



Product Lifecycle Management @ Atos

PLM Market & Trends from Systems Integrator's view

Paris, June 7th, 2013

Luca Benporath – VP Global PLM - Manufacturing, Retail & Services

Agenda

- ▶ **PLM @ Atos**
- ▶ The partnership with Siemens
- ▶ Context & Market challenges
- ▶ The PLM Market: current status & future trends
- ▶ Conclusions



Atos is helping its clients to face tough challenges related to product development

Global Collaboration

Global engineering collaboration

Innovation

Protect existing markets and intellectual property in new market entries
 New business models through change in valuation ideas Ensure competitiveness

Product Complexity

Greater variety in products and product structure
 Custom variants
 Complex parts and assemblies
 High quality products

Time-to-Market

Dramatic reduction of product lifecycles and development phases
 High influence of cost impact in early development phases

Product Compliance

Compliance
 Product liability
 Law / regulations

Global Collaboration

Time-to-Market

Innovations

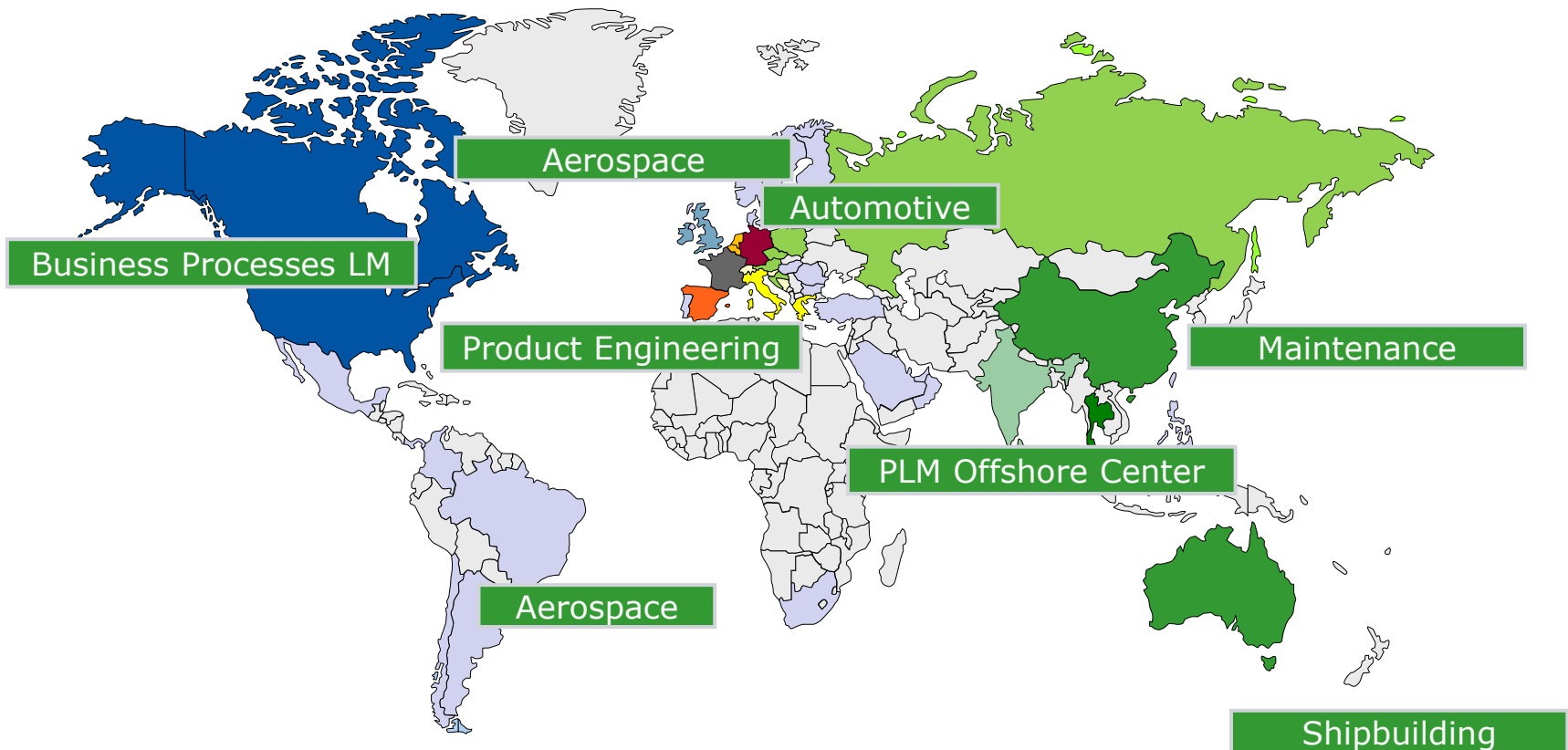
Product Compliance

Product Complexity

Atos global PLM Competence and Presence

Atos PLM revenues across all service lines: > 100M Euro

450+ dedicated consultants worldwide led by PLM GCC (Munich)



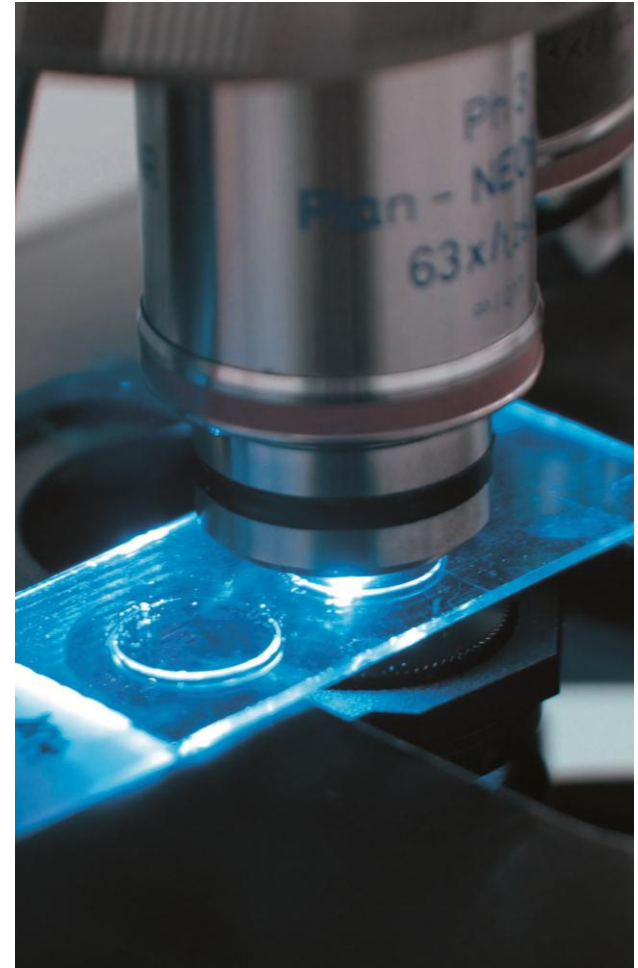
The role of Product Lifecycle Management

A new vision

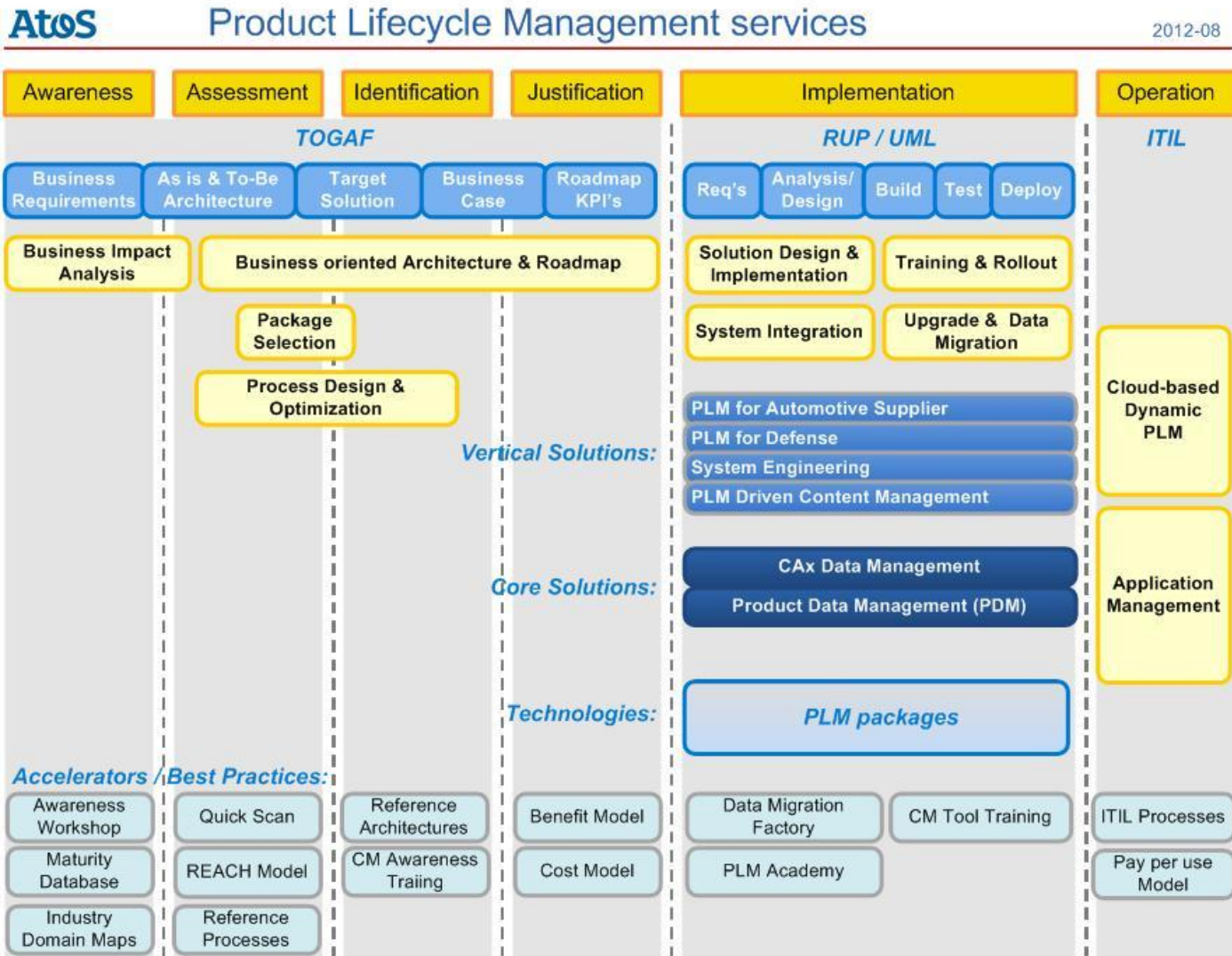
- ▶ PLM is not just a software product
- ▶ It is a new way of looking at the manufacturing value chain
 - ▶ A single, integrated cycle of activities
 - ▶ From initial concept right through to retirement and replacement
 - ▶ Enabling efficient collaborative working at every stage
 - ▶ Improving the way the entire business operates

Beyond the product lifecycle to include other strategic areas:

- ▶ After-sales service lifecycle management
- ▶ Technical documentation
- ▶ Software engineering



The role of a system integrator is to take the client through the « PLM journey »



Consulting around:

- Awareness
- Processes alignment
- Solution selection
- ROI
- IT landscape

Implementation:

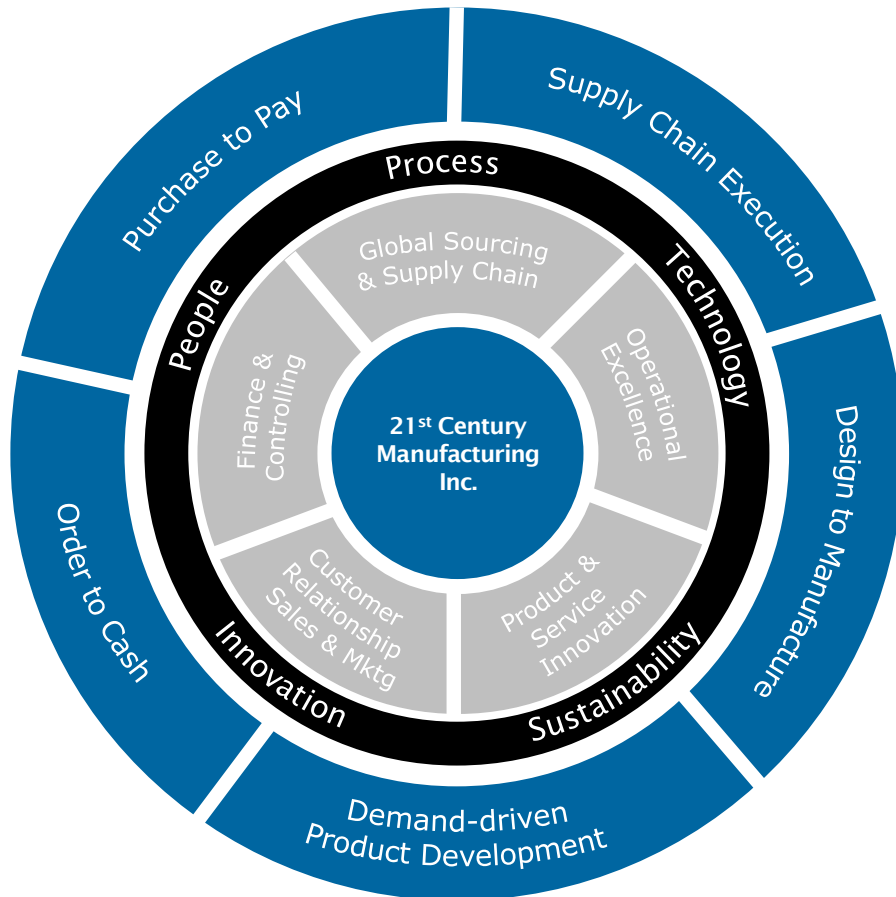
- Design and customization
- Training
- Go-live
- Integration

Operation:

- Post go-live
- Application management

Systems Integration & Enterprise Collaboration

An effective PLM vision and strategy is a must-have



Facilitating, Supporting and Implementing the integration of processes, organizations & data is the key role of Systems Integrators

Product Design is more and more exiting the R&D laboratories to be fully integrated into the enterprise, sharing processes with:

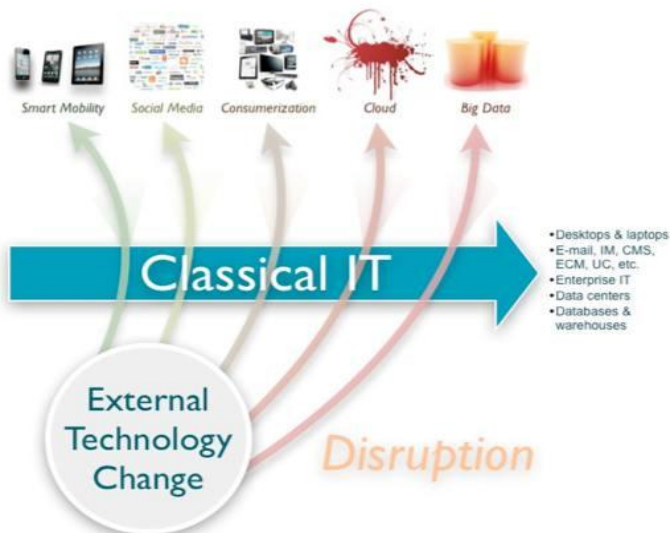
- **Manufacturing / Plant Management**
- **Sourcing & Procurement**
- **Sales & Marketing**
- **Finance for costing purposes**

PLM is in the middle of the "technology disruption"



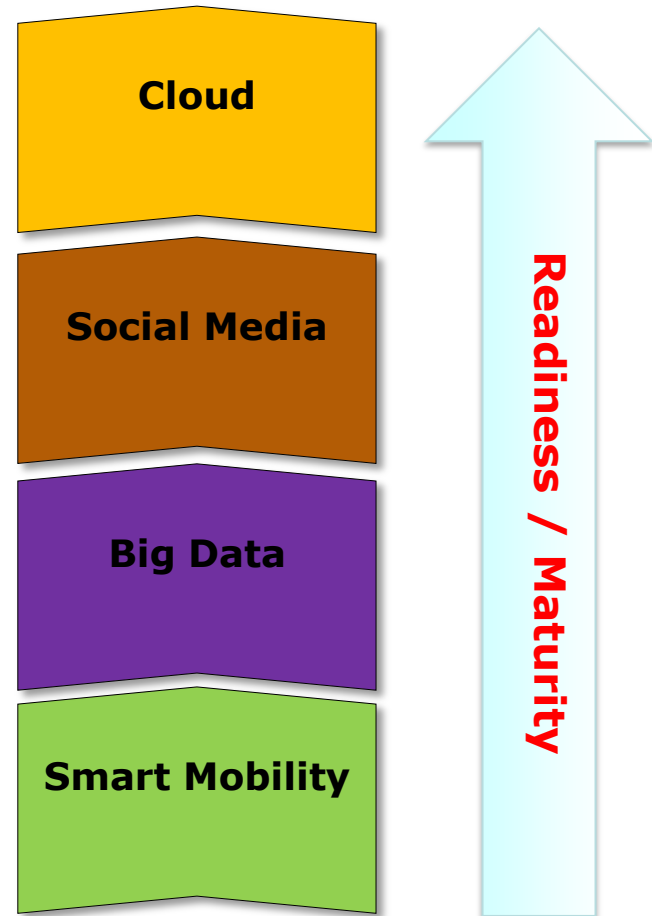
PLM Innovation 2012

5 technology disruptors...



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6



PLM portfolio roadmap is fully integrated into the Group strategy

► Cloud: Industrializing Dynamic PLM



► Bluekiwi acquisition: Social Enterprise Systems collaboration



- Siemens strategic partnership:
 - Supplier Connect
 - Greenfield / Brownfield



PLM at the heart of the new workplace: integrating social media, cloud and other IT disruption factors



Product lifecycle management (PLM) is once again extending its footprint beyond traditional boundaries, says Luca Benporath, Atos vice president global PLM

Two decades ago, design tools and computer-aided applications enabled product data management (PDM) to come out from the "niche" of R&D labs. Since then, PLM has become the product backbone for companies that require a central data repository, accessible across the whole enterprise, enhancing real, effective collaboration between engineering and the rest of the business.

Because of the introduction of PDM, product data has become a valuable asset for an enterprise, allowing R&D, manufacturing, sales, supply chain, after sales and procurement to work on the same, yet seamless, set of processes and data.

In addition, the focus has been extended beyond a pure "mechanical-centric" view to incorporate elements that play an important role in the product lifecycle, such as systems engineering. Software is today such an integral part of any object we use – from an iPhone to a car – that it is becoming more and more crucial for manufacturers to manage systems holistically and holistically of the overall product development.

Another example is service management for after sales, which links only the way companies are increasing customer satisfaction, but most of all a great driver for revenue growth. More recently, we are experiencing a second "wave" of expansion, triggered by the main IT disruption elements – smart mobility, cloud computing, big data, social media and consumerisation leading use of applications to run the business, sourcing them from the consumer world where they originated.

These factors are not only changing the technology, but introducing a different approach to "collaborative PLM", which goes beyond the single company or traditional co-design to include the entire value network that plays a key role in enhancing product quality and reducing time-to-

market. The keywords for such an approach are flexibility, suppliers' collaboration and innovation. By encouraging joint operations among multiple functional groups, inside and outside the enterprise, decision-makers are combining deep insights about customers, competitors and supply bases to strip out costs and amplify what customers truly value (the "networked" enterprises, according to a 2011 McKinsey study entitled *The rise of the networked enterprise: Web 2.0 finds its payoff*).

“**With a collaborative environment, based on best practices derived from enterprise social systems, the new PLM workplace is wherever it needs to be**”

To achieve this, enterprises need to leverage technologies whose business models are much more flexible and scalable than in the past, allowing a rapid increase/decrease of users and partners during the product development process.

With a collaborative environment, based on best practices derived from enterprise social systems, the new PLM workplace is wherever it needs to be. Within a few years, the "social media" generation, typically spanning teenagers to people in their 40s, will dominate the workforce, in particular in emerging economies where hundreds of thousands of young "digital native" engineers will flood the market. Their behaviour will influence a new

way of working, including core business processes for manufacturers, such as product design and development.

The new wave of enterprise social collaboration is already driving with efficiency and enabling greater levels of co-operation regardless of location – "design anywhere", manufacture everywhere" – while removing much of the "noise" and productivity drain due to un-structured communications, endless iterative processes and recurrent non-compliances, which create much overhead in organisations today.

In an environment in rapid and somewhat hectic evolution, Atos is playing a key role in providing strategic assets to leverage IT disruption factors as a competitive advantage for its clients.

Atos has the background to do this. In addition to our 20-plus years' experience in integration of PLM solutions at worldwide level, using best-in-class platforms and heavily investing in R&D projects, Atos has launched strategic initiatives that fulfil such strategy, and help clients to operate with flexibility, collaborative networking and innovation.

To achieve a greater degree of flexibility, Canopy – a one-stop shop company based on the strategic alliance of Atos with B2C and

ITMware for advanced cloud services – offers Dynamic PLM, a truly cloud-based product lifecycle management platform.

Dynamic PLM is the result of many years of research and development at Atos to deliver a solution that could balance specific enterprise processes with a pre-defined framework, as well as special care for data security issues for sensitive information to be stored on the cloud.

The result of this is a flexible and scalable PLM platform with an innovative total cost of ownership (TCO) model on pay-per-use, which is the perfect setting for networked enterprises with evolving business ambitions and increasing partners.

To enhance collaboration, Atos is working on Supplier Connect, the platform to manage partners' ecosystems from an engineering standpoint, adding business intelligence on key processes, such as sustainability, quality and programme management, and product sourcing.

And to boost enterprise innovation, Atos' acquisition of bluekiwi – a leading provider of enterprise social collaboration software – will enable companies to leverage its best practices to deliver multiple methods of collaborating, sharing and managing projects, and workflows. This will directly support the whole end-to-end design process, from idea to execution, determining the most effective route towards further integration.

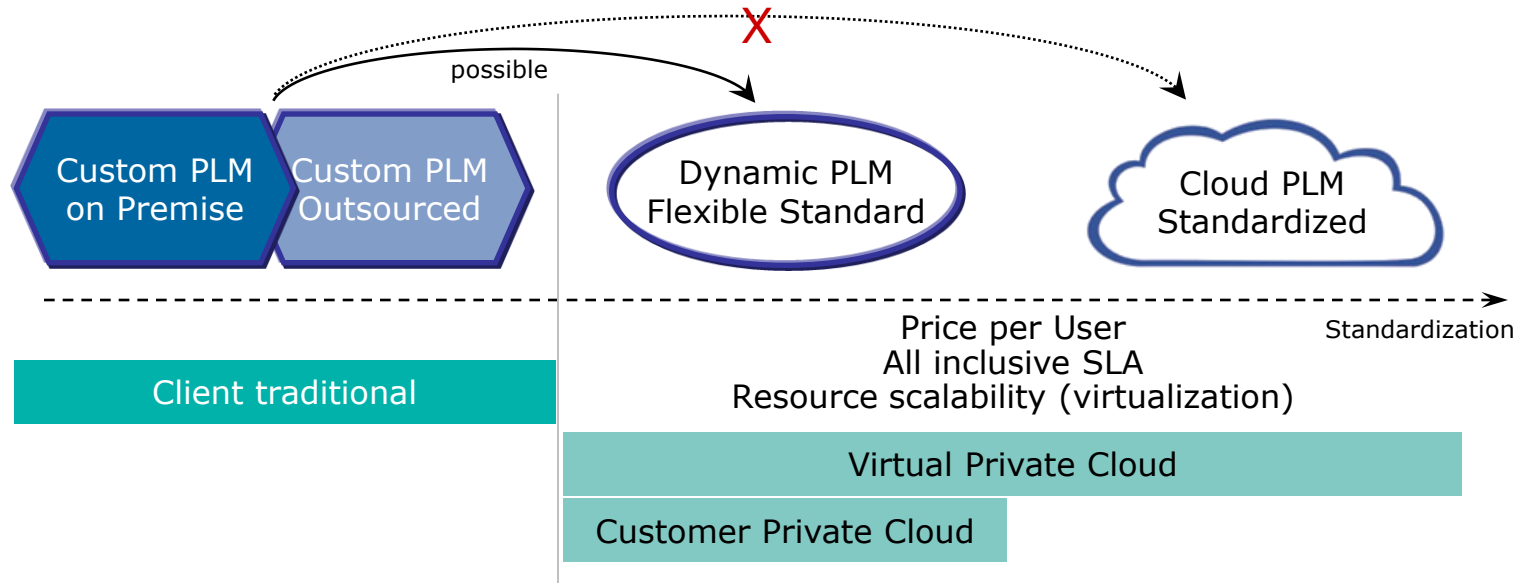
Atos' move to eliminate internal communications – Zero email project – by the end of 2013 and create a collaborative working environment, based on social media, has given the company the expertise to deliver on an enterprise scale. The journey to social collaborative product lifecycle management has just begun.



Luca Benporath
Vice president global PLM



Positioning of Cloud-PLM Service



- ▶ Cloud PLM Service is matching the individual demands of complex PLM processes with the strength of Cloud Computing
- ▶ Cloud PLM Service is a framework that can be adopted to customer specific architecture and security demands

Dynamic PLM is the Atos cloud-based PLM platform

Characteristics:

- ▶ Pay per user
- ▶ Operation at Atos global production centers, remote access and mobile support
- ▶ Service desk and application management ITIL-compliant and based on SLAs
- ▶ Fast and reliable due to local cache servers if required; Scalable and flexible to satisfy changing business needs
- ▶ Openness for customer specific configuration and integrations (CAD, ERP, legacy applications, etc.)

Client Benefits:

- ▶ Cost flexibility by pay-per-user pricing model to include third parties in the network
- ▶ Reduced capital expenditure (CapEx) by the Cloud business model.
- ▶ Ready availability of infrastructure and services significantly reduces duration and risks of PLM implementation projects.
- ▶ Reliability and service quality due to standardization on proven and certificated technology and global bundling of skills and resources.
- ▶ Enter the PLM landscape for non-discrete manufacturers

Atos Distinctive Assets

Awareness

Assessment

Identification

Justification

TOGAF



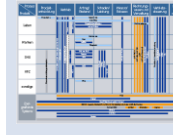
Maturity Scan

Business maturity assessment developed with University Eindhoven



Business Impact Analysis

Best practice methodology to evaluate improvement levers by PLM and derive actions



Architecture & Roadmap

Best practice methodology to define PLM/ERP architecture and program roadmap

Vertical Solutions:



PLM driven Content Management

Best practice solution to integrate technical documentation and engineering based on standard PLM platforms



PLM for Defense / AMPS

Deployable logistic and asset management solution integrated with PLM based maintenance, repair and overhaul system



Security solution / DirX

Integrated enterprise Identity and Access Management Solution for PLM



Automotive Supplier solution

Template based Automotive supplier solution including APQP processes and integration to downstream systems



Dynamic PLM Service, PLM in the cloud

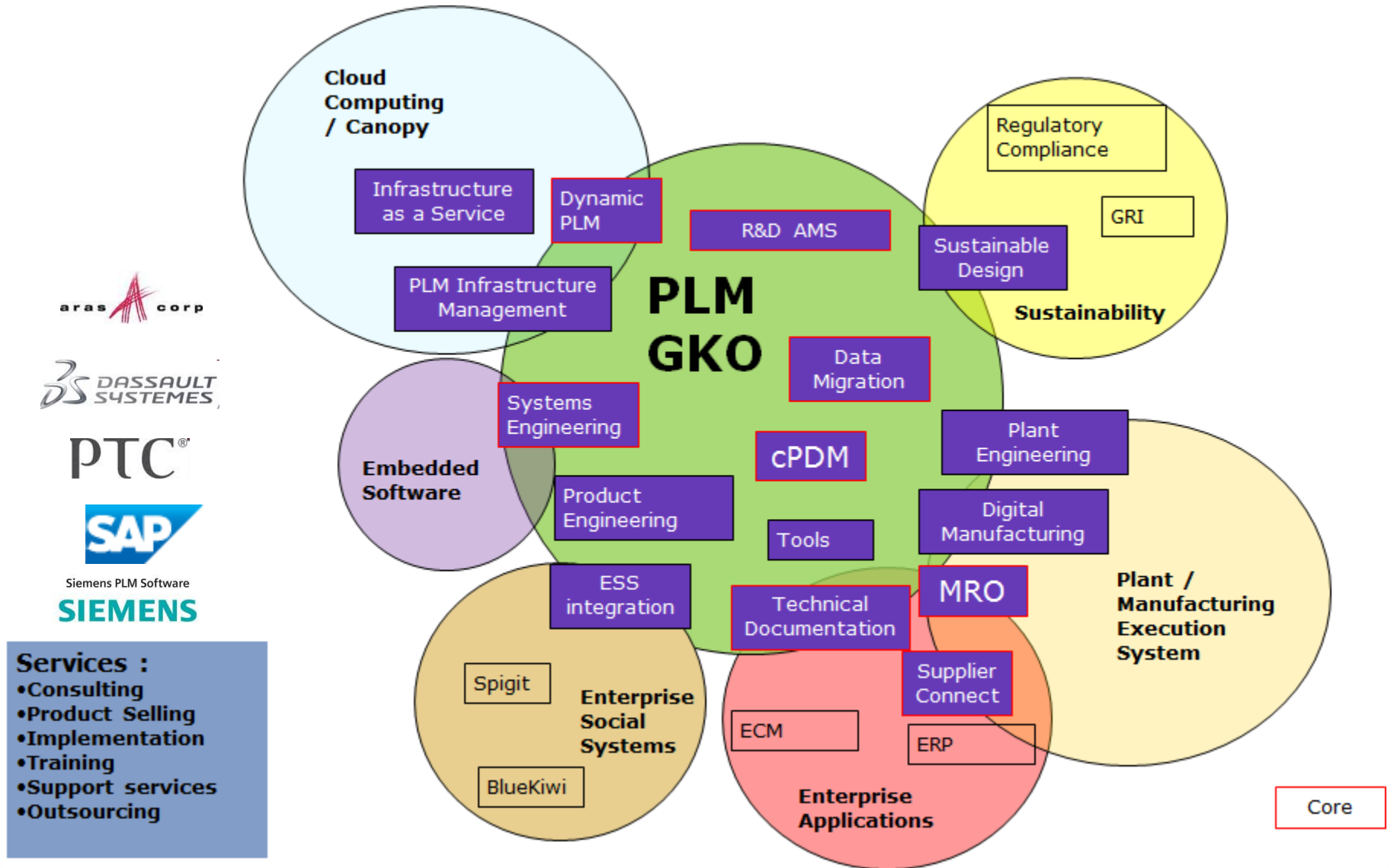
Scalable on-demand PLM environment, consisting of platform and services on a user-based price



Automotive BoM / ERP Integration

Integrated Bill of material solution to deliver manufacturing BOM to enable planning and forecasting in the ERP system

PLM is a Global Key Offering at Group level



Powering progress for our clients

Automotive



Aerospace & Defense



Machinery & Discrete



High Tech & Electronics



Other sectors



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From partnership to writing history

- ▶ Siemens AG is the largest customer of Atos with the largest outsourcing contract signed with Atos for 7 years
 - ▶ 200 countries
 - ▶ 400,000 employees using daily the services
- ▶ Siemens and Atos have signed an agreement to jointly go to market
 - ▶ Atos is the single IT services partner of Siemens One
 - ▶ Atos and Siemens have committed to co-invest in R&D projects in various domains
 - ▶ PLM joint G2M initiative on specific vertical solutions
- ▶ Siemens is a 15% shareholder of the Group, showing its commitment and trust in this partnership

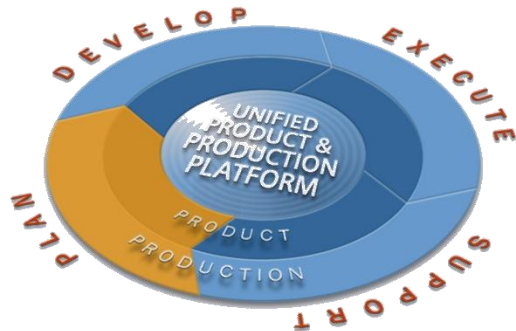


Siemens PLM Software and Atos

Combine Power Products and Power Services

Atos and Siemens PLM partnership has been reinforced by SIS acquisition

Siemens PLM Software



POWER products by Siemens

Atos



POWER services by Atos

Mastery of core processes & integrations
Global coverage of service and support
Innovation leaders:
Strong portfolio alignment
Broad industry knowledge

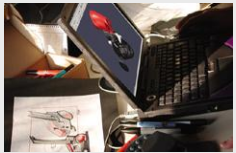
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Industry invests billions to keep pace in the increasingly competitive market

Typical business initiatives driving PLM



NEW PRODUCT DEVELOPMENT

Integrate people & processes & technology to rapidly bring customer driven innovations to market



EXTENDED ENTERPRISE

Connect all value chain members, including partners, suppliers and customers, to optimize product returns



CAPTURE INTELLECTUAL ASSETS

Capture and reuse product & process knowledge to improve productivity and optimize investments



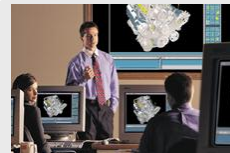
COMPLIANCE & SUSTAINABILITY

Manage processes & records to ensure adherence to government, industry and international regulations



DESIGN ANYWHERE/ BUILD ANYWHERE

Organize, manage & secure critical product & process data to leverage information across enterprise



COMMONIZATION & REUSE

Maximize reuse of products & processes with common development platforms & manufacturing operations



MANUFACTURING EXCELLENCE

Increase manufacturing flexibility & performance by integrating product & process design with production



MECHATRONICS

Design and evaluate complex products that include mechanical, electrical & software elements



REDUCTION OF IT COMPLEXITY

Consolidation, harmonization and refreshment of PLM IT Landscape

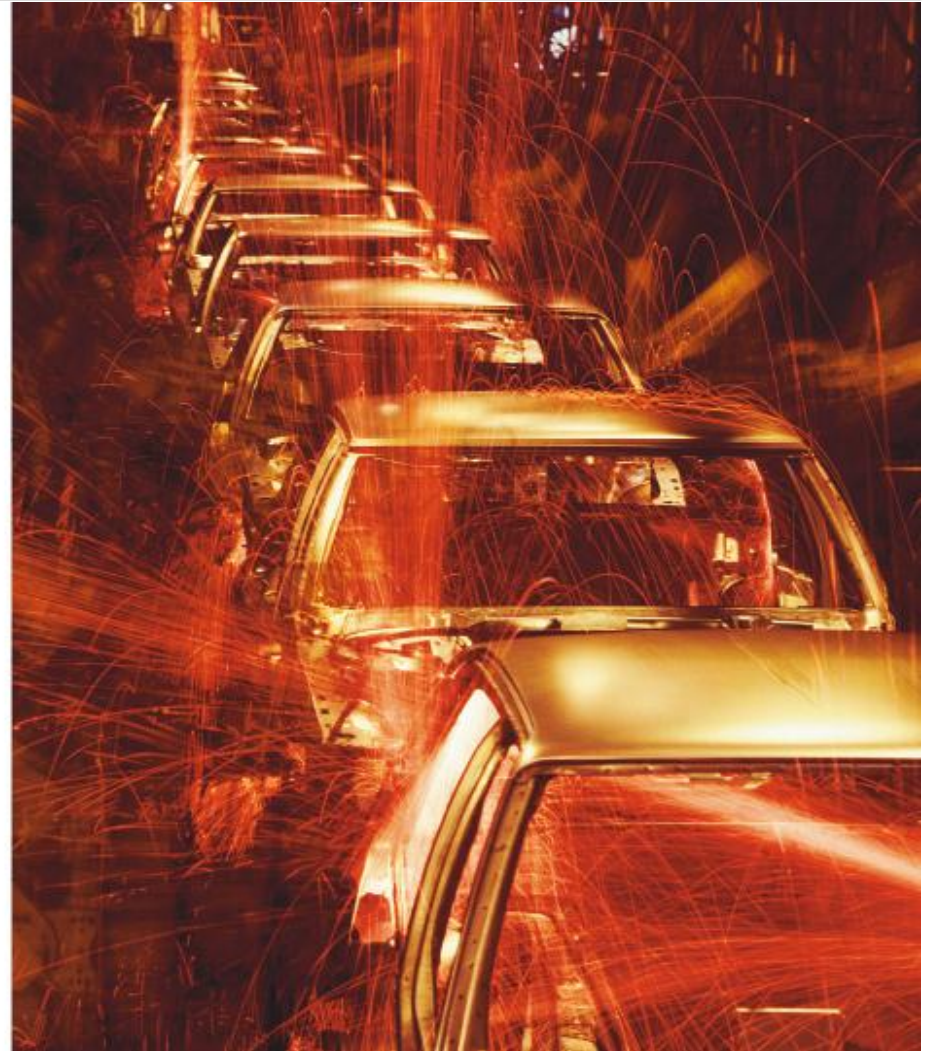


MERGERS AND ACQUISITIONS

Transforming business and IT to a future operating model with respect to all dimensions

Which business drivers are pushing our clients to pursue PLM strategy?

- ▶ Being in line with strategic ambitions:
 - Shorten time to market
 - Increase brand equity and customer intimacy
 - Demonstrate adherence to sustainability
- ▶ Boost Innovation across the whole enterprise
- ▶ Turn product complexity into ease of use
 - Increase use of embedded software
 - Include product after-sales and end-of-life into the cycle
- ▶ Increase collaboration and align R&D to the « social enterprise » paradigm



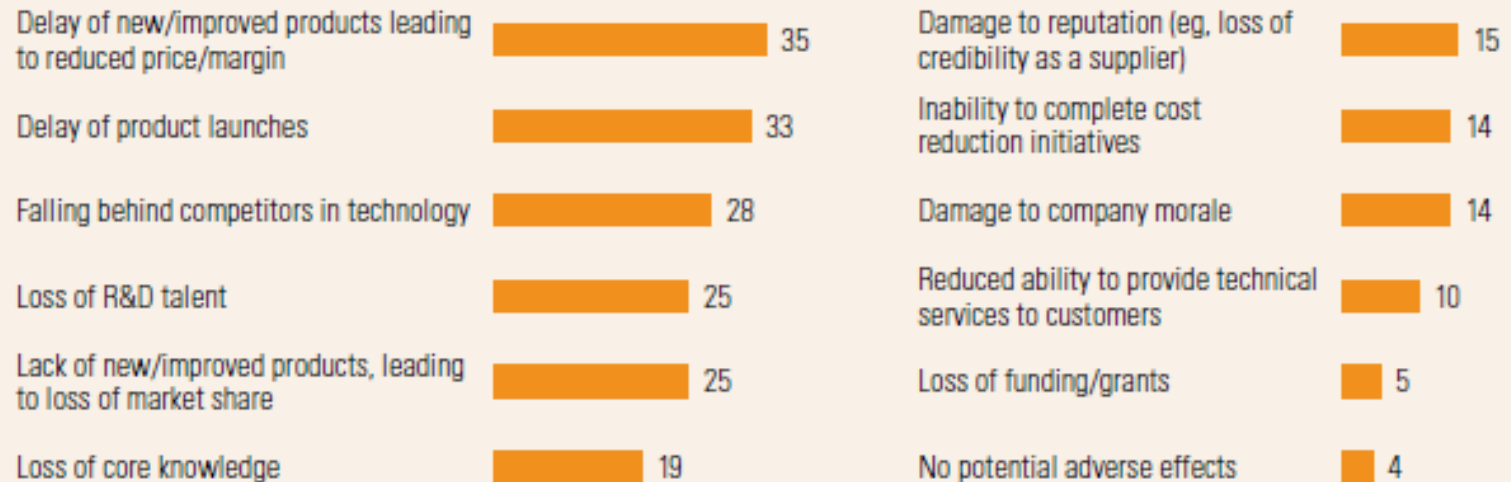
Reducing R&D investments is just not an option for our clients

Exhibit 4

Adverse effects

% of respondents eliminating all R&D activities or reducing R&D budget in 2009,¹ n = 165

Potential adverse effects as a result of eliminating or reducing R&D budget

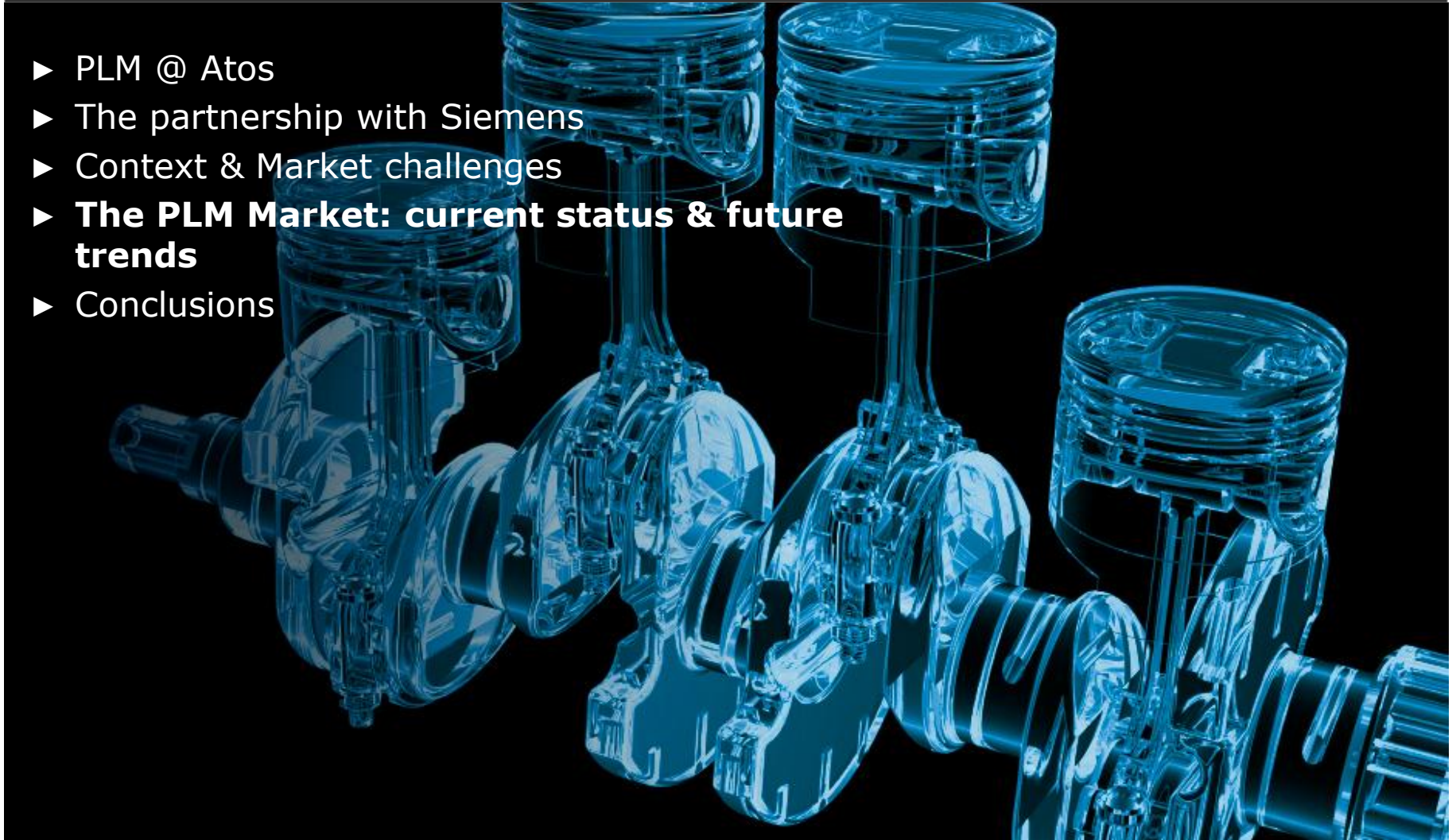


¹ Respondents who answered "other" or "don't know" are not shown.

Source: McKinsey Global Survey – R&D in the Downturn (2009)

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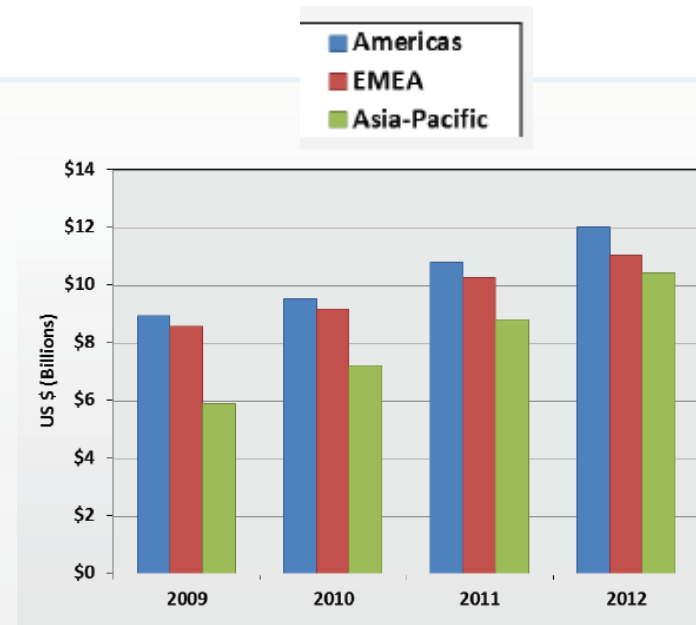


PLM Market over the last 12 months

- ▶ Global economy still not completely recovered
 - Investments in PLM still growing but not in a uniform way and with different degrees of maturity in the different market segments
- ▶ Major global PLM initiatives based on processes harmonization & one single solution selection still happening
- ▶ The software vendor market going into two main tendencies:
 - Increasing the number of vendors entering the PLM territory
 - Increasing the number of acquisitions
- ▶ The software providers market is still very much consolidated into three categories:
 - Traditional leaders: Dassault Systemes, PTC, Siemens
 - ERP vendors: SAP, Oracle
 - Niche / Emerging: Autodesk, Aras...

PLM Market results*

- Overall PLM revenues were up*
 - Comprehensive PLM up 11.3% to \$33.3 billion
 - Mainstream PLM grew 12.1% to \$21 billion
- cPDM growth higher than forecast
 - Up 9.9% to \$11 billion
 - Solid growth in Focused Applications
 - Services grew slower than software, 7.3% and 13.6% respectively
 - Software growth should power services “wave” over next few years
- Digital Manufacturing still growing slowly
 - Up 10.2% to \$550 million



* Source: CIMData market analysis 2012 (released april 2013)
** Mainstream excludes Electronic Design Automation & Computer-aided software engineering

PLM Growth forecast*

- Overall PLM growth will moderate
- We expect growth in major sectors to continue more slowly
 - cPDM will continue to grow
 - Tools growth will be solid, driven by S&A
 - Digital Manufacturing will continue moderate growth

Area	2013	5 Year CAGR Forecast
Mainstream PLM	8.3%	8.5%
Comprehensive PLM	8.7%	8.9%
cPDM	8.54%	8.53%
Tools	8.8%	9.1%
Digital Manufacturing	7%	7.5%

* Source: CIMData: 2012 market analysis (released april 2013)

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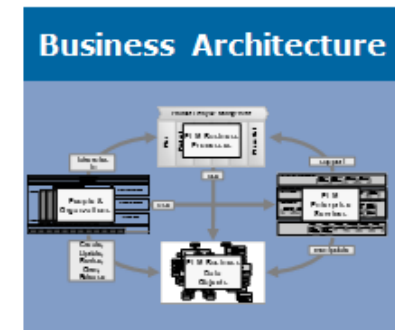
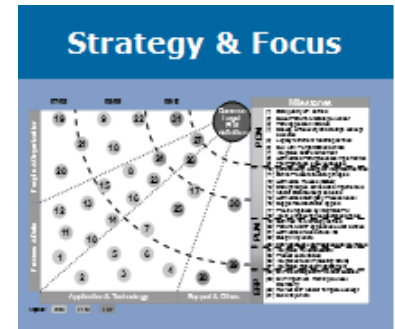
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Overall: PLM market is healthy and growing

- ▶ **Reducing R&D spend is not an option** to stay competitive for our clients
- ▶ **Investments** in full scope PLM can reach **several hundred millions Euro**
- ▶ Global initiatives **driven** directly by **CEO / CIO**
- ▶ On average > **8,5% market growth** *
- ▶ **Higher margins** than traditional IT services
 - Demand stronger than supply
 - Big size projects ongoing and kicking-off
 - Scarse number of engineers available
 - Booming for BRIC countries expected in a few years
 - Still growing in EU and North America
- ▶ **Service providers** market still fragmented but with some **clear leaders (IBM, Atos, T-Systems...)**
- ▶ Increasing presence into **non-traditional PLM sectors** (CPG, Pharma, Retail, Oil & Gas, Chemical...)

* Source: CIMData 2012 market analysis



Questions?

www.atos.net

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