

Transforming Over Time

Reference Architecture as a Roadmap

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| insure | invest | retire |



We'll help you get there.™

ACORD/LOMA Presentation

CRN000000-000

Agenda

▶ About MassMutual

- ▶ Modernization
- ▶ Strategic Partners
- ▶ Reference Architecture
- ▶ Standardization
- ▶ Policy Administration Systems
- ▶ Data Architecture
- ▶ Modernization Progress
- ▶ Success Factors

About MassMutual – Company Overview

- ▶ Founded in 1851
- ▶ Mutually owned financial protection, accumulation and income management company.
- ▶ Hdqtrs - Springfield, MA
- ▶ Offices Worldwide
- ▶ 13M Clients Worldwide
- ▶ Fleet Name: MassMutual Financial Group

Financial Highlights (YE2007)	
Assets Under Management	\$505 Billion
Premiums and other deposits	\$29 Billion
Worldwide Insurance in force	\$502 Billion
Dividends to eligible participating policyholders	\$1.3 Billion

About MassMutual – Company Overview

<i>Major Affiliates</i>	<i>MassMutual Is A Premier Provider Of:</i>
<ul style="list-style-type: none">▶ Babson Capital Management LLC▶ Baring Asset Management Limited▶ C.M. Life Insurance Company▶ MML Bay State Life Insurance Co.▶ Cornerstone Real Estate Advisers LLC▶ MassMutual International, Inc.▶ MML Investors Services, Inc.▶ OppenheimerFunds, Inc.▶ The MassMutual Trust Company, FSB	<ul style="list-style-type: none">▶ Life Insurance▶ Disability Income Insurance▶ Long Term Care Insurance▶ Retirement Planning Products▶ Annuities▶ Income Management▶ Asset Management▶ International Investment Management <p style="text-align: center;">For individuals, business owners, and corporate and institutional markets</p>

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Modernization - Background

- ▶ Prevailing Business Climate and Challenges
- ▶ Establishment of USIG
 - ▶ Core Business Drivers
 - ▶ Speed to Market
 - ▶ Ease of Doing Business
 - ▶ Lower Unit Cost
 - ▶ Product Flexibility
- ▶ Enterprise Reference Architecture as a Blueprint
- ▶ Modernization Launched – Key Projects Follow

Modernization - Business Drivers

- ▶ Speed to Market
 - ▶ Faster Product Delivery
 - ▶ Improved Service Capabilities
- ▶ Ease of Doing Business
 - ▶ Simplified Business Processes
 - ▶ Easy Access to Information & Services
- ▶ Lower Unit Cost
 - ▶ Common Processing
 - ▶ Eliminate Redundancy
- ▶ Product Flexibility
 - ▶ Enable Innovative Features
 - ▶ Reuse Product Components

Modernization - IT Strategy

- ▶ Create Reference Architecture
 - ▶ Well-Defined Future State
 - ▶ Business Process Management
- ▶ Simplify Technology
 - ▶ Small Number of Strategic Vendors
 - ▶ Eliminate Redundant Technologies
- ▶ Provide Business Insight
 - ▶ Data Quality
 - ▶ Enterprise Analytics
- ▶ Services Oriented Architecture
 - ▶ Creates Flexibility & Adaptability
 - ▶ Reusable Business Capabilities

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Strategic Partners

A structured program to manage strategic vendors as an enterprise resource to better leverage the services and technologies of the vendor in support of our strategy.

- ▶ Focus is on strategic issues, future directions.
- ▶ Influencing the development of software/systems.
- ▶ Joint sharing of future plans & directions.

Agenda

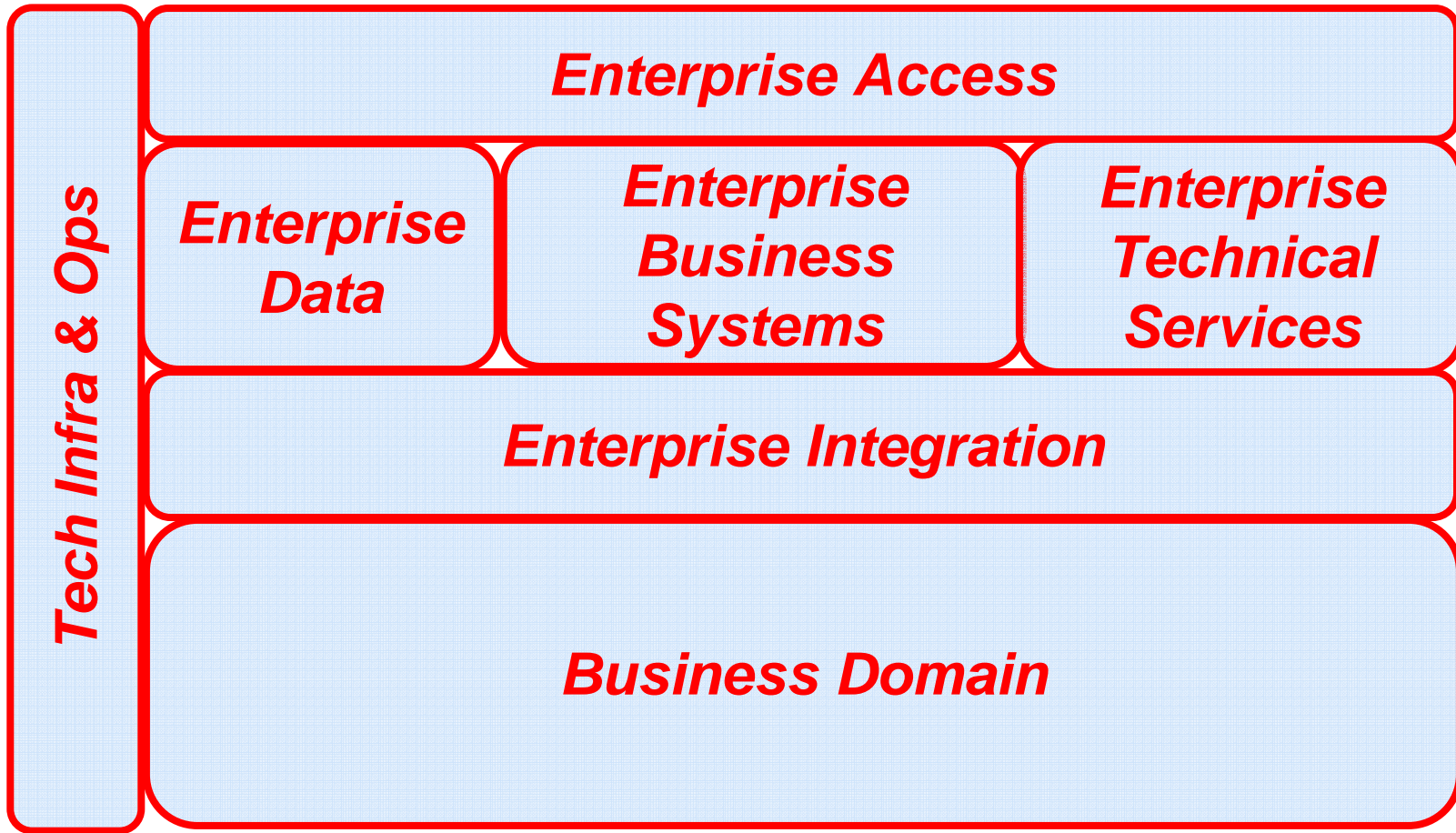
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Reference Architecture

- ▶ *What's in it?*
 - ▶ Systems That Represent Common Functions
 - ▶ Services That All Business Units (can) Leverage
 - ▶ Enterprise-Level Consolidated Data
 - ▶ Integration to Make All Of This Possible!

- ▶ *Why is it important?*
 - ▶ Enabler of Consistent Experience for Customers and Producers
 - ▶ Enabler of Consolidated Servicing; M&A; Agility in the Business

Enterprise Reference Architecture



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Process and Control - Governance

- ▶ Program/Project Portfolio Mgmt
- ▶ Triage Process
 - ▶ Concept – Definition - Execution
 - ▶ Checkpoint Triage Checklist
 - ▶ Infrastructure Engineering
 - ▶ Architecture
 - ▶ Information Security
 - ▶ IT Compliance
 - ▶ IT Asset Mgmt
 - ▶ Data Mgmt
 - ▶ Operational Readiness & Impl Approach Triage Checklist
 - ▶ Quality Checkpoints at Each Phase
- ▶ Post Implementation Reviews

Technology Standards

Example: Data Mgmt

Data Warehouse / Info Factory	SAP BI
Database Engines	IBM DB2 (mainframe and distributed) Microsoft SQL Server
Extract / Transform / Load (ETL)	Informatica PowerCenter / PowerExchange
Reporting / Analysis / Dashboards	Cognos Business Intelligence (BI) Suite
Data Quality / Profiling	Informatica Data Quality Informatica PowerCenter Data Profiling Option
Data Modeling	Erwin Data Modeler (CA) (IBM Rational toolset under consideration)

Data Standards - ACORD

- ▶ Current Implementations
 - ▶ Policy Annual Review Application
 - ▶ Distribution Servicing Platform
 - ▶ Insurance Information Factory
 - ▶ Medical Information Bureau
- ▶ Planned Implementations
 - ▶ New Business STP
 - ▶ Producer Credentialing
 - ▶ Group Insurance Processing
 - ▶ Inforce Sales Illustrations
- ▶ Potential Implementations
 - ▶ SOA
 - ▶ Enterprise Data Mgmt Practice

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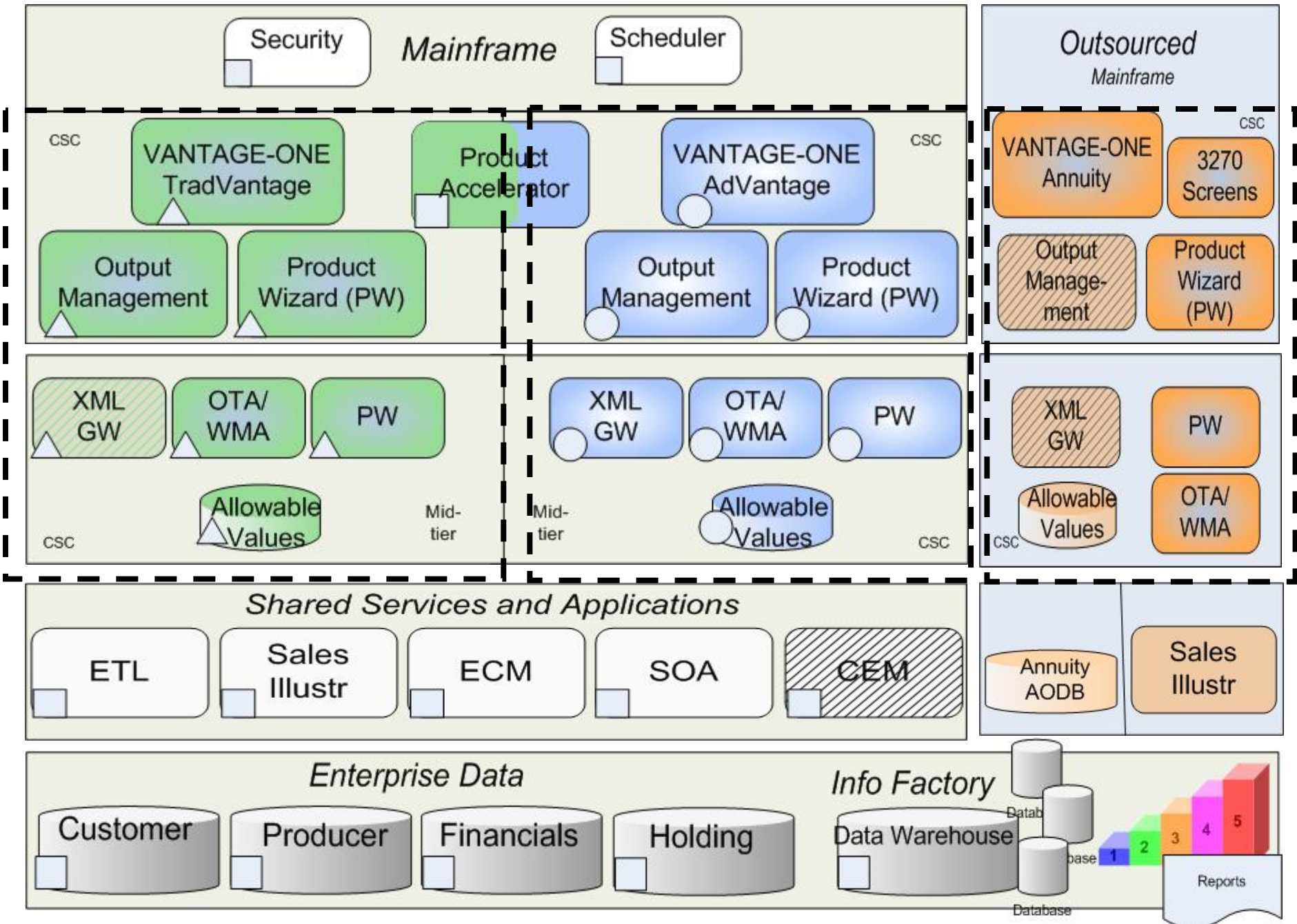
Policy Administration Systems

- ▶ Life and Annuity – CSC's VANTAGE-ONE
- ▶ COLI/BOLI Accenture Life Ins Platform
- ▶ Strategic Architectures Designed and Built
- ▶ Policy Admin Consolidation in Process
- ▶ Real-time Transactions
- ▶ Web Front-End (OTA / WMA)*
- ▶ Web Services Enabled (XML GW)*
- ▶ Product Accelerator (Calc Engine)

OTA is CSC's Open Transaction Architecture

WMA is CSC's Wealth Management Accelerator

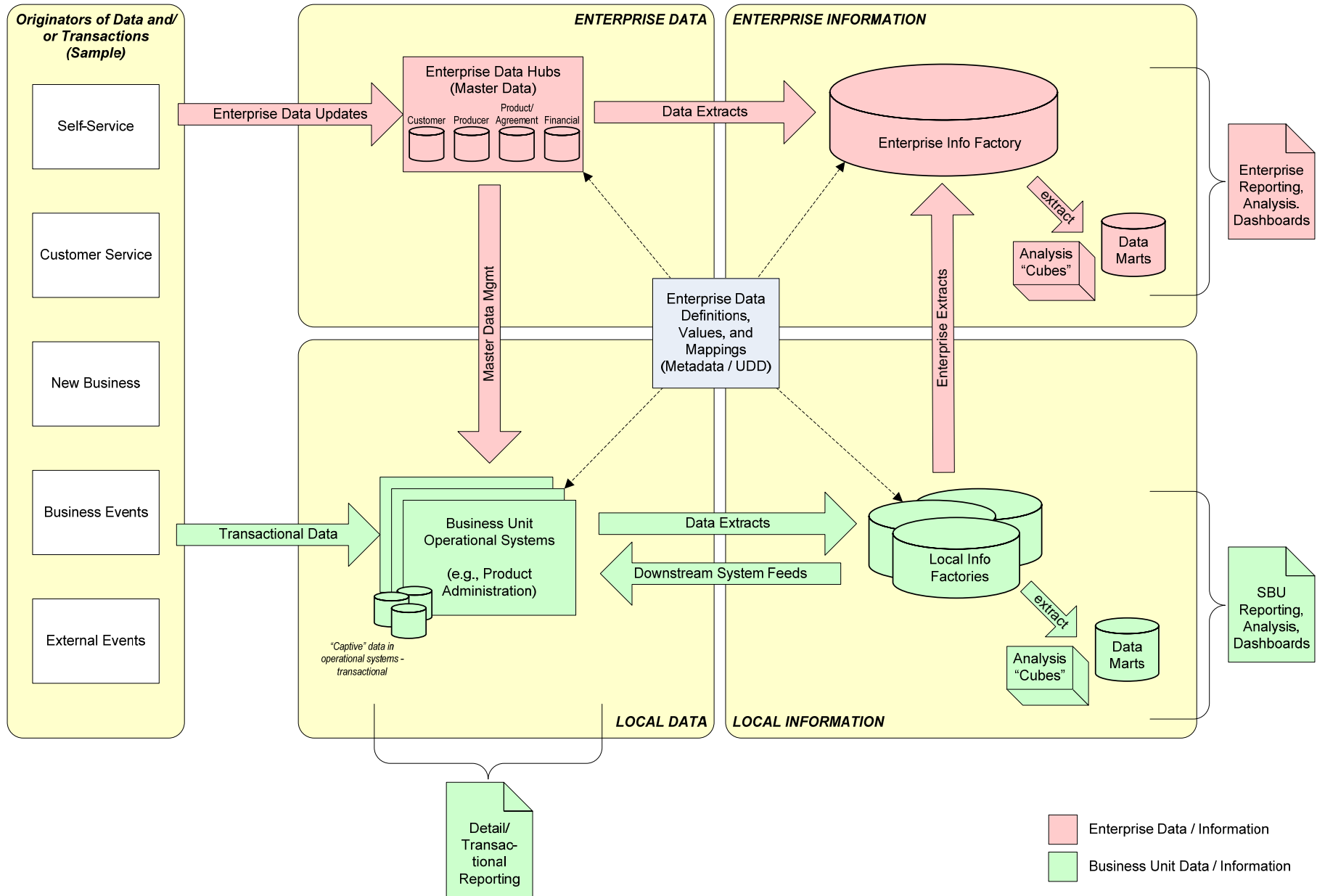
XML GW is CSC's XML Gateway



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Data Architecture – High Level



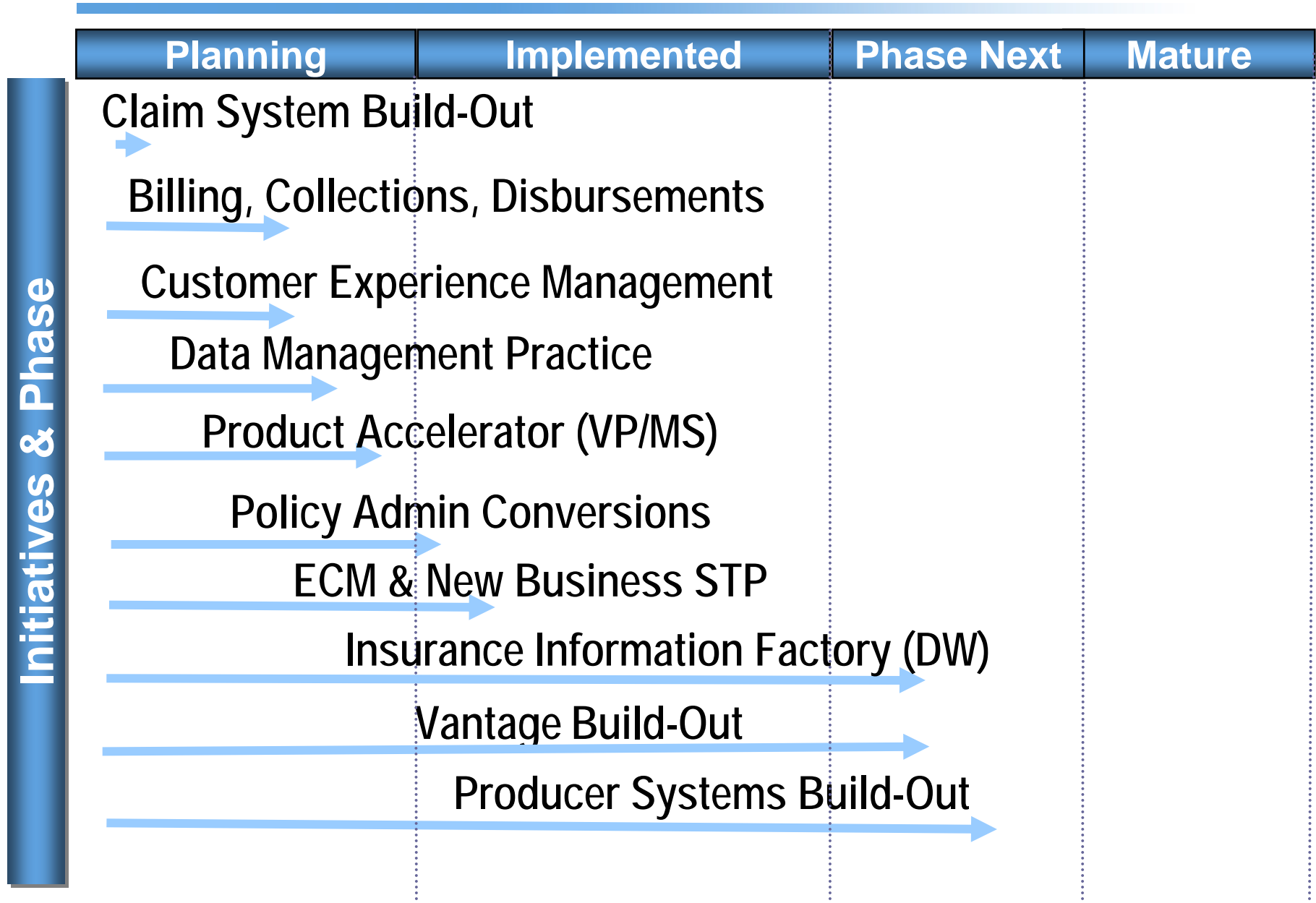
Data Management

- ▶ Established Ent Data Mgmt Practice – Bus and IT
- ▶ Data Mgmt Strategy and Principles Under Development
- ▶ Areas of Concentration:
 - ▶ Data Governance
 - ▶ Data Quality
 - ▶ Meta Data
 - ▶ Data Integration
 - ▶ Business Intelligence
- ▶ Data Mgmt Maturity Model
- ▶ Gap Analysis to Yield Priorities and Projects
 - ▶ People, Process and Technology

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Modernization Progress



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- ▶ Where MassMutual Is Today
- ▶ **Success Factors**

Success Factors

- ▶ Sponsorship By A Business Executive
- ▶ Approval and Oversight By Board of Directors
- ▶ Partnering Between IT and Business
- ▶ Building High Value Strategic Relationships
- ▶ Socializing the Reference Architecture
- ▶ Mapping Initiatives to Reference Architecture
- ▶ Creating a “Modernization” Culture
- ▶ Assessing Portfolio Progress and Adjusting
- ▶ Selecting and Governing Standards

THANK YOU
FROM AIMEE & FRANK!

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Q & A



We'll help you get there.SM