

Data Integrity

N·A·W

NATIONAL ASSOCIATION OF
WHOLESALE-DISTRIBUTORS

Data Integrity

“the maintenance of, and the assurance of the accuracy and consistency of, data over its entire life-cycle, and is a critical aspect to the design, implementation, and usage of any system which stores, processes, or retrieves data.”



Data Integrity vs Quality



Data integrity refers to the validity of data, but it can also be defined as the accuracy and consistency of stored data.

Data quality pertains to the completeness, accuracy, timeliness and consistent state of information managed in an organization's systems.

Data Integrity



Enterprises today have mixed complex information systems with refined processes and automation, employing people to make and manage businesses that produce a large amount of data.

Are Enterprises today giving data and the integrity of data the same attention as customer service, vendor management, inventory management or cash flow?

The answer for most is no.



Data Integrity



5 Key Attributes

Accuracy

- No errors or editing without audit trail

Attributable

- Information exists about who acquired the data or performed an action and when

Available

- Data is available for review and audit or inspection over the lifetime of the record

Complete

- All data is present and available

Consistent

- All elements of the record, such as the sequence of events, are dated or time stamped in expected sequence

All industries benefit from data integrity.

- **Life Sciences / Pharmaceutical**
 - Tracking of information related to the manufacture, transportation and storage of medicinal products.
 - Validated systems and FDA audits require data integrity
- **FDA**
 - Tracking food through today's complex supply chains
- **Electronic Voting**
 - The importance of certifying the integrity of electronic votes.

As more and more data is accumulated in an automated means, it is imperative that the integrity of that data is maintained over time or trust is lost.

Industry Requirement



The following are examples we've dealt with in your Industry:

- Supplier mandates
- Managing requests within your lead times
- Visibility into Total Pipeline within your operations and customer's operations
- Controlling data where you don't control the source system (i.e. RetailLink for Walmart)
- OTIF (On-Time In Full) Requirements
- Category Management
- Warehouse routing optimization

- **What are the key data integrity issues you face in your Wholesale Distribution?**
- **Are the issue more data integrity or quality issues?**
- **What are key pain points you are facing?**

Dirty Data

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Dirty Data

DIRTY DATA

The cost of bad or 'dirty' data **exceeds \$600 Billion dollars** for US businesses annually. ₁

\$600B



Barrier to Entry

46%

of survey respondents cite **Data Quality** as a



for adopting BI / Analytics products. ₂

Data Quality Costs

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A Heavy Cost

Poor Data across businesses & the government costs the US Economy **\$3.1 Trillion dollars** a year. ⁵

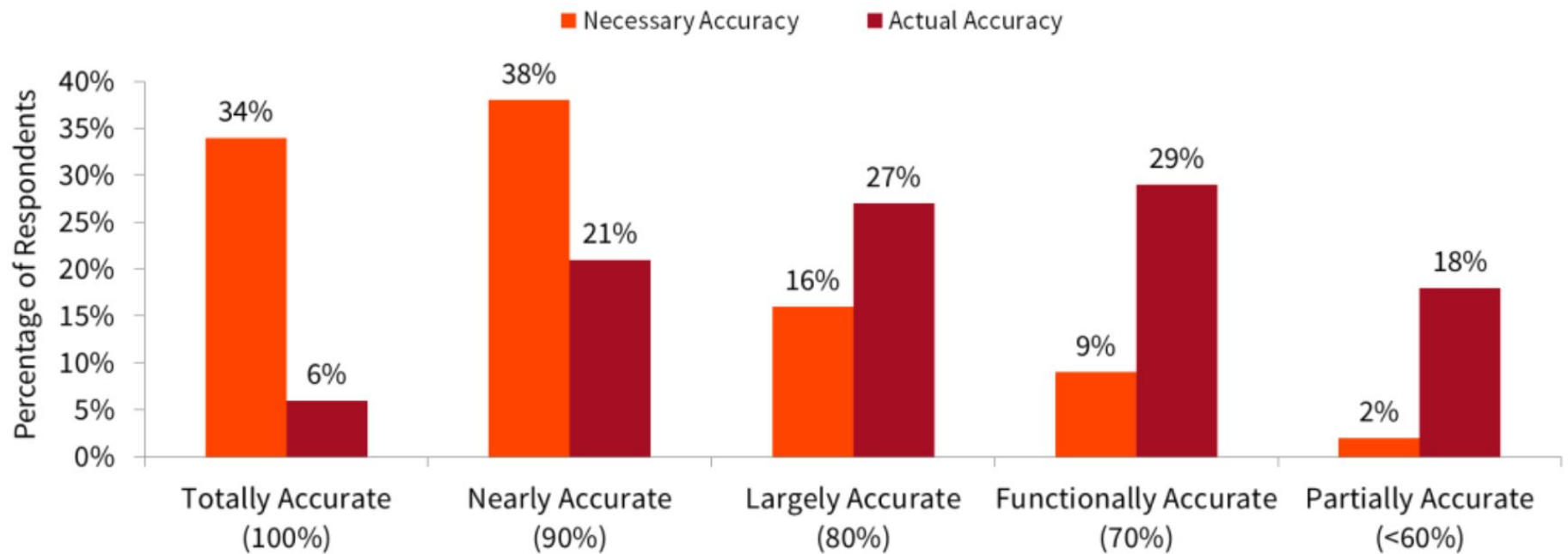


Best Practices

Data Quality Best Practices **boosts revenue by 66%.** ⁶

Data Accuracy

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Source: Aberdeen Group – May 2014

Elements of Trust

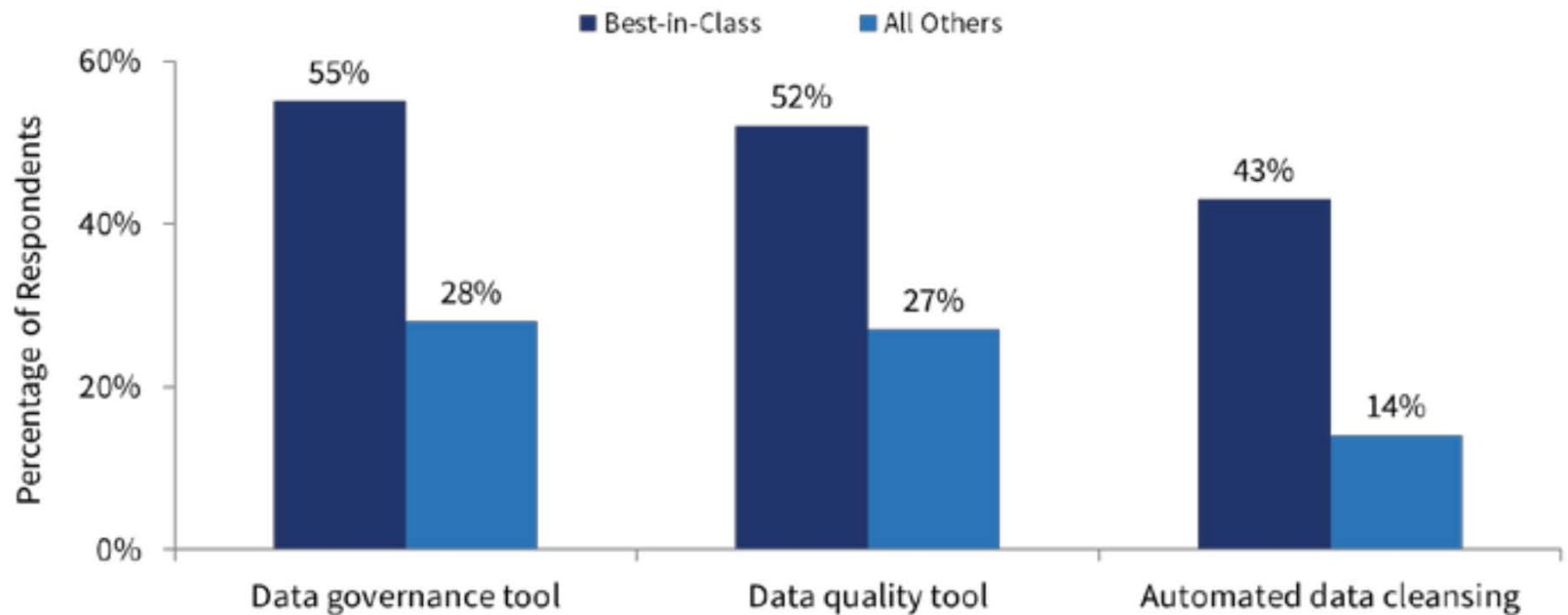
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Source: Aberdeen Group – May 2014

Tools of Trust

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Source: Aberdeen Group – May 2014

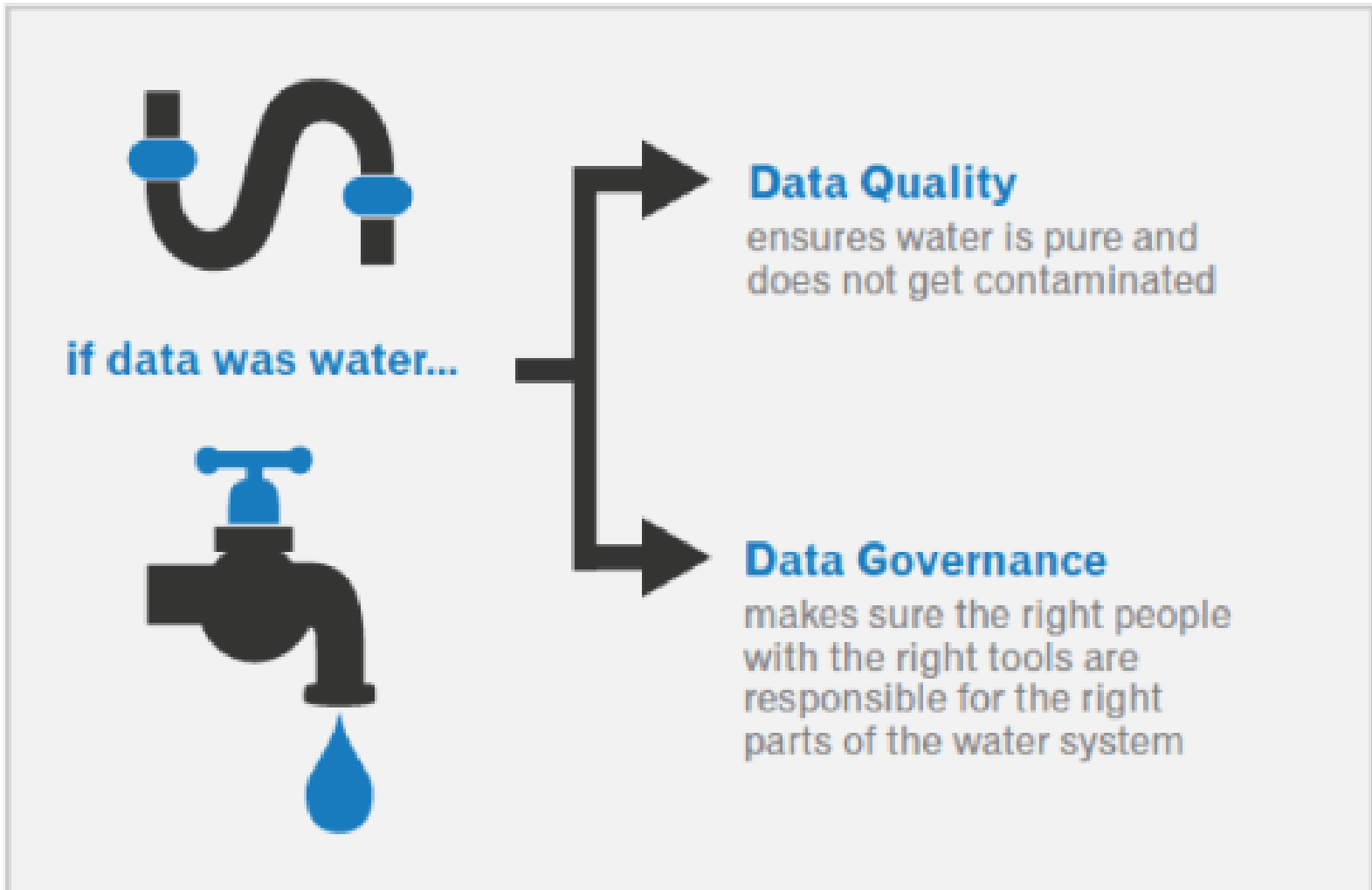
Discussion (hidden)



- **What are the key data quality issues you are fighting?**
- **Are the data quality issues internally or externally caused?**
- **Do you trust the data you are using to make decisions?**

Data Governance

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Goals of Data Governance



1. Enable better decision-making
2. Reduce operational friction
3. Protect the needs of data stakeholders
4. Train management and staff to adopt common approaches to data issues
5. Build standard, repeatable processes
6. Reduce costs and increase effectiveness through coordination of efforts
7. Ensure transparency of processes

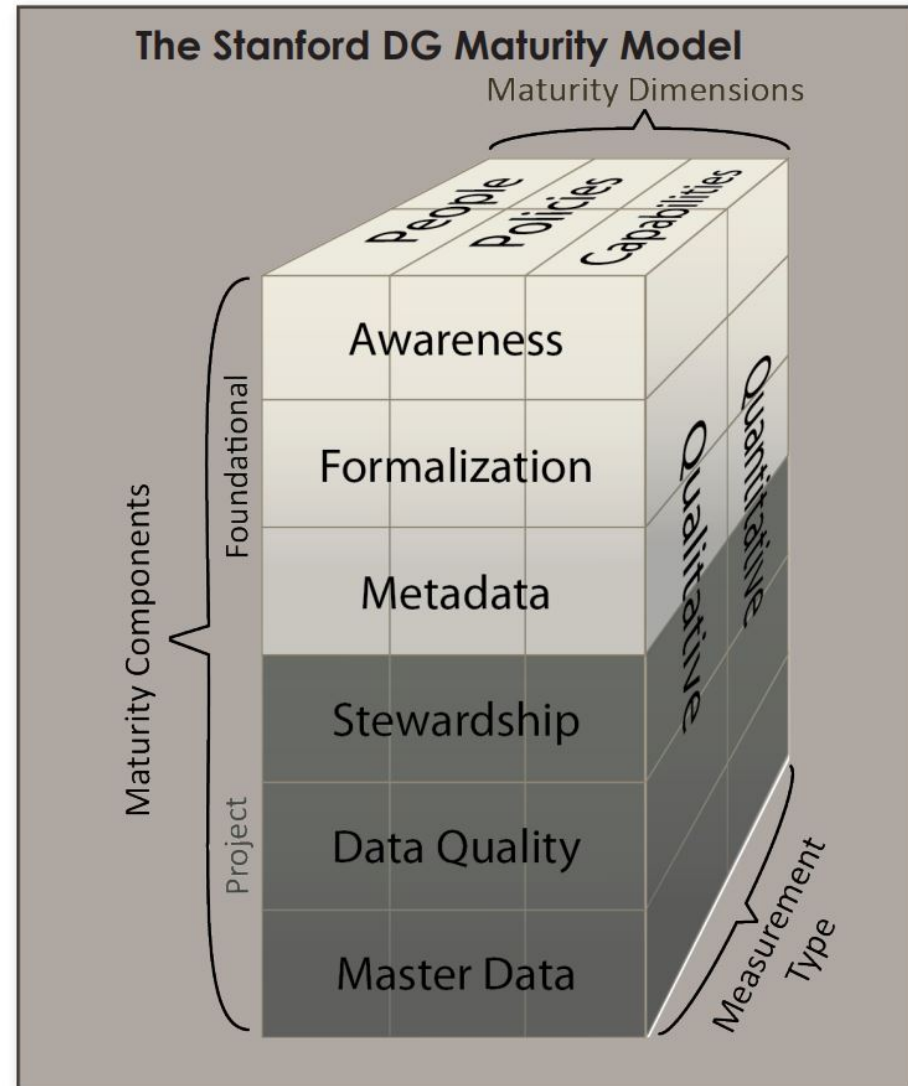
Getting Started

- Start Small
- Identify Business Sponsors
- Identify Key Systems
- Identify Data Stewards
- Identify Key IT Resources
- Move towards creating one version of the truth.



Measure to Improve

- Stanford Data Governance Maturity Model is a great starting place.
- Helps determine an organizations level of maturity
- By measuring Qualitative and Quantitative measurements, it helps measure progress



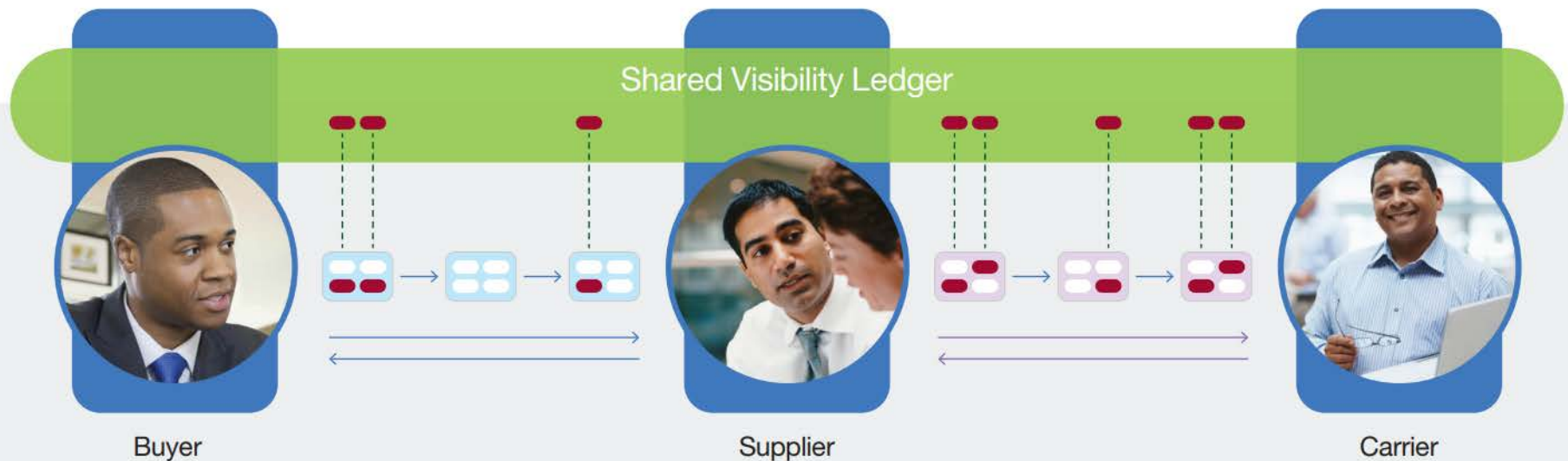
New Technologies

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Blockchain technologies

The blockchain is an incorruptible digital ledger of economic transactions that can be programmed to record not just financial transactions but virtually everything of value.

A key benefit of blockchain for supply chain networks is that it establishes a shared, secure record of information flows; a shared version of events' across networks for supply chain transactions, processes and partners.



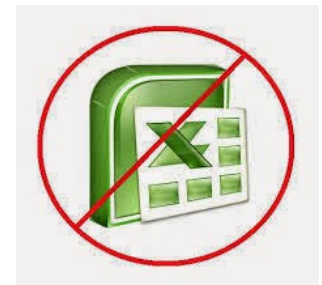
Other Ideas

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- **Establish a governed data approach** for reporting and analytics so that everyone starts to work from a **single version of the truth**.
- **Self-Service Business Intelligence Tools** such as Qlik Sense, Alteryx, PowerBI, etc. are excellent at helping merge data from different data sources as well as identifying data quality issues.
- **Avoid Excel** for enterprise reporting (lack of governance and loss of integrity)



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