

# MEDEA+ System Innovation

ACCESS TO EUROPEAN MICROELECTRONICS  
BEST SOURCE OF R&D

# on Silicon



(Σ!2365)



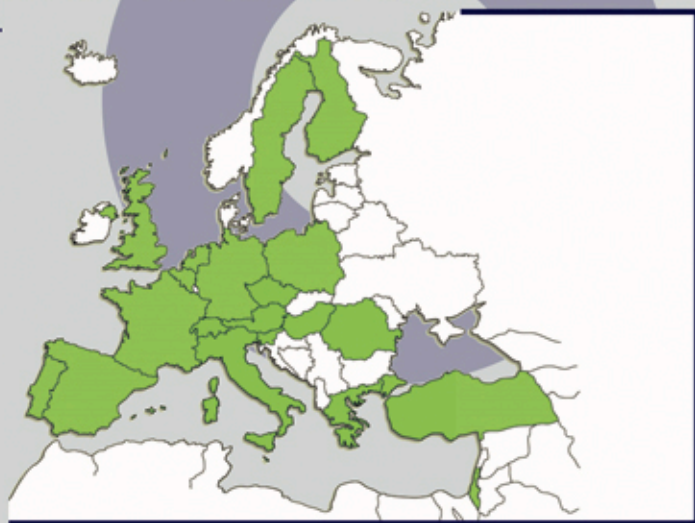
# MEDEA+

## Key data



In 2004, a mid-term assessment of the eight-year MEDEA+ programme (2001-2008) carried out on behalf of Public Authorities certified excellent results in strategy, project achievements and management. It qualified MEDEA+ to enter its second phase and to continue the bundling of private and public funding in micro-/nanoelectronics innovations by drawing together **semiconductor manufacturers, their suppliers, system companies and design houses, private research institutes and the academic world.** This co-operation helps participants to share know-how and to enhance project efficiency. It reduces cost and risk, which are inherent to high-tech innovation.

In line with the ITRS, the MEDEA+ Technologies projects prepare the basis for advanced applications worldwide. The Applications projects proposed by the system houses and their semiconductor suppliers cover dedicated market areas and **prepare the foundations for market leadership in Information and Communication Technology development in Europe.**



### Co-operation helps participants to share know-how and to speed up developments

With almost 70 projects ended or still running at the beginning of 2005, the programme already mobilises cumulative resources of almost 20 000 person-years with an associated cost of more than 500 million Euros per year

MEDEA+ partners include major microelectronics suppliers and equipment manufacturers, system houses, SME's, universities and institutes. There are **about 350 partners involved from 21 European countries**, with France, Germany, The Netherlands, Italy and Belgium being the leading supporters. Two thirds of MEDEA+ partners are SME's and Universities/Institutes. The larger companies, accounting for the remaining balance, contribute approximately 75% of the resources.



# MEDEA+ Structure

Being a EUREKA cluster programme, MEDEA+ has been industry-initiated and is industry-guided. A lean management organisation and coherent procedures have been installed to effectively stimulate, organise and monitor industrial R&D efforts for all MEDEA+ projects.

## **MEDEA+ Board**

The MEDEA+ Board is the top executive body of MEDEA+ Organisation. It is responsible for the strategy and coherence of the whole programme. It establishes general rules of Programme Management and it interfaces with Public Authorities for programme strategy and co-funding. The composition of the MEDEA+ Board underlines, on the one hand the participation of contributing industry and research institutes but also reflects countries allied in the MEDEA+ programme. The Board nominates the MEDEA+ Chairman and its two Vice-Chairmen for Applications and Technologies.

## **MEDEA+ Support Group**

The MEDEA+ Board is assisted by the MEDEA+ Support Group. The MEDEA+ Support Group evaluates project proposals and deals with all operational issues regarding the management of the Programme in terms of strategic objectives and available resources in MEDEA+.

## **MEDEA+ Scientific Committee**

The primary objective of the Scientific Committee is to report on the latest advances and technological trends on a worldwide basis and to accomplish annual tasks defined by the Board and dedicated to the specific benefits of the European industry. To that end, apart from its Chairman and Vice-Chairman the composition of the Committee is adjusted yearly to obtain optimal results.

## **MEDEA+ Steering Groups**

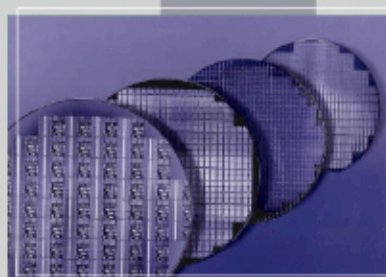
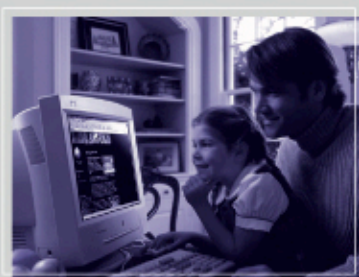
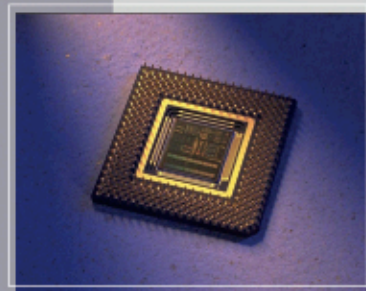
The two MEDEA+ Steering Groups "Applications" and "Technologies", give recommendations in strategic orientation and are responsible for the initiation, evaluation and monitoring of projects.

## **MEDEA+ Office**

The MEDEA+ Office, located in Paris, assists the entire MEDEA+ organisation. It is a central contact point and a meeting place for the whole MEDEA+ Community. It also handles the Programme's interface with the outside world.

# MEDEA+ Collaboration

As an industry-initiated programme, the major European Microelectronics companies back MEDEA+, co-operating with the most prominent institutes and universities.



Semiconductors and Electronics are typical examples where focused co-operation between the actors and their governments has significantly strengthened Europe's competitiveness and as such contributed to European added value and job creation.

National governments from European countries consider the programme to be useful in pooling expertise and resources under the MEDEA+ flag and, given the added value of trans-border co-operation, support financially a percentage of the cost of MEDEA+ labelled projects.

The national governments established the Directors Committee to co-ordinate and monitor the execution and funding of MEDEA+ projects. It is the formal contact point for the MEDEA+ Board. The Directors Committee is supported by an intra-governmental working group, MEDEA+ Authorities Coordination (MAC), who are in charge of discussing with the MEDEA+ organisation day-to-day topics on project performance, monitoring, reporting, funding and selection of new proposals.



# MEDEA+ Projects

MEDEA+ comprises of a portfolio of Research and Development projects forming a coherent industrial programme. The duration for executing these projects varies between 2 and 4 years. Interestingly, the average number of person-years involved in a project has significantly increased compared to MEDEA, obviously as a result of improved focusing.

In Microelectronics, the flagship of modern industrial society, R&D is increasingly becoming a high risk investment, accompanied by massive time-to-market and time-to-volume pressure. Its complexity and demand for ever increasing human and financial resources has reached dimensions where big companies or even nations can no longer effectively solve these issues alone and have realised that only a trans-border high-level globalisation and involvement of best-in-field partners is the answer.



Major criteria for selecting projects are contributions in fostering Europe's leadership in system innovation on silicon. A pre-competitive scenario of co-operating consortia members has to be ensured when defining the development goals of a project. MEDEA+ prioritises the projects where both vertical and horizontal co-operation is possible.

The majority of projects are aimed towards solutions on generic technologies and platforms, leaving enough impetus for product and system differentiation to be carried out at a later stage and on an individual basis. All partners - large firms, SME's, institutes and universities - are motivated in sharing tasks in MEDEA+ projects.

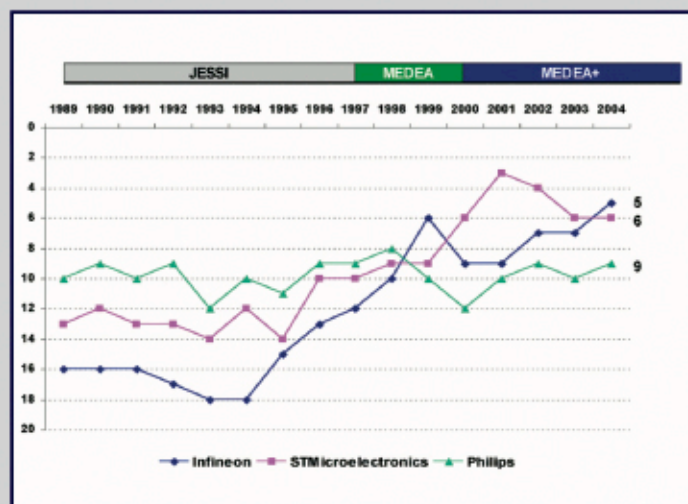
An efficient reporting and monitoring system has been installed to ensure that variances will be discovered at an early stage and appropriate action will be undertaken.

Selected projects receive a MEDEA+ label. Labelled project partners qualify for support with public money from their national governments.

# MEDEA+ Foundation

MEDEA+'s roots go back to the JESSI programme (Joint European Submicron Silicon Initiative), set up in the late 1980's, when it became clear that microelectronics technology was increasingly a key factor in commercial success and that the highly fragmented European microelectronics industry was unable to keep pace with world developments. JESSI's approach was to foster a network of focused, co-operative alliances aimed at ensuring a viable microelectronics infrastructure for European industry.

This included collaboration at R&D level between companies that were market competitors, as well as universities and other research organisations to ensure a strong foundation of technological competence. When the JESSI Programme finished in 1996, Europe was in a state of technological renaissance, with a healthy microelectronics industry that was able to ensure that European industry had access to its key enabling technology.



## Europe's Rising Stars

The three major European manufacturers – Infineon Technologies, Philips and STMicroelectronics – are further forging a path in the top ten largest semiconductor companies in the world.

Following the success of JESSI, the MEDEA programme built upon this co-operative infrastructure to maximise Europe's strengths in six core competencies: Automotive/Traffic Systems, Communications, Multimedia Technologies, Design Techniques and Libraries, CMOS-based Technology Platforms and Manufacturing Technologies.

Over the four years of the programme, MEDEA executed 55 projects involving more than 150 partners in 12 countries at a cost of around 2 billion Euros. The work done in these projects has accounted for roughly 9,400 person-years of highly skilled employment in Europe. Quite a number of start-up companies have been created from the results of the MEDEA projects.



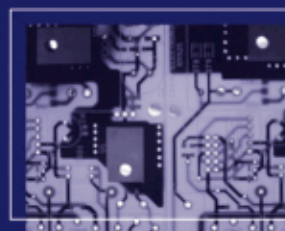
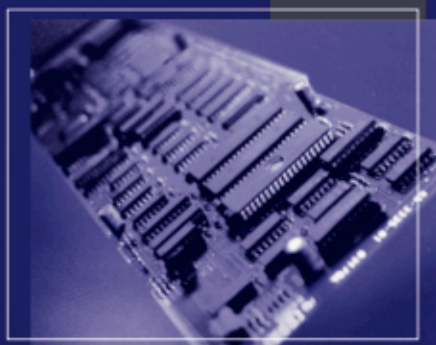
# MEDEA+ Presentation



MEDEA+ (Microelectronics Development for European Applications) is the industry-initiated **pan-European Programme for advanced co-operative Research and Development in Microelectronics** and is striving towards Europe's continued technological and industrial competitiveness in this sector. It has been set up and labelled within the framework of EUREKA (Σ12365) as its largest project. The EUREKA label was granted by the Ministerial Conference in Hanover on 23 June 2000.

## **MEDEA+ started in January 2001 and focuses on "system innovation on silicon"**

The MEDEA+ programme focuses on enabling technologies for the Information Society and aims to make Europe a leader in **System Innovation on Silicon**. Through trans-border cooperation the programme aims at **stimulating innovation** and at **providing technology platforms** allowing the European Microelectronics industry to maintain its position as worldwide leader and to contribute to the **creation of a higher added value and increased employment**. Europe's independence and economic future will largely depend on its ability to cope with the permanently renewed challenges posed by both the market demand and by its main geographic competitors. If Europe is to become "the most dynamic knowledge-based economy in the world by 2010" as stated in 2000 by the Lisbon European Council, a stimulus for growth, employment and innovation is urgently needed.

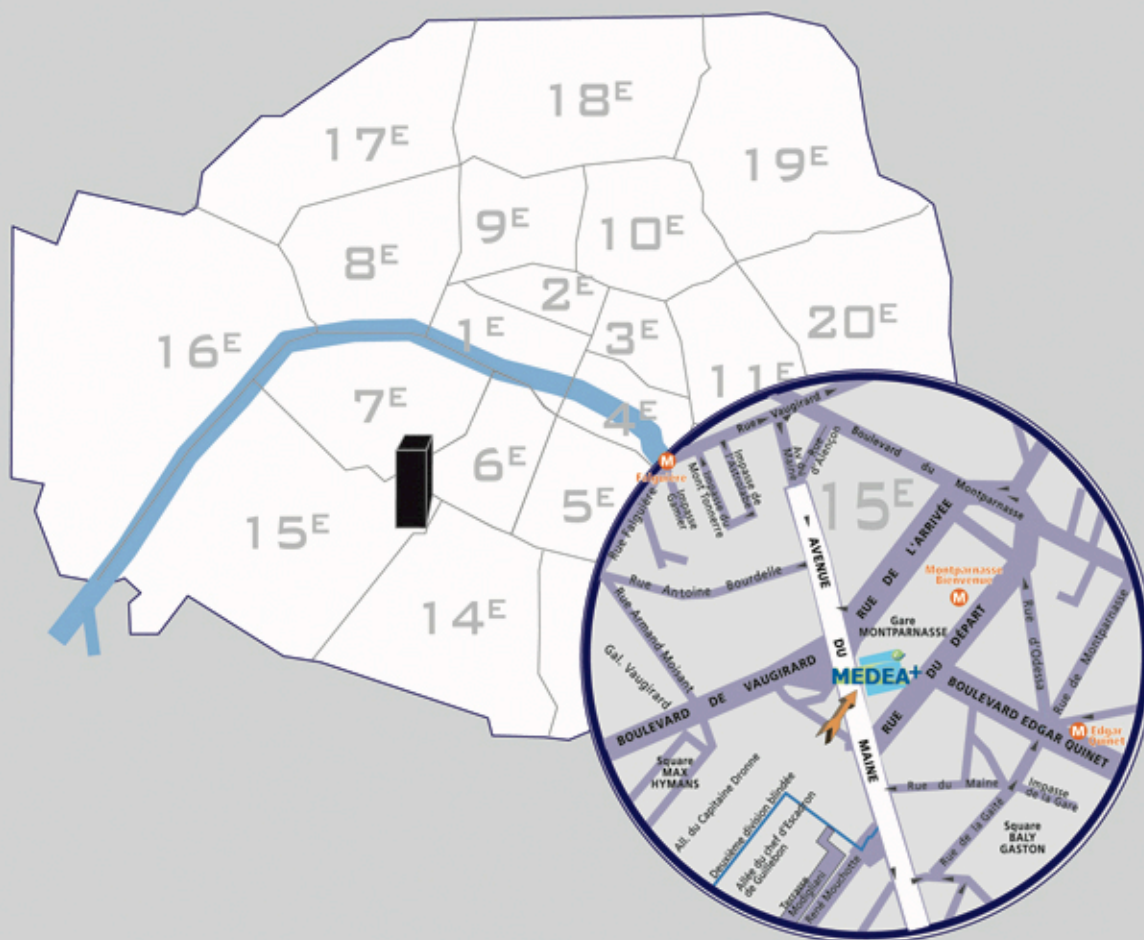


The MEDEA+ Programme covers both "Silicon Applications Platforms" in selected market areas and "Enabling Technologies" supporting them. Applications projects include the development of platforms addressing the main application markets for the information society, like **fixed and mobile communications**, high speed and mobile consumer electronics with multimedia and Internet capabilities, automotive electronics with communication and engine management, smart cards and associated safety and security solutions. Also of interest are projects in the area of architecture and standards, intellectual property libraries and tools, hardware-related software design, hardware/software co-design methodologies and demonstrators on silicon.

For projects in Technologies, apart from the development of those silicon solutions and design tools that are specifically needed for some applications projects, the greatest challenges are in the domain of state-of-the-art Lithography and 65 nm and below CMOS technologies. All achievements are carefully evaluated to stay in line with the ITRS (International Technology Roadmap for Semiconductors), the semiconductor industry's global roadmap for process development.

For additional information  
please visit our web site

[www.medeaplus.org](http://www.medeaplus.org)



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**EUREKA** 

**MEDEA+** (Σ!2365) is the industry-driven pan-European programme for advanced co-operative R&D in microelectronics ensuring Europe's technological and industrial competitiveness in this sector on a worldwide basis.

**MEDEA+** focuses on enabling technologies for the Information Society and aims to make Europe a leader in system innovation on silicon for the e-economy.