

The European Robot Initiative for
Strengthening the Competitiveness of
SMEs in Manufacturing



Dissemination activities :

**SMEs' fruitful feedback to SMERobot
and the road ahead in France**

Final Event Stuttgart, 7 and 8 May 2009

A technical center dedicated to French mechanical industry



Bringing new concepts in mechanics

Public interest works aimed to assist mechanical companies in their development

- Technological watch
- Normative and statutory works
- R&D transverse actions
- R&D actions specific to each trade

A global offer for custom-built services to the profession

- Development or optimisation of products and processes
- Studies and implementation of organisational or technical solutions

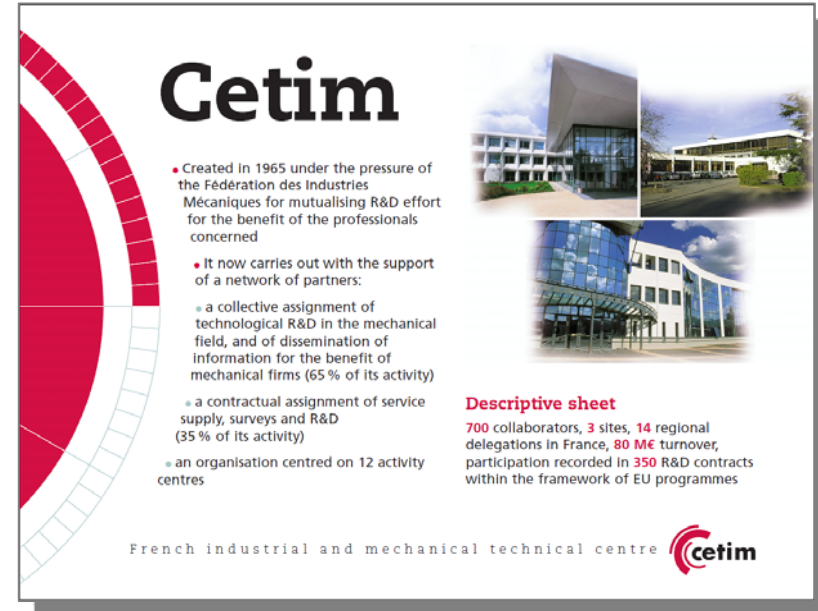
Survey

- Inspections, tests, qualification
- Training

A complete set of test, calculation and simulation platforms

A workforce comprised of 70% of engineers and technicians

French industrial and mechanical technical centre 







Cetim

- Created in 1965 under the pressure of the Fédération des Industries Mécaniques for mutualising R&D effort for the benefit of the professionals concerned
- It now carries out with the support of a network of partners:
 - a collective assignment of technological R&D in the mechanical field, and of dissemination of information for the benefit of mechanical firms (65% of its activity)
 - a contractual assignment of service supply, surveys and R&D (35% of its activity)
- an organisation centred on 12 activity centres

Descriptive sheet

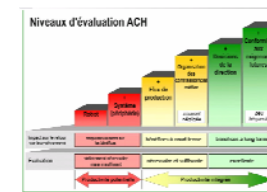
700 collaborators, 3 sites, 14 regional delegations in France, 80 M€ turnover, participation recorded in 350 R&D contracts within the framework of EU programmes

French industrial and mechanical technical centre 

- Cetim in SMERobot to promote :
 - Safety standard for collaborative robots
 - Robotics in and for SMEs
 - Innovative use cases in France

- Cetim's action
 - Translations
 - Participate and organize events
 - SMERobot opportunity assessment





SMErobot Opportunity Assessment

- 20 SMEs interviewed in Industrial processes related to demonstrators :
 - Casting, Assembly, Welding, Composite Machining,
 - 4 integrators
- Our generic approach
 - Disseminate “SMErobot” innovation message
 - Understand SME’s position regarding robotics
 - Identify key requirements and appropriate solutions for “in-situ” robotization



ALU-LIVRY



- First reasons given for robotization by SMEs
 - Working conditions , H&S
 - Repeatable quality
 - Lack of qualified manpower
 - Productivity comes in a second step
- “Classical Approaches” are freezing factors
 - The “Picasso robot” vision may be a robot project killer
 - The usual Go / No Go investment process leads to no decision. Confidence in solution need to be built upstream
- 2 SMEs (out of 20) think and implement automation by themselves. They develop and manage these skills as key competences





Opportunity for integration

- New technologies & standards enable new solutions & uses :
 - SMEs generally do not know new technologies capabilities and safety standards evolution for collaborative robots
 - The value added potential of new uses to be identified by the integrator
- Design of solutions and ROI calculation must be oriented by future challenges of the SME
 - ROI based on the simple operator replacement is often not worth
 - The robot has to be considered with all its value added potential
 - New business models may be required considering engineering and maintenance needs & attached life cycle costs



- Lessons learned
 - French SMEs are open to robotics
 - Leading edge SMEs willing to develop robotics as a core competence
 - Robot without fences more needed than collaborative robot
 - There is a need for an integration approach dedicated to first implementation in SMEs
- Future Challenges
 - Manage local workgroups for robotics integration
 - Take experience from upstream approaches for robotics integration according to SMEs' specific requirements