

“Factories of the Future” PPP

# Challenges and Trends



Massimo Mattucci  
EFFRA Chairman



**EFFRA**

EUROPEAN FACTORIES OF THE FUTURE  
RESEARCH ASSOCIATION

*a MANUFUTURE initiative*

EFFRA: who we are

# European association EFFRA

- non-profit and industry-driven European association
- created by MANUFUTURE technology platform
- aims to strengthen research in production technologies
- partner of the European Commission
- creates consensus on common R&D priorities
- more than 100 members from across Europe
- open to new members from industry and research



**EFFRA**

EUROPEAN FACTORIES OF THE FUTURE  
RESEARCH ASSOCIATION

*a MANUFUTURE initiative*

Who we are and what we do

# European association EFFRA

- explaining industry needs to public authorities
- mobilising private investments in European research
- safeguarding industrial relevance of EU-projects within the 'Factories of the Future' programme



EFFRA: who we are

# Large industry members

**SIEMENS**



ArcelorMittal

**ABB**

*Danfoss*

**DAIMLER**



acciona



**BOSCH**

**FESTO**



SONAE INDÚSTRIA



**JOHN DEERE**



**CIE Automotive**



**DANISH CROWN**



**CENTRO RICERCHE FIAT**



**COMAU**

EFFRA: who we are

# Small and medium-sized members

- Bazigos
- C2i2
- CASP
- CEI
- Convergent
- Correa Anayak
- Dallara
- DELCAM
- Doppelmayr  
Seilbahnen
- EXALCO
- FEAMM
- Fidas
- GEMA Medical
- Gesco
- Gizelis
- Gorenje Orodjarna
- Ibermoldes
- INDO
- Industria de Turbo  
Propulsores
- Lamaplast
- Manas
- Microelectronica
- RU Robots
- SAPA Operaciones
- SCM Group
- Sintesi
- SOLMATES
- Synesis



EFFRA: who we are

# Research members

- AICE-ITC
- AIJU
- Aimen
- Azterlan
- Arts et Métiers
- CARTIF
- CEIT
- CTDE
- Eindhoven University of Technology
- EUVE
- Fatronik
- FIR
- Fraunhofer IPA
- Ideko
- Ideko
- Ikerlan
- INASMET
- Inescop
- INESC Porto
- Instituto de Biomecánica de Valencia
- ITIA
- Katholieke Universiteit Leuven
- Koniker S.Coop
- Laurea University
- Labein Teknalia
- Leitat
- MGEP
- Loughborough University
- Politecnico di Milano
- Robotiker
- Societ de Ingeniería Fabricación
- Sverea IVF
- Tampere University of Technology
- Technische Universität Dresden
- Tekniker
- TNO
- TWI Ltd
- Universidad del País Vasco
- University of Patras
- VTT
- Wroclaw University of Technology

EFFRA: who we are

# Support from Associations' members



Who we are and what we do

# Why did all these organisation join EFFRA?



- because working with partners creates critical mass and pools expertise
- because the individual risk is reduced
- because research projects create and reinforce links to international customers



Manufacturing industries' research priorities

# Industry's expectations of PPPs

- industry, not government, sets research priorities
- help industry to pursue their objectives faster and on a bigger scale
- research results should be applied in industrial environment



# Advising EC on top research priorities

- report with 50 priority actions grouped in four areas
- finalised February 2010
- submitted to European Commission within an advisory group
- download at:  
[www.effra.eu](http://www.effra.eu)

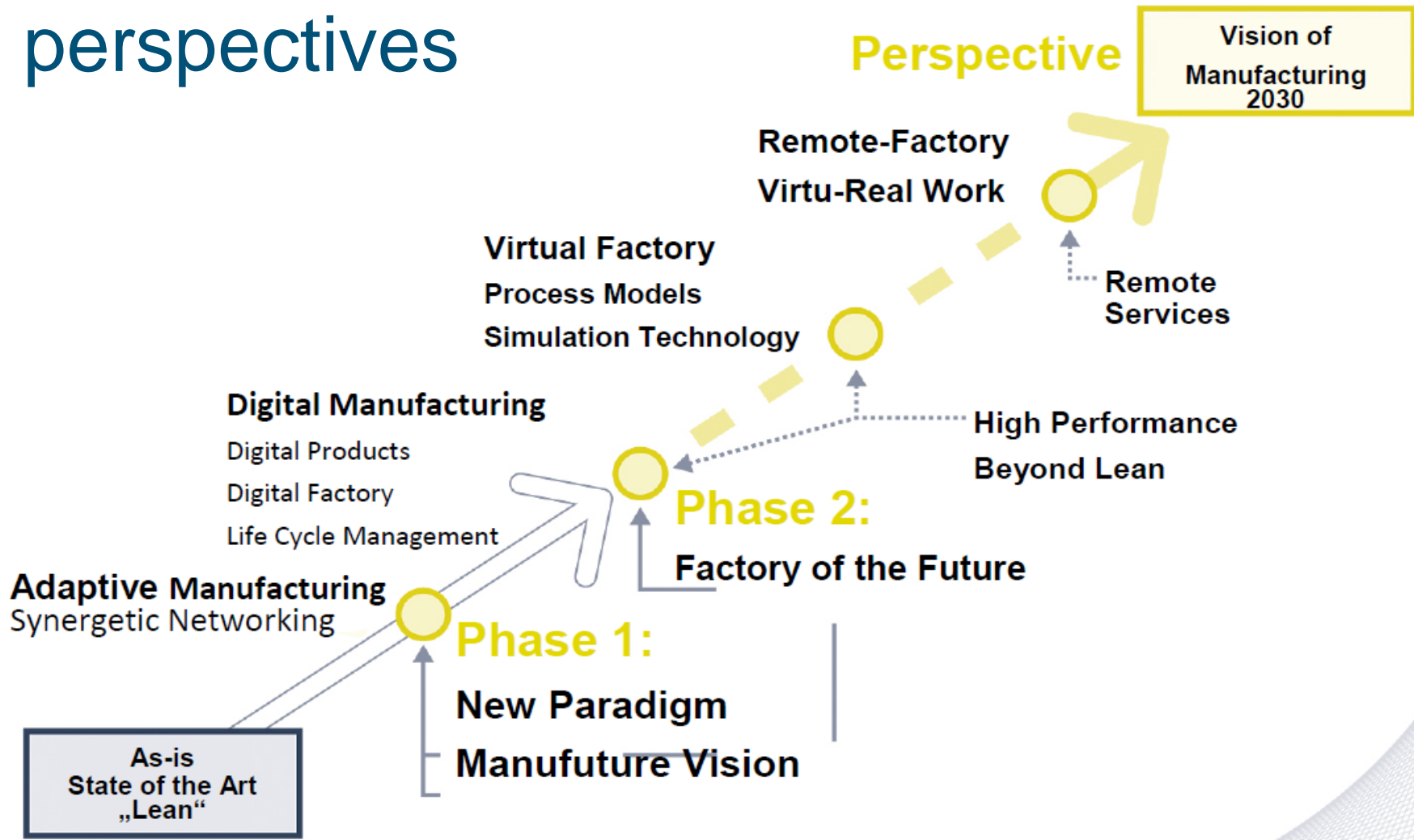


Manufacture vision

# 2010-2030 Manufacturing perspectives

Perspective

Vision of Manufacturing 2030



# Factories of the Future PPP: industrial research priorities

## Strategic Multi-annual Roadmap



- Sustainable manufacturing
- ICT-enabled intelligent manufacturing
- High performance manufacturing
- Exploiting new materials through manufacturing

The 'Factories of the Future' programme

# Overview of the program so far

- 59 projects up and running
- 36-40 projects in the pipeline
- € 230 M of additional EU-funding in 2013
- “time-to-contract”: 8.5 months
- industry participation: 50-60%
- SME presence: 25-30%



Factories of the Future PPP programme

# 4th Call (2013): on-going

- EU-budget of € 230 million (160 from NMP, 70 from ICT)
- Call topics agreed within AIAG, Programme Committee and Commission's DGs
- Info-Day on 9/10 July
- EFFRA helps in the organisation and prepares brokerage session

July

2012



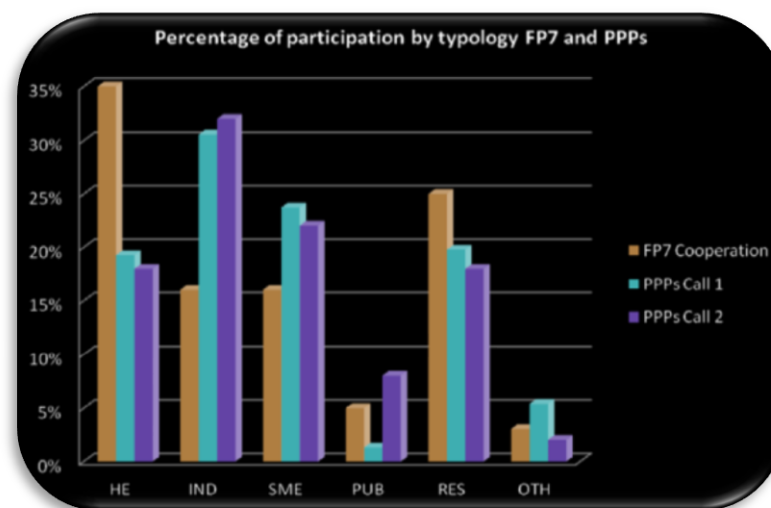
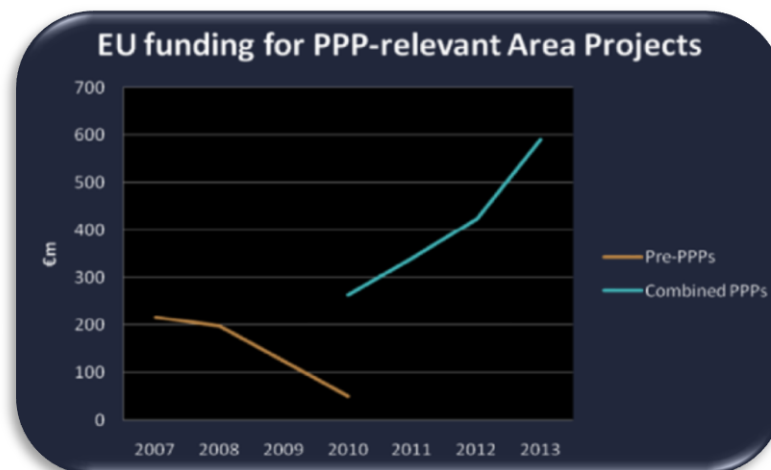
# EFFRA: two years of activities

## Industry re-engaged in projects

- statistics show industrial participation of more than 50%
- AIAG works well and ensures that roadmap reflects industrial needs

## Political support for PPPs

- positive feedback from Commissioners, DG's and MEPs
- interim assessment confirms that PPP is the right approach



The 'Factories of the Future' programme

# Promoting market-driven research

Project:	TAPAS
Total budget:	€5.2 million
EU support:	65%
Co-ordinator:	KUKA AG

- Need to better adjust production to market shifts
- Development of mobile robots with arms
- Testing the invention at two pilot installations
- Showcasing the final product at AUTOMATICA trade fair





## The 'Factories of the Future' programme

# Linking suppliers and customers

Project:	PLANTCockpit
Total budget:	€12.7 million
EU support:	63%
Co-ordinator:	SAP AG

- Need to cope with different enterprise software systems
- Development of integrated business software package
- Direct involvement of end-customers such as:
  - BMW Group
  - Intel Corporation
  - COMAU

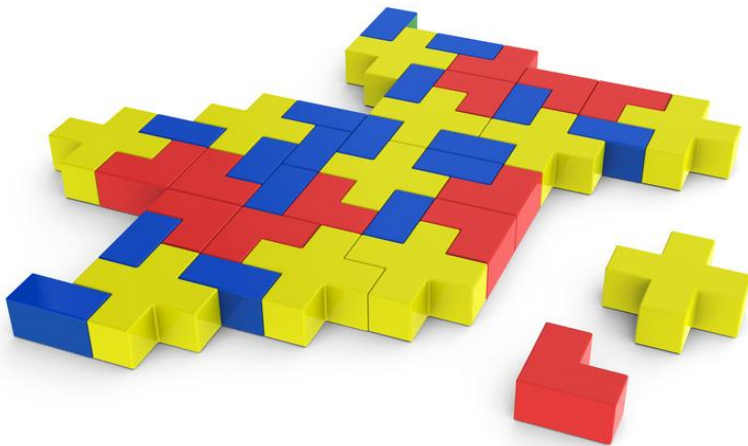


The 'Factories of the Future' programme

# Attractive for large and small companies

Project:	HARCO
Total budget:	€5.4 million
EU support:	72%
Co-ordinator:	Ce.S.I. SA

- Need to make machines more intelligent and cost-effective
- Development of modular 'plug-and-produce' system
- Predominantly run by small and medium-sized companies
- Started seven months after applying for EU grant



The 'Factories of the Future' programme

# Setting standards in Europe

Project:	FoFdation
Total budget:	€10.4 million
EU support:	64%
Co-ordinator:	Airbus Operations

- Need to manage complex worldwide supply chains
- Developing high bandwidth 'manufacturing information pipeline'
- Interoperability solutions will lead to globally uniform standards



How to get involved

# Why participate in 'Factories of the Future' projects?

- working with European partners creates critical mass and pools expertise
- individual risk is reduced
- research projects create and reinforce links to international customers



**take action**

[www.effra.eu](http://www.effra.eu)

- support the association efforts
- participate in 2013 call projects
- express your priorities for the Factories of the Future 2014-2020 roadmap