Manufuture 2013 EFFRA Roadmap & Horizon 2020



Speaker:

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FoF PPP background

- Positive experience of FoF PPP since 2009:
 - development of strategic research roadmap in FP7
 - 4 calls with 150 projects launched; first results now available
 - o over 1000 organisations
 - total value of projects over €1200 Mill
- Commitment of industry to European RD&I: PPP Declaration (Aarhus)
- Broad consultation (stakeholder & public) for new roadmap 2014-2020

new strategic research roadmap 'Factories of the Future 2020'





FoF PPP Assessment (by independent experts)

- Added-value of action at Union level
- Scale of impact on industrial competitiveness, sustainable growth and socio-economic issues
- Long-term commitment from all partners based on a shared vision and clearly defined objectives
- Scale of the resources involved and the ability to leverage additional investments in research and innovation
- Clear definition of roles for each of the partners and agreed key performance indicators over the period chosen

Factories of the Future PPP shall continue under Horizon 2020

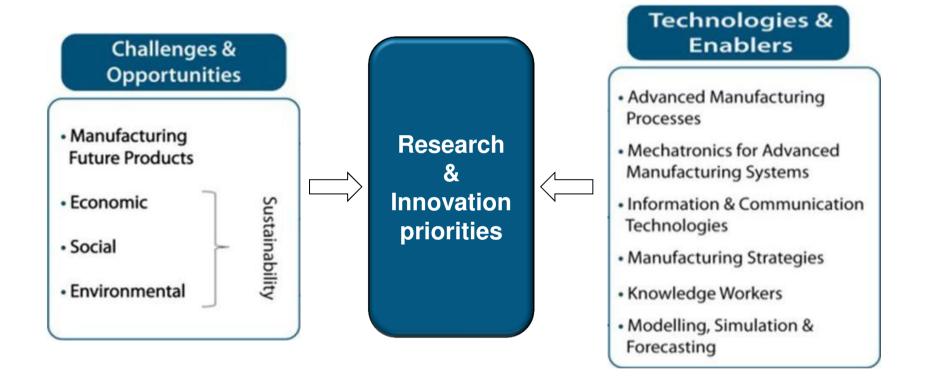


Expectations

- Reach Europe 2020 & Horizon 2020 targets by addressing both societal challenges & industrial competitiveness:
 - o creating competitiveness, sustainability & employment
 - creating sustainable, safe & attractive workplaces
 - fostering creation of advanced technology based companies
 - reducing impact on environment (doing more with less, reducing consumption)
 - strengthen research & innovation potential of Europe
- Reach EU Industrial Policy targets:
 - sustainable growth of EU manufacturing
 - increase value added by manufacturing
- Underpin EU Trade & Investment Policy
 - contribute to retention of EU as world's leading trade region



Identifying R&I Priorities



Identify priorities by understanding challenges, determining technologies & enablers required to meet challenges and measuring the (potential) impact of technologies

Research & Innovation Priorities

Research & Innovation Priorities

Challenges & Opportunities • Manufacturing Future Products • Economic • Social • Environmental

Domain 1: Advanced Manufacturing Processes Innovative processing for both new & current materials or products

Domain 2: Adaptive and Smart Manufacturing Systems

Innovative manufacturing equipment at component & system level, including mechatronics, control & monitoring systems

Domain 3: Digital, Virtual & Resource Efficient Factories

Factory design, data collection & management, operation & planning, from real-time to long term optimisation approaches

Domain 4: Collaborative & Mobile Enterprises
Networked factories & dynamic supply chains

Domain 5: Human-Centred Manufacturing Enhancing the role of people in factories

Domain 6: Customer-Focused Manufacturing

Involving customers in manufacturing value chain, from product process design to manufacturing associated innovative services

Technologies & Enablers

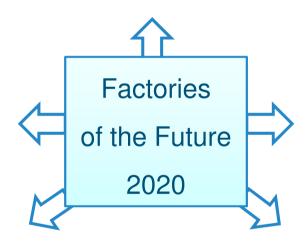
- Advanced Manufacturing Processes
- Mechatronics for Advanced Manufacturing Systems
- Information & Communication Technologies
- · Manufacturing Strategies
- Knowledge Workers
- Modelling, Simulation & Forecasting

Foreseen Impact

economy

generating added value

employment developing high skilled jobs



enabling society meeting societal challenges

doing more with less preserving the environment

deepening cooperation strengthening research & innovation



Towards Contractual PPP (cPPP)

- Establish stable but dynamic industry-led roadmap (base reference for the cPPP within H2020)
- Commitment from private side (matching funds, fostering participation and uptake, stimulation of technology transfer)
- Definition of whole H2020 budget for continuity
- Formalisation of public & private roles

EFFRA's actions

- Coordinate implementation of Factories of the Future 2020
- Collaborate closely with Manufuture ETP (overall vision)
- Support initiatives like 'Smart Specialisation' & Added Value Manufacturing KIC
- Promote direct participation of manufacturing industry including SMEs
- Expand FoF projects database



EFFRA Roadmap & Horizon 2020 Monitoring & KPI

- EFFRA has developed unique projects database
- Database enables projects to be mapped on priorities, challenges & technologies/enablers
- Domains enable identification of expected impact, monitoring of impact during and after project conclusion

Key Performance Indicators

- Economic impact assessment
- Societal impact assessment
- Monitoring innovation capacity
- Monitoring impact using S&T performance indicators on project level (in a dedicated database)
- Environmental impact assessment



Clustering & Networking

- Establish links and cooperation between projects
- Identify opportunities of clustering projects results for wider "demo" activities with larger industry participation
- EFFRA annual workshops:
 - exchange of expertise & strengthening of network
 - external experts for market uptake, venture capital

EFFRA's Role

- Further develop FoF network & links with manufacturing-related initiatives across DGs (RTD, CNECT, ENTR, ENV, ENER, MOVE, EAC, REGIO)
- Strengthen links with fellow cPPPs (SPIRE, EeB, EGVI, Robotics, Photonics, 5G Infrastructure)
- Monitor national & regional activities (via Manufuture NRTPs) within "Smart Specialization"

KETs Integration & Pilot Activities

- Multi-sector approach:
 - under FP7 projects have integrated KETs
 - Factories of the Future 2020 incorporates KETs
- All FoF projects have included elements of demonstration
- Factories of the Future network has experience through demo & pilot activities for projects results validation and diffusion
- EFFRA involved directly in KET High Level Group (HLG)
- Need for 'add-on' initiative to support larger pilot-lines, to avoid negative impact on successful continuation of PPPs & distract resources
- Possibility to combine EU, national & regional funding (within "Smart Specialisation") to enable pilot lines (up to TRL8)



Next Steps

- Contractual PPP:
 - fine-tune memorandum of understanding (MoU)
 - expected signature in December
- Work to ensure an efficient and industry-relevant Added-Value Manufacturing KIC
- Strengthen alignment with EU Industrial Policy
- Preparatory work for FoF 2014 & 2015 Calls within AIAG:
 - o priorities, budget, demo content, SME focus
 - expected launch at PPP Info-Day in <u>December</u>
- Interaction with other PPPs roadmaps and related initiatives to avoid overlapping and wasting of resources



Stakeholders waiting for "good news"

"Without a strong industrial base, Europe's economy cannot prosper"

EC Competitiveness Reports 2013

- Progress ongoing, but Challenges remain: improved innovation vs high unemployment, ongoing low investment & high energy costs
- Recovery & Growth
 - important not to underestimate Industrial Policy target of 20% GDP
- Vital Part of Economy
 - manufacturing represents large share of Europe's economy
 & key to its competitiveness
- Sustainable Growth
 - retains and creates highly skilled jobs
- Support for SMEs
 - manufacturing industry represented by EFFRA is mainly composed of SMEs who need strong support

Thank You

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