

State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023

CIMdata

State of PLM: Today's Market & Leading Trends
PLM Market & Industry Forum
A CIMdata Leadership Event

30 March 2023—Ann Arbor, MI USA

Peter Bilello, President & CEO, p.bilello@CIMdata.com
+1.734.668.9922

#plm4um
www.CIMdata.com
Copyright © 2023

CIMdata Defining What Comes Next in Digital Transformation

Strategic management consulting for competitive advantage in global markets


The leading independent authority on PLM and its digital transformation. We provide research, education, and strategic consulting to clients around the world.

OUR MISSION:
Maximizing clients' ability to design, acquire, deliver, and support innovative products and services.


www.CIMdata.com
Copyright © 2023

State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023



Key Takeaways



State of PLM: Today's Market & Leading Trends

- 2023 – CIMdata's 40th year of defining, tracking & working in the global PLM market
- The global PLM economy is growing and continues to add value
- Multiple disconnects still exist, e.g., prioritization of digital initiatives, and managements narrow understanding of lifecycle management
- To be successful, companies need to transform people, processes and technologies—there are at least 12 critical elements
- The digital thread is really a digital web—key to true E2E traceability
- Data governance and sustainability are lifecycle issues

3

Copyright © 2023



Agenda

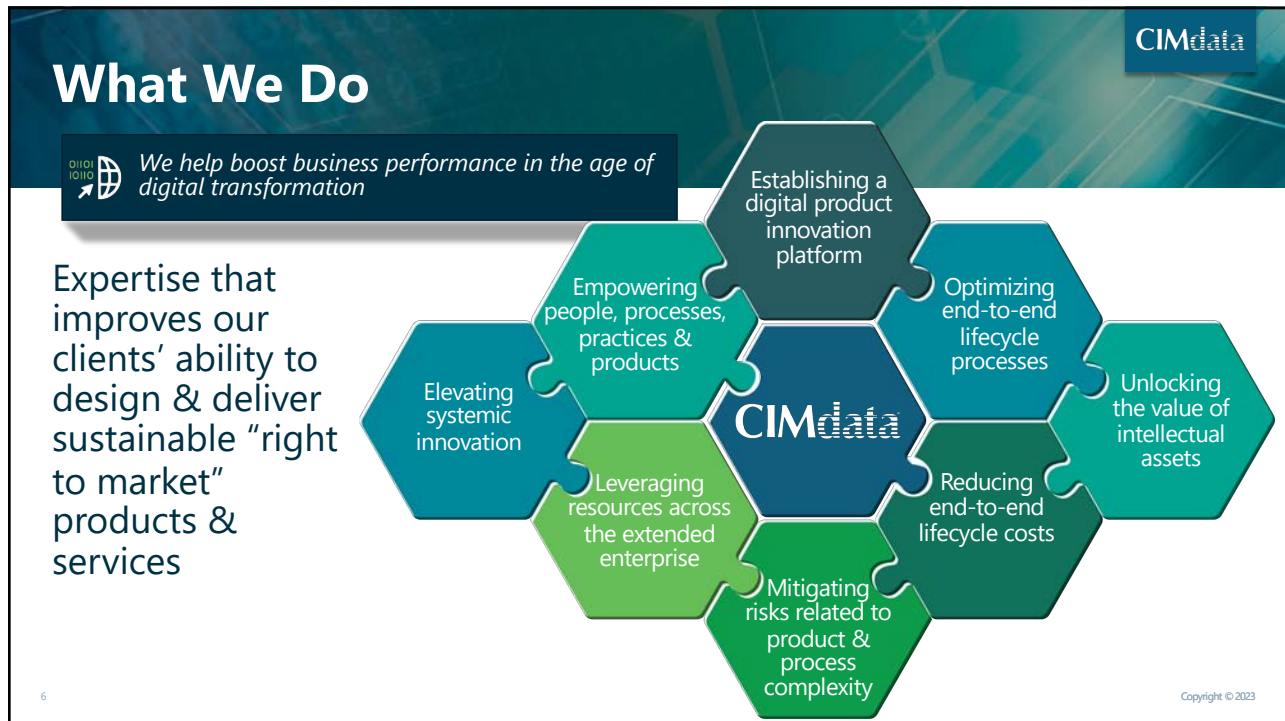
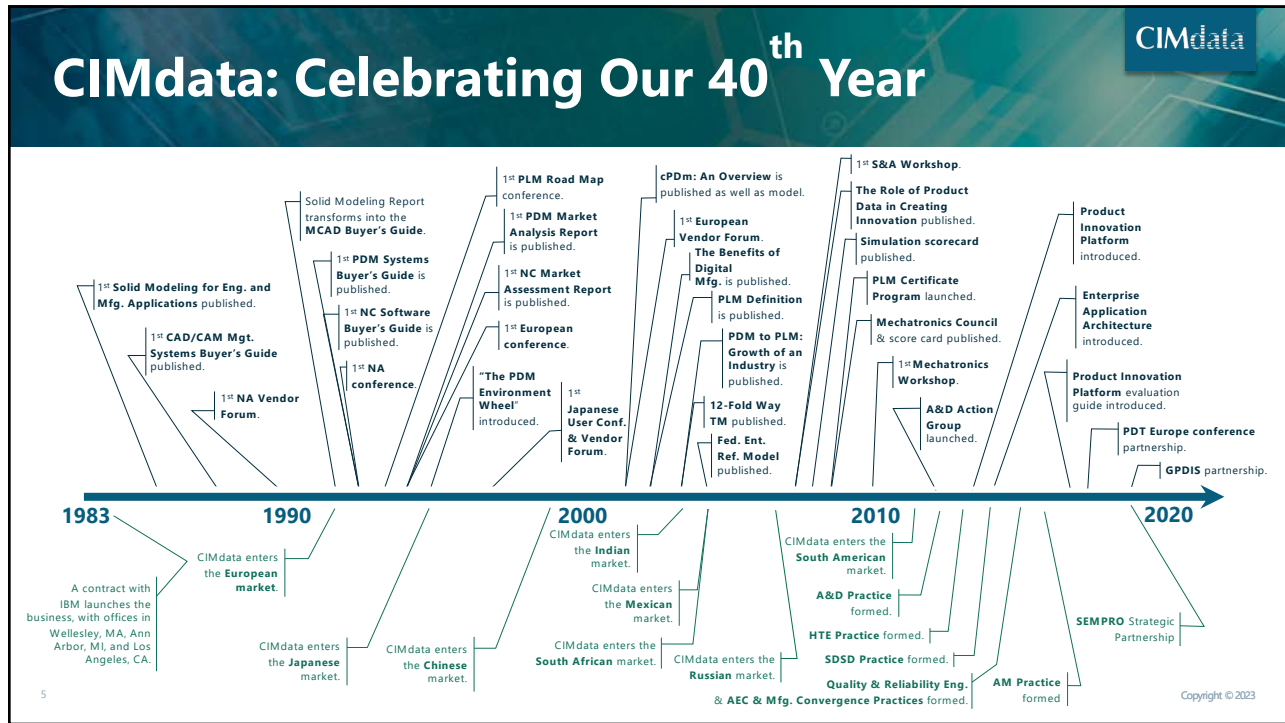
- What's New from CIMdata
- 2022: The Year in Review
- 2023: Today's Trends & Challenges
- Looking Towards the Future
- The Digital Thread: Powering Business Transformation
- Concluding Remarks

4

Copyright © 2023

State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023



State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023

CIMdata

Our Approach

 *Digitally transforming product lifecycles with unbiased research & actionable insight*

- Deliver independent strategic advice & counsel
- Support the end-to-end product lifecycle
- Apply a methodology that is solution-independent, modular & adaptable
- Provide expert & actionable insight informed by extensive market & technology research



Copyright © 2023

CIMdata

Our Team

 *Working closely with clients from industry & technology gives us a unique perspective*

- Extensive team of senior consulting professionals
- Experienced in multiple industries
- Extensive relationships with industrial clients and solution providers



Copyright © 2023

State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023

CIMdata

Global Knowledge & Relationships

 *Diverse, deep experience across industry verticals...delivered on six continents!*

Clients & offices in the Americas, EMEA, and Asia-Pacific



9 Copyright © 2023

CIMdata

Our Contribution

 *We facilitate and energize the global digital ecosystem*

CIMdata sits at the critical intersection of the digital ecosystem, helping define & implement what's next



Solution Providers
Executive Mgmt.
Program Mgmt.
Sales/Mktg.

CIMdata Experts

Industrial Clients
Executive Mgmt.
Program Mgmt.
Users

We address challenges & identify opportunities for both solution providers and industrial organizations

10 Copyright © 2023

State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023

CIMdata

Our Services

 Strategic advice & counsel through a comprehensive & integrated set of services



- RESEARCH**

Foresight
 - Research & analysis
 - Technology evaluations
 - Market-specific insights
 - Industry news & trends
- EDUCATION**


Leadership
 - Industry conferences
 - Seminars & webinars
 - Certificate programs
 - Best practices
- CONSULTING**

Success • Invest • Transformation
 - Strategic guidance
 - Aligning solutions with needs
 - Program management advisement
 - Market positioning


11 Copyright © 2023

CIMdata

Success Methodology

 Services for solution providers to support their drive toward market success

Driving growth & competitive advantage in a complex, dynamic market



- Channel Services
- Strategic Support
- Product & Program Management
- Product & Program Development
- Sales & Marketing

12 Copyright © 2023

State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023

CIMdata

Select Success Clients

13 Copyright © 2023

CIMdata

Invest Methodology

Optimizing investments in the evolving global digital ecosystem

Informed analysis of global PLM markets for industry analysts, private equity firms, and other financial service organizations

14 Copyright © 2023

State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023

CIMdata

Select Financial Industry Clients

15 Copyright © 2023

CIMdata

Transformation Methodology

Services for industrial organizations to enable digitalization of their product lifecycles

Supporting growth & evolution of enterprises across a wide range of industries in their pursuit of digitalization

16 Copyright © 2023

State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023

CIMdata

Select Transformation Clients

Aero & Defense	Auto/Transportation	Fab & Assembly	High-Tech

17
Copyright © 2023

CIMdata

Select Transformation Clients

CPG/F&B/Process	Medical/Pharma	Emerging Industries	Other

18
Copyright © 2023

State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023

CIMdata

Consulting Practice Areas

 Guidance & insight focused on multiple facets of digital transformation


- Additive Manufacturing
- AEC & Manufacturing Convergence
- Aerospace & Defense
- Data Governance
- Digital Skills Transformation
- Collaborative Innovation & Social Product Development
- Manufacturing Systems Engineering
- Simulation-Driven Systems Development
- Sustainability & Green Energy



19 Copyright © 2023

CIMdata

Expansion of CIMdata's Simulation Practice


 Sandeepak Natu joins CIMdata's Simulation-Driven Systems Development team

Monday, January 16, 2023

CIMdata Announces Expansion of Simulation Practice Team

Developing hybrid digital twins with strategic insights and implementation consulting.

Ann Arbor, Michigan, USA 16 January 2023—CIMdata, Inc., the leading global PLM strategic management consulting and research firm, announces the expansion of its Simulation-driven Systems Development (SDSD) practice team, with the addition of Sandeepak Natu as an Executive Consultant.




With industry experience of more than 25 years, Sandeepak has a strong background in multi-physics-based modeling and simulation technologies, including the development and application of hybrid digital twins. Sandeepak started his career with Fluent India (now part of ANSYS Inc.) and has been associated with several engineering consultancy and simulation software organizations. He has worked with various industrial organizations helping them adopt simulation technologies and has deep application expertise in the automotive, aerospace, chemicals, pharmaceuticals, food, consumer products, and healthcare sectors. More recently, he has been involved in multiple technology and management consulting roles encompassing digitalization, simulation, sustainability, and business management, including a key role in helping a global vaccine manufacturer scale up its production facilities at the peak of the COVID-19 pandemic.


20 Copyright © 2023

State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023




Sustainability & Green Energy Practice

 Mark Reisig joins CIMdata's as an Executive Consultant & Practice Director

Monday, July 18, 2022

PLM Industry Executive Mark Reisig joins CIMdata as Executive Consultant and Practice Manager

The primary focus will be on developing and delivering new services to meet the expanding needs of CIMdata's industrial clients.



Ann Arbor, Michigan, USA, 18 July 2022—CIMdata, Inc., the leading global Product Lifecycle Management (PLM) strategic management consulting and research firm, has hired Mark Reisig as an Executive Consultant and Practice Manager. Mark will focus on Green Energy enablement.

Peter Bilello, President & CEO of CIMdata, commented, "We're excited to have Mark join CIMdata. He has a deep understanding of PLM both from a solution provider and industrial user perspective. His experience has given him a comprehensive understanding of how industrial clients' needs continue to evolve. Mark's extensive experience will help CIMdata support its clients in meeting existing and new market challenges."

Mark joins CIMdata after an extensive career in PLM with GE, Federation, Oracle, Auto-trol Technology, Kraft-Heinz, Catalytic, Day & Zimmermann, and most recently, Aras, where he was the Vice President of Product Marketing.

21 Copyright © 2023



CIMdata Foresight

 Delivering actionable research to the global digital economy

- Market Research
 - Global and regional market analysis reports
 - PLM benefits appraisal guide, pricing analysis, etc.
- CIMdata Communities
 - Industrial organizations and solution providers
- CAM Market Service
- Publications
 - Late-breaking news, commentaries, etc.
- Custom Research Projects




22 Copyright © 2023

State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023

Membership Services CIMdata

 A rich set of community services and research areas

Broad, deep portfolio of services and research topics

CIMdata Community

- Industry Action Groups
- Solution Providers

- Innovation Engagement & Governance
- Design Creation & Collaboration
- Simulation-Driven Systems Development
- Manufacturing Systems Engineering
- Enterprise Value & Integration
- Sustainability & Green Energy
- Other Research Topics...

23 Copyright © 2023

Aerospace & Defense PLM Action Group CIMdata

Group Overview


Jim Roche
A&D Practice Director

AEROSPACE & DEFENSE PLM ACTION GROUP

- AIRBUS
- BOEING
- GE Aviation
- Gulfstream®
A GENERAL DYNAMICS COMPANY
- SPRINT & WHITNEY
DEPENDABLE ENGINES
- Rolls-Royce
- SAFRAN

24 Copyright © 2023

State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023



Collaborative Research Program



Study Digital Thread current state & future trends—more on this later

Sponsors










Objective

The A&D PLM Action Group members and the PLM solution provider sponsors share a common objective for this research – To gain understanding of needs and opportunities within industry that will inform Digital Thread solution strategy and roadmap

25
Copyright © 2023



CIMdata Leadership



Industry leading conferences, seminars, and educational programs (1 of 3)

- Speakers at international conferences
 - PDT North America 2023 – May, Washington D.C. area
 - PDT EMEA 2023 – November, Paris, France
- PLM Market & Industry Forums for solution providers
 - North America 2023 – March 30 (in-person)
 - EMEA 2023 – April 4 (in-person)
 - India 2023 – April 10 & 11 (virtual live)
 - China 2023 – April 13 & 14 (virtual live)
 - Japan 2023 – April 17 & 18 (virtual live)



26
Copyright © 2023

State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023



CIMdata Leadership

 Industry leading conferences, seminars, and educational programs (2 of 3)

- CIMdata Community Events
 - A&D PLM Action Group Workshops
 - Industry PLM Action Group Workshops
 - Others to be announced
- PLM Road Map™ 2023 Series
 - PLM Road Map™ NA 2023—3-4 May, Washington D.C. area
 - PLM Road Map™ EMEA 2023—15-16 November, Paris, France

PLM Road Map, in its 30th year, continues to be a premier international PLM industry event in the rapidly transforming digital world

27 Copyright © 2023



CIMdata Leadership

 Industry leading conferences, seminars, and educational programs (3 of 3)

- PLM Certificate Programs
 - Schedule: <https://www.cimdata.com/en/events/cimdata-plm-certificate-program>
- Self-paced E-Learning courses
 - <https://www.cimdata.com/en/education/plm-basics-e-learning-course>
- Digital Transformation Short Course
 - Schedule: <https://www.cimdata.com/en/education/digital-transformation-short-course>
- Systems Modeling and Simulation Certificate Program
 - <https://www.cimdata.com/en/education/sms-certificate-program>
- Monthly Complimentary Educational Webinars
 - Schedule: <http://www.cimdata.com/en/education/educational-webinars>

28 Copyright © 2023

State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023

CIMdata

Over 1,100 PLM Professionals Certified

29 Copyright © 2023

CIMdata

CIMdata Foresight Poll

How can CIMdata better support the global PLM market & its evolution?

How can CIMdata better support the global PLM market & its evolution?

Expand research reports offering	A	42%
Expand education offering	B	
Stand up additional Action Groups	C	47%
Expand solution areas covered	D	11%
Other	E	

30 Copyright © 2023

State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023

CIMdata


Agenda

- What's New from CIMdata
- 2022: The Year in Review
- 2023: Today's Trends & Challenges
- Looking Towards the Future
- The Digital Thread: Powering Business Transformation
- Concluding Remarks

31 Copyright © 2023


CIMdata

Defining PLM

 Digital transformation of the lifecycle, enabled by the product innovation platform

PLM is...

- A strategic business approach powered by a consistent set of solutions
- Enabled by product innovation platforms that support the extended enterprise
- An approach that spans the full lifecycle, from idea through life
- Enables a set of evolving functional domains orchestrated by an extended enterprise-level "systems of systems" approach




32 Copyright © 2023

State of PLM: Today's Market & Leading Trends

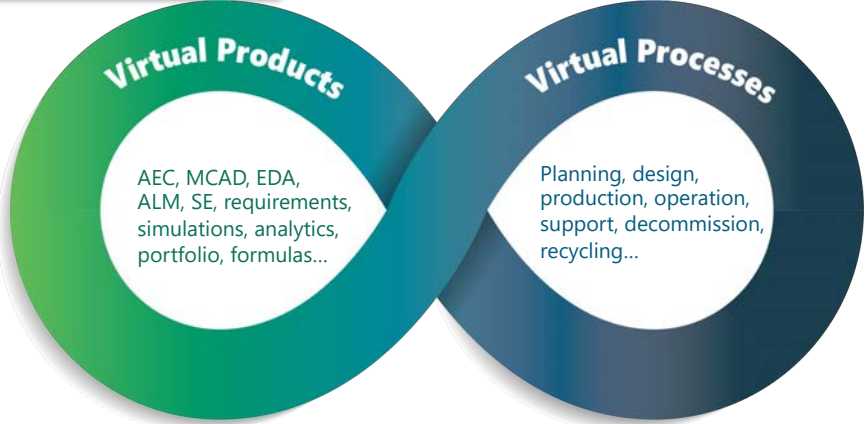
2023 Market & Industry Forum—30 March 2023

CIMdata

PLM's Critical Role

 Spans the full lifecycle: from concept through launch and beyond


PLM is the collaborative creation, use, management, and dissemination of product-related *intellectual assets*



33 Copyright © 2023

CIMdata

2023 CIMdata PLM Status & Trends Survey

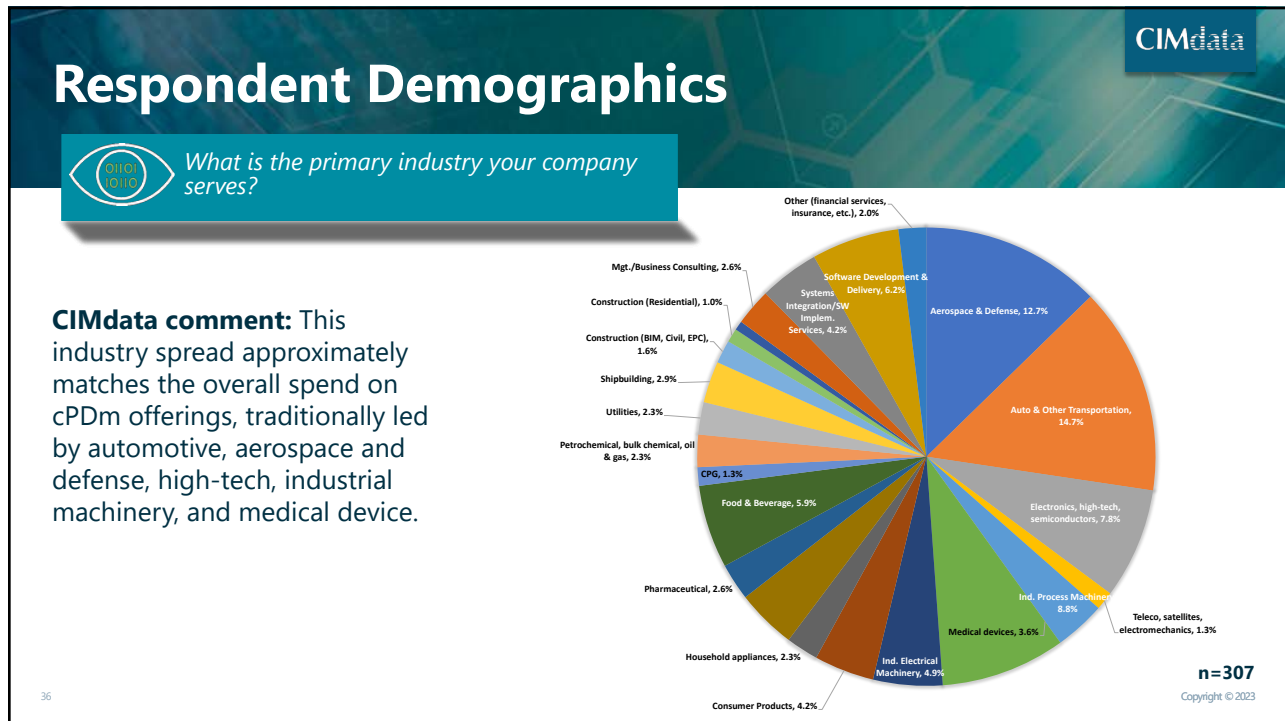
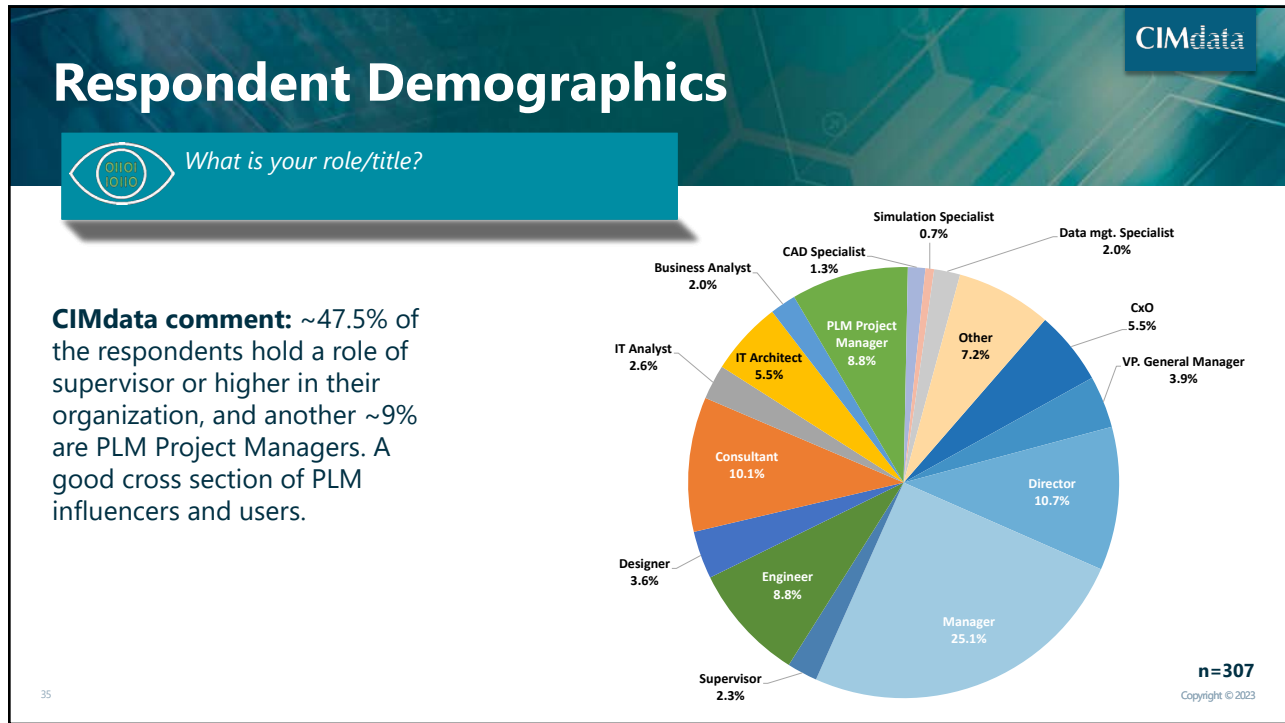
 Some key conclusions

- CIMdata's PLM Status & Trends survey executed again (6th year)
- This year's respondents represent a wide & diverse community
- Most implementations still focus on "traditional" PDM aspects of PLM
- For the most part, companies continue to find PLM worth investing in
- There continues to be an emphasis on getting faster, better, cheaper
- Enterprise digital priorities & systems confusion still exists
- Management disconnect is believed to be widespread
- PLM appears to have continued its positive momentum

34 Copyright © 2023

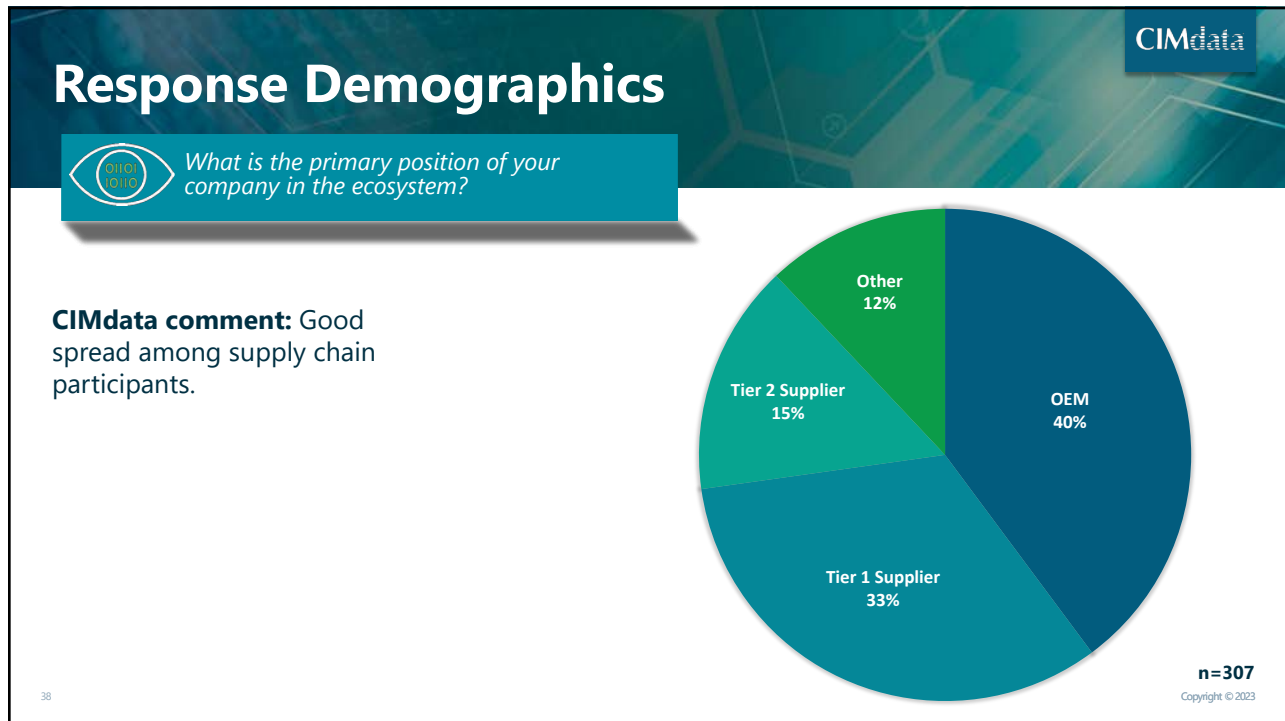
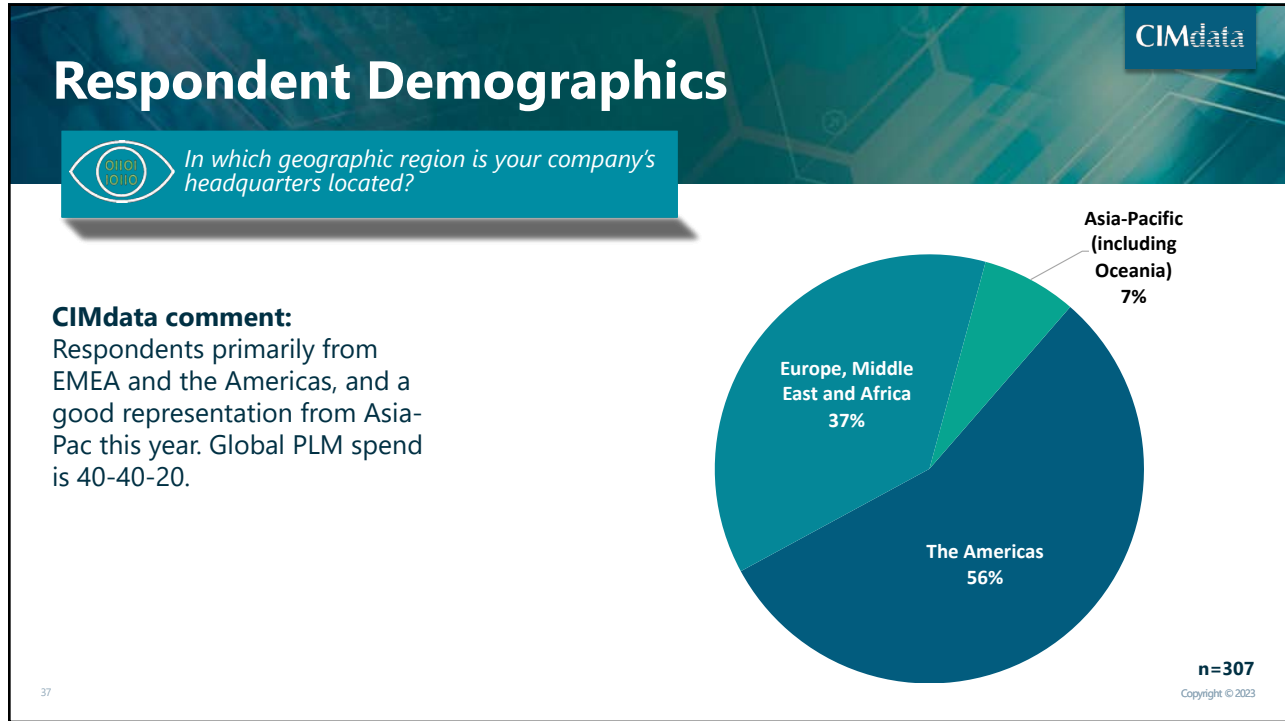
State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023



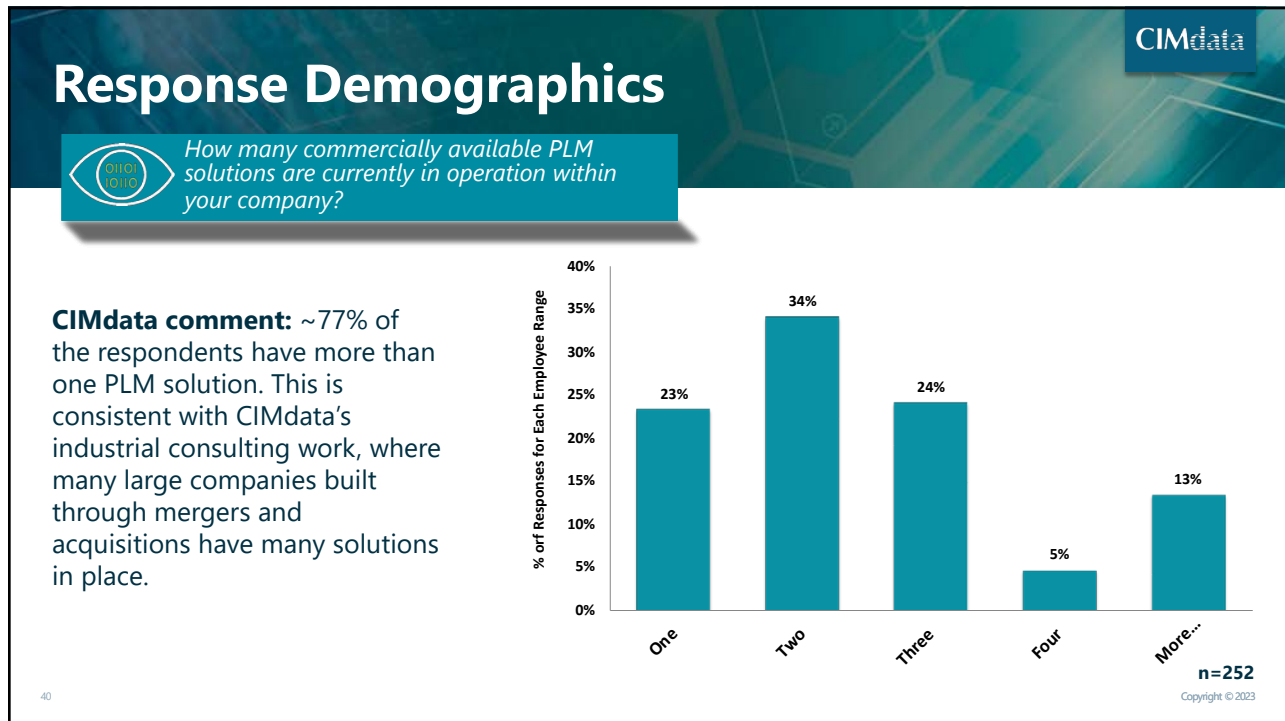
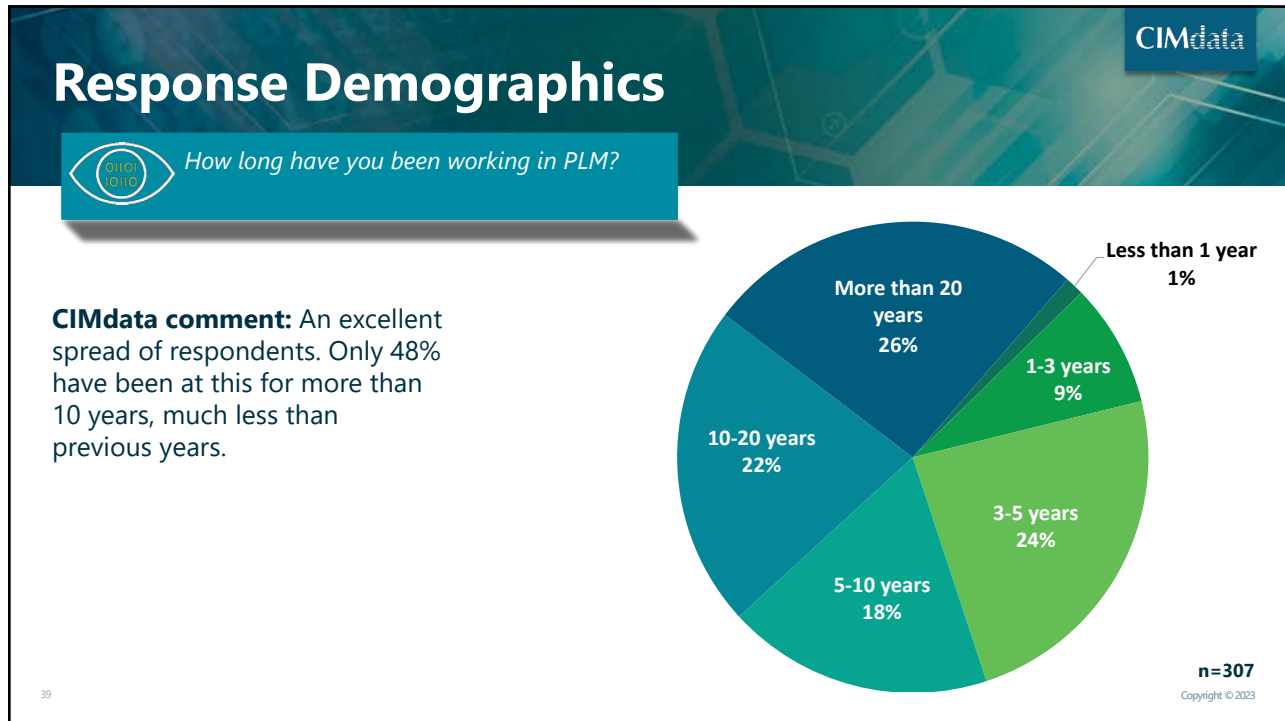
State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023



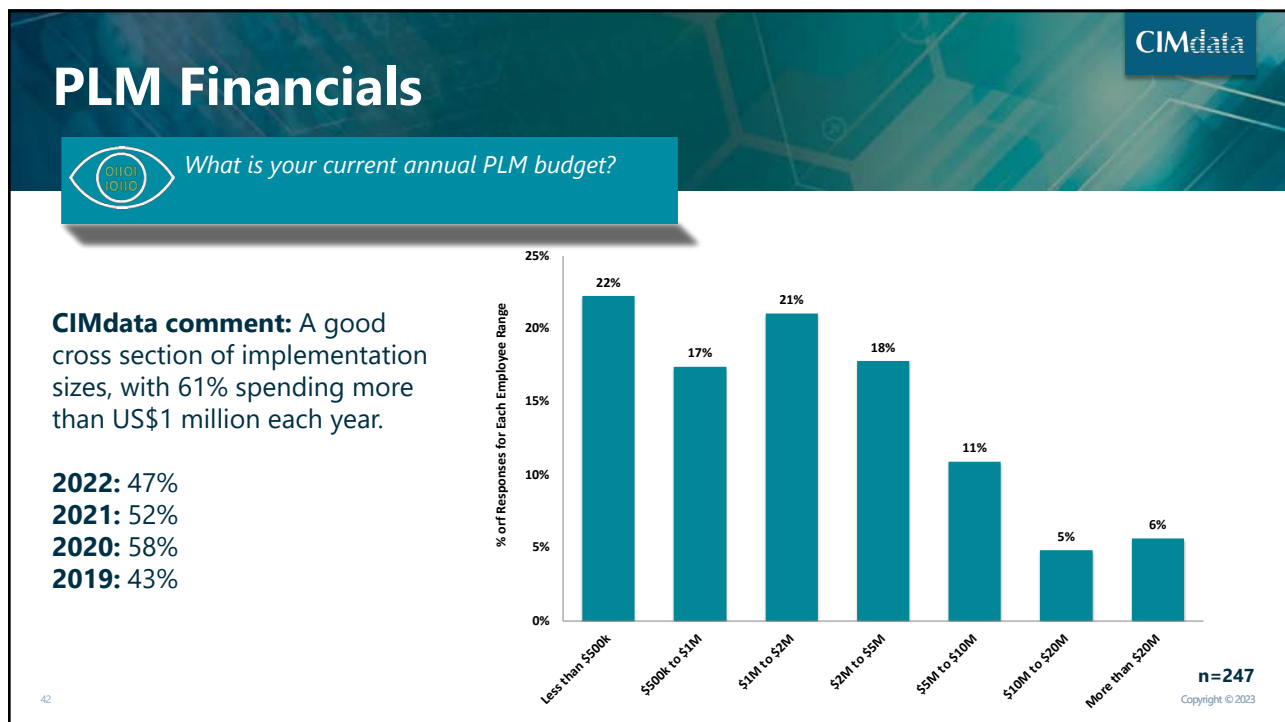
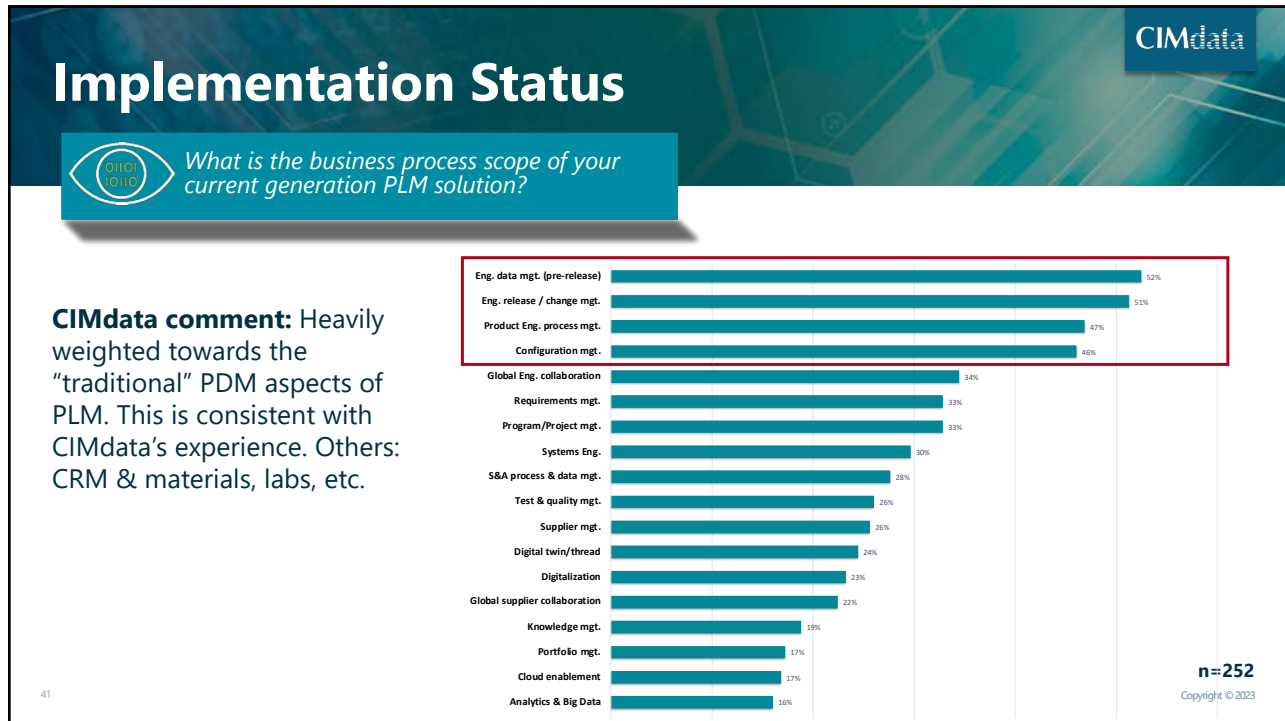
State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023



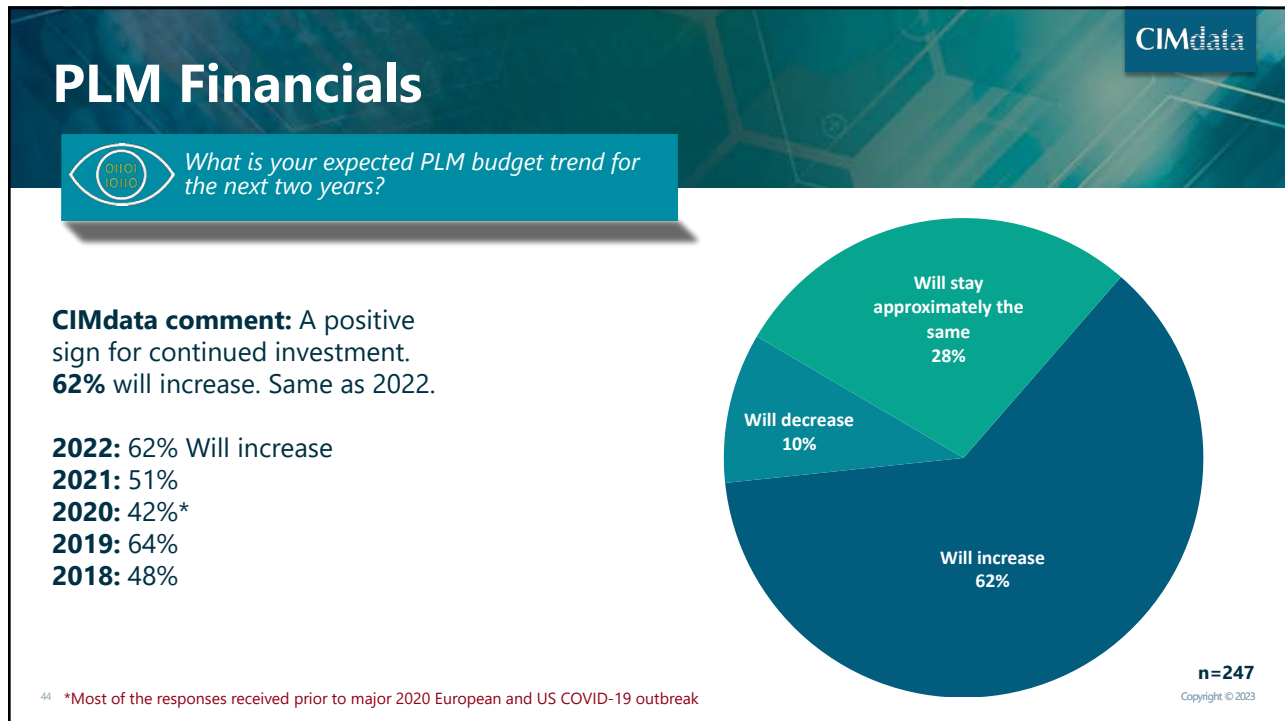
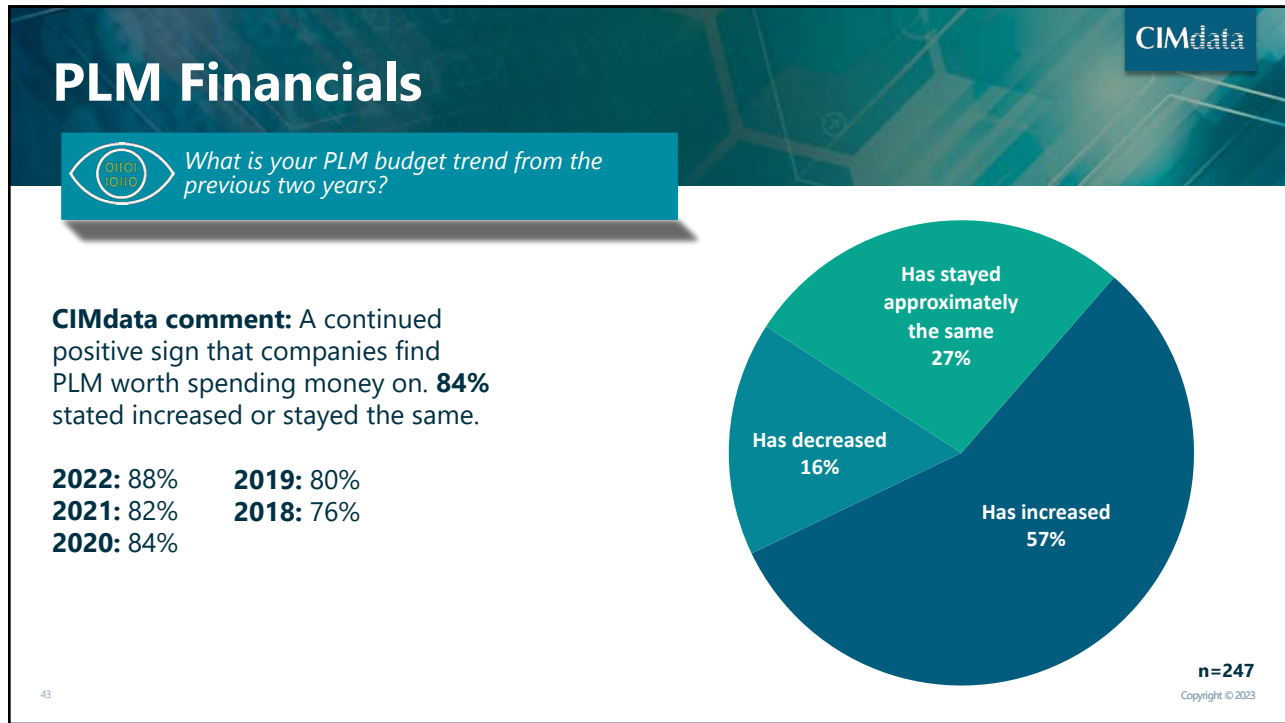
State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023



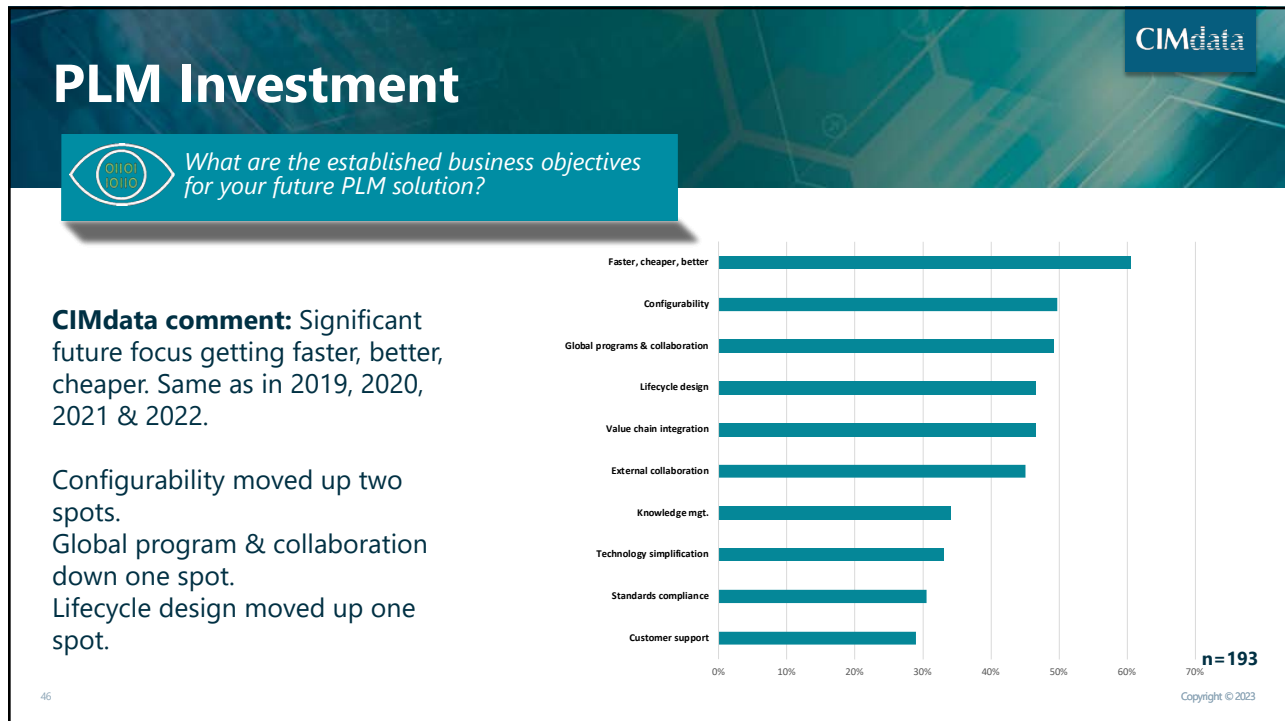
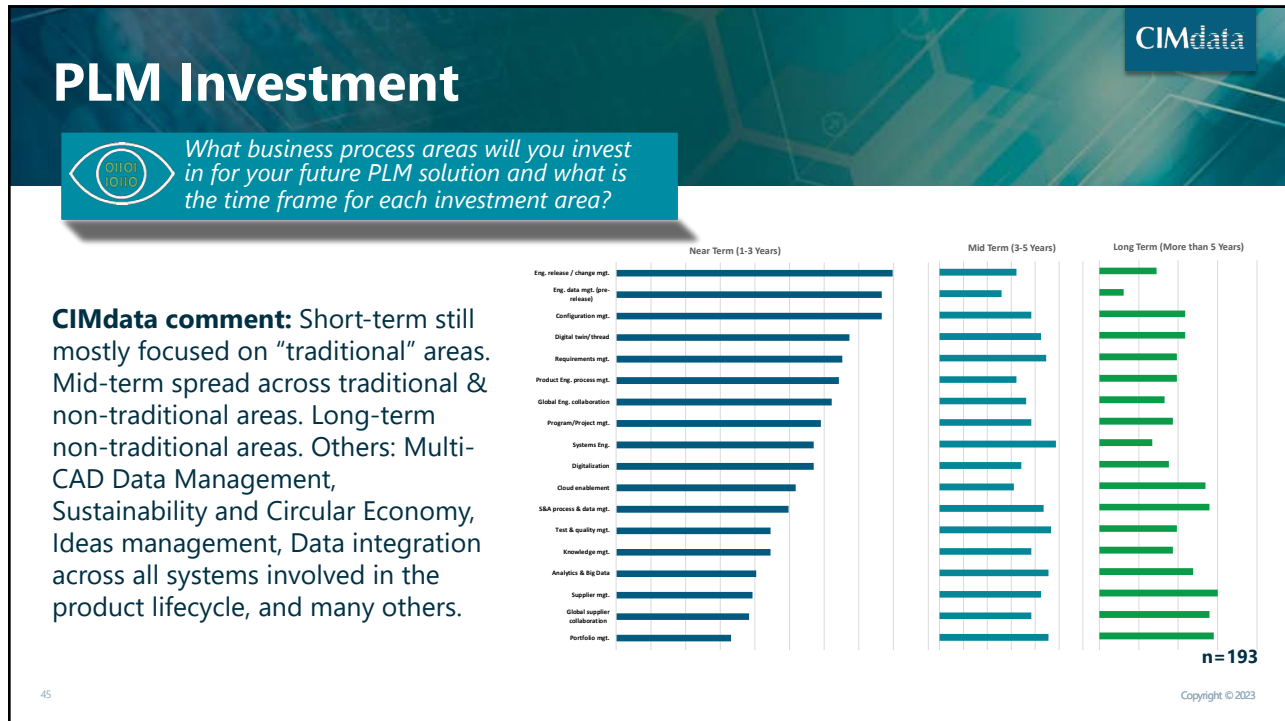
State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023



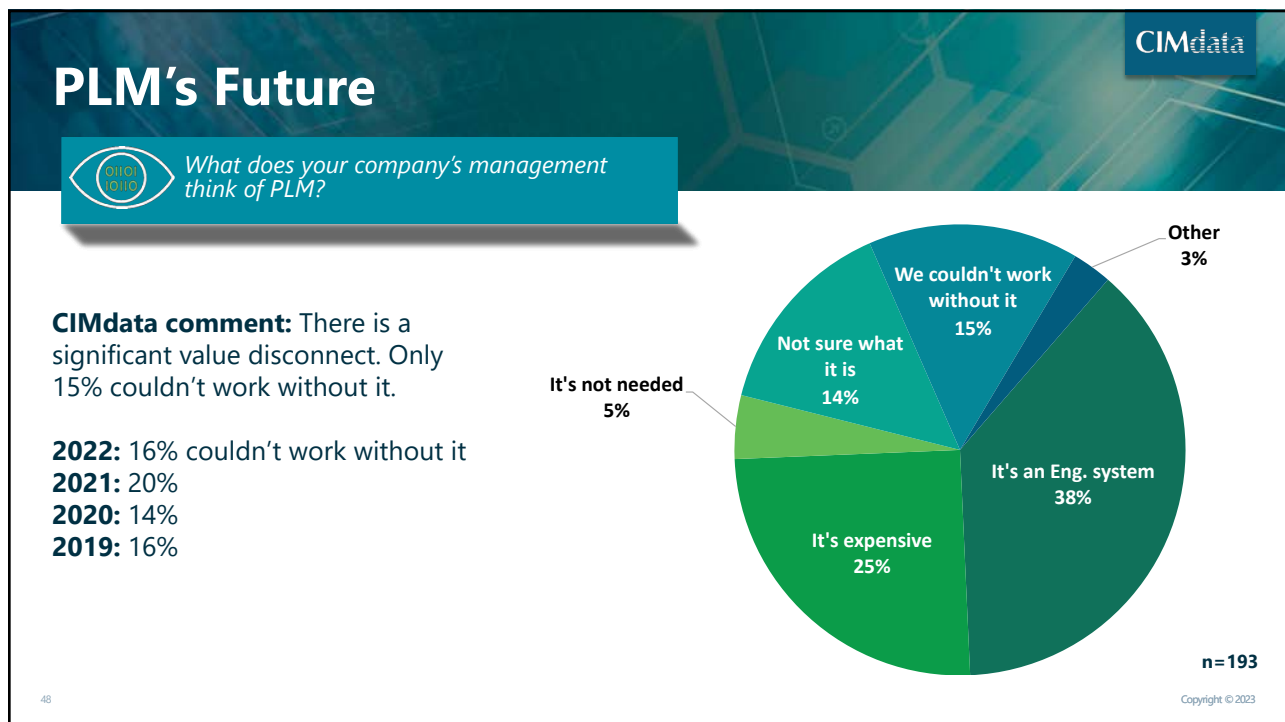
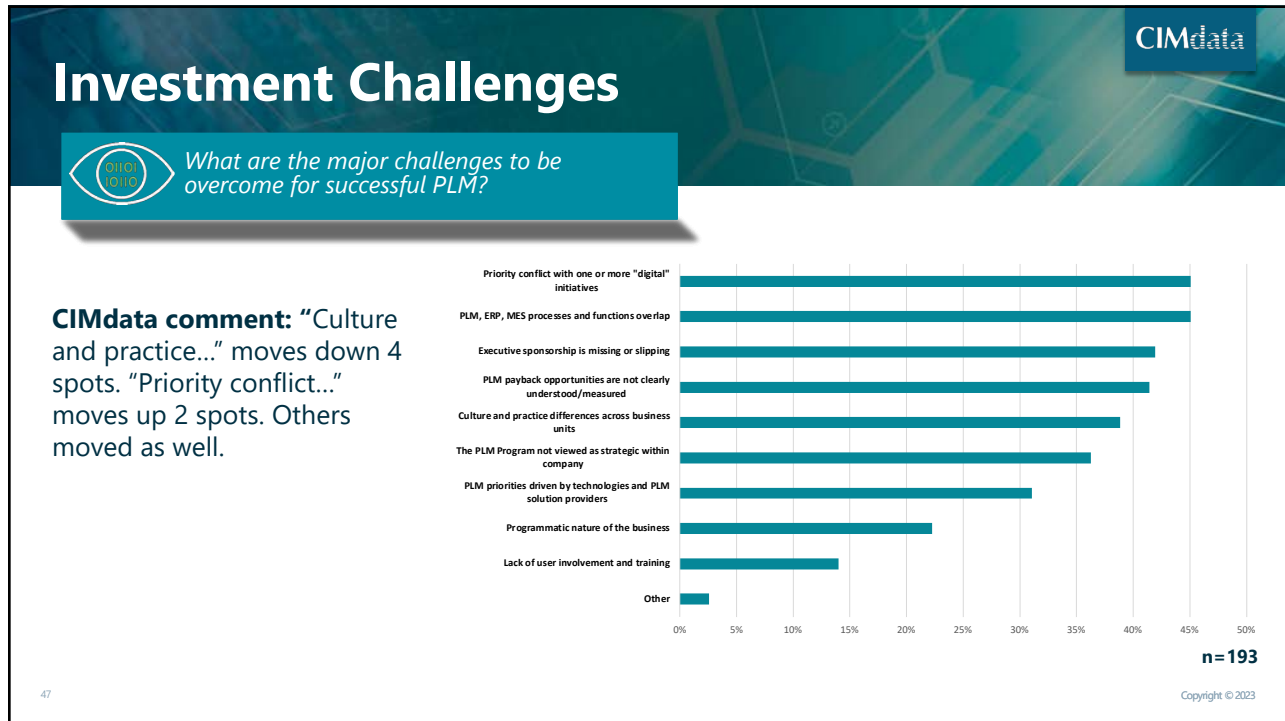
State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023




State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023




State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023

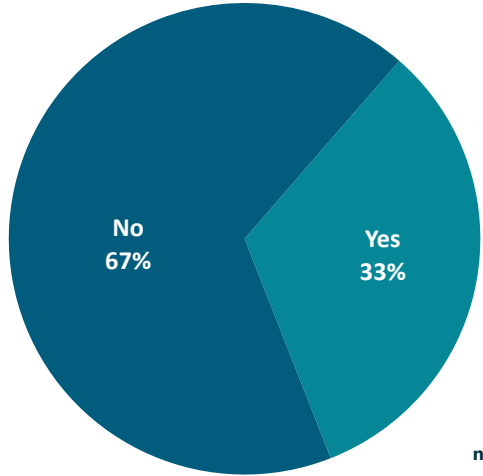


PLM's Future


Has the term PLM run its course?

CIMdata comment: A significant majority still believe that the term PLM has value.


2022: 38% Yes
2021: 31%
2020: 44%
2019: 52%




n=193

Please join our webinar on May 11, 2023 for a full review of our 2023 PLM Status & Trends survey.

49
Copyright © 2023




What CIMdata Has Been Saying


Some examples—have you seen what we have been publishing since the last Forum

ARTICLE

The Future of PLM: CIMdata Spotlights Leading CEO's



31 January 2023
by Tom Gill

ARTICLE


How to Meet Industrial Digital Transformation Challenges With Virtual Prototyping Technologies

A CIMdata commentary on ESI's predictive, real-time, & immersive virtual testing and how it supports the democratization

31 January 2023
by Tom Gill

ARTICLE

Digital Transformation: New Techniques and Technologies Disrupt Accumulated Expertise




ARTICLE

As Data Becomes Digital Threads

Feb 9, 2023
by Mark Reising

Sustainability

Accelerating the Transition to Green Energy with Product Lifecycle Management




ARTICLE

ALSO IN THIS ISSUE

February 9, 2023


Nuclear | Feb 9, 2023




50
Copyright © 2023

State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023



2022 PLM Market – Overall State

 PLM market—overall growth of 8.6%

- The global PLM market fell short of CIMdata's forecast
 - Overall, the PLM market was up 8.6% to \$65.8 billion (vs. forecast of 10.1%)*
 - cPDM sector @ \$20.7B (8.1%); solid software and services growth
 - Tools sector @ \$44.2B (8.9%); led by significant EDA growth
 - Digital Manufacturing sector @ \$893M (2.1%)
- Continued movement towards subscription
 - E.g., Autodesk & PTC finished; others, Siemens, ramping up
- Digital Transformation driving PLM investments
 - Led by major service providers, e.g., Accenture & Atos, expanding their reach
 - Major PLM players are differentiating & expanding their reach

51 *Significant impact from exchange rate fluctuations Copyright © 2023




Agenda

- What's New from CIMdata
- 2022: The Year in Review
- 2023: Today's Trends & Challenges
- Looking Towards the Future
- The Digital Thread: Powering Business Transformation
- Concluding Remarks


52 Copyright © 2023

State of PLM: Today's Market & Leading Trends

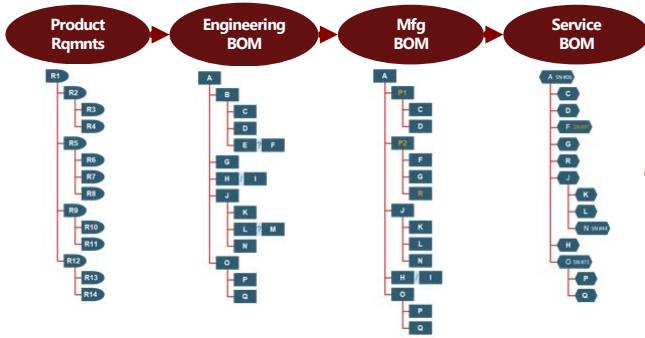
2023 Market & Industry Forum—30 March 2023



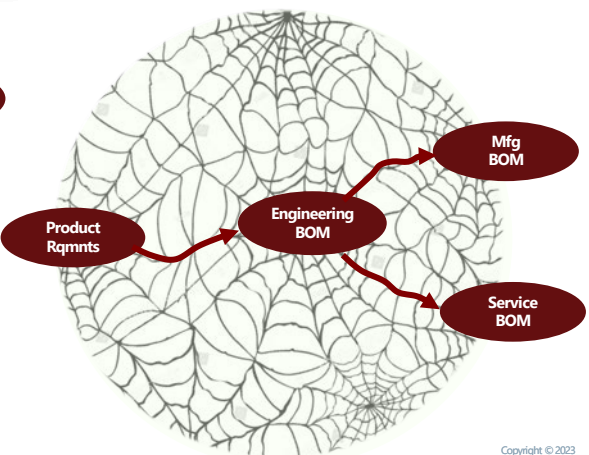
E2E: Lifecycle Product Structures


Connections between the four principal structure configurations – Thread vs. Web


Product Lifecycle Timeline Sequence (Thread)




Derivative Dependencies (Web)

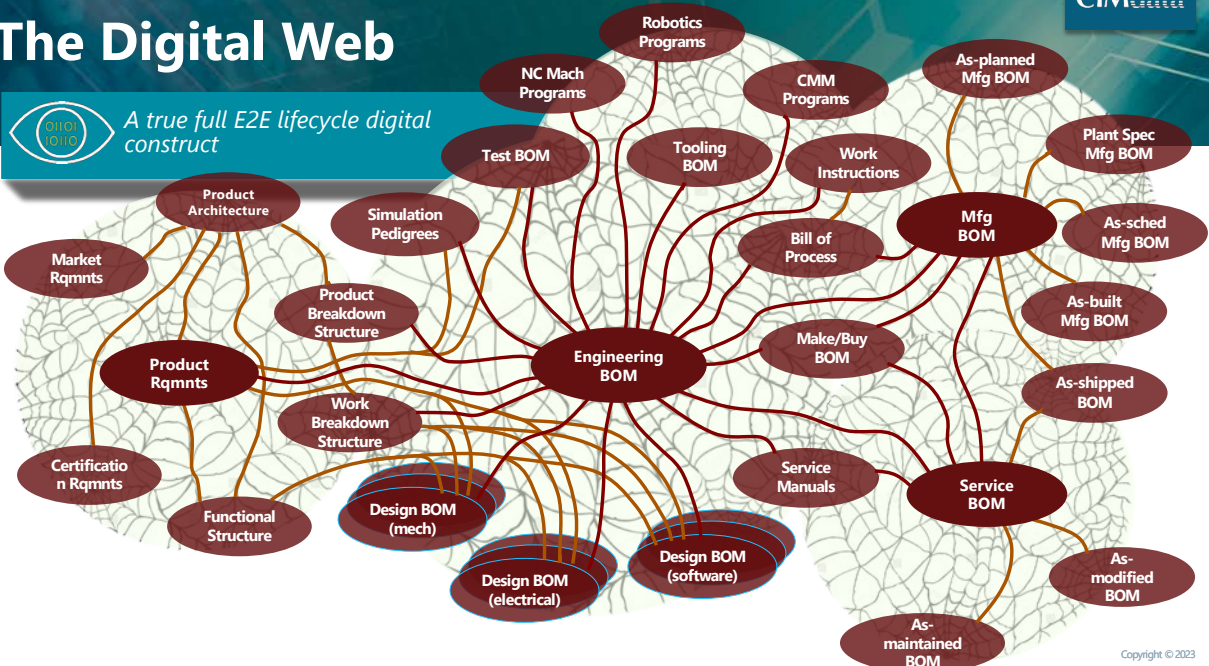


55 Copyright © 2023



The Digital Web



A true full E2E lifecycle digital construct




56 Copyright © 2023

State of PLM: Today's Market & Leading Trends


2023 Market & Industry Forum—30 March 2023




Digital Twin

 *A digital representation of products and/or services at any point throughout the lifecycle*


- A **virtual representation** (i.e., digital surrogate) of a physical asset or collection of physical assets (i.e., physical twin) that exploits data flow to/from the associated physical asset(s).



Digital Twin of the Product




Digital Twin of Production




Digital Twin of Service

Digital twin is enabled and supported by a robust end-to-end and connected systems model and MBSE processes

57 *Adapted from input from ASSESS (see www.assessinitiative.com) Copyright © 2023



Digital Twins


 *Key characteristics*

- There are multiple Digital Twins for different purposes, each have specific characteristics
 - For example, Data Analytics Digital Twins, MRO Digital Twins, Financial Digital Twins, Engineering Digital Twins, and Engineering Simulation Digital Twins
- Each Digital Twin must have a physical twin (i.e., a physical asset)
 - A virtual representation can and should exist prior to its physical twin
 - The physical asset can be a plant, a ship, infrastructure, a car, etc.
- Each Digital Twin must communication with its Physical Twin
 - It does not have to be real time or electronic


58 Adapted from input from ASSESS (see www.assessinitiative.com) Copyright © 2023

State of PLM: Today's Market & Leading Trends

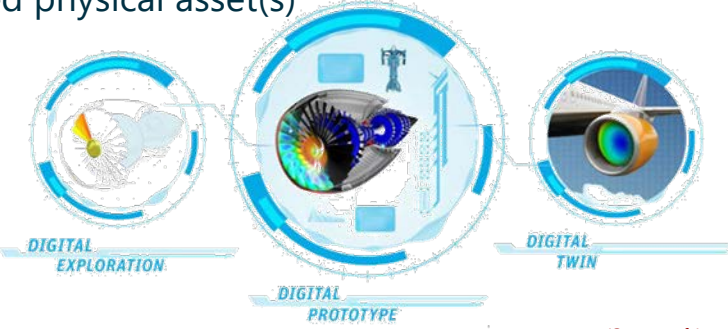
2023 Market & Industry Forum—30 March 2023




Engineering Simulation Digital Twin


CIMdata's preferred definition


- A **physics-based virtual representation** of a physical asset or collection of physical assets (physical twin) that allows simulations of the associated physical asset(s)







(Courtesy of Ansys) Copyright © 2023



Creating & Maintaining the Digital Twins


Digital Twin vision cannot be achieved without a full product/process model

Digital Twin – From Design to Operation

<p>Physical Asset</p>  <p style="font-size: small;">CAD Courtesy of Volvo Cars http://www.ansys-blog.com/digital-twin-pump/</p>	<p>Virtual Prototype</p> 	 <p style="font-size: x-small; color: red; text-align: center;">https://blogs.digit.com/software/2016/04/digital-twins-structural-engineering</p>
<p>Physics-based analytics</p>  <p style="font-size: x-small; color: red; text-align: center;">https://community.plm.automation.siemens.com/t5/Tecnomatix-News/Digital-Twin-Blurring-the-lines-between-reality-and-simulation/ba-p/333483</p>		<p style="font-size: x-small;">Copyright © 2023</p>

State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023

CIMdata's Critical Dozen

CIMdata

01 End-to-end connectivity

02 Data & process management

03 Configuration management

04 Bills of information

05 Model-based structures

06 Digital thread

07 Digital twin

08 IoT & PLM

09 Changing views of "product"

10 Big data & analytics

11 Data governance

12 Digital skills transformation

CIMdata's Critical Dozen
The Top 12 Trends and Enablers of Digital Transformation

12 familiar, evolving trends & key enablers of digital transformation that you cannot, or should not, live without.

61

Copyright © 2023

Agenda

CIMdata


- What's New from CIMdata
- 2022: The Year in Review
- 2023: Today's Trends & Challenges
- Looking Towards the Future
- The Digital Thread: Powering Business Transformation
- Concluding Remarks

62


Copyright © 2023

State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023



Top Strategic Tech Trends


Gartner's Top Strategic Technology Trends

2021	2022	2023
1. Internet of Behavior	1. Data Fabric	1. <u>Digital Immune System</u>
2. <u>Total Experience</u>	2. <u>Cybersecurity Mesh</u>	2. <u>Applied Observability</u>
3. <u>Privacy-Enhancing Computation</u>	3. <u>Privacy-Enhancing Computation</u>	3. <u>AI Trust, Risk and Security Management (AI TRISM)</u>
4. Distributed Cloud	4. Cloud-Native Platforms	4. Industry Cloud Platforms
5. Anywhere Operations	5. Composable Applications	5. Platform Engineering
6. <u>Cybersecurity Mesh</u>	6. Decision Intelligence	6. <u>Wireless-Value Realization</u>
7. <u>Intelligent Composable Business</u>	7. Hyperautomation	7. <u>Superapps</u>
8. AI Engineering	8. AI Engineering	8. <u>Adaptive AI</u>
9. Hyperautomation	9. <u>Distributed Enterprises</u>	9. Metaverse
	10. <u>Total Experience</u>	10. Sustainable Technology
	11. Autonomic Systems	
	12. Generative AI	


<https://https://www.gartner.com/smarterwithgartner/gartner-top-strategic-technology-trends-for-2021/>

Direct connection
63 **Indirect/secondary connection**

<https://www.gartner.com/en/information-technology/insights/top-technology-trends>

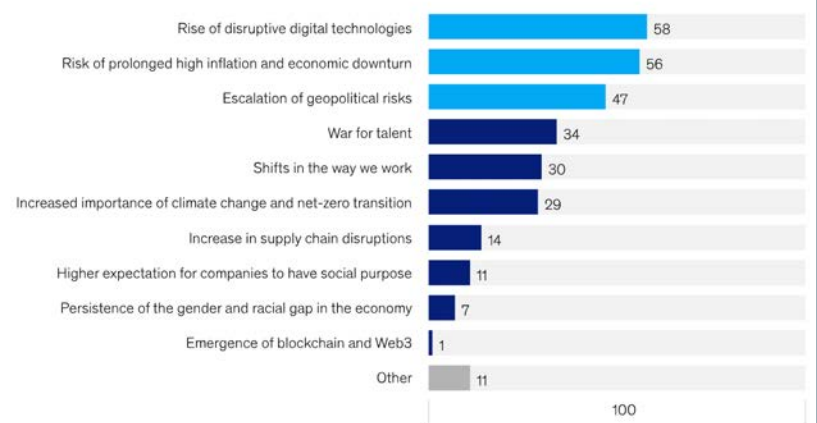
<https://www.gartner.com/en/articles/gartner-top-10-strategic-technology-trends-for-2023>

Copyright © 2023



What CEO's Are Saying

Trends that have the biggest impact on how CEOs are leading their organizations in 2023,¹
% of respondents (n = 73)



Trend	% of respondents
Rise of disruptive digital technologies	58
Risk of prolonged high inflation and economic downturn	56
Escalation of geopolitical risks	47
War for talent	34
Shifts in the way we work	30
Increased importance of climate change and net-zero transition	29
Increase in supply chain disruptions	14
Higher expectation for companies to have social purpose	11
Persistence of the gender and racial gap in the economy	7
Emergence of blockchain and Web3	1
Other	11
Total	100

¹Question: From your perspective as a current or former CEO, which of the following trends will have the biggest impact on how you lead/would lead your organization in 2023 and beyond, compared with past years? Respondents selected their three most important trends.
Source: McKinsey CEO Excellence Survey

64 <https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/actions-the-best-ceos-are-taking-in-2023>

Copyright © 2023

State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023



Other Areas of Activities

 *Just a few words on a few other areas of accelerated PLM-related investment*

- Enterprise platform implementations for digital thread/twin enablement
 - e.g., Aras, CONTACT, Cassini, Dassault Systèmes, PTC, and Siemens*
- Movement to full cloud-enablement and SaaS delivery
 - e.g., Aras, Dassault Systèmes, Oracle, PTC, SAP, and Siemens*
- Continued acquisitions (much more on this later)*
 - ISVs continue to buy their VARs
 - Accenture slowed down from their M&A peak last year
- AI is presenting new possibilities in terms of how to do work

65 *not an all-inclusive list. Copyright © 2023



Agenda

- What's New from CIMdata
- 2022: The Year in Review
- 2023: Today's Trends & Challenges
- Looking Towards the Future
- **The Digital Thread: Powering Business Transformation**
- Concluding Remarks


66 Copyright © 2023

State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023

CIMdata

This Year's Market & Industry Forum Theme

 *The Digital Thread: Powering Business Transformation*

- When PLM was defined in the late 1990s, CIMdata was already promoting the notion of the bill of information (BOI)
 - An info network that fully captures the virtual product & associated processes
- Today, the phrase is “the digital thread” and it has been adopted broadly by industry, governments, and the PLM Economy
 - Unfortunately, many of actors mean quite different things by the same set of words, an all-too-common occurrence
- In this Forum, CIMdata will highlight the overall issue, and then focus on how the global PLM Economy is responding and how well their industrial clients are achieving their digital thread objectives

67 Copyright © 2023

CIMdata

Today's Agenda

 *2023 PLM Market & Industry Forum (1 of 2)*

- **The Digital Thread: Powering Business Transformation**
 - **The Promise of the Digital Thread**
James Roche, Director, A&D Practice
 - **The Digital Thread: The Industrial Perspective**
James Roche, Director, A&D Practice
 - **The Digital Thread: The PLM Economy Perspective**
Stan Przybylinski, Vice President
- **Break**

68 Copyright © 2023

State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023



Today's Agenda

 2023 PLM Market & Industry Forum (2 of 2)

- **Updates on Key Topics**
 - **The Green Energy Transition**
Mark Reisig, Director, Sustainability & Green Energy
 - **Data Governance in the Era of Digital Transformation**
Janie Gurley, Director, Data Governance
- **Closing Comments**

69 Copyright © 2023



Agenda

- What's New from CIMdata
- 2022: The Year in Review
- 2023: Today's Trends & Challenges
- Looking Towards the Future
- The Digital Thread: Powering Business Transformation
- Concluding Remarks


70 Copyright © 2023

State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023

CIMdata

Concluding Remarks


 State of PLM: Today's Market & Leading Trends


- 2023 – CIMdata's 40th year of defining, tracking & working in the global PLM market...we are happy to be your growth partner
- The global PLM economy is growing and continues to add value
- Multiple disconnects still exist, e.g., prioritization of digital initiatives, and managements narrow understanding of lifecycle management
- To be successful, companies need to transform people, processes and technologies—partial solutions don't get the job done
- The digital thread is really a digital web—key to true E2E traceability
- Data governance and sustainability are lifecycle issues

71 Copyright © 2023

CIMdata

Questions & Answers

 What's on your mind?



72 Copyright © 2023

State of PLM: Today's Market & Leading Trends

2023 Market & Industry Forum—30 March 2023

CIMdata Defining What Comes Next in Digital Transformation

Strategic management consulting for competitive advantage in global markets

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

World Headquarters Ann Arbor, Michigan USA Tel: +1.734.668.9922	Asia-Pacific Headquarters Tokyo, Japan Tel: +81.47.361.5850
EMEA Headquarters Weert, NL Tel: +31 (0) 495.533.666	

www.CIMdata.com

Copyright © 2023