



European armaments cooperation 3/4

Review of the main armaments programmes in European cooperation

Cour des comptes

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Relations internationales

In 2017 the Court examined six major cooperative ventures, including four programmes producing complete weapons systems (A400M aircraft, TIGRE and NH90 helicopter, FREMM frigate). The military characteristics are sometimes better than expected 4 , but also sometimes insufficient because of the technological difficulties encountered by manufacturers in meeting demand 5 .

Late deliveries are only partly due to development difficulties; in the case of France, they are more often the consequence of government decisions to spread the budgetary burden. These phenomena, which are also found in armament programmes conducted by France alone, weigh on the operational capabilities of the forces.

Technological successes but operational deadlocks

The ASTER ground-to-air missile family of the future (FSAF) programme is a success, despite very long development times, which has been This was facilitated by the fact that the project management was entrusted to a single industrial company (MBDA), which has already integrated the best of European capabilities. The success also stems from a harmonised expression of needs which led to the adoption of the same missile by all the partner states.

The A400M is a transport aircraft without equivalent in terms of long-range transport capacity and delivery on short runways. However, it has not yet achieved the full tactical capabilities expected, with persistent restrictions on airdrop operations of men and equipment. Developments are continuing in the sometimes tense context of relations between States and the prime contractor (Airbus).

The TIGRE helicopter is a costly technological success that has led States to sharply reduce their orders; it was penalised by an initial definition of needs established during

the Cold War. It also suffers from very low availability.

The NH90, although it was built in lower numbers than anticipated and encountered many delays, has allowed for the sharing of development costs and relative export success. The lack of uniformity of requirements has led to multiple versions, and the fact that its production was shared between two competing manufacturers is a counter-example that should not be followed.

The FREMM frigates, known for their anti-submarine warfare capabilities, are more a matter of juxtaposition than cooperation because the common part was limited to the initial design. The development and above all the manufacture of the French and Italian versions, which are significantly different, are entrusted to the two national industries (Naval Group and Fincantieri). The exercise nevertheless led to some savings on the equipment common to the two types of ship and, on the French side, two export sales.

The MUSIS space observation programme was delayed due to budgetary difficulties in some States, which led France to go ahead on its own by launching two satellites on the optical space component (CSO), before being joined by Germany, which made it possible to finance an additional satellite.

The Franco-British aircraft carrier project ended with the abandonment of the programme, although this was to be expected given the differing expectations of the two States. The failure resulted in a loss of €200 million to French public finances.

Budgetary savings at the cost of many delays

The sharing of development costs between states has resulted in savings of over €8bn (January 2016 value) for French public finances, compared with what it would have cost to launch six national programmes similar to those examined by the Court.

The benefits of cooperation are obtained in return for specific constraints:

- . the need for a consensus between the partner States lengthens the decision-making process, both before launching and during development, when difficulties call for choices ;
- . the lack of harmonization of common specifications leads to the multiplication of versions, thus increasing development work and limiting productivity gains during the production phase ;
- . the desire of States to benefit from a "geographical return" for the benefit of their national industry, in exact return for their financial effort, does not allow for a "geographical return".. the desire of States to benefit from a "geographical return" to their national industry in exact return for their financial effort, does not make it possible to optimize industrial organization according to the technical skills of companies, and limits the coordination capacity of the project manager . Industrial or budgetary programme delays force the armed forces to keep old equipment in service, at increasing maintenance costs due to their obsolescence.

There is still room for improvement in order to take better advantage of equipment acquired by several States. For example, pooling in the field of training and maintenance in operational condition (MCO)⁷ are unevenly exploited to reduce their cost.

Finally, two developments, which are not specific to cooperation, are necessary. On the

one hand, the increasingly rapid innovation of technologies calls for a new approach to shorten the time, often more than a decade, between the decision to launch a programme and the entry into service of equipment. On the other hand, the low rates of availability measured in the programmes studied show the need to foresee from the design stage how equipment will be maintained. The challenge of consolidating the European armaments industries The integration of European groups remains uneven . World leaders in the field of missiles and aeronautics work alongside national specialists in the land and naval fields.

The State can promote the participation of French companies in the consolidation movement on a European scale, as a client by favouring cooperation, but also as a shareholder by recommending or encouraging European alliance projects.

4 Underwater detection of FREMM, use of summary tracks by the A400M .

5 The difficulties encountered by the American F35 fighter aircraft show that this is not specific to Europe, but affects all programmes with a high technological content.

6 OCM covers all equipment maintenance activities aimed at making equipment available for operational use.

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Pensées mili-terre

Centre de doctrine et d'enseignement du commandement

Réduction des cibles françaises sur les principaux programmes d'armement européens

Programme	Cible initiale	Cible actuelle	Report de livraisons
Avion A400M	50	50	Retards liés à la complexité du développement et décalages imposés par la LPM 2014-2019
Hélicoptère NH90	160	101	Étalements des livraisons décidé par les arbitrages des LPM 2009-2014 et 2014-2019
Hélicoptère TIGRE	215	71	Réduction de la cadence de livraison en raison de la réduction de cibles
Frégate FREMM	17	8	Diminutions du nombre des frégates et décalage du calendrier par les LPM 2009-2014 et 2014-2019

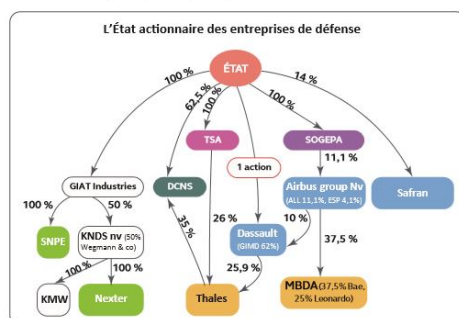
Source : Cour des comptes à partir des documents du ministère des armées

Chiffre d'affaires 2016 des groupes européens de défense (en Md€)

Entreprise	Activité	Chiffre d'affaires
Airbus (Allemagne, France, Espagne)	Aéronautique civile (70 %) et militaire ; Europe (31 %), Asie (29 %), Amérique (23 %)	67
Bae Systems (Royaume-Uni, avec parts de marchés importantes aux États-Unis)	Aéronautique militaire, électronique, naval, armement terrestre, cyberdéfense ; États-Unis (38 %), Europe (35 %)	26,5
Rolls Royce (Royaume-Uni)	Motoriste	17
Safran (France)	Motoriste	15,8
Thales (France)	Électronique de défense	14,9
Leonardo (Italie)	Électronique de défense et aéronautique	12

Sources : données publiques communiquées par les sociétés.

Les participations publiques dans la défense en 2016



Source : Cour des comptes