# ETP
# Future Manufacturing Technologies

# MANU*FUTURE*

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# Manu*future* Organization

## Manu*future* HLG

**MF Support Group**

HLG Sherpas

+ WGs

**MF NRTP Group**

**MF Sub-Platforms**

**+ Cross Sectoral Activities/ETP-Relations**

**MF Industrial Advisory Group**

CEOs/CTOs

# Manu*Future* Strategy

## Industrial Transformation by Knowledge-based Manufacturing

### Manu*Future*

**Compete by**

**REDUCING COSTS**

Cheap labour,
Resource-based
LowTech

**MANUFACTURING**
**Research-Innovation based**

European industrial sectors
e.g. Automotive, Mechanical Eng.

**Compete by**

**HIGH VALUE ADDED**

**(HVA)**

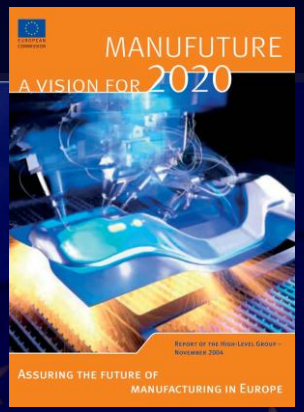
High performance
Customization
New business models
People

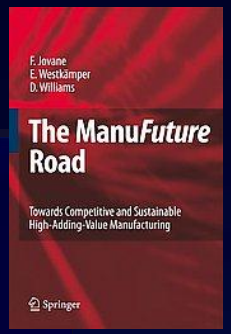
**From cost cutting to high value adding**

# Manu*Future* Achievements FP7

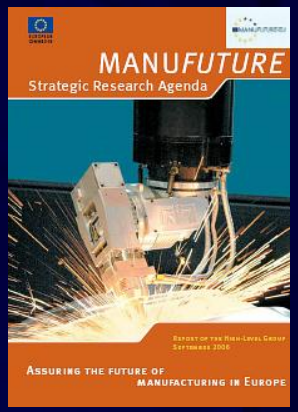
## Strategic Intelligence

Manu*Future* Vision 2020

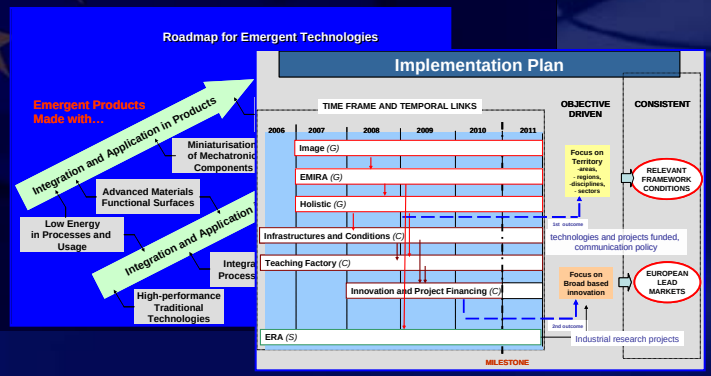



Manu*Future* „Strategic Research Agenda“




Roadmaps and
Implementation Plan



# Implementation Framework

**Manu*Future***
European Technoloy Platform
on Future Manufacturing Technologies

**FP7**
EU Seventh Framework Programme

• Upstream R&D

**FoF PPP**
• European Commission
• European Factories of the Future Research Association

• Downstream R&D

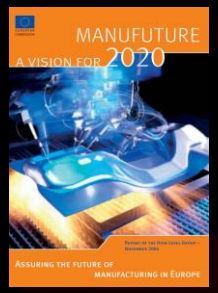
**EUREKA Σ!**
Umbrella and Cluster Projects

• National contracts

• Downstream R&D

National/ Regional Programmes

# Manu*future* persistent input … and next steps




Manu*future* Vision 2020

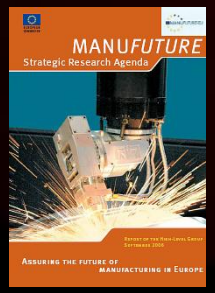
Strategic Innovation Agenda

**Preparation Horizon 2020**

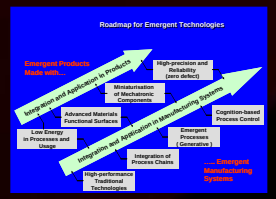
2007

SEVENTH FRAMEWORK PROGRAMME

2013




Manu*future* „Strategic Research Agenda“




Roadmaps

**Factories of the Future PPP initiative**

# „Factories of the Future“ PPP*

## Objective

- Developing enabling technologies to support EU manufacturing industry across many sectors by boosting their technological base

## Topics

strategic multi-annual road map

- SD1: Sustainable Manufacturing
- SD2: ICT enabled Intelligent Manufacturing
- SD3: High performance manufacturing
- SD4: Exploiting new materials through manufacturing

* EC’s Recovery Plan - IP/08/1771

SD = sub domains

# Research Interest Areas in the food technology sector

1: Sustainable Manufacturing

2: ICT enabled Intelligent Manufacturing

3: ICT for supporting consumer awareness

4: Exploiting new materials through manufacturing

5: Knowledge based systems

# Few Key Words for the Research Topics

- Sensors
- Packaging
- Functional Materials
- Roll to Roll Manufacturing (R2R)
- Printing Technology
- Sustainable

# Sustainable manufacturing -1/2

- **Energy efficiency**
  - adaptation and application of appropriate measuring and monitoring devices for energy consumption of individual processing steps and machines and procedures for optimisation with particular focus on processes with high energy consumption such as heat treatment, refrigeration, drying etc.
  - Improved use of renewable resources at factory level (like biogas)

# Sustainable manufacturing -2/2

**Reduction of environmental impact**

- **eco- efficient energy management systems for food processing plants, energy efficient production equipment**
- **lifecycle management**
- **recycling and recovery**
- **environmental modelling**

**Green Products Manufacturing**

**Developing "greener" products**

- **developing efficient sensors for recognition , selection and sorting of materials for recovery from waste**

# ICT to support value creation from global networked manufacturing and logistics

- increasing management efficiency in food supply chains, RFID, time-temperature monitoring, logistics, SCM softwares, store management systems
- predictive and remote equipment management systems

# Exploiting new materials through manufacturing

- **New material functionalities through manufacturing processes**
  - **Using manufacturing processes to integrate materials of different scale and functionality to provide completely new products with functionalities: antimicrobial surfaces, biosensors**
- **Environmental friendly, recyclable and bio-degradable packaging materials**
- **Active and intelligent packaging**

Thanks for your attention

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