FP6*UK*

Nanotechnologies Materials and Production

FP6*UK*

European Framework 7 Programme Opportunities

Institute of Materials

14th December 2006

FP6*UK*

NMP opportunities in FP7

James Johnstone

FP6 UK Contact Point for Industrial Technologies (NMP)

nmp@fp6uk.co.uk 0870 191 0113

Proposals for NMP in Framework 7

Essential Features of FP7

- Co-decision Parl, Council, Comm
  - Starts 1st January 2007
  - Runs for 7 years
  - Budget review in three years
  - Simplification not radical change
  - Open to anyone
    - MS + AS
    - Third countries ICPC + ‘Rich’

The FP7 proposal has four chapters

Cooperation **– Collaborative research**

Ideas **– Frontier Research**

People **– Human Potential**

Capacities **– Research Capacity**

Plus

JRC (non-nuclear)

JRC (nuclear)

Euratom

Cooperation Budget

			€m
Health			6050
Food, Agriculture and Biotechnology			1935
Information and Communication Technologies			9110
Nanosciences, Nanotechnologies, Materials and new Production Technologies			3500
Energy			2300
Environment (including Climate Change)			1900
Transport (including Aeronautics)			4180
Socio-economic Sciences and the Humanities			610
Security and Space			Space 1430 Security 1350

Subject to agreement!

Technology Platforms (2)

Hydrogen and Fuel Cells	Nanoelectronics	Nanomedicine	Plants for the future
Water supply and sanitation	Photvoltaics	Sustainable chemistry	Forestry
Global animal health	European road transport	European rail research	Waterborne technology
Mobile and wireless communications (eMobility)	Innovative medicines	Embedded systems (ARTEMIS)	Aeronautics (ACARE)
Space	Steel	Textiles and clothing	Future manufacturing Technologies (MANUFUTURE)
Construction	Advanced engineering materials and technologies (EuMaT)	Industrial Safety	Networked and electronic media
"Food for life"	Networked European software and services (NESSI)	Robotics (EUROP)	Photonics (Photonics21)
Satcom	. . .	. . .	. . .

Overall FP6 NMP outlook

- Framework 6 2002-2006
- NMP Budget €1.4BN
- Production and Integration is at least a quarter of the programme
- 25 Member states + associated (by subs)
- UK typically wins 10-12% of total budget (2nd) – €150M (£100M)
- Participates in 66% (255) of total projects awarded (~386)
- 590 Partners and 50 coordinators
- Success rate 6:1

NMP FP7 WP (subject to final agreement)

- Continuity with FP6!
- 4 Areas – over 40 topics with assigned ‘funding schemes’
  - Nanosciences and Nanotechnologies
  - Materials
  - Production
  - Integration of NMP
- ERA-NET(+)

4.2 Materials

- 4.2.1 Mastering nano-scale complexity in materials

  Nanostructured polymer-matrix composites (LSIP)

  Nanostructured coatings and thin films (SMFRP)

  Characterisation of nanostructured materials (CSA)

- 4.2.2 Knowledge-based smart materials with tailored properties
  - **Organic materials for electronics and photonics (LSIP)**
  - **Nanostructured materials with tailored magnetic properties (SMFRP)**
  - **Advanced material architectures for energy conversion (SMRFP)**

Subject to
Final EC agreement!

4.2 Materials

- 4.2.3 Novel Biomaterials and bio-inspired materials
  - **Highly porous bioactive scaffolds controlling angiogenesis for tissue engineering (LSIP)**
- 4.2.4 Advances in chemical technologies and materials processing
  - **Flexible efficient processing for polymers (SME-TP)**
  - **Nanostructured catalysts with tailor-made functional surfaces (SMFRP)**
  - **Renewable materials for functional packaging applications (SMFRP)**

Subject to
Final EC agreement!

4.2 Materials

- 4.2.5 Using engineering to develop high performance knowledge based materials

  - **Novel materials tailored for extreme conditions and environments (LSIP)**

  - **Modelling of microstructural evolution under work conditions and in materials processing (SMFRP)**

Subject to
Final EC agreement!

- 4.1 Nanosciences and Nanotechnologies
- 4.1.3 Health, Safety and Environmental Impacts

- 4.1.3-1 Specific, easy-to-use portable devices for measurement and analysis (IP)

- 4.1.3-2 Impact of nanoparticles on health and environment (STREP)

- 4.1.3-3 Critical review on the data and studies on the potential impact on environment and health of nanoparticles (CSA)

- 4.1.3-4 Creation of a critical and commented database on the impact of nanoparticles (CSA)

- 4.1.3-5 Coordination in studying the environmental and health impact of nanoparticles and nanotechnology based materials and products (CSA)

Subject to
Final EC agreement!

4.3 New Production

- 4.3.1 Development and validation of new industrial models and strategies
  - (3 Topics)
- 4.3.2 Adaptive Production systems
  - (2 Topics)
- 4.3.3 Networked Production
  - (2 Topics)
- 4.3.4 Rapid transfer and integration of new technologies into the design and operation of manufacturing processes
  - (2 Topics)
- 4.3.5 Exploitation of the convergence of technologies
  - (2 topics)

Subject to EC agreement!

4.4 Integration

- 7 Topics including;
  - **Advanced Wood-Based Composites and their Production (LSIP)**
  - **Application of New Materials Including Bio-Based Fibres in High-Added Value Textile Products (SME-TP)**
  - **Multifunctional materials for future vehicles (LSIP)**
  - **Resource Efficient and Clean Buildings (LSIP)**

Subject to
EC agreement!

Implementation of the NMP theme

- Annual calls
- Budget per funding scheme (LSIP,SMFRP,CSA,SME-RP)
  - Topics compete with each other
- Question of size?
- Sensible and appropriately resourced consortium
- Subject to 2 stage evaluation in NMP
  - First call to be published late Dec!
  - Collaborative projects (APR (10+2 pp) and Oct 07 (full))
  - Coordination and Support Actions (Sept 07)
  - May differ for each theme!
- Reduced evaluation critieria (S & T, Impact and Implemention)
- Coordinated calls prefered

Subject to EC agreement!

Subject to EC agreement!

2 Stage Application process for “Integrating, focussed & SME” projects – subject to change!

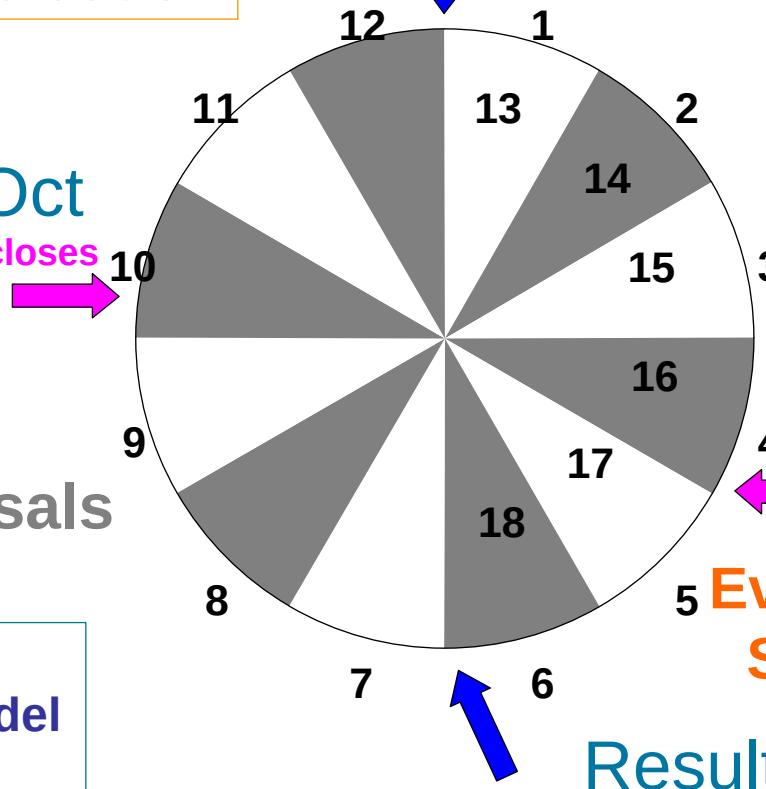
Contract 15 - 21 Months

Money 18 – 24 months!?

Evaluation

22nd DEC

1st Stage Opens



~ 4th Oct

2nd stage closes

10+2 Pages

2nd May

1st Stage Closes

Full Proposals

Evaluation – May/June

ST Quality & Impact

Results – ‘go/no go’

Negotiation and Preparation of Model Grant Agreement

Proposed new EC contribution limits

Research and technological activities: – 50% of eligible costs except for:

- Public bodies: – 75%
- Secondary and higher education establishments: – 75%
- Research organisations (non-profit): – 75%
- SMEs: – 75%
- Demonstration activities: – 50% of eligible costs
- Other activities: – 100% including e.g. Management

  Frontier research actions – 100%

  Coordination and support actions – 100%

  Training and career development of researchers actions – 100%

Receipts are taken into account to determine the final

Community financial contribution

Main implications of FP7 arrangements

- Consortium agreements must be in place before contract
- More money to less participants (esp SME's)
- High rejection rate at stage 1
- Only the best will survive
- Less audits than FP6
- Longer time to contract