Data as an Asset: Balancing the Data Ecosystem

ABSTRACT

Abstract Not Available

BIOGRAPHY

Tonie Leatherberry
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Deloitte Consulting LLP

Tonie Leatherberry is a practice leader in Consumer Business and Information Management with deep experience in Enterprise Data Management and large scale ERP implementations. In addition, she focuses on Information Strategy with an emphasis on enterprise governance, and risk. She assists clients in building compliance and regulatory capabilities within Information Technology..

The professional accolades Tonie has received demonstrate her accomplishments. In May 2006, she graced the cover of Consulting Magazine, by being named one of the profession's top 25 consultants. In August 2007, she was nominated for the 2008 Computerworld Magazine Premier 100 IT Leader award. Tonie was recognized as a Top 100 under 50 Leader by Diversity MBA Magazine in 2008. Most recently, she has been named one of the 2009 "Best 50 Women in Business" in Pennsylvania, and was also selected by Profiles in Diversity Journal for its 8th Annual WomenWorthWatching® issue.

Rena Mears
Partner
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Rena Mears is a partner in Deloitte & Touche LLP's Audit & Enterprise Risk Services practice, and serves as the Global and U.S. Privacy and Data Protection leader. She has more than twenty-five years experience in the areas of risk management, privacy, data leakage protection ("DLP") and security. Rena has led major privacy, data protection and security projects for companies focusing on the design and implementation of enterprise programs and technology solutions, with engagements typically involving data strategy and policy development, inventory mapping, current state assessments, remediation roadmaps. Rena regularly presents at conferences, speaking on subjects such as Data Strategy and Risk, and has authored articles on privacy, security risks and technologies and is the coauthor of the annual Enterprise@Risk Survey. Member: AICPA Privacy Task Force and Information Technology Committee; Certifications: CISSP, CISA, CPA, CITP; BA, University of Albuquerque; MBA, Auburn University

Deloitte.

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MIT IQIS
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Speaker credentials

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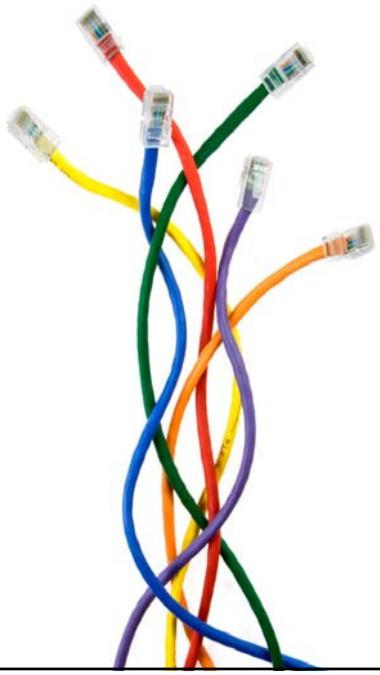
Fundamental concepts



Asset evolution

Neolithic to Information

Neo
8000 BC
- Tangible
- Manually intensive
- High touch — low return
- Localized
- Physical/work is centralized
- Individualized (point to point)

Industrial age
early 18th century
- Shifts to intangible
- Automated/repetitive
- Low touch — high return
- Shifts to globalized
- Shifts to modularized
- Shifts to groups/teams

Information age
late 20th century
- Intangible
- Iterative/self perpetual
- High touch — high return
- Shifts to globalized
- Shifts to atomic
- Shifts to individualized many to many

How do we think of data today?

The global information age brings a paradigm shift in what drives business value.

Pre-information age — **We think of data only as a "tool" used to support the creation of strategy and to support business transactions.**

Global information age — **In the global information age data is the primary asset to manage.**

"Top-performing companies were 15 times more likely to apply analytics to strategic decisions than their underperforming peers…IBM's analysis also discovered having what they termed superior data governance -- assuring that data definitions were clear, relevant and accepted -- is critical the success for top performers. By a factor of three to one, the study found that top performers were much more sophisticated in their approach to governing organizational information relative to lower performing companies (42 percent versus 14 percent)."

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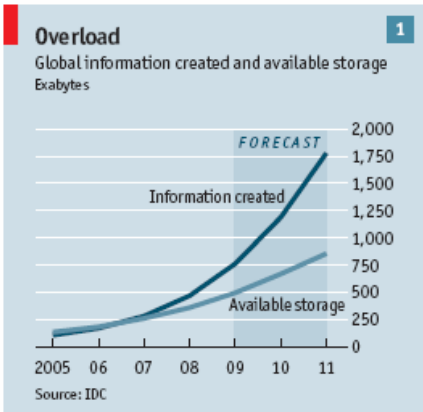
Proliferation of data

Data is proliferating at a rapid and ever-increasing pace.



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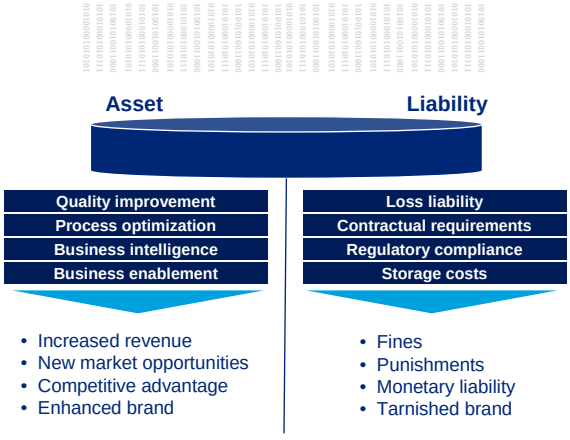
"WalMart is a good example. The retailer operates 8,400 stores worldwide, has more than 2m employees and handles over 200m customer transactions each week. Its revenue last year, around $400 billion, is more than the GDP of many entire countries. The sheer scale of the data is a challenge, admits Rollin Ford, the CIO at WalMart's headquarters in Bentonville, Arkansas. We keep a healthy paranoia."

Data, data everywhere: *A special report on managing information, © The Economist Newspaper Limited, London*

Data Valuation

Viewing data across organization is the first step. The next step is realizing that data is both an enterprise asset and enterprise liability.

Organizations collect, produce, and process an enormous amount of data, which can be either an asset or a liability



How should data be treated?

Data can be managed like any other enterprise asset. It can impact the return on asset (ROA) ratio.

$$\text{Return on assets (ROA)} = \frac{\text{Earnings before interest and taxes}}{\text{Average assets}}$$

Data can actually be **beneficial** (it increases) the ROA ratio in corporate financial reports. Data that supports the business and revenue stream is used to generate and grow earnings. However, data itself is not included in the calculation for average assets.

Corporate balance sheet (assets)	
Current assets	Cash and cash equivalents Short-term investments Accounts receivable, net Inventories Other current assets --- Total current assets
Non-current assets	Property and equipment, net Goodwill Other non-current assets --- Total assets

? **Where is the value for data assets captured on the balance sheet?**

Analyzing data assets

Data can be managed like any other enterprise asset, subject to the same net business value calculations balancing value, risk, and total cost of ownership.

Net Business Value (+ / -)	=	Data Value	-	Data Risk	-	Total Cost of Ownership (TCO)
Although it is not possible to calculate an exact value for the net business value, we can calculate whether net business value is positive or negative for any given type of data.		**Internal PV to each department** **+ Discounted FV to each department** **+ External PV[1]** **+ Discounted External FV[1]** **= Data Business Value**		**Risk of fines due to noncompliance[2]** **+ Risk of fines due to loss or misuse** **+ Risk of tarnished brand due to loss or misuse of PII** **= Data Risk**		**Storage systems hardware & software cost** **+ Operational and personnel costs to administer acquisition, storage, use, and disposal** **= TCO**

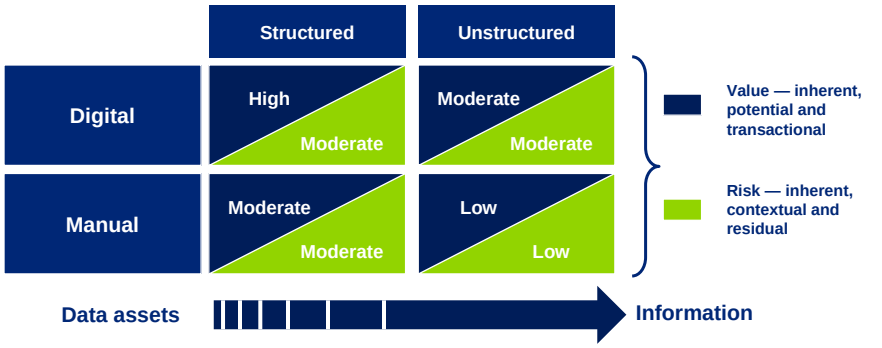
[1] If licensed to external organizations

[2] With domestic and international laws and regulations

We define data value as the total life-cycle benefits net of related costs, adjusted for risk and (in the case of financial value) for the time value of money

Enterprise data — Understanding the challenges

Different types of data have different risk/value profiles.



"Traditionally, data integration focused on structured data formats stored in databases, but more recently, the need to integrate with unstructured content and semistructured data formats has grown. Enterprises want to integrate unstructured content such as images, videos, binaries, and Word documents with semistructured data such as XML and emails, which further exacerbates the complexity of data integration, challenging traditional technologies and best practices.

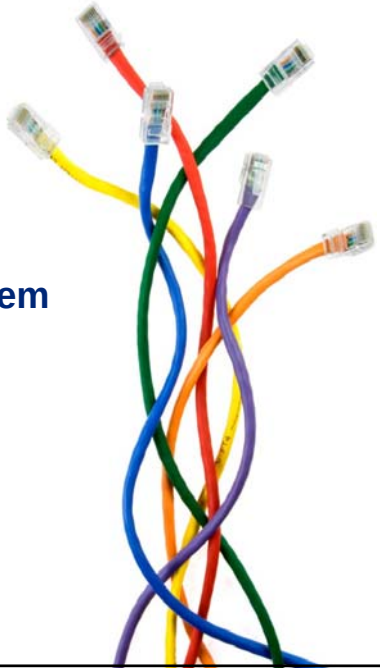
"Forrester TechRadar™: Enterprise Data Integration, Q1 2010," Forrester Research, Inc., February, 2010

Key strategic questions…

? **If the net business value of the data is negative, should the data be destroyed? Or should investments be made to increase its value?**

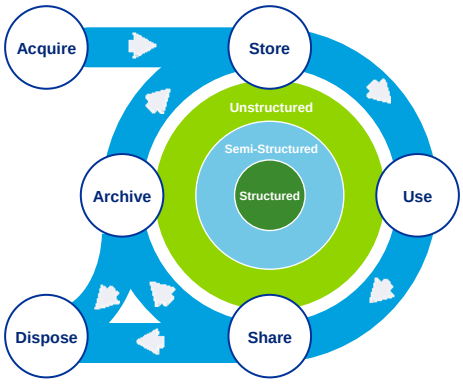
? **If the net business value of the data is positive, what needs to be done to maintain its benefit? What needs to be done to improve its benefit?**

The data asset ecosystem



Data lifecycle

Data Management addresses how an organization manages its data. It is a comprehensive set of capabilities that properly manages the data lifecycle requirements of an enterprise — via the development and execution of **policies**, **procedures, architectures**, and use of **technologies**.



"…a data-centric security approach… extends well beyond encryption, covering classification, access controls, use monitoring, retention, and destruction."

"Market Overview: IT Security In 2009," Forrester Research, Inc., April, 2009

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Data needs to be managed across an organization





Human resources | **Manufacturing** | **Sales** | **Corporate** | **Legal**

Customer data
- Credit card data
- Personally identifiable data
- Buyer patterns

Operational data
- Manufacturing data
- QA data

Economic
- Economic forecasts
- Demand forecasts
- Geopolitical trends

Patents and trade secrets
- Product feature and design

Employee data
- Personally identifiable data
- Compensation

Product line
- Upcoming products

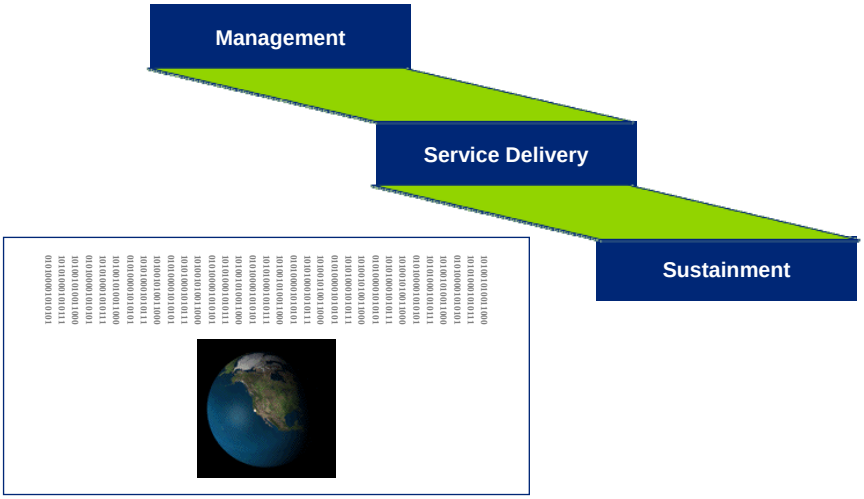
Financial data
- Budgets
- Financial reports

Research and development
- Internal research and results

Product line
- Competitive intelligence
- Consumer preference

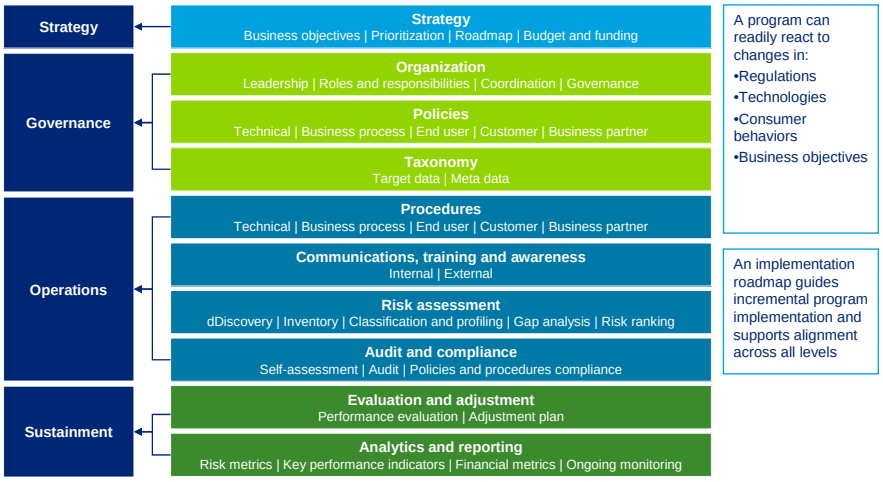
The data asset ecosystem

There are 3 major components to the ecosystem.



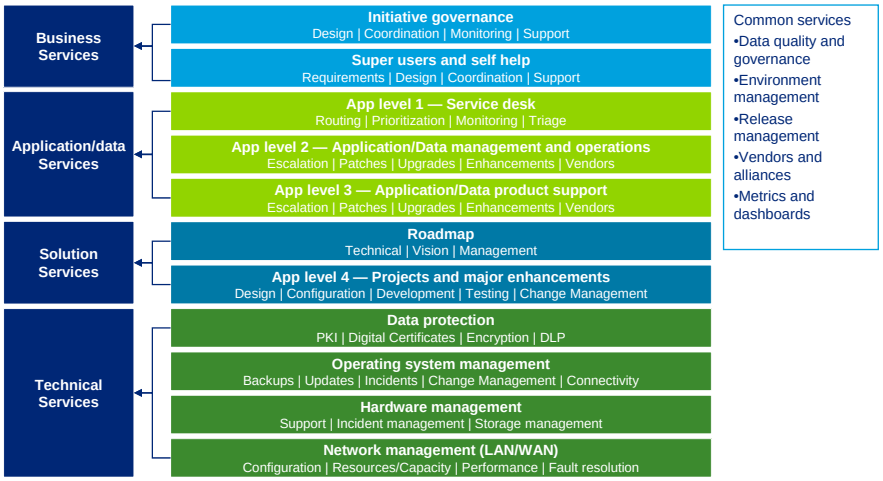
Management

A program is an ongoing multi-faceted initiative that provides a comprehensive data management framework.



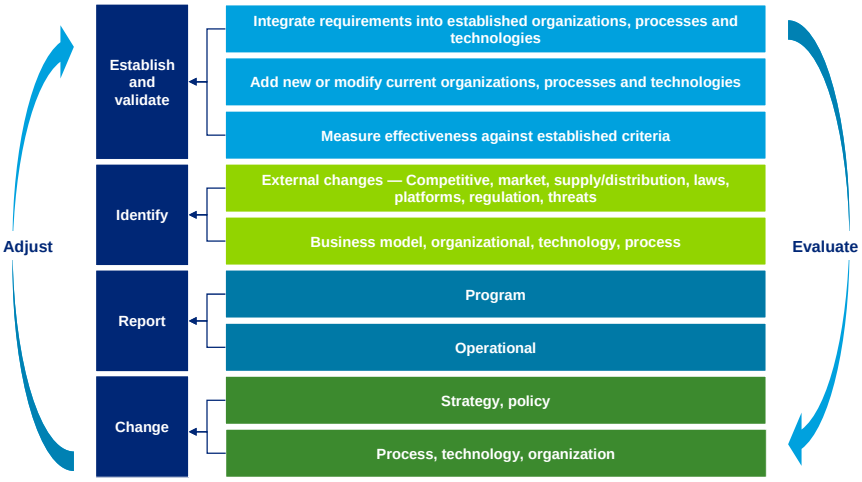
Service Delivery

A service-oriented model organizes data management in alignment with the overall program.



Sustainment

Continuous improvement of the program and associated operations over time is needed.



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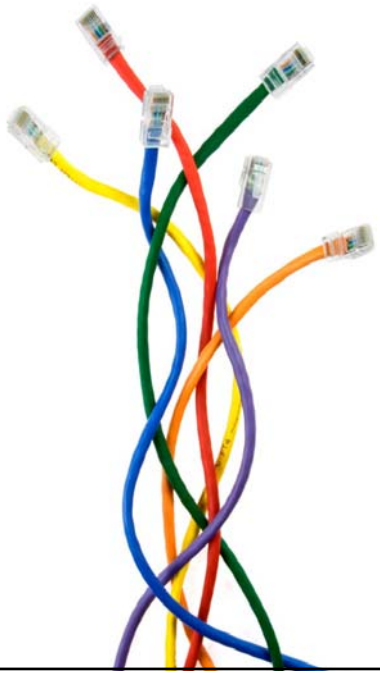
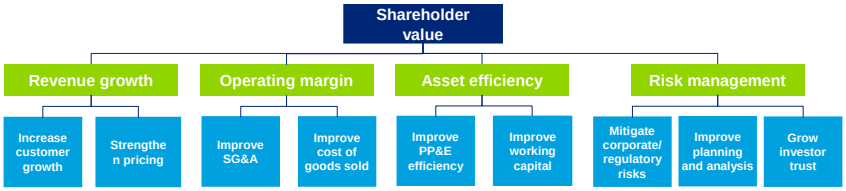
Models for success



Leveraging data assets to maximize shareholder value

Data assets can contribute to shareholder value maximization across several key dimensions.



"Data are becoming the new raw material of business: an economic input almost on a par with capital and labour. Every day I wake up and ask, 'how can I flow data better, manage data better, analyse data better? says Rollin Ford, the CIO of WalMart."

Data, data everywhere: *A special report on managing information*, © The Economist Newspaper Limited, London

"This shift from information scarcity to surfeit has broad effects. What we are seeing is the ability to have economies form around the data and that to me is the big change at a societal and even macroeconomic level, says Craig Mundie, head of research and strategy at Microsoft."

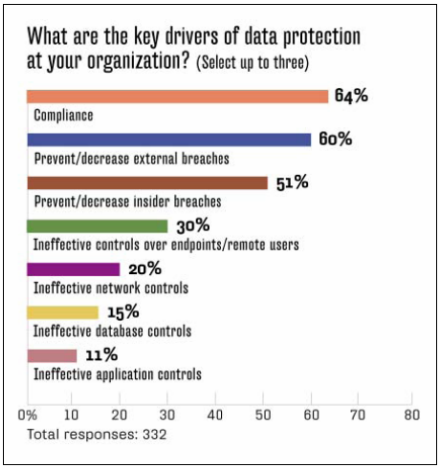
Data, data everywhere: *A special report on managing information*, © The Economist Newspaper Limited, London

Data protection

Consistent approach and associated methodology, framework and tools to accelerate data risk analysis, data mapping, and inventory.

"For compliance-minded enterprises, data protection is a top issue. After all, standards such as PCI are all about protecting data. Security breach laws also often provide exemptions for encrypted data. Despite flat security budgets, 23 percent of survey respondents say they expect to spend more on data protection—including encryption, data loss prevention and database access controls.."

TechTarget, Information Security Magazine – February 2010



TechTarget, Information Security Magazine – February 2010

Enterprise Data Management

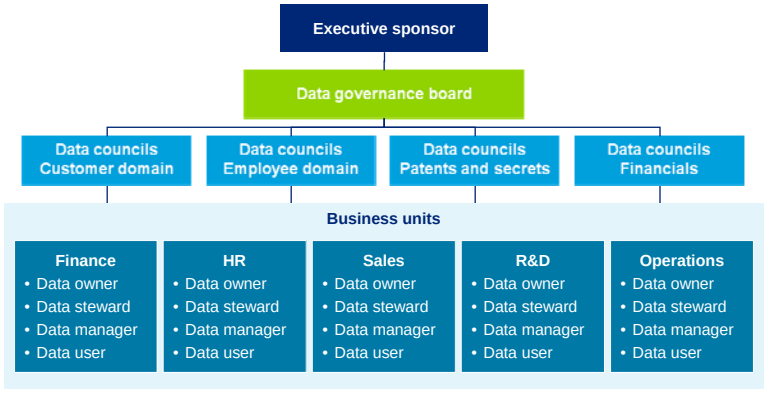
Addressing data management in an integrated, disciplined fashion can help maximize business value of information within and external to the enterprise.

Implementing a single, real-time, integrated version of data supports business intelligence than can help enterprises:

- Expand markets
- Better understand customers
- Cross-sell/up-sell more effectively
- Achieve business agility required for M&A, globalization, and integration of supply-chain and collaboration with partners

Data governance

Definition and management of data creation, usage, quality, ownership, distribution, auditing, reporting, and architecture.

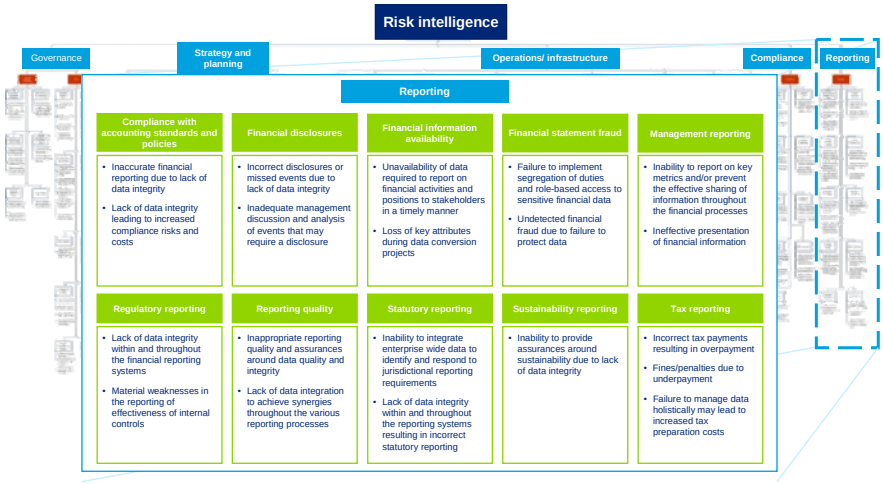


"It's important to design data governance programs specifically for an organization's culture and current processes. There's no "cookie-cutter" template."
Trends Shaping Data Management, Hannah Smalltree, SearchDataManagement.com

Data risk intelligence map

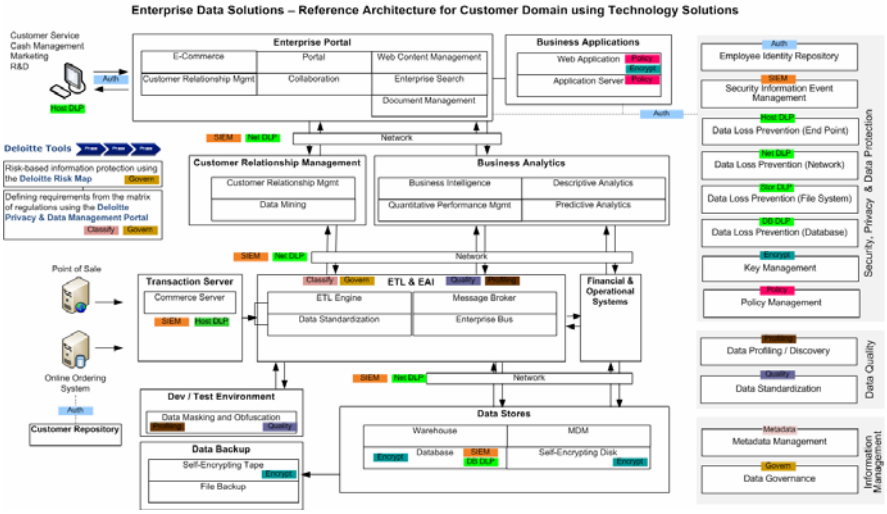
Provides a unique view of the pervasive, evolving, and interconnected nature of risk.

Executives and managers will find the data risk intelligence map useful in identifying risks that apply to their organizations.



Reference architecture

The technology suite offers a common set of services that are consistently applied across the IT systems landscape.



Case Study #1 — Large biotechnology company

Background

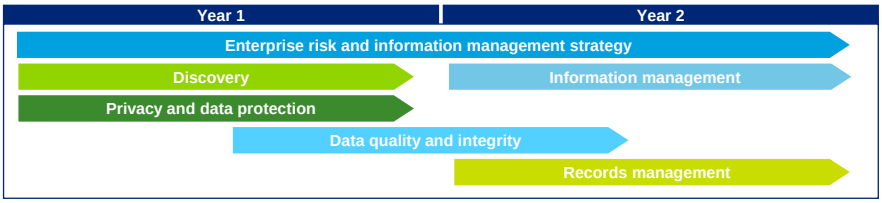
The company collects, creates, stores and manages large volumes of information assets, including personal information and intellectual property, which are critical to the company's key operational capabilities.

Business problem

Ineffective protection of these information assets can lead to non-compliance with legal and regulatory requirements and loss of asset value, impacting the overall financials of the company. The fundamental nature of information as an asset makes it difficult to protect. The information is exists in large volumes throughout the organization, and is constantly increasing in volume and distribution to extended partners and affiliates in many forms. Moreover the characteristics of information change throughout its lifecycle making it difficult to discover.

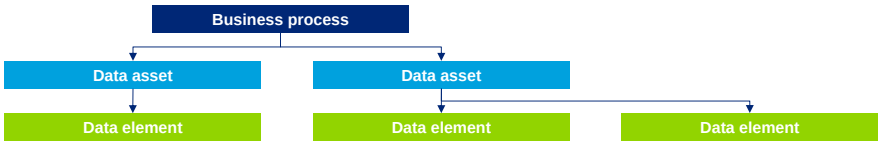
Solution objectives

- Accommodate growing amount of data
- Be responsive to regulatory and legal requests
- Estimate, manage, and mitigate financials risk
- Maximize data value
- Ensure the right type and amount of data is collected
- Establish ongoing data program management
- Implement enabling technologies
  - Information management
  - Enterprise search
  - Data leakage protection

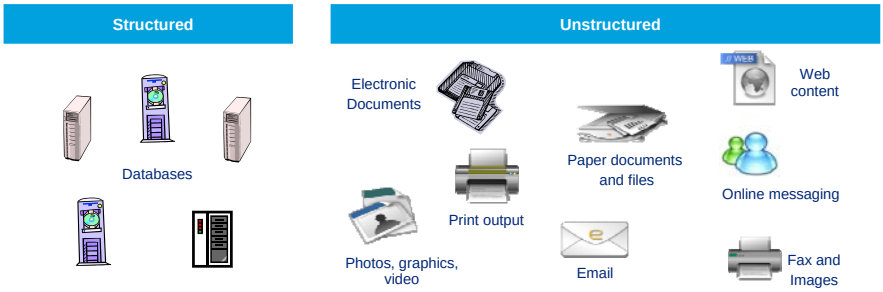


Business process focus

Business processes are supported by one or more information assets, which in turn may be supported by multiple distinct data elements. Data is a raw material, but it is rarely considered, valued or protected accordingly.



Information asset: applications, infrastructure, and facilities where information is created, received, and maintained by an organization or person, in pursuance of legal obligations or in the transaction of business



Case Study #2 — Leading bio-tech company

Background

The company provides hospitals and physicians with advanced, highly specialized diagnostic testing. The company's vision is to use the in-depth results from its cutting-edge tests to fuel development of new diagnostic services, and to position itself as a key player in emerging areas such as Health Information Exchange (HIE) and personalized medicine.

Business problem

After growing rapidly through a series of acquisitions, it found itself with a collection of independent businesses each operating with a different set of systems and processes. This siloed approach was costly and inefficient. Even worse, it prevented the company from using its test results to drive research and development innovation, which was a strategic necessity. Also, the company's laboratory operations had become a bottleneck and were struggling to handle peak daily testing volumes. This made it hard to deliver timely and responsive customer service.

Solution objectives

- Analyze, streamline, and standardize business processes and operations.
- Implement a variety of new systems and IT platforms such as a customer relationship management system, business intelligence tools, a security and identity management platform, and a web portal for ordering lab tests.
- Architect and implement a new technology infrastructure, including WAN upgrades, a new integration platform, and a new data center
- Design a service-oriented architecture and enterprise data model.
- Manage vendor-led system implementations for billing, laboratory operations, document management (including integrated faxing), and system development tools.

Key success criteria

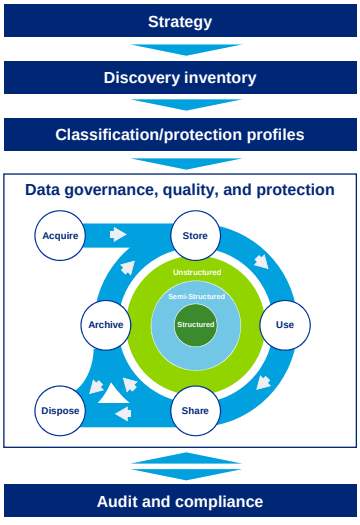
Cornerstone of a comprehensive and effective approach

Keep in mind:

- Data is an asset
- Data requires a program, not a bunch of projects

Follow a logical approach:

- Form a strategy
- Discover and inventory data
- Classify the data
- Establish an ongoing program to implement data governance, quality, and protection throughout the data lifecycle
- Audit and monitor the effectiveness of the program



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