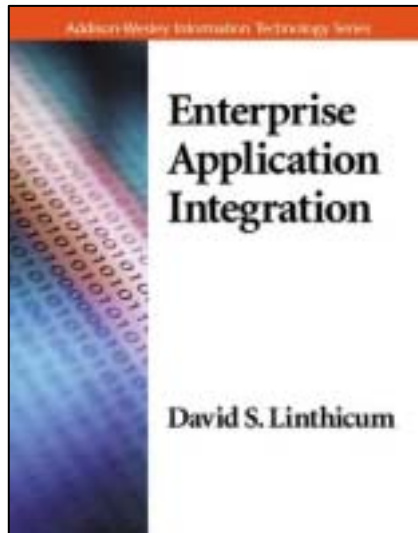


David S. Linthicum

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5 Surefire Ways to Make Your SOA a Success

1995



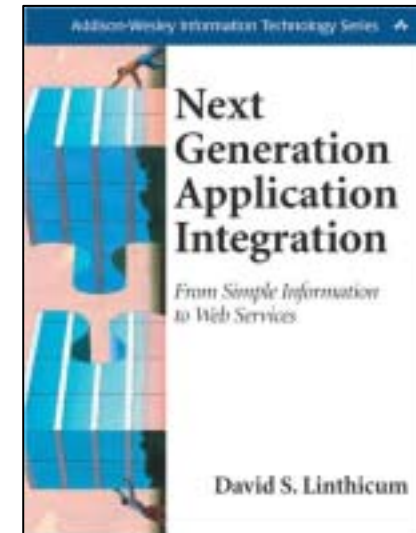
Integration of
Internal Systems

2000



Integration with
External Systems

2006



Pervasive Integration
SOA
SaaS/Web Services
Web 2.0

5 Ways to Make Your SOA a Success

- 1. Understand the pain.**
- 2. Define the value.**
3. Focus on understanding (Steps to SOA).
- 4. Remember the people.**
- 5. Focus longer term.**

Goals and Characteristics of a 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



Understand the pain.

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

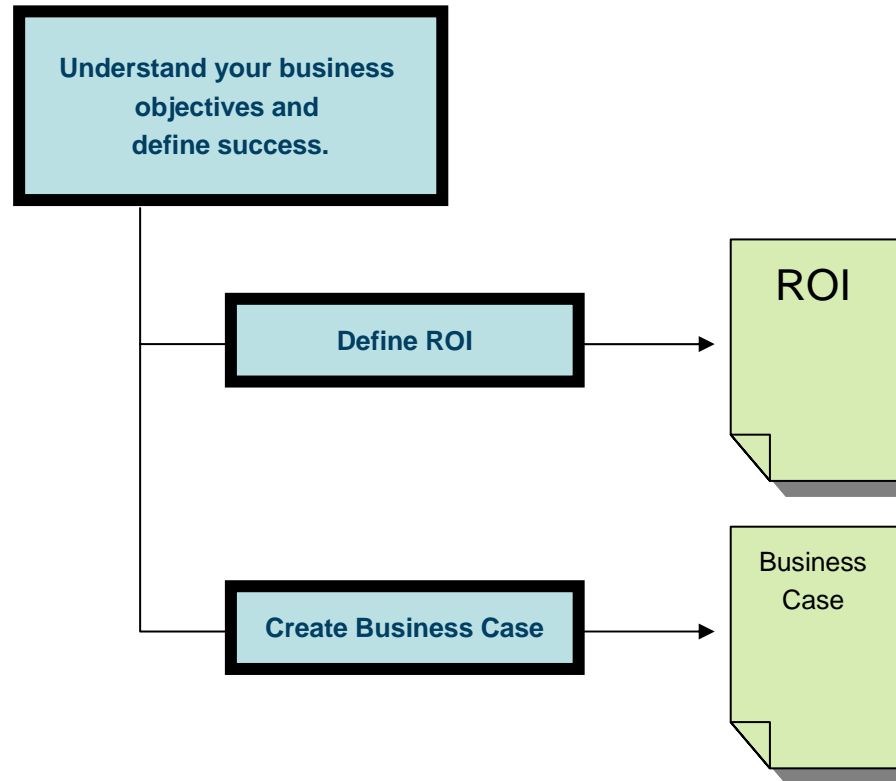




Define the value.

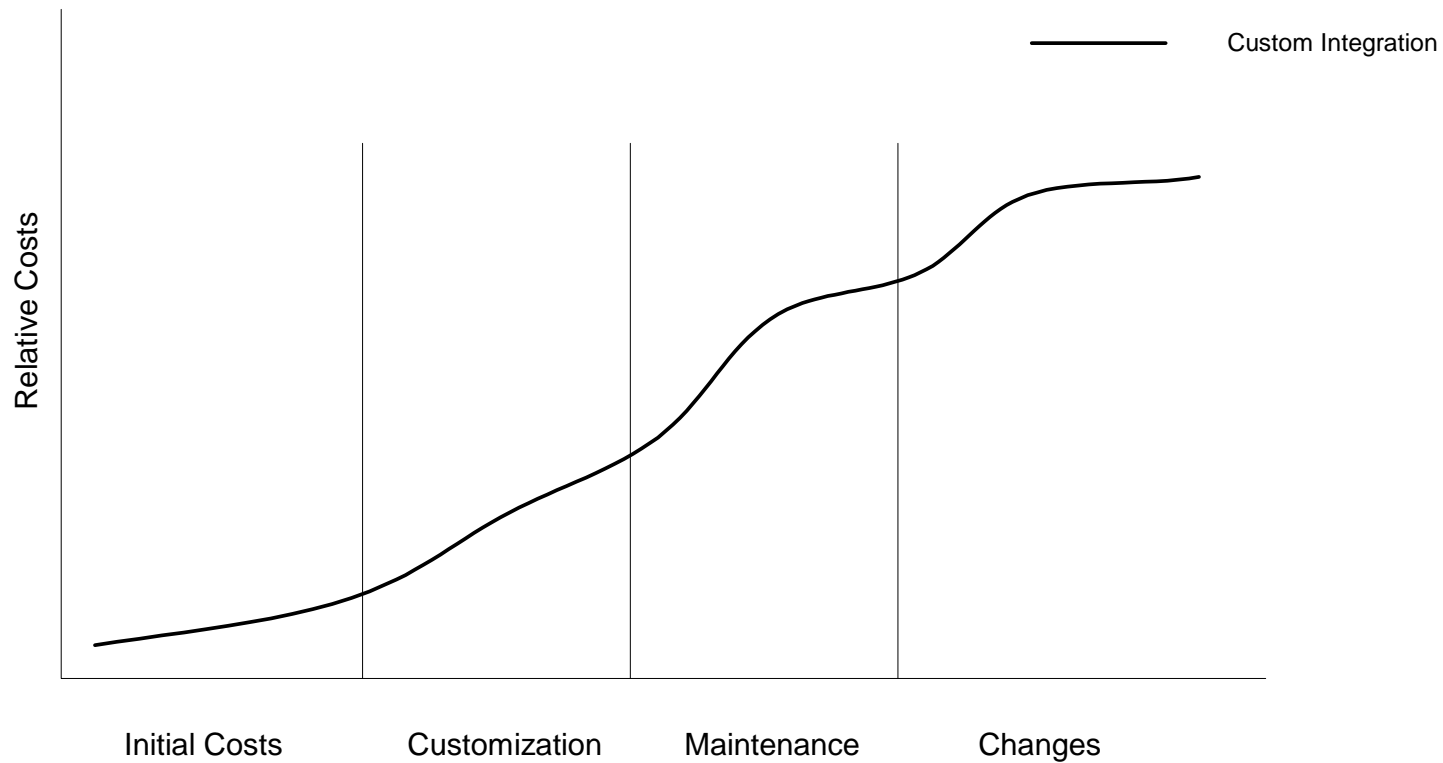
Defining the value.

- **The technology you layer into that business should add value by supporting that business' objectives and facilitating efficiencies.**
 - The technology should help improve the bottom line.
 - Thus, it's very important to define these objectives up front, including the goals for business success.



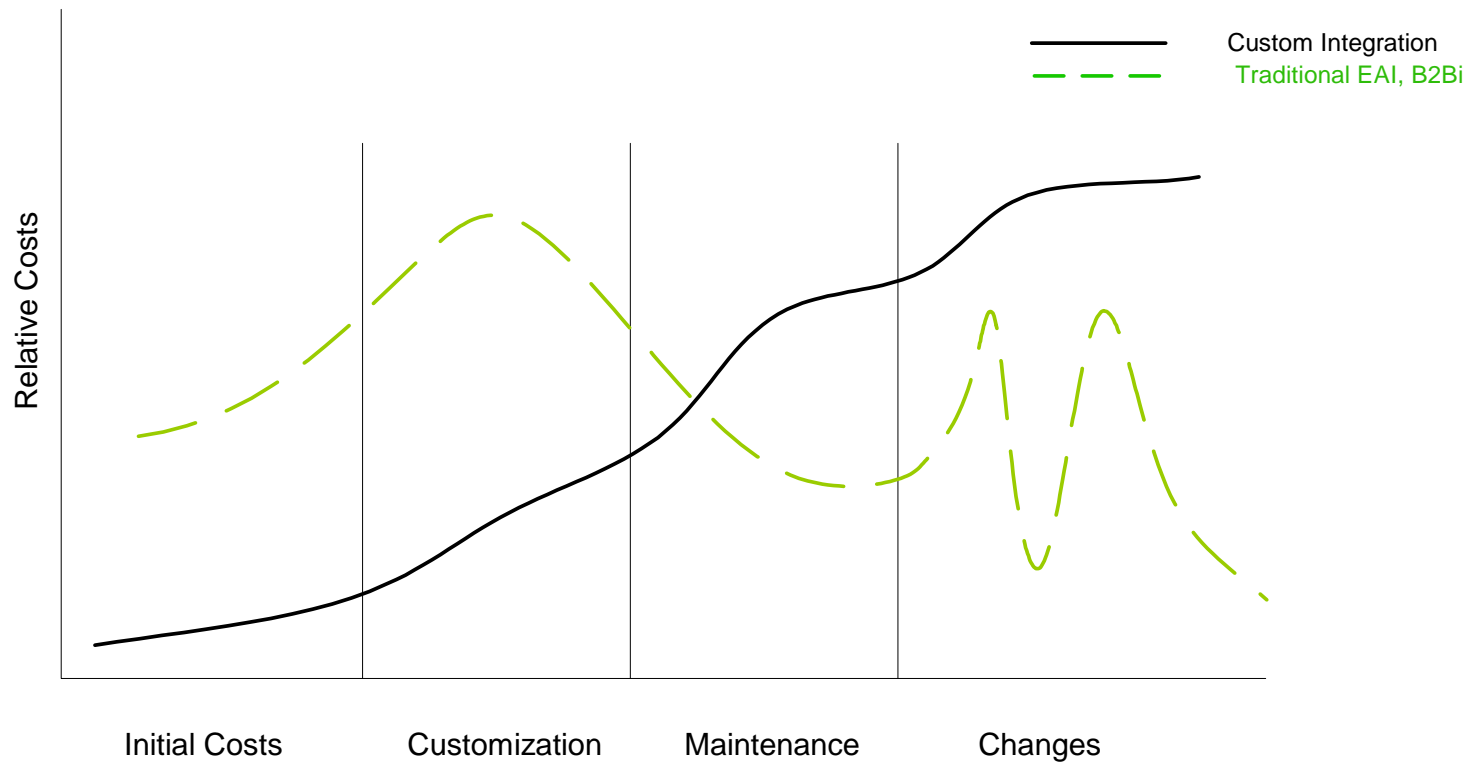
The Economics of Integration

The Relative Costs of Different Integration Approaches



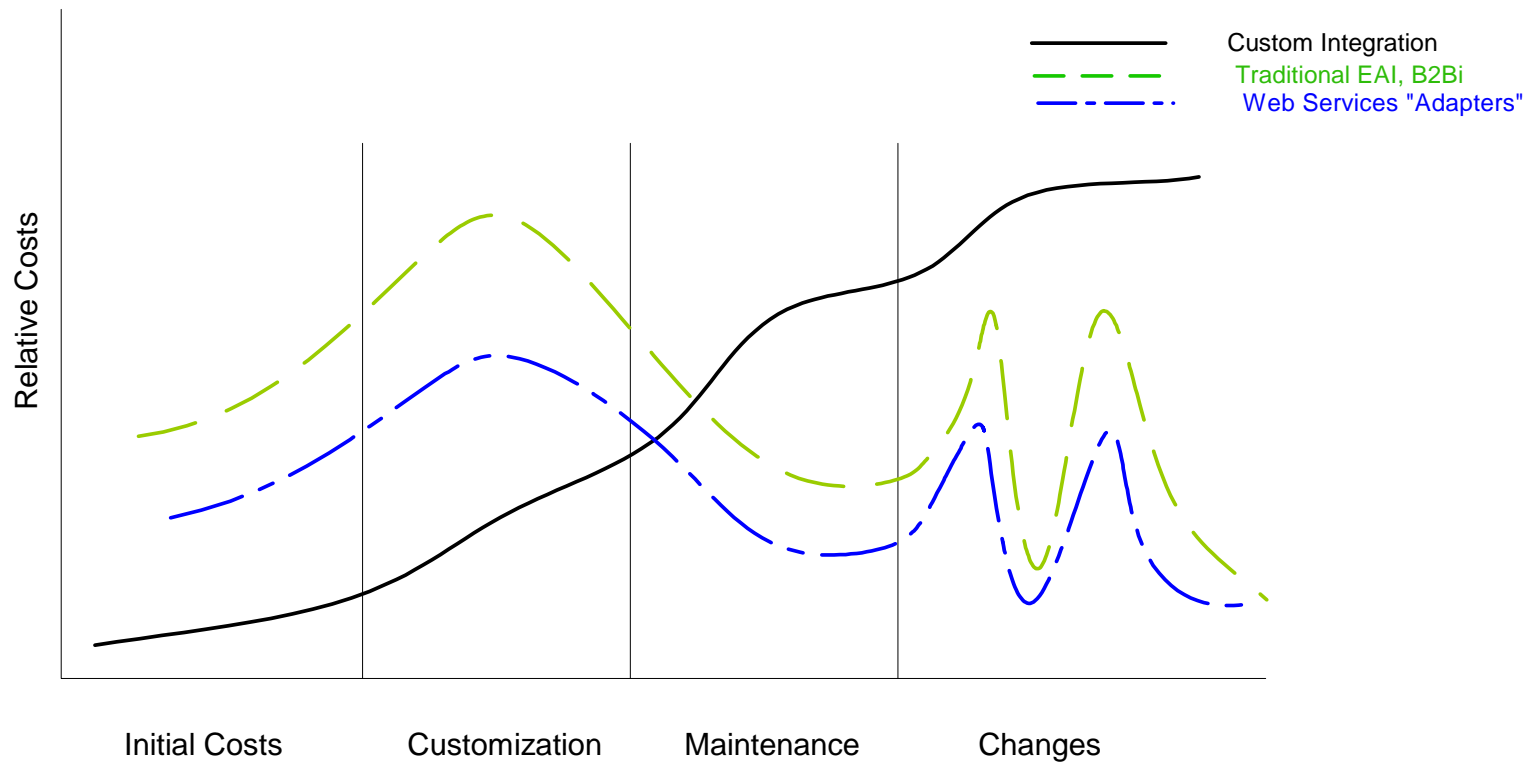
The Economics of Integration

The Relative Costs of Different Integration Approaches



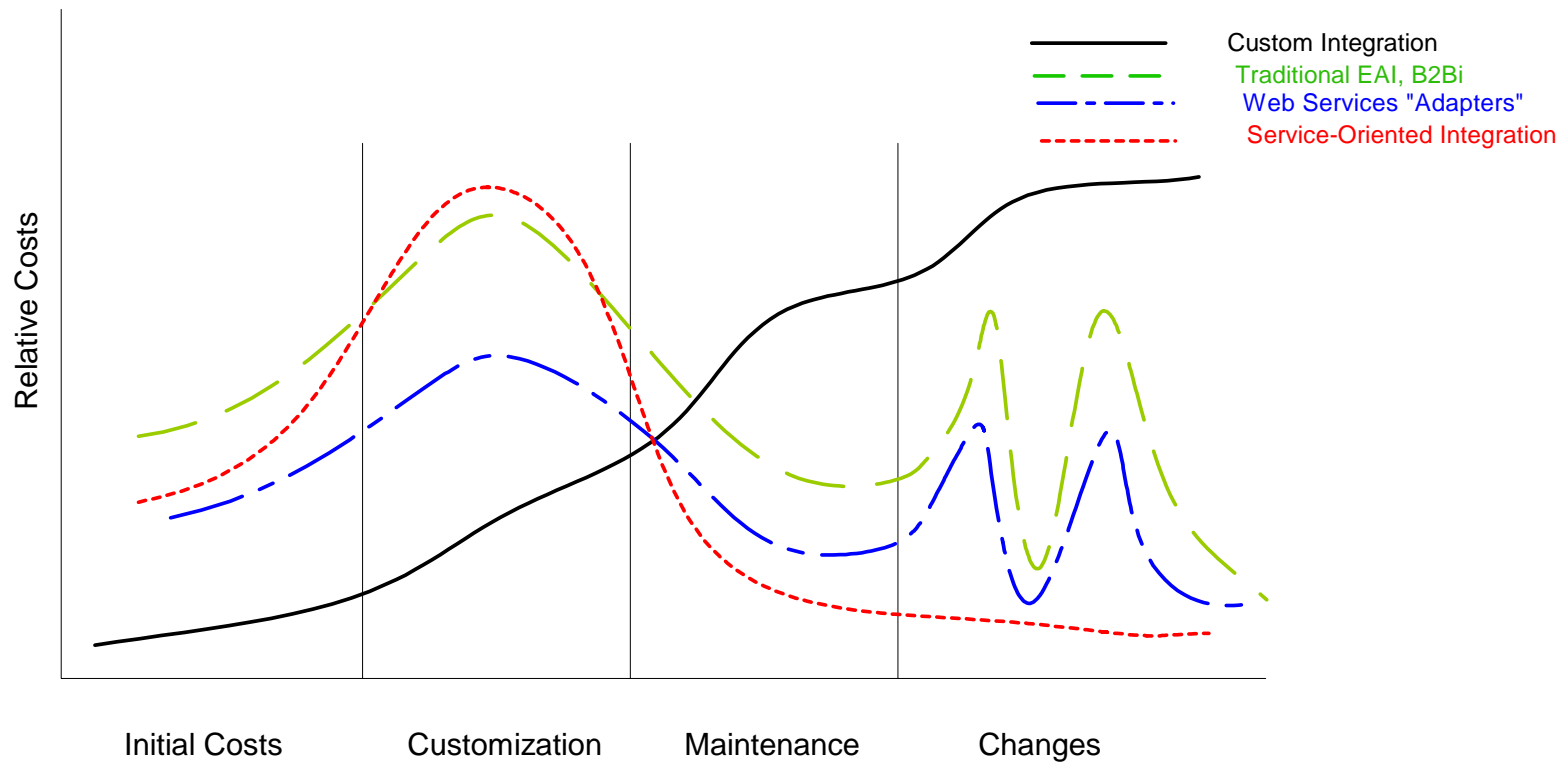
The Economics of Integration

The Relative Costs of Different Integration Approaches



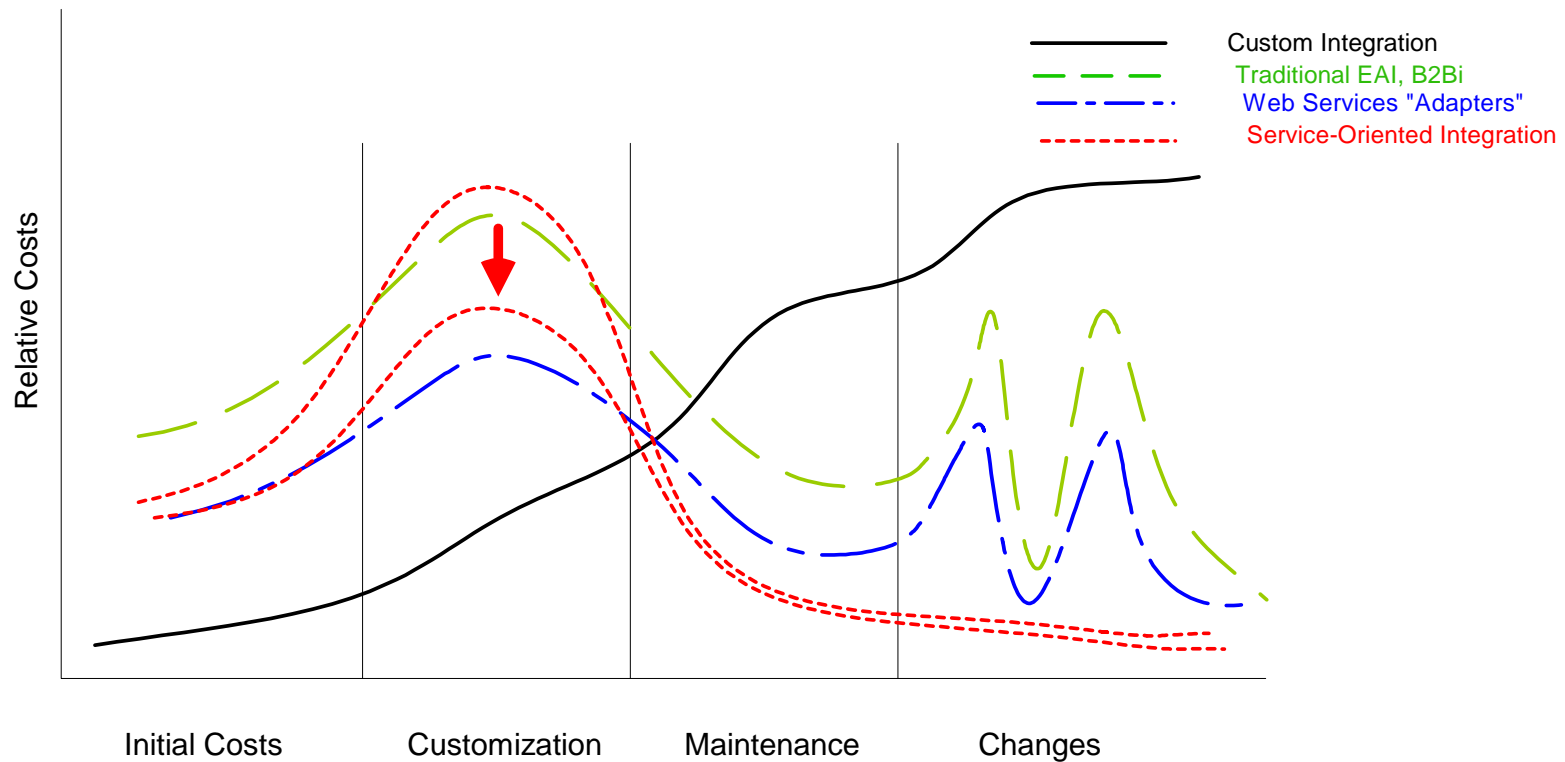
The Economics of Integration

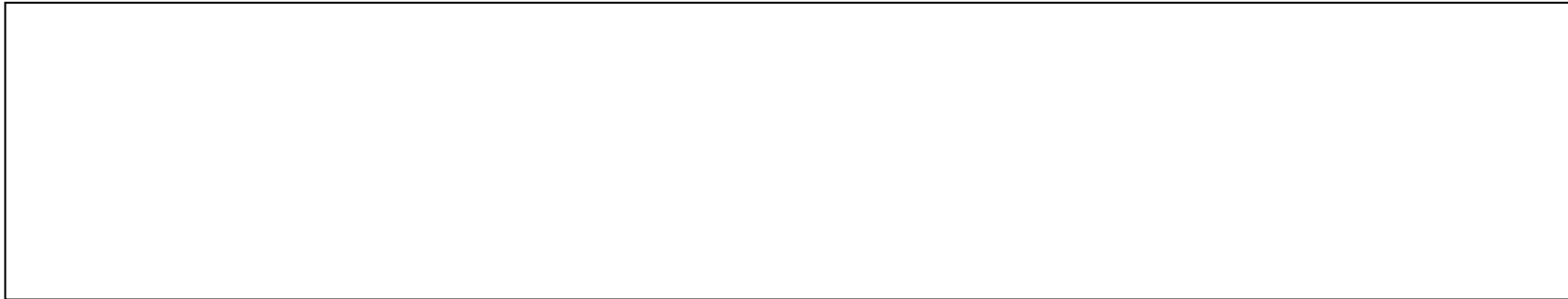
The Relative Costs of Different Integration Approaches



The Economics of Integration

The Relative Costs of Different Integration Approaches

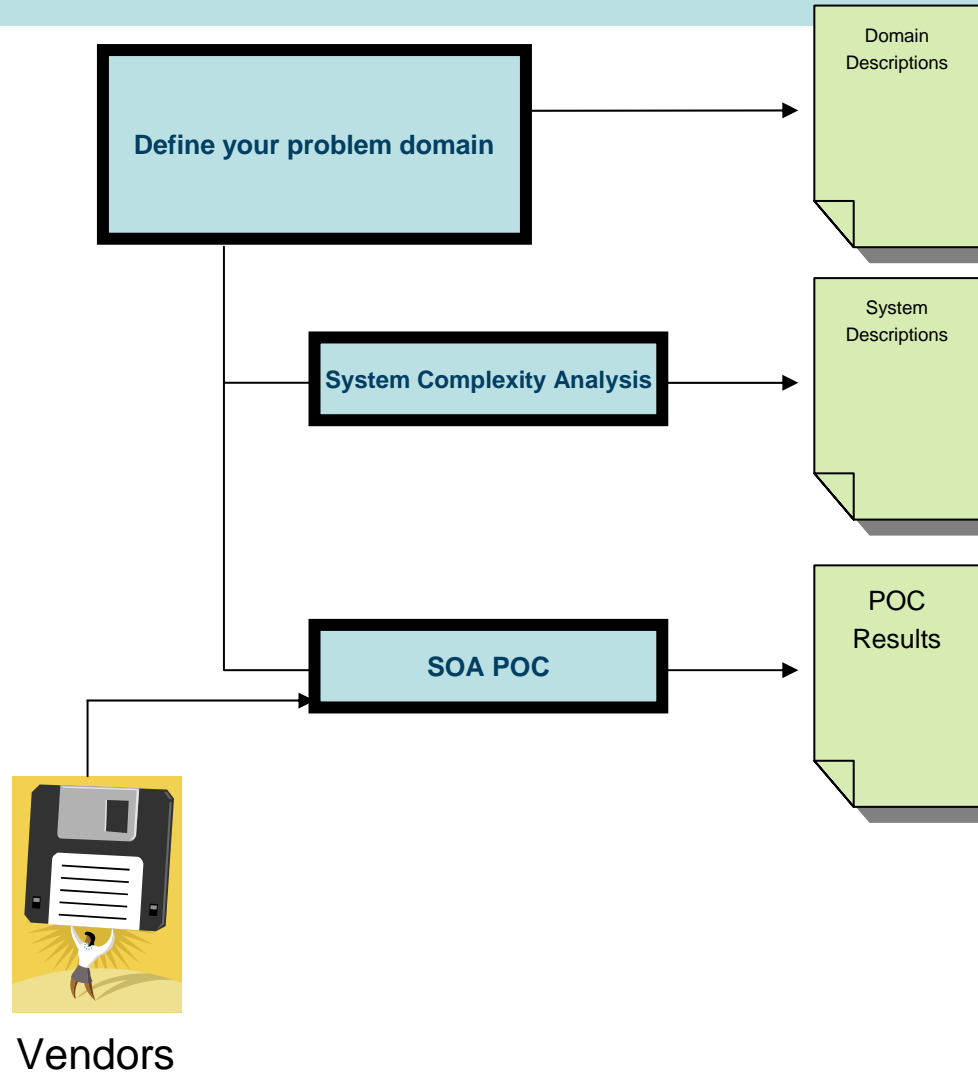




Focus on understanding.

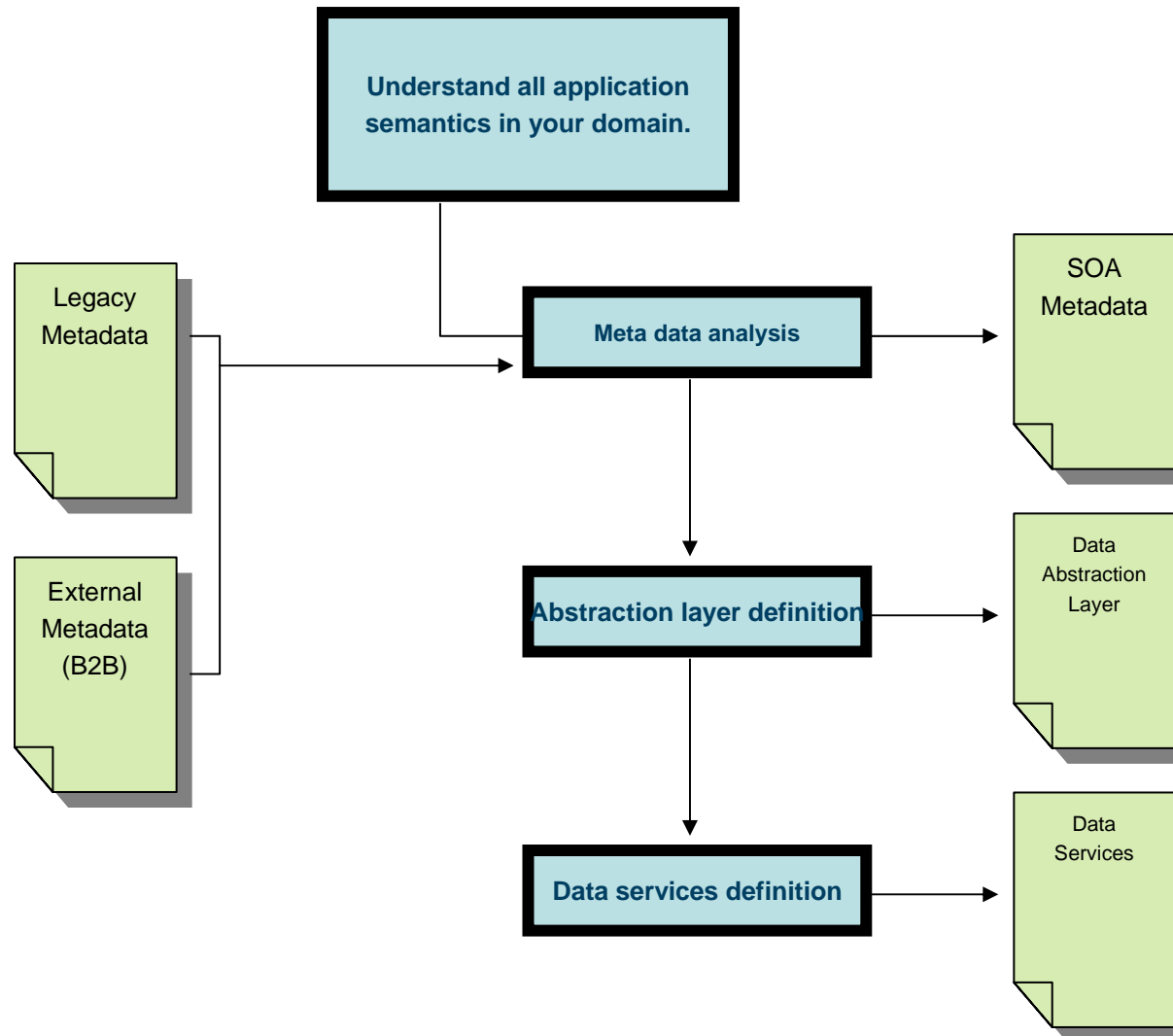
Define your problem domain.

- **You can't boil the ocean, thus you must define the scope of your SOA, within an enterprise.**
- **Most SOAs are best implemented in small steps, such as moving a single division, or portion of a division, to SOA, if needed, instead of an entire enterprise all at once.**
- **You need to establish the demarcation lines at the beginning of the project to provide better focus and understanding.**
- **Remember, a POC will have a POC domain.**



Understand all application semantics in your domain.

- **You can't deal with information you don't understand, including information bound to behavior (services).**
- **It is extremely important for you to identify all application semantics—metadata, if you will--that exist in your domain, thus allowing you to properly deal with that data.**

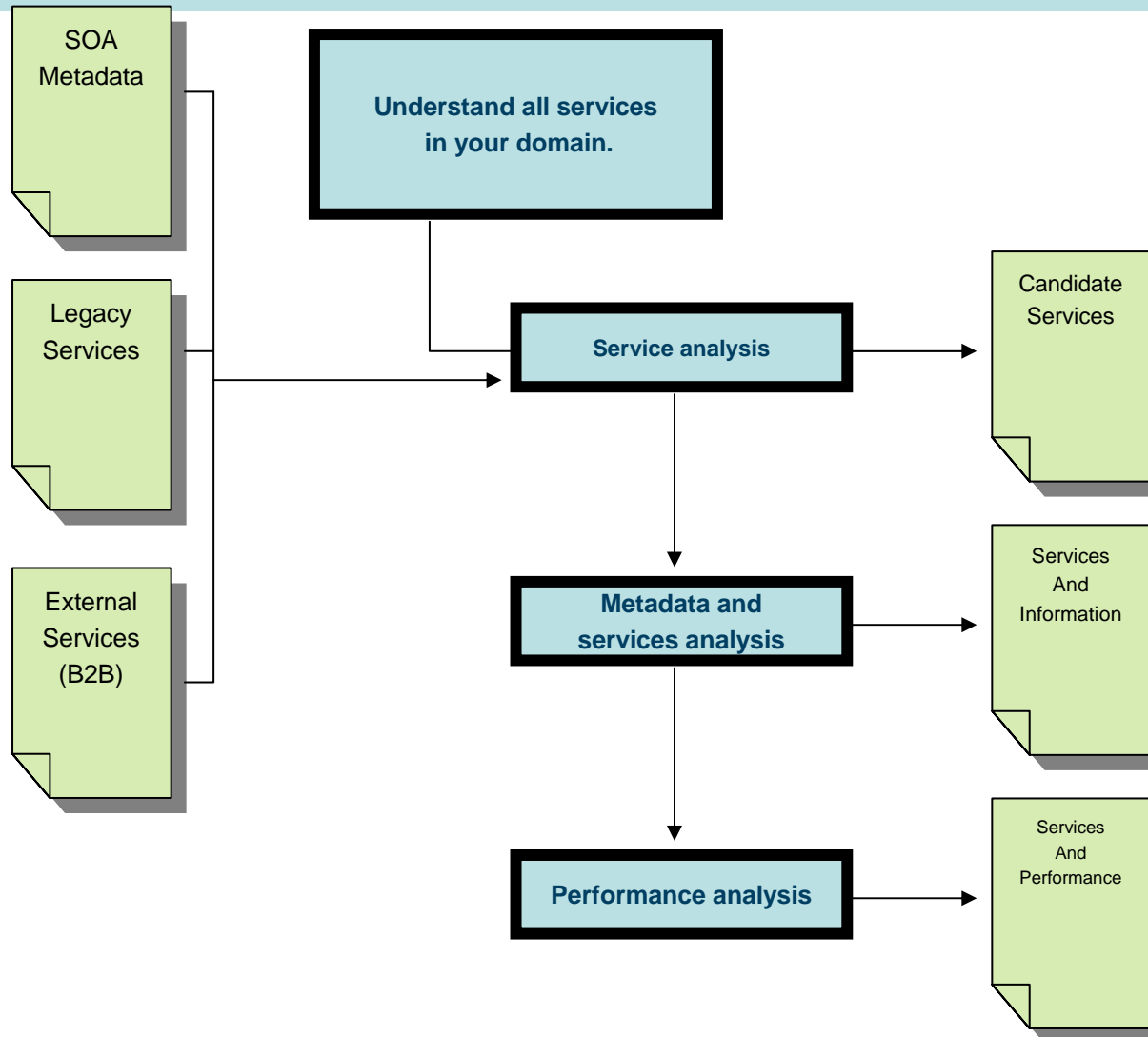


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a_users	password	C	4	15		Password	4	all	<input type="checkbox"/>		
a_users	password2	C		15		Verify Password	4.5	all	<input type="checkbox"/>		
a_users	Zodiac	L					5	all	<input type="checkbox"/>	--	Aries, Lib
a_users	fullname	C	2	40		Name	7	all	<input type="checkbox"/>		
a_users	phone1	C	0	40		Phone	9	read	<input type="checkbox"/>		
a_users	email	C	5	80		E-Mail Address	11	all	<input type="checkbox"/>		
a_users	ccn	C	0	20		Credit Card Numbe	13	all	<input type="checkbox"/>		
a_users	othercontact	C	0	60		Other Contact Info	17	all	<input type="checkbox"/>	test default	
a_users	whenAdded	D					19	none	<input type="checkbox"/>		
a_users	State	L					23	all	<input type="checkbox"/>	--	
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a_users	BirthDay	L				Birth Day	31	all	<input checked="" type="checkbox"/>		1,2,3,4,5
a_users	BirthYear	N		2999	0	Birth Year	33	all	<input checked="" type="checkbox"/>		
a_users	BirthTime	C	0	15		Birth Time	35	all	<input checked="" type="checkbox"/>		
a_users	userExpires	D	1/1/1990	12/31/2999		End Date	37	all	<input type="checkbox"/>		
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Record: 6 of 27

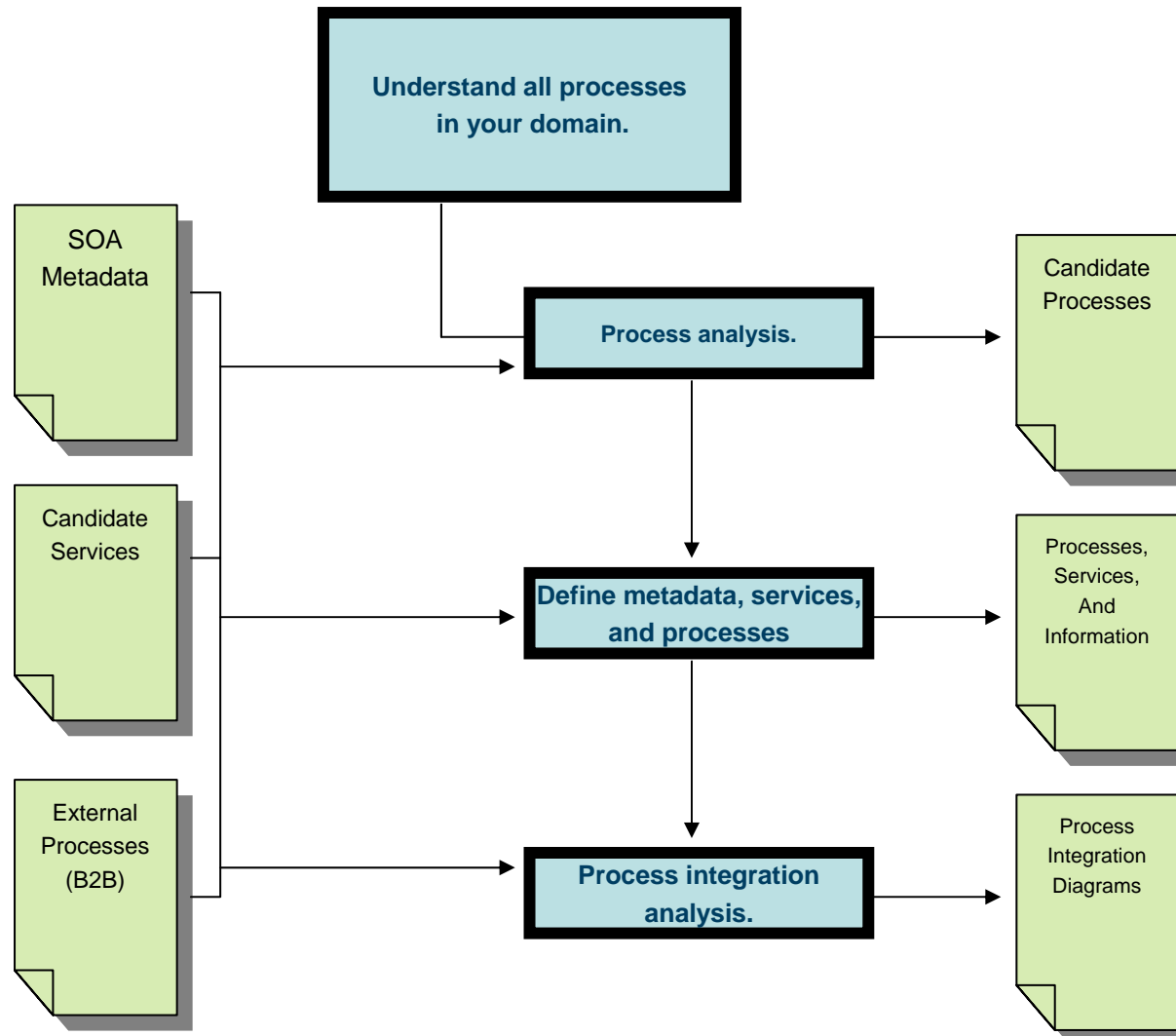
Understand all services available in your domain.

- **Service interfaces are quirky. They differ greatly from application to application, custom or proprietary.**
- **What's more, many interfaces, despite what the application vendors or developers may claim, are not really service interfaces at all, and you need to know the difference.**
- **Services provide behavior as well as information, thus they are service-oriented.**
- **It is important to devote time to validating assumptions about services, including:**
 - Where they exist.
 - The purpose of the service.
 - Information bound to the service.
 - Dependencies (e.g., if it's a composite service).
 - Security issues.









Understand all processes in your domain.

- **You need to define and list all business processes that exist within your domain, either automated or not.**
- **This is important because, now that we know which services and information sources and sinks are available, we must define higher level mechanisms for interaction, including all high-level, mid-level, and low level processes.**
- **In many instance, these processes have yet to become automated or are only partially automated.**



One Approach

Excerpt from Business Process Modeling Notation (BPMN) Working Draft

Element	Description	Notation
Event (three types)	An event is something that "happens" during the course of a business process. These events affect the flow of the process and usually have a cause or an impact. There are three types of events in terms of how they affect the flow: start, intermediate, and end.	<p>Start </p> <p>Intermediate </p> <p>End </p>
Task (atomic)	A Task is an atomic activity that is included within a Process. A Task is used when the work in the Process is not broken down to a finer level of Process Model detail.	
Decision	Decisions are locations within a business process where the flow of control can take two or more alternative paths.	
Sequence Flow	A Sequence Flow is used to show the order that activities will be performed in a Process.	

Define new services.

- You must define all new services that are to make up your SOA, these will fall into one of three categories.
 - First are services exposed out of existing systems, or, **legacy services**, such as ERP, CRM, legacy, etc..
 - The second type of services are **composite services**, which are services unto themselves that are made up of many different services.
 - Finally, **scratch built** services are services that are built from the ground up to be a true service.

Processes,
Services,
And
Information

Candidate
Services

SOA
Metadata

Candidate
Processes

Process
Integration
Diagrams

Define new services.

Service definition.

Service design.

Service implementation.

Service
Definition

Service
Design

Service
Implementation

Define new processes.

- **At this point we should understand most of what is needed to define new processes, as well as bind them to existing processes, and automate processes previously not automated.**
- **New processes should be defined that automate the interactions of services as well as information flows to automate a particular business event or sets of events.**
- **While you can define some very complex logic within new processes using today's tools, the theme here is to orchestrate existing services and information flows rather than create new functionality.**
- **In essence, it's a meta-application that sits on top of many smaller applications, defining interactions from lower to higher levels.**

Processes,
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And
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Candidate
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Define new processes.

Process definition.

Process design.

Process implementation.

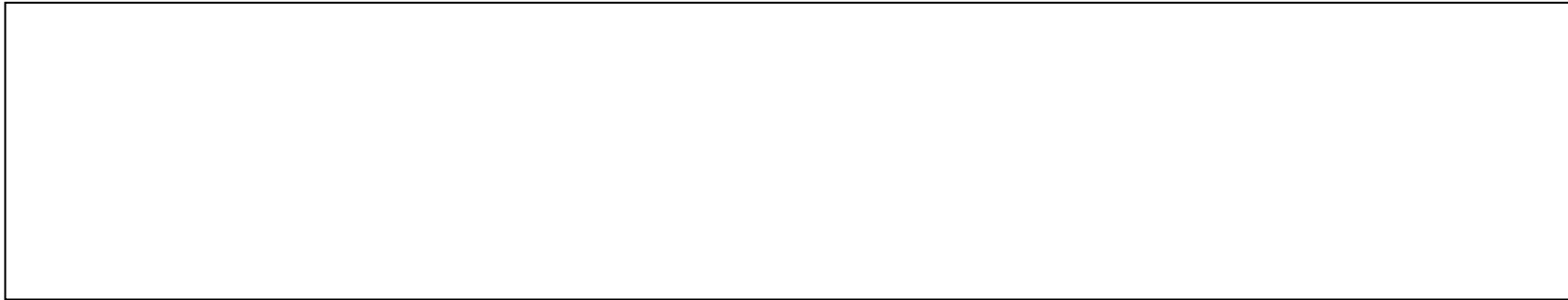
Process
Definition

Process
Design

Process
Implementation



Remember the people.



Focus longer term.

Thanks!

- **Blogs:**

- eBizq.net “Linthicum Channel”
- InfoWorld “Real World SOA”



- **Weekly Podcast**

- InfoWorld SOA Report

- **Columns**

- Web Services Journal
- Business Integration Journal

