

Methodology for Process Improvement and SOA: A Symbiosis

Standardized methodologies deliver key components required to implement Service Oriented Architectures, and in turn, SOA enables controls that help enforce, measure and manage the implementation of these standards

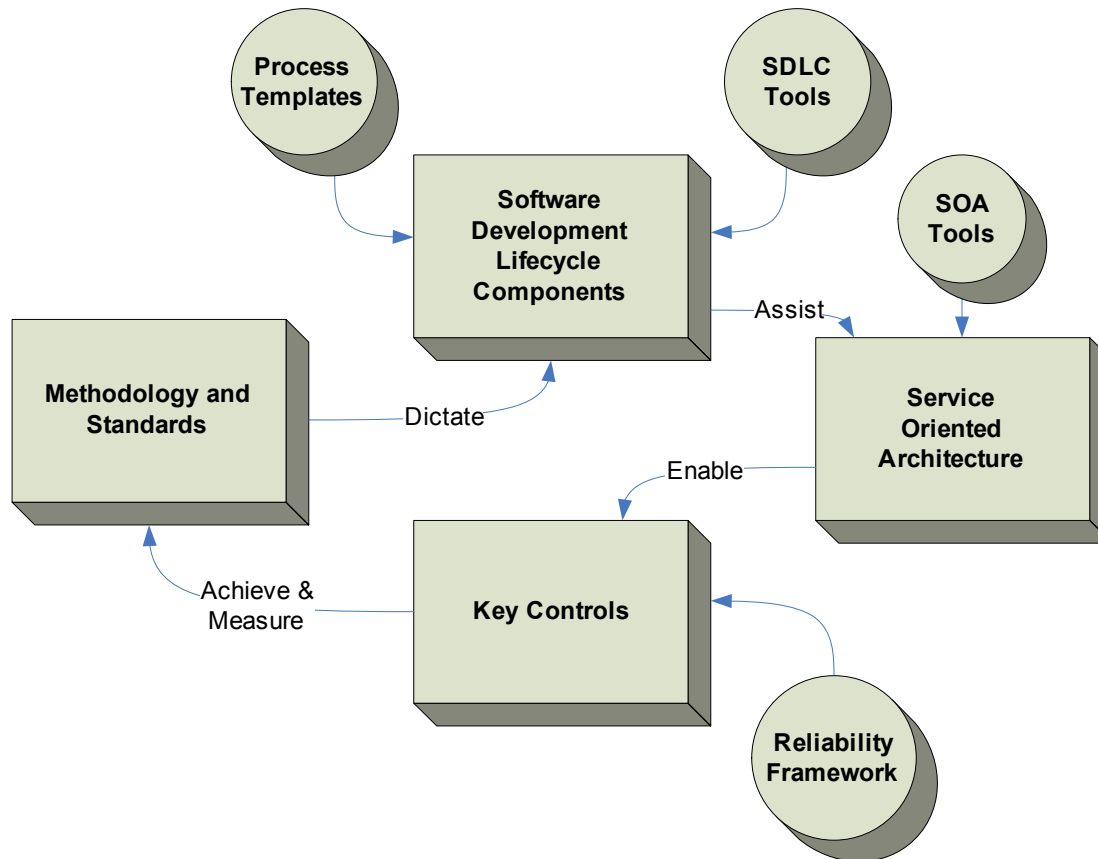


Agenda

- Symbiosis
- Standards Overview
- SDLCM Components
- A High-Level SOA Blue Print
- A Service Oriented Architecture
- Controls and Metrics
- Benefits
- Q & A

Symbiosis

Symbiosis between Methodology & SOA





Symbiosis

- Aspects of standards such as ISO-12207, ITIL and COBIT generate artifacts and capabilities that assist in the implementation of Service Oriented Architectures
- Service Oriented Architectures, supported by these capabilities, provide controls and feature-sets that help achieve and implement these standards
- Their relationship is symbiotic

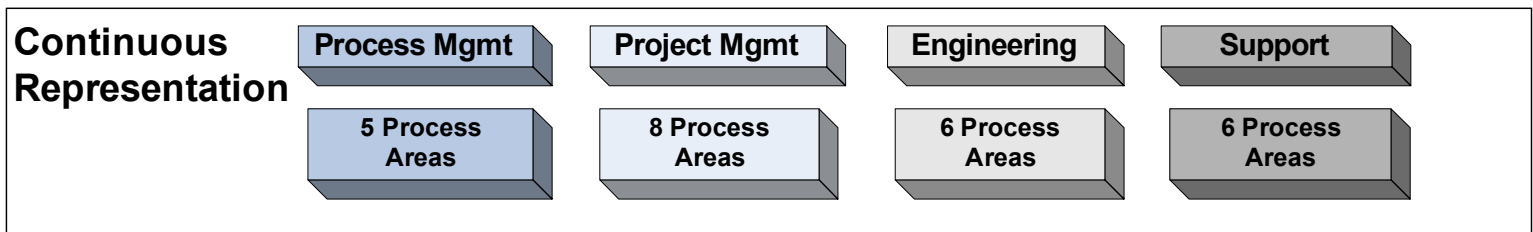


Standards Overview

- SEI CMMI v1.1
- Software Development Lifecycle Management - ISO/IEC-12207:1995
- Common Objectives for Business and IT - COBIT v3.2
- IT Infrastructure Library - ITIL-2
- Architectural Description of Software-Intensive Systems - IEEE-1471:2000 (e.g., 4+1 Views)

Standards Overview

SEI-CMMI



- Organizational Process Focus
- Organizational Process Definition
- Organizational Training
- Organizational Process Performance
- Organizational Innovation and Deployment

- Project Planning
- Project Monitoring and Control
- Supplier Agreement Management
- Integrated Project Management
- Risk Management
- Integrated Teaming
- Integrated Supplier Management
- Quantitative Project Management

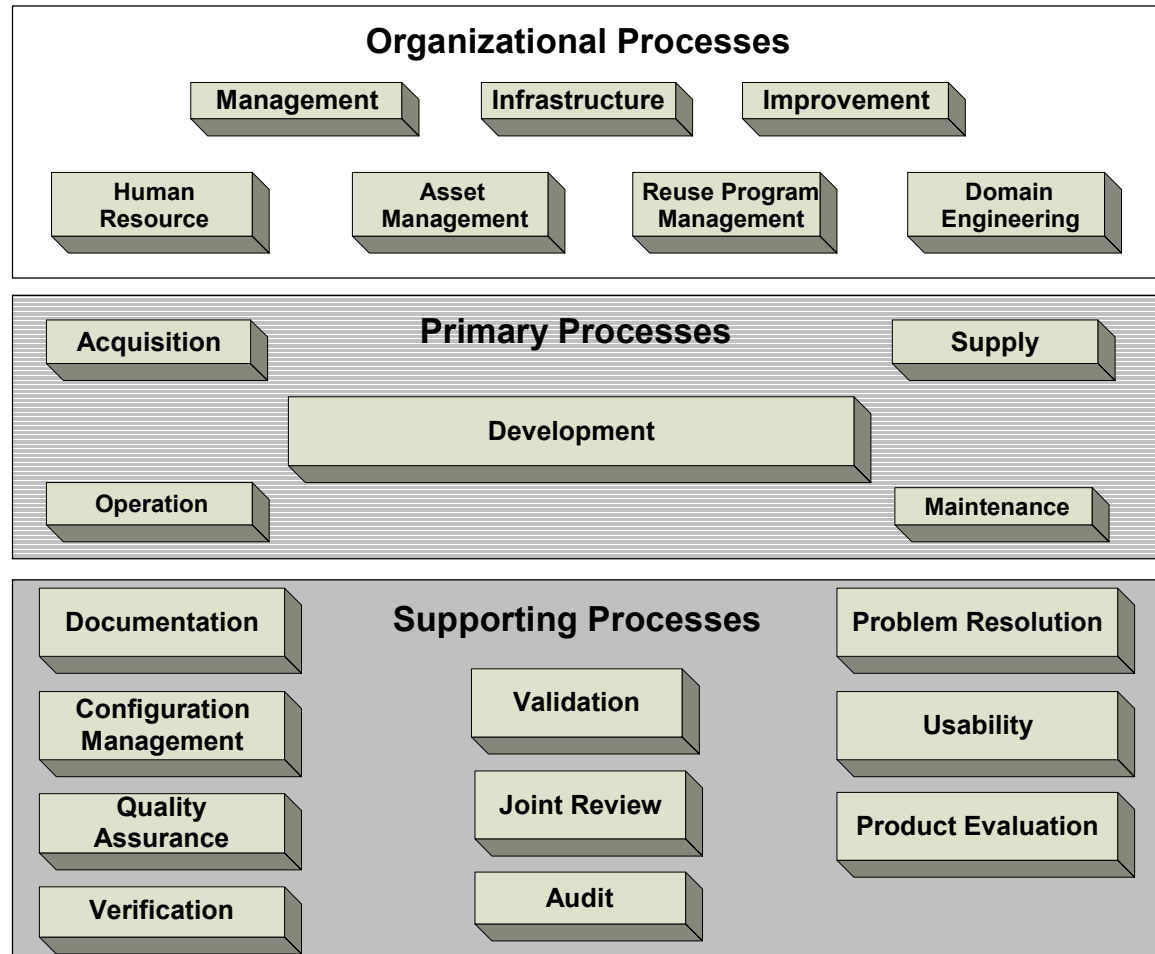
- Requirements Management
- Requirements Development
- Technical Solutions
- Product Integration
- Verification
- Validation

- Configuration Management
- Process and Product Quality Assurance
- Measurement and Analysis
- Decision Analysis and Resolution
- Organizational Environment for Integration
- Causal Analysis and Resolution

Source : SEI - CMU, USA

Standards Overview

ISO-12207:1995

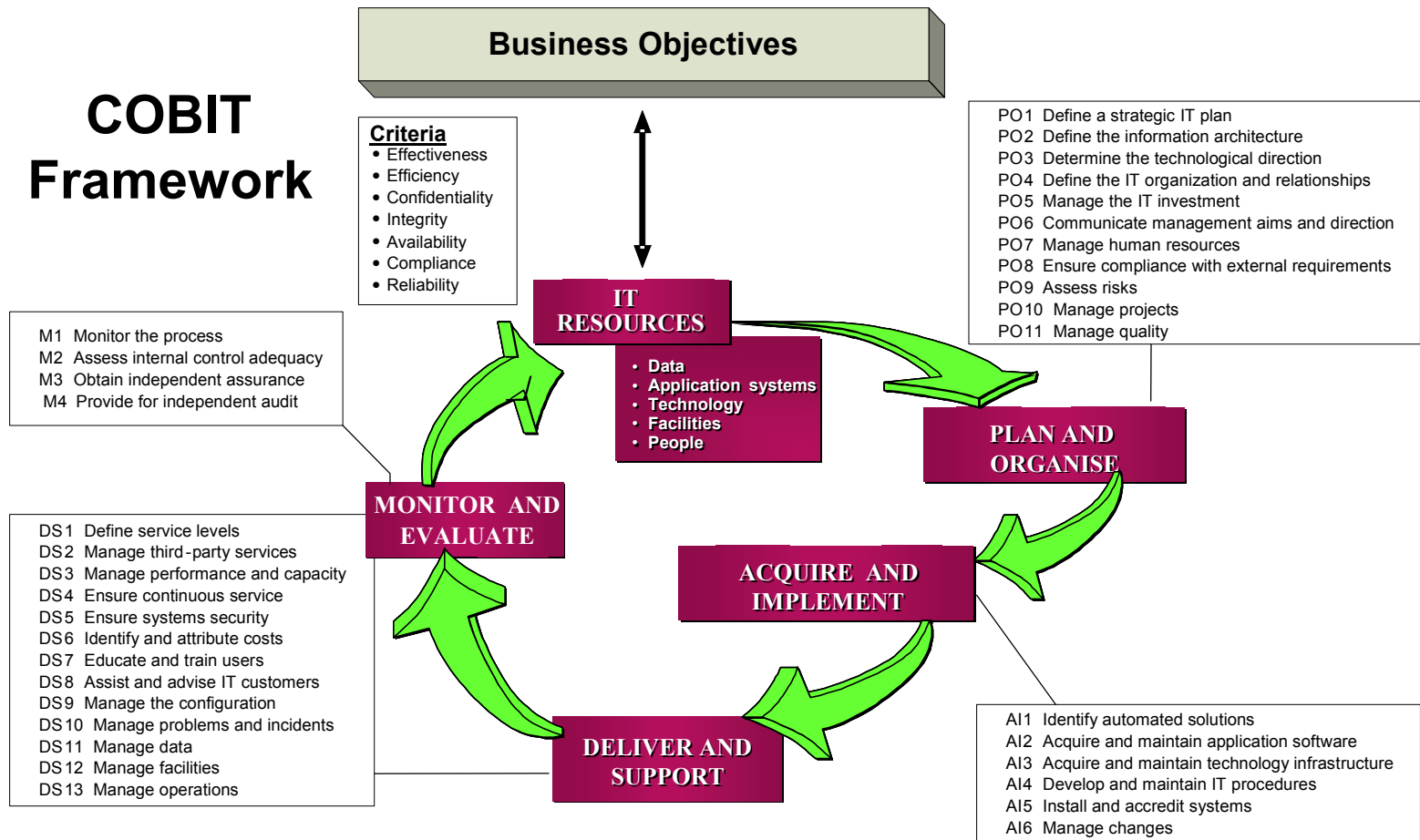


Source: ISO/IEC

Standards Overview

COBIT Framework

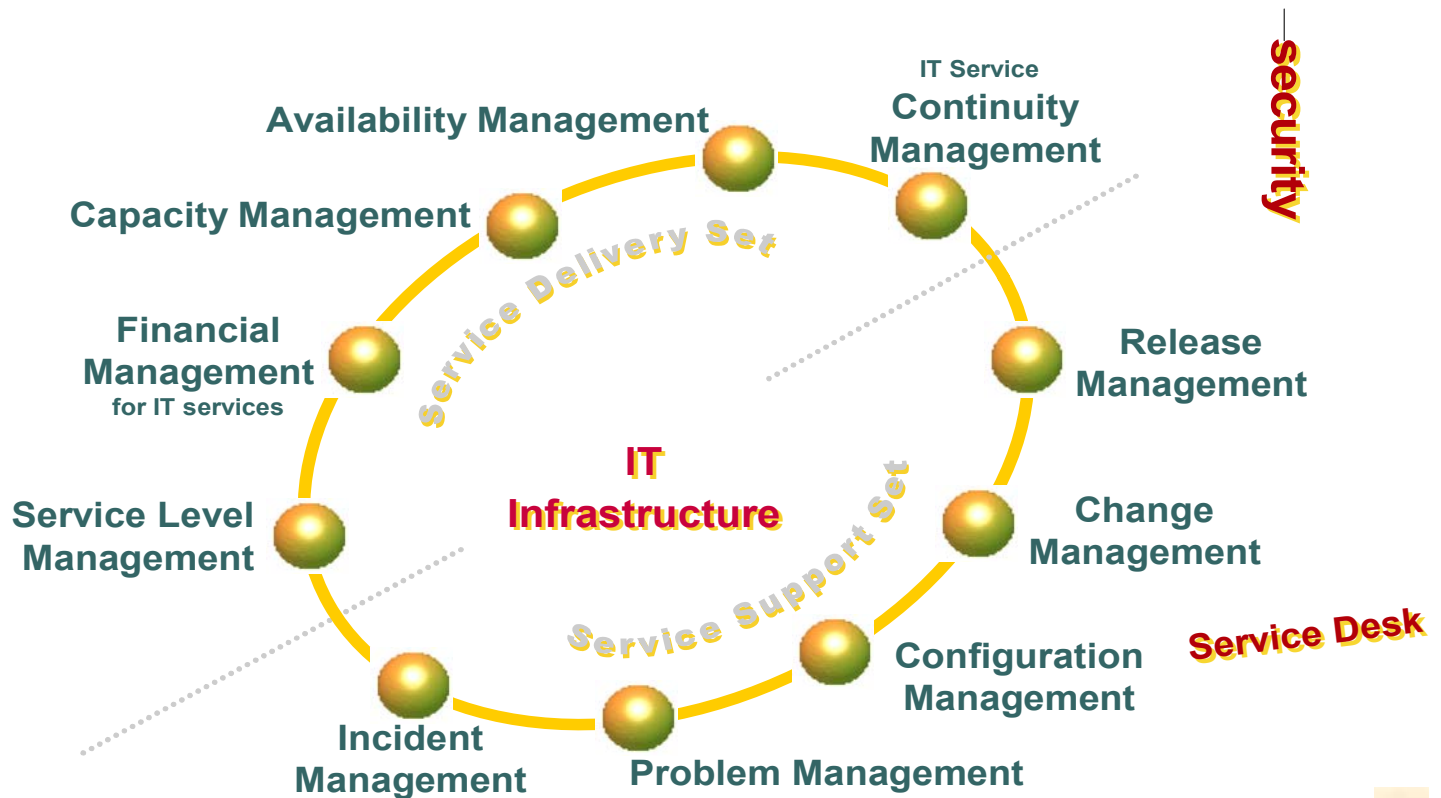
COBIT Framework



Source : IT Governance Institute USA

Standards Overview

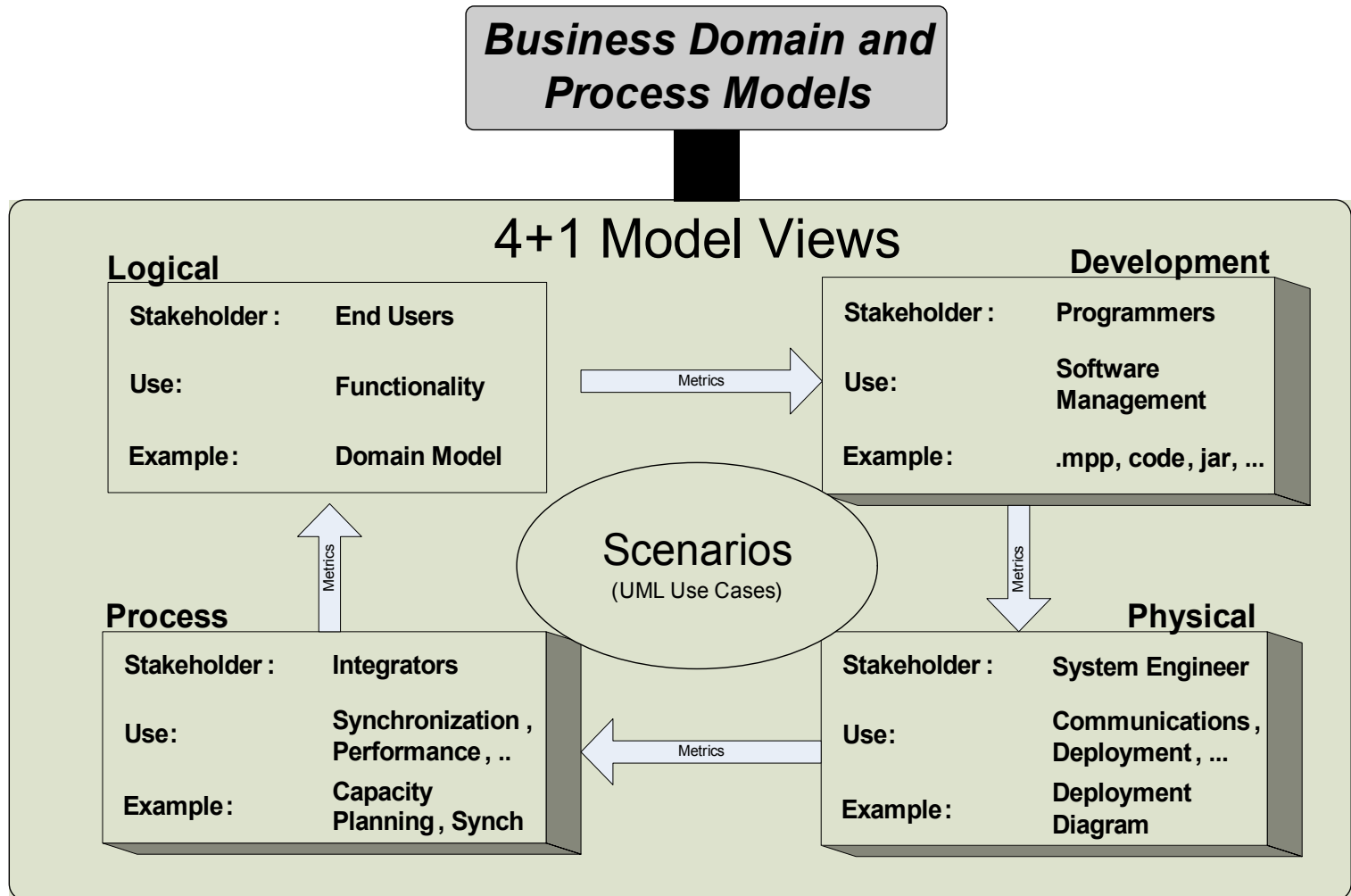
ITIL Service Management



Source : OGC, UK

Standards Overview

4+1 Views



SDLCM Components

- Facts about SOA:
 - SOA can start small
 - SOA is successful when aligned with business objectives
 - SOA needs a holistic approach with respect to:
 - Organization
 - Management
 - Infrastructure
 - Human resources
 - Knowledge and experience helps in selecting the right set of technologies for a given environment
- Successful SOA implementations that demonstrate measurable ROI require key SDLCM components

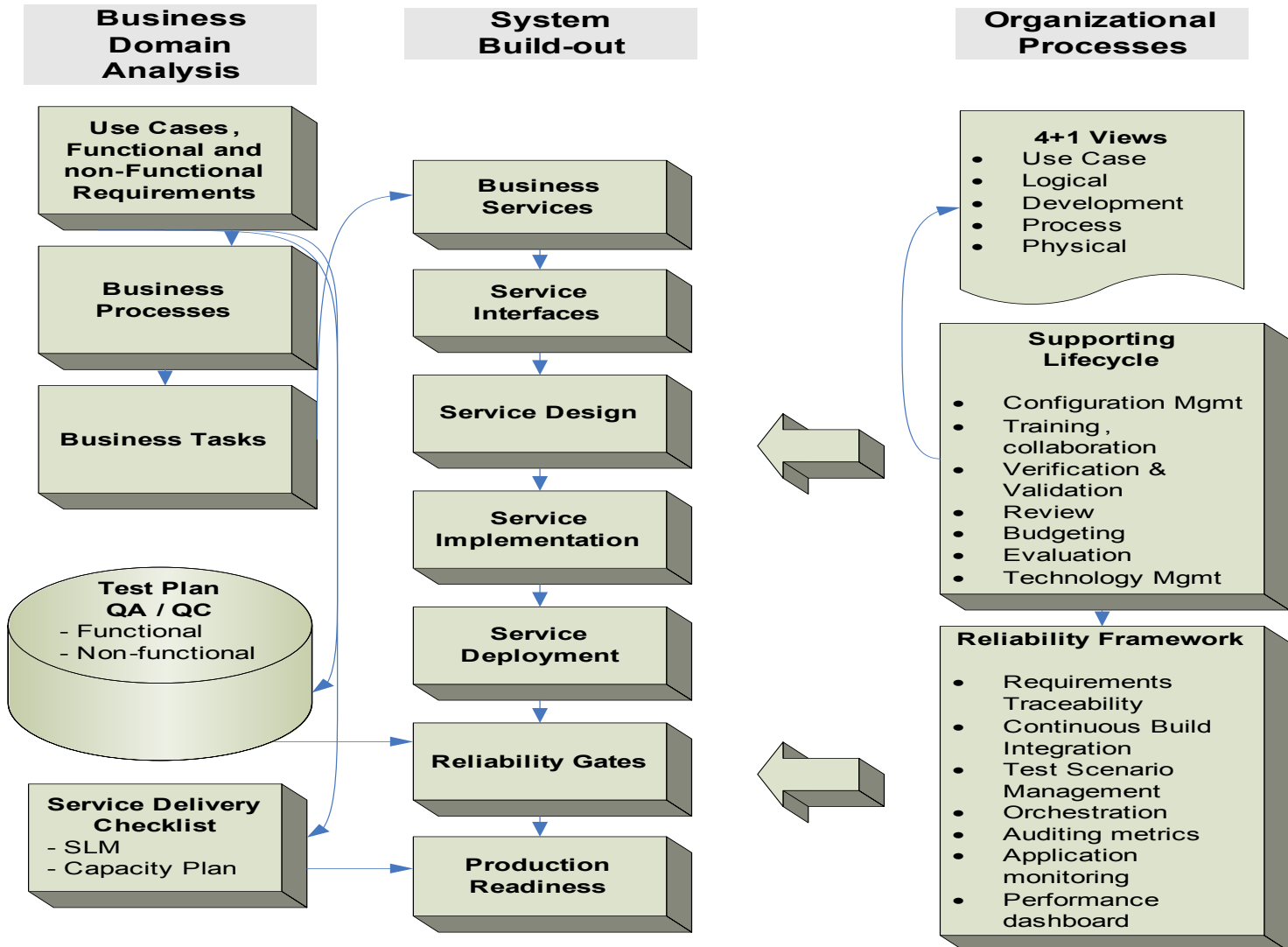
SDLCM Components Delivered By These Methodologies For The Implementation Of SOA – Part 1

- Requirements - Use Case View and Non-functional Requirements, Definition of Roles, Rights and Entitlements
 - ISO-12207 Acquisition
 - CMMI Engg Requirements management, Engg Requirements development
- Business Domain Analysis and Model
 - IEEE-1471 Use case view
- Definition of Service Level Metrics
 - COBIT DS Define service levels
- Ownership and Chargeback Mechanisms
 - COBIT DS Identify and attribute costs
 - ITIL Financial management
- Organizational Structure, Planning, PMO and Reporting Process
 - ISO-12207 Management
 - COBIT PO Define the strategic IT plan, Define the IT organization and relationships, PO Manage projects
 - ITIL Release management
 - CMMI ProjM Project planning

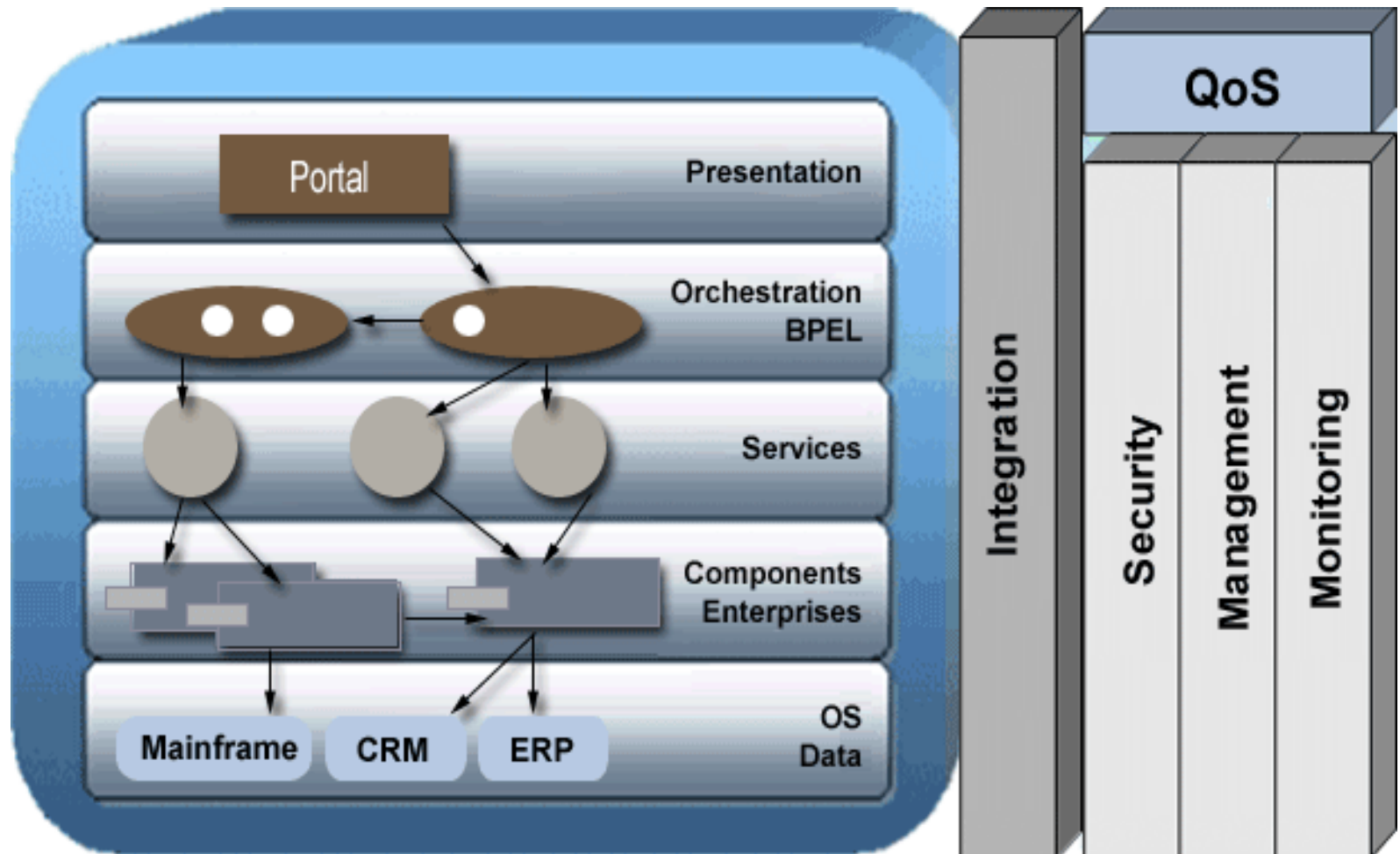
SDLCM Components Delivered By These Methodologies For The Implementation Of SOA – Part 2

- Training and Human Resource
 - ISO-12207 Management, Human resource, Documentation
 - COBIT DS Educate and train users, PO Manage human resources
 - CMMI ProcM Organizational training
- Change Management
 - ISO-12207 Configuration management, AI Manage changes, DS Manage the configuration
 - ITIL Change management, configuration management
- Environmental Constraints
 - ISO-12207 Infrastructure and asset management
 - COBIT PO Manage IT investment, DS Manage facilities
- Technology Management
 - ISO-12207 Domain Engineering, Reuse program management

High Level SOA Blue Print



High Level SOA Blue Print



Controls And Metrics

- Facts about SOA:
 - SOA is meaningful only when the services are accompanied by SLAs
 - Abstraction enables metrics to be managed at levels of granularity aligned with business processes/entities
 - Models such as 4+1 deliver accountability through every stage of the lifecycle
 - Services Reliability Framework ensures reliability as code, environment and business needs continue to evolve
- The tools and frameworks associated with SOA help enforce, manage, monitor and measure important controls required by the Standards

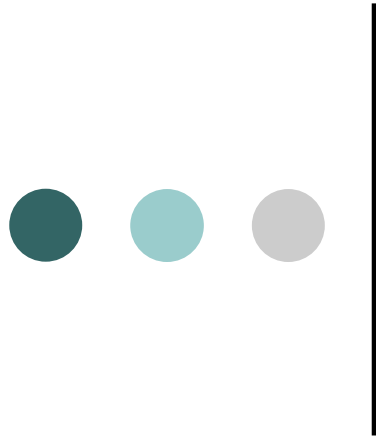
Controls And Metrics

- Artifacts for Ensuring Requirements Traceability
 - ISO-12207 Verification and Validation
 - ISO-12207 Verification and validation, Joint Review, Audit
 - COBIT M Obtain independent assurance
 - CMMI Engg Verification and validation
- Reliability Model
 - COBIT PO Manage quality, DS Manage problems and incidents, PO Assess risks, M Monitor the process, DS Ensure continuous service
 - ITIL Continuity management, Availability management, Service level management, Incident management, Problem management
 - CMMI ProjM Risk management
- Capacity Management
 - COBIT DS Manage performance and capacity
 - ITIL Capacity management
- Security Model
 - COBIT DS Ensure systems security
- Information Architecture
 - COBIT PO Define the information architecture
- Measurement
 - Charge back models
 - Return on investment
 - Service levels, reliability, scalability and security
 - Audit trails and accountability



Benefits

- Facilitates process optimization:
 - Improve resource utilization
 - Integrate central processes
 - Promote reuse and eliminate redundancy and duplication
 - Quicker root cause analysis
- Justify cost of service and service quality through metrics
- Predictable and reliable Software Management
- Assists compliance with statutory regulations such as:
 - HIPAA in the Pharmaceutical and Pharmacy Benefits Management industries
 - US FDA 21CFR Part 11 and GxP in the Pharmaceutical industry
 - Sarbanes Oxley and COSO controls in a number of verticals including Financial Services, Banking, Manufacturing and Insurance industries
 - NCPDP 5.x and RxHub requirements in Claims processing
 - SEC regulations in the Financial Services industry



Q & A

Thank You