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| **FP7 NMP: Preliminary Overview of 2013 Work Programme**  The following summary gives some insights into the development of the 2013 FP7 NMP Work Programme for the next call to open in July.  **Budget** The overall budget for the 2013 NMP Work Programme is expected to be approximately EUR 610 million, with around EUR 100 million allocated to cross-cutting basic research, EUR 220 million to more application-specific research, and EUR 290 million for Public-Private Partnerships (PPPs).  **Public-Private Partnerships** The PPPs are considered by the Commission to be very successful so far in achieving their objectives and there seemed to be a strong move towards more of this particular funding scheme in Horizon 2020. DG-RTD is hoping to launch a **PPP in production** soon, as are DG-INFSO in the areas of **photonics** and **robotics**. It is also expected that the Green Cars PPP may be downscaled in scope to electromobility.  **Potential activities funded under the 2013 Call**  **Nanosciences and Nanotechnologies**  a) Maximising the contribution of Nanotechnology on sustainable development:   * Exploration, optimisation and control of nano-catalytic processes for energy applications; and * Self-assembly and biomimetics of lignocellulosic systems.   b) Nanotechnology for benefiting environment, energy and health:   * Nanotechnology-based sensors for environmental monitoring and other mass market applications; and * Nanotherapeutics to treat bacterial infectious diseases.   c) Ensuring the safety of Nanotechnology:   * Safety in nanoscale design and processing; * Nanomaterials safety assessment data curation: Ontology, databases for modelling and RA; and * Development of a systematic framework for naming, handling and assessing safety of hybrid nano-molecular systems being developed for renewable energy and other industrial applications.   d) Cross-cutting and enabling R&D:   * Multi-scale modelling for nanomaterials and systems by design; * In-situ synthesis of nanomaterials; * Metrology research for the development and validation of design rules for engineering of nanostructured and nano-enabled materials and devices; * Deployment of societally beneficial nanotechnology in ICP countries; * Support for cluster activities of projects in the main nanotechnology application fields; and * Supporting skilling and career development to meet the needs of EU industry and society for responsible nanotechnologists.   **Materials**  a) Health:   * Novel biomaterials for advanced therapies for a specific disease process; and * Biomaterials: Imaging and rapid micro/nano prototyping technology for custom made scaffolds - with China (NSFC).   b) Energy:   * Wide bandgap semiconductor materials and structures for power electronics in energy applications (wind energy, photovoltaics, grid); and * Materials solutions for durable energy-scavengers (for low-power applications, e.g. autonomous nano/microdevices, medical implants, smartcards).   c) Environment and strategic supply:   * Replacement of critical materials (e.g. rare earths, platinum group elements) - with Japan (JST/MEXT); and * New functional ( e.g. anti-bio-fouling and/or self-healing) materials for advanced underwater maritime applications (within the 'Oceans of tomorrow' initiative).   d) Opening new business areas or production routes:   * New bio-bases for materials in chemical value chains.   e) Interdisciplinary, enabling & multiuse:   * Developing new, economically and ecologically advantageous, precursors and processing routes for carbon fibres.   f) Integration:   * 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).   g) Structuring ERA and other CSA:   * Benchmarking and best practices of LCA assessment with focus on the ecological implications of materials; and * Advanced materials - our allies for a sustainable future.   **New Production Technologies**  a) New Production:   * Tools for Monitoring and Assessing Resource-efficiency in the Value Chain of Process Industries; * Processing and Control Systems for Sustainable Production in Farms and Forests; and * Embedded Knowledge in Intelligent Products (IMS Joint Call with Korea).   b) Integration:   * Safe Life Extension Management of Aged Infrastructures and Industrial Plants.   c) Raw materials:   * Breakthrough Solutions for Mineral Extraction and Processing in Extreme Environments; and * European Intelligence Network on Critical Raw Materials.   **Topics covered by NMP in PPPs**  a) Energy-efficient Buildings (EeB) PPP - Cross thematic Call NMP, ICT, Energy, Environment:   * Nanotechnology for light-weight, fire-resistant construction materials and components; * Safe, energy efficient and affordable eco-innovative materials for building envelopes/partitions to provide a healthier indoor environment; * Integration of most promising materials and technologies; * New testing methods and methodologies leading to pre-standardisation activities along the value chain (from design until commissioning) in energy efficient integrated building applications; * Development of energy efficient solutions for district heating and integration with decentralised thermal energy generation at district level; and * High efficiency retrofitting of all buildings residential, commercial, changes of use.   b) Factories of the Future PPP (FoF) - Cross thematic Call NMP & ICT:   * Improved use of renewable resources at factory level; * Innovative re-use of equipment and integrated factory lay-out design; * Workplaces of the future: the new human-centred production site (IMS priority); * Innovative methodologies addressing social sustainability in manufacturing; * Innovative collaborative design environments for product-services and enhanced, interoperable models for related processes; * Mini-factories for customised products using local flexible production; * New hybrid production systems in advanced factory environments based on self-learning human-robot interactive cooperation; * Manufacturing strategies for renovation and repair; * Innovative business models for product-services and their manufacturing in globalised markets (IMS); * Manufacturing of using engineered metallic and composite materials; and * Manufacturing of highly miniaturised components. |