For a competitive autonomy in Europe :

THE DEFENCE PROCUREMENT POLICY

CONTENTS

THE MINISTRY OF DEFENCE PROCUREMENT POLICY VI

PREPARING FOR THE FUTURE VII

Looking to the future VII
Research and technology VIII
Preparing the defence industrial and technological base (BITD) IX

EQUIPPING THE ARMED FORCES X

Competitive bidding X
Making prime contractors responsible XI
New procurement and financing methods XI

IN-SERVICE SUPPORT XII

THE MINISTRY OF DEFENCE PROCUREMENT POLICY

In 2002, the President of the Republic and the French government restated their intention to provide France with defence forces in keeping with the nation's security interests and international ambitions. This intention is reflected in the 2003-2008 military programming law, which, in a demanding economic context, provides €15 billion per year for defence investments.

In 2004, the armament programmes management reform has highlighted two objectives for the Ministry of Defence activities : a) to reinforce government project ownership b) to help develop the **defence industrial and technological base** at the national and European level.

The Ministry of Defence is therefore responsible for building a high-performance defence system consistent with government priorities. To this end, it is implementing a **procurement policy** aimed at providing the French armed forces with the equipment they need to accomplish their tasks.

This policy is based on a principle of **competitive autonomy**, built around two complementary goals :

- optimising the economic efficiency of investments made by the Ministry of Defence to meet armed forces' requirements ;
- guaranteeing access to the industrial and technological capabilities on which the long-term fulfilment of these requirements depends.

In view of the amounts invested in defence and the effort they represent for the nation, economic efficiency must be among the Ministry's top priorities. Each euro spent must secure **the best return on investment** in terms of the national defence system's efficiency. For this reason, priority shall be given to market mechanisms and competitive bidding, which provide great leverage in achieving **competitiveness** and innovation.

Access to technological and industrial capabilities in the defence field does not only guarantee France's military effectiveness, but also gives it more diplomatic leeway and, as a consequence, more freedom to decide and act in an autonomous way. The Ministry of Defence must therefore seek to maintain and develop an industrial and technological base which degree of **autonomy** at the national and European levels guarantees secure supply sources for the armed forces, unrestricted use of the equipment procured, and the possibility of exporting arms to friendly nations and allies.

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The way in which the competitive autonomy principle is applied depends on the type of equipment considered.

A first category groups together equipment that can be acquired through cooperation with partner nations or allies. This approach provides the **reference framework** for an increasing number of investments.

Equipment in this category can be procured on the European market, in particular, or manufactured through **European cooperation** agreements. Cooperation of this type allows investments to be shared among partner nations and helps to ensure equipment interoperability. From a broader perspective, it promotes the construction of the European defence force – in both institutional and industrial aspects – and reinforces the contribution of European Union Member States to the military capabilities of the Atlantic Alliance. It implicitly leads to stronger ties between Member States within a framework of mutually accepted interdependence, drawing on widely acknowledged centres of excellence.

This aspect of the Ministry's procurement policy benefits from the development of organisations and instruments dedicated to European cooperation, including the OCCAR (Organisation for Common Armament Cooperation, created in 1996), the LoI framework agreement (signed in 1998) and the European Defence Agency (currently being set up).

Equipment in the first category can also be acquired through balanced **transatlantic cooperation** agreements, particularly within the NATO context, when the required conditions related technology transfer and mutual access to markets can be met.

A second category of equipment concerns areas involving the notion of **sovereignty** where the nation's vital interests are at stake. Nuclear deterrent is one such area where France intends to maintain her control on technologies and preserve her ability to design, manufacture and support equipment at the national level, while ensuring that these activities are conducted within a competitive industrial environment.

A third category includes equipment for which the Ministry of Defence turns to the **global marketplace**. This includes common equipment that can be procured from a large number of providers (mobile support equipment, camouflage systems, etc.). It also includes a few specialised systems of which small quantities are to be acquired through existing equipment.

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The implementation of the competitive autonomy principle relies on close collaboration with the defence industry, which employs a highly qualified work force of 160,000 people in France. The Ministry has undertaken **to review its partnership** with companies in the defence sector to ensure that French and European industrial and technological capabilities are being developed properly and that companies in the sector remain competitive.

As part of this process, the government intends to proceed with the controlled sale of its holdings in defence companies to allow them more freedom of action and promote European consolidation.

The process should also promote the development of innovative procurement solutions, making particular use of private funding and bought-in services.

Building closer ties with industry also aims at supporting the activities of defence companies on the worldwide marketplace. Arms exports have a significant diplomatic and economic aspect. They boost the activity considerably – to the tune of some €5 billion per year – and bring in a return on investments made. In this way, they contribute to developing the defence industrial and technological base. They often provide a vital contribution to the viability, long-term sustainability and competitive edge of this industrial activity. Whatever the case, arms exports play a key role in maintaining and developing a highly qualified work force in the high-technology fields concerned.

The new approach to the dialogue between the Ministry of Defence and industry is reflected in the creation of a Defence-Industry Council. The new Council provides the setting for political dialogue, which is the keystone for the various strategic talks conducted elsewhere at every level.

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The Ministry of Defence procurement policy and its underlying principle of competitive autonomy can be broken down according to the various stages in the life cycle of an armament programme:

- **preparing for the future**, which entails carrying out research, controlling technologies and preparing the industrial resources required for manufacturing future weapon systems ;
- **equipping the armed forces**, which means preparing, designing and manufacturing equipments ;
- **in-service support**, which is vital to the operational readiness of the armed forces ■

Preparing for the future

The Ministry of Defence intends to secure the possibility of procuring – with the required degree of autonomy – the equipment the armed forces need to fulfil their missions in the future. This equipment must benefit from technologies allowing it to fit its exact purpose, and must be procurable under optimum conditions in terms of costs, lead times and risks. Activities undertaken to prepare for the future represent annual expenditure of nearly €1.2 billion and are aimed at ensuring a high "return on technological investment".

The objective of autonomy and the related strategy for the development of the defence industrial and technological base are closely correlated with the results of the forward-looking process launched within the Ministry of Defence and cannot be dissociated from the choices made concerning research and technology work.

Looking to the future

The aim of the forward-looking process embarked upon jointly by the defence staffs and the French armament procurement agency (DGA) is to imagine what form future military operations will take and deduce the operational capabilities and weapon systems needed in the medium and long term to meet the related requirements.

The risks and threats with which France is liable to be confronted can be anticipated by analysing the geostrategic context and its possible developments. The impact of innovations and technological breakthroughs on defence systems is assessed at the same time, together with the cost of access to new technologies. These activities are carried out within the Ministry of Defence (particularly at the Defence Analysis Centre) or delegated to organisations and institutes specialised in strategic research. Like the other aspects of these preparations for the future, they are intended to account for an increasing share of European exchange activities in order to promote cooperation initiatives right from the start of research and technology work.

"Future weapon systems" are then proposed according to the technical-operational scenarios adopted.

The related equipment plans are drawn up for each of the "force systems" contributing to France's military capabilities : deterrent, C3I (command, control, communication and intelligence), strategic and tactical mobility, deep strike capability, control of the air-land environment, control of the air-sea environment, control

of the aerospace environment and preparation and maintenance of operational capability.

The **30-year forecast plan** (PP 30) brings together the results obtained at the various stages of the forward-looking process, combining the geostrategic, operational and technological approaches. On the basis of these analyses, it outlines possible future weapon systems and the equipment plans contemplated for each force system. It is the yearly updated reference for all work carried out to prepare for the future. Much of the information contained in this document has already been shared with the technological and industrial community. As from 2004, a public version will be issued every year.

Research and technology

Work carried out in the research and technology field aims at ensuring that the technology and know-how required to make future weapon systems are available. This work serves a dual purpose.

It supports the forward-looking process, anticipating developments in the scientific and technical world by identifying innovations and technological breakthroughs liable to appear in the future. In this way, it helps to acquire the knowledge required for future weapon system specifications.

Downstream from the forward-looking process, it contributes to the development of the technical and industrial capabilities considered necessary for building the future systems.

It calls on the skills of experts from civil and military research organisations, industry and the DGA. Organisations under Ministry of Defence supervision are particularly involved through cost-plus-incentive-fee contracts.

Research work particularly aims at allowing the Ministry of Defence access to all the nation's scientific and technological skills through cooperation with civil research organisations (laboratories, educational establishments, etc.). This cooperation at the centre of a partnership with the Ministry of Research and Technology, intends to enhance the overall efficiency of public research funding. More specifically, it involves creating the necessary synergies for the implementation of dual-technology areas : space, biotechnologies, materials, information technologies, etc.

The **technological capability model** provides the reference framework for research work carried out by the Ministry of Defence. It identifies technologies that must be acquired – with the required degree of autonomy – to manufacture equipment for which procurement is either planned in the army model or included in the 30-year forecast plan.

For each technological capability identified, a road map is drawn up specifying the content and schedule of work to be carried out. Guidelines and programming for research work and technological studies are set down in a Ministerial Directive, which also defines annual priorities. A three-year commitment plan then defines the "upstream research programmes" to be managed.

Following competitive bidding, upstream research programme contracts are awarded (to research organisations or companies) according to the technical value of the bids received (particular priority being given to the degree of innovation). In view of the contingencies inherent in research activities, the DGA also ensures that risks are divided fairly among contractors.

Some upstream research programmes consist in building **technological demonstrators**. These are large-scale operations designed to verify that required performance levels are achieved under representative conditions. Based on the use of several elementary technologies, this work reduces the risks involved in the subsequent development of weapon systems.

The scale of these projects and the military, technological and industrial challenge they represent make them a decisive factor in the acquisition of target capabilities. For this reason, France promotes them to its allies and partners, proposing the creation of a cooperative framework, particularly at the European level.

Within this context, France initiated a demonstrator project for a ballistic missile detection system using infrared sensors installed on an orbiting satellite. The project, awarded to Astrium, an EADS subsidiary, is worth €120 million and could lead to a programme giving France and its European partners autonomous means of ballistic threat assessment.

A cooperation agreement is currently being sought for a demonstrator project for an unmanned fighter aircraft, announced by the Minister of Defence at the Le Bourget air show in June 2003. Notification of a contract worth

€300 to 400 million is expected in Autumn 2004. Several French and European firms with recognised expertise in the military aircraft field will be involved in the project, and Dassault Aviation will be prime contractor.

Cooperation in research and technology is to be one of the tasks of the future European Defence Agency. European nations are already meeting to discuss draft proposals for studies and demonstrators liable to be concerned by cooperation agreements. The LoI research directors group is particularly active in this area. At the NATO level, the *Research and Technology Organisation* (RTO) is heading talks in the field.

Preparing the defence industrial and technological base

The Ministry of Defence examines the current situation and changes in the defence industrial and technological base, in light of identified technological and future weapon systems requirements. This work is carried out according to the results of forward-looking analysis and the choice of research projects. In this way, current industrial capabilities in France and Europe and their foreseeable development are compared with requirements identified by the technological capability model.

Each technical field involved in armament is analysed in terms of operational, technological, industrial, financial and international issues involved. Procurement methods (particularly the scope for competition) can thus be decided upon in each field to guarantee optimum economic efficiency according to the required degree of independence.

This analysis receives input from the partnership set up between the Ministry and companies in the defence sector. The **Defence-Industry Council** is the political keystone of this partnership. The Council is chaired by the Minister of Defence and meets with leading defence industrialists to discuss major issues of concern to companies in the sector: the European Defence Agency, the transatlantic partnership, research and technology, exports, and so on.

The partnership is also responsible for informing industry of medium- and long-term defence requirements, as reflected by the analysis provided for in the 30-year forecast plan, and keeping-up-to date with the industrial strategies implemented by the companies concerned. Within this context, bilateral meetings and general forums are organised in close collaboration with CIDEF, the French defence industry council, which groups together the country's leading actors in the sector. The themes addressed may be cross-disciplinary (cooperation, research and technology, procurement methods, support for small and medium-sized businesses and industries) or sector-based (i.e. concerning a particular technological field).

Particular attention is given to the development of **high-tech, small and medium-sized businesses**, which are a source of innovative and competitive solutions and complement the offer of large industrial prime contractors and OEMs. In association with ANVAR (French national research support agency), the DGA has set up funding specifically adapted to their needs (in particular, reimbursable loans).

At the same time, the DGA promotes the involvement of investment fund companies like *Financière de Brienne* to support small and medium-sized companies in the defence sector. In addition, it studies new financial instruments suited to the needs of larger firms.

The French state remains generally attentive to the nationality of defence companies (this can be defined in several ways : capital ownership, location of operational headquarters and key business units, nationality of managers, etc.). This issue is important given the need to guarantee secured sources of procurement for the armed forces and support for fielded equipment in the long term. Foreign investments in France related to military equipment or national defence activities are therefore subject to government approval. Within this context, the Ministry of Defence checks that foreign investment projects are compatible with French defence interests and, when necessary, defines the undertakings to be obtained from potential investors concerning the completion of current contracts, continuing support of delivered equipment and, in some cases, the guarantee that strategic activities will remain in France. This procedure is designed to reconcile observance of market mechanisms (freedom of investment, in particular) with the need to preserve sensitive sectors of the defence industrial and technological base.

At the European level, France and its partners are seeking to implement measures (under the **LoI framework agreement**) to promote the development of transnational defence companies. Among other things, this means coordinating research policies and simplifying export procedures. The agreement also includes clauses concerning security of supply. These are aimed at rationalising European defence industry resources by creating interdependence between the countries concerned.

Furthermore, the forum made up of the LoI signatory nations – which are also the leading European arms manufacturing countries – is helping to move towards the harmonisation of European defence procurement policies.

The preservation and development of a European industrial and technological base in the defence sector is a priority for France. This should be achieved by :

- guaranteeing the existence of suitable national and European instruments – regulations in particular – adapted to the specific requirements of the armament field ;
- setting up a genuine internal marketplace for defence equipment and systems based on balanced reciprocity.

The development of a dynamic European market, benefiting from the decision by twenty-five European governments to give top priority to building up and maintaining independent defence capabilities, is likely to open up clear technological and commercial prospects for the defence industry. The construction of a more solid and coherent foundation for activity than that offered by juxtaposed national markets will allow companies in the sector to develop their competitive edge and capacity for innovation ■

EQUIPPING THE ARMED FORCES

The 2003-2008 military programming law devotes some €8 billion every year to equipping the armed forces within the context of armament programmes or other operations.

The DGA, consulting with the staffs concerned, manages armament programmes aimed at meeting the armed forces' equipment needs at the best cost, within the planned lead times and with the required performance levels. It accomplishes this task drawing on industrial capabilities.

By applying the principle of competitive autonomy, a procurement method can be determined for each armament programme in a way that is consistent with the required degree of autonomy, with particular regard to the security of supply and information.

When an armament programme is part of a cooperation agreement with partner nations or allies, the Ministry of Defence can call on international procurement agencies in Europe (particularly the OCCAR) and within NATO or on the procurement agency of one of the cooperating nations.

Armament procurement usually requires a prime contractor to assume overall industrial liability.
Procurement methods implemented by the Ministry of Defence are based on :

- the use of competitive bidding whenever possible ;
- making prime contractors responsible by obtaining commitments to results.

The use of new procurement and financing methods is also encouraged.

Competitive bidding

A market-based approach with competitive bidding significantly contributes to technical and economic emulation and helps to improve the service provided. It provides a suitable framework for achieving a trade-off between the need to meet the public buyer's requirements at the best price and the expectations of vendors, who are justifiably concerned with the profitability and long-term future of their company. It also has a revealing impact on the competitiveness of the defence industrial and technological base.

Competition is therefore desirable and is sought within an area consistent with the required degree of autonomy, particularly within the frontiers of Europe, which is the reference area.

As the consolidation of French and European industry has reduced the number of potential vendors in some fields, the situation often arises where only one company is in a position to act as prime contractor for an armament programme, considering the required degree of autonomy.

In such cases, the DGA requires the prime contractor to undertake to open contracts for subsystems and equipment to competition. This undertaking is set down in a **procurement plan** defining the rules governing the competitive bidding process, and is an integral part of the agreement signed between the DGA and the prime contractor.

Procurement plans thus help to identify the most competitive technical and industrial solutions. They also ensure that potential subcontractors are given fair treatment and promote the emergence of innovative technical solutions – especially those proposed by small and medium-sized companies. They also encourage the definition of measures aimed at limiting the risks of technological dependence.

Making prime contractors responsible

Contractual relations with prime contractors are based on a principle of responsibility designed to guarantee a well-balanced, controlled distribution of risks. This means enabling prime contractors to take the necessary action to find the best technical solutions. In exchange, they must make commitments related to the price, manufacturing lead times and performance levels of the entire weapon system concerned. Commitments linked to in-service support (through-life support cost, performance in terms of reliability, availability, dependability, etc.) are also required.

Incentives can also be negotiated to encourage prime contractors to achieve further reductions in costs and lead times during the performance of the contract signed with the DGA.

Grouped orders give prime contractors a clearer view of their future work load and allow them to organise their procurements, investments and production more efficiently, on the basis of order books committing the government over a period of several years.

This approach is to the benefit of both parties and, in return, the Ministry of Defence expects substantial price reductions and better control of obsolescence from prime contractors.

New procurement and financing methods

With longstanding experience in public service delegation, the French government wishes to broaden the scope of partnerships between the public and private sectors to take in activities closer to its traditional missions.

In the field of defence, studies are under way to determine how some of the armed forces requirements can be met through private funding. These new procurement methods are liable to be implemented when comparison with conventional procurement and ownership methods shows an economic advantage. It is also necessary to ensure that the transfer to the private sector of risks associated with these operations can be properly controlled.

Projects coming under the **public-private partnership** approach currently studied by the DGA concern technological-content equipment or infrastructures made available to the armed forces and for which operation and support are “outsourced” – in whole or in part – to the private sector. The arrangements envisaged are covered by long-term, global service contracts, calling for an initial investment under the responsibility of a private partner, who is also in charge of funding.

The Ministry expects these new procurement methods to offer the following advantages :

- achieve tighter control of the overall life cycle cost of equipment through closer involvement of companies in every stage of the equipment’s life ;
- reduce costs by making available to third parties any potential capacity not used by the armed forces ;
- share expenses over a period consistent with equipment lifetime, allowing equipment to be handed over and, in some cases, reducing the unit price.

In addition to their economic and financial impact, these new procurement methods have implications (varying according to the operation) for a number of issues – organisation, state ownership, social aspects – as well as contractual or tax consequences.

A multidisciplinary expert unit has been set up within the Ministry to consider these various aspects and assist departments liable to make use of the new procurement methods. A specialised team has also been set up at the DGA to implement them within the context of armament programmes ■

IN-SERVICE SUPPORT

The in-service support of defence equipment is crucial to their operational readiness and, more generally, to the fulfilment of the armed forces' operational obligations. Given the share of through-life support (TLS) in the life cycle cost of weapon systems, in-service support is a major economic consideration. The annual credits for scheduled equipment maintenance amount to €2,5 billion.

Improving equipment readiness and reducing support costs are among the Ministry's top priorities.

Equipment support is considered right from the armament programme preparation stage. Armament programme management and equipment through-life support are closely linked, especially during the utilisation stage, the crucial moment when the equipment is fielded. The Ministry constantly ensures the consistency of activities in this area to minimise the overall life cycle cost of equipment. Through-life support is procured via suitable procedures and is mainly a matter for the armed forces.

In accordance with the principle of competitive autonomy, and depending on the category of equipment concerned, competitive bidding is carried out as broadly as possible. A systematic effort is made to join up support activities for equipment manufactured as part of collaborative armament programmes.

Prime contractors for support services can be made responsible through commitments to availability. Remuneration can then be calculated according to a fixed sum proportional to operational activity (flying time for example) or be based on all the spare parts and repair services concerning a given item of equipment.

In order to bring users and the teams responsible for ordering through-life support services closer together, specialised **integrated support structures** have been created in the aeronautical (SIMMAD)[1] and naval (SSF)[2] equipment fields. They are supported by armed forces and DGA personnel and expertise.

Like the other armed forces support structures (for example DCMAT)[3], these structures assume project ownership of support operations and can therefore apply the procurement methods used within the context of armament programmes (fixed-sum and globalisation of services, obligation of result).

In general, "service-type" support operations can be ordered through innovative procurement procedures ("flying time" through-life support contracts, spare parts management contract guaranteeing an availability level, service contracts, etc.).

Prime contracting for operations is entrusted to public industrial entities, such as the SMA (aeronautical maintenance service) or private firms. The Ministry constantly checks that existing industrial capabilities match the demand for support services in the defence sector to reconcile operational, economic and industrial requirements ■

1- SIMMAD : Integrated Aerial Defense Systems Support Structure.
2- SSF : Fleet Support Service.
3- DCMAT : Central Direction for the Army Weapons Systems.