

Linthicum Group



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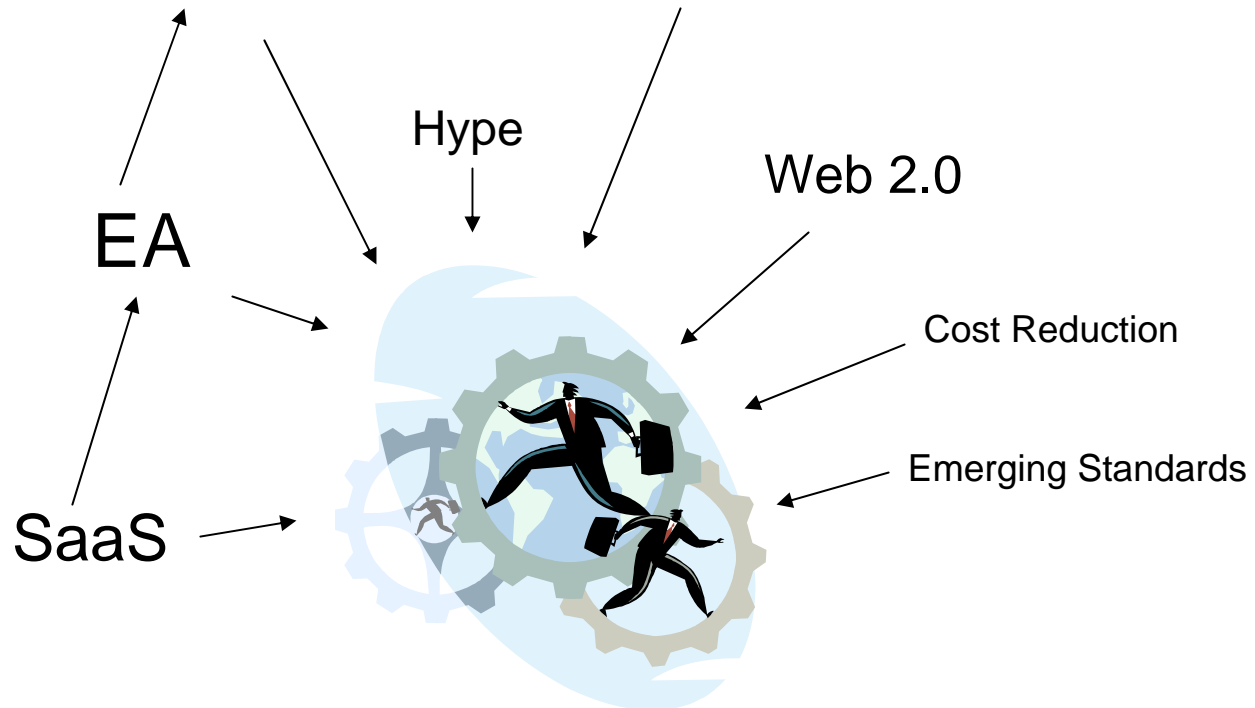
Lessons Learned from both
Commercial and Federal EA Sectors

Current Issues

- Competing frameworks/approaches
 - Zachman Framework
 - Gartner/Meta Group
 - Open Group's TOGAF (SOA Reference Architecture)
 - Vendors (IBM, Oracle, BEA, etc.)
 - Roll-your-own
- Hype-driven confusion (e.g., "SOA 2.0")
- Lack of leadership
- Processes moving outside of the firewall
- Departments operating independent of oversight
- More enterprise applications are Web-delivered
- Technology as a business advantage and cost saving mechanism

Understanding the Forces at Work

SOA



EA and SOA...Let's Face Facts

- There seems to be two worlds out there, the world of enterprise architecture and the world of SOA.
 - *“The funny thing is that those in each world thinks that they can do the other world's jobs.”*
 - *“The end result...there is not a lot of synergy there yet.”*



Understanding the Pain Points

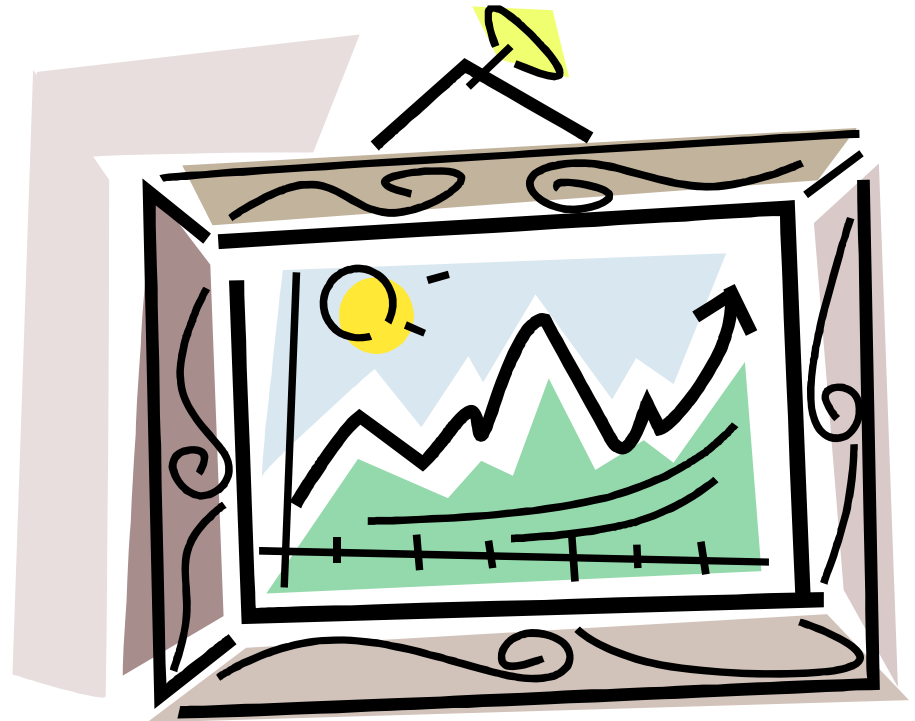
“A recent survey by the Business Performance Management Institute found that:

- Only 11 percent of executives say they're able to keep up with business demand to change technology-enabled processes.
 - 40 percent of which, according to the survey, are currently in need of IT attention.
 - Worse, 36 percent report that their company's IT departments are having either "significant difficulties" (27 percent) or "can't keep up at all" (9 percent).”
- CIO Magazine



So, the EA “Mega Trends”

1. SOA, SOA, SOA!
2. SaaS
3. “Web 2.0”
4. “Enterprise 2.0”
 - Mashups
 - Inside-out
 - Outside-in
5. Incorporating existing Enterprise Architecture concepts and practices...how?



State of Things

The survey was of 196 Information Technology (IT) decision makers.

"Indicators point to the fact that IT professionals **overwhelmingly support the SOA concept** with 56 percent reporting they **believe their company/agency would benefit from a SOA**. Among those who have experienced a SOA implementation, 73 percent would **recommend other companies/agencies follow suit and adopt a SOA approach.** “

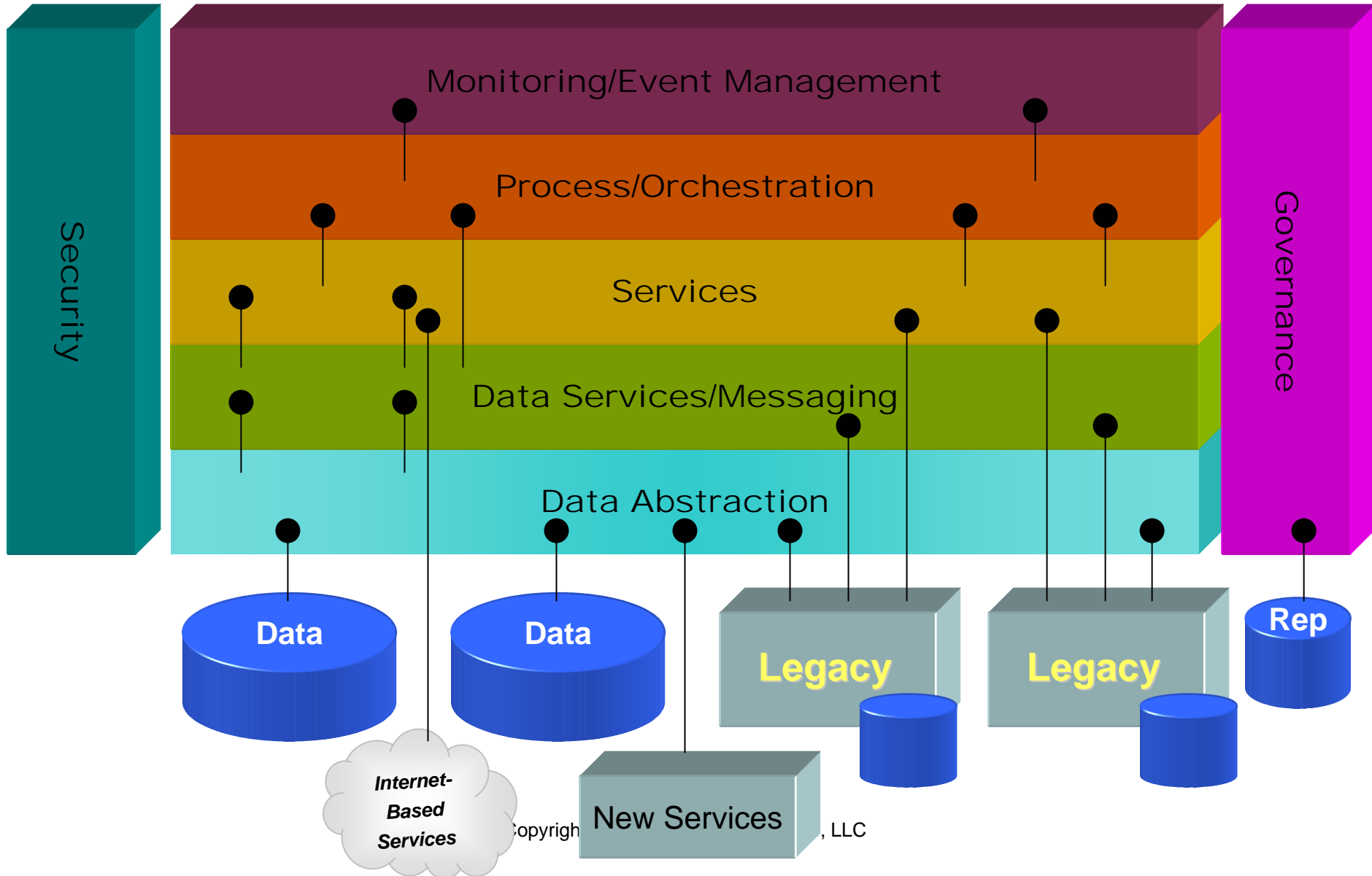
But, there is Reality

- Hype is huge, and management by magazine is the way of the world these days.
 - “I got to git me one of them SOAs”
 - “A SOA will fix that.”
 - “SOA 2.0”
- Bad practices:
 - Selecting technology before understanding your requirements and needs.
 - Not linking back to accepted EA best practices.
 - Not creating a business case.
 - Using the wrong people.
 - Lacking funding and empowerment.

So, Why SOA?

- Improved Adaptability and Agility
 - Respond to business needs in near real-time
- Functional Reusability
 - Eliminate the need for large scale rip and replace
- Independent Change Management
 - Focus on configuration rather than programming
- Interoperability instead of point-to-point integration
 - Loosely-coupled framework, services in network
- Orchestrate rather than integrate
 - Configuration rather than development to deliver business needs

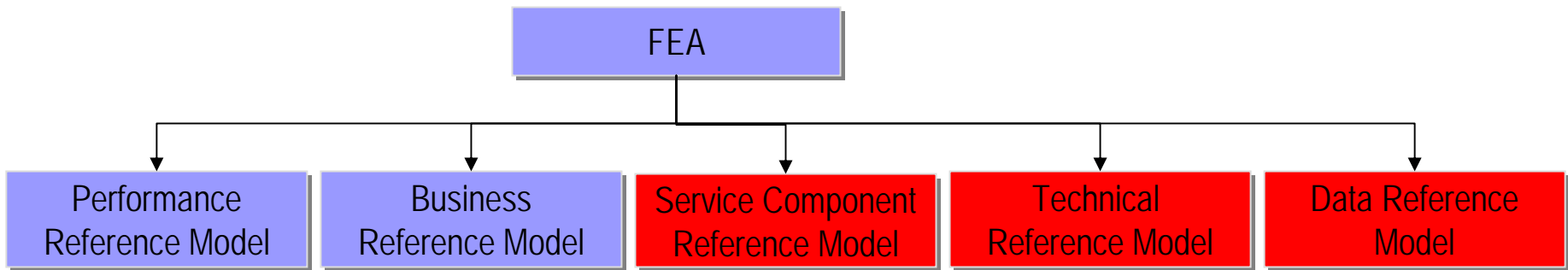
SOA Meta Model



SOA and the FEA

- Key things to remember:
 - FEA is intentionally vague.
 - Focus on the notion of standards, but not particular standards.
 - Focus on high-level concepts, not specific technology.
 - Focus on sharing models, data, and core architectures among agencies.
 - SOA is a component, not holistic to the FEA.

SOA and the FEA



Note: While there are some SOA concepts within the **Performance Reference Model** and the **Business Reference Model**, the primary use of SOA is within the other models.

JBOWS vs. SOA

- **JBOWS** = Just a Bunch of Web Services.
- **SOA** = Use of services to form solutions quickly and easily.

The Value Proposition of a SOA

- We implement SOA for two major reasons.
 - First is the ability to save development dollars through *reuse* of services.
 - Second is the ability *to change* the IT infrastructure faster to adapt to changing needs of the business, or **agility**.
 - Enhance, not replace, existing EA.

How Do you Build A SOA?

Test and evaluate SOA solution.

Deploy SOA technology.

Select your technology set.

Define new processes.

Define new services.

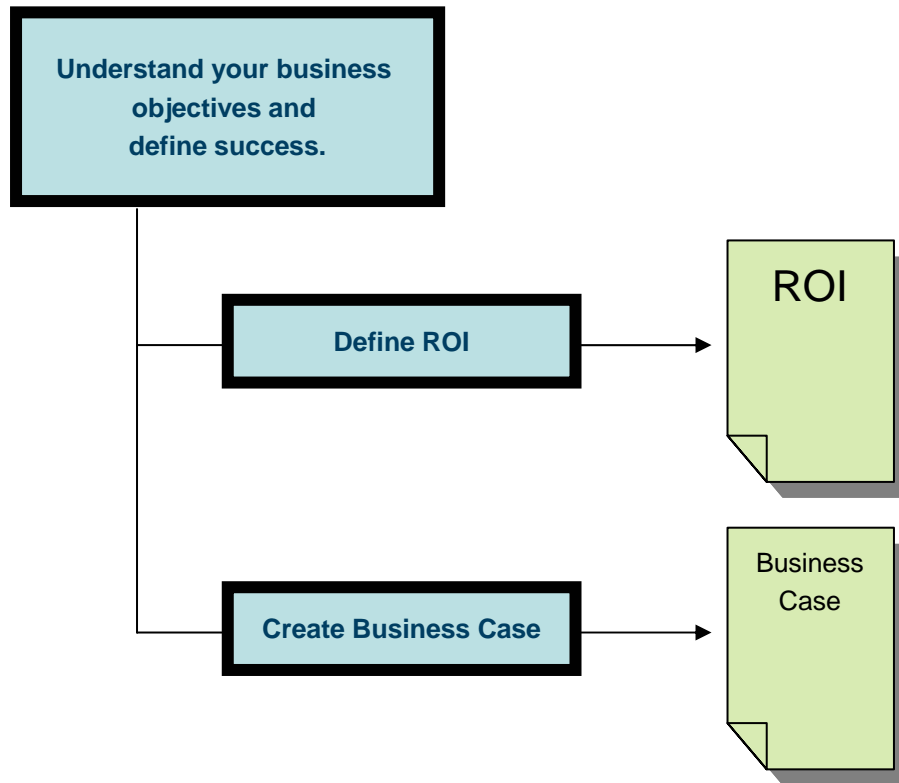
Understand all processes.

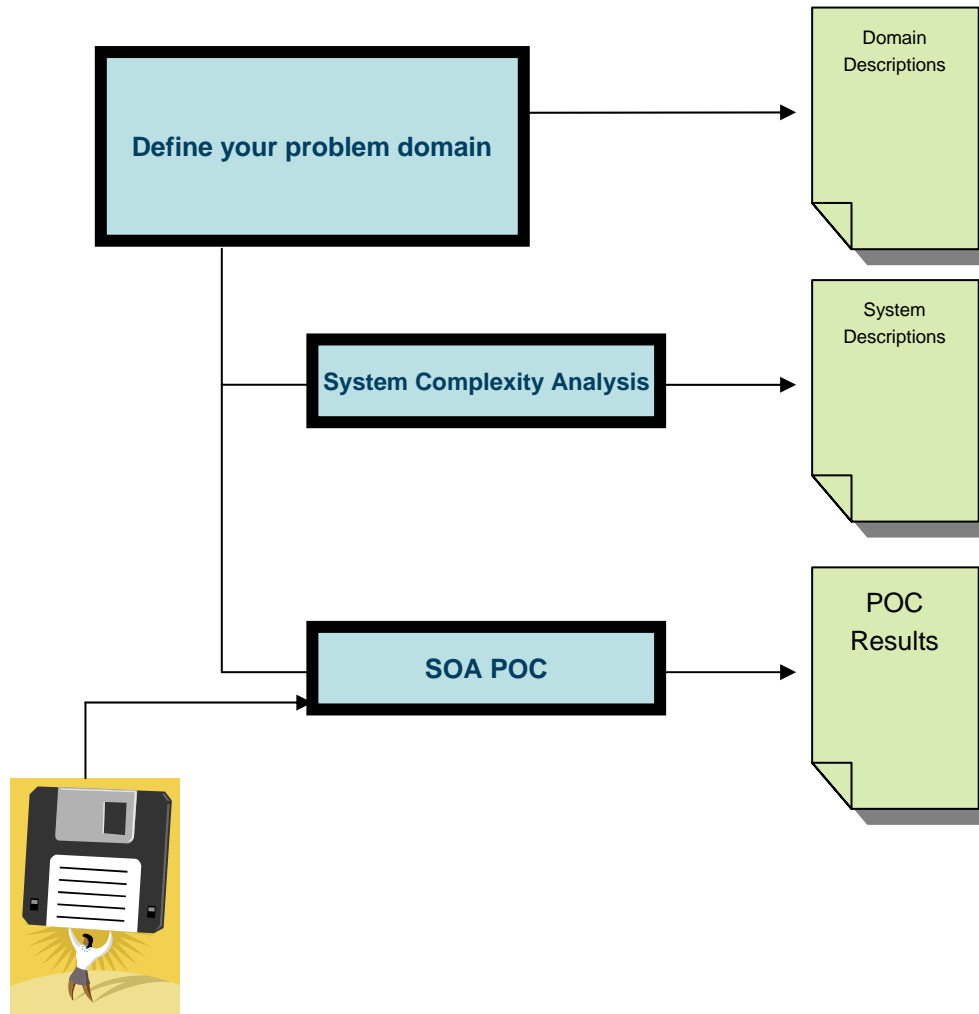
Understand all services.

Understand all application semantics.

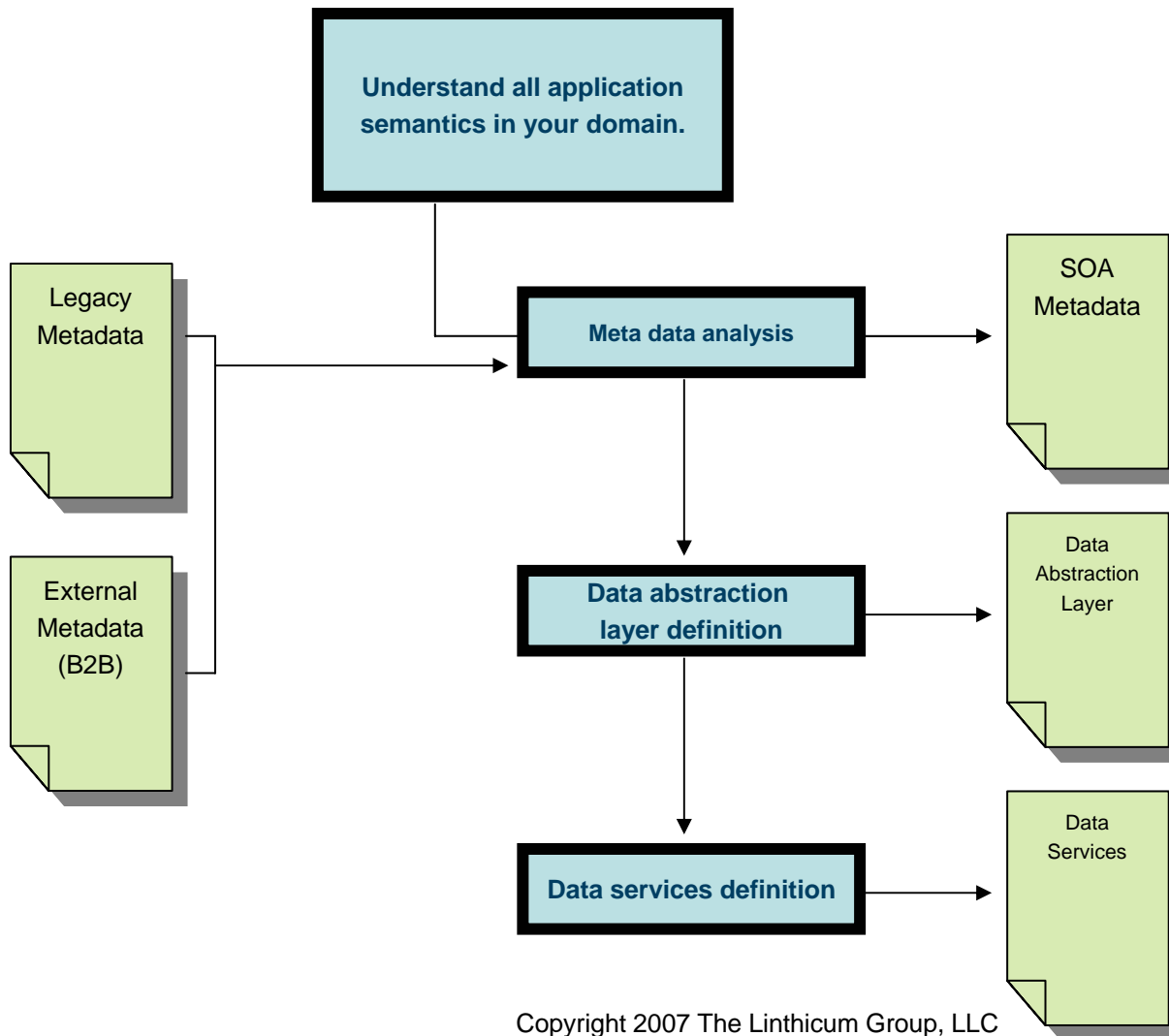
Define your problem domain.

Understand your business objectives and define success.





Vendors



Service management

- Tracking services through design, development, deployment, and testing.
- Core components:
 - Repository
 - Service control
 - Links to security
 - Designer

Governance

- Manage access and policy at the services level.
- Core components:
 - Directory
 - Repository
 - Policy management engine
 - Links to security
 - Service maturation

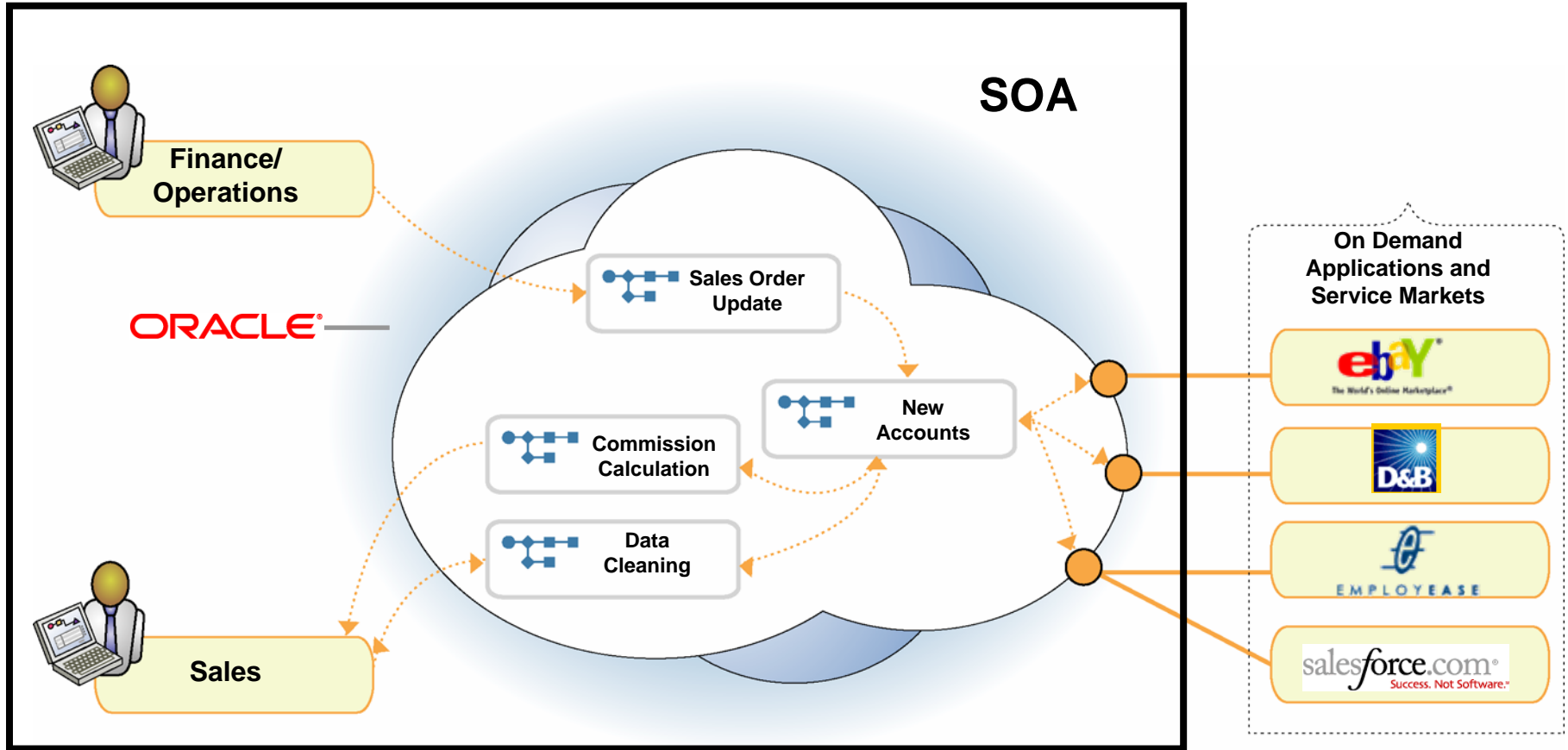
Emerging Stuff

- More focus on design and architecture
- More use of external services (next section)
- More use of governance
- Orchestration finally works
- The Joining of SOA and Mashups
- “Services for rent”

Moving to “Outside In”

- Today, more services exist outside the enterprise for use within the enterprise.
 - Examples:
 - Amazon.com
 - eBay
 - Salesforce.com
 - NetSuite
 - Many others
- Leveraging outside services provides enterprises with:
 - More agility with their ability to add, change, and delete services as needed
 - Reuse of services they did not need to create or maintain
 - Better value chain integration incorporating both customers and suppliers
 - Exposing business services outside of the enterprise “Inside out”

Understand Outside Interfaces



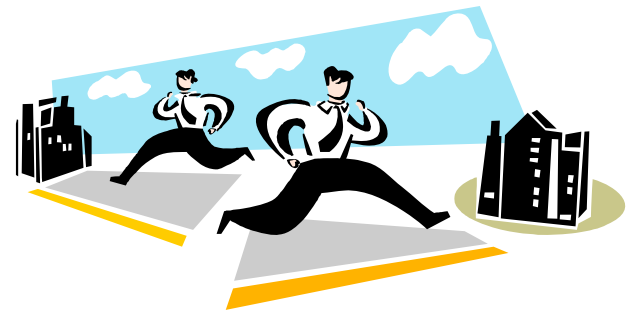
Best Practices as Shared Processes

Beyond SOA...SaaS, Web 2.0, Mashups, Oh My!

- We are moving toward a day when **many of our enterprise applications may be delivered as services**, and thus provide a more economical way to approach information technology management with businesses going forward.
- **This is also the great equalizer since businesses**, large and small, will have access to the same number and quality of services, much like they do with Web sites today.
- Shared services will **create many opportunities**, including better agility and the ability to operate a business with fewer IT resources.
- In essence, **we're moving to Web 2.0** where service delivery over the Internet will be added to information deliver as the key strategic value of the Web to businesses, as well as extending the Web as a true platform.

Understanding the Problem

- Service providers must integrate with existing enterprise systems to become more valuable.
- However, existing internal integration needs to exist to ensure:
 - Production and consumption of structured information
 - Semantic mediation
 - Security mediation
 - Service enablement
 - Firewall management
 - Transactional integrity
 - Holistic management of complete integration chain



Remember, there are a few technical issues that you must address...

- **Semantic and metadata management**, or, the management of the different information representations amount the external services and internal systems.
- **Transformation and routing**, or, accounting for those data differences during run time.
- **Governance across all systems**, meaning, not giving up the notion of security and control when extending your SOA to the global SOA.
- **Discovery and service management**, meaning, how to find and leverage services inside or outside of your enterprise, and how to keep track of those services through their maturation.
- **Information consumption, processing, and delivery**, or, how to effectively move information to and from all interested systems.
- **Connectivity and adapter management**, or, how to externalize and internalize information and services from very old and proprietary systems.
- **Process orchestration and service, and process abstraction**, or, the ability to abstract the services and information flows into bound processes, thus creating a solution



Understanding the Change

- It doesn't take a rocket scientist to figure out that the creation of an SOA on top of these applications, including process/orchestration layers, directory services layers, identity management, monitoring, semantic management, etc., would **add a tremendous amount of value, considering the use of those applications and abstraction into real business solutions.**
- Indeed, you'll find that **many SOA's for many businesses actually exist outside of their firewalls**, making their on-demand applications work well together.
- This **trend is only accelerating** as "Web 2.0" becomes more valuable for enterprises.

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Thanks!

- Blogs:
 - eBizq.net “Linthicum Channel”
 - InfoWorld “Real World SOA”
 - Intelligent Enterprise “SaaS Advisor”
- Weekly Podcast
 - InfoWorld SOA Report
- Columns
 - SOA World

