

PLM Certificate Programs

A CIMdata PLM Leadership Education & Training Programs

For more than twenty-eight years, CIMdata has been working in the Product Lifecycle Management (PLM) industry. Our consulting services and research expertise are known around the world for best practice-based content. CIMdata has leveraged its knowledge and experience to create the PLM Certificate Program as a central part of CIMdata PLM Leadership—the PLM industry’s most comprehensive non-biased education and training program for today’s PLM professionals.

CIMdata PLM Leadership is comprised of a set of well defined, assessment-based PLM education and training certificate programs, short courses, and webinars. The certificate programs are delivered through a series of education and training sessions and are intended to ensure that those who participate in a PLM project all have a strong understanding of PLM concepts and industry leading best-practices.

These certificate programs are available to industrial companies who are considering or implementing PLM, and to PLM technology and service solution suppliers. Additionally, these programs are offered in a number of different configurations, including the configuration described herein (please see www.CIMdata.com for additional detail).

PLM Certificate Program

CIMdata’s PLM Certificate Program leverages CIMdata’s internationally recognized 5-day *PLM Certificate Program for Industrial Organizations and PLM Solution Suppliers*. This assessment-based certificate program satisfies the main PLM education requirements of medium and large enterprises. The program also provides primary PLM education to PLM solution suppliers (i.e., PLM software and services organizations) and their employees who are responsible for providing PLM implementation services. The Public version of the program provides organizations with an exclusively presented series of educational seminars that may be tailored to their specific industry and/or topical needs.

“Wish I had this BEFORE we implemented our PLM. It will be good for continuous improvement.”—Anonymous.

The PLM Certificate Programs are delivered through a series of education and training sessions. All sessions are 3.5 hours in duration. Furthermore, the intent is to tailor the delivery of the program’s content, within the given time restrictions, to address any industrial specific issues impacting the attendees.

The students in the course are also expected to take part in team exercises that may require additional time outside of the time allotted to the sessions.

“The PLM course provides a great overall view of the business value of PLM. It will expand your knowledge so you can extend PLM benefits in your organization.”—Dan Miles, Tata Technologies.

The certificate program includes a combination of lectures, industry case studies, group exercises, and tests.

Successful completion of a 2-day program results in a *Core Certificate of PLM Leadership* and successful completion of the additional 3-day program leads to a *Standard Certificate of PLM Leadership*.

A 5-day program towards an *Advanced Certificate of PLM Leadership* is also available on request.

Delivery

A team of internationally experienced, senior-level CIMdata consultants will deliver all course material in English. All presentation materials are provided to each participant in a printed notebook as well as in a fully searchable set of PDF files provided on a CD.

Target Audience

The target audience for the Public PLM Certificate Program includes, but is not limited to:

- Mid-Level Business Managers
- Program Champions
- Business and Engineering Subject Matter Experts
- Project Leaders
- Engineering Team Members
- PLM Project Team Members
- IT Professionals
- IT Managers

Target Industries

The PLM Certificate Programs have been designed to be industry independent. However, industry-specific content (e.g., process discussions, examples, cases studies) can be easily added if the program is being delivered to a specific company or industry group.

Certificate Program Outlines

Core Certificate of PLM Leadership (2-day)

- Day 1:** Session 1a: Introduction to PLM
Session 1b: Introduction to PLM, continued
- Day 2:** Session 2: Expanding PLM Across the Value Chain
Session 3: Configuration Management's Role in PLM

Standard Certificate of PLM Leadership (3-day)

Prerequisite:

- Core Certificate of PLM Leadership (2-day)
- Day 3:** Session 4: PLM Benefits & Potential Value
Session 5: PLM Strategy & Solution Definition
- Day 4:** Session 6: PLM Solution Evaluation & Selection
Session 7: PLM Implementation, Monitoring & Continuous Improvement
- Day 5:** Session 8: PLM Process Development & Testing
Session 9: Integrating PLM within the Enterprise

Advanced Certificate of PLM Leadership

Prerequisite:

- Core Certificate of PLM Leadership (2-day)

As required:

- Requirements Management
- Systems Engineering & Mechatronics
- PLM & Cultural Change Management
- Product Portfolio Management
- Data Modeling within PLM
- Classification and Data Search & Retrieve
- Integrating PLM & ERP
- Advanced Configuration Management (CMII) & PLM
- Enterprise Simulation Management
- Collaborative Development
- PLM & Enterprise Program Management
- Enterprise Content Management
- Security & IP Management
- Maintenance, Repair & Overhaul/Operations (MRO)
- Strategic Sourcing
- PLM in a Specification Driven Industry
- Digital Manufacturing
- The PLM Commercial Landscape

"Very worthwhile, will definitely help move our own PLM initiative forward."—Allen Heindel, Crown Equipment Corporation.

About CIMdata

CIMdata, a leading independent worldwide firm, provides strategic management consulting to maximize an enterprise's ability to design and deliver innovative products and services through the application of Product Lifecycle Management (PLM) solutions. Since its founding more than 28 years ago, CIMdata has delivered world-class knowledge, expertise, and best-practice methods on PLM solutions. These solutions incorporate both business processes and a wide-ranging set of PLM enabling technologies.

CIMdata works with both industrial organizations and suppliers of technologies and services seeking competitive advantage in the global economy. CIMdata helps industrial organizations establish effective PLM strategies, assists in the identification of requirements and selection of PLM technologies, helps organizations optimize their operational structure and processes to implement solutions, and assists in the deployment of these solutions. For PLM solution suppliers, CIMdata helps define business and market strategies, delivers worldwide market information and analyses, provides education and support for internal sales and marketing teams, as well as overall support at all stages of business and product programs to make them optimally effective in their markets.

In addition to consulting, CIMdata conducts research, provides PLM-focused subscription services, and produces several commercial publications. The company also provides industry education through PLM certificate programs, seminars, and conferences worldwide. CIMdata serves clients around the world from offices in North America, Europe, and Asia Pacific.

To learn more about CIMdata's services, visit our website at www.CIMdata.com.

About CSIR

The CSIR (Council for Scientific and Industrial Research) is one of the leading R&D, technology and innovation institutions in Africa, with a track record spanning close to 70 years. The CSIR undertakes scientific research and technological development in areas identified as national priorities. The CSIR provides value to its clients by establishing, improving or sharing capabilities with other organisations and supporting decision making, strategic (long-term) technology planning, portfolio management and operations.

A significant emphasis is placed on partnerships (local and global), rendering support to industrial development and competitiveness, and ensuring opportunities to establish and grow future science and technology skills.

Please contact us, as the South African partner of CIMData, for more information.

Contact person is Rentia Barnard at (012) 841 4543 or rbarnard@csir.co.za.

www.csir.co.za

PLM Certificate Programs - Session Descriptions

Core Certificate of PLM Leadership

Sessions 1 through 3 comprise the *Core Certificate of PLM Leadership* which is presented over **two days**.

Sessions 1a and 1b—Introduction to PLM

Duration: 1 day

Prerequisites: None

Intent: The scope of this 7-hour session includes the presentation of today's view and vision of the global PLM market and technologies. The overall intent of the session is to provide a broad overview of the PLM market, including trends, system architectures, and critical elements of success. This session will include presentations, discussions, and a set of interactive exercises.

Session Outline:

- *Session Introduction*
A discussion of the PLM market status, including recent history, today's facts and figures, and some market trends that can help an attendee understand the market's evolution. These include system sources, types of implementations, scope of implementations, sources of investment, etc.
- *Elements of a PLM Solution*
Definition—A definition and description of a PLM solution, what it is and how its various components fit together. This provides a broad definition for PLM, and positions PLM with regard to other related technologies, such as CAD, software engineering, and ERP/MRP II tools.
Functionality—A description of the functionality required to support PLM. This includes a description of the functional areas that make up typical PLM solutions and a discussion of each of them; what they are and how they work, what they are used to achieve, examples of how they are supported in commercial and private PLM systems.
Architecture—A discussion of issues related to the architectures of PLM solutions, including distributed system operational requirements, user interfaces, applications interfaces, platform issues, service oriented architectures, etc.
- *The Expanding Reach of PLM*
This discussion introduces PLM's key expansion areas. These include functional areas of an extended enterprise where PLM has yet to be applied or where PLM has recently begun to show applicable benefits. Some of these areas include: portfolio management, requirements management, digital manufacturing, mechatronics, and simulation and analysis.
- *An Introduction to the PLM Commercial Landscape*
This discussion provides an overview of the commercial landscape for PLM solutions, including a review of leading PLM solution suppliers and their offerings. This session will describe today's "mind-share" PLM solution suppliers with a specific focus on the PLM solution suppliers that support the region in which the Certificate Program is being delivered.
- *PLM Benefits*
This discussion provides an overview of the types and magnitude of benefits that can be achieved through the proper adoption of a PLM strategy and supporting technologies. This session will include the review of a selected set of actual benefit examples from various industrial companies.
- *Best Practices for PLM Strategy Definition & Solution Selection*
This discussion provides a set of high-level guidelines for developing a PLM strategy and executing a solution evaluation and selection. Ideally, these best practices help organizations reduce the time it takes to get to implementation, identify and quantify associated risks, and better manage and control project costs.
- *Best Practices for PLM Deployment, Monitoring, & Continuous Improvement*
This discussion provides an overview of the main activities associated with the successful deployment, monitoring, and continuous improvement of a PLM solution.

Session 2—Expanding PLM across the Value Chain

Duration: 1/2 day

Prerequisites:

- Session 1: Introduction to PLM

Intent: This half-day session covers the next steps in implementing PLM inside and outside the company, to its supplier and partner community, providing access to its customers, to other functional areas outside of engineering and manufacturing operations, and distribute operations across the broader enterprise.

Session Outline:

- Defining the Value Chain
- Areas of Expansion
- Essential Issues for each Area
- Priorities & Steps for Expansion

Session 3—Configuration Management's Role in PLM

Duration: 1/2 day

Prerequisites:

- Session 1: Introduction to PLM

Intent: This half-day session defines configuration management and how PLM can be used to enable it. The session provides an understanding of the various PLM-related configuration management elements (e.g., configuration items, options & variants, change management, and effectivity) and how a PLM solution can be used to support them. The session also reviews a set of configuration management best practices and industry examples.

Session Outline:

- Introduction to Configuration Management
- Configuration Management Defined
- Processes & Related Requirements
- Best Practices Guidelines
- Industry Example

Standard Certificate of PLM Leadership

Adding Sessions 4 through 9 to the curriculum completes the *Standard Certificate of PLM Leadership*, which is presented over **three days**.

Prerequisite:

- Core Certificate of PLM Leadership (2-day)

Session 4—PLM Benefits and Potential Value

Duration: 1/2 day

Prerequisites:

- Session 1: Introduction to PLM

Intent: This half-day session reviews industry metrics used to measure and monitor the benefits of PLM implementations. Areas of potential PLM benefits will be presented by discussing results achieved by various companies that have implemented PLM. These case studies are taken from published literature and CIMdata's researched case studies. The focus of the session will be to describe how metrics should be used to help define a company's PLM strategy, define the company's PLM roadmap, select the most appropriate PLM enabling solutions, and much more.

Session Outline

- Potential Benefits of PLM
- Defining & Measuring the Costs of PLM
- Measuring the Value of PLM
 - Methods for measuring value, e.g., ROI
 - The importance of metrics
- Introduction to a Benefits Appraisal Methodology
- Using Metrics to Steer a PLM Program
- Selected PLM Benefits Case Studies

Session 5—PLM Strategy & Solution Definition

Duration: 1/2 day

Prerequisites:

- Session 1: Introduction to PLM
- Session 2: PLM Benefits & Potential Value

Intent: This half-day session provides a set of detailed guidelines for PLM strategy development and solution definition. When properly followed, these guidelines will help an organization reduce the time it takes to define and create a PLM solution strategy.

Session Outline:

- Introduction to PLM Strategy Development
- High-Level Planning
- Defining a Strategy & Tactics
- Defining Business Requirements
- Implementation Strategies

Session 6—PLM Solution Evaluation & Selection

Duration: 1/2 day

Prerequisites:

- Session 1: Introduction to PLM
- Session 3: PLM Strategy & Solution Definition

Intent: This session provides a set of detailed guidelines for evaluating available solutions and selecting appropriate solutions to support a company's PLM strategy. When properly followed, these guidelines will help an organization reduce the time it takes to select the right solution for their organization.

Session Outline:

- Evaluation of Available PLM Solutions
- Selecting an Appropriate PLM Solution
- Developing True Business Requirements
- Developing Technical Requirements
- How to translate business requirements into technical requirements
- Developing Benchmark Scenarios
- How to Select the Most Appropriate Solutions
- How to evaluate solutions against requirements

Session 7—PLM Implementation, Monitoring & Continuous Improvement

Duration: 1/2 day

Prerequisites:

- Session 1: Introduction to PLM
- Session 2: PLM Benefits & Potential Value
- Session 3: Strategy & Solution Definition

Intent: This half-day session provides a set of detailed guidelines for implementing and evolving a PLM environment. When properly followed, these best practices will help an organization reduce the time it takes to identify and quantify associated risks and better manage and control project costs from the project concept phase through implementation and organizational adoption.

Session Outline:

- Organizing the Program
- Key Roles & Responsibilities
- Project Management Practice Areas: scope, risk, quality assurance, and others as appropriate
- Initiating & Planning the Deployment Project
- Program Execution & Control
- Monitoring & Improving the Program
- Transition to On-going Support & Evolution

Session 8—PLM Process Development & Testing

Duration: 1/2 day

Prerequisites:

- Session 1: Introduction to PLM
- Session 2: PLM Benefits & Potential Value
- Session 3: Strategy & Solution Definition
- Session 4: PLM Solution Evaluation & Selection
- Session 5: Implementation, Monitoring & Continuous Improvement

Intent: This half-day session provides an understanding how to best define, implement, and continuously improve PLM enabled processes. The session will also present best practices for testing the process enabling PLM solutions.

Session Outline:

- Introduction
- Refinement of Process Requirements
- Development of Process Flows & Use Cases
- System Testing (software development lifecycles and the type of testing required, user acceptance testing, test management, etc.)
- Process Ownership & Continuous Improvement

Session 9—Integrating PLM within the Enterprise

Duration: 1/2 day

Prerequisites:

- Session 1: Introduction to PLM
- Session 2: PLM Benefits & Potential Value
- Session 3: Strategy & Solution Definition
- Session 5: Implementation, Monitoring & Continuous Improvement

Intent: This half-day session focuses on PLM's role within an enterprise's overall information technology architecture (both process and data) and how to best approach the integration of various PLM solutions (e.g., via the implementation of a service oriented architecture), especially PDM technologies, with other enterprise IT systems, e.g., ERP, CRM, etc.

Session Outline:

- Introduction
- The Typical Enterprise IT Landscape
- PLM's Role in an Enterprise IT Landscape
- Integration Approaches that Work
- Other Issues to Consider

Advanced Certificate of PLM Leadership

Adding any 10 half-day advanced educational sessions to the curriculum completes the *Advanced Certificate of PLM Leadership*, which is presented typically over **five days**.

Prerequisite:

- Core Certificate of PLM Leadership (2-day)

Optionally available advanced topics include:

- Requirements Management
- Systems Engineering & Mechatronics
- PLM & Cultural Change Management
- Product Portfolio Management
- Data Modeling within PLM
- Classification and Data Search & Retrieve
- Integrating PLM & ERP
- Advanced Configuration Management (CMII) & PLM
- Enterprise Simulation Management
- Collaborative Development
- PLM & Enterprise Program Management
- Enterprise Content Management
- Security & IP Management
- Maintenance, Repair & Overhaul/Operations (MRO)
- Strategic Sourcing
- PLM in a Specification Driven Industry
- Digital Manufacturing
- The PLM Commercial Landscape

The scope of these half-day advanced educational sessions and discussions includes: scope and definition of the topic, how PLM supports the topic being considered, and presentations of selected solution suppliers and their solutions (where appropriate). These sessions also include review of a number of industrial case studies and a set of interactive exercises. Overall, these sessions include presentations, discussions, one or more case studies, and an interactive exercise if applicable.

This program is only available on request.

Please contact Rentia Barnard at the CSIR for more detail: rbarnard@csir.co.za, (012) 841 4543.