A Consolidation of Methodologies

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The objectives of Integrating Methodologies:

? Build awareness of the Implementation and Management aspects of an Architecture

? Leverage the core concepts/ideas from different initiatives

? Align -best of breed methodologies

? Identify flow between an Enterprise's Business/Information Architecture, Application Architecture, Services Architecture, Implementation/Deployment Architecture and Management Architecture

Agenda

- Overview of OMG's Model Driven Architecture & its focus on an Integrated Information Architecture (Business/Data Models)
- Overview of RUP/UML based Iterative Development Methodology & its focus on Application Architectures
- Overview of The Open Group's Architecture Framework/Architecture Development Methodology & its focus on Services Architecture
- Overview of OGC's Prince 2 as a methodology that focuses on the implementation of a Physical/Deployment Architecture
- Overview of OGC's IT Infrastructure Library & its focus on the Management of a deployed Architecture
- Alignment of Methodologies + Architectures with AIM
- Q & A
- Wrap-up and Closure

# Object Management Group's Model Driven Architectures
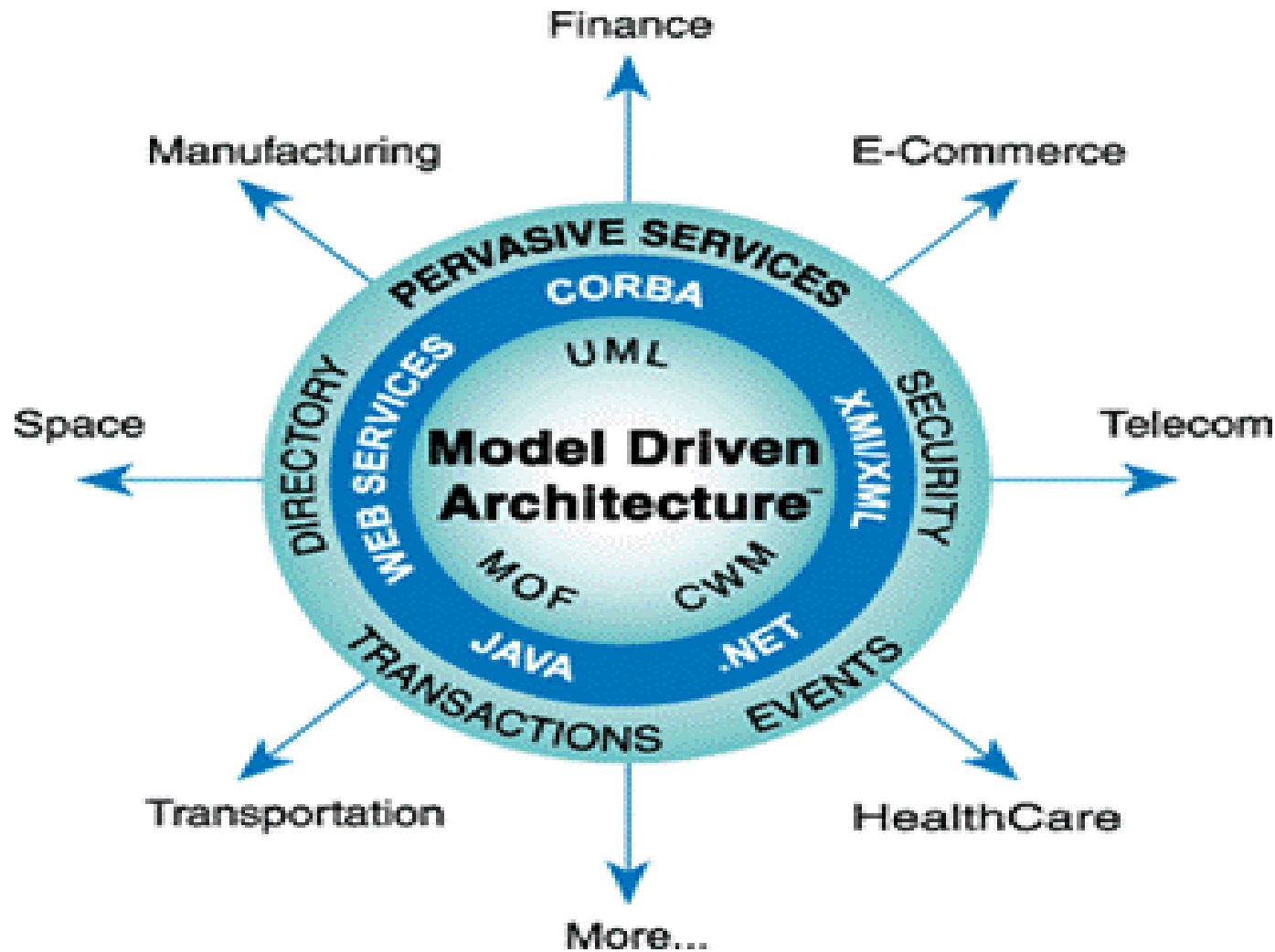
Object Management Group's Model Driven Architectures

- ? MDA suite of standards include Unified Modeling Language (UML); Meta-Object Facilit (MOF); XML Meta-Data Interchange (XMI); and Common Warehouse Meta-model (CWM)
- ? Applying MDA to Enterprise Computing by David Frankel (excellent resource) – move from Machine Centric Computing to Application Centric Computing to Enterprise Centric Computing
- ? http://www.omg.org/mda Is also a very usefull resource
- ? Sample implementation of MDA's tools - http://www.metamatrix.com (that includes a MOF, XMI and CWM)
- ? Core value proposition – addresses Enterprise Information Integration with a meta repository of all the data/business models in an enterprise

Object Management Group's Model Driven Architectures

- Overview of OMG's Model Driven Architecture & its focus on an Integrated Information Architecture (Business Models)
- MDA aids in the development of Conceptual Business Models and Data Models
- Model Driven implies that its typically not platform specific and maintenance over time is possible
- Can scale from one focus area (customer focused, employee focussed, supplier focussed) to the entire enterprise
- Industry specific/domain specific modeling tools/templates can be developed/reused
- Forms the basis for building applications (based on OO technologies) and services

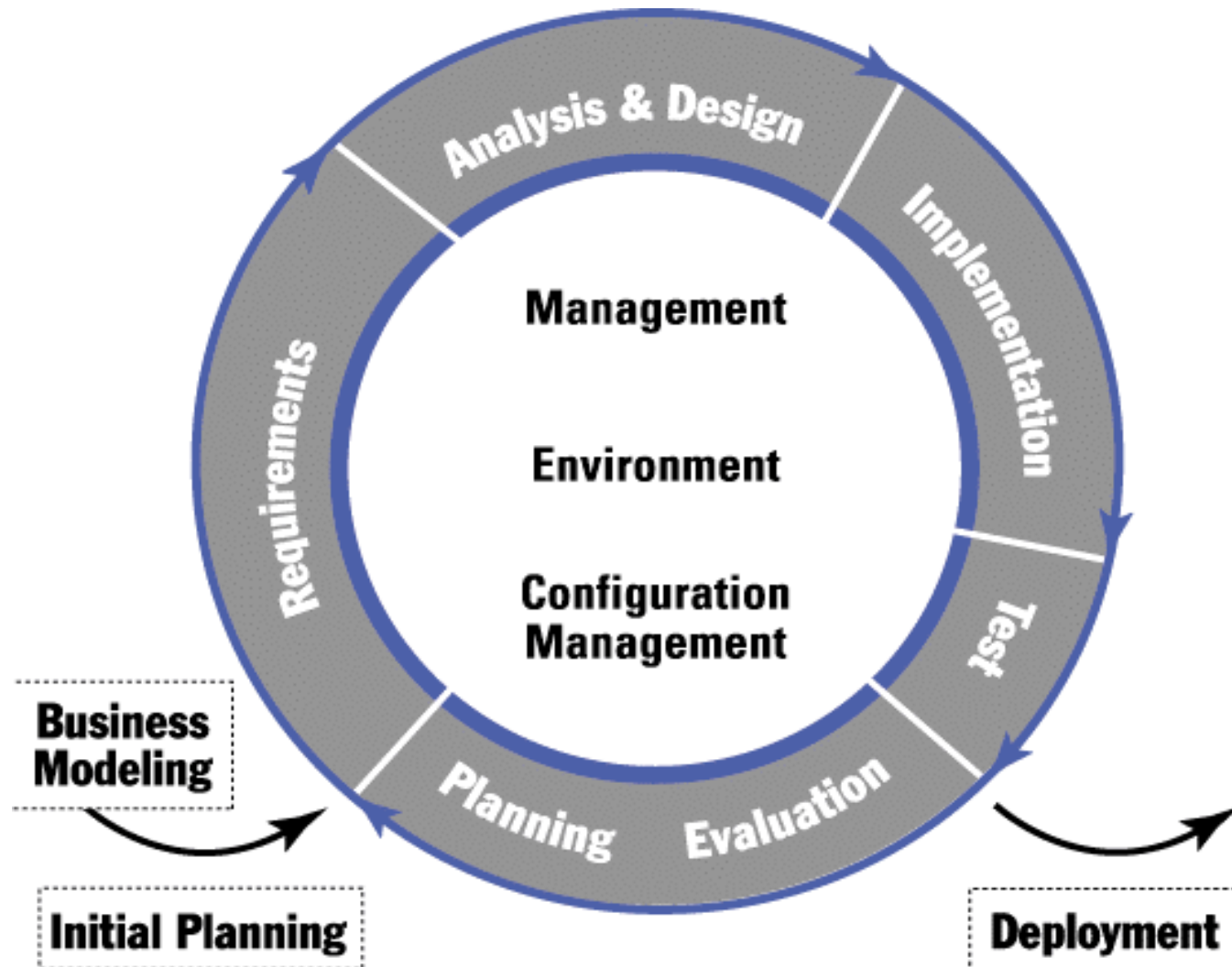# Rationale's (IBM)Unified Process & Iterative Development Architectures
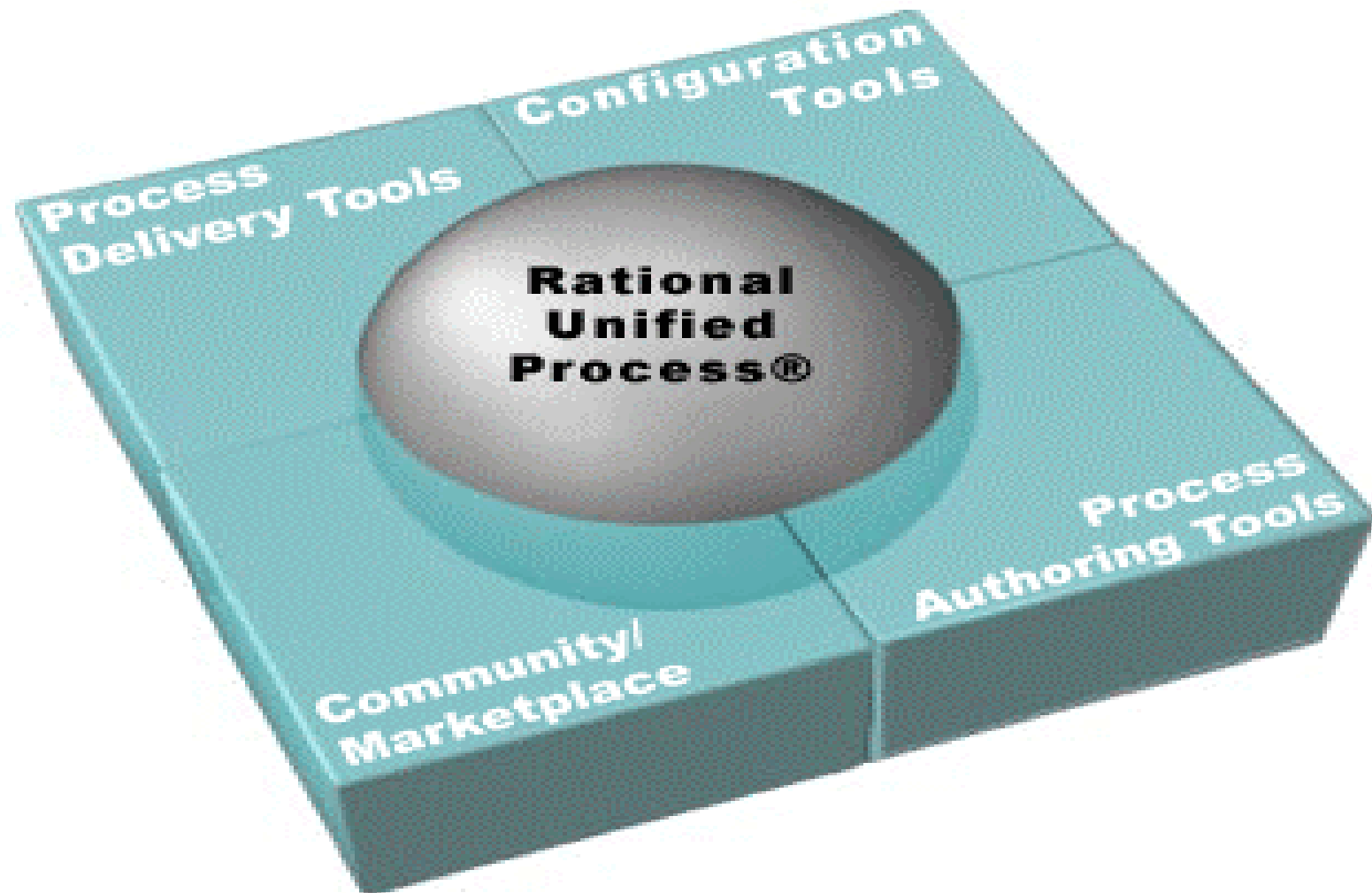
# Rationale's (IBM)Unified Process & Iterative Development Architectures

? Overview of RUP/UML based Iterative Development Methodology & its focus on Application Architectures

? RUP and UML is extensively leveraged for the development of applications in the OO world (java/c#)

? Its an iterative model where the application/s developed are extensible in nature (add-on functionality/features)

? It aids in the definition, description and specification of interfaces between services

? It forms the basis for developing business services (on top of an application infrastructure stack that offers a set of basic/foundation services – App/Web/Dir/DB/Portal/Id/Int Servers)

? Supported by a set of Process Authoring Tools, Process Delivery Tools, Configuration Tools.

? Notion of developing iteratively (J2EE & .NET)

? Best practices, workflows and artefacts

Rationale's (IBM)Unified Process & Iterative Development Architectures

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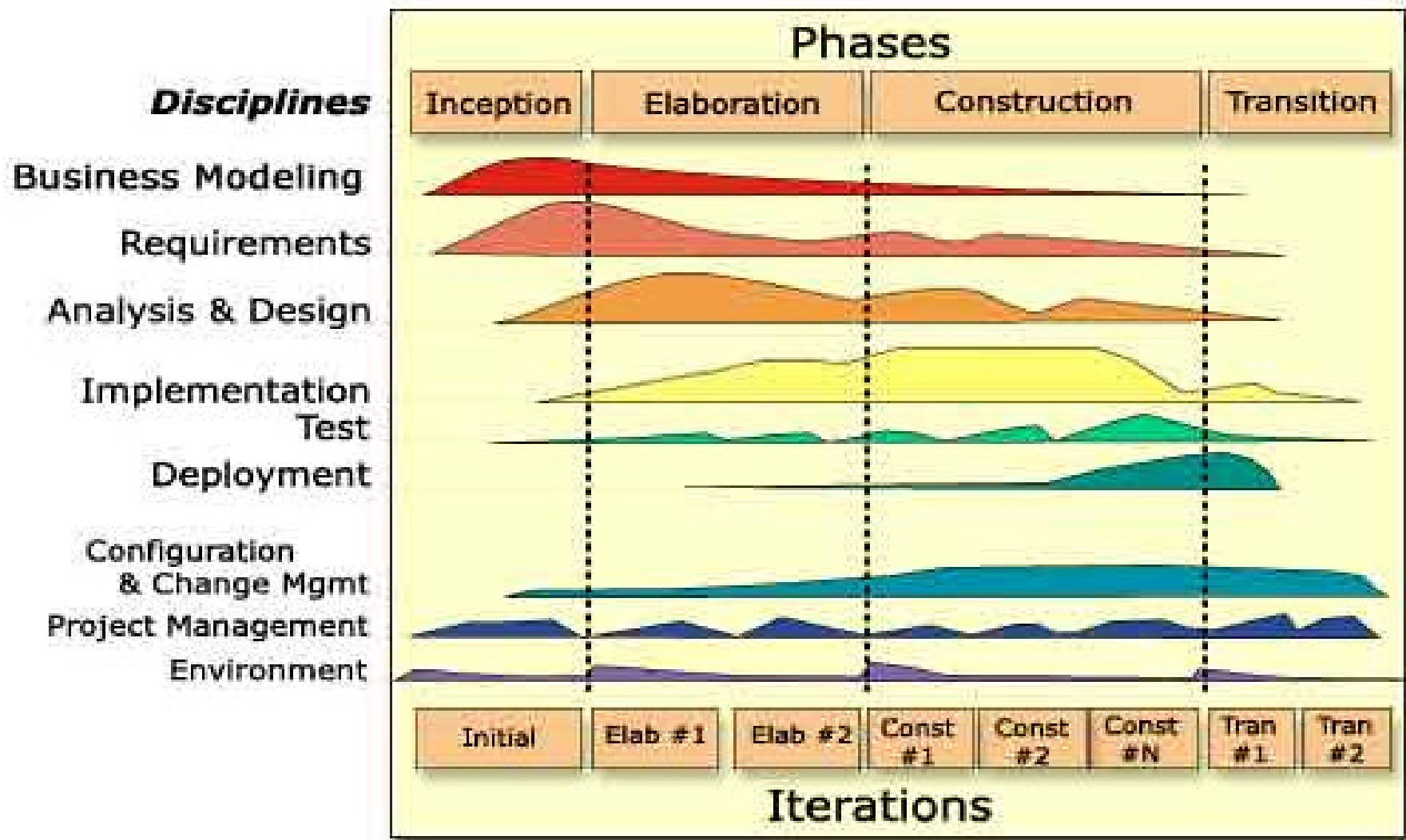
The Open Group's Architecture Framework & Dev'pt Methodology

The Iron Age (60's to early 90's) -*Mainframe –Separation of a purely software architectural approach and the architecture of the reminder of the infrastructure and environment.*

 The Renaissance (70's to 2000) - *Client Server/UNIX – Architecture by Specifications – Bodies such as IEEE and ISO were the first to begin to describe an instance of a technology landscape*

The Industrial Revolution (80's to now) - *PC and the Internet explosion – Architecture by Products*

 Galactic Enlightenment (03/04 and beyond maybe) - *realization of "the network is the computer"- The future – ":basic infrastructure consolidation (STAR): networks, operating systems and software architectures will merge into a small number of key technologies all necessary to support "INTER-OPERABLE WEB APPLICATIONS"*

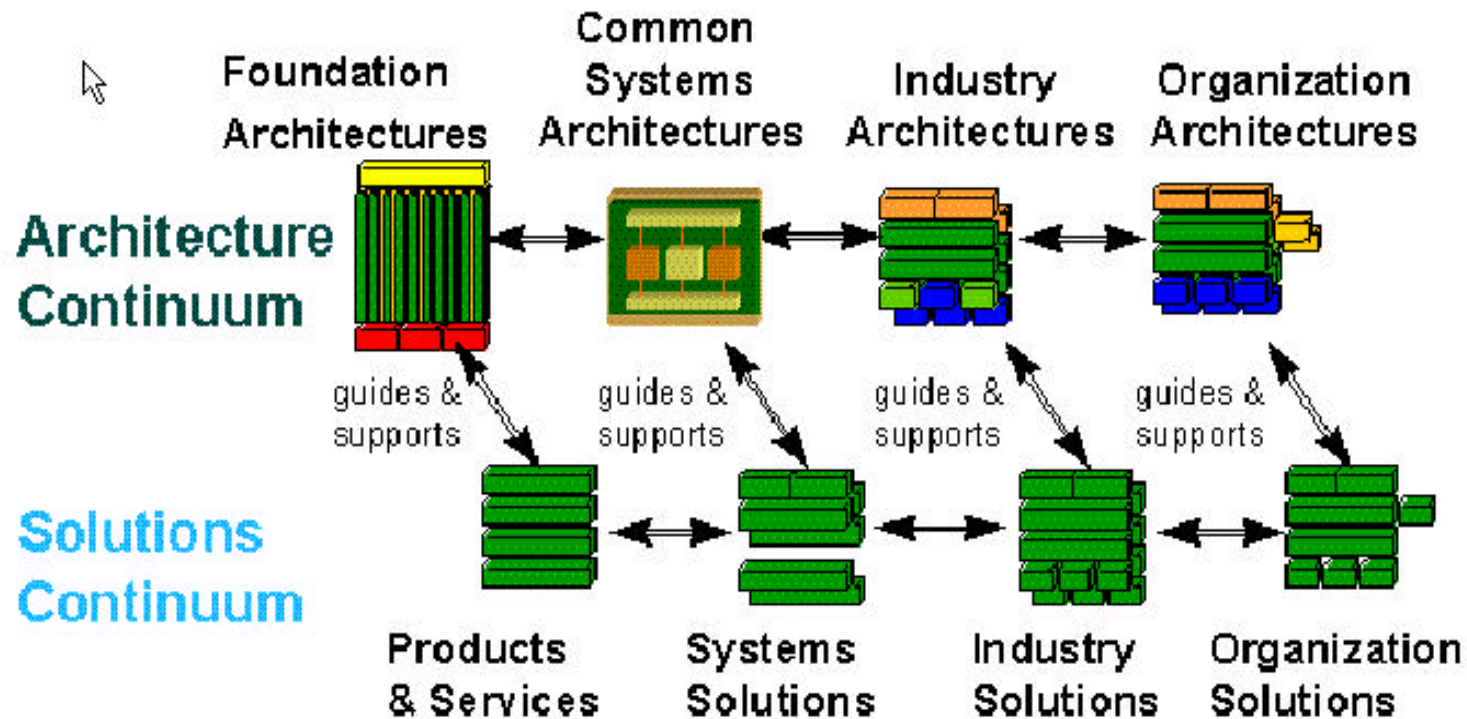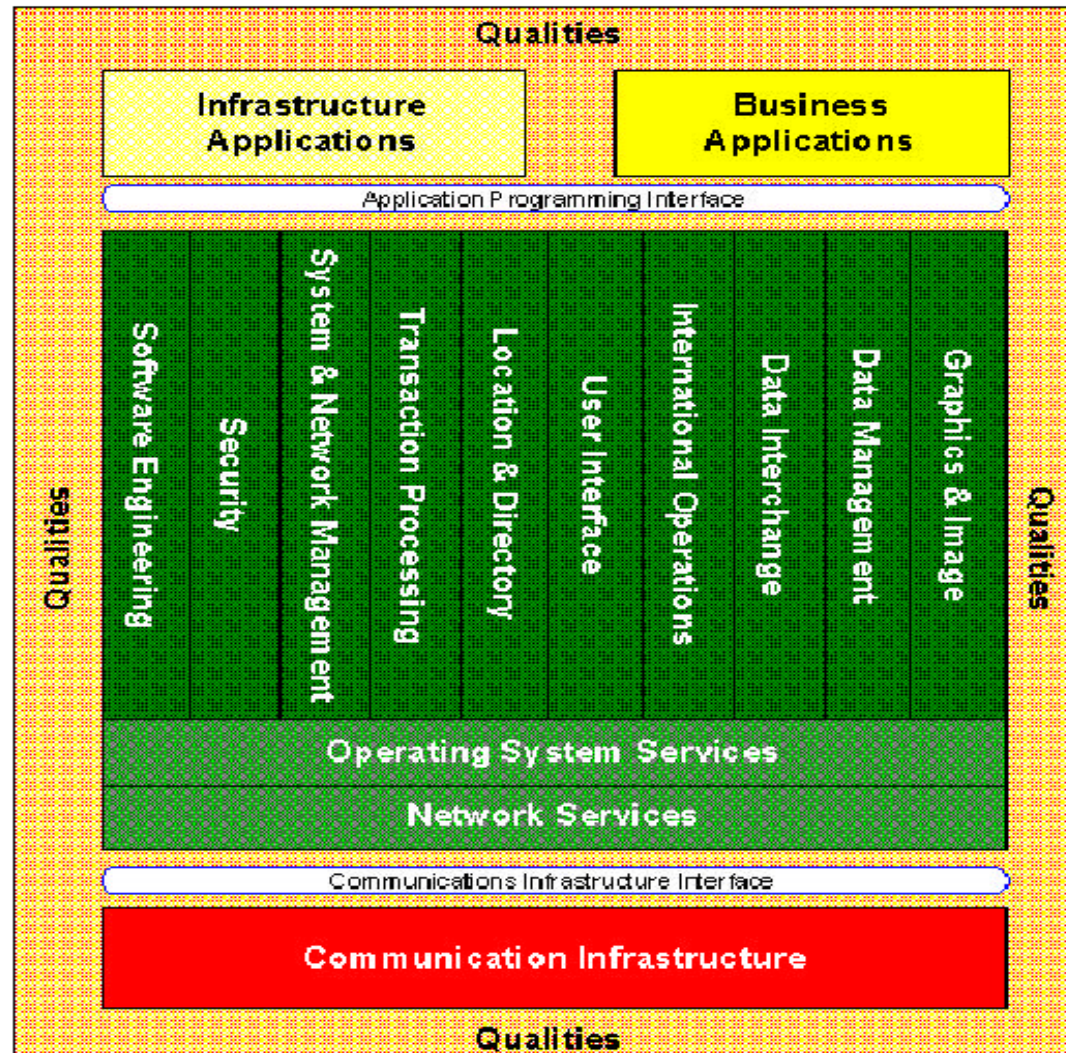# The Open Group's Architecture Framework & Dev'pt Methodology

Figure 4: The Enterprise Continuum

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The Open Group's Architecture Framework & Dev'pt Methodology

The Open Group's Architecture Framework & Dev'pt Methodology

- ? Overview of The Open Group's Architecture Framework/Architecture Development Methodology & its focus on Services Architecture
- ? Col Perks Book on Enterprise IT Architectures
- ? TOGAF + ADM + TRM + IIIRM more helps with the build up of a Technical Architecture
- ? It defines, describes and specifies the basic foundation services that are needed to build business services in an Enterprises Technical Architecture
- ? It has a comprehensive set of Services Taxonomy (including System Services, Storage/management services, Security Services, etc.).
- ? It acts as glue between the logical and the physical Architectures

# The Open Group's Architecture Framework & Dev'pt Methodology

? Phase 1: Initiation and Framework

? Phase 2: Baseline Description

? Phase 3: Target Architecture

? Phase 4: Opportunities and Solutions

? Phase 5: Migration Planning

? Phase 6: Implementation

? Phase 7: Architecture Maintenance

OGC's PRINCE 2 Implementation Methodology

- Overview of OGC's Prince 2 as a methodology that focuses on the implementation of a Logical and Physical/Deployment Architectures
- PRINCE stands for Projects IN Controlled Environments
- Prince 2 leverages the best practices around project/program management processes
- Addresses risk mitigation techniques
- Logistics Issues
- People and Resource concerns
- Expectations Management
- Ensures successful deployments for Large Scale multi-vendor deployment Architectures (including network, server and storage elements)
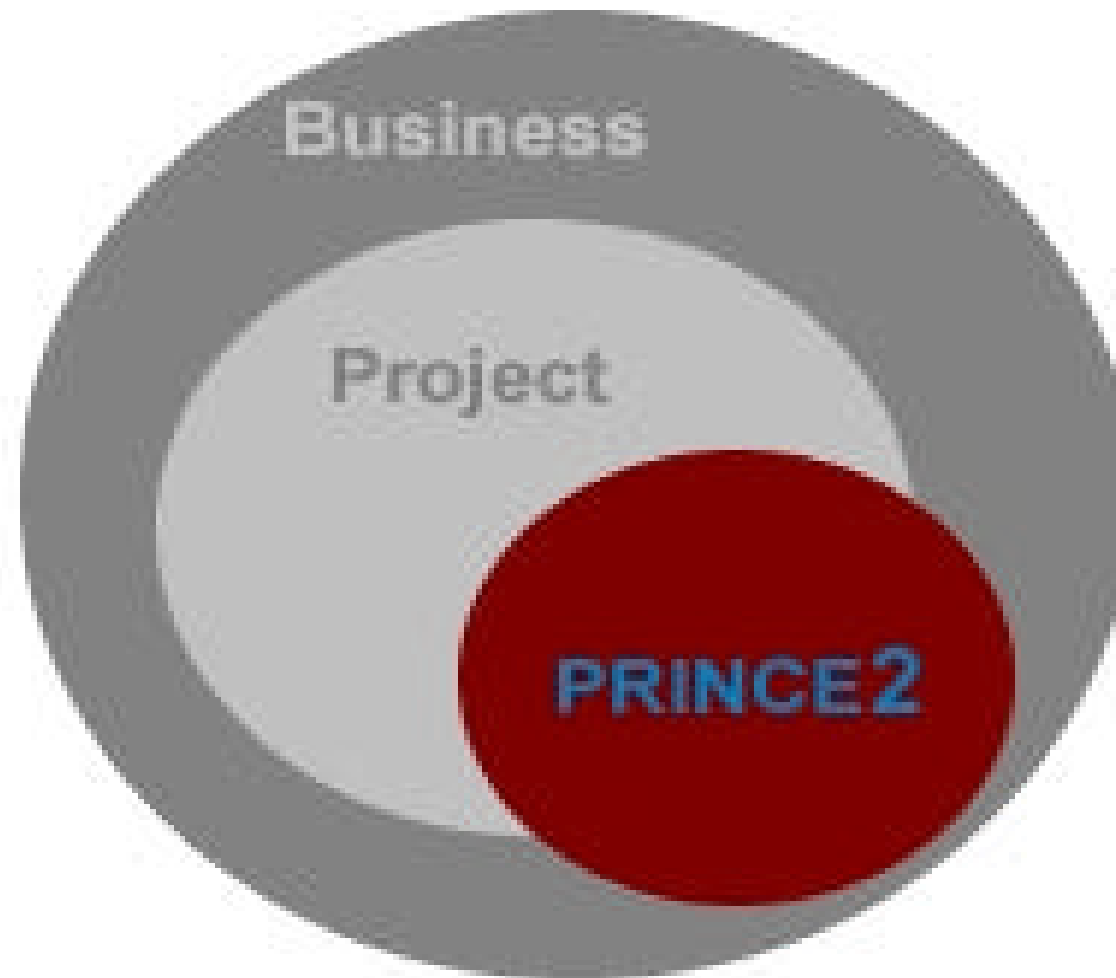- Leverages prior efforts and blends logical architecture with a real deployment architecture

OGC's PRINCE 2 Implementation Methodology
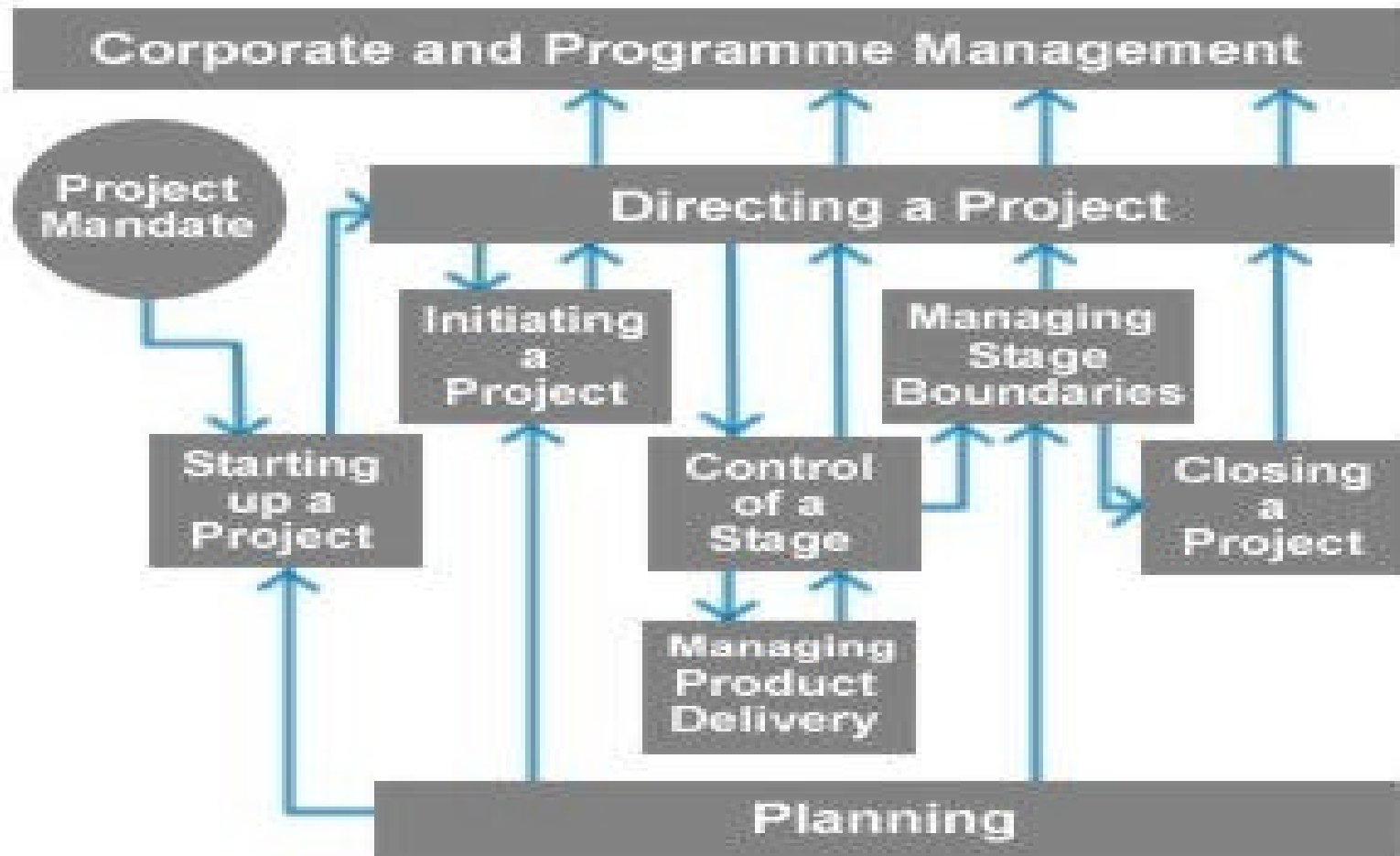
PRINCE 2 Process Model

OGC's PRINCE 2 Implementation Methodology

Scope of PRINCE 2

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OGC's ITIL as a Operations Management Methodology

- Overview of OGC's IT Infrastructure Library & its focus on the Management of a deployed Architecture
- Post deployment management of operations (sustenance of the architecture)
- Clearly defined SLA's & OLA's
- Clearly defined disciplines – change management, problem management, incidence management, etc.
- Addresses the optimisation of an architecture and infrastructure on a continuous basis
- Management of Business Services from the Beginning of Life to End-of Life

What is AIM?
(Architect, Implement, Manage)

? AIM is cluster of methodologies associated with
  – developing
  – deploying
  – maintaining
  open Architectures for delivering customer solutions

? A = Architect, I = Implement and M = Management

? A = MDA+TOGAF+RUP, I=Prince 2 and M=ITIL

Methodologies (& Techniques)

Methodology/ Techniques	Data Models	Meta Models	Business Models	Technical Repository	Control Mechanisms	Management Tools
OMG/MDA	ERD/Class Diagrams	MOF, XMI, CWM	UML	N/A	N/A	N/A
RUP/UML	ERD/Class Diagrams	XDE, Modeler	UML (as an input)	N/A	Process Delivery Tools	Configuration Tools
TOGAF/ADM	N/A	ADML	IIIRM	TRM SIB	N/A	N/A
OGC/PRINCE	N/A	N/A	N/A	N/A	Artifact Driven	Change Mangement Tools
OGC/ITIL	N/A	N/A	N/A	N/A	OLA/SLA's	CMDB

Methodologies are expected to be:

- Scalable
- Repeatable
- Extensible
- Non-prescriptive
- Partner friendly
- Flexible
- Predictable
- Span Industry/Domain

- Customer problem focused
- Promote accountability
- Use common terminology
- Measurable
- Quality solution
- Open

Methodologies Aligned with Architectures

MDA = Enterprise Information Architecture
RUP/UML = Enterprise Application Architecture
OGAF/ADM = Enterprise Technical/Services Architecture
GC/Prince2 = Enterprise Physical/Deployment Architectur
GC/ITIL = Enterprise Operational/Management Architectur

Q & A