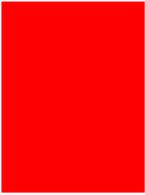




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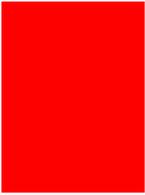
Selim Burduroğlu

Enterprise Architect
Named and Strategic Accounts
Oracle, USA
10.22.2007



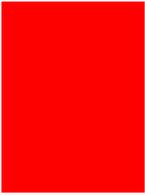
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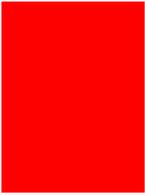
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Topics

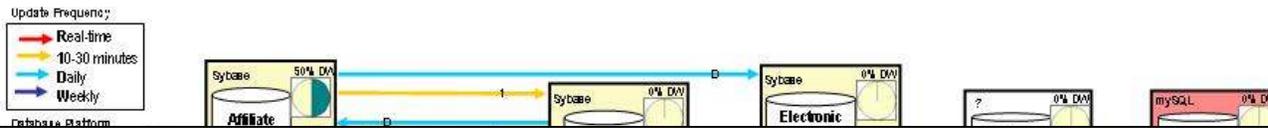
- Why Service Oriented Architecture (SOA)?
- What is SOA?
 - Key Components
 - Reference Architecture
- Oracle's SOA Platform
- SOA What?
- Summary



Topics

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Today's Typical Landscape



Issues

- Little standardization
- Many **hardwired** integrations
- High costs of integrating **applications** and **technologies**
- Focus is on **'life support'**

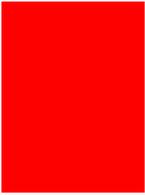
Results in

- Inflexible business processes
- Lack of enterprise visibility
- Users as integrators



v2 - 9/12/05

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CEOs & VPs...

See the promise of SOA

Please rate the importance implementing a **Service-Oriented Architecture (SOA)** will have on your organization's success over the next 12 months.

Source – Yankee Group Interoperability Survey – June 2005



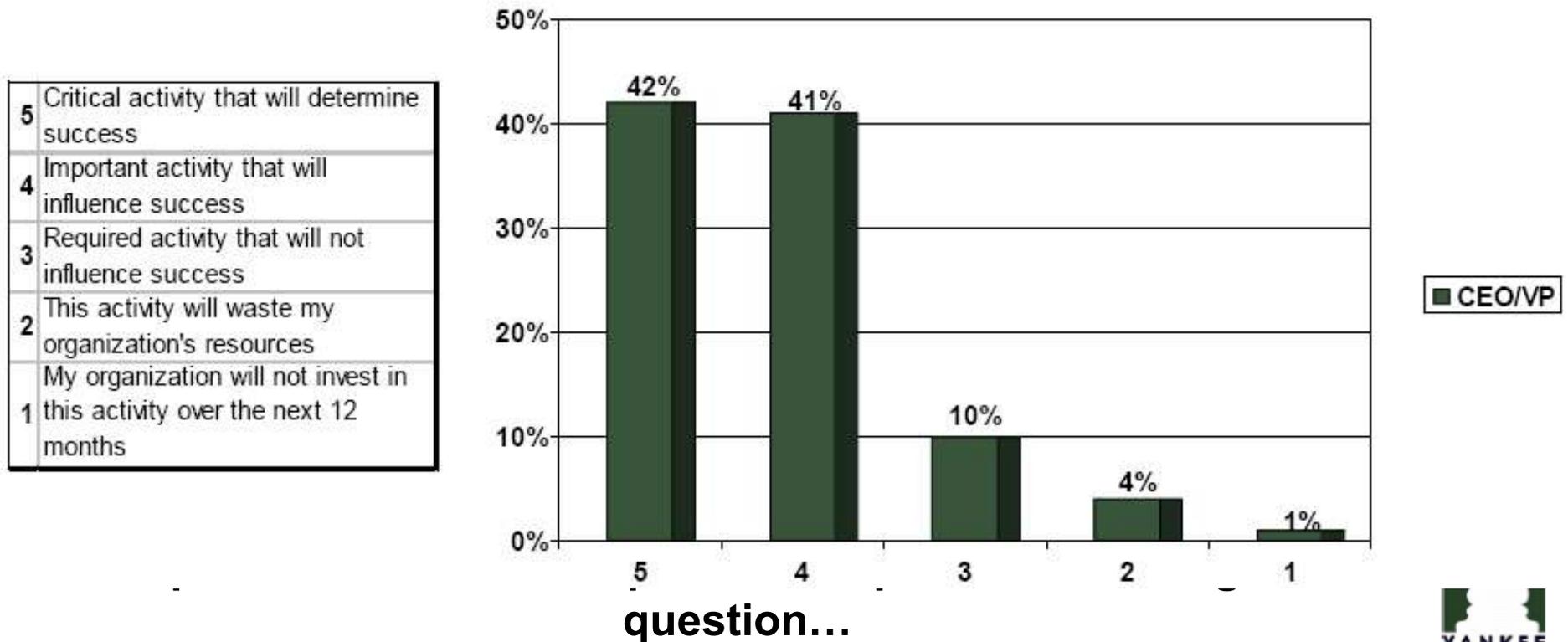
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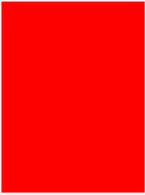


- 83% rated as “important” or “critical” activity



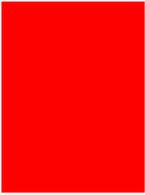
Why SOA?

- Respond to business change including regulatory compliance – FERPA, HIPAA, SEVIS, etc.
- Address new needs with existing applications (Composite Applications like employee/student on-boarding)
- Support new channels & complex interactions (Single view of the constituent across channels, integrated service offerings)
- Improve ITS services and reduce unit costs
- Support Organic Business – linked ecosystems



Topics

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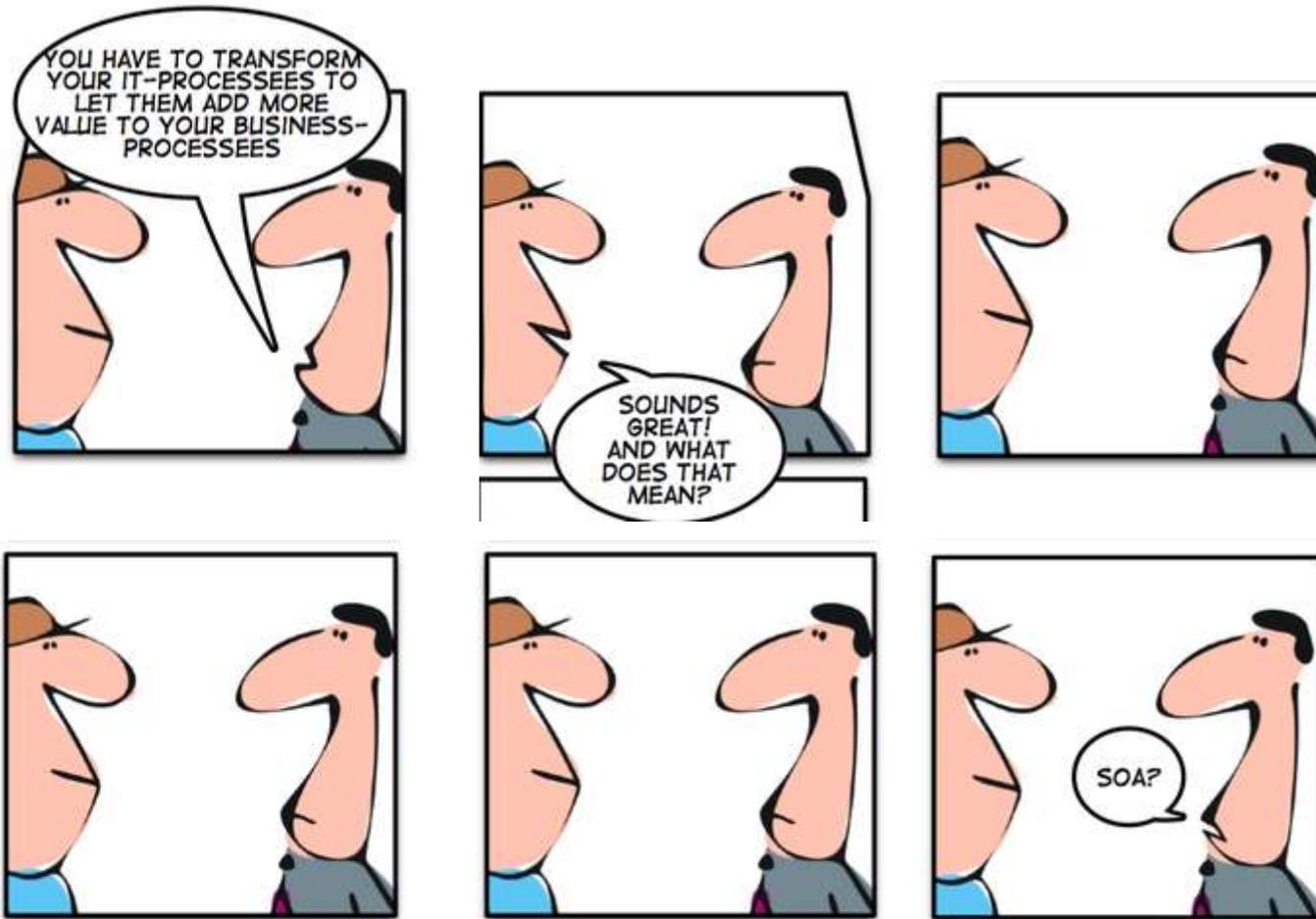
Got SOA?

You Say S-O-A , I say SOAH...

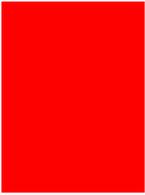
Is SOA an acronym or a word?

What is SOA?

Got SOA?



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Definitions...

Literal Translation

A **service** is a unit of discrete business functionality.

A **service oriented architecture** provides a standards-based platform that allows services to be provided, discovered, and consumed by each other, to facilitate the creation of a orchestrated business process.

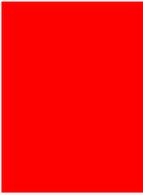
A **service oriented application** is a set of application functionality that fully leverages the power of a service oriented architecture.

This is a SOA!



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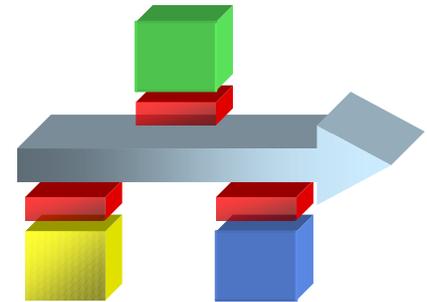
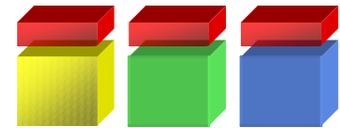
More Definitions...

Service-oriented Architecture (SOA) is an architectural design pattern that concerns itself with defining loosely-coupled relationships between producers and consumers.

What is SOA?

A Business Perspective

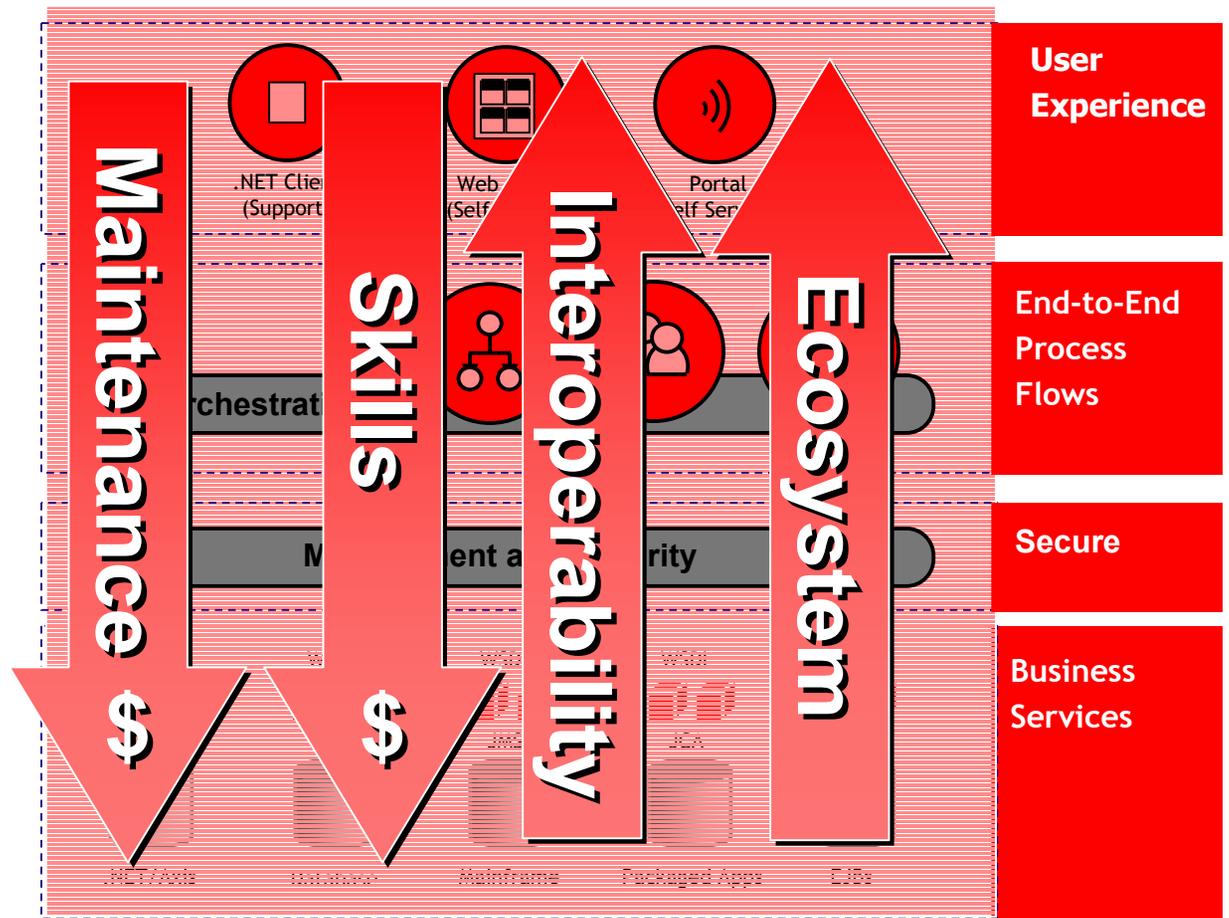
- Architecture & design principals that enable:
 - Access to, and reuse of IT system resources
 - Orchestration of IT system resources into business processes that deliver:
 - ✓ Increased service/productivity
 - ✓ Greater agility
 - ✓ Improved visibility



What is SOA?

A Technical Perspective

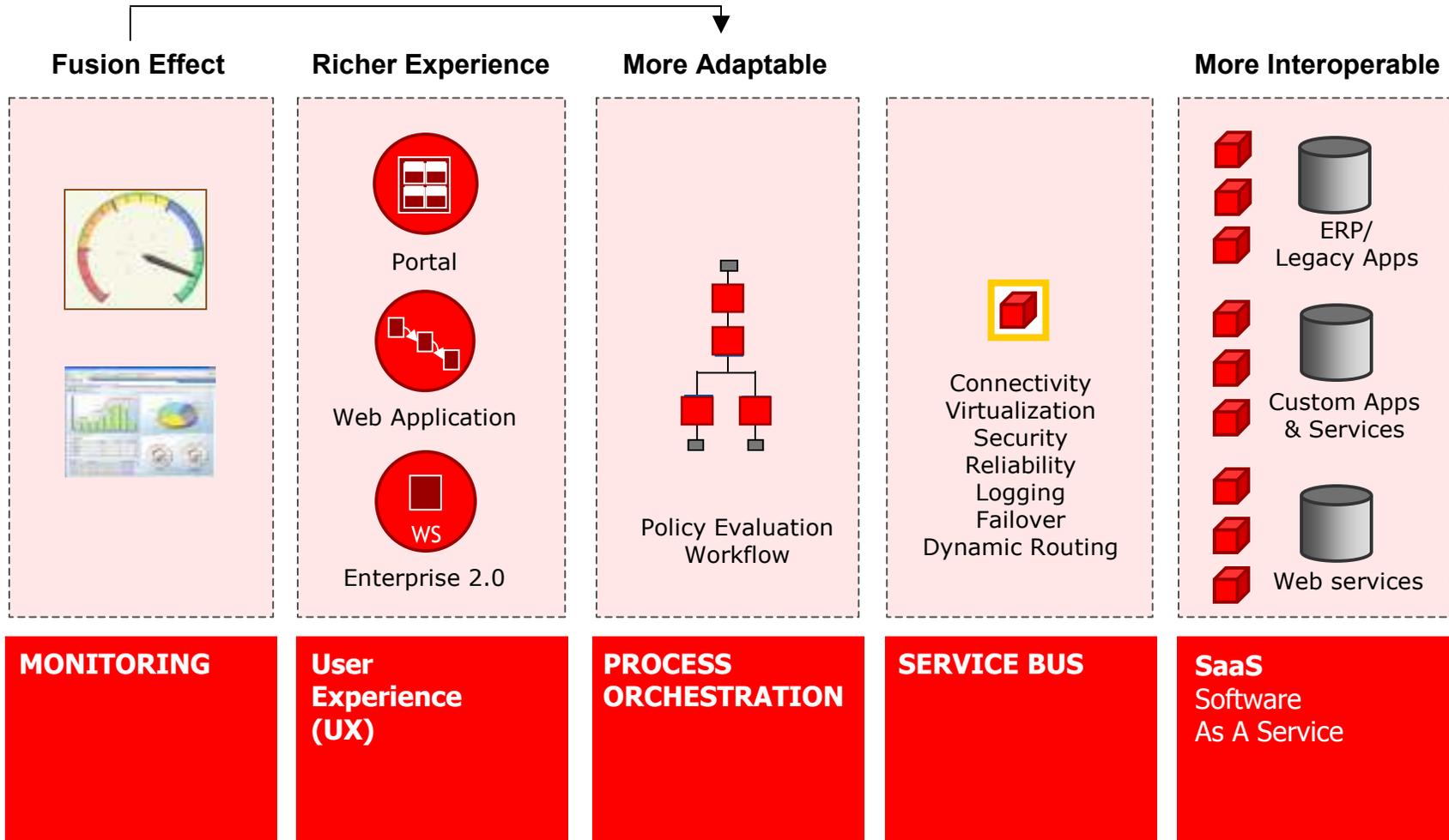
- A collection of self-contained system functions (*services*):
 - ✓ coarse grained
 - ✓ loosely coupled
 - ✓ self describing
- Standards & technologies that enable rapid composition into business processes



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Key SOA Components

Automated Self-Optimized Applications



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Characteristics of a Service

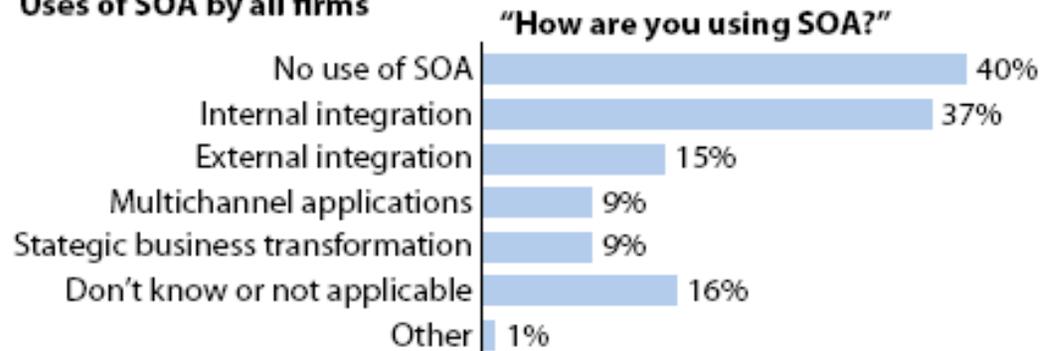
- Well defined function
- Well understood interface
- Well defined inputs and outputs
- Immediate feedback
- Used exclusively or in combination
- Predictable
- Replaceable (Outsourceable)



Integration is top SOA priority

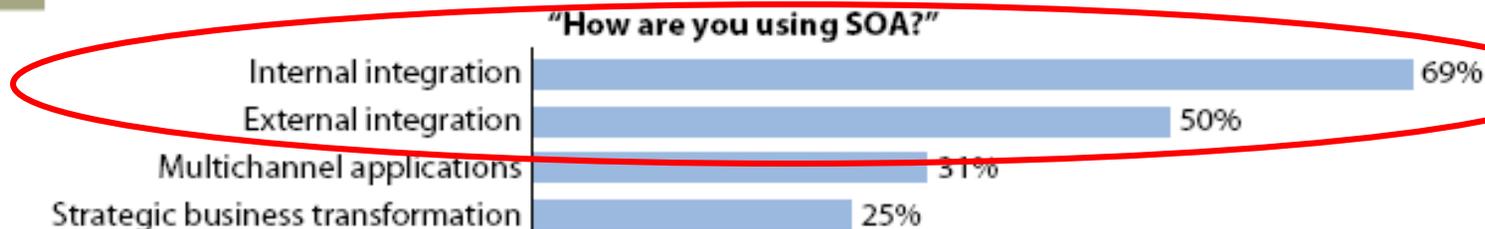
Figure 2 SOA Is Used For Internal integration — And More

2-1 Uses of SOA by all firms



Base: 116 North American decision-makers familiar with programming technologies, application software architecture, and application platforms (multiple responses accepted)

2-2 All large enterprises using SOA by the end of 2005

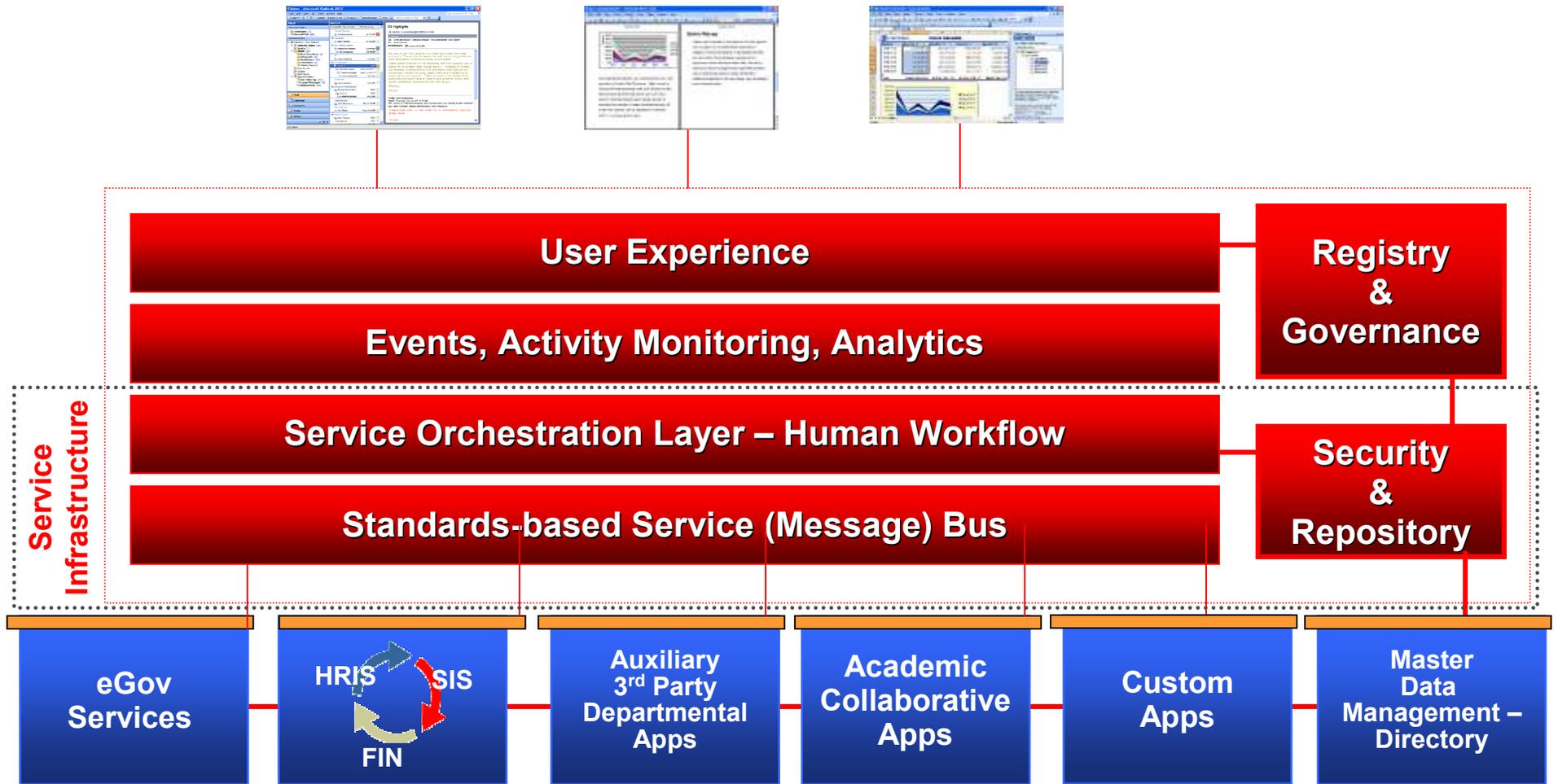


Base: 16 North American decision-makers from large enterprises using/planning to use SOA by the end of 2005 familiar with programming technologies, application software architecture, and application platforms (multiple responses accepted)

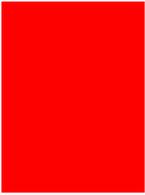
Source: Forrester Research, Inc.

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Reference Architecture



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Topics

- **Why Service Oriented Architecture (SOA)?**
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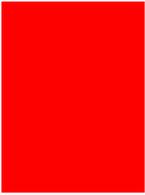
Oracle's SOA Platform

- **Comprehensive Service Oriented Architecture Platform**
 - Develop, Orchestrate, Integrate, Monitor & Manage
- **Open Standards Support**
 - Presentation, Integration, Security and Data Layers
- **Hot-Pluggable Components**
 - Certified Deployment on non-Oracle technologies
- **Lowest Total Cost Ownership**
 - Lowest Deployment cost through Grid Computing



SOA: Adoption Patterns

- **Standards Based Integration**
 - Simplify and Reduce Cost of Integration
- **Re-Use and Composite Applications**
 - Re-use Existing Applications to Support New Business Requirements
- **Legacy Migration**
 - Enable Graceful Migration from Legacy Systems
- **Macro Process Automation**
 - Implement Flexible, Agile Processes to Respond to Changing Business Requirements
- **Compliance**
 - Help Implement Compliance and Transparency Solutions
- **Mergers and Acquisitions**
 - Rationalize IT Systems Following M&A



Topics

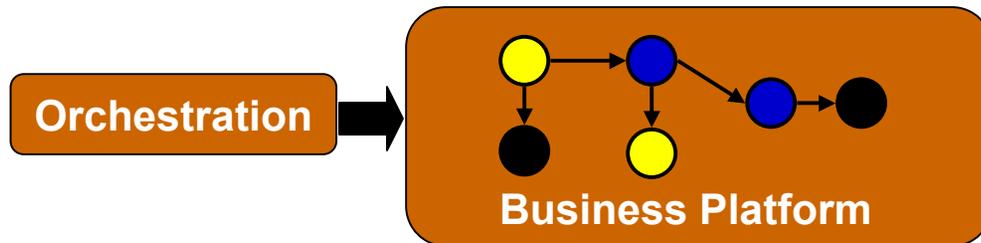
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Service Oriented Architecture is about...

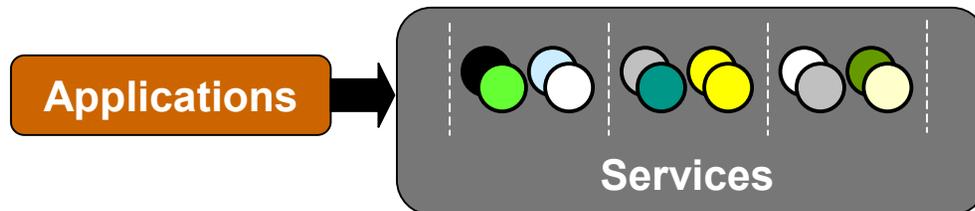
Need for targeted Graduate Student Recruitment Campaign



Outcomes



End-to-End Process Flows



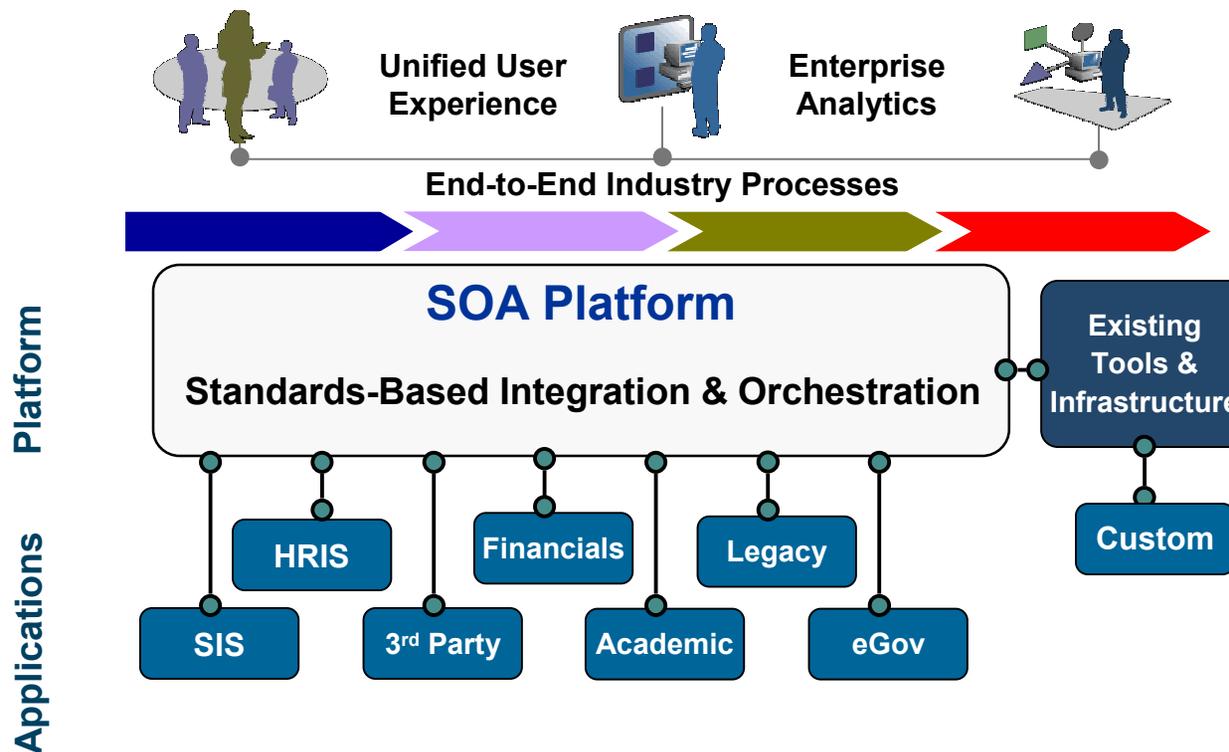
Software Services



Standard Platform

Value of SOA Platform...

Adopting SOA platform shifts emphasis from maintenance to innovation



Benefits

↑ Agility

- Process Innovation
- Business Configurable
- Easily Extended

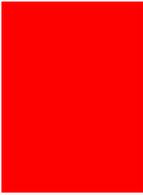
↑ Visibility

- Embedded
- Vertical & Horizontal
- Real-time & Historical

↑ Efficiencies

- Open – Based on Standards
- 'Closed Loop' Processes
- Low Cost Infrastructure

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SOA in Public Sector

Challenges

- Inter-Agency Communication – Information exchange with other agencies
- eGovernment Services – Streamline paper forms to electronic data entry
- Asset Management of Public Resources – Inefficient manual processes

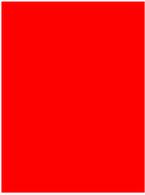
Opportunities

- Standards based support for various data formats and conversions
- Integration of backend systems with portal
- Support for human workflow



SOA in Higher Education

- Services can allow institutions to leverage the benefits of the decentralized nature of Higher Education.
- Service-orientation can support changing business processes and systems more effectively – especially in areas such as recruitment, registration, and fund raising.
- Thoughtful deployment of middleware and service oriented strategies early on can reduce overall costs of migrating to new applications.



Topics

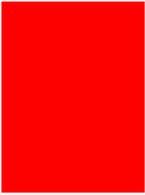
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Next Steps...

OPPORTUNITIES: Reduce the cost and effort of integration among all the administrative and academic applications such as PeopleSoft applications as well as all "external" apps, Housing & Dining, WebCT, Custom Apps, uPortal, etc.

- Top-down modeling, document current processes (**BPA**)
- Deploy **Enterprise Service Bus** as the foundation for SOA
- Start surfacing services from administrative apps and other applications – Provide/Consume Web Service Wizard
- Simplify integration across disparate system – establish the canonical data model to reduce effort
- Leverage **adapters** as needed for A2A integrations



Summary

- Provide a framework for the future, rather than continue to reinvest in the past
- Increase reuse of services, reducing the time and effort necessary to develop new services and improving applications reliability
- Improve the agility of IT, including the rapid deployment or modification of business processes in response to changing regulatory requirements and needs



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