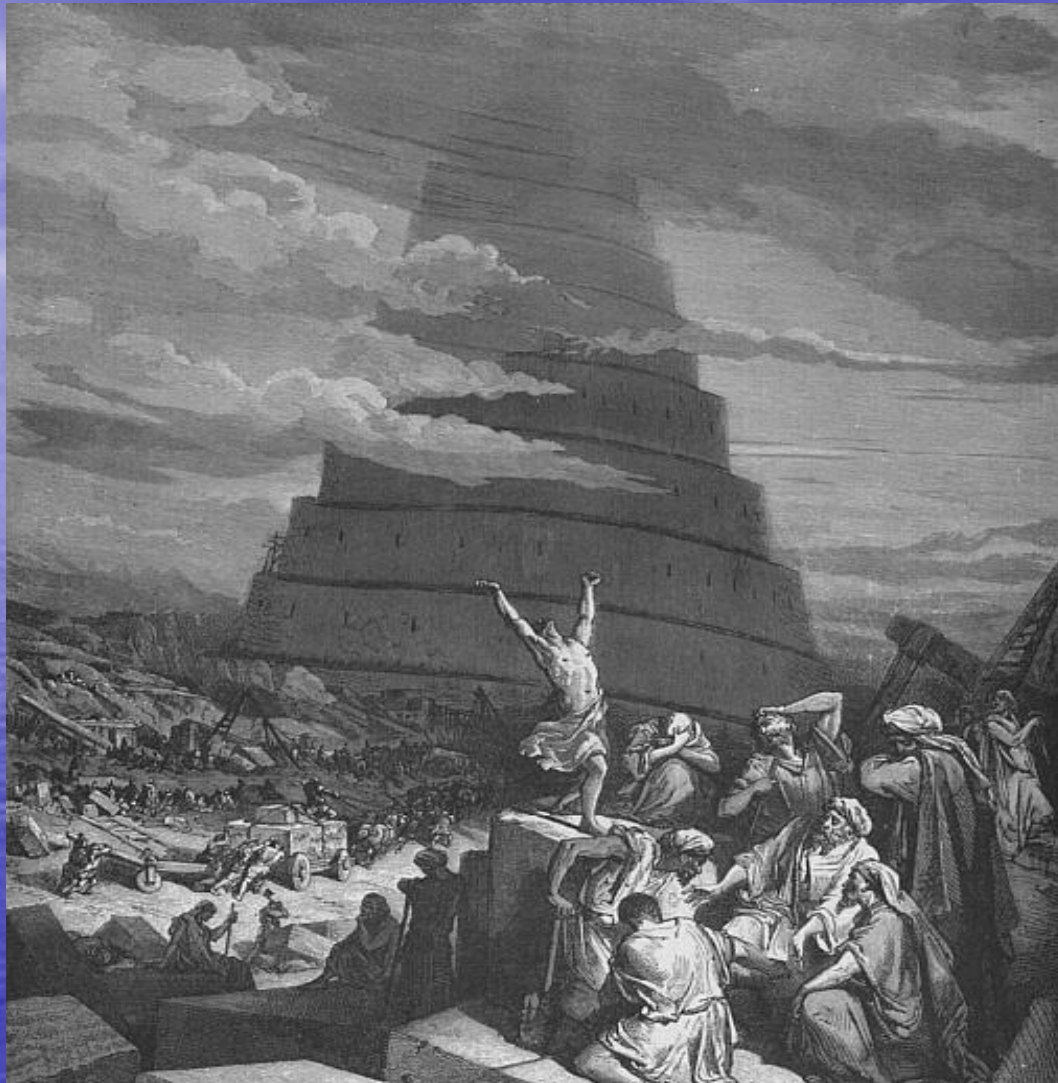


Speaking A Common Language: OASIS SOA RM

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Language Allows People to Work Together

A Common Language Permits Common Understanding



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Software, Inc.

SOA Reference Model Provides a Common Vocabulary



Who Needs it?

Everybody

Vendors

Managers

Architects

Stakeholders

Market Researchers

Executives

Developers

Business Analysts

What is a Reference Model?

Basic Axioms
Key Relationships
Unifying Concepts
Abstract

What is a Reference Architecture?

Common Domain Problems
Common Domain Patterns
Multiple Reference Architectures
Range of Abstractness

Housing Reference Model

Defines:

Eating Areas

Sleeping Areas

Hygiene Areas

Basic Constraints:

Zoning

Land Use

Neighborhoods

Housing Reference Architectures

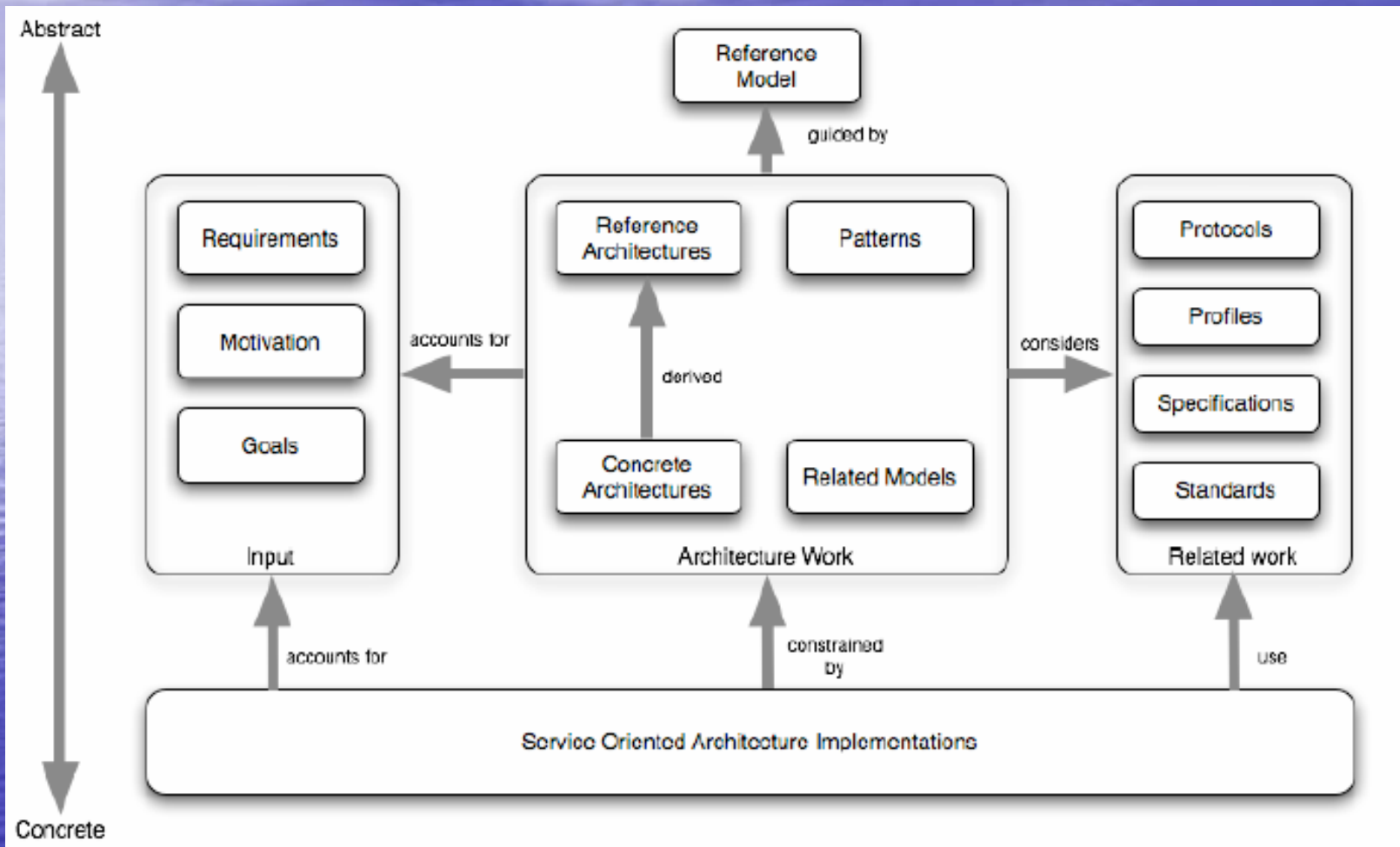
Apartment Building RA

Igloo RA

Victorian House RA

Western Row House RA

Post WW II Track House RA



What is SOA?

Distributed Capabilities Matching Needs With Capabilities Crossing Trust Boundaries

Domain → Needs and Capabilities

Capabilities exist outside SOA

Solution is composed in the domain.

SOA is the organizing principle for:
reuse
growth
interoperability

Why is SOA different?

Ownership boundaries matter.

RM extracts concepts that are vendor, domain and technology independent.

What is a service?

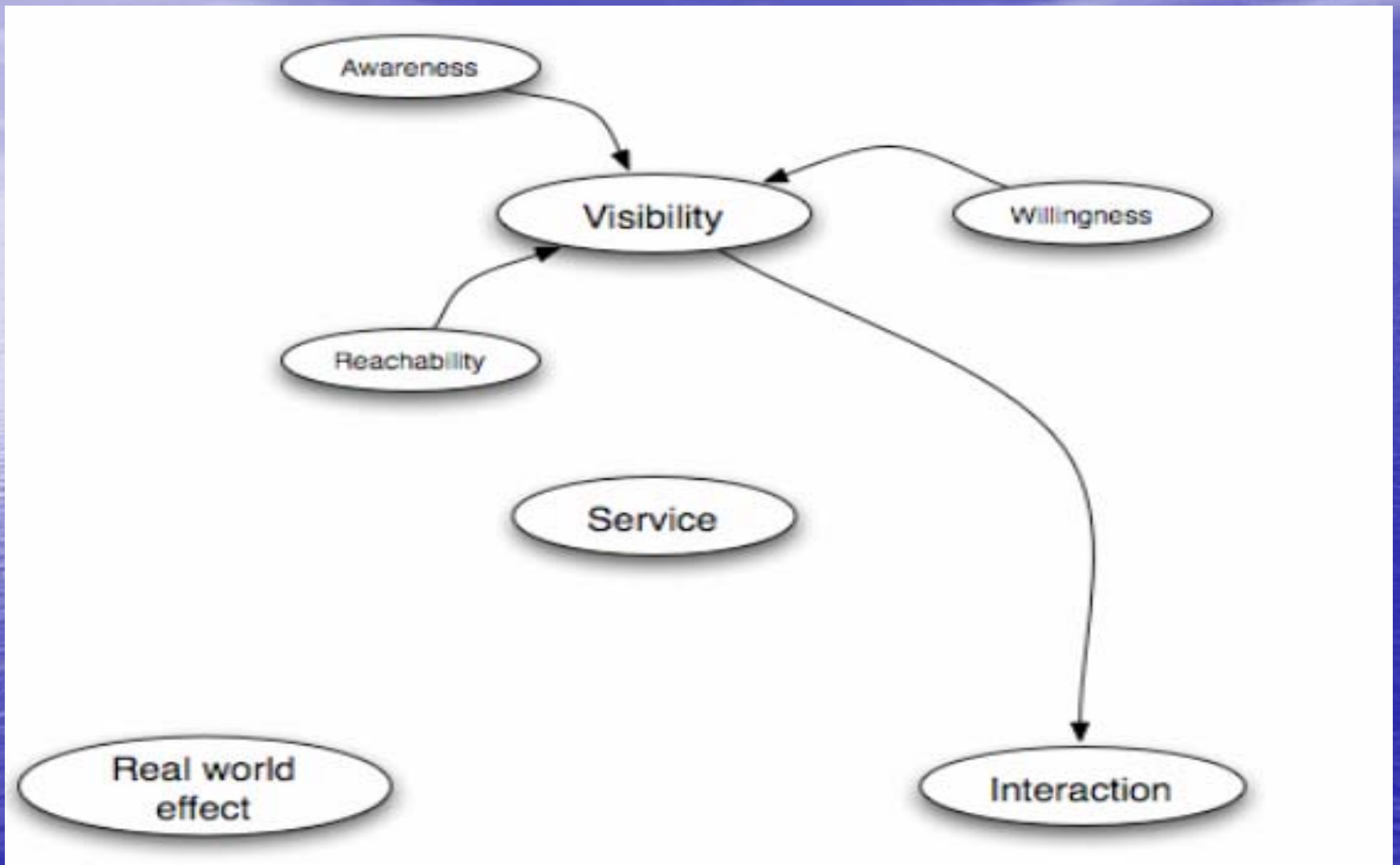
Bring Needs and Capabilities Together

Service creates a real world effect.

SOA Key Concepts:

- Visibility
- Interaction
- Real World Effect

Visibility provides the possibility that needs could match capabilities.



Visibility:

Service Description

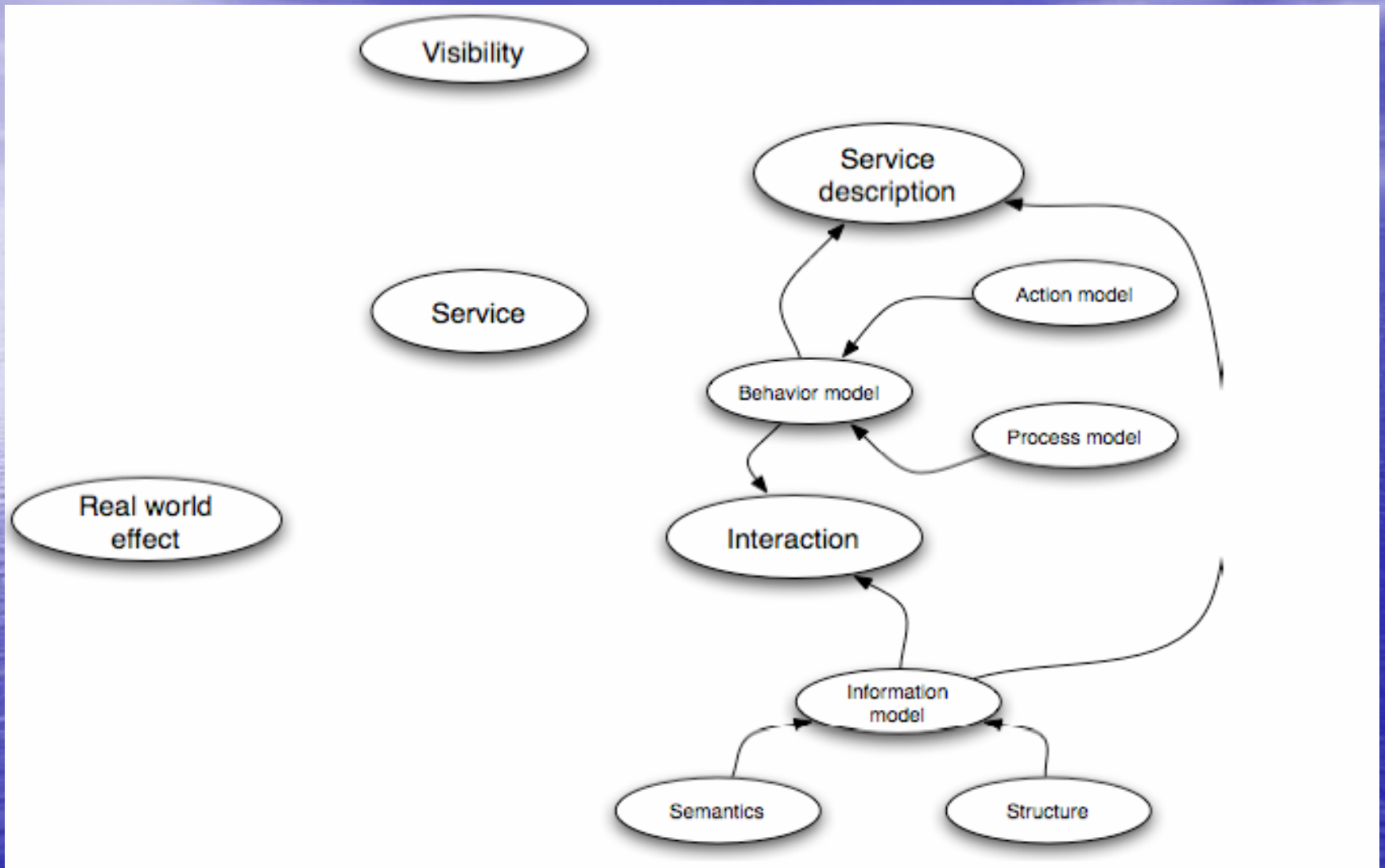
Syntax and Semantics

Constraints

Policies

RM does not dictate how this happens

Interaction describes how the capability is used.



Interaction:

Typically message exchange

Execution Context

Set of business and technical
requirements for needs to match
capabilities

Provides policy decision points

Information Model

Data Structure and Semantics

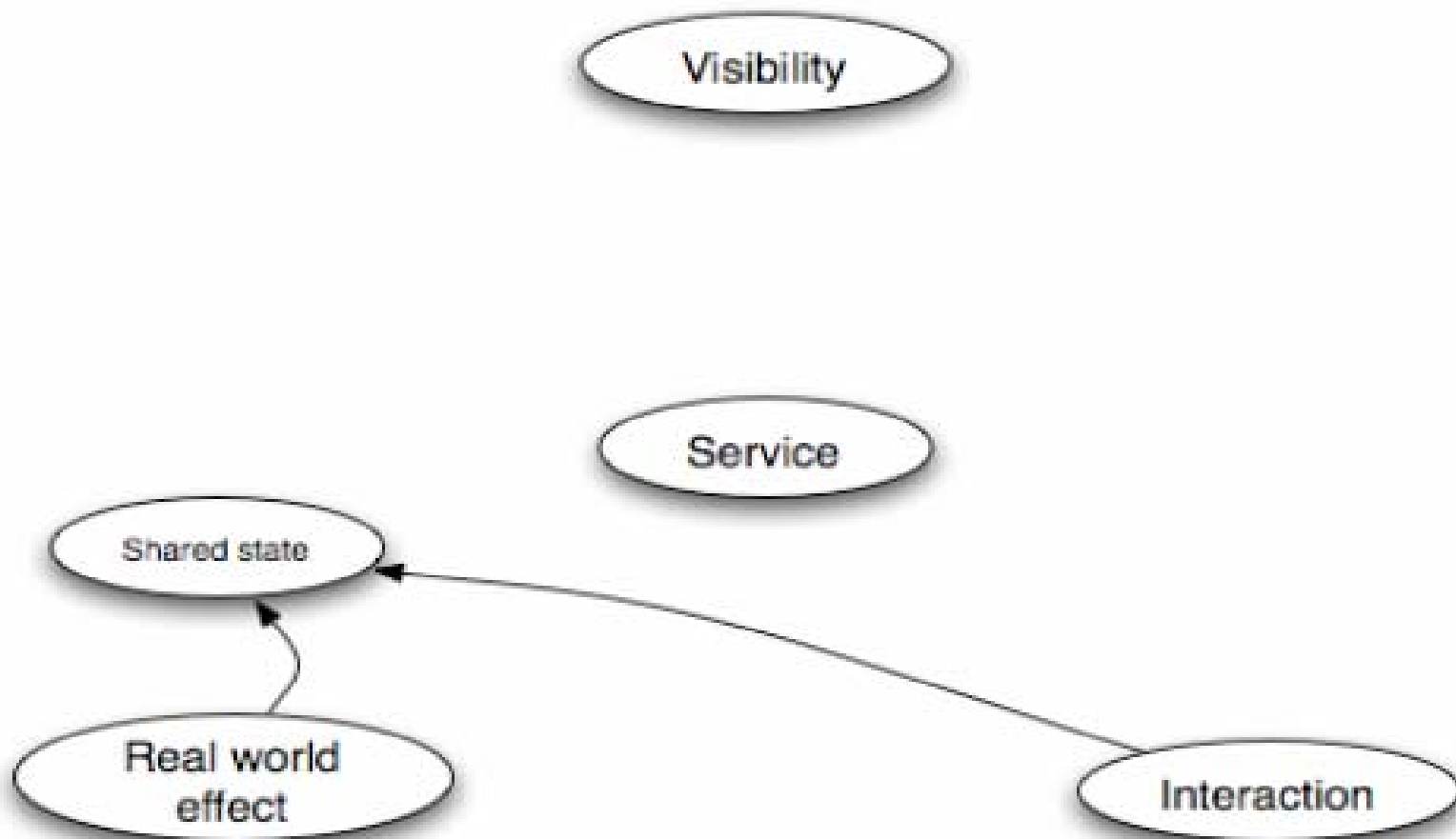
Behavior Model

Temporal Actions and Dependencies

Action Model

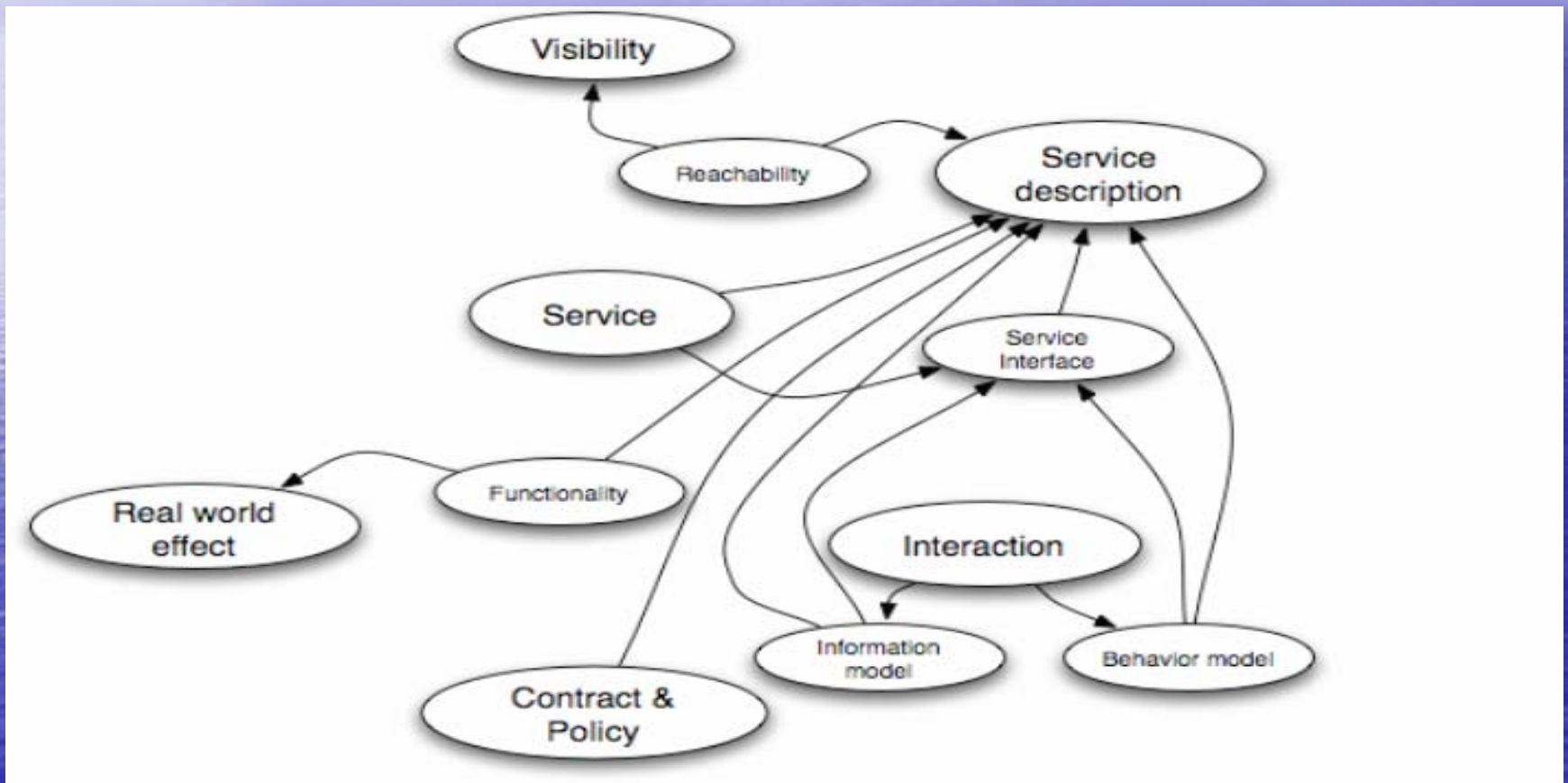
Process Model

Real World Effect is the change to the
shared public state of the
participants.



Marketplace for exchange of
economic value, not a marketplace of
technical services.

Service Description



Facilitates Interaction and Visibility

How a service is accessed (Reachability)

Behavior Model

Information Model

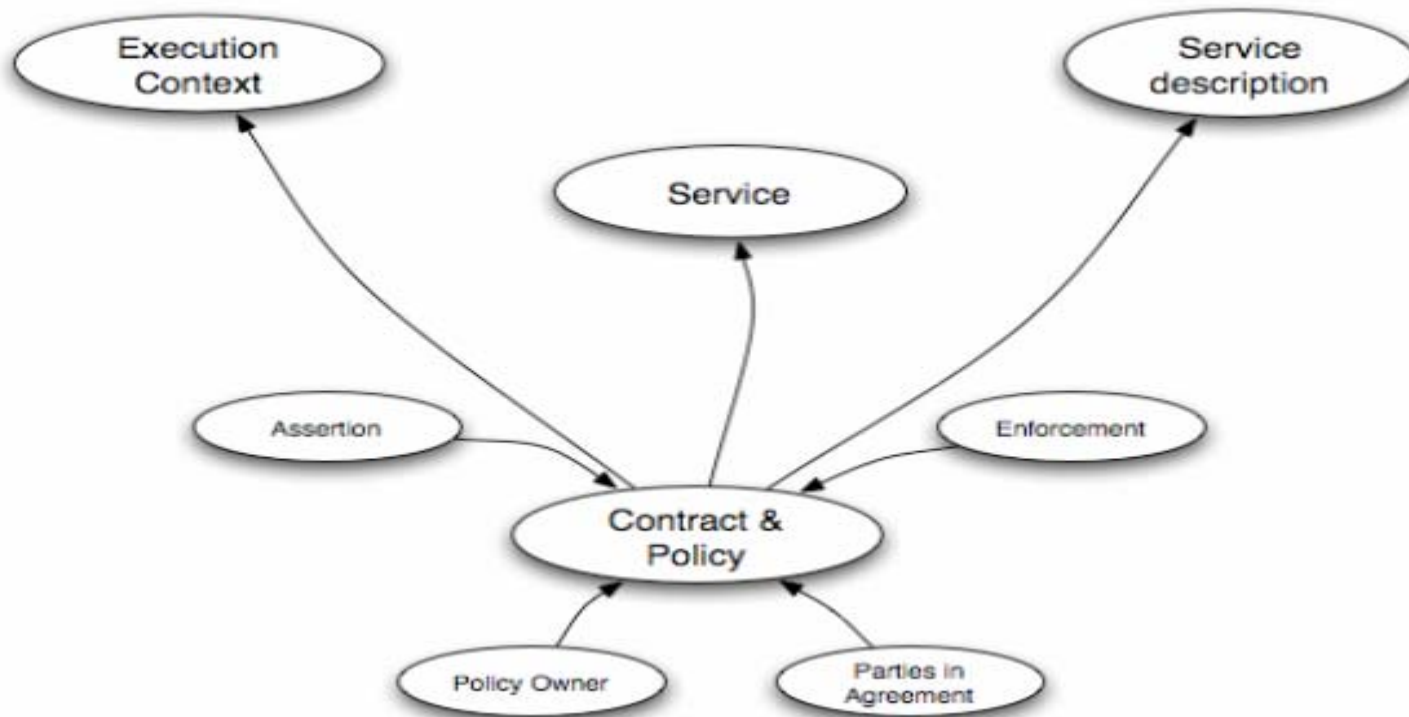
Functionality and Real World Effect

Contract and Policy

May or may not be in machine format

Service consumer only sees:
Service Interface
Service Description

Policies and Contracts



Service Policy

Constraints or Conditions on Service Use

Policies are assertions (unilateral)

Policies have enforcement points

Examples:

Service Level Agreements (SLA)

Security

Privacy

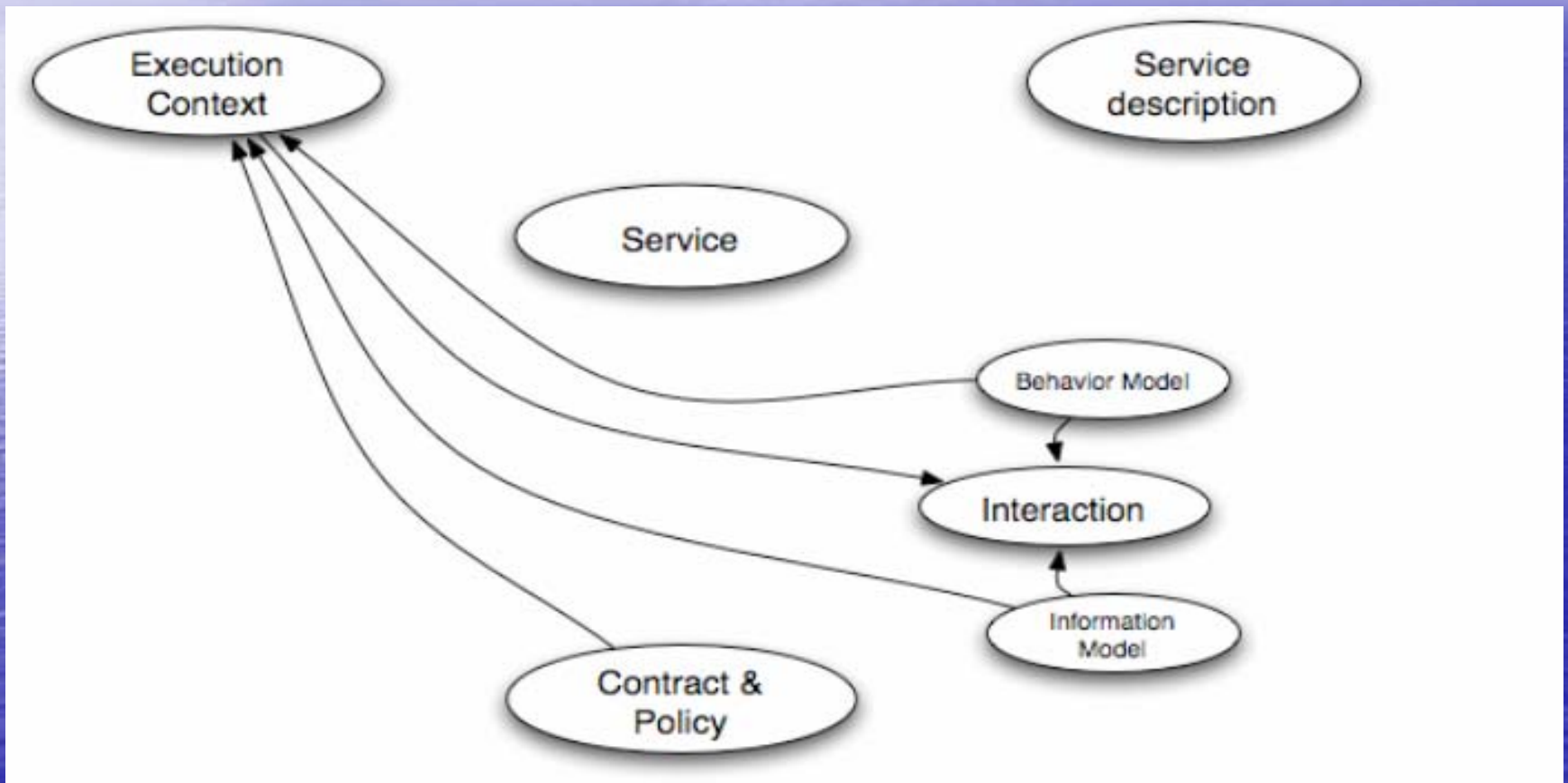
Service Contract

Agreement between two parties

Disputes are resolved, not enforced

May or may not be in machine format

Execution Context



Set of necessary conditions for using service

Service Consumer

Service Provider

Infrastructure

Third parties such as government

Policies, Technology, Contracts

Each service use is a different context

Data meaning might vary

Implementation Technologies

WS-Lite

XML, SOAP, WSDL

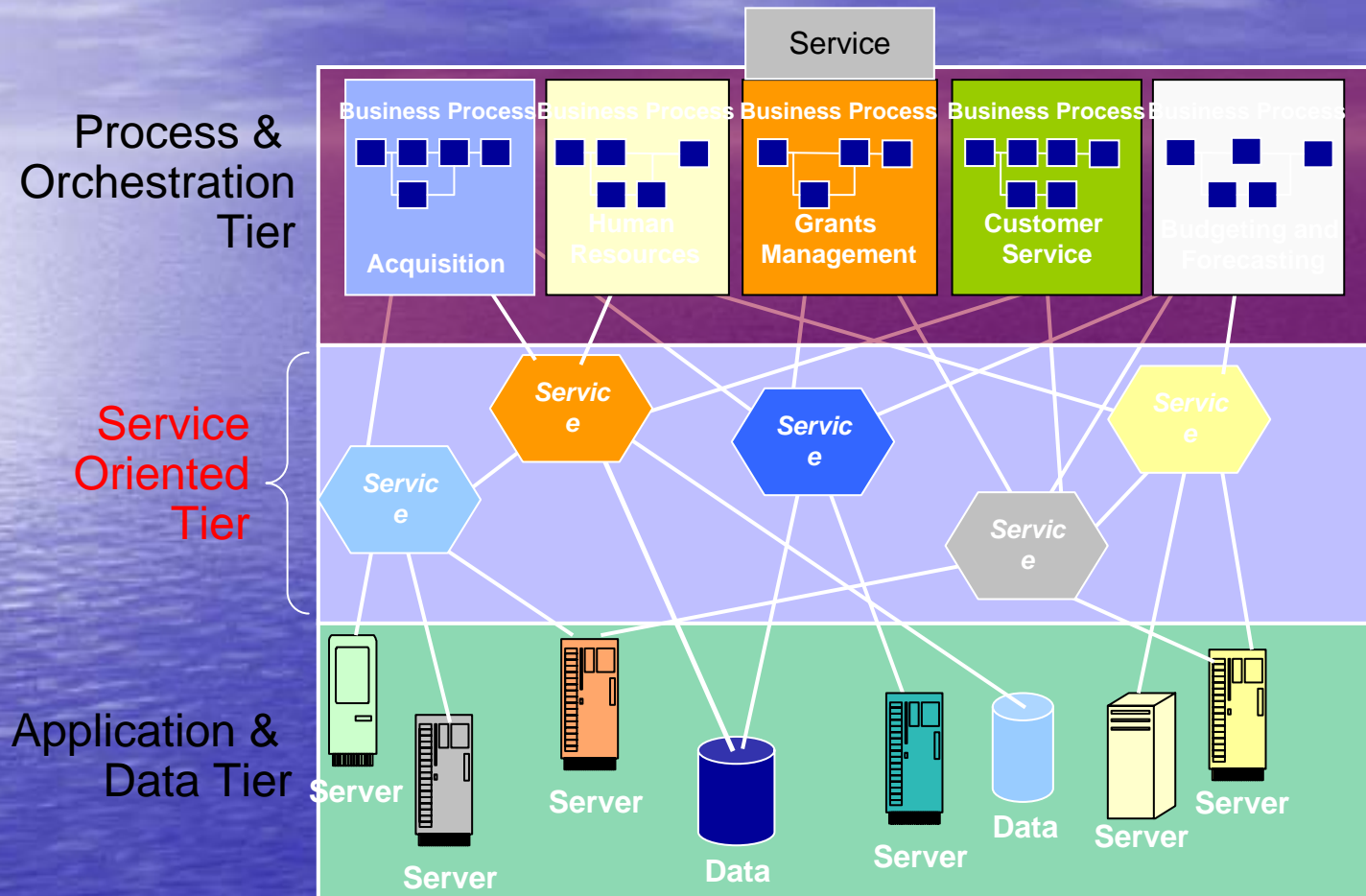
WS-Heavy

WS-Lite + WS-Security, WS-Addressing, etc.

Representational State Transfer (REST)

XML over HTTP (POX)

Relationship to BPM



Courtesy Booz Allen Hamilton – <http://www.bah.com>

Who is Using the Reference Model?

NATO Interop Standards and Profiles (NISP)
produced by NATO Open Systems Working
Group (NOSWG)

IC SOA Strategy and IC SOA Reference
Model

US Dept of Justice Justice Reference
Architecture

Summary

Using the OASIS Reference Model allows for a common vocabulary for talking about parts of an SOA

Abstract, applicable to all domains