

FP7-téma NMP

Nanosciences and nanotechnologies, **M**aterials, and new
Production technologies

výzva na rok 2013

vyhlásenie ~ júl 2012

*uzávierka **október/december** 2012*

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delegát SR v Programovom výbore NMP

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Kto si vo výzve nájde svoju parketu:

- Strojári
- Elektrotechnici
- Stavbári
- Materiáloví vedci
- Farmakológovia
- Lekári
- Sociológovia
- Fyzici
- Chemici
- Informatici
- Metrológovia
- Polovodičiari
- Farmári
- Lesníci
- Oceánológovia
- Baníci
- Prekladatelia z čínštiny 😊

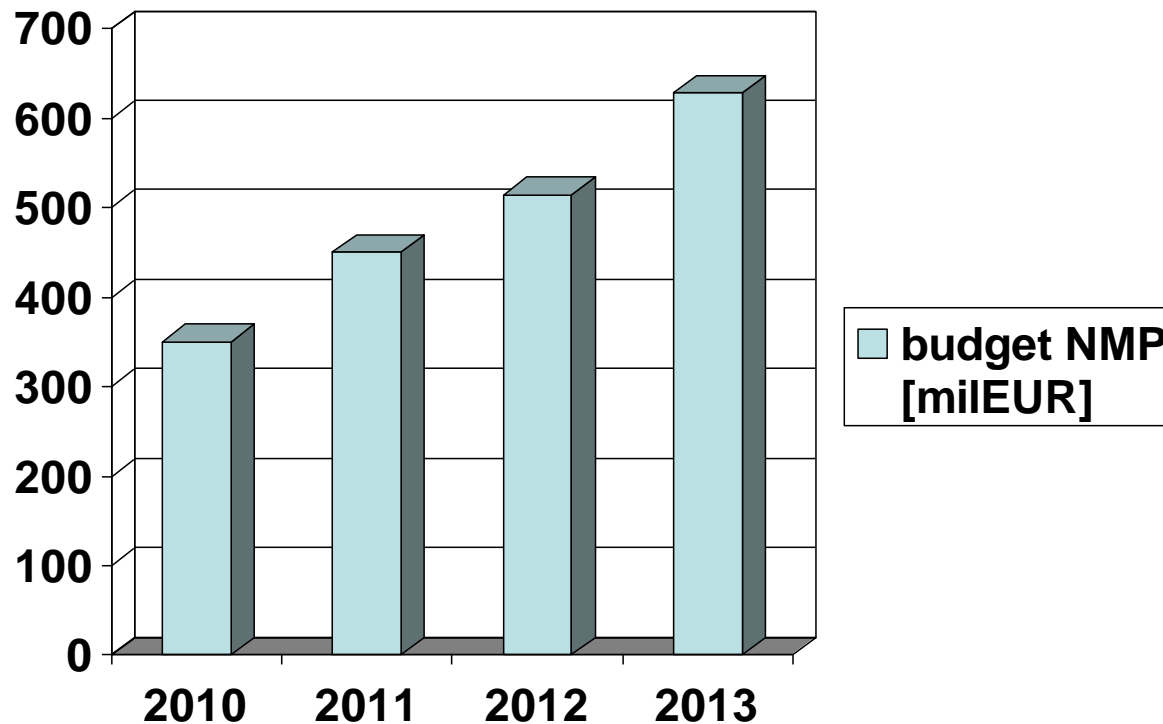
Prihláste sa za evalvátora / evalvátorku

Vyplňte prihlášku na stránke

<https://cordis.europa.eu/emmfp7>

NMP budget for 2011-2012-2013

	2011	2012	2013
[M€]	450	514	628



Typy projektov

Collaborative projects

LARGE > 4 M€ (priemerne 15 M€) (DEMO)

SMALL : zväčša 1M€ až 3 M€, max. 4M€

SME-targeted projects: at least 35% to SMEs

CSA = Coordination and Support actions

Oblast' 1: Nanosciences and Nanotechnologies

Boss: Christos Tokamanis

Oblast' 2: Materials

Boss: Renzo Tomellini

Oblast' 3: New Production

Boss: Jose-Lorenzo Valles

Oblast' 4: Integration

Oblast' 5: PPP projekty

Factories of the Future	FoF
Energy-efficient Buildings	EeB
Green Cars	GC



Big boss: **Herbert von Bose**

DG Research and Innovation
Directoriat G- Industrial Technologies



The biggest boss: **Robert Jan Smits**

DG Research and Innovation
Director General

Nano

- 1.1-1 Exploration, optimisation and control of **nano-catalytic processes for energy** applications LARGE
- 1.1-2 **Self-assembly** of naturally occurring nanosystems SMALL

- 1.2-1 Nanotechnology-based **sensors** for environmental monitoring. SMALL
- 1.2-2 **Nanotherapeutics** to treat bacterial infectious diseases LARGE

- 1.3-1 **Safety** in nanoscale production and products LARGE
- 1.3-2 Nanomaterials safety assessment: Ontology, database(s) for modelling and risk assessment SMALL
- 1.3-3 Development of a systematic framework for **naming** and assessing safety of the next generations of nanomaterials being developed for industrial applications LARGE

Nano

- 1.4-1 Development of an integrated **multi-scale modelling** environment for nanomaterials and systems by design SMALL
- 1.4-2 **Metrology** research for the development and validation of design rules for engineering of nanostructured and nano-enabled materials and devices LARGE
- 1.4-3 Development of methods and **standards** supporting the implementation of the Commission recommendation for a definition of nanomaterial LARGE
- 1.4-4 Developing innovative outreach and **dialogue** on responsible nanotechnologies in EU civil society CSA

Materials

- 2.1-1 Developing new precursors, new processing routes and functionalisations for **carbon fibres** LARGE

- 2.2-1 **Biomaterials** for Advanced Therapies and Medical Devices in the neurological/neuromuscular or cardiovascular fields SME
- 2.2-2 Biomaterials: Imaging and rapid precise prototyping technology for custom made **scaffolds** – coordinated call with **China** SMALL
- 2.2-3 **Wide band gap semiconductor** materials and structures for power electronics in energy technologies LARGE
- 2.2-4 Materials solutions for durable **energy-harvesters** SMALL

- 2.3-1 Advanced materials – our allies for a sustainable future CSA
- 2.3-2 Rational design of **functional materials**: networking and sharing of best practices CSA

Production

- 3.0-1 Tools for Monitoring and Assessing **Resource-efficiency** in the Value Chain of Process Industries SMALL
- 3.0-2 Integrated processing and Control Systems for Sustainable Production in **Farms and Forests** SME

Integration

- 4.0-1 **Graphene** production technologies LARGE
- 4.0-2 Innovative materials for efficient, stable and cheap **organic photovoltaic cells** SMALL
- 4.0-3 **From research to innovation:** substantial steps forward in the industrial use of European intellectual assets, stimulating the use of newly developed materials and materials technologies by the industry SME
- 4.0-4 Support for **cluster activities of projects** in the main application fields of NMP Theme CSA
- 4.0-5 **Deployment** of societally beneficial nano- and/or materials technologies in ICP countries CSA

Integration

- 4.0-6 **Safe Life Extension** management of aged infrastructures networks and industrial plants CSA
- 4.0-7 **ERA-NET** to support Innovation in the NMP thematic area CSA
- 4.0-8 The impact of the integration of **key enabling technologies** on industrial production and societal goals CSA
- 4.0-9 Organisation of events related to the **Presidencies** of the European Union CSA

Integration - SUROVINY

- 4.1-1 Development of new materials for the **substitution of critical metals** – coordinated call with the Japan Science and Technology Agency SMALL
- 4.1-2 Breakthrough Solutions for **Mineral Extraction** and Processing in **Extreme Environments** LARGE
- 4.1-3 European Intelligence **Network** on the Supply of **Raw Materials** CSA

The Ocean of Tomorrow 2013

- 1 **Biosensors** for real time monitoring of biohazard and man-made chemical contaminants in the marine environment LARGE
- 2 Innovative **antifouling materials** for maritime applications LARGE

NMP - návrh rozpočtu na 2013

	M€
LARGE-7	158.00
SMALL-7	82.00
SME-7	39.30
CSA-7	13.90
Call FP7- OCEAN -2013	7.00
Coordinated call EU+China	5.00
Coordinated call EU+Japan	5.00
Call ERANET	1.50
Sub-total (NMP topics)	311.70

Štart 10. júla

Koniec 23. októbra / 4. dec.

	M€
Factories of the Future	160.00
Energy-efficient Buildings	110.00
Green Cars	20.00
Sub-total (PPP topics)	290.00
<i>Zverejnenie výzvy</i>	<i>10. júla</i>
<i>Uzávierka</i>	<i>4. dec.</i>

Závěrečné poznámky:

1. Začnite okamžite konať !
2. Hľadanie partnera cez NCP – p. Janičkovič
3. Konzultácie s projektovým úradníkom v BXL
4. Prihláste sa za evalvátora/evalvátorku
 - žiadané „profesie“ :
 - *ľudia z EU12*
 - *ľudia z priemyslu*
 - *female*

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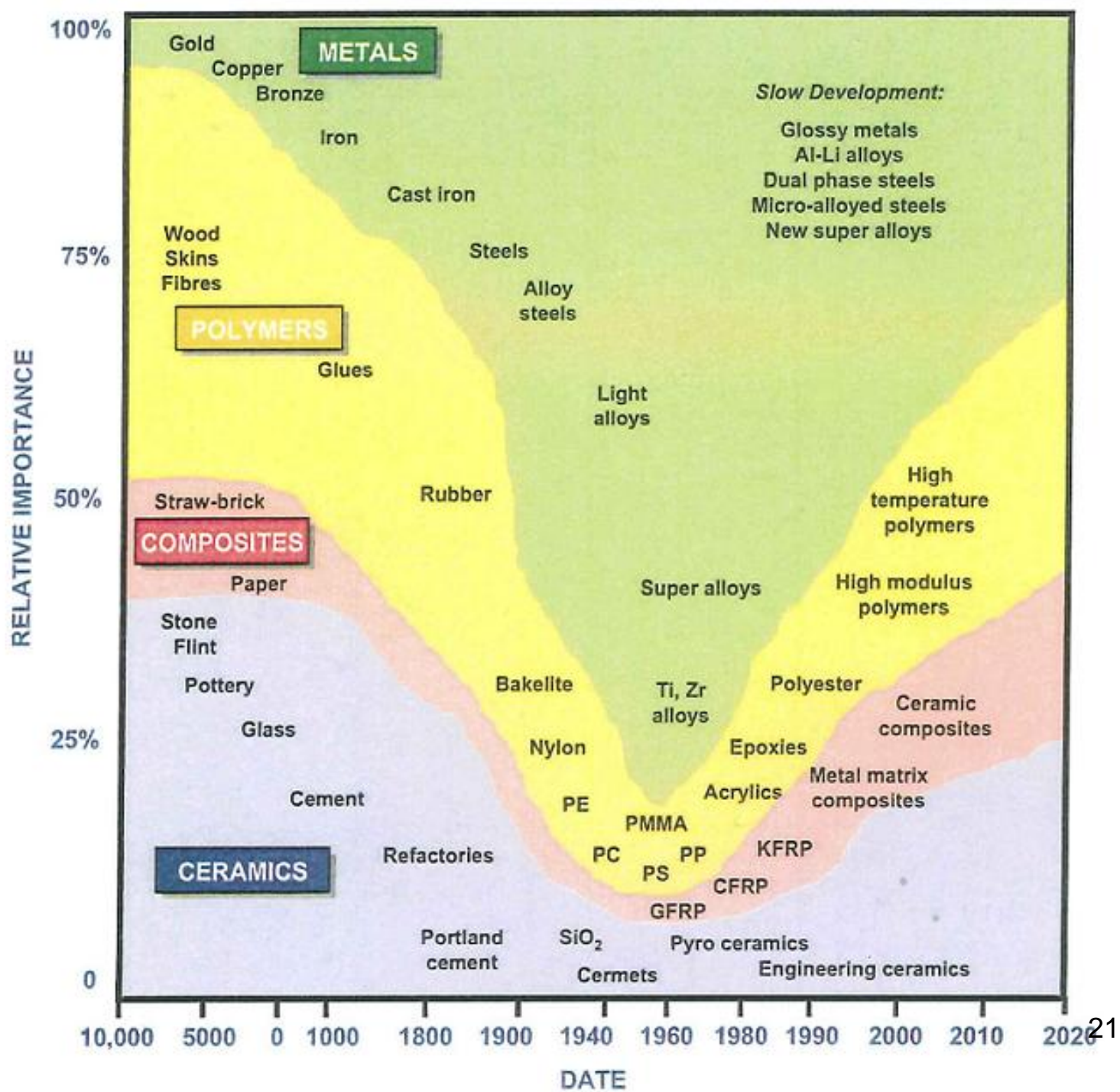
Advanced materials: submarkets

Submarkets	Market size (bn \$)	Ref. year	Forecast (bn \$)	Ref. year	Annual Growth Rate (%)
Biopolymers	1	2007	5.96	2015	25
Conductive polymer composite	1.4	2007	1.9	2013	5
Printable electronics	1.2	2007	48.2	2017	45
Diamond films & coating	0.53	2007	1	2012	14
Materials for medical and health applications	0.43	2006	39	2021	35
Nanomaterials	1	2006	4.2	2011	33
Engineering ceramics	4	2006	5.8	2011	6.5
Powder metallurgy	21	2006	30	2012	5
Thin-film & organic photovoltaics	0.84	2008	3.8	2015	24
Photocatalysts	0.8	2007	1.6	2014	10

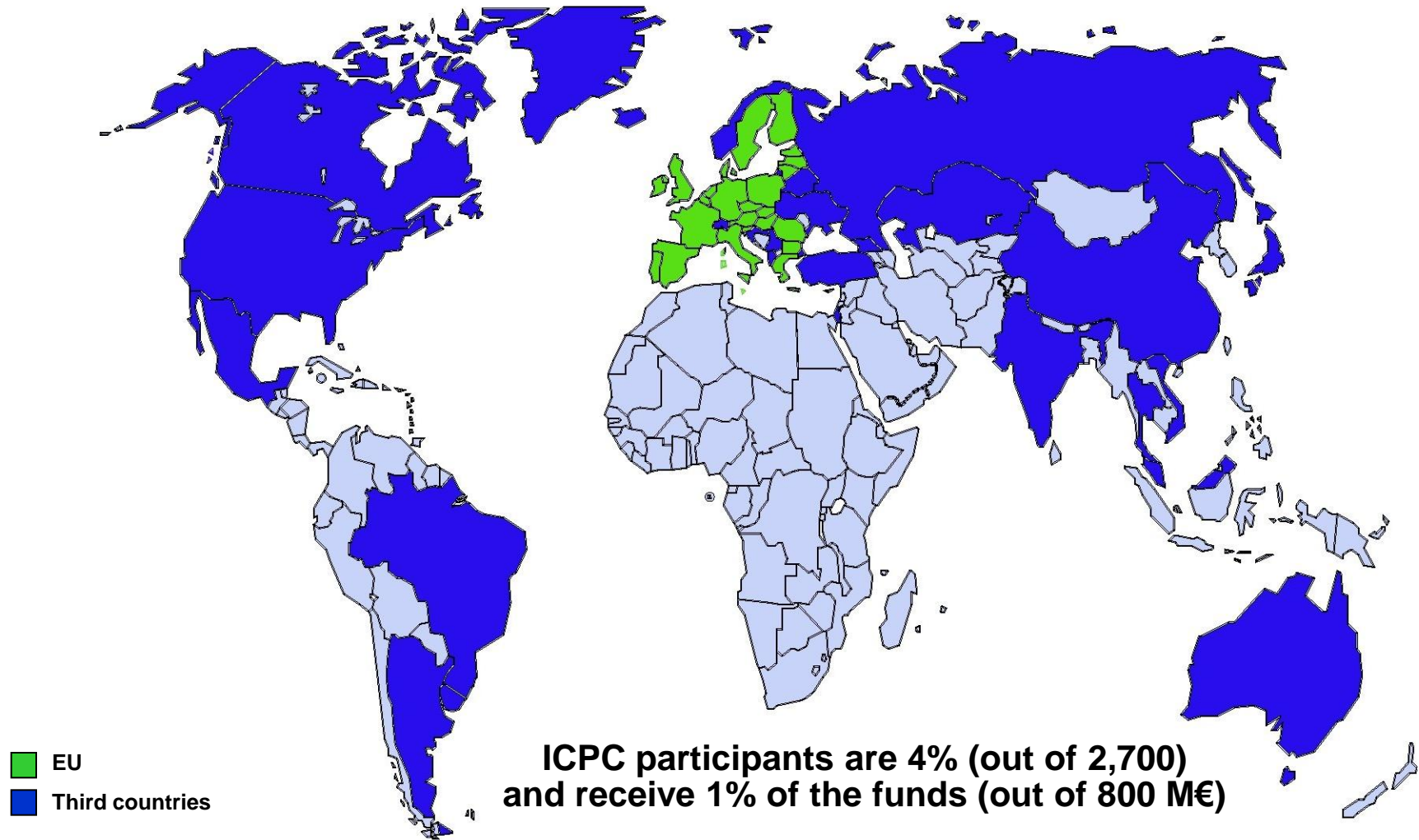
	Market size (bn \$)	Ref. year	Forecast (bn\$)	Ref. year	Annual growth rate (%)
Smart glass	0.85	2006	1.85	2013	12
Metal matrix composites	4.1	2007	5.9	2013	6
Advanced structural carbon products	1.7	2007	2.2	2013	4
Metamaterials	0.15	2007	1.65	2018	24
Superconductors	1.4	2007	2.7	2013	12
Specialty fibers	5	2006	9.2	2012	11
Electronic chemicals and materials	22.7	2005	34.8	2010	9
Semiconductor materials	14.44	2006	33.7	2012	15
Optical coatings	5	2008	5.7	2015	2
Optical data transfer (fibres, diodes)	1.7	2006	2.5	2009	13
Membranes for filtration	0.89	2006	0.31	2012	26
Materials for energy storage	0.823	2007	2.5	2011	32
Materials for energy efficiency	1.62	2007	30	2011	65
Materials for solar energy	17.2	2007	30	2010	20
Li batteries	4.6	2006	6.3	2012	5 ¹⁹
Dendrimers	0.12	2005	0.42	2010	28

Ďakujem za pozornosť a prajem
úspech v získaní projektu

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Participation in NMP-Materials projects (FP6+FP7)



Note: this map may well not be precise for the borders

Six FET proactive initiatives in 2011–12:

- 1. Quantum Information Technologies:** combining quantum physics with information science to perform complex calculations and communication tasks;
- 2. Unconventional Computing:** alternative computing paradigms and methods such as optical, chemical, molecular or analogue computing, possibly including self-assembling and self-regulating, life-like systems interfaced to traditional silicon technology;
- 3. Carbon-free ICT:** reduction of energy consumption of ICT (at device, circuitry and system, network, software, operating system, human machine interface levels), paving the way for a.o. low-power neuro-computers or autonomous sensor networks;
- 4. Complex Systems Science:** shifting from control and dependability to notions of emergence and lack of complete predictability needed to understand, analyse, manage and design future complex ICT systems;
- 5. Neuro-Bio-inspired Systems:** understanding how biological systems compute (massive parallelism, fault tolerance, low power operation, intelligent behaviour) and applying this understanding to ICT research;
- 6. Collective Adaptive Systems:** technologies and design paradigms for massive-scale pervasive ICT systems, capable of autonomously and dynamically adapting to changing techno-social contexts;