

Data Governance in the Era of the Digital Thread

2023 PLM Market & Industry Forum—30 March 2023



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Data Governance in the Era of the Digital Thread
PLM Market & Industry Forum
A CIMdata Leadership Event

30 March 2023—Ann Arbor, MI USA

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Data Governance Practice

Practice Overview



Director: Janie Gurley

Mission

- Ensure high-quality data is always available to all extended enterprise participants to increase profitability and reduce business risk

Areas of Focus

- Providing strategy and guidance to industrial clients and solution providers to promote application of data governance best practices
- Enable better decision-making, reduce operational friction, and protect the needs of data stakeholders
- Effective data structuring and alignment of core enterprise domains
- Educate management and staff to adopt common approaches to data issues by building and/or adopting standards, enhancing processes, reducing costs, and increasing effectiveness

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Janie Gurley

*Professional background*

- Over 25 years experience supporting product and strategy development in manufacturing and business planning with broad-based understanding and expertise in analysis, production solutions, and processes mainly in mechanical and industrial engineering
- Holds an MS in Management and a BS in Business Administration from Southern Wesleyan University, Columbia, S.C. Also, a certified Scrum Master and Business Analyst. CIMdata PLM Technology certification and Digital Transformation Leadership certification

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Key Takeaways



Data Governance in the Era of the Digital Thread

- Successful creation and maintenance of a digital thread requires effective elements of a governance model
- Data governance process must be proactively designed and managed
- Elements of a governance model must be “appropriate” for the program being governed
- Effective governance must address the people, process, and technology dimensions
- Data governance initiatives will fail without proper executive support and budgetary resources

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Agenda

- The What & Why of Data Governance
- Review CIMdata Survey Results
- Primary Challenge of Data Governance
- What is the Business Opportunity?
- Concluding Remarks

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Data Governance

What - CIMdata's definition

Implementation, and management of policies, procedures, structures, roles and responsibilities that outline and enforce the rules of engagement, decision rights, and accountabilities for the effective management of information assets.

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Data Governance

What - Digital thread – tie together with governance

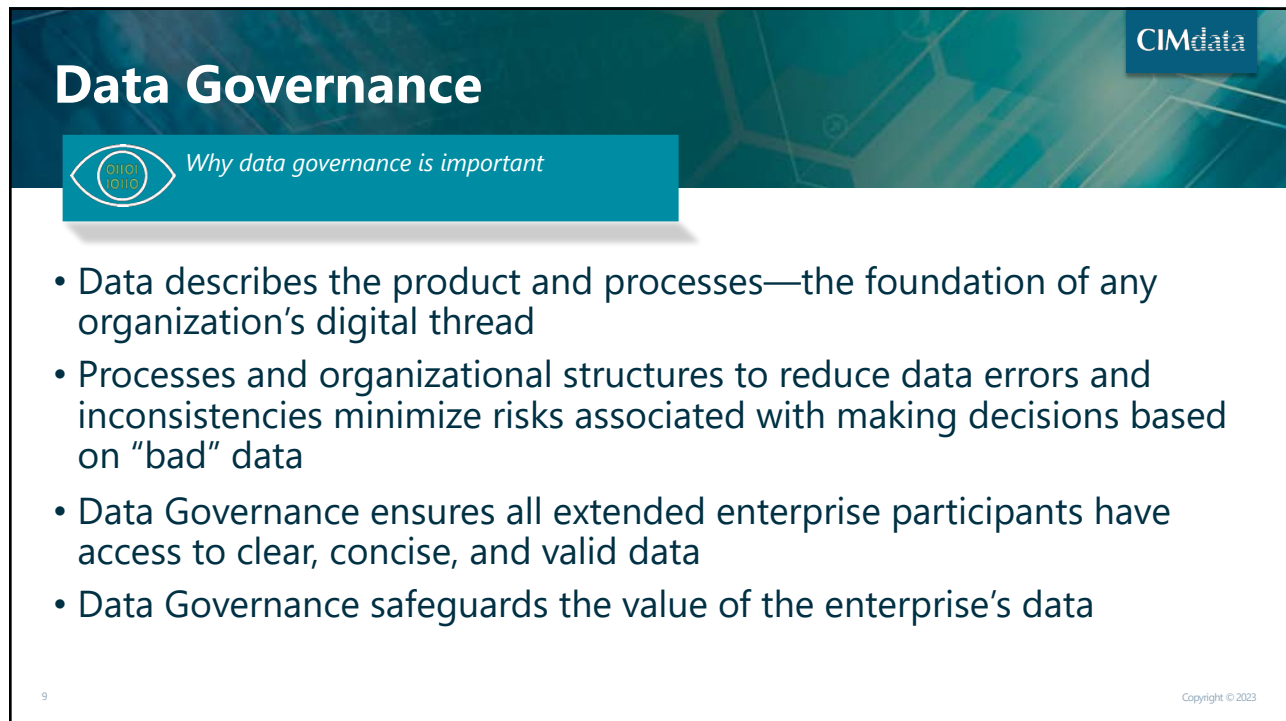
Digital Web

Digital Thread


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Data Governance

 *Why data governance is important*

- Data describes the product and processes—the foundation of any organization’s digital thread
- Processes and organizational structures to reduce data errors and inconsistencies minimize risks associated with making decisions based on “bad” data
- Data Governance ensures all extended enterprise participants have access to clear, concise, and valid data
- Data Governance safeguards the value of the enterprise’s data

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Data Governance

 *Why data governance is needed to enable an organization's digital thread*

- Enable effective management of data assets
- Enable a holistic view of an organization’s data assets
- Ensure information assets are trustworthy, i.e., clear, concise, and valid
- Digitalization provides an opportunity to leverage best practices to fix the sins of the past and provide opportunities for innovation and optimization

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CIMdata Data Governance Survey Insights

 Background

- CIMdata conducted a survey in Dec 2022 – Feb 2023 to learn more about Data Governance plans and practices within industry
- Respondents included industrial practitioners with knowledge of the Data Governance policies, practices, and plans within their company
- Over 50% of respondents were from aerospace and defense, auto & other transportation, and mechanical machinery/heavy equipment industries

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CIMdata Data Governance Survey Insights

Is data governance understood within your organization?

- In CIMdata's consulting experience data governance needs to be well defined
- The organization needs to understand that data governance is not a one-off project but a way of working and thinking that needs to permeate the organization's digitalization projects

Organizational Understanding

Response	Percentage
Yes	51%
No	43%
I Don't Know	7%

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CIMdata Data Governance Survey Insights

Do you have executive sponsorship for Data Governance?

- Data governance is complex and just having top management buy-in is not enough but is critical to driving this effort and embedding it within the organizational fabric

Executive Sponsorship

Response	Percentage
Yes	54%
No	39%
I Don't Know	7%

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CIMdata Data Governance Survey Insights

Do you currently have budget for Data Governance or is one planned?

- Our survey results supports what CIMdata believes, that executive sponsorship relates to having a sustainable budget for data governance
- How can I get the organization on board with data governance?
 - Gaining executive sponsorship is crucial

Response	Percentage
Yes	51%
No	28%
Not sure	21%

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CIMdata Data Governance Survey Insights

Is data governance a part of your digital transformation initiative?

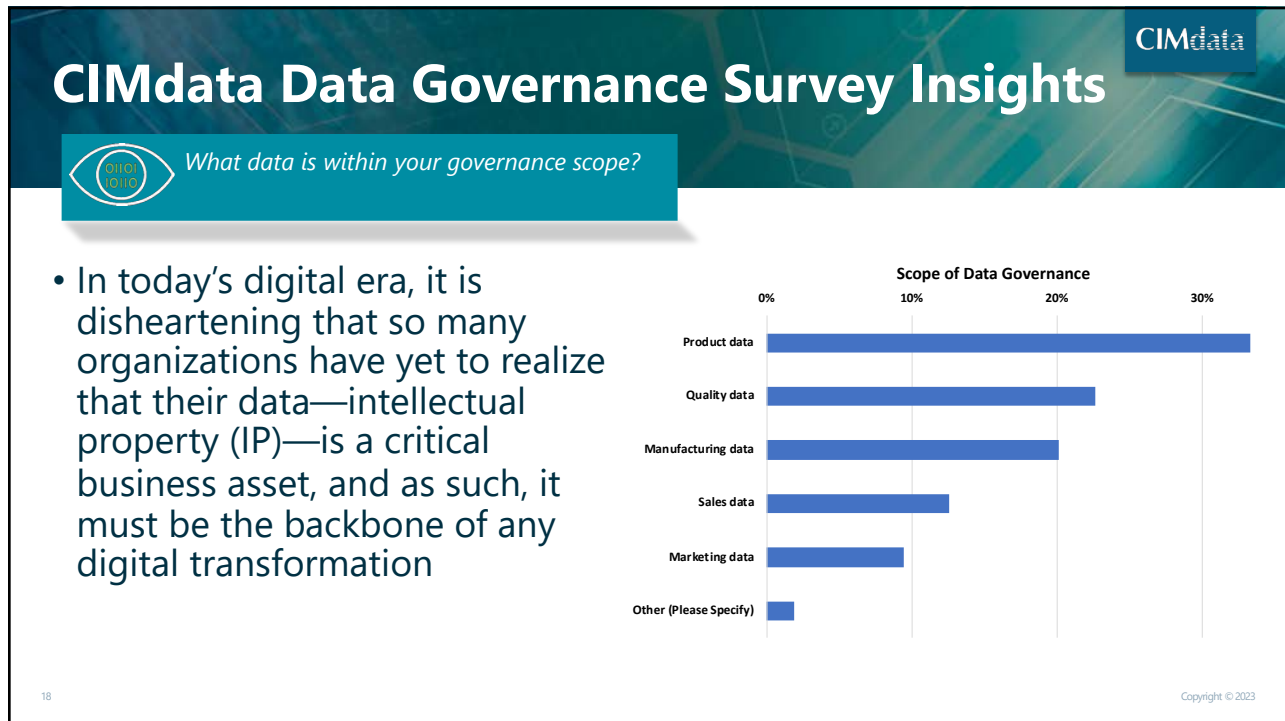
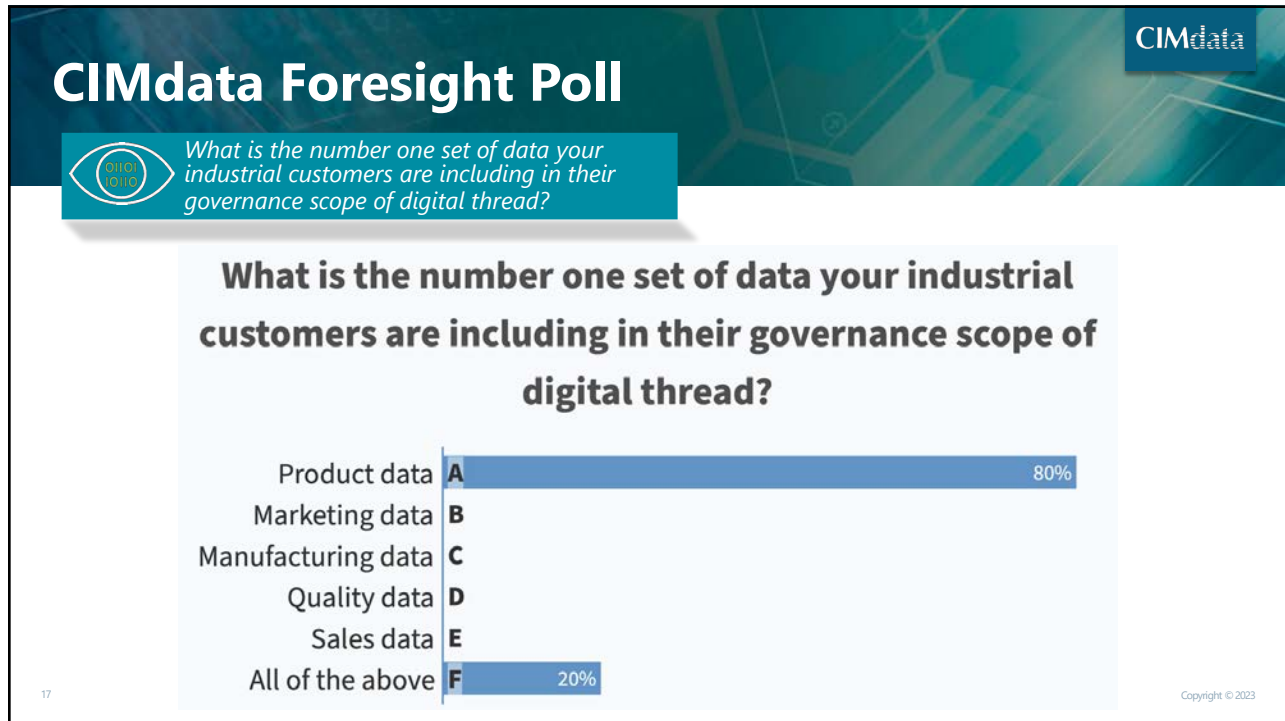
- The right set of data governance policies, procedures, structures, roles, and responsibilities are essential
 - Without them, digital transformation's effectiveness will be undermined and its hopes of providing benefits will be at risk

Response	Percentage
Yes	79%
No	15%
I Don't Know	7%

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CIMdata Data Governance Survey Insights

What is the status of your organization's digital transformation initiative

- Respondents reflect different levels of progress in their organization's digital transformation initiative
- As digital transformation spreads throughout a business, the need for effective Data Governance gains importance, benefiting every task and process where reliable data is indispensable

Status	Percentage
In Planning	16%
In Design	6%
In Development	15%
Implementation Started	19%
Midimplementation	20%
Continuing with Maintenance/Upgrades	8%
No Formal Digital Transformation Initiative in Place	11%
Not Sure	2%

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CIMdata Data Governance Survey Insights

Are you confident that your Enterprise Data sources have the correct data under governance?


- A surprising number of respondents either do not have any confidence or are not sure of their confidence in having the correct data under governance

Confidence Level	Percentage
Not sure	43%
Yes	34%
No	23%


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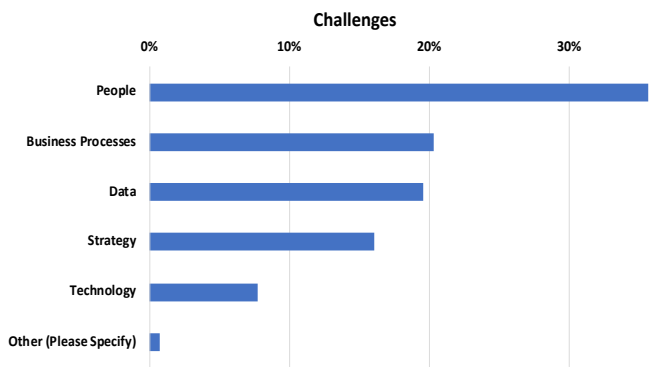


CIMdata Data Governance Survey Insights



What are the biggest challenges with implementing Data Governance?


- The biggest challenges reported for implementing data governance
- Respondents were split between challenges from data and business processes




Challenge	Percentage
People	30%
Business Processes	20%
Data	20%
Strategy	15%
Technology	10%
Other (Please Specify)	5%

0% 10% 20% 30%

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CIMdata Foresight Poll



What is the primary type of data-related initiatives your customers are performing?

What is the primary type of data-related initiatives your customers are performing?

Data Governance	A	
Enterprise Information Management	B	17%
Data Management	C	17%
Data Quality Management	D	
Metadata Management	E	
PLM to PLM Integration	F	
PLM to ERP Integration	G	67%
None of the above	H	

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Primary Challenge of Data Governance




Complexity of adapting theory to individual company—one size does not fit all

“...often it is too big to be approached holistically...break down the Data Governance Discipline and program, and present them as a set of more manageable pieces that can be prioritized, aligned with organizational goals and economic impacts, and executed upon and scaled up over time...”


24 Source: Master Data Management and Data Governance, 2/E 2nd Edition Copyright © 2023

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Data Governance Challenges



Enterprise continues to contain fragmented information

- Organizing a sustainable DG structure and overall strategy
- Effort to achieve effective data structuring and alignment of core enterprise domains continues to be underestimated
- Digital thread initiatives forcing a “data culture” underestimate the effort to remove the silos of data, ignore tribal knowledge, and ignore data quality issues
- PLM implementations often fail to achieve ROI and other targets due to poor DG

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Business Opportunity for Solution Providers

 *High-quality data always available will increase profitability and reduce business risk*

- **Justification** – Data Governance needs to be included in digital strategy to ensure implementation success
- **Education** – organizations have vast amounts of data and need to understand the importance data governance
- **Strategy development** – promote DG best practices
- **Tactical consulting** – assessing quality of existing data, organizing a DG initiative, building DG processes, cleansing existing data, etc.
- **Products** – advise on how to configure your solutions to enable effective Data Governance

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How CIMdata Can Help


 *Industry understanding and action*

- CIMdata can participate in the data governance aspects of your customer engagements
- CIMdata can help you develop a DG practice, including training your people
- CIMdata can assist and advice on system data cleansing services
- CIMdata can review your existing DG practice and advise on improvement

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Concluding Remarks



- The successful creation and maintenance of a digital thread requires effective data governance
- Data governance process must be proactively designed and managed
- Elements of a governance model must be “appropriate” for the customer and program being governed
- Effective governance must address the people, process, and technology dimensions
- Data governance initiatives will fail without proper executive support and budgetary resources

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To Learn More...

- Janie Gurley, Data Governance Director
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- CIMdata has several useful resources on this topic
 - CIMdata Data Governance Practice: As digital transformation spreads throughout business, the need for effective Data Governance is gaining importance, benefiting every task and process where reliable data is indispensable
 - For more information, please look at CIMdata's Dossier on this topic

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Questions & Answers

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What's on your mind?



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