



“Build to Share”

***Data Perspectives
for
Architecture Plus***

23 February 2011

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Agenda

- ◆ Why is sharing data still hard?
- ◆ What's the changing paradigm?
- ◆ What's the status and impact to government?
- ◆ What are we doing about it?



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Why is sharing data still so hard?

- ◆ We still have the same problems with data we did 30-40 years ago and can be summarized into two basic types:
 - Problems around interoperability: Getting systems to talk to and understand each other.
 - Problems around shareability: Getting to institutionalized ways around discovery and access.
 - We're still having some problems with context. Information sharing means different things to different people.
- ◆ These unsolved problems are compounded by a paradigm shift using new technologies ergo the 25 Point IT Management Reform Plan and a refresh of FEA



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What's the Changing Paradigm?

- ◆ The race is on for a data infrastructure or the web of data (i.e., semantic web, data platform, etc.)
- ◆ The evolving infrastructure means everything captures data about something
- ◆ As the web of data gets 'smarter' about the data, the time consuming hunt for data may reach an end
 - Software agents may enable data that you need to come to you regardless of where you are or what you're doing
 - BUT, we first need to take care of some fundamental steps



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What's the impact to Government?

- ◆ Government faces a fork on the road of revolutionary change:
 - One direction leads to problem solving using current paradigms.
 - The other direction means solving problems using a different paradigm facilitating agility and immediacy in the midst of a complex and accelerating digital age.
- ◆ This new paradigm direction is enabled by:
 - semantic technologies, and
 - other new standards and technologiesto help visibility and consumption of data in both human and machine readable ways on the web. Open Government Data is within this paradigm shift.
- ◆ We need a well managed EA and IT infrastructure to guide modernization for success in a networked digital world



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What's required to facilitate the change?

To improve government data discovery, access, and re-use, we need to at least:

- ◆ Architect a way to unlock data artifacts (e.g. datasets, repositories, registries, dictionaries...) that are hidden in agency silos
 - Data.gov is but a first step in this direction
 - AIC DAS is working on guidance for Open Government Vocabularies
- ◆ Apply standard metadata descriptions
- ◆ Recognize and publish authoritative sources – these sources may become the defacto standard for certain information
- ◆ Apply standard data quality disciplines
- ◆ Capture and ensure the rules for sharing/using the data components



What can AIC DAS do?

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- ◆ DAS cannot solve all the data related problems that plague Federal Government today
- ◆ DAS can determine the contributions that will have the greatest and most far reaching effect on everything else subject to IT management reform
 - The first step begun: Expose datasets in standard formats (e.g., RDF) via Data.gov. DAS provides support.
 - Next step is around vocabularies: Opening up vocabularies that come in a variety of forms (metadata registries, repositories, community specific ontologies, enterprise/logical data models, Excel spreadsheets, etc)



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What AIC DAS will produce (Current Thinking)

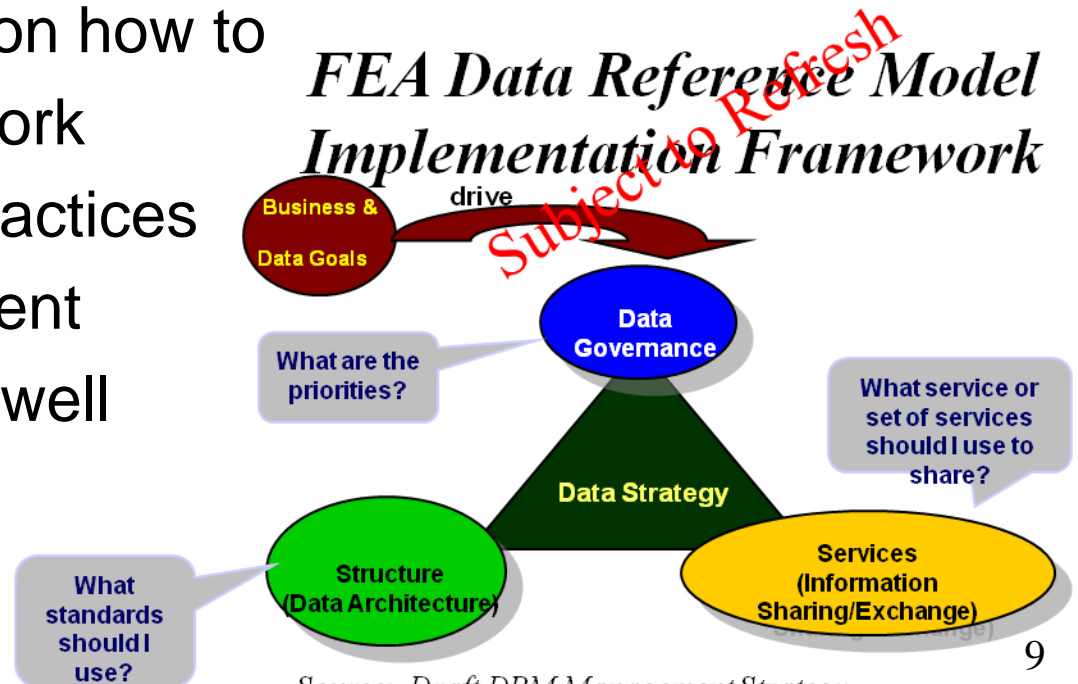
- ◆ What DAS Open Government Vocabularies Working Group will do:
 - A classification of vocabulary types
 - Standard metadata for describing the vocabularies
 - A common URI scheme
 - A paper on what open government vocabularies means to Federal agencies and how to use them



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What AIC DAS will produce (Current Thinking and Notional)

- ◆ What other DAS working groups might do:
 - Refresh the unpublished draft DRM Management Strategy in concert with the FEA refresh with:
 - ‘DRM Implementation Guide of Best Practices’ (notional)
 - Basic guidance on how to use the framework
 - Highlight best practices that solve different data problems well
 - Data.gov
 - NIEM
 - Others?

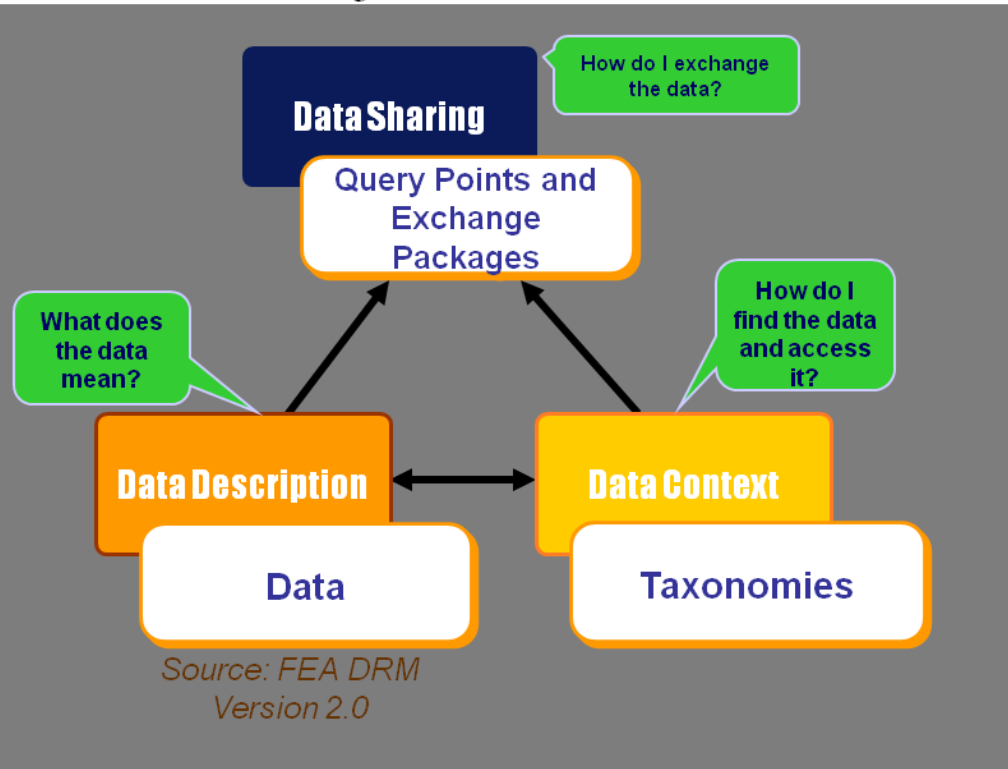




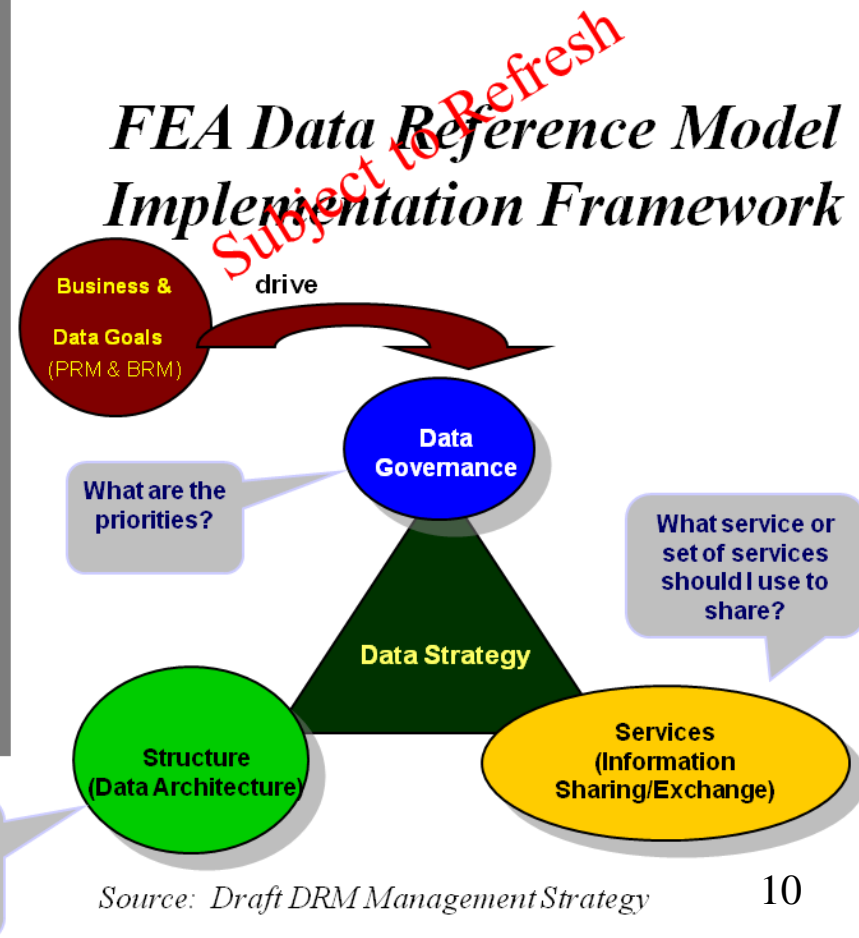
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- DRM focuses on Planning and Executing Performance and Business Driven Information Sharing Objectives.
- What's missing is a more comprehensive enterprise data management framework to manage data as resources.

FEA Data Reference Model Framework



FEA Data Reference Model Implementation Framework





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Summary

- ◆ Two basic types of data problems still exist despite technology advancements:
 - Problems around interoperability
 - Problems around shareability
 - We're still having some problems recognizing contexts of information sharing
- ◆ There's a fundamental gap around enterprise data management for achieving consistent information sharing success. Is it time for a DRM refresh?
- ◆ With digital age complexity, simplicity may be a good approach



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Questions



Federal Data Architecture Subcommittee (DAS)

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