

F E D E R A L
S T U D E N T A I D
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September 30, 2003

Enterprise Architecture Governance
Process for IT Investments Using the
FSA-EA Reference Models Components of
OMB Exhibit 300 Capital Asset Plans



Scope

- Establish EA Governance Process for IT Investments using the FSA-EA OMB Exhibit 300 Capital Asset Plans
- Establish Key Linkages with FSA IT Management Processes
- Determine Next Steps



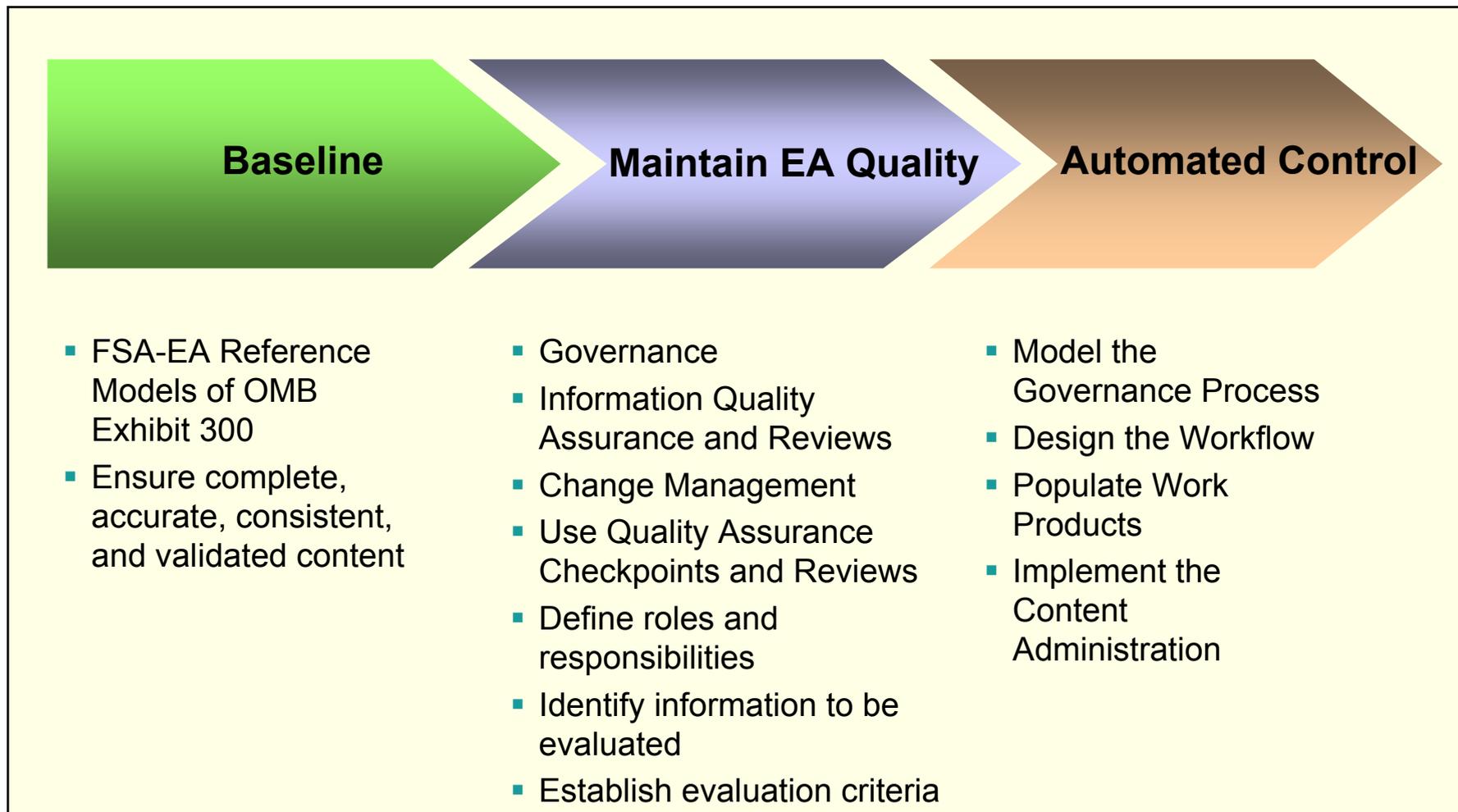
Develop FSA-EA OMB Exhibit 300 Governance Process

■ Objectives:

- Develop a repeatable process flow to manage the information in the FSA-EA tool
- Develop a governance process for validating and updating the information in the EA tool and incorporating EA information into the FSA Capital Planning Process
- Establish an information quality process to effectively manage the stored FSA-EA information
- Establish a security profile to prevent unauthorized persons from changing the EA data in the Repository
- Demonstrate the value and benefits of the EA Governance Process



Governance Process Strategy





Governance High-Level Processes

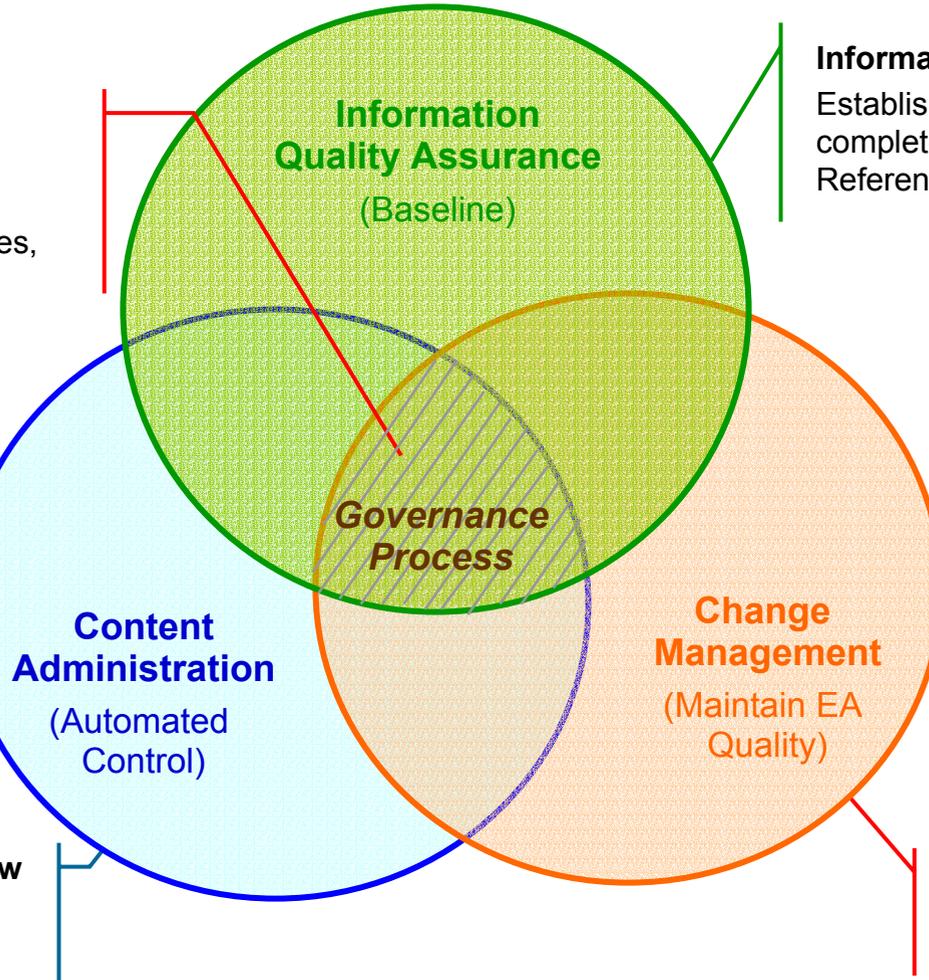
Governance Process

Will control variance, ensure compliance with external requirements and leading practices, maintain vitality and enable communication

Information Quality Assurance (Baseline)

Information Quality Assurance Activities

Establish a baseline, ensure the completeness and accuracy of the FSA-EA Reference Models



Content Administration (Automated Control)

Change Management (Maintain EA Quality)

Governance Process

Content Administration Workflow

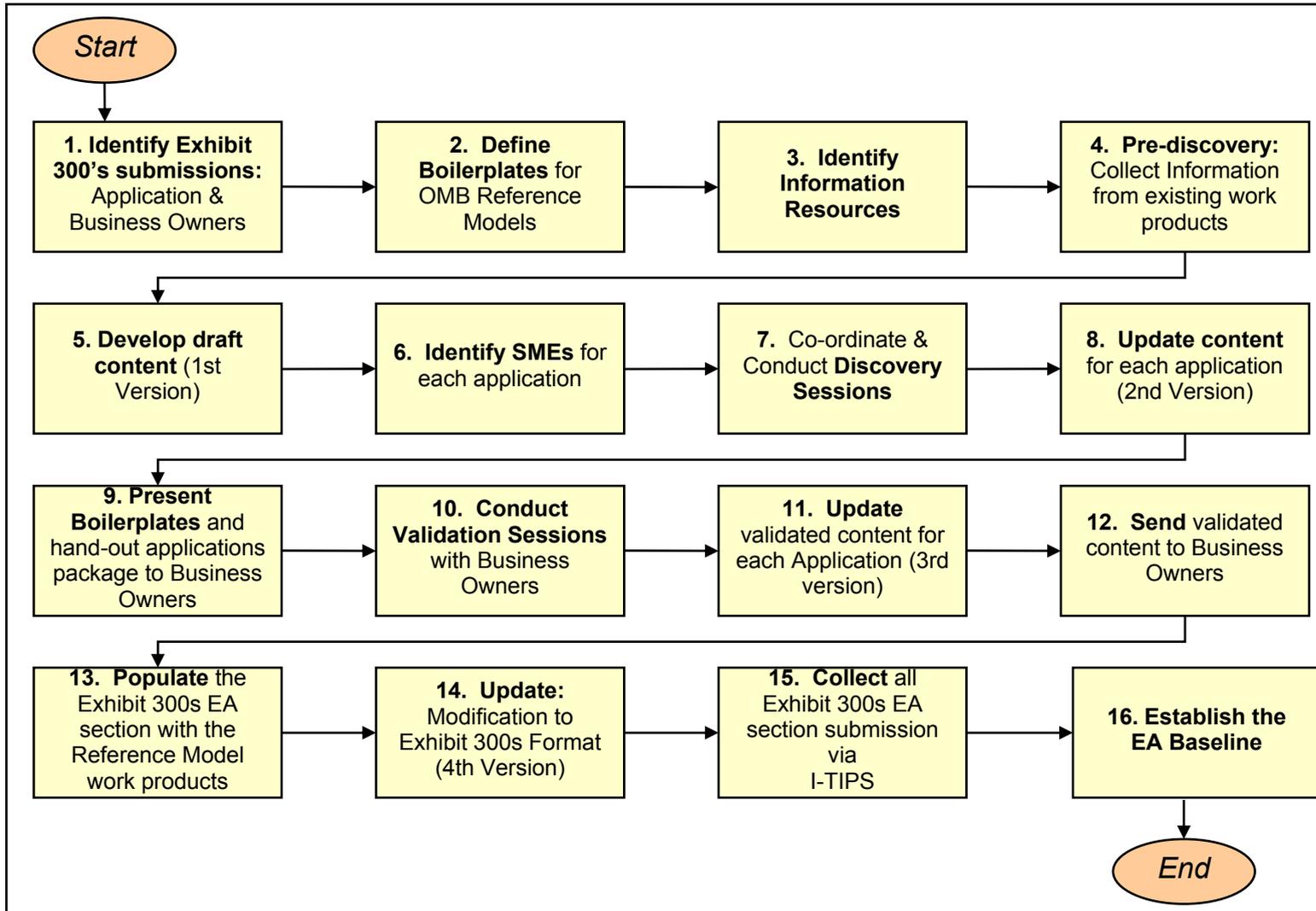
Automated Control, Process Workflow Automation

Change Management Steps

Establish quality assurance checkpoints and allows flexibility in adapting EA to business or technology changes



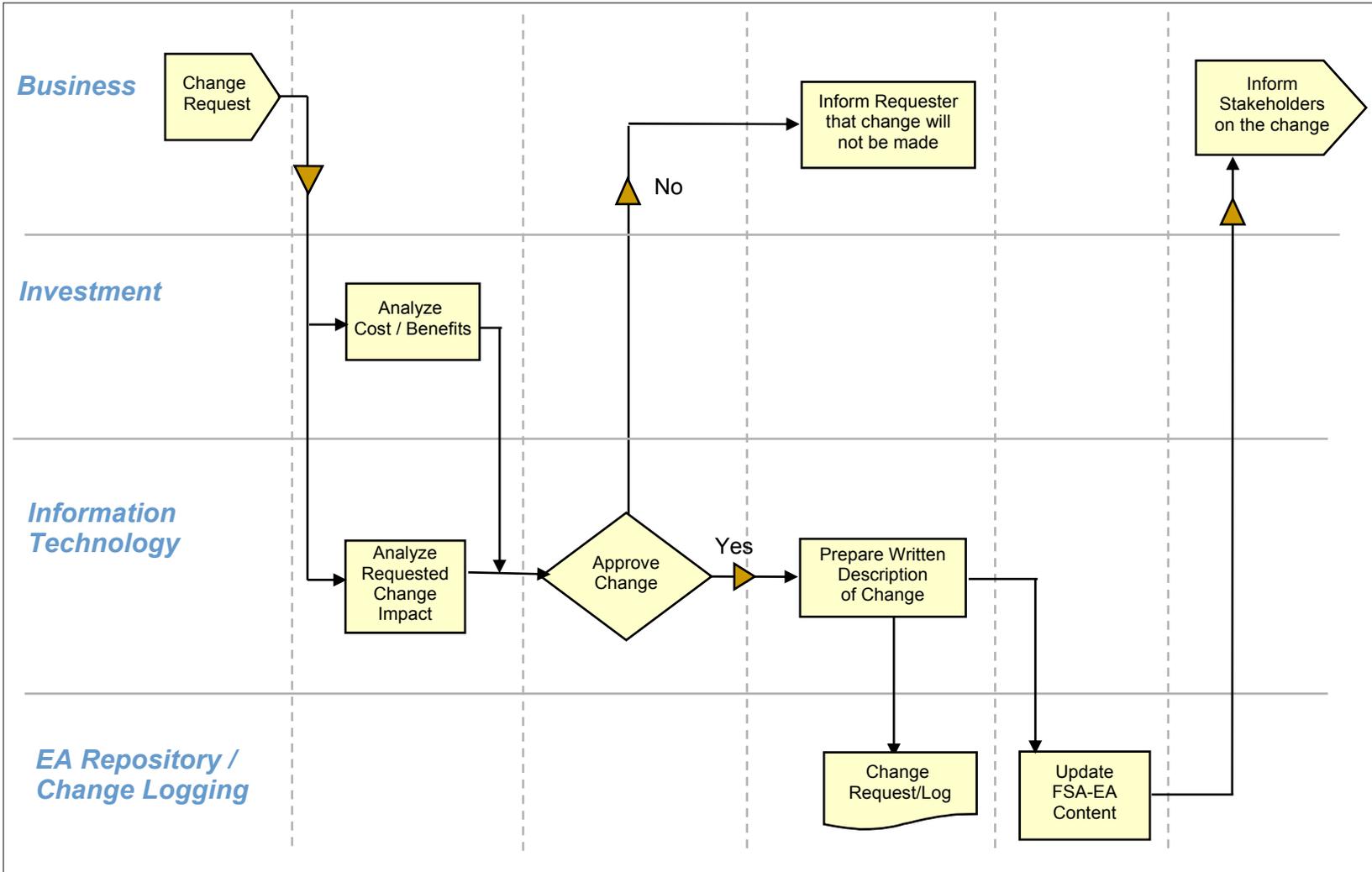
Information Quality Assurance Activities (FY '05)



In 2003 Q2 this baseline process was followed to produce EA FY '05



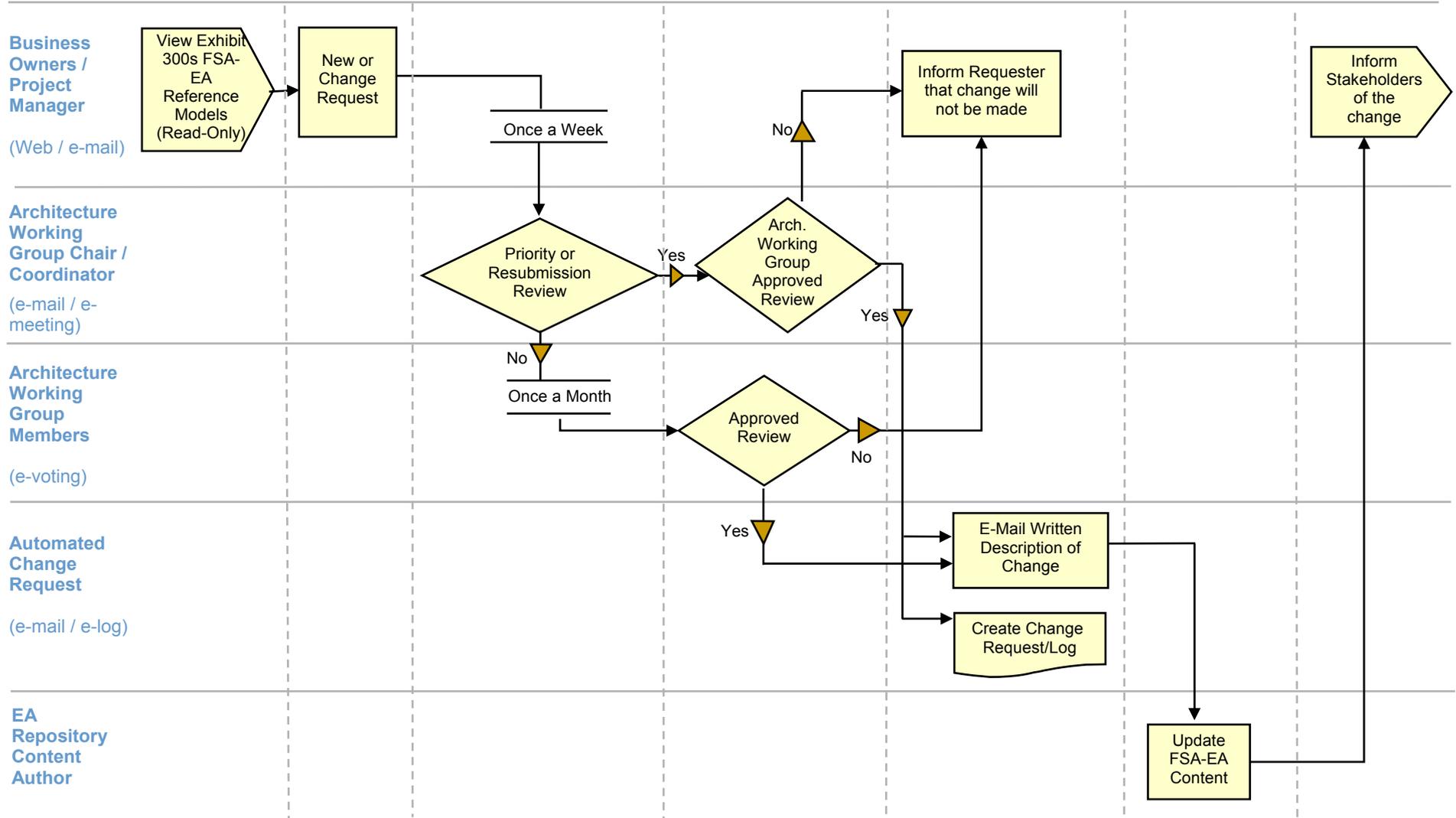
Change Management Steps (Future / Manual)



In 2003 Q3 proposed a future streamlined change management steps



Content Administration Workflow (Future / Automated)





EA Request for Change (EACR) Log

| Req. Date | Date Logged | Control # | Originator | Description | Approval Decision | Imp. Status | Comments | Proj. Imp. Date | Actual Imp. Date |
|-----------|-------------|-----------|------------|---------------------------|-------------------|-------------|-------------------------|-----------------|------------------|
| 6/5/01 | 6/5/01 | 00116 | Joe | Joe's Request Description | Pending | Pending | Waiting for Approval | 6/9/03 | 6/9/03 |
| 5/31/01 | 5/31/01 | 00115 | Ron | Ron's Request Description | Approved | Complete | Completed Ron's Request | 6/3/03 | 6/3/03 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Sample



Establish the security profile to prevent unauthorized persons from changing the data

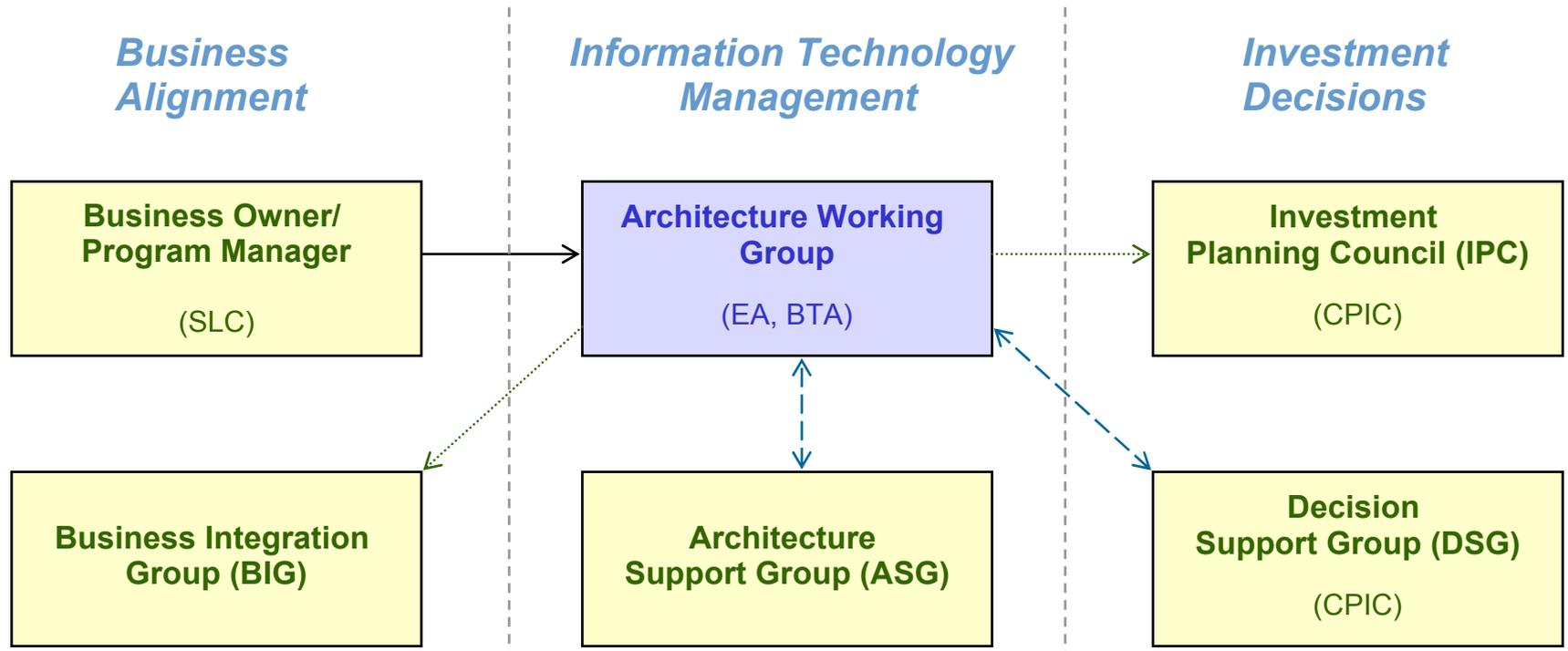
- Popkin provides Access Control capability at the Encyclopedia Level.
- Depending on the user role, the System Architect Encyclopedia Utility can be used to grant the corresponding Access Control privilege to that user.



| User | Role | Access Control Privilege | Access Object |
|------------------|-------------------------|---------------------------|-------------------------|
| Primary Author | IT Enterprise Architect | Read, Add, Modify, Delete | FSA-EA OMB Exhibit 300s |
| Secondary Author | IT Enterprise Architect | Read, Add, Modify, Delete | FSA-EA OMB Exhibit 300s |
| Administrator | IT System Administrator | User Management, Upgrades | FSA Repository |
| FSA User | Business Owner | Read Only | HTML / Word Reports |



Governance Stakeholders

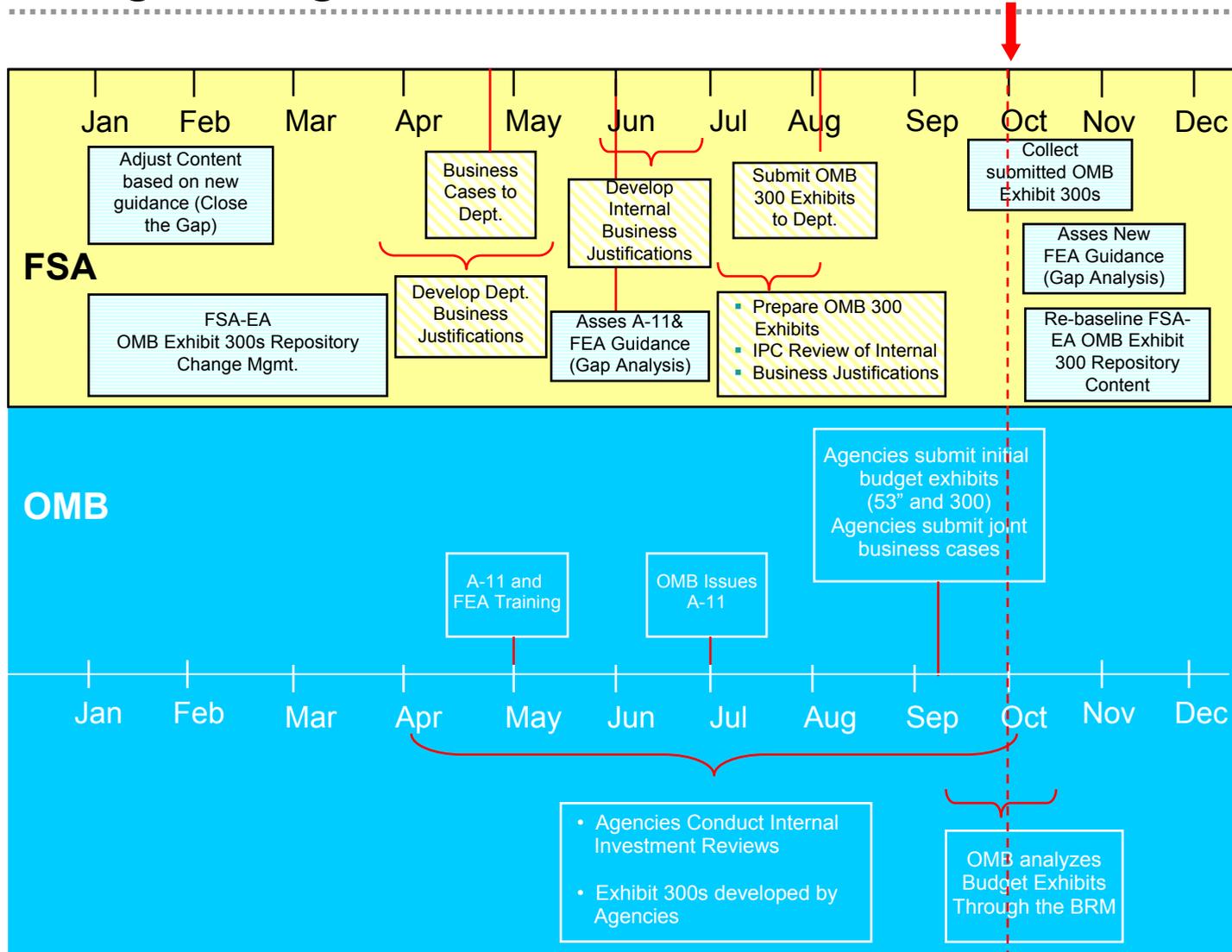


| Acronyms |
|--|
| BTA – Business Technology Alignment |
| CPIC - Capital Planning & Investment Control |
| EA- Enterprise Architecture |
| SLC - Solution Life Cycle |

| Legend | |
|---------------|---|
| Request | → |
| Inform | → |
| Co-ordination | → |



Change Management Timeline



Legend

- OMB CPIC & FEA PMO Milestones (Blue box)
- FSA-CPIC Milestones (Yellow hatched box)
- Recommended FSA-EA Milestones (Light blue box)



Value and Benefits of the EA Governance Process

- **Accuracy and Completeness** - Information Quality
- **Efficiency and Measurements** - Automated Process
- **Timeliness** - Repeatable and Manageable Process, well defined roles and information
- **Control Baseline** – Popkin Repository
- **Improve Analysis, Reporting/Presentation Capabilities** - Popkin Repository
- **Complies with Federal Oversight** - Integrated with FSA IT Management Processes

Potential to apply and extend this Governance Process to additional FSA Processes (e.g., BTA, SLC, CPIC, etc.) – Automated Pilot

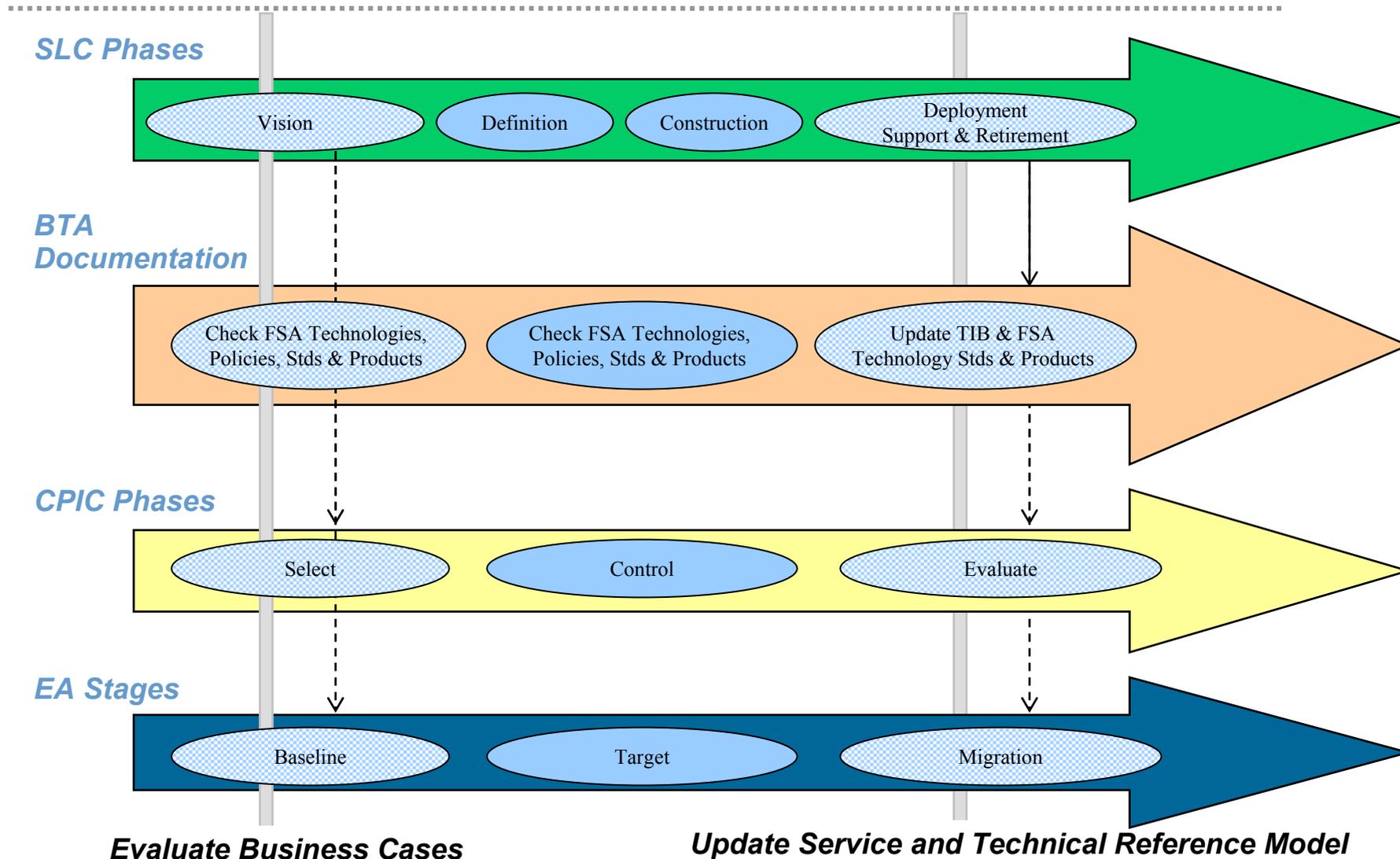


Establish Key Linkages with FSA IT Management Processes

■ Objectives:

- Implement the Office of Inspector General (OIG) recommendations to strengthen linkages between Enterprise Architecture (EA) and Capital Planning and Investment Control (CPIC)
- Identify key linkages between FSA-EA reference models, Solution Life Cycle (SLC) Phases, Business Technology Alignment (BTA) Documentation, CPIC phases, and EA stages
- Recommended required checkpoints, outputs and changes to the SLC, BTA and CPIC

Governance establishes an architectural approval and compliance process that is integrated with FSA's SLC, BTA and CPIC Processes





Recommended changes to the SLC, BTA and CPIC

■ Assumptions

- The Control phase will be used in the future as a checkpoint in case of major and substantial differences between the proposed and deployed solutions
- Acquisition planning and contract management are part of the SLC and will be used as a checkpoint to ensure EA compliancy

■ Checkpoints

- Vision Phase (SLC)
- Deployment Phase (SLC)

■ Outputs

- Business Case (SLC and CPIC)
- Project Inventory List (SLC Release Management)
- Change Order (EACR Log)

■ Changes or Updates

- **Business Case amendment by EA Alignment information**
- Update the Technology Information Blueprints based on the deployed solution
- Update the FSA Technology Standards and Products based on EA
- Update the Service and Technical Reference Model Content



Determine Next Steps

- Objectives:
 - Coordinate updates to other standards documents to ensure consistency
 - Communicate the strategy for maintaining the information



Next Steps

- FSA/Chief Architect to review
- Incorporate updates to the Governance Process, as necessary
- Present to the BTA Enhancement Workshop
- Approval by Architecture Working Group
- Present/buy-in by BIG, DSG and IPC
- Coordinate updates to SLC, BTA and CPIC
- Implement the approved Governance Process



Next Steps (Cont.) - Coordinate updates to SLC, BTA and CPIC

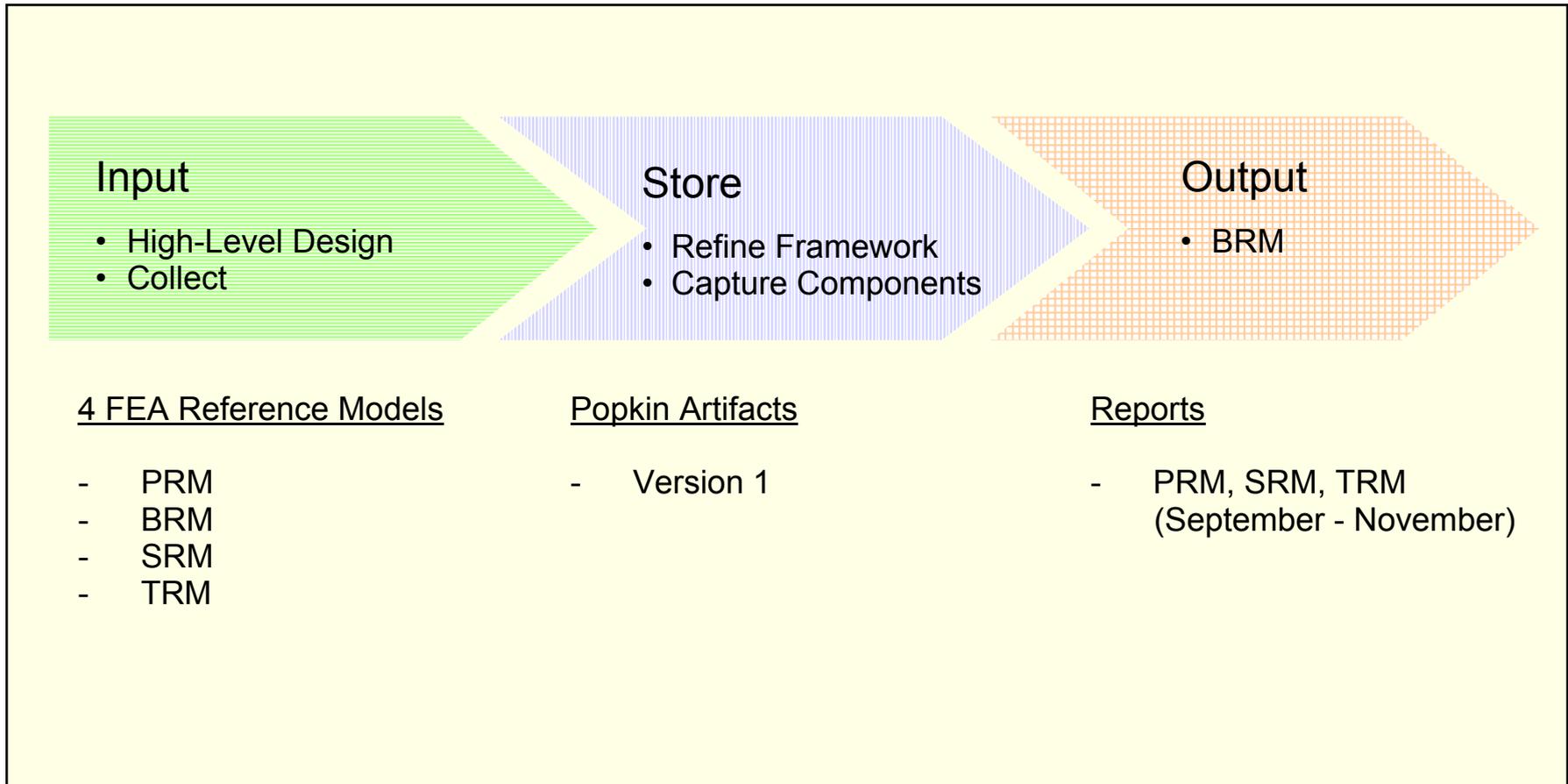
| Point of Contact | Process Alignment | Meeting Schedule |
|------------------|---|------------------|
| Debbie Bairdain | SLC (Process) | October |
| Lana Gourdine | SLC (Process, Verification Matrix) | October |
| Mike Giordano | SLC (Release Management) | October |
| Steve Allison | CPIC (Business Case, FY05-06 Planning & Budget Calendar) | October |
| Terry Hardgrave | BTA (TIB, FSA Technologies, Policies, Standards and Products) | October |



Backup Slides

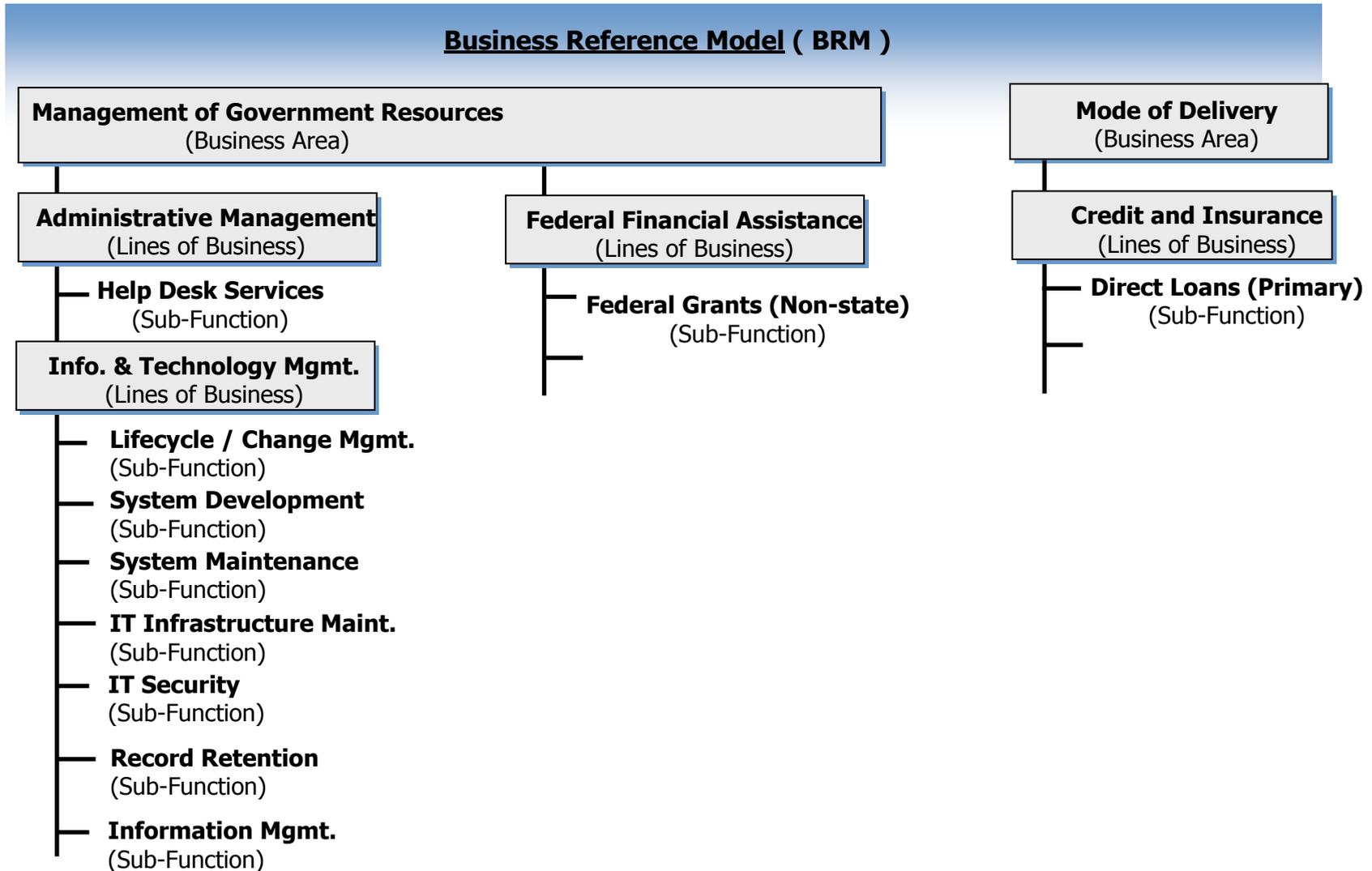


Popkin Framework Design Roadmap





BRM – COD (Input Sample)





FSA EA Framework (Store Sample)

System Architect - UCPE337023\POPKINSQL (Version 1 BRM) - [Federal Student Aid - EA Framework]

File Edit View Format Draw Tools Dictionary Reports Window Help

70%

Browse

- Diagrams
 - 2005 FSA - FEAPMO
 - Business Reference Model
 - Performance Reference Model
 - Service Reference Model
 - Technical Reference Model
- Definitions
 - Description
 - Elementary Business Process
 - Information Exchange
 - Organizational Unit
 - Picture
 - Trigger Template

All Methods | Data Modeling | Structured | Organization

Browse Detail

| | Data | Business Function | Security | Network | People | Schedule | Strategy |
|------------------|------|-------------------|----------|---------|--------|----------|----------|
| Scope | | | | | | | |
| Enterprise Model | | | | | | | |
| System Model | | | | | | | |
| Technology Model | | | | | | | |
| Components | | | | | | | |

MV



OMB Reference Model Hierarchy (Store Sample)

System Architect - feaf_draft - [Federal Student Aid - EA Framework]

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Browse

- Diagrams
 - 2005 FSA - FEAPMO
 - Other Artifacts
 - Business Reference Model
 - BRM Artifacts
 - Performance Reference Model
 - PRM Artifacts
 - Service Reference Model
 - Applications
 - Initiatives
 - Technical Reference Model
 - Applications
 - Initiatives
 - Definitions

FSA
FEDERAL STUDENT AID

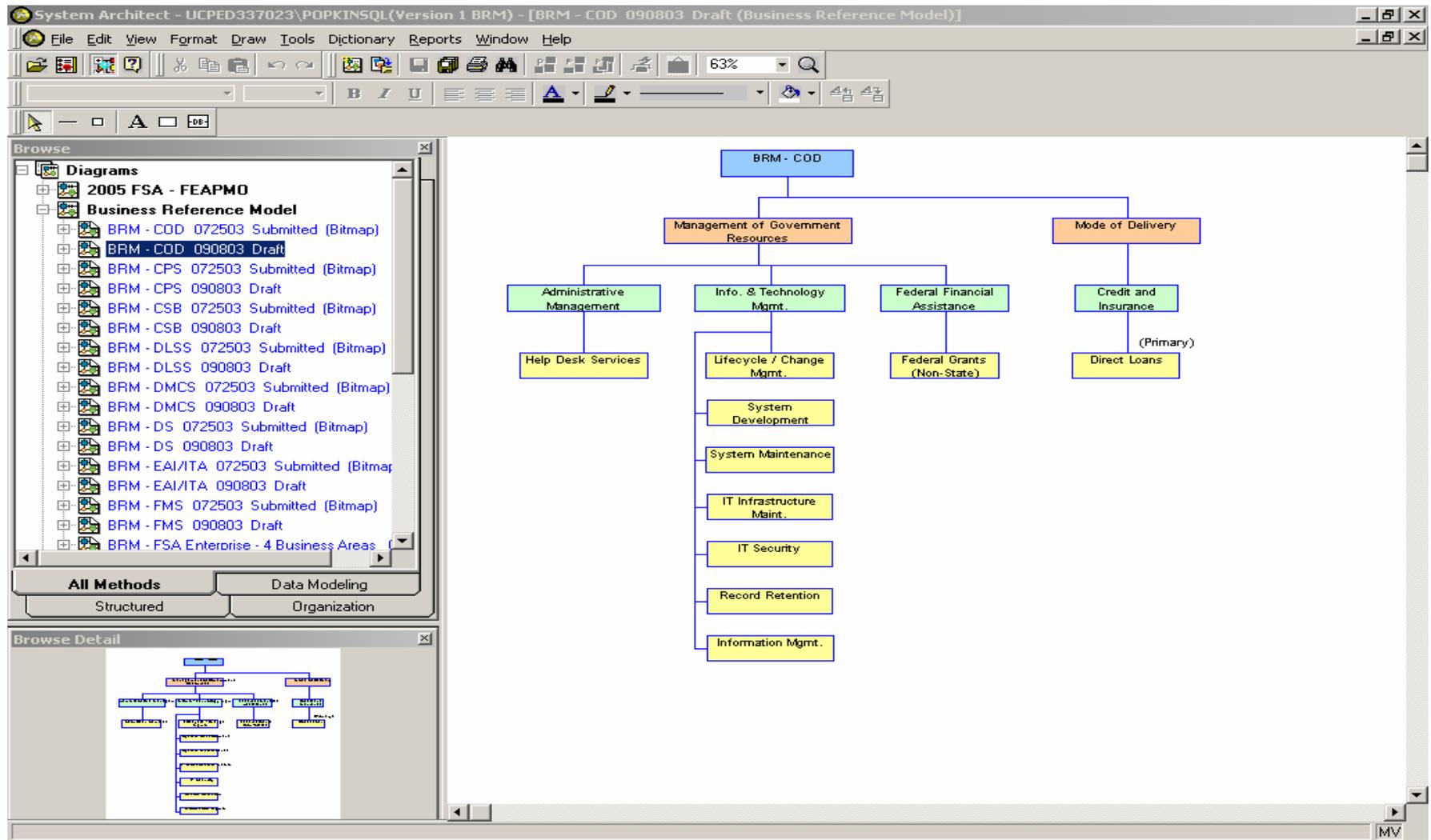
Scope

Enterprise Model

All Methods | Data Modeling | Structured | Organization



BRM – COD (Store Sample)





FSA-EA Mapping to BRM (Output Sample)

fsa_brm_mapping.xls - Microsoft Internet Explorer provided by US Department of Education

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Address C:\fsa_brm_mapping.xls

| | A | B | | Education | Federal Student Aid | e-Loans | EWITA | CRSS | FMSS | GAPS | ISS | TMS | DMCS | DATA STRATEGY | DLSS | CSB | COO | CPS | INFO ASSURANCE | ED WEB | NAEP | ERIC | PBDMT | FMS | R TSC - VDC, N144, OPS | NSLDS II | NSLDS | T | |
|----|---|--|---------------------------------------|-----------|---------------------|---------|-------|------|------|------|-----|-----|------|---------------|------|-----|-----|-----|----------------|--------|------|------|-------|-----|------------------------|----------|-------|---|--|
| 1 | | Analytical Summary | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | Average Number of Agencies per Sub-Function is | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | Average Number of Agencies per Line of Business is | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | Average Number of Lines of Business per Agency is | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | Average Number of Sub-Functions per Agency is | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | Community and Social Services | Homeownership Promotion | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | Community and Regional Development | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | Social Services | | x | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | x | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | Postal Services | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | | Correctional Activities | Criminal Incarceration | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | | | Criminal Rehabilitation | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | | Defense and National Security | Command and Control | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | | | Execute Joint Operations | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | | | Support Joint Operations | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | | Disaster Management | Disaster Monitoring and Prediction | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | | | Disaster Preparedness and Planning | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | | | Disaster Repair and Restore | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | | | Emergency Response | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 26 | | Economic Development | Business and Industry Development | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | | | Intellectual Property Protection | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 28 | | | Financial Sector Oversight | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | | Education | Elementary, Secondary, and Vocational | | x | x | | | | | | | | | | | | | | | | | | | | | | | |
| 31 | | | Higher Education | | x | x | s | | | | | | | | | | | | | | | | | | | | | | |
| 32 | | | Cultural and Historic Preservation | | x | | | | | | | | | | | | | | | | | | | | | | | | |
| 33 | | | Cultural and Historic Exhibition | | x | | | | | | | | | | | | | | | | | | | | | | | | |
| 34 | | | | | x | | | | | | | | | | | | | | | | | | | | | | | | |
| 36 | | Energy | Energy Supply | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 37 | | | Energy Conservation and Preparedness | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 38 | | | Energy Resource Management | | | | | | | | | | | | | | | | | | | | | | | | | | |

Services Modes Support Resource Mgt FSA Lines Internal of Business

Unknown Zone