



Problem – Information Overload
Purpose of EBIM
Philosophy for EBIM
Programs within EBIM



“The ability to capture and harness corporate knowledge has become critical for firms as they seek to adapt to change”

“Yet as this research shows all too plainly, many firms have a dismal track record when it comes to capturing and exploiting many categories of important information.”

Economist Intelligence Unit, “Know how: Managing knowledge for competitive advantage”, http://graphics.eiu.com/files/ad_pdfs/Tata_KnowHow_WP.pdf



“What CIOs may be missing is that CEOs want more context about the reports they already have—context that explains what the data mean... But the creation of meaning is an active, not a passive, process. It is created by exploring context-specific linkages inherent in enterprise data.”

“[The Enterprise’s] future business agility will depend on their ability to focus on techniques that optimize sharing rather than maintaining silos. That’s why a standards based approach makes sense”

Technology Forecast, PriceWaterhouseCoopers, <http://www.pwc.com/us/en/technology-forecast/index.jhtml>

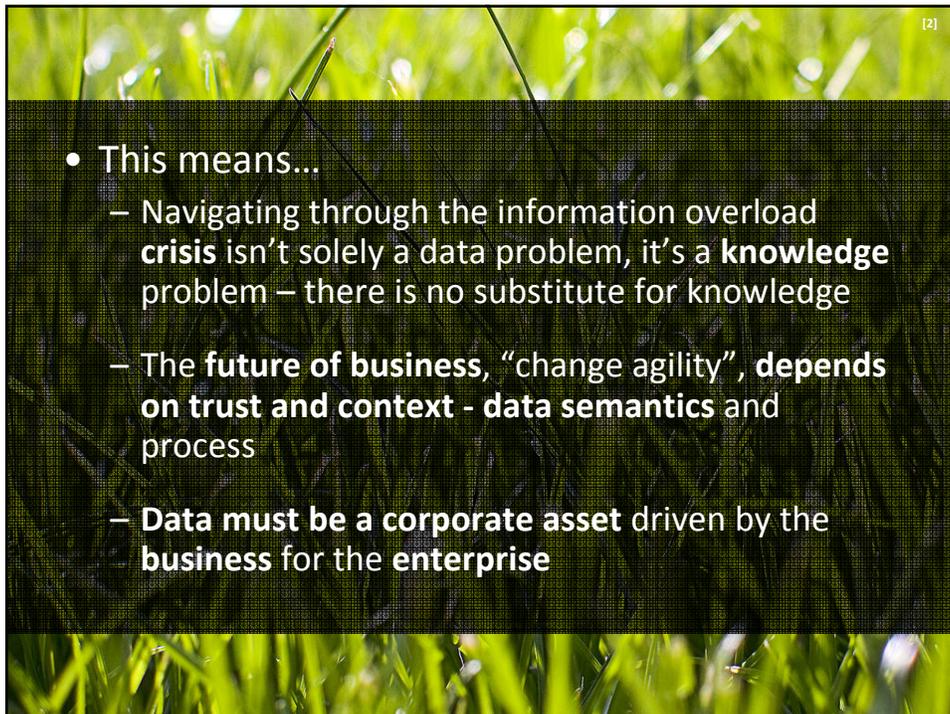
Problem – Information Overload

- What does this mean

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[2]

- This means...
 - Navigating through the information overload **crisis** isn't solely a data problem, it's a **knowledge** problem – there is no substitute for knowledge
 - The **future of business**, “change agility”, **depends on trust and context - data semantics** and process
 - **Data must be a corporate asset** driven by the **business for the enterprise**

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Public Sector Initiatives

Adaptability

Attention to the Business Case

Openness to private sector practices and partners

Commitment to Transparency

Citizen-focused employees and processes

“Continually challenged by modest budgets and the accelerating pace of change, the **public sector will turn to technology** to foster collaboration, satisfy citizens’ demands for improved service delivery and meet **growing expectations of transparency—80% of executives expect technology to be critical** to their organization’s ability to achieve its mission in 2010.”

“Unlike 1945, people don’t put up with the basics. In a **consumer age, they expect quality, choice and standards.**”

“Over the course of the next five years, **stressing the information in IT will be the hallmark of the successful public-sector organization.**”

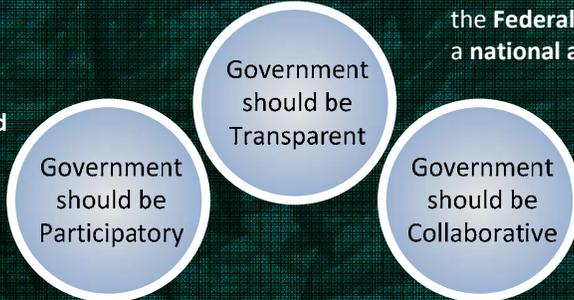
The Economist, Business 2010: The Public Sector, Embracing the challenge of change, http://graphics.eiu.com/files/ad_pdfs/Business_2010_Public_sector_WP.pdf



[3]

US Government Initiatives

“Knowledge is widely dispersed in society, and public officials benefit from having access to that dispersed knowledge.”



“Information maintained by the Federal Government is a national asset.”

“Collaboration actively engages Americans in the work of their Government. Executive departments and agencies should use innovative tools, methods, and systems to cooperate [with all].”

Harvard Business Review – Data.gov Case Study, http://www.data.gov/documents/hbs_datagov_case_study.pdf

White House Memorandum for the Heads of Executive Departments and Agencies, *Transparency and Open Government*, http://www.whitehouse.gov/the_press_office/TransparencyandOpenGovernment/



[3]

US Government Initiatives

“In all parts of the world, we see the promise of innovation to make government more open and accountable... [W]e should bring specific commitments to promote transparency; to fight corruption; to energize civic engagement; to leverage new technologies so that we strengthen the foundations of freedom in our own countries, while living up to the ideals that can light the world.” -President Barack Obama, September 23, 2010



- Open Gov to Increase Public Integrity
- Open Gov to Manage Public Resources More Effectively
- Open Gov to Improve Public Services

“Because the American people deserve a 21st Century government, this National Plan embraces the role of technology and innovation in tackling the key challenges that the U.S. and other governments face around the world.”

White House, The Open Government Partnership, *National Action Plan for the United States of America*, http://www.whitehouse.gov/sites/default/files/us_national_action_plan_final_2.pdf





[3]

FMS Initiatives

- **Business Architecture Office**
 - **Enterprise Business Information Management**
 - To structurally manage **data as a corporate asset** to assist **decision making and government reporting**
 - Implement **international standards** for metadata **best practices** and **inculcate a standards discipline**
 - **Socialize effort** and work products with federal agencies, governance groups, and international community
 - Support **FMS, Treasury, Federal Government, and Public Sector Initiatives**

Creativity + Communication + Collaboration



[3]

FMS Initiatives

- **FMS Business support for EBIM**
 - **Authority**
 - **Treasury Financial Manual Bulletin No. 2011-05** “The [EBIM Data Registry serves as the authoritative source for] data elements that FMS and the Office of Management and Budget require for central reporting, transactional processing, and budget and proprietary reporting, including balances.” <http://www.fms.treas.gov/tfm/vol1/11-05.pdf>
 - **Transparency**
 - Rely on international standards, industry standards, and open standards
 - Support Open Gov, Data.gov, Usaspending.gov, Recovery.gov
 - **Alignment**
 - Work with Federal Agencies, industry partners, financial institutions, and standards organizations

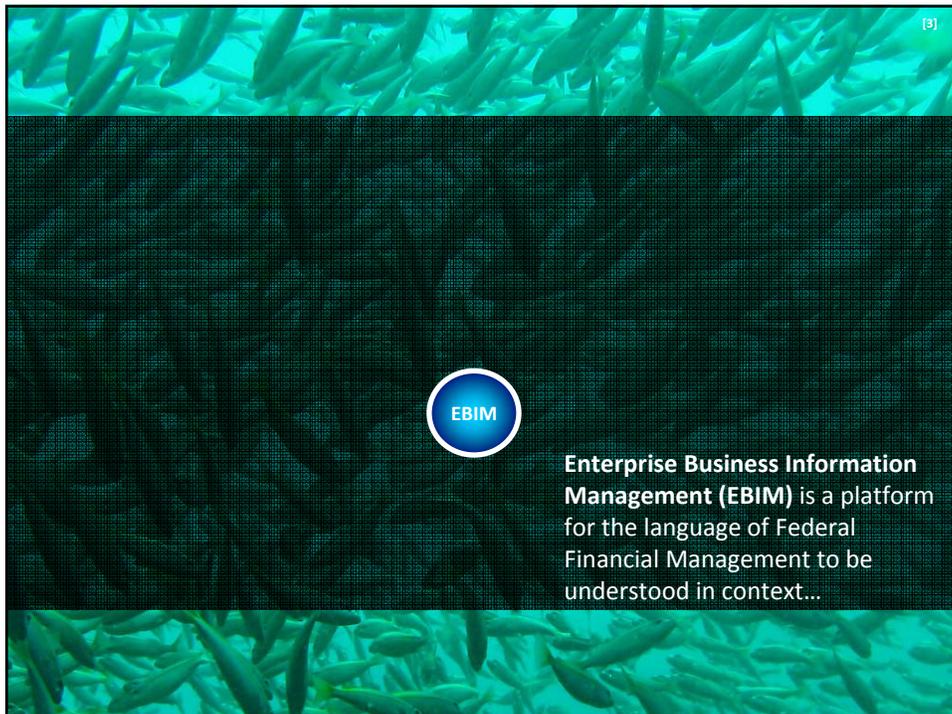
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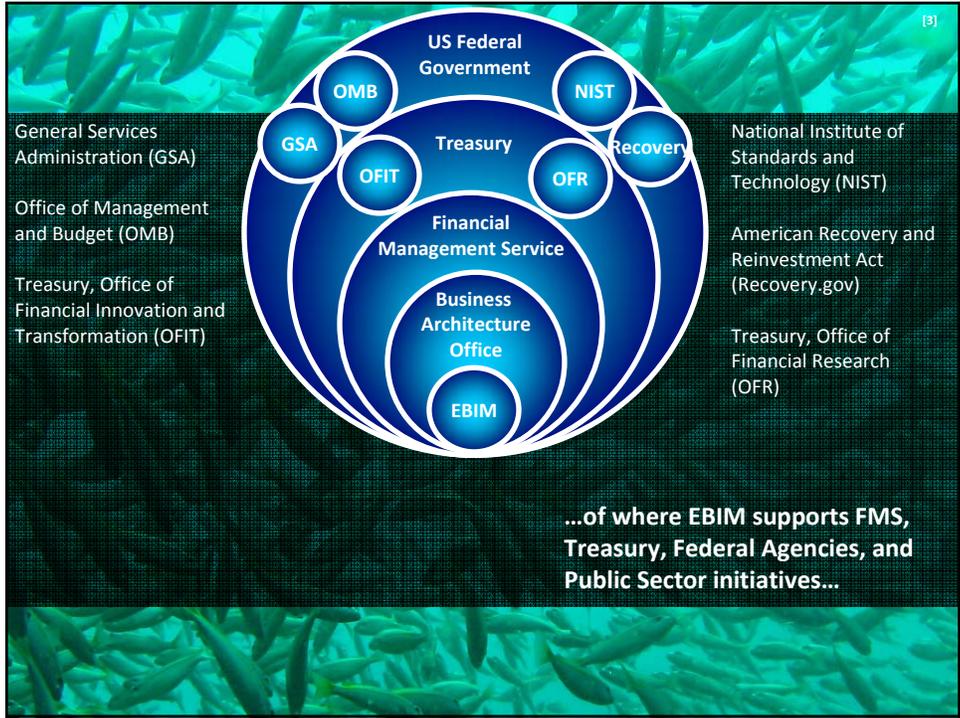
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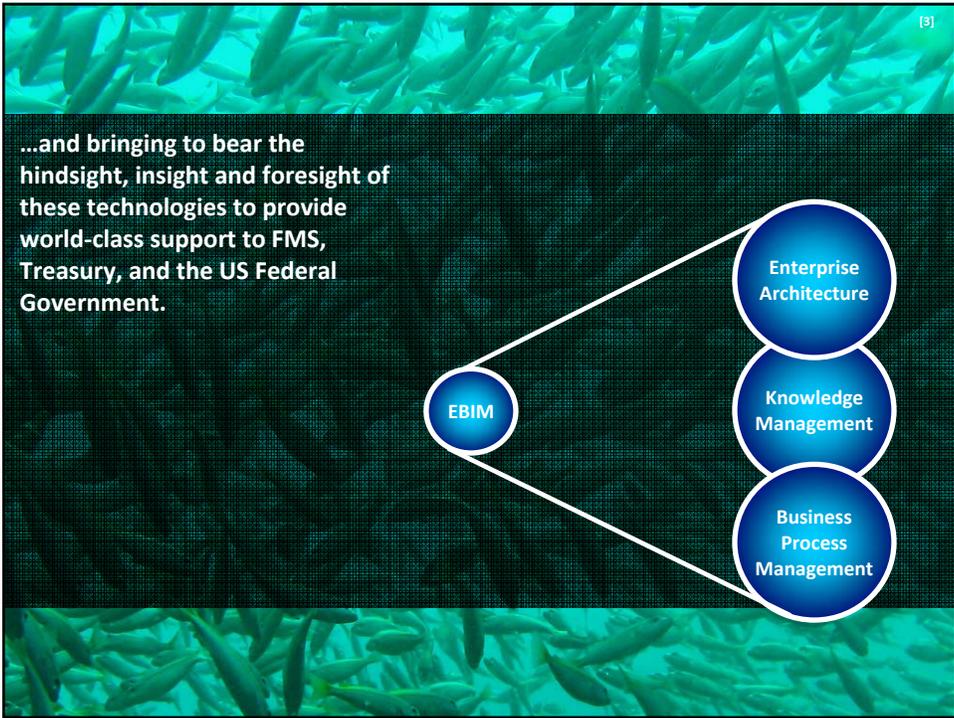
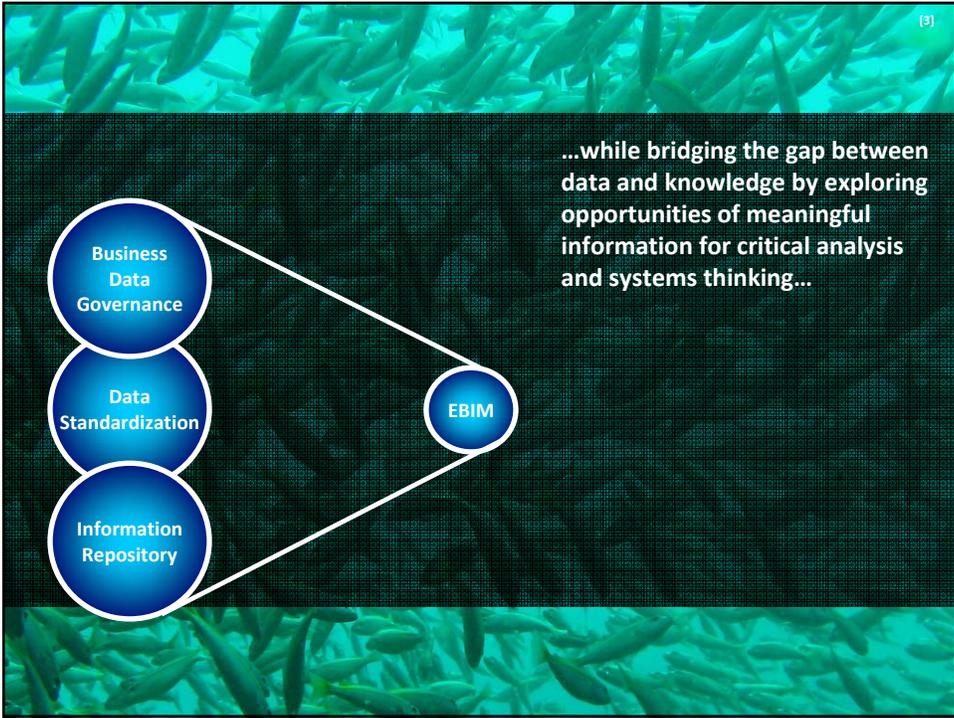


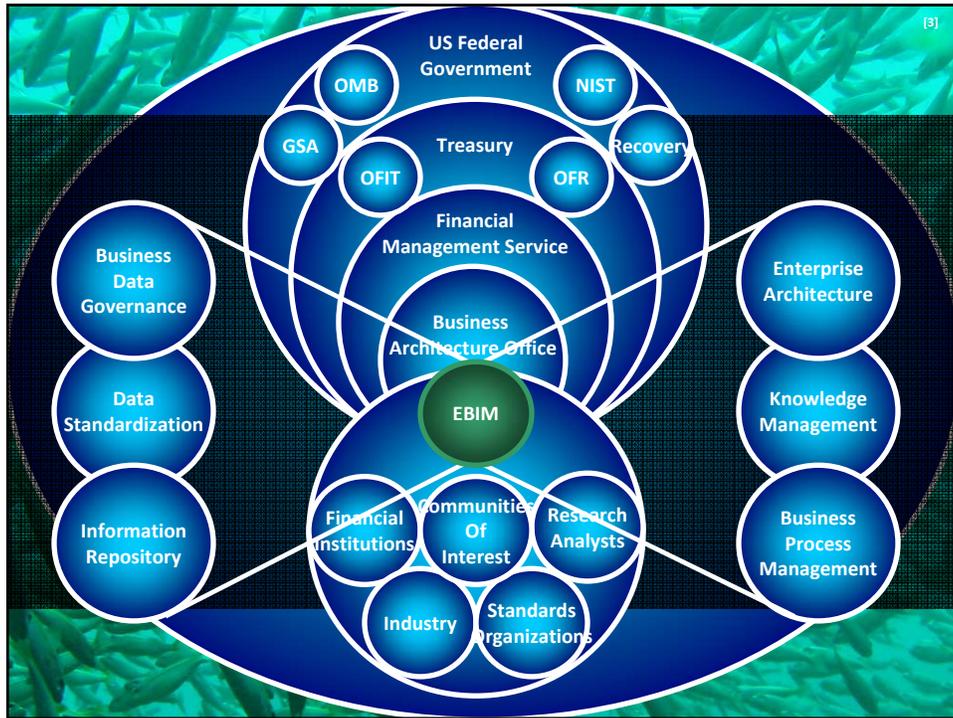
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EBIM

Enterprise Business Information Management (EBIM) is a platform for the language of Federal Financial Management to be understood in context...





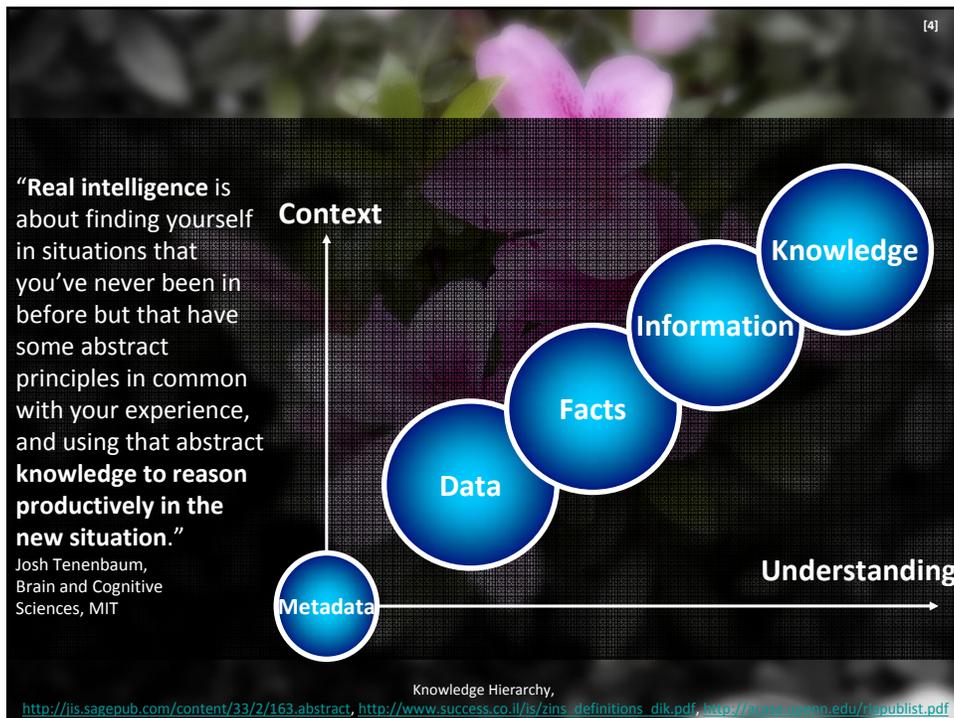
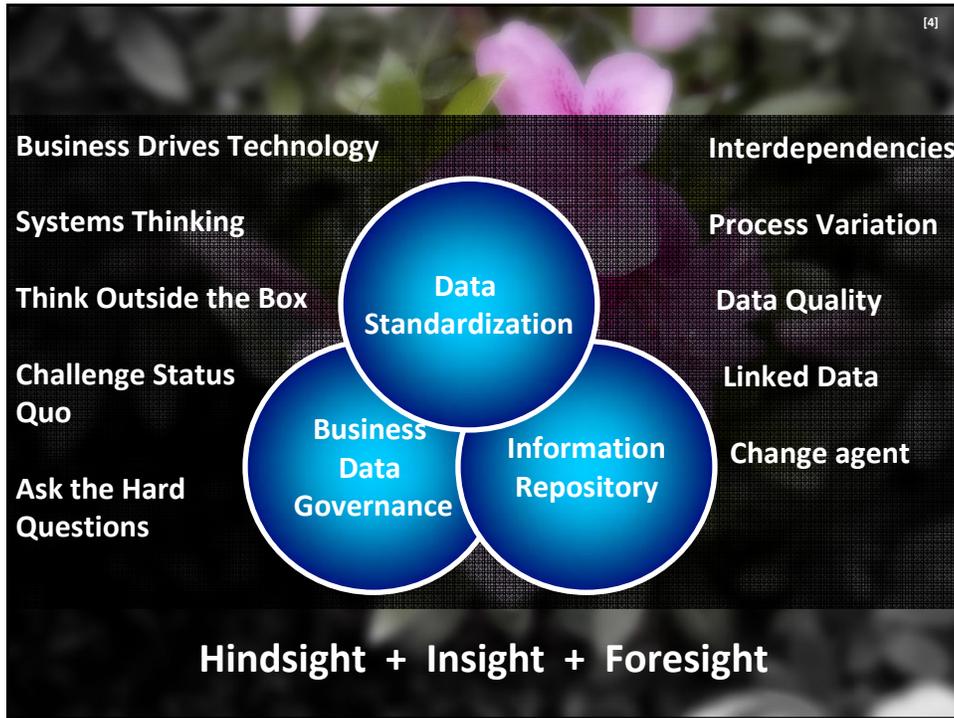


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[4]

Knowledge of a System
Holistic view of organization

Knowledge of Variation
Metrics and Performance Data

System of Profound Knowledge

Knowledge of Psychology
Understand motivation

Theory of Knowledge
Systematically innovate

"We have learned to live in a **world of mistakes and defective products** as if they were necessary to life.

It is time to adopt a new philosophy."

-W. Edwards Deming

The Deming System of Profound Knowledge,
<http://deming.org/index.cfm?content=66>, <http://www.dln.org.uk/methods.html>
<http://leweb2.loc.gov/service/mss/partnrmss/partnrmss/1997/mc992017.pdf>

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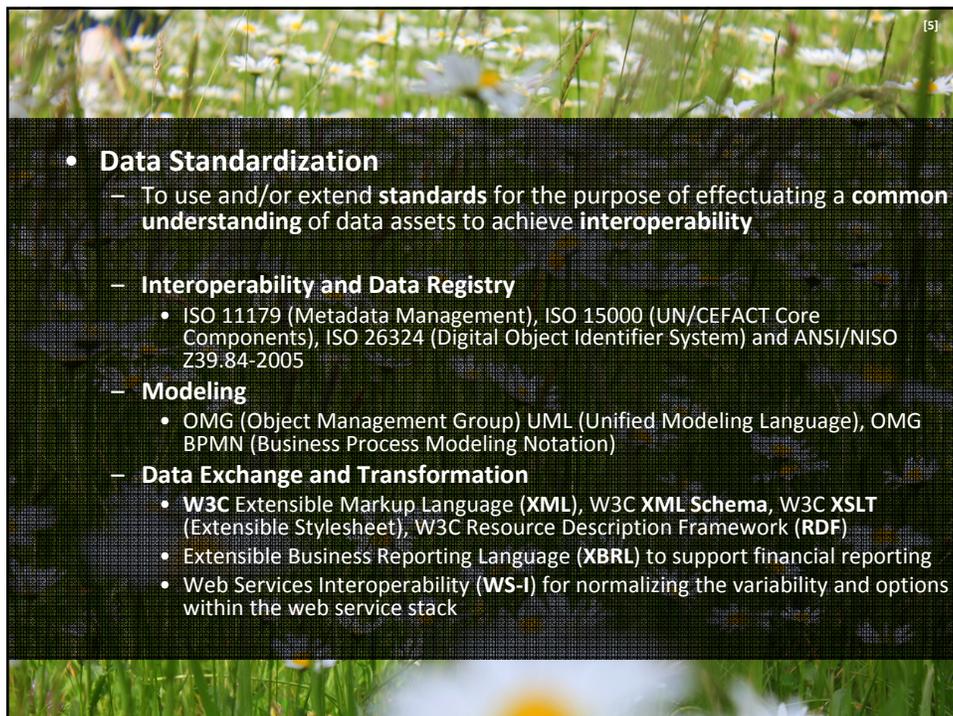
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[5]

- **Business Data Governance**
 - Treasury/FMS implements multi-level governance groups for the purpose of **assigning accountability and transparency** for strategic and tactical activities **collaboratively**
 - To provide the environment and structure for **influence** to happen in an open forum (relationships-and-reason over command-and-control)
 - **Data Stewards:**
 - Each FMS Business Line has a **Business Architect** and is accountable for the management of the business line data resources
 - Roles and Responsibilities document grounded on governance best practices and discipline (ISO, DoD Net-Centric, Data Governance Institute)
 - All data from Data Stewards stored in FMS Metadata Repository
 - Current Project – aligning the relationships and associations between Business Process functions, major applications, messaging, and data elements (**Enterprise Architecture and Business Process Management**)



[5]

- **Data Standardization**
 - To use and/or extend **standards** for the purpose of effectuating a **common understanding** of data assets to achieve **interoperability**
 - **Interoperability and Data Registry**
 - ISO 11179 (Metadata Management), ISO 15000 (UN/CEFACT Core Components), ISO 26324 (Digital Object Identifier System) and ANSI/NISO Z39.84-2005
 - **Modeling**
 - OMG (Object Management Group) UML (Unified Modeling Language), OMG BPMN (Business Process Modeling Notation)
 - **Data Exchange and Transformation**
 - **W3C** Extensible Markup Language (**XML**), **W3C XML Schema**, **W3C XSLT** (Extensible Stylesheet), **W3C Resource Description Framework (RDF)**
 - Extensible Business Reporting Language (**XBRL**) to support financial reporting
 - Web Services Interoperability (**WS-I**) for normalizing the variability and options within the web service stack

- **Information Repository - Data as a Platform**

- To provide a central repository to harvest meaningful information by exploring, mining, extracting intelligence from business lines and other sources
 - Supporting the Financial Information Repository (FIR), Collections Information Repository (CIR), Payments Information Repository (PIR), future-Intragovernmental Repository, and E-Invoice Repository (EIPP)
- **Information Integration**
 - **Data Virtualization** - Abstract, transform, federate, and deliver data from disparate sources
 - **Data Models** – Standardize content creation based on business lines data models and enterprise data models through transformation
- **Data Quality**
 - **Data Profiling** – Examine data in data sources and collecting statistics and information from data
 - **Data Cleansing** – Process of detecting and correcting data
 - **Text Analytics** – Lexical analysis to decipher word frequency pattern recognition, information extraction, and link and association analysis
- **Knowledge Discovery**
 - **Data Mining** – Extract patterns by combining statistics and artificial intelligence
- **Better Decisions**
 - **Business Intelligence** – Extract and analyze data for reporting, further analysis, benchmarking, to support better decision-making
- **Visualization**
 - Produce meaningful diagrams, charts, graphics, mindmaps, and other media to visually communicate meaningful information

Review

[6]

- **Problem – Synthesizing Meaningful Information in an Ocean of Data**
 - Economist/Gartner/Forrester/PwC research
- **Purpose for EBIM - Strategic Relevance**
 - Global Public Sector Initiatives for 2020
 - US Federal Government – Executive Order
 - US Federal Government – National Action Plan
 - US Treasury 12 Initiatives for Transforming Federal Financial Management
 - FMS Strategy and Initiatives – Internal Alignment
- **Philosophy of EBIM - Reason and Methodology**
 - Performance Management and Metrics
 - From Metadata Management to Management of Knowledge to Business Intelligence
 - Systems Thinking - Web of Interdependencies
- **Programs within EBIM - Tactical Execution**
 - Business Data Governance - Data Stewards
 - Data Standardization - Financial Metadata Repository
 - Information Repository - Financial Information Repository

[6]

- EBIM is the **platform** for the **collection and evolution of meaningful information** for FMS
- EBIM is the **framework** in which FMS will **explore new value streams by linking operational data, tactical objectives, and strategic goals**

[6]

- **Good data leads to good information leads to good knowledge leads to good decision-making**
 - In other words, our ability to make meaningful decisions based on meaningful intelligence is fundamentally based on a good understanding of our data

A diagram illustrating the flow from data to decision-making. It features two blue circular nodes with white outlines. The left node is labeled "Data" and the right node is labeled "Decision-Making". A white arrow points from the "Data" node to the "Decision-Making" node, indicating a causal relationship.

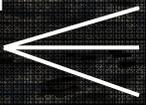
[6]

"The biggest impediment to all-source analysis—to a greater likelihood of connecting the dots—is the human or systemic resistance to sharing information."

The cover of the 9/11 Commission Report. The title "THE 9/11 COMMISSION REPORT" is prominently displayed in blue and red. Below the title, it reads "FINAL REPORT OF THE NATIONAL COMMISSION ON TERRORIST ATTACKS UPON THE UNITED STATES" and features the official seal of the National Commission on Terrorist Attacks Upon the United States.

[6]

We have to start thinking of meaningful information as **connected, dynamic, interdependent, agile, adaptable and flowing**.

This can only happen if we **systematically**  know the **semantics** of our data
know the **business** of our data
know the **value** of our data.

"Success should be judged by results, and **data is a powerful tool to determine results**. We can't ignore facts. **We can't ignore data.**" – US President Obama, 24 July, 2009

[6]

- "We can't solve problems by using the same thinking we used when we created them."
– Albert Einstein
- "It would be a capital mistake to theorize before one has data."
– Sir Arthur Conan Doyle ("Sherlock Holmes")
- More info about EBIM (FMS internal blog):
<http://quickr01.fms.treas.gov/LotusQuickr/enterprisebusinessinformationmanagement/Main.nsf>
- EBIM (external blog):
https://docs.google.com/leaf?id=0B2jitiN0WBSMzRjMzZiNDktM2FIZC00NTYwLWE4NTctOGRIzjBjNTNlZTU2&hl=en_US

- Appendix

- Example of **unstructured data to standardized linked data to meaningful information**

