IBM SOA Executive Summit

Moving Ahead With SOA

IBM Strategy for SOA Governance: *Empowering Teams to Innovate*

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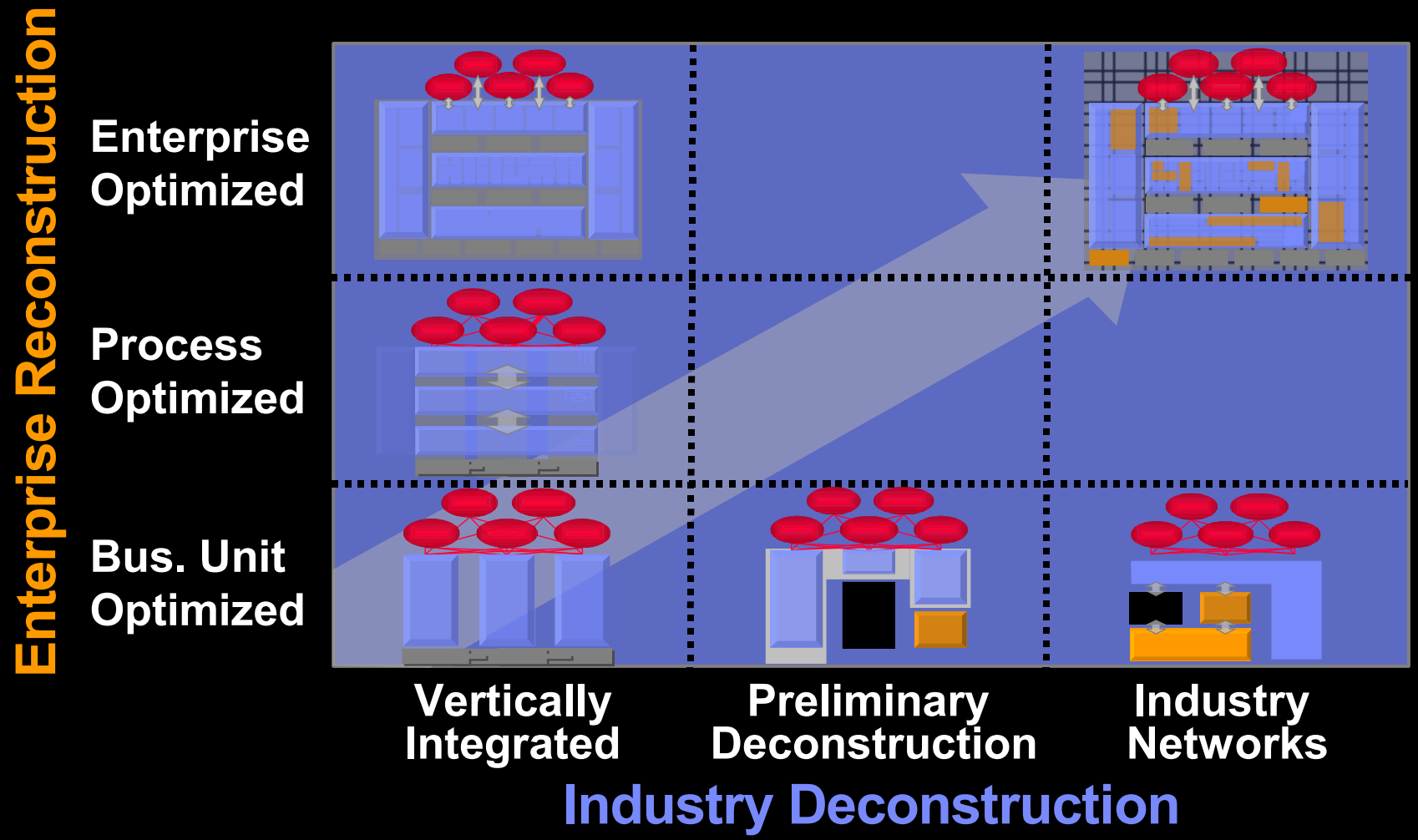
ON DEMAND BUSINESS™

SOA Entry Points Help Customers Get Started

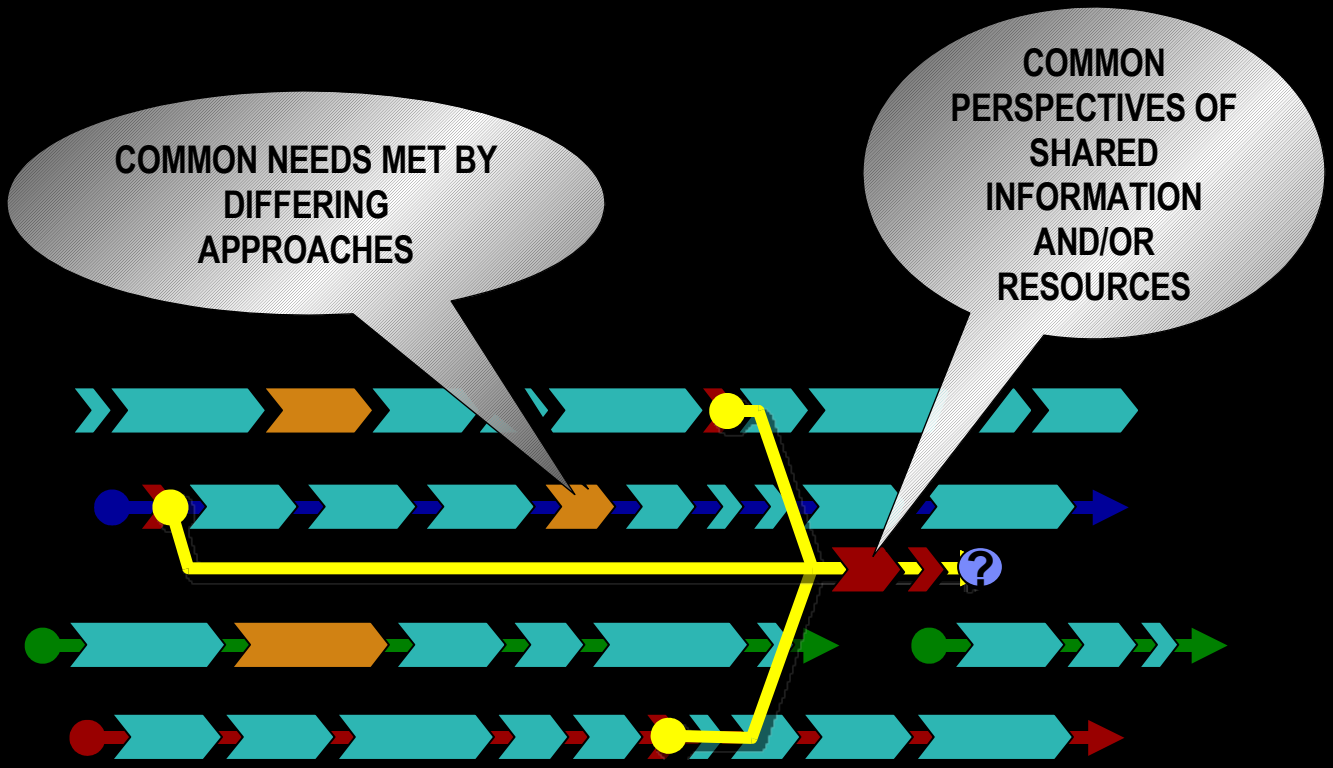
Both Business Centric and IT Focused

Leading companies of the future will have a Specialized Enterprise Business Model



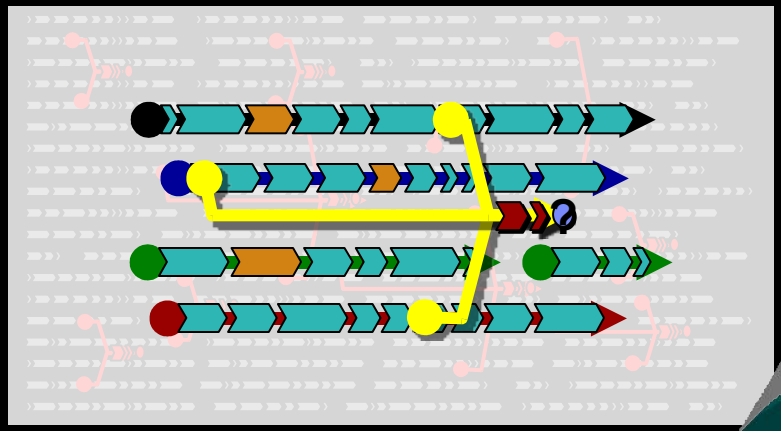
Source: IBM Institute for Business Value analysis

Traditional analysis and development has aligned to automating established end to end processes

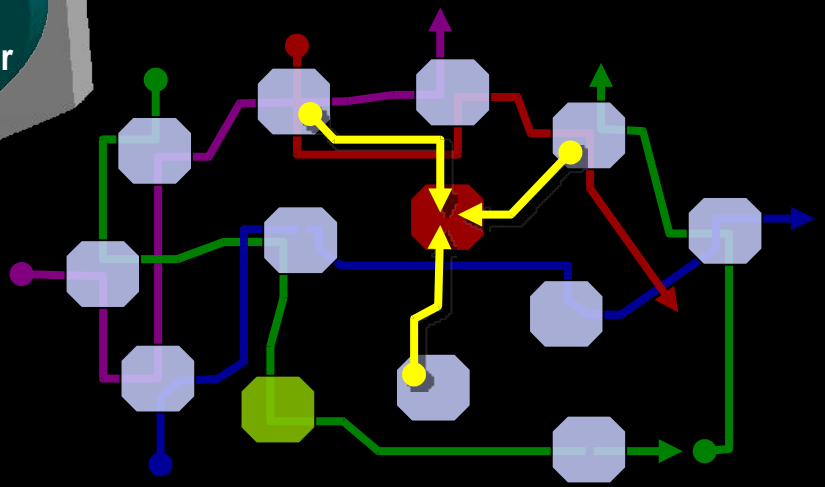


The process perspective does not impose the generalization of common tasks nor help rationalize shared activities

Business value is derived when we can identify the collection of business service capabilities which are combined to support the full array of possible processes



150-300 significant processes supported by 50-80 business service center components



So why governance?

It's **Empowerment**:

Chains of responsibility, authority & communications to ***empower*** people

Measurement, policy & control mechanisms to ***enable*** people to carry out their roles and responsibilities

What role does IT play in governance?

- Establishing decision-making rights associated with IT
- Establishing mechanisms and policies used to measure and control the way IT decisions are made and carried out

How does SOA influence IT governance?

- Extension of IT governance focused on the **lifecycle of services** to ensure the business value of SOA

Proper Governance helps extract maximum business value from SOA

IT Governance Challenges are ***accelerated*** by Service Oriented Architectures

- Establishing decision rights
- Defining high value business services
- Managing the lifecycle of assets
- Measuring effectiveness

Note: Based on real life IBM SOA engagements

SOA Governance Challenges Expressed in Real Life Examples

Common Scenario	Challenges
Composite applications and services shared across lines of business	No clear decision maker or owner Roles and responsibilities not clear Confusion about funding
LOB and IT not well aligned	Lack of common goals Who and how are success factors defined
Limited visibility to information about the business value and cost of services	Metrics for success ill defined How are cost & benefits balanced between departments
Ad hoc service definition and discovery	Limited reuse resulting in service proliferation Lack of trust

Why are these concerns surfaced?

- Downstream effects of IT based projects
- Focus on business value first to understand the business benefits before turning to IT ramifications

- Start with the business side first…

IT Governance in Action

- Defining high value business services
- Establishing decision rights
- Measuring effectiveness
- Managing the lifecycle of assets

Scenario: Defining high value business services

Instantiating policy and metrics

Airline has inefficient ramp control between ground crews, airport services, flight operations and 200+ different partners causing lower profitability and customer satisfaction. Issue

sp... 100 daily ... orts ... bu...
ra... o ... 10% ... ier...
fl... h ... dtrip

How do I execute quickly? How much will it cost?

Can I do this without creating new applications from scratch?

Who should lead this cross-LOB initiative?

Who should fund this shared service? Who's responsible to fix it if it breaks? Who owns it?

Business Ex...
Decrease ramp operations turnaround time an... co... ac...

CIO
Agree with increased efficiencies but ...gnize ... flexib...

...T Council & LOB
Determines high value business ...omponents and ...l drivers

D...velopment Exec
Decides to use SOA to gain flexibility and time to market to support the initiative

How do we move forward to deliver application?

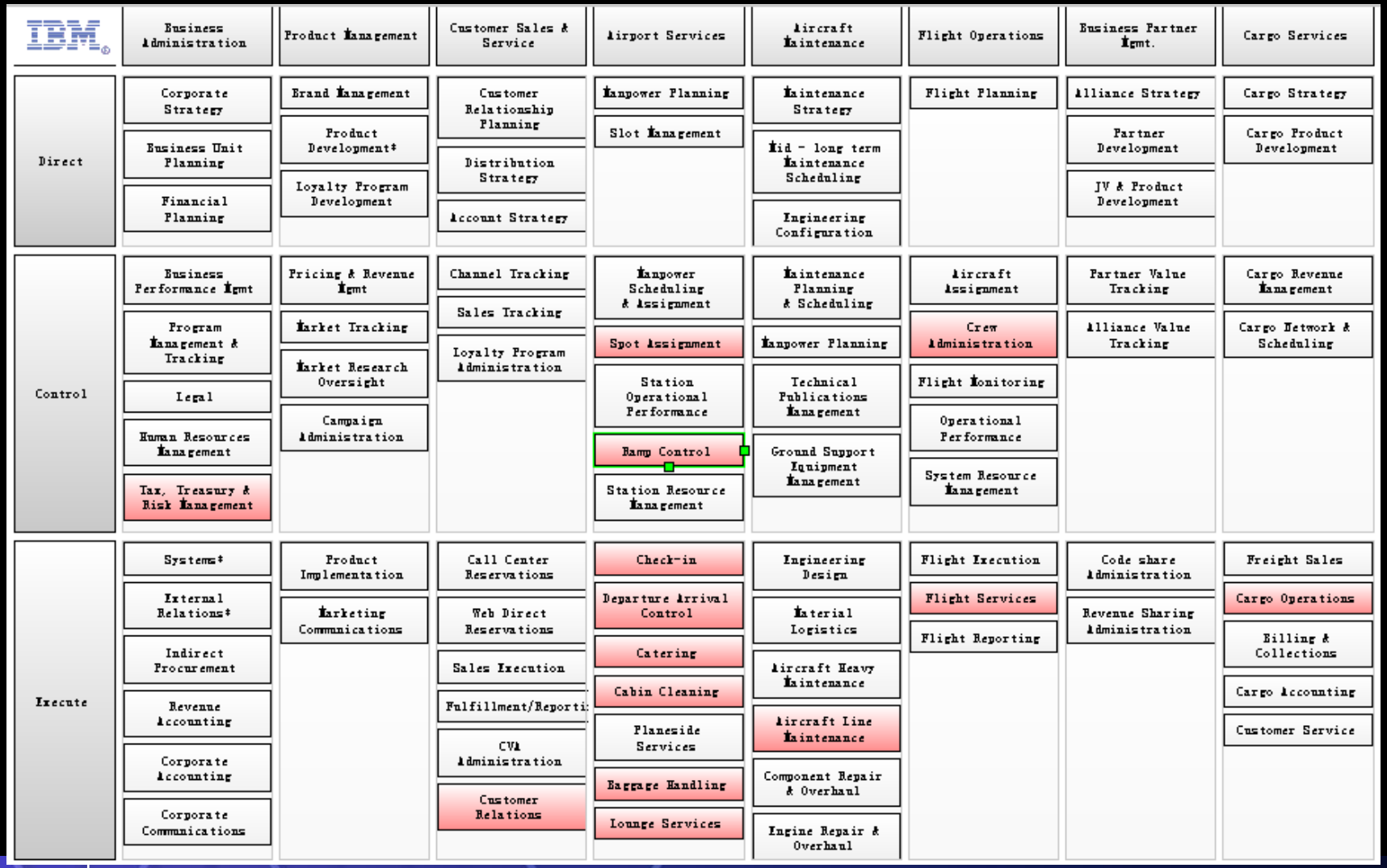
How do we govern this? Who needs to be involved?

Business Ana...st & Architect
Create business process model and service model

Business Ana...t & Architec...
Determines that processes are similar but there are unique policies and standards for country and corporate compliance

Architect
Needs to model services that maximize commonality but are configurable for each country/airport

The Heat-map from Ramp Coordination Perspective



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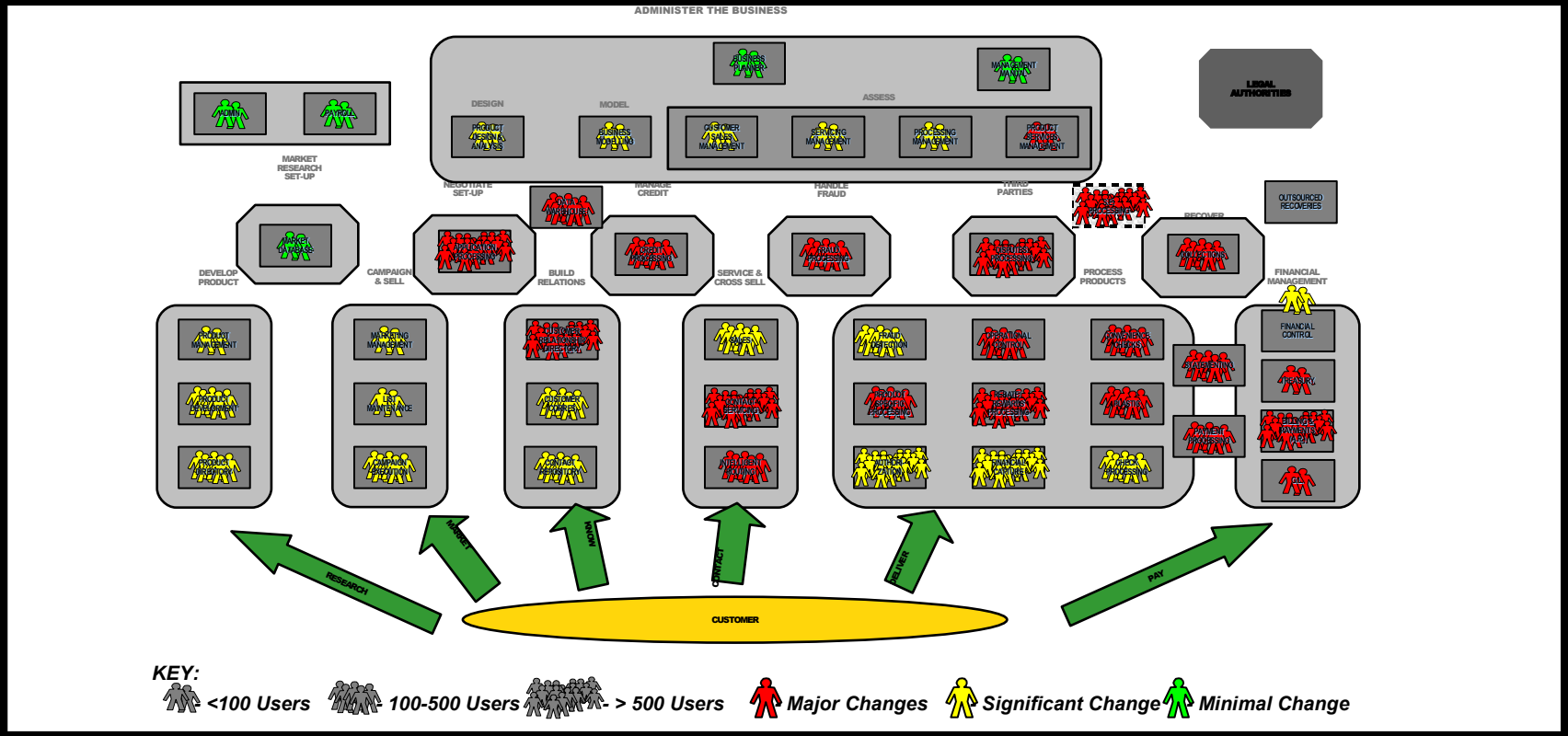
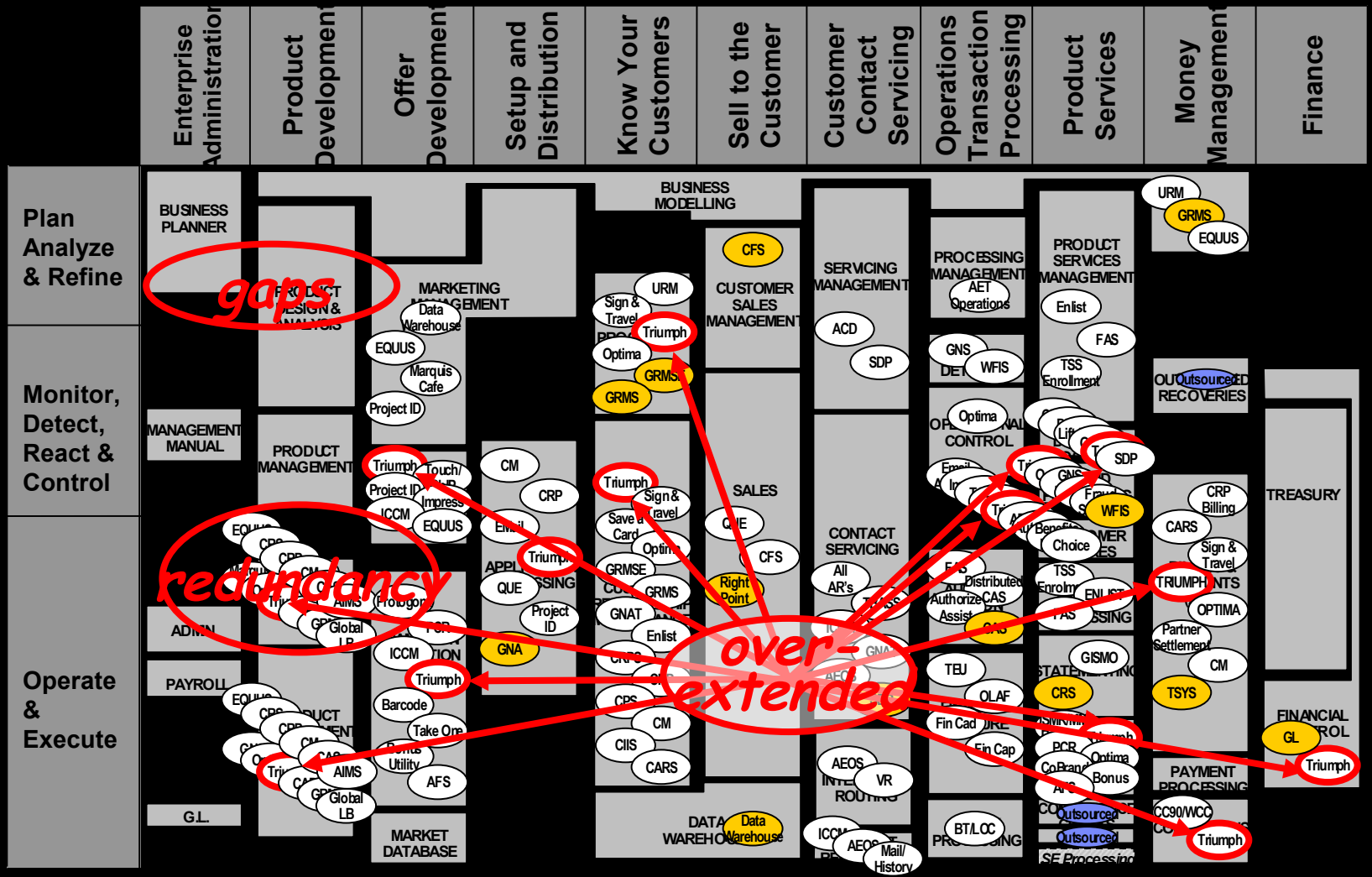
Understanding business value: Allows insight into organizational impact



Understanding business value: Allows insight into architecture patterns and usage



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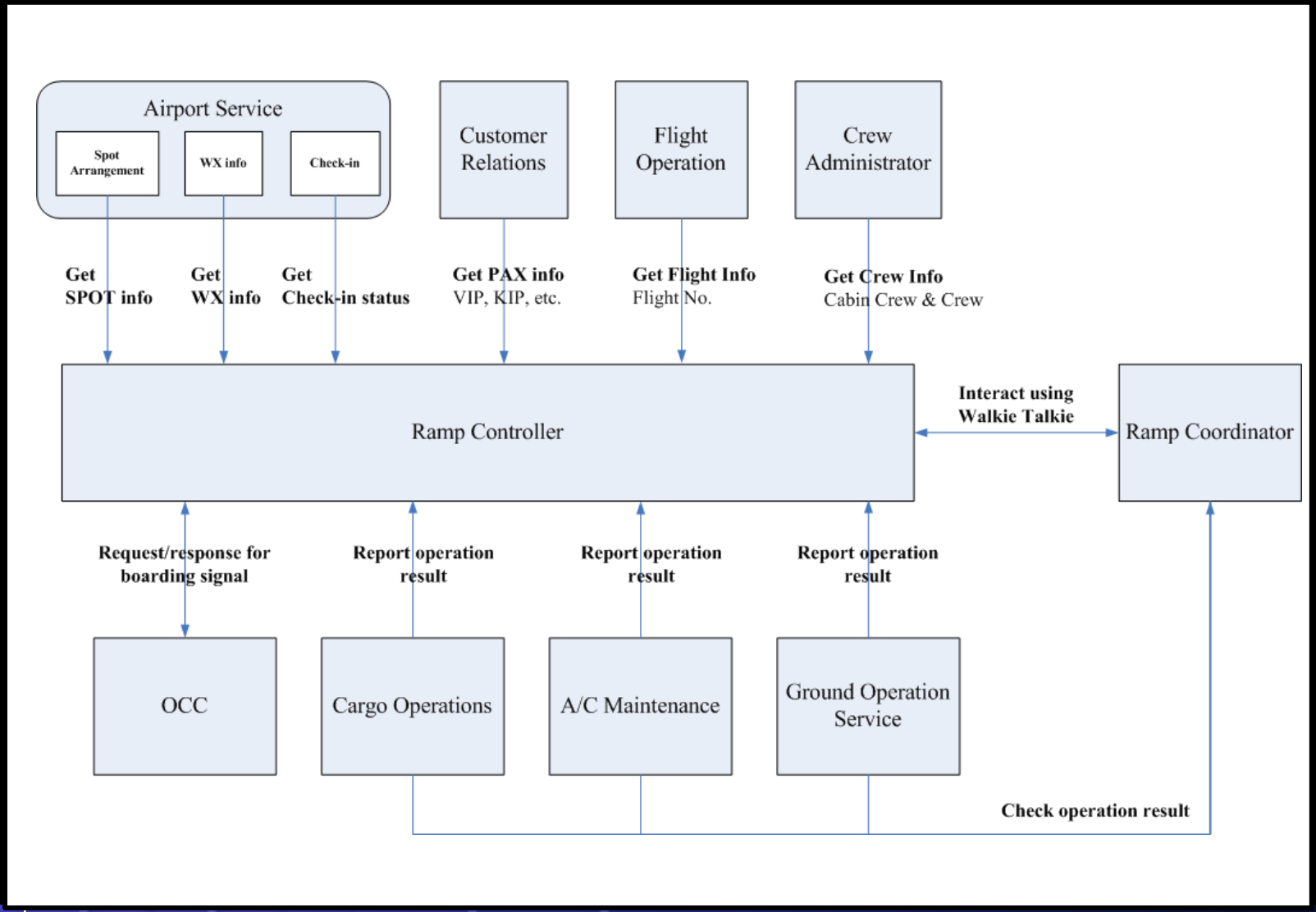
Business Context (AS-IS)



Defining high value business services: Scenario

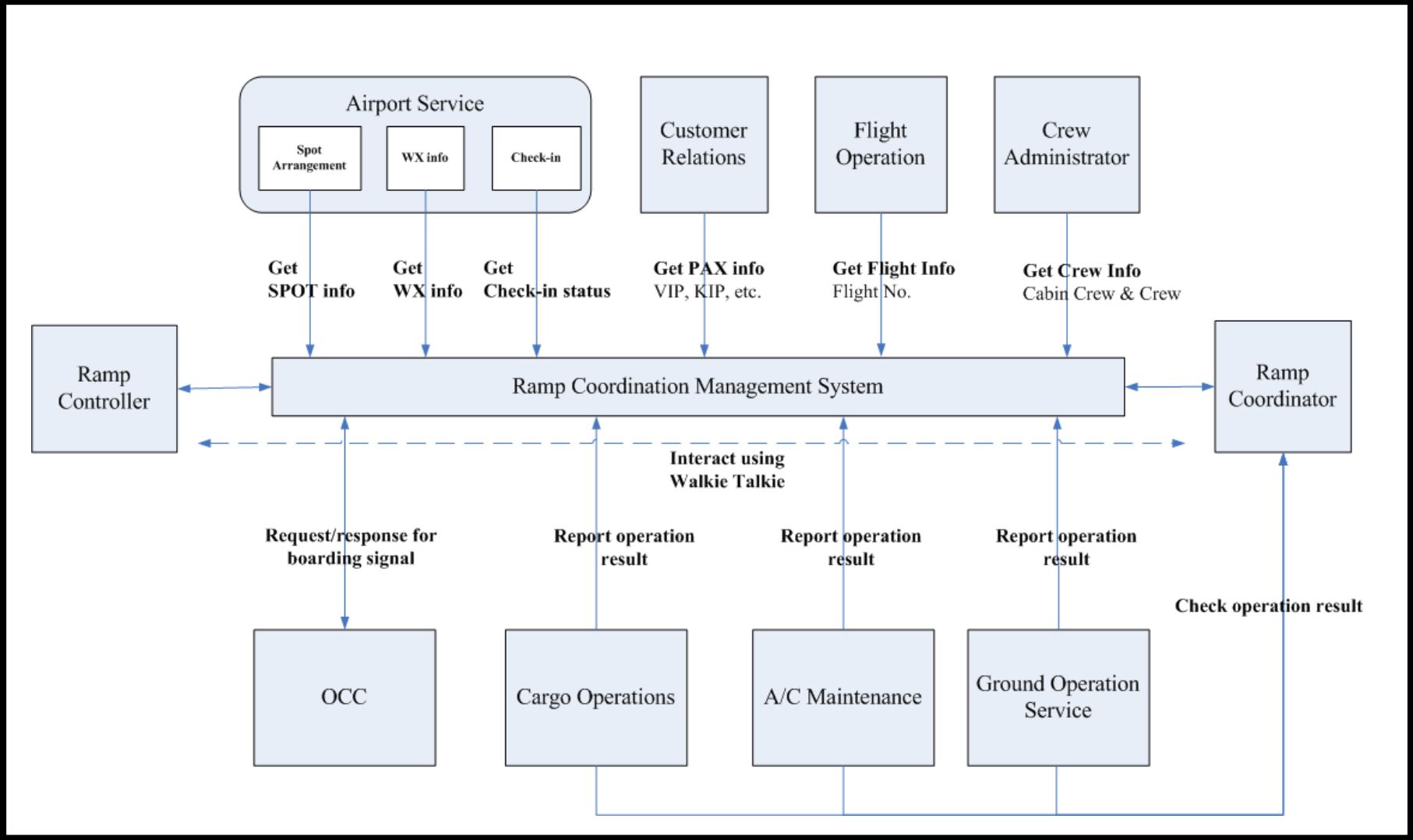
Scenario:

- Limited visibility to information about service value & cost
- Services deployed ad hoc over time
- Individual systems optimized to IT cost savings instead of business value
- Architectural emphasis on IT value vs. business value

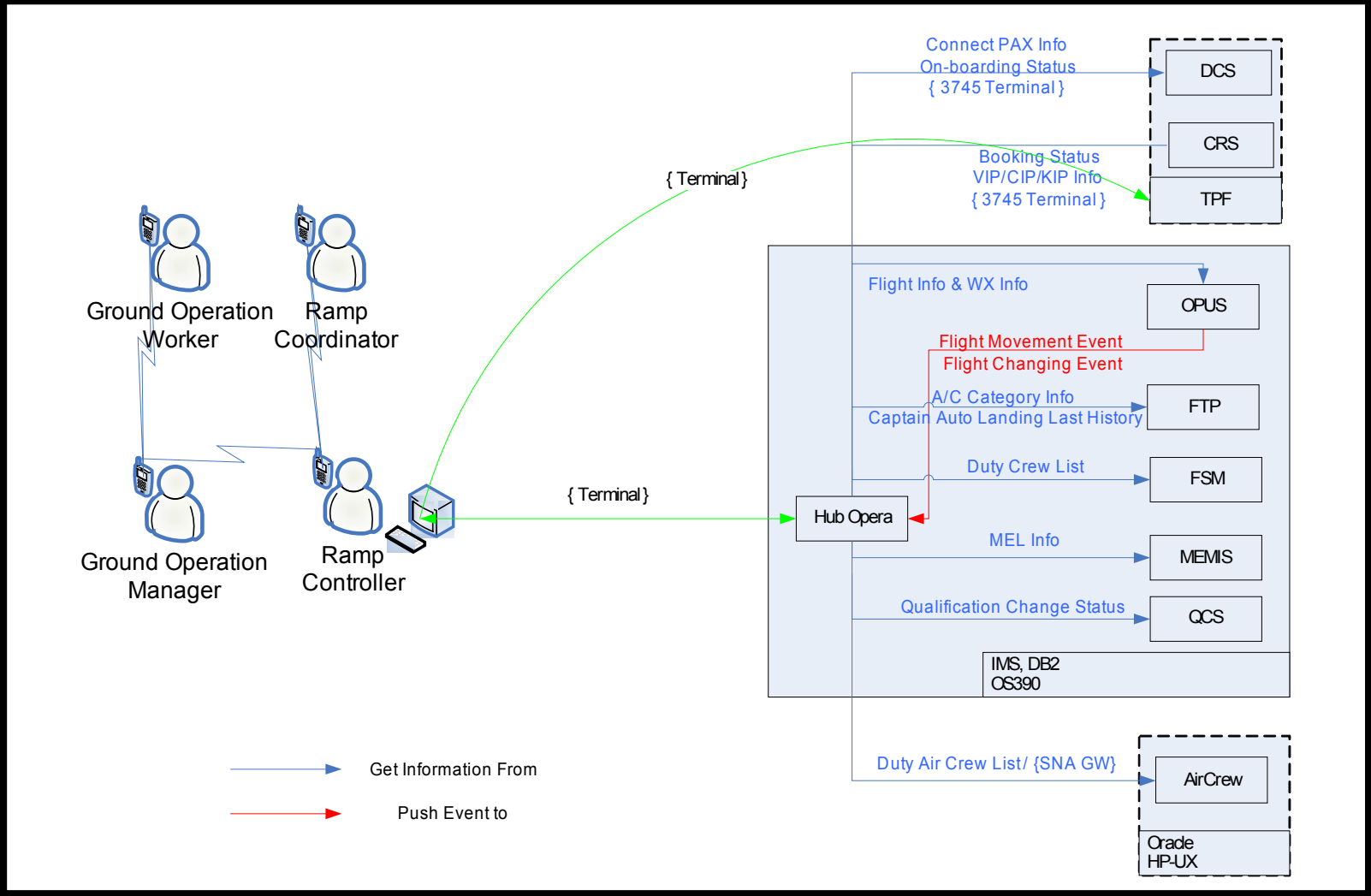
Challenges:

- No clear success factors defined for LOB
- No agreed upon measures for both IT and LOB success
- Who decides which services are shared and how are costs shared across Lines of Business (value vs. cost based models)

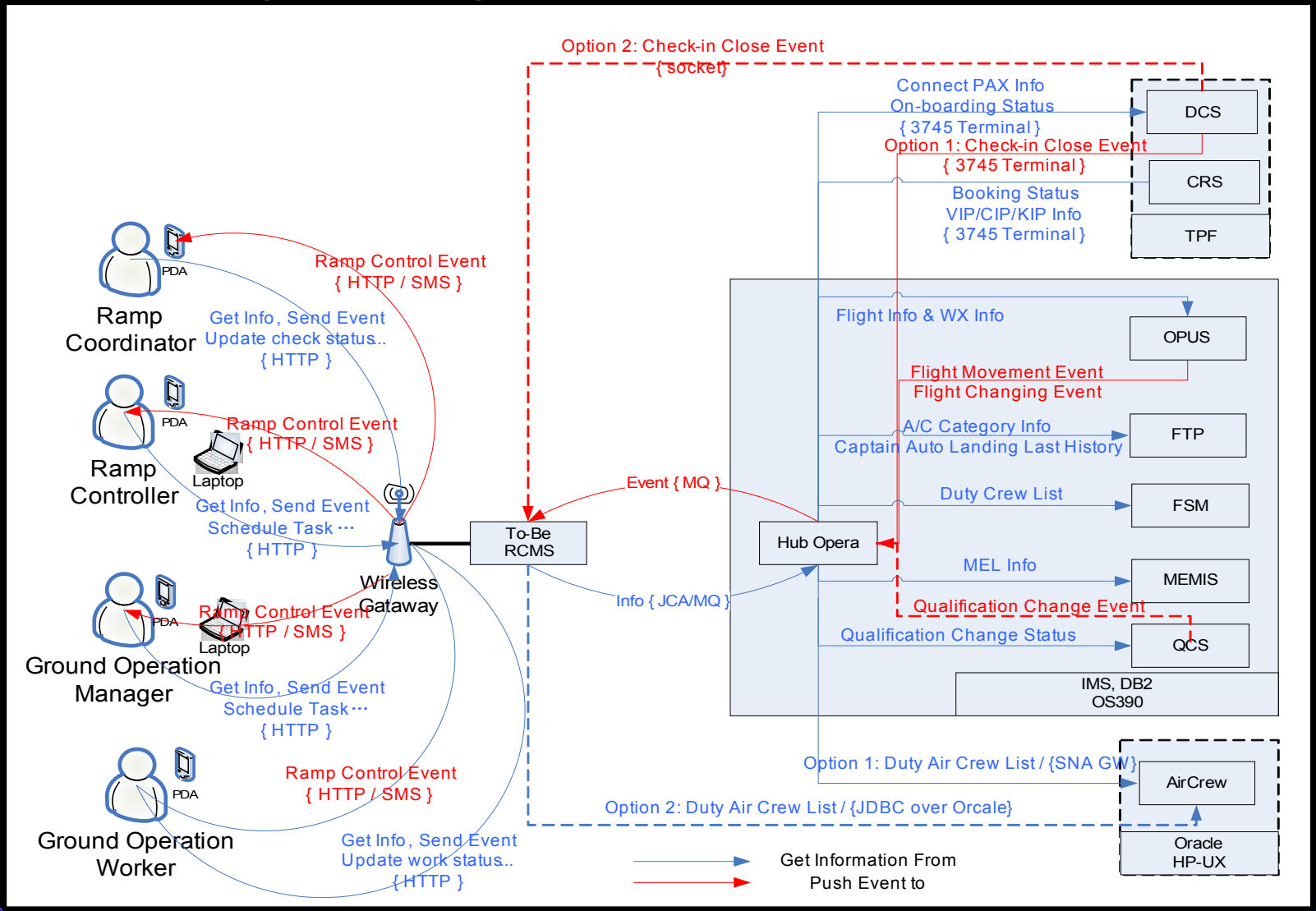
Business Context (TO-BE)



IT Context (AS-IS)



IT Context (TO-BE)



Getting Started: Defining high value business services

Business Executive

Document business strategy & components

Strategy & Planning Services

Identify key performance targets & indicators

Strategy & Planning Services

Charter Center of Excellence

Center of Excellence Services

Define development process

Rational Unified Process for SOA RMC Plugin

IT Executive

Identify metrics

Strategy & Planning Services

Business / System Analyst

Document standards and policies

Rational ReqPro, ClearCase & ClearQuest

Model key performance indicators across business process

WebSphere Business Modeler

Software Architect

Instantiate standards in application design

Rational Software Architect

Capture assets & manage deployment

WS Registry & Repositories Asset Management

Data Architect

Instantiate data standards

Rational Data Architect

Scenario: Defining high value business services

Initial scenario

Large airline has inefficient ramp control between ground crews, airport services, flight operations and 200+ different partners causing lower profitability and customer satisfaction. Issue spread across 160 daily flights to/from 120 airports worldwide. Better business logic and ramp control communications targeted to drive 10% greater ramp efficiency or US$12,800 per flight.

Result

SOA transformation in largest hub achieved 19% greater efficiency or $24,800 per flight. Results achieved without any additional enablement requirements for 200+ partners. Transformation now being implemented to additional airports worldwide.

Unexpected Result

Many vendors and partners have inquired into viability of using this airline's system with other carriers at this airport. Airline is considering whether they should keep system proprietary as competitive advantage or commercialize system into new business model.

This sounds a lot like “big” IBM talking…

- Top – Down approach
- Map out corporate business model components
- CxO level sponsorship…

- Optimal approach vs. real world approach
- How governance “in the small” can work

IT Governance in Action

- Defining high value business services
- Establishing decision rights
- Measuring effectiveness
- Managing the lifecycle of assets

Establishing decision rights: Align with LOB on Specific Project

Scenario:

- Various departments within large electronics company have ad hoc SOA initiatives underway. Some services shared across different lines of business. Costs not currently shared across departments but allocations becoming an issue as certain services are becoming over extended.

Challenges:

- No effective method for cost sharing
- Requests for “new” services made ad hoc and based on one off inter-department negotiations
- Standards for services QoS ill defined
- Lacking business justification for corporate SOA initiative.

Getting Started: Establishing decision rights

Sales, Legal and Procurement decide to improve Opportunity Management System. Shorten cycle time for sales to do Estimate & Quote and propose legal contract.

Cross dept workgroup determines congruencies and incongruencies in various departmental approaches. Creates unified approach.

Business Executives

IT Executive

Determine single business process which leverages SOA

SOA Assessment Services

Assess readiness for SOA

SOA Assessment Services

Assess current governance approach

SOA Governance and Management Method

Determine governance plan

Rational Method Composer

LOB and IT work jointly to assess as-is and to-be process then which services should exposed and how costs are shared.

Cross dept workgroup determines project standards, who creates new services, who modifies existing services, break-fix…

Establishing decision rights: Align with LOB on Specific Project

Scenario:

- Various departments within large electronics company have ad hoc SOA initiatives underway. Some services shared across different lines of business. Costs not currently shared across departments but allocations becoming an issue as certain services are becoming over extended.

Approach:

- Start small
- LOB & IT jointly selects single cross-dept process to optimize
- Establish governance “in the small” to demonstrate success

IT Governance in Action

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Measuring Effectiveness: Turn LOB Antagonist into Ally

Scenario:

- Insurance company has multiple multiple ad hoc efforts in SOA. CIO would like to drive corporate wide effort but struggles with ROI justification.

Challenges:

- Depts or divisions have disparate goals, measurements and success criteria
- No clear definition of business value and IT goals
- Costs / benefits not balanced between depts

Getting Started: Measuring effectiveness

LOB with longstanding desire for policy billing flexibility makes 2 separate change requests requests. LOB & IT exec parse out requests into Project 1 and Project 2.

Project 1 bears "startup" costs of exposing certain services. Project 2 time to market & costs measured separately.

Business Executive

Monitor key performance indicators

WebSphere Business Monitor

Measure performance against business milestones

Rational Portfolio Manager

IT Executive

Measure project costs

Rational Portfolio Manager

Operations Manager

Monitor performance against service level agreement

Tivoli Service Level Adviser

Monitor and measure service performance

Tivoli Composite Application Manager

Performance characteristics of newly created SOA applications tracked against agreed upon SLAs.

Measuring Effectiveness: Turn LOB Antagonist into Ally

Scenario:

- Insurance company has multiple multiple ad hoc efforts in SOA. CIO would like to drive corporate wide effort but struggles with ROI justification.

Approach:

- Identify LOB execs with longstanding desire for increased business agility.
- Leverage requests to identify relevant metrics and measure effectiveness of mini-SOA initiative.
- Capture metrics and work with LOB on projections for larger business case.

IT Governance in Action

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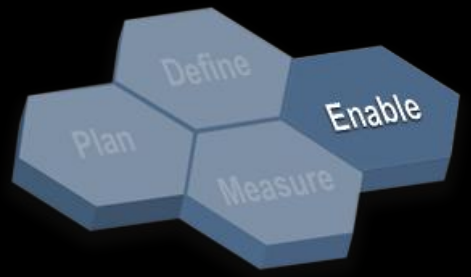
Managing the lifecycle of assets: Start Small & Federate Approach



Scenario:

- Retailer faced with increasing competition to its online and catalog sales channels institutes a new billing policy. Each LOB has adopted SOA and implemented its own unique solution. It has been determined that this uncoordinated proliferation of services is an impediment to efficiently implementing this new policy.

Challenges:

- Little insight into change management of systems & multiple inter-connected services
- Unclear policies on how are services owners and users are notified of change
- No clear understanding if service owners and service subscribers have decision rights when changes occur

Getting Started: Managing the lifecycle of assets

Business Executives

Project managers

Management considerations with common tool set across depts. to manage assets.

Implemented with Lifecycle

Audit trail and feedback loop in place to continuously monitor against performance metrics.

IT Executive

Identify requirements for new billing process
Rational Method Composer

Establish change management process for development
Rational Unified Process for SOA

Establish change management process for operations
Tivoli Unified Process

Developer

Discover service for reuse / publish service
WebSphere Service Registry and Repository

Manage and track build time assets
Rational ClearCase

Ensure signoff and create audit trail for change
Rational ClearQuest

Deployment Manager

Record service configuration information
Tivoli Change and Configuration Management Database

Security Manager

Validate and authenticate user
Tivoli Federated Identity Manager

Instantiate security policy
Tivoli Access Manager

Managing the lifecycle of assets: Start Small & Federate Approach

Scenario:

- Large retailer faced with increasing competition to its online and catalog sales channels institutes a new billing policy. Each LOB has adopted SOA and implemented its own unique solution. It has been determined that this uncoordinated proliferation of services is an impediment to efficiently implementing this new policy.

Approach:

- IT executive used LOB request to increase marketplace competitive posture as catalyst to drive governance.
- Downplayed “standards” approach initially and focused on single project while leveraging common tool set to setup future scenarios.
- Success in single project and inter-departmental project based buy-in setup Phase 2 discussions about larger rollout of lifecycle management.
- Federate projects with proper lifecycle management “after the fact”

Getting started?...
IBM WebSphere Service Registry & Repository Capabilities

WebSphere Service Registry and Repository Capabilities

Publish

Find

Agility

Manage

Govern

Answers… What?... Where?... How?... of services in your SOA

… but is this the complete answer?

Getting started?...
IBM WebSphere Service Registry & Repository Capabilities

WebSphere Service Registry and Repository Capabilities





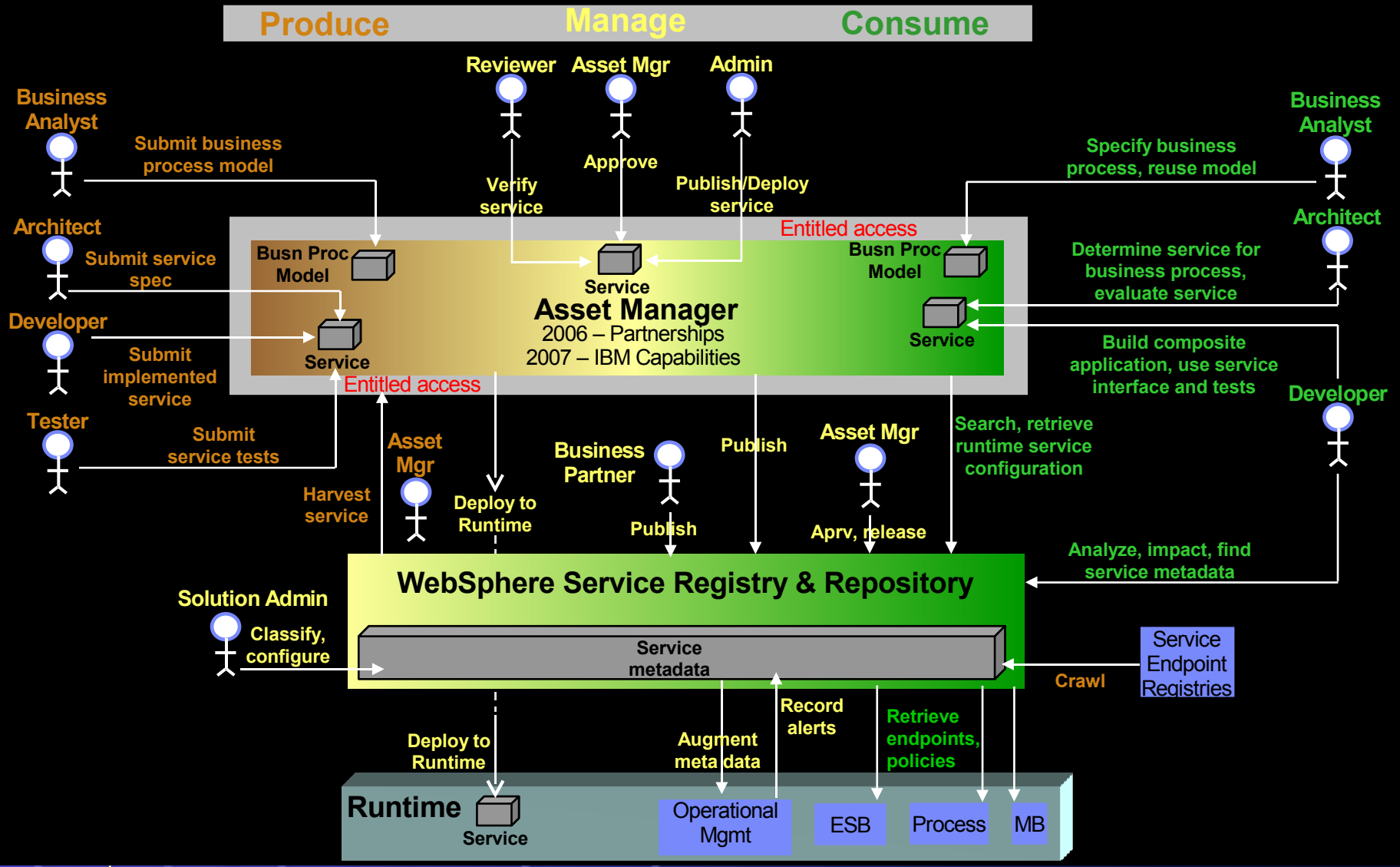
Publish ***Find*** ***Agility*** ***Manage*** ***Govern***

Answers… What?... Where?... Why?... How?... of services in your SOA

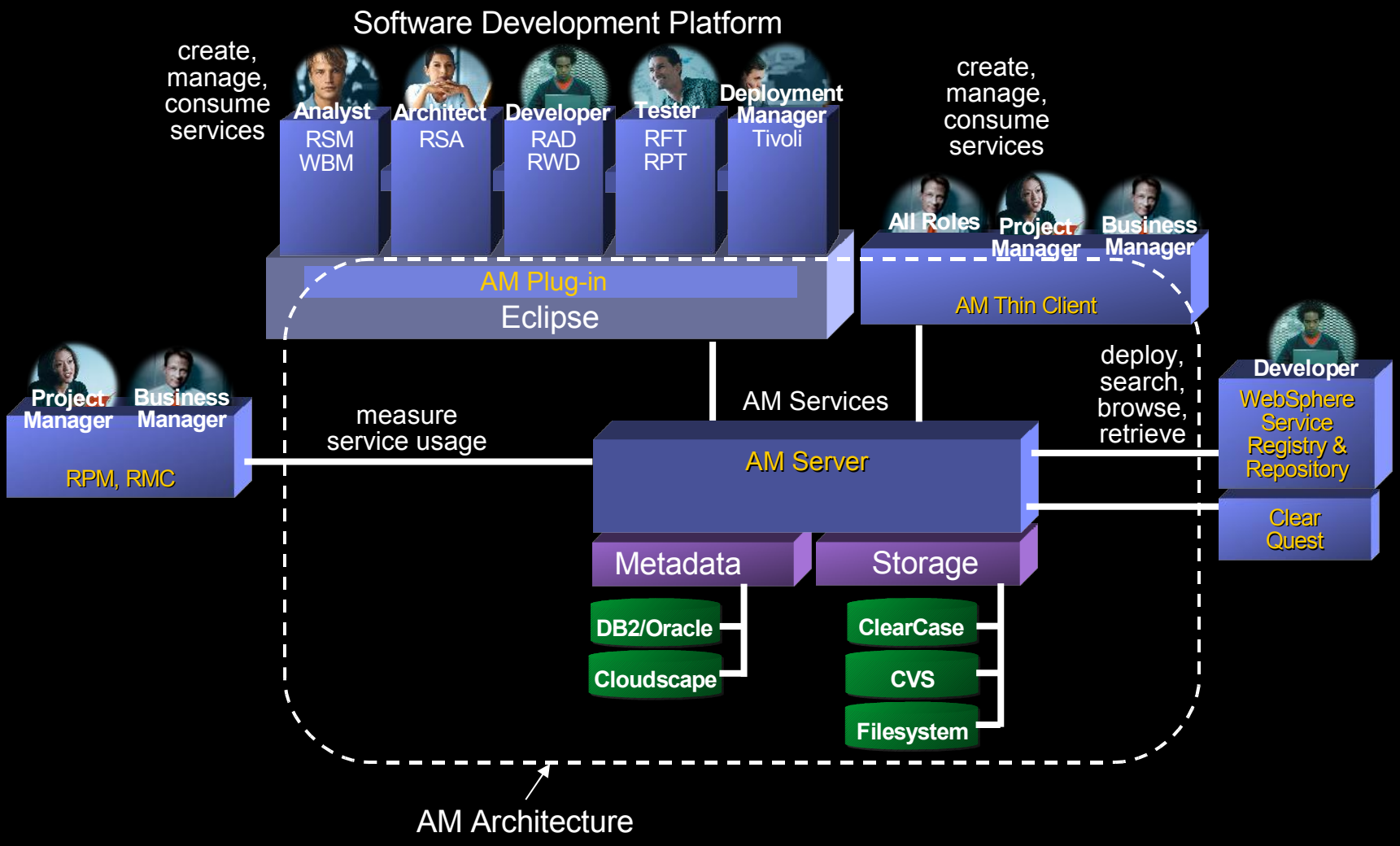
But the answers don't necessarily address business questions.

- *What business value is derived from this service?*
- *Who decides which individuals or depts can create & publish services?*
- *What's the priority of services across the entire organization?*
- *How are costs of services shared across depts?*

Service Lifecycle: Asset Manager & WSRR



Asset Management (AM) Architecture



Current approaches to SOA Governance

- Deploy SOA technology like service registries and SOA management solutions
  - Registries needed to manage services at runtime but not sufficient on its own
  - Management is most effective when done in the context of governance
- Fragmented, uncoordinated activities around SOA
  - Inconsistent approaches that result in limited ability for reuse
- Business as usual
  - Treat SOA projects same as others
- SOA governance planning

What is needed

- Framework for **defining high value business services**
- Comprehensive approach to **managing lifecycle of services assets** with multiple entry points
- Proper SOA governance as part of a larger IT governance structure allows for **establishment of decision making rights** on tradeoffs between application construction (custom build) vs. application integration (SOA)
- Establish joint LOB & IT metrics for **measuring effectiveness**
- Best practices, methodology and processes and tools and technology

Governance is key to realizing the full value of SOA

SOA Governance Lifecycle

Establish the Governance Need

- Document and validate business strategy for SOA and IT
- Assess current IT and SOA capabilities
- Define/Refine SOA vision and strategy
- Review current Governance capabilities and arrangements
- Layout governance plan

Define the Governance Approach

- Define/modify governance processes
- Design policies and enforcement mechanisms
- Identify success factors, metrics
- Identify owners and funding model
- Charter/refine SOA Center of Excellence
- Design governance IT infrastructure

Monitor and Manage the Governance Processes

- Monitor compliance with policies
- Monitor compliance with governance arrangements
- Monitor IT effectiveness metrics

Deploy the Governance Model Incrementally

- Deploy governance mechanisms
- Deploy governance IT infrastructure
- Educate and deploy on expected behaviors and practices
- Deploy policies

Additional skills and expertise available

- IBM Organizational Design Services to help refine organizational model
- IBM Design Services for SOA to help create services model
- IBM Infrastructure Services for SOA readiness, design and optimization
- Rational Unified Process for SOA deployable via Rational Method Composer Plug-In

"To fully realize the potential value of SOA, an organization needs to adjust both its infrastructure and its governance mechanisms. This means providing the information to support good decisions, and the mechanisms governing who can decide what, when and on what grounds. The governance process must also cover the full life cycle of software and infrastructure. IBM through its broad infrastructure and tools base has a unique opportunity to deliver a coherent development, management and governance platform. I am pleased that IBM is taking an SOA governance initiative, and look forward to working together on addressing this important issue."

-Claus Torp Jensen, VP, Head of Architecture and Development Strategy, Danske Bank

Next steps

- Learn more about SOA Governance
  - **ibm.com**/soa/gov
- Download whitepaper
  - **ibm.com**/soa/gov
- Identify aspect of governance for initial focus
- Download RMC Plug-In
  - http://www-128.ibm.com/developerworks/rational/downloads/06/plugins/rmc_soa_gov/overview.html
- Conduct an SOA Workshop


Thank
You