




# SERVICES INFRASTRUCTURE! A Practical Approach to SOA for an Enterprise


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CTO, BEA-IT

# Agenda

- The Promise of SOA
- Our Experience with SOA
- Getting Started



# WHAT IF WE COULD...? A CIO'S QUESTIONS TO HER ARCHITECTURE TEAM

- **Deliver** business capability **in weeks**, not months, nor years?
  - Systematically **re-use** existing components rather than build?
  - Integrate **seamlessly**, organically?
  - Dramatically **lower our end-to-end cost of ownership**?
  - Limit funds at risk to **micro-investments** rather than massive investments?
  - **Focus** on building business **processes** rather than applications?
  - Develop in a **massively parallel** way where we need speed?
- 

# WE CAN ... THREE MAJOR TRENDS ARE TRANSFORMING ENTERPRISE COMPUTING

1

**Service Oriented Architectures**

- **Interoperability** enabling new, much faster and efficient ways to deliver IT

2

**Low Cost High Performance Platforms**

- **Linux-Intel** dramatically reducing TCO of IT

3

**Global Sourcing**

- Large **global supply** of skills dramatically increasing affordability of labor

Speed

Efficiency

Differentiation

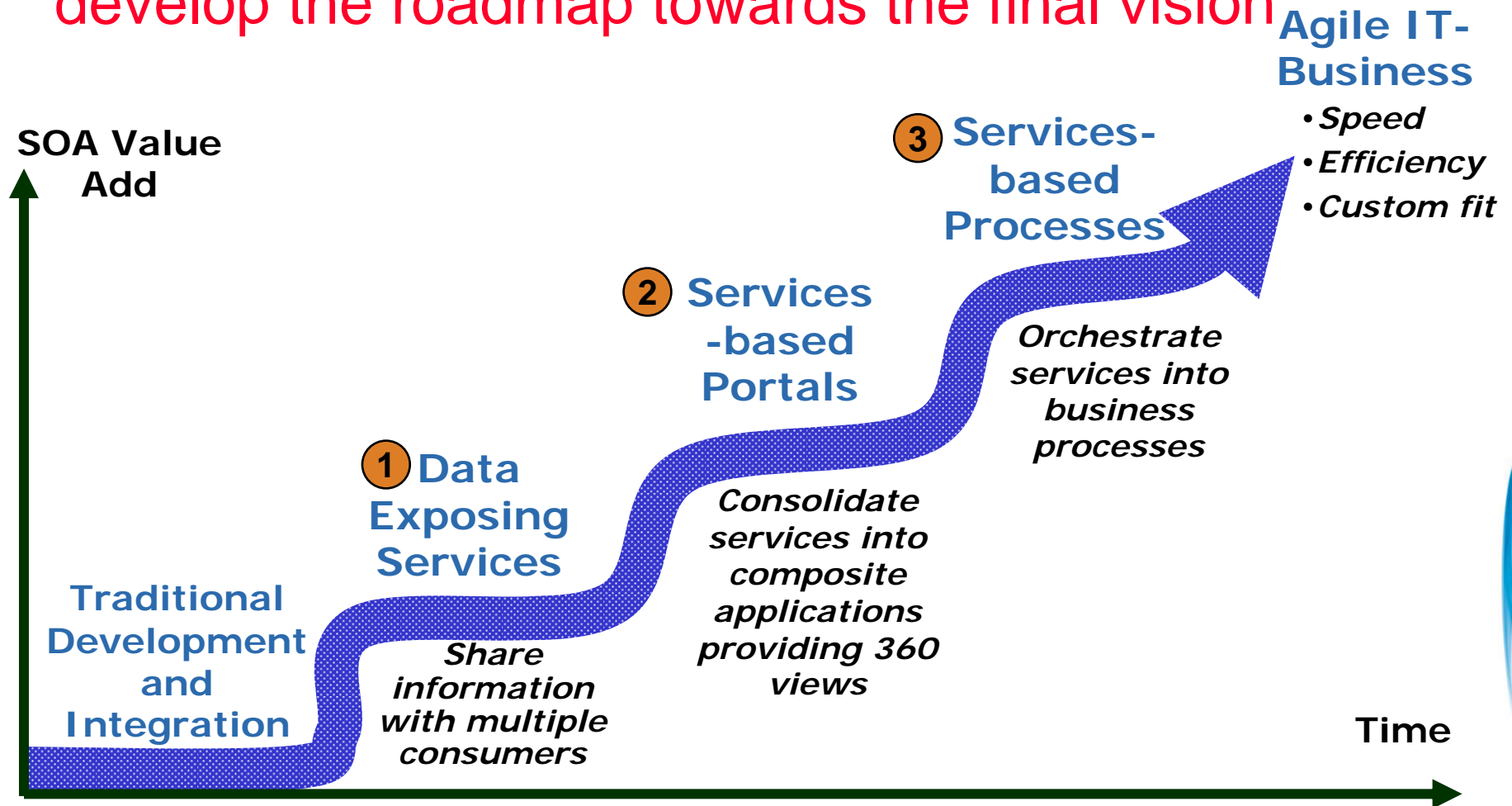
# SOA: A PARADIGM SHIFT

<b>Distributed Component Architecture</b>	<b>Service-Oriented Architecture</b>
Functionality Oriented	Process Oriented
Designed to Last	Designed to Change
Long Development Cycle	Interactive and Iterative Development
Cost Centered	Business Centered
Application Block	Services Orchestration
Tightly Coupled	Agile and Adaptive
Homogeneous Technology	Heterogeneous Technology
Object Oriented	Message Oriented
Known Implementation	Abstraction

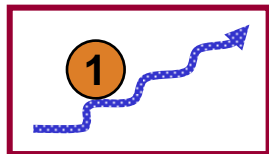
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# Identifying the roadmap to SOA helped us develop the roadmap towards the final vision

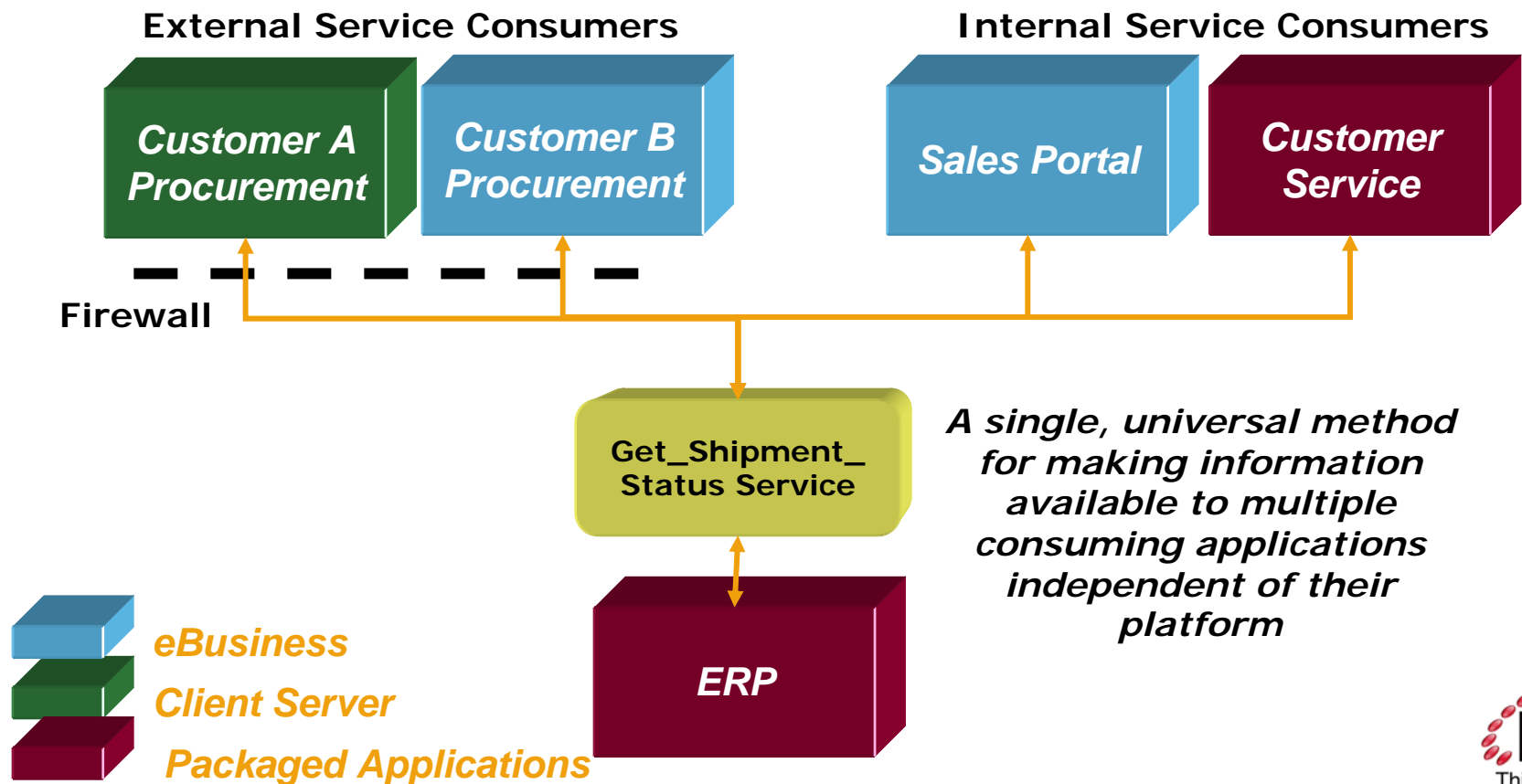


# SOA Step #1 Consists of exposing enterprise information to internal or external "client" applications



## Data Exposing Services

Example: Product Shipping Status



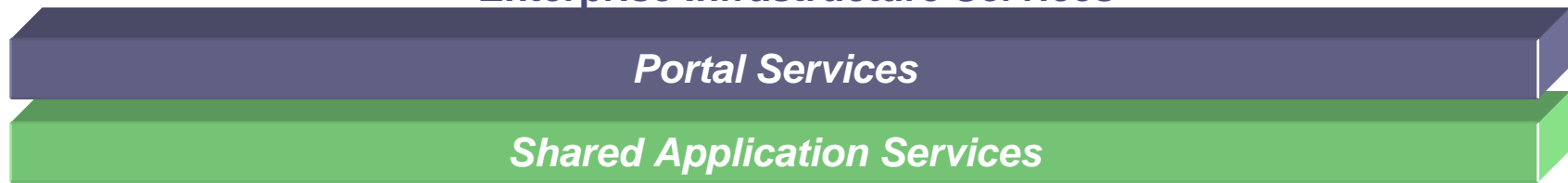


# OUR 1st GENERATION SOA HELPED BUILD FRONT-END PORTAL APPLICATIONS VERY RAPIDLY AND EFFICIENTLY

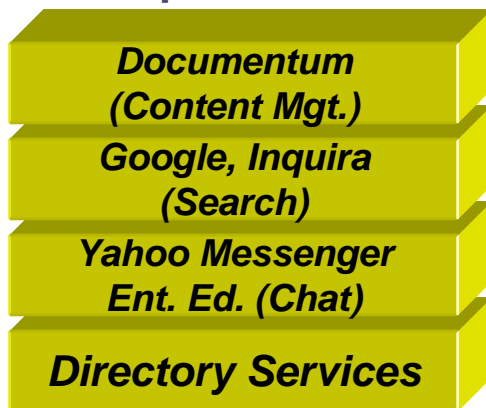
## Custom Portal Applications – Front-end



## Enterprise Infrastructure Services



## Enterprise Services



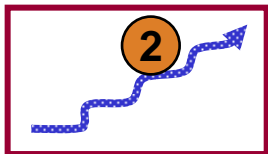
## Enterprise Applications – Back-end



## Enterprise Data

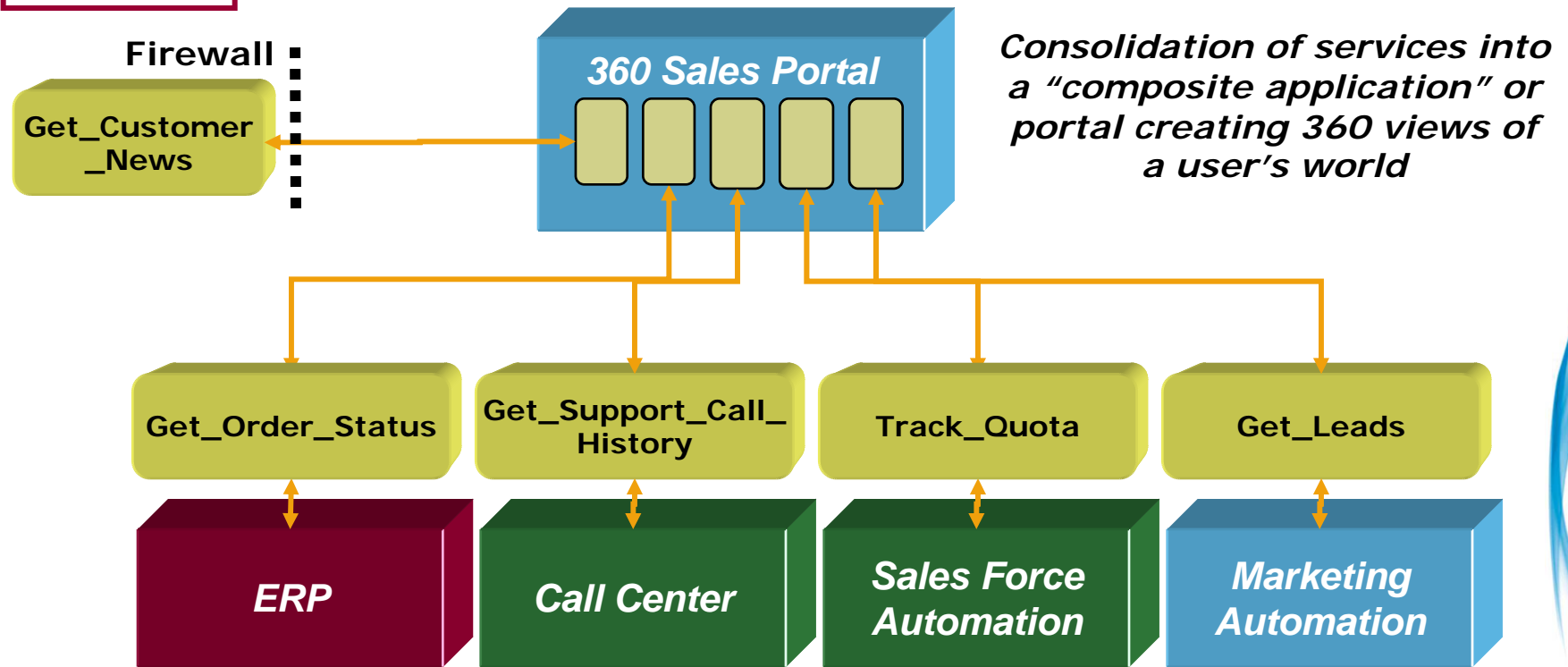


Step #2 Consists of creating portal applications that create “360 Degree” views of their users work environment



## Services-based Portals

Example: A Sales Portal



-  eBusiness
-  Client Server
-  Packed Applications

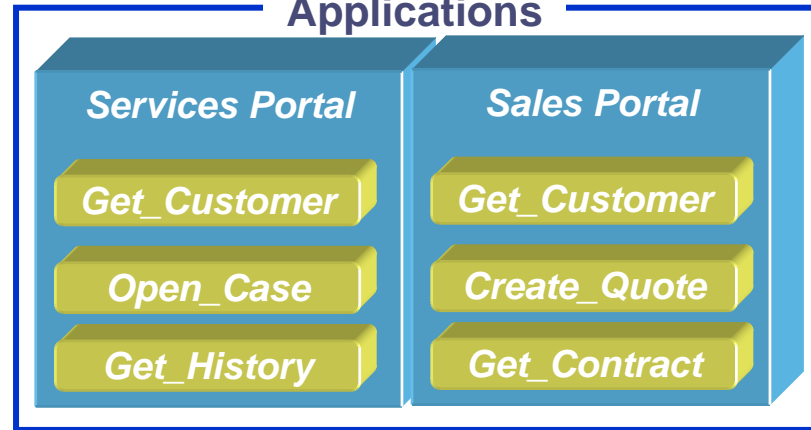
# OUR SECOND GENERATION SOA: SERVICES TO INTEGRATE THE ENTERPRISE AND BUILD COMPOSITE APPLICATIONS

Composite Applications Assembled from Business Services Components and Portlets that Expose Enterprise Data and Functionality

“Traditional” Portal Applications



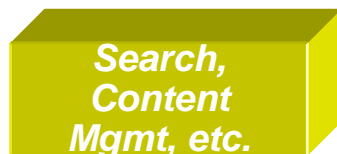
Composite Applications



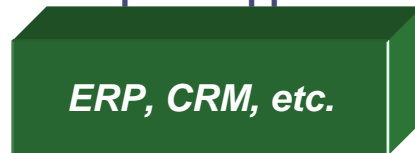
Enterprise Infrastructure Services



Enterprise Services



Enterprise Applications



Enterprise Data



# It allows us to build powerful new business applications.

**Sales Portal - Example**

Account: AT&T Wireless Seattle

MyQuotes  
Leads  
Contracts  
Intelligence  
Campaigns

Customer News  
Words you cannot search for and which cannot improve your search include: ...

Order History

Date	Name	Product	Issue Level
03/15	P. James	WLU	1
03/15	M. Wright	WLP	2
03/15	J. Yu	WLS	1
03/15	T. Chen	Workshop	3
03/15	A. Pett	WLU	1

Licenses Installed Base

Product	License #	Contact	IP Address
WLU	12345	P. James	IP addresses
WLP	07000	J. Chen	IP addresses
Workshop	12345	M. McQuin	IP addresses
WLS	07000	A. Pett	IP addresses

Service Experience

Overall Satisfaction: 4.5  
Loyalty Index: 3.1

Support Case History

Date	Name	Product	Issue Level
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Professional Services Projects

Project Name	Product	Status
Supply Chain Portal	WLU	In Progress
Enterprise Billing	WLP	In Progress
Settlement Automation	WLS	Complete
Customer Care Portal	Workshop	Complete



The new architecture and many of the same services can enable customer facing applications.

**Customer Portal - Example**

<b>Company</b> AT&T Wireless Seattle		<b>MyContacts</b>
<b>Name</b> J. Cheng		<b>MyConfigs</b>
<b>Position</b> Sr. Director, eBusiness		<b>Support Tools</b>
		<b>Events</b>

**Service Experience**

**Support Case History**

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**Professional Services Projects**

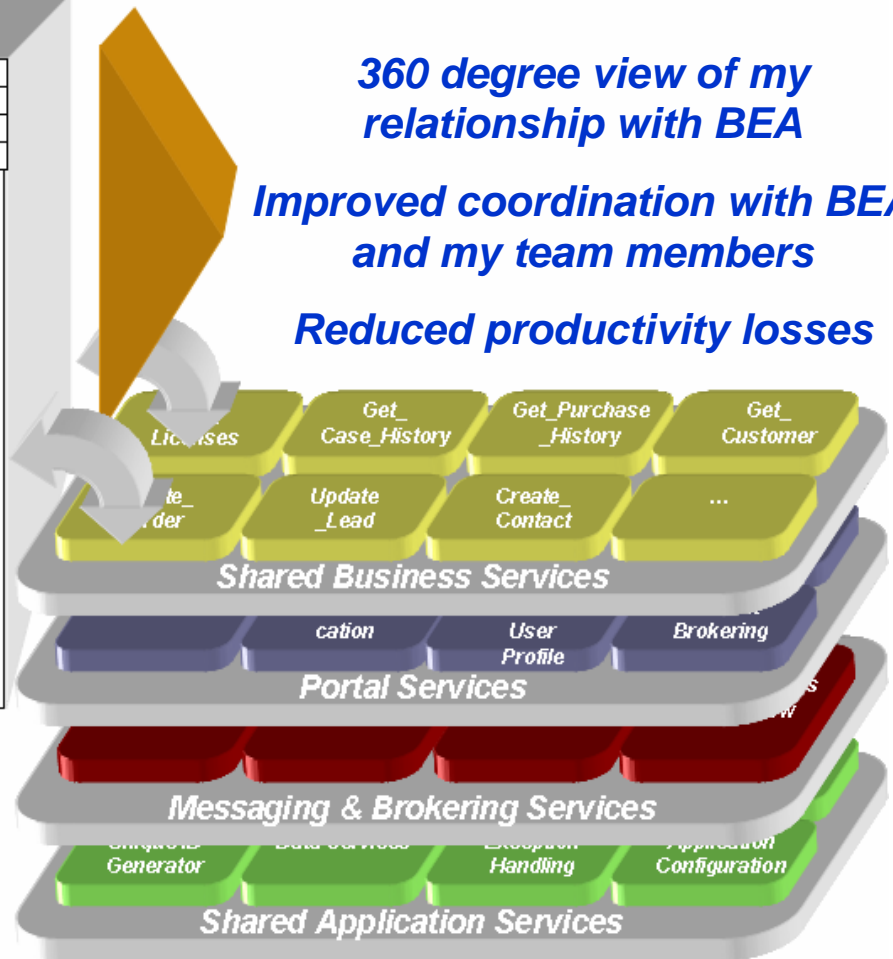
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**MyLicenses**

Product	License #	Contact	IP Address
WLU	12345	P. James	IP addresses
WLP	87000	J. Chen	IP addresses
Workshop	12345	M. McCall	IP addresses
WLS	87000	A. Hopper	IP addresses



# Our SOA approach has helped us create big wins for our Business at a very rapid pace



The Year's Ten Best Web Support Sites

eSupport

- 12/01
- 11/02
- 6/03

Dev2Dev

- 03/02
- 03/03
- 06/03

eOrders

- 05/02

HR Portal

- 08/02

eLicense

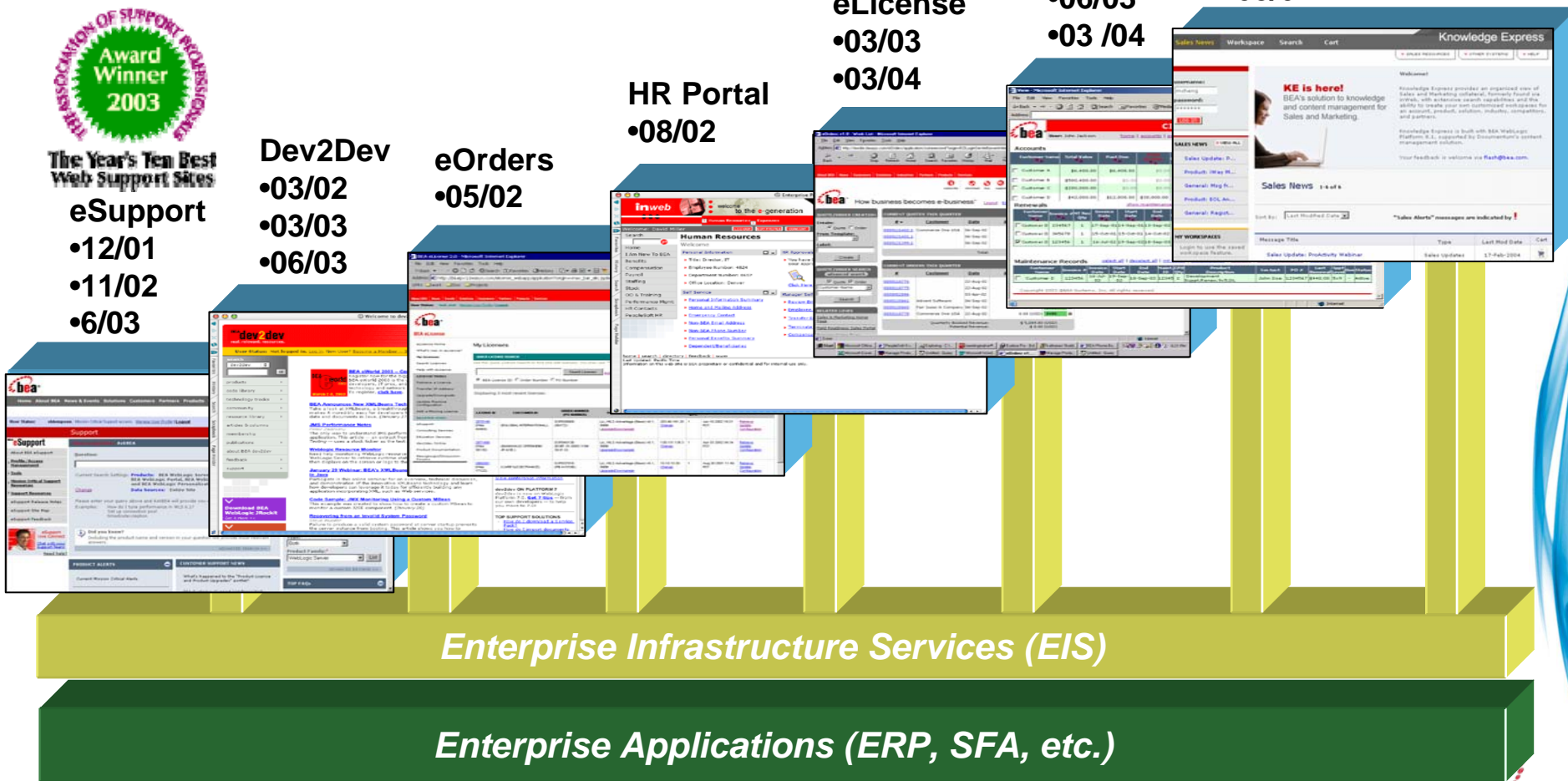
- 03/03
- 03/04

Renewals

- 06/03
- 03 /04

Knowledge Express

- 03/04







# Enterprise Architecture increases IT proficiency and optimizes business value

## Benefit Examples: Impact on BEA's eBusiness Program

### Efficiency

- **\$5.5 M** savings in application development
  - **\$2.2 M** savings in supporting functions (production environment support, application support, etc.)
- 

### Speed

- **50%** reduction in development time for new applications
  - Most **releases in 4 months**: 12x4 Development Model
- 

### Predictability

- 50,000+ development man-hours delivered with **less than 3% schedule variance**
  - Over \$20M implementation costs **within 1% of budget**
- 

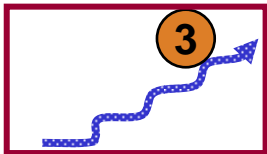
### Quality & Performance

- All apps released with **zero known functional defects**
  - **Always on infrastructure**
- 

### IP and Skills

- Depth of **skills/institutional knowledge in standards based architecture and technologies.**

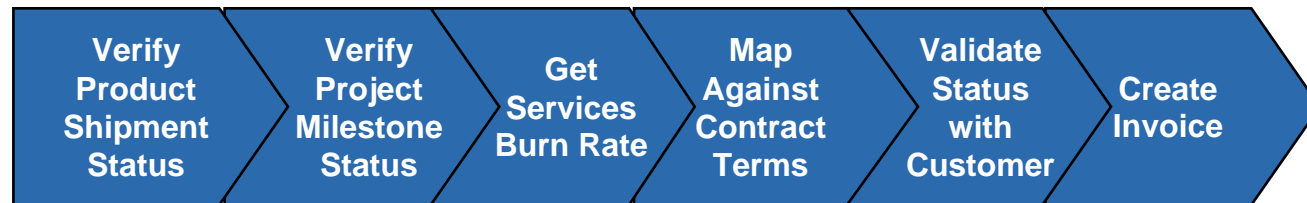
# STEP #3 IS ORCHESTRATING SERVICES INTO BUSINESS PROCESSES



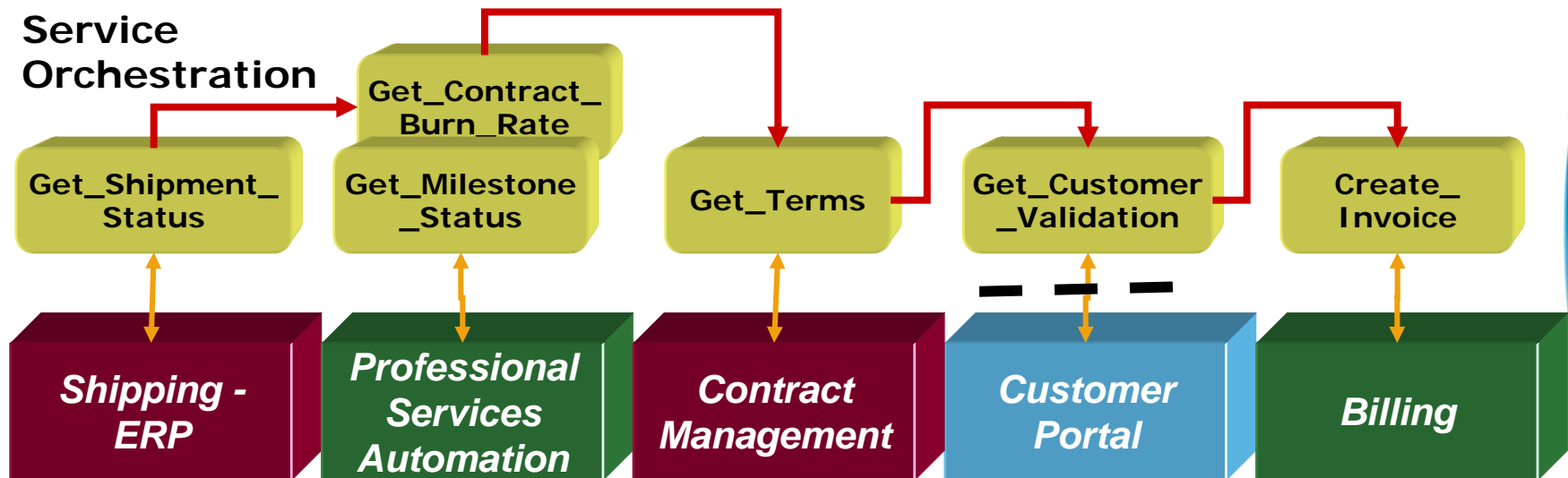
## Services-Based Processes

Example: A Solution Milestone Invoicing Process

**Business Process**



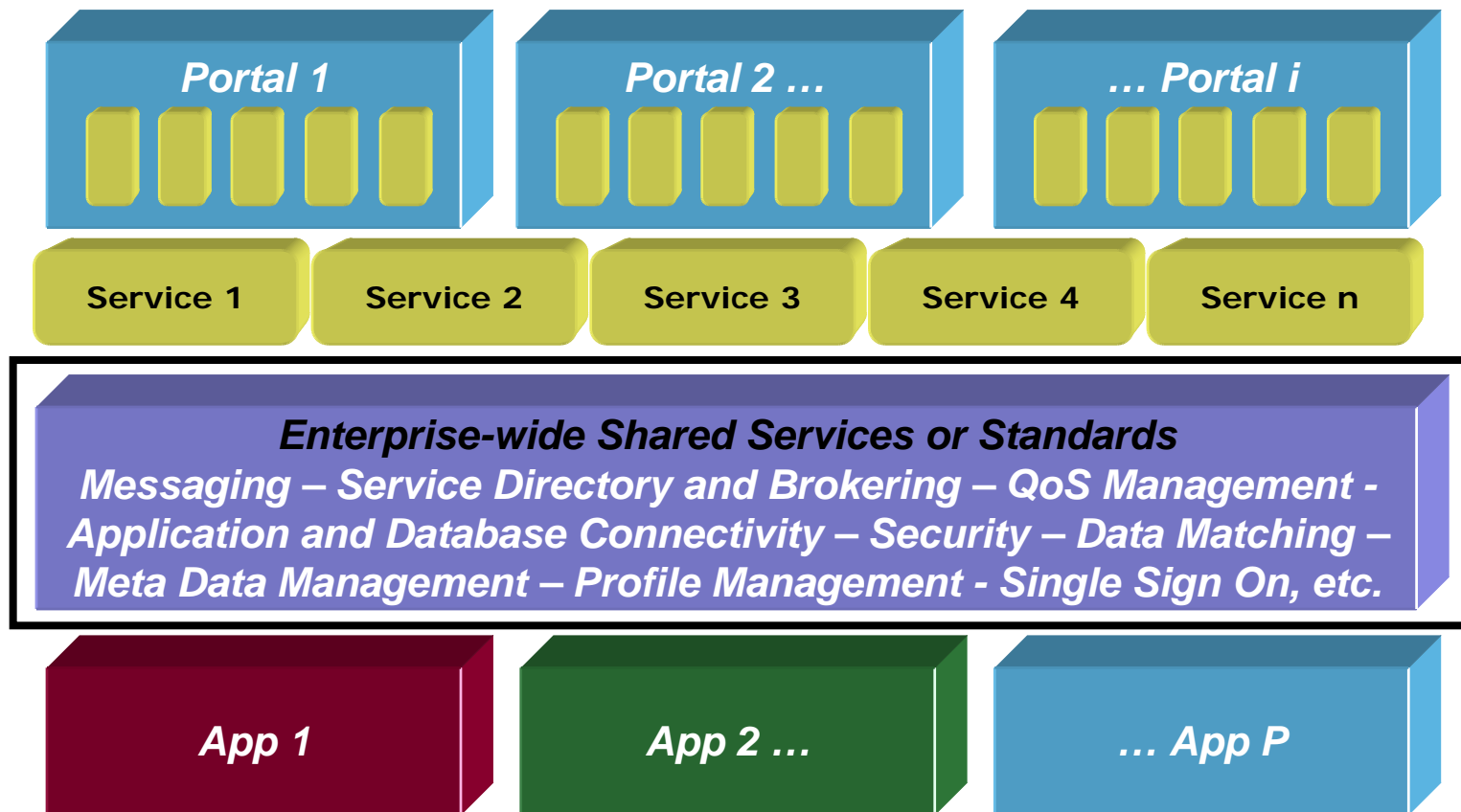
**Service Orchestration**





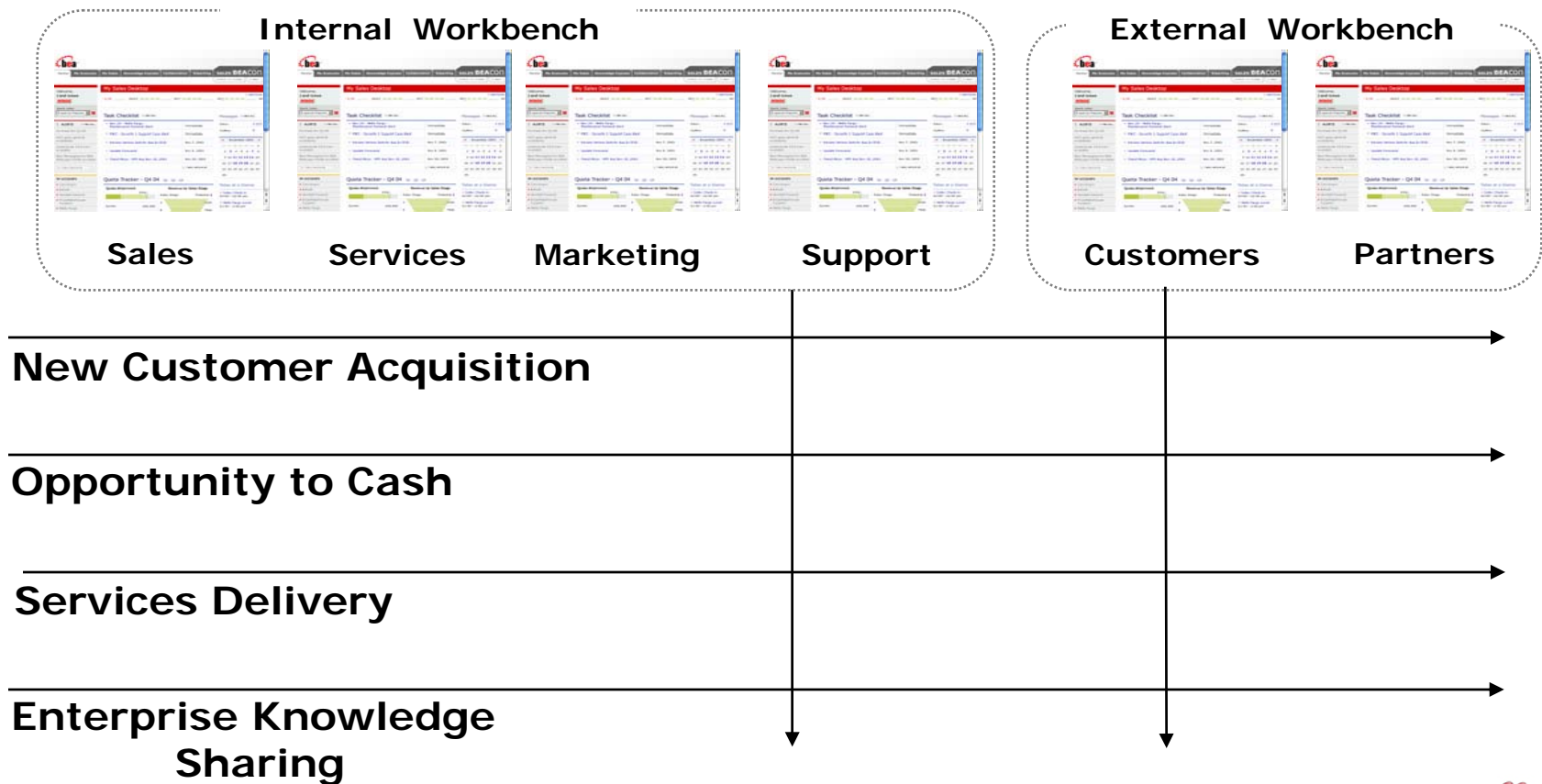
# THE NEED FOR “A” IN SOA

## Opportunities for Architectural Standards and Shared Services

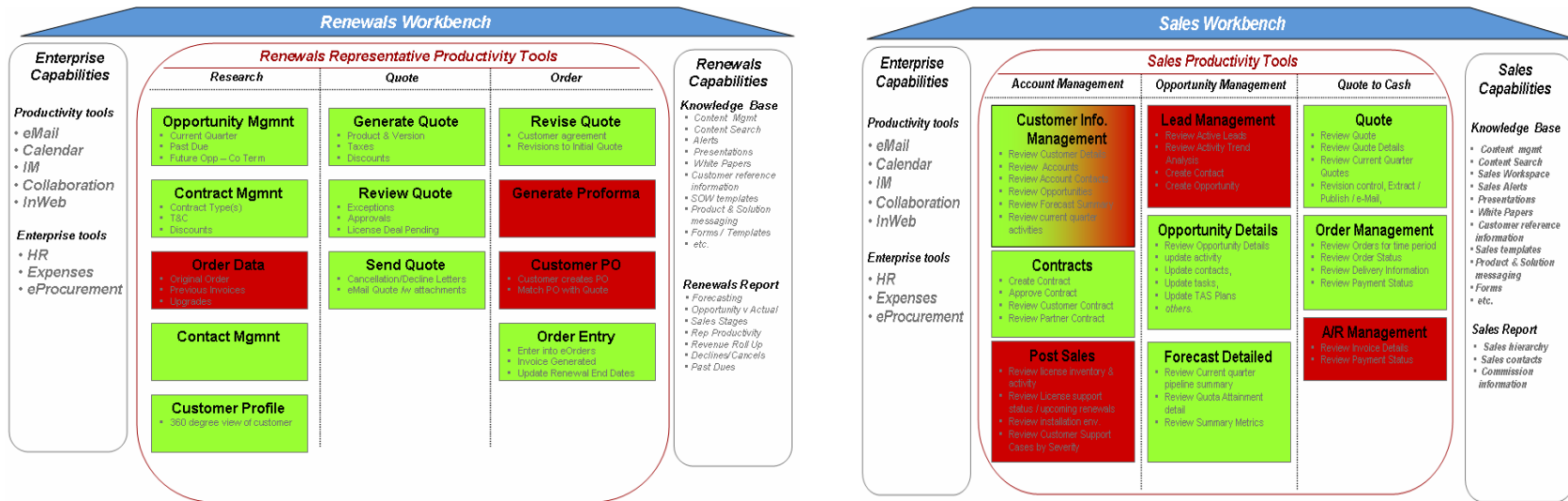


# THE SIMPLE IDEA FOR BEA'S FUTURE APPLICATION ARCHITECTURE


Streamlined Core Processes Accessed by Role-Based Workbenches




# Role Based Portals Shall Leverage IT Investments Made Across the Entire Application Portfolio

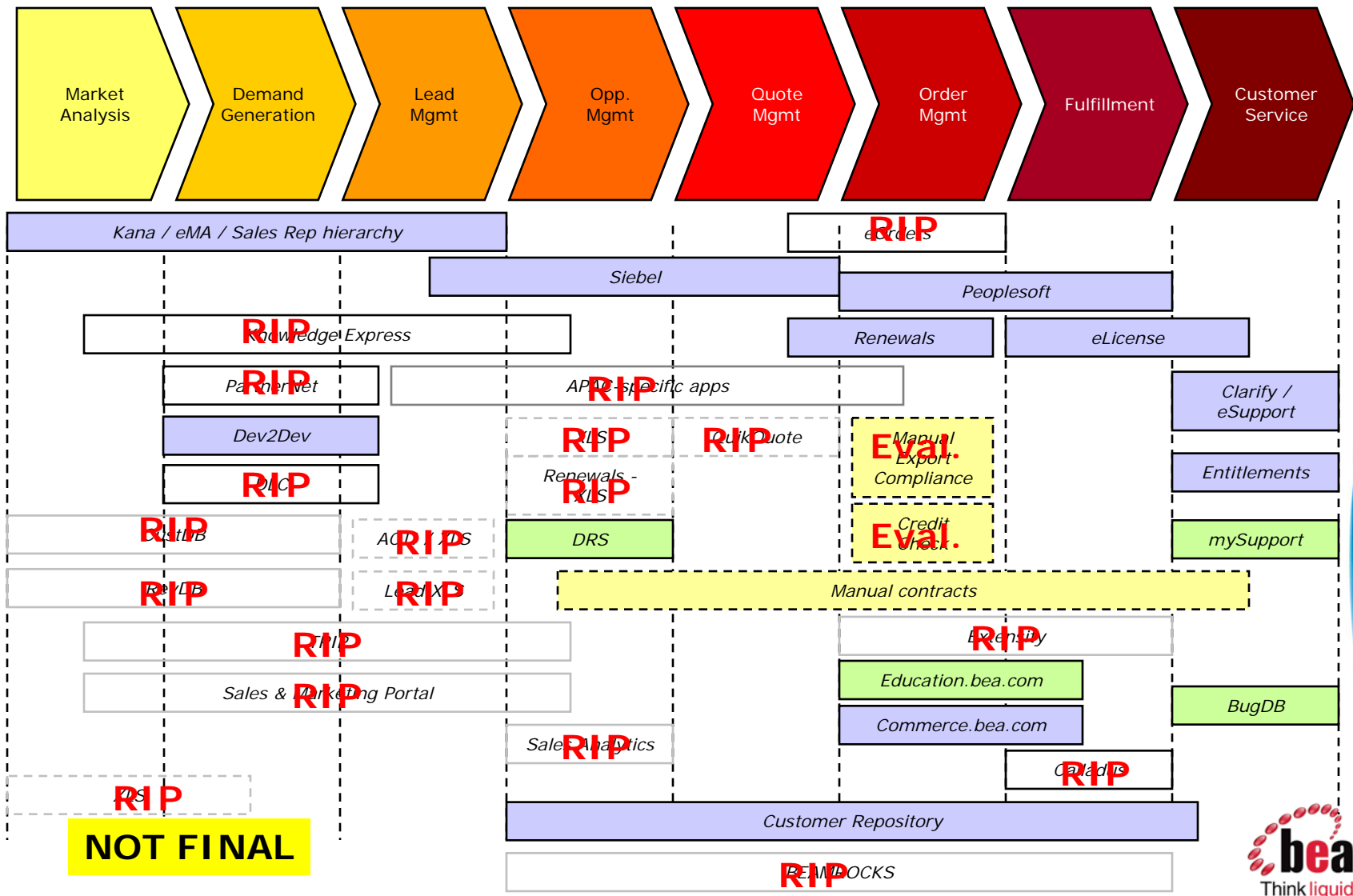


- High re-use of common Services
- Reuse of Infrastructure/Foundational Components
- Reduction in time needed to develop new capabilities

 Shared Infrastructure / Business Service

 Specific Services (limited or no re-use)

# As This Future Vision Is Deployed, BEA's Legacy Applications Are Dramatically Simplified



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# GETTING STARTED...

- **Craft your SOA vision and market it to the executive suite**
  - An SOA is a vision for enterprise computing – **you will need a seat at the executive table** to sell it and realize it
  - Link your SOA benefit to the **company's competitive advantage**: your SOA is the cornerstone of the IT value proposition
- **Pick your team carefully**
  - Find **the few business executives who actually “get it”** and will support you through the journey
  - Select or hire **the best and brightest** architects, developers and project managers – a few superstars are required initially if you want to avoid costly mistakes
  - As needed, **peer them with partners** who can demonstrate their experience and will **help you build a successful organization**, not just deliver capabilities
- **Sustain business sponsorship** and staff **motivation** throughout the journey
  - **Go for small and quick wins** rather than big bang deliveries
  - **Market your wins** and create the self-fulfilling success engine



Thank You!

13 July 2006