www.cbdiforum.com

EA Meets SOA

Best Practices and Winning Strategies

Paul Allen
Principal Consultant

Independent Guidance for
Service Architecture and Engineering

Agenda

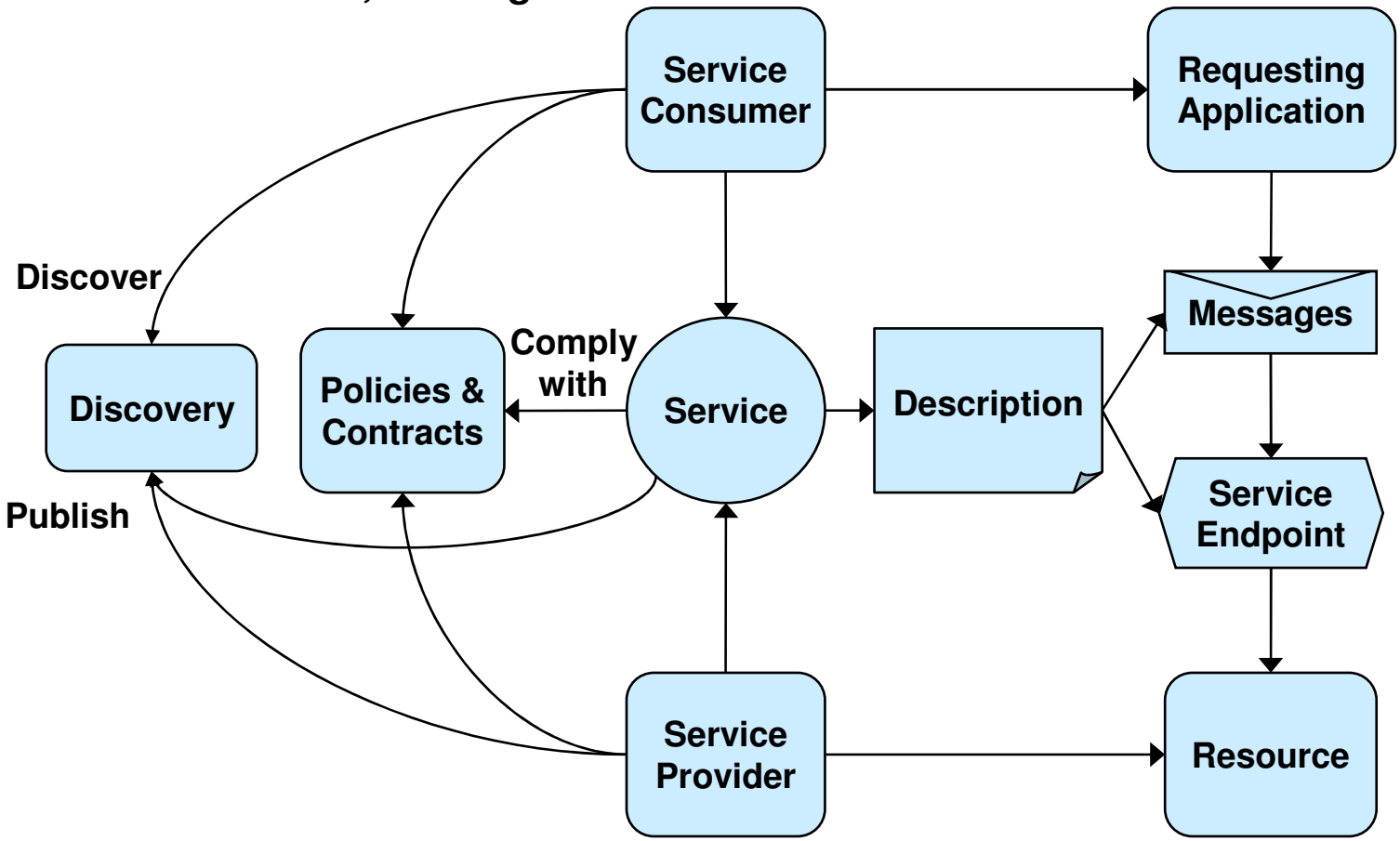
- SOA Vision and Concepts
- EA Meets SOA
- Pragmatic Progression

SOA Concepts and Vision

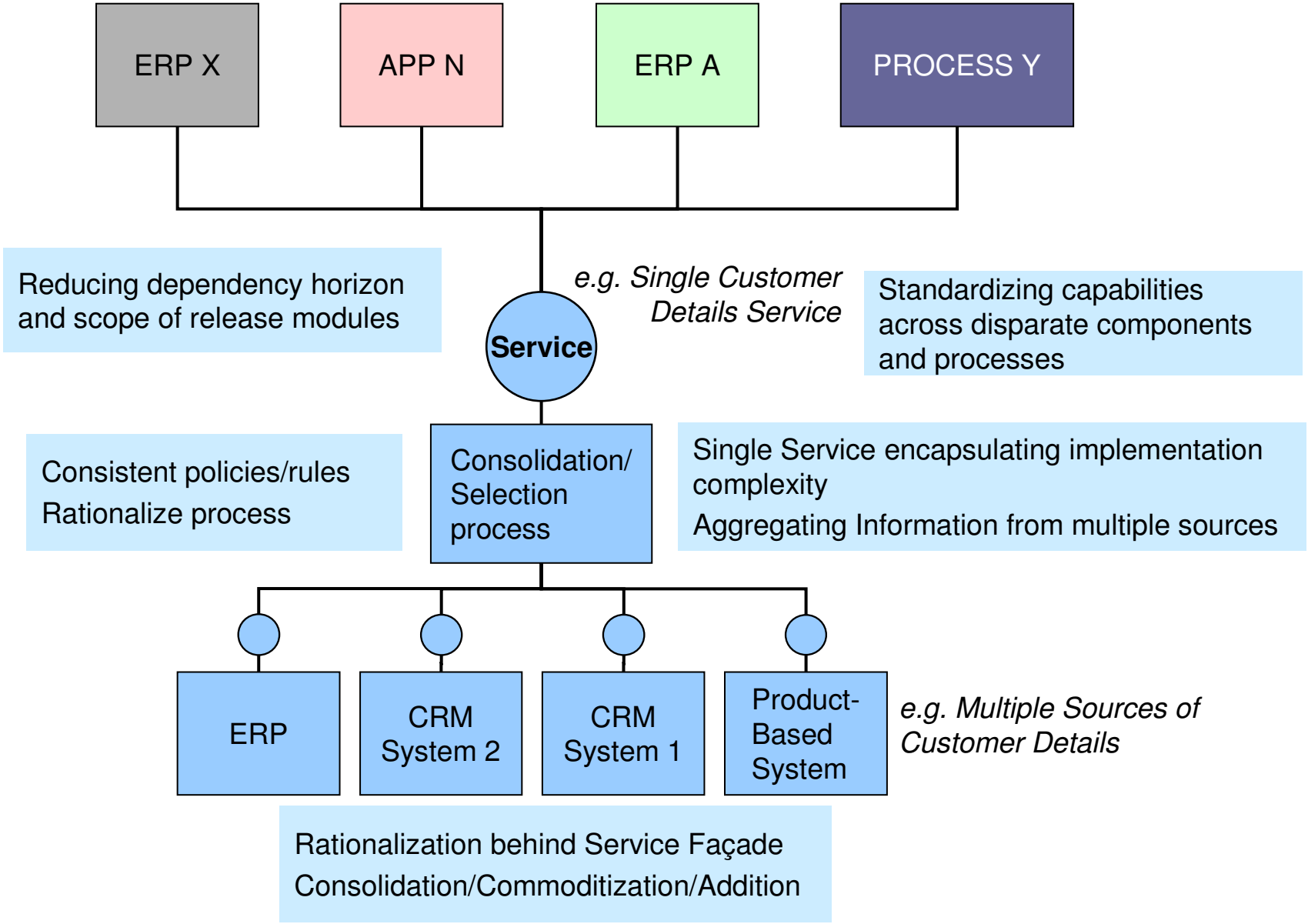
- Services Defined
- SOA as a Business Phenomenon
- Enabling Strategies

Service Defined

- A **Service** is a **capability** by which the **need** of the **Service Consumer** or **Requestor** is **satisfied** according to a **contract**
- Separate the **what** from the **how**, **who and where**
- Manage and govern through **policies** and **contracts**
- Communicate using **messages** that **share schema not technology**
- Are **discoverable,** at **design** and **run-time**



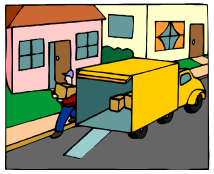
What Does This Enable?
SOA Vision I - Structural Improvement and Portfolio Rationalization



What Does This Enable?
SOA Vision II – Flexible, Federated Real-time Business Processes

Enabling a virtual federation of participants to collaborate in an end-to-end business process

Enabling reuse of Services in different solutions



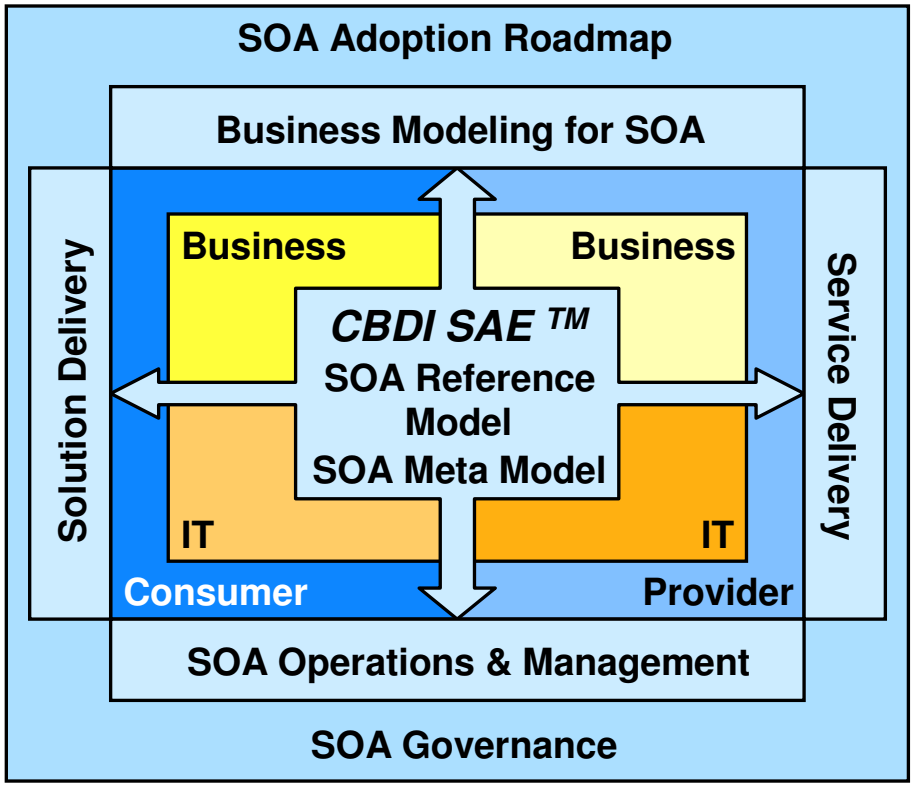
Enabling aggregation from multiple providers or flexible choice of provider

Enabling flexible use of resources
Including existing applications

CBDI-SAE™

SOA is more than infrastructure!

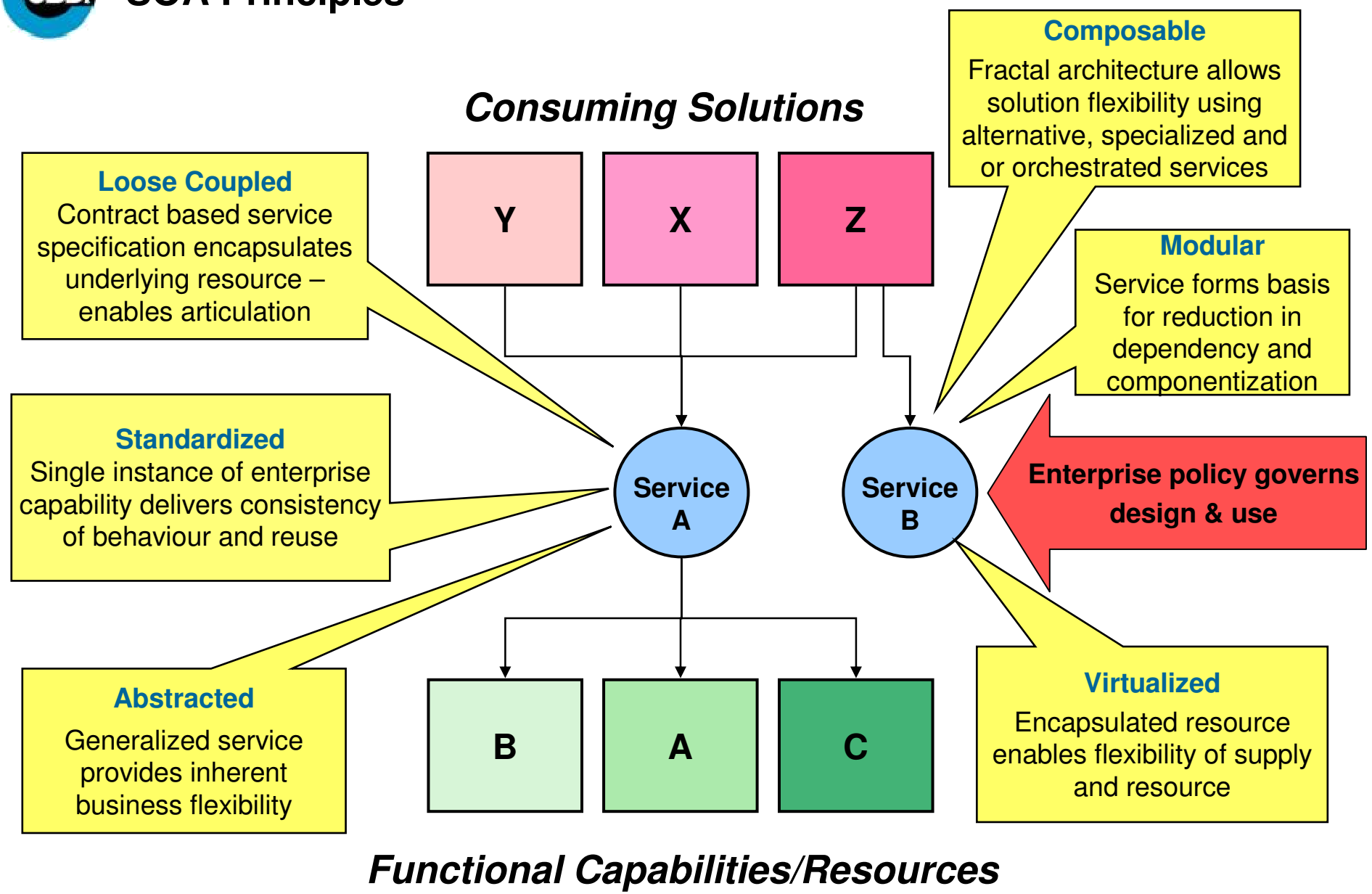
- Collection of knowledge & best practice
- Coherent conceptual approach
- Blueprint for enterprise
- Reference Model and Architecture
- Processes
- Rigorous – where necessary
- Standards based



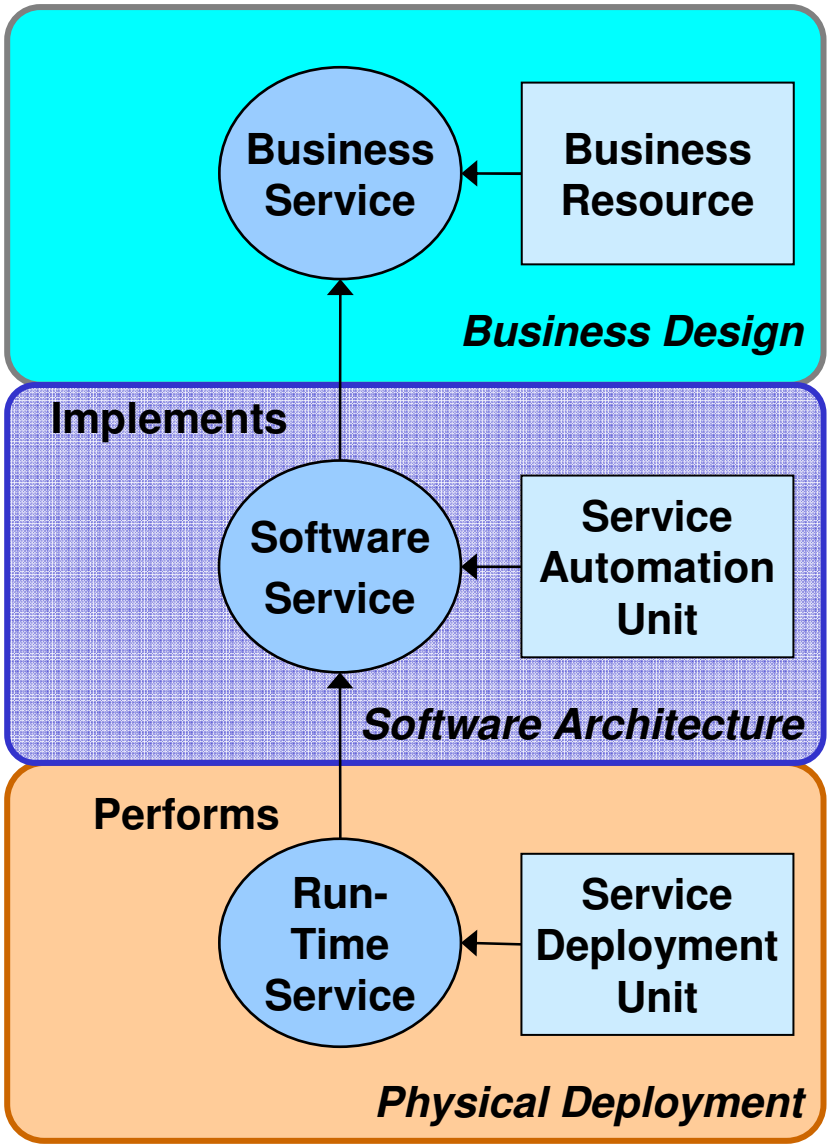
11

SAE = Service Architecture and Engineering

SOA Principles



Full Life Cycle SOA – Three Levels of Abstraction



- Service concepts are equally applicable to the way the both business and IT each thinks about the provision and consumption of capability and resources
- SOA is as much of a business modeling approach as it is a software engineering paradigm
- Services can represent meaningful business capability
  - Recognizable by the business
  - Enable Business/IT convergence
- Run-time Services provide a further layer of flexibility over the software architecture
  - E.g. Many Run-time Service instances of the same Software Service – resolved by dynamic routing

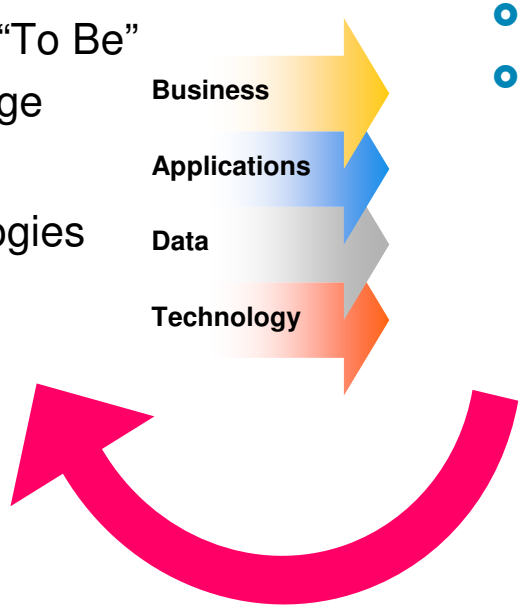
EA Meets SOA

- Coverage
- Practical Techniques
- Example

EA meets SOA: Coverage

Enterprise Architecture:
"The who, what, why, when, where, and how of the business at every level from high-level corporate goals to the code of low-level programs that implement business processes used to achieve those goals." *

- Blueprint "As Is" versus "To Be"
- Wide application coverage
- Wide data scope
- Technologies and topologies



SOA:
The discipline that enables software to be provided and consumed as services.

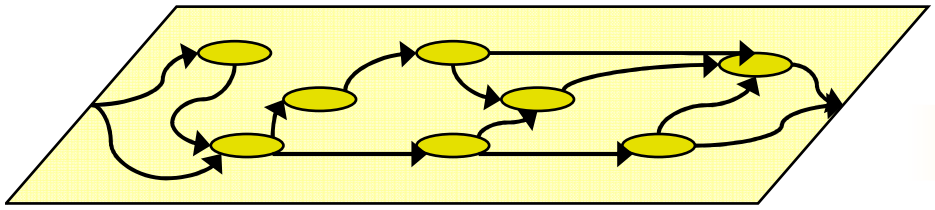
- Core versus Context
- Separation of Consumers and Providers
- Focus on Quality of Service
- Criticality of Specification and Policy

Focus on How *Well* ?

* **Source: "TOGAF: Establishing Itself As the Definitive Method for Building Enterprise Architectures in the Commercial World",**
-David Harrison and Lou Varveris
http://www.developer.com/design/article.php/3374171

EA meets SOA: Techniques

EA Concepts



Business Architecture

Application Architecture

Data Architecture

Example
Service-Oriented Techniques

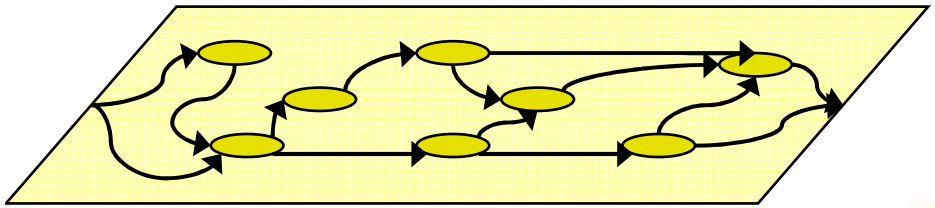
Service-Oriented Viewpoints
Process Services

Rationalization Requirements,
Core Context Analysis

Domain Partitioning,
Service Identification

SOA for Application Rationalization

EA Concepts

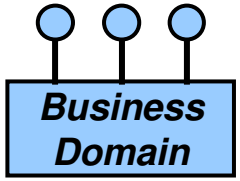


Business Architecture

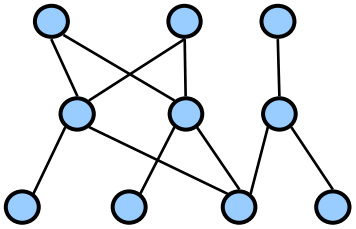
Application Architecture

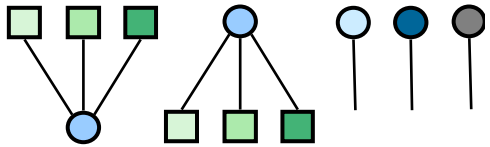
Data Architecture

SOA Concepts



Services Grouped by Domain

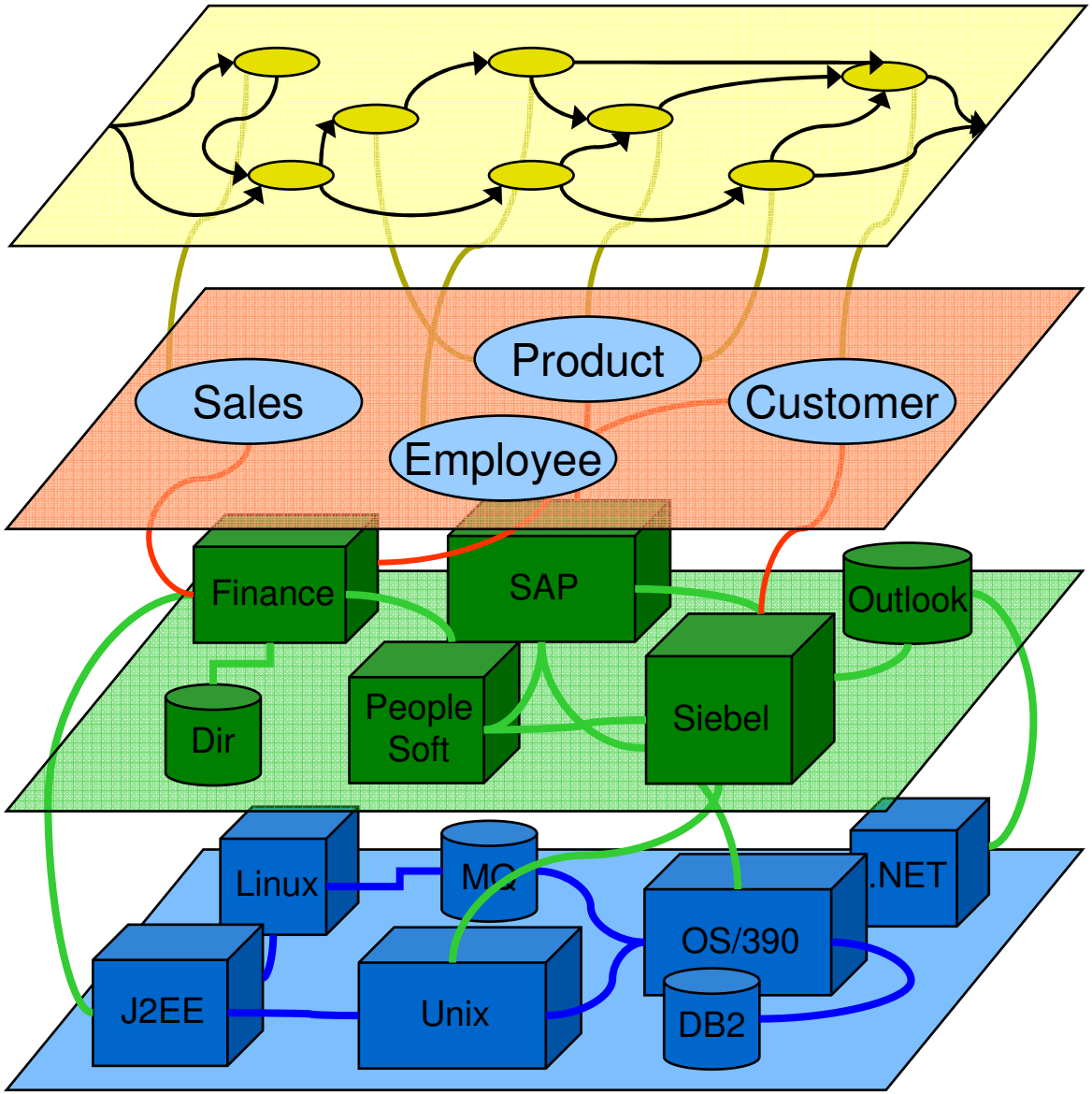




Services Selected for Sharing, Aggregation or Differentiation

Services Organized into layers by Purpose and Type

SOA Based Integration



Business Process Layer

- Cross Functional End-to-end Sales Order Process

Service Layer

- How do you connect sales to customers?

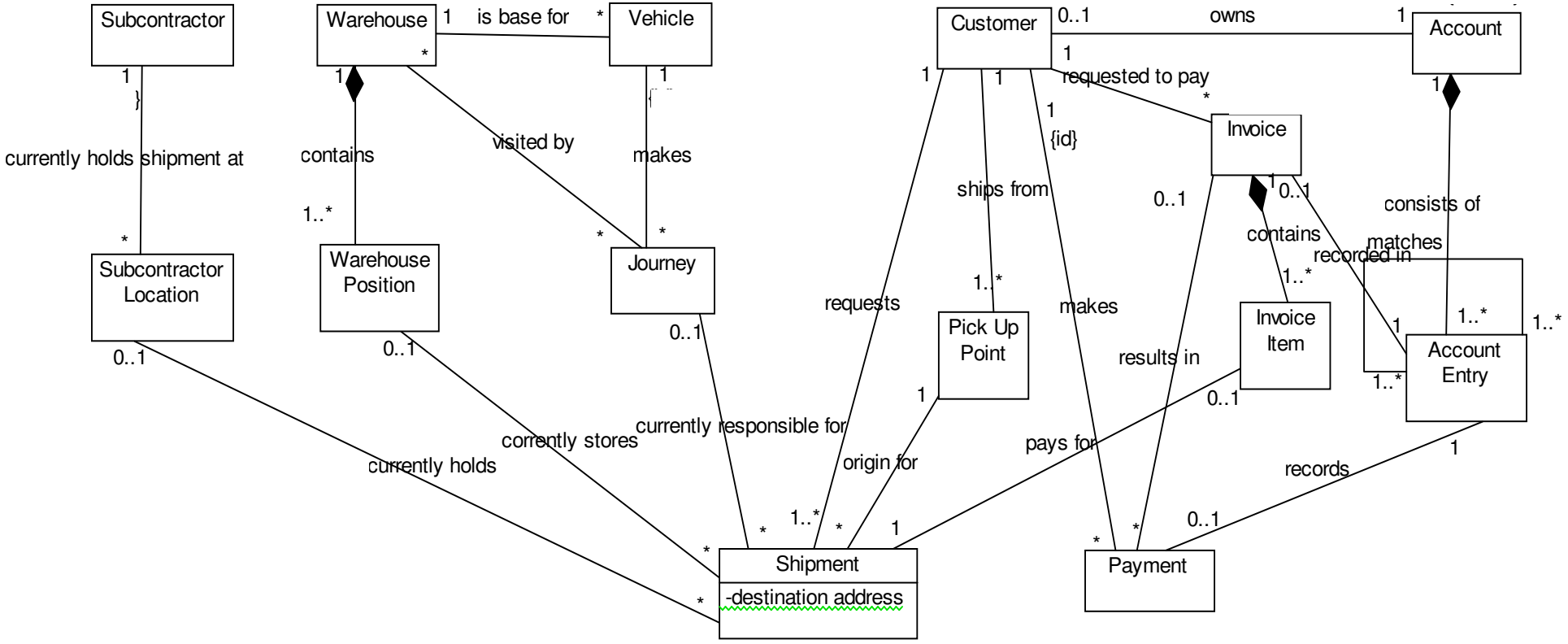
Application and Data Layers

- Applications, Databases
- How do you connect SAP to Siebel?

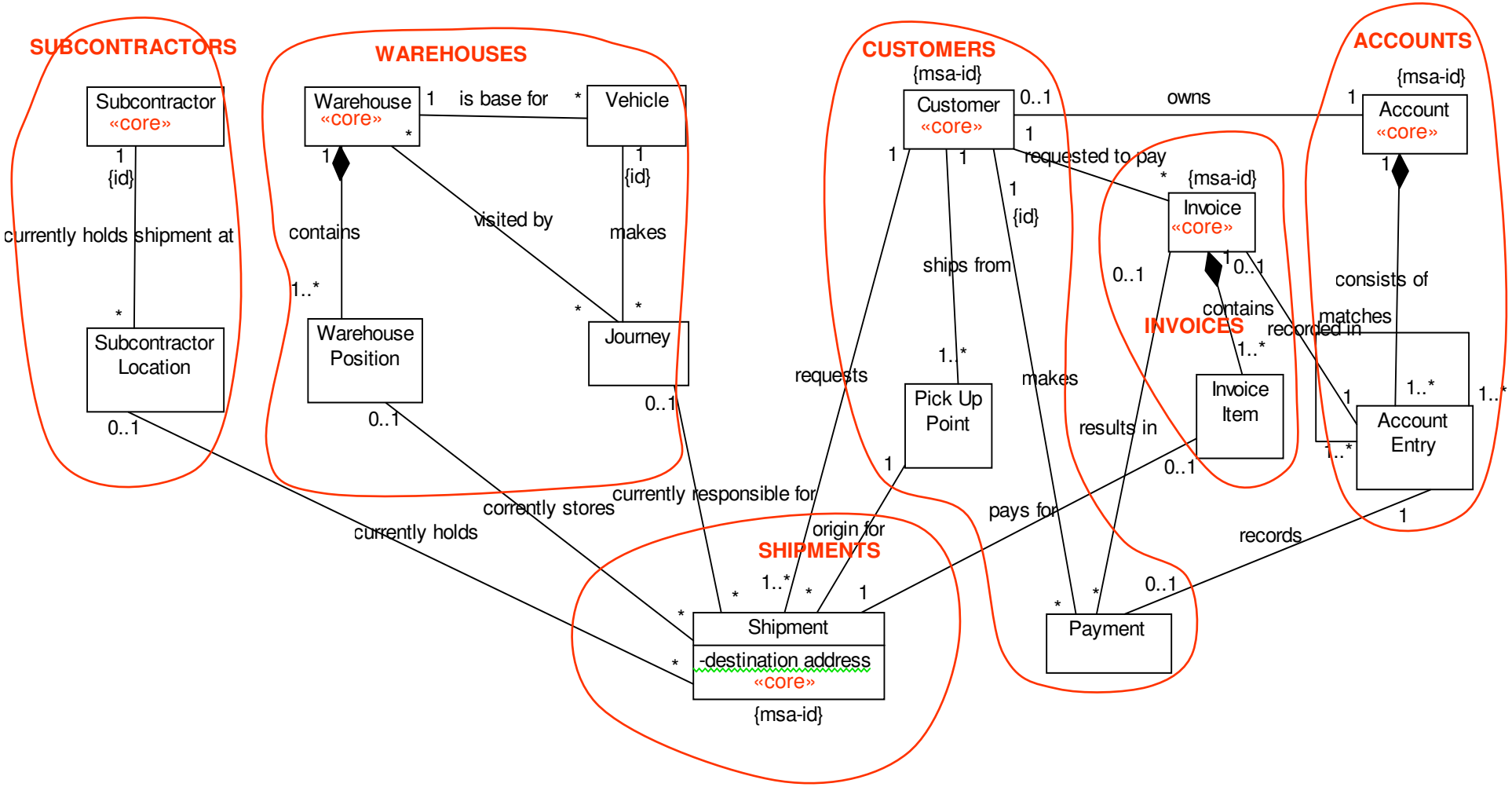
Technology Layer

- Hardware, Network
- How do you connect J2EE to .NET?

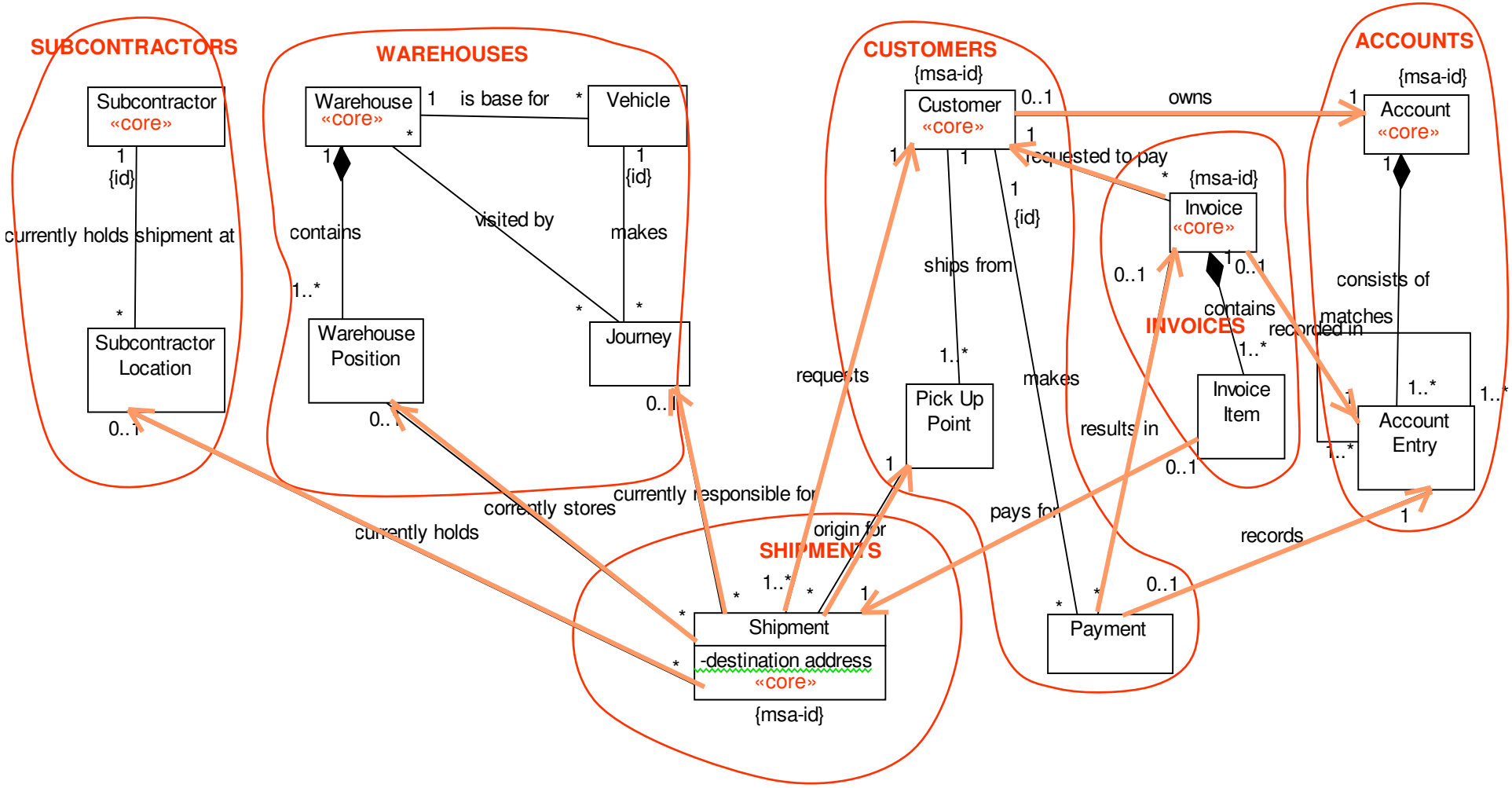
Example Logical Data Model



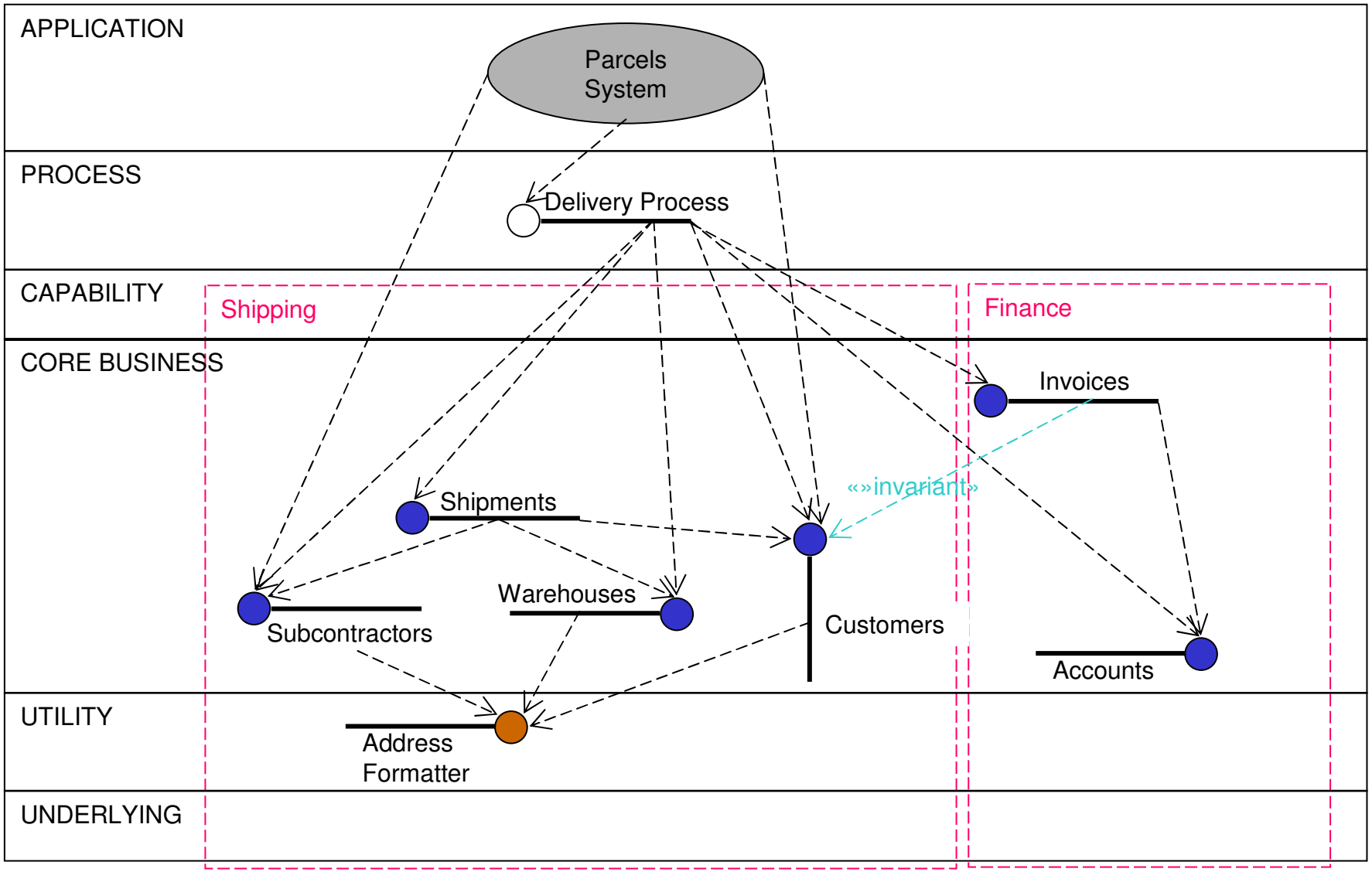
Using a Logical Data Model to Identify Services



Proposed Service Dependencies



Example Business Service Architecture

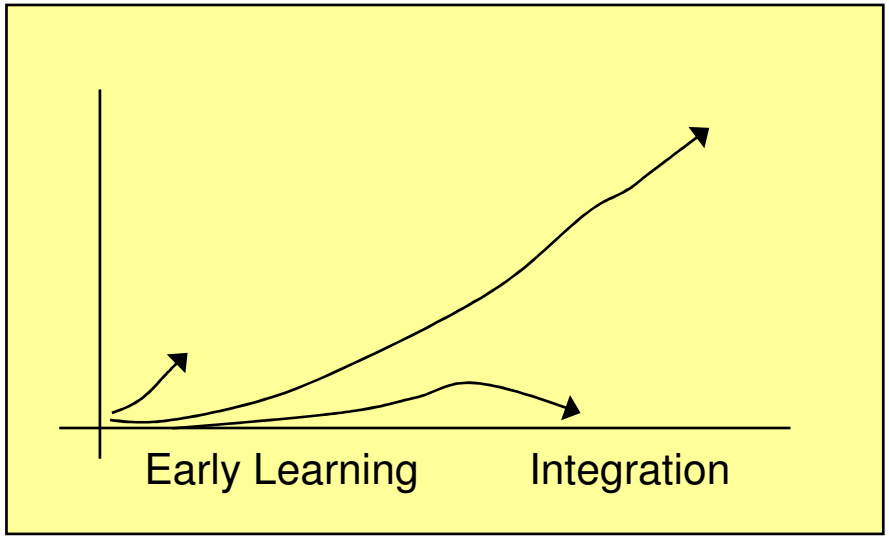


Pragmatic Progression

- Adoption Roadmap
- Practical Experiences
- The Way Forward

Current State

- Tactical SOA
  - Project and or infrastructure driven
  - Delivering and using services with little or no structure
  - Little or no consensus or consistency across the organization
  - No explicit policies and repeatable processes that permit governance
  - Recipe for **Service Anarchy** and limited ROI



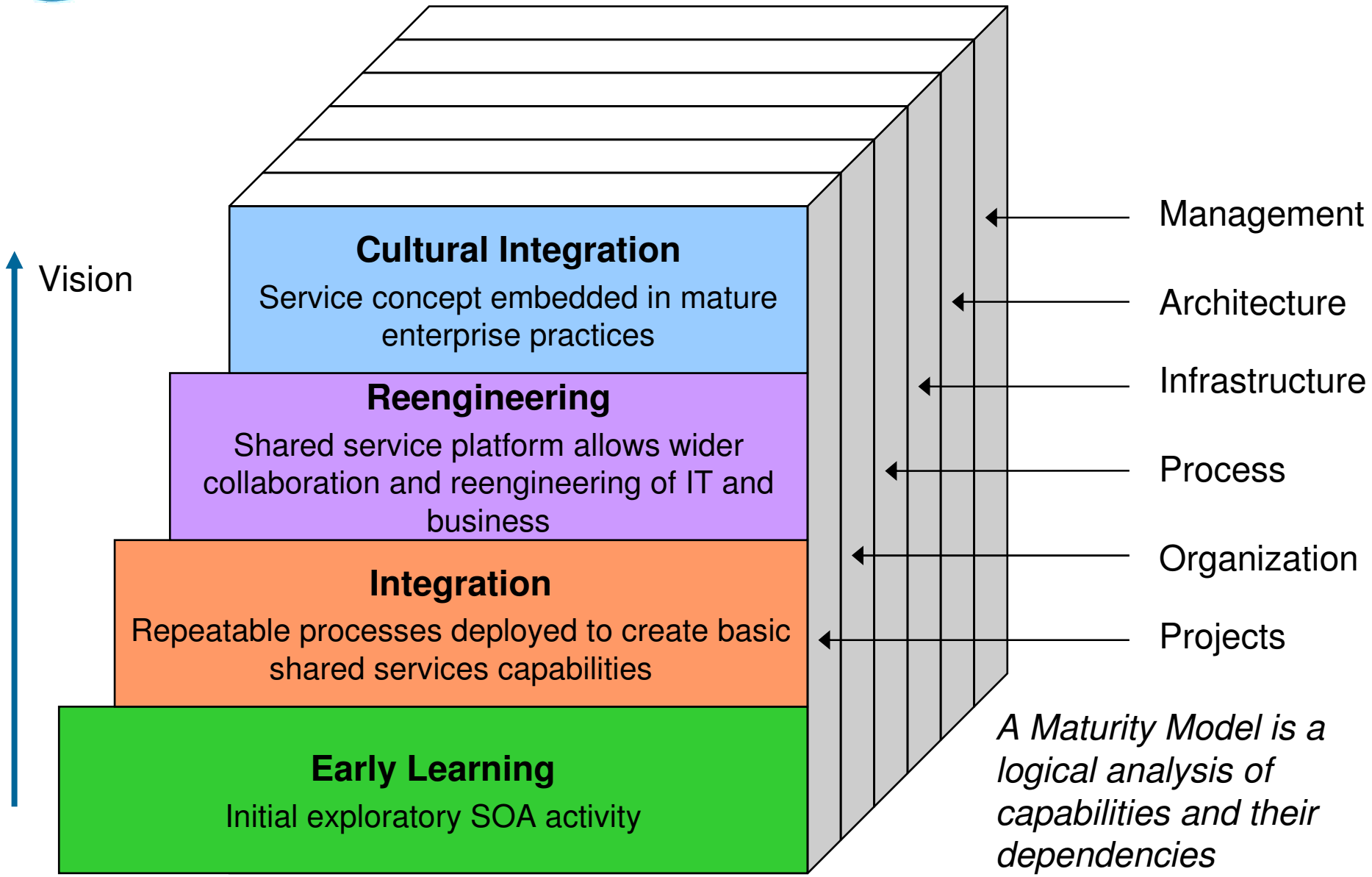
Introduction to SAE

- Tactical SOA
  - Project and or infrastructure driven
  - Delivering and using services with little or no structure
  - Little or no consensus or consistency across the organization
  - No explicit policies and repeatable processes that permit governance
  - Recipe for **Service Anarchy** and limited ROI
- Strategic SOA
  - Analogous to a manufacturing and assembly environment
  - Classes of service have appropriate, repeatable processes
  - Mature architecture and engineering processes and practices
  - Formality over policy implementation to ensure implementation of both business requirements and architectural policies
  - Manage outcomes that are fit for purpose, deliver future flexibility, utility and cost.

Service Architecture & Engineering:

A comprehensive, defined approach for service architecture together with repeatable service engineering processes that guide the delivery of the agile enterprise.

Everware-CBDI SOA Capability Maturity Model

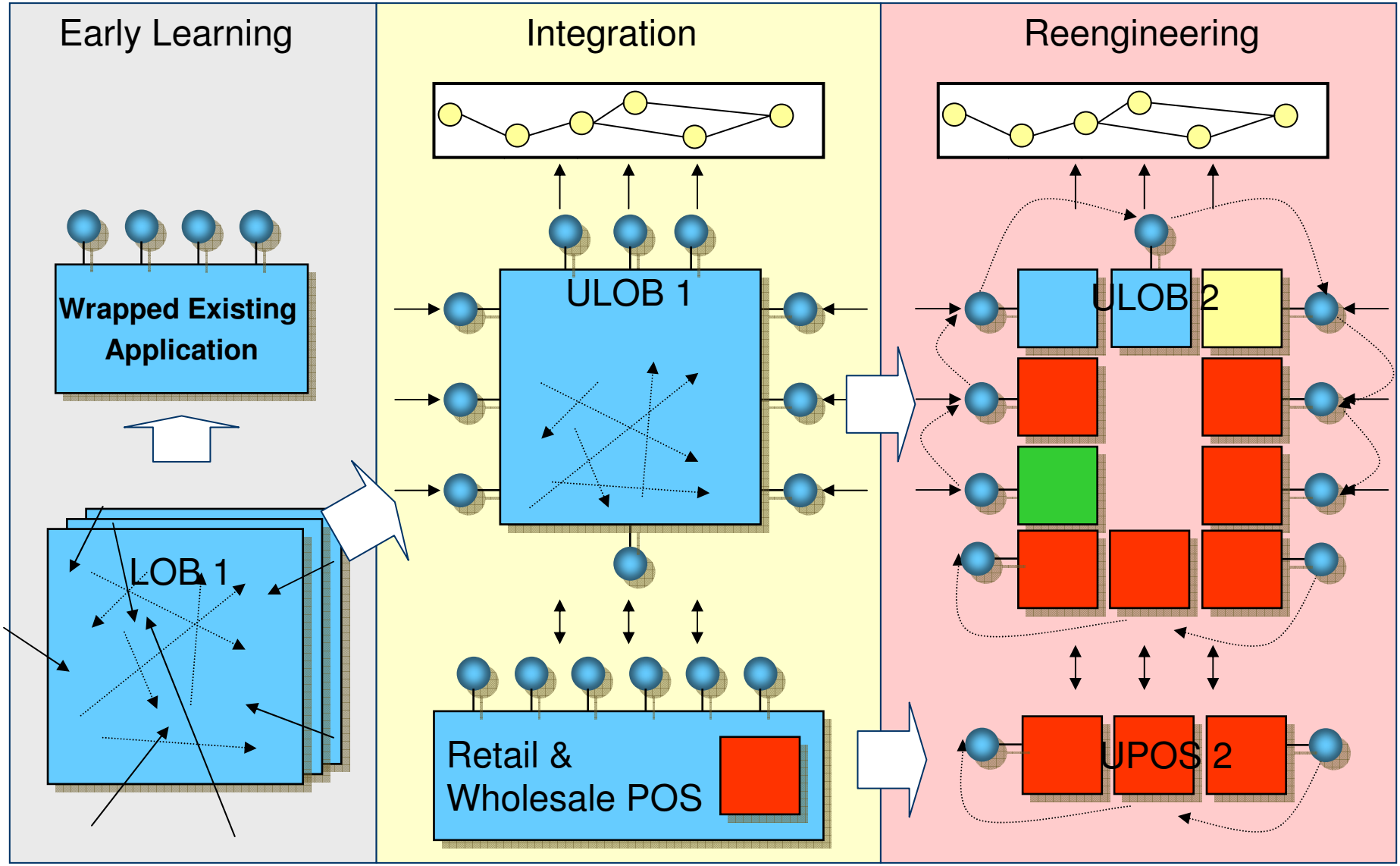


A Maturity Model is a logical analysis of capabilities and their dependencies

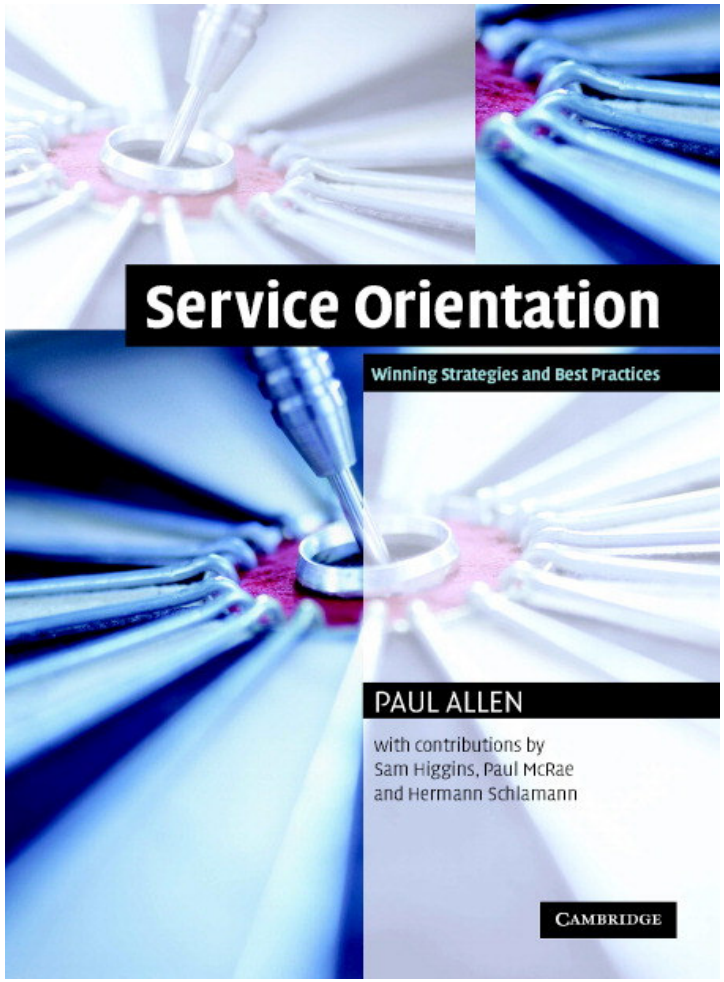
Structural Improvement and Portfolio Rationalization Case Study - Telco

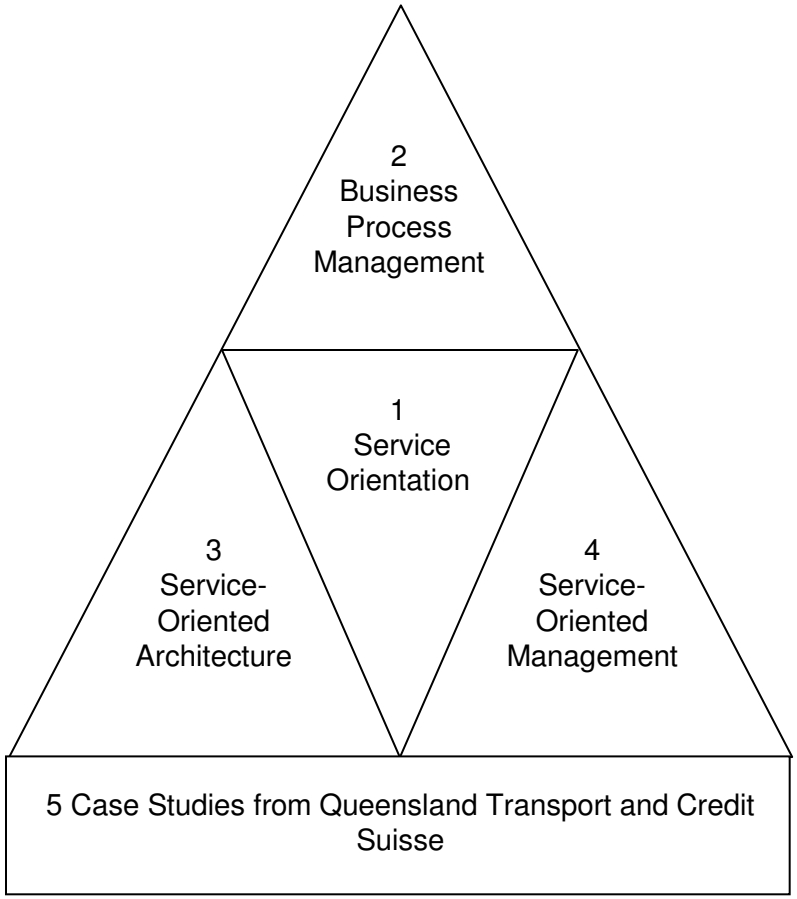
- Aggressive SOA strategy to **respond rapidly with new products and services** in rapidly evolving telecoms market
- Aim to **rationalize internal systems environment** to achieve competitive advantage through cost leadership
- Had **unique stacks in each country** supporting approx 28,000 Global Services products
- SOA objectives to create one coherent environment and **reduce no of products to 18**; consistent set of processes and systems - significantly reduce cost of maintenance and time to market
- Developed **canonical data model** – defining core business data - Matrix Architecture
- Enterprise wide rollout of a service oriented architecture with the **goal of rationalising some 5000 systems down to approximately 100**, and to provide a common set of re-usable components
- Another goal is to **reduce the time to bring products to market by two thirds** - grouping systems into logical domains which separate and expose generalized services
- Recently **centralized all its Line Of Business integration competency** centres into a single pan-organizational unit targeted towards the delivery of services.
- Widespread **acceptance of the core capability architecture is emerging** with discussions on how to organise their IT operations around delivering, utilizing and supporting capabilities
- **Centralized integration group** initially set up with 400 staff (supporting 14 different integration platforms). **Today reduced to < 100 key roles**
- **SOA pattern:**
  - **Common Component Service: Standardize & rationalize**
  - **Centralized integration**

Structural Improvement and Portfolio Rationalization
High Level Roadmap



New Book by Paul Allen





ISBN: 0-521-843367

www.cbdiforum.com

Independent Guidance for Service Architecture and Engineering

www.everware-cbdi.com