Project Management Practices for PLM Success
A CIMdata Education Webinar

Project Management Practices for PLM Success
CIMdata: PLM Webinar Series
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Project Management Practices for PLM Success

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Our Mission...
Strategic management consulting for competitive advantage in global markets

CIMdata is the leading independent global strategic management consulting and research authority focused exclusively on the PLM market.

We are dedicated to maximizing our clients’ ability to design and deliver innovative products and services through the application of PLM.

Presenters’ Profile
Chris Gregory

• Chris Gregory, Practice Manager, PLM Success
  • Chris Gregory comes to CIMdata with over 30 years of experience with major PLM solution providers, with broad experience and cross functional roles in services, product marketing, sales support, strategic alliances, business development and program management
  • Chris has led PLM implementations collectively representing over 100,000 users, over $250 million in proven ROI
Learning Objectives

What you should understand at the end of this session

- Why use a formal project management methodology when implementing PLM?
- Necessary tasks in organizing a PLM program and associated project team
- Key roles and responsibilities that need to be understood and assigned
- Managing and mitigating PLM program risks

Using Project Management for PLM Success

Discussion topics

- PLM and PM methodology - Why and What
- The benefits of following a well-defined project management methodology
- Project team
  - Work Breakdown Structure
  - Best practices for each role
- Top 10 risk areas – focused planning will increase success
Project Management Practices for PLM Success

PLM Spans the Product Life and value chain

Formal deployment methodology aligns needs of all enterprise stakeholders

What is a Project Management Methodology?

PLM solution complexity demands formal and structured implementations

Project management is a methodical approach to planning and guiding project processes from start to finish.

- Techtarget

Project management is the application of processes, methods, knowledge, skills, and experience to achieve the project objectives. A project is a unique, transient endeavor, undertaken to achieve planned objectives, which could be defined in terms of outputs, outcomes or benefits.

- Assoc for Project Management

Project management is the discipline of carefully projecting or planning, organizing, motivating and controlling resources to achieve specific goals and meet specific success criteria.

- Wikipedia
A Formal Project Management Process

Method of managing the work needed to deliver a PLM solution

- Project Management Institute PMBOK

Project Mgt. Process with Software Dvlp.

Don't confuse PM with SDLC!

Project Management Process

Software Development Lifecycle

A PLM project uses both Project Management methodology and a software development methodology
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Project Mgt. Process vs. Software Development

Different SDLC methods are used at different times

Software Development Lifecycle

Waterfall
Best for:
- Software deployments
- Data migration

Success Factors
- Experienced leader needed
- End user involvement
- Business goals clearly defined

Agile | Scrum
Best for:
- Development efforts when end state isn’t defined
- Mid-stream requirement changes

Success Factors
- Experienced leader needed
- End user involvement
- Business goals clearly defined

Harnessing Project Management Process

Using the process to form and control the PLM program

Initiating
- Created the Governance Board and planned the high-level phases
- Status reporting back to Governance Board as to cost, timing, scope results so far

Planning
- Determined Phase deliverables, captured the team resources, determined schedule
- Using a development process such as Agile to create and refine deliverables based upon business requirements

Monitoring & Controlling
- Project Management Institute PMBOK

Executing
- Using development process such as Agile to create and refine deliverables based upon business requirements

Closing
- PLM programs don’t end – they just start the next Phase

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Benefits

Using a formal project management methodology minimizes risk to success

- Demands adequate planning from the project team, minimizing surprises
  - The team will document and plan for risk mitigation and avoidance
  - Creating a resource plan ensures proper skillsets utilized at the proper time
- Produces timing forecasts, budget tracking and scope mgmt.
  - The Governance Board can make better informed decisions
- Creates transparency through formal communication channels—garnering trust within the user community
- Using a Change Control process manages expectations of the stakeholders
PLM Implementation

Main roles & responsibilities

<table>
<thead>
<tr>
<th>PLM Champion</th>
<th>Governance Board</th>
<th>Program/Project Mgt</th>
<th>Information Technology</th>
<th>Solution Provider</th>
<th>Business Units/Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief Evangelist</td>
<td>Roadblock Remover</td>
<td>Budget Owner</td>
<td>Provider Management</td>
<td>Solution</td>
<td>Communications</td>
</tr>
<tr>
<td>Board Responsible</td>
<td>Review &amp; Approve Vision &amp; Strategy</td>
<td>Metrics Owner</td>
<td>Software Build Cycle</td>
<td>Configuration</td>
<td>Requirements</td>
</tr>
<tr>
<td>Visionary</td>
<td>Budget Review &amp; Approval</td>
<td>Cultural Change Mgt. Facilitation</td>
<td>Unit, System Regression Testing</td>
<td>Infrastructure Guidance</td>
<td>User Acceptance Testing</td>
</tr>
<tr>
<td>Budget Review</td>
<td>Review Security needs for overall program</td>
<td>Status Reporting</td>
<td>Developer Training</td>
<td>Data Migration SMEs</td>
<td>End User Training</td>
</tr>
<tr>
<td>Roadblock Remover</td>
<td>Integration with other initiatives</td>
<td>Scope Management</td>
<td>Data Migration Execution</td>
<td>Integration Support</td>
<td>Data Migration Planning &amp; Cleansing</td>
</tr>
</tbody>
</table>

Program Manager: Expectation management; responsible for managing the expectations of all stakeholders!

Monitoring the Implementation Results

Governance Board reviews metrics and validates ROI—acts upon lessons learned

Focus Groups

- Cultural Change
- Application Training

New Functionality, Issues with Processes
Project Team Setup - Best practices

- General PM success points
- Communications
- Requirements Definition
- Business Process Definition
- Organizational Change Management
- Data Migration
- Security
- Systems Configuration & Development
- Testing
- Adoption

General Project Management – Best Practices

**Responsible party: program manager & project managers**

- Make sure you hold a Kickoff Meeting to:
  - Inform stakeholders of schedule and phases of the project
  - Obtain cross-department resources
  - Inform team of scope and level of quality expected
  - Provide Champion a chance to speak; create a sense of urgency and introduce themselves; the first formal introduction between team members

- Communication is necessary for a successful project
  - Your first, and last, obligation as a project manager
  - Continue to use a marketing approach to communications
    - Create press releases, posters, social media, etc.
  - Spend time on **defining, documenting, and making visible** your plan

- Keep working with your Solution Provider on an on-going basis
  - Think about keeping a representative from your supplier partner contractually engaged in the phases of the rollout
Communication is a Priority
Create and USE your communication plan (1 of 2)

On the Project Phase Level:

● Communication on this level is all about project status

● Create a written document that defines the following
  ▪ Who will be given status of project execution?
  ▪ What kind of information will be communicated?
  ▪ When it will be communicated?
  ▪ How (phone, e-mail, Blog, etc.) it will be communicated?
  ▪ Who on the project team will do the communicating?

Share good news quickly,
Share bad news … even faster!

Communication is a Priority
Create and USE your communication plan (2 of 2)

On the Program Level:

● Communication on this level is really Marketing and needs to be planned and executed!
  ▪ Websites
  ▪ Posters
  ▪ Elevator pitches
  ▪ Press Releases, etc.
  ▪ All managed by the Governance Board

This is really part of a Organizational Change Management initiative.
Business Process Definition & Management

*Responsible party: Business process owners*

- Define processes & ownership responsibilities
  - Define the processes within the scope of the program and assign owners
- Best practices
  - Capture and define best practices related to the processes within scope
- Re-architect processes
  - Support the design of use cases and associated process flows
- Define general policies & procedures
  - Define and/or update corporate policies and procedures as required
- Process adoption
  - Define process metrics and follow up procedures to ensure process adherence
- Continuous improvement
  - Use metrics to consistently improve processes (as needed)

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Business Process Definition – Best Practices

*Responsible party: Business process owners*

- Highly important to review and manage the design of use cases and associated process flows
  - *These are directly instantiated in the PLM tools as workflows*
- Define and/or update corporate policies and procedures as required, including record retention policies
  - Work with the legal department to update if needed
  - Use these policies when contracting with product design suppliers – how and when they access, update and interface with your data
- Understand and own the security in the PLM solution as it pertains to your process
**Requirements Definition**

*Responsible party: Business Analyst*

- Conduct Current Situation Analysis
  - Map out current processes, roles, artifacts to understand business rules, methods and work instructions
- Define Data types & their structures
  - Use selected solutions to define the data type structures and attached document types to create the data model
- Phase requirement definition
  - Define and manage detailed phase definitions, focus on phase scope
- Use case development
  - Work with internal subject matters experts & general users, process owners, solution provider, and 3rd-party SMEs to define appropriate use cases
  - Capture Form, attributes and their behavior on each form, list of values, security on attributes, and other details for user interfaces

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**Organizational Change Mgt. – Best Practices**

*Responsible party: Program & Project Managers*

**Round-Tables**

- User round tables

**Seminars**

- Executives
- Users
- Suppliers
- Partners
- Customers
- Etc.

**Documentation**

- Positioning papers
- User briefing papers

**Web Site**

- Contact Info
- Success stories
- Focused articles
- Events
- Project Info
- Etc.

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Reaction to Change Negatively Seen

Quickly overcoming this is critical to success

Status Quo

Anger, Rage

Bargaining

Acceptance

Neutral Zone

Beginning

Denial

Depression

Ending

Stunned Paralysis

TIME

ENERGY

Reaction to Change Negatively Seen

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TIME

ENERGY

Getting People to Care

It begins and ends with education

- Educate and communicate
- Listen to the users
- Get people involved
- Change plans if appropriate
- Symbolic gestures by sponsor
- Educate and train

“Faced with the choice between changing one’s mind and proving that there is no need to do so, almost everyone gets busy on the proof.”

- John Kenneth Galbraith, economist (1908-2006)
Data Migration

Responsible party: IT project manager

- Data migration planning
  - Develop the data migration plan, including identifying the data to be migrated, the responsible individuals, the methods for cleansing and migrating, etc.
  - Determine what data to move out of the system, and if you keep it or not, per your record retention policies
- Data cleansing
  - Use manual and automated methods to cleanse data and actually input existing data into the new solution.
- Data migration
  - Define timing and schedule with all stakeholders; including Focus Group representatives
  - Migration occurs usually in conjunction with PLM phased releases

Data Migration – Best Practices

Responsible party: IT project manager (1 of 2)

- Biggest underestimated part of project – **ALWAYS**
  - Always, always, and for all time
- Create separate team to do this effort
  - Create large enough team to handle scope
- Data migration directly affects the project rollout
  - Determines which users may use the system and when
  - Determines what processes are rolled out first
- Know your data retention policy
  - What to keep, for how long, why?
- Ask provider to write bulk data loading programs
  - Create project tasks for developing and testing of these scripts
Data Migration – Best Practices

Create Data Migration plan that includes:

- Current sources of data
  - Data Migration team should have one representative for each source
- Current data structures and nomenclature
- Map of where data is going in PLM system
  - What data models, or data structures are needed to capture this in the new PLM
- Description of how to handle data not being migrated

Load data before training the end users

- Acceptance of system relies on this being completed successfully

No data, no acceptance, no adoption = failed program!

Security

Responsible party: IT project manager AND Business

- Security planning
  - Develop the security plan with the business representative who owns security issues and approvals
  - Validate with Governance Board

- Security monitoring
  - Use manual and automated methods to monitor and report data breaches
  - Use the Governance Board escalation process to determine action needed

- Global Security Strategy
  - Understand timing of new product introduction; how it will impact data security; and how to implement within the PLM solution
  - Make sure your data access restrictions support your organization’s global data security policies
Security – Best Practices

Responsible party: IT project manager AND Business

- Put Security changes policies under formal change control
  - May need to go through Governance Board for approval
  - Any changes may impact the user experience – so communicate!
  - A sub-board of security IT people and business people could be used to analyze impacts of the proposed changes
- All security changes should be tracked
- Security must be tested at each release of the system

System Configuration & Dvlp. – Best Practices

Responsible party: IT project manager (1 of 2)

System Configuration:

- The team will have multiple PLM Environments to manage
  - Sandbox(s)
  - Development
  - Testing – IDENTICAL configurations
  - Production – IDENTICAL configurations
- Consistently work on system performance
  - Inadequate architecture leads to performance issues
  - This should be a status report each Governance Board meeting
  - Work with solution provider and 3rd-party SMEs to define and manage specifications, as these can effect performance
**System Configuration & Dvlp. – Best Practices**

*Responsible party: IT project manager (2 of 2)*

**Development:**
- Documented requirements are key when using Third-party development teams – to track contract deliverables
- Customized code must be annotated internally to support updates
- Changes in preferences, switches, controls, etc. should be tracked globally for all coders and implementation teams
- Additions to Security and Access for new development should be tracked by the on-going security support team
- Remember adoption – get U/I changes to them
- Unit testing is done by the developers

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**Testing, Sys Validation & Rollout – Best Practices**

*Responsible party: IT project manager AND Business*

- **System validation Testing is done by IT**
  - Execute the system validation plans: including data migration testing, load testing, file distribution testing (Multisite) and security testing
  - Some regression testing and others, could be done with test scripts and automated testing procedures
- **User Acceptance Testing (UAT) is managed and conducted by the Business**
  - Working with the user community
  - Test plans are developed separately from IT testing
  - Data Migration checking at some level should also be done by the Business
- **Sign off that the system is ready to be released into production is done by the Champion**

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Adoption – Best Practices

*Responsible party: Training Specialist (1 of 2)*

- Training plan
  - Determine who, what and where
  - Must be developed in conjunction with the next phase of the system release

- Training Material
  - May want to incorporate vendor material
  - MUST include new process flows, and work instructions to achieve adoption by the end users
  - Process and workflow portion could be trained by business SMEs

- Training Specialist is on the core team
  - Input is needed for scheduling upgrades to the next phase
  - Must coordinate training schedule with release schedule

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Adoption – Best Practices

*You cannot afford to under spend (2 of 2)*

- Start immediately to define training plans
- Make training part of rollout plans
  - Use specific types of training for different functional groups
- May want to consider train the trainer
- May want to consider mentors for each functional area
  - They may also help with communication

*Remember: The new PLM environment will change the way people do their jobs!*
Top 10 Reasons Projects Fail

Poll for your top reasons of Project Failure

1. Inadequately trained and/or inexperienced project managers
2. Failure to set and manage expectations
3. Poor leadership at one or more levels of the organization
4. Failure to adequately identify, document & track requirements
5. Misalignment between the project team and the business
6. Cultural and organizational misalignment
7. Poor plans and planning processes
8. Inadequate or misused methods
9. Inadequate communication
10. Poor effort estimation

Solving the Top 10 Reasons Projects Fail

Most can be eliminated by following good project management practices (1 of 2)

- Obtain committed Leadership
  - Organizing the program with a Governance Board
- Harness Project Management Skills
  - Knowing and applying discipline to a proven methodology
- Spend time Planning each phase
  - Setting up the program team activities to address known PLM problem areas
    - Business Process Ownership, Data Migration, Security, Organizational Change
- Make Communication a top priority in all areas of the program
  - Use cultural change management to create adoption and spokespeople
Project Management Practices for PLM Success

Solving the Top 10 Reasons Projects Fail

Most can be eliminated by following good project management practices (2 of 2)

- Manage expectations both verbally and visually
  - Requirements are documented, prioritized, and visualized for each phase of your program
  - Change Control is in place
- Assess the implementation
  - Establish Metrics
  - Manage Quality Control
- Commit to a sustainable program
  - Organize your On-going Support and operations teams
  - Move from Production Pilot to Production

Concluding Remarks

Project Management increases PLM implementation success

- The use a formal project management methodology lessens the risk to the project
- Structure the project team around high risk areas
  - Data Migration
  - Security
  - Organizational Change Management
- Focus on key activities that foster adoption:
  - Communication, education, training, and rewards
Our Services...
Creating, disseminating, and applying our intellectual capital

Research
- Market research & analysis
- Technology research & analysis
- Reports & publications
- Market news
- Member services...

Education
- Executive seminars
- PLM Certificate Programs
- Technology seminars
- INT conferences & workshops
- Best practices training...

Consulting
- Strategy & vision
- Needs assessment
- Solution evaluation
- Best practices
- Quality assurance
- Program management
- Market planning...

Delivering strategic advice and counsel through a comprehensive, integrated set of research, education, and consulting services

Our Role...
Our role in the PLM ecosystem—facilitating and energizing the PLM economy

Solution Providers
Exec. Mgmt., Product Mgmt., Mktg./Sales

CIMdata
Exec. Mgmt., PLM Prog. Mgmt., Users

Industrial Clients
Project Management Practices for PLM Success
A CIMdata Education Webinar

Our PLM Transformation Clients...
A sampling of CIMdata’s international industrial clients (1 of 2)

Our PLM Transformation Clients...
A sampling of CIMdata's international industrial clients (2 of 2)
CIMdata's certificate program is primarily comprised of a set of well defined, assessment-based PLM education and training classes.

These certificate programs are available to industrial companies who are considering and/or implementing PLM, and to PLM technology and service solution providers.

PLM Certificate Program Outline

- **Day 1:** Session 1: Introduction to PLM
- **Day 2:** Session 2: PLM Benefits & Potential Value
  Session 3: PLM Strategy & Solution Definition
- **Day 3:** Session 4: PLM Solution Evaluation & Selection
  Session 5: PLM Implementation, Monitoring & Continuous Improvement
- **Day 4:** Session 6: PLM Process Development & Testing
  Session 7: Integrating PLM within the Enterprise
- **Day 5:** Session 8: Expanding PLM Across the Value Chain
  Session 9: Configuration Management’s Role in PLM
What Others Are Saying
A sampling of feedback received from past certificate program participants

“A must attend program for anyone that is planning to participate in PLM selection or implementation activities at their organization.”
—Shinod Kumar, Edwards Lifesciences, USA

“An excellent overview of all PLM and it’s fit to companies. Good insights that can avoid many troubles in implementation.”
—Paulo C L Villaca, Embraer, Brazil

“I wish we had done this before we started our PLM effort…”
—Jeff Burk, Whirlpool, USA

“Hazy about PLM? Come to CIMdata and clarify.”
—Mrs. B. Uma Prasad, Bharat Heavy Electricals Ltd., India

2015/6 PLM Certificate Class Schedule*
Join us, to understand how PLM can help your organization

- March 16-20 – Amsterdam, The Netherlands (completed)
- May 4-8 – Ann Arbor, MI USA (completed)
- September 21-25 – Boston, MA USA (completed)
- December 7-11 – Cypress, CA USA
- March 7-11, 2016 – Ann Arbor, MI USA
- June 6-10, 2016 – Amsterdam, the Netherlands

* Dates are subject to change

15% Discount for any scheduled class:
Sign up and pay by November 13th, 2015

* Dates are subject to change