



MANAGING RISK

MIT IQ Industry Symposium



Session 4A: Success Stories and Lessons Learned

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Agenda

- One slide on DNV
- Information quality for us
- Poor information quality
- Success Stories Complex Product Information
 - JSF
 - The Norwegian Frigate
 - Volvo and US Army (Eurostep)
- Lessons learned
 - The “Technology Trap” and “Quick Fixes”
 - Regarding Information as a resource/asset
 - Better understanding of Information Quality

DNV worldwide



MANAGING RISK



- Head Office
- Main support and service centres
- Local offices

7000 employees
 300 offices
 110 countries
 >\$1B in Revenues

Maritime
 Industry
 Energy
 Risk Management
 Research
 Software

17% of the world fleet of ships
 80 national accreditations
 Risk Based Certification

Key research areas for DNV

- Info Quality and Security
- Global Transport
- Future energy solutions
- Structures and Materials
- Secure, reliable software



Information quality for us

- **Information quality is about the right information and information that is right, for the right people, and at the right time.**
 - The **right information** means that it is the information that is required to support decisions in a process, that its meaning is unambiguous, and that it is complete
 - **Information that is right** means that the process for creating and maintaining the information is defined and followed so that the information is accurate, and consistent.
 - For the **right people** means that those who need access have it, and equally, those who should not have access do not.
 - At the **right time** means that the information is available when decisions relying on it need to be taken.

Cost of poor information quality

- **Larry English**
 - The average perceived cost of poor data quality is as high as 10-20% of organizations' revenues
- **The Data Warehousing Institute (TDWI) Study**
 - The TDWI 2002 study showed that data quality problems cost U.S. businesses more than \$600 billion a year.
- **2000 US Presidential Election**
 - The controversy surrounding the 2000 Presidential election and the Florida recount shows the profound business effect associated with information of questionable quality. The lack of a clear winner, directly resulting from poor data quality, immediately led to a drop in stock prices during the days after the election.
- **NIKE Shoes**
 - Nike blames the i2 ordering-system for a \$80-100 million cut in third- quarter sales that caused the company to miss earnings estimates by as much as 13%. The day that Nike announced this, its stock price dropped 25% in value from \$49.17 to \$38.80. On the other side, i2's senior management claimed that their software was not responsible for Nike's shortfalls.

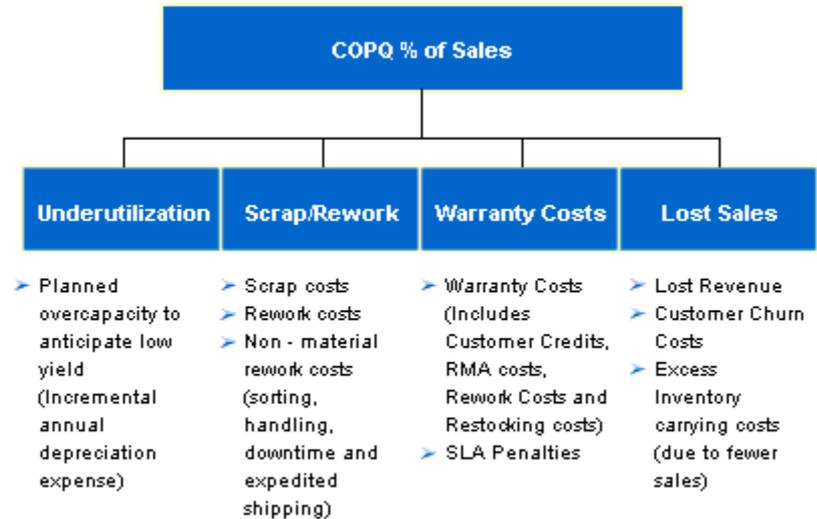


Figure 1: A Framework used by a Fortune 500 company for Calculating COPQ

Sources: The Cost of Poor Data Quality, Article published in DM Direct Newsletter, June 29, 2001 Issue By David Loshin and Cost of Poor Quality (CoPQ) of Sales, http://www.metricstream.com/insights/costofPoorQuality_home.htm

Example over poor information


Switchboard Your Digital Directory

Find a Business Find a Person Maps & Directions Search by Phone Area & Zip Codes Web Search

Business Name or Category: Location: Within: [Help](#)

Search Results for *dmv* in *alexandria, va* (1 - 2 of 2)



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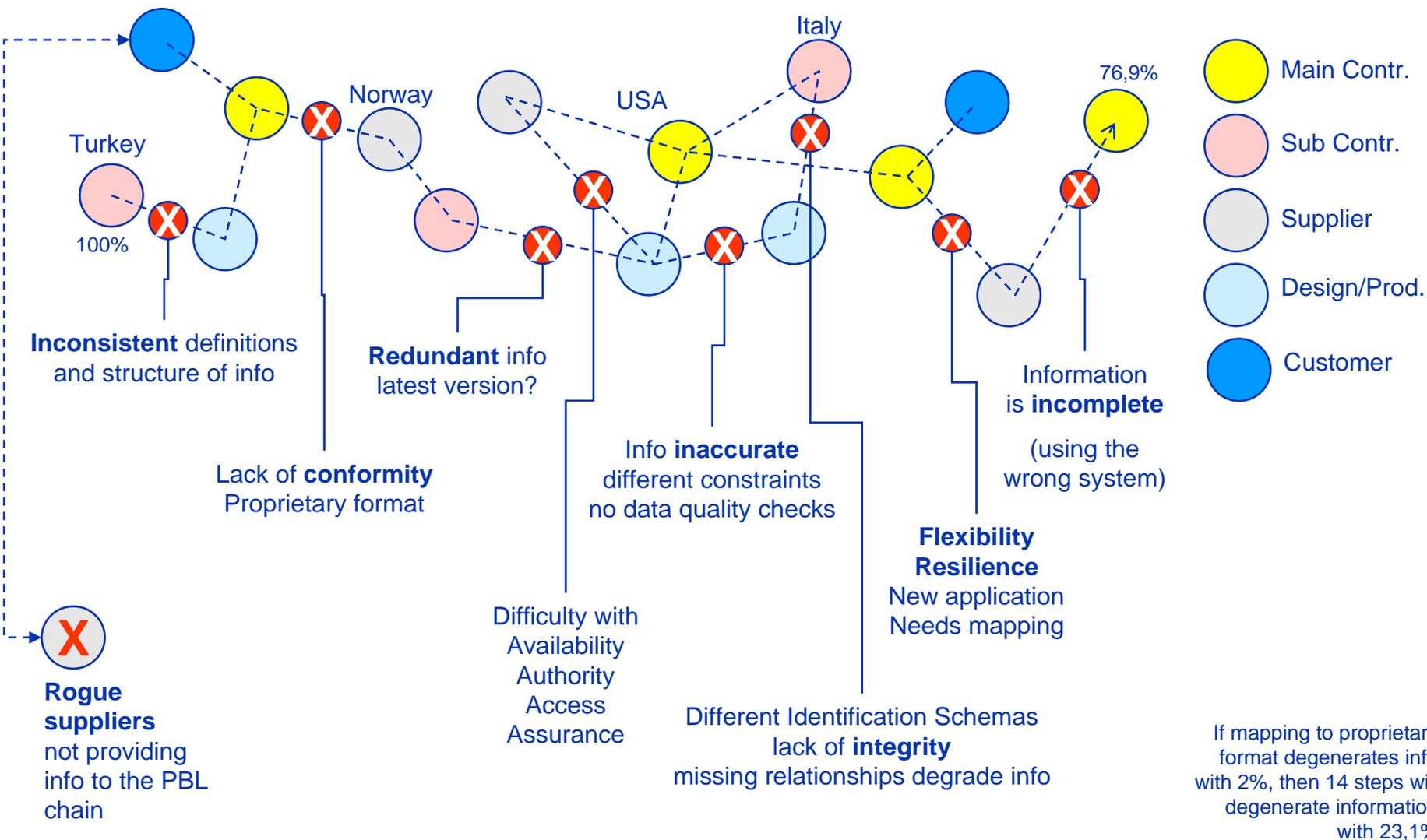
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5-10 people per week since February 2007
Costs for our reception & administration
DNV takes much of the blame
Lost confidence in Switchboard / Yellow Pages



Problems in the information flow...

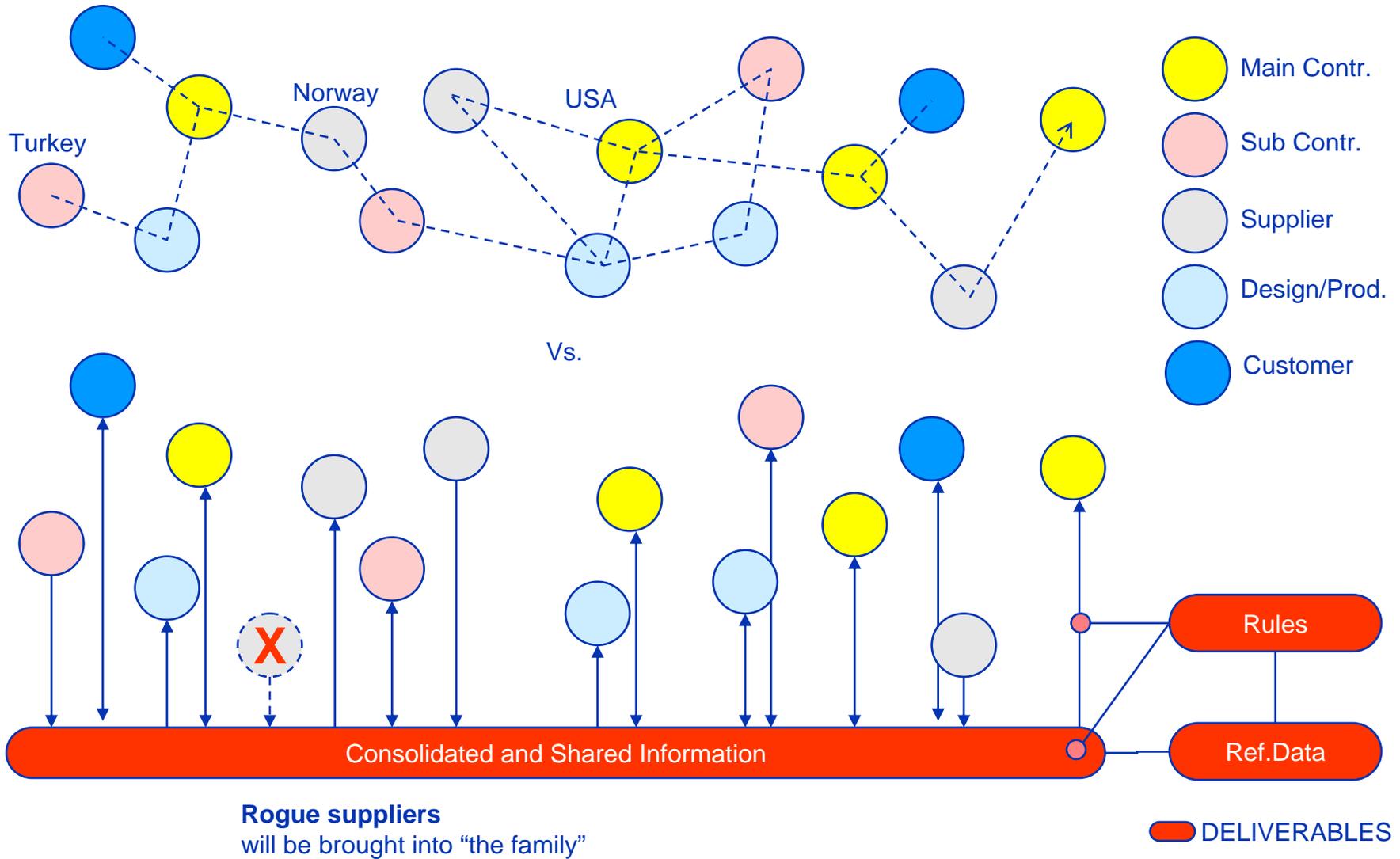


Six common Information quality problems

- **Inconsistent** information:
 - The same info in multiple systems often leads to inconsistencies, different definitions, representations and structures, difficult to merge
- **Inaccurate** information:
 - The quality of information rapidly degrades, spelling, wrong keystrokes, not updated
A typical decay rate of customer information is 30% per annum (study by PWHC)
- **Incomplete** information:
 - Information is often missing or unusable
19% of Information Quality issues relate to missing information (IAT survey)
- **Duplicated** information:
 - Multiple instances of the same information is a big inhibitor of effective info mgmt
- **Lack of conformity**:
 - Information stored in a proprietary (non-standard) format is after some time unusable
- **Lack of integrity**:
 - Missing relationships between information objects degrade the quality of information

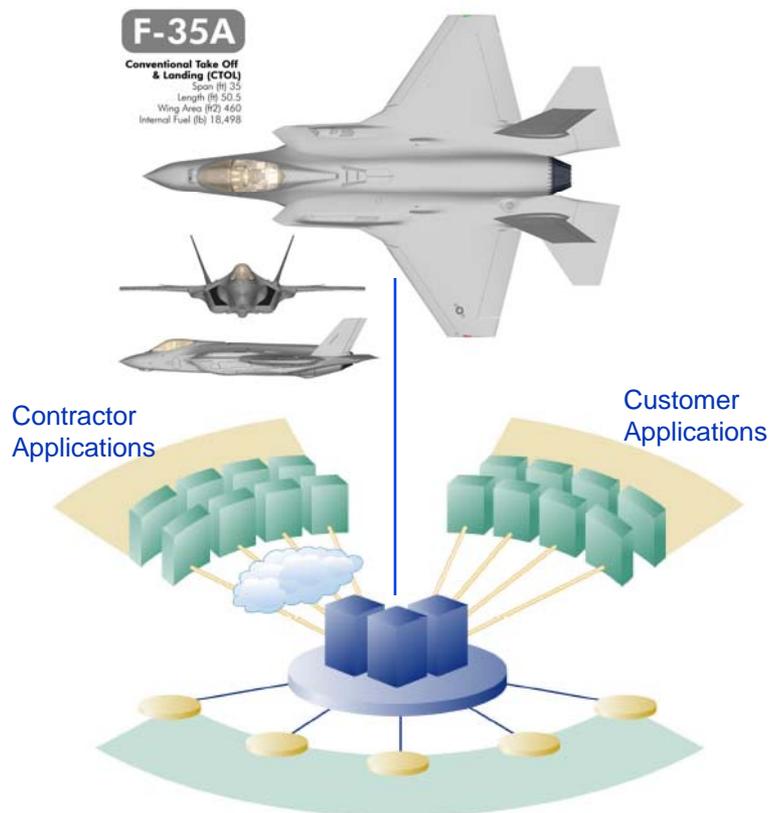
Solving information quality problems...

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Success Story - JSF

- Joint Strike Fighter International Information Interoperability Initiative (JSF4I), Norwegian Industry Consortium consists of DNV, EPM, Corena and Kongsberg to demonstrate for the JSF Program sharing of Product Information through international standards
- Analyzed customer value include, improved information quality (definition, validity, provenance, availability and cost), increased flexibility upon changes of processes and applications, reduced risks/improved information security



Success Story - Norwegian Frigates

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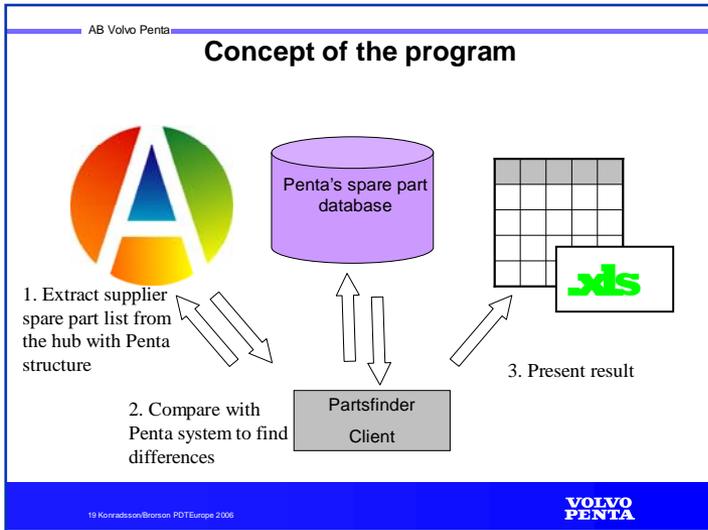


- Largest known PLCS implementation project in the world, Norwegian Frigates, part of the \$ 2 billion program delivered by Spanish Shipyard Izar
- DNV receives, quality controls, re-structures and manages all product information
- Customer benefits include
 - Enterprise and mission integration
 - Joint Technical Architecture
 - Unified Object Definitions
 - Improved availability
 - Improved quality
 - Reduced cost



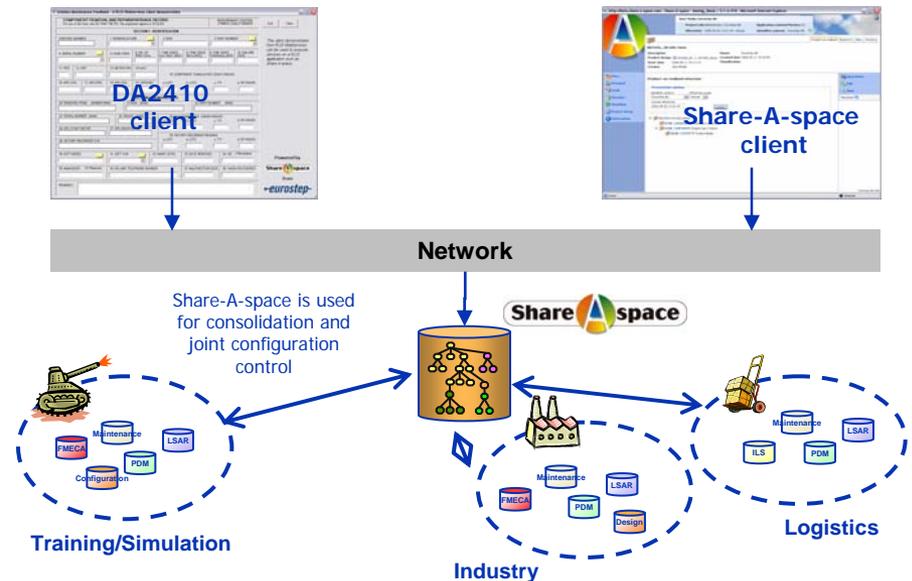
Success Stories by Eurostep

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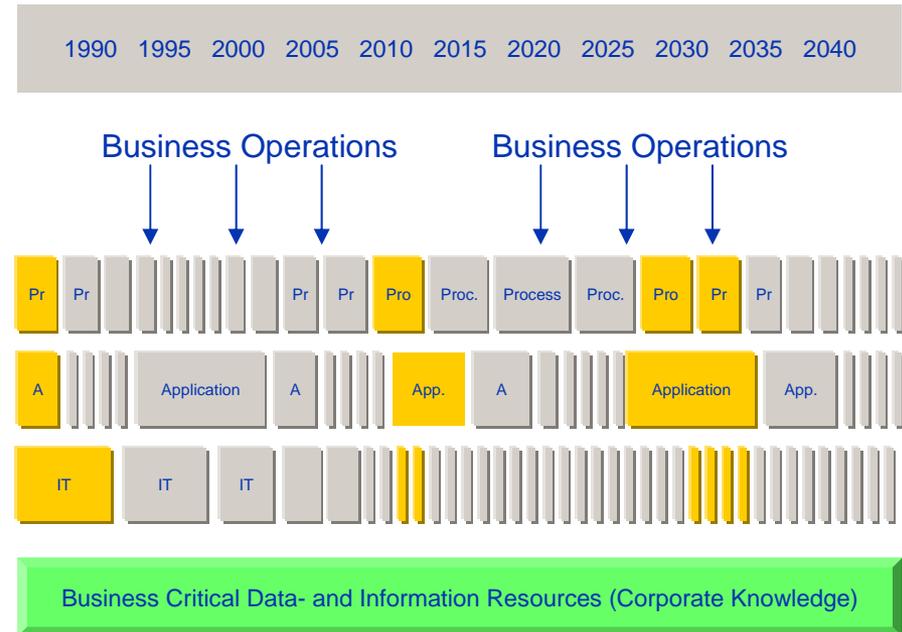
- US Army DA Form 2410
- Applying Webservices towards well-structured information (exploiting information resources)
- **This example, integration of cross-sector information, lower leadtime and improved information quality**
- Joint Configuration Control

- Applying Webservices towards well-structured information (exploiting information resources)
- **This example, savings of approximately 200k€/year**
- Volvo Penta needs to find out all changes that are affecting engines used by them
- Changes affecting only Penta and others
- Changed parts and structures
- Volvo Penta has limited resources



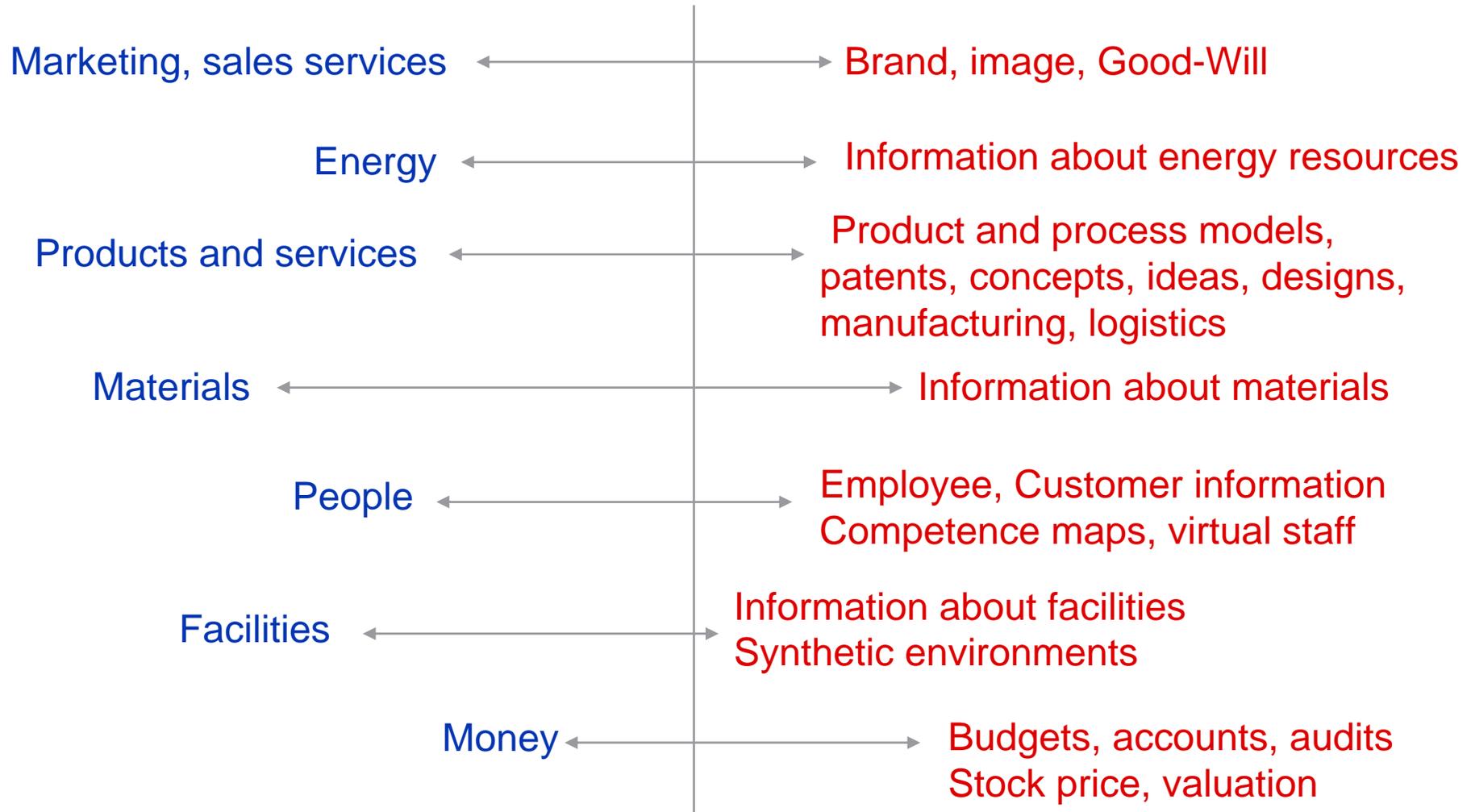
Lessons learned - The Technology Trap

- Enterprises need resilient solutions, due to rapid changes of markets and business enablers
- Ted Friedman, Gartner: *There isn't a silver bullet. It isn't an IT problem. If you're only throwing technology at the problem, at best you'll only get some short-term, lukewarm benefits.*
- Overconfidence in “quick fixes”, technological solutions, which claims to solve information problems, usually leads to:
 - Sub-optimizations of vertical stovepipes
 - Lack of coordination and interoperability leads to redundancies and inconsistencies
 - Difficulty to utilize/exploit the full potential of information resources/assets
 - Increasing information quality, -legal and -security problems
 - Need to get some more “quick technology fixes” to overcome undesired consequences
 - Rapid expansion of complexity





LL - Material and **Immaterial** Resources



The value of information is often far greater than the value of physical goods

LL - Information is a resource

- From a financial point of view, information can be regarded as a resource if its **use by an organization leads to added value**
- Information has the potential to be useful for purposes that are different from the purpose for which it was originally created
- Information remains a resource for an organization only if it is **carefully managed, stored, updated, shared and reused**
- “Information based costing” measures the total expense for Lifecycle Information Management
- If this cost is less than the cost of creating (or recreating) the same information then Information Quality Management will contribute to cost savings



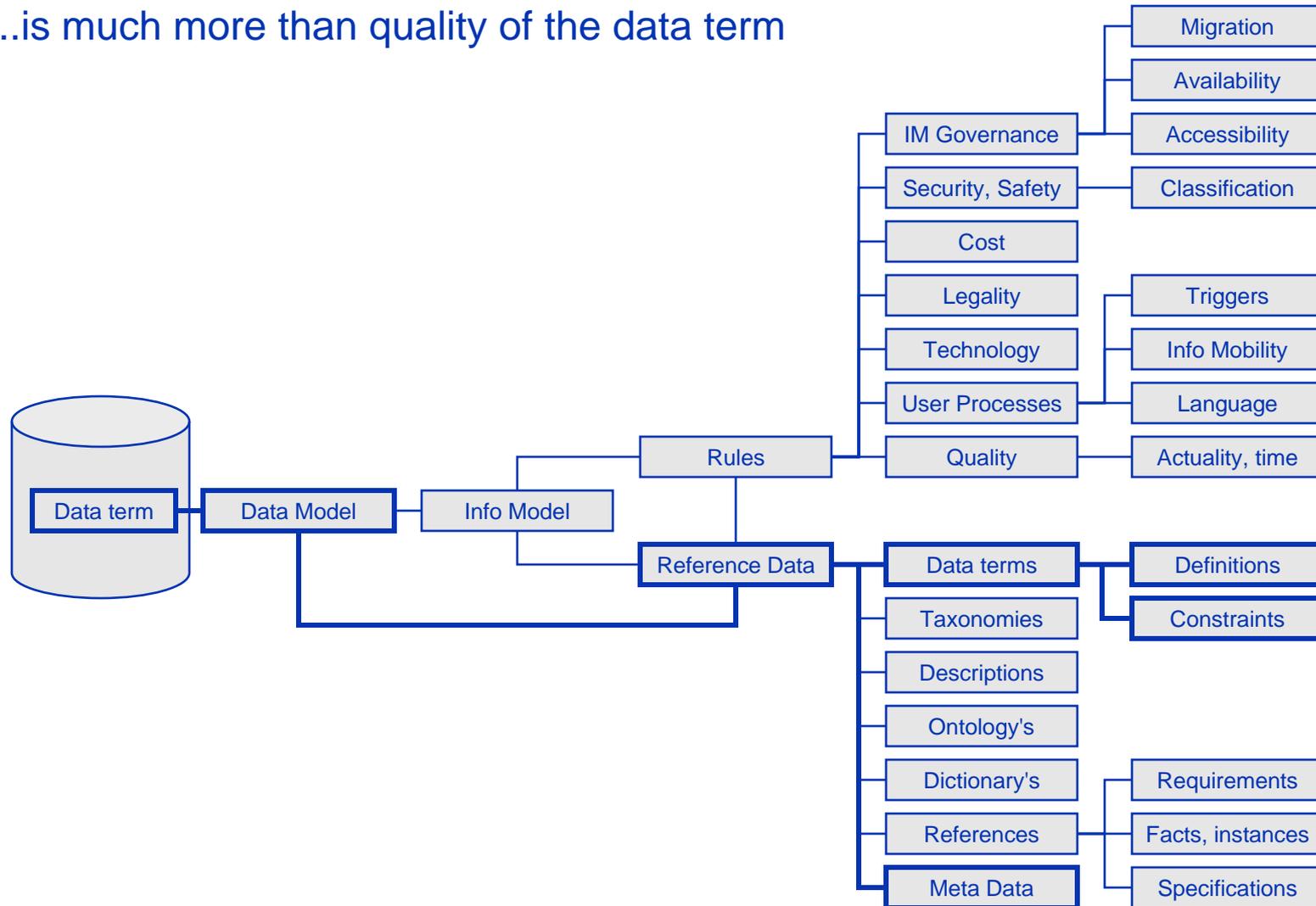
LL - Information, value or no value..?

- Information resources are different from other resources, since they tend to become more valuable the more they are shared and used.
 - Cash-flow analysis
 - Cost analysis to create, disaster analysis to re-create
 - Price- and Market analysis
- In principle, information resources can be used an unlimited number of times, by an unlimited number of users, without losing its value
- But if they are not managed and maintained (poor quality), information resources quickly lose their value ...



LL - Information Quality..

..is much more than quality of the data term



Summary

- DNV is now focusing on the management of information resources/assets
- We believe that a well managed and quality assured information resource can bring significant value to the enterprise
- We encourage other companies and organizations to join us in exploring this evolving market

