



HYDRO

Public Funding Possibilities for Research & Development

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Public Funding Possibilities for Research & Development

➤ German Public Funding systems

- DfG
- BMBF
- Local agencies (NRW,...)

➤ European Public Funding systems

- EUFWP 1-7,
- Horizon2020
- EU Platforms
- Metallurgy Europe - Roadmaps
- Public Private Partnerships „PPT“

• Out of Europe

- US- Materials Genome Initiative
- TMS “ICME Implementation” Study

German Public Funding systems

- DfG : universitäre Forschung (Grundlagen)
- BMBF : angewandte Forschung, Industrieprojekte
 - Light-eBody project (e-car body design – running , *incl. RDB*)
 - ALLEE Projekt (electric components in Aluminium - in preparation, *incl. RDB*)
 - CLANG (thermodynamische Simulation) in preparation
- local agencies (NRW,ZIEL2, ..) : Standort-Förderung
- AIF Projekte : Industrieprojekte an Unis (inkl. SMEs!)
 - WVM, EFB , FVG,
- BDI : Deutschland -Förderung

AIF Projekte (WVM-Stifterverband Metalle - Beirat) :

- Durchgängige Planheitsmessung in Warmbandstrassen (BFI, TU Freiberg, u.a.)
 - Umformpressen
 - Aushärtbarkeit von Al-Mg-Si (6000)Legierungen (HMI-Berlin, Uni Rostock, **incl. RDB**)
 - Mg Drahtwalzen (TU-Freiburg)
 - Strangpresssimulation (WVM Freiberg)
 - Absenkung KCl-Gehalt beim Al- Recycling (IME Aachen)
 - Aluminiumdosenband Fertigung (TU Freiberg, AluNorf, **incl. RDB**)
 - Zerstörungsfreie Prüfung von stranggepressten Profilen mit Querpressnähten
 - Gewindeherstellung
 - Verzug von Aluminiumstrangpressprofilen (IUL Dortmund)
 - Tailored Al Profiles (IUL, GDA, OEMs)
 - Fibre reinforced Al profiles (IUL, GDA, OEMs)
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BDI (nahe an der deutschen Politik) :

- Arbeitskreis „Europäische Forschungs- und Innovationspolitik“
- FTI „Fast Track to Innovation“ EU-Initiative (Brussels meeting dec. 2013)
- KIC - Knowledge and Innovation Community : “Raw MatTERS”
(BMI , and via IME/RWTH Aachen – active involved)

European Public Funding systems

➤ EUFWP 1-7 - history

➤ Horizon2020 (FP8)

➤ EU Platforms (public lobbying activities organized/suported):

- **SPIRE** platform (EUROMETAUX) : raw materials (⇒ Hydro active)
- **EUMAT** : only EU recogninzed platform on material research
- **KETs** : Key Enabling Technologies (KETs) –**The RO-cKETs study**
- **Public Private Partnerships „PPT“** (FP7, ff):
 - **Factories of the Future (FoF)**: eine Initiative zu "**Fabriken der Zukunft**",
 - **Energy-efficient Buildings (EeB)**: eine Initiative für **energieeffiziente Gebäude**,
 - **Green Cars (GC)**: eine Initiative für **umweltgerechte Kraftfahrzeuge**.

EU : EUMAT platform and Steering committee

- EUMAT : only EU recognized platform on material research
 - EAA/EATP (European Aluminium Association) – „Horizon 2030 Vision“
 - ManuFuture, Nanofuture
 - FET „future & emerging technologies“ (ICT industry, DG connect dialogue)
- Alliance for Materials-A4M (6 platforms with strong materials agenda)
- EuMaT – working group input for the Strategic Research Agenda “SRA” :
 - SRA updated (add to address social grand challenges (defined in Horizon 2020))
 - New revision of EUMAT position paper for the next EU materials events
 - Typical deliverables of the WG’s are contributions to:
 - (i) updates of SRA’s, (ii) white papers, (iii) topics for the EC Work Programmes
 - Prepare for 2015 calls (end 2014) , 2016 calls in preparation (MatVal workshops)
- Metallurgy Europe – **Roadmap** – start MatSEEC-Initiative, EU reaction:
 - Metallurgy roadmap for Europe (A.Stallios, still in draft! to be circulated soon)
 - Incl. FEMS white paper on precipitation Al alloys (Expert Meeting Paris)
- **MatVal** project : workshops with interested partners (incl. A4M):

Matval CSA FP7 project by EUMAT platform

- MatVal project : workshops with interested partners (incl. A4M):
- helps implement the objectives of Alliance of Materials (A4M)
- With a leading role of the EuMaT ETP
- Next workshop : Bologna Spt.30th 2014
- any industrial initiative welcome : in close agreement with EU policy!






		EuMaT Working Groups						
Societal challenges		Modelling and multiscale	Materials for energy	Nano materials	Structural and Functional materials	Life cycle impact and risk	Materials for ICT	Bio materials
	Health, Demographic Change and Wellbeing							
	Food Security, Sustainable Agriculture and Forestry, Marine							
	Secure, Clean and Efficient Energy							
	Smart, Green and Integrated Transport							
	Climate Action, Environment, Resource Efficiency and Raw Materials							
	Europe in a changing world - Inclusive, innovative and reflective societies							
	Secure societies – Protecting freedom and security of Europe and its citizens							

MatVal

- Matval CSA FP7 project,
- helps implement the objectives of Alliance of Materials (A4M)
- leading role of EuMaT ETP
- 3rd workshop : Bologna 30.9.2014

- SRA updated (add to adress social grand challenges (def Horizon 2020))

European Aluminium Technology Platform EATP

EATP WG number		1	2	3	4	5	6	7	8	9	10	11	12
EATP WG Name		Primary	Liquid metal inclusion detector	Casting & solidification	Recycling & liquid Al purification	Predictive modelling	Non-contact sensors	Quantification of microstructure	Enabling Technology	On-line inspection surface systems	Surface engineering & corrosion	Network of excellence	Education & e-learning
Chair		Hydro Al	Sapa	Hydro Al	Corus	Novelis	Corus	Alcan	Sapa	EAA	Hydro Al	Alcoa	EAA
Smelting													
Casting & remelting													
Semi-production (extrusion & rolling)													
Applications (transport, building, general engineering, packaging, etc.)													
Recycling & refining													



EAA/EATP - Project proposals

Project	Objectives
LTD_BAMS	Develop an accelerated durability test for adhesive joints, a standard method for automobile constructors and suppliers
MAP	Develop an economic purification technology (< 200 USD/tonne), for removal of Fe, Si and Mn from molten aluminium in the casthouse, preferably by in-line treatment
AluMatter	Develop an advanced (interactive) internet based learning tool in Aluminium fundamentals, processing and application
NanoBulk (NanoLight)	Develop methods and produce nano-scale microstructured Al- and Mg-alloys with improved specific properties, incl. applications.
SurfMat (MFSL)	Develop intelligent surfaces and advanced surface treatments for Al in Multi-Material application in Automotive pre-treatment lines.
SLC (LAAS)	Develop new lightweight automotive concepts, technologies and improved production & manufacturing processes suitable for mass production leading to > 35% weight reduction in future vehicles.
SMARTLI	Ecological and economical development of methods to improve recyclability and profitability according to future legal and market requirements.
PRIMA	Substantially reduce the environmental impact of the primary Aluminium production process and reduce the energy loss

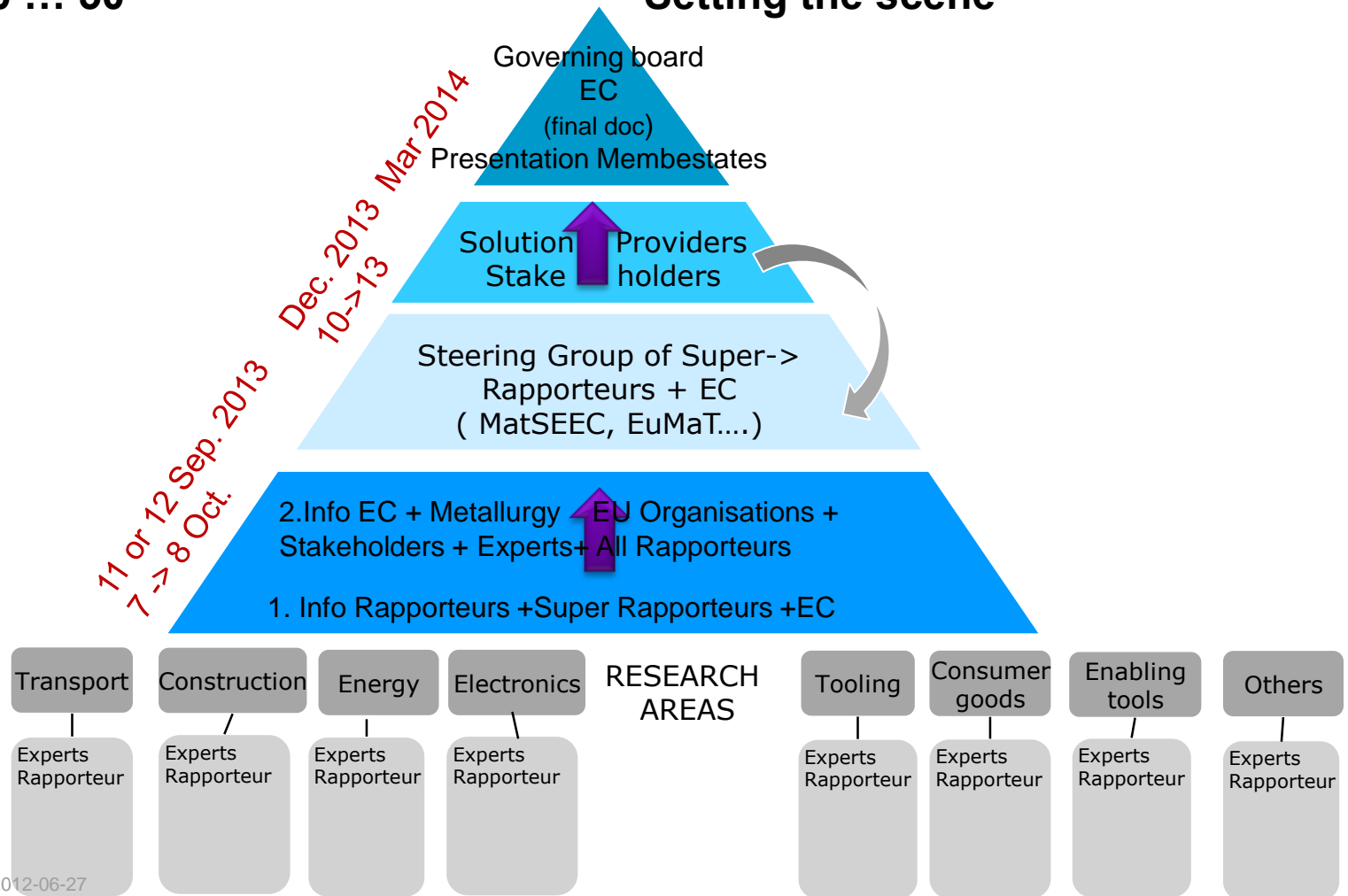
MatSEEC initiative : Metallurgy Europe – A Renaissance Programme for 2012-2022 - Key Recommendation :

- **The creation of the “Metallurgy Europe” research programme, a vibrant, well-coordinated and large-scale “Metallurgy Europe” Research Programme that can design, develop and deploy the next set of revolutionary alloys and composites for key industrial applications, including energy, renewables, mobility and health.**
- **It should be based on public and private contributions from the EC (Horizon 2020)³, national funding agencies, EU industry, EIROforum partners and academia**
- **Sustained and substantial funding of the order of 100 M€/yr for at least 10 years.**

Metallurgy of Materials Roadmap (A.Stallios)

2020 – 30 ... 50

Setting the scene



TMS/USA :

- US- **Materials Genome Initiative**
- TMS “ICME Implementation” Study