

Project Management Practices for PLM Success

A CIMdata Education Webinar

Project Management Practices for PLM Success

CIMdata: PLM Webinar Series

21 October 2015

Chris Gregory, PLM Success Practice Manager
Email: c.gregory@cimdata.com
Tel: +1.734.668.9922

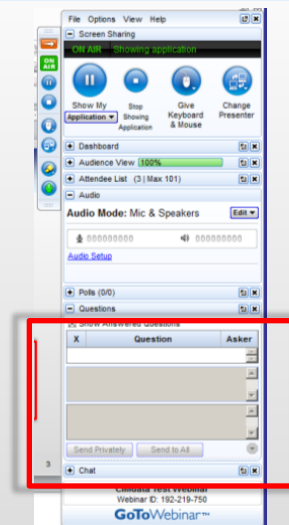
CIMdata® | Global Leaders in PLM Consulting
www.CIMdata.com

Copyright © 2015 by CIMdata, Inc.

Questions?

Please use the GoToWebinar Question panel

- Please enter questions in the GoToWebinar Question panel
- We will answer as many questions as time allows...
- Those that can't be answered live will be answered by email



 **CIMdata**

Copyright © 2015 by CIMdata, Inc.

2

Project Management Practices for PLM Success

A CIMdata Education Webinar

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.

 Copyright © 2015 by CIMdata, Inc.  3

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



 Copyright © 2015 by CIMdata, Inc.  4

Project Management Practices for PLM Success

A CIMdata Education Webinar

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



Copyright © 2015 by CIMdata, Inc.



5

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



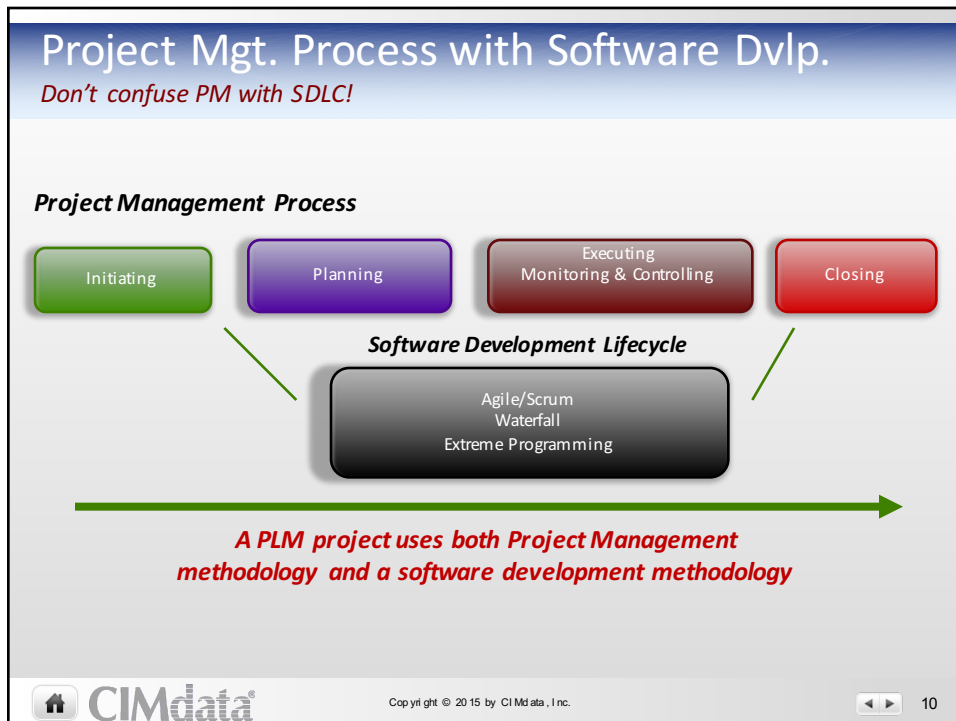
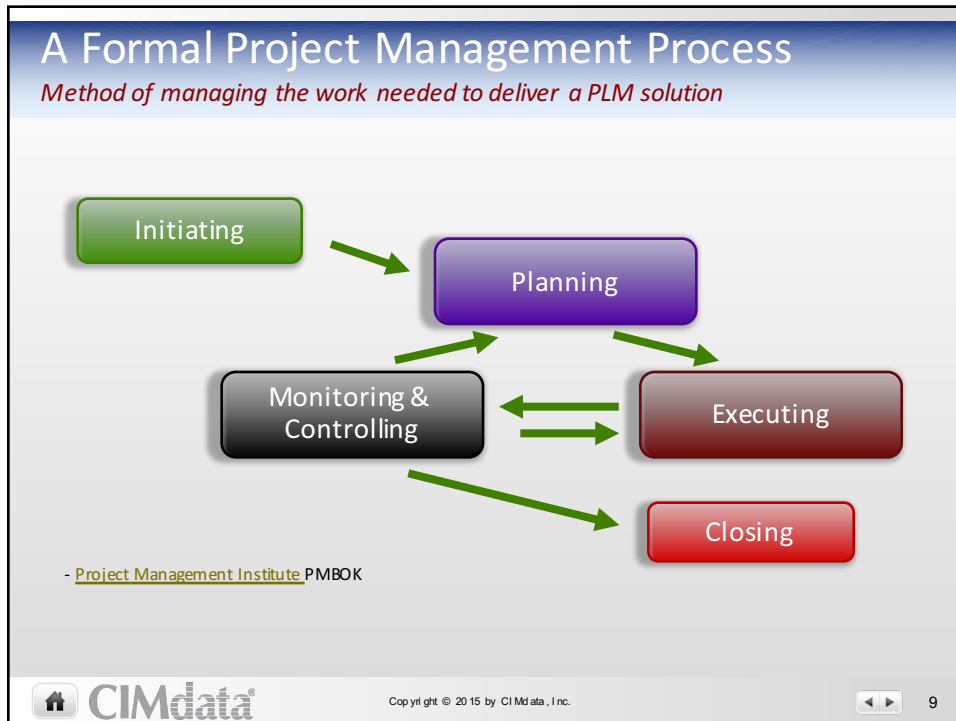
Copyright © 2015 by CIMdata, Inc.



6

Project Management Practices for PLM Success

A CIMdata Education Webinar



Project Management Practices for PLM Success

A CIMdata Education Webinar

Project Mgt. Process vs. Software Development

Different SDLC methods are used at different times

Software Development Lifecycle

Agile|Scrum
Waterfall
Extreme Programming

<p><u>Waterfall</u> Best for:</p> <ul style="list-style-type: none"> - Software deployments - Data migration <p><u>Success Factors</u></p> <ul style="list-style-type: none"> - Experienced leader needed - End user involvement - Business goals clearly defined 	<p><u>Agile Scrum</u> Best for:</p> <ul style="list-style-type: none"> - Development efforts when end state isn't defined - Mid-stream requirement changes <p><u>Success Factors</u></p> <ul style="list-style-type: none"> - Experienced leader needed - End user involvement - Business goals clearly defined
--	---

Copyright © 2015 by CIMdata, Inc. 11

Harnessing Project Management Process

Using the process to form and control the PLM program

```

    graph TD
      Initiating --> Planning
      Planning --> Monitoring_Controlling[Monitoring & Controlling]
      Monitoring_Controlling --> Executing
      Executing --> Closing
      Monitoring_Controlling <--> Executing
      Closing --> X((X))
  
```

Project Management Institute PMBOK

Copyright © 2015 by CIMdata, Inc. 12

Project Management Practices for PLM Success

A CIMdata Education Webinar

Benefits

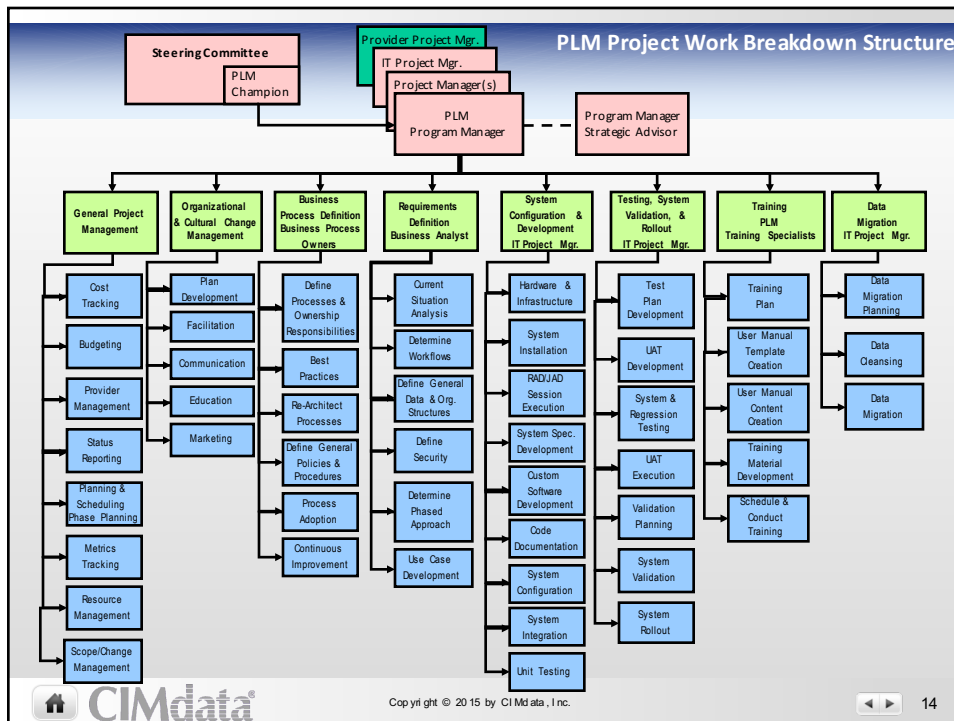
Using a formal project management methodology minimizes risk to success

- 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 mgt.
 - 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



Copyright © 2015 by CIMdata, Inc.

13



Copyright © 2015 by CIMdata, Inc.

14

Project Management Practices for PLM Success


A CIMdata Education Webinar

PLM Implementation

Main roles & responsibilities

PLM Champion	Governance Board	Program/ Project Mgr.	Information Technology	Solution Provider	Business Units/ Users
Chief Evangelist	Roadblock Remover	Budget Owner	Provider Management	Solution Configuration	Communications
Board Responsible	Review & Approve Vision & Strategy	Metrics Owner	Software Build Cycle	Solution Specific Training	Requirements
Visionary	Budget Review & Approval	Cultural Change Mgt. Facilitation	Unit, System, Regression Testing	Infrastructure Guidance	User Acceptance Testing
Budget Review	Review Security needs for overall program	Status Reporting	Developer Training	Data Migration SMEs	End User Training
Resource Identification	Resource Allocation	Resource Management	Production Release Change Control	Process SMEs	Requirements Change Control
Roadblock Remover	Integration with other Initiatives	Scope Management	Data Migration Execution	Integration Support	Data Migration Planning & Cleansing

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

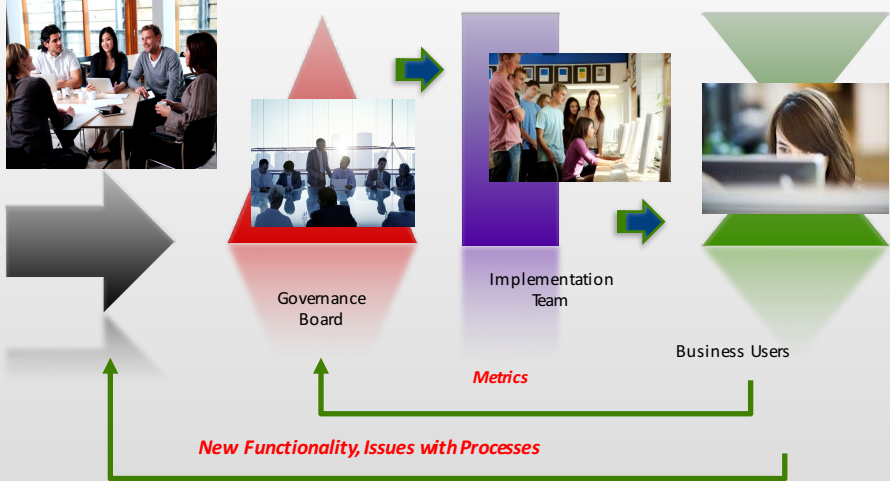
 Copyright © 2015 by CIMdata, Inc. 15


Monitoring the Implementation Results

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

Focus Groups

- Cultural Change
- Application Training



 Copyright © 2015 by CIMdata, Inc. 16

Project Management Practices for PLM Success

A CIMdata Education Webinar

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



Copyright © 2015 by CIMdata, Inc.

17

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



Copyright © 2015 by CIMdata, Inc.

18

Project Management Practices for PLM Success

A CIMdata Education Webinar

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!*



Copyright © 2015 by CIMdata, Inc.



19

Communication is a Priority

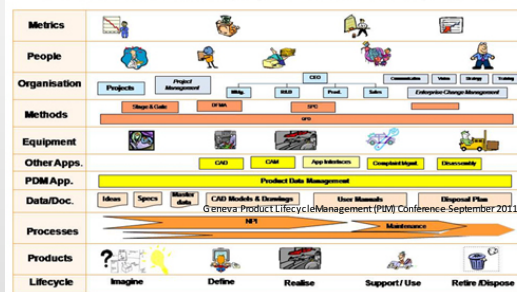
Create and USE your communication plan (2 of 2)

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

The PLM Grid : Scope, Phases & Components



*This is really part of a Organizational Change
Management initiative.*



Copyright © 2015 by CIMdata, Inc.



20

Project Management Practices for PLM Success

A CIMdata Education Webinar

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)



Copyright © 2015 by CIMdata, Inc.



21

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



Copyright © 2015 by CIMdata, Inc.



22

Project Management Practices for PLM Success

A CIMdata Education Webinar

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



Copyright © 2015 by CIMdata, Inc.



23

Organizational Change Mgt. – Best Practices

Responsible party: Program & Project Managers

Round-Tables



User round tables

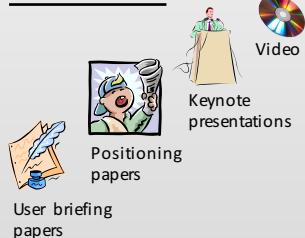
Seminars

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



Education

Documentation



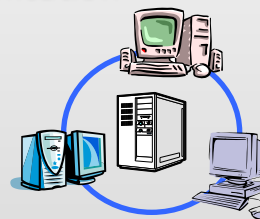
Video

Keynote presentations

Positioning papers

User briefing papers

Communication



Web Site

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



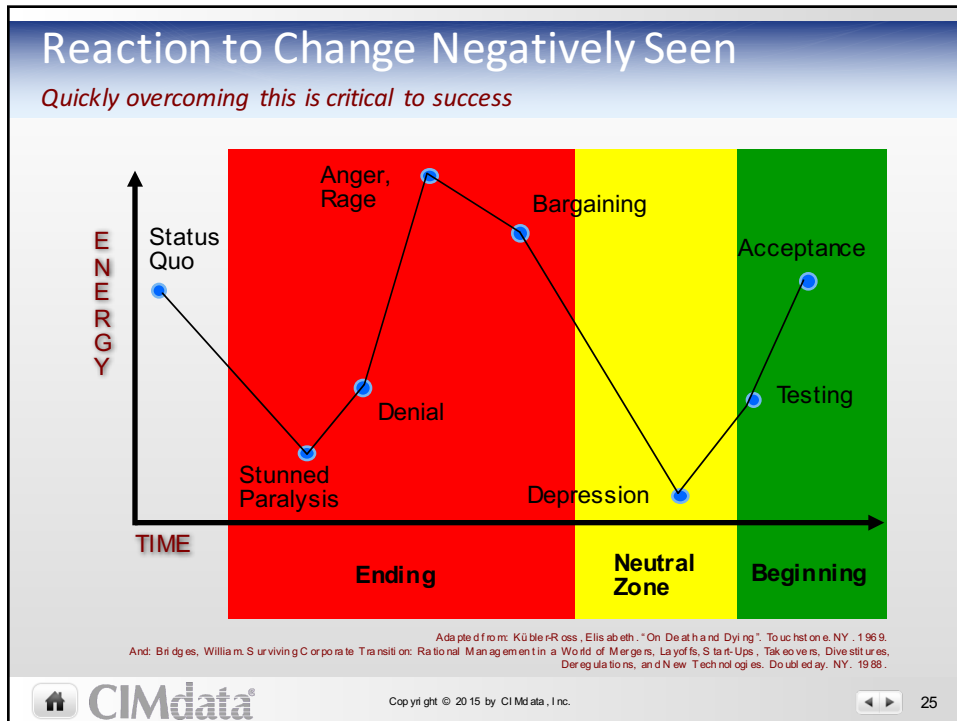
Copyright © 2015 by CIMdata, Inc.



24

Project Management Practices for PLM Success

A CIMdata Education Webinar



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)

Copyright © 2015 by CIMdata, Inc. 26

Project Management Practices for PLM Success

A CIMdata Education Webinar

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



Copyright © 2015 by CIMdata, Inc.



27

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 effects 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



Copyright © 2015 by CIMdata, Inc.



28

Project Management Practices for PLM Success

A CIMdata Education Webinar

Data Migration – Best Practices

Data migration may cause cost overruns to occur (2 of 2)

- 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!



Copyright © 2015 by CIMdata, Inc.



29

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



Copyright © 2015 by CIMdata, Inc.



30

Project Management Practices for PLM Success

A CIMdata Education Webinar

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



Copyright © 2015 by CIMdata, Inc.



31

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



Copyright © 2015 by CIMdata, Inc.



32

Project Management Practices for PLM Success

A CIMdata Education Webinar

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



Copyright © 2015 by CIMdata, Inc.



33

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



Copyright © 2015 by CIMdata, Inc.



34

Project Management Practices for PLM Success

A CIMdata Education Webinar

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

 Copyright © 2015 by CIMdata, Inc.  35

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!

 Copyright © 2015 by CIMdata, Inc.  36

Project Management Practices for PLM Success

A CIMdata Education Webinar

Top 10 Reasons Projects Fail

What needs to be remembered

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



Copyright © 2015 by CIMdata, Inc.



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



Copyright © 2015 by CIMdata, Inc.



Project Management Practices for PLM Success

A CIMdata Education Webinar

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



Copyright © 2015 by CIMdata, Inc.



39

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



Copyright © 2015 by CIMdata, Inc.



40

Project Management Practices for PLM Success

A CIMdata Education Webinar

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'l conferences & workshops
- Best practices training...

Consulting

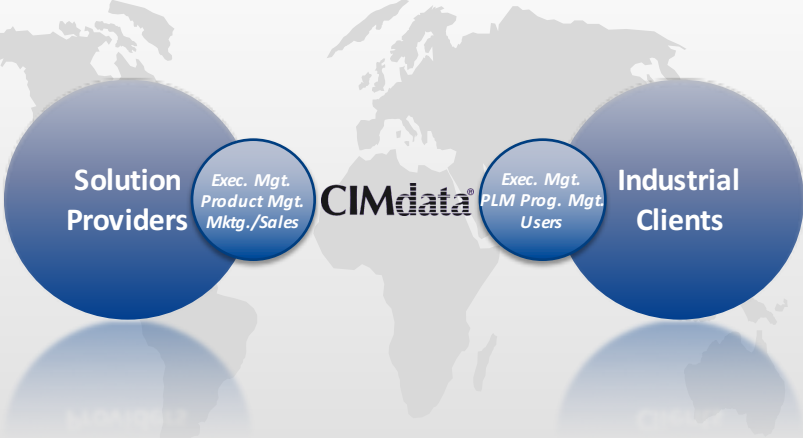
- Strategy & vision
- Needs assessment
- Solution evaluation
- Best practices
- Quality assurance
- Program management
- Market planning...

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



 **CIMdata** Copyright © 2015 by CIMdata, Inc.  41

Our Role...

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



Solution Providers *Exec. Mgt. Product Mgt. Mktg./Sales* **CIMdata** *Exec. Mgt. PLM Prog. Mgt. Users* **Industrial Clients**

 **CIMdata** Copyright © 2015 by CIMdata, Inc.  42

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)

CPG/F&B/Process	Medical/Pharma	Fab & Assembly	High-Tech

Copyright © 2015 by CIMdata, Inc. 43

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

A&D	Auto	Emerging Ind.	Other

Copyright © 2015 by CIMdata, Inc. 44

Project Management Practices for PLM Success

A CIMdata Education Webinar

CIMdata PLM Leadership

PLM Industry's most comprehensive non-biased education & training offering

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.

CIMdata[®]
PLM Leadership

 **CIMdata** Copyright © 2015 by CIMdata, Inc.  45

PLM Certificate Program Outline

5-day, 9-session outline for PLM Leadership offering

- **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

 **CIMdata** Copyright © 2015 by CIMdata, Inc.  46

Project Management Practices for PLM Success

A CIMdata Education Webinar

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



Copyright © 2015 by CIMdata, Inc.

47

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



15% Discount for any scheduled class:

Sign up and pay by November 13th, 2015

** Dates are subject to change*



Copyright © 2015 by CIMdata, Inc.

48

Project Management Practices for PLM Success

A CIMdata Education Webinar



CIMdata
Strategic consulting for competitive advantage in global markets



World Headquarters
3909 Research Park Drive
Ann Arbor, MI 48108 USA
Tel: +1.734.668.9922
Fax: +1.734.668.1957

Main Office - Europe
Oogststraat 20
6004 CV Weert, NL
Tel: +31 (0) 495.533.666

Main Office - Asia-Pacific
Takegahana-Nishimachi 310-31
Matsudo, Chiba 271-0071 JAPAN
Tel: +81.47.361.5850
Fax: +81.47.362.0472

www.CIMdata.com

Serving clients from offices in North America, Europe, and Asia-Pacific



 **CIMdata** Copyright © 2015 by CIMdata, Inc.  49