

## The EADS Corporate Research Center - New Dimensions for the Future -

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### Abstract

*In July 2000 the European Aeronautic Defence and Space Company (EADS) was created as a merger of the French company Aerospatiale Matra, the German DaimlerChrysler Aerospace and the Spanish CASA. Part of the European integration of the EADS is the organization of the central research capabilities, the EADS Corporate Research Center (CRC) on a European level in the EADS directorate "Industrial, Research and Technology". The EADS common Research & Technology (R&T) System is based on centralized / decentralized resources in the EADS Business Units (BU) and the CRC. The information exchange, R&T planning of common projects (shared research) and transfer of best practices is enabled and organized by the EADS R&T Network where BU's and CRC define together the common research plan (CRP) of EADS. The CRC has the mission to provide expertise and synergies in the area of transversal technologies with a focus on application of oriented upstream research.*

### 1. Introduction

Technological competence is an important and decisive factor in the EADS strategy. Technology has to pay off for the customer as a "Customer Benefit" in terms of "best product for best price", and for the manufacturer in terms of "Cost Effective-

ness" in new manufacturing processes, new tools and methods.

Through a sophisticated "Technological Networking", a broad application of innovations and good market positions have been achieved and will be achieved for the future.

Combining the technological excellence and the inherent innovation potential in the EADS Business Units (BU) and the EADS Corporate Research Center (CRC) to continuously improve all our business products and brands is the prerequisite for a sustainable value growth of EADS.

The EADS innovation strategy is based on a balanced system of decentralized and centralized Research & Technology (R&T) and Research & Development resources coordinated by an efficient R&T Network to link the long-term technology strategy with day-to-day knowledge of customer needs. R&T Network and CRC are under the responsibility of the EADS Chief Technology Officer (CTO) as part of the "Industrial, Research & Technology" function of EADS Strategic Coordination which is shown in Fig. 1.

The innovation potential of EADS is also based on the high degree of co-operation and integration with public and private research organizations and institutions to acquire the best available knowledge and to provide continuous innovation trend monitoring.

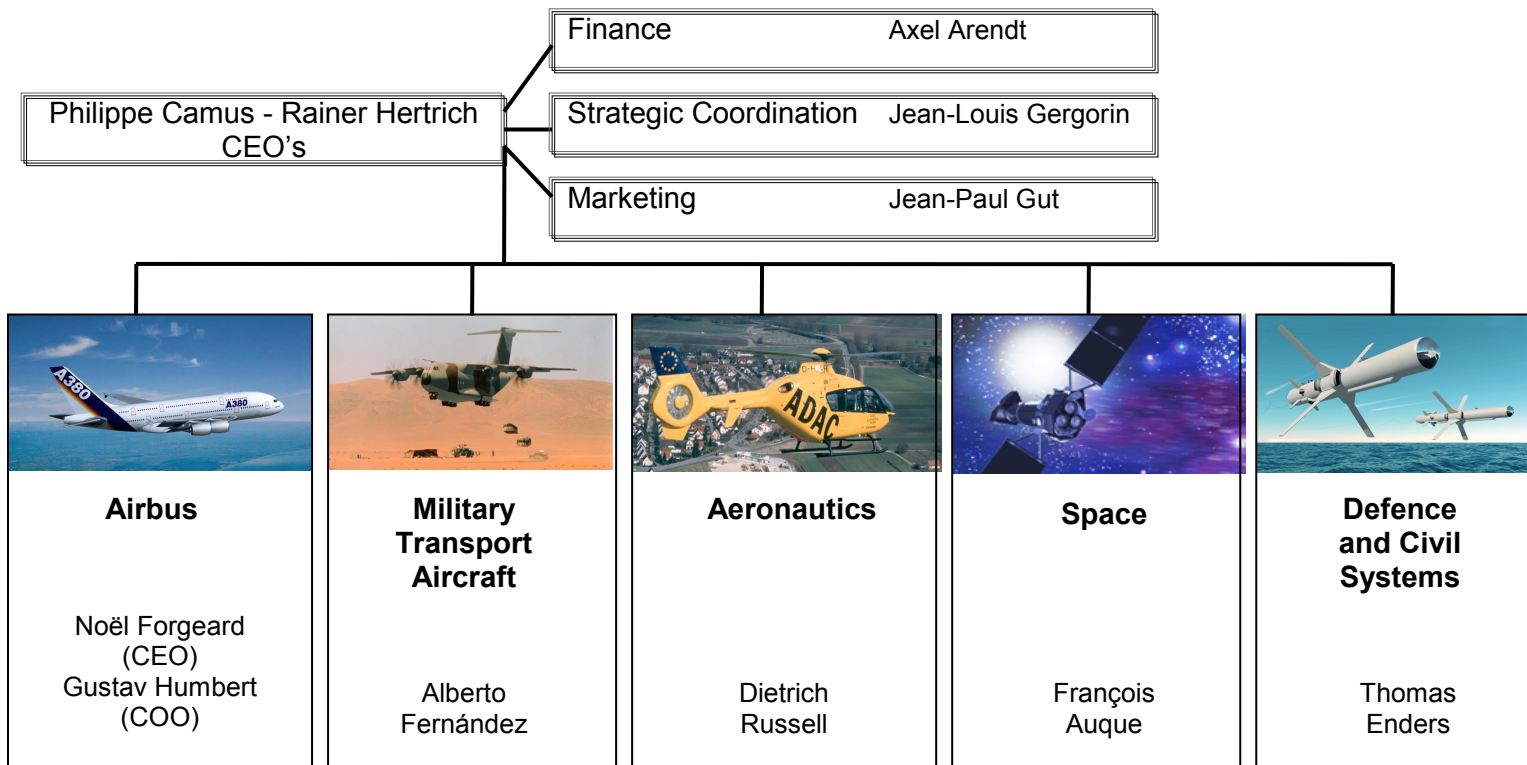


Fig. 1: EADS Management Structure

## 2. The EADS Common R & T System

The EADS Group consists of a wide variety of BU's, each one with its own specific R&T needs, but also with a high potential of synergy between the BU's and the BU's and the CRC, which provide R&T capabilities mainly for transversal technologies. In order to avoid unnecessary expenditure, motivate organized integration and co-operation on R&T projects, and create added value, an R&T Network, with BU and CRC representatives, has been deployed.

The organization of the EADS common R&T System with R&T Network and CRC is based on "best practice" experience from each of the former national companies in EADS.

The added value of the common EADS R&T system is based on the sharing of facilities, skills, experience and budgets to reach common targets for transversal technologies.

The R&T Network has a matrix structure based on nineteen technological domains with its corresponding R&T Groups (RTG's) including all interested BU's and the CRC, thus ensuring transversal expert co-ordination and the appropriate coverage of all competencies and needs of the players within the network (Fig. 2).

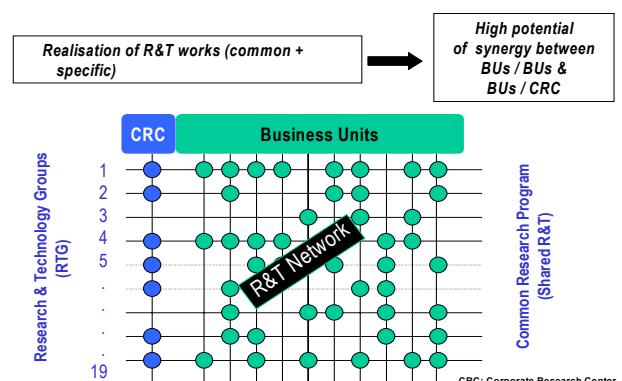


Fig. 2: EADS R & T Network Structure

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The steering of the network and the decision-making process are performed jointly by all participants of the groups and committees of the R&T Network.

The structure of this network also allows R&T co-operation with non-EADS organizations, thus permitting the optimization of the external co-operation across BU's and CRC.

The overall R&T plan of EADS includes the upstream research plan (URP) which is mainly executed in the CRC, the common research plan (CRP), which includes common (shared) research projects of BU's and CRC and direct research, where CRC is executing specific R&T projects for a BU and / or an external customer.

For 2002 the CRP is implemented with up to 150 common projects involving about 1.200 persons across the group.

### 3. The EADS Corporate Research Center

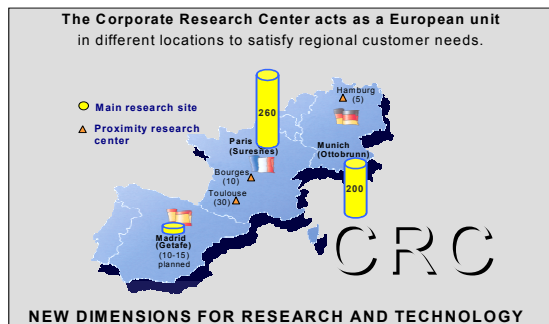


Fig. 3: EADS Corporate Research Center

The CRC includes nearly 600 researchers in France, Germany and, in the near future, also in Spain. The CRC acts as a European unit in different locations to also satisfy regional customer needs and is active in:

- Materials, Processes and Manufacturing
- Structure Engineering and Acoustics
- Micro-Systems and Electronics
- Systems Engineering
- Sensors and Image Processing

- Environmental Control of Systems
- Information Technologies for Engineering

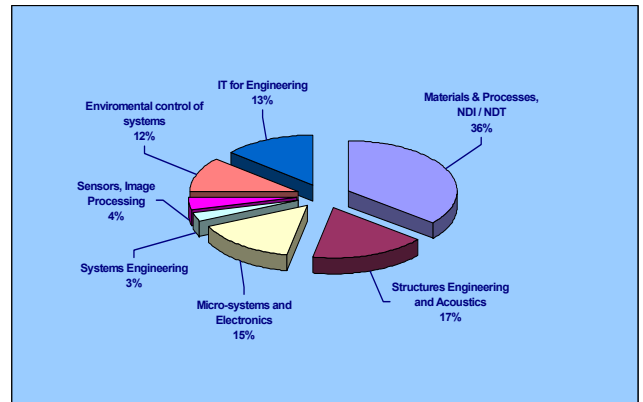


Fig. 4: Distribution of Corporate Research Center Activities in 2001

The mission of the CRC in EADS is to assure added value by synergy of shared research inside EADS and by co-operation with research partners, to maintain and develop the innovation potential for long term technological competitiveness of the group, to enable emerging technology integration in current and future EADS products and processes as well as to support the EADS Technology Strategy together with the BU's.

The strengthening of the EADS technological core competencies and thereby the improvement of the bottom-line benefits for our customers is the driving force behind the EADS R&T activities. Within the group-wide technology strategy, special focus has been laid on short-, mid- and long-term technologies of common interest, as well as on considerations concerning the "make, buy or co-operate" policy. For an optimized positioning vis-à-vis the competition and for optimum support of the innovation processes, strategic core technologies have been identified in the fields of:

- Advanced materials, structures and manufacturing to assure cost-effective production

- Electronics, micro-electronics /  
optronics and microwave  
technologies to provide integrated  
“smart” products
- Physics of flight, propulsion,  
energy and acoustics to produce  
“environmentally friendly” aircraft  
and high-performance vehicles
- Systems and related services to  
realize “robust” intelligent systems  
and extended business  
opportunities
- Information and software  
technologies and advanced  
processes to provide supporting  
tools with respect to economic  
issues and cost savings within the  
topic of “Virtual Product  
Engineering”

These core competencies are strongly addressed within the activities of the EADS R&T Network and the Corporate Research Center.

#### 4. Future Perspectives

The year 2002 / 2003 will see the continuation of the dialogue between the EADS Headquarters and all Business Units to further foster the group-wide technology strategy, which will result in further research activities, coordinated through the Research & Technology Network, towards the improvement of productivity, performance and environmental compatibility of products and processes for EADS customers.

This development will be underlined by a further improvement of the networking with key suppliers, as well as the strong integration of European and where possible overseas aeronautical research institutions and academia.

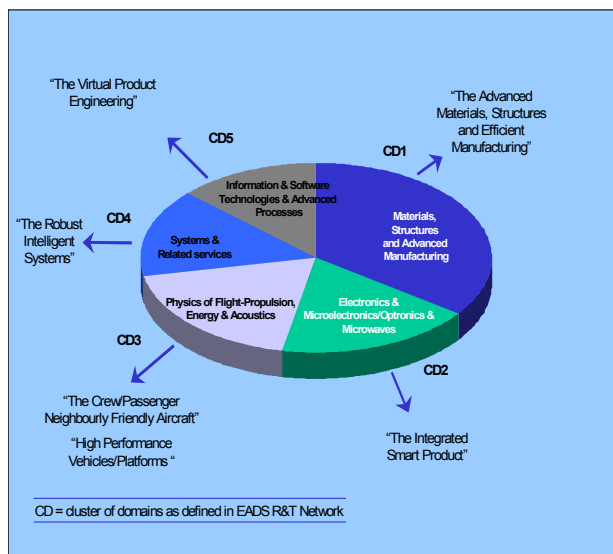


Fig. 5: Core Technology Nominations