PLMadvisors
Better Processes. Better Technology. Better Results.

Webinar 3:

Find the Right Technology to Enable Your Competitive Advantage

Agenda

1. Introduction

2. Quick Review of Previous Webinars

3. 10 Steps to Finding the Right Technology to Enable Your Competitive Advantage

4. Summary

5. Questions

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Our Advisors

Andreas Lindenthal - Managing Partner

- Over 25 years of practical, international experience in innovation, product development, PLM, business management and consulting

- Former partner at Kalypso, leading the PLM, A&D and Automotive practices

- Co-founder and president of Metafore, an independent PLM solution provider

- Former executive at Siemens PLM/UGS in Switzerland and the US

- Former head of new product development at Sulzer AG in Switzerland

- MBA in Entrepreneurship from Pepperdine University in Malibu, CA

- BSME degree with emphasis in CIM from the Zurich University of Applied Sciences in Switzerland

- Author of numerous articles, publications and blogs in the area of innovation, NPD and PLM

- Select clients and projects:

    - Apple (HT&E): Supply chain integration and PLM implementation
    - Applied Materials (HT&E): PLM selection
    - American Medical Systems (MD): Process optimization, PLM selection and implementation
    - Edwards Lifesciences (MD): Process optimization and PLM implementation
    - HGST (HT&E): PLM strategy, selection and business case
    - Hunter Industries (I&PE): PLM C&M assessment, NPD assessment and process transformation
    - Nexteer (Auto): PLM C&M assessment and recommendation
    - Thales (A&D): Process optimization, PLM selection and implementation
   - Topcon (Mfg): PLM implementation

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- We provide unbiased consulting and advisory services in
    - **Product lifecycle management (PLM).**
    - **New product development (NPD)**
    - **Innovation**

- We help clients to define and optimize their strategies, practices, processes and technologies

- We are strictly vendor independent and technology neutral

- We do not sell software and do not have strategic partnerships with software vendors

- We implement and support all major and many smaller PLM systems

- Services we offer include
    - Education & awareness
    - Assessments & diagnostics
    - Strategy & roadmap development
    - Business case development
    - Software evaluations & selection
    - Process design & optimization
    - Project management and recovery
    - Organizational change management & leadership

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Webinar 1: Creating Competitive Advantage with PLM

Integrating value activities
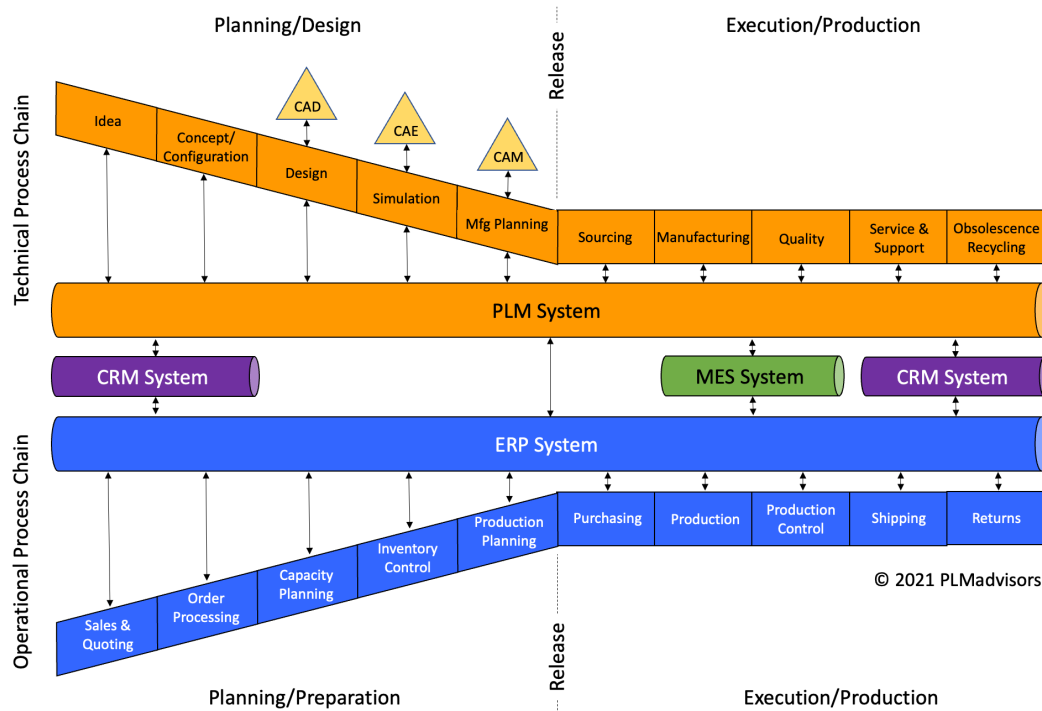
**PLM can make every value activity in itself and the entire technical value chain more efficient and hence improve a company's competitive advantage**

The full value of PLM comes from integrating the entire value chain

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Webinar 2: Create PLM Roadmap

1. Determine highest business priorities and the required PLM capabilities (related and prerequisites)

2. Define the scope of the initial phase based on business capacity → maximum 4 to 6 months

3. Plan to define and optimize processes in those areas → Before technology implementation (!)

4. Identify tools that can be replaced and plan for data migration and tool retirement

5. Repeat for additional phases → Each additional phase should not be more than 3 to 4 months


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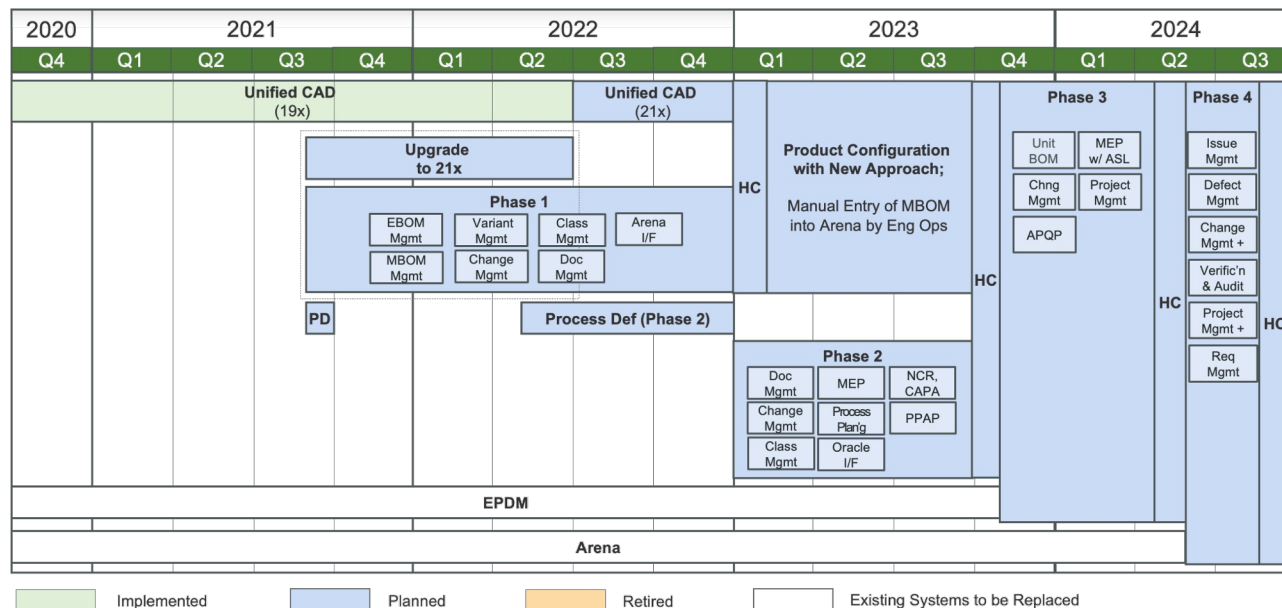
Steps to Finding the Right Technology

1. Define and optimize high-level processes for PLM

2. Determine required PLM Capabilities (overall scope)

3. Define PLM Use Cases and Requirements

4. Gather sample data for system demonstrations

5. Pre-select 3 – 5 potential candidate PLM systems for evaluation

6. Create PLM RFP and submit to preselected PLM vendors

7. Define evaluation criteria

8. Reference calls and visits

9. System Demonstrations against Use Cases and Requirements using sample data

10. Analyze results and select the best PLM system for your business needs

11. Evaluate and select the best implementation partner
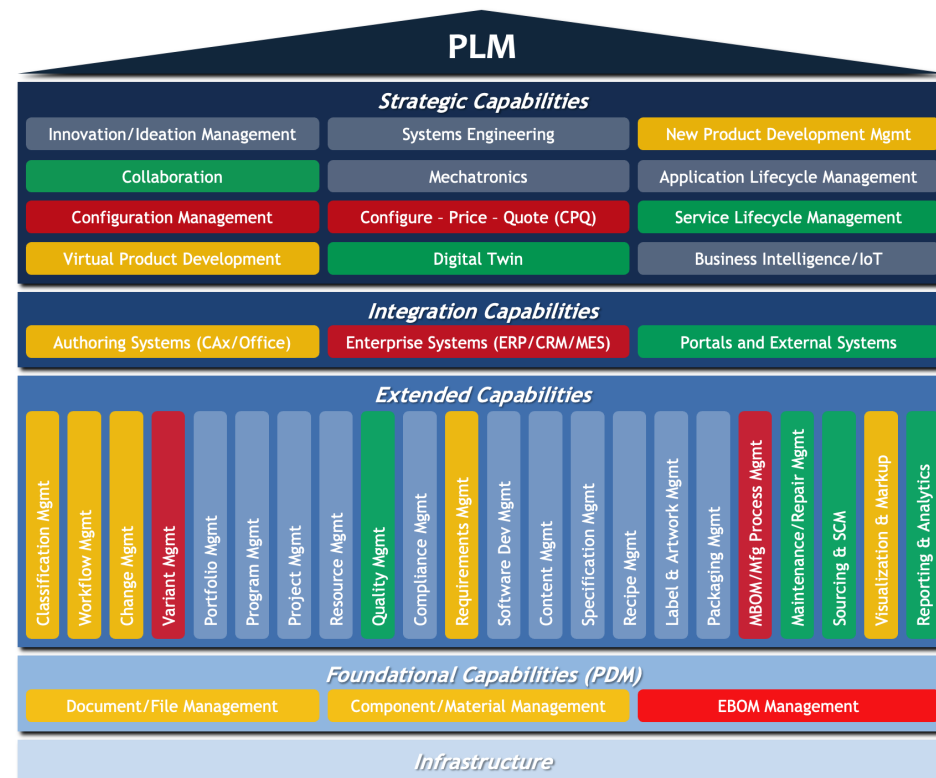
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Step 1: Define and Optimize high-level processes for PLM

- Many current processes may be manual and paper based

- Should be optimized on a high level (at this point) for PLM

- Needed to define Use Cases and Requirements
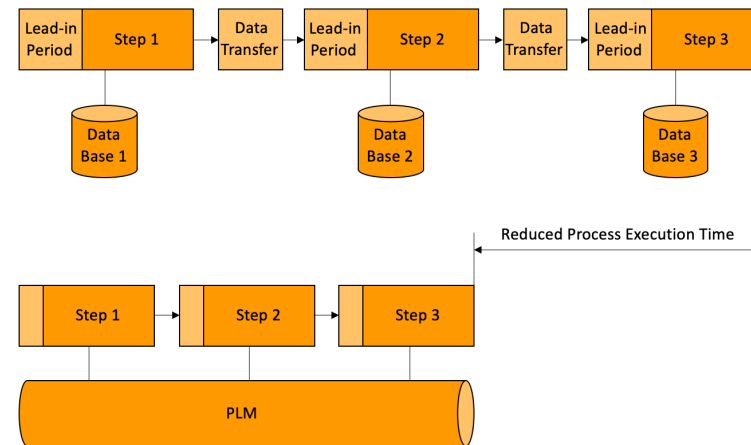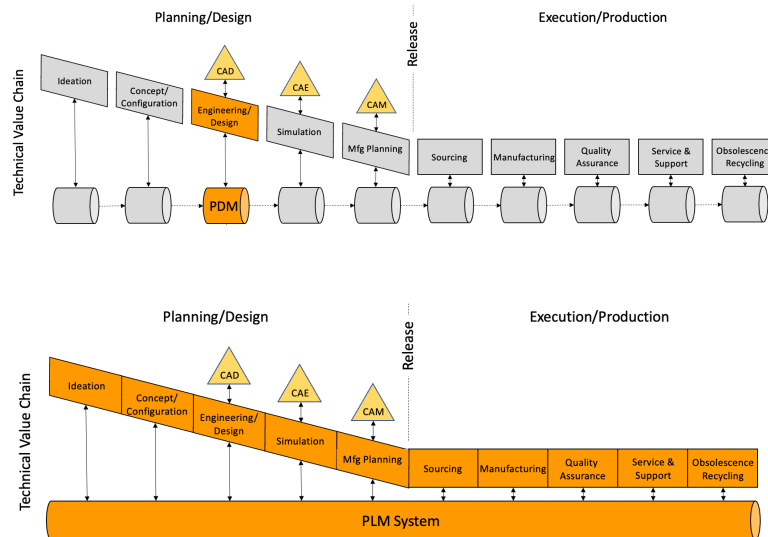
Step 2: Determine required PLM Capabilities (Overall Scope)

- Based on priorities, i.e. business needs, business value, and the ability and willingness for organizational change

- Based on dependencies, i.e. required PLM capabilities and system functionality

- Need to determine the overall, long-term needs of the business

Overall Scope

| Priority 1 |
| Priority 2 |
| Priority 3 |

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Strategic Capabilities

Innovation/Ideation Management	Systems Engineering	New Product Development Mgmt
Collaboration	Mechatronics	Application Lifecycle Management
Configuration Management	Configure – Price – Quote (CPQ)	Service Lifecycle Management
Virtual Product Development	Digital Twin	Business Intelligence/IoT

Integration Capabilities

| Authoring Systems (CAx/Office) | Enterprise Systems (ERP/CRM/MES) | Portals and External Systems |

Extended Capabilities

Classification Mgmt · Workflow Mgmt · Change Mgmt · Variant Mgmt · Portfolio Mgmt · Program Mgmt · Project Mgmt · Resource Mgmt · Quality Mgmt · Compliance Mgmt · Requirements Mgmt · Software Dev Mgmt · Content Mgmt · Specification Mgmt · Recipe Mgmt · Label & Artwork Mgmt · Packaging Mgmt · MBOM/Mfg Process Mgmt · Maintenance/Repair Mgmt · Sourcing & SCM · Visualization & Markup · Reporting & Analytics

Foundational Capabilities (PDM)

| Document/File Management | Component/Material Management | EBOM Management |

Infrastructure

Dependency

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Step 3: Define PLM Use Cases and Requirements

- A Use Case is a clearly defined task the PLM system needs to be able to perform ("Create New Company Part", "Open Document", "Change BOM", etc)

- Each Use Case has one or multiple Requirements.

- Requirements should be defined in sufficient detail for evaluation purposes (will be defined in more detail during implementation)

- PLM Requirements Specification with over 1,200 standard requirements in the 40 PLM Capability areas available from PLMadvisors (PLMadvisors.com – Tools) https://plmadvisors.com/tools/plm-requirements-specification/


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Step 4: Gather sample data for system demonstrations

- System demonstrations need to be company specific based on the defined use cases

- Data used for system demonstrations should be company specific

- Ensure that the PLM system can manage all the data formats you have. This is especially important with CAD data (parts, assemblies/BOMs, drawings, part families/tables and all the file relationships)

- Select a small sample of representative data and send to PLM vendors together with the RFP so that they can prepare and use your data in the system demonstrations

- It's not wasted effort. This step will have to be done later much more extensively when identifying all the data that needs to be migrated

	Mobilize	Design	Build	Test	Deploy
Client	Identify Data to be Migrated	Data Cleanup and Staging	Development of Data Export Scripts	Export from Source Systems → Transfer File (CSV)	
System Integrator			Development of Data Import Scripts	Test Data Migration	Import to PLM System

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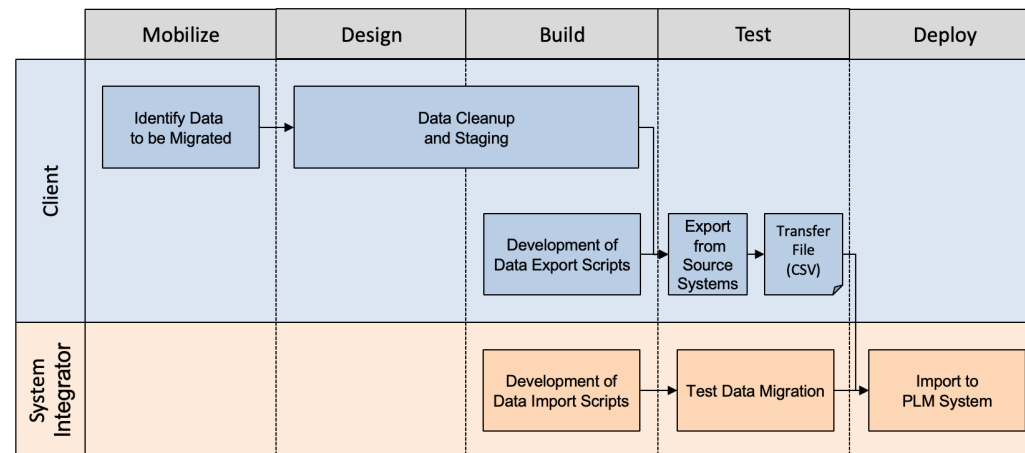
Step 5: Pre-select 3 – 5 Potential Candidate PLM Systems for Evaluation

- Educate yourself about PLM in general and PLM systems specifically. There are good resources, including the PLM Technology Guide (www.plmtechnologyguide.com).

- Do your own market research, ask other companies that use or recently have evaluated PLM or ask an unbiased PLM consultant

- Attend trade shows to talk to vendors and see different available systems

- Invite vendors to do unscripted demos just to see what the different systems are capable of

- Pre-select based on defined requirements and use cases

- Pre-select minimum 3 different PLM systems for more detailed evaluation

SPARK Matrix™: Product Lifecycle Management (PLM), Q3 2023

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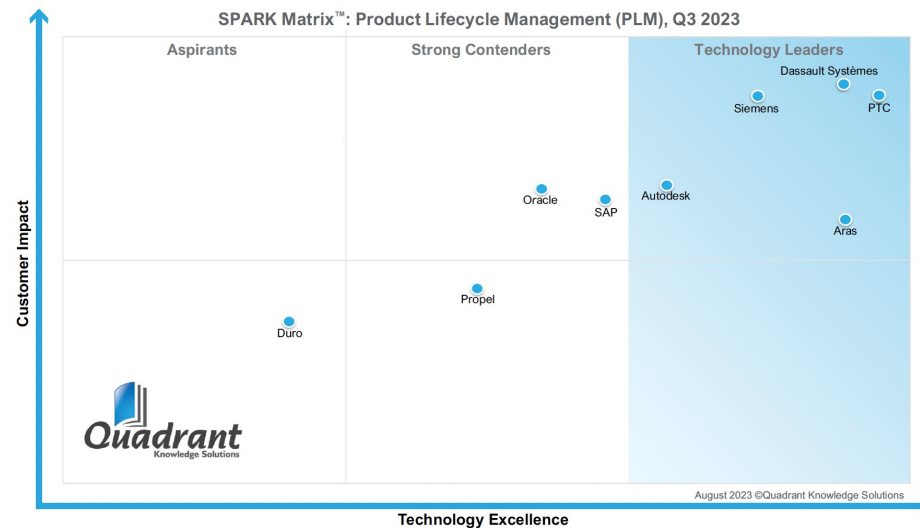
Step 6: Create PLM RFP and Submit to Preselected PLM Vendors

- RFP should include description of current situation (processes, practices, systems to be replaced, systems to be integrated, hardware)

- RFP should include clear description of required functional scope (PLM Capabilities)

- RFP should include required user count (creators, approvers, viewers) for each required functionality

- RFP should include clear definition of required services (installation, configuration, customization, application integrations, data migration, project management, training, testing, validation, OCM, post-go-live support, etc)

- RFP should include clear use cases and requirements

- RFP should include sample data

- RFP should include demo scripts for each use case

- RFP should include request for at least 3 to 4 references of companies with similar functional deployments and in a similar industry

- Submit to vendors at least 3 weeks before scheduled demos; vendors need time to prepare

- RFP should include requested due date for response

- RFP Template available from PLMadvisors (PLMadvisors.com – Tools – RFP Template) https://plmadvisors.com/tools/plm-rfp-template/

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Step 7: Define evaluation criteria

- Define criteria **before** doing demos and analyzing vendor proposals

- Identify must have criteria, nice to have criteria, and not required criteria

- Prioritize criteria into high, medium and low

- Define who is scoring **before** doing demos and analyzing vendor proposals

- Create a score sheet with all evaluation criteria

- Decide how you will use the result from scoring the evaluation criteria **before** you score (the highest wins, consultative only, etc)

- Assign a score to each criteria during the demos and proposal analysis

- Calculate the scores and use them as decided previously

Step 8: Reference calls and visits

- References are a great way to meet other users of the PLM system you are interested in and exchange experiences and best practices

- Understand that references are not unbiased; they have been selected by the vendor for a reason

- Ask for 3 to 4 references in the RFP from each PLM vendor.

- References should have a similar deployment in terms of functional scope. Maybe there isn't one reference that has everything you want to do, so ask for different references that each have part of the functionality you are interested in.

- References should be in the same or a very similar industry

- Prepare questions for reference visits or calls

- Ask for the direct contact information. Often vendors are present during reference visits and calls and the reference person cannot speak completely openly. That may be different when you can talk with them directly without anyone else present.

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Step 9: System Demonstrations

- Don't confuse system demonstrations with sales pitches
- System demos need to be scripted and be based on your use cases and requirements
- PLM vendors love to show what their systems are good at → Pixie Dust
- System demos have to demonstrate specifically what you need, not what the vendors want to show you
- Create step by step demo scripts based on your use cases and requirements and send those demo scripts to the PLM vendors together with the RFP
- Ask the vendors to follow exactly the demo scripts (or explain why they are not)
- Ask the vendors to use the sample data you gave them for the demos
- Ask the vendors to indicate if the functionality shown is out-of-the-box (OOTB), configured or customized
- Distribute the demo scripts to the audience and ask them to rate every step

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Step 10: Analyze Results and Select the Best PLM System

- Analyze proposals, system demos and reference calls against the evaluation criteria

- Score all evaluation criteria

- Select the system with the highest score, or whatever decision criteria you defined previously

- Explain the entire process and approach early on to everyone. The decision time is the time when people all of a sudden come up with new criteria and justifications why one system is better than another. This quickly can become very political and jeopardize the entire evaluation process

- Decide whether another system can also meet your needs → second choice

- Present findings and recommendation to management

- Negotiate with selected vendor. Do not announce the result to other vendors yet in case negotiations with the preferred vendor are not successful. If they are not successful, go to second choice.

- If two systems can meet your needs, negotiate with both vendors and select the one that is more economical.

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Step 11: Evaluate and Select the Best Implementation Partner

- Many PLM software companies implement their own systems. Not always the best economical choice

- There are many third-party system integrators that also offer implementation services for various PLM systems

- It may make sense to look at different options for an implementation service provider and not just default to the PLM software company

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Steps to Achieving a Competitive Advantage with PLM

Summary

1. Identify the value activities and processes that can be improved with PLM

2. Optimize high-level processes within each value activity for PLM

3. Map PLM Capabilities against value activities and processes

4. Define priorities and dependencies

5. Create a PLM roadmap reflecting your priorities and dependencies

6. Evaluate and select the best PLM system for your business needs

7. Implement the selected system → Next webinar

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Questions?

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Webinar Series: Using PLM to Gain a Competitive Advantage

Join us for our webinar series where we will explore how your company can gain a competitive advantage with PLM.

Webinar 1: Identify your company's competitive advantage
Thursday, September 7, 2023; 8 AM Pacific time.

**Webinar 2: Plan your competitive advantage beyond PDM**
Thursday, September 14, 2023; 8 AM Pacific time.

Webinar 3: Find the right technology to enable your competitive advantage
Thursday, September 21, 2023; 8 AM Pacific time.

Webinar 4: Realize your competitive advantage
Thursday, September 28, 2023; 8 AM Pacific time.

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Register @ **www.plmadvisors.com/competitive-advantage/**

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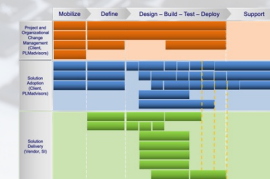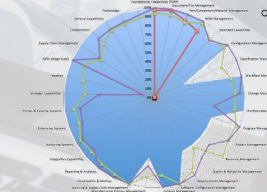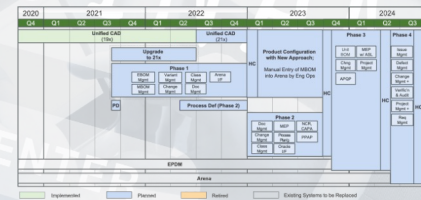
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