

FP7 UK

Nanosciences, Nanotechnologies, Materials and New Production Technologies

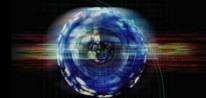
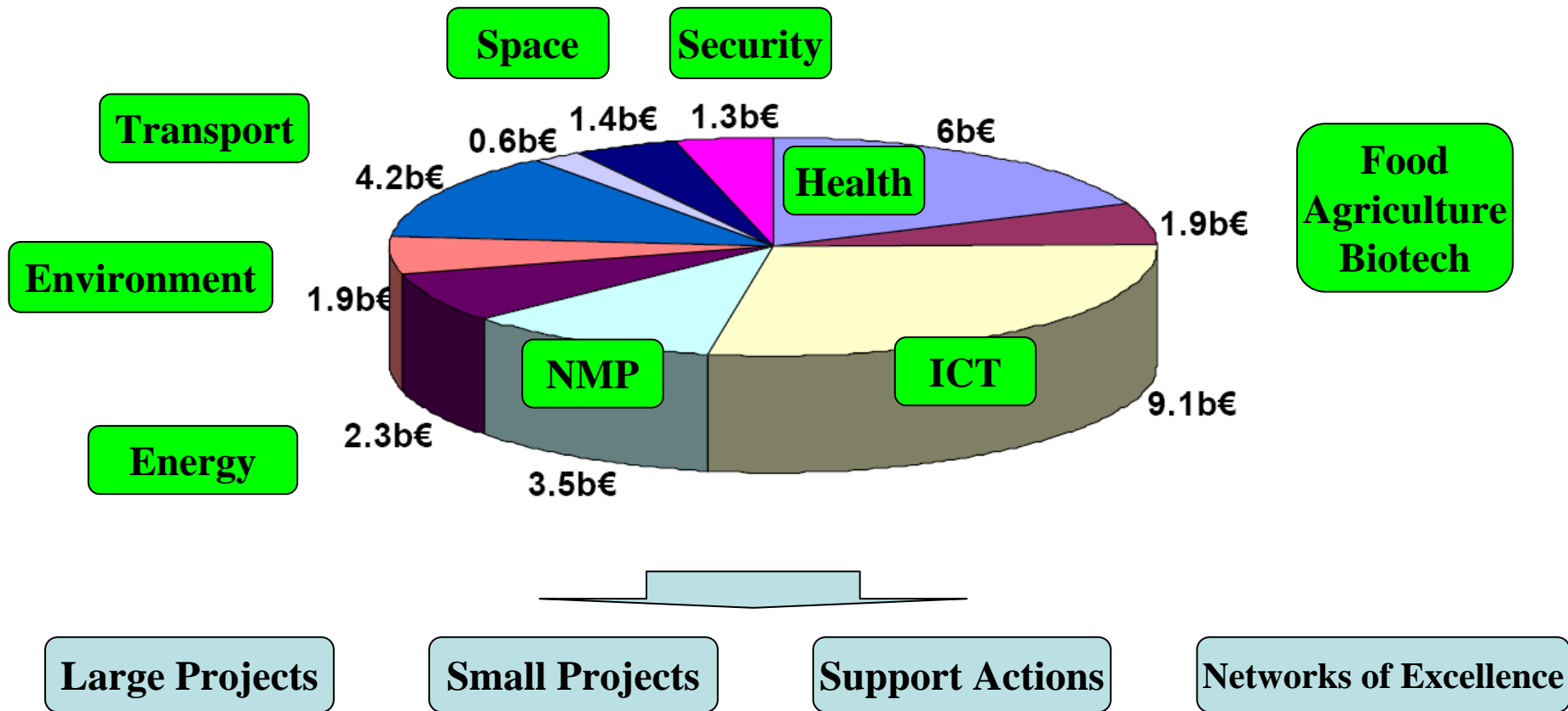
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National Contact Point

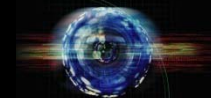
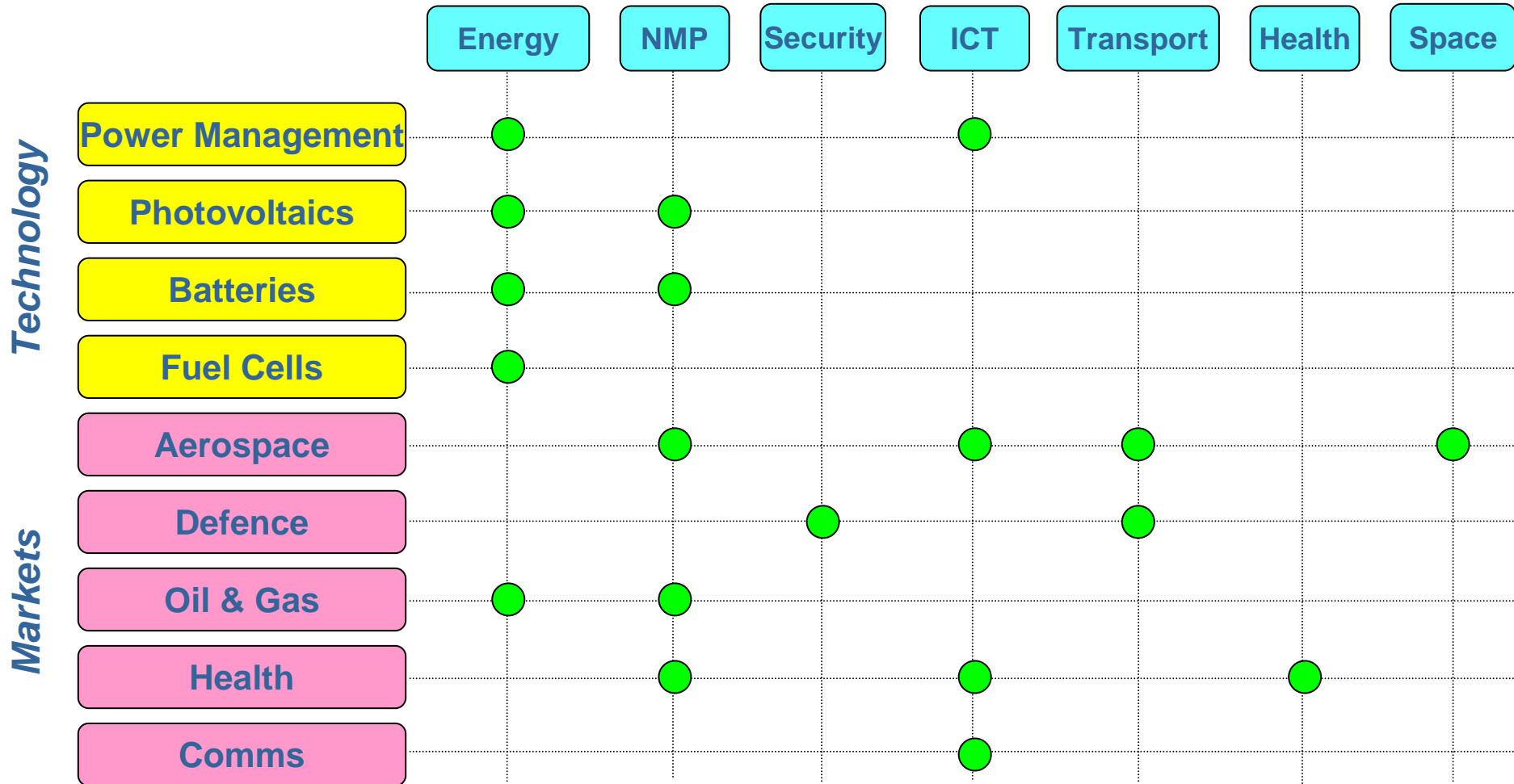
*Nanosciences, Nanotechnologies, Materials and new
Production Technologies - NMP*



Chapter 1 Cooperation (Core Technology or End Market CR&D)



Portable Power example – aligning to themes



What NMP is about

Improving industry competitiveness by developing, integrating and implementing high value-added technologies and processes:

- **Relevant to many sectors**
- **Relevant to many technologies**



UK in the NMP calls

- UK Industrial participation is at the same level as academia
- More than 50 UK SMEs were successful in 2007 (c.f. 80 in all of FP6).
- UK grants in NMP call alone will be equivalent to that from a full UK CR&D call.



Directly Relevant Sectors in the 2008 NMP call

All these sectors have topics related to them in the 2008 NMP Work Programme:

Aerospace

Electronics

ICT

Photonics

Automotive

Energy

Manufacturing

Textiles

Biotechnology

Environment

Materials

Transport

Chemicals

Forestry

Nanotechnology

Construction

Health

Oil & Gas



NMP - Example of Collaborative Projects

- **Small** or medium-scale focused research projects
 - <4m€ Funding (Typically €2-3m, ~6 organisations)
 - Generally research focused with some end markets & applications
- **Large** scale integrating collaborative projects,
 - >4m€ Funding (typically €6-8m, ~12 organisations)
 - Still pre-competitive research, but tying closer into end markets and applications.
 - Higher dissemination & training element
- **SME** collaborative projects
 - Aimed at making SMEs research and knowledge-driven
 - >35% SME participation (no prescribed No. of participants)
 - SME drive but don't have to be the coordinator



Work Programme Main Features

- **Strategic use** of funding schemes
 - One funding scheme per topic
- Calls are by **funding scheme**
- Budget allocation is **by call** (not by Activity/area) size

**Very Prescriptive Work Programme – proposal positioning
is critical!**



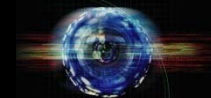
NMP 2009 Call Timescales and Details:

Call Publication 19th November 2008

1st Stage Deadline 17th February 2009

2nd Stage Deadline 22nd July 2009

Total budget ~€250m



2009 Summary table – Nano & Materials

Section		2009	
		Type	Topic
4.1: Nanosciences & Converging Sciences	4.1.1: NanoSciences & Converging Sciences	Small	Nanotechnology for harvesting energy in 2020
		Small	NanoBio S&T (Joint call with Dir. E: Biotechnologies, Agriculture, Food)
	4.1.2: NanoTechnologies & Converging Technologies	Small	Molecular factory
		CSA	Interfacing researchers and investors
	4.1.3: Health & Environmental Impacts	Small	Life cycle of nanotech products, (Joint call with Dir. I: Environment)
		CSA	Exposure scenarios to nanoparticles
4.2: Materials		Small	Self-ordered 2D nanomaterials and graphene-related materials
	4.2.2: Knowledge-based smart materials with tailored properties	Large	Oxide materials for electronic applications
	4.2.3: Novel biomaterials and bio-inspired materials	Small	Biomimetic gels and polymers for tissue repair
	4.2.4: Advances in chemical technologies and materials processing	SME	New biomass-based composite materials and their processing
	4.2.5: Using engineering to develop high performance knowledge-based materials	Large	Light high-performance composites



2009 Summary table – New Production and Integration

Section		2009	
		Type	Topic
4.3: New Production	4.3.1: Development and validation of new industrial models and strategies		
	4.3.2: Adaptive production systems	Large	Innovative pathways for sustainable chemical production
		Small	Adaptive control systems for responsive factories
	4.3.3: Networked Production		
	4.3.4: Rapid transfer and integration of new technologies into the design and operation of manufacturing processes	SME	Holistic and integrated approach to high-performance, reliable and adaptive machine tool design and production
		Small	Automation and robotics for sustainable crop & forestry management
4.3.5: Exploitation of the convergence of technologies			
4.4: Integration of Technologies for Industrial Applications	Large	Nanomedicine: fighting cancer (in coord. with Theme HEALTH)	
	Large	Reducing environmental footprint of energy intensive industries	
	SME	Innovative and knowledge-based tooling industry	
	CSA	Nanomedicine: coordination amongst major stakeholders (in coord. with Theme HEALTH)	
	CSA	EuroNanoForum in BE, ES, HU, PL	
	Eragnet	ERANET on Technical Textiles	
INCO-related topics	Small	Nanostructured sensors - (Coordinated call with Russia)	
	Small	Novel membranes for water technologies (SICA for MENA and African countries)	



Topic Focus – Large Projects

Title: Innovative pathways for sustainable chemical production

Scope includes:

- Eco-efficient chemical synthesis and corresponding processes with high resource efficiency and reduced waste and emissions.
- Includes highly selective multi-functional catalysts, but not bio-catalytic routes.
- Industrial leadership essential

Title: Reducing the environmental footprint of energy-intensive industries

Scope includes:

- Use of alternative and renewable energy resources including bio-based
- Industries include non-ferrous metals, pulp & paper, cement, glass, ceramics etc. NOT chemical, petrochemical, iron& steel.



Topic Focus – Small Projects

Title: Nanotechnology for harvesting energy via photovoltaic technologies

Scope includes:

- Problem-solving for new applications, up-scaling and improved efficiency
- Increased innovation in European industry and products is an expected impact.

Title: Novel Membranes for Water Technologies

Scope includes:

- Materials engineering for membranes that enable safe drinking water
- Cooperation with ICPC countries essential – Europe in a world role.

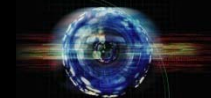


Topic Focus – SME Projects

Title: New biomass-based composite materials and their processing

Scope includes:

- New processes, properties and applications
- High positive environmental impact is essential



2010 Summary table – NMP

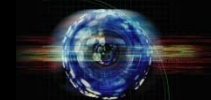
Section		2010	
		Type	Topic
4.1: Nanosciences	4.1.1: NanoSciences & Converging Sciences	CSA	Stimulating participation modes and societal debate on nano-sciences and nano-technologies
	4.1.2: NanoTechnologies & Converging Technologies	Large	Components for energy converters based on nanotechnology
	4.1.3: Health & Environmental Impacts	Small	Substitution of materials and components by environmentally-friendly nano-solutions
		CSA	Regulatory scenarios
4.2: Materials	4.2.2: Knowledge-based smart materials with tailored properties	Large	Organic-inorganic hybrids and related advanced materials architectures for electronics and photonics
	4.2.3: Novel biomaterials and bio-inspired materials	Large	Model scaffolds for the rational design of bioactive materials
	4.2.4: Advances in chemical technologies and materials processing	Small	Materials functionalisation and selective membranes for catalytic reactors
	4.2.5: Using engineering to develop high performance knowledge-based materials	Small	Modelling of materials degradation and reliability
	4.3.1: Development and validation of new industrial models and strategies	Small	Preventive quality management approaches for customised production
4.3: New Production	4.3.2: Adaptive production systems	Small	Plug-and-play components based on adaptive smart materials
	4.3.3: Networked Production	Small	Embedded intelligence of products and systems to use and buildings life-cycle management
		SME	Supply chains approaches for small series industrial production
	4.3.4: Rapid transfer and integration of new technologies into the design and operation of manufacturing processes	Small	Methods, standards and tools for production network engineering
		Small	Formulation engineering for designed products with particulate structure
	4.3.5: Exploitation of the convergence of technologies	Large	Intelligent, scalable, adaptable manufacturing platforms for multi-material meso/micro components and devices with micro and nano-scale functional features
4.4: Integration of Technologies for Industrial Applications	Large	Nanomedicine: selection for appropriate therapy or drug and therapy monitoring (in coord. with Theme HEALTH)	
	Large	Complex nanotech-based sensors for multi-parameter detection	
	SME	A new generation of multi-functional fibre-based products produced by new and flexible manufacturing concepts	
	Eragnet	ERANET PLUS on Nanosciences	
	Eragnet	ERANET PLUS on Nanotoxicology research	
INCO-related topics	Eragnet	ERANET on Manufacturing (Manunet II)	
	Small	Research on health and environmental impact of nano-particles (coordinated call with USA or Advanced materials architectures for efficient energy storage (Potential Coordinated call with US - DoE and/or NSF)	
	Small	Nanotech de-pollution and valorisation with Latin America	



Coming in July 2009 (provisional!)

Components converters based on nanotechnology

Materials functionalisation and selective membranes for catalytic reactors



Some advice

- Begin early (but there will be further calls)
- Read carefully the contents of the Work Programme!
- Take into account the evaluation criteria (from the 1st stage...)
- Submit a draft version on EPSS one week before the deadline!
- Do not leave it until the last minute to present the « Submit » button!



How FP7UK Can Help

- Helping you decide your strategy
- The Work Programmes in Detail
- Proposal positioning & links with the commission
- Some partnering – links to NCPs from other countries
- We encourage you to use KTNs
- The do's and don'ts of applying

FP7UK



Advice and Assistance in the UK

FP7UK National Contact Points:

www.fp7uk.co.uk

- ✓ **0870 600 6080**
- ✓ **help@fp7uk.co.uk**

The Official Commission FP7 Website, Cordis is:

http://cordis.europa.eu/fp7/home_en.html

