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EUROPEAN DEFENCE AGENCY:
PAST, PRESENT & FUTURE

SUMMARY

PROLOGUE

The coordinated bolstering of cooperative efforts in regards to armaments and defence industries in Europe has always received special attention from the Office of the Secretary of State for Defence, and constitutes yet one more sign within this Office's scope of authority of our nation's unequivocal commitment to involvement in European affairs.

As a result of this commitment, Spain, along with those European countries with the greatest industrial and technological capacity in the area of defence, signed the Framework Agreement to Facilitate the Restructuring and Operation of the European Defence Industry in July 2000. This agreement was ratified by the parliaments of Germany, France, Italy, the United Kingdom and Sweden, as well as of Spain, and constituted the formal reply by the Ministry of Defence (MoD) in these countries to the need to ascertain the policy framework of governments within which defence industries should adopt their strategic business decisions as they faced the situation created in the nineties. This need had been acknowledged previously in a Letter of Intent, referred to generically by its initials (LoI).

Also becoming more obvious was the need to increase cooperation in the development of new high–technology programmes that would provide a joint response to existing deficiencies. In order to facilitate the management of these collaborative development programmes among European countries, the Organisation for Joint Armament Cooperation (OCCAR, from its initials in French) was created, which Spain joined in 2005, shortly after its creation. Other member countries include Germany, Belgium, France, Italy and the United Kingdom. As in the previous case, the Parliaments of the participating countries ratified the Convention through which OCCAR was constituted.

The evolutionary progress of European Defence continued vigorously and made a significant qualitative jump in 2004 when, through a Joint Action by the Council of the European Union, the European Defence Agency (EDA) was established. This Agency, whose ambitions are greater than those of either the LoI or OCCAR, promotes the development of those military

capabilities necessary to support European Security and Defence Policy (ESDP), this time with the participation of every European Union country, the only exception being Denmark.

The Agency was constituted to stand at a central point where the planning of these capabilities and the advancement of the technologies required both meet, and to push for the development of an industrial sector with the capacities necessary to build said technologies, within the context of a competitive European defence market promoting subsequent armament cooperation programmes.

As a result of its experience at a national level, this Office is all too familiar with the difficulties of adequately combining these elements and of coordinating and efficiently executing a complex system involving different national organisations with such diverse authorities and fields of action. And yet, this same experience has shown that the convergence of all of these fields of action is essential if a realistic, practical and efficient process for achieving military capabilities is to be attained.

And so it is that the European Defence Agency has accepted the thrilling task of addressing the communal dimensions of this problem at a European level.

The five years elapsed since the beginning of this great project coincide with the tenth anniversary of the implementation of the European Security and Defence Policy through the entry into force of the Treaty of Lisbon on 1 December 2009, and with Spain's EU Presidency in the first half of 2010.

The Spanish Presidency has set for itself the goal of, in addition to stimulating the advancement of the European defence industry, supporting the development of the EDA. That is because the Agency is, without a doubt, a key player in achieving those capabilities necessary for the adequate conduct of the European Security and Defence Policy (ESDP).

The approval of the Lisbon Treaty is likewise propelling the Agency's role in terms of the ESDP, without prejudice to any definitions that will be required in coming months on the duties that are to be discharged by the new High Representative specified in the Treaty.

EDA is mentioned specifically in the new Treaty, where it is assigned functions similar to those attributed to it in the provisions of the Joint Action. The progress made during its years of existence under the Joint Action, therefore, will be deemed as remaining fully in effect following its

transfer to the legal framework provided by the new Treaty. Going forward, the Lisbon Treaty will also present new opportunities for European Defence to advance and to reinforce its achievements.

A novel aspect included in the Treaty is the role the Agency is asked to play in the Permanent Structured Cooperation, by contributing to the periodic assessment of national contributions and by reporting annually to the Council.

The Agency is facing the future with the assurance of the positive results from its five years of existence and a notable string of indisputable successes, such as its long–term vision, the Capabilities Development Plan, the European Armaments Cooperation Strategy, the Intergovernmental Regime for promoting competition in the European defence equipment market, the Code of Conduct on defence procurement and the Code of Best Practice in the Supply Chain.

Let us not suppose that our vision of the Agency is free from criticism or, better yet, from constructive self–criticism –insofar as we, all the Member states, make up and guide the Agency– an approach that I also recommend to the reader. Our focus is strictly critical because we expect more from the Agency, more results, more efficiency; and it is constructive because we unite our efforts with everyone else's, contributing and working towards the common goal. We are convinced that the Agency must move forward and will be able to do so in every area of its activity, and that new cooperative projects will emerge from its labour that will provide a collective response to the development of those military capabilities that will remedy existing deficiencies in the conduct of the ESDP. These will be developed mainly by a truly European Defence Technological and Industrial Base that is able to compete in other markets.

The first great challenge the Agency must face in this new stage is that of building on those actions already taken to implement new programmes in armaments cooperation. This time, the Agency will have to champion the cause of European capacity in order to launch cooperative programmes with strategic implications in areas such as air transport and communications. To achieve this, it must rely on assistance from OCCAR, an organisation that is known for its efficiency and excellence in managing programmes and that is called upon to execute those large procurement programmes whose management will be transfer by the Agency.

The second main challenge involves the overlap of the Agency with the new institutional framework of the ESDP, resulting from the coming into effect

of the Lisbon Treaty. The push for European Defence relies to a large extent on reinforcing –as compared to the previous stage– the authority of the organisations involved, namely the EU's High Representative for Common Foreign and Security Policy, the Military Staff of the European Union and the Agency itself, under the authority of the Council, not to mention other European institutions, such as the Commission and the European Parliament, insofar as their competencies may affect the industrial sector and the defence market in particular. In this new stage it must be specified and fine tuned the relations between the various institutional players in Europe while maintaining and strengthening any relevant ties with Member states. The Agency must, therefore, find its rightful place within the new policy framework.

On the one hand, the implementation of important capabilities acquisition programmes is going to require a redoubling of efforts from the Agency, an internal and quantitative leap forward, if it is to build on its actions to date; while, on the other hand, the entry into effect of the Lisbon Treaty will require external actions of the Agency, a qualitative leap that places it at the front lines of the ESDP, in coordination, and level, with other important European players.

To conclude, and being very mindful of the moment in which the European construction process finds itself and of its particular relevance to the European Security and Defence Policy, I think the timeliness of this monograph, which is a new and updated edition of a study conducted a year ago, is evident. I would like, therefore, to congratulate the CESEDEN for its decision to re–issue this work on the occasion of the Spanish Presidency of the EU.

Its contents will be of great help in understanding the bases of the European Defence Agency and to highlight the results of its brief but intense history in the service of all Member States in support of the European Defence.

CONSTANTINO MÉNDEZ
Secretary of State for Defence
MoD Spain

INTRODUCTION

By Antonio Cieza González

As early as the end of the Second World War, and primarily in the 1950s, the need for a common European policy on such important issues as the economy, foreign policy, security and defence was already apparent.

From the aforementioned decade to the present, there has always been great political will, on paper at least, to implement joint cooperation in which no special interests prevailed above those of a strictly common nature and which allowed us to obtain advantages befitting members of a great enterprise called the European Union (EU).

It is worth noting how every single initiative aimed at creating a new, strong and self–sufficient Europe with an increasingly relevant role in world affairs has featured the notable, if perhaps unconscious, participation of France and the United Kingdom, especially in the post–war years. Subsequently, the Benelux countries, and later Italy and Germany, joined these initiatives aimed at the creation of one Europe with a common policy on security and defence.

What is obvious is that from the end of the Second World War to today, persistent steps have been taken toward establishing a strong EU, the goal being to best defend the interests of all member countries.

We should emphasize the fact that, despite the clear objective of creating a supranational organisation, the right of a country to propose and apply its own set of laws whenever the decisions or norms of a supranational nature were in conflict with the interests of the country in question were always respected.

This circumstance is, in my opinion, what has impeded the rapid advancement of the construction of Europe, since each step taken is analysed by every country so as to verify that every measure under consideration does not adversely affect its own interests as an individual nation.

We should note that the goals of the fledgling national unions formed in the 50s differed considerably from those of the current EU. While initially the aim was to defend the interests of the member states of the various organisations, the current goal goes further and aims to provide a more active presence in the various events that take place around the world. As such, the EU wants to prepare for possible interventions in the various theatres arising as a result of the instability that is present in different parts of the globe.

Already in 1950, Jean Monnet, president of the intergovernmental conference that was held in Paris, made the following statement of principles: "*We are here to undertake a common effort, not to negotiate advantages, but to look for our advantages in the common advantage. Only by ridding our debates of every particularist sentiment can a solution be found*."

Speaking of Europe as a union of destiny in a globalised world sounds nice, and we can even have some idea of the benefits such a union could provide every EU member country. The problem may be that a significant number of those member countries regard Europe as something that grows around them; they feel like the core around which the EU should grow in their image, which does not coincide with the idea other member States of the Union have for Europe, and which is more in line with Jean Monnet's statement and which would imply sacrifice and resignation on the part of certain countries.

There is a feeling sometimes that the benefits that a strong EU would impart are known to all, but it is not obvious that the sharing of said benefits would meet with the approval of every member nation, especially when we take individual stock and realise that the numbers do not quite add up for some, if not all, concerned, who believe the benefits would be greater if acting alone.

Such hypothesizing is understandable and a consequence of our freedom to act, but if we analysed the parameters involved in the calculations, we would see that we forgot, sometimes voluntarily and sometimes not, many parameters that would shed a new light on our calculations and which, in time, would translate into bread today and hunger tomorrow.

It might be a question of engaging in a very simple exercise: let us imagine that we calculate how much of Europe's military requirements could be obtained by summing the individual current Defence budgets of EU member States. The result would likely surprise us. We would almost

certainly be able to ensure that the lack of military capacity within the EU would be greatly diminished.

This would mean, moreover, that the EU's industrial defence base would be stronger and more competitive, and that its technological level would rival that of the leading companies in the technology market.

Research and technology is perhaps one of the most important issues to bear in mind within the EU, one that is deserving of special consideration by those countries that are in possession of the most advanced technologies. Obviously the technological achievements of these countries must be respected and viewed as an asset. Their financial and investigative efforts over many years must be acknowledged.

When competing in R&T projects that the European Defence Agency (EDA) might implement, it is not easy to find solutions that can safeguard the rights of countries that have made significant prior efforts while simultaneously facilitating the participation of those countries that lack the necessary industry in many areas of technology.

Alternatives must be found that facilitate the participation of these companies in the various R&T projects without violating the rights of companies that have invested significant sums of money into research in an effort to become more competitive, thus enabling them to enjoy their well–earned rewards.

We can conclude by mentioning the need to look for alternatives so that countries with a modest industrial technological base can be invited to cooperate financially in R&T projects, thus facilitating their companies access to said projects so they can, in this way, raise their technical level. This would mean these countries would not be acting as mere contributors, serving only to subsidise those countries that already enjoy a powerful industrial base.

One possible alternative for respecting competitiveness could be to invite every country to take part in various R&T projects such that each country shoulders the costs of the contracts awarded by the EDA to its companies and which were won individually or as members of an ad hoc consortium of companies. This would facilitate the financial participation of those less technologically advanced countries and the involvement of their more competitive companies, allowing them to attain greater technical prowess. This is obviously one of many possible options and could be kept in mind for some types of contracts.

Other alternatives that should not be ignored, though they should be adequately regulated, concern “fair return” and “industrial compensation” schemes. Related measures should be aimed at the elimination of covert subsidies from the less technologically advanced countries toward those with more advanced technology, which would favour the growth of those member States with an underdeveloped industrial defence base.

It is also important to note the fact that it is in the interest of the EU, and specifically the EDA, to increase competition among companies and to avoid, to the extent possible, having certain technologies in the hands of a single industrial group. This is achieved by providing other companies access to these technologies through intergovernmental policies that, in some way, force the various industrial to reach an accord in this sense.

The EDA’s role is very important but also very difficult to carry out: to be the agency charged with designing the political lines that lead to the European reality we all have in mind. This would mean having the EU achieve, in terms of defence and security, the stated goals, namely, attaining the military capacity it requires in keeping with the times while at the same time establishing a competitive industrial base for itself with an adequate technological level.

Ever since its creation, the functions assigned to the EDA have all been aimed at achieving the objectives defined in the Common Foreign and Security Policy and the European Security and Defence Policy, as established in Articles 2 and 5 of Common Action 2004/551/PESC of 12 July 2004.

The Agency is tasked with coordinating the execution of the European action plan, promoting and coordinating military requirements, proposing joint activities, promoting new multilateral cooperation projects, promoting profitable contracting, strengthening the European Defence Technological and Industrial Base (EDTIB) and fomenting the creation of a competitive defence market, among others.

All of these mandates are aimed at attempting to attract member States toward a policy of action that allows us to achieve the objectives that are listed specifically in the Common Action but which require a total commitment from member States, one free from dissension to the sometimes thankless labour with which the Agency is tasked. The Common Action itself specifies that the functions of the Agency shall not affect the competencies of member States in matters of defence, which places no small limitation on the Agency’s actions.

Along similar lines, Article 296 of the Founding Treaty of the European Community (TEC) respects the right of member States to safeguard any information that might be interpreted as affecting the fundamental interests of its security and the right to adopt any measures deemed necessary to safeguard said interests. As we can see, private interests always outweigh the general interests of a strong EU, which imposes a deterrent to the creation of that EU that has been so sought after ever since the post–war years.

Lastly, I should like to highlight the fact that the sole clients of this entire industrial defence base are the States. And keeping in mind that the money available to said States comes from the taxpayers, it is obvious that the real clients of said industry are the citizens of each State, as the real contributors by way of the various taxes they pay.

What does this mean? That in the average citizen's mind, that citizen who does not speak of grand strategies, but rather of day to day concerns, a sound investment policy is that which allows a greater guarantee for jobs wherever he may live, since for the time being, despite being listed as a European citizen, in fact he is, and feels, Italian, Spanish, French, German, Swedish and a great many others.

In my modest opinion, I think the EU in general, and the EDA in particular, must consider how the cooperative investments to be made in the various defence programs, whether R&T or development, can revert in some way to the participating countries such that their citizens can obtain a certain benefit from the investments made on their behalf by the State to which they have entrusted their money.

In the chapters that follow you will read a clear description that seeks to show the reality and the functions of the EDA.

Each chapter has been written by not only an expert in the issues presented, but by someone who, in most cases, has participated and continues to participate in the everyday tasks of the EDA and who, through his active participation, is contributing to the realisation of the ultimate goal, which is none other than the achievement of that European Defence Agency that is able, within a reasonable time frame, to fulfil the missions for which it was created.

Let us be optimistic and believe that despite the complexity of the task, the end result will see the convergence of all those lines traced out by

the various member States and which at first seemed to diverge, in some cases considerably.

In theory, the EU has but one goal. The problem is that in reality, we can almost affirm that each state has its own agenda and presents it as a goal of the EDA. Obviously this means that we are starting out with as many goals as there are member States. These will have to be shaped into a single objective that is accepted by every country. This will require precious time, to the detriment of both the EU and, by extension, of the interests of its member States.

One important outcome of this endeavour will be to provide all of its readers a greater understanding not only of the EDA, but of the overall Spanish involvement in every facet of the EDA. I dare say this will be of great benefit to all Spanish participants in said facets, since they will have the opportunity to learn firsthand how Spain is participating in the EDA, what problems exist at the various government agencies and what roads we will have to take if we are to combine our efforts and all pull the rope in the same direction[1].

1 All information and references of every type listed in this document are final as of 01 December 2009.

CHAPTER ONE
ESTABLISHMENT OF THE EUROPEAN DEFENCE AGENCY:
A key milestone in the process of constructing European defence

By Arturo Alfonso–Meiriño

Overview

The thought of the Defence Europe is no longer an abstract concept. Over the last ten years, European leaders, through the Council of the European Union (EU), have been developing a set of initiatives relating to the process of constructing a European Defence and establishing objectives within the framework of a European Security and Defence Policy (ESDP) that, only two decades ago, would have been unthinkable. The creation of the European Defence Agency (EDA) in 2004 was, without a doubt, a key milestone in this slow but unstoppable process.

The EDA has become a reference point on defence matters for any political or industrial query, not only within the EU context, but also outside its borders, as evidenced by the existing interest from other countries in learning about its working agenda, illustrated by the ties established with government institutions and the National Defence Industry Associations of the United States or Norway.

The EDA's arrival on the European scene has also led to a certain "revolution" within the structures and working habits of its participating Member States (pMS). The wide spectrum of duties performed by the EDA, ranging from military capabilities to industrial and market matters, has brought about a necessary, increased and improved coordination among the different departments within the Defence Ministries of the pMS related with the Agency's duties in one way or another. All of this even surpasses the purviews of those Ministries, demonstrating the multiple outcomes that the security and defence actions and policies have on the Government Administration and on society at large.

Since the European Council meeting in Cologne in 1999 at which the EU Government and Heads of State decided to "*we intend to give the European Union the necessary means and capabilities to assume its responsibilities regarding a common European policy on security and defence*", constructing European Defence has been a slow and bumpy process, as has been the case with building Europe in general. However, the EU policy with the biggest progress during this period has been, without a doubt, that of European Defence.

If we use as a reference the first allusion to the Common Foreign and Security Policy (CFSP) in the Treaty of Maastricht, that in Article J.4 states "*The common foreign and security policy shall include all questions related to the security of the Union, including the eventual framing of a common defence policy, which might in time lead to a common defence*", as well as its subsequent strengthening by means of the Amsterdam and Nice Treaties, over the last ten years there has been development in structures, procedures and concepts that has ultimately allowed the launch, not without difficulties, of real crisis management operations under full EU responsibility.

The last decade was vastly marked by important milestones that, in their own way, have shaped the landscape of current European defence. The creation of the Secretary General of the Council and High Representative for Common Foreign and Security Policy of the European Union position in 1999, whose appointment was awarded to the Spaniard Javier Solana, the creation of the Political and Security Committee (PSC), the establishment of the Military Committee (EUMC) and Military Staff (EUMS) in 2001, the new elements of the General Secretariat of the Council of Europe and the Joint Situation Centre, are clear examples of those structures and advances.

The new document presented by Javier Solana and adopted by the Heads of State and Heads of Government at the European Council in Brussels on 12 December 2003, "*A Secure Europe In A Better World: European Security Strategy*", is also a historic milestone in the process of building up European defence. The "Solana document" springs the EU's objectives forward from a qualitative standpoint. The document notably highlights the importance of the EU in the global context. With 25 member states at the time (the official EU enlargement to 25 members was on 1 May 2004), the EU encompassed a population of over 450 million people and comprised a quarter of the world's gross national product.

Furthermore, Solana's document delves deeper into the definition and analysis of the objectives the Union must have. The document reiterates that "*Europe should be ready to share in the responsibility for global security and in building a better world*". Similarly, in discussing strategic objectives, it recognises that, "in an era of globalisation, distant threats may be as much a concern as those that are near at hand…*"*", and that "w*ith the new threats, the first line of defence will often be abroad*", as the conflicts emerging after the document's publishing have been proving.

In its third chapter, "Strategic Implications to Europe", the European security strategy proclaims a need to become **more active, more capable and more coherent** in the security and defence arena: "*The point of the Common Foreign and Security Policy and European Security and Defence Policy is that we are stronger* when we act together… *The challenge now is to bring together the different instruments and capabilities…*", and it is precisely in this chapter where there is a reference to a future European defence agency by noting "*…"Actions underway –notably the establishment of a defence agency– take us in the right direction*".

Adopting Council Joint Action 2004/551/PESC[2] on 12 July 2004 related to the creation of the European Defence Agency, which historically was always called "European Armaments Agency", is, I believe, one of the most important milestones in this interesting process.

However, the functional implementation of the EDA has not been a short process, nor has its development been constant over the years. Like the path of the Guadiana river, the concept of creating an agency has appeared and disappeared, with different names and during irregular intervals, from political agendas. The political and economic circumstances of each time have been determining factors in this discontinuous process, as has occurred with Europe's general construction process.

Efforts aside from the European Community/European Union

The effort to launch a defence Agency dates back practically to the beginning of the European Economic Community. But, as one of the current EU funding fathers foretold, Robert Schuman, in a 1950 speech in Paris at the d'Orsay Palace: "*Europe will not be made all at once, or*

2 http://eur–lex.europa.eu/LexUriServ/site/en/oj/2004/l_245/l_24520040717en00170028.pdf)

according to a single plan. It will be built through concrete achievements which first create a de facto solidarity".

The incredibly futuristic and totally revolutionary ideas that René Pleven and Jean Monnet introduced in 1953 –especially if we consider their place in time, close to the end of World War II, for the creation of a European Defence Community (EDC)– presented among their proposals, matters such as a shared European army, a single military budget and a single management organism for research, production and acquisition of military equipment.

However, after the French legislature rejected the EDC on 30 August, 1954 and despite the creation of the Western European Union (WEU) a few months later, it was not until 1971 that we find the first reference to the development of a European armaments agency: *"The WEU Assembly recommends carrying out all necessary efforts for the establishment of a European armaments agency for Western Europe that will permit the standardisation of European armed forces and will be conceived to provide a more efficient defence while reducing costs, so that Western Europe becomes a viable ally to the United States within the Atlantic Treaty context".*

Twenty years later, on 10 December, 1991, nine of the 13 WEU countries that were also European Economic Community members (Belgium, France, Germany, Italy, Luxembourg, Netherlands, Portugal, Spain and the United Kingdom) launched a declaration at the Maastricht summit about "The WEU role and its relations with the European Union and the Atlantic Alliance". In this declaration and within the framework of the different measures to be applied to strengthen the WEU, it included a specific reference to ""*regular meetings of Chiefs of Staff of WEU member countries were proposed in the letter, as was the goal of creating a European armaments agency…".*

A year later, in December 1992, the functions of the Independent European Programme Group (IEPG), established in 1976 by the European NATO members (except Iceland) as a reference for armament cooperation, were transferred to the WEU and the Western European Armaments Group (WEAG) instituted within it, that can be considered as the precursor to the European Defence Agency, even though its mission was never framed in the context of the EU.

The WEAG, whose broad objectives included, among others, a more effective use of resources by standardising requirements, the opening of

national defence markets to cross–border competition, the strengthening of the European Defence Technological and Industrial Base (EDTIB) and cooperation in defence research and development, lay the groundwork for advancing toward establishing a future defence agency.

It was the WEAG Defence Ministers who approved in 1993 the creation of a study group for the purpose of evaluating the viability of a European Armaments Agency (EAA). Surprisingly, the group's final recommendations were against creating it, due to what they considered to be unfavourable political, economic and industrial conditions.

However, the final report and studies provided by the study group were not cast aside and they contributed to the creation of the Western European Armaments Organisation (WEAO), approved by the WEAG Defence Ministers in 1996. The WEAO was born as a subsidiary of the WEU, with its own international legal status, and able therefore to provide a legal framework for armament cooperation.

Despite the objective established in Article 6[3] of its founding Charter, and the different functions included in Article 7, it was the Research and Technology (R&T) area, developed within the framework called Panel II, that had acceptable operational development[4]. Through its thirteen common priority areas (CEPA), its main instrument, the European Cooperation for the Long Term in Defence (EUCLID) programme and the EUROPA (European Understanding for Research Organisation, Programmes and Activities) Memorandum of Understanding, the WEAO initiated projects that helped build trust in European cooperation in the field of defence R&T.

The WEAO's initial work, leaning towards the creation of a European Armaments Agency, received a new boost in November 1997 when the organisation's defence ministers decided, during their Erfurt (Germany) meeting, to launch a Master Plan that laid out the necessary preliminary stages for the development of the Agency that, based on the work of

3 Article 6 of the WEAO founding Charter states as its objective to *"…contribute to the promotion and intensification of European armament cooperation, strengthening of the European defence technological and industrial base and the creation of a European defence equipment market according to WEAO guidelines".*

4 Article 7 of the WEAO's founding Charter establishes the following functions:
   a. *Research and technology activities in defence field*
   b. *Defence equipment procurement*
   c. *Studies*
   d. *Goods and facilities management*
   e. *Other functions needed to achieve the organisation's objectives.*

a group of experts, would permit the development of the structures and rules to guide the defence ministers to decide over the temporary framework for its implementation. Finally, after the defence ministers' meeting in Rome on 16 May, 2002, the group of experts was dissolved and the Master Plan's recommendations practically forgotten, without any political interest to promote the establishment of a European Defence Agency in the WEAO framework.

During the 90's, there were other cooperation attempts in the armaments field alongside the WEAO. It is important to highlight that those attempts were initiated by individual groups of countries, not as a joint effort of all WEAO members and it was never with the intention to combine objectives and different functions detailed in the WEAO's Charter, Articles 6 and 7.

The first of those parallel attempts took place in 1996 with the signing of a Memorandum of Understanding between France, Germany, Italy and the United Kingdom to create the Organisation for Joint Armament Cooperation (OCCAR). This was neither a WEU subsidiary, nor was it framed within the EU institutions, nor did it comprehensively cover defence issues. Because it was an intergovernmental Convention, the OCCAR endured a long process –from 9 September 1998 until January 2001– until its ratification by all parliaments of member countries, allowing it to acquire its own legal status.

OCCAR had enough potential to have eventually become the European Armaments Agency (EAA[5]). However, from the outset its activities were directed almost exclusively to managing defence equipment programmes, and not to the broader aspects related to military capabilities improvement. At any rate, it is necessary to highlight that the OCCAR procedures and

5 OCCAR Convention Article 8 includes the following tasks:
- (a) management of current and future cooperative programmes, which may include configuration control and in–service support, as well as research activities;
- (b) management of those national programmes of Member States that are assigned to it;
- (c) preparation of common technical specifications for the development and procurement of jointly defined equipment;
- (d) coordination and planning of joint research activities as well as, in cooperation with appropriate military staffs, studies of technical solutions to meet future operational requirements;
- (e) coordination of national decisions concerning the common industrial base and common technologies;
- (f) coordination of both capital investments and the use of test facilities.

work methods used were innovative in the field of managing armament cooperation programmes.

Aside from the international management teams for different programmes and their prolific Operational Management Procedures (OMP), perhaps the most revolutionary aspect is the interpretation of the *juste retour* (work share equal to cost share) calculated on a global basis, not programme to programme, but across multiple programmes and over multiple years.

OCCAR –now with Belgium and Spain as participating members– and with an important programme, the A400M, among its portfolio of clients, tried to find its own future. However the tendency for European defence budgets, associated, in the best case, just with an increase equal to inflation, as well as the effect of high financial obligations that many countries would have to face in the next 10 to 15 years as a consequence of the large recent armament programmes, made launching new large programmes in Europe difficult.

Another attempt we can consider as a precursor to the European Defence Agency, though also developed outside the EU, with more limited objectives and supported by only six countries, is the Letter of Intent (LoI). The largest European armament manufacturers' Defence ministers (France, Germany, Italy, Spain, United Kingdom and Sweden) signed such a Letter, in July 1998, that laid out as its objective the establishment of a cooperative framework to facilitate the restructuring of the European defence industries. Since then, despite the fact that other EU countries have approached them, there have been no modifications to the number of members.

The negotiations that took place based on the LoI led to the Framework Agreement (FA), signed in 2000, related to the measures to facilitate the restructuring of the European defence industry that, given its legally binding Treaty nature, had to wait until July 2003 to be ratified by the parliaments of the six countries.

The LoI, as it is commonly known in Europe, has reached some agreements within the six areas that, related to the restructuring of the defence industry, are covered in Framework Agreement, Article 1.

The LoI/FA remains functional and has retained its working groups, trying to find new horizons and revisiting its purpose given recent developments in Europe, like the birth of the European Defence Agency. In any case, the

LoI/FA was never intended to build permanent structures, a factor that has limited the advancement of its activities from a temporal point of view[6].

Today the LoI/FA is slowly but progressively collaborating with the EDA on common projects. In the area of "Military Requirements Harmonisation", LoI countries have begun to suggest, for example, the transfer of Common Staff Targets (CST) to EDA that, could allow to reach critical mass in terms of participation levels, thus paving the way for its conversion to armament programmes. The EDA is also interested in advances in other areas like the "Security of Supply" where the LoI Code of Conduct, still in the approval phase by the six LoI countries, could be a transferable reference to the Agency's participating Member States.

The LoI/FA's future is in the midst of a revitalisation process that will require an evaluation based on the current situation, namely the existence of the European Defence Agency. The EDA, as detailed further down, carries out functions and objectives that are shared with those of the LoI, therefore there is a risk of unnecessary redundancies. Nevertheless one must recognise that the six LoI countries currently make up the bulk of European defence budgets, defence industry, investment in defence technology and actively deployed troops in ESDP operations.

Figure 1 shows some of the most important milestones that have taken place over the last decade related to constructing the Defence Europe.

The EDA in the development of the ESDP

Even though the European Defence Agency was already regarded as such in the Draft Treaty establishing Europe's Constitution[7], the EU Heads of

6 Since 2003 the LoI/FA has been focusing on the following six areas:
- I. Security of Supply.
- II. Export Procedures.
- III. Research and Technology.
- IV. Treatment of Technical Information.
- V. Security of Information.
- VI. Harmonisation of Military Requirements.

7 Article I–41 "Specific Provisions Relating to the ESDP" establishes that*: "Member States shall undertake progressively to improve their military capabilities. An Agency in the field of defence capabilities development, research, acquisition and armaments (European Defence Agency) shall be established to identify operational requirements, to promote measures to satisfy those requirements, to contribute to identifying and, where appropriate, implementing any measure needed to strengthen the industrial*

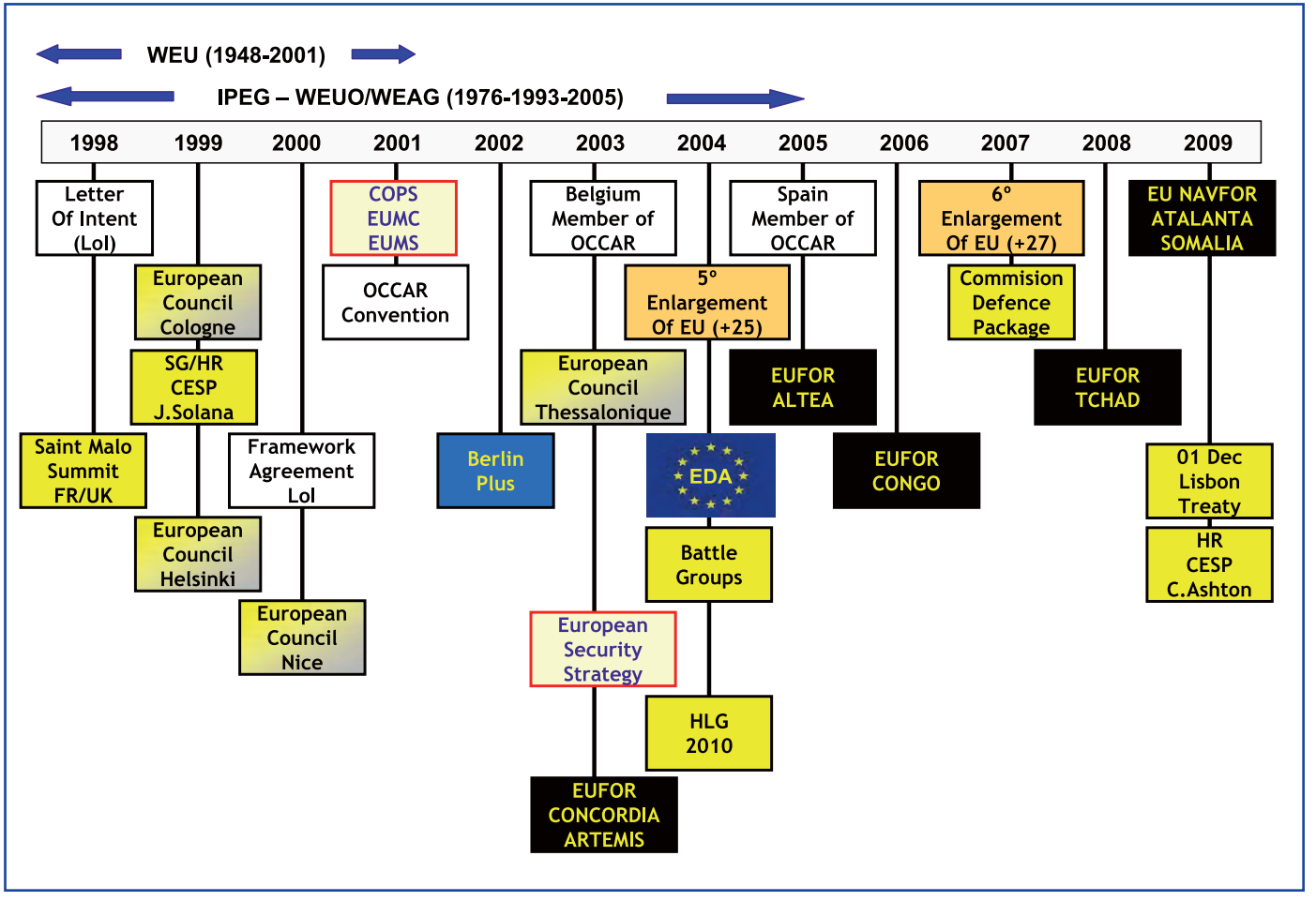

Figure 1. *The building up of the European Defence. The crucial milestones*

Government and Heads of State, at the European Council of Thessaloniki on 19 and 20 June 2003, decided to accelerate the Agency's creation. It is at that time and with great success that they detached the Agency's creation from the future Constitution, where it was agreed that *"the European Council, following the 2003 Spring European Council, tasks the appropriate bodies of the Council to undertake the necessary actions towards creating, in the course of 2004, an intergovernmental agency in the field of defence capabilities development, research, acquisition and armaments*".

Later on[8] the EU Council decided to create the Agency Establishment Team (AET), reporting to the General Secretariat of the Council, and it was assigned a very strict schedule to provide the necessary conditions for the development of an operational agency focusing on the development of capabilities, research, procurement and armaments. The AET, launched in January 2004, was to present a set of specific proposals at the end of April 2004 to a group created for this purpose, that reported to the Committee of Permanent Representatives (COREPER) and the Political and Security Committee (PSC).

Finally, through Council Joint Action (2004/551/CFSP) of 12 July, 2004, even before full ratification of the Treaty establishing a Constitution for Europe, the Agency's establishment was unanimously approved ***"…in the field of defence capabilities development, research, acquisition and armaments (the European Defence Agency)… shall act under the Council's authority, in support of the CFSP and the ESDP, within the single institutional framework of the European Union***". This decision was a strategic one and it not only allowed the Agency to begin operations in 2004, but since it was not tied to the European Constitution's approval, it also avoided the negative impact that the rejection of the Treaty by France and Netherlands could have had on its implementation.

The Agency's appearance, with headquarters in Brussels, does not affect the competencies of the Council's preparatory and advisory bodies, notably those of the COREPER, acting under the Treaty establishing the European Community. It does not affect the PSC competencies nor those of the EUMC. Regardless, the need for a fluid relationship with these

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and technological base of the defence sector, to participate in defining a European capabilities and armaments policy, and to assist the Council in evaluating the improvement of military capabilities."

8 Council Decision 2003/834/EC of 17 November.

organisations as well as with other EU organisations like the Commission or European Parliament, is obvious. Figure 2 shows the institutional matrix that includes the EUMS, the Military Committee Working Group (EUMC WG) and the special ad–hoc group dedicated to the *Headline Goal* because of their obvious implications to the EDA's daily routine.

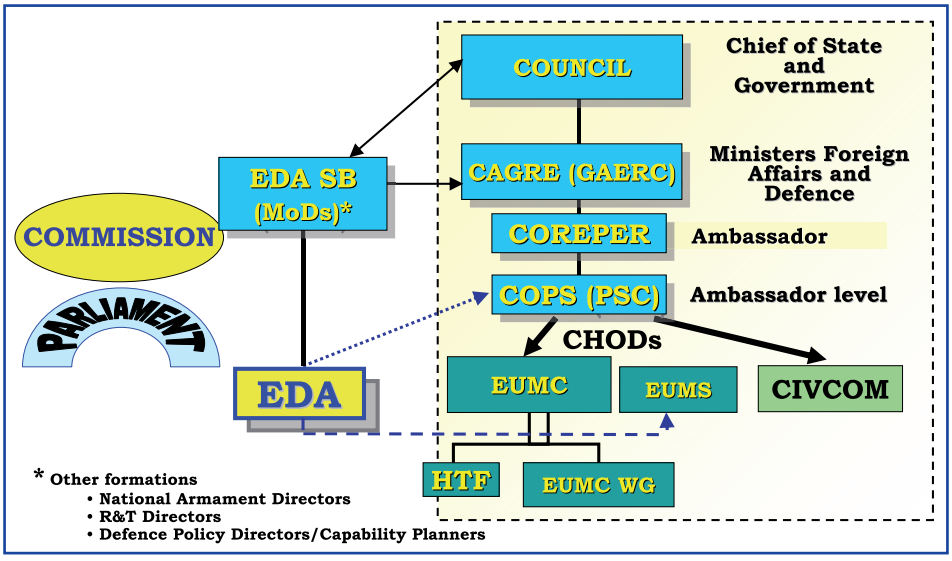

Figure 2. *The Institutional Framework.*

The EDA, membership in which is open to all European Union members, is actually constituted by 26 participating member States (pMS); that is to say, all the EU countries except Denmark which, in compliance with Article 6 of its adhesion Treaty to the EU Protocol and the European Community Treaty, does not participate in EU decisions or actions related to Defence.

The EDA: military capabilities as its objective

The EDA, acting under the Council's authority, was assigned the mission to ***"support the Council and the Member States in their effort to improve the EU's defence capabilities in the field of crisis management and to sustain the ESDP as it stands now and develops in the future".***

Nevertheless, the Joint Action that establishes its creation indicates that it does not affect the competencies of the pMS on defence matters.

Therefore, the capabilities, or rather the analysis, identification, and maintenance or development of military capabilities needed to support the ESDP, are the Agency's reason for being. The Joint Action says: *"The European Security Strategy endorsed by the European Council identifies the establishment of a Defence Agency as an important element towards the development of more flexible and efficient European military resources".*

However, during the EDA's gestation there was always a broad perspective regarding defence matters. Therefore, member States recognised that not only was there a need to provide Armed Forces with the military capabilities required at the moment or relating to new threats in the future, but there was also a need to delve into other important areas to allow for a comprehensive approach to defence matters. That is to say, areas that promote armament cooperation and joint defence technology research that allows, within the framework of a united European defence market, and not fragmented as it is now, for the development of a strong defence technological and industrial base. All of this to efficiently fulfil the required military capabilities, technologically appropriate and economically viable, and with a certain autonomy throughout. In this context and in carrying out its functions and commitments, the Agency's main working areas are:

a. Development of defence capabilities in the area of crisis management. Particularly by determining future EU defence capability needs in association with the Council bodies.

b. Development and improvement in European armament cooperation. Particularly through the development and proposal of new multilateral cooperation projects and the promotion of effective procurement and contracting procedures based on defining and disseminating best practices.

c. Creating a European market for defence equipment and strengthening the EDTIB. Particularly through the development of adequate policies and strategies –in accordance with the Council and, if necessary, with industry– that would help avoid existing fragmentation, that improve the competitiveness of the European defence industry at a global level, and diminish Europe's dependency on external suppliers for industrial capabilities that are considered key under the Capabilities Development Plan (CDP) as well as defence technologies that are

regarded as essential based on the importance of preserving or developing them in Europe.

d. Improvement in the European defence research and technology (R&T) effectiveness. Among other initiatives, there will be an impulse for a joint defence R&T with better established objectives, taking advantage of the WEAG and the WEAO experience. Equally, a necessary cooperation with the EU bodies will be developed to minimise redundancy and maximise synergies among dual use programmes benefitting defence and civil or security related sectors.

The Steering Board (SB) is the EDA's decision–making arm and contains representatives from each pMS as well as from the EU Commission, the latter without voting rights. The Steering Board level is that of the Defence Ministers level which, given the political level, adds an aspect that is essential to its decisions.

The post of both Agency Director and Steering Board president falls on the Secretary General/High Representative of the CFSP (SG/HR). The first Head was Javier Solana Madariaga. With the Treaty of Lisbon into force, the post has been filled by Britain's Catherine Margaret Ashton who is simultaneously filling the post of European Commission Vice President.

The Steering Board in defence ministers formation meets twice a year, coinciding with the Foreign Affairs Council meetings called to session by the rotating EU Presidency. This Steering Board also meets in different forms: National Armament Directors, Research and Technology Directors, and National Defence Planners/Policy Directors responsible for Capabilities. These Steering Board formations also meet twice during the calendar year. If we keep in mind that all of them have the same decision–making ability, and eliminate vacation periods, the result is one meeting per month, which implies a high level of follow–up on the Agency's agenda.

Regarding the daily activities, it is the Agency's Management Board (AMB) consisting of the Executive Director, his two Strategy and Operations Deputies, the four functional Directors and the Corporate Services Director, assisted by the Plans and Policy Unit, that, following direction from the Steering Board, executes and coordinates the Agency's work.

There are also other fundamental aspects associated with the EDA's operations, as recognised by the Joint Action. The European Defence Agency is keenly aware of the importance of its external relations and

understands that its function can only be carried out in a work environment shared with the main European Defence actors.

First and foremost, special attention is given to relations with the European Commission that, as previously indicated, is a non voting Steering Board member. From the outset, the Agency was mandated to develop necessary activities to promote the exchange of experiences and assessment of those areas where the European Commission's activities affected the Agency's mission, and in those with ties to the Commission. Since January 2005 when the Agency achieved full operational status, there have been multiple examples of this activity. As a sampling of those are the tight relationships achieved on the EDA and Commission initiatives for the creation of a truly European defence market, and the exchanges and cooperation related to dual use, civil and military, technologies, within the framework of the EU Commission's European Security and Research Programme (ESRP) or the most recent European Framework Cooperation initiative for Security and Defence between the EDA and the Commission approved by the defence ministers in May 2009.

The Joint Action also recognises the advantages of entering into Administrative Arrangements, if the Steering Board considers it advisable, with other countries, organisations and agencies in order to further its mission. The first Administrative Agreement was signed with Norway, a non–EU Member State, that already participates in specific Agency projects such as its Intergovernmental Regime to improve the transparency and promotion of competition in defence procurements, as discussed in this monograph's fifth chapter. The WEAG always received priority over other organisations before its activities were finally transferred to the EDA in 2005.

The Agency is also mandated with establishing relationships with organisations like OCCAR and the LoI Framework Agreement so as to incorporate or assimilate their principles and practices when the time is right, and by mutual agreement. These relationships have been developed almost from the EDA's inception and are part of its annual work programmes.

Another organisation mentioned in the Joint Action is NATO, with which the Agency is urged to maintain a reciprocal transparency and coherent development regarding military capabilities. For now, there are regular joint meetings between the EDA and NATO regarding capabilities.

Throughout its five years of existence, the EDA has developed close relationships with other important European defence players such as the Aerospace and Defence Industries Association of Europe (ASD), as well as with the national defence industry associations that are considered key in the development of the Agency's missions, and more specifically for the strategies and initiatives relating to the defence industry and market.

Lastly, it is necessary to highlight the multiple ties that have been generated, since the Agency's inception, with academic institutions and European think tanks. The participation in seminars and conferences by EDA personnel, from the Executive Director to project officers, contributes and will keep contributing to the dissemination of the ESDP and to an understanding of EDA projects and initiatives beyond the boundaries of the specific defence ministries, associations, and industries.

The relationship with the Higher Defence Studies College (EALEDE) and the Higher Staff College of the Armed Forces (ESFAS), both part of the Centre for National Defence Studies (CESEDEN), is a clear and productive example of the cooperation that must continue and even deepen through the promotion of specific seminars relating to the EDA's four functional areas, and which contribute to enrich defence culture and improve the effectiveness of the Agency's work.

To optimally facilitate its work, the Agency also has legal status that enables it to place contracts with public and private entities and organisations, as well as to acquire or sell goods and property.

The EDA's Assets

To address the aforementioned tasks and missions, the Steering Board approved its organisational structure in November 2004. This structure is still in place with one modification, made January 2007, when the Deputy Director position, in existence until January 2008, was divided into two: a Deputy Director for Strategy –focused more on the Agency's external affairs– and a Deputy Director for Operations –focused more on internal affairs. Figure 3 shows the current organisational structure.

The board further approved a workforce that has been increased slowly to the current 100 plus employees. Staffing has increased as annual budgets have been approved and are subject to further potential increases.

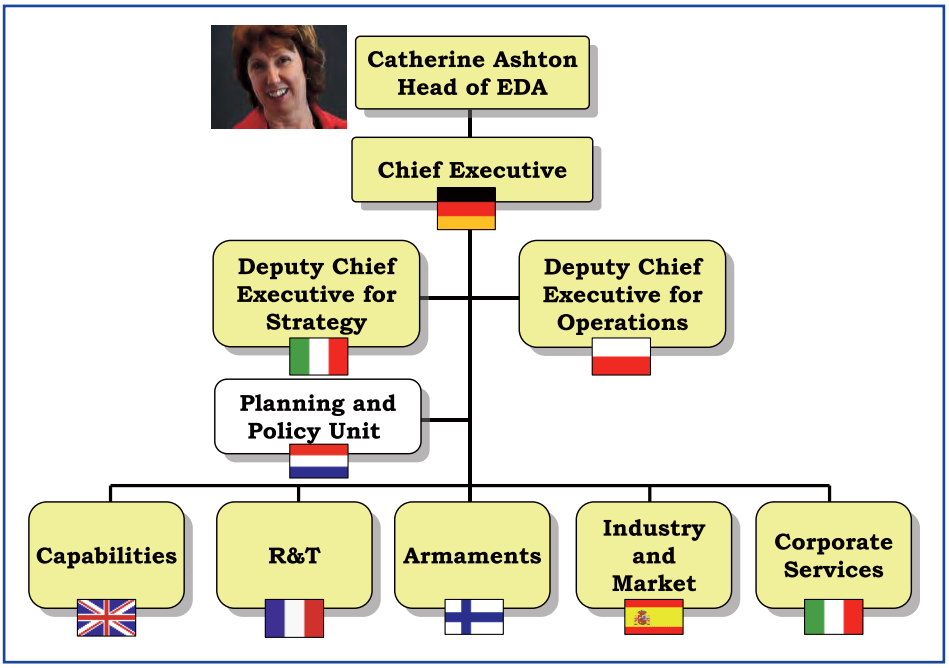

Figure 3. *EDA Organigramme. Status 1.12.2009*

The Agency began operations in July 2004, as previously stated, but with only the Executive Director and his Deputy appointed and working in the Agency's limited provisional quarters located in the Council's building, where they remained until July 2005.

Over the last several months of 2004, they dedicated themselves to selecting what could be called a first team of pioneers formed by the Functional Directors, their Deputies, and a very limited number of administrative personnel. Thereafter, the first task of this small group of pioneers, of which I was privileged to be a part, was to begin the process of selecting the Agency's remaining personnel. This was not completed until nearly the summer of 2005. The selection process proved to be rather complicated, not only due to the large number of candidates submitted by the participating Member States, but also by the problem of the geographical distribution of the positions and the ideal goal of having a properly balanced representation of the aforementioned pMS.

The Agency's personnel selection process could be considered "revolutionary" if compared to the traditional processes of other international agencies.

In recruiting for the EDA there is no preset quota of positions assigned for each country. The model also does not fit the "on the job training" approach, allowing for hiring workers lacking international experience with the hope of attaining it on the job. This is even applicable to the positions that are not at a high level. On the contrary, the selection for each of the positions in the operations areas and in corporate services is subject to competition and to pertinent specialisation and to equitable and transparent procedures. Furthermore, productivity is demanded practically from the outset of being hired. Obviously, given the EDA's international characteristics, one cannot ignore the importance given to the geographical distribution of candidates representing Member States, when considering similarly qualified candidates. These were the rules of the game that were broadly accepted when approving the Joint Action creating the Agency.

The Agency has currently reached the replacement point for an important portion of the workforce that was initially recruited at the time of the establishment of the Agency. Initially, the basic contracts for both Temporary Agents (TAs) and participating Member States' Seconded National Experts (SNEs) are for three years, being extendable to a maximum of six years for TAs and five for SNEs.

The personnel dual contracting formula[9], selected initially as much for its impact on the Agency's budget (SNEs are not part of the administrative budget) as for the convenience of maintaining ties with the capitals through these loaned experts, has not proven to be as successful as was anticipated. In particular for SNEs pMS, in many cases due to budget reasons, have not submitted candidates, making for very limited competition, if any, among the few applications received.

A new personnel geographic distribution map is developing as a result of this first rotation, beginning with the Executive Committee (AMB). Similarly a review is underway of the distribution of TA and SNE posts.

There is currently a certain inconsistency in this regard between the TAs and the SNEs. On the one hand, maintaining a ceiling on the number of TAs helps the Agency avoid budget increases since the SNEs are

9 The primary difference between employment contract types stems from the administrative responsibility. While the TAs are the Agency's responsibility, the SNEs report to their Defence ministries, which has different impacts relating to salaries or privileges and immunities. Under both contract types, however, functional responsibility lies with the Agency's Executive Director.

financially dependent on their sponsoring participating Member State. On the other, the reality is that the number of candidates sent for positions set aside for SNEs is frankly very low, often making for difficult and slow recruiting efforts. This has obvious negative implications on the normal functions of directorates where a post is set aside for an SNE.

The staffing trend is illustrated in Figure 4 from a quantitative standpoint. With the exception of the important growth between 2004 and 2005, as a consequence of the initial recruitment process lasting until nearly the summer of 2005, the changes in number of personnel over the years have not been significant. The 2010 budget includes approval for a limited increase that will bring the number of employees to 114. Future trends will depend on many factors but it would seem logical to expect that as the EDA is assigned tasks across a broader spectrum, there will be a parallel increase in its number of personnel.

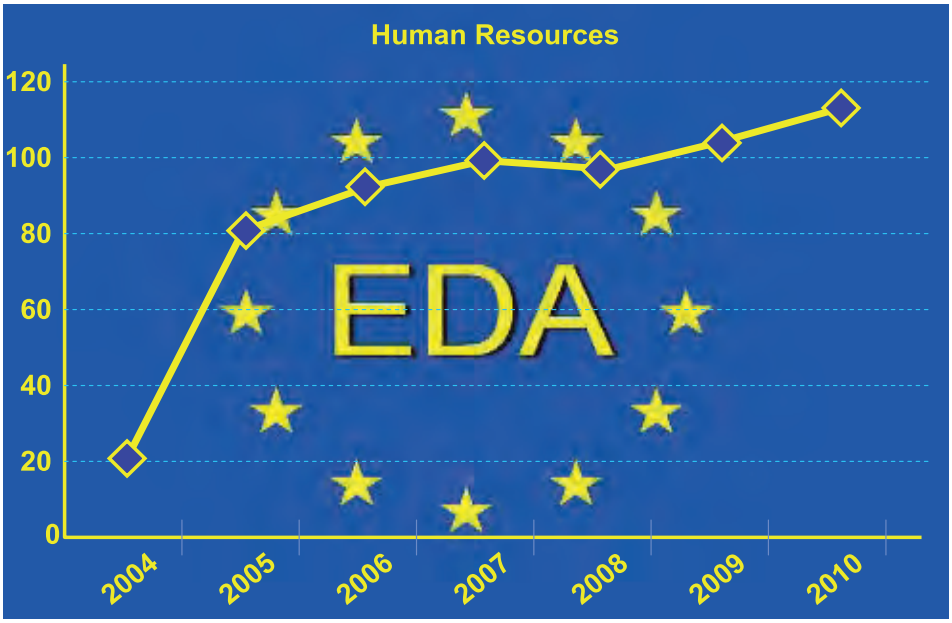

Figure 4. *Human Resources*

Like other European institutions, the Agency has a programme, named *stagiaire*, that permits it to send personnel to train for a specific period not exceeding one year. This measure has especially helped the EU's new

Member States in their adjustment period while adapting to the Union's rules, regulations and customs. This programme has further helped them acquire the necessary work experience in international organisations.

The Agency's creation has also had, without a doubt, an important impact on the structures of Defence ministries, and therefore on their personnel. Currently, with the goal of providing more fluid Agency–pMS communications, there are four main contact points, independent of those project–specific and subject–specific contacts that may exist now or in the future.

First there is the Central Point of Contact (*Central PoC*). All high–level matters related to the Agency's work are channelled through this PoC. This, of course, does not affect the direct relations maintained between the Agency Director –High Representative for the CFSP– and pMS Defence Ministers for very high–level matters.

Add to this Central Point, a PoC for each of the Agency's functional areas, with the exceptions of the Armaments Directorate and Industry and Markets Directorate, which share a single PoC. That is to say, PoC's are required from each Member State for Capabilities, for R&T, and for National Armaments Directors. In addition to this, a Deputy Central PoC must be appointed. Separately, the countries maintain an Agency PoC among their Brussels personnel. In this case, dealing with pMS EU Permanent Representatives personnel. This important lattice has distinct ramifications and implications to the respective Defence ministries.

In addition to its personnel, the EDA's other important assets logically includes its budgets. On the one hand it is important to note their slowly rising trend especially as compared to the increase in the Agency's work programme over the last four years. The resistance of pMS to increase the funds allocated to the Agency's operational budget is evident even when the amounts at stake are manifestly trivial next to the budgets of other Defence–related organisations or agencies. The operating budget funds studies and analyses leading to the support of proposals and initiatives associated to projects. The functional budget funds both the personnel costs and the day to day business of the Agency. The result has been minimal variations to the budget needed to support the Agency's management expenses (basically the sum of operational and functional expenses).

Figure 5 shows the Agency's budget trend. The 2010 budget was approved at 30.4M €. Nevertheless, if the amount of this budget seems insignificant,

it is worth noting that the Agency currently lacks acquisition budgets since it does not manage multinational defence–related equipment procurement programmes. Furthermore, the Agency manages ad–hoc projects where only a limited number of pMS collaborate and contribute financially based on the variable geometry concept. These ad–hoc projects are primarily in the R&T area, resulting in additional workloads for the Agency that must be accounted for.

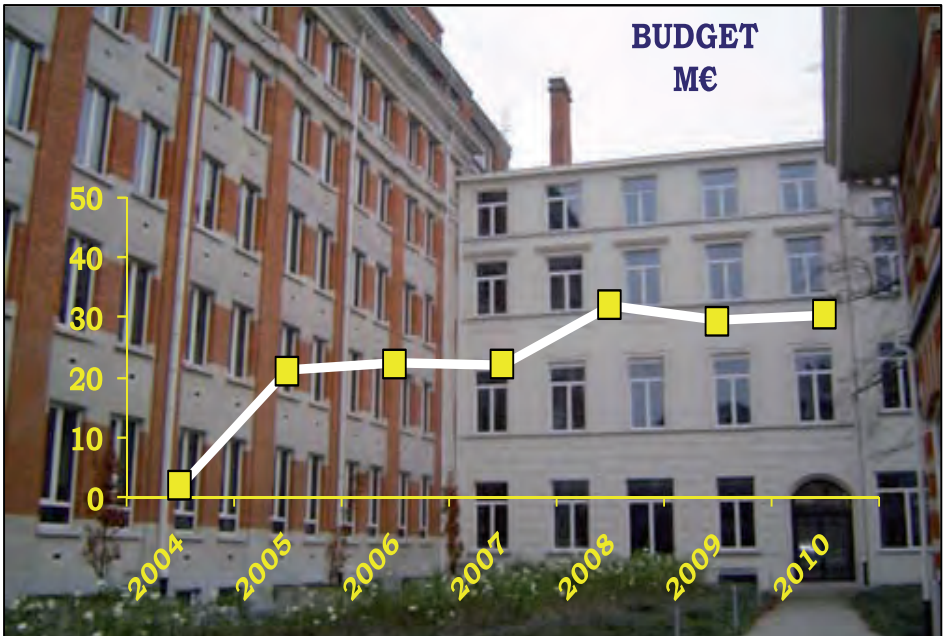

Figure 5. *Budget*

Financial contributions from pMS to the EDA's general budget (operating and functioning) take into account an allocation ratio that is based on the country's gross national product. This ratio confirms the unwritten 80/20 rule. That is to say that 80% of the Agency's budget is contributed by 20% of the pMS, with the five largest contributors being, in order, Germany, United Kingdom, France, Italy, and Spain.

The EDA: an evolving work programme

The Agency officially reached operating capacity on 1 January 2005, even before completing its personnel selection process. Since then its

work programme has been evolving as a function of the Member States' requirements, expressed through various SB meetings and reflected in the different annual work programmes, and also as a function of the opportunities that have emerged for specific needs.

After the scarce resources with which the Agency began operations, approval of the first work programme, for the year 2005, was given at the Steering Board in Defence Ministers formation meeting of 22 November 2004. Said programme included reaching the EDA's full operational functions, its definitive establishment, holding initial contacts with its major stakeholders (Member States, industry, LoI/FA Community, OCCAR, WEAG, etc.) and an appropriate dissemination of information (website creation, press releases through its own media/communications office, and so on). Additionally the EDA was to get on board with previously established European defence related initiatives such as the European Commission's Green Book on the acquisition of defence materials in Europe, the European Capabilities Action Plan (ECAP), and the assimilation of archives and know–how acquired by the WEAG in light of its progressive dissolution.

The Steering Board further assigned four Flagship projects to each of its operating directorates: Command, Control & Communications (C3) to the Capabilities Directorate, Unmanned Aerial Vehicles (UAVs) to the Research & Technology Directorate, Armoured Fighting Vehicles (AFVs) to the Armaments Directorate, and the launch of initiatives leading to the creation of a truly European defence market, and the strengthening of the EDTIB, assigned to the Defence Industry & Markets Directorate.

With all this baggage, the Agency's working agenda has been taking shape over its five years of existence. Its strategic framework (Figure 6) was completed in 2008 with the approval of the Capabilities Development Plan, the European Armaments Cooperation Strategy, and the R&T Strategy. The fourth Strategy, the one to strengthening Europe's Defence Technological and Industrial Base, had already been approved by the Defence Ministers the year before in May 2007. Each and every one of them is analysed in its respective chapter of this monograph.

The Agency incorporates an integrated approach to work whereby the European defence capabilities that must be maintained or developed fuels the projects and initiatives to be undertaken by the other 3 functional areas. That is to say, in the fields of defence research and technology, armaments cooperation, the European defence equipment market, and

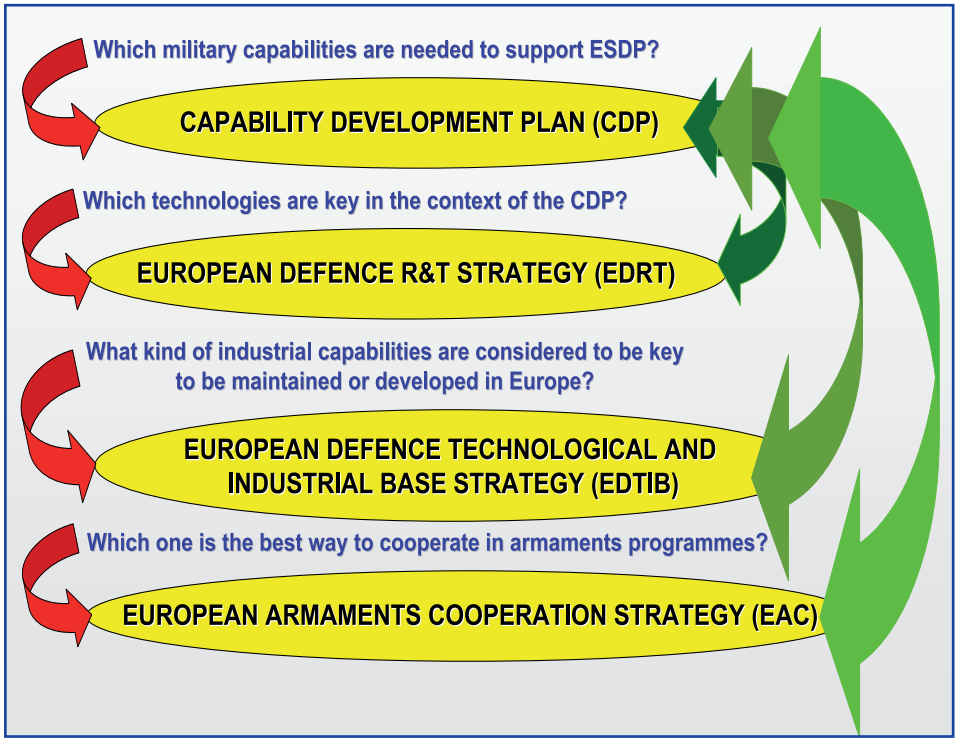

Figure 6. *The EDA Strategic framework*

the strengthening of the EDTIB. All of this while not ignoring the existence of specific working roles in each of the four functional areas that need not nor must not be directly related to this approach (Figure 7).

The Agency's work methods include a concept that is essential to their progress, that is the "Variable Geometry" through which projects that are undertaken may follow the *opt–out* principle, meaning one participates unless indications are given to the contrary and therefore opts out of the project, or the opt–in principle, describing when a group of countries decide to launch a project and invite other countries to participate following certain preset rules. It is therefore evident that not all projects need be launched "at 26", since that could slow progress. This concept is linked to that defined as the Permanent Structured Cooperation that appears in protocol 10 of the Treaty of Lisbon that is sure to become a model for the Agency's future work. Projects carried out primarily in R&T and in Armaments cooperation are framed in this context.

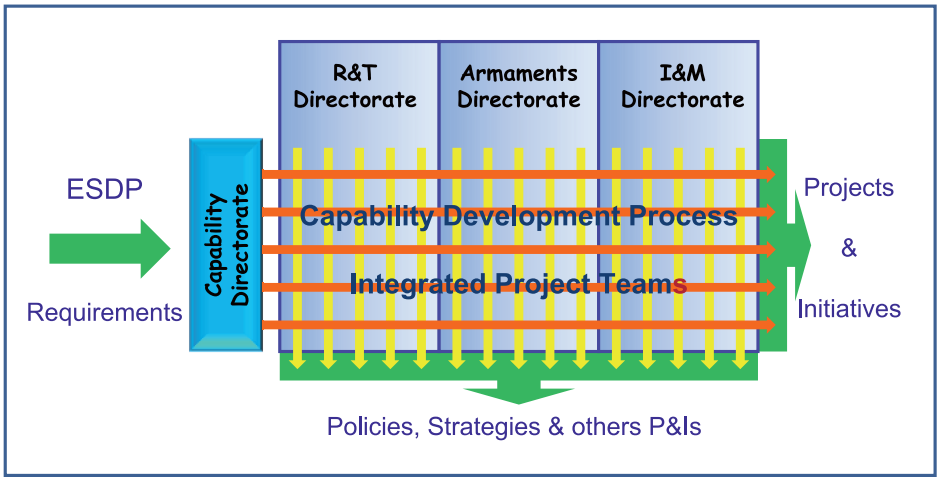

Figure 7. *Matrix work methodology*

The EDA: adding value to the development if the ESDP

Nowadays, no European country can singularly take on either the maintenance or the procurement of military capabilities required by the world's current threats. National defence budgets also cannot be the sole supporters of maintenance and innovation required by the Industrial and Technological base. This affirmation is equally applicable to those pMS with larger industrial bases, including any of the six LoI countries. And what is more important, Europe, due to the fragmentation that is present in both supply and demand, may be losing technological and industrial capabilities that would subject it to total dependence on other markets. The implications in the supply security field, so important to the Defence market, and therefore the possible consequences to EU operations in the framework of the ESDP are evident.

The difference between the EDA and previous endeavours is that the EDA executes its mission through a comprehensive approach to its tasks. It is one of the Council's institutions that looks to develop a rational Defence policy on a European scale beginning, with the fundamentals, like the analysis of military capabilities. From there it seeks to find common ground among the heretofore separate Research and Technology, cooperation, industry and Defence market. There is no denying the direct correlations between military capabilities, adequate investments in defence related

technologies, effective and efficient cooperation in design, development, production and logistical support of defence related teams, and a strong industrial and technological base.

But above all, the EDA has an important cohesive political role in the sense that it acts as an integrator, capable of combining efforts across pMS to improve European defence. The Agency acts as the conscience and catalyst of said efforts and serves equally as an excellent communications channel, capable of transmitting the political wills of its members. The 26 EDA governments collectively spend some 200,000M € in defence which, though it is 50% of what the United States spends, on paper is sufficient to cover European defence needs. However, the reality is that despite the considerable financial resources allocated to defence, Europe lacks certain military capabilities and properly equipped Armed Forces, as demonstrated by the fact that some 70% of ground forces are as yet unprepared to deploy beyond their respective national borders.

The Agency therefore presents itself as an instrument of ESDP that proposes policies and strategies directed toward finding commonality pertaining to defence matters in the framework of intergovernmental politics. That is to say the framework that is subject to agreements that, without legal binding, politically commit the participating Member States. It is the correct solution to further the building of the Defence Europe, given the coexistence of national sovereignty with European defence and security policies. Aside from not being legally possible according to the current Treaty of Lisbon and the Treaty on the Functioning of the EU, it is still considered premature to include the Agency in the framework of top–down legal community policies. Of course neither of those aspects is at odds with the proposals of the Permanent Structured Cooperation (PSC) reflected in the Treaty of Lisbon and whose establishment continues to be recommended by many experts, though still unclear in regards to its possible format.

The EDA is in the process of implementing the four areas that compose its strategic framework, as was approved throughout 2008. This process will require significant time and dedication, not only by the Agency proper but also by the Defence ministers and others in the defence arena such as the ASD and the national defence industry associations.

What is certain is that the Agency has received recognition as a main actor in the interesting process of building up European defence. As was previously noted by the Agency's first Head, SG/HR Javier Solana, "*The*

need to strengthen European military capabilities to address our aspirations is more urgent than ever, as is the need to respond better to the challenges faced by our defence industry. The European Defence Agency will play an essential role in this context".

ANNEX

DEFENCE TIMELINE WITHIN THE EUROPEAN UNION

This timeline, though not comprehensive, aims to reflect the most significant milestones achieved thus far in the long process of building up defence within the European Union. With that in mind, the starting point is at the birth of the EU, through the Maastricht Treaty, whereby the founding Treaties of the European Communities (Treaty of Paris 1951, Treaty of Rome 1957, Single European Union 1986) are amended and where for the first time, consideration was given beyond the initial economic objectives of the Communities and a clear political vocation was initiated. The system of intergovernmental cooperation that is currently the basis for agreements and advances in respect to a Common Foreign and Security Policy (CFSP) was established as an outcome of Maastricht.

1992

7 February	Signing of Treaty on European Union in Maastricht by the then 12 member states (EU–12). For the first time, the EU adopts a security policy. Article J.4 states that "*the common foreign and security policy shall include all questions related to the security of the Union, including the eventual framing of a common defence policy, which might in time lead to a common defence*." Annexed to the Treaty, a declaration is included from the Western European Union (WEU) that provides among other measures for "*enhanced cooperation in the field of armaments with the aim of creating a European armaments agency*."
19 June	Petersberg Declaration. The "Petersberg missions" are adopted at the Ministerial Council of the WEU and include three tasks: humanitarian and rescue, peacekeeping, and crisis management, including peacemaking operations.

December — Transfer the functions of the Independent European Programme Group (IEPG), which had been created in 1976, to the WEU.

1993

May — Founding of the Western European Armaments Group (WEAG) that replaces the IEPG.

1 November — Treaty of European Union comes into effect.

1995

1 January — Fourth EU enlargement with the accession of Austria, Finland and Sweden (EU–15).

26 July — Creation of an ad hoc group on armaments policy (POLARM) before the Council of the European Union (COREPER) in the framework of the second pillar.

1996

24 January — European Commission Communication COM (96) 10. "*The challenges facing the European defence industry; a contribution to taking action at the European level*".

12 November — Creation of the Organisation for Joint Armament Cooperation (OCCAR) by Germany, France, Italy and the United Kingdom. This is a provisional structure that, for the moment, lacks a legal status.

3 June — Creation of the European Security and Defence Identity within NATO. Agreement is reached for the transfer of NATO structures and resources for future military missions led by the WEU.

18/19 Nov — Ostende Declaration. The Defence Ministers of the WEAG create the Western Europe Armaments Organisation (WEAO) as a legal entity subsidiary to the WEU.

1997

17 June — Signing of the Amsterdam Treaty. This incorporates the Petersberg missions to the CFSP and opens the way for

integrating the WEU into the EU (Art. 17). The position of Secretary General and High Representative of the CFSP is created. The WEU declaration annexed to the final Act of the Treaty makes reference to the study of a "*cooperation in the field of armaments, as appropriate, within the framework of the Western European Armaments Group (WEAG), as the European forum for armaments cooperation, the EU and WEU in the context of rationalisation of the European armaments market and the establishment of a European Armaments Agency*". The WEAG/WEAO were recognised as "the European body for armaments".

4 November — European Commission Communication COM (97) 583, *"Implementing European Union Strategy On Defence–Related Industries".*

18 November — Meeting of the WEAG Defence Ministers in Erfurt. Agreement is reached to develop a master plan as well as to create a group of experts with the purpose of creating a European Armaments Agency.

1998

6 July — Signing of the Letter of Intent in Farnborough in which France, Germany, Italy, Spain, Sweden and the United Kingdom commit to facilitating the cross–border restructuring of the European defence industries.

9 September — Signing of the OCCAR Convention with the objective of improving the management of joint armaments–related projects.

4 November — Informal meeting of the Defence Ministers in Vienna. For the first time, in the institutional framework of the EU, the Ministers of Defence have a debate specific to Defence.

17 November — The WEAG Ministers agree in Rome that "The European Armaments Agency (EAA) Master plan" will become the basis for later development of said Agency.

3/4 December — French–British summit in Saint Malo. Joint declaration regarding European defence arguing in favour of establishing "*autonomous and credible*" military resources within the

EU. The Saint Malo declaration was then considered the reference for launching the ESDP.

1999

4/5 June — European Council of Cologne where it is agreed that "*The European Union must possess autonomous capability supported by military forces, must have the means to make decisions to this end, and must be prepared to address international crises without prejudice to the actions taken by NATO*".

Javier Solana is named as Secretary General (SG) of the EU Council and High Representative (HR) for the CFSP.

Reference is made to the possibility of creating:

- periodic meetings (or special meetings) of the General Affairs Council, in which the Defence Ministers will participate when necessary;
- a permanent agency based in Brussels (PCS Political and Security Committee) consisting of representatives with political and military expertise;
- an EU Military Committee of Military Representatives that will make recommendations to the Political and Security Committee;
- an EU Military Staff, that will include a Situation Centre;
- other resources, like a Satellite Centre and a Security Studies Institute.

15 November — First meeting of the EU Defence and Foreign Affairs Ministers in Brussels.

10/11 Dec — Helsinki European Council where the Member states' governments agree to the "Headline Goal" (deployment of 60,000 men in a period of 60 days with the mission lasting one year) to be achieved in 2003.

The Council agrees to establish new political and military organisms and structures that will allow the Union to

guarantee the political orientation and strategic direction needed for the EU's ESDP operations, respecting the single institutional framework.

2000

27 July — Signing of Framework Agreement (FA) restructuring the European Defence industry within the 6 countries signing the LoI.

20 November — Brussels Capabilities Commitment Conference. Defining of "Headline Goal" and development of "Force Catalogue".

6/12 December — European Council in Nice. Agreement to permanently establish Political and Security Committee (PCS), EU Military Committee (EUMC) and EU Military Staff (EUMS).

Acceptance of directives pertaining to establishing military operations.

2001

28 January — OCCAR granted legal status.

30 January — Council Decision (2001/78/CFSP) of 22 January creating the EU Political and Security Committee (PCS) (OJ L 27).

Council Decision (2001/79/CFSP) of 22 January creating the EU Military Committee (OJ L 27).

Council Decision (2001/80/CFSP) of 22 January creating the EU Military Staff (OJ L 27). (Modified by Council Decision 2005/395/CFSP of 26 May 2005 –OJ L 132).

26 February — Signing of Nice Treaty that modifies the Treaty on European Union and the Treaty establishing the European Community.

15 May — Signing of EUROPA MoU by the WEAG Defence Ministers for cooperation on Defence related research and technology.

28 June — The WEU assumes a residual status in Brussels.

19/20 Nov — Conference to improve military capabilities.

14/15 Dec — European Council of Laeken. Commencement of European Capabilities Action Plan (ECAP). Analysis of EU's initial operational capability to conduct various crisis management operations.

2002

1 January — Spanish PResidency over EU.

Birth of EU's Satellite Centre (Torrejón, Spain) and Institute for Security Studies (Paris).

22/23 March — Informal meeting of EU Defence Ministers in Zaragoza, Spain.

22/28 May — First EU crisis management exercise.

16 July — European Aerospace Advisory Group presents "STAR 21" report to European Commission President. The document contains a "Revised aerospace strategy for the 21st century".

10 September — "Defence Group" is created at European Convention. Group will be presided over by Frenchman Michel Barnier.

17 September — Publication of new "National Security Strategy" by the United States.

16 December — Joint NATO–EU declaration regarding ESDP (*Berlin Plus*) granting the EU access to NATO's crisis management resources.

Final "Defence Group" report at European Convention.

2003

27 January — EU Foreign Affairs Ministers approve first European military mission in the Former Yugoslav Republic of Macedonia.

1 March — The ECAP working group presents its final report.

11 March — European Commission Communication COM (2003) 113 "*European Defence. Industrial and Market issues: Towards an EU Defence Equipment Policy*".

31 March — Launch of CONCORDIA mission, first EU mission in former Yugoslav Republic of Macedonia using NATO structures and resources pursuant to *Berlin Plus*.

12 June — Launch of ARTEMIS operation, in the Democratic Republic of Congo, first EU mission without NATO, outside the European continent.

19/20 June — European Council of Thessaloniki. The SG/HR for CFSP, Javier Solana, presents initial recommendations for an EU Security Strategy. Italian presidency is assigned task of developing plans to create a European Agency in the armaments field.

18 July — Presentation of Draft Treaty that establishes the basis for the European Constitution. Article I–41, specific directives pertaining to the PCSD, establish "*Member States shall undertake progressively to improve their military capabilities.* ***An Agency in the field of defence capabilities development, research, acquisition and armaments*** *(European Defence Agency)".*

17 November — The Foreign Affairs Council accepts the principles that guide the creation of an *Agency* in the field of developing defence capabilities, research, acquisition and armament.

12/13 Dec — European Council of Brussels. Adoption of the final version of the European security strategy based on Solana's document "A Secure Europe in a Better World".

2004

28 January — Nick Witney named to lead Agency Establishment Team (AET) and said team begins working. Navy Captain Jesús Lúgaro is named Spanish representative to the Team.

18 February — At the Berlin Summit, Germany, France and the UK propose the creation of *Battle Groups* (1500 soldiers, deployable to crisis areas outside European territory 5–10 days after mission approval by the Council and with logistical self–sufficiency for 30 days extendable to 120 days).

23 February	Council Decision (5770/04) establishing the "Athens" mechanism to administer the financing of common costs of EU military and defence operations.
15 March	European Commission Communication recommending the establishment of a Research & Technology programme in the field of internal security and to missions outside the EU (ESRP: *European Security and Research Programme)*. Efficient Intergovernmental collaboration is advocated in the field of research and civilian–military technology including cooperation with the future European Defence Agency in the field of capabilities, research, acquisition and armaments.
31 March	European Parliament and Council approve 2004/18/EC on *"coordinating procedures for awarding contracts for public works, supplies, and services".*
5/6 April	Informal meeting of EU Defence Ministers. *Battle Groups* concept is approved.
28 April	AET report as well as presentation of draft of future Joint Action identifying the EDA's statutes.
1 May	Fifth EU enlargement. Simultaneous accessions of Poland, Czech Republic, Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Slovakia and Slovenia (EU–25).
12 July	Council Joint Action (2004/555/CFSP) *creating the European Defence Agency (EDA).*
30 July	Britain's Nick Whitney named as Agency's first Executive Director, after having headed the AET, and as his Deputy, Germany's Hilmar Linnenkamp who had also participated in the AET.
14 October	Naming of the EDA's first four functional Directors. Candidates from Belgium, France, Italy and Sweden respectively occupy the Direction of Capability, Research & Technology, Armaments, and Industry and Market.
17 September	The EDA Steering Board meets for the first time in Defence Ministers formation in Noordwijk (Netherlands).

23 September European Commission Communication COM (2004) 608 "*Green Paper on Defence Procurement*".

22 November The EDA Steering Board of the EDA meets for the second time in Defence Ministers formation in Brussels. The EDA's 2005 budget is approved as well as the year's first annual Work Programme.

2 December Launch of EUFOR–ALTHEA military operation in Bosnia–Herzegovina.

2005

2 March First EDA Steering Board meeting in National Armaments Directors formation. Board decides to initiate work leading to the creation of a European Defence Equipment Market (EDEM).

22 April First EDA Steering Board meeting in Research & Technology Directors formation. Board decides to transfer WEAG activities to the EDA over the course of 2005.

2 May Council Joint Action 2005/355/CFSP establishing the EUSEC DR *Congo* civilian and military mission of providing advice and assistance for security sector reform in the Democratic Republic of Congo.

21 June First EDA Steering Board meeting in the formation of National Defence Planners and Policy Directors responsible for Capabilities.

18 July Council Joint Action 2005/575/CFSP of 18 July 2005 on the creation of the European Security and Defence College (ESDC) (OJ L 194, July 26).

Council Joint Action 2005/557/CFSP establishing "*Support to Amis II*", a civilian–military to assist the African Union mission's efforts on political, military, and police matters in the Darfur region of Sudan.

21 November The EDA Steering Board in Defence ministers formation approves the "*intergovernmental regime to improve the transparency and promotion of competition in the European defence equipment market*" together with the "*Defence*

Procurement Code of Conduct". Ministers also approved the EDA budget and Work Programme for 2006.

6 December — The Commission announces its proposals to put future initiatives in place to improve competition in European defence acquisitions. Among others, the Commission will issue an interpretive communication in 2006 regarding the derogation of internal market rules resulting from Member States invoking TEC Article 296.

14 December — First EDA contract awarded to study unmanned aerial vehicle technologies.

2006

9 February — First Annual EDA "Research & Technology Conference".

7 April — Approval of measures to support the implementation of the EDA's "Defence Procurement Code of Conduct" as well as for launching its Electronic Bulletin Board (EBB) that will commence 1 July 2006. The Executive Committee of the Aerospace and Defence Industries Association of Europe (ASD) agrees to co–sign the Code of Best Practice in the Supply Chain (CoBPSC) committing its members to abide by this Code when it is technically and financially viable in its subcontracts.

25 April — Spain and Hungary decide to 'opt–out' of the "*intergovernmental regime to improve the transparency and promotion of competition in the European defence equipment market*", together with the "*Defence Procurement Code of Conduct*", until a later date, while making adjustments at a national level to accommodate the Codes' principles.

12 June — Launch of Operation EUFOR DR *Congo* supporting the UN Mission (MONUC) through the Democratic Republic of Congo's electoral process.

1 July — Launch of Code of Conduct for promoting competition in defence procurement, subscribed to by all EDA participating countries except Spain and Hungary.

20 September — EDA Steering Board in National Armaments Directors formation agrees on "Characteristics of the future European

Defence Technological and Industrial Base". Similarly, approval is given to framework agreements governing the Security of Supply in situations of crisis, emergencies, or armed conflicts as well as regarding the Security of Information governing acquisitions of a classified nature among countries subscribing to the Code of Conduct.

3 October "Long–Term Vision for European Capability Needs" is presented at the Levi (Finland) EDA meeting of the Steering board in Defence Ministers formation.

13 November The first *Joint Investment Programme* (JIP) on research and technology is approved at the EDA Steering board meeting in Defence Ministers formation. The programme sets out to study 18 technologies relating to five military capabilities focusing on "Protecting the Armed Forces". Nineteen countries, including Norway, which is not part of the EDA but has an administrative collaboration agreement with the EDA, join the project valued at 55M €.

7 December EU Commission Interpretative Communication COM (2006) 779 pertaining to *"applying Treaty Article 296 to public defence contracts"*.

14 December EDA Steering Board meeting in National Defence Planners and Capabilities Directors formation. Directors agree on the principles that will guide the Capabilities Development Plan (CDP), that will provide a systematic and structured methodology for developing military capabilities required for the ESDP's military operations. The plan will further serve as the basis for Member States to develop plans and programmes. The process will include the EDA, the Member States, the EU Military Committee, the EU Military Staff and the EU Council.

2007

1 January Sixth EU enlargement incorporating Bulgaria and Romania as Member States. The EU–27 becomes the world's third largest population with nearly 500 million residents. In Defence terms, with nearly 2 million military professionals, the budget represents 201,000M € (2006), which is 1.78% of

its Gross National Product (GNP), which in turn represents 25% of the world's GNP.

1 February — Second annual EDA conference in Brussels under the theme "*European Defence Technological & Industrial Base"* (EDTIB). The EDA will consider the results of this conference while drafting the future Strategy for strengthening the EDTIB.

27 March — Launch of second phase of the European Bulletin Board for defence procurement relating to the "*Code of Best Practice in the Supply Chain*". From then on, defence industries may register and publish their subcontracting opportunities through this portal. This improves access to the defence markets for small and medium enterprises.

14 May — Agreement at the meeting of the Agency's steering board in Defence Ministers formation to launch the "*EDTIB Strategy*", strengthening the European defence industry's position for developing military capabilities.

24 May — Javier Solana announces the appointment of Germany's Alexander Weis as the Agency's new Executive Director beginning 1 October 2007. The Steering Board also decides that, from 1 January 2008, there will be two Deputy Executive Directors. The heretofore Armaments Director Carlo Magrassi (Italian) will become the strategy Deputy, and a Polish official Adam Sowa will become the operations Deputy.

1 July — Spain and Hungary subscribe to the intergovernmental regime promoting competition in the European defence market and to its Code of Conduct. All of the nations agreeing to the principles of the Code of Conduct in 2005 are now subscribed to it. Only Bulgaria and Romania, which joined the EU in January, are not subscribed.

25 September — During a Steering Board meeting, the National Armaments Directors approved four roadmaps to implementing the "EDTIB Strategy" approved by the Defence ministers on 14 May.

Initial Agency report after the first year of the "*intergovernmental regime for the improvement of transparency and competition*

in the European defence market", the "*Code of Conduct",* the *"Code of Best Practice in the Supply Chain",* and the associated Electronic Bulletin Boards (EBB).

5 November — Javier Solana announces the appointments of the new Capabilities Director Jonathan Mulling (British) and Armaments Director Jukka Juusti (Finnish) that on 1 January 2008 will respectively replace the current Belgian and Italian directors, who have been in their posts since the start of the Agency.

19 November — EDA Steering Board meeting in Defence Ministers formation, where the ministers adopt the framework for developing the Agency's "*Strategy on Defence Research & Technology*", the technologies to be developed in support of ESDP and the initiatives to be implemented in this regard.

5 December — European Commission Communication COM (2007) 764 final "*Strategy for a Stronger More Competitive European Defence Industry*".

14 December — Signing of the first three contracts in the Agency's *Joint Investment Programme* (JIP) pertaining to "Protecting the Armed Forces" with a value of 13.1M €.

2008

28 January — EUFOR *Tchad*/RCA military mission launched by EU in the Republic of Chad and the Central African Republic.

12 February — Council Joint Action 2008/112/CFSP establishing EU mission *SSR Guinea Bissau*, supporting reform in the Republic of Guinea–Bissau's security sector.

27 February — Third annual EDA conference on "Commercialising Logistics" addressing private sector involvement in logistical support for crisis–management operations.

25 April — Bulgaria subscribes to the "*Intergovernmental Regime promoting transparency and competition in the European defence market*" and to its corresponding Codes of Conduct. Among the EDA's 26 member states only Romania remains outside the regime.

21 May — Agency Head, Javier Solana, announces the appointment of the new Research & Technology Director Christian Bréant (Frenchman) taking his post on 1 August replacing the exiting Frenchman holding the post since the Agency's founding.

26 May — EDA Steering board meeting in Defence Ministers formation launches the Agency's second *Joint Investment Programme* focusing on emerging technologies that may negatively impact the battle field. (*Disruptive Defence Technologies*). Eleven countries join the project investing a total of 15.5M €.

At the same meeting, Norway agrees to subscribe to the "*intergovernmental regime promoting transparency and competition in the European defence market*", accepting its corresponding Codes of Conduct. Note that Norway is not an EU member though it is a member of the European Economic Space and maintains a collaborative administrative agreement with the EDA. Norway's participation becomes effective 1 October 2008.

23 June — Council Joint Action 2008/550/CFSP establishes the European Security and Defence College as a network for bringing together institutes, colleges, academies, universities and EU institutions.

8 July — EDA Steering Board meeting in National Defence Planners/ Capabilities Directors formation approves the Capabilities Development Plan that defines future military needs and ESDP priorities. EDA Member States agree to use the plan as a guide for future national decisions affecting investments in defence and as a reference for coherent developments that enhance cooperation. Twelve priorities are identified including mobile countermeasures for aerial systems and increased helicopter availability.

28 August — Recognising the EDA's goal of becoming the main reference for defence–related information, the Agency's website adds an interactive system providing access to defence data on its 26 Member States.

15 October EDA Steering board meeting in National Armaments Directors formation approves the European Armaments Cooperation Strategy. This supports the European Security and Defence Policy. The strategy has three aims: generate, promote and facilitate cooperation through a dedicated programme preparation phase; coordination with the European Defence Industrial and Technological Base; and lastly, improving the efficiency of armaments cooperation based on lessons learned from previous programmes.

24 October EDA Steering Board in National Armaments Directors formation approves the Code of Conduct for Offsets to promote more transparent use of Offsets and help shape its evolution to strengthen the European Defence Technological and Industrial Base.

10 November EDA Steering Board in the Defence Ministers formation endorses European Defence Research and Technology (EDRT) Strategy to enhance and develop more effective research collaboration among EDA participating Member States in support of military capabilities required by the Armed Forces.

Council Joint Action 2008/851/CFSP to carry out military operations to contribute to the discouragement, prevention, and repression of acts of piracy and armed thievery off the coasts of Somalia. EU NAVFOR Operation ATALANTA.

4 December Javier Solana, EDA Head, announces the appointment of Arturo Alfonso–Meiriño as the Agency's Industry and Market Director, taking the post on 1 January 2009. The Spaniard is promoted from his current position as Assistant Director were he has served since the founding of the EDA.

11 December European Security Strategy report under the heading "Providing Security in a Changing World".

Among the Presidency's Conclusions is a Council declaration on the improvement of the ESDP in matters pertaining to military capabilities, and to the Technological and Industrial Base, as a key element to supplying said capabilities.

2009

5 March	Multinational Space–based Imaging System (MUSIS) project launched for the next generation of military earth observation satellites.
10 March	Fourth annual EDA conference focusing on "Helicopters – Key to Mobility".
2 April	EDA Steering Board in National Armaments Directors formation agrees to begin negotiations leading to an Administrative Agreement between the EDA and OCCAR.
18 May	"European Framework Cooperation for Security and Defence Research" project launched to provide synergies between the Commission and the EDA on expenses related to research of technologies having application in both defence and security.
10 June	Publication of Directive 2009/43/EC of the European Parliament and of the Council simplifying terms and conditions of transfers within the Community of defence–related products.
12 June	Under the Czech Republic presidency and with the EDA's support, Prague hosts workshop on streamlining the certification of military airworthiness.
17 June	MID–Air Collision Avoidance System (MIDCAS) project launched within EDA framework by France, Germany, Italy, Spain, and Sweden at the Paris Air Show.
1 July	Code of Conduct on Offsets comes into force with the goal of augmenting transparency and monitoring the impact of Offsets practices on the strengthening of Europe's Defence Industrial and Technological base. Norway plus all EDA participants except Romania subscribe to the Code.
	Third Party Logistic Support (TPLS) platform launched in the framework of ESDP operations.
20 August	Publication if the Official Journal of the EU of Directive 2009/81/EC of the European Parliament and of the Council on the coordination of procedures for the award of certain work contracts, supply contracts and service contracts

by contracting authorities or entities in the fields of defence and security, and amending Directives 2004/17/EC and 2004/18/EC.

16 September "The Role of Space in Security and Defence" conference organised by the European Commission, the European Space Agency, and the EDA to improve synergies among main European stakeholders.

23 September Javier Solana appoints Dutchman Rob de Jong as new Chairman of the Steering Board of National Armaments Directors and France's Lt. General Jean–Marc Denual to chair the Capabilities Directors Steering Board.

9 October The Agency's Steering Board in National Armaments Directors formation approves guidelines facilitating access by SMEs to the defence market. Approval is also given to continue the work on the roadmap to identify key industrial capabilities in helicopters and unmanned aerial vehicles in the framework of Future Aerial Systems.

3 November Completion of the ratification of the Treaty of Lisbon with the signing by the Czech Republic's President Vaclav Klaus after a favourable ruling by the Czech Constitutional Tribunal. The concern over Ireland's outcome was resolved when the nation ratified the Treaty after the favourable 3 October referendum, which in turn permitted the Polish President to sign it on 13 October.

17 November GAERC Council Conclusions "10 Years of ESDP: Challenges and Opportunities".

The EDA's Steering Board in Defence Ministers formation:

- Agrees to launch a Helicopter Training Programme to improve their availability on short notice for ESDP operations.
- Signs (14 of the 26 Defence Ministers of the Member States participating in EDA) a LoI to further the European Air Transport Fleet.
- Agrees to ratify the commitment of EDA participating Member States to continue working to create a European defence market that is more open, more

competitive, and one that ensures equal, just, and non–discriminatory treatment of participants in the defence procurement market.

– Agrees to include in the 2010 Work Programme an analysis identifying the impact of the Treaty of Lisbon on the European Defence Agency's mission and operations, and especially to its role in the Permanent Structured Cooperation.

– Agrees to launch the Framework Cooperation for Security and Defence to further the systematic synchronisation of R&D investments by the EDA and the European Commission to maximise the complementary nature of the research programmes relating to Security, Space, and Defence.

– Approves the EDA's 2010 Budget (estimated at 32.4M €) and 2010 Work Programme.

18 November Herman Van Rompuy nominated as First EU President under the new Treaty of Lisbon. Catherine Ashton is appointed High Representative for Foreign Affairs and Head of the European Defence Agency.

26 November Naming of the new team of Commissioners of the EU Commission.

1 December Treaty of Lisbon goes into force.

CHAPTER TWO
THE DEVELOPMENT OF CAPABILITIES

By Fernando Riera Berenguer

The Capabilities Directorate

The improvement of the military capabilities of the participating Member States as well as the identification and further development of new ones, in accordance with the requirements derived from the operational implementation of the ESDP, is at the core of the mission of the European Defence Agency.

Therefore, the Capabilities Directorate, as one of the Agency's four functional Directorates, can be considered as the engine of the comprehensive approach of the EDA towards the achievement of its mission.

Article 5, "Functions and Tasks", Section 3 of Joint Action 2004/551/CFSP of the Council, by which the European Defence Agency was created, lists its main areas of activity, which, as they relate to the development of defence capabilities in the area of crisis management, specifically states:

- Identifying, in association with the competent Council bodies, and utilising the Capability Development Mechanism (CDM), the EU's future defence capability requirements in quantitative and qualitative terms (encompassing both forces and equipment).
- Coordinating the implementation of the European Capabilities Action Plan (ECAP) and any successor plan.
- Scrutinising, assessing and evaluating against criteria to be agreed by the Member States the capability commitments given by the Member States through the ECAP process, and utilising the CDM.
- Promoting and coordinating harmonisation of military requirements.

– Identifying and proposing collaborative activities in the operational domain.

– Providing appraisals on financial priorities for capabilities development and acquisition.

The above listed functions and tasks are now specified in Art 45 paragraph (a) of the Lisbon Treaty when it states, that the EDA shall have as its tasks *inter–alia*, "to contribute to identifying the Member States military capability objectives and evaluating observance of the capability commitments given by the Member States".

General Issues on Force Planning in the European Union

Background

Before analysing the Agency's sphere of action in terms of capabilities development, it is worth looking back in time to see how military capabilities were developed prior to the appearance of the EDA.

At the European Council of Helsinki in December 1999, the EU set the "General Forces Objective" for Petersberg missions. This goal, which was called the *Helsinki Headline Goal* (HHG)[10], was to have been completed by 2003 (HHG 2003). It initiated the first cycle for Force Planning in the European Union.

On the basis of political–military objectives defined at a political and strategic level and oriented around theatres of action, the Council approves the military force requirements that are needed for achieving those objectives. Against those requirements, the countries contribute, on a voluntarily basis and in accordance with their own possibilities and national assessment, to the common effort. A comparative analysis of the force requirements and those made available by the countries reveals the force shortfalls and the operational risks present in those theatres of action.

10 HHG: Primary force objective. By 2003, member States shall be able to rapidly deploy and sustain a military ground force that is able to carry out the entire range of "Petersberg Missions" with a troop strength of between 50,000 and 60,000, with its corresponding naval and air support (if any). This force shall be able to deploy within 60 days and remain on station for a year.

At the conclusion of the process, the Military Committee of the European Union (EUMC), as the main military body responsible for the conduct of Force Planning, by taking into account the operational risks involved, prioritizes the shortfalls. This exercise is made with the aim of launching mechanisms that will allow fulfilling the gaps.

In the first Force Planning cycle, the initial step was the drafting of the "Helsinki Headline Goal Catalogue" (HGC), which defined the forces required to attain the political objective. To complete the catalogue, the countries offered forces and capabilities that were included in the so–called "Headline Force Catalogue" (HFC). This first cycle ended in 2001 with the comparison of the HGC (requirements) and the HFC (availability), and which yielded the shortfalls that were laid out in the new catalogue, called the "Helsinki Progress Catalogue" (HPC). The new EU's military requirements were compiled then in a catalogue of requirements called HHC 02 (*Helsinki Headline Goal Catalogue 02*).

No further full planning cycles have been conducted since, though the requirements catalogue (HGC) was updated and led to the promulgation in 2003 of a new Force Catalogue (HFC), with updated offers from the States, and of a new Shortfalls Catalogue (HPC). The HFC and HPC were last updated in the first quarter of 2004 to include the contributions of the new member States following the enlargement of the EU to 25.

Although unfilled needs still existed, the nations regarded the Helsinki Headline Goal as achieved in December 2003.

Following the conclusion of the first Force Planning cycle in 2001, negotiations were started on implementing and realising this planning process in the EU through the so–called CDM document, which was approved in March 2003. This system, similar in its mechanics to NATO's, differs fundamentally in that the contribution is always voluntary (each nation's contribution is not stipulated) and is not periodic in nature. The intention is not for the organisation to dictate procurement policies, but rather for the States to provide what the Union needs voluntarily.

The process described in the CDM featured three main steps:

- Establishing the Military Requirements for reaching the objectives and the national commitments to attain them.
- Monitoring and assessing the progress.
- Solving any shortfalls.

Throughout the process it was evident that the one charged with developing military capabilities within the EU was the Political and Security Committee (PSC), and that the EUMC's responsibilities in this matter, as the "supreme military body within the Council", were to:

- Establish requirements.
- Compare against member contributions.
- Identify shortfalls.
- Evaluate the risks of these shortfalls.
- Prioritize shortfalls.

During Spain's EU presidency in 2002, the ECAP was put into motion and consisted of setting up a series of panels, led by the nations, for the purpose of proposing possible solutions to the shortfalls detected during that first planning cycle. The ECAP panels presented their proposals to the Military Committee and to the States on 1 May 2003 in an effort to address the deficiencies found.

Starting in May 2003, a second ECAP phase was started in which a series of Project Groups (PG) were created whose task was to devise specific measures for dealing with the shortfalls. It was no longer a question of continuing to study the capabilities problem, but to acquire said capabilities. At the second capabilities conference on 19 May 2003, the PGs in Figure 8 were created:

Project Groups	Leader
Air-to-Air Refuelling (AAR)	Spain
Combat Search and Rescue (CSAR)	Germany
Headquarters (HQs)	United Kingdom
Nuclear, Biological & Chemical (NBC)	Italy
Special Forces Operations (SOF)	Portugal
Tactical Ballistic Missile Defence (TBMD)	Netherlands
Unmanned Aerial Vehicle (UAV)	France
Strategic Airlift	Germany
Space-based Assets	France
Interoperability Issues and Working Procedures for Evacuation and Humanitarian Operations	Belgium
Strategic Sealift	Greece
Collective Medical Protection	Netherlands
Attack Helicopters	Italy
Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR)	United Kingdom

Figure 8. *Projects Groups on the ECAP*

The entire ECAP process was led by the EUMC.

When the Intergovernmental Agency in the field of defence capabilities, research, procurement and armaments, or, in its abbreviated form, the European Defence Agency (EDA), was established in July 2004, the tasks of "Develop defensive capabilities in the field of crisis management" were given in particular to the Capabilities Directorate.

At the EUMC's request, in 2005 the process of reviewing the entire ECAP was undertaken in a joint effort by the EDA and the EUMS and the Council approved a proposal through which many of the PGs were transferred to EDA and organised into a more coordinated structure. The exception was for those PGs dealing with "operational" issues such as concepts, doctrine, procedures, etc. which remained under the supervision of the EUMC. Finally some others were simply dissolved.

The task of developing military capabilities was thereafter included in the Comprehensive Capability Development Plan (CCDP) under the EDA's structure and this one divided into six Integrated Development Teams (IDTs) associated with the six areas of capabilities described later on in this Chapter.

Role of the EDA within the second European Union Force Planning cycle

In May 2003, at the meeting of the Foreign Affairs Council, it was declared that the EU had the operational capability to carry out the entirety of the "Petersburg Missions", limited and restricted though it was by acknowledged shortfalls. This declaration was made just a few moths ahead of the adoption, by the European Council, of the "European Security Strategy" (ESS), the so called Solana's document, which recognises the EU's prominent role in global security.

In 2004, the member States decided to establish a new Headline Goal, the Headline Goal 2010 (HLG 2010) which, by taking already into account the "European Security Strategy" document issued in December 2003, was the reference for the drafting of the Requirements Catalogue 05 (RC 05). It replaced HHC 02 and reflects the military forces and the capabilities needed to enforce the ESDP goals. Figure 9 shows the process described.

What was new about this second planning cycle with respect to the first one was that RC 05 not only identified the forces needed, but also the capabilities of those forces. That is to say, it is a quantitative and qualitative catalogue that defines the forces required and the capabilities associated with said forces. It may be affirmed, then, that RC 05 represents the

starting point in the planning process of the military capabilities within the context of the ESDP.

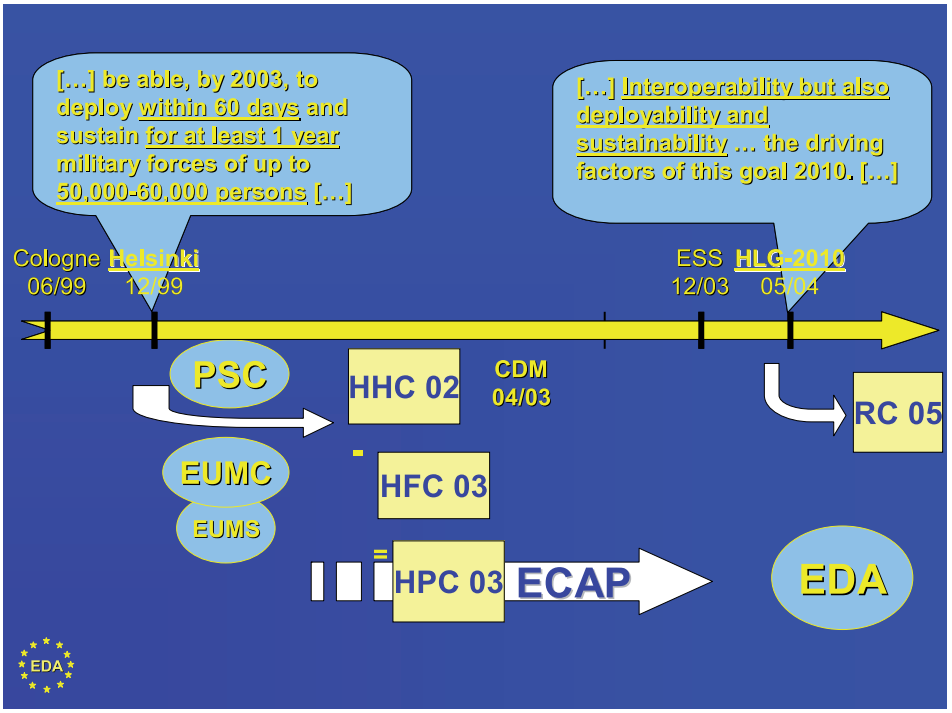

Figure 9. *Head Line Goal Process*

The new EU Force Planning cycle, as prescribed in the CDM, can be summarised as shown in Figure 10.

According to the CDM, determining capabilities is a process that spans the policy spectrum and encompasses: the definition of the forces necessary to achieve the goals set out in the ESS and HLG, the contribution of forces by the member States, the assessment of the shortfalls noted in the forces and, finally, the development of needed military capabilities.

Part of the new planning cycle established in RC 05 was the Total Force Requirement (TFR) for a series of "illustrative scenarios" indicated below:

- *Separation of Parties by Force* –SOPF.
- *Stabilisation, Reconstruction and Military Advice to Third Countries* –SR.

– *Conflict Prevention* –CP.

– *Evacuation Operations* –EO.

– *Assistance to Humanitarian Operations* –HA.

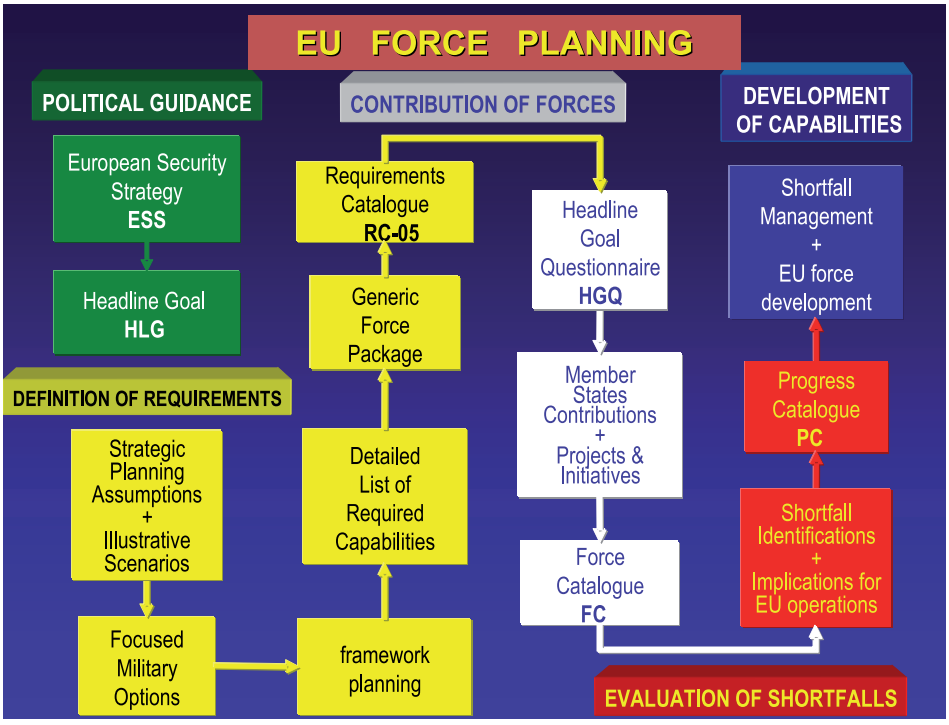

Figure 10. *EU Force Planning*

In the process of implementing the methodology related to the building up of the military capabilities of the EU, the Member States contributed in January 2006 to a computer based "Headline Goal Questionnaire" which provided with basic information on their voluntary contributions to RC 05.

Continuing with the process, the EDA, in concert with the EUMC, drafted a document titled "Scrutinising, Assessing & Evaluating" that would serve to establish the bases for three consecutive processes. The first one to examine the capabilities of the units offered by the countries in relation to the reference units described in RC 05 (Scrutinising); the second one to determine capability shortfalls (Assessing) and, finally, to evaluate the operational risks (Evaluating) faced by the forces dedicated to ESDP in the

"illustrative scenarios" indicated above. Was between April 2006 and late 2006 when the EUMC capabilities working group, the EUMC–WG/HTF, conducted the scrutinising process that culminated in the publication of the "Forces Catalogue 06" in November 2006.

This Forces catalogue is basically a document which reflects the different nations' force contributions, compares the units offered to the RC 05 reference and gives a preliminary indication of those capabilities which pose a shortfall.

Figure 11 shows a summary of the EU Force Planning process and the three Catalogues: Requirements, Forces and Progress, which are the main Force Planning documents.

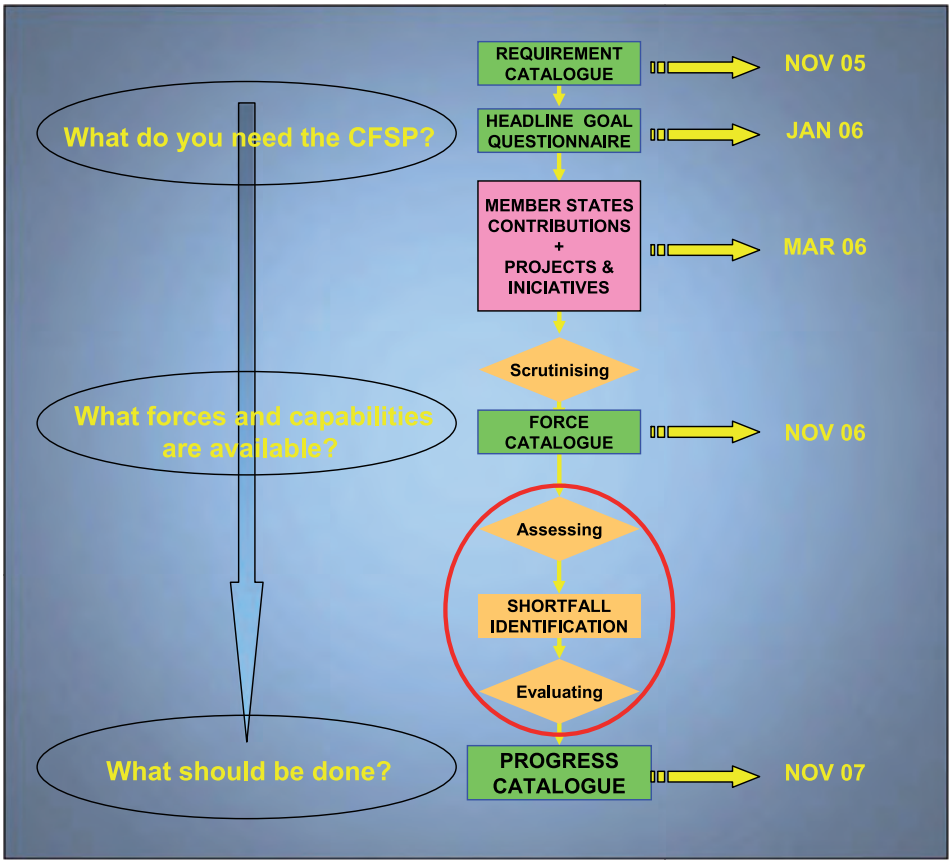

Figure 11. *The three EU Catalogs*

Based on the "Forces Catalogue 06", the EUMC–WG/HTF began the Assessing process, as part of which the shortfalls detected were analysed quantitatively and qualitatively: quantitatively as relates to the number of units offered, and qualitatively as relates to whether these units satisfied the personnel, equipment, materiel and operational characteristics as reflected in a series of reference units.

Once the quantitative and qualitative shortfalls were identified, the EUMC–WG/HTF undertook the Evaluating process, which involved identifying the operational risks associated with the shortfalls detected.

The Force Planning process finished in November 2007 with the publication of the Progress Catalogue 07, which reflected the operational risks associated with the shortfalls and provided an initial indication of how to correct those shortfalls. Starting in November 2007, the EUMC–WG/HTF began working on drafting a prioritised list of shortfalls. This process concluded in April 2008 with the prioritised list of capability shortfalls detected by the EUMC. These shortfalls were used as inputs to the EDA's CDP, which will be described later.

From the "Capability Development Mechanism" (CDM) to the "Comprehensive Capability Development Plan" (CCDP) and the "Capability Development Plan" (CDP)

When the EDA began its activity, the Capabilities Directorate proposed improving the CDM and developing a new Capabilities Planning system called CCDP (Comprehensive Capability Development Plan). The CCDP put forth by the EDA was not intended to replace the CDM, but rather to improve it. It reflected, as shown in Figure 12, the interaction between the different players involved in the definition and development of ESDP capabilities, namely the EUMC, the EUMS, the Political and Security Committee and the Council, in addition to the EDA.

When the EDA started the process, it was noted that the HLG 2010 process only considered short–term capability requirements and that the process, as developed, did not consider the capabilities the EU would need in the future within the scope of the ESDP. Nor did it consider the technology and industrial capabilities that would be used to develop military capabilities in the future or how ESDP operations would be conducted as dictated by a set of strategic indicators, such as the economy, demographics, and the challenges of globalisation, the environment or global governance.

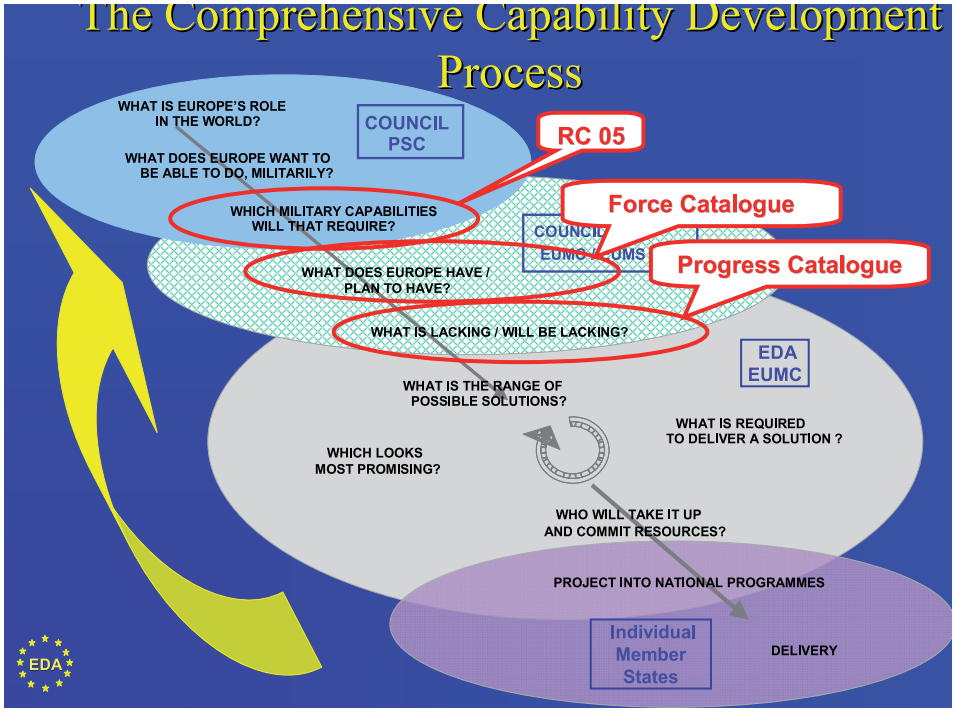

Figure 12. *The Comprehensive Capability Development Process*

This would require, as reflected in Figure 13, including the long–term vision (LTV) of the ESDP in the CCDP. As a result of this requirement the Agency presented to the Steering Board in October 2006 the document titled "*An Initial Long–Term Vision for European Defence Capability and Capacity Needs*", which was then adopted as a reference to be used in process of drafting the CDP.

The LTV is a comprehensive compilation of the analysis made in three different but complementary lines of investigation. Line 1, led by the EU Institute for Security Studies in Paris, offered a vision of the world crafted with a view to 2025. Line 2, led by the EUMC, took on the task of finding a way to conduct future ESDP operations and the implications that would have on defence capabilities needs. Finally Line 3, led by the EDA, gathered scientific experts and technologists in an effort to understand how technology would influence future defensive capabilities within the timeframe specified.

Figure 13 shows how the exercise was structured:

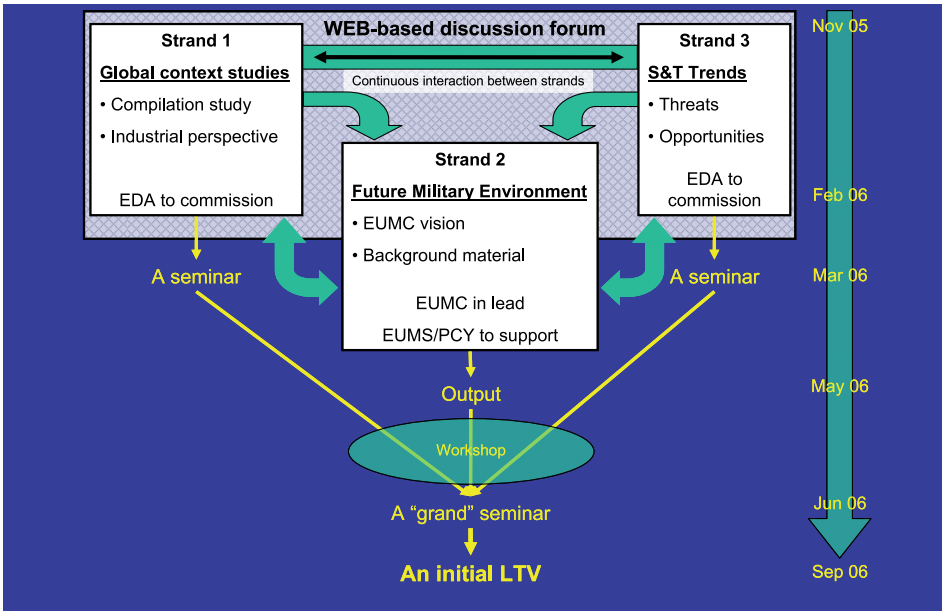

Figure 13. *Long Term Vision Methodology*

Therefore, in the context of the CCDP process, the Agency was able to collect on one hand, the capabilities required in the short term as a result of progressing toward HLG 2010; this was named as Strand A. On the other hand, the Long Term Vision (2025) that should be taking into account in the building process of the CDP; this was named Strand B.

Nevertheless, it was noted that the CCDP was still incomplete, insofar that it did not consider the national plans or programmes of the EDA's participating Member States nor the capabilities requirements deduced from the lessons learned in EU operations. These two additional elements named as Strand C and Strand D respectively completed the four elements that contributed as building blocks to the Capability Development Plan (CDP) analysis launched at the Agency's Steering Board in Capabilities Directors formation of December 2006.

The final results of the CDP were presented to the Steering Board, also in Capabilities Directors formation, on 8 July 2008. The CDP, whose description is provided later in this same chapter, constitutes the strategic initiative associated with the Capabilities Directorate within the strategic

framework of the EDA's which encompasses as well the R&T Strategy, the Armaments Cooperation Strategy and the EDTIB Strategy.

Structure of the EDA Capabilities Directorate

Operational concept, organisation and function

The Capabilities Directorate carries out its work in keeping with the following principles, as listed in its "Operating Concept":

- Contribute to the requirement definition phase and compile national programmes and initiatives, but always for the purpose of advancing toward the development of new and improved military capabilities.
- Focus on planning the development of the capabilities needed to provide the outcomes required by the EDSP.
- Interact with all the bodies involved in the definition and development of capabilities, keeping in mind that its main role will always be that of questioning traditional thinking, using novel techniques and promoting imaginative and forward–looking ideas so as to design flexible, capable and credible forces for the 21st century.

The Capabilities Directorate will apply these three principles in support of the EDA Steering Committee while backing and aiding the efforts of member States to develop new and improved capabilities and exploiting the Agency's work methods to the fullest.

EDA participating Member States will support the CDP primarily by providing capabilities planners, who will meet periodically so as to address issues involving capabilities and to support the Agency in the Steering Board's preparatory work, always in concert with the EUMC/EUMS and other relevant EU bodies. They will also support the CDP by evaluating capabilities so as to establish the current and planned status of capabilities for the purpose of updating the CDP, which is described later.

In order to support and help member States in their efforts to acquire new and improved military capabilities, the Capabilities Directorate established a series of groups called Integrated Development Teams (IDTs) for each Capability Area.

There are three Capability Areas: Knowledge, Engagement and Manoeuvre. Each Area features two IDTs, as shown in Figure 14.

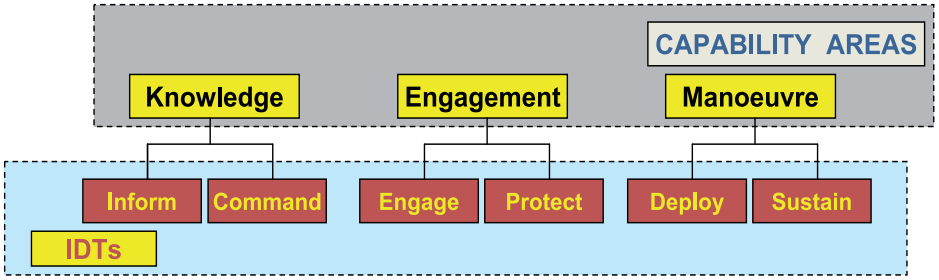

Figure 14. *Capability Areas*

Reporting to the Capabilities Director (Figure 15) and in charge of each of the Capability Areas is a Capability Manager, each of whom is, in turn, responsible for two IDTs. Assisting the Capability Managers there are a number of Project Officers. This staff is responsible for coordinating the national participation of the Capabilities Directorate member States.

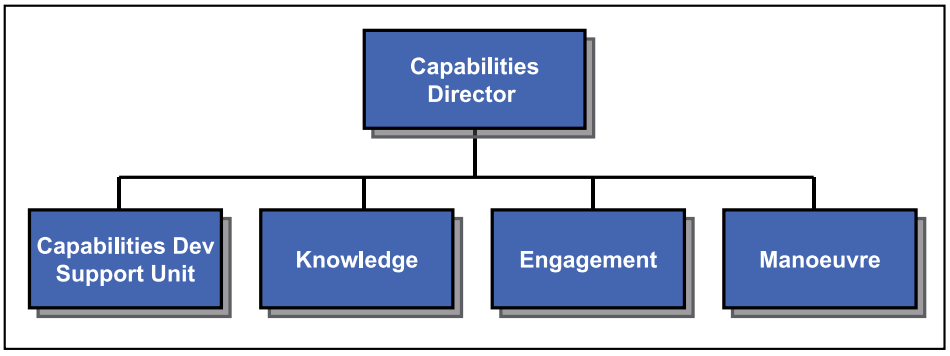

Figure 15. *Capability Directorate. Organization*

Each IDT is chaired by the Capability Manager of the Capability Area in question and involves Project Officers, experts from the pMS (participating Member states), members from other Agency Directorates and also from the EUMC/EUMS. The IDT members can also call on experts from the world of industry, research or academia, as required.

The key tasks of the IDTs, as listed in the Capabilities Directorate Operational Concept, are to:

– Analyse capability shortfalls.

– Consider the various alternatives.

– Propose solutions.

When an IDT considers various alternatives in an effort to address capability shortcomings and proposes a solution or other alternatives, the process of deciding how to best resolve a shortfall usually concludes with a proposal to form a group called a Project Team (PT). The PT consists of those member States that are interested in developing a solution that addresses the capability shortfall identified. Finally, when a PT reaches the point where the shortfall can be tackled through a specific programme, the creation of an Ad Hoc Project Group (AHPG) is proposed, which will eventually lead to the formation of a Project Management Group (PMG) led by a nation. Figure 16 shows the process described:

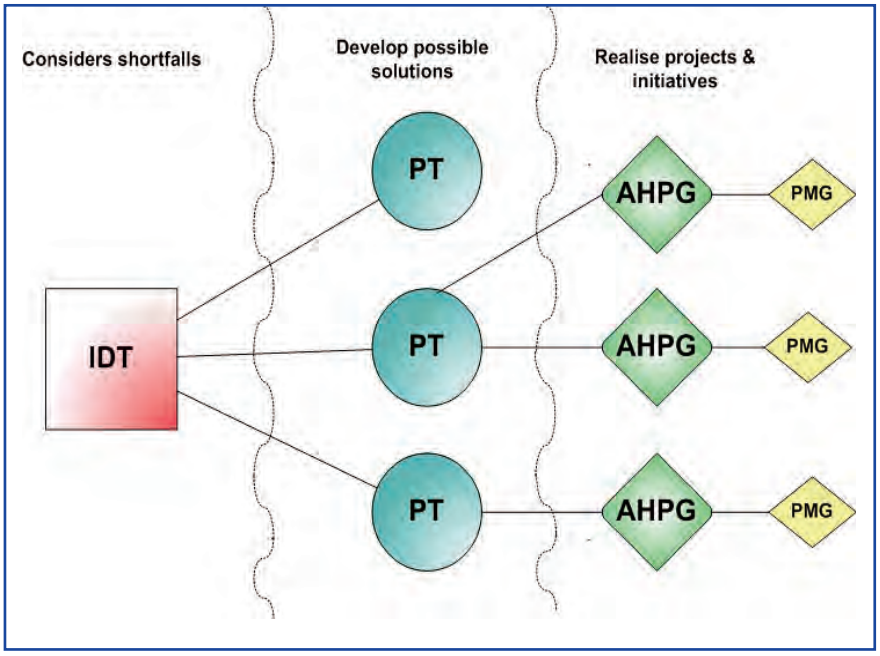

Figure 16. *Capability Directorate way of working*

In theory, this is the way in which the process of solving a shortfall should be handled within the Agency. In practice, though, the process is flexible and several options can arise, such as that of forming a PMG without first creating an AHPG, as shown in Figure 17.

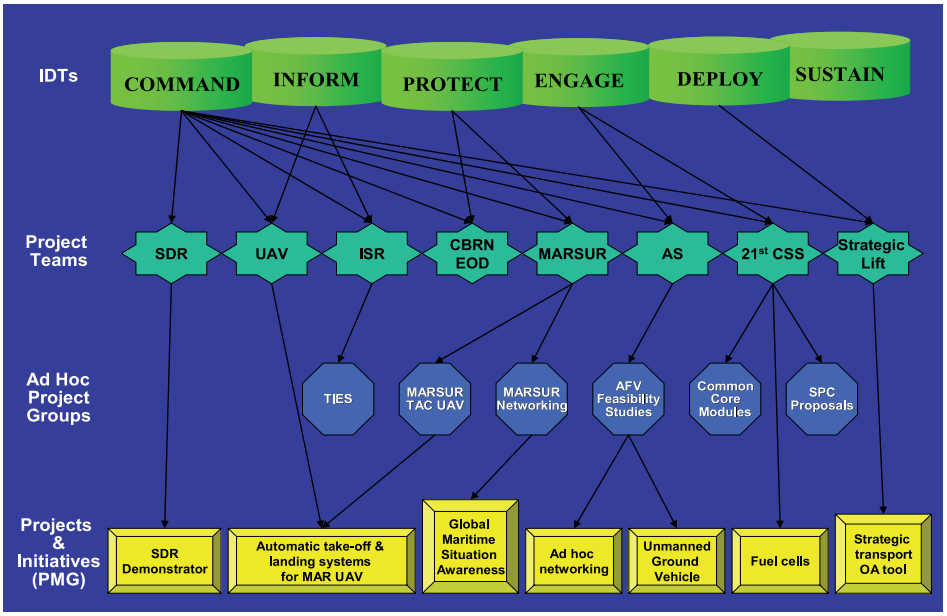

Figure 17. *Project Management Groups*

Spain's Participation in the Capabilities Directorate

Spain's participation in issues related to the Capabilities Directorate, whether in Capabilities Directors formation or in the Capabilities Point of Contact (PoC) group or the various other capabilities working groups, is coordinated between the Office of the Directorate General of Defence Policy (DIGENPOL) and the Joint Defence Staff (EMACON).

Twice a year, the DIGENPOL meet in the EDA premises for the Steering Board in Capabilities formation which, together with the other SB's formations, is one of the decision making bodies of the Agency. All the other meetings attended by DIGENPOL staff or EMACON's Strategy and Planning Division (DIVESPLA) unlike those held by the EDA Steering Board, are of an informative nature only and do not involve any decision making.

Spain's overall participation in the IDTs and subgroups (PTs, AHPGs and PMGs) of the EDA Capabilities Directorate is also jointly coordinated by EMACON and DIGENPOL.

The twice–yearly IDT meetings are attended by representatives from the Armed Forces Intelligence Centre (CIFAS) (Inform IDT), representatives

from the EMACON Communication and Information System (CIS) Division (Command IDT) and representatives from the EMACON Logistics Division (Sustain, Deploy, Engage and Protect IDTs).

As for the PTs, participation involves various specialists from the EMACON, Army, Navy and Air Force. The designation of the representatives is coordinated by CIFAS and the EMACON CIS and Logistics Divisions, depending on the subject involved.

In addition, the EDA usually organises seminars throughout the year on various topics that may be attended by representatives from DIGENPOL, EMAD, the Army, Navy, and Air Force or from other organisations.

The EDA's relationship with other Council organisations on capability issues

As we have seen, there are other EU organisations involved in defining and developing military capabilities.

The EUMC is the committee charged with defining military capabilities, a task in which it is aided by the EUMS and by its Capabilities Working Group (EUMC–WG/HTF).

In 2000 the working group called Helsinki Headline Goal Task Force (HTF) was created by personnel from the Military Committee and reinforced with experts from capitals. The EUMC–WG/HTF was created to implement the Helsinki Headline Goal. The HTF started its work in June 2000 as a working group of the EUMC dedicated to capabilities development. Its meetings can be attended by NATO experts. This is referred to as HTF+. In theory its mission should have concluded in 2003 when the Helsinki Headline Goal was achieved. An agreement was reached, however, and to date this Military Committee Working Group continues its work of planning capability developments.

A representative of Spain's Military Delegation to the EU regularly attends the HTF, who then reports directly to EMACON on the outcome of the meetings. In April 2008 the HTF drafted a priority list of capability shortfalls detected en route to HLG 2010. The HTF also coordinated the work of the ECAP PGs that remained under the EUMC's purview.

In brief, it may be stated that planning the development of military capabilities is the competence of both the EDA and the EUMC/EUMS.

These institutions of the EU, in concert with the pMS, are charged with proposing solutions for any military capability shortfalls detected.

The Capabilities Development Plan

The Capabilities Development Plan (CDP) under the responsibility of the Capabilities Directorate is one of four strategic initiatives within the EDA. It was conceived under the mandate given to the EDA by the Steering Board on 3 October 2006, which gave directions to the Agency to draft a CDP for the ESDP for presentation to member States at a later meeting of the Steering Board.

The CDP, based on the four Strands already mentioned: HLG 2010, EDA's initial Long–Term Vision, pMS Plans and Programmes and Lessons Learned, has, as its main objectives, to analyze the paths specified by the LTV, to identify the priorities for the development of capabilities and to search for and identify opportunities for the pMS to cooperate in attaining said capabilities. Spain is fully involved in all of them.

Strand A, headed by the EUMC, is based on progressing toward HLG 2010 and involves everything from available forces and capabilities as provided by the pMS, to quantitatively and qualitatively identifying capability shortfalls as well as the operational risks associated with these shortfalls. The EUMC has been working on developing an initial prioritised list of these shortfalls. The result of this strand is a prioritised list of shortfalls for the short term. Spain's participation in this strand is carried out through its Military Delegation to the EU, which attends meetings of the EUMC–WG/HTF, the EUMC agency responsible for capability issues.

Strand B, led by the EDA, has as its objective that of identifying possible future trends in capability characteristics within the framework of ESDP missions, as well as the military tasks associated with these missions. The work for this strand was structured in two phases:

- Phase 1, from June 2007 to March 2008, in which the risks, threats and opportunities for ESDP operations between now and 2025 were analysed.
- Phase 2, which offered a glimpse of possible capability trends between now and 2025 to address the risks and threats detected in the previous phase. Its completion included organising a series of seminars which analysed the technology available between now

and 2025; the ways the adversary could take advantage of said technology and the types of threats that would be present in ESDP operations between now and 2025.

In Phase 2, the EDA, in concert with the EUMC, drafted a "Generic List of Military Tasks" for each Capability Area so as to define the way each of these tasks would executed in 2010 and in 2025 based on the threat analysis conducted in Phase 1. To that end, the EDA organised two seminars in 2008 aimed at studying each of these tasks with national military experts.

The strand B report, along with the EUMC's joint vision, was presented to the EDA Steering Board in Capabilities Directors formation on 8 July 2008. The result of this phase, which naturally takes into account this joint vision, described future trends in military capabilities between now and 2025. The report does not aim to offer a roadmap for the next 15 years. It only aspires to be considered as a starting point. It indicated the different directions that should reasonably be taken and which will of course be subject to subsequent developments and revisions.

The work carried out –and which will continue to be carried out– by the EDA in concert with the EUMC and national experts, points to a set of key trends. Some, such as those involving science and technology and to the driving aspects behind global strategies or threats, have already been provided to the pMS, while other, new, trends were specified at the time of the presentation of the final conclusions of the CDP in the Steering Board of 8 July 2008. An initial conclusion highlights the fact that the need to develop concepts, doctrine, procedures, training and structures for developing future capabilities –which must obviously satisfy the requirement that they be interoperable– is more pressing than that of obtaining the corresponding equipment.

Spain has actively participated in strand B by providing experts from the National Armaments Directorate (DGAM), EMACON, the EMAD Operations Command and from CIFAS.

Strand C, led by the EDA, is an online database accessible to member countries through which they can report on their national programmes and plans voluntarily. With the information obtained through this database, the Agency presents emerging cooperative opportunities for said plans and programmes. The first list of these opportunities was presented at a meeting of the Steering Board in Capabilities Directors formation on February 2008 and reviewed at a later meeting on 7 May. The EDA, as part of its continuing process of analysing the database, presented a new list of

cooperative opportunities at its meeting of 8 July 2008, in which it identified 19 opportunities, categorised them (for example those opportunities in progress within LoI countries) and proposed a series of recommendations for implementation in each of the areas. All of this is carried out in concert with the respective IDTs and with the EDA Armaments Directorate through an in house developed IT tool.

Figure 18. *Meeting of the EDA Steering Board in Capabilities Directors formation on 8 July 2008*

Strand D, led by the EUMC, seeks to provide the CDP with the capability requirements derived from the "lessons learned" in operations. Spain's participation in this strand is through is Military Delegation to the EU and its attendance at EUMC meetings. The work for this strand, as far as its contribution to the CDP analysis presented in July 2008 is concerned, was finished in April 2008. Nonetheless this is obviously a dynamic document that continues to provide lessons learned derived from the ESDO operations.

The coordination and validation of the work carried out in each strand is performed by the CDP–T (CDP Team), which as far as Spain's participation is concerned involves DIVESPLA from EMACON.

Based on the work done as part of the four main Strands, the EDA presented an initial CDP to the Steering Board in Capabilities Directors formation on 8 July 2008. As indicated in the Board's decisions, this is a living document and therefore subject to ongoing revisions that will continue to be drafted jointly by the pMS, EUMC, EUMS and EDA. The document as such was not approved verbatim by the Steering Board, but it did approve it as a springboard for the conduct of short– and long–term work and activities aimed at developing military capabilities within the framework of the ESDP.

The CDP is a key component for the systematic establishment of activities in the field of developing the military capabilities required to address the threats faced by the ESDP. It is important to note that the CDP is not a supranational plan that aims to replace the national processes for identifying capabilities. On the contrary, the CDP was conceived to help the pMS develop their national plans based on a proper balance of ambitions and existing resources, allowing for the identification and assignment of priorities and the subsequent control of the operational, technical or financial challenges.

The Agency, in coordination with the EUMC/EUMS, is charged with the task of promoting the CDP within each pMS and within the relevant EU Council departments, going beyond the scope of the military planning experts. Foreign and Defence Ministers, National Armaments Directors, R&T Directors and those responsible for national defence planning and policies are the main participants the EDA wants to involve in the CDP.

In addition to the general conclusions specified in the CDP, a series of specific initial proposals were presented at the EDA Steering Board meeting of 8 July 2008 for inclusion in the short– and long–term agendas of pMS. This initial list of priorities is based on the conclusions stemming from the initial CDP report, on the first prioritised list of capabilities shortfalls presented by the EUMC, on the work in progress at the EDA IDTs/PTs and other working groups, and on the collegiate vision of the EUMC referenced earlier in this chapter.

The initial list of capability priorities approved by the Steering Board is shown in Figure 19.

Initial List of Capabilities	
1	Counter Man Portable Air Defence Systems
2	Computer Network Operations
3	Mine Counter-Measures in Littoral Seas Areas
4	Comprehensive Approach-military implications
5	Military Human Intelligenge and Cultural Language Training
6	Intelligence, Surveillance, Target Adquisition and Reconnaissance Architecture
7	Medical Support
8	Chemical, Biological, Radiological and Nuclear Defence
9	Third Party Logistic Support
10	Counter-Improvised Explosive Device
11	Increased availability of helicopters
12	Network Enabled Capability

Figure 19. *Initial List of Capabilities*

The process of planning the capabilities needed by the ESDP was launched with the decision made by the Agency's Steering Board on 8 July 2008. The CDP is a living document, subject to future revisions required by the global framework of capabilities requirements, by potential capability shortfalls associated with the ESDP, by capability trends between now and 2025 and by cooperative opportunities between countries in projects and programmes. The work being developed by the Agency in coordination with the EUMC/EUMS concentrates its efforts in implementing the specific actions proposed for each of the 12 priority areas that will, from now on, also serve as a reference for the EDA in the development of other strategic initiatives in the area of R&T, the defence technological and industrial base and cooperation in armaments. The future success of the Plan, and therefore of Europe's future military capabilities, will depend on the extent to which the pMS become involved in this process.

The NATO–EU Capabilities Group

The cooperation of NATO–EU in matters of capabilities is coordinated by a group called the EU/NATO Capability Group, which arose out of the

agreements reached in “Berlin Plus” and whose mission is the transparent and consistent development of capabilities.

This group is the main forum, from a strategic standpoint, for addressing the overall consistency and complementarity of each group’s specific goals, commitments and priorities. The object is to ensure that the mutual effort devoted to the development of capabilities common to both is coherent and not redundant.

The Group is comprised of representatives from all NATO countries and those EU countries that, as members of NATO or of the PfP (Partnership for Peace), have signed bilateral security agreements with the Organisation and with the respective Military Staffs of both organisations (Malta and Cyprus have not taken part).

In NATO, the Chairman is usually the Assistant Secretary General for Defence, Plans & Policy. In the EU, the rotating presidency is charged with coordinating the agenda and designating the Chairman. NATO is usually represented by members of its EWG (Executive Working Group), CNAD (Conference of National Armaments Directors) and the IS (International Staff), and the EU by representatives from the EUMC, EUMS and EDA.

Each organisation’s level of representation is not fixed. It is decided unilaterally by the Military Staffs involved in the Group’s meetings.

At the Group’s meetings, which are not held on a regular basis, each organisation’s initiatives are presented, from the capability requirement definition stage to development. Spain is represented by two officials, one from its Permanent Delegation to NATO and the other from the Delegation to the EU’s PSC. The meetings are of a purely informative nature and are not used to decide such important issues as which organisation will deal with a given capability so as to prevent redundancies.

Redundancy in NATO–EU Capabilities

From a capabilities standpoint, it should be noted that the two organisations do their own for force planning, though the desire of both is to avoid unnecessary redundancies as much as possible. The NATO planning systems, mainly the Defence Requirement Review (DRR), offer a new field for future cooperation, as long as the conditional factor of documentary security is resolved.

This force planning is characterised by different planning scenarios with diverse planning hypotheses, such as the Levels of Ambition (LoA) and HLG 2010. This means that although the force planning system is in some ways similar, the nations must adapt to two different procedures that, despite often having the same objective, do not always share the same path.

NATO–EU cooperation in force planning is characterised by having achieved complete transparency between the two organisations. Even so, we must not forget that in Spain and in the majority of other countries, the forces made available to the EU are also committed to NATO, in keeping with the Single Set of Forces principle. This could result in a distorted picture of what capabilities are actually available while subjecting the capabilities offered to more stringent requirements.

The degree of cooperation in planning is good. We can offer as an example the evaluation of RC 05 by NC3A (NATO Consultation, Command and Control Agency). The planning of EU forces is based on RC 05, which specifies the totality of forces required as well as the capabilities they must possess. A group of military experts from member States was involved in drafting RC 05 so as to analyse the EU's settings for action. The result of the RC 05 was subjected to an exhaustive analysis by NATO's NC3A in order to corroborate the results obtained by the experts.

Now then, despite the good cooperation so far in force planning, the same cannot be said to apply to the field of capabilities development, which must feature greater cooperation if redundancies are to be avoided. To this end, the EU–NATO Capabilities Group was established, at which the capability initiatives of both organisations are presented. The EU's CDP, which is being coordinated by the EDA, has been presented at this group, for example.

This group deals with the initiatives underway at both organisations in different aspects such as, for example, UAVs and CBRN. The practical results of this endeavour in transparency, however, have yet to materialise.

If we want to improve the development of capabilities, the opinions of experts must be considered, since they are the ones who can truly detect redundancies in capabilities. Along these lines, the NATO–EU Capabilities Group should be the organisation that resolves any conflicts, something that has not been accomplished to date since this group has yet to assume a leadership role in matters of coordination.

Conclusions

We can state that the EDA, as far as the functions and tasks of its Capabilities Directorate are concerned, has not only found its niche in the development of capabilities in the EU but that its role in this important issue has been reconfirmed by the Lisbon Treaty now into force. It has successfully moved forward the ECAP process and has been able to add value to the process by identifying concrete areas in which concrete actions are now being implemented in order to fulfil the gaps. Capability areas considered as strategic content cases like, CMANPADS, CBRN, CIED or MMCM or others with quick benefits in the short term like helicopter's training or Third Party Logistic Support (TPLS), pretty much associated to present ESDP operations, are now being tackled with detailed projects. All of them will have for sure a clear impact in the strategic framework of the Agency since there will be implications in R&T, Armaments Cooperation or the strengthening of the EDTIB, as a consequence of its implementation.

The structure of the Capabilities Directorate and its work methods have allowed for the creation of a network of national military experts in the area of military capabilities and, more specifically, in the various IDTs and PTs, whose work is overseen by the Agency's Steering Board in Capabilities formation.

The EDA's CDP, as a strategic issue within the Capabilities Directorate, has provided all those organisations involved in defining and developing the EU's military capabilities with a common forum in which to discuss and exchange information relevant to the process of identifying and developing capabilities. Moreover it has contributed to increase and improve the necessary coordination, at national level, between the capability planners and the ones responsible for the acquisition of defence equipment and the defence R&T investments.

However, In spite of the "Berlin Plus" agreements, what needs still further work is the relationship NATO–EU as far as capabilities development is concerned. It seems that a solution, to the problem of avoiding redundancies in military capabilities NATO and the EU is not foreseeable, in particular given each organisation's apparent desire to pursue its own initiatives in this field.

CHAPTER THREE
RESEARCH AND TECHNOLOGY (R&T)

By Tomás Martínez Piquer
"Forschung ist die Medizin"

Prologue

In early June, 2008, German television showed a commercial for a well–known pharmaceutical company from that country that makes substantial investments in research. The screen showed a person taking medicine while it displayed the message "Forschung ist die Medizin", whose literal translation is "Research is Medicine". The message the commercial wants to convey is clear: the discovery of more effective medicines, and with it a better and more rapid recovery of one's health, is only possible if great efforts are made in the field of research.

The advertisement allows establishing a certain parallel between recovering one's health and developing a capability in the field of defence. Thus, a specific lack of military capabilities (lack of health: sickness) can be satisfied (eliminate or fight) by putting in place a new system (medicine). Like in the commercial, reaching the planned objectives in either case requires committing to research programmes.

As we have seen in previous chapters, the European Defence Agency (EDA) was created to help member States of the European Union to develop their military capabilities. Without minimizing in the least the important role of other factors in this capability–acquisition process, there is not the slightest doubt that research is a decisive part of said process. This, among others, is the EDA's mission: to promote cooperative research so as to develop Europe's defence capabilities.

Background: The WEAG and the WEAO

The first chapter of this paper details the various attempts at creating a defence–related European agency prior to the EDA. As concerns issues of research, there is no doubt that the most significant precedents were the Western European Armaments Group (WEAG) and the Western European Armaments Organisation (WEAO), where the organisations responsible for research efforts, the Panel II and the Board of Directors, respectively, made significant advances, especially in the final two years.

When these organisations ceased their activities (May 2005 in the case of the WEAG and August 2006 for the WEAO), the number of projects underway was approximately 300 (125 finished and 172 active or ready to start), representing a total investment of some one thousand million euros. A non–quantifiable, but highly relevant, aspect is the network of national research policy managers and of defence technology experts, both in government and industry, woven far and wide across Europe after ten years of activity.

It is obvious that errors and missteps can also be attributed to these organisations, but when balancing the positive and negative aspects, the former have a greater weight. In brief, the WEAG and the WEAO both made valuable contributions in the field of European research in defence–related cooperation.

In any case, this previous experience contributed decisively to the natural continuity of research issues within the framework of the EDA, which favoured the rapid implementation of this agency's R&T Directorate. Putting it in practical terms, we can add that of the EDA's 24 founding members, 16 of them, including those countries with the largest research investments, were working together years back in the WEAG and/or WEAO, which greatly facilitated the development of many of the initial projects undertaken by the R&T Directorate. By way of example, we need only mention that the first legal framework for the initiation of research activities put in place at the EDA, and called simply the General Conditions[11], is nothing more than a synthesis of the EUROPA MoU[12] and the ERG1[13], both drafted in the setting of the WEAG/WEAO.

11 *General Conditions applicable to Ad–Hoc Research & Technology Projects and Programmes of the European Defence Agency*

12 EUROPA MoU: *European Understandings for Research Organisation Programmes and Activities Memorandum of Understanding*.

13 ERG1: *European Research Group.*

Defence research. Technology research and development

Defence–related research has a growing importance within the framework of the Armed Forces. Its role has evolved from offering support in the development of weapons systems to being one of the strategic pillars in the transformation of the Armed Forces, as well as in the evolution of military capabilities. Defence research integrates two types of clearly differentiated activities: technological research on the one hand, known as R&T, and research and development on the other, called R&D.

Research and technology activities comprise basic and applied research for the purpose of expanding knowledge and acquiring technology that may be applicable to future weapons systems, as well as its verification through technology demonstrators. The purpose of development activities, however, is to produce prototypes as a prior step of their integration into equipments and weapon systems that satisfy operational needs. The R&T timeframe, therefore, is medium–long term, while that of R&D is more short–term oriented.

One way of estimating the research phase and thus of more easily differentiating research and technology from development is by using the so–called TRL[14]. The TRL is a systematic measurement method that allows the maturity of a specific technology to be evaluated, making it easier to ascertain the extent of the research in progress (and with it the existing risk). Without being able to establish clearly defined borders, R&T is viewed as including the TRLs, encompassing from 1 to 5/6, and development, spanning from the latter values up to 9. TRL 1 corresponds to the basic principles that have been observed and reported for a specific experiment. TRL levels 5–6 correspond to technical components, subsystems or systems that have been verified and validated in the laboratory (technology demonstrators). TRL 9 corresponds to systems that have been qualified after having worked successfully on operational missions.

The EDA has also indirectly established a definition for R&T in its IST[15] initiative, which lists important statistical data related to defence. Over the course of this activity it was necessary to reach an agreement on the

14 TRL: *Technology Readiness Level*. Metric established by NASA in 1995 (built on, among others, NASA precedents) and in widespread use today. Its original seven levels were later expanded to nine.

15 *Indicators of Strategic Targets.*

meaning of certain terms so that each would be defined in very similar terms by every country. In the case of R&T spending, this is defined as "*expenditure for basic research, applied research and technology demonstration for defence purposes [includes approximately TRLs 1–6]. It does not include expenditure for demonstration or development of products and systems for which a decision to procure has been taken and a service date has been envisaged. R&T is subset of R&D.*"

The environment of the missions in which the EU operates is very dynamic. Thus, the R&T activities play a key role, since it is necessary to have technical solutions sufficiently far in advance for them to be incorporated into future weapons systems quickly, flexibly and sustainably. In the defence arena, the purpose of R&T is considered to be that of early identification and evaluation of any novel technological development that is able to support new user capabilities and requirements. Technological research is already regarded as part of the military superiority concept through its ability to evaluate and integrate emerging technologies into defence systems.

The Joint Action (JA), as explained in the first chapter of this monograph, constitutes the founding charter of the EDA. There are various references to research as one of the Agency's roles in the early parts of the charter (Preamble and Article 1, Section 1), but they are generic. It is only later, in Article 5, Section 3.4, that it first states that research activities will be of the Research and Technology type. The European Defence Agency, then, has the responsibility of driving European cooperative research policy toward the R&T concepts defined above. Its activity, then, so long as its founding charter remains unchanged, will be aimed primarily at basic and applied research and technology demonstration.

Below we describe the purposes, objectives and functions of the EDA in matters of Research and Technology, noting its important role in the development of defence capabilities.

Functions and tasks of the EDA in R&T

Article 5 of the Joint Action (JA) defines the functions and tasks of the Agency and it specifies the fields in which the EDA shall work. Specifically, Section 3.4 of Article 5 of the JA states that the main objetive of the EDA R&T Directorate is that of increasing the effectiveness of European R&T in the field of defence. In particular by:

- promoting, in liaison with the Community's research activities where appropriate, research aimed at fulfilling future defence and security capability requirements and thereby strengthening Europe's industrial and technological potential in this domain,
- promoting more effectively targeted joint defence R&T, drawing on the experience of relevant elements of the WEAG and WEAO,
- coordinating and planning joint research activities,
- catalysing defence R&T through studies and projects,
- managing defence R&T contracts,
- working in liaison with the [European] Commission to maximise complementarity and synergy between defence and civil or security related research programmes.

In light of what is stated in the JA, the main purposes of the EDA in Research and Technology could be considered as **developing policies and strategies so as to strengthen defence technology in Europe and promoting European R&T collaboration among participating Member States** (pMS) so as to improve defence capabilities.

Framework. Structure

While the first meeting of the Steering Board took place on 17 September 2004, it was at its second meeting, held on 22 November of the same year that the first practical decisions were made. Of these, of greatest importance to R&T were, on the one hand, the approval of the EDA's budget for 2005, which included the organisation chart and staffing for the R&T Directorate and on the other the approval of the EDA's work programme for that same year, which included the general areas of activity for that Directorate.

As concerns the EDA's budget, it is important to note that the so–called operating budget, that is, those funds set aside by the EDA for practical studies or projects to be developed by every Directorate with its own funds, reached a total of 3.0M €, a patently insufficient amount for implementing activities of any significance.

The structure initially approved for the R&T Directorate, which was not very clearly defined, has, over time, been adapted to suit those activities

that have gradually been developed at the Directorate. Currently, it is organised around the CapTechs, technology areas and networks of experts which will be defined later. A diagram of the current structure for the R&T Directorate is shown in Figure 20.

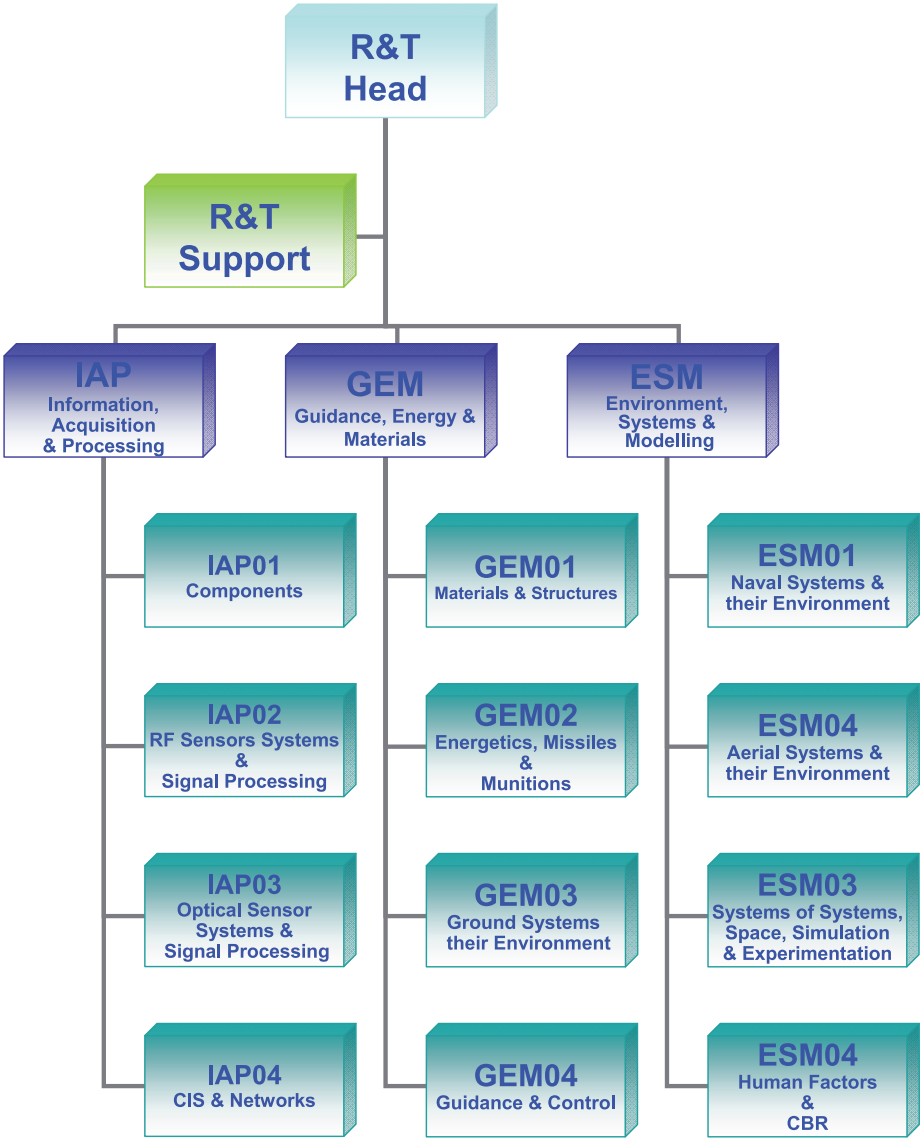

Figure 20. *R&T Directorate. Organization*

As for the work programme, the most important questions directly related to R&T or which had a direct bearing on this field were as follows:

- Develop the so–called Operational Concepts, which are the main points or directives for achieving the EDA's objectives in its four activities: Capabilities, Armaments, R&T and Defence Industry and Market.
- Establish good relations with other groups in the field of R&T, including WEAG, LoI/FA, industry and universities and research centres.
- Determine European R&T priorities.
- Assume a large part of the WEAG's assets (primarily those existing R&T projects involving EDA countries).
- Take the lead in UAV/ISTAR initiatives. In particular, the Armaments Directorate was charged with initiating activities in the field of armoured vehicles.
- Investigate ongoing activities in the CBRN field, with a special emphasis on research projects.

While some of these points will be examined in more detail later, a rapid analysis leads to the following observations:

- At least in matters concerning R&T, relations between EDA member states were complicated and tense over much of its early history and there was a failure in establishing good communications. The current situation is one of complete normalcy.
- Relations with other R&T groups were also difficult at first. In some cases this situation persisted for a long time, as happened with the GDR[16] of the LoI/FA. At the present time, however, the situation can be considered as satisfactory,
- The EDA worked on the preparation of several technology priorities lists but ignoring practically the opinion from the Member States, resulting in a lack of agreements. Eventually, at a meeting of the Steering Board held in December of 2005, an agreement was reached on the basis of the technology priorities that had been defined within the framework of the LoI. This list had no practical

16 LoI/FA/GRD: LoI/FA – *Group of Research Directors.*

repercussions and it was not until 2008 that a new list of priorities was drafted as part of the R&T strategy called EDRT[17].

- With regard to CBRN activities, only those projects involving capabilities that had no bearing on R&T were addressed. The first steps were taken with the agreement reached by the Steering Board at its November 2008 meeting on the implementation of crosslinked CDP and EDRT R&T activities associated with four areas regarded as being a priority (CBRN, MMCM, C–IED and C–MANPAD).
- The UAV/ISTAR and armoured vehicle initiatives have not made any significant contributions to the European theatre.

Of all the R&T goals set out in the 2005 work programme, the one with the most repercussions was without a doubt the development of the R&T Operational Concept, which represented the first practical achievement of any importance.

R&T Operational Concept

The R&T Operational Concept, approved in April 2005 by the EDA Steering Board in Directors Formation, established the work methods and procedures to be implemented in order to carry out R&T activities. It thus defined the modus operandi of the EDA in R&T.

This operational concept is based on seven key operating rules (KOR) as follows:

Capability Orientation

With this objective, the EDA, in order to conduct R&T activities, defined a framework derived from the three capability domains established by the Capability Directorate.

It includes the following:

- **IAP**: **I**nformation–**A**cquisition–**P**rocessing ↔ *Knowledge*.
- **GEM**: **G**uidance–**E**nergy–**M**aterials ↔ *Engagement*.
- **ESM**: **E**nvironment–**S**ystems–**M**odelling ↔ *Manoeuvre*.

17 EDRT: *European Defence R&T Strategy*.

Each of these three large blocks was subsequently divided into four capability–based technology groups called CapTechs[18], which would serve as the basis for the development of cooperative activities. This represents a total of twelve technology groups, or CapTechs. The twelve CapTechs were launched over the course of 2005. A more detailed analysis of the CapTechs will follow.

At the time, this endeavour did not represent a significant contribution. The CapTechs were similar in many ways to the WEAG technology areas called CEPA[19]. The goal of the EDA was to better orient the CapTechs toward capabilities than was done in the WEAG, though the structure and practical working methods were very similar.

The EDA would later define and assign technologies to each CapTech using the taxonomy employed in the WEAG. This task posed an enormous challenge. Dividing the entire technology spectrum into a limited number of groupings, twelve in this case, always implies a lack of uniformity and certain inconsistencies within and among the groups. On this occasion, the assignment, made by the R&T Directorate having held few consultations with the pMS, was not very judicious and resulted in problems as the CapTechs engaged in their activities.

That is why three years later, the R&T Directors Steering Board approved at its April 2008 meeting a new CapTech structure after a consensus was reached by the EDA and pMS. This new arrangement, though not ideal either as pointed out above, incorporates four areas for transversal activities (ground, naval and aerial systems and systems of systems/aerospace systems) which facilitates the implementation of multidisciplinary work. This particular aspect posed many difficulties under the previous classification when it came to assigning the work to a specific CapTech.

Network Centric Management

This second rule specifies, among others, two important measures:

– How to work through expert groups with the participation of industry and research institutions. The role of the EDA in these groups would be, as specified in this rule, to provide dynamism and to promote the exchange of information between the various CapTechs.

18 *CapTech: Capability Tecnology.*
19 CEPA: *Common European Priority Area*

– The information generated would be kept online (extranet) accessible to member States. This would provide constantly updated, centralized and transparent information. Moreover, part of the work could be done online. Exchanges of opinion and working discussions would also be possible.

As regards the first point, the operation of the CapTechs experienced some difficulties at first that led to a reduction in the number of projects launched with respect to previous levels. After some time, however, too much time in the opinion of some, the situation stabilized and activity was restored to pre–EDA levels.

As for the centralized computer network implemented by the EDA, it should be noted that it has been a resounding success. The launch of the so–called "EDA Extranet" enables member States, via the proper channels, to access online work forums where a great deal of the information generated by the EDA is available. The network can also be used to easily exchange information and create discussion forums.

Transparency through Monitoring and Reporting

This third rule attempts to establish good communications, monitoring and exchange of information between the Agency, the pMS and the Steering Board.

It proposes for the first time an R&T roadmap and a strategy for this area. It likewise establishes the need for proper liaison with the Capabilities and Armaments Directorates. Finally, it proposes a definition for a set of indicators to track cooperation in R&T.

To improve communication and cooperation between the EDA and the countries, it was agreed to establish a group called R&T PoC (Point of Contact), delegated by the respective R&T Directors, to conduct work on a regular basis in between Steering Board meetings. This group was approved by the same Steering Board that approved the operational concept (April 2005).

As on other occasions, some of the results were far from expected, especially during the initial period of operation of the R&T Directorate. The lack of communication and transparency with respect to the pMS in the initial years was notable in some regards. Suffice it to say that the EDA did not convene the Steering Board in R&T formation from December 2005 to April 2008 despite petitions from member States to hold meetings to address vitally important issues, such as the R&T strategy.

As for the definition of indicators to measure efficiency in cooperation, to date these have yet to be formalized. In any case, it should be noted that defining an acceptable metric in such a sense is a fairly complicated task.

Embracing valuable existing cooperation and networks

With this rule, the EDA invited the already existing work groups and networks to transfer their activities to its R&T organisation so long as they accepted its structure and work methods.

The message was aimed at two main recipients: the WEAG on the one hand, with which it had an official agreement to transfer most of its existing activities and groups, and the LoI on the other.

Existing WEAG projects that did not involve Norway and Turkey, which are not members of the European Union, were eventually transferred to the EDA starting in August 2005. Of a total of 52 projects among EU member states valued at 226.0M €, 42 were transferred, 12 of which featured Spain's participation. Other studies, such as the AHPGs (Ad–hoc Project Groups) were also transferred, but they barely had an impact on business at the Agency. As for the WEAG CEPAs, the expert groups smoothly transitioned into the Agency's CapTechs.

With regard to the LoI, the GRD (Group of Research Directors) decided at the time, so as to facilitate the liaison with the EDA, that once a study or project was defined, it would be launched from within the CapTechs. This has been the practice to date.

Effective interface with dual–use and civil research

The intent of this rule is to establish mechanisms to ensure synergies with dual research of security activities and avoid duplication. The EDA also states its intention to suggest research priorities in the area of security.

Not many comments are needed in this respect. Suffice it to say that the EDA, at an institutional level, is making a considerable effort to establish good communications with other research organisations, including, logically, the European Commission. Examples of this are the EFC (European Framework Cooperation) Programme, in cooperation with the European Commission and the European Space Agency, still in the definition stage, and the initiative on Critical Space Technologies developed by the same groups so that Europe is not strategically dependent in this field.

On a more practical level, the CapTechs have an important role to perform, that of efficiently interfacing with civil research. The experts working in

these groups often take part in other forums, groups and organisations dedicated to research, at which they establish contacts with experts in the civil or security fields, whether governmental or industrial. This helps to promote efficient communications between both spheres, avoiding overlaps or duplications.

Involvement of industry

With this rule, the EDA recognizes the important role that industry plays in the classical project generation process, commonly known as bottom–up, as opposed to a top–down, or executive, strategy.

Industry's contribution to R&T as it relates to the EDA is made mainly through the CapTechs. Industry actively participates in these groups from the start of the activity.

An aspect that has always concerned industry involves the ownership of the results, since it regards the EDA's current approach to intellectual property rights (IPRs) as unsatisfactory. That is why, since the fall of 2008, a new set of regulations has been under consideration that takes into account the requests of the ASD[20] on behalf of European industry. The goal is to have the agreement ready by early 2010.

Using EDA contracting capacity for R&T

Pursuant to Articles 13.2, 17, 20 and 21 of the Joint Action, the EDA lays claim to its support role to member States in cooperation projects, including contracting. It likewise asserts its function when it comes to creating and managing R&T studies and projects, paid for by its own funds.

The EDA has had a very active role in this field. It has launched several activities, mainly studies, involving areas with a shortage of capabilities. The studies and projects have been of a limited scope since the operating budget to date has been rather low, but the results have been very interesting.

Its role as a contractor was rapidly assumed and it works quickly and efficiently.

20 *ASD: The Aerospace and Defence Industries Association.*

Work process

The work process of the R&T Directorate is in keeping with its position in the overall activities development process of the EDA, as described in the first chapter of this monograph. It is dually oriented, with a horizontal or transversal nature and a second, vertical, approach. In the former, the R&T activities are linked to those of the remaining EDA Directorates (Capabilities, Armaments and Industry and Market). The latter corresponds to work done within the R&T Directorate itself. A graphical representation of this integrated work structure is shown in Chapter 1, Figure 7 of this paper.

Of the two processes, the first, or horizontal, adheres to the so–called capability–driven model, and involves the performance of R&T activities derived from capabilities that have been previously defined by the EDA Capabilities Directorate. This comprises the strategic part of the R&T work process, also commonly referred to as top–down. This process is shown schematically in Figure 21.

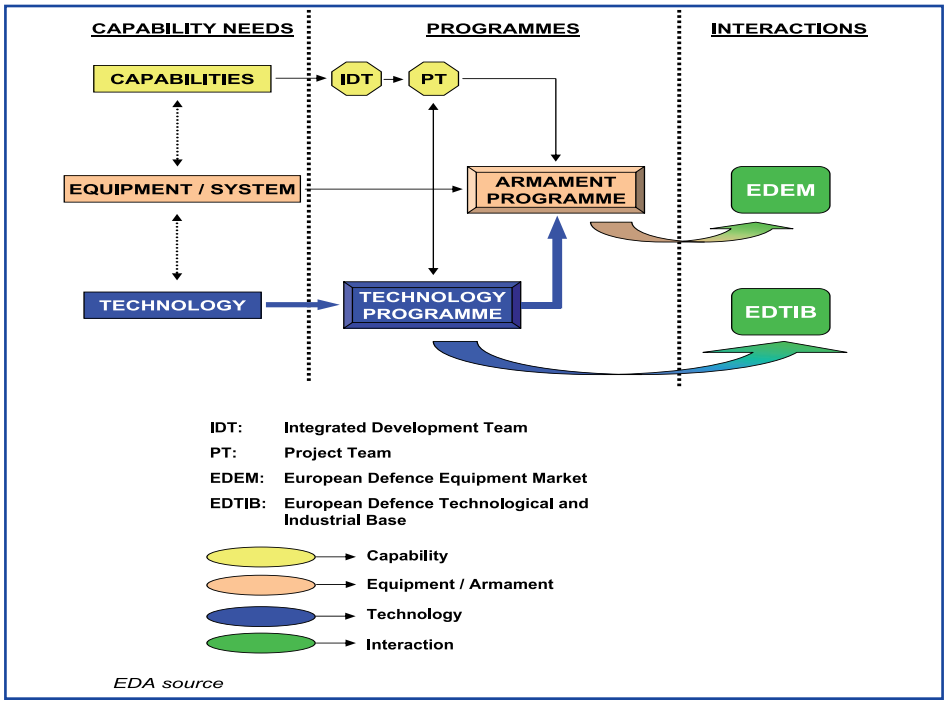

Figure 21. *Capability Driven Process*

In the R&T specific part of the aforementioned process, the goals are established from a translation based on the capabilities needs that finishes with the R&T activities that have to be implemented to obtain said capabilities. A diagram of this process is shown in Figure 22.

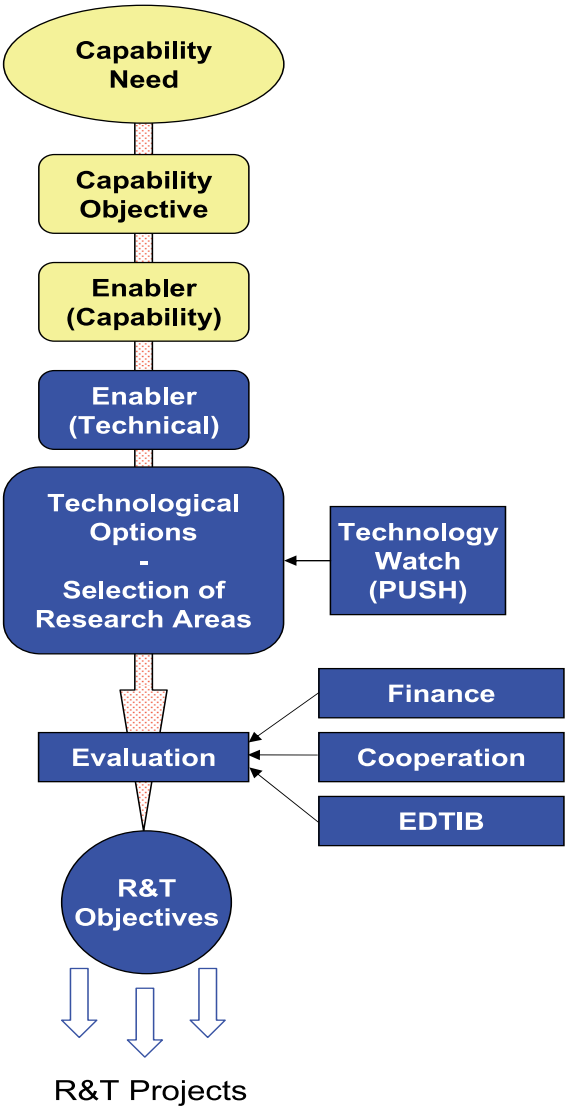

Figure 22. *Translation Capability–R&T*

A practical example of this R&T project generation process based on the definition of a capability was carried out in the first category–A[21] programme developed by the EDA and called JIP–FP[22]. In Figure 23 we can see a practical diagram of the capability–technology translation carried out in this programme.

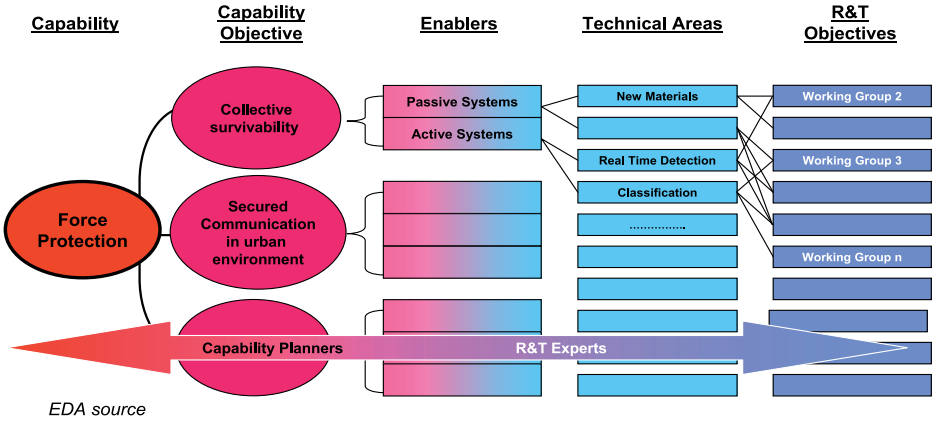

Figure 23. *JIP–FP Translation Exercise*

The second of the two work processes mentioned, defined as the vertical component and which is mainly technology oriented, relies on the R&T knowledge of national experts and of the EDA, without this knowledge necessarily being derived from capabilities[23]. This is the so–called bottom–up approach.

Captechs

Definition

The CapTechs comprise the basic pillar the EDA relies on to generate cooperative R&T projects. Conceptually, they are two things at once:

21 Category A project: Proposed by the EDA or by one or more pMS for general participation. More details to follow.

22 JIP–FP: *Joint Investment Programme–Force Protection.*

23 Nevertheless, the proposal of a national representative also introduces a capability–oriented element since it is derived from national capability needs. It may not be common to all participants but this bottom–up input also has some top–down components.

– A *set of technologies* directed at one of the capabilities defined by the EDA.

– A *group of experts* from the pMS, industry and research centres and universities.

The main purpose of the CapTechs is to propose R&T activities along one of its two paths: strategic or capability oriented (top–down), and technological (bottom–up). These activities should be intended primarily to initiate cooperative projects.

Structure

In keeping with the stipulations of R&T Key Operating Rule no. 1, explained above, the number of CapTechs is twelve, assigned to three main capability blocks:

Knowledge: Inform/Command
IAP: Information/Acquisition/Processing

Engagement: Engage/Protect
GEM: Guidance/Energy/Materials

Manoeuvre: Deploy/Sustain
ESM: Environment/Systems/Modelling

After an initial structure defined by the EDA which, as noted previously, exhibited various problems over the course of its existence, the Steering Board in R&T Directors Formation met on 8 April 2008 and approved a new definition for the technology areas in accordance with the diagram shown in Figure 24.

Composition

The CapTechs are comprised of the following members:

– An EDA staff member acting as Moderator.

– National governmental experts in the corresponding technology areas and designated as CNCs, CapTech National Coordinators.

– National governmental experts in specific technologies and designated as CGEs, CapTech Governmental Experts.

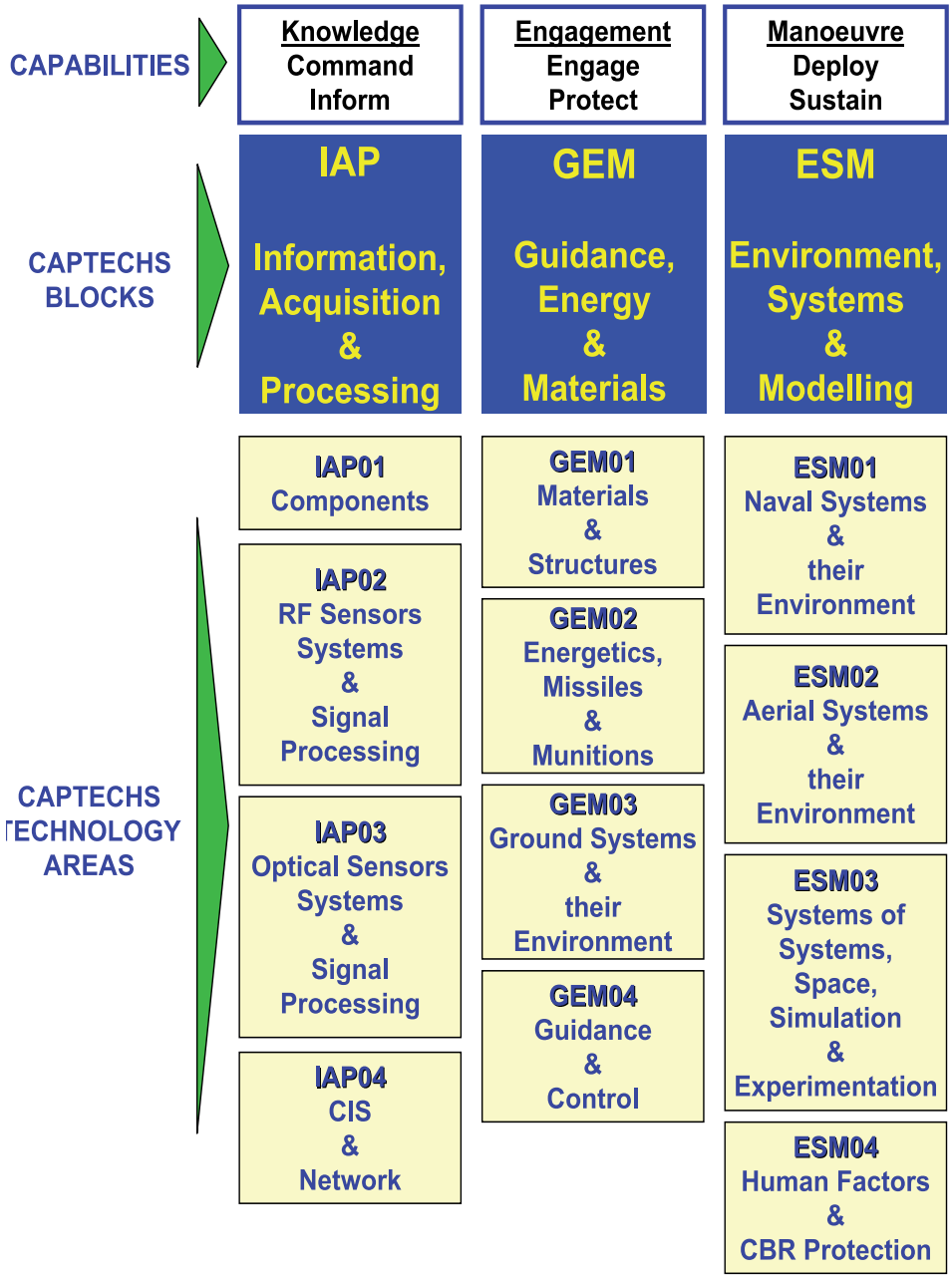

Figure 24. *CapTechs*

– National non–governmental experts from industry, research centres and universities (CnGEs: CapTech non–Governmental Experts).

The role assigned to each is as follows:

Moderator

– Promote and moderate discussions and exchanges of opinion.
– Conduct exchanges with other CepTechs as required (horizontality or transversality principle).
– Organize meetings of experts on specific topics as required.
– Maintain updated expert lists.
– Monitor and report on the activities of the CapTech at all times.

CNC

– Contribute to the work and exchange of opinions as an expert in a technology area.
– Provide well–founded points of view on each issue addressed in the CapTech: identification of projects, technologies, replies to capability priorities, etc.
– Assist the Moderator.
– Designate national experts.

CGE

– Contribute as an expert to the work conducted in the CapTech.
– Propose R&T activities within his field of expertise.
– Present proposals to contribute to the EDA R&T road map.
– Act as R&T study or project director if required.

CnGE

– Contribute as an expert to the work conducted in the CapTech.
– Propose R&T activities within his field of expertise.
– Present proposals to contribute to the EDA R&T road map.

All of these national and EDA experts debate ideas and proposals at regular meetings. When agreement is reached by at least two pMS, an implementation process is started that concludes with the signing of a governmental agreement between the participating countries and, subsequently, with the signing of a contract with an industrial consortium

that is charged with executing the R&T project. Since there is no specific rule to address this, the projects are usually cofinanced by the governments and the public or private agencies conducting the research.

Non–governmental experts are free to participate, though, for practical reasons, it is advisable to be in close contact with the Captech governmental representative (CNC).

A graphical representation of the composition of a CapTech is shown in Figure 25.

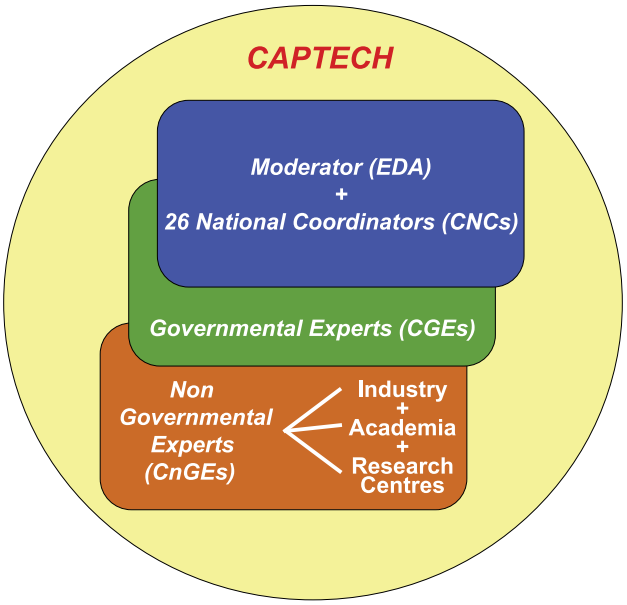

Figure 25. *CapTechs Structure*

Process for generating R&T projects

Process types

The generation of R&T projects involves the two mechanisms explained above:

– Strategic or *top–down.*

  It is a capability–driven process. The projects are generated by the EDA or the pMS to address an identified capability gap or, in a broad sense, a priority established by these same groups.

– Technology or *bottom–up*.

  It is a technology–driven process. The projects are proposed by governmental or non–governmental experts (industry, research centres, university, etc.) based mainly on technical reasons and approved by a certain number of pMS.

Project categories

There are three project categories for initiating R&T activities:

– EDA funded projects.
– Ad hoc category A projects (also referred to as *opt–out*).
– Ad hoc category B projects (also referred to as *opt–in*).

The first of these is a project proposed by the EDA and financed under its operating budget. Since they are paid for with joint funds, all the pMS receive information on the project and share the results.

An ad hoc category A project has the following characteristics:

– Proposed by the EDA or by one or more pMS for involvement by all the pMS and the European Commission, and therefore also known as an "Open Project", meaning it is open to participation by any interested country. Because it is open to general participation, those countries not wishing to take part need only report their decision to the Steering Board, hence the name opt out.
– The specific guidelines are set by the EDA Steering Board as proposed by the participating pMS, which are called cMS[24].
– Technical management for the project is handled by a group consisting of representatives of the cMS.
– The results of the project are shared by the cMS. Non–participating countries are given a summary.

The complete characteristics for this project category are specified in Article 20 of the Joint Action.

The features of an ad hoc category B project are:

– Proposed by one or more pMS for execution by themselves. This type of project is therefore also known as a "Closed Project".
– The rest of the pMS are informed of the intention to initiate the project.

24 cMS: *contributing Member State*.

– A two–month period is given for the remaining countries to express an interest in participating, hence the alternative name “opt in” for these projects.
– The countries proposing the project have the power to accept or reject the participation of those pMS that have expressed an interest.
– The project guidelines are set by the proposing countries.
– Technical management for the project is handled by a group consisting of representatives from the participating countries.
– The results of the project are shared only among participating countries.

The detailed characteristics for ad hoc category B projects can be found in Article 20 of the Joint Action.

Project generation

As previously indicated, the CapTechs constitute the foundation atop which rests the bulk of the R&T project generation process. The EDA, in conjunction with the networks of experts described above, has established a systematic process for the initiation of activities.

By means of the two action mechanisms described (top–down and bottom–up), the CapTechs are given an initial set of ideas based either on capabilities or on technology and/or industrial aspects. After holding discussions with the national coordinators (CNCs) on the ideas proposed, these are defined in more detail and used to build up a portfolio of proposals in each CapTech. Whenever a pMS expresses an interest in participating in any of these proposals, the activity involved is initiated and, based on the general interest, a decision is made as to the more suitable project type for conducting the work: EDA–funded project (category A), or category B project.

Once the type of project is selected, it is presented to the EDA Steering Board for approval. Once obtained, a formal agreement is signed by the participating countries in the case of category A or B projects, or the EDA calls for bids in the case where the project is financed by the agency itself. Once the governmental commitment is signed by the participating pMS or the most suitable offer is chosen for EDA–funded projects, the contract is signed for the execution of the project. The process described is shown graphically in Figure 26.

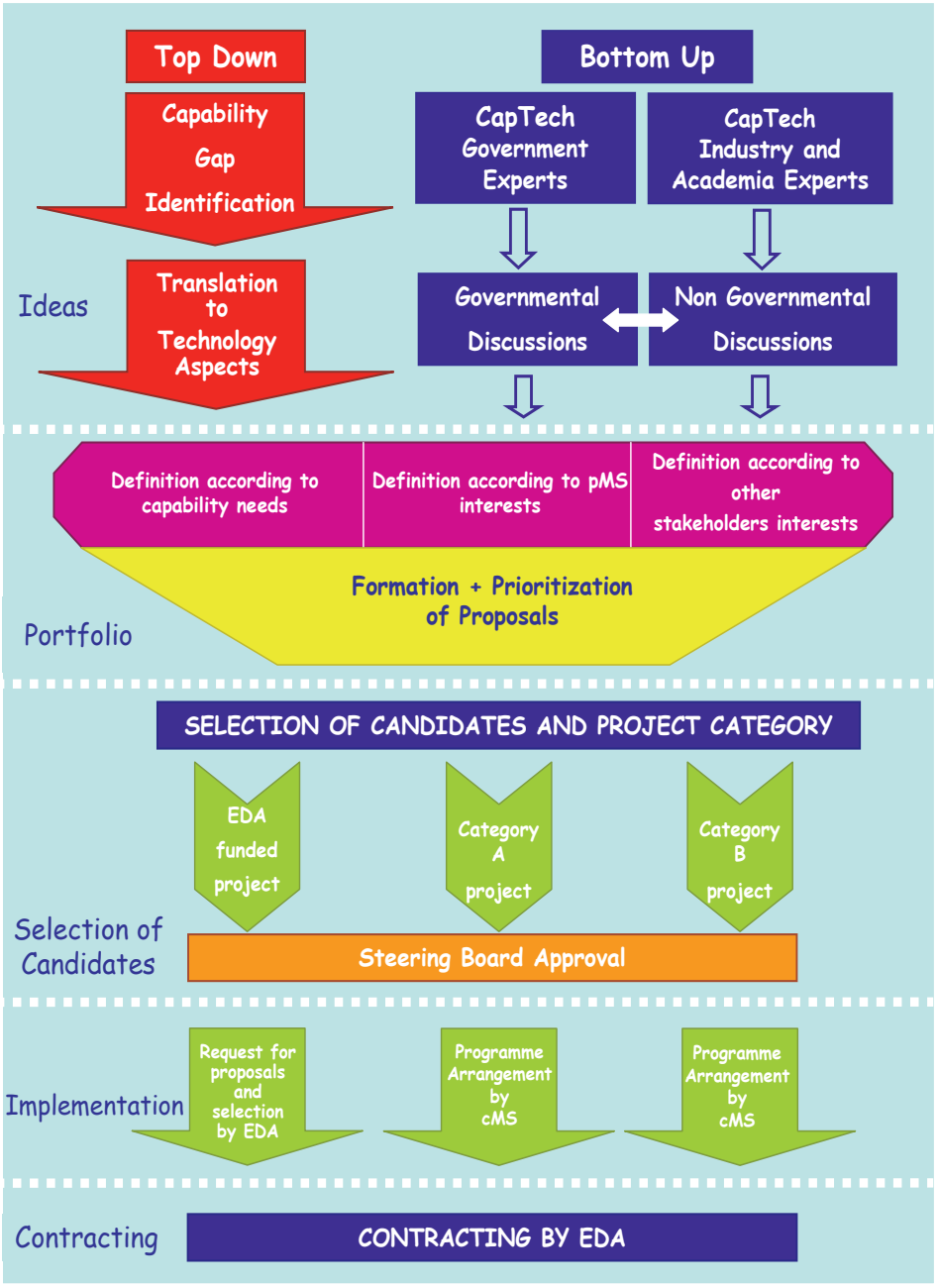

Figure 26. *Project Generation*

R&T activities carried out by the EDA

Overview

As noted previously, it was in November 2004 when the EDA as a whole and the R&T Directorate in particular, started their work in earnest. The work programme approved by the Steering Board on that date considered the structure for the R&T Directorate and decreed that the Operational Concept, which was to be approved by the Steering Board in April of 2005, be written as quickly as possible.

From the aforementioned date, November 2004, until late 2007, the EDA saw a period in which every measure of support was given to those R&T activities exhibiting a strong political component in adhering in the strictest aspects to those concepts derived from the so–called Hampton Court agenda.

Hampton Court was the site of an informal summit of heads of State and the EU government held in October 2005 under the presidency of the United Kingdom. Its primary objective was to have a frank an open discussion on globalization, economic reforms that should be introduced and the Union's internal and external security.

During the meeting it was agreed that Europe should consolidate its defence capabilities so as to enhance its security[25] on the one hand and, on the other, to adequately fulfil the missions that it is called on in increasingly greater numbers to participate in around the world. It was decided then that research and technology were critical elements in the process to improve and develop Europe's defence capabilities. Javier Solana, High Representative for Common Foreign and Security Policy and head of the EDA, was charged with adopting the necessary measures to carry out this task.

Basic course of action

In December 2005, Javier Solana presented the basic course of action at a meeting of the EU Council[26]. Basically, his initial guidelines to the Council

25 *A secure Europe in a better world.*

26 *Follow–up on Hampton Court discussions regarding certain CFSP aspects, by EU HR Javier Solana. Attachment I: Improving our defence capabilities by increasing levels of research spending, finding opportunities for research collaboration, tackling*

on questions of research outlined that Europe should "*invest more, invest more together and more effectively*". To that end, it was agreed to implement a series of measures, including:

- Generate precise statistical data on R&T so as to establish objectives for overall spending and cooperation. The EDA would have to identify the reasons behind the low individual and joint spending on R&T.
- Improve the cooperation mechanisms and thus increase the amount of collaborations. As a first step, an initial set of technology priorities should be specified to serve as a guide for the implementation of projects. In the absence of its own properties, it was advised that the priorities defined in the LoI be used.
- Define a European strategy in R&T and technology priorities.
- Implement economic measures intended toward a more rational and coordinated use of national defence budgets. Some of the recommendations included avoiding duplication of infrastructure (of test facilities, for example), establish the maximum synergies possible with other research groups (including industry), and implement mechanisms to guarantee proper complementarity with the efforts made in the civil field (security, space, etc.).

Once the course of action was defined, the EDA Steering Board in Research Directors formation met on 16 December 2005 and tasked the R&T Directorate with, among other things, developing an R&T strategy, later called EDRT. The Steering Board set an initial date of late March 2006 for finishing the assignment. It was agreed that the strategy should have the following general characteristics:

- Capability–driven model with its corresponding methodology.
- Definition of short term technology priorities.
- Identification of technologies that would have a high–impact on defence in 15–20 years' time. This task had to involve the so–called LTV[27].

As for the improvement of cooperative mechanisms, it was thought that the methods developed to date in the case of conventional projects (corresponding to the projects defined at the EDA as category B) posed

capability gaps and collaborating as partners on training.

27 *Long Term Vision. An Initial Long–Term Vision for European Defence Capability and Capability Needs.*

many problems given the substantial changes in the R&T landscape in the preceding years.

The factors that had a negative effect on the implementation of cooperative projects were regarded as, among others, the long start up periods involved, the undefined financial commitments, lengthy and uncoordinated national processes and a rigid framework conditioned by various aspects that mired the process, including the presence of the already outdated *juste retour* for individual projects and the scarce use of free competition in the contract awards. As a result, it was decided that it was necessary to increase the number of category A initiatives while at the same time adopting measures more agile of project implementation and management.

Most important initiatives

Initially, the EDA implemented two R&T studies involving two important technology areas in the field of UAVs[28], both financed from the operational budget. It cannot be said that these studies represented an important contribution to the field; however, they did provide a notable added value by being the first contracts for R&T projects implemented by the EDA and competitively awarded to European consortiums, which represented the first important sign sent by the Agency to the industrial sector in the field of R&T.

The above example aside, the most important R&T activities undertaken by the EDA as of late 2009 were the following:

- R&T strategy (EDRT Strategy).
- Technology priorities.
- Joint Investment Programmes (JIP).
  - Category A.
  - Category A/B.
- Connectivity between CDP and R&T.
- European Framework Cooperation.
- Critical Space Technologies.

28 *Technology Demonstration Study on Sense & Avoid Technologies for Long Endurance*: Initiated in March 2006 and completed in August 2007.
Technology Demonstration Study–LE/UAV Datalink Study: Initiated in December 2005 and completed in February 2007.

– General Conditions.

– Category B projects.

R&T Strategy (EDRT)

One of the courses of action delineated after the EU Council meeting held in December 2005, at which Javier Solana disclosed the initial R&T guidelines, was the drafting of an R&T strategy for the Agency with a list of technology priorities of common interest. With these guidelines the EDA initiated the work and generated a methodology[29] in April 2006 whose objective was to identify the process to be used in drafting the strategy. Later, in November 2007, at a ministerial meeting of the Steering Board, a document titled *Framework for a European Defence Research & Technology (EDRT) Strategy* was endorsed that more specifically defined the strategy's main points. Finally, in May 2008, the Steering Board tasked the Agency with writing the final EDRT document under the guidance of the national R&T Directors, to be submitted for approval to the Steering Board in the fall of 2008.

As a result of the above, on 10 November 2008 the EDA Ministerial Steering Board approved the European Defence R&T Strategy, which makes it easier for the Agency to comply with the missions assigned to it by the Joint Action, in particular those related to R&T.

The ultimate goal of the strategy is to improve and to more efficiently develop cooperation on basic and applied research and on technology demonstrators, the goal being to supply adequate technologies in support of developing short–, medium– and long–term military capabilities. The EDRT strategy is being implemented in concert with the Capability Development Plan (CDP) and the EDTIB[30] strategy that envisages cooperation in R&T as one of the key factors for success. The synergy of these strategies, in conjunction with the Armament Strategy, approved in December of 2008, will enable the achievement of the desired objective of improving Europe's defence capabilities.

The R&T strategy is not viewed as a static process. Quite the contrary, it should be seen as something active that is continuously benefiting from

29 *Defining and Implementing a European R&T Strategy for Defence Applications.*
30 *European Defence Technological and Industrial Base (EDTIB).*

the advances that are produced over time. The strategy must guide and pave the way for all those who take part in R&T activities.

As for its structure, the strategy has two main considerations:

- *ends* or the technologies requiring investment in order to meet capability needs and,
- *means* or the mechanisms, processes and structures for most efficiently achieving the ends.

Ends

The core of the strategy comprises a prioritized list of key technologies and research items requiring a significant effort. This initial list represents a first alignment of the needs of the pMS and is to be used to guide defence equipment suppliers toward a better integration of Europe's technology and industrial base.

The strategy specifies that the definition of the ends must be accompanied by R&T projects, with a suitable balance between capability–driven projects and projects of a more scientific and technical nature. The goal is to be able to anticipate new threats and to be at the forefront of advances in technology so as to achieve military superiority. In particular, special attention must be paid to disruptive and emerging technologies so as to evaluate their potential applications to defence beforehand.

Means

As for the means, it was established that they must:

- Improve the integration of the EDTIB into a wider supply chain.

  These means are intended to maintain the Security of Supply (SoS) by strengthening competitiveness and increasing the efficiency of the European defence industry. In particular, they must be aimed at:

  - Establishing a strategic dialogue with industry and research providers.
  - Coordinating efforts with other R&T networks and bodies.
  - Broadening the supplier base.
  - Promoting R&T networks.

– Promote technology push[31] as a complement to the capabilities component.

  Means within this cluster are aimed at ensuring that Europe has the right tools in place to identify emerging or disruptive technologies that may lead to future ends so that the EU remains one step ahead of possible adversaries. In this field the recommendations include:

  - Improving the shared R&T watch mechanism.
  - Promoting awareness of civil technologies for defence.
  - Developing technology roadmaps.

– Improve the effectiveness of R&T collaboration.

  These means are aimed at improving the speed and efficiency of delivering the ends while at the same time ensuring that those already delivered will have a direct benefit for EU defence capabilities. This requires:

  - Providing R&T better management.
  - Translating capability needs into R&T objectives.
  - Promoting visibility of R&T activities at all levels.
  - Developing a process of identifying commonalities and synergies between national plans.
  - Defining modalities for the sharing and exploitation of R&T results
  - Developing networking skills of R&T experts and managers
  - Accelerate new technology insertion

Technology priorities

In parallel with the strategy, a preliminary list of technologies in which cooperation was a priority was drafted to serve as the basis for the list of key technologies that will be a part of the final EDRT strategy. The list of technology areas, called functional areas, resulted from the processing of information received from the pMS and was based on a method defined by a working group established for that purpose. The Aerospace and

31 As opposed to *Capability pull*.

Defence Industries Association of Europe (ASD) also contributed to the final result, providing the industrial point of view.

During the process of defining said functional areas, the cooperation of the aforementioned working group, which was established by the R&T Directors so as to collaborate with the Agency in this task, was decisive. The group's task consisted of establishing the bases for a method that would identify those technology areas for which the benefits of working in a group and exchanging information would far exceed the obstacles posed by multilateral collaboration. Also to be identified were potentially advantageous areas involving a single country not having the resources necessary to take on the subsequent research. This working group featured the participation of the following countries: the United Kingdom (lead), Germany, Slovenia, France, Italy, Netherlands, Poland and Spain. The group's main efforts consisted of developing the method mentioned above and in conducting a pilot study of four functional areas.

This process resulted in 22 functional areas corresponding to R&T strategy headings. A listing is provided in the box in Figure 27.

Joint Investment Programmes

Category A Programmes

JIP – FP Programme

In keeping with the priorities established based on the Hampton Court agenda, the EDA Steering Board approved the implementation of the first category A programme in November 2006. The programme consists of two parts, one of an administrative–financial nature and the other technical. The former specifies how to establish the cooperation in administrative and financial terms based on joint funds, hence the name of Joint Investment Programme. To achieve this, a set of rules was drafted specifying how the programme is to be managed. It includes aspects such as the characteristics of the programme management committee (comprised of representatives from the participating countries), the financing, the selection of activities and contracting, the work share, the sharing of results and the involvement of third parties.

The technical part describes the scope of the programme in terms of 18 specific R&T objectives corresponding to the force protection capability. The definition of the objectives constitutes the first example developed

by the Agency of a top–down process and of achieving R&T objectives based on capability requirements. The 18 objectives are grouped into five capability areas:

- Collective survivability.

  The 4 related R&T Goals improve the capability to detect and, recognise immediate and latent threats (e.g.: troops, crowds, booby–traps, IEDs, snipers, CBRN, terrorists, mortars and rockets) including the capability to look inside of buildings.

- Individual protection.

  The 2 related R&T Goals improve the capability to counter artillery, missile and mortar fire and to counter snipers. Further they enhance individual protection in ESDP operations by minimising the effects of IEDs. In addition they contribute to increase permanently (day / night, all weather) vision efficiency of employed forces.

- Data analysis including data fusion from various sources.

  The 5 related R&T Goals improve the integrated C4ISR architecture and the INTEL cycle down to lowest level. They further improve the analysis and exploitation of existing and new sources of information.

- Secure tactical wireless communications systems in urban environment.

  The 2 related R&T Goals also improve the integrated C4ISR architecture. Further they enhance the capability to deny local communications and hostile sensors.

- Mission planning / Training in an asymmetric environment.

  The 5 related R&T Goals improve the capability for planning, analysis for decision support, mission rehearsal and training, for the whole operation spectrum down to the lowest level.

The other programme features are as follows:

- Duration: 36 months starting in January of 2007.
- Budget: approximately 55.0M € (Spain's contribution: 2.64M €).
- Participants: 20 countries, including Spain and with the participation of Norway (third party).

The governmental agreement was signed in May 2007, with the first contracts being awarded in December of that same year.

JIP – ICET Programme

The second category A programme approved in the EDA was the ICET, whose goal is to research disruptive technologies that could have a significant effect on future weapons systems. It was approved by the Steering Board in May 2008.

Its administrative–financial oversight rules are very similar to those for the Force Protection programme and covers the eight areas of research listed below:

- Improved autonomy.
  - Non–linear control design.
  - Integrated navigation architecture.
- New solutions for materials and structures.
  - Nanotechnologies.
  - Structural health monitoring.
- Data capture and exploitation.
  - Remote detection of hidden items.
  - Nanostructures electro–optical and other.
  - Radar technologies – Processing.
  - Radar technologies – Components.

Other characteristics include:

- Duration: 24 months starting in November 2008.
- Budget: 15.5M € (Spain's contribution: 2.0M €.
- Participants: 11 countries, including Spain.

Category A/B Programmes

JIP–UMS Programme

Although this programme's management rules have yet to be fully defined, the new EDA initiative is organized like a JIP Category A that, at its core, is comprised of a series of individual Category B projects. This is generically known as a JIP Category B.

	Euro R&T Strategy Heading	Functional Area
1	RF Technologies	RF generic technologies (components, processing, systems, integration) and multifunction RF technologies.
2	Electro-optic Technologies	EO Systems & Integration.
3	Electronic components and devices	Electronics Hardware.
4	Materials & Structures	Structural Modelling Design & Through Life Support.
5	Command & Battlespace Management, and Mission Systems	Networked sensor control, management and cueing.
6	Command & Battlespace Management, and Mission Systems	Command and control technologies (campaign / ops / mission planning and mgt, battlespace mgt, shared situational understanding, data fusion / mining / reduction, image exploitation, innovative Sensors for Urban Warfare, including acoustic and seismic sensors).
7	Communications, Networks, Information Systems & Computing	HF, VHF & UHF Communication Technologies.
8	Communications, Networks, Information Systems & Computing	Waveform design, spectrum and bandwidth management.
9	Communications, Networks, Information Systems & Computing	Network Management in NEC operations (Fault, Configuration, Administration, Performance & Security management).
10	Communications, Networks, Information Systems & Computing	Technologies for secure and robust information management, information exchange and communications.
11	Human Factors.	Human integration and interoperability.
12	Complex Weapons, General Munitions and Energetics	Energetics & Energetic Materials.
13	Ground systems & their environment	Soldiers Systems (incl. integration into Systems of Systems and NEC).
14	Ground systems & their environment	Counter-mine, gap-crossing and counter-mobility systems.
15	Ground systems & their environment	Power source and supply technologies.
16	Ground systems & their environment	Ground Platform technologies (structure, mobility…) and mounted platform systems.
17	Ground systems & their environment	Uninhabited systems.
18	Aerial systems & their environment	Aerial platform technologies (airframes, propulsion, aerodynamics, structures, control…), incl. Helicopters, UAVs, incl. High altitude platforms.
19	Naval systems & their environment	Environment definition (Oceanographic & hydrographic techniques and analysis).
20	Naval systems & their environment	Uninhabited systems, especially underwater systems.
21	CBR Protection	Physical protection.
22	Systems of systems and architectures	Concepts, design, integration, simulation & modelling.

EDA source

Figure 27. *EDRT Strategy. Priority Functional Areas*

In the technical category, the UMS programme aims to complement the MMCM priority (described later in this chapter). Whereas the goal of the MMCM project is to define the necessary capabilities out to the year 2018, the UMS R&T programme is aimed at the next generation of systems (2022–25) that could be used not only within the framework of the MMCM, but also in other naval applications.

The projects included in the JIP–UMS will focus on researching a group of key technologies associated with the EDRT priority "Uninhabited Naval Systems, especially Underwater Systems" and the CDP MMCM priority.

The programme's final goal will be to define the technical concept for a system of systems that includes UUVs (Unmanned Underwater Vehicles) and USVs (Unmanned Surface Vehicles) and that can be used to improve Europe's capabilities in naval operations such as maritime surveillance, harbour protection, etc. This concept should include notions of standardisation, interoperability, modularity and inter–changeability of modules of European USVs and UUVs.

This programme was approved at a ministerial meeting of the Steering Board in November 2009. The EDA was tasked with defining the technical, management, financial and legal aspects required for a programme launch in 2011. The programme is initially expected to last five years.

Connectivity between CDP and R&T

With this activity the EDA intends to establish activities involving requirements for capabilities defined in the CDP and the technology priorities that emerge from the EDRT Strategy. In the area of R&T, this endeavour should identify opportunities for cooperative research projects.

The initial discussions were held at an R&T Steering Board meeting in September 2008, at which it was suggested that the results of the CDP and EDRT be correlated. Eventually, in November of that same year the Ministerial Steering Board tasked the EDA with gathering information on national R&T activities and to inquire as to the future interest of pMS in four areas:

- Counter–MANPADS.
- Maritime Mine Counter Measures in Littoral Sea Areas (MMCM).
- Counter–IED.
- CBRN.

At present, not only is the R&T work assigned by the Steering Board being carried out, but advances are also being made in the area of capabilities thanks to the activities of the Project Teams for CIED, EOD, CBRN, Maritime Surveillance and NEC. Various workshops have also been organized by experts on capabilities and R&T in order to analyze the information available to date, to exchange ideas and to identify suitable candidates for R&T cooperative projects. The goal, in keeping with the Steering Board mandate, is to launch specific R&T projects in early 2010.

This EDA activity will continue in the near future for the remaining 12 priority actions specified in the CDP. Priority areas for cooperation in the long term will also be identified.

European Framework Cooperation

The EDA Ministerial Steering Board decided at a meeting held in May 2009 to task the Agency with establishing a cooperative framework with the European Commission and with other European organisations in the area of security and defence research that featured a high degree of synergy and complementarity between these two arenas. Since the CDP states that superiority in information is affected by limited capabilities in the area of situational awareness, it was initially decided to adopt this topic since the exploitation of knowledge is essential to both present and future operations.

Starting on the aforementioned date, the EDA, in concert with the European Commission and the European Space Agency (ESA), launched a process to prepare a programme called EFC (European Framework Cooperation).

Finally, at a Ministerial Steering Board meeting in November 2009, the ministers of defence approved the implementation of this framework of cooperation, tasking the Agency with presenting the relevant proposals at the Ministerial Steering Board meeting scheduled for the spring of 2010. The decision includes the adoption of a coordination system intended to maximize complementarity and synergy between the two fields of defence and security, a description of the basic course of action in the area of situational awareness and a definition of the management rules for that part of the programme assigned to the EDA.

This is an ambitious and novel initiative that will lay the foundation for cooperation among important European defence and security institutions, such as the EDA, the European Commission and the European Space Agency, whose different frameworks pose some practical obstacles.

Critical Space Technologies

So as to ensure Europe the future availability of technical and industrial capabilities required for accessing space, in particular in the area of satellite and launcher construction, the EDA, the European Commission (EC) and the European Space Agency (ESA) have agreed to unite their efforts to develop those technologies Europe needs to preserve or establish, as the case may be.

To that end, in November 2008 a group was established with representatives from the three aforementioned institutions, called the Joint Task Force (JTF). The group's mission is mainly to:

a) Raise awareness on this strategic issue.
b) Define an agreed common methodology for a coherent Europe–wide approach.
c) Define a common list of priorities for critical space technologies.
d) Work towards the availability of critical space technologies and products for European space programmes.

The EDA's role in this initiative is to provide information related to defence matters, establish synergies and avoid duplication.

The JTF met for the last time in May 2009 to present the group's final report. In reply to the assigned tasks, the document reports on topics:

– The first joint list of critical technologies for European non–dependence.
– The proposed common methodology.
– The implementation instruments.
– Final recommendations.

This last item, specified in two phases, transitory and nominal, is as follows:

Transitory Phase

– Use the first list of critical technologies in the work programmes of the three institutions.
– Launch the process in Q2 of 2009.
– To make funds available for activities in this field.
– To review and update the list every two years and monitor its status on a regular basis.

– To make the best use of the available instruments until those specifically designed for this initiative are set up.

Nominal Phase

– Future implementation instruments should be improved and targeted at critical technologies and better suited to the criteria identified in the report.

In accordance with the defined European Non–Dependence Process, the final report was widely distributed to involved parties and decision makers. Finally, two meetings, in September and December 2009, were held in order to issue the Non–Dependence list by January 2010.

General Conditions

The General Conditions (GC) for R&T is the framework established for the implementation of EDA research projects. They were approved by the Steering Board in April 2006 and were initially designed for use in both category A and category B projects. The wording resulted from the contents of the MoU EUROPA and the ERG1 drafted previously at the WEAG.

The pMS are not bound by the GC; in fact, some pMS have stated that certain contracting clauses envisaged in these conditions are unacceptable, meaning the GCs will not be used in those projects involving said countries. On a related topic, as mentioned in the previous section, specific basic rules for category A programmes have been developed[32].

As a result, the use of the GCs in projects implemented in the EDA has decreased somewhat. Currently, the GCs or the MoU EUROPA/ERG1 are used interchangeably to launch projects.

So as to solve the aforementioned problems, a working group was created in 2008 to make various changes to the text, thus extending the use of the GCs to all pMS. Also, so as to address certain reservations expressed by the industry, new clauses on property rights are being drafted. The goal is to have a new version of the GCs ready in 2010.

Category B Projects

A key aspect of the R&T Directorate is those activities aimed at the implementation and management of category B projects in support of

32 *Rules for Joint Investment Programme*.

pMS, which, while certainly an obscure task, is essential to cooperative research. To this end, the EDA is implementing a series of measures intended to increase the number of cooperative projects and activities. Worth noting among those measures adopted are:

- Action Plan for the means identified in the EDRT. Section 3 of this plan is devoted to improve the effectiveness of R&T collaboration.
- SRA Initiative (Strategic Research Agenda). Will serve to provide a shared vision among governmental and non–governmental CapTech members on the most pressing technical challenges worthy of study in each of these groups' technology areas. Will include actions identified in the action plan for means mentioned above, EDRT technology push aspects and also the adoption of known or planned capability requirements.
- Food for Thought report by the nations on accelerating the generation of category B projects.

As an example of projects already developed or underway in the EDA framework, we can cite that prior to the last quarter of 2009, 30 category B projects were developed in the EDA and a total of 36 were active.

A small contribution to the future in R&T

It is not the intention of the few lines that follow to show a future vision of the EDA (an extremely difficult task), not even of its R&T aspect. At the start of this monograph the position of the EDA in the context of defence was already described, and in Chapter 7 it will be detailed the organisation's future role. The Agency is seen as a vital component of ESDP, as a result of which it must have an important presence in the future of European defence. The purpose of this section is much more modest, and is limited to presenting some general reflections in this regard and to offer some lines of action for the R&T Directorate to consider for the near future.

For the questions of a general nature, we can cite:

- Defence budgets have been stagnant in Europe for some ten years, and have decreased in some cases. The current economic crisis only serves to exacerbate this, which makes organizing cooperative R&T activities is that much more difficult. A great effort is needed, therefore, to more efficiently stimulate the generation of projects in the future.

– Article 5, Section 3.4.6 of the Joint Action states that the EDA must work jointly with the European Commission to maximize cooperation between defence, security and civil research programmes[33]. This common ground with other organizations is vitally important, and as such, efforts in this area should be redoubled. Over the course of 2009 the EDA initiated interesting activities in this field that should represent only the beginning of a large number of activities in this sector.

– The main mission of the defence industry is to supply the necessary capabilities in keeping with the guidelines provided by governments. But, unlike other industries, the defence market is highly regulated. Because of this, the industry and other groups involved in defence R&T require a different approach than is used in other domains. In this sense, a permanent, open and frank dialog between the R&T Directorate and industry is considered essential.

In reference to concrete R&T issues, the following are worth noting:

– To date, the project types specified in the Joint Action (category A – in the JIP format – category B and those financed by the EDA) have sufficed for the initial phase. However, while not considering these R&T cooperation instruments as depleted, it is necessary to put in place new models to lure participation. One could be the aforementioned JIP Cat B, as materialized in the UMS project. Another model of interest is the one used in the SIMCLAIRS[34] project under the so–called ITP (Innovation and Technology Partnership) formula, implemented in March 2009 and which features novel and highly interesting organizational and management aspects.

– The use of emerging and highly disruptive technologies must be closely watched through EDA R&T projects. An example of this is the ICET programme, which should continue to be pursued in the most suitable areas of technology. In the case of disruptive technologies, the role of the pMS and their knowledge of national affairs is of considerable importance.

33 Art. 5, 3.4.6: "*Enhancement of the effectiveness of European Defence Research and Technology (R&T), in particular by working in liaison with the Commission to maximize complementarity and synergy between defence and civil or security related research programmes*."

34 SIMCLAIRS *Studies for Integrated Multifunction Compact Lightweight Airborne Radars and Systems.*

– Contributions from small and medium enterprises (SME), universities and non–governmental research centres are essential in some technology areas. As a result, mechanisms should be devised to facilitate the involvement of these groups in R&T activities.

– The theatre of operations of EU missions is diverse/wide–ranging and subject to rapid variations. Under these circumstances, short–term adjustments to changes in capabilities are necessary. The role of CD&E[35] is vitally important in these situations.

– Technology innovation will have a prominent role in the immediate future of defence R&T, by which we mean the generation or exploitation of new technologies or the novel application of an existing technology, process or service to satisfy a military capability by offering an improved cost–efficiency ratio.

These last two points merit a final consideration.

The need to apply technological advances quickly and flexibly when confronting a changing threat, and the need to reduce the costs of incorporating technology to defence systems with increasingly shorter life cycles makes it essential that those programmes and strategies aimed at defining, promoting and enhancing innovation in defence technology be expanded.

Technology innovation represents a form of innovation that is characterized by briefer and generally less ambitious research efforts and greater experimentation efforts. As a result, innovation in technology is particularly well suited to the development of demonstrators and the application of the concepts, developments and experiments mentioned earlier.

It is necessary, therefore, to provide our fullest support to R&T cooperation in Europe in this regard. Aspects such as systems engineering, availability management and technology life cycles, as well as the use of open architectures and developments, are the kinds of typical technology innovation elements that the EDA's R&T Directorate should facilitate and promote in future activities.

35 CD&E: *Concept, Development & Experimentation*.

CHAPTER FOUR
COOPERATION IN ARMAMENTS

José Ignacio Barrasa Martín

The Origins of Security and Defence in Europe

The Western European Union (WEU) and cooperation in armaments

Oftentimes, and particularly so in recent years, we are offered the chance to attend debates, whether of a professional or personal nature, at which the need to make the greatest efforts to achieve the levels of "security and defence" that advanced societies demand of their respective governments was presented. It was unfortunately because of and after the attacks on New York, Madrid and London, where the vulnerability of both concepts was evidenced, that society started to prepare itself for the real danger that is lurking and came to realize that it is not someone else's problem or threat, but a real one that can affect any of us at any time, and that any resources that we use to achieve the necessary levels of "security and defence" will always fall short.

The existence of this threat has had repercussions at every level in the European Union in the sense that it has become obvious that terrorism is a challenge to Europe and constitutes a threat to our security. Even within the realm of the European Security and Defence Policy (ESDP) there are efforts underway that are taking into consideration the greater demands that this new reality will place on Europe's military capabilities.

We know these are not new concepts that have emerged overnight. European countries have been working for years for the purpose of achieving some semblance of an agreement to establish joint security.

The road has never been easy, nor has the history of the countries that make up today's Europe been favourable to attaining a clear concept of Europe. Each country has preferred to maintain its own separate measure of Security autonomously and privately, curiously alleging the concept of "National Security" to the detriment of a joint action. As for the model for joint Defence, actions have been taken under the auspices of NATO and in most cases following the lead set by the USA.

These two concepts have not evolved side by side. In fact, it was not until the year 2000 that, by way of the Nice Treaty, the European Security and Defence Policy (ESPD) was promoted as the fundamental core of the Common Foreign and Security Policy (CFSP). Even today, for all practical purposes, there are great obstacles to carrying out joint "Security and Defence" actions requiring the use of civil and military resources.

If we analyze the European history of the last century, we can conclude that its peoples have based both concepts on a sense of mutual threat or distrust, without considering potential outside threats as is the case today. Hence the difficulty in assimilating and exporting these concepts to a common European setting. Many more years must pass before the principle of collective security and defence is accepted and assimilated by each and every one of the countries that makes up Europe.

In order to glimpse its progress and development, we must first reflect on the historical evolution of both concepts.

Chronologically, the origin of the European concept of security and defence goes back to 1948, with the signing of the Brussels Treaty and the creation of the Western Union (WU) –which became the Western European Union (WEU) in 1954 with the Paris Agreements– as an organisation for cooperation in Defence and Security. Throughout its history, 28 countries have been part of this organisation, their memberships being determined by one of four different statutes: member States, Associate Members, Observers and Associate Countries.

The main impetus behind the creation of the WU is found in the years following the Second World War and in the need to coordinate a joint self–defence. This need drove the two existing powers at the time, the United Kingdom and France, to sign the Treaty of Dunkirk in 1947, which was a commitment to automatic assistance between the parties in case of an armed aggression against either. Later, in 1948, the Treaty was broadened to include the Benelux countries (Belgium, Netherlands and Luxembourg) with the signing of the Treaty of Brussels, which aimed to

reconstruct and integrate post–war Europe by considering every facet that affected security. The Federal Republic of Germany (West Germany) and Italy signed on to the Treaty of Brussels by means of the Paris Agreements in 1954, effectively creating the WEU.

The events following the Second World War and the appearance of a new threat, the Soviet Union, meant that political independence and the WEU's concept of Security could only be maintained with the help of the United States. This required, therefore, that the concept of European security be forged in a transatlantic link through the Treaty of Washington (1949), which gave rise to the North Atlantic Treaty Organization (NATO).

In the field of cooperation in armaments, over forty years had to pass before the WEU member States, on the occasion of the Maastricht Summit (1992), expressed their willingness to act jointly in that regard. The statement invited other European Union and NATO nations to adopt a status that would allow them to participate fully in the activities of the WEU. One of the main goals of this new phase was to avoid duplication of activities and the involvement of the least number of forums or organisations engaged in these activities. The decision was thus made to have the Independent European Programme Group (IEPG), of which more will be said later, join in the WEU's activities.

Later, in 1999, the Treaty of Amsterdam defined the WEU as an integral part in the development of the European Union (EU), due to its operational capability in the area of defence. Despite having participated and conducted the first humanitarian and peace missions, the so–called "Petersburg missions", its main functions were gradually dissipated in favour of new activities in the EU proper within the framework of the new European Security and Defence Policy (ESDP). In fact, the operational capacities of the WEU were transferred to the EU. Joint defence, which had been a WEU competency, has since been the responsibility of NATO.

The Independent European Programme Group (IEPG)

The IEPG was chartered in Rome on 2 February 1976 for the purpose of increasing cooperation in matters of armaments between European NATO countries, which thought it necessary to promote European cooperation, strengthen the cohesion of the Atlantic Alliance and maintain their conventional forces at a suitable level.

European cooperation in matters of armaments has as its main objectives to:

- Allow for the efficient use of research, development and equipment procurement funds.
- Increase equipment standardization and interoperability, which will also facilitate cooperation in the fields of logistics and training
- Assure that Europe's technological and industrial base is maintained.
- Reinforce the European pillar in relations with the United States and Canada.

As a result, the Group, within the spirit of collaboration of the Atlantic Alliance countries while maintaining its own level of autonomy in relation to national responsibilities, would work on:

- Reconciling programmes and dates for the replacement of equipment.
- Agreements to conduct joint projects.
- Eliminating duplication in efforts to develop weapons systems.

Until 1984, the work of the IEPG, which Spain joined in 1983, had been limited to a mutual awareness of national processes for obtaining armaments and equipment and to the exploration and analysis of possible models for managing cooperative projects. In November 1984 the Group, whose highest level was that of National Armament Directors (NADs), began meeting at a Ministers of Defence level so as to give greater momentum to cooperation in armaments.

After trying for more than 15 years to promote cooperation in armaments in Western Europe, it reached the extent of its possibilities –which it must be admitted were limited from the start due to its informal nature– when it attempted to implement the gradual opening of the defence equipment market in Europe by appealing to the moral and political commitment of its member countries without actually having an international treaty or accord to fall back on.

The lack of a legal status for the IEPG, the interest of the WEU in dealing with issues on cooperation in armaments and the need to avoid duplicate efforts led to the integration of the IEPG into the WEU by way of a

communiqué from the Council to the WEU on 19 May 1993 and the new designation of the Western Europe Armaments Group (WEAG).

In regard to cooperation in armaments, it was decreed that the functions of the IEPG would be transferred to the WEU and the six basic principles for cooperation in armaments were accepted (Basic Principles contained in the Bonn Declaration of 4 December 1992). It was established that decisions in matters of armaments would be made by the thirteen WEAG Ministers of Defence and would subsequently be taken up by the WEU Council. The thirteen European member countries of the former IEPG were granted full rights in this new group, integrated as it was in a chartered international organisation and thus endowed with a legal status.

Among the new goals proposed by the ministers was that of increased European cooperation in research and technology as well as the conduct of a study to improve competition among companies and enhance Europe's industrial defence base. A document was likewise drafted which included the abiding principles of the European Defence Equipment Market (EDEM). This document was updated with initiatives to restructure the European defence industry and a plan for the creation of the European Armaments Agency (EAA). As we can see, all of these previous functions would eventually create the basis for the European Defence Agency (EDA).

At the last meeting of the WEAG Defence Ministers in 1997, it was agreed that the NADs would work on establishing a European Armaments Agency and develop a plan to present to the Defence Ministers in 1998.

On this road toward the creation of a European Armaments Agency, the greatest obstacles to consensus were, on the one hand, the application of the *juste retour* concept, the allocation of work in proportion to the costs or investments made by participating countries and, on the other, everything related to the tracking and studying of those data that allow for an evaluation of the extent to which the defence market has developed.

The birth of the European Defence Agency

The original idea of creating a European Armaments Agency can be attributed to the German European parliamentarian Egon Klepsch who, in 1978, dared to suggest the proposal without undoubtedly having the slightest idea of its potential future consequences, at least in terms of

the difficulties it would face. The member States at the time, however, did not think much of the project and rejected Klepsch's proposal. They did not accept the idea of creating a single European armaments organisation.

Subsequently, as the Maastricht Treaty was being debated in the 90s, the idea of cooperating in matters of armaments emerged once again and there was renewed talk on the need for a European armaments agency. The idea was again rejected, this time at the behest of the United Kingdom, which considered the exclusion of non–European suppliers from the European defence market and the creation of a European fortress inappropriate.

In 2002 the idea came up again, but this time within the context of the Convention for the future of Europe. In this case, the United Kingdom decided to back the idea but outside the framework of the Constitutional Treaty. France and the United Kingdom agreed on the need to create a European Agency that was able to coordinate armaments acquisitions. Including the concept of capabilities gave a broader character than one limited to just armaments. From that moment on, there was talk of the need to create a European Defence Agency.

With the full backing of the remaining member States, a group was established in 2003 to work on creating the EDA.

Over the past fifty years, different structures and organisations (WEU, IEPG, WEAG, OCCAR, LoI/FA, etc.) have been created for the common purpose of improving defensive capabilities and restructuring the defence industry. The purpose behind them in each case was to attempt to solve the difficulties faced by their predecessors. Nevertheless, and in parallel, governments have traditionally cooperated in individual armaments projects, thus resolving the need to cooperate in armaments programmes while said organisations failed to see the way forward and resolve their problems.

One of the main obstacles to the evolution of said organisations was that the field of Defence has traditionally been one in which nations have not yielded sovereignty to international organisations, preferring instead to make unilateral decisions on issues that, in one way or another, affect their national sovereignty.

The Thessaloniki European Council decided, in June 2003, to create an intergovernmental agency in the field of capabilities development,

research, procurement and armaments. In September an ad hoc group was created to arrange for the creation of the Agency and, two months later, in December, an Agency Establishment Team was formed as the nucleus in the creation of the Agency.

Finally in July 2004, the Council approved the Joint Action (JA), by which the European Defence Agency (EDA) was created.

Operational Concept in Armaments

As the EDA's work agenda for 2005 was being discussed, there was a need to draft a document that would be approved by the Steering Board (SB) and that specified the operational concept of the Armaments Directorate; that is, the basic principles and objectives on which to base the Agency's activities in the area of armaments. This request was partly removed from reality, given that today we have to recognize that the first years of the Agency's existence have been characterized by the difficulties the Sates have had in reaching general agreements, even more so in the area of armaments due to the reservations countries have to establish and agree on the basics of programme executions.

This operational concept, established as a guide to the activities to be developed by the EDA Armaments Directorate, though never formally was approved, reflected what the nations assumed the Agency should do and has, in fact, remained as its basic operating manual.

The document identifies the main objectives of the Armaments Directorate so that it can engage in its activity along with the member States. Its main objectives, as also reflected in the EDA's Joint Action, include:

- Promoting and proposing cooperation in armaments.
- Coordinating existing programmes.
- Managing specific programmes.
- Identifying practical improvements.

There goals are in fact not new, since they were previously defined as objectives of the IEPG. The products developed through cooperative programmes and which involved various nations have, on the other hand, been of a generally high quality, though they are also characterized by their high costs and by the delay between execution and delivery. These negative aspects, among others, have resulted in the majority of countries making their acquisitions at a national level. In the area of armaments,

the EDA acknowledges the need to improve the quantity and quality of defence equipment through cooperative programmes or projects.

Unlike previous armaments organisations, the EDA, in the conduct of its armaments activities, has the distinct advantage of having other complementary activities such as R&T, Industry and Market, Capabilities, etc., that its predecessors did not and whose most important goal is to look for synergies among said activities.

The process of developing capabilities through the CDP (Capability Development Plan) aims to ensure that the EDA's activity is oriented toward the future needs of the various Armed Forces and that each nation's involvement in these needs is in cooperation with the other participating nations.

In order to promote new cooperative projects, the EDA has started to work on the initial stages of project development, namely the process of harmonizing requirements. The cooperation starts with a shared understanding of the capability that is to be developed before moving on to a joint analysis of how to develop the project. This analysis is carried out through the CDP, discussed in the second chapter of this monograph. It also considers models that differ from the previous one in an effort to collaborate by pursuing a target of opportunity.

In both, the EDA is in close contact with participating nations, the Organisation for Joint Armament Cooperation (OCCAR), industry, LoI nations, etc. Experiences are also shared with crisis management departments of the European Union and Military Staff of the European Union (EUMS).

Regardless of whether a chance to cooperate is born out of a capability development process or out of a target of opportunity, the role of the EDA must be flexible in the sense that, on the one hand, it must address the needs of those nations participating in the project and, on the other, cover the successive phases, from definition of requirements to project management.

As for the coordination of already existing programmes, the EDA's activity is less defined since, as a general rule, large, programmes that have already been started and are in progress are managed by specific agencies or organisations created to develop said function, as it is the case with OCCAR. It is true that the EDA could engage in coordinating those programmes already in development so as to identify points in

common among participating countries, such as studying the possibility of cooperation during the support phases for said programmes so that, once coordinated, the management responsibility can be shifted to OCCAR.

The Joint Action includes the possibility of managing specific programmes, whether through cooperation among several nations or, alternatively, by giving the EDA a specific budget for managing said programmes. The management, if so requested by the participating nations, would be handled by OCCAR or in accordance with another model as agreed to by the nations.

Another important activity defined under the operational concept is the identification and subsequent application of best practices. In future planning, the lessons learned from armament activities carried out by the different organisations at a European level must be one of the main starting points. Given its importance we are devoting a section to this aspect in this chapter in which we reflect on the problems identified to date in the history of cooperation in armaments and on possible solutions to apply in the future.

We would be remiss to ignore a fundamental factor, one that has given the armaments world so many predicaments. We are referring to the development of the normalization and standardization process. Both the Ministers of Defence and industry have expressed on countless occasions the need to apply common standards, such as those of the European Committee for Standardization (CEN), to activities involving equipment development and, in particular, to promote the need to draft joint procedures, as finally specified in the European Handbook for Defence Procurement (EHDP). Along these lines, the mission in the area of armaments can be no other than to promote the use of the aforementioned manual, whose main objective is to foment harmonization procedures in the procurement process.

Finally, another particularly important point is the rationalization of infrastructure. In this sense, a very important function for the EDA to carry out is that of uniting the test and evaluation centres so as to pool their capabilities and of sharing the resources necessary to build said centres. To this end, two years ago, an agreement was reached on a Code of Conduct whose purpose is to promote joint cooperation in projects whose budgets exceed one million euros and also to encourage nations to jointly use said facilities. A section is also devoted to the rationalization process that is carried out within the EDA.

Armaments Area. Duties and Organisation

The Article 5 of the Joint Action specifies the functions and duties of the EDA in the area of armaments. Its main objective is to promote and improve European cooperation in matters of armaments by proposing to member states new multilateral cooperative projects whose purpose is to address the needs of the European Security and Defence Policy in matters of capabilities.

Said document makes clear the importance of the EDA in coordinating existing programmes and in assuming, at the request of member States, the responsibility of managing specific programmes, whether through OCCAR or other organisations that may be determined by the member States. The Joint Action likewise assigns the EDA the responsibility of promoting profitable and efficient contracting procedures through the determination and dissemination of best practices.

One of the Agency's most important duties in the area of armaments cooperation, however, is undoubtedly that of enhancing the European Defence Technological and Industrial Base (EDTIB) and of promoting the creation of a European defence materiel market that is competitive internationally. This requires the development of suitable policies and strategies in consultation with the Commission and, if applicable, with industry.

Two programme or project types have been established to aid in carrying out these duties:

- *Category A programmes or projects*. These are proposed by one or several nations, are of general interest and participation is open to all Agency member states.
- *Category B programmes or projects*. These are proposed by one or several nations. Participation is restricted to the promoting countries, which reserve the right to admit others. The reason for its existence is the large degree of disparity in technological capabilities, in defence interests and in the international projection of the member States. This allows for an optimized use of the Agency and increased opportunities for cooperation.

In order to carry out its functions and duties, the Armaments Directorate is structured as follows:

– An Armaments Director who reports directly to the Agency's Chief Executive, with a Principal Officer for communications and information systems and two assistants.

– An Assistant Director for Cooperation in Armaments, reporting to the Director, and four Principal Officers who oversee the various programme types managed at the Directorate and are aided by three Senior Officers.
– An Assistant Director for Armaments Policy, also reporting to the Director, and two Principal Officers and one Senior Officer.

A total of nineteen individuals comprise the current staff of the Armaments Directorate, a number that is logically bound to increase as the number of collaborative programmes managed by the Agency grows. To get some idea of the growth of the Directorate, a third of the staff has been hired in the last year and a half. Figure 28 shows the organisational structure of the Armament Directorate.

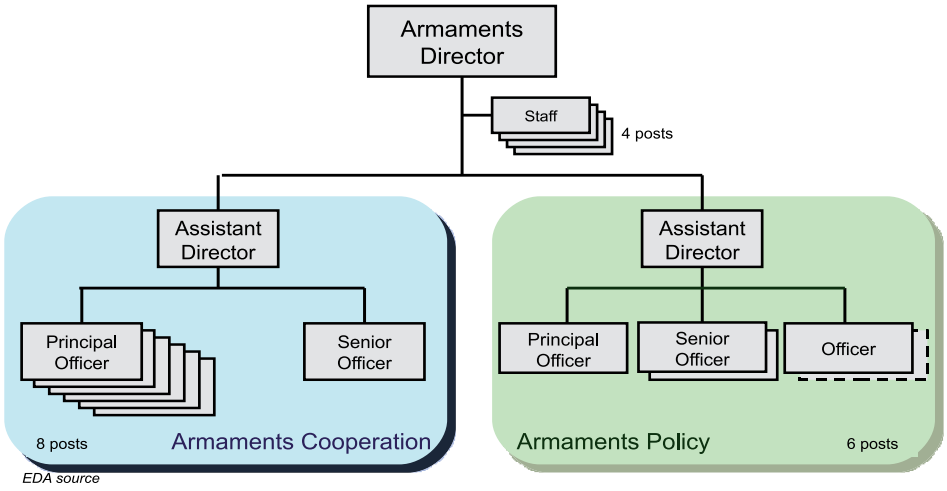

Figure 28. *Armaments Directorate. Organization*

Lessons learned from cooperation in armaments

We mentioned earlier that one of the main activities of the so–called Operational Concept in the area of armaments is that of the identification and subsequent application of best practices. The activity in this area is currently taking its first steps by defining an Armament Strategy. This makes it necessary, therefore, to carry out an exhaustive analysis of lessons learned so as to direct future activities in the area of armaments with the best possible expectations for success. The lessons learned, based on the experiences in cooperation in armaments and provided by

various organisations within Europe, must be one of the primary starting points when planning for the future.

History provides us with a wide array of examples in armament programme cooperation. On many occasions the intended aim was achieved, though at other times the result was a clear failure.

So as to obtain the most information possible on the different models of cooperation, in 2006 the EDA decided to conduct a study on "lessons learned and best practices" in cooperation programmes. The purpose of the study, developed by the Consortium for International and Strategic Relations (IRIS) in Paris, the Centre for European Reform (CER) in London, the Foreign Policy Institute (DGAP) in Berlin and the International Affairs Institute (IAI) in Rome, was to analyze both the positive and negative aspects in the area of cooperation in armaments, identifying those potential areas for improvement. The goal was to prepare a general guide that would explain how to promote cooperation programmes and that would serve as a basis for nations and industry, and as a starting point for the EDA and for nations to establish the main criteria for launching a programme.

Due to the importance of this analysis to the future of cooperation in armaments, we are devoting a sufficiently extensive section to it in order to reflect on the aspects, both positive and negative, these processes have had throughout history.

The methodology used was based on the writing of questionnaires, personal interviews with the players directly involved in managing national programmes, holding seminars, etc.

The analysis was conducted in four main areas:

- Requirements.
- Budgets.
- Management.
- Industrial cooperation.

To this end specific cases were studied involving programmes which at the time were being developed in various countries with different armies and in various phases: viability, development, in–service support, etc.

The study is divided into three chapters. The first attempts to analyze the main reason why European governments decide to participate in armaments programmes. The second chapter identifies the main

challenges to cooperation in armaments, and the third formulates recommendations based on the study conducted, the purpose being to apply them in future programmes.

Why do nations participate in armaments programmes?

Although there are obviously different reasons why countries decide to participate in cooperative programmes, the main is that while the prices of military equipment and materiel increase year after year, the national defence budgets that finance said acquisitions decrease every year. Nevertheless, and as a general rule, those countries with a high level of industrial activity are more prone to participate in cooperative programmes than those without a significant defence industry. The increased use of the new "dual–use" technologies appearing on the market, however, is making the active participation of the less industrially developed countries in cooperative projects increasingly frequent.

In recent years, new opportunities have appeared for collaboration in the field of in–service support for the main programmes, for which we know the cost of said phase tends to represent a very high percentage of the total cost of the weapons system.

There is a wide range of opportunities available to the EDA to identify potential cooperative programmes for in–service support of existing systems or programmes.

The benefits of participating in a cooperative programme are undoubtedly great for any country. Among the most important is that it can allow for economies of scale to come into play, meaning that more costly equipment can be purchased since the development costs are now shared; it allows for interoperability, a key concept for ensuring success in military operations; not to mention the added value that the joint participation of many countries in a collaborative programme has for European security.

At the same time, and as it relates to the development of the European Defence Technological and Industrial Base (EDTIB), participation in these projects helps to broaden said technological base while forcing nations to develop necessary joint concepts, such as security of supply or joint procurement policies and procedures, since one of the obstacles to the development of said EDTIB is the diversity of national industrial policies.

Governments, asserting the principle of national security concerns, want to maintain their autonomy and their security and are adverse to sharing their industrial capability objectives. But it is increasingly difficult to sustain a national industrial defence policy autonomously due to the aforementioned increased costs in defence equipment and to the constant budgetary cutbacks.

One aspect that we must note is the benefit to nations of sharing and developing technologies and of using joint standardization regulations.

Finally, export programmes can provide a very important benefit to countries, although the success of this type of programme is not always guaranteed since, as a general rule, the lack of joint procedures poses severe obstacles that have to be overcome.

Being able to exploit all the advantages that engaging in a cooperative programme can provide requires joint management that is able to unite the different procedures and policies of every country. To this end the EDA has a very important role when it comes to coordinating the different national policies and developing joint procedures, something that, to date, has been impossible to achieve.

Challenges to cooperation in armaments

There are different areas in which cooperation in armament presents specific difficulties, such as strategy, doctrine and capabilities, budgets and programmes, definition of joint requirements, national procurement procedures, government–industry relations and Research and Technology, among others.

In the global framework of defining future capabilities, governments must define the objectives and activities that their Armed Forces want to develop in the future. If we analyze EU military missions in recent years, it is obvious that the trend has been for these missions to increase from one year to another, and they will continue doing so in the future.

The EU has agreed to develop a joint security strategy and the number of joint operations continues to increase, but there is still one outstanding issue, namely, the lack of a common doctrine. This factor stands in the way of the necessary joint definition of requirements, with the result being that cooperative programmes are not as appealing to nations. The current

increase in joint missions must be used to propel EU Defence ministers to develop a common doctrine.

As for military capabilities, there have always been many obstacles to having nations reach an agreement since, as a general rule, each country has its own priorities and timelines for developing said capabilities. That is why the EU has undertaken different initiatives, such as *Headline Goal 2010*, *European Capabilities Action Plan* (ECAP) and the *Capability Development Plan* (CDP), recently approved by the EDA and which establish different categories so as to allow for the coordination of national needs.

As for budgets and programmes, we reiterate the essential factor that is the elevated cost of military equipment and materiel, and the yearly cutbacks endured by military budgets. As a statistic of interest, EDA countries spend around 200,000M € on defence, equivalent to a per capita expense of approximately 400 €.

Though this might seem like a considerable figure, as a group it would be the second military power in terms of expenses after the USA. But we must ask ourselves if what is spent on defence in Europe is spent wisely.

The EU spends approximately half what our American allies do, but when we compare the capabilities of each, the proportion is more than double in favour of the USA. This disproportion is obviously due to the duplication of programmes, of organisations engaged in the same activities, and to the large quantity of existing military materiel that would not be usable for carrying out joint missions.

That is why one of the main problems that the EU intends to address is a definition of those capabilities that will be required in the future. This process is carried out through the recently approved CDP, via which the EDA will attempt to unite the joint military capabilities to be developed that are compatible with the various national interests.

So as to analyze the national defence efforts being made by the countries, the EDA is attempting to conduct a comparative study of said efforts through the so–called Defence data. On many occasions, though, it is difficult to draw conclusions because the parameters for defining the concepts to be compared are not homogeneous. That is the case of France and Italy, which include in their defence spending the costs associated with the Gendarmerie and the Carabinieri, while other countries do not include the costs for paramilitary forces. Similarly, the former expend

considerable funds on nuclear forces while in other countries this type of expense does not exist.

The countries that invest the most on defence are the United Kingdom, France, Germany, Italy and Spain. Rough figures referenced to budgets in recent years indicate that the United Kingdom invests approximately 2.5% of its gross domestic product, France 2.3%, Germany 1.3%, Italy 1.4% and Spain 1.2%. As we can see, the United Kingdom and France are the countries that make the most significant effort in terms of investing in defence. This shows how the leading governments define their needs from a patently nationalistic perspective[36].

If we analyze the overall defence effort made by the EU, we can draw some important conclusions. The number of Armed Forces personnel is just under two million soldiers, though with a dedicated effort 100,000 soldiers can be deployed anywhere in the world. This amount represents 5%, which in turn is ten times less that the ratio corresponding to the USA. If we compare the volume of materiel deployed, the gap is even greater due to the limitations involved in carrying out a mission with full guarantees of success.

As for participation in defence programmes, EU countries have a clear tendency to develop them nationally. Countries spend over 30.000M € to acquire military materiel. Around 80% of these investments are made through national programmes, though it should be noted that this percentage is decreasing every year. This means that development and manufacturing efforts are being duplicated, with the ensuing standardisation problems. The resulting fragmentation has a significant impact on joint logistical support for the main weapons systems, a concept that if carried out, would lead to meaningful economies of scale with the subsequent budgetary savings. Moreover, it would help to solve the huge problems that exist in terms of interoperability.

The elevated number of different programmes is also evidence of a lack of coordination in the demand for defence equipment, despite efforts to reach a common objective. The main programme that should dictate the armament policy of EU countries is the consolidation of the demand and the desire to spend jointly and more efficiently if the common goal in military capabilities is to be attained.

36 All figures have been updated to 2008 data in order to give a more realistic view.

We know that the process of executing an armaments programme that is carried out nationally poses many obstacles. If to this we add the involvement of another nation, the process is complicated by various circumstances, including a slowdown when combining needs, different national procurement procedures and reconciling the dates for delivering the required need.

To address this dysfunctional situation, Europe's Defence ministers have tried to coordinate their requests for decades, In fact, important agreements have been reached in an effort to prop up this process that, as mentioned before when referring to the determination of military capabilities, are reflected in the European Headline Goal 2010, the EDA's Capabilities Development Plan, the Letter of Intent (LoI), and even the Code of Conduct on Defence Procurement, also developed within the EDA.

One of the proposed needs is that of establishing specific criteria for defining joint requirements. The countries must do this in an operational, rather than a technical, basis since when done with reference to the latter, it is more difficult to consolidate the overall demand as certain technologies may favour a given country's industry.

What is more, defining highly technical requirements usually involve lengthier negotiations, which makes reaching an agreement on the implementation of the project that much more complicated.

Another important factor to bear in mind when studying and developing a cooperative agreement is the in–service support phase of the system being developed. As a general rule, this phase is not considered when studying the financial effort needed to go ahead with a programme. The reason is obvious: the cost of this phase represents a very significant percentage of the programme's total cost, and it is more practical and viable to authorize the execution in phases, rather than considering the large amounts involved over the total life cycle.

As a general rule, countries tend to seek out national solutions for in–service support contracts since one of their main objectives is to sustain their own national industries. The duration of in–service support contracts for large weapons systems tend to be rather lengthy, over thirty years in some cases. Many countries face financial and regulatory hurdles when attempting to establish such long–term contracts.

The execution of cooperative programmes over the life cycle of a large number of weapons systems requires a firm decision on the part of the national governments involved. Along these lines, only minimal efforts have been made to date in the area of training, but not in the areas of logistics or maintenance. Currently, the first agreements are being worked out in OCCAR to engage in a joint in–service support contract for the Tiger and A400M programmes (Figure 29).

Figure 29. *First A400M, an OCCAR project, assembled at the EADS CASA factory in San Pablo (Seville) during its roll–out on 26 June 2008*

An important aspect when executing a cooperative programme is the management model used in the programme. There is a close link between the degree of integration of the project teams (PT) and the success of cooperative programmes. When speaking of project teams, we refer to the people assigned by each nation to the joint group that is going to manage the programme and act on behalf of the nations.

The problem is that these multinational teams have no decision–making authority, meaning each national representative has to elevate any issues to his respective country before a decision, even a minor one, is made. That is why, starting in the nineties, it was decided to create permanent

project teams in which each representative not only served as his nation's representative, but did so as part of an integrated team that tried to work out a final solution or float a joint proposal.

Another factor to analyze is the study of different procurement procedures which, as a general rule, vary from one country to the next. There are countries that use Article 296 of the Treaty Establishing the European Community (TEC) [37] to justify protectionist policies in the procurement processes. The main problem is the lack of transparency in these procedures. Article 296 of the TEC allows a member State to take whatever measures it considers necessary to protect the essential interests of its security; this provides the countries a way, therefore, to promote their own technology and industrial development. This deficiency has been redressed, in part, by the implementation of the EDA's Intergovernmental System and, within that, by the Code of Conduct on Defence Procurement, though even now, after more than two years since it went into effect, some countries are still hesitant to open their markets to suppliers that are not strictly national.

The practices for carrying out procurement programmes have changed over time. At first the tendency was to have few phases in the development of a programme. The first consisted of the definition phase, before proceeding to the second phase, design and development, during which potential technical risks were evaluated. The third phase, for more complex programmes, especially those managed by NATO, was production. Certain programmes included an additional phase between definition and development called the risk reduction phase. These models were developed first by the United Kingdom and then by France and Germany.

In the case of cooperative programmes, it was eventually concluded that it is more practical for there to be few phases since governments are forced to negotiate a contract for each phase of the programme. This does, however, lead to delays in the execution of the programme. An additional problem is the delineation of responsibilities for both the client and the contractor, or Industry, something that has to be perfectly specified in the contract. The more specific the definition and design phases, the more clearly delineated each party's responsibilities will be. The main purpose of sharing responsibilities is to define the programme cost and the delivery

37 Abbreviated versions of the TEC and TEU are available at: http://eur–lex.europa.eu/LexUriServ/

timeline. The more the potential risks in the definition phase are reduced, the easier it should be to divert risks to industry for extra costs or delays. This is known in programme management as the commercial approach.

The system's level of complexity is a highly influential factor in governments' decisions on programme development. In some cases, when developing complex systems, the decisions involving the procurement process are made jointly by the governments and industry, and the Defence ministers themselves play a very active role in the industrial consortium created to develop and manage the programme for the purpose of sharing risks. For less complex systems, the model is reversed in the sense that the risk is assumed wholly by the industry although, as a general rule, the bid includes an assessment of said risk. Depending on whether the assessment is done properly or not, it could mean an additional cost for the industry.

It is important to analyze the role played by the relations between government and industry. If a given country's defence budget is low, its defence industry will, in general, find it challenging to sustain itself on a national level. In certain sectors, such as aerospace and electronic systems, industry has gradually consolidated itself by entering into contracts abroad. The reality of this process, however, is far from ideal. Industry must reach a certain degree of consolidation if it wants to play an important role in the global defence market. There are also areas that have been excluded from the consolidation process, such as naval platforms and ground weapons in general, for which the industrial defence base is structured around small and medium sized enterprise.

The different industrial policies make the development of a joint procurement process difficult. Experience tells us that, in general, the less involvement a Defence ministry has in its industry, the more competitive the defence market.

As for the possible liaisons between industry and government, there are different models, from those in France, the United Kingdom and Italy, where the governments have a very special and direct relationship with their national industries, to those which barely have a defence industry and base their procurements on off the shelf purchases. In between are those where niches exist for certain technologies, with the government adopting a protectionist stance.

The industrial participation model used by most nations in developing a programme of cooperation involves the practice of *juste retour*, that is, a participating country's industry is allotted a share of the work in proportion

to its country's financial contribution to the programme. Experience shows that the greater the interest of the various industries and governments to participate in a programme, the more roadblocks there are in determining a model of cooperation. *Juste retour* may be the greatest obstacle to carrying out cooperative programmes, though the reality is that few governments would be willing to participate in a cooperative programme without being assured certain benefits for their industries. What is more, it is difficult to justify in the court of public opinion the need to participate in a defence programme requiring the contribution of large sums of money without some sort of industrial return on said investment.

Even in organisations like OCCAR, one of whose fundamental principles is the rejection of juste retour, there is a tendency to reach a certain global balance in the Agency's participation. That is to say, the cost to a nation to participate in certain Agency programmes is balanced out by the allotment of the work load of all the programmes in which its industry is involved. Whether the industry is large or small, nations want to maintain that balance for two key political reasons: employment and the control of the technology developed over the course of the programmes.

Another factor that could distort the execution of a cooperative programme that is every bit as important as its management is the handling of intellectual property rights. The problem is born out the normally opposing needs of governments and industry with regard to the ownership of the technical information generated as a result of a programme's development.

Unlike civil technology, there is no agency that controls patent rights or intellectual property rights in the military arena, a factor that would help to propel the technology defence market. It would be desirable for such control over the technologies developed to exist in this area so as to ensure aspects such as security of supply, the existence of incentives to industry to innovate, or to adapt different technologies so that subcontracted industries within the supply chain can protect their industrial niches and thus develop their industrial capabilities. The greater the technology developed, the greater the industrial control over it and, in practically every case, the industry maintains control over the ownership of the technology developed, even if it grants Defence ministries the right to use said technology.

Lastly, another challenge to cooperation that must be addressed is the joint development of R&D projects. EU governments spend more than 40.000M € on procurement and R&D each year, around 9,000M €

correspond to Defence. France and the United Kingdom alone shoulder over 75% of these costs, a figure that rises to 90% if Germany and Sweden are included. But more significant is that France and the United Kingdom spend 13% of their budgets on R&D, practically the same percentage as the USA (15%). The EU average is 7%. Duplication and the negative impact resulting from a lack of economies of scale greatly reduce the effectiveness of said investments.

The need is obvious, therefore, to engage in joint R&D projects and investments, and to stop doing business as usual, with each country taking on parallel projects, each at its own expense, investing in similar projects and depleting resources that could have been used to develop new technologies. This principle of joint investment becomes even more necessary from the standpoint of ensuring interoperability when carrying out military missions.

Recommendations for cooperation in armaments programmes

Having presented the main reasons why countries decide to participate in cooperative programmes, along with the key challenges that must be faced if we are to engage in a common armaments policy in Europe and carry out cooperative programmes with a certain degree of success, it is now time to reflect on these and, through this process, to attempt to draw some conclusions.

The recommendations made in the study, and which are summarized below, are based on the experience and lessons learned from the different programmes and cooperation models implemented to date. They involve five main areas: requirements for developing a cooperative programme, R&D investments, industrial cooperation, budgets and programme or project management.

As concerns requirements, we can say that within the EU, a set of capability objectives was agreed upon for the year 2010 (Headline Goal 2010), along with the establishment of a mechanism to develop capabilities. It is necessary for nations to agree on a common process for defining requirements. As part of the LoI, the six countries (United Kingdom, France, Italy, Germany, Sweden and Spain) established a process for harmonizing military requirements, which the EDA has taken as a model for expansion to all 26 nations. It is a matter, then, of reaching joint agreements on the definition of Military Staff objectives and requirements

The EDA sets the mechanism for developing the capabilities agreed to by the countries in concert with the EU Military Staff and NATO. In order to reach a common agreement on the definition of requirements, it is necessary to start with a common doctrine, said doctrine being none other than that used to implement the "Petersberg Tasks" as part of the ESDP. So as to carry out the process, it is necessary to have industry's involvement from the time the requirements are defined, given its ability to provide essential information regarding the technical requirements and potential advances, as well as to define delivery timelines and information on technologies available in the market.

It is necessary to apply the life cycle concept to cooperative programmes and include maintenance, training, logistical support, operational use and removal from service, since all of these phases have an associated cost that must be taken into account when assessing the life cycle cost of a weapons system.

As for R&D investments, we recommend an exchange of information during the planning phase. Governments need to share information on R&D projects for future investments in an effort to try to avoid duplications. This activity could be coordinated by the EDA and oriented toward the capabilities development process outlines in the Headline Goal 2010 and the CDP. The quality of the information will depend on the relationship that exists between the governments and their industries, meaning the information coordinated with the various national industries is essential to reaching the above goal and to sharing information concerning intellectual property rights.

R&D goals must likewise be established. Just as a goal for capabilities was developed in Headline Goal 2010, so should a goal be set for R&D projects, one which governments would commit to achieving by the year 2020. This would provide industry with a plan of action while promoting cooperation among nations in Research and Technology projects.

We once again face the need to promote research programmes in the arena of European defence. There are but a limited number of countries with substantial investments in R&T. Given the limited budgets and the potential economies of scale, governments should collaborate more closely on research projects. Only 12 % of countries' R&T budgets involve joint projects. Three–quarters of these are European, while the rest is spent with other partners, mainly US. Nations must therefore push for collaboration in joint R&T projects so as to share resources. The way to do this would be by fomenting, through the EDA, common projects which,

given its relationship with the Commission, should be based on the study of the utilization of dual–use technologies.

As for industrial cooperation, the use of the *juste retour* concept poses a significant obstacle to the development of cooperative programmes. Even admitting that the use by OCCAR of the "global balance" concept represents a great improvement over previous agreements, it is difficult for governments to renounce this concept in the short term. Nations should consider eliminating this concept in a future. This would strengthen the industry's consolidation process and technological specialization in Europe, and it would enhance competition and the industrial base, key factors to propelling the technological and industrial base within Europe.

These factors would be pointless if the supply of military equipment to countries could not be assured. In fact, one of the main reasons why countries refuse to renounce *juste retour* is to assure said supply, and the best way to do so is by controlling the supply through its own domestic corporations. The need therefore exists to reach firm agreements regarding security of supply. To this end the EDA should, in the near future, apply the agreements reached by the LoI group and which are currently starting to be implemented. Europe needs a different legal framework, one in which the security of supply can be guaranteed and where a single market without borders can exist. Along these lines, the way this concept is addressed in the procurement directive currently being drafted by the Commission is of the utmost importance.

Another important aspect to keep in mind is the implementation of joint procedures involving the handling and management of defence budgets. In principle, it is necessary to establish procedures for the exchange of information as regards the various approval processes for said budgets. These processes vary from country to country, meaning that important decisions on cooperative programmes have resulted in delays in their execution. Coordinating these processes would help in the execution of cooperative programmes.

One important factor whose compliance the nations must monitor, enforce and promote, both as it relates to their own industry and to other nations, is the application of the Code of Best Practice in the Supply Chain. Through this Code, nations and industries alike commit to reaching intergovernmental agreements and to guaranteeing transparency in the supply chain so that the lesser defence companies, mainly small and

medium enterprises, can access the defence market as second or third tier subcontractors.

We mentioned earlier that one of the main factors that tend s to upset the pace at which a cooperative programme is executed is the handling of intellectual property rights, since normally it is not clear who retains ownership of these rights. To address this, the EDA is holding meetings with the members States and industry in an effort to define a system for handling these intellectual property rights and which must include the necessary measures to protect defence company know–how and avoid any kind of duplication. This system should consider three fundamental aspects: governmental control and maintenance of the technology developed as a consequence of advances associated with the programmes, assuring security of supply; providing the incentives industry needs to innovate and adapt the various technologies as they are developed; and lastly, suitably protecting the technological niches of subcontractors.

Finally, we offer a general recommendation on the coordination of the various procurement processes. Although we accept as a given that the harmonization of said processes is practically unviable, it would be vastly beneficial to try to coordinate the different work schemes used by both industry and nations to carry out the procurement process for military hardware or a weapons system. Doing this requires conducting a cost–benefit study so as to determine the viability of a cooperative programme. Companies must likewise avoid having several suppliers for one programme. These must be reduced to a bare minimum. Compliance with the EDA's Code of Conduct for procurements must be enforced if we are to move forward in the processes of transparency and of opening defence markets.

Lastly, the different national procurement cycles for weapons systems must be coordinated. To this end the EDA, through its Armaments Directorate, has already started work on a joint procedure, as reflected in the armaments strategy approved by the National Armaments Directors (NADs).

The new step taken by the EDA with this strategy is very important to the process of cooperation in armaments. The final document was drafted by a group of national armaments experts that, along with the EDA and even OCCAR, worked to define the strategy. Given its importance, we next provide a detailed explanation of the process behind the strategy for cooperation in armaments.

Strategy for cooperation in armaments

The areas of Industry and Market and R&T were the first to launch a work plan, especially for their long–term strategies. This was followed by one for Capabilities and culminated with a plan, already approved, for developing capabilities. Of all Agency areas, that of armaments was the last to implement a plan for developing its activity, probably due to the difficulty of having the nations reach a consensus.

It was not until late 2008, with the approval of the armaments strategy, that this department started to carry out its main activity. As a result of this, one of the most influential tasks in the EDA's normal work routine is the long–term development of this strategy, the main goal of which is to establish the principles and the areas of activity for promoting and furthering armament programmes. Governments cooperate in international programmes for various reasons. The main one is to obtain the capability requirements they demand at an affordable price and to be able to maintain them by sharing non–recurring costs. The main advantage to sharing joint equipment is that of solving interoperability problems, in addition to partaking in the technology. Another important factor that still needs to be addressed by the various Armed Forces is that of solving the problem of military hardware standardization.

Regardless of these advantages, however, the main reason why nations decide to participate in cooperative programmes is the high cost associated with any decision involving the procurement process. Given the continuing cutbacks in defence budgets and the relentless increase in the cost of military equipment, the most viable and affordable option when acquiring a weapons system or military hardware seems to be that of cooperation. For many nations the importance of cooperation in armaments goes beyond mere support for the EDTIB.

But let us analyze now how this cooperation between nations is handled within the EDA. The Joint Action defines the EDA's role in reference to cooperation in armaments with terms such as identification, coordination, management, development and execution of best practices. To this end, a series of so–called strategic objectives have been identified, to be attained via the execution of the cooperation in armaments strategy and a series of actions to be derived from each of the objectives, as described briefly below:

Strategic Objective no. 1

Generate, promote facilitate and manage cooperative armaments programmes to meet capability needs.

Once the requirements are harmonized, opportunities for cooperation must be sought out in order to find cost efficient solutions and promote interoperability. The EDA, as part of the tasks decreed to it by the Joint Action, has a fundamental role when it comes to facilitating the transformation of capabilities into programmes. These opportunities for cooperation must be publicized, hence the great usefulness of the computerized procedures and systems implemented at the EDA. As a consequence of the Capabilities Development Plan (CDP), the process must be iterative from the moment of definition and in all phases of the programme.

The participating nations must define their needs based on the priorities defined in the CDP. The best procurement strategy must be assiduously applied and the best use made of the R&T resulting from the EDRT strategy, civil technologies and investments by the defence industry.

Once the needs are harmonized, the programme development phase is planned.

So as to avoid duplication, the activities must be closely coordinated between the EDA, participating Member states (pMS) and the agency charged with overseeing the programme.

In late 2008, the pMS agreed that the agency for cooperation in armaments, OCCAR, would be charged with managing those programmes defined under the EDA's purview.

Strategic Objective no. 2

Ensure the EDTIB and Investment therein is capability oriented and supports future cooperative programmes.

Establishing true cooperation in armaments requires the creation of a solid European industrial base. This cooperation will, in turn, give a firm boost to the EDTIB and promote competition among European industry.

Achieving an EDTIB that is consistent with the capabilities needed requires promoting transparency and understanding between the various governments and industries. To do this, industry has to know the needs of the pMS; that is, the information involving the CDP and the results that are obtained as the research and technology, and EDTIB, strategies develop, and the way in which future cooperative programmes are going to be structured.

These decisions must be made within the context of a continental market. The possibility of procuring defence equipment from different strategic sectors of the European market must be ensured.

The participation of small and medium companies in the cooperative model must also be promoted. Doing this requires, as mentioned earlier, the application of measures that foster transparency and the compatibility of the various national procurement procedures.

Strategic Objective no. 3

Improve the effectiveness and the efficiency of European Armaments cooperation developing the right tools to achieve the ends.

In addition to the activity needed to develop armament programmes, greater efficiency in cooperative programmes must also be achieved. Thus, new opportunities for cooperation must be identified at the start of the life cycle. Dialogue between the pMS is important when harmonizing requirements if the benefits of cooperation are to be maximized.

Any decisions made during the programme's preparation phase, along with the various actions to reduce risk, will be of particular importance to the execution of the programme in terms of cost and delivery timeline. If a programmed is to be developed in the most cost–effective way possible, then the programme's life cycle must be considered.

It is important that standardization procedures be followed in keeping with the principles established in the standardization policy applicable to the Agency.

As part of the system's life cycle analysis, an exhaustive study of aspects involving the DTEB must be conducted. The opportune actions must be taken to attain the required levels of logistical

interoperability and compatibility by means of the standardization, logistical support, coordination and harmonization of defence materiel in Europe.

In order to reach these objectives, the EDA, along with the pMS, has tried to implement a series of actions that it is necessary to develop. Promoting cooperative programmes requires for the development of the ESDP to be based on the capabilities initiatives proposed by the pMS and on those agreed to in the CDP under the purview of the EDA.

To achieve this, a Preparation Guide must be developed for a programme that incorporates the methods and procedures for managing a programme over its life cycle.

Cooperative solutions must be used that employ dual use technologies that are applicable to both the security and military sectors. National procurement plans should always consider the cooperation model in terms of the most profitable potential situation, while attempting to achieve the best model for interoperability.

As specified by the EDTIB strategy and so as to obtain the most benefits from the investments made to fund future cooperative programmes, it is necessary to identify the essential military capabilities to be maintained or developed at a European level while preserving the principles of security of supply and information.

We must look for a flexible approach in terms of industry participation in order to find the most efficient solution that provides the specified requirements. The involvement of small and medium companies must also be increased.

How could efficiency in armament cooperation be improved?

Evidently it would be necessary to define an interface model that would delineate the activities of the EDA and of the organism or agency managing the programme or project. There must be a mutual understanding regarding the procedures to apply in cooperative programmes.

A best practices guide to cooperation in armaments will also be drafted for the purpose of reducing programme start–up times and its life cycle costs. This guide will include documentation covering aspects such as the programme preparation phase, the liaison between the EDA and OCCAR (interface model), application of life cycle management to a programme, acquisition of off–the–shelf armaments, cooperation on subsystems and

technology demonstrators, a guide to promote cooperation in the DTEB and the best practices in management standardization. Also of great importance is the establishment of a legal and contractual framework for cooperative programmes.

It is important for the aforementioned programmes to be interrelated so that they can provide a framework or a plan of action for cooperation in armaments within the EDA that can be used by the different project teams and groups in order to ensure the efficient and effective transformation of a programme into its subsequent phases.

This plan of action must include the key aspects for establishing a joint procedure for the development of a programme's preparation phase. This involves identifying the nexus between the capabilities defined in the CDP and the cooperative programmes to be developed. The purpose of developing capabilities within the framework of the EDA is to transform the necessities that arise out of the ESDP into possible solutions to be worked out cooperatively.

This transformative process must be without loopholes. It must allow the selected programmes to constantly evolve over the course of the different phases of the procurement process. The goal of this phase, as noted above, is none other than to find common ground between the areas of capability development that emerge from the CDP and subsequent agreements related to the development of the cooperative programme. These agreements must be supported by the industrial establishment, meaning it is vitally important that industry take part alongside the national representatives in this first phase.

This transformative process, in turn, comprises three different phases that are not isolated, but which rather, through the iterative process, allow the EDA to intervene at any time during the development of the process. Likewise, the model must be unique, that is, it must be applicable to any type of programme regardless of its scope.

The first phase of the process, called Common Staff Target (CST), starts with an expression of the resulting basic capability need either via the CDP or as defined by the need of one of the nations. Moreover, it must be supported by a concept or doctrine developed by the Military Committee of the European Union (EUMC) or by a national or NATO doctrine.

The CST must describe the result or effects that the users need to develop. At this point the possible solutions to the need are not considered, though

a temporary forecast for the achievement of objectives will be included, such as a definition of the Initial Operational Capability (IOC) or the Full Operational Capability (FOC). The experts from the participating nations will harmonize the capabilities required in cooperation with the EDA Capabilities Directorate.

Finally, a project team (PT) will be named, consisting of national, EUMS and EDA representatives who will develop the CST. This document will be presented to the Steering Committee and will serve as a basis for the preparation of the outline description (OD) of the programme preparation phase.

The Programme Preparation Phase starts with the decision of the Steering Board and includes, first, the reporting to said Board of the capability identified as necessary, the declaration by the participating nations to carry out said preparation phase, and therefore to produce a CSR and a Business Case (BC), an offer to other nations to participate and, finally, the involvement of the nations in this phase through the creation of a Preparation Group (PG), formed by personnel from nations participating in the programme and from the EDA.

This phase will be regarded as an ad hoc project in keeping with the Agency's Joint Action document. There is a provision for establishing a Steering Committee, whose responsibility would be to oversee the development of this phase. In most cases it will be treated as a Category B project with or without a financial commitment, as appropriate. Some type of contractual commitment or study may have to be established, in which case the appropriate administrative agreements will be initiated.

Once approved, a decision will be made on whether industry will be given the documentation so that it can propose possible solutions, define the inherent risks and engage in a dialogue with the various national industries involved in the programme so that the supply chain can be defined. This decision will be evaluated while the CSR is developed.

The second phase specifies the development of the CSR. This is the most critical phase, in which the CSR is transformed into user requirements spanning the entire range of capabilities and development lines. Measures of effectiveness and other programme development data are also established. In this phase all the technical data, as well as the programme risks, must be taken into consideration. The possible solutions to the desired capabilities are identified, along with the technological, industrial and economic variables, especially for large programmes in which the

influence of the different players engaged in the process is complex. The CSR must be agreed upon by the nations involved in the process and must be included in their national plans. As for the timeline of this phase, due to the number of factors requiring consideration it will, in general, exceed that of the CST.

Ideally, the CST should remain invariable, but any deviation or circumstance that leads to a gap between the CST and CSR should be reflected in the capabilities development process. It is likely for there to be more than one CSR in support of a CST. During this phase it is necessary to keep in mind the degree of investment necessary to execute the programme. Additionally, participating nations must consider the need for the final objective and identify R&T solutions so as to reduce any potential technology risks.

At this point, the joint participation of national experts in capabilities, armaments and R&T is necessary to develop the CSR, whose contents, in certain cases and depending on its importance, could be transferred to the MoU or to the contract itself.

Once the CSR is ratified, a viability report (Business case –BC) will be drafted so that the national representatives can evaluate it and make a final decision. The main purpose behind this document is to provide the necessary basis so the nations can make decisions involving future activities to develop and can start the negotiations for the next phases prior to making a formal commitment. It must transfer the capability requirements to the programme definition and analyze the various factors affecting the programme, such as effectiveness, the potential for integration, costs and R&T objectives. This report will be drafted by the participating countries in collaboration with the EDA Armaments and remaining Directorates. The process of drafting the CSR will be conducted in parallel.

The result is a document that will provide sufficient information on the programme procurement process to enable proceeding to the subsequent phase, which will be developed by a programme management organisation, such as OCCAR.

The intended aim of the CST, CSR and BC documents is to provide the participating nations with an overall view of their involvement in the programme. At the same time, it is also necessary to carry out a rigorous analysis of the degree of financing, contractual agreements required, technical specifications, etc. It has been determined that these aspects, in principle, must be developed outside the EDA since any relevant

decisions must be made at a national level. Nevertheless, the role of the EDA in supporting member States on this issue must be defined through a Steering Committee decision.

The preparation phase concludes with the decision of said Committee, which will determine the approval of the CSR by the nations, the result of the BC and the intention of the nations to launch an ad hoc programme under the purview of the EDA, as specified in the Joint Action and which, as we have already seen, would be a “Category B” programme.

The decision will also be made on whether to establish an Ad Hoc Programme Group (AHPG) to execute the next phases jointly with OCCAR or another management organisation, as applicable.

The last programmes to have emerged from the EDA, such as the Future Unmanned Aerial System (FUAS), Maritime Mine Counter Measures (MMCM) or the preparation phase of the Biological Equipment Development and Enhancement Programme (BIO EDEP), were developed under the management principles set out in the programme Preparation Guide.

Figure 30 provides a graph that shows the sequence of events in the Preparation Phase for a cooperative programme from the time the CST is approved until the Steering Committee approves the launch of the programme.

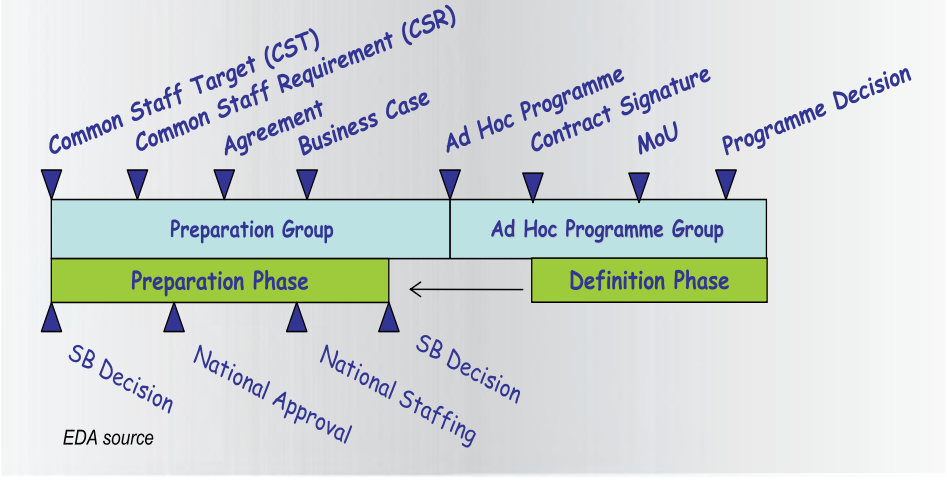

Figure 30. *Programme Preparation*

OCCAR and EDA relations

Once the Steering Committee agreed to launch the programme, consideration was given as to what organisation should manage it. Every indication was that OCCAR could become the centre of excellence in Europe for the management of cooperative programmes, though it obviously was not the only choice. The OCCAR member nations (United Kingdom, France, Germany, Italy, Belgium and Spain) supported this idea from the start, along with the vast majority of member States, though others suggested the possibility that another organism could be in charge of the management.

By way of background, ever since 2005, one year after the creation of the EDA, both the EDA and OCCAR have studied possible collaboration models so as to facilitate cooperation and joint participation in certain projects and programmes.

This collaboration is based on the guiding principle that, while the EDA is the agency that is charged with managing military defence capabilities and studies possible armament programmes, the OCCAR would serve as the centre of excellence for managing and developing cooperative armaments programmes once approved by the EDA and the relevant decisions to participate have been made by the interested countries. This possibility is clearly specified in Articles 20 and 21 of the Joint Action.

As a consequence of this analysis, the French presidency of the EU proposed, in the second half of 2008, that OCCAR officially become the organisation responsible for managing those programmes initiated within the EDA to develop Europe's industrial and technology base. Said proposal became a reality when the Council of the European Union approved a policy statement defining the cooperation between the EDA and OCCAR based on the need for member States to work in close collaboration to develop the civil and military capabilities needed to further the EDTIB.

As a result of this agreement, work was started on an administrative agreement that would define the various responsibilities of both organisations.

Its main point is an acknowledgment of the independent nature of both organisations and their different supervisory structures, with the EDA acting under the direction of the Steering Committee and OCCAR being bound by the decisions of the Board of Supervisor (BoS) on behalf of National Armament Directors of the nations belonging to said organisation.

So as to carry out the missions described in the Joint Action (EDA), and in the OCCAR Convention, both organisations aim to enhance their activities while avoiding duplication and carrying out common projects whose goal is cooperation in armaments and the development of the EDTIB.

The cooperation model consists of managing a project or programme that is initiated within the EDA and for which OCCAR has been identified beforehand as the potential managing organisation. It also includes projects or programmes taken to the EDA by participating nations and which, likewise, have identified OCCAR as a potential managing organisation.

Both organisations must develop a cooperation model that reflects the different decision–making possibilities so as to ensure the development of capabilities over the life cycle of the project or programmes. That is why the coordination and consultation model used is important, as is the work between the different groups in both organisations, which is intended to allow each organisation to participate in the other's work meetings without prior approval from the governing bodies.

It was necessary to establish a security agreement between the EU and OCCAR for the purpose of protecting classified information. An administrative agreement is currently being negotiated between the EDA and OCCAR to define the responsibilities and competencies of each organisation. This agreement is scheduled to be approved in the next months.

Although the first steps are being taken toward establishing the working model between the EDA and OCCAR, in keeping with the development of the armament strategy, a procedure is being worked out by means of which once it is agreed to launch a cooperative programme, OCCAR will oversee its development for the duration of its life cycle.

The model will explain how a cooperative programme can be backed by a group of EDA nations even if they are not OCCAR members. The EDA promotes cooperative programmes by way of the cooperation phase, from which moment on it promotes and enhances opportunities for countries to cooperate. As soon as the programmes, including the Technology Demonstration Programmes (TDPs), start to take shape, OCCAR could be required by the nations to oversee their delivery through the management of the programme's life cycle.

During the preparation phase, the EDA analyzes the programme in terms of objectives, costs, delivery schedule and participation model so as to achieve the previously harmonized requirements.

We noted earlier that once the CST is defined and the decision is made to draft a CSR and BC, a project group (PG) comprised of national and EDA representatives will be established within the EDA to develop them. If it is agreed to continue with the next phases, the EDA's Steering Committee will be asked for specific approval to establish the EDA Ad Hoc Programme, in accordance with Article 21 of the Joint Action.

At that time the OCCAR would be requested to participate in managing the programme or project. The Programme Group would then become an EDA Ad Hoc Programme Group, whose main responsibility will be to develop the agreements for the following phases and integration within OCCAR. This group will consist of representatives from the EDA, the member States and OCCAR and will be supervised by a Steering Committee that will later become the Programme Committee (PC), once OCCAR's integration into the programme is approved by the OCCAR supervisory board, that body's top executive council.

The interface procedure between both organizations, though not fully defined, is at a very advanced stage thanks to the efforts of the EDA Armaments Directorate which, along with the pMS, has shown a common interest in managing programmes under a joint procedure that defines the different responsibilities of both organisations.

So as to provide a graphical overview of the model, Figure 31 shows the relationship between the Preparation and the Definition Phases, as well as the activities that are handled by the EDA and by OCCAR.

Education and training initiative

One of the main consequences of the Armaments Strategy has been the development of the education and training concept. The Strategy recognises the need to work together, learning from each other and tackling cooperation from a European perspective. In the long term it is necessary to have a mutual understanding supported by a common concept of training and education. The difficulty is that people involved in armaments programmes have different backgrounds, which hinders the task of working together.

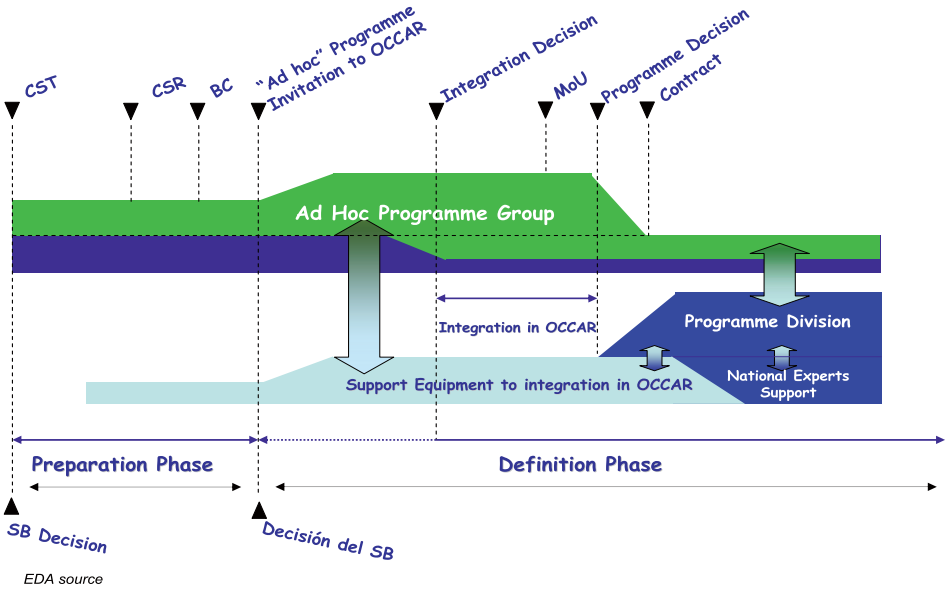

Figure 31. *Relationship between the Preparation and the Definition Phases*

Keeping in mind the lessons learned provided by the study on cooperation in programmes, the EDA decided to launch an initiative on education and training once the armaments Strategy was approved.

Since that time a study by the EUISS (EU Institute for Security Studies) along with several EDA workshops have been conducted. It is necessary to mention that the LoI (DE, FR, IT, SE, UK, ES) group had also identified the need to reinforce cooperation through the exchange of personnel and training. Perhaps the most important event was the conference of June 2009 on "European Education and Training in Armaments Cooperation" under the Czech Republic EU Presidency, which proved to be the turning point that launched the initiative.

The EUISS study made recommendations on what member States, the EDA and the European Security and Defence College (ESDC) should do in order to enhance mutual understanding in cooperative programmes.

Lastly, in October 2009 at a Steering Board meeting in NADs formation, the member States approved the European Armaments Cooperation (EAC) Framework as the reference for cooperative training and educational needs. It was decided that the EDA would develop the initiative. This Agency was tasked with creating a database on training along with possible options

for a web–based virtual learning package (internet distance learning) by autumn 2010.

As a consequence of that initiative, some educational organisations in Europe have already offered to work closely with the EDA and member States.

In this regard the Session Européenne des Responsables d'Armement (SERA) can be one of the most important candidates and the EDA has provided advice for the 2010 session themes. The European Consortium for Advanced Training in Aerospace (ECATA) was mentioned by the ASD. The European Institute for Public Administration (EIPA) provides courses on behalf of a number of European institutions and there are many relevant courses available in national defence colleges. Germany proposed EuroSTAMP and the European Security and Defence College (ESDC) is prepared to include armaments–related topics in its current courses and modules.

Now all stakeholders are to define the governance arrangements to coordinate this initiative at a European level.

We are convinced that this initiative will provide the benefits required to be considered as one of the most important pillars for enhancing armaments cooperation.

Rationalization in the activities of the Test and Evaluation Centres

There has been a significant effort to promote one of the armaments activities of the EDA, namely the rationalization of the activities of the Test and Evaluation (T&E) Centres.

The DTEB (Defence Test & Evaluation Base) Group had its origins in the Western European Armaments Group (WEAG), where 19 countries, including Spain, formed part of the Subgroup on Test Facilities (SGTF). This subgroup's main objectives were to promote cooperation at a European level between the Test and Evaluation Centres, to facilitate the joint use of available facilities by member States and, lastly, the optimization and rationalization of the resources in this field.

In 2005 this initiative was transferred from the WEAG to the EDA through the creation of the DTEB work group, which reports to the Armaments Directorate. Among the goals assigned to this group are achieving a better utilization of financial resources by reducing unnecessary redundancies,

identifying needs and coordinating future planning in terms of testing requirements, the drafting of joint strategies, investment forecasts, joint financing of new facilities, etc.

In 2006 a small number of countries decided to create a a working group called the Embryo Grouping (EG), which was intended to study a possible rationalization process at a European level for test and evaluation centres. The founding members of the group were France, Italy, Germany, the Czech Republic, Netherlands, Sweden and Spain. The study began with an analysis of electromagnetic effects, an area in which the Spanish centre INTA (Aerospace Technology National Institute) is an international leader.

The tasks assigned to the EG included identifying possible formulas for reducing the costs of T&R activities and analyzing the difficulties involved in international cooperation without having first established a suitable legal framework, mainly as it relates to Security of Information (SoI) and Security of Supply (SoS).

The first report presented by the group noted the need to reduce costs and avoid unneeded redundancies in future investments. Moreover it identified a series of specific actions to be carried out jointly that could provide significant medium to long–term savings.

The participation of European industry was also requested within the DTEB group. This was an effort to, on the one hand, familiarize industry with the initiative for the rationalization of T&E centres that was being developed and, on the other, to draft a set of actions to involve it in the process.

The EDA admits that the process initiated for the rationalization of the DTEB was very slow and that the results obtained were not commensurate with the efforts made. The conclusions of the work done implied that the most fruitful way of handling the rationalization involved the coordination of future T&E investments. Already in 2007 the EDA urged the Steering Committee to back the development of a Code of Conduct (CoC) for T&E investments as a suitable method for rationalization at a European level.

The goal of the CoC, which relies on voluntary acceptance by member countries, is to promote cooperation in investments in T&E facilities and equipment. Through this Code the nations recognize that the fragmentation of their T&E base could lead to the duplication of means, which is not the desired model of conduct at a European level. The goal, then, is to reduce these redundancies by establishing a procedure that consists primarily of informing other countries whenever a planned investment

in excess of one million euros is going to be made in T&E facilities or equipment (excepting those involving nuclear weapons, nuclear propulsion systems, cryptographic equipment or electronic warfare systems). After the announcement, a three–month period will start during which the other nations can suggest a joint investment or, as an alternative, offer the guaranteed and extended use of an existing installation on their territory.

In keeping with the principle of transparency, consultations can be made prior to committing to the investment. To this end, points of contact are named for each nation, these being responsible for issuing the communications and for informing their respective National Armaments Directors.

In the two years since the approval of the Code of Conduct, we can state that the results have not been particularly encouraging. To date, only France has announced an investment under the conditions established in the CoC.

Although the results have fallen short of expectations, the nations do not want to undo all of the work completed to date and have decided to continue and to encourage all the parties to use the CoC. As a result, it has been decided for the full DTEB group to review the objectives established in its day and to finish classifying the capabilities of the various facilities. A requirement has been imposed on it to unify its database and to present the results of its efforts to the Steering Committee in the fall of 2010. In July 2009 a work group was formed that included representatives from Austria, France, Germany, Italy and Spain. It was tasked with reviewing the activities completed to date and with introducing new development ideas to be implemented in a conceptual guide that must be finished by the fall of 2010.

The Steering Committee in National Armaments Director formation agreed in October 2009 to give the Code a second chance and to encourage the nations to use it. It set a milestone date of June 2010 for analyzing any new developments.

Lastly, it is worth mentioning that in 2001, the LoI countries –United Kingdom, France, Germany, Italy, Sweden and Spain, these last two joining in 2005– formed the Test and Evaluation Ad Hoc Management (TEAM), an informal group whose contributions to and collaboration in the DTEB rationalization process has been essential.

The standardization of defence materiel

One of the main problems that international organisations have had to face over time has been that of standardizing weapons and communications systems, equipment, munitions, fuels, and other equipment generally referred to as defence materiel.

Standardization can be approached from both the civil as well as the military arena. Both concepts have a similar meaning, although if the concept is analyzed within the military domain, its content and objective will probably be broader than those relative to the civil domain. As is obvious, and involving as it does military material, the most detailed studies on the minimization of problems posed by the use of different military hardware during joint exercises or manoeuvres have been conducted by NATO.

NATO defines standardization as the process of developing and implementing concepts, doctrines and procedures for achieving and maintaining the necessary levels of compatibility, interchangeability and commonality in the areas of operations, procedures, materiel, technology and administration, so as to achieve the necessary degree of interoperability.

This definition goes beyond that normally used in the civil field in that it encompasses technical aspects, such as design, administrative and other, even more conceptual, aspects such as the procedures to be used, generally known as operational standardization. Through these concepts, NATO aims to achieve the main objective, which is none other than interoperability, a necessary concept for conducting international operations. Although, paradoxically, a case could be made that having identical equipment does not necessarily imply that they will be fully interoperable by different multinational forces.

NATO defines three different levels of standardization:

- "Compatibility level", which consists of adapting processes or services for joint use under specific conditions and satisfying certain requirements.
- "Interchangeability level" which consists in allowing certain products or processes to be used in place of others that meet the same requirements or needs, and finally
- "Communality level" which is the use of the same doctrines, procedures or equipment.

The main objective of military standardization has been to reach a specified level of efficiency in missions involving multinational forces. The fundamental advantages of the standardization process on the international stage implies improved interoperability of the equipment and systems used, a lower number of components susceptible to maintenance, improved joint logistical support and a key advantage in terms of cost through savings from avoiding redundancies in R&D costs for defence materiel.

Having briefly introduced the concept, though, we should now ask ourselves what actions have been carried out to date and what actions can be carried out at a European level to achieve a given level of standardization in the materials and procedures used in the area of security and defence. To this end, the European Commission in 1998 tasked the University of Sussex to conduct a study to analyze the various facets of this question from different points of view (governmental, business and technical) and to determine possible solutions to the standardization deficiencies in defence materiel.

The outcome of the study was the so–called "Sussex Report". The study was conducted as a result of the different initiatives carried out by the Commission in the previous years and which, due to the changes made in the defence industries and to the increased cooperation in armaments programmes, resulted in the need to ascertain how said changes could impact the standardization process for civil and military material. The intention, thus, was to identify existing problems in this area and to determine possible options to promote and facilitate the joint use of civil and military standards and to facilitate, to the extent possible, the process of implementing the future single European defence market.

One of the main questions posed in the procurement reform process that was being implemented at the time was how to handle the different military standards and specifications. Until then, when military hardware was designed, it was done under the concept of differentiated military and civil requirements. In many areas there is a general belief that these specifications can be substituted by civil commercial standards. This would give an opportunity to a great number of civil companies to enter the defence market. The reform of the defence standards, however, also has certain risks, such as shifting the responsibility to the contractor for the system's specifications, maintenance, in–service support, and so on, which could lead to problems in the continuity of the military material

or weapons system, since this would depend on the contractor's own continuity.

What is more, problems could arise in the handling of equipment defined using military standards and which featured civil components, since in certain areas such as computing and communications, civil standards are constantly evolving and many of the most important ones are trademarked, meaning any type of modification or adaptation would require the corresponding original manufacturer's approval. Another unknown would be the implications to the export market of converting military equipment to civil standards.

In the case of the USA, recent years have seen important reforms in its defence standardization system, which has mainly been directed to improving industrial efficiency and lowering procurement costs for defence materiel by replacing military standards with civil ones. Some EU members –Germany and the United Kingdom, primarily– have engaged in similar military procurement reform programmes, though with different results, due mainly to the fact that the European market is highly fragmented, which leads to a lack of control and coordination mechanisms in the defence materiel standardization processes. Still, the European Commission recognizes the strategic importance of using common standards to achieve efficiency in the internal market and regards standardization as a priority for Europe's defence industry as a way to cut costs and promote competition.

Having presented the situation and the main problems posed by a joint standardization process that can address the problems of interoperability and favour competition in the European defence market, the Sussex report then proposed a series of recommendations that, while not fully resolving the problems in the short term, could palliate, in part at least, any existing deficiencies and will, without a doubt, promote the homogenization of procedures and the utilization and combination of dual use technologies.

As a starting point, the report poses the need integrate the production of defence equipment with commercial technologies, an admittedly difficult task but one that will improve competition among defence companies in the future. There is also a need to create a joint European standardization system that provides a solid and permanent structure for carrying out the reform process for the standardization of European defence. This system must be closely linked to the existing European civil standardization system and also to international civil and military systems.

The defence standardization process must involve two initiatives. One is an *operational approach* driven by the military need to ensure the interoperability of defence systems, and the other an *industrial and financial approach* driven by the desire of governments to develop and support defence systems and equipment in keeping with a cost–efficiency model.

This European defence standardization must provide a common, transparent structure for reforming European defence standards and the ensuing maintenance system. Harmonization criteria and documentary procedures must also be established in order to retain the specific defence standards of EU member States.

There is also a proposal to establish ties between the EU and NATO standardization structures and to increase relations with the USA in order to identify existing problems, collaborate on and propose solutions involving the process of reforming defence standards.

So as to establish criteria for the unification of civil and military procedures, a proposal is included to encourage the creation of an interface between the civil and defence standardization systems within the current framework of the European standardization system.

The report recognizes the need to facilitate access to information so as to gather, manage and distribute information on standards relative to defence acquisitions in Europe and the USA. In the case of Spain, it is important to note the advances being made by the Ministry of Defence, and its Material and Armament General Directorate which, through the Defence Standardization Service, plans to make available to its intranet users a system for checking and accessing materiel standards published by leading civil and military organisations both at home and abroad. In the future, this system could be integrated into a broader system, European in scope, and homogenized with those systems developed at the EDA.

Finally, it recommends that a European defence standards and procedures manual be drafted that fully details the standardization processes in effect and how they relate to each country's military materiel procurement procedures. This manual should be the tool for harmonizing the various procedures currently in use and for promoting best practices on a European level in the future.

Overall, these are the main recommendations made following the identification of the problem. The study goes much further, however, in the sense that it identifies at least thirteen areas where some kind of action can be taken to try to solve the standardization deficiencies. It concludes by making some thirty recommendations for the EU to carry out in the medium to long term.

The study did not fall on deaf ears; rather, both the European Committee for Standardization (CEN) and the standardization group, first at the WEAG and then at the EDA, started to carry out their activities based on the recommendations and conclusions drawn in the study. When placed into practice, we need to consider how the greater the collaboration in armaments projects or programmes, the greater the standardization levels that can be achieved. The creation of agencies like OCCAR and the EDA –whose main goal is to manage and promote cooperative armaments programmes– make the standardization process less cumbersome than if these programmes are carried out nationally.

To this end, the work carried out by the harmonization and standardization group at the EDA, called the Material standardization and Harmonization team (MSHT), has been of great importance.

The MSHT was created under the auspices of the EDA and inherited the legacy of the WEAG's standardization group, founded by the Commission and whose main objective was to analyze different industry standardization systems in the USA and the EU. The work done by the WEAG standardization group started over ten years ago and, since its dissolution, has been taken up again and built upon by the MHST over the course of the past two years. This group, which has had the full support of the EDA, and therefore of the nations, has worked on trying to improve European standardization practices in matters of defence materiel, the sole goal being to develop a tool for improving the interoperability of defence equipment and, as a result, of the Armed Forces.

In addition, it has enhanced its cooperation in the development of defence standards by combining the various national resources. In some areas, certain technical standards exceed those of NATO. Currently there is even an increased use of civil standards for those areas not covered by NATO.

One of the areas where the biggest effort is being made is in operations, as an attempt is made to find common ground between the various Armed Forces and the interoperability of their equipment so as to maximize the

effectiveness of operations. To this end, the Material Standardization Group (MSG) –actually the MHST group minus Turkey– has been created within the EDA and includes the participation of the EUMC. Its purpose is to have both the operational needs and the lessons learned from missions and operations taken into consideration when developing materiel standards and even in European defence materiel projects supported by the EDA.

The European Handbook for Defence Procurement (EHDP), derived from the Sussex report, was supported and financed by the EU and consists of a catalogue written by the CEN that includes, among others, information on the defence materiel standardization structure and procedures used by European countries and, significantly, the standards selected by groups of European civil and military experts as those best suited for use in the various areas of defence materiel –sixteen to date– as well as best practices to adopt when using them.

Recently, under the aegis of the EDA and with the cooperation of the MSHT, a system was launched called the European Defence Standardization Information System (EDSIS), which could well become the future system for the standardization of defence materiel in Europe.

This system was created at the EDA as a consequence of the need, on the part of nations, to have available a system that would offer the possibility of working jointly on materiel standards and promote interoperability, thus making feasible the creation of European defence standards. Its use is very simple: a nation introduces a brief summary of the standard it wants to develop or modify, at which time all of the system's registered users –currently the MSHT's national representatives– are notified of the proposal so they can gauge their nation's interest in participating in the development of said standard. It is very important that every effort be made to avoid redundancies in the development of standards by European nations and that the proposal reach every player involved in the standard development process, especially industry, so that they can offer their products in line with military standards and defence product specifications.

Another important factor that will improve the standardization processes is the progress made in consolidating the European defence market, since as new borders are opened up to this market, the industries will be forced to homogenize their products, which will undoubtedly result in a greater

level of standardization, and therefore of operability of the various defence systems.

In conclusion, let us state that the actions carried out by the EU in the area of standardizing defence materiel, both in the EDA (MSHT, MSG, EDSIS) and in the European Standardization Committee (EHDP), will no doubt provide important elements toward the establishment of a single European defence market, thereby establishing the synergies needed in the European defence industry that will make for better use of the materiel and its associated standards by the European nations' Armed Forces.

Conclusions

Progress in Europe in the field of armaments cooperation has posed many obstacles over its long history. From the end of the Second World War to this day, successive attempts have been made at creating different agencies whose purpose was to promote and manage various models of cooperation in the area of armaments.

The reality is that, one after the other, they all failed, due in large part to a lack of trust by most countries, in particular by those with the largest industrial base. It cannot be said that cooperation in armaments has been one area that nations have been keen to explore, except for specific coalitions created to develop particular programmes and always with a minimum number of nations.

Even within the EDA, and comparing the activities developed by the different Directorates, the one for Armaments was the last to develop its activities. The reason may have been that knowing full well the difficulties involved in armaments cooperation, it was decided to develop other key activities at the Agency first so as to give the member States the confidence necessary to deal with cooperative programmes or projects.

As we mentioned on several occasions, nations have, to date, preferred to develop activities on a national scale. The cooperative programmes that have been developed have involved the participation of a limited group of nations, and not on a large European scale.

The lack of confidence and varying industrial interests mean that cooperation in armaments still has some way to go as we continue to construct and develop the ESDP.

This past, which gives little hope for an optimistic outlook, has not managed to dampen the aspiration of many who believe that the future of European defence must be based on cooperation and on the joint development of programmes or projects.

There are many circumstances that will enhance and favour this cooperation, mainly the scarcity of resources at a national level to develop defence programmes in isolation, and the increasing costs involved in developing today's sophisticated weapons systems. Our net experience and lessons learned show that a duplication of efforts, the resources used and objectives reached must mark a turning point in the decision by governments to start cooperating in a more rational manner.

Now, within the EDA, member States have the chance to create a structure that, once and for all, will allow for engaging in co–operation projects. This is not an easy task, nor, perhaps, is the timing ideal if we analyze the financial commitments we will have to make in coming years, commitments which leave little manoeuvring room for carrying out new cooperative projects and programmes.

But, at any rate, we must look to the future with optimism and confide in the activities being carried out at the EDA's Armaments Directorate. The definition of the Armaments Strategy, approved with the consent of every member State, will be a fundamental pillar on which to build and develop the principles of cooperation in armaments at a European level. Another important factor to the future success of armaments cooperation in Europe will be the contributions and experience of OCCAR as a centre of excellence in programme management.

Now may be the time, as a consequence of our accumulated experience, the successive failed attempts made by the different European organisations at creating a cooperation model in armaments and the need to build a common European defence, for not only a certain anxiety to build up in our collective consciousness, but also a sense of certainty in every member State that the future of procurements in the world of armaments will inevitably pass through engaging in cooperative programmes.

We are working to that end.

CHAPTER FIVE
THE DEFENCE MARKET AND THE STRENGTHENING OF EUROPE'S DEFENCE TECHNOLOGICAL AND INDUSTRIAL BASE

By Arturo Alfonso–Meiriño

Overview

An initial reading of the mission assigned to the European Defence Agency as described in the Council's Joint Action that created it[38] would have even many defence professionals question the role of a Defence Industry and Market Directorate in a governmental institution of a multinational nature such as the EDA within the framework of the EU. From my point of view, there are two main arguments to explain the logic behind the existence of this functional Directorate at the Agency.

Firstly, and this is a historical constant, the military capabilities that Europe's Armed Forces require in the present and will demand in the future cannot be developed without the existence of an adequate European Defence Technological and Industrial Base (EDTIB). In other words, the European Security and Defence Policy (ESDP) would be unviable without the support of an industrial structure that is capable of supplying and maintaining, with a certain degree of autonomy, the high–technology defence systems needed by today's armies. This is especially true of certain industrial

38 Council Joint Action 2004/551/CFSP of 12 July 2004 on the establishment of a European Defence Agency.
Article 2. Mission.
1. To support the Council and the Member States in their effort to improve the EU's defence capabilities in the field of crisis management and to sustain the ESDP as it stands now and develops in the future.
2. The Agency's mission shall be without prejudice to the competences of Member States in defence matters.

technologies and capabilities that are regarded as key to maintaining and developing those military capabilities associated with an acceptable and reasonable degree of Security of Supply (SoS).

The first fundamental premise, therefore, is that a strong EDTIB is required in order to support the ESDP. And this without delving into other relevant socio–economic aspects, such as might be those involving dual use technologies, whose synergies positively affect both the civil and military fields. Other considerations are the overall competitiveness of the European defence industry and its implications to the economy by way of exports, or the important connotations in terms of employment if we consider the volume of employees[39], many of them highly qualified, who support this important sector of the defence industry.

Secondly, it is an established fact that the defence market has some very unique characteristics that stand in sharp contrast to traditional markets. The States, the Governments, play an essential role in this market by being practically the sole clients. They also regulate said markets through specific actions, such as in terms of exports and the use of defence products by third countries. Lastly, Governments are also in certain cases still stock holders or owners of certain industrial capabilities or of defence–related industries.

It seems reasonable, therefore, that an integrated defence concept (except for operations), such as some have wanted to attribute to the functions of the EDA –and which, as described in the first chapter of this monograph, encompasses everything from military capabilities to armaments cooperation and research and technology– would feature a Directorate dedicated to defence–related aspects of industry and markets. A market that, due to its characteristics, cannot be left to the sole devices of supply and demand and which presents its own particularities when speaking of maximum transparency, non–discrimination and open competition, aspects that the EU has always defended as basic principles for the construction of its so–called internal market.

39 According to data from the Aerospace and Defence Industries Association of Europe (ASD), in 2008 these sectors employed 676,000 workers and had a sales volume of 137,000 million euros, 52.9% of that associated with the defence sub–sector. ASD encompasses the aerospace and defence industries in 17 of the 27 EU member States, plus Switzerland, Norway and Turkey. www.asd–europe.org.

The fragmentation of the European defence market: first challenge for the I&M Directorate

From a quantitative standpoint, the European defence equipment market, that is, the portion of the defence budgets devoted to capital investment, excluding infrastructure –almost 40,000 million euros– does not necessarily imply that Europe, as a whole, spends little on defence materiel. And yet a qualitative study of this expense reveals the existence of a deeply fragmented market whose efficiency is far from ideal. If the money invested in defence in Europe in overall terms were applied rationally, we should not find ourselves in a situation of either lacking military capabilities or of having interoperability problems that directly affect the multinational operations in which European Armed Forces are increasingly involved.

The fragmentation of the European defence market is evidenced, for example, by the fact that in the EU, where only 2% of defence expenses are invested in Research and Technology, only 10% of that is invested cooperatively between member States. Another illuminating example is offered by the armoured vehicle subsector in Europe, where over a dozen industries are involved in over twenty different models with truly unviable production runs in terms of the economics of the financial investment. The effect of this on industrial competitiveness is unquestionable.

In addition to the implications to operational aspects, this fragmentation reflects a lack of global competitiveness of the EDTIB. Proof of this is the fact that of the top ten defence companies in the world in terms of sales, only two are European.

The argument put forth to date to explain this fragmented market, in particular by those member States with a strong defence industry, has revolved around the need to preserve an economy that allows for defence equipment to be produced and maintained within a State's own borders for reasons of national security and sovereignty. And yet, even for "large" countries, the situation has been made unsustainable by a series of factors, not least of which is restrictive defence budgets. Given the short and medium–term trends of most European countries' defence budgets, it is complicated to maintain a level of activity in the defence industry that not only covers current expenses, but also allows adequate levels of investment in new technologies while remaining competitive around the world.

What is at stake, then is the competitiveness of European defence industries? The paradox is that the lack of competitiveness and the technological shortcomings of national defence industries might eventually lead to an ever increasing dependence on defence industries located beyond a nation's borders. This situation, extrapolated to Europe, can therefore mean a greater reliance on assets outside European borders when it comes to obtaining the military capabilities required by the old continent's ESDP.

The source of the fragmentation in the defence market can be traced to the Treaty of Rome of 1957. Although the Treaty encompasses every aspect of the market, those issues specifically related to defence were dealt with separately. Article 233 –later renumbered as 296 in the Treaty Establishing the European Community (TEC), and which after the ratification of the Treaty of Lisbon remains with the same text as Article 346 in the Treaty of the Functioning of the European Union associated with the Treaty of Lisbon– authorises the member States to disregard the regulations applicable to the internal market when procuring defence material, as long as this can be duly justified expressly for reasons of national security[40]. The reality is that this Article has been very loosely interpreted over the years, meaning that foreign companies have rarely been given the opportunity to participate in national defence contracts.

That is why the creation of a true European defence market, given the specifics of this unique market, has been a top priority of the EDA since its creation. Its Steering Board, at a meeting in November 2004, recognised the benefits of reducing the fragmentation of European markets and reaffirmed the role of the EDA in achieving this objective. It was decided

40 Article 346 of the Treaty on the Functioning of the European Union.

1. The provisions of the Treaties shall not preclude the application of the following rules:
   a. no Member State shall be obliged to supply information the disclosure of which it considers contrary to the essential interests of its security.
   b. any member State may take such measures as it considers necessary for the protection of the essential interests of its security which are connected with the production of or trade in arms, munitions and war material; such measures shall not adversely affect the conditions of competition in the internal market regarding products which are not intended for specifically military purposes.
2. The Council may, acting unanimously on a proposal from the Commission, make changes to the list, which it drew up on 15 April 1958, of the products to which the provisions of paragraph 1(b) apply.

that the EDA should implement a project to deal with the problem of defence acquisitions within the context of Article 296 of the TEC as a fundamental step toward improving Europe's military capabilities within the framework of the ESDP.

The conviction, often noted by Javier Solana in his role as Director of the EDA, that "*no member State, not even the most economically powerful, can face the future in matters of defence all by itself*", has provided the definitive impetus to the launching of a project to open the European defence market, a project that had been debated for so long in the halls of the Agency's predecessors, such as the WEU and the WEAG.

The Intergovernmental regime for defence acquisitions

The so–called "*Intergovernmental regime for the promotion of transparency and free competition in defence acquisitions*" was approved by the EDA's Steering Board in November 2005. It can be considered as the first of the actions taken by the Agency and the first of its successes. This Regime is defined within the context of Article 346 of the Treaty on the Functioning of the EU associated with the Treaty of Lisbon and adheres to the principles set forth in the two respective Codes of Conduct.

The Code of Conduct per se that was agreed to by the ministers of defence was approved at the same time as, and as a part of, the Intergovernmental Regime. The *Code of Best practice in the Supply Chain* was jointly approved in April 2006 by the EDA Steering Board and by the Board of Directors of the Aerospace and Defence Industries Association of Europe (ASD). The entire package, including its information–technology based tool, was implemented on 1 July 2006.

The Code of Conduct contains five principles whose goal it is to modify the models traditionally employed in defence procurement and which, under the broad interpretation of Article 346 of the Treaty on the Functioning of the EU associated to Treaty of Lisbon, member States have been using to practically and systematically exclude non–national defence companies from their contracts. The Code of Conduct also includes a series of special cases involving exclusions and exceptions from the Code's principles.

The first of the Code of Conduct's five principles is its "*voluntary and non–legally binding nature*". It is certainly reasonable to question the effectiveness of a Regime and Code of Conduct that are not legally binding and that are not included in any community legislation that is

enforceable within the territory of member States. And yet, bearing in mind the continued presence of Article 346 in the text of the on the Functioning of the EU associated to the Treaty of Lisbon, only a regime with these characteristics could, for the time being, have a positive effect on the opening of markets.

In its second principle, the Code of Conduct proffers the "*Fair and equal treatment of suppliers*". The goal is to maximise the opportunities for all defence material suppliers located in the territory of the participating nations through the inclusion of four aspects:

- *Selection criteria*: all the companies must be evaluated based on standard and transparent objectives.
- *Specifications and statement of requirements*: these must be formulated to the maximum extent possible in terms of functionalities. Wherever possible, international standards must be included in the technical specifications, avoiding requirements based on national standards or on concrete specifications linked to particular companies.
- *Award criteria*: must be specified from the start of the contracting process. The key criterion for the final selection of the contractor must be that of proposing the most financially beneficial offer that is in keeping with the technical specifications, bearing in mind considerations such as cost (both procurement and life cycle), compliance with specifications, quality assurance, security of supply and industrial offsets.
- *Debriefing:*contractors not awarded the bid and who so request it must be informed of the contracting process once the final decision is made regarding the awarding of the contract.

"*Mutual Transparency and Accountability*" among the participants of the Intergovernmental Regime – the third of the Code's principles – is essential to its proper implementation. Mutual trust requires a progressive and gradual process built on clear and shared information about the defence acquisitions made by participating countries. The EDA, as the recipient of information that participating countries of the Intergovernmental Regime have pledged to provide, plays a fundamental role in enforcing this principle.

"*Mutual support*" between participating member States is the fourth principle, one which is inextricably linked to security of supply and which constitutes another pillar in the Code of Conduct. In defence material and

equipment acquisitions, ensuring the delivery of systems or sub–systems as well as providing logistical support over their life cycle are fundamental aspects to bear in mind when selecting a given contractor. This assurance has two dimensions, those associated with times of crisis and of peace, both of which have very important political considerations. The EDA is continuing to work on this additional element of the Intergovernmental Regime.

Lastly, an Intergovernmental Regime for the opening up of the defence market cannot be successfully implemented without a clear "*mutual benefit*" to the participating member States. This is the fifth principle of the Code of Conduct. An important factor within this context is the "Code of Best Practice in the Supply Chain" in which, also voluntarily, industry, namely Prime Contractors as well as other relevant defence contractors, have pledged to apply the principles of the Code of Conduct in their subcontracts. The aim is to maximise the involvement of small and medium companies in participating nations in the defence market.

In order to monitor the proper application of the Intergovernmental Regime by the participating member States, a monitoring tool was launched in July 2006, just as the Intergovernmental Regime was declared operational, called the Electronic Bulletin Board (EBB). The EEB is an information–technology based tool that, in addition to providing online access to all the information relevant to the two Codes of Conduct that might be of interest to any Government or defence contractor, also includes two main areas, one dedicated to publishing Government contracting opportunities (EBB1), and the other to subcontracting opportunities published by companies registered in the Code of Best Practice in the Supply Chain (EBB2).

It has been over three years since the Intergovernmental Regime on defence procurement and its EBB were launched. To date, 25 of the EDA's 26 participating member States (all except Romania) have voluntarily subscribed to it. Likewise, over 70 defence companies in these countries have registered as potential offerors of subcontracting opportunities in accordance with the principles of the Code of Best Practice in the Supply Chain. Additionally, Norway, a non–member state of the EU, has also joined the group of subscribing countries on the basis of its membership in the European Economic Area, and therefore subject to the provisions of Article 346, as well as on the basis of the Administrative Agreement it has signed with the EDA. The Norwegian Defence and Security Industries Association has also endorsed the Code of Best Practice in the Supply Chain on behalf of its members.

Around 500 contracting opportunities have been published to date in the EBB 1 by contracting authorities in the participating countries, of which almost half have already been awarded. As for industries, over 200 opportunities (both real and potential) have been published by some thirty of the registered defence material contractors to date. Moreover, the participating countries have informed the Agency –on a confidential basis, meaning that this information may only be shared by the Steering Board– of the awarding by the contracting authorities of over 300 contracts that were not published in the EBB under the exclusions and exceptions recognised in the Code of Conduct, but which they agreed to report *a posteriori*. This is an extraordinarily important factor, since the arguments provided by countries on the reasons that, at the time, led them to not publish these contracts, provides information to the other participants that clearly contributes to transparency in contracting as well as to the gradual building of mutual trust.

The net result of the implementation of the Intergovernmental Regime on defence procurement can be defined as positive. This does not mean that there is no room for improvement. It is essential to continue monitoring the system and to report on how close we are to achieving the Regime's main objectives: greater transparency in defence procurement and a more pronounced presence of non–national companies in awarded contracts, revealing a true European dimension to the contracting processes. The Agency plays a key role in monitoring and reporting. The responsibility for the day–to–day control of the EBB as well as for monitoring the Intergovernmental Regime and applying the principles of the respective Codes and for preparing the periodic implementation reports has been assigned to the EDA. Despite this, the EDA's role is neither that of an independent researcher nor of an arbitrator. It is the Steering Board that reaches agreements and assign actions based on the reports presented by the Agency.

Other aspects related to the defence market

The Intergovernmental Regime described above is neither an initiative that should remain static nor an isolated document that is limited solely to the two Codes –that of Conduct and Best Practice– and the EBB. The Regime was created with a view to its ongoing evolution, adaptation and improvement while encompassing other areas related to the defence

equipment market and identified as having a direct bearing on the proper operation of this unique market.

The Security of Information was one of the first areas analysed by the Agency in terms of the Intergovernmental Regime, since this is one aspect that is often linked to defence material procurement processes as a result of its logical connection to national security. A perfectly functioning European defence market must imply non–discrimination of contractors for reasons of Information Security related to their location. In other words, any participating member State of the Intergovernmental Regime should be able to provide classified information related to the contracting processes to any company in another participating member State –assuming of course that said companies are properly certified by their national authorities– with the full guarantee that said information will be safeguarded during the course of the various phases of the procurement process. Along the same lines, certified companies located in any participating member State must have guarantees that any commercial in confidence information used by the governments will be properly safeguarded.

The Security of Information agreement that was added to the Intergovernmental Regime after its approval by the Steering Board on 20 September 2006 represents one of the key milestones in the process of creating a true European defence equipment market. The agreement states that Intergovernmental Regime subscribing countries will use the security measures of the EU Council[41] for those procurements made under the Code of Conduct that require classified information when the use of bilateral security agreements is not possible or is considered inadequate by the authorities in the contracting country. The agreement also includes a set of common minimum industrial security standards to be used by participating countries for those national procurements that, under the Code of Conduct, require that information be protected. These standards were adopted using the corresponding section of the aforementioned Council security regulations[42] as a reference.

Another fundamental aspect involving defence procurement, also under the purview of the I&M Directorate, is Security of Supply (SoS). Weapons systems are normally associated with long operating periods during

41 Council Decision 2001/264/EC of 19/03/01 on the adoption of the security regulations (modified and expanded by Council Decisions 2004/194/EC of 10/02/04. 2005/571/EC of 12/07/05 and 2005/952/EC of 20/12/05).

42 Section XIII, Part II of the Annex to Decision 2001/264/EC of 19/03/01.

which said systems need support, maintenance and even technology updates. Likewise, in special circumstances, Defence ministries may require an urgent acquisition of defence material or an increase in existing production. Security of Supply in these cases is one of the pillars in the process of building the European defence market.

A Security of Supply agreement between participating countries for crisis or emergency situations was incorporated into the Intergovernmental Regime after it was approved by the EDA Steering Board on 20 September 2006. This agreement basically dictates that in times of emergency, crisis or armed conflict, if one or several participating countries require defence materials or services, a dialogue will be immediately started based on the principles of cooperation and solidarity and aimed at meeting said requirements in the fastest way possible. To this end, the country where the supplying defence company is based must expedite the administrative processes –including, among others, those involving intracommunity transfers and shipments of defence materials and technology– by immediately contacting the company. It shall likewise urgently and positively consider any request by the country in need to supply it with goods or services from its own stock in exchange for suitable financial compensation. A group of contact points in each of this agreement's participating countries is being created in concert with the EDA's I&M Directorate, as the agency in charge of monitoring the implementation of the agreement.

The involvement of industry in the long–term SoS process still poses an uphill struggle for the Agency, one it will have to address in the immediate future, perhaps based on agreements crafted around the LoI/FA and their extrapolation to Regime participating countries or, as recently expressed by its Steering Board in National Armaments Directors formation, based on other existing intergovernmental agreements, such as those signed by the Nordic countries, for example.

The so–called offsets[43] are another important area associated with the defence market in which the EDA's I&M Directorate is involved. Currently

43 In general, offsets can be defined as the compensations required by many governments of non–national defence material suppliers as a condition for the acquisition of military material. These compensations can cover a wide range of activities. Direct offsets are directly related to the subject matter of the public contract, whereas indirect offsets are not and can be of a civil or military nature. Practices related to offsets in the EU, however, are numerous and varied.

the range of uses of offsets by EDA member countries goes from those that, at least in theory, do not demand offsets in their procurement processes, to those that have just issued regulations or even issued laws to regulate their use. Some countries with a limited industrial defence capability associate their offsets more with the field of industrial participation than with compensation, per se.

Regardless of the problems associated with their possible illegality within the framework of the EU[44], the fact remains that the practice of offsets, in one way or another, affects the defence market. To analyse this area, the I&M Directorate used an open competition process to commission a study, the results of which are available on its website[45] and which, while in no way committing the EDA to said results, have served as a reference in the process of finding a strategy of dealing with defence offsets that is acceptable to all EDA countries.

It is within this context that the first goal was reached on 24 October 2008 with the approval of a proposal presented by the EDA on a Code of Conduct for Offsets. As with the Code approved for defence procurements, the aim was to reach a gentlemen's agreement, that is, a new Code of Conduct, this time for the practice of offsets. The goal of this new Code within the legislative framework of the EU and in the context of intergovernmental relations in the EU (second pillar) is to rationalise the practice of offsets carried out by member States. It is not a question of implementing a strategy directed at the short–term eradication of the practice[46]. It is an effort, first of all, to create a transparency that will allow

44 The EU Commission, in its Interpretative Communication COM (2006) 779 final, on the applicability of EC Treaty Article 296 to public defence contracts, states that indirect non–military offsets constitute a clear example of practices that do not serve specific security interests, but rather general economic interests, and are therefore not covered under Article 296 of the Treaty even if they are related to a defence material procurement contract that is exempt by virtue of that Article.

45 http//www.eda.europa.eu/documents.aspx (12/07/2007) *Study on the effects of offsets on the development of a European Defence Industry and Market*.

46 The EU Commission, in its Interpretative Communication COM (2006) 779 final on the application of Article 296 of the European Community Founding Treaty in the field of public defence contracts, establishes that the measures taken by virtue of Section 1 b) of said article "must not adversely affect the conditions of competition in the common market regarding products which are not intended for specifically military purposes", and thus member States must ensure that offset agreements involving procurement contracts for defence materials covered by Article 296 respect that provision.

the EDA Steering Board to ascertain how the various offset practices that are carried out in participating countries work so as to create mutual trust. Secondly, it aims to have EDA countries voluntarily pledge not to engage in those offset practices that negatively interfere in the creation of a true European defence market. At the same time it tries to identify those potential offset practices that, if used, could bring about positive changes in strengthening the defence technological and industrial base, the second of the two main lines of work of the I&M Directorate, described in more detail later in this chapter.

There are other areas already identified by the I&M Directorate that, as influential factors in the process of creating a more competitive and transparent European defence market, deserve a more in–depth analysis. State subsidies to defence industries or the involvement of the State in these companies, either as a shareholder or as an owner, and its implications to free competition are clearly another important line of work for the I&M Directorate. As with other projects, the Agency began by competitively commissioning a study that would serve as the foundation for a future policy on state subsidies or ownership so as to establish a level playing field for European companies wishing to access the competitive European defence contracting market. The Agency's Steering Board at its meeting of 17 November 2009 in defence ministers formation issued a policy statement through which it committed to continuing to analyse the aspects affecting the creation of a truly open and competitive defence market and tasked the EDA with developing this line of work and proposing a course of action for correcting the possible negative impact to achieving a level playing field while taking into consideration the unique qualities of this sector.

Figure 32 summarises the set of initiatives launched to date by the EDA on the creation and promotion of a true European defence market, as encompassed in the so–called "Intergovernmental Regime for Defence Procurement".

Strengthening the European Defence Technological and Industrial Base: the I&M Directorate's second challenge

Chapter two of this monograph makes mention of what might be considered one of the key milestones in the EDA's brief history, that of the approval at a meeting by its Steering Board in Defence Ministers formation on 2–3 October 2006 in Levi (Finland) of the Initial Long–Term Vision (LTV)

for Europe's Defence Capabilities[47]. In addition to other aspects detailed in the second chapter, the EDA's LTV also analysed the role of the defence technological and industrial base in the process of developing and attaining European military capabilities. In the long–term vision, the industrial capabilities required for maintaining weapons systems viable in Europe, as well as those that will have to be developed in order to face the technology and innovation challenges that the new equipment will require, are regarded as being key to the future of the ESDP. Without a strong defence technological and industrial base, it will not be possible to resolve the shortfalls in the military capabilities required by the ESDP.

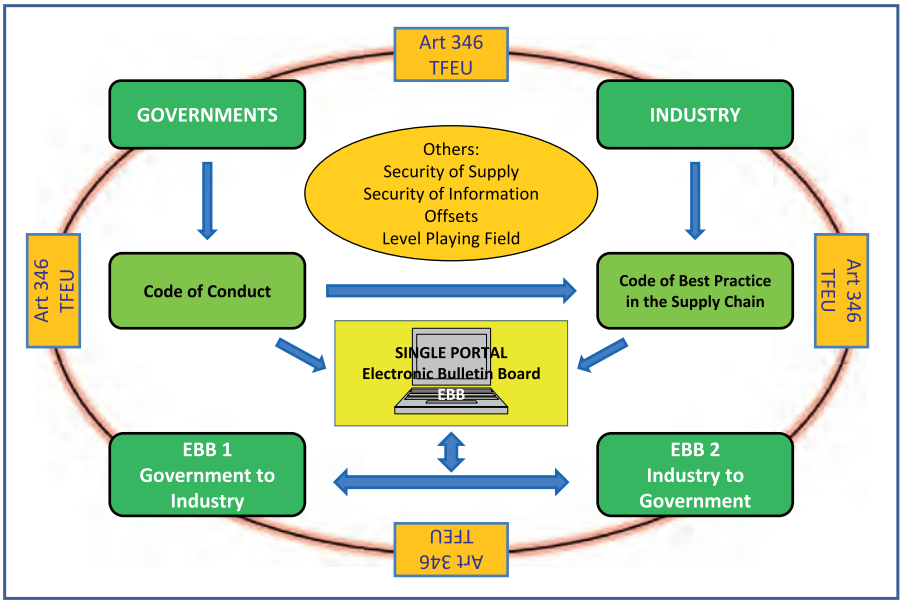

Figure 32. *EDEM Initiatives launched by the EDA*

If we analyse today's reality, we can say that at present, Europe has a wide–ranging and capable defence technological and industrial base, but it is the evolution of this industry that poses many questions. The defence industry moves in a market with some very special characteristics

47 http://www.eda.europa.eu/documents.aspx. (20/10/2006) *Long Term Vision Report – Paper Version.*

that make it scarcely assimilable to the market for goods and services in general. That is why the measures applicable to other sectors of the economy are difficult to extrapolate to the defence industry.

Strategically speaking, Governments, through their Defence ministries and defence equipment procurement agencies, play a key and varied role for defence companies. On the one hand, they are their lone customers, and on the other they are market regulators that double as the principal source of R&T funds in the sector.

From a circumstantial standpoint –in reference to the last 18 years– Europe's defence companies have also been subjected to profound changes stemming from the budgetary limitations imposed on defence spending as a result of the so–called "peace dividend". Those defence budgets in Europe, which at least as regards their R&T figures are a key factor for the future of the EDTIB, have, in recent years, been subjected to substantial restrictions brought on by the still relatively high percentages represented by personnel costs. Another factor has been the increased expenses resulting from the new peacekeeping missions involving the Armed Forces of member States.

The drop in defence R&T investment in real terms in the last 15 years in Europe, and the current lack of new armaments programmes, along with the dominance of the export market by the United States, all confirm the forecast of a progressive and significant weakening of Europe's technological and industrial base. This factor was cited above as being particularly relevant and influential to the development of future military capabilities within the framework of the EU.

One of the most relevant changes produced in recent years in the defence industry has been its restructuring and trans–nationalisation, mainly in the aerospace sector and, to a lesser extent, the land, naval and electronic sectors. Also, especially in the new EU member States, the changes have affected the ownership of these companies, which have gone from state to private hands with a non–trivial cost in terms of the disappearance of the companies themselves or in terms of job losses. Curiously, and partly as a consequence of this privatisation, and in contrast to what was said earlier about the specificity of this sector, the defence industry has adhered to the market laws of other sectors as concerns corporate profits. That is to say, shareholders have pressured defence companies in search of profits, which has resulted, for example, in the transfer by European defence companies of investment capital to places where their investments are

optimised, and therefore where more market opportunities in terms of procurement volume exist. Such is the case of the United States.

This model of the "industry chasing the money" is now a reality and has led to the migration of companies, with the consequent depletion or outright disappearance of certain industrial capabilities in Europe. Large European defence contractors are buying companies outside the EU's borders in an effort to start up and transfer part of their business to these areas, fleeing from the bleak outlook of the European market.

As noted by, at that time, Head of the Agency Javier Solana a few months after the approval of the LTV, at the opening of the EDTIB conference held in Brussels in February 2007, "*None of us [EU countries] can, nowadays, as a nation, sustain a healthy and competitive defence industry. The health, perhaps even the very survival, of Europe's defence industry requires a European approach as well as a European strategy*." This strategy is exactly what constitutes the second main line of action of the EDA's I&M Directorate.

Figure 33. *Mr. Solana, Head of the EDA at the time, at the Annual EDA Conference in February 2007, on the issue of the EDTIB*

The model of Europe's Defence Technological and Industrial Base

As noted previously, the strengthening of the European Defence Technological and Industrial Base is a key priority within the functions of the EDA, and in particular of its I&M Directorate.

The first step taken by the Agency in this regard was the approval of the document titled "*Characteristics of a Strong European Technological and Industrial Base*", approved by the EDA Steering Board at its meeting of September 2006 in National Armaments Directors formation. This document recognises, firstly, the need to reach a suitable balance between the concepts of national sovereignty and European autonomy in developing the European concept of a defence industry. There is a reason why European defence is far from being united. It also considers the need for the parallel development of a harmonisation of military requirements, that is, to maximise demand as much as possible so as to facilitate the consolidation and restructuring of the supply. In this sense the member States agreed that a strong EDTIB should feature three key elements. The goal of a European defence industry relies on its being *military–capability driven*, *competent* and *competitive on a global scale*.

The first of these characteristics, that it be driven by military capabilities, advocates for a European industrial defence base that is able to meet Europe's defence needs, and therefore to supply and maintain key military capabilities, to provide complex systems of systems, to sustain and update defence platforms and systems in the long term, all the while being associated with acceptable and accepted levels of operational sovereignty at both a national and European level. It does not in the least advocate an industry that, with the sole objective of surviving, simply provides defence material that is often technologically obsolete and out of touch with the new military capabilities required by the Armed Forces of member states as they engage in real challenges and missions.

When speaking of a *competent* defence industry, the document refers to having an EDTIB that can supply cutting–edge technology within a suitable timeframe. Hence the push for promoting innovation, to include that obtained from sources outside the traditional defence industries, such as academia. The development of key technologies, with a special emphasis on emerging technologies, is surfacing as a key element in the process of achieving a competitive defence industry.

The third and final feature of the future EDTIB involves its *competitiveness* in global terms. The goal is an industry that is capable of providing military capabilities efficiently and at the lowest cost possible, ready to export beyond the EU's borders and open to cooperation with non–European companies or institutions. Also an industry that contributes to the overall economic growth, to include the development of small and medium enterprises (SMEs), a subsector that is key in the area of defence, especially when speaking of innovation.

The courses of action established for attaining a defence industry that satisfies the above characteristics are basically summarised as follows:

- Greater consolidation, distribution of work and mutual reliance on a European level based on greater and better security of supply and on drastically simplified procedures for the intra–community transfer and movement of defence goods and services.
- Special focus on the creation of centres of excellence that, based on a process led by industry itself and not on centralised economic procedures, allow for a suitable geographic distribution of defence industrial capabilities.
- Greater integration in the broadest sense of the European industrial base beyond the defence industries. Put another way, making better use of commercial solutions identified as being dual use, civil and military.
- Less dependence on non–European sources for those technologies considered key in the context of improving the military capabilities needed to support the ESDP.

A Strategy for the European Defence Technological and Industrial Base

The "*Characteristics of a strong European technological and industrial base*" lay the groundwork for the drafting of one of the key documents approved to date by the Agency's Steering Board: "*A Strategy for the European Defence Technological and Industrial Base*". This document was approved in May 2007 with the full support of the European defence industry, represented by the ASD. It emphasises the priority of the need to work positively and constructively on developing a true EDTIB that is more than the mere sum of its parts, represented by the technological and industrial bases of each member State. However, and this is an

important point, at no time does it call for the creation of a "fortress Europe". Quite the contrary, it recognises the need for imports and for cooperation with non–European companies and governments in the defence field. The EDTIB strategy also acknowledges, however, that the problem of accessing the American defence market and of establishing a level playing field for the exchange of technology across the Atlantic would result in the "natural and necessary" call for Europeans to attempt to cooperate more closely so as to ensure the future of their own EDTIB.

The defence industries need competition and investment but, unlike other industries, as previously noted, they are critically dependent on Governments in their roles as regulators, clients, investors and even, in some cases, as owners. That is why the EDA's EDTIB strategy aims to establish a set of policies and initiatives that will enable the establishment of a defence industry in Europe that addresses the agreed upon characteristics of being capability driven, competent and competitive.

The role of Governments in the development of the EDTIB strategy revolves around concrete actions in the following areas:

Clarification of Priorities

- Prioritisation of military capabilities. The so–called Capabilities Development Plan, detailed in the second chapter, is responsible for providing as its final outcome those key military capabilities that must either be maintained or developed in Europe as part of its ESDP.

- Identification of key technologies. The R&T strategy for which the EDA's R&T Directorate is responsible must identify those key technologies which must be preserved or whose future development requires investment, while bearing in mind the outcome and the prioritisation of the Capabilities Development Plan.

- Identification of key industrial capabilities. This is not a question of grouping all the industrial capabilities necessary to provide those weapons systems currently demanded by the armies, but of identifying which we should have in Europe, which are easily accessible on a global scale and which can be included in the framework of extra–European cooperation.

Consolidation of demand

Aligning and combining the equipment needs of EU member States' Armed Forces has been one of the goals pursued ever since the creation of the Independent European Programme Group (IEPG) or the Western Europe Armaments Group (WEAG), as noted in the first chapter. And yet success in this field has not been a reality, with the exception, for example, of specific cooperative efforts in the military aviation sector.

Through the coordination of the Capabilities Development Plan and of the three main EDA strategies (see Chapter 1, Figure 6), the objective is for the Agency to be the competent organisation in the EU for researching, analysing and proposing potential synergies for future cooperation programmes based on common Military Staff requirements and identified in the initial stages of the national planning processes. In other words, the EDA is responsible for seeing that the member States consider, during the decision–making process in the planning phase, the option of multinational cooperation in their defence equipment procurement.

Increased investment

Investments in research, technology and development related to defence constitute a fundamental stepping stone toward the goal of a competent and competitive defence industry. But what the EDTIB strategy proposes is not just greater investment in quantitative terms. What is proposed is increased cooperative investment in technology. The Joint Investment R&T Programmes managed by the EDA's R&T Directorate mentioned in the third chapter are aimed at precisely what, in the words of Head of the Agency Javier Solana, has to be done in this field: "invest more, invest more together and more effectively".

Ensuring "Security of Supply"

A true EDTIB can never be attained in practise without the full confidence of the EDA member States. In other words, the greater interdependence of the supply of defence goods and services must always go hand in hand with increased guarantees for the "Security of Supply". And this must hold in both times of crisis, emergency or armed conflict as in times of peace. The work done by the I&M Directorate along these lines and the considerable work that remains, especially in the long term associated

with, for example, the creation of Centres of Excellence, is one of this Directorate's top priorities.

Increased free competition and cooperation

Thinking that free competition in the defence market is a "cure–all" is absolutely puerile. That is why the EDTIB strategy has determined that, above all, the EDTIB of the future must work together to increase free competition in Europe's defence market and, when that is not feasible or appropriate, to improve cooperation. The history of cooperation in Europe is dotted with examples of success, especially in the field of military aviation. But it is necessary to identify and put into practice innovative solutions and proposals that revisit the concept of *just retour* and pursue efficient production that emphasises the industrial base at a European, and not just national, level. Striking a balance is not easy, since every member State has a right to promote an acceptable national industrial defence base. At the same time, though, the companies can remain in the spotlight – that is, not merely survive but thrive and innovate in terms of their technological assets – if they are capable of producing quality high technology at competitive prices. The European Armaments Cooperation Strategy, being implemented attempt to address this need.

The roadmaps for the European Defence Technological and Industrial Base strategy

The so–called roadmaps approved by the Steering Board in National Armaments Directors formation in September 2007 round out the EDTIB strategy (Figure 34).

1. The first of the roadmaps makes reference to the "*Clarification of the key defence–related industrial capabilities that must be preserved or developed in Europe*". This endeavour will also allow for an identification of those industrial capabilities that, keeping in mind the concept of "Security of Supply", can be contracted in the global market. This includes both obtaining them through cooperation with third countries, as well as the possibility of acquiring them in the global market. This roadmap was put in place just after the Steering Board meeting in National Armaments Directors Formation in September 2007.

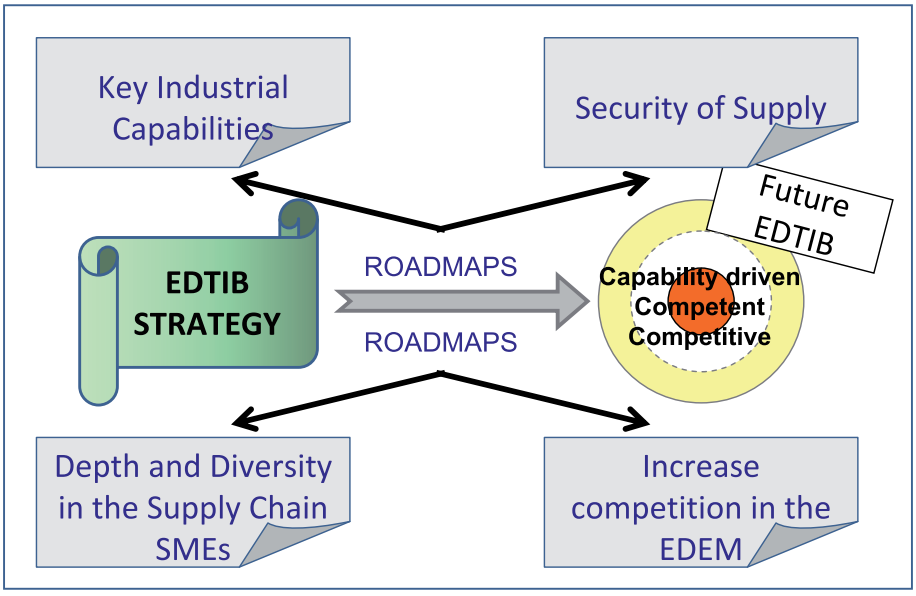

Figure 34. *EDTIB Strategy*

The first results are already on the table. The member States have agreed to focus their analysis of industrial capabilities on the so-called Future Air Systems (FAS). This area has been regarded as a priority due to its importance from both a military capabilities perspective and from a consideration of the technologies that must be preserved or developed in Europe. The range of FAS is certainly wide, encompassing everything from fighter or training airplanes to future unmanned combat aerial vehicles (UCAV). It also includes manned and unmanned surveillance and monitoring platforms, helicopters, both attack and support and transport and cargo and mid–air refuelling airplanes. The goal of this roadmap is to analyse the various cross–sectional elements that are common to all the platforms (engines, avionics, electronics, etc.) and identify those industrial capabilities requiring time and money if their existence on European soil is to be assured. The Agency's Steering Board, at its meeting of 9 October 2009 in National Armaments Directors formation, went a step further and approved a more concrete aspect of the FAS project. The proposal approved was developed by the EDA after consulting with member States. From this point on, work will focus on analysing the platforms for helicopters, unmanned

aerial vehicles and, not least of all, fighter airplanes. Also included in the mandate given to the Agency are aspects such as its connection to the capabilities development plan, the Commission's initiatives, mainly within the R&T investment plan as it relates to security and dual use, the coordination with the work carried out by industry itself on the future of this sector, and aspects involving the participation of SMEs.

2. The absolute interdependence that exists between the concepts of defence procurement and security of supply has already been mentioned on various occasions. Increasing the mutual trust between member States through "greater security of supply" is therefore the goal of the third of the roadmaps approved to date. It is not only a question of attempting to implement the agreement on the security of supply in the event of an emergency, crisis or armed conflict, as referenced earlier in this chapter, but also the more difficult task of developing the courses of action for regulating the relationship between governments and industry so as to accelerate the supply when so required by a member State.
3. The third roadmap is not actually a new activity. It involves incorporating into the EDTIB those activities already started by the Agency in working toward a European defence equipment market. The "Increase of free competition in the European market" for defence equipment is the aim of the activities carried out by the Agency in concert with member States and with other protagonists in the area of defence in Europe, such as the EU Commission, involved now through its "defence package", which is described later, the Aerospace and Defence Industries Association of Europe (ASD), national defence industry associations and academia.
4. The last of the roadmaps approved to date within the context of an EDTIB strategy is aimed at "Developing depth and diversity in the European defence–related supplier base". This relies on the recognition in the strategy itself of the fact that the future success of the EDTIB will depend largely on the human capital, on innovation, not only on that provided by the large contractors but also by that which flows from the SMEs and from those industries not always associated with defence. It will also rely on the potential present in the new member States[48]. There are two main activities

48 "New member States" are defined as the ten that joined the EU in May 2004 (Cyprus, Slovakia, Slovenia, Hungary, Malta, Poland, Czech Republic and the three

included in this roadmap: support for the involvement of SMEs as well as of industries not traditionally associated with defence in the EDTIB process; and, favouring the integration of companies from new member States by identifying the roadblocks to their greater integration with the industries in existing States and by developing measures that facilitate and increase mutual cooperation, investment and integration. At its meeting of 9 October 2009, the Agency's Steering Board in National Armaments Directors formation approved a reference guide to greater market penetration for defence–related SMEs to be implemented by member countries over the next few months.

Like all the strategies launched or about to be launched by the EDA, the EDTIB strategy is the start of a long process that will require great efforts and large doses of negotiation by the member States and by the EDA itself. The fact that 26 member States within the EU's intergovernmental structure have to reach an agreement does not make matters any easier. The issues at hand, such as that of the EDTIB, are not of equal interest nor do they have the same implications in all the countries that make up the EDA. In the Agency there are highly industrialised countries from a defence standpoint, and therefore with considerable political, financial and strategic interests in matters related to the defence industry, and there are also countries with barely a hint of a defence industry that will not be affected by strategies on topics such as the EDTIB.

The goals of the roadmaps are certainly very ambitious, but once again we need to point out the presence of clear signs of change. At their meeting of 14 May 2007, the EDA Defence Ministers, when the EDTIB strategy was approved, concurred in stating that "*The essence of change is in recognising that it is impossible to maintain a full defence technological and industrial base at a national level*". What is certain is that the formula used to date for determining defence capabilities, and marked by a strong nationalistic character, the fragmentation of investments in equipment that is becoming increasingly more demanding technologically and the procurement of defence systems through separate acquisition procedures and processes tied to very limited production runs, is a confirmation of its economic intractability.

Baltic republics: Estonia, Latvia and Lithuania), plus the two that joined the EU in January 2007 (Bulgaria and Romania).

But in addition, European Armed Forces nowadays move in a world that is tied to international multinational expeditionary missions in which a lack of interoperability in operational theatres is absolutely unacceptable. The EDTIB strategy in which not only the EDA's I&M Directorate, but in fact all of the other Directorates, find themselves immersed, due to the obvious implications and interconnections between their other fields of activity, is the challenge of today and tomorrow. The steps being taken along these lines, while not huge, are positive. The Permanent Structured Cooperation referred to in the Treaty of Lisbon can contribute significantly to the goal of the EDTIB. The persistence of the sovereignty concept in affairs of defence within the EU leads to a consideration of the convenience of developing the issues of the ESDP in the same way that the EU's economic affairs have been developed, such as with the single currency for example. That is, to form a group of pioneering countries by using criteria of willingness and convergence and thus advance in the area of European common defence[49].

Complementary initiatives within the European Union

Up to now we have described the two main areas of activity carried out by the Defence Industry and Market Directorate, one of the EDA's four functional directorates. We would be remiss, however, if we did not include in this chapter a discussion of the initiatives related to the defence market and industry currently underway in the EU and created by the European Commission, both because of their relevance, since said initiatives originated in the EU's first pillar, namely that of a regulatory framework, and because of how the actions complement, without overlapping, those being taken by the EDA.

The opening up of the defence market advocated by the European Commission (EC) as a sine qua non for eliminating excessive fragmentation while at the same time improving the competitiveness of the EDTIB is nothing new. The CE has been analysing the problems in the defence equipment market and its implications for the continental defence industry since 1996[50]. The outcome of this work was the so–called "*Green Paper*

49 See the document *Re–energising Europe's Security and Defence Policy*, published in July 2008 by Nick Witney, first Executive Director of the EDA and currently Senior Policy Fellow at the European Council on Foreign Relations. http://ecfr.3cdn.net/c66a5b8b70f2e804a0_6xm6iywb0.pdf

50 COM(96) 10 of 24/01/1996 "Challenges Facing the European Defence–Related Industry; a Contribution for Action at European Level".

on Defence Procurement", published in 2004. It outlined the actions for the European Commission to take so as to contribute to the progressive construction of a more open and transparent European market that, while respecting the specificities of the sector, made it more financially efficient. This while guaranteeing a better allocation of resources –especially in a context of defence budget cutbacks– and supporting the development of member State capabilities within the framework of the ESDP.

The first effective document that resulted from the process initiated by the Commission was the Interpretative Communication[51], published in December 2006, for the purpose of preventing potentially erroneous interpretations and abuses of Article 296 TEC (presently Art 346 TFEU associated to the Lisbon Treaty) in the field of public defence contracts, obviating the application of existing EU law for public sector contracts[52]. Although the Interpretative Communication recognises the prerogative of member States to define their own essential security interests and their duty to defend them, it also restricts their discretion in terms of those measures they can take and which they deem necessary to the protection of those interests. Other interests, particularly industrial and economic, even if related to the production and trade of arms, munitions and war material[53], cannot in and of themselves justify an exception under Article 296, Section 1 b) of the TEC (presently Art 346 TFEU associated to the Lisbon Treaty). Thus, the Commission, by way of its Interpretative Communication, explains that the only way member States can reconcile their prerogatives in the area of security with the obligations that are incumbent upon them pursuant to the TEC is by very carefully assessing whether each contract warrants an exemption from community regulations.

Likewise, as announced in the green paper on defence procurement, the Commission issued a second Communication in December 2007[54],

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COM(97) 583 of 04/12/1997 "Implementing European Union Strategy on Defence–Related Industries".
COM(2003) 113 of 11/03/2003 "European Defence: Industrial and Market Issues. Towards an EU Defence Equipment Policy".
COM(2004) 608 of 23/09/2004 "Green Paper on Defence Procurement".

51 COM(2006) 779 final of 07/12/2006. Interpretative Communication "on the Application of Article 296 of the Treaty in the field of Defence Procurement".

52 Directive 2004/18/EC of the European Parliament and of the Council of 31/03/04, on the coordination of the procedures for the award of public works, public supply and public service contracts.

53 List adopted on 15/04/58 as Council Decision no. 255/58.

54 COM(2007) 764 final de 05/12/2007, "A Strategy for a Stronger and more

known as the "defence package", and which lists the initiatives being implemented by the European Commission related to the analysis and operation of the defence equipment market. The Communication includes three main areas of activity:

– Policies aimed at improving the operation of the internal defence products market. These include both additional legislation as well as other accessory measures. The additional legislation proposed two Directives:

  First is the Directive on transfers of defence goods and services within the Community. This Directive was published in the Official Journal of the EU on 10 June 2009[55]. In Article 18 it specifies that member states must adopt and publish the laws, regulations and administrative provisions necessary to comply with this Directive no later than 30 June 2011. Those measures shall be applied from 30 June 2012.

  The obstacles to the circulation of defence–related products in the internal market can distort free competition and do more harm than good to the development of the necessary trust–based security of supply between member States. In short, they encumber the participation of defence companies in the European defence market and have a direct and negative effect on their competitiveness.

  The Directive presents two fundamental approaches, one aimed at simplifying procedures and the other at harmonising them, in an effort to establish a more rational system that promotes the use of general and global licences and reduces the issuing of individual export licences to exceptional cases.

  Another important aspect of this Directive on the transfer of defence goods and services is the certification of companies. The member States, within the framework of enhancing mutual trust and therefore of developing true security of supply, must certify, based on common criteria, the companies that benefit from the global licences issued by other member States. These companies, for their part, must guarantee to respect the export

Competitive European Defence Industry".

55 "Directive 2009/43/EC of the European Parliament and of the Council simplifying terms and conditions of transfers of defence–related products within the Community". Official Journal of the European Union, 10.06.2009

restrictions imposed by the countries of origin through a series of procedures, such as the appointment by the company of a person responsible for transfers and exports and a signed description of the internal compliance programme or the export management system implemented in the company. This certification is expected to last five years.

While this Directive clearly paves the way for simplifying the procedures for granting transfer licences among EU member States, there is also a certain risk in terms of harmonisation. The text of the Directive, as is to be expected given the sensitivity involved with the transfer/export of defence material, gives member States some manoeuvring room when it comes to applying the different types of transfer licences, as well as to the company certification procedures. That is why the next twenty–four months will be key to the future of the potential benefits derived from its application.

Secondly, there is the Directive on defence procurement, though to be more exact we should say on Defence and Security, since this second field is also included within its scope. This Directive was published in the Official Journal of the EU on 20 August 2009. In accordance with Article 72, member States shall, by 21 August 2011, "adopt and publish the laws, regulations and administrative provisions necessary to comply with this Directive. They shall forthwith communicate to the Commission the text of those measures". Some time will be required then before the impact of this new Directive on the creation of a more transparent and competitive European defence market can be determined.

There are many reasons behind the Commission's proposal for a new directive specifically aimed at the procurement of defence and security equipment. Even bearing in mind the fact that national security is still the sole responsibility of each member State, in the fields of both defence and security, the member States themselves agree on the need for the gradual formation of a more transparent and competitive European defence equipment market that will allow for the strengthening of the European defence technological and industrial base and, as a result, favour the development of the military capabilities required to implement the ESDP.

The goal of the new Directive is to facilitate the contracting of defence and security material, in itself very specific, and which,

with the exception of those aspects related to the national security interests mentioned in Article 296 of the TEC (presently Art 346 TFEU associated to the Lisbon Treaty), has been subject to the provisions in the more general regulations on public sector contracts (Ibid. 16). Those contracts awarded pursuant to this new Directive must adhere to the principles of equal treatment of economic operators, transparency and non–discrimination. In this sense, the scope encompasses everything from the supply of military and sensitive equipment, including the pieces, components and/or sub–assemblies thereof, the works, supplies and services directly related to the aforementioned equipment, as well as works and services for specifically military purposes or sensitive works and sensitive services. It is important to note that the new Directive does not include those contracts awarded under international programmes, meaning those cooperation programmes that are subject to Memorandums of Understanding between participating member States. It also will not be applicable in Government to Government contracts for the supply of military or sensitive equipment. In coordinating the process of implementing both Directives, the European Defence Agency should also play its role given its intergovernmental nature and its function as a catalyst, thereby facilitating the coordination of member States from the perspective of the Defence Ministries.

It is true that affairs involving transfer/export licences, for example, go beyond the responsibilities of the Defence Ministries of member States, but it is no less true that it is these Ministries themselves that stand to gain or suffer, as the case may be, if the final implementation does not go according to plan. Aspects as basic as military capabilities or security of supply could be seriously compromised if the Directive is improperly implemented. But the greatest harm will ultimately be done to the European Security and Defence Policy, which will undermine all the efforts made by member States to work toward a European defence industry that is solid, competitive and truly oriented at providing the military capabilities required by Europe's Armed Forces in the 21st century.

Other policies aimed at improving the functioning of the internal defence market allude to the use of joint standards, increasing mutual trust among member States and controlling the actions of

the defence industry, mainly as regards its acquisition by capital outside the EU.

– *Policies for improving overall coordination.* This includes policies on the demand side to harmonise requirements and jointly improve investments in defence–related research and development.

– *Accompanying policies*. These are aimed at opening up markets beyond the EU's borders in anticipation of changes that may arise as a consequence of the restructuring of the defence industry (in terms of employment, for example) and through improved instruments for overseeing the European defence market, such as, for example, converging towards common procurement procedures.

As part of the joint decision process initiated in the wake of the publication of the "defence package" by the European Commission in December 2007, both the European Parliament and the Council have been firmly supporting the initiatives under way in the EC as an example of the way forward in the creation of a truly continental market for defence equipment that contributes to strengthening Europe's defence technological and industrial base as an essential pillar to the achievement of the military capabilities demanded by the current and future missions of Europe's Armed Forces.

Defence Market and Industry: two key concepts for the future of the EDA

As already stated, market conditions and the existence of a strong defence technological and industrial base are key requirements when it comes to developing the ESDP. And given the special characteristics of this market/sector that differentiate them from others of a purely commercial nature (governments as the main protagonists by being the only clients, regulators [through the regulation, for example, of subsidies or of defence exports], strategic supervisors [overseeing company restructurings, mergers and takeovers], owners or main shareholders in certain industries in some cases), it is certain that the policies and initiatives implemented by the EDA will play a fundamental role in the future of the Agency.

But it would be extremely naive to hope that the market conditions promoted by the EC or the EDA would, by themselves, be capable of creating a suitable atmosphere for restructuring and strengthening the industrial defence that is required to supply the ESDP military capabilities

demanded by member States. There are many other factors involved. By way of example, the comprehensive development of military capabilities at a European level and the harmonisation of military requirements among member States are just some aspects that are in need of further analysis before an appropriate degree of consensus is reached. Europe is acting more within the framework of the ESDP every day and taking an increasingly joint approach through international crisis management operations. In this setting of multinational formations, interoperability is more and more important and there is an inexorable demand for the joint development of such concepts. Joint investment in research and technology programmes and an increase and improvement of cooperative armaments programmes are additional key elements to achieving this objective.

The launch of the EC and EDA initiatives can only be considered as the start of a long process. It is not an issue of supplanting the "national" defence concept with a "European" one, but rather of keeping in mind the context of Europe and the ESDP when the respective Military Staffs set about establishing military capability objectives and the various National Armament Directorates make their plans for procuring defence systems.

The EDA's five–year journey in the fields of the defence market and industry is proof that something is changing and that member States are gradually committing to changing their behavioural habits in the area of defence.

The strategies and initiatives implemented to date by the Defence Industry and Market Directorate, along with the roadmaps already in place and those still to come and entirely developed in concert with the other three functional Directorates, constitute the main added value provided by this relatively new institution in the framework of the ESDP. Its effects are already evident in the structures of the Defence ministries of member States. The existence of the EDA is also apparent in the business strategies of European defence companies. And its impact goes even beyond the borders of the EU, as demonstrated by the interest of the Department of Defense and the National Defense Industry Association of the United States in the EDTIB strategy, or in the EDA's Intergovernmental Regime initiative for defence procurement described in this chapter.

While the political will to keep supporting the development of the ESDP is undeniable, especially if some member States wish to provide that support as leading players, they must still play an active role in the activities of the EDA. Governments on the one hand, through their Defence ministries, and

defence industries on the other, either directly or through their national associations, will have to stay on top of the evolution of the various EDA initiatives. But this comes at a price. Leadership by pMS requires active participation, which in turn translates into financial commitments and into providing the human resources needed to attend to the multiple and varied courses of action managed by the EDA. The challenge is substantial if we bear in mind the admittedly restrictive tendencies of Europe's Defence ministries, both in terms of budgets and personnel.

CHAPTER SIX
THE EUROPEAN DEFENCE AGENCY: INVOLVEMENT OF SPAIN'S INDUSTRY

ROBERTO L. YUSTOS CORDOBÉS

We will have the fate that we deserve.
Albert Einstein

Initial Considerations

For years, Europe has tried to drive for greater industrial and technological cooperation as a necessary complement to its desire to achieve a joint defence.

The possibility of creating an instrument to give shape to this goal was found in the Statement on the Western European Union annexed to the Treaties of Maastricht and Amsterdam. It was not until 2003, however, with the celebration of the European Council of Thessaloniki, that this instrument took on its final shape with the creation of what was then called the European Agency in the Field of Defence Capabilities Development, Research, Acquisition and Armaments, and which we have since come to know as the European Defence Agency (EDA).

Among the missions specified in the Joint Action adopted in 2004 by the Council of the European Union (EU) that created the Agency is that of supporting the Council and member States in their efforts to improve the defensive capabilities of the EU in the area of crisis management. This is one of the support tools underlying the European Security and Defence Policy (ESDP), as a result of which different initiatives have been adopted and launched for the purpose of identifying and acquiring those Defence capabilities identified as necessary by the member States.

From an industrial standpoint and in following with what was mentioned in earlier chapters, the creation of the Agency has yielded undeniable advantages over the previous situation. It not only represents an attempt at rationalising the complex network of existing institutions involved in armaments policies, but it also provides an added value by assuming the task of "evaluating the observance of the capability commitments given".

Likewise, European industry considers the EDA's greatest future challenge to be to consolidate itself as something more than a mere technical body without any decision–making authority. On the contrary, the Agency, in essence, must ultimately exercise a real influence on the decisions of member States in the area of the defence Europe, even going so far as to promote and develop European initiatives involving both the implementation of new cooperative programmes, as well as related research and technology (R&T) activities.

In light of the above and focusing on the main areas of activity specified in the aforementioned Joint Action, over the course of this chapter we will attempt to provide as detailed an idea as possible on the past and current participation and the degree of involvement of Spain's defence industry in the various initiatives and actions promoted by the Agency.

We shall do so in reference mainly to the two large blocks of initiatives related to the Agency's two leading activities: those efforts aimed at favouring the creation of a single European defence market on the one hand, and, on the other, the initiatives developed for the purpose of promoting and enhancing European cooperation in the area of defence R&T.

Initiatives aimed at favouring the creation of a single European defence market

The idea of creating a single defence market as one of the pillars for upholding a joint European defence policy has been one the most sought–after aspirations of EU institutions. The reality of the various European treaties and the common practices of member States, however, have only served to demonstrate the complexities and obstacles that have hampered this objective.

As everyone well knows, the defence industry benefited in the past, and continues to do so to this day, from special treatment in the rules

regulating Europe's internal market, both because of its specificities and due to its direct impact on the essential security interests of the States.

Specifically, both the current Article 296 of the Treaty Establishing the European Community (TEC) and Article III–436 of the upcoming European Constitution, still in the ratification process, have preserved this exceptional treatment, whose text is as follows:

> *«1. The Constitution shall not preclude the application of the following rules:*
>
> *a) no member State shall be obliged to supply information the disclosure of which it considers contrary to the essential interests of its security;*
>
> *b) any member State may take such measures as it considers necessary for the protection of the essential interests of its security which are connected with the production of or trade in arms, munitions and war material; such measures shall not adversely affect the conditions of competition in the internal market regarding products which are not intended for specifically military purposes.*
>
> *2. The Council, on a proposal from the Commission, may unanimously adopt a European decision making changes to the list of 15 April 1958 of the products to which the provisions of paragraph 1 (b) apply.*

Experience has shown us that the member States have been interpreting this article very loosely, applying a broad concept of national security that has allowed them to exclude the regulations on the internal European market from the vast majority of their defence acquisitions.

For its part, the Court of Justice of the European Union has indicated on certain occasions that this interpretation by the States was not in keeping with the spirit of the article and that the exception is to be strictly applied and is not automatic. The burden of proving the existence of a specific need to protect the essential interests of its security lies with the State.

Bearing in mind this specific nature of European defence markets, the European defence landscape has, in recent years, been marked by two major tendencies that, despite their common intent, to achieve a single European defence market, have taken parallel paths. They can be differentiated by what we shall consider from this point on as initiatives at the Community level, led by the European Commission, and at the Intergovernmental level, led by the EDA.

Initiatives at the Community level

When dealing with those initiatives launched by the different General Directorates of the European Commission in an area as significant to industry as the European defence market, we shall do so by focusing on the most notable activities, in light of their complementarity with the actions taken by the EDA.

We can safely say that in recent years the Commission has been characterised by the special care it has taken when addressing the issue of public defence contracts. Judging by the results obtained, however, its success in this area has been somewhat mixed.

Since the late 90s, the Commission has published various communications that have tended to both modify the contractual defence scheme in Europe and to alter the conditions of said scheme as they apply to member States.

In March 2003, the European Commission, through a Communication titled "Towards an EU Defence Equipment Policy"[56], set in motion seven initiatives intended to implement a more effective European defence material market.

In this Communication, the Commission underlined the need to reflect on how best to optimise defence material acquisitions, and announced the adoption of a series of measures that would serve as a basis for the debate by all interested parties so as to reach an agreement on the regulations applicable to the adjudication of public defence equipment contracts based on their degree of sensitivity.

Along these lines, the Communication materialised with the publication of the "Green Paper on Defence Procurement" [57] in September 2004, the contents of which reflected the generalised and widespread use that member States were making of TEC Article 296 on the grounds of defending their essential national security interests.

Subsequently, and stemming from the results yielded by the paper, the Commission announced the future adoption of two new initiatives aimed at improving the existing situation.

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56 COM (2003) 113 FINAL: Commission Communication of 11 March 2003, on European defence. "Towards an EU Defence Equipment Policy".

57 COM (2004) 608 FINAL: *Commission Green Paper of 23 September 2004 on Defence Procurement.*

So it was that, in December 2006, the Commission presented an "Interpretative Communication on the Applicability of Art. 296 of the Treaty"[58], intended to clarify the conditions of use of Article 296 by national contracting authorities, thus providing the industry with more solid guidelines on the issue.

As stated in the Communication itself, the Commission's argument stems from a fundamental supposition in stating that a "Clarification of the existing legal framework is a necessary first step towards greater openness of European defence markets" and proposes an interpretation of Article 296 that is based on the dual vision of its contents: the powers conferred to member States and the limitations established in the exercise of said powers.

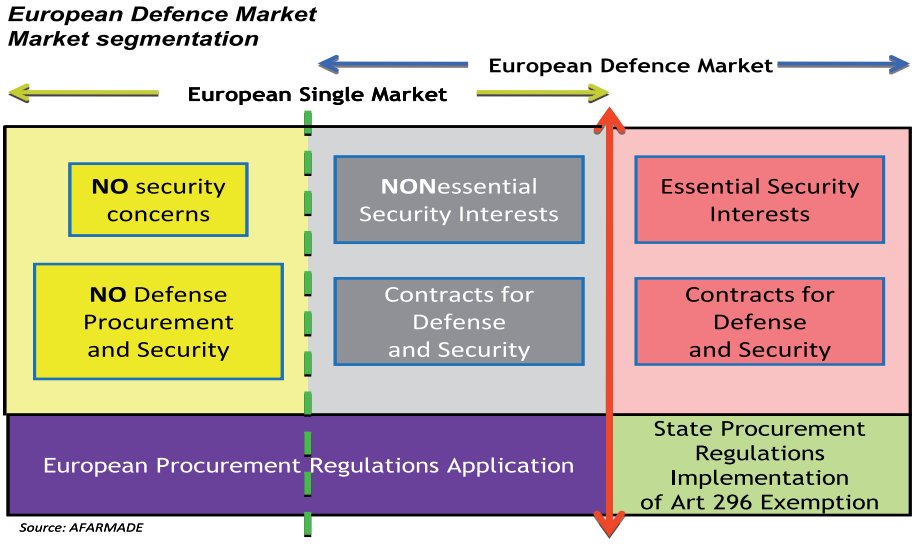


Figure 35. *Competences confer to the member States*

So as to specify the conditions under which the exception contained in Article 296 applies, the Commission noted that the States must evaluate on a case by case, contract by contract basis whether or not an exemption of EU rules is warranted. The crux of this interpretation of Article 296 lies

58 COM (2006) 779 FINAL: Interpretative Communication of 7 December 2006, presented by the Commission on the Application of Article 296 on the Treaty in the Field of Defence Procurement.

in just what is to be considered as material included in the precept and concept of essential security interests.

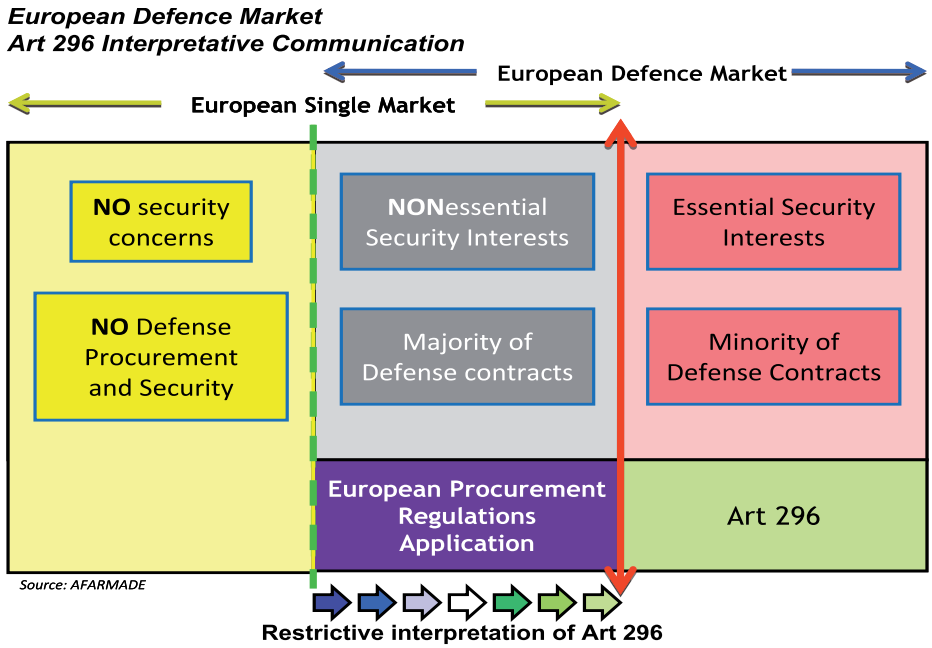


Figure 36. *Member States case by case evaluation*

For the Commission, the fact that the material is included in the 1958 list and is intended for specifically military purposes is not enough to justify an exception under Article 296. Moreover, the contracting of said material in compliance with EU laws must harm an essential security interest.

Various sectors have viewed this stance by the Commission as excessive, since this interpretation goes beyond the purview of Articles 296 and 298 and there is no consistent jurisprudence to support it.

These authors note that both the Commission and the Court of Justice could control the exercise of Article 296 powers through the formal elements of said exercise, but under no conditions could they engage in a detailed examination of the crux of the matter, which is no other than the extent of the discretionary nature of the States to define, delimit and defend their essential security interests. Anything else would be equivalent to claiming that the Commission or the Court of Justice could substitute

the discretion of the States by their own, and thereby determine what the States' interests are, their classification as essential or not and the way to protect them.

The second and most recent proposal undertaken in the area of defence procurement in Europe was the adoption in December 2007 of a proposal made by the European Commission regarding two legislative instruments that, along with a strategic Communication on the European defence industry, comprise the so–called "Defence Package"[59].

The aim of the two new legislative initiatives proposed by the Commission is to contribute to the creation of a genuine European defence market without the need to sacrifice the control now exercised by member States over their respective essential defence and security interests.

Some of the reasons behind the European Commission's actions in a sector as concrete as that of defence and security include, among others, the specific importance of this sector, both in terms of turnover and employment. According to data provided by the Commission itself, annual defence industry sales in Europe exceed 55,000M €, which represents around 30% of global production. The industry also employs over 300,000 people.

Also, as a consequence of the direct threat now posed by terrorism, it is becoming more and more difficult to draw a line distinguishing between defence and security, an increasingly blurry line that requires improved coordination of the policies affecting both sectors.

Another of the specificities mentioned earlier, and also recognised by the Commission, that is exhibited by the defence and security sector is the predominant role played by the respective governments of member

59 Defence Package adopted by the European Commission on 5 December 2007. Includes the following parts:
– COM (2007) 764 final: *A strategy for a stronger and more competitive European Defence Industry.*
– COM (2007) 765 final: *Proposal for a Directive of the European Parliament and of the Council on simplifying terms and conditions of transfers of defence–related products within the Community.*
– COM (2007) 766 final: *Proposal for a Directive of the European Parliament and of the Council on the coordination of procedures for the award of certain public contracts, public supply contracts and public service contracts in the fields of defence and security.*

countries, in their roles as both legislators and primary consumers alike, and even, in some cases, as owners and majority shareholders.

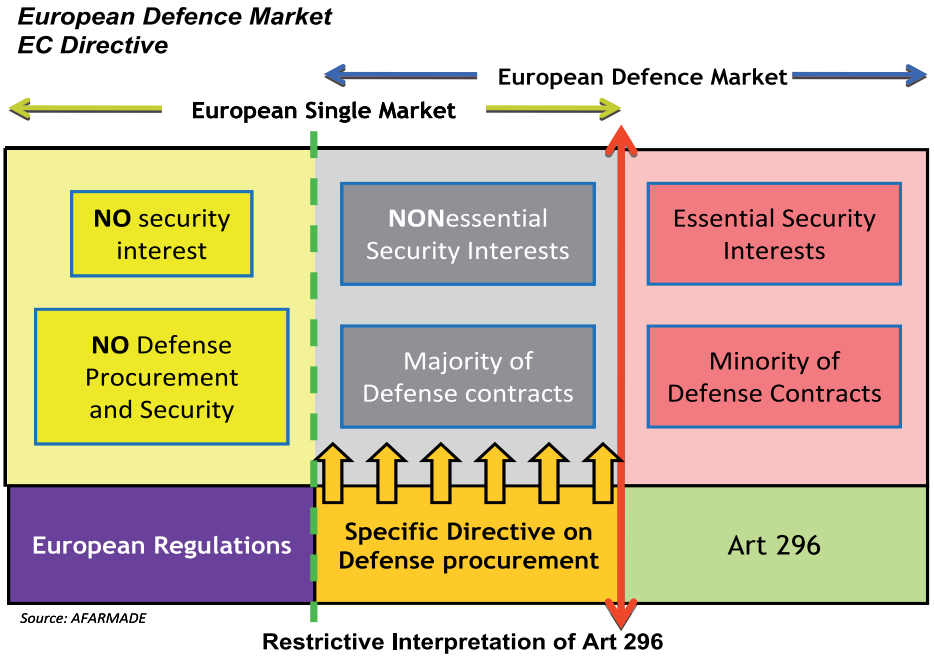


Figure 37. *Definition of Defence and Security contracts*

The need to increase the level of competition in the industry is explained partly by the current budgetary landscape which, in the opinion of the Commission, is but a reflection of each member State's policies and priorities. This landscape is characterised by constant cuts that have resulted in a significant reduction in sales and employment figures.

Another of the characteristics that, according to the Commission, defines the European market is its excessive fragmentation. It is possible to find specialised companies in the manufacture of support systems and equipment throughout the continent.

At the same time, European governments exhibit a clear preference for their own national defence and security industries, being fairly reluctant in general to accept mutual reliance. As a result, the defence and security industries in other member countries have only limited access to defence markets abroad.

The outcome of all this is a high degree of duplication, as evidenced by the 89 different armaments programmes existing in the European Union, versus the 27 in the United States.

Among the factors identified by the Commission and that, in its opinion, have contributed to a large extent to the current fragmentation of European defence markets, it notes: an over–reliance on TEC Article 296 by member States; a failure to distinguish between exports to third countries and transfers between member States as a consequence of national regulations; the limited European dimension reflected in the laws of certain member countries concerning the control of strategic defence resources; the lack of cooperation and coordination between member States when defining common requirements, R&D or common production programmes; and, the widespread use of offsets in Europe and the ensuing distortion this practice has on competitiveness.

The Commission's analysis of European defence markets also takes into account the growing trans–Atlantic imbalance that characterises American–European trade relations. While American manufacturers encounter practically no obstacles to accessing European markets, European companies in the sector often face numerous hurdles when attempting to do business in the United States.

The Commission, in its December Communication, proposed a series of legislative actions and measures aimed at improving global coordination, strengthening Europe's internal defence and security market and contributing to the necessary adaptation and modernisation process.

Specifically, over the course of 2008 the Commission focused its efforts on the two Directives proposed in December 2007, one involving defence procurement – which aims to favour greater openness and encourage a greater European presence in the defence markets of member countries – and the other, intracommunity defence transfers – which aims to minimise existing obstacles.

The procedure chosen for the approval of both legislative proposals was the co–decision procedure, characterised by being the only procedure that grants equal powers to the European Parliament and to the EU Council of Ministers. The procedure is detailed in TEC Article 251[60].

60 Treaty Establishing the European Community (consolidated Nice version) – Part five: Community Institutions – Title I: Provisions Governing the Institutions – Chapter 2: Provisions common to several institutions – Article 251 – Article 189 B – EC Treaty

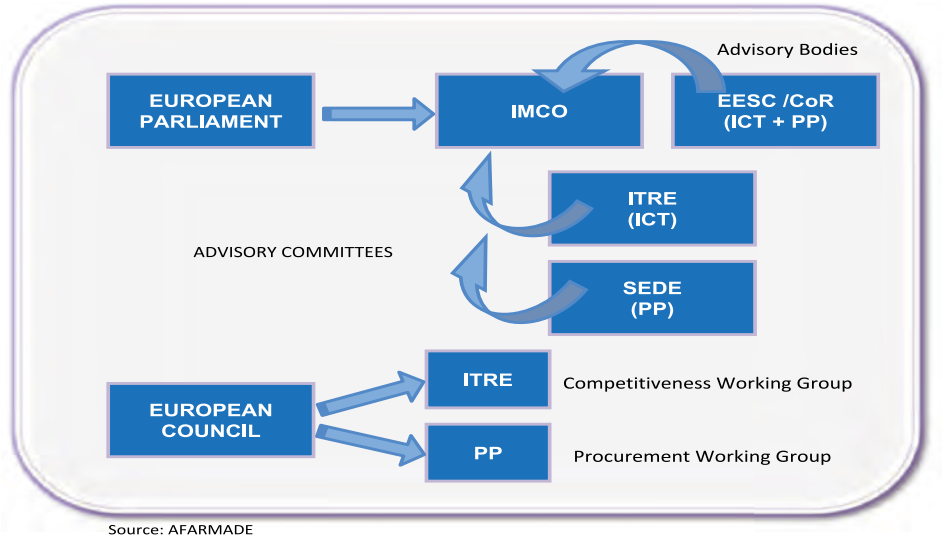


Figure 38. *Co–decision Procedure. Application*

While the work undertaken toward adopting these proposals began during Slovenia's rotating EU presidency in 2007, it was the French presidency that devoted a greater effort and exerted more pressure on the remaining member States so as achieve its adoption in late 2008.

Eventually, and as expected, both legislative proposals were approved on first reading by the European Parliament in December 2008 and January 2009. A two–year period was established from the time of publication for European Union member States to transpose said directives to their respective national legislations, at which time the interpretations made by each nation will play a decisive role in their subsequent application to the national arena.

As for the importance of these legislative proposals, and by way of conclusion, we note two key facts that are of particular relevance to Spain's industry[61]:

On the one hand, the measures proposed by the European Commission will contribute decisively to the configuration of the future policy framework within which European defence and security companies will have to

(consolidated Maastricht version).

61 Report drafted by AFARMADE titled: "Analysis of Spain's Defence and Security Industry based on the Defence Package drafted by the European Commission".

operate, both at a European and national level, paying particular attention to the possible effects and implications that its subsequent transposition to the national stage could have on Spanish laws.

And on the other, the proposals put forth by the Commission only serve to consolidate the existing trend nowadays toward an increasing shift of regulatory powers toward European institutions, and all the implications that could have in terms of independence and autonomy in areas as sensitive to nations as defence and security.

Participation in intergovernmental initiatives

In addition to the Commission's initiatives, the EDA, and in particular its Industry and Market Directorate, has likewise been proactive in intergovernmental matters, particularly in the area of European defence markets.

Though Chapter 5 of this monograph has already reviewed at length the areas in which said Directorate is involved, I think it is worthwhile to reconsider some of the ideas and initiatives mentioned there so as to contextualise the participation of the national industry in them.

As already mentioned, it was in November 2005 when the Agency's Steering Board approved the terms and the working programme for the implementation of the so–called Code of Conduct (CoC) for defence procurement as an integral part of the Intergovernmental Regime. It went into effect in July 2006.

The non–binding CoC consists of a set of rules of conduct, in the form of a gentleman's agreement, that the signatory nations agree to abide by when making defence procurements under the auspices of TEC Article 296. It is based on the principles of mutual transparency, support and benefit. As already indicated, signing the CoC is voluntary, but a signatory State is bound to comply. The Agency is tasked with its enforcement. To help it in this task it has been provided with the power to request information from participating States to verify its proper application.

It may be said that this Code's basic commitment is in the agreement of member countries to provide procurement opportunities for defence products to all suppliers under conditions of equality of treatment as regards selection criteria, specifications and requirements and awarding criteria. Also, along with this central commitment, participating countries

agree to publish tenders meeting the conditions specified in the Code in the electronic portal set up for this purpose – the Electronic Bulletin Board (EBB). The EBB will also double as a tool for monitoring and observing the commitments made by participating member States.

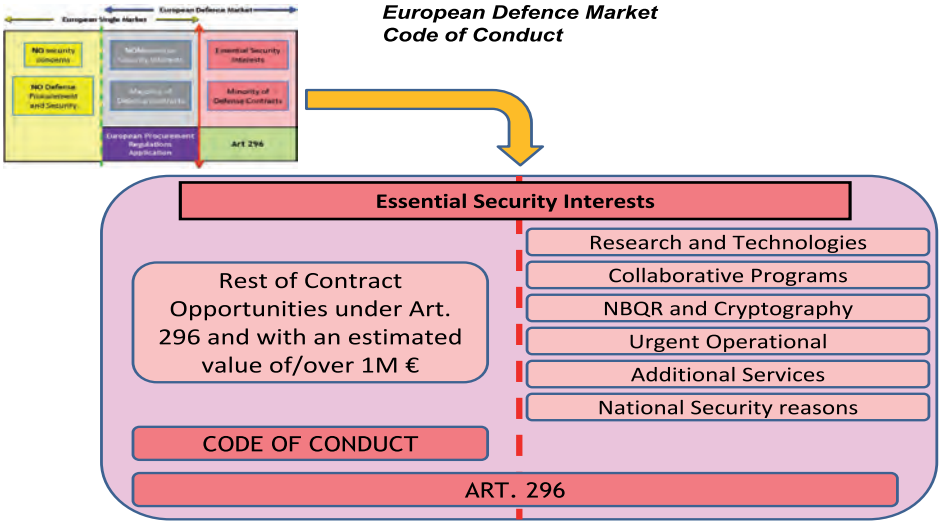


Figure 39. *sMS commitments derived from the CoC*

As noted in Chapter 5, of the 24 countries then members of the Agency, only Spain and Hungary opted out of the CoC for defence procurement. In Spain's case, the decision was based essentially on the presence in the CoC of certain elements that were contrary to Spain's interests, while at the same time it obviated some issues of importance to Spain.

Among the reasons put forward by the Spanish government was the potential contradiction arising between having the Code specify the "best economic offer" criterion as an element for adjudicating the contract and the possible interest in purchasing a more expensive system that was better suited to an operational need. Also cited was the lack of specifics in certain key contractual terms, such as Security of Supply (SoS), Security of Information (SoI) and Offsets, with Spain's future incorporation to the Code being conditional on progress made in these areas.

As it happens, the efforts of the EDA's subsequent work programme on the Intergovernmental Regime and on its respective pillars focused on the areas of concern previously noted by the Spanish government.

Toward that end, during the Steering Board meeting held on 20 September 2006, the CoC member States adopted new commitments involving SoI and SoS, though they decided to postpone any possible decision on the possible harmonisation of offsets until the work and analyses undertaken in that area were further developed.

The progress made by the EDA in these efforts is part of the reason that led the two countries that initially expressed their reservations to subscribe to the Code just one year after its implementation.

Some experts believe this "delay" in the incorporation of Spain to the Intergovernmental Regime may have had a negative influence on Spain's industrial fabric in terms of contracting opportunities lost, as well as in terms of the industry's image. In this regard, while no reliable information is available on how many companies opted for these opportunities, assuming they actually did, all that can be said is that there is no record of any Spanish company having been rejected over the course of this period in the awarding of any of the contracts published on the bulletin board set up by the EDA for this purpose[62].

As mentioned in the previous chapter, the Intergovernmental Regime for defence procurement features two basic pillars that aim to provide the European Defence Equipment Market (EDEM) with a greater degree of equality, transparency and competitiveness.

The second of these pillars, not mentioned yet, is known as the Code of Best Practice in the Supply Chain which, as its governmental counterpart, has as its main objective that of achieving greater openness and transparency in the defence market so as to consolidate a competitive EDEM. The focus in this case, obviously, is on the subcontracting chain.

It is worth noting that the drafting and subsequent approval of this Code of Best Practice featured the active participation of the European defence industry. The Code was not endorsed by the member States until it was approved by the Council of the ASD (Aerospace and Defence Industries Association of Europe), which took place on 27 April 2006.

It is worth reiterating that both Codes, of a non–binding nature, comprise a set of codes of conduct that both countries, in the case of the CoC, and companies, in the case of the CoBPSC, agree to abide by when taking

62 EBB I: *Electronic Bulletin Board – Government Contracts.*

part in the defence procurement system covered under TEC Article 296, inspired by the principles of mutual transparency, support and benefit.

From industry's point of view, we should note the positive stance taken by the Spanish defence industry for an initiative – the Intergovernmental Regime and its associated pillars – that serves to provide continuity to the efforts made in the last decade aimed at attempting to modify defence contractual arrangements in Europe, as noted earlier.

And all of this without losing sight for an instant of the possible risks entailed by the theoretical opening of the European defence market for a sector like the Spanish defence industry which, in addition to being uneven, may not properly account for the specific peculiarities associated with a sector as unique and as relevant as the defence sector.

According to data provided by the EDA itself regarding the Electronic Bulletin Board used by governments participating in the Intergovernmental Regime for posting contracting announcements, the trend in the number of contracting opportunities posted is on the rise, as is evident in Figure 40.

According to these same data, since its implementation in July 2006, a total of 468 contracting opportunities have been published, coming from 19 of the 26 member States, with an estimated total value in excess of 11,000M €.

It is also of note that 253 of these contracting opportunities were eventually awarded at an approximate value of 3,900M €, though only 74 of them, or 38%, crossed borders and were awarded to companies not based in the country of origin of the offer. This includes companies headquartered in countries not belonging to the EDA, such as the United States, Canada, Brazil and Switzerland, whose contracts totalled 1,340M €.

Focusing these figures on Spain's industry, of the total 253 contracting opportunities awarded, Spanish industry was adjudicated only five contracts, having taken part in at least thirteen bidding processes.

Yet another criterion for assessing the success of this initiative is the extent to which Small and Medium Enterprises (SMEs) in the European defence sector were successfully involved in the process.

In this regard, the available data show that of the 253 total contracting opportunities awarded under competition, 113 of them, over 44%, were awarded to European SMEs in the sector, though only ten of these were

cross–border, being awarded to SMEs of a different nationality than that of the contracting authority.

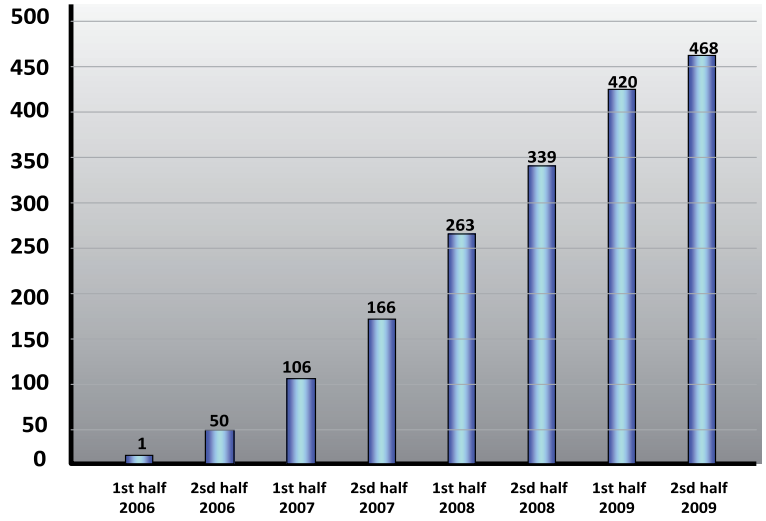


Figure 40. *Government Contract Opportunities posted. Trends*

When analysing the relative success of this Agency initiative, an isolated study of these data could yield a somewhat skewed picture. When issuing any assessment, it is necessary to bear in mind not only the number of contracts that eventually crossed borders, but also the corresponding industrial fabric (including the percentage of SMEs) of the countries that offered said opportunities, as well as whether the contracts would have been similarly publicised if not for the existence of the Intergovernmental Regime.

Along parallel lines, on 29 March 2007, the so–called EBB II – Industry Contracts – went into effect. This section of the Electronic Bulletin Board is for the publication, by those European companies in the sector that have so requested, of those subcontracting opportunities that comply with the principles and criteria reflected in the CoBPSC.

As for the success of the utilisation of this section of the EBB, we note that only 17 companies, out of a total of 78 registered as of the writing of this chapter, have published a subcontracting opportunity (SCN) since the EBB's inception in March 2007, the total number of postings being 44 and valued at around 200M €.

Perhaps this is one of the weak points that the Agency should address. These figures show a very low level of participation by European industry as a whole, and by Spanish industry in particular. Only seven Spanish companies are part of the community of contractors created by the EDA through the EBB. If to this we add the fact that only one of these seven Spanish companies has posted a contracting announcement, the degree of success of this initiative is even less apparent.

On a positive note, we should note that while the number of Spanish companies registered is fairly low, we can find among them enterprises of various sizes located in different sectors of the Spanish defence industry. Spain's participation is 8.9%, as we can see in Figure 41, ahead of countries like the United Kingdom and Italy, whose industrial and technological bases are deeply rooted in the countries comprising the European Community.

While a certain apathy on the part of Spain's defence industry has been, and will continue to be, a constant in the implementation of this Agency initiative, a large number of experts show no hesitation in linking this to the no less dubious success of its official counterpart, whose figures for the number of contracts published and their budgets are far from the reality in the industry. This only serves to call into question just how willing member States are to participate in the Intergovernmental Regime.

So as to attenuate and make amends for European industry's lacklustre commitment, the Agency has started working on possible parallel paths for stimulating and assuring a greater awareness in companies in the sector. It is doing so through the use of tools such as the Call Centre, which aims to make available a sufficiently reliable database of the industries in each member State. It also hopes, through direct marketing efforts, to raise awareness of the initiatives, tools and activities being offered by the EDA in the area of EDEM.

The participation of Spanish industry in this database is proving fairly satisfactory not only in terms of the companies included – almost 200 in all – but also in terms of the awareness and use of the tools developed by the Agency, such as the two electronic bulletin boards used by both member States and by large companies in the sector for posting contracting opportunities.

In general terms, both the CoC and CoBPSC, and more specifically their electronic bulletin boards (EBB I and II), are regarded by Spanish industry as a new work tool for staying informed about new contracting

opportunities, especially for SMEs, which can now gain access to contracts that were previously beyond their reach, either due to a lack of information or of resources.

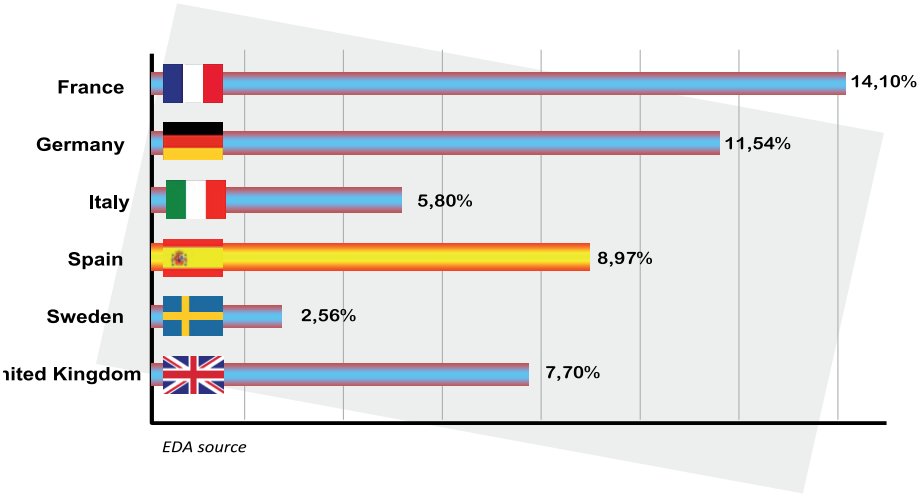


Figure 41. *Companies registered in the EBB II–LoI environment*

Having said that, that same industry is equally aware of the limitations posed by this recently implemented tool that, in order to be truly effective, still needs to address a series of drawbacks (terms for presenting proposals, languages in which offers are made, conditions for accessing bids). In the case of many European companies and SMEs, these obstacles are insurmountable when it comes to accessing the European defence market, at least under the such highly espoused conditions of equality and transparency.

Other issues on which the EDA is working in concert with European industry, since they are directly related to the EDEM, are the offsets practices, a greater involvement of European SMEs in the sector and governmental policies to aid the sector.

While it is true that advances in any of these will have implications and important repercussions for the whole of the European defence industry, I think it convenient to delve into the area of offsets so as to examine in more detail the current situation as it applies to such a complex and problematic issue as this.

The offset policies and practices developed by countries have been the source of much debate both on the European and international stages.

The debate has focused mainly on two points. One is the argument put forth by the European Commission that calls into question the legality of this practice. The second point at the centre of this debate involves the possible distorting effects that this practice can have on the EDEM.

Along these lines, and as already addressed by the European Commission's Defence Package, the Commission will keep using all legal means at its disposal to ensure honest competition in relation to defence industry goods. The Commission views the existence of offsets as potentially distorting the market, and is advocating for the creation of market conditions and an EDTIB structure that do not require such a practice.

As for the EDA, one of its main objectives since its inception has been that of taking an active role in an area as relevant to the European defence industry as that represented by the various offset practices and policies that exist in EDA participating member States (pMS).

After an initial failed attempt to include offsets and their possible harmonisation in the CoC for defence procurement as an integral part of the Intergovernmental Regime, it was decided, given the complexity of the issue, to continue working in this area. Any decision and/or possible action would be dependent on the conclusions of a study commissioned to ascertain the actual extent of this practice and the existence of related policies in Europe.

Subsequently, in 2008, a working team consisting of official experts was created in the EDA. This team, which included representatives from Spain, worked in concert with the European defence industry to draft a code of conduct for offsets. Finally, after a heated consultation period, said code went into effect on 1 July 2009 with the endorsement of 25 EDA member countries plus Norway.

Among the goals of this code is to progressively suppress those practices that could have a negative bearing on either the development of the EDEM or on the achievement of a future EDTIB. The initial idea of including this code as part of the Intergovernmental Regime is being championed once more.

As stated in the working document on this issue drafted by the Spanish Association of Armaments and Defence and Security Material (AFARMADE), "Spanish industry views favourably the application of an offsets policy,

understanding offsets to mean 'industrial participation' and its contribution to the technological development of countries. The concept held today of offsets is obviously not exactly the same as that held in the beginning. It also considers that, since no common rules actually exist to date, it would not be judicious for the sector to suppress the practice of offsets. We must also keep in mind that it is a common practice in the international market" [63].

As mentioned earlier, another of the objectives pursued by the EDA in relation to the EDEM is that of guaranteeing equality in opportunities and the existence of fair competition between European defence companies. The application of government policies to subsidise the sector would constitute a clear distortion that would require rectification.

To that end, the Agency commissioned a study in late 2007 to identify the subsidy formulas adopted by member countries and the extent to which they could affect the development of the EDEM and, more specifically, of fair competition in the sector. The study, headed by a Spanish company, finally came out in March 2009. Among its more prominent conclusions was the need for a fairer and more egalitarian treatment of potential suppliers, regardless of nationality, so as to attain a greater degree of competition and efficiency in the European defence market.

The participation of Spanish industry in Agency initiatives to enhance European cooperation in the area of defence R&T

European cooperation in matters of defence R&T has been and continues to this day to be a area of constant debate and transformation, given its growing relevance and contributions to the development of the industrial and technological complex, both nationally and in Europe.

In this regard, as we had the chance to read in previous chapters, the creation and subsequent founding of the EDA in 2004 marked a turning point that represented a renewed drive to promoting a European approach to defence R&T, all in an effort to honour one of its main tasks, which is none other than the commitment to promote and improve the effectiveness of defence R&T in Europe.

We are currently in a transition period of great relevance to European industry as a whole, and to the Spanish defence industry in particular.

63 Report written by AFARMADE titled: "The Position of Spanish Industry on the Code of Conduct on Offsets – CCO"

The Agency, through its Research and Technology Directorate, and by drawing heavily on prior experiences in this area, is effectively trying to revitalise cooperation in a field as relevant and complex as that of R&T, as it attempts to even out insofar as is possible the historical imbalance that has existed in this area between the EU and the United States[64].

As mentioned in Chapter 3, one of the functions and tasks assigned to the EDA pursuant to the Joint Action that created it (2004/551/ESDP of 12 July 2004) is to "enhance the effectiveness of European defence research and technology".

To comply with this mandate, the Joint Action also provides for the Agency to coordinate and plan joint research activities, to promote joint defence R&T with better defined goals, to manage contracts in this area and, in concert with the Commission, to promote research activities that strive to achieve maximum complementarity and synergy between research programmes in the areas of defence and in civil or security issues, in an effort to provide for future capability needs.

As already mentioned, in order to reach these objectives, the EDA and its member countries posited the need to gather and seize upon the experiences, both good and bad, learned from prior initiatives, especially those involving the WEAG and the networks of experts created for the CEPAs identified.

Translating the transfer of power (Figure 42) into numbers allows us to see how, of all the R&T projects that existed under the WEAG eligible for transfer to the EDA, 42 were initially transferred, including 12 projects with participation of Spain.

As commented in Chapter 3, the structures around which the EDA bases the generation of R&T activities are the CapTechs. To reiterate, the practical ways of setting these activities in motion are: programmes financed by the EDA, Category A programmes and Category B programmes. The theory behind these initiatives is clearly defined by the Joint Action, depending on who manages them and on how they are financed. Their subsequent implementation, however, as we shall see later, does not appear to have contributed much to their differentiation.

That said, over the course of this last part of the chapter we will attempt to depict as real a picture as possible regarding the extent of Spanish

64 *EDA working paper: European–United States Defence Expenditure in 2005.*

industry's involvement and participation in each of the initiatives and programmes mentioned in the preceding paragraph.

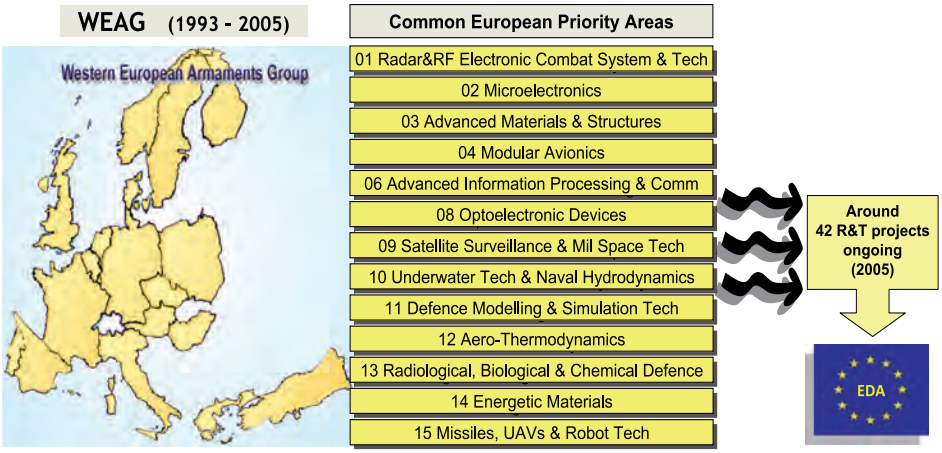


Figure 42. *WEAG 1993–2005*

Industry participation in the CapTechs structure[65]

In keeping with the decision adopted by the EDA Steering Board at its first R&T Directors formation meeting on 22 April 2005, the Agency agreed to gradually assume all of the activities developed by the WEAG in matters of R&T.

At the same time it was decided to approve the fundamental rules for defence R&T. This involved, as we have seen in detail in Chapter 3 of this monograph, a segmentation based on three sweeping capability areas, with the establishing of a series of CapTechs for those areas where cooperation was considered essential on the European stage.

The table included as an annex to this chapter aims to reflect this search for correspondences among the areas identified by initiatives in the area of European defence R&T and already temporarily resolved (WEAG), as well as those others around which it was decided to create the CapTech structure.

65 Set of technologies and group of experts devoted to a specific military capability and the technologies associated with it.

Within the mechanics around which the CapTechs are arranged, the role of the industry experts is none other than to offer the proposals and the industry's point of view to the activities and initiatives managed within them. They thus contribute, along with the national experts appointed by each member State, to providing content to the EDA's work programme in this area.

The participation of Spain's industry in this structure or network of experts was initially marked by a certain measure of hesitation when confronted with a clearly novel initiative that posed serious doubts, primarily in its way of working. An interpretation of the current registration figures on industrial experts, however, shows that this hesitation has started to wane. This is proof of the notable degree of awareness among European companies in the sector, as shown in Figure 43.

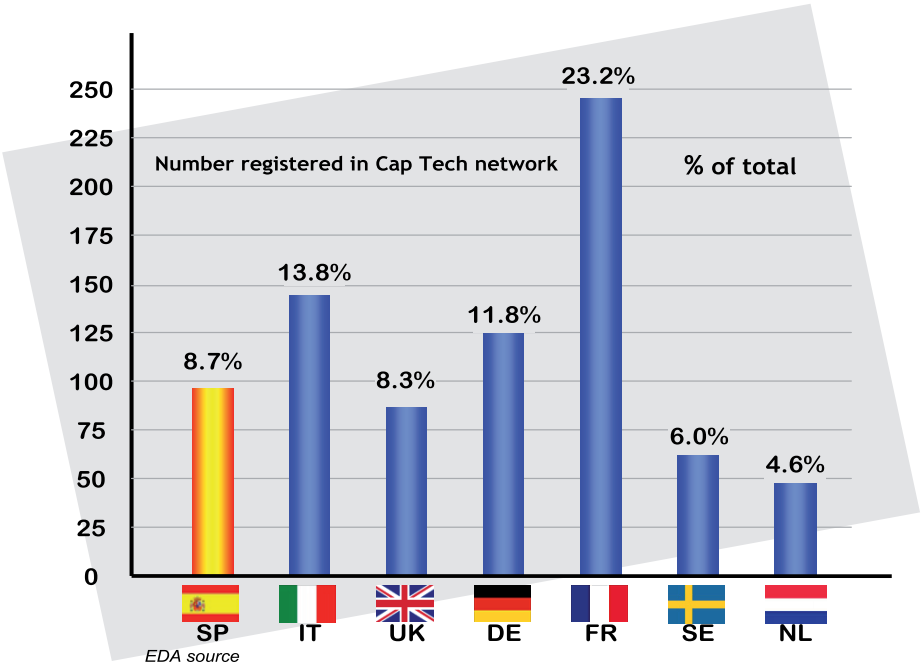


Figure 43. *Number of nGE. Captech Matrix*

While it is true that Spain now occupies a more than respectable fourth place in terms of the number of registered industry experts (8.7% of the total), ahead of countries like the United Kingdom, Sweden and

Netherlands, this is a static figure that provides no information about the degree of activity or involvement of these representatives in the work being carried out within the CapTechs.

Another fact to highlight concerning the participation of Spain's industry in this initiative is the presence of large multinationals alongside companies clearly in the ranks of the SMEs among those companies with the greatest number of experts assigned to the various CapTechs. This supports the prevailing idea, especially in the European defence industry, of not necessarily associating the size of the company with the existence of centres of excellence.

Industry participation in activities financed by the EDA

In regard to the participation of Spanish industry in those activities financed by the Agency itself as part of its operating budget, Spain's position is rather solvent and significant (Figure 44), and is on a par with the involvement of countries like France and Germany, with their presupposed superior industrial and technological networks.

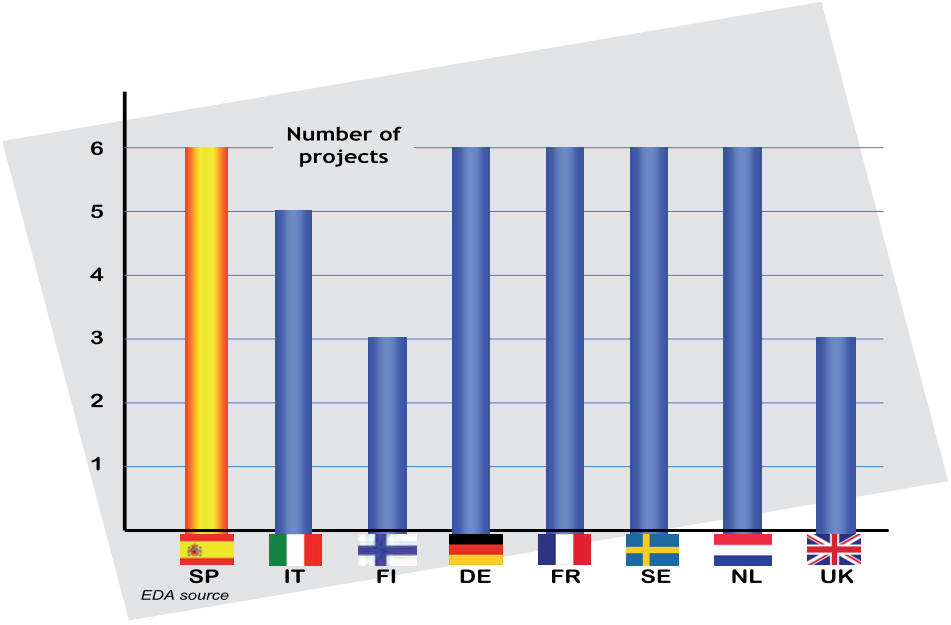


Figure 44. *Participation in EDA funded Projects . Operational Budget*

While the importance of this fact is unquestionable from a qualitative standpoint, it is almost anecdotal in quantitative terms if we keep in mind, on the one hand, that when speaking of activities financed by the Agency, we are referring basically to studies of an operational nature prior to the launch of any R&T activity, and on the other, that this operational budget used by the Agency to finance such activities has remained a constant 5 to 6M € (per year) since the Agency's inception in 2004.

Industry participation in the EDA's Category A programmes

Despite the fact that the bulk of the Agency's defence R&T activities in the early going were channelled and handled mainly through Category B programmes, the launch in November 2006 of the JIP–FP (Joint Investment Programme on Force Protection[66]), the Agency's first Category A programme, marked a turning point both qualitatively and quantitatively.

Without going into excessive detail, we should still note some of the more relevant features of these novel mechanisms for R&T cooperation so as to identify those key elements that the European defence industry should bear in mind when participating in these activities.

For one, in keeping with the Council's dictate, these programmes are to be financed via contributions from participating member States since, in theory, all of the Agency's pMS should contribute the same amount.

Another feature that should be introduced in preparation for a more detailed discussion later involves the "stipulated" cofinancing levels for the projects, levels that could differ significantly between the different types of programmes managed at the Agency.

This could clash directly with the requirements of the Agency's general contracting rules, which stipulate that consortiums will not be forced to present any cofinancing whatsoever. In keeping with the "value for money" criterion for assessing proposals, however, this cofinancing invariably ends up affecting said assessment.

As mentioned in this chapter's opening considerations, while the theory behind the Joint Action seems to be sufficiently clear when differentiating

66 EDA *paper: EU Defence Ministers Club Together to Research Better Protection for Armed Forces*.

between programmes based on a series of elemental characteristics, the issue of financing and participation in Category A programmes is one of those criteria that in practice only serves to raise questions.

In keeping with the above, and as described earlier in Chapter 3, 20 of the 24 countries that comprised the Agency in November 2006, along with Norway, initially took part in the JIP–FP. Of the total budget of some 55M €, Spain pledged to pay 4.81%, or 2.64M €.

As for the participation of Spanish industry in the various calls for tender into which the programme was eventually dissected, we can conclude that said involvement has been quite poor, judging by the participation and registration figures shown in Figure 45. This is aggravated even more by the fact that these figures not only include registered national companies, but also reflect registered national universities and research centres.

FP Call	Total registered entities	Spanish entities	Proposals investees by Spanish entities	Return
1	270	6	7	24 %
2	306	25	4	67 %
3	155	16	4	38 %
4	210	33	1	0 %
ICET Call				
1	311	44	11	6 %
2	273	70	17	N.D.

Documental source: EDA data

Figure 45. *Summary Chart. Spanish participation in the EDA JIP initiatives*

This relatively scarce participation can also be explained partly by the inexperience of European industry with initiatives as novel as that of the Agency's Category A, especially as regards the methodology and mechanisms for participating (latecomers[67]), and partly by the different technological areas and objectives included in each of the calls for tender.

At any rate, such information about the seemingly scarce participation by Spanish industry is very subjective, especially if we consider that within

67 Term used by the EDA to refer to organisations added to a Category A programme outside the established period.

the context of those countries that comprise the LoI, Spain occupies fifth place, ahead of countries as solvent as Sweden.

Continuing with this argument, we should note that among the first signed JIP–FP projects made public by the EDA we can find a considerable number of Spanish organisations, including companies, universities and research centres, not only participating in but even leading some of the better funded projects.

Another key characteristic to highlight regarding this type of programme is the application of the "global balance" principle, versus *juste retour*. The former aims to have the balance between industry's participation in the programme and the financial support provided to the programme be realised globally, and not programme to programme.

In the opinion of numerous experts on the subject, the application of this "global balance" principle is more a wish than reality. This observation anticipates the existence of certain final imbalances, attributable mainly to the varying degrees of competitiveness in the industrial and technological fabrics of the countries participating in the programmes.

Based on this criterion, Spain's participation is characterised by having managed to achieve, once the various calls to tender that eventually comprised the programme, around a 129% return on its investment, a fact that should be assessed keeping in mind the technology levels associated with the contracts that were obtained by Spanish companies

Similarly, this success in terms of the returns achieved only serves to underscore the high level of competitiveness of Spanish defence companies. It also provides an incentive to the competent national authorities when it comes to planning future participations in and contributions to new cooperative programmes of this type, as in fact happened with the second of the programmes launched by the EDA, as we shall see next.

Finally, in May 2008, the Agency agreed to launch a new Category A programme in the area of emerging technologies called JIP–ICET (Joint Investment Programme Innovative Concept and Emerging Technologies[68]). Its aim was to give a renewed push to European R&T collaborative efforts.

68 EDA *press release: New joint R&T Programme on Disruptive Defence Technologies.*

As noted in Chapter 3, on this occasion the programme had the backing and participation of eleven member countries and a total budget in excess of 15.5M €. Spain has pledged to provide 2M € or around 13% of the total.

As we can see, this is yet another programme that, in keeping with the EDA's philosophy for Category A programmes, is striving, like its predecessor, to attain a high participation rate. In the end, once it was identified by member States as a military capability area that was to be enhanced through cooperative projects, support dwindled, with contributions being provided by 11 of the 26 member countries and potential participants.

According to information provided by the Agency itself, Spain's participation (industry, SMEs, academia and research centres) in this second programme saw a significant increase in both quantitative and qualitative terms (Figure 45). It was involved in 16 of the 33 proposals presented in the second call for tenders and led eight of them. While these numbers are a reason for optimism, we must wait until the final returns on the investment are known before making any assessment as to its possible success.

With the launch of this new programme, it was hoped, by both European industry as a whole and by Spanish industry in particular, that the Agency would take advantage of the experience accumulated to date so as to overcome certain pitfalls previously identified. Specifically, this refers to issues of Intellectual Property Rights (IPR) and which had led to an open confrontation with the European defence industry.

By way of summary, the controversy surrounding these rights, led by the ASD, basically focused on an open denunciation that highlighted how the projections included in the contracts signed within the framework of the EDA's JIP regarding IPRs and derived usage rights, implied guarantees that were much greater for member States than those found in the EDA's own General Conditions or in the MoU EUROPA[69].

A new approach was applied to the EDA's JIPs in that the projections in the Agency's General Conditions would not be applied project to project, as in Category B programmes or in the MoU EUROPA; rather, they would be applied to the programme as a whole, meaning that member States that contributed to the JIPs would automatically be granted rights to the results obtained from the programme, as well as to any other information

69 Legal framework dated 2001, not directly associated with the WEAG and based on the principles of transparency and flexibility.

required beforehand for its use, and this regardless of each country's financial commitments, the degree of involvement of their industries or the technological level of the projects.

The question eventually triggered a series of actions and commitments by the EDA, including a pledge to continue analysing the matter in concert with European industry so as to avoid a high "volatility" rate in the information provided by industrial contracting parties.

That being said, the reality of the current situation involves IPRs that are part of the negotiating processes associated with the signing of the contracts, such that in the absence of cofinancing, said rights will belong to the contributing member States. A minimum cofinancing level of 20% was established in order for companies to have access to IPRs in the JIP–FP. A final decision is still pending in the case of JIP–ICET.

On a related issue, in keeping with the technological areas proposed in the two calls for tenders included in the work programme (February 2009 and October 2009), the possibility of introducing very basic technology levels (TRL[70]) was considered at first. But faced with the risk of relegating the large defence contractors to an undesired supporting role, it was decided to elevate it to intermediate levels (TRL4: "Up to technology demonstrators valid in a laboratory environment and with repercussions on capabilities").

This development is seen by many as an attempt to provide continuity to the aforementioned objective of promoting a closer association between the European defence industry and other organisations not directly tied to or even outside the sector, mainly by encouraging greater participation of SMEs, universities and research centres in the activities promoted by the Agency.

Industry participation in the EDA's Category B programmes

Continuing with the idea posed in the initial section on addressing the participation of Spain's industry in Agency initiatives so as to enhance European cooperation in the area of defence R&T, we can identify different project types based on who is responsible for their management and on how they are financed.

70 TRL *Technology Readiness Level*.

To this end and by way of summary, we simply note once more that in the so–called Category B programmes, the decisions required for establishing and executing the project involved, and the corresponding budget, if appropriate, can only be made among contributing member States. In the words of experts on the subject: “ideas first, then – occasionally, the funds”.

The projects are overseen through a management group appointed the by participating countries, and the results of the projects are shared solely among those countries.

As for Spain’s participation in these types of projects, in the third quarter of 2009, of the 36 programmes/projects underway (see Figure 46, pags.234-235), Spain was the lead for one and a participant in eleven others, with an average of 1M € allotted by the government per project. These figures put us in a favourable position versus purely competitive countries, such as the United Kingdom or Germany, as shown in Figure 47.

Nation	Number of projects	Total Value (M€)	Average MS Contribution (M€)
France	26	268,2	1,0
Germany	9	69,4	0,5
Italy	20	230,3	0,7
Spain	12	180,6	1,0
Sweden	15	217,5	0,8
United Kingdom	10	64,5	1,4

Documental source: EDA data

Figure 47. *EDA category B current Projects. Spanish participation*

In the case of the figures associated with Spain, France, Italy and Sweden, we must keep in mind that the bottom line includes the budget for the ESSOR (Europe Secure Software Define Radio Referential), with a total allotment of over 100M €. This programme stands out as being the first successful type B EDA programme that was managed in its final phase by the OCCAR Programmes Division.

Another B–type programme worth noting for its implications to Spanish industry, and which constituted one of the cases of a successful transfer of power from the LoI to the Agency, is the so–called CEDS (Combat Equipment for Dismounted Soldier) programme.

Figure 46. *EDA category B current Projects*

	EDA Category B current Projects						
	Title	**Acronym**	**Leader**	**Spanish Participation**	**Other Participating**	**Length (years)**	**Value M€**
1	Quiescent Period Prediction	QPP	SP	YES	FR,IT,FI	2	1.3
2	Development and Validaton of Tools for Prediction of Hidrodynamic Signatures	DALIDA	FR		FR,IT	3	2.0
3	Sea-bottom roughness mesurement by use of low frecuency sonar	RUMBLE II	FR		NL,SE,NO	4	3.7
4	Mid-air Collision Avoidance System	MIDCAS	SE	YES	SE, GE, FR, IT	4	40.0
5	Stablishing and sharing a global maritime situation awareness	GlobMarSit	FR		FR,NO	2	2.0
6	Networked Multi-Robot System	NM-RS	GE	YES	GE, BE, IT	3	4.7
7	Database of B-Agents	BATABASE-B	SE		SE, AT, BE, CZ, GE, FI, FR, IT, NL, NO, PL	3	6.6
8	Mini Aerial Vehicle DEMonstrator	MAVDEM	FR	YES	FR, IT, NO		4.9
9	Advanced Low Observable Materials	ALOA	GE		GE, FR, NL, SE	3	4.7
10	Antifouling Coating for War Ships	ACWS	FR		FR, UK	3	1.6
11	Vulnerability Reduction Technologies for Large Maritime Composite Stractures	Vulnerability reduction	UK		UK,FR,IT,NL,NO,SE	N/A	8.4
12	Protection and Armoured Fighting Vehicles Against EFP	EFP Protection	IT	YES	IT, NL, CZ	4	2.8
13	Insensitive Munitions and Aging	IMA	FR		FR, CZ, FI, GE, NL, SE, UK	3	4.0
14	Unmanned Ground Tactical Vehicle	UGTV	IT		IT, PT, GE, EL, FI, FR, PL	1	1.0
15	Semi-Autonomous Small Ground Vehicle System Demonstrator	SAM-UGV	GE		GE, FR, NL, SE	4	3.3
16	Switches Application	SWAP	SE		SE, NL	3	4.0
17	Architectures for Advanced Modulation in Optoelectronic RF oscillators and RF System	ARAMOS	FR		FR, IT	3	5.1
18	Identification and Health Monitoring of equipments in real life	MINERVE	IT		IT, NL, FR	3	6.1

19	Critical Optical Devices for Future Integrated Sampling Architectures	CODFISH	UK		UK, IT	N/A	2.3
20	Implementation for Physics of Failure for MEMs	POLYNOE	FR		FR, UK	3	2.5
21	Surface-mount Technologies for Active Modules Production	STAMP 2	NL		NL, SE	1	4.7
22	CWA Analyzer Based on Low Cost Dual Band IR Microsystems	CANARIO	IT	YES	IT	4	4.5
23	EW Common Modular Architecture for Missions Simulation	COMARMS	SE	YES	SE, GE, FR, IT	1	0.3
24	Studies for Integrated Multifunction Compact Lightweight Airborne Radars	SIMCLAIRS	FR		FR, SE, UK	4	18.5
25	Naval environment modeling & electro magnetic signature of surface targets for improved simulations	NEMESIS	FR		FR, NL	1	0.4
26	Scalable Multi-Function Radar Programme	SMRF	NL	YES	NL, SE, NO, UK, CZ, GE	10	N/A
27	Multifunctional Optical Reconfigurable Scalable Equipment	MORSE	IT		IT, SE, UK	4	3.8
28	Scalable Multi-Function Radar Programme Implementation	SIMPLE	NL	YES	NL, SE, UK, CZ, FR, IT	3	10.7
29	Signal Processing for Radar and EW Systems	SPREWS	SE		SE, CZ, FR, IT, NL	3	8.1
30	Technology Demonstration of a Dual Mode Seeker System	DUMAS	UK		UK, FR	4	12.7
31	SCOOBIDOO	SCOOBIDOO	NO		NO, FR	3	1.2
32	High Data Rate Technology for HF Communications	HDR-HF	GE		GE, FR, BE	3	5.1
33	Enabling Technology for Advanced Radio in Europe	ETARE	IT		IT, BE, FI, FR	3	6.6
34	European Secured Software Define Radio Referential	ESSOR	(OCCAR)	YES	FI, FR, IT, PL, SE	4	100.0
35	High Bandwidth communication - datalink	ETAP TDP1.4c	FR	YES	FR, IT	2	6.0
36	Operational Semantic intelligence infrastructure	OSEMINTI	FR	YES	FR, IT	2	5.4

After a long period of sometimes complicated negotiations, the EDA Steering Board in Capabilities Directors formation agreed in July 2007, by decision of the five initiating countries – Spain, Italy, Germany, France and Sweden – that in the end the initiative would be crafted as a category B programme, backed by the support of an additional three countries: Poland, Portugal and Austria. Of particular note is that, as happened in the LoI, both the official work and that carried out by industry is being led by Spain.

In spite of what was said above about category B programmes, for many of us this is still the Agency's weak point. In a context characterised by shrinking national budgets and the still fledgling European willingness to cooperate in issues of defence R&T, what is required if the sought–after EDTIB is to be achieved is greater institutional support, both from European capitals and from the leading community institutions with authority in the matter.

The progress evidenced in the development of various programmes managed by the Agency is viewed by many as an accurate reflection of the international reality confronting us, with less and less money committed to these endeavours and fewer countries participating. There is a clear preference at the Agency for promoting category A cooperative programmes. These are based on establishing joint funds where the money does indeed cross borders, as opposed to the reality of category B cooperative programmes, which not only guarantee that the money provided by a country will not cross borders, but which give member States greater control over its funds.

Summary table

Almost by way of concluding this chapter, it is worth showing in the summary table of Figure 48, if only for reference purposes, those initiatives, in addition to those discussed over the course of this chapter, in which Spain's industry is taking part at different levels. Given their relevance to Spain's defence industry, it would seem a worthwhile effort to follow their progress very closely in coming years.

Along these lines, all that is left to note is that while the first chapter of this monograph discussed the structural methodology that guides the work that is done within the Agency, with the participation of the Agency's different operational Directives in various stages of the process, this summary table attempts to provide some more or less accurate

details by linking the different EDA initiatives and programmes with those Directorates responsible for them.

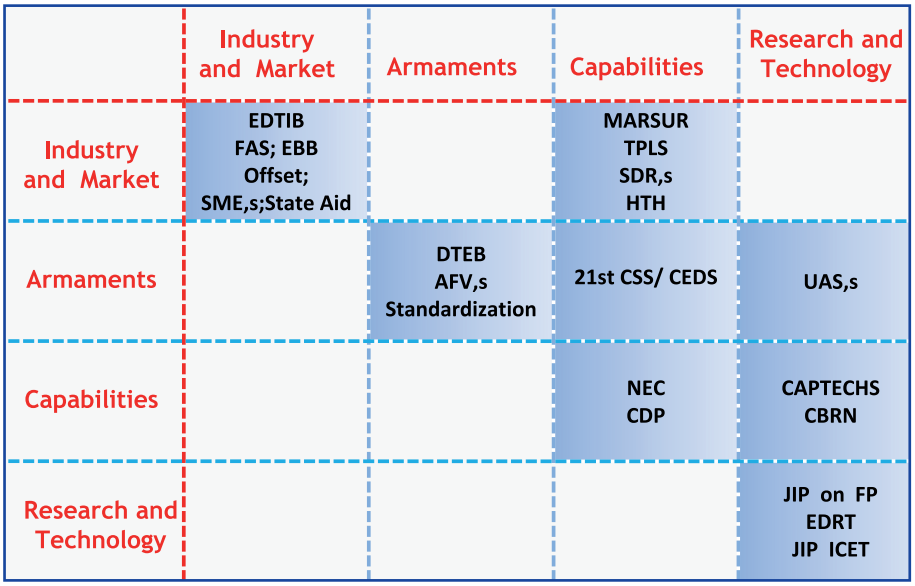


Figure 48. *EDA Initiatives. Spanish Industry participation*

Correspondence matrix between WEAG and EDA CapTechs technological areas

WEAG TAXONOMY TECHNOLOGY / EDA CAP TECH		IAP (Information Acquisition and Processing)				GEM (Guidance,Energy and Materials)				ESM (Environment, Systems and Modelling)			
		1	2	3	4	1	2	3	4	1	2	3	4
		Components	Sensor Systems	Signal processing & computing	CIS & Networks	Materials	Energy & Propulsion Systems	Lethality & Protection	Guidance & Control	Design	Simulation	Operating Environment	Human Factor
A Underpinning Technologies	1 Structural & Smart Materials & Structural Mechanics					■							
	2 Signature Related Materials					■							
	3 Electronic Materials Technology	■											
	4 Photonic/Optical Materials & Device Tech.		■										
	5 Electronical, Electrical & Electromech. Device Tech.	(1)					(2)						
	6 Energetic Materials & Plasma Tech.						■						
	7 Chemical, Biological and Medical Materials							■					
	8 Computing Technologies & Mathematical Techniques			■									
	9 Information and Signal Processing Technology			■									
	10 Human Sciences												■
	11 Operating Environment Technology											■	
	12 Mechanical, Thermal and Fluid-relat. Techn. & Devices									■			

B Systems related Technologies	**1**	Lethality & Platform Protection							■					
	2	Propulsion & Power Plants						■						
	3	Design Technologies for Platformas & Weapons	**(3)**								**(4)**			
	4	Electronic Warfare Systems & Directed Energy Tech.		■										
	5	Signature Control and Signature Reduction									■			
	6	Sensor Systems		■										
	7	Guidance and Control Syst. for Weapons and Platforms								■				
	8	Simulators, Trainers & Synthetic Environments										■		
	9	Integrated systems Technology											■	
	10	Communications and CIS related Technologies				■								
	11	Personnel Protection Systems												■
	12	Manufacturing Processes/Design Tools/Techniques									■			
C Military Assessments, Equipment and functions	**1**	Defence Analysis											■	
	2	Integrated Platforms											■	
	3	Weapons	Not yet assigned to a specific CAPTECH											
	4	Installations and Facilities											■	
	5	Equipped Personnel												■
	6	Miscellaneous Defence Functions and Policy Support											■	
	7	Battlespace Information				■								
	8	Business Processes									■			

Notes:

(1) A05-01,-02,-03,-07,-08, and -11 sub-technologies

(2) A05-04, -05, -06, -09, and -10 sub-technologies

(3) B03-08 sub-technology

(4) All B03 except B03-08 sub-technology

CHAPTER SEVEN
THE FUTURE OF THE EUROPEAN DEFENCE AGENCY

Arturo Alfonso–Meiriño and
Roberto L. Yustos Cordobés

Progress consists of change
Miguel de Unamuno

Overview

The European Defence Agency (EDA) as defined on more than one occasion by its first Executive Director, Briton Nick Witney, is still in its infancy, despite its five years of existence. One should also keep in mind that what could be defined as its progenitor, that is, the ESDP, is little less than a young teen. The ESDP, launched at the Council of Cologne in June 1999, just saw its tenth anniversary. It does not seem appropriate, then, to deny a newborn a future. It should, at least, be given the benefit of the doubt. Reacting sceptically and thinking that the EDA is no more than a new organisation added atop the already bureaucratic lattice of the European Union seems somewhat debatable.

As mentioned in Chapter 1 of this monograph, defence issues have been on the sidelines of the European Economic Community for many years. Even when member States decided to go beyond an economic union and agreed to form a political union, ten more years had to pass before matters of defence started to take shape and the institutions charged with handling them appeared on the EU stage. It does not seem logical, then,

to conduct an exhaustive study of what the Agency has achieved in its five years of existence with a negative bias.

The future of the EDA will succeed or fail depending on many factors, many of them completely foreign to the Agency. The current problems of western economies and their implications on defence budgets, and therefore knock–on effects in terms of defence investments by EDA member States, is just one such example.

But regardless of external factors, there are two aspects that will undoubtedly set the stage for the EDA's future.

First we have to mention the Agency's work methods and its culture. The sovereignty of member States in the area of defence, even within the framework of the Treaty of Lisbon, is still very much a reality. Keeping this aspect in mind, it is obvious that one cannot speak of joint defence policies and directives emanating from Brussels if there is no process available for the key players to discuss and reach consensus beforehand. The EDA must therefore be aware of the importance of staying in touch with the reality that exists in the member States, meaning it must keep pushing for the creation of a culture that will keep it close to that reality. The EDA must realise that it is an institution that works for member States, and it must avoid by all means possible being seen as an outsider that is looked upon with mistrust by the European capitals, as an institution that must be watched very closely.

Over the last decade the ESDP has been promoting the creation of a European conscience among member States in matters of defence, The EDA, along with other key players within the Union, such as the European Commission and even the European defence industry itself, has played a fundamental role in developing that culture of European defence. The EDA is currently going through a critical phase, since member States are starting to demand specific results that go beyond high–level policies and that provide an added value to the process of improving European defence capabilities, thus justifying the existence of an agency such as the EDA. Europe's prior experiences in the field of defence and armaments policies have shown us that we have to be imaginative and practical and avoid long, tedious, and ultimately ineffective procedures.

There is, however, one major difference between the EDA and prior attempts, namely the integral nature of its functions. The strategic framework within which it has carried out its actions, centred on the idea of promoting a rational defence policy on a European scale that, based

on an analysis of its capabilities, can unite the heretofore separate worlds of defence research, development, cooperation, industry and markets, is its unique characteristic. The solutions to shortfalls in required military capabilities can only be found by uniting efforts, including those related to the strengthening of the defence technological and industrial base, a fundamental pillar when it comes to ensuring said capabilities.

But the fact that the Agency has to keep in mind that it works for the member States does not mean that it cannot or must not play its role as the conscience and catalyst of efforts to improve defence capabilities. The Agency must make the most of its political power, considering that no other institution is capable of officially assembling Defence Ministers, Capabilities Directors, National Armaments Directors or Research and Technology Directors around a table in Brussels on a practically monthly basis to address the issues that it itself presents to the various Directors formations.

Having mentioned the EDA's working methods and culture as key factors for its future, we must mention the supporting role played by its member States. The way in which the participating countries are involved in the Agency and in its work programme is key to the EDA's future. This role is exercised from the moment the candidates are presented, especially those for key posts, or when they provide the Agency with the human and monetary resources on which it relies to carry out its work agenda every year.

The decision levels of member States in the four Steering Board formations means that the interest with which said Sates become involved is critical. But it is not just the degree of involvement in high–level meetings that matters. Also critical to the Agency's development is the participation of the countries in its day–to–day affairs through its PoCs and specific working groups. Above all, it is essential that member States be innovative when making decisions about the future, decisions that will no doubt involve significant compromises and sacrifices, given the connotations on national sovereignty that traditionally surround issues of defence. The concept of European Security must start to take shape and, through a de facto solidarity, as noted by Robert Schuman in his 1950 speech, trump that of National Security. This will require large doses of negotiating prowess and a profound change of mentality.

Javier Solana himself, on the occasion of the Steering Board meeting in Defence Ministers formation of 23 May 2005, stated that "*The EDA is*

our best hope for ensuring that defence budgets are spent efficiently. It is perfectly positioned for identifying the intersection between economic and operational imperatives. It provides a forum for discussion and acts as a catalyst for member States to confront problems jointly and develop shared solutions. But its success will depend fundamentally on political will. European governments must confront the challenges they have set for themselves". The 26 EDA governments collectively spend some 200,000M € on defence equipment, an amount that is approximately half that of the United States and that, on paper, should be enough to cover Europe's defence needs. And yet, despite the considerable financial resources dedicated to defence, Europe lacks certain military capabilities and properly equipped Armed Forces. Failure in this effort now would be tremendously harmful to the future of European defence.

Figure 49. *Mr. Solana, Head of the EDA at the time, visits the European Union Operation in the Republic of Chad on 7 May 2008*

Ahead of the EDA lies a complete and ambitious work programme, assigned by its Steering Board and based primarily on its Capabilities Development Plan and on its three strategies involving key defence technologies, the

strengthening of the industrial base and innovative cooperation in the procurement of defence equipment. Both the Plan and the strategies are medium– to long–term activities and are fully dynamic, since they will from time to time have to incorporate new aspects derived from a revision of the strategies and from lessons learned, in particular from military operations carried out by the EU in the framework of the ESDP.

The Agency's role might, in theory, appear more virtual than real, given its lack of any significant research or procurement budgets for use on new defence equipment projects. As already mentioned, the global financial situation going forward does not seem like it will favour defence budgets in the least. This is undoubtedly having repercussions on the EDA as well.

The most important challenge, however, continues to be that of convincing member States, even beyond the political level of their Defence ministers, of the need to harmonise military requirements, to develop a long–term vision for defence research and technology, to open the European defence market to competition and to promote cooperation. All of this, as well as the policies that aim to strengthen the European defence industry – including small and medium enterprises – must allow for the maintenance, improvement and, in short, coverage of all aspects related to military capabilities.

There is increasing talk of the possibility of continuing with the idea of a defence Europe in which not every step in each and every one of its areas must necessarily be taken by all member States. The possibility of a Permanent Structured Cooperation that allows a group of countries that so desire it to implement a joint defence is already included in Protocol 10 annexed to the Treaty of Lisbon.

On 17 November 2009, the Foreign Affairs Council adopted the document "ESDP Ten Years – Challenges and Opportunities". This political statement took stock of the objectives reached, including the 22 missions and operations launched by the EU on three continents, the creation of the structures associated with the ESDP and the improvement implemented in crisis management that has contributed to stability in various parts of the world. At the same time, the document, in its preamble, recognises the present and future challenges still to be confronted. In addition to other references, including that of the entry into force of the Treaty of Lisbon, that will undoubtedly mark a new chapter in the history of a joint foreign policy, and of the Security and Defence Policy in particular, the Council's political statement pays special attention to the need to continue with those

efforts aimed at a greater, more coherent and more efficient development of capabilities in support of the ESDP. It is in this section where reference is made to the European Defence Agency and its integrated strategic framework. The coordinated and joint development of military capabilities, increased investment in security and defence R&T – full of synergies in both fields –, the promotion of cooperative armaments programmes, the creation of a true European defence market based on transparency and competitiveness, the efforts to encourage Security of Supply within the EU, all of these activities are fully within the EDA's functional mandate and are considered by EU Foreign and Defence Ministers as essential to the process of strengthening Europe's defence industrial base. This, in turn, is a prerequisite without which the goal of improving military capabilities on a European level will not be achieved.

The implications of the Treaty of Lisbon to the future of the EDA that are analysed next serve to highlight the importance that is given to the Agency in the next chapter of the history of the EU, and specifically within the framework of the Permanent Structured Cooperation.

Implications of the Treaty of Lisbon on the future of the European Defence Agency

General considerations

After nearly six years of intense work and negotiations on the Common Foreign and Security Policy (CFSP) and the European Security and Defence Policy (ESDP), it can be said that the Treaty of Lisbon has kept the majority of the provisions contained in the ill–fated European Constitution project, though it is equally true that there have been changes as far as the terminology used in some cases and the inclusion of certain protocols of an interpretative nature.

Insofar as the ESDP is concerned, it has come to be known in the Treaty as the Common Security and Defence Policy (CSDP), a change in terminology that does not imply any change in policy since it is still a constituent part of the CFSP.

As for the CFSP, and pursuant to Art. 21, the Treaty of Lisbon, in keeping with the ideas developed in the draft Constitution, specifies that the competencies attributed to the Union will encompass every area of foreign policy and every issue involving the security of the Union, including the

progressive definition of the Common Defence Policy that may eventually lead, if so decided by the member States, to a common defence.

The fact that the military capabilities of member States and that the vision of each in terms of security and defence differs so substantially explains why the Treaty, as was the case with the draft Constitution, includes provisions based on flexible agreements that are acceptable to every EU member with a view to their political affiliations and commitments.

The provisions of the Treaty in matters of defence have been greatly enhanced, however, with general provisions applicable to all member States on the one hand, and, on the other, as we shall see in greater detail over the course of the chapter, with particular provisions that allow a group of States to advance faster than others in matters of security and defence.

In keeping with the opinion of numerous experts on the subject, it could be said that the Treaty offers new opportunities when it comes to improving the consistency, effectiveness and visibility of European policy. There remain, at the same time, some open questions concerning its application. In this regard, certain sectors of the community[71] are insisting on the importance to the Treaty's effectiveness of its application, there being certain grey areas that will probably require future negotiations among member States and relevant institutions so as to avoid unnecessary delays.

Likewise, another question to keep in mind when considering potential problems in the application of the Treaty is the still fuzzy division of powers and responsibilities at the higher orders of the community that would make up what some authors are calling the new community *troika*, comprising the President of the European Council, the President of the Commission and the High Representative of the Union for Foreign Affairs and Security Policy.

Main innovations proposed by the Treaty of Lisbon

Concerning the analysis of the novelties introduced in the areas of the CFSP and the CSDP, as previously mentioned, practically all of the provisions contained in the failed European Constitution were maintained in the Treaty of Lisbon, though certain innovations have been introduced that merit further consideration for their present and future implications.

71 Briefing Paper DG External Policies of the Union: "The Impact of the Lisbon Treaty on ESDP"

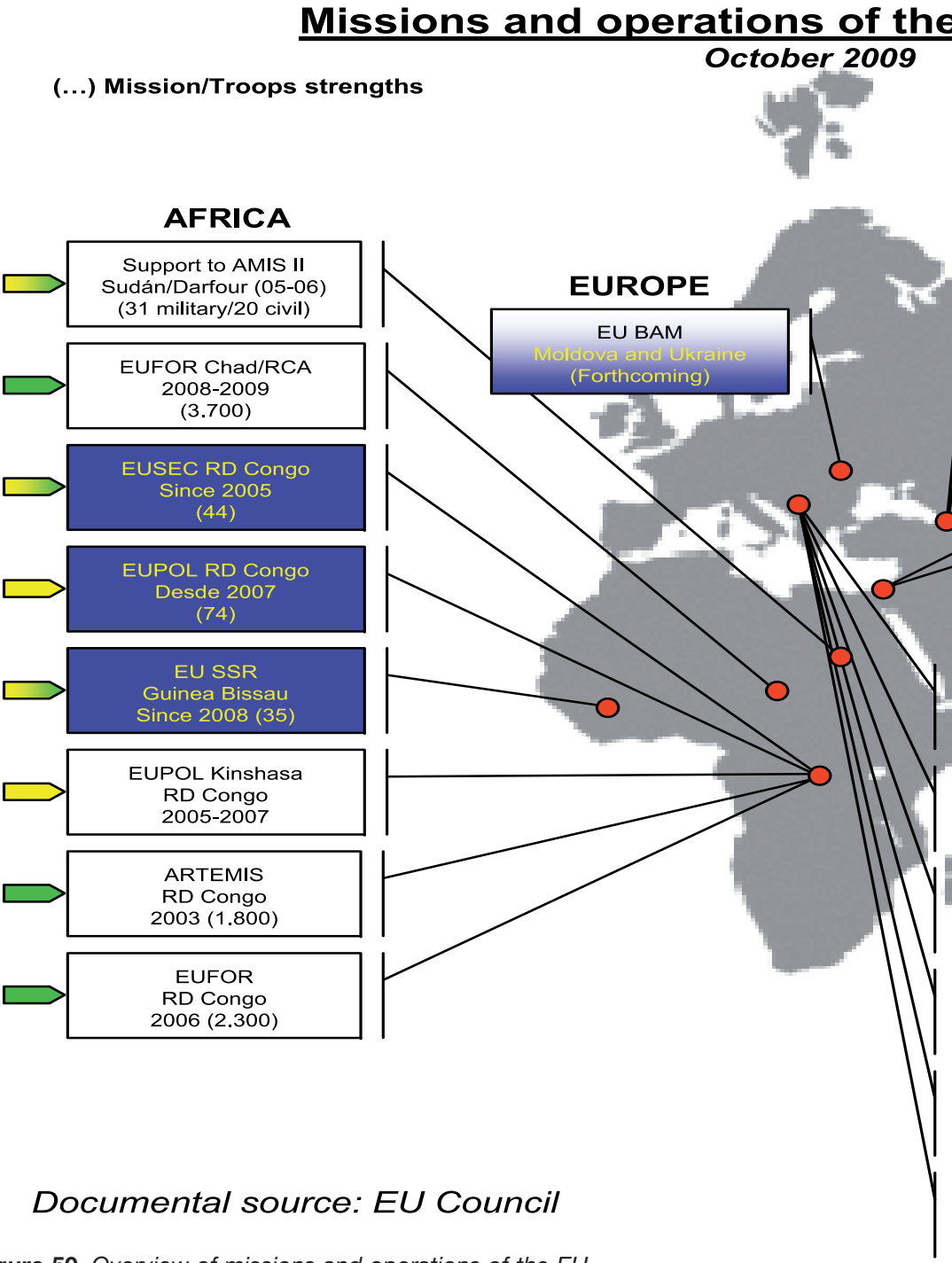
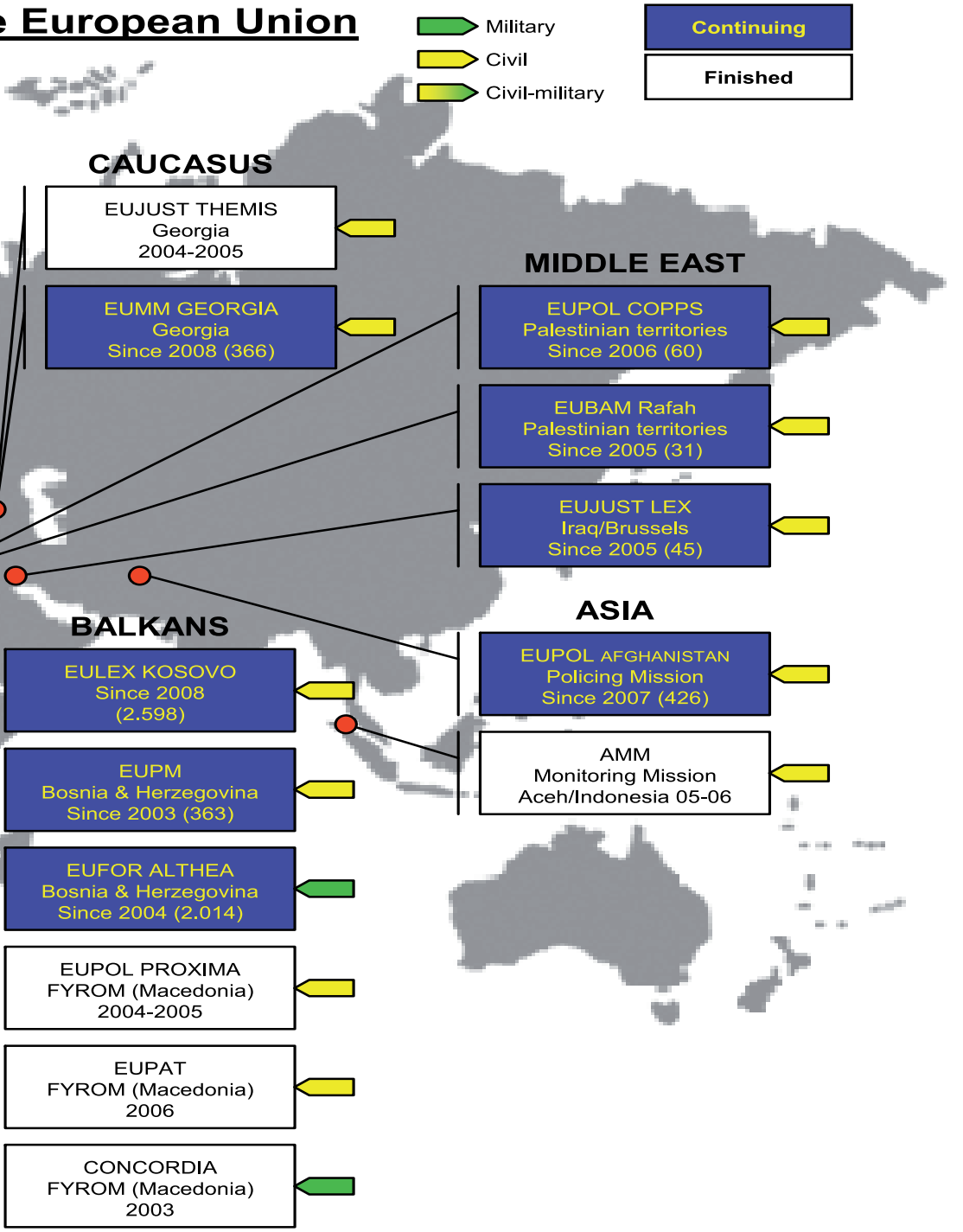


Figure 50. *Overview of missions and operations of the EU.*


e European Union
Military
Civil
Civil-military
Continuing
Finished
CAUCASUS
EUJUST THEMIS
Georgia
2004-2005
EUMM GEORGIA
Georgia
Since 2008 (366)
MIDDLE EAST
EUPOL COPPS
Palestinian territories
Since 2006 (60)
EUBAM Rafah
Palestinian territories
Since 2005 (31)
EUJUST LEX
Iraq/Brussels
Since 2005 (45)
BALKANS
EULEX KOSOVO
Since 2008
(2.598)
EUPM
Bosnia & Herzegovina
Since 2003 (363)
EUFOR ALTHEA
Bosnia & Herzegovina
Since 2004 (2.014)
EUPOL PROXIMA
FYROM (Macedonia)
2004-2005
EUPAT
FYROM (Macedonia)
2006
CONCORDIA
FYROM (Macedonia)
2003
ASIA
EUPOL AFGHANISTAN
Policing Mission
Since 2007 (426)
AMM
Monitoring Mission
Aceh/Indonesia 05-06

Of these innovations, we can start by highlighting the creation of the post of High Representative of the Union for Foreign Affairs and Security Policy, replacing the old concept of the Foreign Affairs Minister. This figure, who in addition can now rely on the support of the newly–created European External Action Service (EEAS)[72], will be tasked with, among other objectives, fomenting greater and better visibility and coordination within the EU, thus serving to offset the sluggishness imposed by the procedures for making joint decisions in the Union.

To this end, and in keeping with the provisions of the Treaty itself, "*The Union shall ensure consistency between the different areas of its external action and between these and its other policies*", all this by means of the activity of "*the Council and the Commission, assisted by the High Representative of the Union for Foreign Affairs and Security Policy, [which] shall ensure that consistency and shall cooperate to that effect*".

Other innovations worth mentioning are those Statements[73] which highlight that the new provisions, including those relative to the EEAS, will not affect member States' current responsibilities in the planning and exercise of their foreign policies, nor their representation before third countries or in international organisations. It goes so far as to specify that "*the new CFSP provisions give no new powers to the Commission to initiate decisions and no increased role for Parliament*".

Along these same lines and as concerns the possible repercussions that a further deepening of European defence could have on current trans–Atlantic relations, the Treaty establishes that the Atlantic Alliance will continue to be the basis for the collective defence of member States, such that the commitments defined in the Treaty in matters of security and defence shall not supersede those acquired as part of the North Atlantic Treaty Organization. There can be no doubt that this approach will allow for a continuation of the privileged relationship between the two great western powers on matters of security and defence.

72 According to Article 27 of the Treaty "…the High Representative shall be assisted by a European External Action Service. This service shall work in cooperation with the diplomatic services of the Member States and shall comprise officials from relevant departments of the General Secretariat of the Council and of the Commission as well as staff seconded from national diplomatic services of the Member States. The organisation and functioning of the European External Action Service shall be established by a decision of the Council…"

73 Declarations 13 and 14 on Common Foreign and Security Policy.

While the innovations involving the post of High Representative and the responsibilities of member States might appear as merely conceptual when considered individually, where a symbolic change of terms is added to another that does nothing more than to reiterate the current regulatory reality, taken together they could be seen as an attempt to contain the possible effects derived from the dual roles of the High Representative, while at the same time preserving the separation that has traditionally existed between the three pillars that make up the EU architecture. It is the second of these that corresponds to the CFSP, characterised by the application of the intergovernmental system to institutional operations.

Another element that must likewise be highlighted and that will no doubt have serious implications on the CSDP going forward is the establishment of a new Solidarity Clause, such that the Union will be able to mobilise every instrument at its disposal, including military, to provide assistance to another European State in case of a terrorist attack or a disaster. What is truly vital about this definition is that it institutionalises the concept of collective defence, something that to date only found a legal framework within the setting of the North Atlantic Treaty.

What is more, the CSDP, as an integral part of the CFSP, must offer the Union an operational capability that is based on both civil and military resources, both being available for those missions whose objective is, in keeping with the United Nations Charter, that of peacekeeping, the prevention of conflicts and the strengthening of international security[74].

These missions are also envisioned as encompassing joint actions in matters of disarmament, humanitarian and rescue missions, military advisory and assistance missions, conflict prevention and peacekeeping missions, crisis management missions involving combat forces, including missions to re–establish peace, and post–conflict stabilising operations.

Of interest is the fact that the Treaty explicitly mentions that all of these missions can contribute to the struggle against terrorism by providing support to third countries to combat terrorism on their own soil.

This expansion in the Union's area of activities provides it with greater functional flexibility as it acquires new civil roles that serve to broaden the objectives of traditional peacekeeping missions. It also gives legitimacy to those missions already being carried out by the European Union

74 Art. 42 of the Provisions on the Common Security and Defence Policy.

that lacked an explicit mandate for their execution, and all this without generating new obligations for member States.

Among the commitments acquired by member States, in addition to making available to the Union the civil and military capabilities needed to progress toward a common defence, is the commitment to work on progressively improving their respective military capabilities.

It is in the area of military capabilities where the Treaty of Lisbon, as was the case with the failed European Constitution, institutionalises the EDA as the community organisation that must ensure the realisation of those military capabilities needed to accomplish the missions assigned by the Treaty to the EU, associating the fulfilment of these needs with the strengthening of the EDTIB.

And yet the Treaty seems to use a different approach to the Agency's actions in terms of defining the objectives of military capabilities versus those actions relative to the strengthening of the EDTIB.

With regard to the first, the military capability objectives, the Treaty limits the Agency's role to advising and coordinating member States. It has no objective functions, these resting firstly with the member States, and secondly with the Council, to which the Agency reports.

With regard to the second, the strengthening of the EDTIB, the Treaty clearly specifies that the Agency "*shall contribute to identifying and, where appropriate, implementing any measure needed to strengthen the industrial and technological base of the defence sector*".

The foregoing implies that member States wanted the Agency's actions in the industrial arena to focus on a supporting role in identifying adequate measures for strengthening the European technological and industrial base, and in those cases deemed appropriate by member States, to be able to entrust the application of said measures to the EDA.

It is necessary to note that these powers are not attributed generically, such that the Agency could be interpreted as having a free hand to act as it sees fit in matters of industry. On the contrary, the precept frames these powers within the context of improving military capabilities. It is from this perspective that the Agency, subject to the Council, must direct its activities.

The above notwithstanding, it seems appropriate to note that the Treaty is a reflection of the European tendency to attribute a more active role

to the Agency in the area of capabilities, and by extension, to industry, completing by means of Article 45[75] those missions and tasks already present in the Joint Action 2004/551/CFSP of the Council of 12 July 2004, on the creation of the European Defence Agency[76].

On a related topic, and as previously mentioned, the Treaty, through the Permanent Structured Cooperation, opens the door to the option of having a group of countries decide to augment their relations and cooperation, establishing a de facto Europe in which the European defence policy can progress at different rates.

The Protocol included in the Treaty specifies that "*Member States whose military capabilities fulfil higher criteria and which have made more binding commitments to one another in this area with a view to the most demanding missions shall establish permanent structured cooperation within the Union framework, notifying their intention to the Council and to the High Representative of the Union for Foreign Affairs and Security Policy*".

The possibility of establishing this cooperation mechanism is open to all those member States that commit, pursuant to Article 1 of the Protocol, to proceed more intensively to develop their defence capabilities, as well as to be in a condition to provide (no later than 2010), either individually or as part of a multinational force, targeted combat units for the missions planned.

To comply with these objectives, member States agree to cooperate toward achieving the goals set for investment levels for defence equipment, to continue advancing toward the harmonisation of military needs, to work on defining common objectives in matters of force projection and to participate, when necessary, on developing major joint or European equipment programmes in the framework of the European Defence Agency.

This is a new opportunity to give the European Defence Agency a greater leadership role and new responsibilities by being designated as the organisation charged with periodically evaluating the contributions made by participating member States. It is also worth noting that the Treaty confers a specific and special attribute to the Agency, in contrast to

75 See Annex I to this chapter.
76 See Annex II to this chapter.

other EU "agencies", by designating it as the cornerstone atop which the Union's Common Security and Defence Policy is built.

Closing thoughts

By way of conclusion, we can state that the Treaty of Lisbon has given a significant impetus to the realisation of the long awaited Common European Policy in the areas of Foreign, Defence and Security matters, providing the suitable legal and political framework for the European Union to take on a more active and ambitious role on the international stage.

Finally, we note that while the Treaty has provided the European Defence Agency with a firm pat on the back in terms of recognising and broadening its functions and responsibilities in the context of the ESDP, this same Treaty likewise confirms and strengthens the strictly intergovernmental nature of the CFSP, and of the ESDP in particular.

This assertion is reaffirmed by the Statements adopted by the Conference of the Representatives of the Governments of the Member States which, in the final Acta on the CFSP, recalls that the provisions governing the CSDP do not prejudice the specific character of the security and defence policy of the Member States.

ANNEX I

TREATY OF LISBON AMENDING THE TREATY ON EUROPEAN UNION AND THE TREATY ESTABLISHING THE EUROPEAN COMMUNITY, SIGNED AT LISBON, 13 DECEMBER 2007

(C 115/01 Official Journal of the European Union 09.05.2008)

Article 45

1. The European Defence Agency referred to in Article 42 (3), subject to the authority of the Council, shall have as its task to:

   (a) contribute to identifying the Member States' military capability objectives and evaluating observance of the capability commitments given by the Member States;

(b) promote harmonisation of operational needs and adoption of effective, compatible procurement methods;

(c) propose multilateral projects to fulfil the objectives in terms of military capabilities, ensure coordination of the programmes implemented by the Member States and management of specific cooperation programmes;

(d) support defence technology research, and coordinate and plan joint research activities and the study of technical solutions meeting future operational needs;

(e) contribute to identifying and, if necessary, implementing any useful measure for strengthening the industrial and technological base of the defence sector and for improving the effectiveness of military expenditure.

2. The European Defence Agency shall be open to all Member States wishing to be part of it. The Council, acting by a qualified majority, shall adopt a decision defining the Agency's statute, seat and operational rules. That decision should take account of the level of effective participation in the Agency's activities. Specific groups shall be set up within the Agency bringing together Member States engaged in joint projects. The Agency shall carry out its tasks in liaison with the Commission where necessary.

ANNEX II

COUNCIL JOINT ACTION 2004/551/CFSP OF 12 JULY 2004 ON THE ESTABLISHMENT OF THE EUROPEAN DEFENCE AGENCY

(L 245/19 Official Journal of the European Union 17.7.2004)

Article 2

Mission

1. The mission of the Agency is to support the Council and the Member States in their effort to improve the EU's defence capabilities in the field of crisis management and to sustain the ESDP as it stands now and develops in the future.

2. The Agency's mission shall be without prejudice to the competences of Member States in defence matters.

Article 5

Functions and tasks

1. In fulfilling its functions and tasks, the Agency shall respect the competences of the European Community and those of the EU institutions.

2. The Agency's fulfilment of its functions and tasks shall be without prejudice to the competences of Member States in defence matters.

3. The Agency shall work in the following principal fields:

   3.1. Development of defence capabilities in the field of crisis management, in particular by:

      3.1.1. identifying, in association with the competent Council bodies, and utilising the Capability Development Mechanism (CDM), the EU's future defence capability requirements in quantitative and qualitative terms (encompassing both forces and equipment);
      3.1.2. coordinating the implementation of the European Capabilities Action Plan (ECAP) and any successor plan;
      3.1.3. scrutinising, assessing and evaluating against criteria to be agreed by the Member States the capability commitments given by the Member States through the ECAP process, and utilising the CDM;
      3.1.4. promoting and coordinating harmonisation of military requirements;
      3.1.5. identifying and proposing collaborative activities in the operational domain;
      3.1.6. providing appraisals on financial priorities for capabilities development and acquisition.

3.2. Promotion and enhancement of European armaments cooperation, in particular by:

3.2.1. promoting and proposing new multilateral cooperative projects to meet ESDP capabilities requirements as they stand now and develop in the future;

3.2.2. working for coordination of existing programmes implemented by Member States;

3.2.3. assuming, at the request of Member States, responsibility for managing specific programmes (through OCCAR or other programme management arrangements as appropriate);

3.2.4. promoting cost–effective and efficient procurement by identifying and disseminating best practices.

3.3. Working to strengthen the DTIB and for the creation of an internationally competitive European Defence Equipment Market in particular by:

3.3.1. developing relevant policies and strategies, in consultation with the Commission and industry as appropriate;

3.3.2. pursuing EU–wide development and harmonisation of relevant rules and regulations (particularly by an EU–wide application of relevant rules of the LoI Framework Agreement).

3.4. Enhancement of the effectiveness of European Defence Research and Technology (R & T), in particular by:

3.4.1. promoting, in liaison with the Community's research activities where appropriate, research aimed at fulfilling future defence and security capability requirements and thereby strengthening Europe's industrial and technological potential in this domain;

3.4.2. promoting more effectively targeted joint defence R & T, drawing on the experience of relevant elements of the WEAG and the WEAO;

3.4.3. coordinating and planning joint research activities;

3.4.4. catalysing defence R & T through studies and projects;

3.4.5. managing defence R & T contracts;

3.4.6. working in liaison with the Commission to maximise complementarity and synergy between defence and civil or security related research programmes.

ANNEX III

PROTOCOL Nº10 ON PERMANENT STRUCTURED COOPERATION ESTABLISHED BY ARTICLE 42 OF THE TREATY ON EUROPEAN UNION

(C 115/01 Official Journal of the European Union 09.05.2008)

Article 1

The permanent structured cooperation referred to in Article 42 (6) of the Treaty on European Union shall be open to any Member State which undertakes, from the date of entry into force of the Treaty of Lisbon, to:

(a) proceed more intensively to develop its defence capacities through the development of its national contributions and participation, where appropriate, in multinational forces, in the main European equipment programmes, and in the activity of the Agency in the field of defence capabilities development, research, acquisition and armaments (European Defence Agency), and

(b) have the capacity to supply by 2010 at the latest, either at national level or as a component of multinational force groups, targeted combat units for the missions planned, structured at a tactical level as a battle group, with support elements including transport and logistics, capable of carrying out the tasks referred to in Article 43 of the Treaty on European Union, within a period of 5 to 30 days, in particular in response to requests from the United Nations Organisation, and which can be sustained for an initial period of 30 days and be extended up to at least 120 days.

Article 2

To achieve the objectives laid down in Article 1, Member States participating in permanent structured cooperation shall undertake to:

(a) cooperate, as from the entry into force of the Treaty of Lisbon, with a view to achieving approved objectives concerning the level of investment expenditure on defence equipment, and regularly review these objectives, in the light of the security environment and of the Union's international responsibilities;

(b) bring their defence apparatus into line with each other as far as possible, particularly by harmonising the identification of their military needs, by pooling and, where appropriate, specialising their defence means and capabilities, and by encouraging cooperation in the fields of training and logistics;

(c) take concrete measures to enhance the availability, interoperability, flexibility and deployability of their forces, in particular by identifying common objectives regarding the commitment of forces, including possibly reviewing their national decision–making procedures;

(d) work together to ensure that they take the necessary measures to make good, including through multinational approaches, and without prejudice to undertakings in this regard within the North Atlantic Treaty Organisation, the shortfalls perceived in the framework of the 'Capability Development Mechanism';

(e) take part, where appropriate, in the development of major joint or European equipment programmes in the framework of the European Defence Agency.

Article 3

The European Defence Agency shall contribute to the regular assessment of participating Member States' contributions with regard to capabilities, in particular contributions made in accordance with the criteria to be established, *inter alia*, on the basis of Article 2, and shall report thereon at least once a year. The assessment may serve as a basis for Council recommendations and decisions adopted in accordance with Article 46 of the Treaty on European Union.

GLOSSARY OF ACRONYMS

21st CSS/CEDS	21st Century Soldier System/ Common Equipment Dismounted System
AAR	Air to Air Refuelling
AEA	EAA
AET	Agency Establishment Team
AFARMADE	Spanish Association of Manufacturers of Armament and Defence and Security Material (Spain)
AFV	Armoured Fighting Vehicle
AHPG	Ad Hoc Project Group
AMB	Agency's Management Board
ASD	Aerospace and Defence Industries Association of Europe
AT	TA
BC	Business Case
BIO EDEP	Biological Equipment Development and Enhancement Programme
BoD	Board of Directors
BoS	Board of Supervisors
BTIED	EDTIB
CapTech	Capability Technologies
CBRN	Chemical, Biological, Radiological and Nuclear
CCDP	Comprehensive Capability Development Plan
CD&E	Concept, Development and Experimentation
CDM	Capability Development Mechanism
CDP	Capability Development Plan
CE	EC
CEDS	Combat Equipment for Dismounted Soldier (program)
CEN	European Standardization Committee

CEPA	Common European Priority Areas
CER	Centre for European Reform (London)
CESEDEN	Centre for National Defence Studies (Spain)
CFSP	Common Foreign and Security Policy
CGE	CapTech Governmental Expert
CIFAS	Intelligence Centre Armed Forces (Spain)
CIS	Communication and Information System
CIVMOV	Centre for Civil and Military Situation
cMS	Contributing Member State
CMUE	EUMC
CMUE–WG/HTF	EUMC Capabilities Working Group
CnGE	CapTech non–Governmental Expert
CNAD	Conference of National Armament Directors (NATO)
CNC	CapTech National Coordinator
CoBPSC	Code of Best Practices in the Supply Chain
CoC	Code of Conduct
CoR	Committee of the Regions (EU)
COMBAT SAR	Combat Search and Rescue (CSAR)
COPS	Security and Policy Committee
COREPER	Permanent Representatives Committee
CP	Conflict Prevention
CSR	Common Staff Requirements
CST	Common Staff Targets
DGAM	Material and Armament General Directorate (MoD Spain)
DGAP	Foreign Policy Institute (Berlin)
DIGENPOL	Defence Policy Directorate (MoD Spain)
DIVESPLA	Plans and Policy Division (Joint Staff Spain)
DNA	National Armament Directors
DRR	Defence Requirement Review (NATO)

DTEB	European Defence Test and Evaluation Base
EAA	European Armament Agency
EAC	European Armaments Cooperation
EALEDE	Higher Defence Studies College (Spain)
EBB	Electronic Bulletin Board
EC	European Commission
ECAP	European Capability Action Plan
ECATA	European Consortium for Advanced Training in Aerospace
EDA	European Defence Agency
EDC	European Defence Community
EDEM	European Defence Equipment Market
EDRT	European Defence R&T Strategy
EDSIS	European Defence Standardization Information System
EDTIB	European Defence Technological and Industrial Base
EEAS	European External Action Service
EESC	European Economic and Social Committee (EU)
EFP	Explosively Formed Projectiles
EG	Embryo Grouping
EHDP	European Handbook for Defence Procurement
EIPA	European Institute for Public Administration
EIPG	European Independent Programmes Group
EMACON	Joint Staff (Spain)
EMAD	Defence Staff (Spain)
EMp	pMS
EMUE	EUMS
EO	Evacuation Operation
ERG	European Research Grouping
ESDC	European Security and Defence College
ESDP	European Security and Defence Policy

ESFAS	Higher Staff College of the Armed Forces (Spain)
ESM	Environment/Systems/Modelling
ESRP	European Security and Research Programme
ESS	European Security Strategy
EU	European Union
EUCLID	European Cooperation for the Long Term in Defence
EUISS	European Union Institute for Security Studies
EUMC	European Union Military Committee
EUMS	European Union Military Staff
EUROPA	European Understanding for Research Organization, Programmes and Activities
EWG	Executive Working Group (NATO)
FA	Framework Agreement
FAS	Future Air System
FOC	Full Operational Capability
FUAS	Future Unmanned Aerial System
GAEO	WEAG
GAERC	General Affairs and External Relations Council
GC	General Conditions
GEIP	EIPG
GEM	Guidance/Energy/Materials (CapTech)
GNP	Gross National Product
GRD	Group of Research Directors (LoI/FA)
HA	Humanitarian Assistance
HFC	Headline Force Catalogue
HGC	Headline Goal Catalogue
HHG	Helsinki Headline Goa
HPC	Headline Progress Catalogue
HQ	Headquarters
HR/SG	High Representative/Secretary–General
HTF	Helsinki Headline Goal Task Force

HTH	High Transport Helicopter
I&M	Defence Industry and Market (EDA Directorate)
I+D	Research and Development
I+D+i	Research, Development and innovation
I+T	R&T
IAI	International Affairs Institute (Rome)
IAP	Information/Adquisition/Processing (CapTech)
ICET	Innovative Concepts and Emerging Technologies
ICPP	Initial Common Programme Plan
ICT	Intracommunitary Transfers
IDT	Integrated Development Team
IED	Improvised Explosive Device
IMCO	Committee on Internal Market and Consumer Protection (European Parliament)
IMS	International Military Staff (NATO)
INTA	Aerospace Technology National Institute (Spain)
IOC	Initial Operational Capability
IPR	Intelectual Property Right
IPT	Integrated Project Team
IRIS	Consortium for International and Strategic Relations (Paris)
IS	International Staff (NATO)
IST	Indicators and Strategic Targets
ISTAR	Intelligence, Surveillance, Target Acquisition and Reconaissance
ITRE	Committee on Industry, Research and Energy (European Parliament)
JA	Joint Action
JIP–FP	Joint Investment Programme on Force Protection
JIP–ICET	Joint Investment Programme on Innovative Concepts and Emerging Technologies
KOR	Key Operating Rules

LoA	Level of Ambition
LoI	Letter of Intent
LTV	Long Term Vision
MANPAD	Man Portable Air Defence
MARSUR	Maritime surveillance
MDC	CDM
MEMS	MicroElectro Mechanical systems
MIDCAS	MID–Air Collision Avoidance System
MMCM	Maritime Mine Counter Measures
MoD	Ministry of Defence
MoU	Memorandum of Understanding
MSG	Material Standardization Group
MSHT	Material Standardization and Harmonization Team
MUSIS	Multinational Space–based Imaging System
NATO	North Atlantic Treaty Organization
NBC	Nuclear, Biological, Chemical
NC3A	NATO Consultation, Command and Control Agency (NATO)
NEC	Network Enabled Capability
OAEO	WEAO
OCCAR	Organisation Conjointe de Coopération pour l›Armement
OD	Outline Description
OMP	Operating Management Procedures
OTAN	NATO
PA	Programme Arrangement
PERMREP	Permanent Representative (NATO)
PESC	CFSP
PESD	ESDP
PfP	Partnership for Peace (NATO)
PG	Project Group

PMG	Project Management Group
pMS	Participating Member State
PoC	Point of Contact
POLARM	Ad hoc group on armaments policy
PP	Public Procurements
PSC	Permanent Structured Cooperation
PT	Project Team
PYME	SME
R&D	Research and Development
R&T	Research and Technology
RC	Requirement Catalogue
REPER/COPS/UE	Permanent Representative (COPS/EU)
SB	Steering Board
SDEP	Security and Defence European Policy
SDR	Software Defined Radio
SEDE	Subcommittee on European Security and Defence (European Parliament)
SERA	Session Européenne des Responsables d'Armement
SG/AR	HR/SG
SGTF	Subgroup on Test Facilities
SIMCLAIRS	Studies for Integrated Multifunction Compact Lightweight Airborne Radars and Systems
SME	Small and Medium Enterprise
sMS	Subscribing Member State
SNE	Seconded National Experts
SOF	Special Operations Force
SoI	Security of Information
SOPF	Separation of Parties by Force
SoS	Security of Supply
SR	Stabilisation, Reconstruction and Military Advice to Third Countries

STAMP	Surface–mount Technologies for Active Modules Production
T&E	Test and Evaluation
TA	Temporary Agent
TBMD	Theatre Balistic Missile Defence
TCE	TEC
TDM	Theatre Defence Missile
TDP	Technology Demonstration Programme
TEU	Treaty European Union
TEAM	Test and Evaluation Ad Hoc Management
TEC	Treaty Establishing the European Community
TFEU	Treaty on the Functioning of the European Union
TFR	Total Force Requirement
TPLS	Third Party Logistic Support
TRL	Technology Readiness Level
TUE	TEU
UAV	Unmanned Aerial Vehicle
UAS	Unmanned Aerial System
UCAV	Unmanned Combat Aerial Vehicle
UE	EU
UEO	WEU
UMS	Unmanned Maritime System
USV	Unmanned Surface Vehicle
UUV	Unmanned Underwater Vehicle
WEAG	Western European Armaments Group
WEAO	Western European Armaments Organization
WEU	Western European Union
WRC	WEAO Research Cell

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