

igniteXML

Canonical Model Management

Simplifying Enterprise Integration with
one model for data in motion



- λ 10:15 Federated SOA using Federated Canonical Models
 - Doug Stacey, Data Architect for Allstate Insurance Company
- λ 11:15 Break
- λ 11:45 Canonical Model examples and the rationale for adopting one:
 - Group discussion to follow presentations by:
 - Chris Moran, SOA Architect for the Business Transformation Agency within the U.S. Department of Defence and President & CTO of IMSC
- λ 1:00
- λ 2:00
 - Mike Gilpin, Vice President Research Director for Forrester Research
- λ 3:15
- λ 3:45
 - Jeremy Sindall & Rogan Hounsell-Roberts
- λ 5:00 Session Close
- λ 6:30 Dinner and Networking evening hosted by digitalML

Multiple sources blended into a single model

Logical Models



Canonical Model



Physical Models



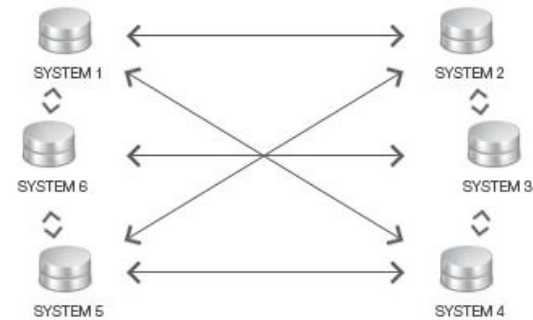
Data Model Mappings



Example M&A Data Integration project

λ Point to point integration

- Time 18 months
- Cost \$26m
- Project team 160 in 50 external contractors



Simplified example of Point-to-Point integration

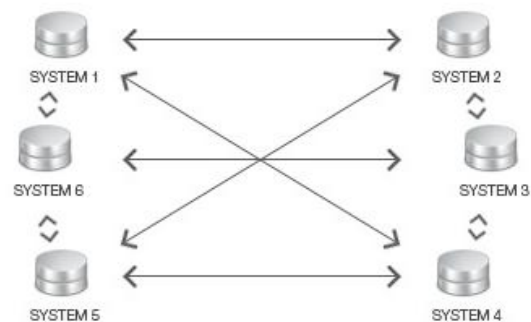
λ Canonical Model based integration

- 6 months shaved off project delivery
- \$16m lower cost
- Fewer external contractors required



Simplified example of a Canonical Model

λ Point to point integration

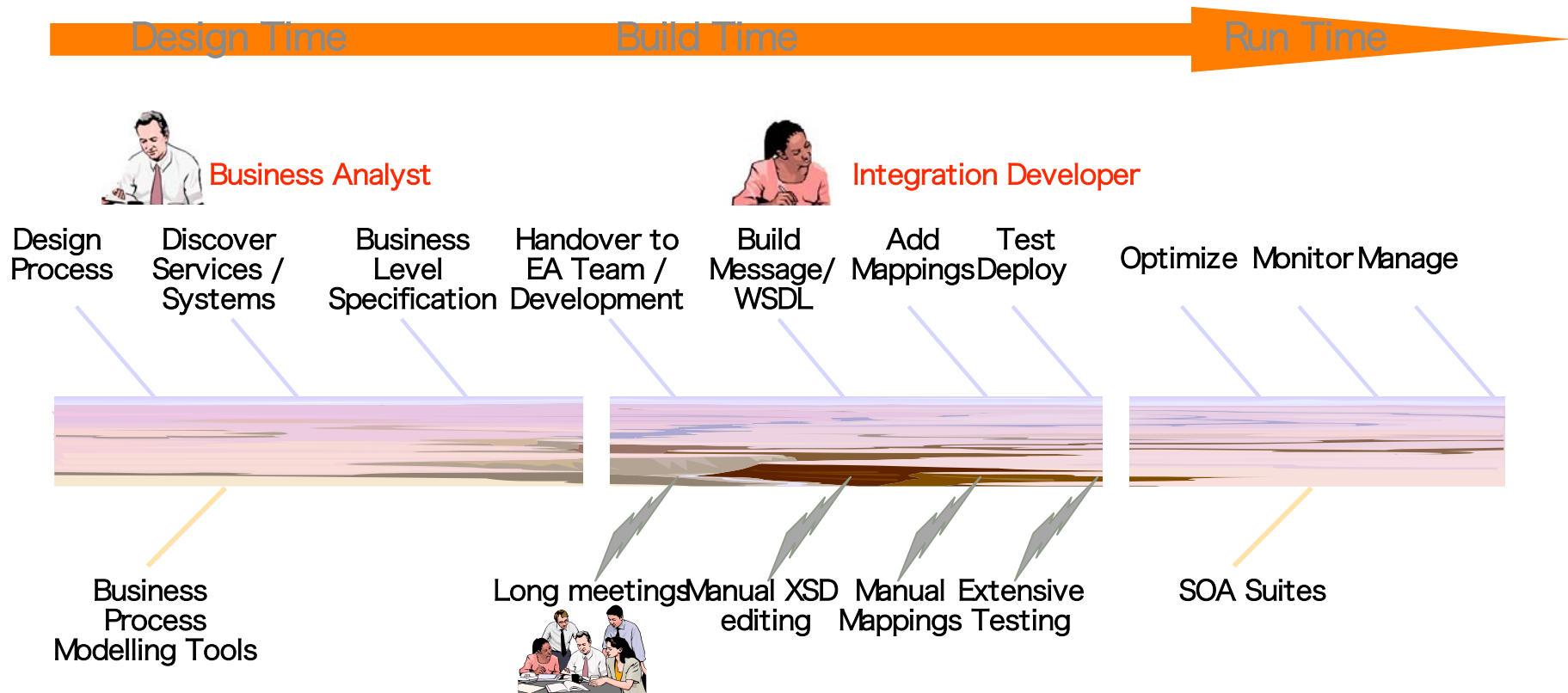


Simplified example of Point-to-Point integration

λ Canonical Schema Management

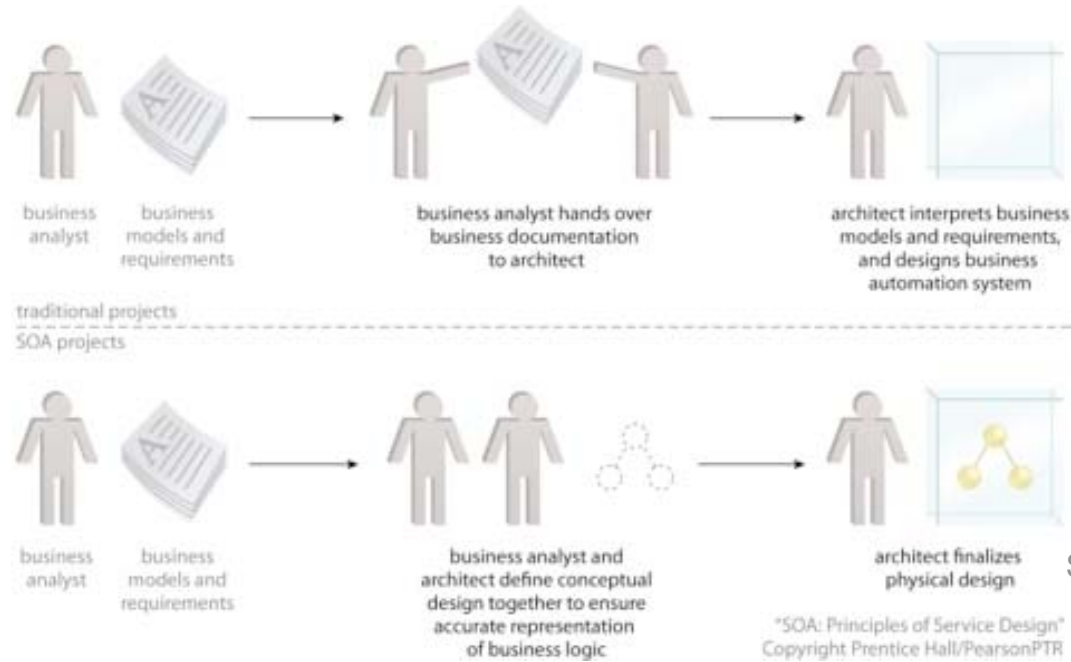


Enterprise Integration Process Flow



ISSUE	IMPLICATION	IMPACT
No control of Semantics used	Inconsistent Data throughout EI	Limited Reuse
Manual steps slow the process	Long time to value	Limited Agility
EA team swamped	EA team become a bottleneck	Limited Scalability

Enterprise Integration Process Flow



Source
Thomas Earl
SOA Principles of Service Design

ISSUE	IMPLICATION	IMPACT
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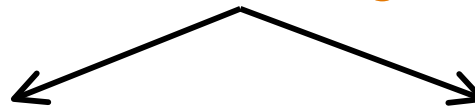
Enterprise Integration Process Flow with Canonical Model Management



Canonical Model



Two Challenges



Model Management

- λ Import Logical and Physical models
- λ Extend and Combine
- λ Collaborate
- λ Lifecycle Management
 - Impact Analysis
 - Version Control
- λ Needs to fit with existing tooling e.g. SOA Suite & LDM tools

Model Adoption

- λ Ease of use for Business Analysts and Integration Developers to
 - Build Specifications
 - Build Messages / Services
 - Mappings

Ways to a Canonical Model

λ Building a model in house



λ Leveraging a generic physical model



λ Starting from a logical model



λ Have a Master Data Model



λ Using sector focused models

- Insurance  

- Finance     

- Government 

- Telecom 

- Manufacturing 

- Retail 

- Healthcare 

- Defence 

Re-using the Model NOT XML Schema








import



XML
XMI
CSV

Decompose and link



-  Core Component
-  Element
-  Complex Type
-  Simple Type
-  Attribute
-  Attribute Group
-  Group

Organize



Store in object mode



igniteXML



US Patent
7788238

Import , Organize, Publish, Consume

Physical Models










Logical Models



Metadata Overlay

II Data Model Vocabulary
II Taxonomy e.g. UDEF
II Structured e.g. RDF/OWL

-  Core Component
-  Element
-  Complex Type
-  Simple Type
-  Attribute
-  Attribute Group
-  Group

Organizers (Model Management)



Consumers

Weblogic
Websphere
Glassfish



Canonical Model

- address
- credit
- order
 - address
 - bill
 - comment
 - creditcard
 - customer
 - date
 - giro
 - items
 - Items
 - itemTotal
 - name
 - order



Business Analyst



Integration Developer

Browse Model Search Model Reuse Specification

Canonical 1.0

- Core
- Enumerations
- ReferenceModel
 - Complex Types
 - Account to D
 - Account
 - ACH
 - ACHTrans
 - ACLSSpeci
 - Address

Schema Contents

Canonical 1.0

- Account
 - sequence
 - BalanceAmt [0-1]
 - AmountType
 - ChartOfAcctsCategoryType [0-1]
 - AccountingDateType
 - HolderTypeDescription [0-1]
 - DescriptionType

This part of the model is from a UML logical model

Drill down & this part of the model is from a physical model e.g. OAGis

OAG 9.4.1

- AmountType [0-1]
 - decimal
 - @currency
 - CurrencyCode CurrencyCodeType

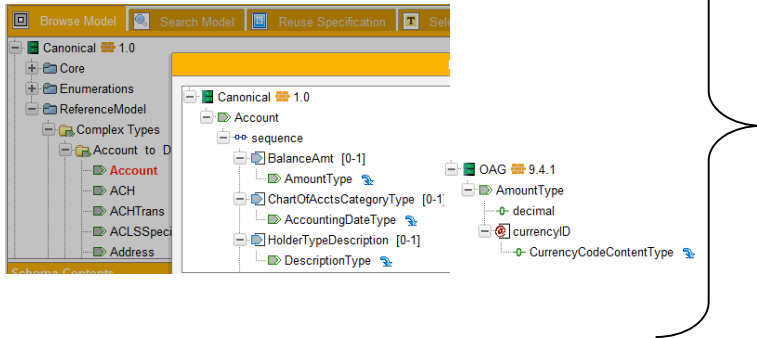
This object maps to a legacy data model

Information

Complex type: AmountType

Vocabulary
UBL.Price.PriceAmount.Amount.PriceAmount

A common reference point for all



Business Analyst

Reference the model
in specifications



Integration Developer

Build Messages and
mappings from the model

- λ **All messages**
- 100% consistent
 - Optimized for runtime
 - Clearly understood
 - Easy to maintain
 - Mapped to data model

- λ **The result...**
- Integration Projects delivered faster
 - Dramatic productivity improvements
 - Cost savings
 - Lower complexity

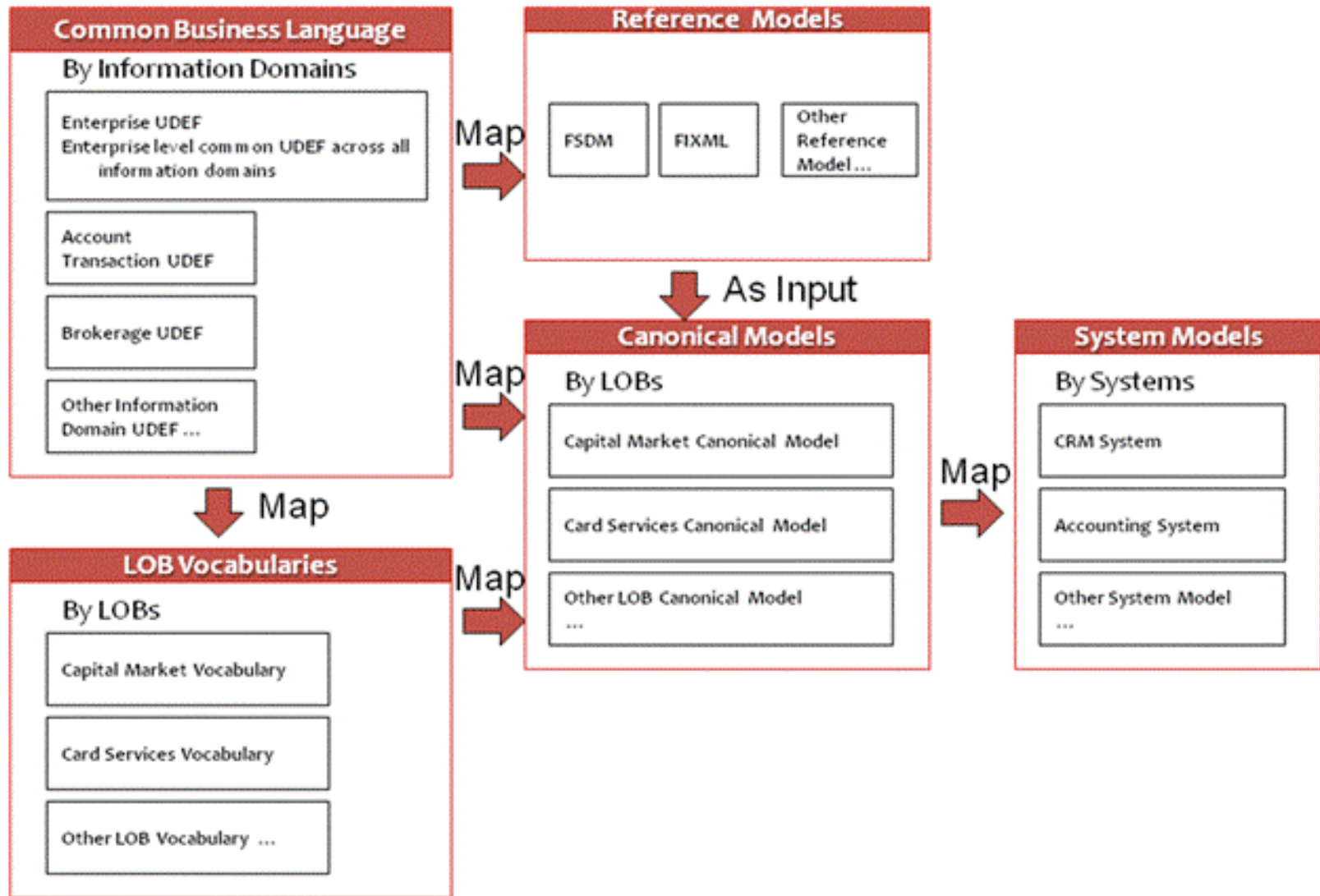


- λ Track model adoption across the enterprise
- λ Calculate project time saved
- λ Calculate costs saved
 - On first time build
 - On the ongoing lifecycle management
- λ Measure increased business agility

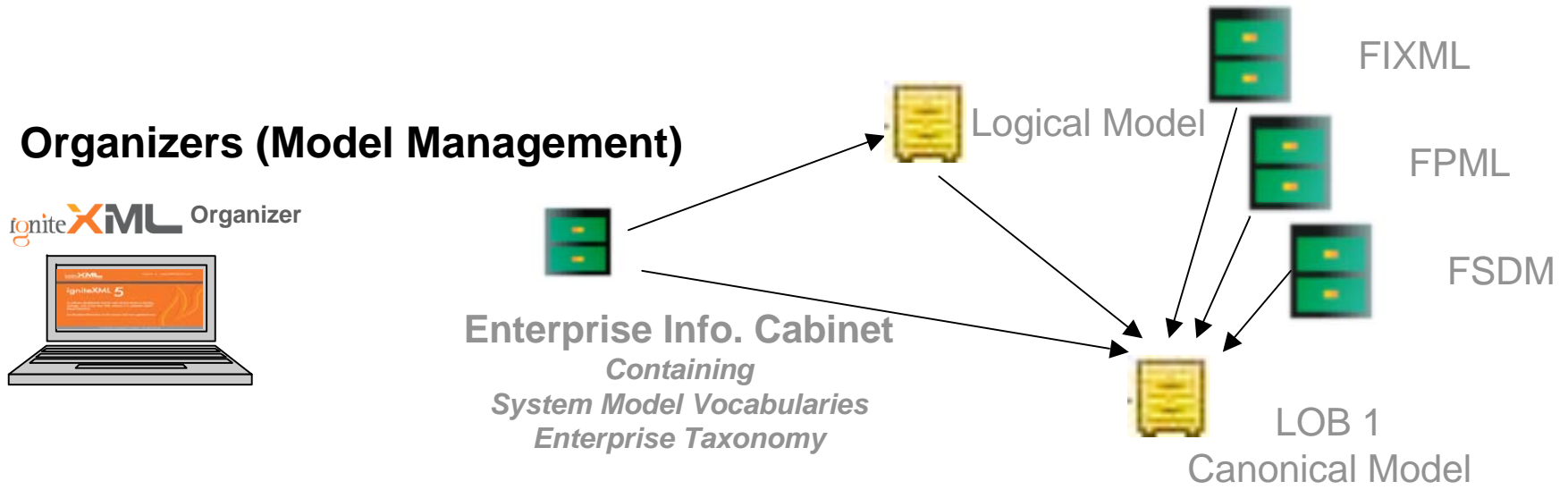


Demonstration

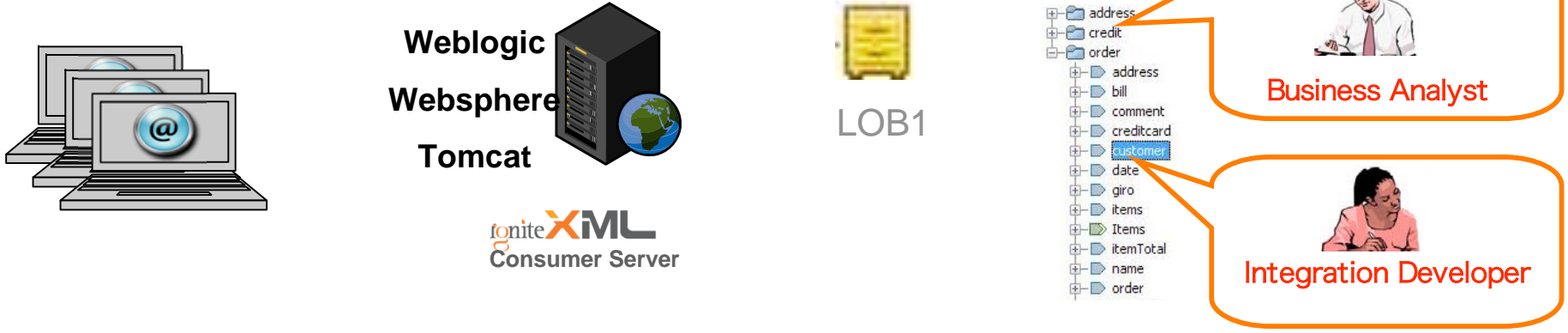
Demonstration example

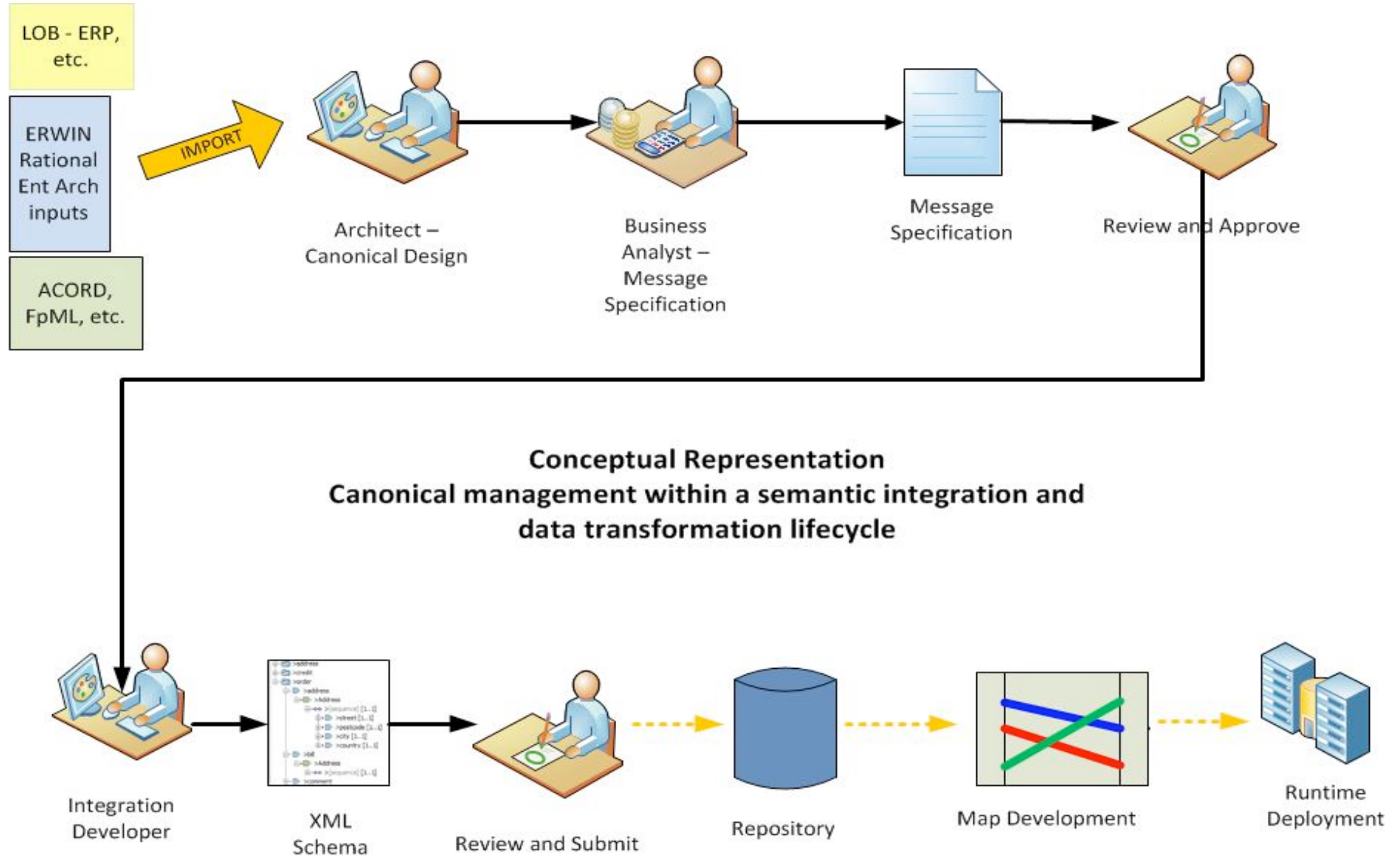


To...Cabinet Structure



Consumers





- λ Demonstration
- λ + Service Generation WSDL

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Forum Group



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