



ELEMENTIVE

Where is SOA taking us in OSS Design?

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Where is SOA coming from?

Pre 1950's
to 1960's

1970's to
mid 1980's

1980's to
mid 1990's

Mid 1990's to
Early 2000's

Late
1990's

Today

Monolithic
Architectures

Sub-routines
& Remote
Procedure
Calls

Remote
Object
Invocation

Message
Processing

Enterprise
Application
Integration
(EAI)

Service
Oriented
Architecture
(SOA)

SOA Leverages previous technologies

SOA is a means of organizing solutions that promotes reuse, growth and interoperability. SOA does not provide any domain elements of a solution that do not exist without SOA.

Industry Trends: Impacts on OSS/BSS & Enterprise Architecture

Industry trends



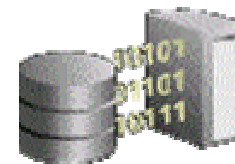
- IT Organizations Becoming Key Decision Makers



- Reduced Time & Cost for Service Deployments
- Customer self-serve Model required



- Non-Traditional Service Providers entering market
- Frequent service changes required to compete



- IT Vendors Moving into OSS/BSS space with cross industry products
- SOA architecture

TeleManagement
FORUM

- Standards being developed to speed Integration
 - eTOM
 - MTOSI
 - J2EE, XML

Applications Development Impacts

- Support customer IT org performing some of the project work
- Must integrate with IT Enterprise Arch.

- Reduced RTUs & cheaper integration required
- Data access needed to support self service

- Must automate flows in a distributed env.
- Must adapt quickly to service changes

- Must compete with IT cross industry products
- Must integrate with Enterprise SOA Arch.

- Must support industry standards

Enterprise Architecture Impacts

- Support customer IT org performing some of the project work & providing products

- Support reuse of components
- End user portals
- Leverage legacy data

- Support frequent change & distributed business flows
- Use business process model to drive changes

- Support integration with IT vendor applications

- Enforce compliance with architecture & industry standards

Service Oriented Architecture

The Paradigm Shift

Traditional Architecture



Service-oriented Architecture

Functionality Driven



Process Oriented

Designed to last



Designed for change

Long development cycles



Iterative development

Tightly Coupled



Loosely Coupled

Object Oriented



Message Oriented

Application Specific



Heterogeneous

Loosely coupled, machine-to-machine interactions facilitated by

- Mature network based technologies (i.e. TCP/IP)
- Mature tools sets (i.e. IDE's, UML, etc.)
- Mature platforms (i.e. J2EE, etc.)
- Mature Self describing data representation (i.e. XML, etc.)
- Related methodologies (i.e. OO, services, etc.)

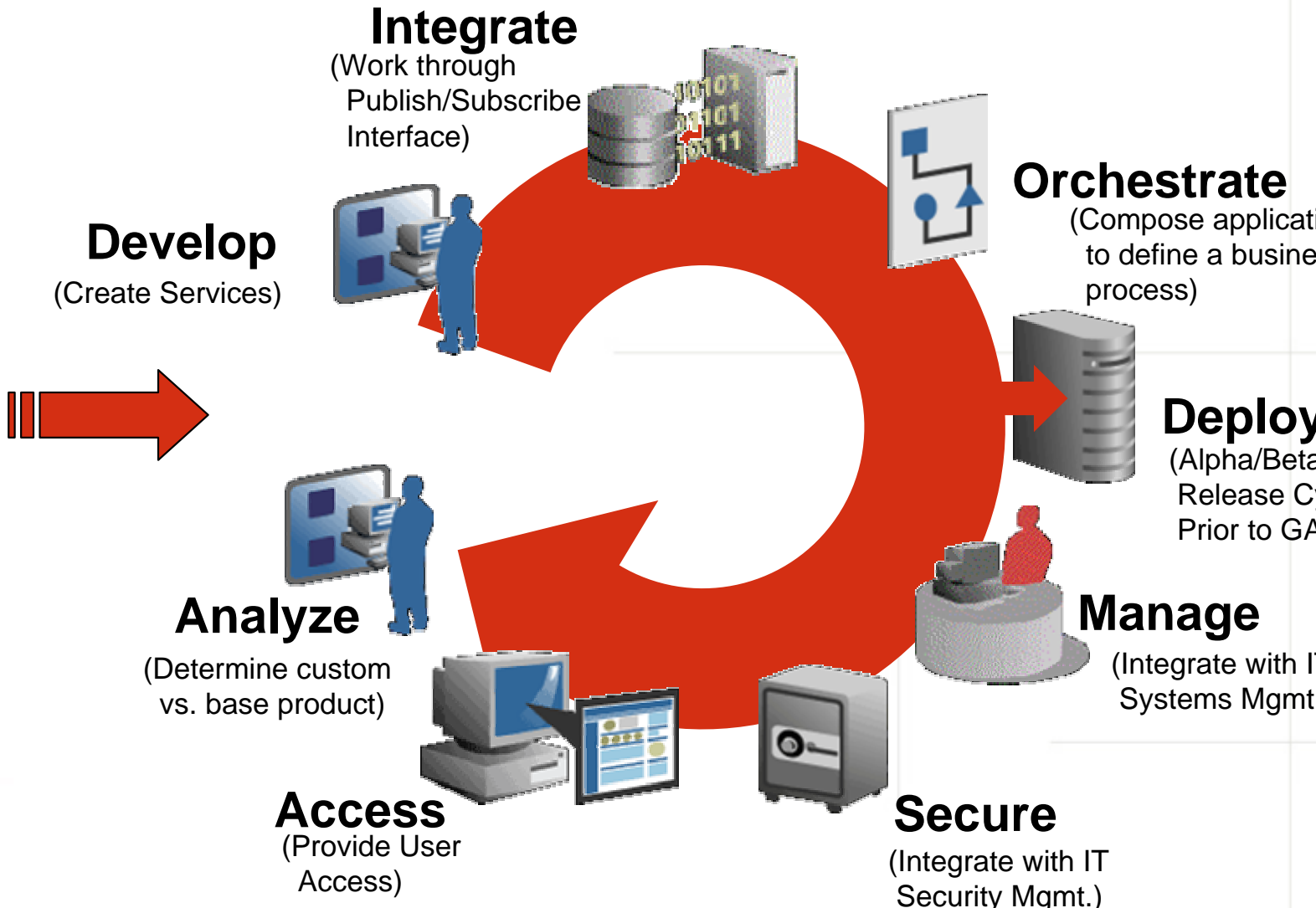
Service Oriented Architecture Not a Solution to World Hunger

- **SOA is not a magic cure-all for all the ills in the software industry**
- **SOA will not satisfy all integration needs**
- **Service Oriented Architectures should not be used for:**
 - Critical real-time, high performance interface
 - e.g. Call processing interface in an intelligent network element
 - Homogeneous standardized environments
 - Static environments with little or no change
 - Existing interfaces that will not provide business value to the customer or lacks customer demand
 - Bulk data synchronization processes
 - Backup and restore processes

Service Oriented Architecture Product Development Model Needed

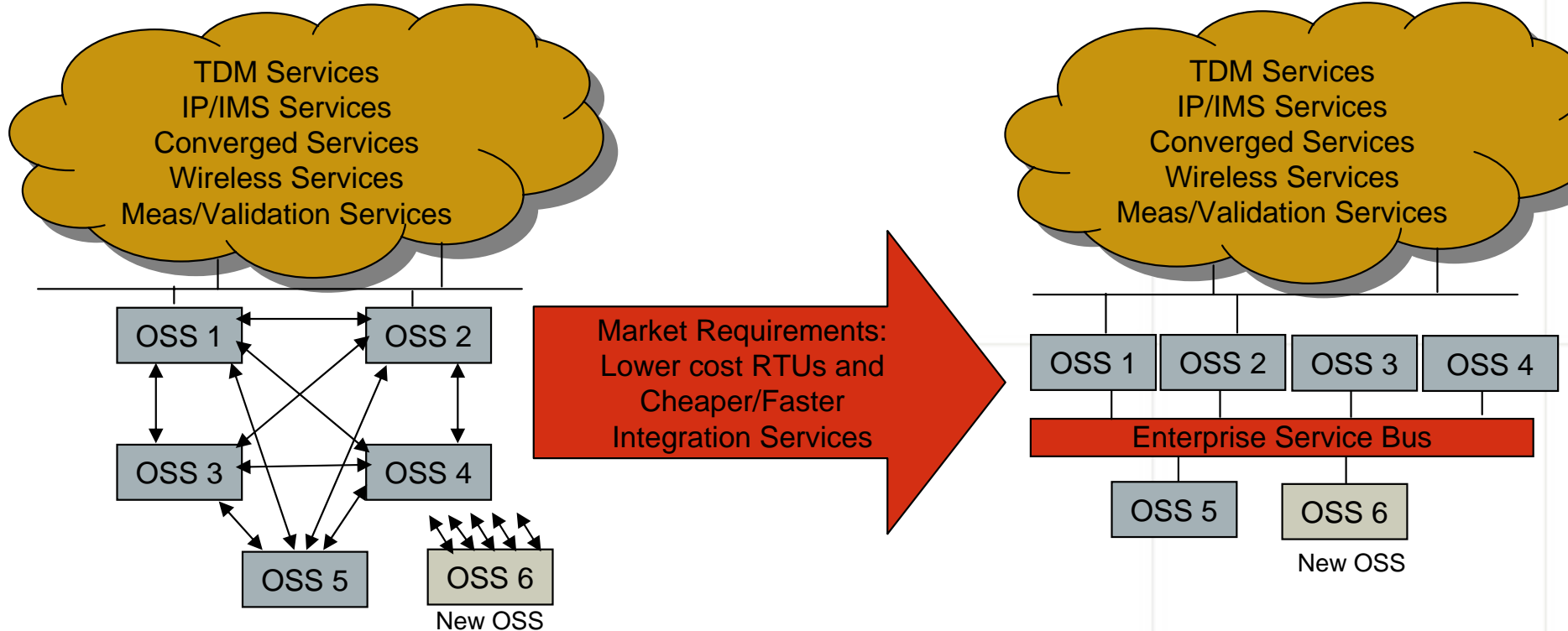
Requirements
Process
Critical

- Define
- Document
- Collaborate
- Validate



Transformation Strategy

Utilize a Service Oriented Architecture



Yesterday's OSS & BSS Systems

- Pair wise proprietary Point-to-point interfaces
- Expensive/ Time consuming Integration
- Adding new interfaces impacts existing interfaces
- Complexity not needed in IP world

Today's SOA - Based OSS & BSS Systems

- Common shared service interfaces (opens da
- Cheaper/faster integration
- Abstracts/Simplifies interfaces
- No impact to existing interfaces to add new o
- Flexible coupling/decoupling

Summary

- **Business flexibility in creating new networks/services is key to our customer's future**
- **The entire IT industry is moving to SOA**
- **Migration to a SOA based architecture is an iterative process to be performed incrementally**
- **Telcordia is continuing moving its products into an open, standards based SOA environment**
- **We can leverage existing assets by adapting core products and other products into the SOA architecture**
- **We must nourish an eco-system that supports the development and delivery of the SOA based solutions**