Knowledge, Awareness and Prediction of Man, Machine, Material and Method in Manufacturing

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Success stories on FoF PPP
(Brussels July 9th, 2012)
FP7 - KAP
Success story FoF PPP – Brussels July 9th 2012

- **Knowledge**
  - Building a strong *knowledge on historic data*
  - Focusing on **standardisation and harmonisation** of production performance indicators (PPI)
  - Provide a **transparent PPI definition** to allow the intuitive comparison of processes
  - PPI definitions for energy consumption

- **Awareness**
  - Enable **real-time monitoring** via distributed complex **event processing**
  - PPI definitions for real-time status
  - Real-time monitoring also **at aggregated plant level**

- **Prediction**
  - Combine the **history** and the **real-time data** to enable better **prediction**
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- Consortium: High industrial participation (10/14), SME involvement, several industries and test beds, good collaboration with the Commission.
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M1
First Specification & State of the Art

M2
Early Prototype

M3
Integrated Prototype & Final Specification

M4
Final Demonstration

Delivery dates

7  13  25  36
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CUSTOMERS: Data consumption

Data Broker

CEP: Real time DATA

DATA BASES REAL TIME +HISTORIC

REPOSITORY

FACTORY - SHOPFLOOR: Data integration

CEP: Real time DATA

DATA BASES REAL TIME +HISTORIC

REPOSITORY

CUSTOMERS: Data consumption
KAP managed to become a success story because of its impact approach

- All consortium members have established and are tracking exploitation KPI’s

- Sub teams have been formed to address the automotive and high tech sectors
  - Initial SWOT analysis conducted at first year consortium meeting
  - Detailed roadmap being developed and tracked for each sector
  - Patent search conducted by sector

- A process for managing IP issues being developed based on the foundation outlined in the CA
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- KAP is a **success story for the partners** (1/2)
- **Academic Institutes**
  - Increased student numbers, curriculum development, practical/applied research, consultancy opportunities
- **Applied Research Labs / Software House**
  - Increased product offerings, broadening of customer base, build company reputation and brand awareness
  - Position the real-time analytics platform for **maintenance prediction** using tools of the software companies in the project.
  - **Partners internal dissemination** channels to promote our research and project collaborations
  - Collaboration with other Software company **R&D groups** on a Platform for low-latency Data Processing
KAP is a success story for the partners (2/2)

Industrial Demonstrators

- Rollout to existing and next generation production lines,
- Reduction in energy costs,
- Process & quality improvements,
- Suppliers involvement in energy awareness
• KAP is addressing Economic growth and jobs (key issue of the FoF PPP)
  – Deliver power reduction from KAP framework across the FAB resulting in 10% cost of ownership reduction resulting in scales up to ~€1 million p.a. for full adoption
  – Increase the number of teaching personnel
  – Additional consultancy fee income per year
  – Additional course fees per year (MSc)(BSc)
  – Additional New product portfolio sells or licensing per year
KAP is promoting the worldwide competitiveness of Europe.

- **KAP Goal is to demonstrate a 5% waste and energy consumption reduction per unit on the test cases.**
- Extend the perspective of European Countries being a manufacturing **centre of excellence** within the Intel network, enhancing opportunities for further manufacturing investment in Europe.

- **KAP is looking for a Societal Impact:**
  - Increase **energy awareness** on manufacturing industry within Europe
  - Develop practical **skills** of energy management and streaming data analysis in students and staff
  - Promote and extend the use of **knowledge based tools**
Thank You… Questions?

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