

Smart Manufacturing

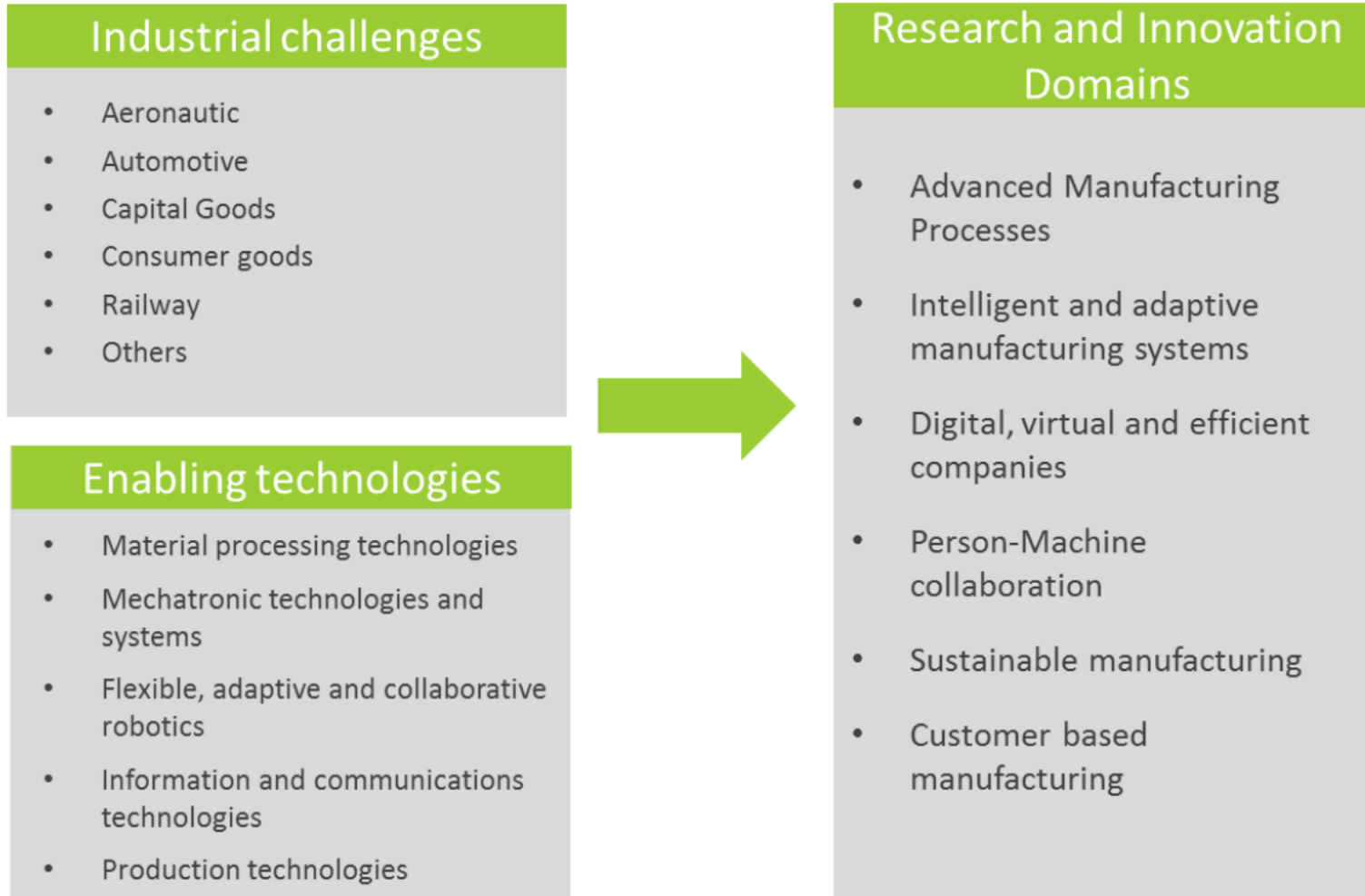
New solutions for the production of tomorrow

THE RTO INNOVATION SUMMIT



Source: CFME
Pagrati Pathrotkar

Roadmap of Smart Manufacturing



Roadmap - Selection

Sector	Short Term	Long Term
Automotive	<ul style="list-style-type: none">• Parts Inspection and Measuring in Manufacturing Processes• Decrease of Energy Consumption by Production Unit	<ul style="list-style-type: none">• Development of Image Processing Systems to Detect Model Diversities• Autonomous Robot Operational Networks with Embedded Intelligence
Consumer Goods	<ul style="list-style-type: none">• Materials and Technologies for Digital Manufacturing of Components• Advanced Value Chain Integration Software	<ul style="list-style-type: none">• Design for Manufacturing• Adaptable, Networked and Knowledge-Based Digital Manufacturing Development
Capital Goods	<ul style="list-style-type: none">• Green Manufacturing Systems• Service Development for Intelligent Manufacturing	<ul style="list-style-type: none">• New Functionalities based on Surface Modification• Symbiotic Human-Robot-Interaction

The Role of RTOs in Smart Manufacturing

- Development of new processes, software and manufacturing solutions
- Integration of Design, Manufacturing and Maintenance
- Building a Network of all Stakeholders
- Providing Digital Technology Hubs
- Integration of Basic Science and Industrial Use

The diagram illustrates the 'Smart Manufacturing Innovation Hub' as a central concept, surrounded by nine interconnected service areas:

- Innovation Scouting
- Business Model Development
- Equipment Assessment
- Financing (Regional Funds, VC)
- Test Beds Pilot Lines
- Brokerage
- Business Competence Center
- ICT Competence Center
- Process Competence Center

Session Outline

- Future of additive manufacturing and smart materials- between applied research and industry
 - Jeppe Skinnerup Byskov, Danish Technological Institute
 - Werner Stapela, Danfoss Group
- How KI / AI / Sensing already effects our lives and what we need to know and do for the future of manufacturing
 - Diego Galar, Tecnalia
 - Idoia Iceta, NEM Solutions
- Machine-Human-Interaction and Organisational changes
 - Joachim Lentjes, Fraunhofer IAO Stuttgart
 - Ernst Wolf, Wolf Produktionssysteme Freudenstadt