

Issues and Remedies for PLM Obsolescence

PDT Europe 2016—November 2016

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PLM Obsolescence
PDT Europe 2016
Paris, France—9-10 November 2016

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PDT Europe 2016
Paris, November 9-10

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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.

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Key Takeaways

Issues and Remedies for PLM Obsolescence

- CIMdata research shows that industrial organizations often struggle with PLM solution obsolescence
- CIMdata's PLM Investment Sustainability Model provides a way to measure obsolescence and the effectiveness of Platformization
- Service providers need to ensure they can architect solutions on PLM platforms that maximize long-term sustainability
- Solution providers must improve their solution interfaces so they can plug and play in platforms
- Industrial organizations must proactively manage software obsolescence—this is critical for long-term success



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Many Forms of Obsolescence

At least those we, as PLM practitioners, are usually concerned about

- **Part obsolescence**—a situation where a company can no longer purchase a specific part or sets of parts (i.e., they have reached their end of life)
- **Digital obsolescence**—a situation where a digital resource (i.e., digital media) is no longer readable, thereby requiring data aging
- **Software obsolescence**—a situation where specific executable software code will no longer function, function correctly, or upgrade; often due to software, operating system, and/or hardware conflicts

The last is probably the most complex and least understood.



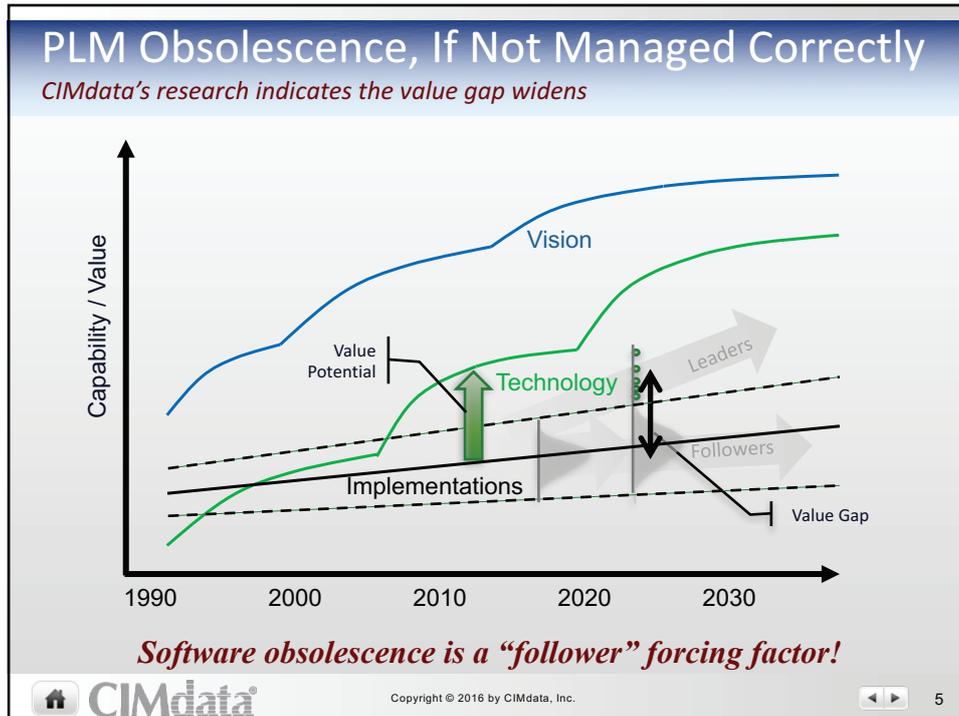
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The Need to Close the Value Gap

Many PLM installs have become legacy systems, no longer sustainable

The disconnect between customer requirements and solution capabilities (“the value gap”) has led to the need to ask some very important questions...

What is the future of the PLM industry as it stands and how does this need to change to avoid obsolescence?

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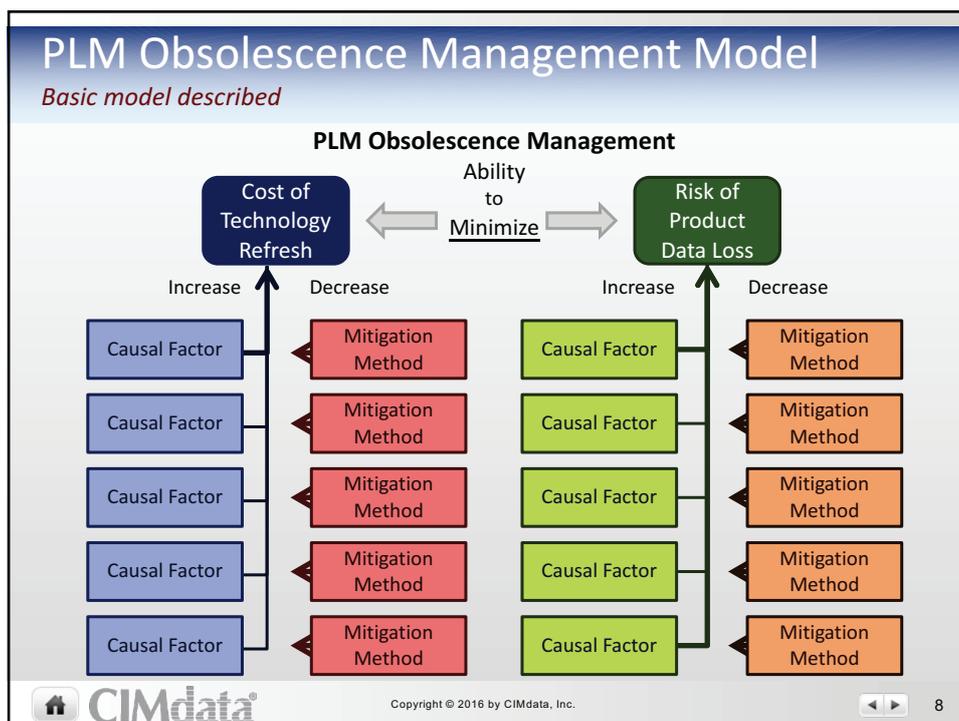
PLM Technology Obsolescence: Definitions

CIMdata's perspective on obsolescence and obsolescence management

- Obsolescence mgt. is the set of policies and practices by which a company controls & minimizes obsolescence impact
- PLM obsolescence is a positive phenomenon
 - Obsolescence occurs when new improved solutions are available
- Negative aspects associated with technology obsolescence:
 - The cost of the technology refresh to obtain those improvements
 - The risk of data loss when migrating to a new solution
- Goal of PLM obsolescence management:
 - The ability to upgrade and transition to new solutions incrementally over a period of several decades without loss of data and without incurring excessive cost and effort

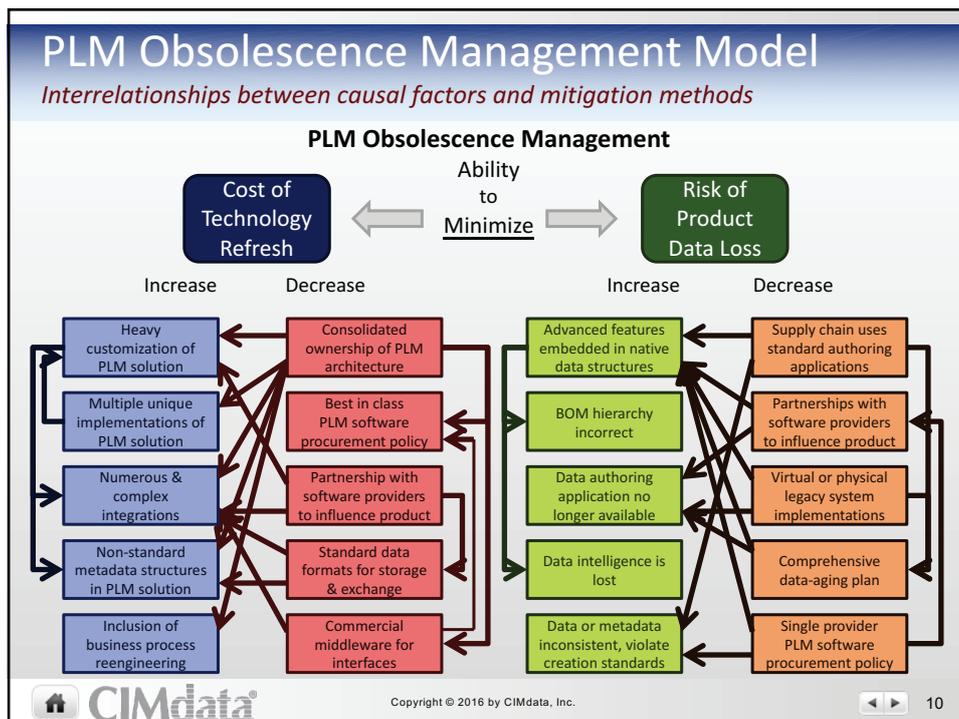
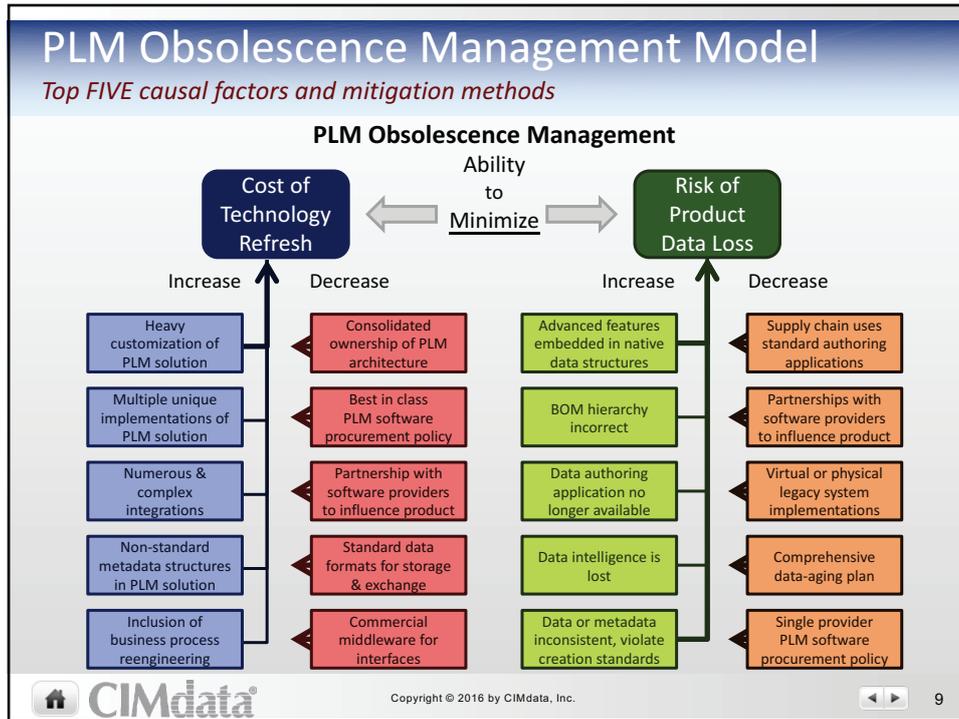
Obsolescence management is a multi-variable equation

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PLM Obsolescence Management

Main observations from research

- Contradiction between Best in Class and Single Provider as mitigation methods
- Surprising that out-of-the-box (OOTB) did not make the Top Five list of Mitigation Methods
- Some data loss mitigation methods address near term, some address long term
- Partnership with software providers is a good idea that doesn't work well
- Good ideas for data loss mitigation that don't work well – yet
 - Virtual or physical legacy system implementations
 - Comprehensive data aging plan



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PLM Obsolescence Management

Research conclusions

- Causes of high cost and risk of data loss are primarily technology based, but mitigation methods are primarily policy and process based
- Standards will play an increasingly important role in mitigating risk of data loss
- Implementing companies have the primary role in mitigation of cost and risk of technology refresh
 - Consolidated ownership of PLM offers great potential for cost reduction
- Solution providers can play a significant role in mitigation of cost and risk, but will need clear communication and strong financial pressure from their customer base
- Building and maintaining sustainable solutions is key



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PLM Sustainability Defined

CIMdata's definition

The PLM solution's long-term ability to provide a maximum return on investment

- Sustainability implies the complete PLM solution (i.e., the software, processes enabled, and support service) is meeting the company's business needs now and will into the future via continuous and cost effective improvements rather than a series of discontinuous, high-intensity, and costly events

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PLM Investment Sustainability Model

A maturity model to help companies improve (1 of 2)

A CIMdata maturity model and associated supporting materials that qualifies and quantifies a PLM environment's and/or strategy's short- and long-term viability

- Model is based on seventeen elements that are critical to the long-term successful operation of a PLM environment
- Model is implemented as a survey that captures and processes responses to questions on sustainability elements

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PLM Investment Sustainability Model

Research project details and results (2 of 2)

- Summary results
 - Scalability and Configurability are the highest scoring elements probably due to hardware/Server OS/DB advances and UI configurability
 - A lot of variation across companies
 - Overall scores are low, i.e., unsustainable across all elements
- Conclusion: PLM upgrades won't be getting significantly easier for a while
- The promise of the Cloud and Platforms addresses many sustainability issues

Composite of All Respondents

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Why Measure PLM Investment Sustainability?

Key questions that industrial companies consistently ask

- Are we getting significant value from our PLM investment and how sustainable is that investment?
- Are the new investments we are planning sustainable (i.e., will they provide the appropriate level of return on our investment)?
- Can our PLM environment properly support our current business commitments and future business requirements?
- Are we positioned to meet future PLM environment challenges like upgrades, expansions, partnerships and mergers & acquisitions without “ripping and replacing?”

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Key Platform Characteristics

The top eight abilities as specified by our clients

- Adaptability
- Maintainability
- Upgradability
- Extensibility
- Stability
- Reliability
- Scalability
- Compatibility

CIMdata's PLM Investment Sustainability Model

All PLM Investment Sustainability elements are applicable to Platformization

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The Product Innovation Platform

CIMdata's Enterprise Product Innovation Platform Model

A set of evolving Functional Domains orchestrated by an enterprise level "systems of systems" approach

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What Must Service Providers Do...

What is their opportunity?

- Most of the costs in the model come from work traditionally done in services engagements
- Build frameworks and enabling technology to deliver needed capabilities more rapidly
 - Including social, mobile, Big Data/analytics, cloud, AI...
- Working directly with solution providers on building industry-focused offerings on existing platforms
- Services are still required for cloud implementations, but types of services change
 - Hybrid cloud the most likely scenario
 - Can more be done offsite, lowering costs?



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What Must Software Providers Do...

What is their opportunity?

- Separate the applications from the underlying platform
 - Platform upgrades that don't impact apps will reduce customer TCO, and help them upgrade faster
- Need to have open enough ecosystems to support heterogeneity
 - Your apps won't meet all customer needs
 - Need to have open enough ecosystems to support heterogeneity – availability of apps will make your platform stickier
- Some influence of consumerization of IT, platform and apps
 - E.g., Microsoft apps running on iOS
 - Could their apps run on a competitor's platform?



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What Must Industrial Organizations Do...

What is their opportunity?

- Look to improve current technologies to enable a building block approach promised by the platformization of PLM
- Be prepared to integrate PLM to other business platforms, PLM is one of several platforms within enterprises
- Understand and position your PLM platform as a data source for your customer and consumer applications, as well as product-related enterprise analytics
- Participate in relevant standards organizations and require/demand your solution providers to support those that are important to you



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Final Thoughts

A well thought-out and executed obsolescence mgt. strategy is critical (1 of 3)

- Systems obsolescence is a reality for every company and a timely, costly and often complex one at that
 - It is a multi-level problem that can include: operating systems, integrations, applications, middleware, etc.
- Once the software is superseded by newer and better iterations, it needs to be pulled and retired
 - While this is difficult in itself, so is the estimation of when its operational lifecycle will come to an end
- Companies must proactively define and manage systems obsolescence and long-term solution sustainability
- The platformization of PLM provides an answer, but...
 - It requires a shift in skillset by PLM service providers to support sustainability



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Final Thoughts

The “platformization” of PLM must enable PLM solution sustainability (2 of 3)

- Solution providers need to re-architect to support platform architectures necessary to support PLM sustainability and minimize obsolescence issues
- Standards need to play a major role, so does technology openness and other sustainability factors
- The enablement of product innovation platforms is the future, and many key elements and strategies already exist
- Vision and strategy will play a key role in an organization’s ability to successfully compete well into the future

How will you transform your PLM solution into a sustainable Production Innovation Platform that closes the value gap?



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Final Thoughts

What do you think? (3 of 3)

Can we reach the vision where apps from platform and non-platform providers are downloaded and instantly available for use, just like we experience with our smart phones?



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