



Major trends and networking in the EU Materials R&D community: the Alliance for Materials (A4M)

Marco Falzetti

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What is Alliance for Materials



Madam Máire Geoghegan-Quinn European Commissioner for Research Innovation and Science European Commission Mister AntonioTajani Vice-President European Commission European Commissioner for Enterprise and Industry

European Commission

The enabling role of materials for industrial innovation and wealth creation under next FP8 and CIP

Dear Madam, dear Sir

....The global community is facing Grand Challenges. The European Enoulodge Society must tachle there through the best analysis, powerful actions and increased removerse. Challenges must tam into astainable rotations in avear atoeb werning, tighteness supplies of energy, waster and food agregate porteiner, public heath, paraderica and exercly. It must tackle the ownerching challenge of taming Europe into an eco-afficient economy.... [From the Lund Drehamism]

With the Land Declaration, clear lines have been defined for identifying future European R&D needs for the next 20 years. Starting from these lines, the European Commission has abaped a strategy as stated in the Agenda 2020, the Innovation Union Communication and other initiatives related to Materials R&D (Rwa Material Initiatives, KET ...). All these documents contribute towards setting the scene for achieving the technological progress necessary to meet the threat of the major Societal Trand Chard (SGC).

The optimum solutions for the main issues posed by the SGCs require a global approach where political, economical, ethical and technological aspects are taken jointly into account to develop solutions able to ensure world-scale, long term sustainable growth. Among these elements, the technological dimension is a front line problem.

Relevant technological initiatives are underway and flarther will appear to face the identified challenges. In almost any of these, the proposed innovative solutions have demanding requirements in terms of Materials needs. Many of these solutions will fail or will not be fully implemented if suitable and proper Materials are not available on time.

With its FP7 NMP programme, and previous FP and CIP actions, the European Commission has obtained relevant results to assure a strong European dimension to Materialis R&D and to promote a collaborative attitude among the European materials science community and the various European industries who produce and transform advanced materialis in innovative solutions and products. Therefore, we strongly support and encourage the Commission to maintain Materials R&D among the core enabling elements of the future R&D and Encovation programmes in order to strengthen Europe's Endenship position in Materials Research, and to avoid becoming dependent on others. We propose that the materials research programme should be continued with enhanced momentum, faster delivery and with increased efficiency through improved planning and implementing instruments.

The results achieved so far in materials science-industry collaborations have to be further accelerated and improved in view of the key role of materials in providing cost effective options for the future technological requirements posed by the SGCs.

In order for the new programme to prove effective, it should be devised and implemented taking into consideration the following fundamental elements and requirements that we would like to bring to your attention:

<u>Reinforcing Science-Industry synergy</u>

Materials R&D provides an outstanding opportunity to reinforce the science-industry dialogue, offering an attractive scenario where new models of collaboration and synergies between the two worlds can be tested. The new programme should include this aspect by continuing the leading role of industry in cooperative R&D projects.

Linking Research and Innovation

The generation of new advanced materials, the radical improvement in the characteristics of widely used conventional materials, the substitution of radicional materials with most co-efficient coses, the replacement of rare and/or scarce materials with alternative solutions, and the development of material solutions for energy sources of future, are key elements in creating immediate innovation in many industrial solutions. The iteration of these institutives include the improved performance and asstantiable eco-characteristics of many industrial and consumer goods, or even tatuly new peddets. In this framework, robust and credible innovation cannot be advised without statismion raw materials and their availability, as key elements of a long-term materials neosuring statingy able to ecocompast technological, economical and geopolicital aspects. In didition, recycling and developments of materials that enable improved recycling, should be fostered to close the materials loop and reduce dependency on nources outside Europe.

Connecting materials with design will ensure we achieve sustainable growth from R&D and accelerate innovation within the value chain. Europe has world class positions in both materials and product design and should capitalise on this.

The new programme should further boost integration with other important Commission initiatives, such as the Competitiveness and Innovation Programme (CIP) or any other similar future programme, with the aim of bridging between scientific/technological developments and the market valorisation of the new knowledge.

The key role of the European Technology Platforms (ETPs)

Materials R&D is by definition a crosscuring and enabling technology area which affrets almost every industrial actor. The achievement of effective coordinations between different sectors, while maintaining the relative autonomy, interests and strategies of each, is an essential condition to achieve the best and most effective use of community resources in Materials R&D targeted to make effective contributions to the SGCs. The ETPs should continue to play a pacific and dedicated role in the new programme, as the natural providers, able to bridge the different industrial sectors interests in materials. They take a view that embrance the whole value chains of materials production, including raw material extraction, the process industries producing and transforming materials, and the downstream industries producing industrial and consumer goods from these materials.

Through an alliance of a number of ETPs, each with a fundamental and significant materials component in their strategies, we will provide in the near future a proposal for concrete initiatives on how to align the value chain consisting of the supply of materials, their processing and the manufacturing needed to address the key societal challenges defined within the EU 2020 policy objectives. These initiatives can also be applied in the ongoing work of the High Level Group of Key Enabling Technologies.

For the European Technology Platforms

Yours sincerely



Marco Falzetti Steering Committee Chainman EuMart - Adramad Engineering Materiale and Technologies m.falzetti@c-s-m.it



Paul-Joël Derian Chairman of Board SUSCHEM – Sustainable Chemistry naul-joel.derjan@eu.rhodin.com

> Henryk Karas Chairman of High Level Oroup

SMR – Sustainable Mineral Resources h.karas@kghm.pl

Summaning lengthar



Heinrich Flegel Chairman of High Level Group MANUFUTURE – Future Manufacturing Technologies heinrich.flegelsädaimler.com

Dick Hendriks

Clothing info@euratex.eu

estep.eu

Albertul



Bertrand de Lamberterie Secretary General ESTEP – European Steel Technology Platform bertrand.de lamberteric@steelresearch-

Chairman of the Governing Council TEXTILE - Future of Textiles and

Brassels, 30th November 2010





What is Alliance for Materials

The original initiators of A4M initiative are six European Technology Platforms with a strong material agenda in their respective strategies. These are: EuMaT, Suschem, Manufuture, FTC (textile), ESTEP, SMR (sustainable resources), integrated by the two main European materials associations: E-MRS and FEMS



The way to



integrate the diversity of ideas in Materials developments across ETPs and other main stakeholders to create synergy and an integrated Materials R&D programme for Europe

ensure that the Industrial Value Chain acts as main driver for a credible integration of resources and players for speeding up exploitation and valorisation of materials research



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Value chain driven action





... is a Value chain driven action justifying for a pure Market PULL Materials R&D strategy?





A4M intends to concretely contribute to identify a reasonable identification of the market PULL-PUSH optimal balance





Communicating Materials Value

Materials... a difficult element to valorise.

















Why Alliance for Materials







Why Alliance for Materials

Even if the related industries belonging to A4M will have competitive activities the A4M group regards the complementary aspects of higher importance: the collaboration impact is stronger than the sum of the individual contributions

...not any more an option but a technological evidence with a competitive advantage



...on Materials R&D



Competing approach



Collaborative approach



Source: M.Goede, VW Group Research, SLC



Who take advantages from Alliance for Materials

- Industrybecause they can be on the front of the Materials R&D strategy definition for the coming years (market PULL)
- Academia and Researchbecause they can bring their visions and ideas to the attention of industry for possible future commercial valorisation (market PUSH)
- Industry and Researchbecause together they can design a coherent picture of the future Materials R&D need and strategies (balanced innovation)
- Industry and Researchbecause the current complexity of the technological scenario, ask to deal with:
 - Cross sectorial and cross disciplines approaches
 - Scale integration (nano, meso, macro)
 - Production integration (Materials and Manufacturing)
 - Time to market (certification and standards)











MATCH Consortium





Minerals and Mining















Inspiring Business



ЛS

KMM

FEDERATION OF EUROPEAN

MATERIALS SOCIETIES





EURATEX 브큐브큐브 THE EUROPEAN APPAREL AND TEXTILE CONFEDERATION

IK4 OTEKNIKER Research Alliance



LUXEMBOURG INSTITUTE OF SCIENCE AND TECHNOLOGY



ENERGY MATERIALS INDUSTRIAL RESEARCH INITIATIVE





Thank you for your attention



Marco Falzetti Manager EU Research Affairs Centro Sviluppo Materiali S.p.A.

Chairman of the Management Board of Alliance for Materials - **A4M**

Chairman of the Steering Committee **EuMaT** - The European Technology Platform on Advanced Engineering Materials and Technologies



e-mail: m.falzetti@c-s-m.it