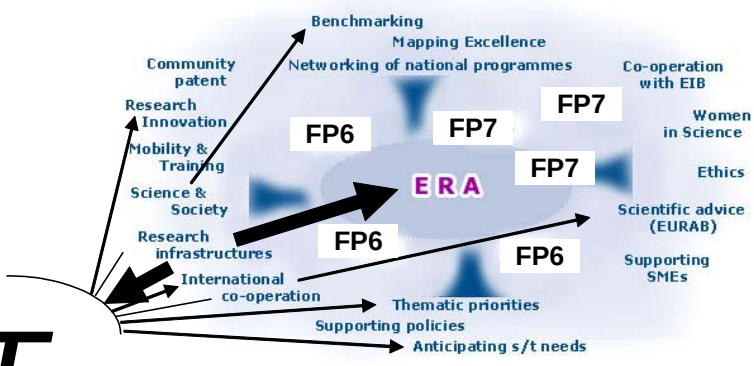
Ver. 16a, 28 Oct. 04



EuMaT

European Technology Platform for Advanced Engineering Materials and Technologies

From FP6 to FP7: Basic idea of EuMaT

An important part of the 17 billion € investment made into the 6th Framework Programme (FP6 - http://fp6.cordis.lu/fp6/home.cfm) went to research related to development and application of advanced engineering materials and related industrial technologies. This amount is expected to be significantly increased in the 7th Framework Programme (FP7). In addition to the instruments used in FP6 (e.g. Integrated Projects), a new one, the Technology Platforms, is expected to play an increasingly important role in FP7.

Correspondingly, **EuMaT – European Technology Platform for Advanced Engineering Materials and Technologies** has been launched in order to assure optimal involvement of industry and other important stakeholders in the process of establishing of R&D priorities in the area of advanced engineering materials and technologies. EuMaT should improve coherence in existing and forthcoming EU projects, and lead to (according the EU list of keywords):

1. "Radical Change"
2. "Sustainable Development"

Both, obviously, in the sector of advanced engineering materials and related technologies.

EuMaT should cover all elements of the life cycle of advanced engineering materials / technologies:

What are Technology Platforms …

Technology platforms (TP's, http://www.cordis.lu/technology-platforms) are new mechanism proposed jointly by the industry and the EU in order to define research, technology and development (RTD) priorities, timeframes and budgets on a number of strategically important issues with high societal relevance for the forthcoming RTD programs of the EU. TP's shall unite stakeholders around a common vision and approach for the development of the technologies concerned, with specific focus on the ***definition of a Strategic Research Agenda****. The implementation of the research agendas should take place partly by means of* ***existing instruments****, and partly, for research agendas of high ambition, complexity and scale, by means of the* ***new appropriate mechanism*** *which can be set up under the provisions of* ***Treaty Article 171****. This mechanism would comprise one of the principal axes of the* ***7th Framework Programme (FP7)****.*

R&D organizations*, e.g.*
- *IPPT*
- *IJS*
- *MPA*
- *ONERA*
- *NLC*
- *….*

Projects*, e.g.*
- *Industry*
- *National*
- *Eureka*
- *FP5*
- *FP6: NoE (KMM); IP (Extremat)*
- *FP7 …*
- *….*

Education, Academia*, e.g.*
- *Leuven*
- *Warsaw*
- *Stuttgart*
- *….*

Financial organizations*, e.g.*
- *Banks*
- *LIFT, ….*

Government Regulatory bodies, Notified bodies, Standardization organizations, society …
- *EU*
- *National*
- *Regional*
- *….*

Professional Associations*, e.g.*
- *EMRS*
- *EPERC*
- *DECHEMA*
- *DGM*
- *FDBR*
- *DVS*
- *….*

Industry*, e.g.*
- *Electronics*
- *Automotive*
- *Space*
- *Process*
- *Power*
- *….*

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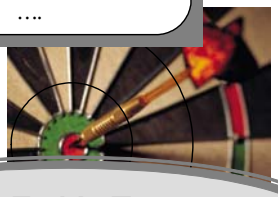
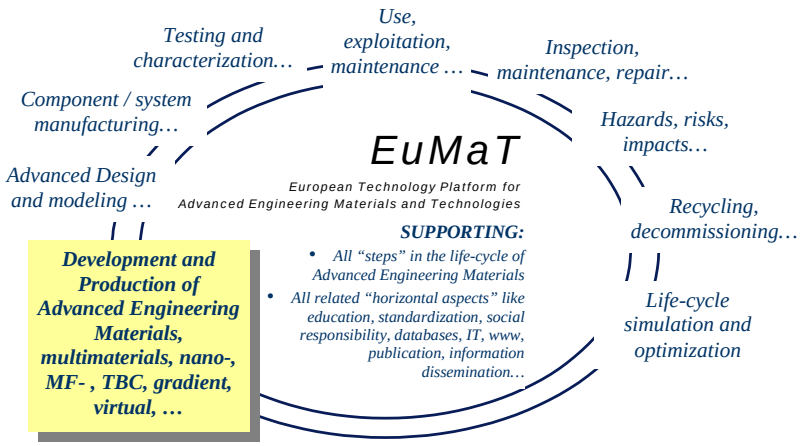


EuMaT
STRATEGIC RESEARCH AGENDA

… bringing together all important stakeholders active in the area of Advanced Engineering Materials and concerting their efforts towards common goals: Agreed priorities, optimized R&D investment , synergy…

- design, development & qualification of advanced materials
- advanced production, processing and manufacturing
- material and component testing
- material selection and optimization
- advanced modeling on all scales
- databases and supporting analytical tools
- life-cycle considerations, including impacts, decommissioning, reliability, hazards, risks and recyclability.



Main objectives of EuMaT

Main objective of EuMaT is to produce:

The Strategic Research Agenda which, with appropriate involvement of industry and other main stakeholders will provide basis for

- identification of needs and
- establishing priorities.

in the area of advanced materials and technologies. In addition, EuMaT will promote

- interdisciplinary education and training, and technology transfer and innovation
- societal considerations in the R&D (e.g. potential impacts on public health, safety, environmental risks)
- cooperation and initiatives at international level.

EuMaT will be open to all the interested new members accepting EuMaT goals, principles and statutes.

EuMaT Financing

For the deployment of its Strategic Research Agenda EuMaT will explicitly look for other than only EU based financing. For this purpose EuMaT will concentrate its efforts on **strong concerting of the EU and non-EU financing**, helping to avoid duplication and/or any sub-optimal use of resources. For its financing EuMaT will very much look at the experiences from other success stories (e.g. **European Coal and Steel Community (ECSC)**, and relay on the principles of the **PPP – Public-Private-Partnership** schemes.

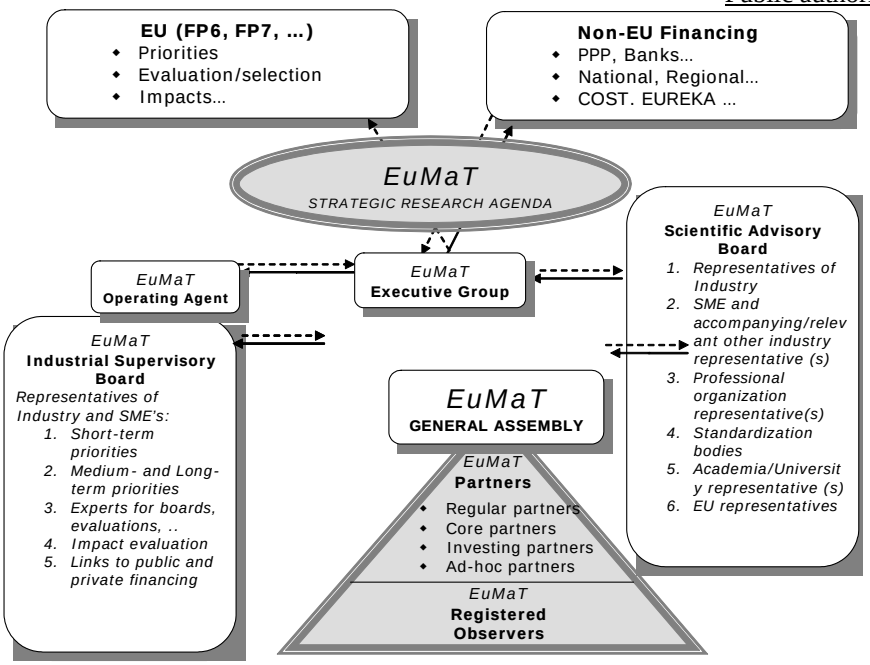
EuMaT Organization of the stakeholders – The pan-European partnership

The stakeholders will be organized as a EuMaT partners (regular ones, core ones, ad-hoc ones, each of which can be, at the same time also an "investing/financing partner"). The decision-making and management structure comprising essentially:

- the Industrial **Supervisory** Board
- the Scientific **Advisory** Board
- the all-partner **General Assembly** and
- the **Executive Group**, and the **Operating Agent**.

Main stakeholders to be involved are:

- Industry (large, medium and small, embracing the whole production and supply chain, including component, equipment and sub-system suppliers, service providers and user industries; those involved in technology transfer; also, industry associations)
- Public authorities (regulators and policy makers, funding agencies; in the particular notified and licensing bodies)
- Academic community (apart for education and research also those involved in innovation and interested in the issue of. European Innovation Area);
- Consortia from other EU projects
- Financial community (private banks including the EIB, the European Investment Fund EIF, venture capital, etc.; in particular supporting SME's)
- Civil society, including users and consumers (involving the also the future customers, e.g. through associations).



Tasks groups of EuMaT

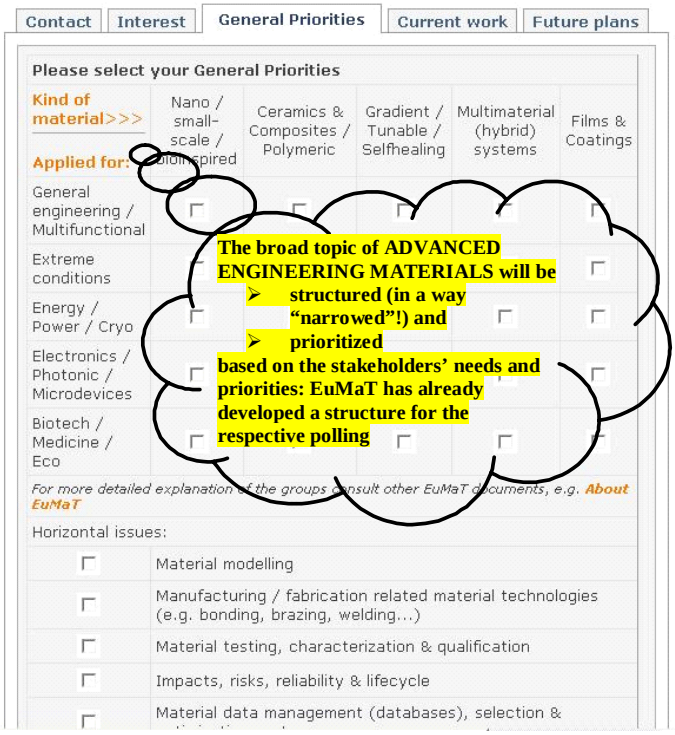
The practical work of EuMaT will be defined around the following main issues (the partners' views on their importance/priorities, current interests and their future plans will be polled):

I. TASK GROUP STRATEGIC RESEARCH AGENDA and communication with EU

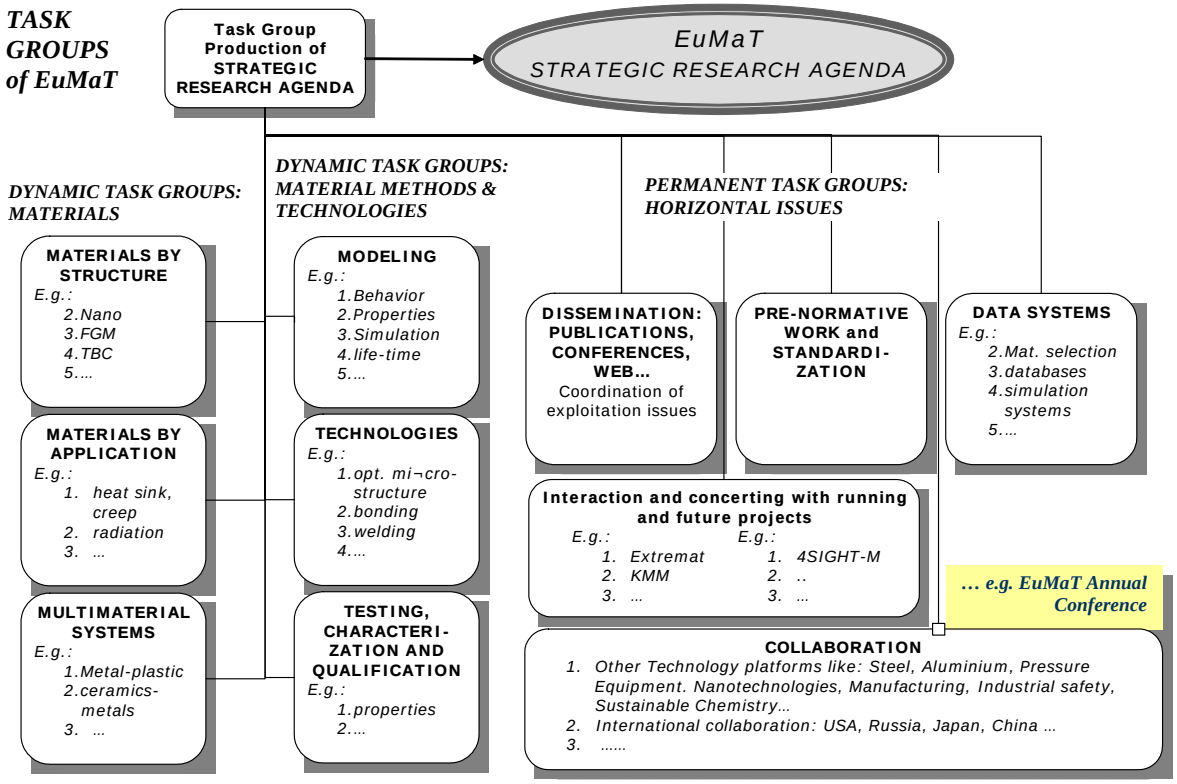
II. TASK GROUP Follow-up of, interaction with and concerting of new PROPOSALS and PROJECTS (e.g. in FP6 and FP7)

III. DYNAMIC MATERIAL-TOPIC-CENTERED TASK GROUPS covering various **Advanced Engineering Materials** for different **Types of Applications**, e.g.:

- Nanostructured materials (nano-powders): ceramic materials and intermetallic alloys
- Fiber-based composites; SiC-based materials
- Multimaterial (hybrid) systems: Metals-plastic, ceramics-metals, compounds …
- Materials with functionally gradient composition or structure (FGM)
- Thin/thick films and coatings: magnetic films, thermal barrier (TBC), corrosion protection,...
- High-temperature materials: heat sink materials, creep resistant materials (structural materials for long term application incl. lightweight aspects and oxidation resistance), in particular metals, composites and coating systems
- High strength and corrosion resistant materials (ultra steels, materials for bridges, marine environment, pressure equipment…)



- Self-passivating materials
- Radiation resistant materials
- Biomaterials (implants, FGM ceramic artificial joints, functional materials for enhanced human well-being (e.g.: anti-bacterial, isothermal, etc.), engineering polymers, soft materials…
- Materials for microdevices; magnetic thin films, sensors, materials for memory storage magnetic thin films, GaN, GaAlN
- Cryogenic, hydrogen storage materials: (CeLa) – (NiCoCuFe), quasicrystals (Ti–V–Zr–Ni)…
- Catalytic materials for new combustion systems (e.g.: alternative fuels, micro-combustor, etc.)



as well as the **particular topics** like:

IV. MODELING of advanced materials: properties, functional behavior, simulation, life-time, impacts, …. on all scales

V. MATERIALS PRODUCTION TECHNOLOGIES for advanced materials with optimized microstructure and heat treatment and manufacturing technologies (stabilized precipitations, DS, CC..) … also to include forming, shaping, welding, brazing, bonding and similar

VI. Advanced MATERIALS TESTING, CHARACTERIZATION AND QUALIFICATION

VII. Development of DATA SYSTEMS (e.g. for material selection, material data bases, simulation systems, etc.)

VIII. PRE-NORMATIVE WORK and STANDARDIZATION

IX. DISSEMINATION**:** publications, conferences, web…Coordination of exploitation issues

X. COLLABORATION with other TP's, international cooperation, etc.

Start-up of EuMaT

Establishing of the TP will approximately happen in the following steps:

- ✓ Organization of the kick-off meeting on:

EuMaT Kick-off Meeting: November 29, 2004, Brussels

- ✓ Establishing the TP infra-structure
- ✓ Drafting of the "Vision Paper"
- ✓ Organizing the "Launch Event" in early 2005

Preliminary contact points

In the setup phase of EuMaT the contact points have been preliminary and temporary defined as follows:

Contact Point EuMaT Industrial Supervisory Board
Dr. Eisele, BOSCH, Germany
Prof. Hirsch, Aluminium Hydro, Germany
Dr. Renner, BAYER Technologies, Germany

Contact Point EuMaT Scientific Advisory Board:
Dr. Maile, MPA, Germany
Prof. Basista, IPPT, Poland
Dr. Linsmeier, MPI Plasmaphysik, Germany

Contact Point EuMaT Operating agent:
Prof. Bogaerts, Technologica, Belgium
Dr. Jovanovic, MPA Stuttgart

Liaison to E-MRS (European Mat. Res. Society)
Prof. Kurzydlowski, WUT, Poland

Liaison to CEN (EU Standardization)
Mr. Pirlet, CEN, Belgium

EU (Commission)
Dr. S. Becker, Dr. L. Valles, RTD-G, Materials,
Dr. R. Tomellini, RTD-G, Nanotechnologies
Dr. G. Van-Goethem, Dr. S..Paidassi, RTD-J, Energy
Dr. L. Prista, RTD-H, Space & Transport

General contact/coordination address:
Dr. A. Jovanovic / secretary: Ms. R. Kokejl
MPA Stuttgart, Pfaffenwaldring 32,
70569 Stuttgart, Germany
Tel: +49 711 685 3007; Fax: +49 711 685 3947;
E-Mail: roswitha.kokejl@mpa.uni-stuttgart.de

Stakeholders (the "core group") involved in the preparation of EuMaT

(industry)
- ALSTOM, France
- Aluminium Hydro, Germany
- Arcelor, France
- BAYER Technology, Germany
- BESIX, Belgium
- BOSCH, Germany
- ENEA CRF, Italy
- ENI Technologie, Italy
- Fischer Adv. Composite Comps AG, Austria
- Centro Ricerche FIAT, Italy
- Hauzer, The Netherlands
- Metso Powdermet Oy, Finland
- Patria Aviation, Finland
- Schunk Kohlenstofftechnik, Germany
- UMICORE, Belgium

(associations)
- DECHEMA, Germany
- EEA, Belgium
- EFC, Europe
- E-MRS, Europe
- EPPSA, Germany/Belgium

(standardization)
- CEN, Belgium

(government, society…)
- Land Baden-Württemberg, Germany
- Selected Members of European Parliament

(academia, R&D)
- AUT, Greece
- BZF, Hungary
- CEA, France
- IJS, Slovenia
- IMR SAS, Slovakia
- INASMET, Spain
- IPPT, Poland
- MPA, Germany
- MPI Plasmaphysik, Germany
- ONERA, France
- VTT, Finland
- WUT, Poland

Further info & registration: www.EuMaT.org !