Knowledge Management: A major challenge for a PLM dedicated Consulting Company
Introduction

Until recently PLM focused on the initial phase in the lifecycle (design, production)...

…the industry is now looking for innovation within the complete lifecycle of their products

Additionally, new regulations, combined with new constraints are forcing companies to adapt their organizations, processes and tools

Topics covered, new implementation approach, PLM tools maturity, time to delivery…

…and are forcing PLM consulting companies to adapt their knowledge management everyday.
Summary

- PCO Innovation quick overview
- Knowledge management vision for PCO Innovation
- PLM overview for PCO Innovation
- PCO Innovation knowledge management
- Conclusion
PCO Innovation is a worldwide independent leader of PLM consulting & services

Key figures

>2000: Birth of PCO Innovation
>+600 experts all around the world
>Sustained growth + 20% / year
>Global action capacity: Europe / America / Asia

Focus
A full range of added value services

Merged into customer oriented packaged offers

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### Aeronautics
- AIRBUS
- BOEING
- EUROCOPTER
- BELL HELICOPTER
- SOGERMA
- PRATT & WHITNEY
- TURBOMECA
- DASSAULT

### Defence
- DCNS
- EADS CCR
- EADS DS
- NEXTER
- MBDA

### Energy
- AREVA
- ALSTOM POWER
- GENERAL ELECTRIC
- EDF
- ARKEMA
- HYDRO QUEBEC

### Manufacturing Industry
- AGIECHARMILLES
- GROSFILLEX
- PATEK PHILIPPE
- SEB
- SOMFY
- SNR
- ESSILOR

### Transport
- BOMBARDIER
- ALSTOM TRANSPORT
- IRISBUS
- PREVOST
- VOLVO TRUCKS
- AGCO
- CHANTIERS DE L’ATLANTIQUE

### Automotive
- BOURBON-FABI
- FAURECIA
- MICHELIN
- VOLKSWAGEN
- PSA
- RENAULT
- VALEO
- HONDA
- HYUNDAI-KIA

### Food / Cosmetics / Pharmaceuticals
- ARTENAY
- BEL
- AVON
- SPMSD
- PIERRE FABRE
- BIOMERIEUX

### High Tech / Telecoms
- SCHNEIDER ELECTRIC
- NOKIA
- ST MICROELECTRONICS
- ST ERICSSON
- CAE
- SFR
- GEMALTO

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Over 150 customers worldwide
Company’s knowledge = Intellectual Assets

“Human beings who generate intellectual capital in an organization or society”

Intellectual Assets are comprised of all the components of the enterprise’s product and process definition:

- All product/service data, mechanical, electronic, software, and documentation components
- All business & manufacturing process definitions within the scope of the lifecycle
Innovation doesn’t only take place during the transformation process, but also in the definition of the organization’s intellectual assets!

Cimdata 2012
How to Manage Intellectual Assets

- **Identify knowledge areas** that support the business activities
- **Appoint a person in charge** for each core competency and manage community
- Identify, define, describe and map **key concepts of each domain**
- Select and **share the same definition** to describe the these concepts *(glossary)*
- Describe methodological **approaches to exploit** these areas of knowledge *(processes)*
- **Equip** intellectual assets with **tools**
How to take advantage of Intellectual Assets

A continuous process

- Develop
- Intellectual Assets
- Update
- Share
PLM : the PCO Innovation’s product

- A PLM project is a **corporate initiative**, that includes **processes, tools and the organization** to:
  - Manage **intellectual assets**
  - Support **innovation**
  - Optimize **collaboration**
  - **Effectively manage** product information
  - **Create, maintain and share the definition of a product during** its entire lifecycle (conception, manufacturing, maintenance and retreat)
A **PLM project** is an opportunity for the company:

- **To improve** the performance of its activities
- **To benchmark** their internal processes
- **To be inspired** by best practices
- **To increase** the level of **automation**

A **PLM project** is not an IT project

Usually, a PLM project **brings (a lot of) transformations** (Human & IT)
For a successful PLM project, it is necessary to insure collaboration between different types of actors:

- Decision makers
- Business specialists
- Domain experts
- PLM consultants
- Technological experts
- Specialists in change management

As there will be many complementary profiles, each will come with their specific skills, speaking their own languages.
It is necessary to **capture the specific logic** of each actor and align towards the **corporate objectives**.

It is mandatory to **remain consistent** between these different layers.
PLM Approach: Main Principles

PCO Innovation areas of expertise

Best Practices

PLM Experts

Industrial Standards

Out of the Box Approach

PLM Module Experts

WHAT

Business Actors

HOW

PLM SOLUTION

Solution Experts

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PLM playground

Sectors
- Aeronautics / Defense
- Automotive / Transport
- Electricity, Electronics
- Energy
- Manufacturing industry
- Pharmaceuticals
- Food & Beverage
- Telecoms
- Construction
- Apparel

Organization
- Project / Program / R&D /
- Engineering / Purchasing / 
- Industrialization/Manufacturing / 
- Documentation / Customer service

Disciplines
- Mechanical
- Electrical
- Electronics
- Software
- Recipe
- Packaging

Technologies

Tools:
- CAD/CAM/CAE

Collaborative applications:
- Product → PDM
- Process → MPM
- Service → MRO
- Project → PPM
- Document Management

Processes
- Design
- Configuration Management
- Requirement Management
- Project & Portfolio Management
- Platform / Diversity
- Digital Mockup
- Digital Factory
- Extended enterprise
- And more …
PLM Project activities

- Business consulting
- Technology integration
- Project management
- Change management
- Support and maintenance

- Community experts
- Community leaders
- Identification, definition and description of key concepts
- Relation with other areas
- Glossary
- Methodological approaches
- Tools
PCO Innovation knowledge management

- Identify best practices: configuration management, requirement management, manufacturing processes, ...
- By sector, by industry: Aeronautics / Defense, Automotive / Transport, Energy, High-tech, ...
- Develop methodology: Business process optimization, Strategic planning & roadmap, ...
- Develop soft skills: ability to deal with top management, ...
- Certify: CMII, ...

Business consulting

- Technology integration
- Project management
- Change management
- Support and maintenance

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PCO Innovation knowledge management

- Partnership with PLM vendors
- Technical certification
- Trainings roadmap
- Develop tools: migration factory, interface modules, …
- Dedicated team of referees
- R&D: continuous PLM methodologies & tools improvement
- ECOINT: guidelines & tools validated and supported by PCO Innovation for each step of a System Integration project
PCO Innovation knowledge management

- Business consulting
- Technology integration
- Project management
- Change management
- Support and maintenance

- PMO: PCO Innovation PLM project methodology
- Manage PLM key success factors:
  - OOTB approach
  - Migration strategy
  - Change management
- Project quality management
- Agile methodology (scrum)
PCO Innovation knowledge management

- Training & e-learning
- Coaching
- Neutral vision of PLM from vendors
- Specific methodology for organizational change management: impact analysis on processes, organization, tools, HR
- Training tools and methodology: Learning Management System, blended learning, ...
- Communication process

- Business consulting
- Technology integration
- Project management
- Change management
- Support and maintenance
PCO Innovation knowledge management

- Production user support
- Administration & monitoring
- Third party application maintenance
- External and/or internal
- Internal tools and methodology

- Business consulting
- Technology integration
- Project management
- Change management

Support and maintenance
Conclusion

- **PLM is complex**: strategic characteristics, processes, organization, tools, change management, etc…
- **PLM Environments change every day**: new rules, new market, new tools, new subjects to cover and integrate
- **PLM approach is different**: from toolbox to “OOTB”
- **Human factor is a key success for PLM**: specific skills, not only technical

To be efficient, a PLM consulting firm like PCO Innovation must manage its knowledge in **multiple dimensions**: IT, industry, process, organization, soft skills, strategy, human, etc…

- Knowledge management at PCO Innovation is efficient and our customers are advised that a PCO Innovation consultant has access to the whole PCO community

www.pco-innovation.com
Thank you for attention…

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The synergy of our skills working towards your success