Welcome to the Smart Manufacturing innovation session

Moderated by
Jerker Delsing | Lulea University of Technology
Etienne Pouille | Airbus

11 May 2017, Amsterdam
Jury members
Smart Manufacturing

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VP Ecosystems, Market Enablers & Customer Innovation Centers
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Information and Communication Technologies Director
Tofaş

Joël Ducay
Head of Electronics Products
Airbus

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Co-founder and managing partner
ACV Venture Partners

Philippe Vanrie
Head of the EUREKA Secretariat
EUREKA Network
Batchforce is Creating Europe's Leading Virtual Manufacturing Service
Batchforce is Creating Europe's Leading Virtual Manufacturing Service

CAD/CAM

From a digital world...
Batchforce is Creating Europe's Leading Virtual Manufacturing Service

SOLUTION

- Centraal digital point of distribution for small batch manufacturing;

- Broker connection system;

- Regionale outsourcer of production capacity.
Batchforce is Creating Europe's Leading Virtual Manufacturing Service

BUSINESS MODEL

Engineer / OEM

Batchforce

Contract manufacturer

Contract manufacturer

Contract manufacturer
Batchforce is Creating Europe's Leading Virtual Manufacturing Service

SMART FACTORIES
Batchforce is Creating Europe's Leading Virtual Manufacturing Service
CIMSOURCE brings the Digital Factory to life!

Contact: Goetz Marczinski, CEO
Tel.: +49 241 8887 713 email: mc@cimsorce.com
www.cimsorce.com
Kasernenstr. 22 D- 52064 Aachen
CIMSOURCE breathes life into the Digital Factory.

<table>
<thead>
<tr>
<th>Situation</th>
<th>Challenges</th>
<th>Solution</th>
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<tbody>
<tr>
<td>The capital-intensity of industrial operations is constantly increasing.</td>
<td>Digital representations of the manufacturing resources are mandatory for each simulation.</td>
<td>CIMSOURCE is the Single Source for the Digital Factory.</td>
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<tr>
<td>In the future no machining process will be started without it’s prior verification by simulation.</td>
<td>For each machine up to 150 tools form up to 25 suppliers are needed.</td>
<td>CIMSOURCE equips “Virtual Machines“ with a click of a button with the matching data format.</td>
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<tr>
<td>The implementation of simulation-software (CAM = computer aided manufacturing, virtual machine,.. ) is slow because the digital twins of the manufacturing resources are missing.</td>
<td>Two options for the user today: Collect the necessary content from different sources or: \textit{“Do-it-yourself“}, requiring an effort of 2h to 6h per tool.</td>
<td>CIMSOURCE drives sales of the tool suppliers: \textit{“Once a manufacturing process is engineered in virtual world, the respective tools will be purchased in reality.“}</td>
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ToolsUnited - The Machining Google

ToolsUnited leads the end user to the right tool and guides him to the local supplier.
The CIMSOURCE technology.

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<tr>
<th>StOB Standard</th>
<th>CIMSOURCE Cloud</th>
<th>User Interface</th>
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<tbody>
<tr>
<td>Proprietary data scheme for the description of cutting tools.</td>
<td>Web-based data mapping. Multiple CAM export filters</td>
<td>Integration via Web-Services and Mobile Apps</td>
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<td>Origin of DIN 4000 Compatible with ISO 13399</td>
<td></td>
<td>Dedicated Master-Server hosted in Germany. Local computer centers for expansion (USA, Japan, Korea).</td>
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<td>World wide applicability beyond the metric system (inch).</td>
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CIMSOURCE customers
35% are looking for Digital Twins.
Revenue model:

Switch from „service in return for money“ to „Google“-approach

**Supply Side**

- **SalesSupport Services** – License fee per tool group (annually)
- **Sales commission** – Profit share per sale
- **Tip-commission** – Pay-per-Click on OEM Web-Site

**Demand Side**

- **ToolsUnited**
  - Free search and retrieval
- **ToolLink**
  - License fee per customer (annually)
Jotne EPM Technology
by Kjell A. Bengtsson

Innovation session
Smart Manufacturing

11 May 2017, Amsterdam
It's all about people, and these days it will also be about Digital Transformations. For successful teams creating new products and solutions:

- Aeronautics
- Space
- Defense
- Built environment (BIM)
What is the problem solved?

Today small and large businesses find it difficult to collaborate on and archive their designs, products, analyses and engineering data in general due to clashing formats and the lack of platforms for sharing such data.

The challenges of the Information Age is interoperability and requires freedom from vendor lock-in, addressed by open data solutions, multiple viewpoints and solutions embodying data independence.

What is the proposed solution?

Jotne designs and delivers software built on open standards (in particular STEP, IFC/BIM, PLCS and ASD/AIA) that enables collaboration and archiving of engineering data throughout the product’s (or building’s) lifecycle and believes that there is great market potential due to the increased need for engineering and manufacturing collaboration implied by concepts such as Industry 4.0 and the need for greater engineering efficiency, shorter time to market etc.
What is the compared to the State-of-the-Art?

The unique selling points is that through using Jotne’s systems a business’ data is managed so that they can easily collaborate with others when they choose and then archive data in a future proof format when necessary. For example:

- Large international consortia (such as Eurofighter, F-35) where each partner wishes to continue using its own in house design systems but still needs active, up-to-date collaboration with the other partners.

- SMEs who need to receive and provide critical design information to and from a variety of customers. Who today frequently need to invest in various CAD/PLM and other design tools purely to meet the needs of their various customers.

- Building owners and construction consortia who need to build and then maintain modern BIM complex constructions and who today often continue to resort to document based systems using 3D CAD and similar models only in isolation and not across the design-build-deliver-maintain-recycle lifecycle.
What is the business model?

As of today, the business model has been predominantly based on the sale of licences and maintenance for the software products and from consultancy implementing and developing solutions using smart software, data management and engineering knowledge.

Jotne is also moving to Cloud based applications, initially through involvement in collaborative Cloud architectures focused on SMEs where users will register for a fee.

What is the future outlook?

Jotne has identified that one of the key strengths of its solutions is predominantly for those who need to collaborate frequently, with a high volume of technical information, and to multiple stakeholders.

“Therefore we are looking for partnerships based on industrial knowledge including a common and shared vision on using open and international standards for the next generation solutions. Such partnership will support the international outreach and provide the further growth.”
KE-works
by Stefan van der Elst

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KE-CHAIN
CUSTOM APPS FOR SMART ENGINEERING

Stefan van der Elst
Managing Director
KE-works BV
WHAT DO THESE CASES HAVE IN COMMON?
DID YOU KNOW THIS ALL ADDS UP?

30% FIND INFORMATION
30% FIXING MISTAKES
80% ROUTINE WORK
KE-chain platform
Custom cloud-based apps for engineering: Engineering-as-a-Service

- Easy and global access
- Real-time status and analytics
- Collaborative environment
- Easy development: model-driven
- Reuse of projects, templates and libraries
- Extendible through open API and integration capabilities
Our key selling points for Smart Engineering

• Apps for collaborative engineering teams. Multi-user environment based on a heterogeneous data model

• Bi-model-driven approach: Composite applications that combine data model and data management with process orchestration through workflows

• Design automation: Procedural programming extensions and scripting via open API and third party integrations
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We are looking for...

- **High-tech companies** that are looking for digital transformation and automation of their engineering

- **Solution providers** that are interested in collaboration to increase impact for our customers
START ...

AND ACCELERATE YOUR BUSINESS TODAY!

Stefan van der Elst
Managing Director
KE-works
RethinkResource
by Linda Grieder

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Tasks in a Box

by Peter Stuer & Peter Plessers

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This add-in works in: Outlook 2013 or later, Outlook 2016 for Mac, Outlook on the Web.

Tags: Productivity Project Management
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Open

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Download

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Download

Outlook
Manage your Inbox. Easily turn your Outlook emails into tasks.
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Download

Mac
Tasks in a Box for Mac
Download
Why customers choose Tasks in a Box
Business Model

B2B
Pure SaaS
Cloud Native
Global Reach
Freemium Apps
Lean
Lean scaling: Revenue x10 - Expenses x3
automation for all secondary processes

Clearly identify and verticalize different use cases
both by usage type as well as industry segment

Improve on effectiveness/simplicity
exploiting machine learning for automation
Tasks in a Box
Simplifying work management

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**USP**
Integration of Simulation and Design

**Today:**

**Tomorrow:**

Isogeometric Analysis

Problem solved
Fluid-Structure-Interaction

Source: Exa‘s PowerFLOW on engineering.com
Source: TWT
Problem solved
Integration of Various Simulations
**Market**

Users, Customers, Partnerships

- Users and customers throughout design-to-simulation-to-production chain
- European Partnerships with
  - SMEs
  - Universities
  - research institutes with decades of experience in CFD and FSI
  - tool developers and vendors
  - IT system integration experts and
  - Engineering.
Market
Business Model and Plan

- Provision of engineering services based on IGA
- Simulations available to small enterprises, licensing possible
- Ultimately help larger companies integrate IGA
- 3 year development required

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<tbody>
<tr>
<td>50k</td>
<td>Engineering requirements and aerospace and automotive use cases</td>
</tr>
<tr>
<td>150k</td>
<td>Methodological transfer to CFD and FSI</td>
</tr>
<tr>
<td>100k</td>
<td>Subcontract methodological transfer to CFD and FSI</td>
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<tr>
<td>200k</td>
<td>IGA Implementation, CAD/CAE Interfaces, tool platform integration &amp; validation</td>
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<td>GUI Development</td>
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Questions?
Thank you for your attention