Factories of the future

part ICT

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Továrny budoucnosti - ICT témata

Charakteristika projektů:

- Výzkum řízený průmyslem - jasná vedoucí role průmyslového partnera v projektu, validace výsledků, kvantifikované cíle, řešené vztahy k IPR, implementace v průmyslu 2013-5
- Klíčová role ICT v továrnách budoucnosti

Návaznost na první výzvu „smart factories“ - financováno je 5 projektů, téma bude pokračovat další výzvou příští rok

Aktuální témata - výzva 20. 7. 2010, uzávěrka 2. 12. 2010 :

„virtual factories“ - řízení produktového řetězce, integrace produktů a služeb ,

„digital factories“ - modelování a testování produktu před výrobou

FoF-ICT-2011.7. 3 :
Virtual Factories and Enterprises

Contents/scope:

End-to-end integrated ICT solutions that enable innovation and higher management efficiency in networked enterprise operations

Funding scheme: Collaborative Projects –IPs and STREPs

Expected impact:

- Higher management efficiency of networked and sustainable business operations.
- ICT tools enabling the participation of SMEs in virtual factory environments.
- New business models and innovation scenarios for a low-carbon economy.

Call: FoF-ICT-2011.7. 3 ; budget: 45M€

FoF-ICT-2011.7. 3 :
Virtual Factories and Enterprises

Targeted outcomes:

a) **Distributed, adaptive, and interoperable virtual enterprise environments**
   - **beyond existing integration of novel management methods and ICT to help virtual factories/enterprises move operational capability**

b) **Real-time management of volatile manufacturing assets**
   - **manage inventories, stakeholder relationships, product configurations, knowledge and skils across the value chain**

c) **Component-based tools and architectures enabling the innovative dynamic composition of services**
   - **sustainable lifecycle management of product-based services**

d) **Internet-based, user-centric collaboration, sharing and/or mixed reality tools**
   - **Including new manufacturing business models and practices to enhance and sustain product based services across the value chain**

FoF-ICT-2011.7. 4 : Digital Factories Manufacturing design and product lifecycle management

Contents/scope:

early stages of manufacturing and engineering through interoperable models, engineering platforms, computer-assisted product and process development and analysis, and virtual prototyping and testing environments to reduce the need for physical mock-ups

Funding scheme: Collaborative Projects (IP and STREP), CSA

Expected impact:

- Reinforced European leadership in knowledge-driven platforms, tools, methodologies, product development and manufacturing.
- Accelerated product design and manufacturing, enabling new products to be realised with a considerably shorter time-to-production and time-to-market.
- Drastically improved accuracy, reliability and speed of simulation techniques for manufacturing processes and/or full complex products permitting design decisions earlier in the design process.

Call: FoF-ICT-2011.7. 4 ; budget 35M€

FoF-ICT-2011.7. 4 : Digital Factories Manufacturing design and product lifecycle management

Targeted outcomes:

a) **Comprehensive engineering platforms**
- **crossdisciplinary information sharing, workflow integration, knowlwdge capture**

b) **User-intuitive tools for simulation and virtual prototyping with forward and backward compatibility**
- **e.g. better models with forward nad backward compatibility, model auto-generation, meshong, optimisation**

c) **Tools for holistic modelling and simulation of full complex products and processes**
- **with multi-physics features, allowing tolerance changes**
- **product/processes behavionr simulation from atomic level upwards**

For more info: ICT work programme and contact ICT NCP