Technology adoption in the industrial sector

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Confucius (551 - 479 B.C)

Introduction

......... was a Chinese thinker and philosopher. His philosophy emphasized personal and governmental morality, correctness of social relationships, justice and sincerity.

Tell me and I will forget ........

Show me and I will remember .......

Involve me and I will understand.
Dear Speakers,

I would like to thank you for your participation to this workshop. I would like also to remind you that the aim of this workshop is to explore how technology transfer activities can be used as a mechanism to help EU Industry to adopt new advanced and clean manufacturing technologies. Therefore, your presentations have to be focused mainly on technology transfer, in particular exploring barriers and success levers of your story.

Panels will include a sequence of 12 minutes of slides presentations, each followed by a Q&A session, with a strong interaction between the speakers and the audience.

The audience will be composed mainly of industry executives, technology transfer officers, and policy makers. Bearing this in mind, I would kindly ask you to avoid using too many technical details in your presentation.

In order to make the stories comparable each other, your slides presentation should have the following structure:

1. 1 slide for the presentation of your organisation;
2. 3 slide for the presentation of the technology;
3. all the other slides should be dedicated to cover the following main technology transfer aspects:
   - Type of consortia and cooperation approaches
   - Industry involvement in R&D
   - Pathway to market
   - IPR management
   - Risk capital
   - Spin-off
   - Dissemination and marketing strategy
   - Importance of standards and regulations
   - Important project management and governance
Delcam: great company & software for the manufacturing ind.
Technology: machining with robots
Type of consortia: mix
Industry involvement in R&D: essential
Pathway to market: during project
IPR management: depends
Risk capital: not
Spin-off: one company + products
Dissemination and marketing strategy: no.2 priority
Importance of standards and regulations: do you have an hour?
Important project management and governance: key enabler
Content

Why are you attending?

From: Sergio.GRANDE@ec.europa.eu [mailto:Sergio.GRANDE@ec.europa.eu]
Sent: 04 February 2015 09:20
To: yves@bellcount.eu; Jan.Wolken@gunnink.de; jarleto@deko.es; robert.souclamore@twi.co.uk; marco.silvani@enea.it; alberto.silvani@eni.it; Paolo.Genmaroni@avioaero.it; fgbertjan.bol@gmail.com; georg.steinhilper@engol.at
Cc: Helen.KERR@ext.ec.europa.eu
Subject: Workshop "Technology transfer; paving the way for advanced manufacturing" - Slide presentations

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Content

• Success levers
• Barriers
• Conclusion
• Success?
• Success levers
• Barriers
• Conclusion
Content

- COMET technology: machining with robots
- Success?
- Success levers
- Barriers
- Conclusion
• COMET technology: machining with robots
• Success?
• Success levers
• Barriers
• Conclusion
COMET technology
‘Flying brick’

- Can’t fly on its own
- Modelled its aero-‘behaviour’
- Integrated in control software to support pilot
- Sensors to correct
• Not accurate by itself (machining)

• Modelled its kin. & dyn. ‘behaviour’

• Integrated in CAM software to support programmer

• Sensors to correct
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• COMET technology: machining with robots
• **Success?**
• Success levers
• Barriers
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What is Horizon 2020?

0.05 mm: a new accuracy standard for industrial robots

Published by newsroom editor on Monday, 03/11/2014

An EU-funded project brought together industry and scientists to develop pioneering ways for industrial robots to be more accurate, significantly reducing the time and cost of machining processes. Software and know-how from the project is already generating new business for Europe’s robotic industry.

To gain an edge in highly cost-competitive markets,

"The software Delcam developed under COMET is already generating up to a million euros in additional sales,” says Gunnink.

That is one of many sales streams coming out of the project’s work. Lund University, a project partner in Sweden, studied what happens when robotic arms go off course and have since created Cognibotics – a spin-off which helps factories deal with common problems like friction and backlash (a small amount of movement in the robot’s joints that reduce accuracy)."
Projects

180 pre-competitive projects have been launched through the ‘Factories of the Future’ partnership. Over 1,200 organisations from across Europe have participated to date. Under FP7, 151 Projects were launched in response to call topics based upon the ‘Factories of the Future’ Strategic Research Roadmap.

From 2014, ‘Factories of the Future’ projects have been launched under Horizon 2020 (the EU’s research programme from 2014 to 2020). These projects address the following research and innovation priorities as identified within the ‘Factories of the Future 2020’ roadmap:

- Advanced Manufacturing Processes
- Adaptive and Smart Manufacturing Systems
- Digital, Virtual and Resource-Efficient Factories
- Collaborative and Mobile Enterprises
- Human-Centred Manufacturing
- Customer-Focused Manufacturing

Innovation Portal

Information on all of the ‘Factories of the Future’ projects is available in the EFFRA Innovation Portal. Within the portal, each project profile provides a summary of the project and information on its consortium.

The EFFRA Innovation Portal stimulates clustering, maps projects on the ‘Factories of the Future 2020’ roadmap and allows for project monitoring and impact measurement. EFFRA members have access to enhanced features within the portal.
Succes?
Content

- COMET technology: machining with robots
- Success!
- Success levers
- Barriers
- Conclusion
Success levers
Technically
Success levers
Commerciaally

Tell me and I will forget……..
Website: > 35000 page views
Q-newsletter: > 1000 direct mailing list
Press releases: > 50
Twitter: > 100 direct / > 1000 via retweets

Show me and I will remember…. 
COMET YouTube channel: > 4500 views
DelcamTV: First video > 100.000 views
Other videos > 20.000 views

Involve me and I will understand.
Demonstrator cells: 6
Public training days: Greece, UK, Italy

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• COMET technology: machining with robots
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Avoid barriers:

- Right consortium (people)
  - (Technically) capable
  - Commercial drive (product / dissemination)
- Demonstrators (a lot)
  - The devil is in the detail … most of time not a scientific problem
  - Show the future customer
  - (Show the tax payer)
• **Avoid barriers:**
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    • (Show the tax payer)

• **Overcome barriers:**
  • RTD providers vs. Industrial partners
  • Make market ready in parallel - momentum
• COMET technology: machining with robots
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- COMET technology
- Success?
- Success levers
- Barriers
- Intermezzo
- Conclusion
and lessons learned. One of the key objectives is to discuss policy implications at project level that could help accelerating the adoption of advanced technologies by the European manufacturing industry.
@ Project evaluation:
- Industrial / commercialisation partner(s) for results
- Industrial / commercialisation partner(s) in the lead
- Demonstrators are key / public training days very useful
- Dissemination should be seen as no. 2 priority
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@ Project reviews:
- PO and PTA at near-to-every meeting (pressure/modifications)
- Not only technically .... dissemination from the start
- Project results (not the IP) in public domain (EFFRA Portal)
• COMET technology
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Conclusion

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