GESTS483 – GESTH510
IT Governance - Session 2
Enterprise Architecture

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Business and IT Pain Points

Business Pain Points

Globalization: Competition from geographies that have lower cost structures

Economic Pressures: Record cash reserves but anemic growth

Business Process Outsourcing: Outsource non-core capabilities

Regulatory Compliance: Must comply to stay in business

Technology: New technologies that provide additional business capability

IT Investments: Investment in improving IT efficiency, rather than creating new business opportunities

IT Pain Points

Globalization: Business acting globally and IT is an after thought

Economic Pressures: IT not generally viewed as a differentiator

Business Silos: redundant infrastructure and higher cost

Lack of Cohesive Business Information Strategy across the enterprise

Governance & Organization for agility

Standards: At last count over 50 standard bodies

Technology Refresh: Business reluctant to upgrade

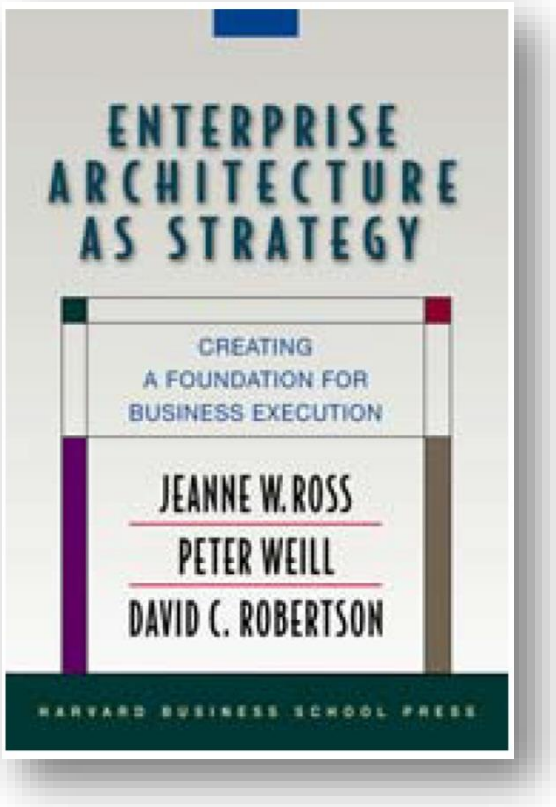
Session is based on this book

Joint effort between IMD and MIT

Interviewed or surveyed over 150 organizations in 7 countries in the US and Europe

Quantitative survey of 103 organizations in US and Europe

Book published in June 2006



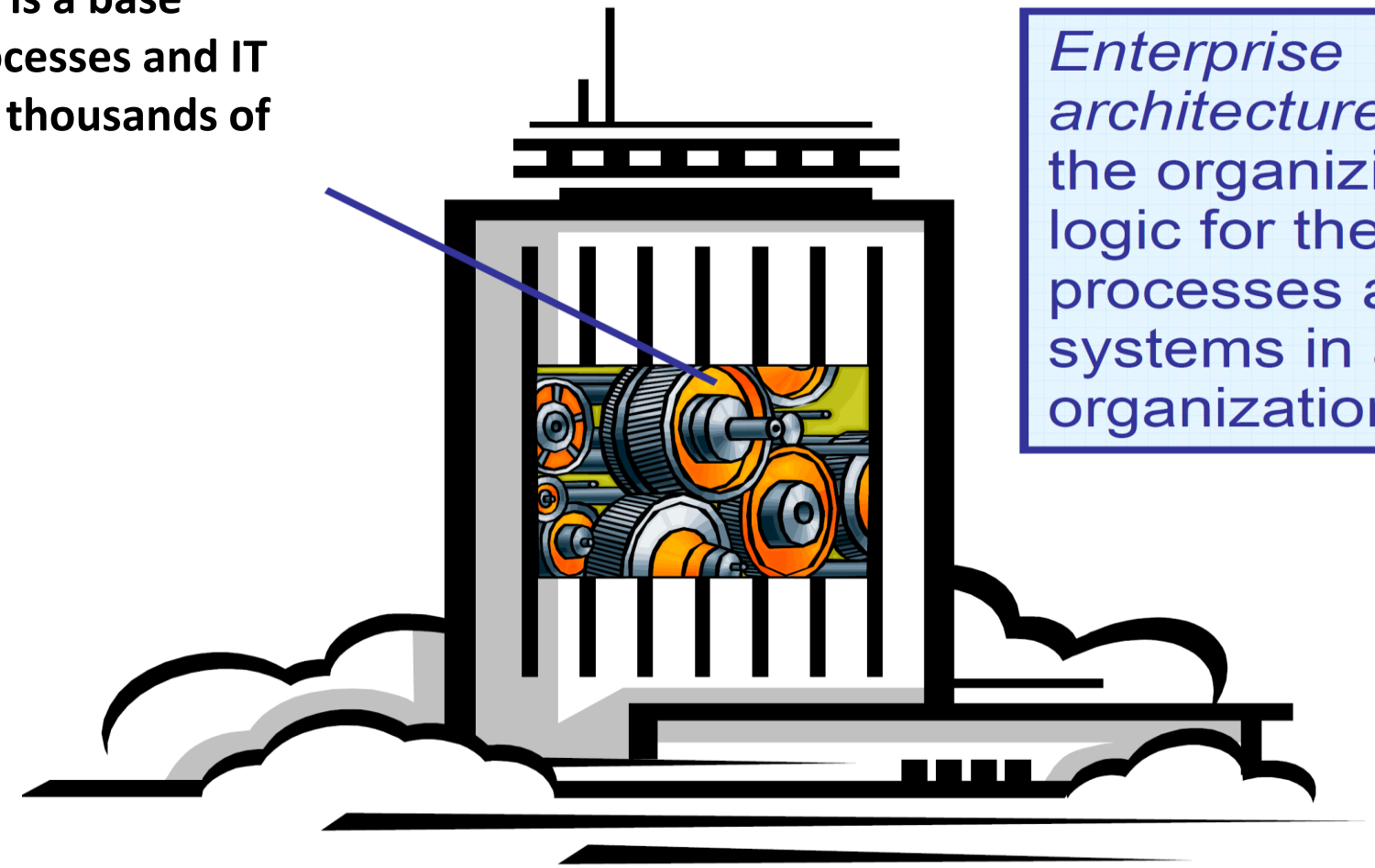
Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

The architecture of an organization is like the structure of a car

Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

Just like a car, an organization has a structure

Inside any organization is a base foundation of work processes and IT systems that processes thousands of daily transactions



Enterprise architecture is the organizing logic for the work processes and IT systems in an organization

Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

An organization's architecture lets it execute some initiatives well but not others

<u>Johnson & Johnson</u>

Over 200 operating units

$47B in annual revenues

Sales increases and double-digit earnings increases every year for 20 years

<u>J&J's Management</u>

Autonomous management of each unit

Different systems and processes in each unit

Great local flexibility and fast response to changing market needs

Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

Definitions - Architecture

“The structure of components, their relationships, and the principles and guidelines governing their design and evolution over time.”

IEEE STD 610.12

It is about: (using explicit representations for shared understanding)

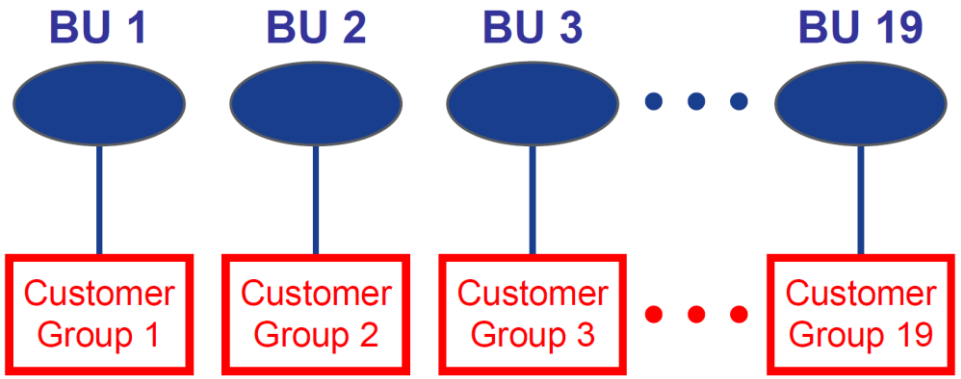
- decomposing a complex problem to it’s invariant elements and rules
- assigning jurisdictions and responsibilities
- establishing coordination and change management mechanisms

European Products Producer

<u>Branded products producer</u>

19 different country business units, each independently managed, with separate system, processes and staff

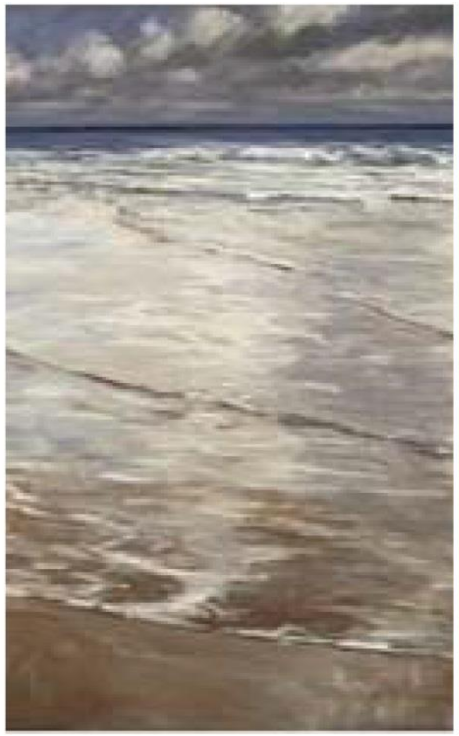
<u>The Problems</u>
Slow to change
Expensive to run
Global customers took advantage



Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

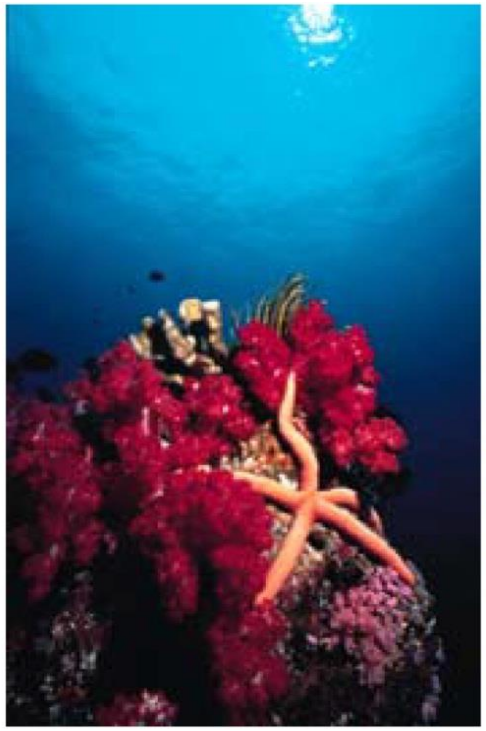
Why don't organizations have the right architecture?

Change in Environment

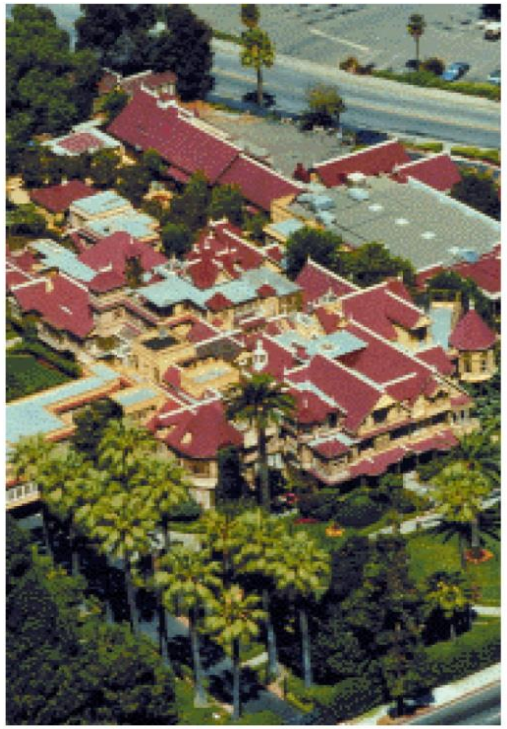


M&A or other strategic actions

Architectural Degradation

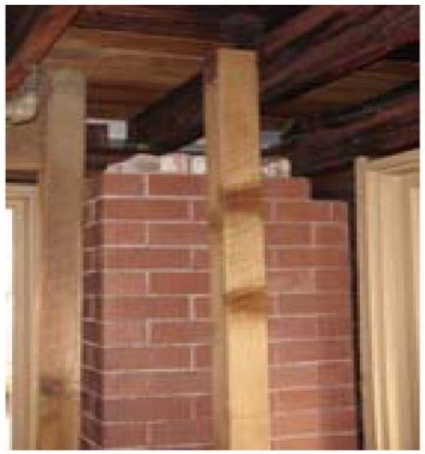


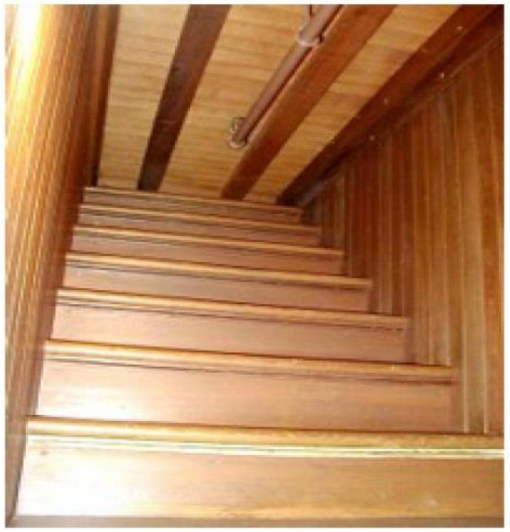
No Plan



Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

How do architectures get designed?

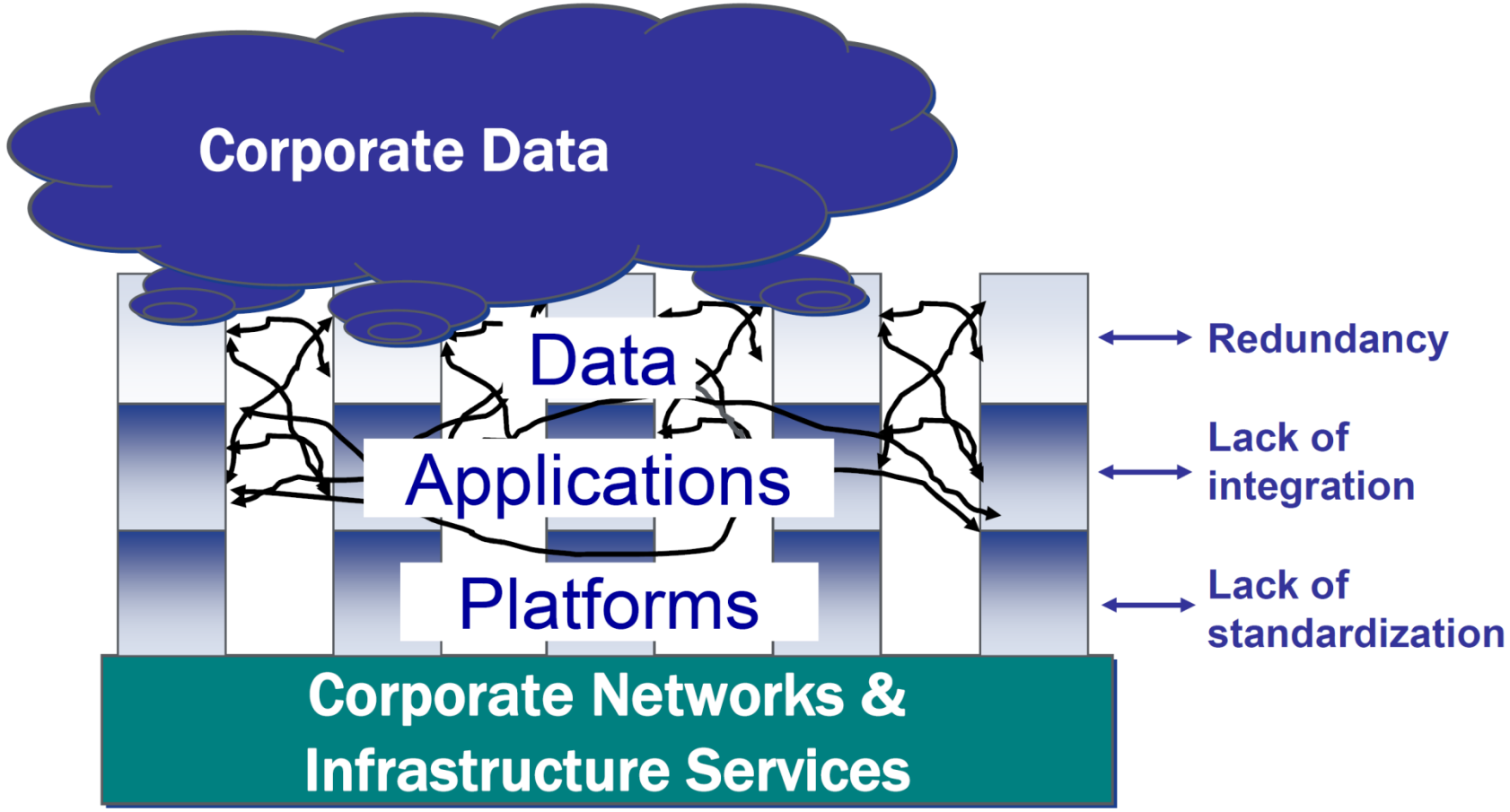




Winchester House – Fresno, California

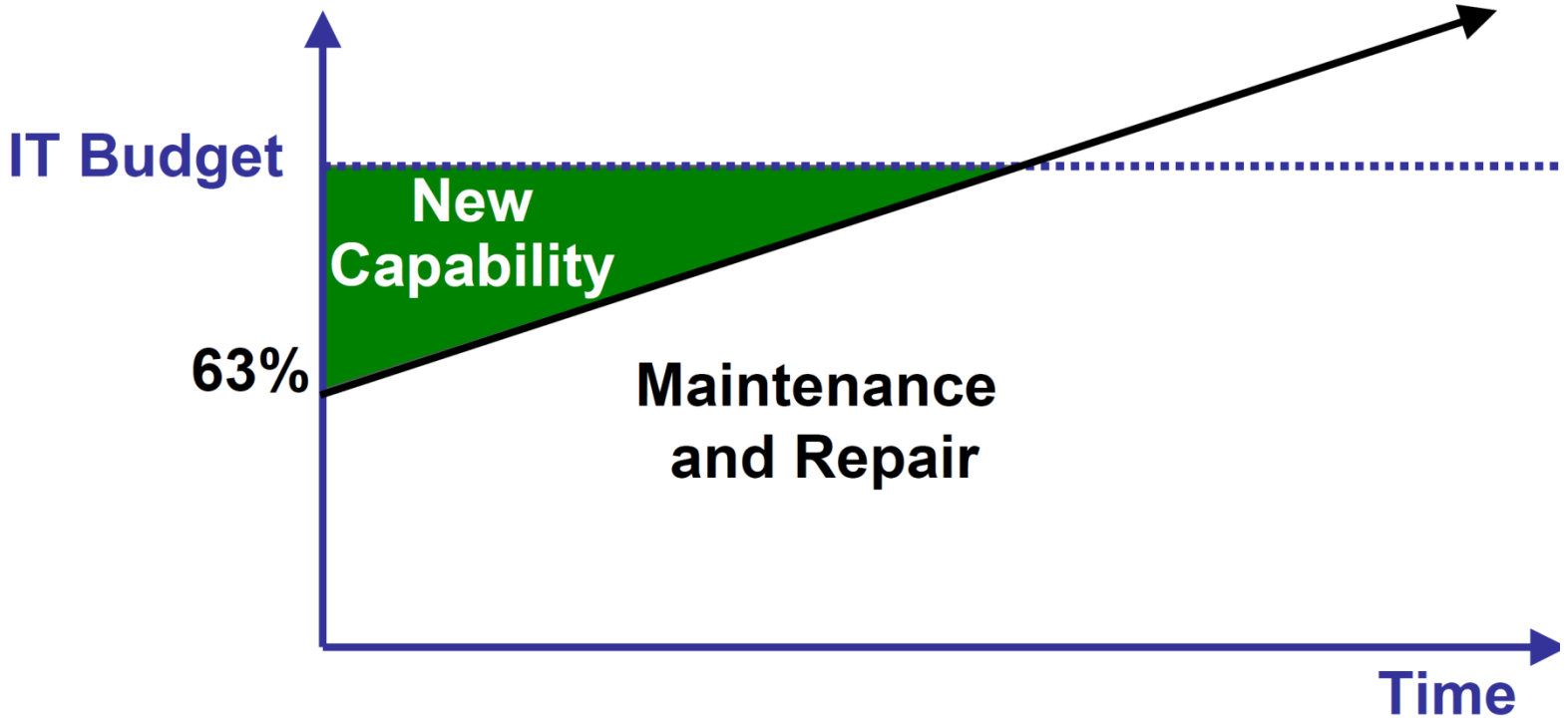
Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

Without a plan, IT becomes project- and cost- focused, leading to a silo-ed architecture



Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

Silo-ed architectures and a short-term focus lead to long-term cost increases



Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

How alignment should work

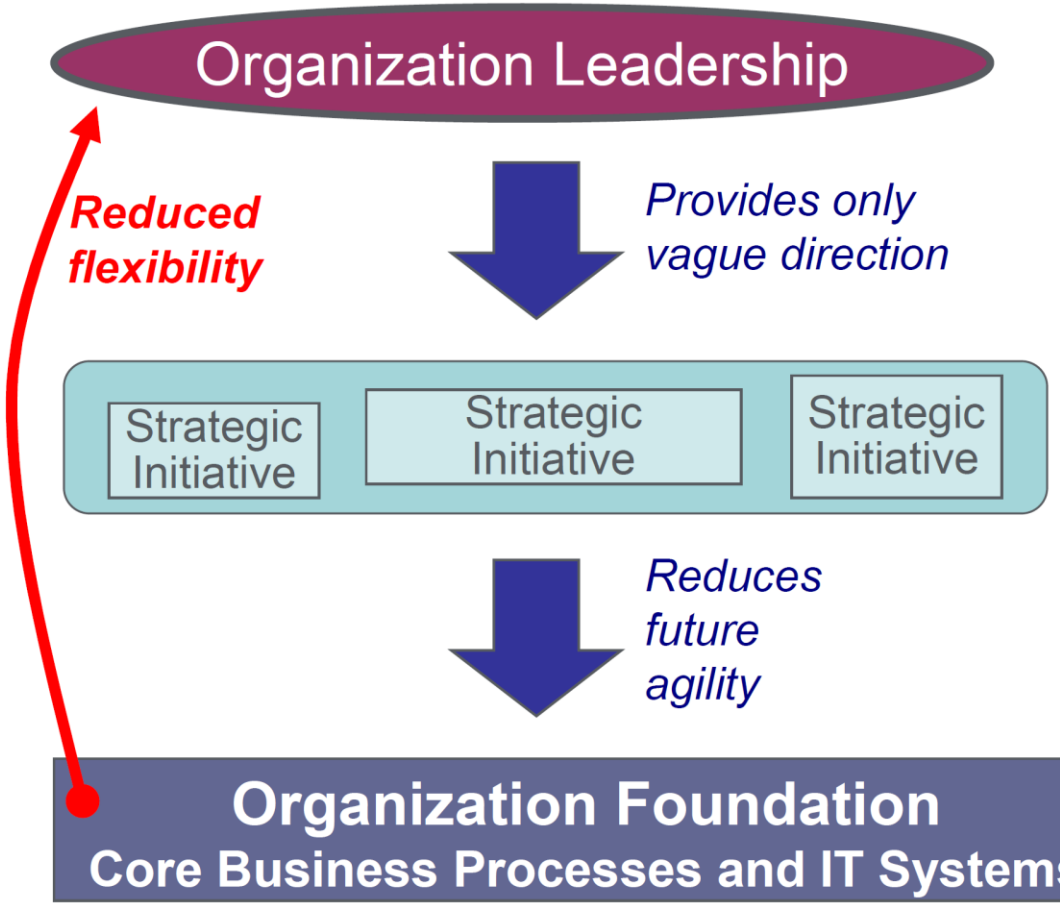
Senior managers define strategic priorities

Project teams identify and implement business changes and IT support

The resulting IT-supported processes help the organization achieve its strategic objectives

Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

How alignment really works



Strategic statements are often *promises* ("get closer to our customers") or *operational directives* ("enter Chinese market")

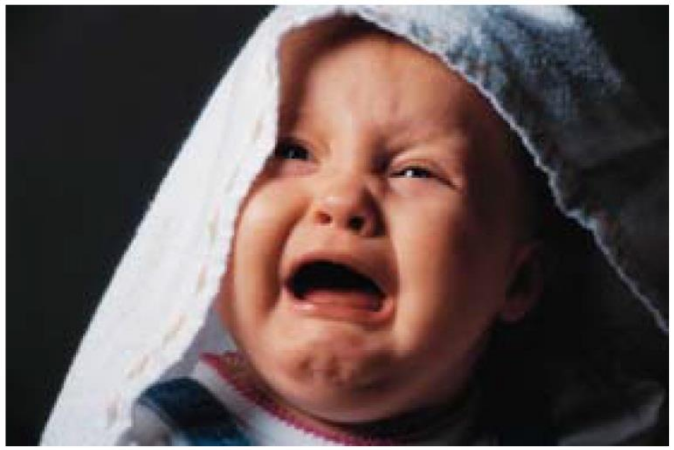
Strategy provides little information on long-term direction of organization

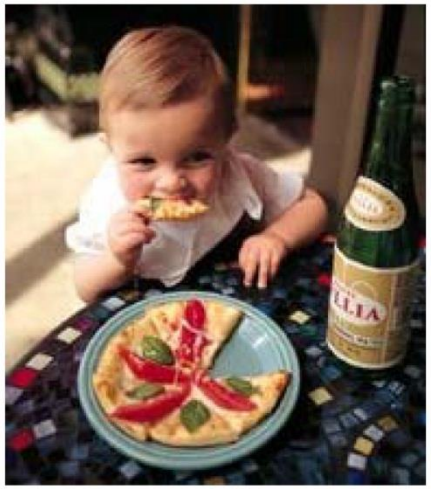
By the time IT finishes its work, the strategy has changed

The resulting IT legacy makes the organization *less* flexible in the future

Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

Building capabilities





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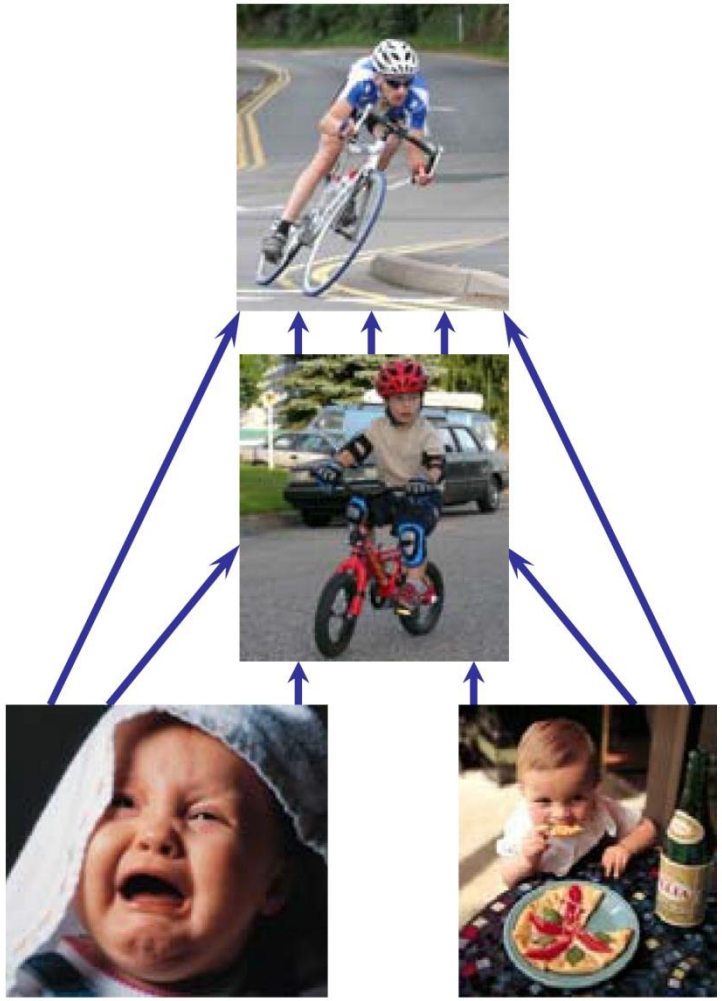
To achieve greatness requires learning basic skills so well that they become second nature



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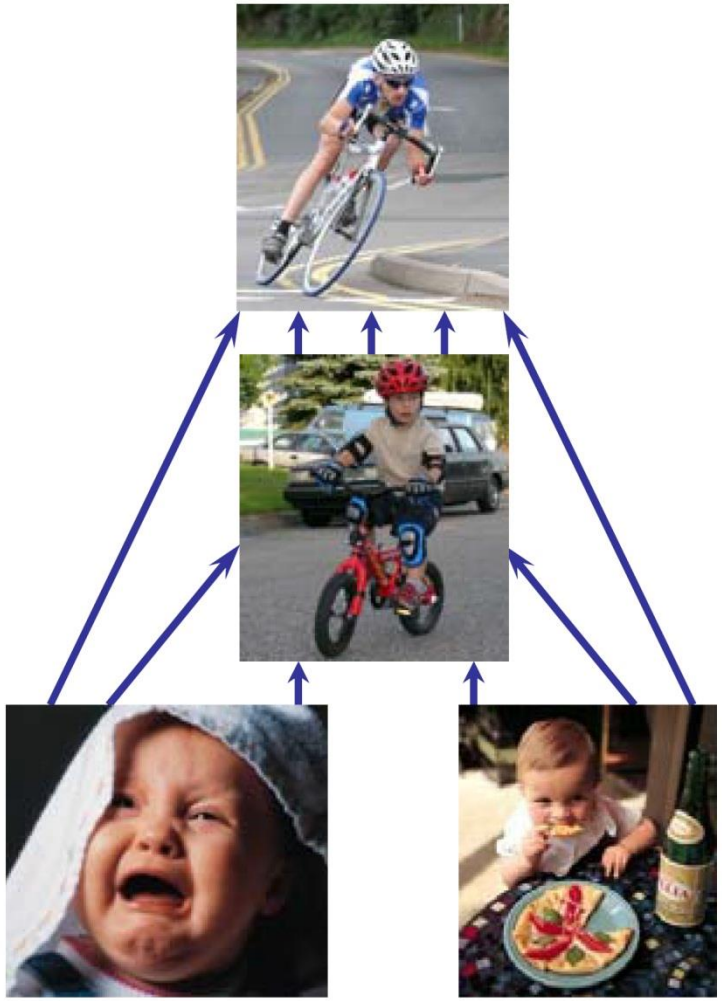
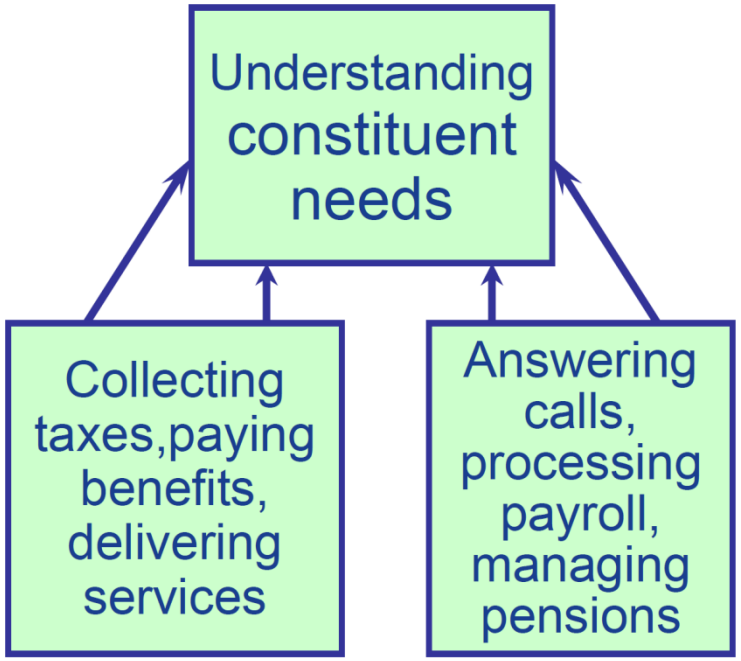
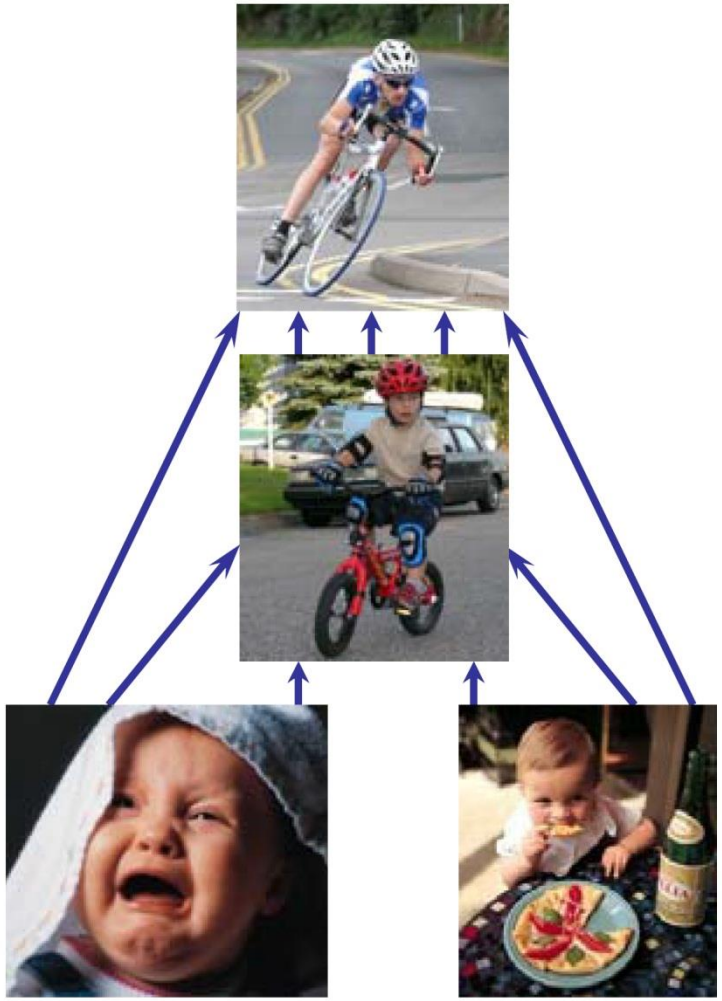
In many organizations managers spend too much time on basic tasks – not focusing on higher-value activities





Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

Getting the architecture right for basic tasks gives you a platform for innovation



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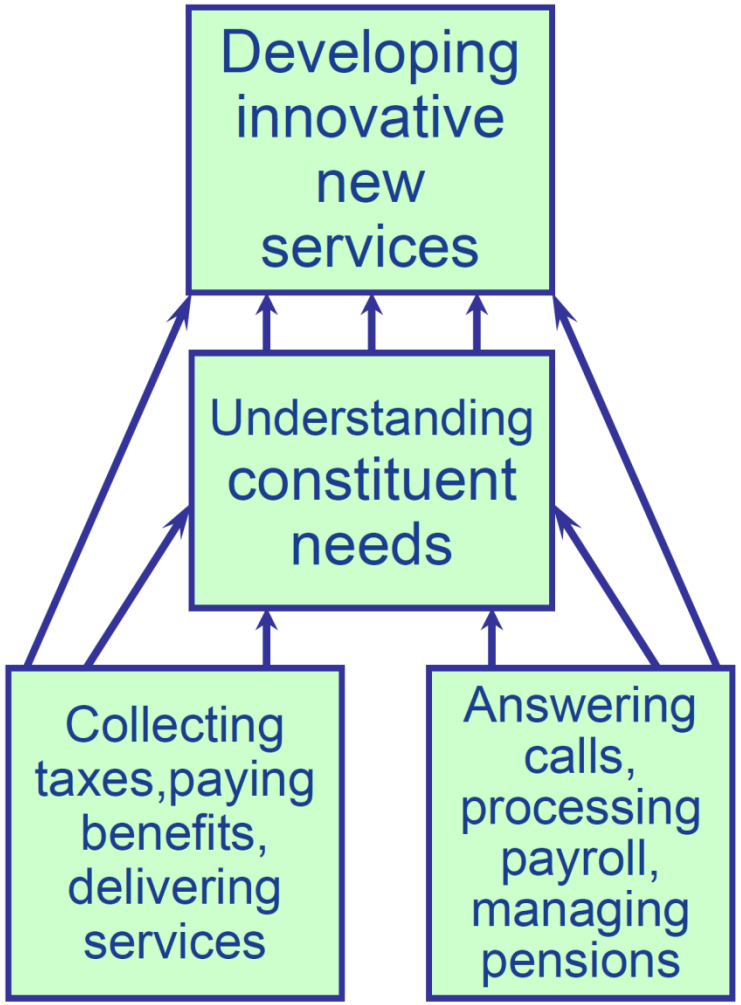


To support your strategy, define your operating model

The Operating Model is your answer to 2 questions:

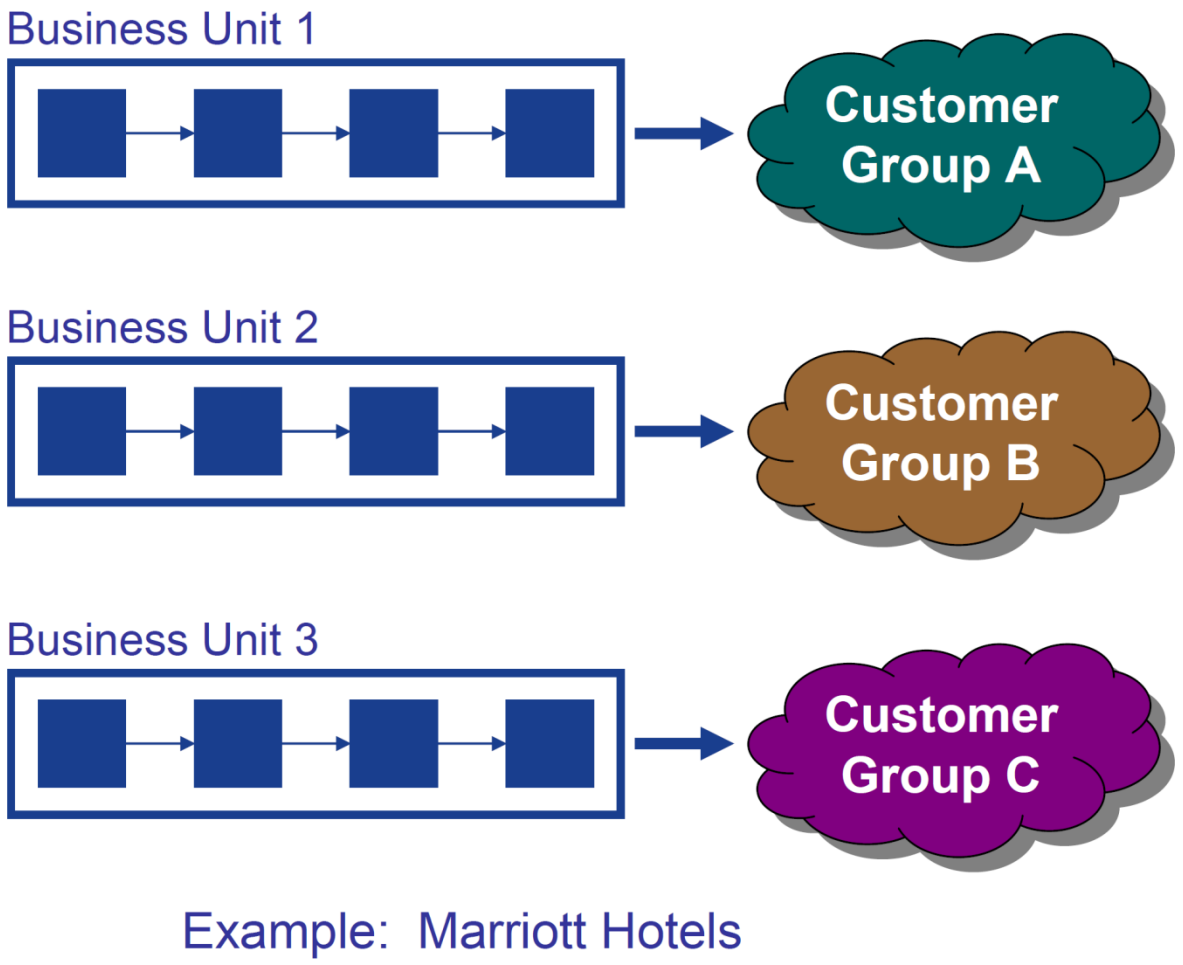
1. What are the core activities in your organization
    - What activities do you want to perform repeatability, flawlessly, and efficiently?
    - What activities did you perform yesterday, and will you perform today and tomorrow?
2. How *standardized* and *integrated* do they need to be?

The Operating Model

- *Focuses on the "sacred transactions" of the organization – the core activities that should be second nature*
- *Provides a stable view of the organization*
- *Is more useful for guiding IT efforts*

Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

Standardization (without integration)



Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

How much standardization do you need?
(Or: how much standardization can you live with?)

Standardization

Simplifies operations, reduces costs, and increases efficiency

Allows measurement, comparison, and improvement

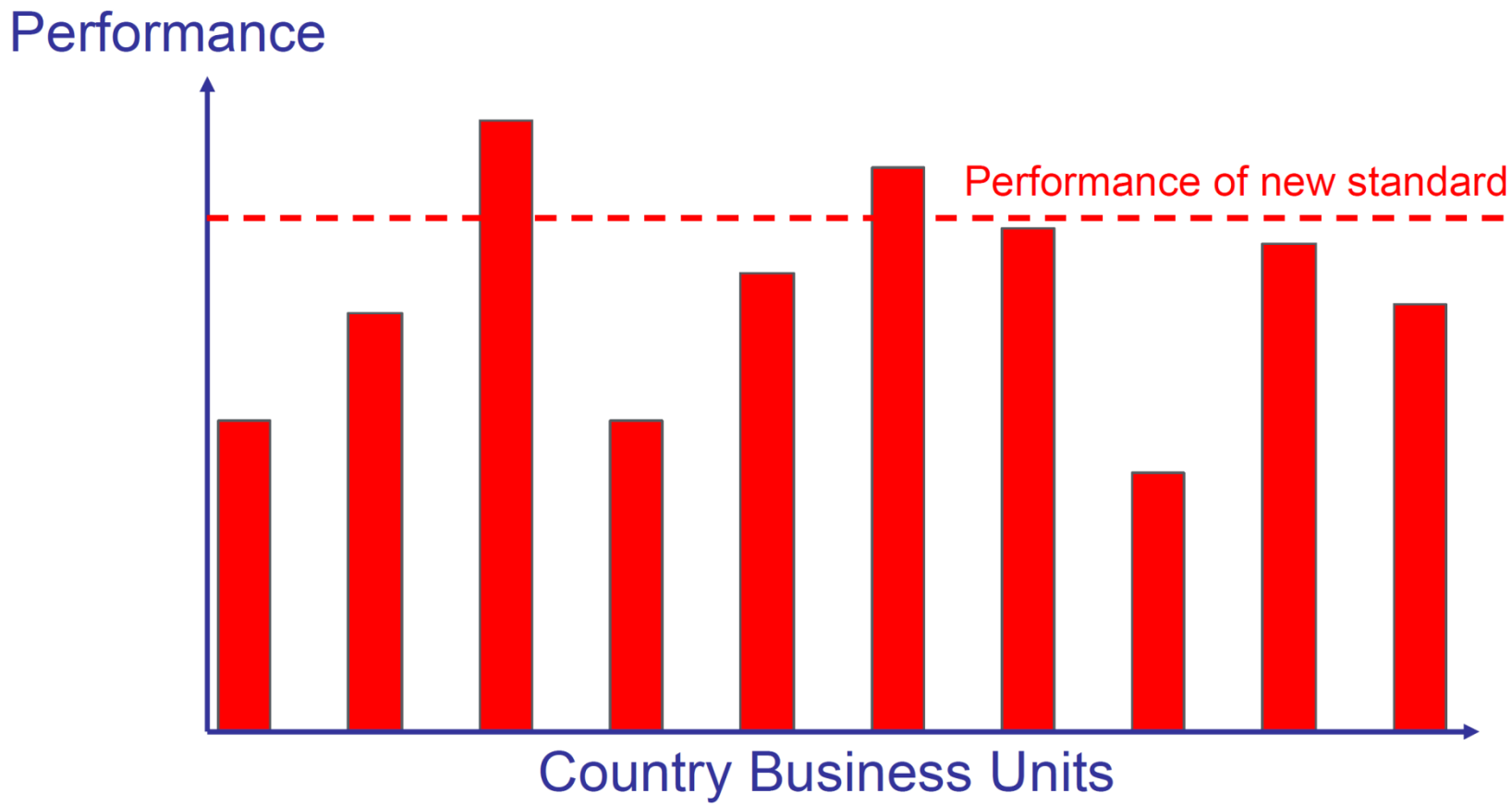
Can accelerate innovation

BUT

- Can limit local flexibility
- May require that local units replace perfectly good systems and processes with new standards
- May be politically difficult to implement

Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

The challenge of standardizing



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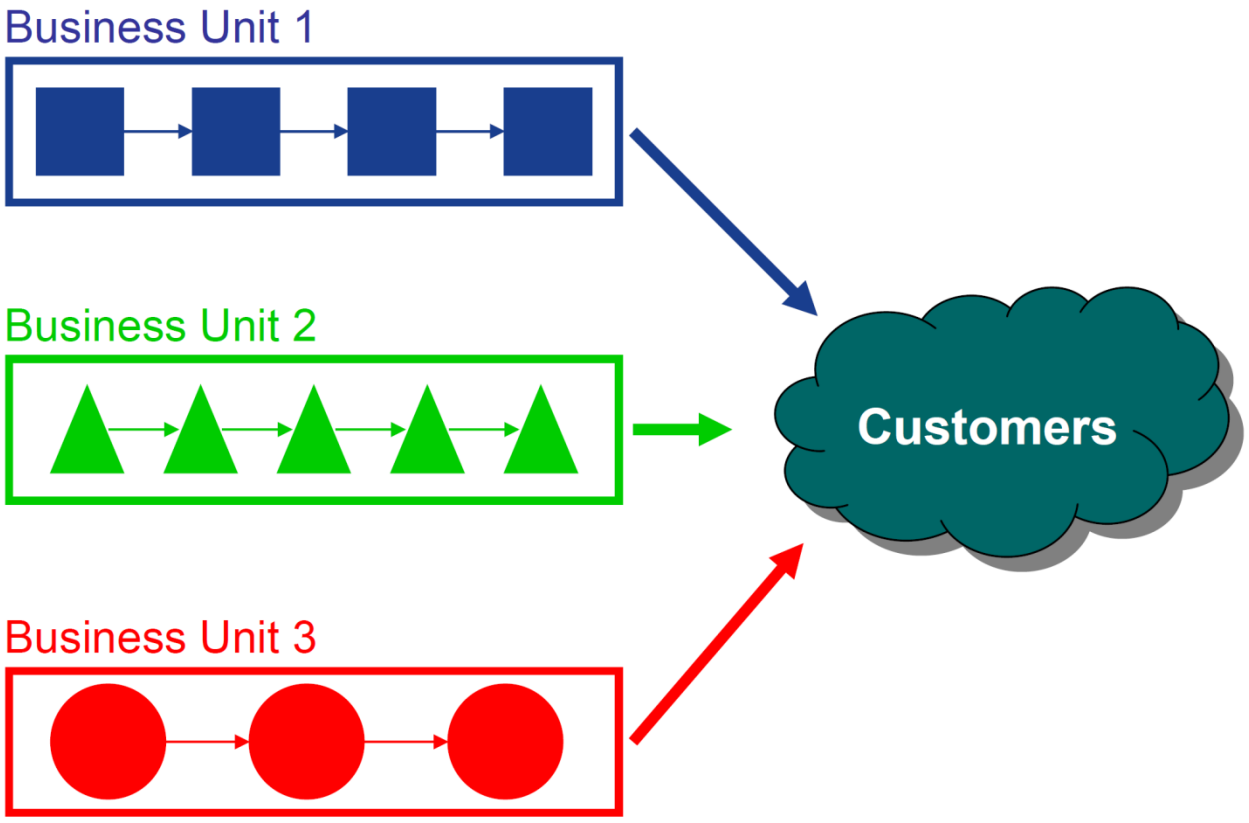
Integration (without standardization)



Example: MetLife

Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

How much integration do you need?
(Or: how much can you live with?)

Integration

Links efforts through shared data

Provides transparency across the organization, and the seamless flow of information across activities

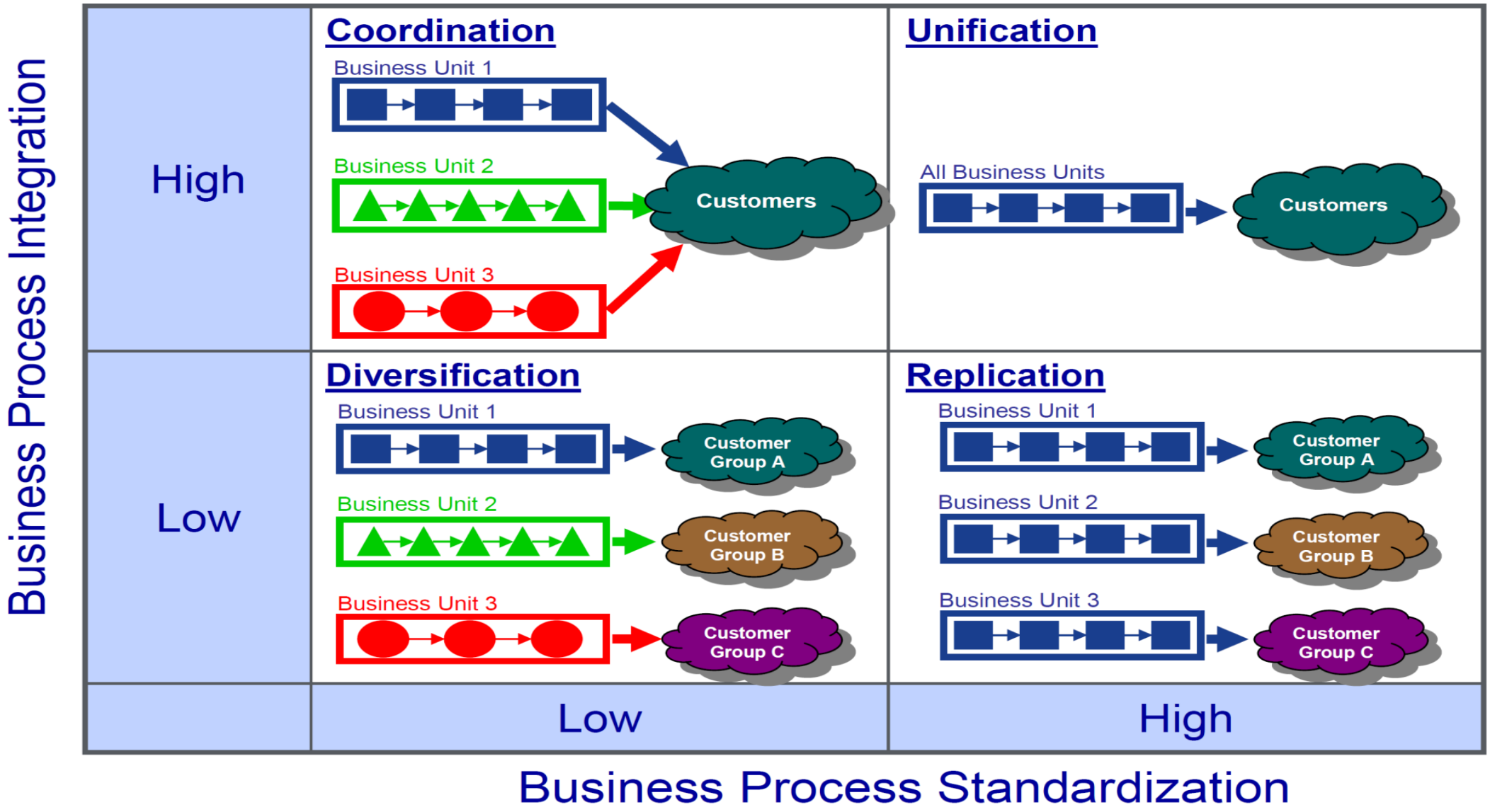
Allows an organization to present a single face to a customer, supplier, or partner

BUT

- Requires common data definitions
- Can be time-consuming and difficult to implement
- Unnecessary if units are organized around unique customer groups

Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

The Operating Model



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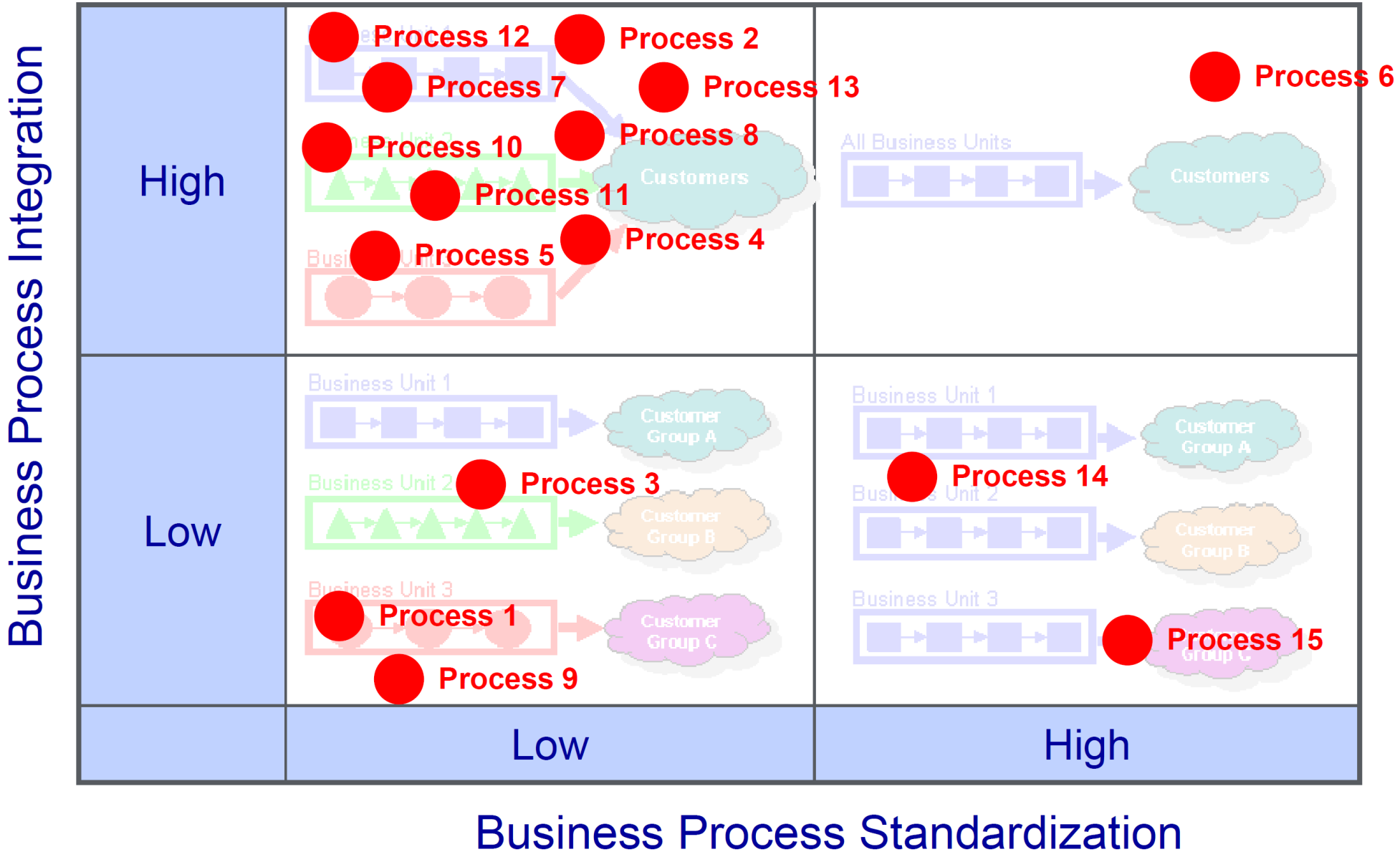
Where is your organization?



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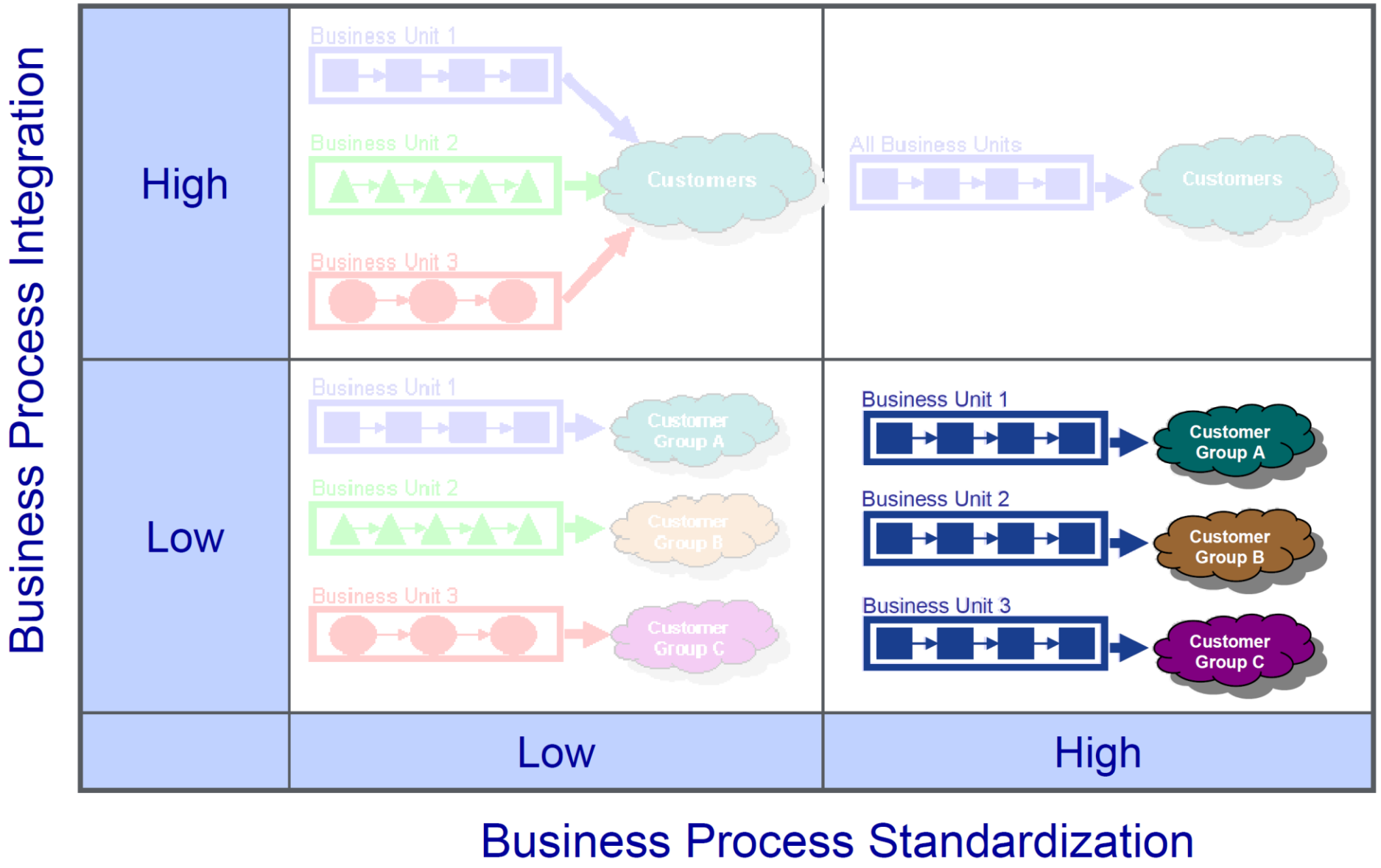
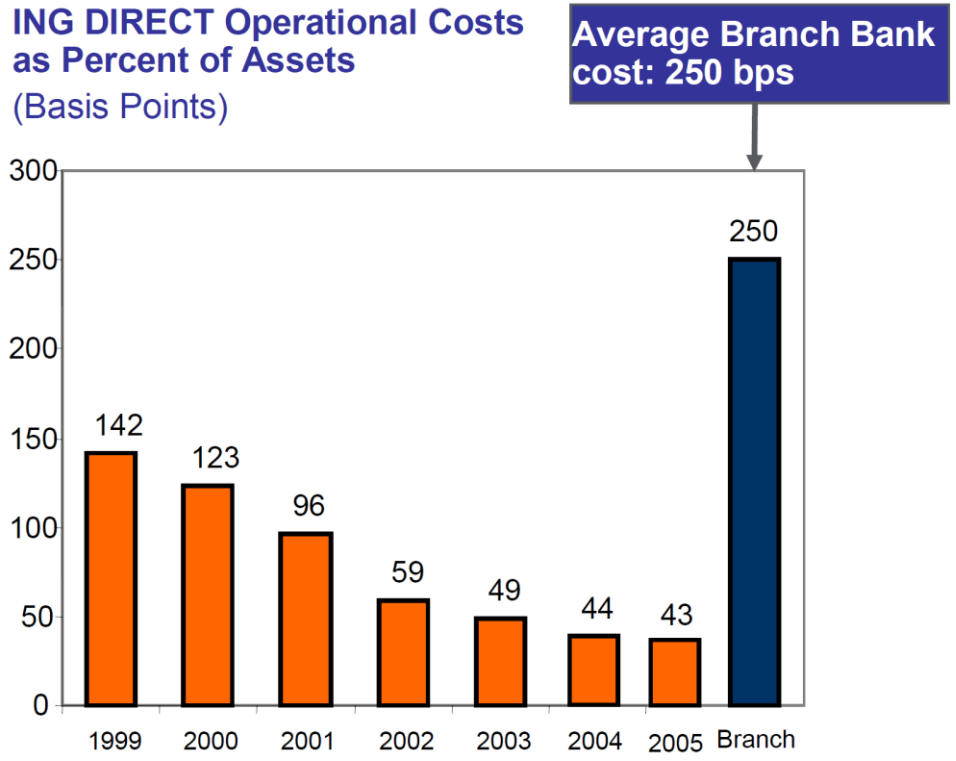
ING DIRECT



Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

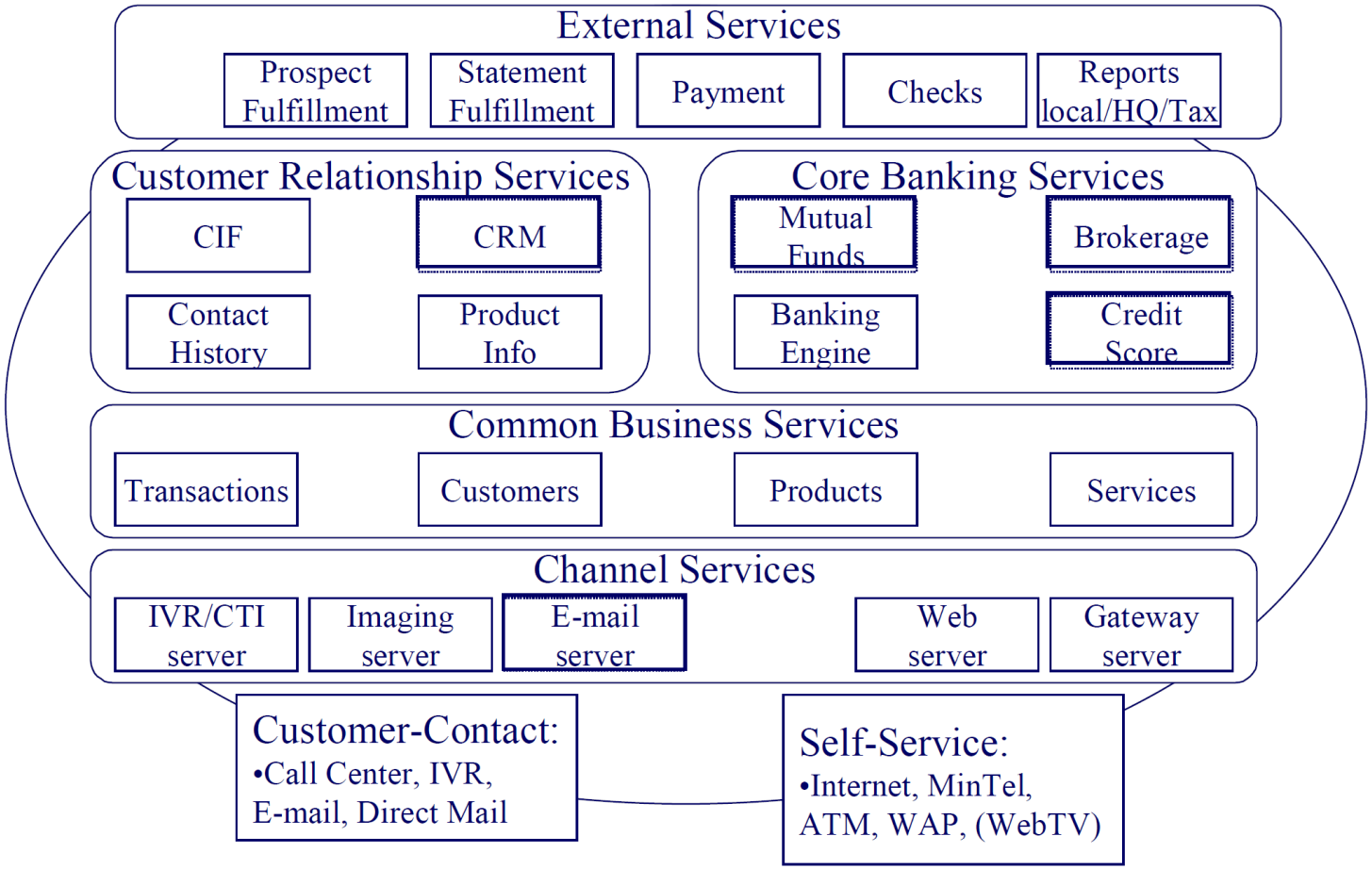
ING DIRECT

- Simple products, mostly savings and simple loans
- No current account, no cash, no ATMs
- No bank branches: internet and call centres only
- Copy best practices between country business units
- Shared IT architecture and applications



Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

ING DIRECT Architecture Description



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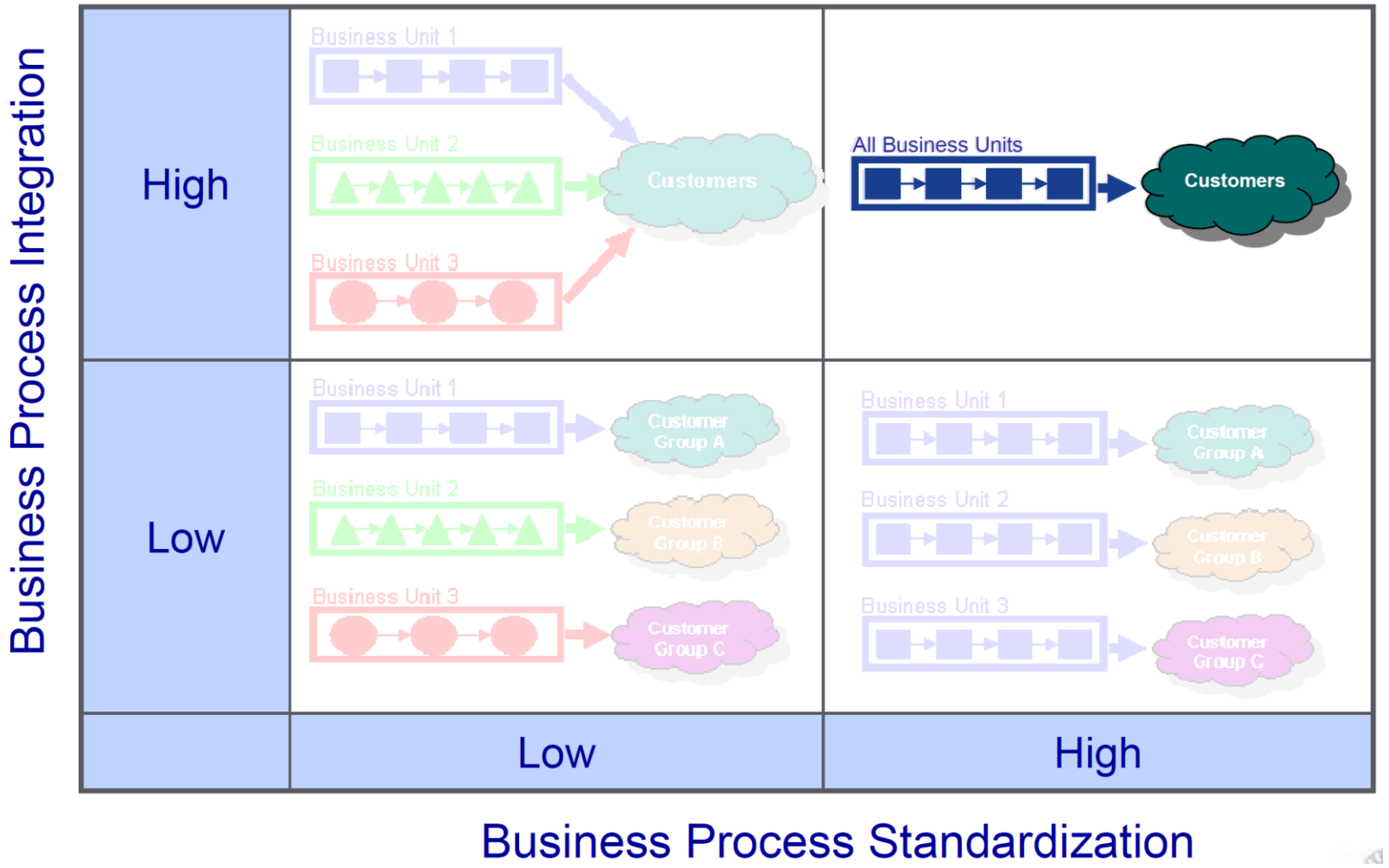
Unification example: Delta Airlines



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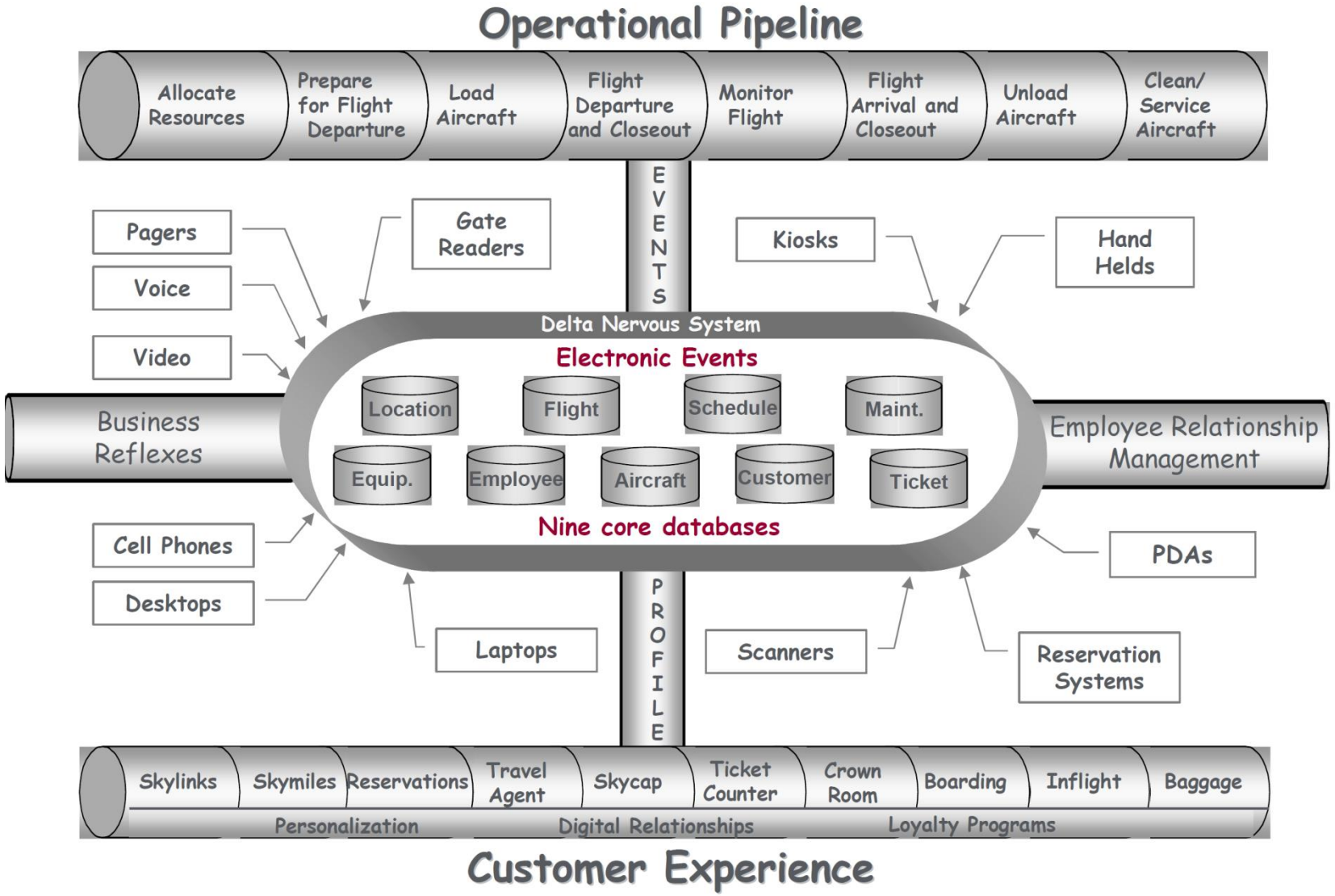
Delta Enterprise Architecture Requirements



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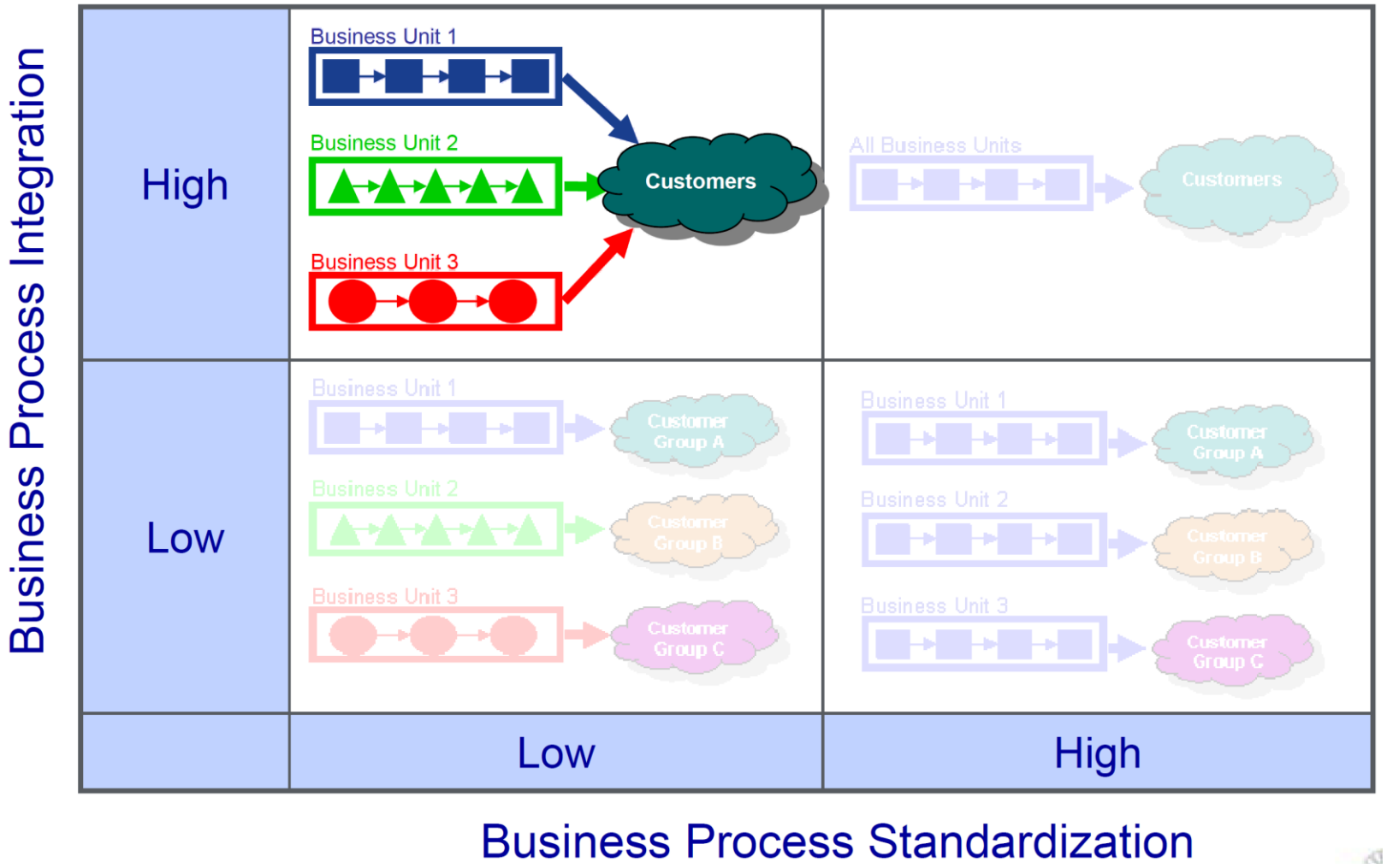
Integration example: MetLife



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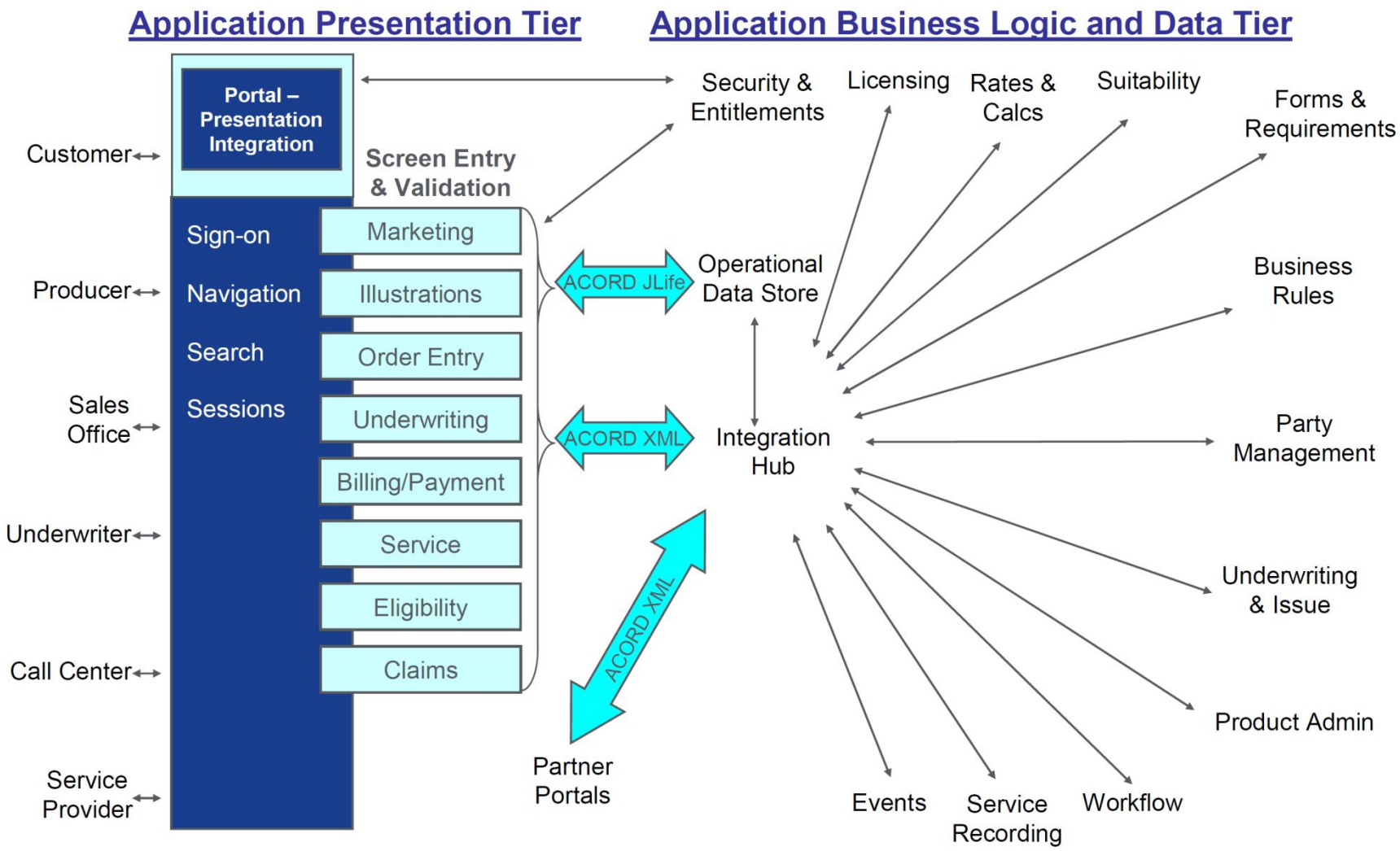
MetLife's Enterprise Architecture Requirements



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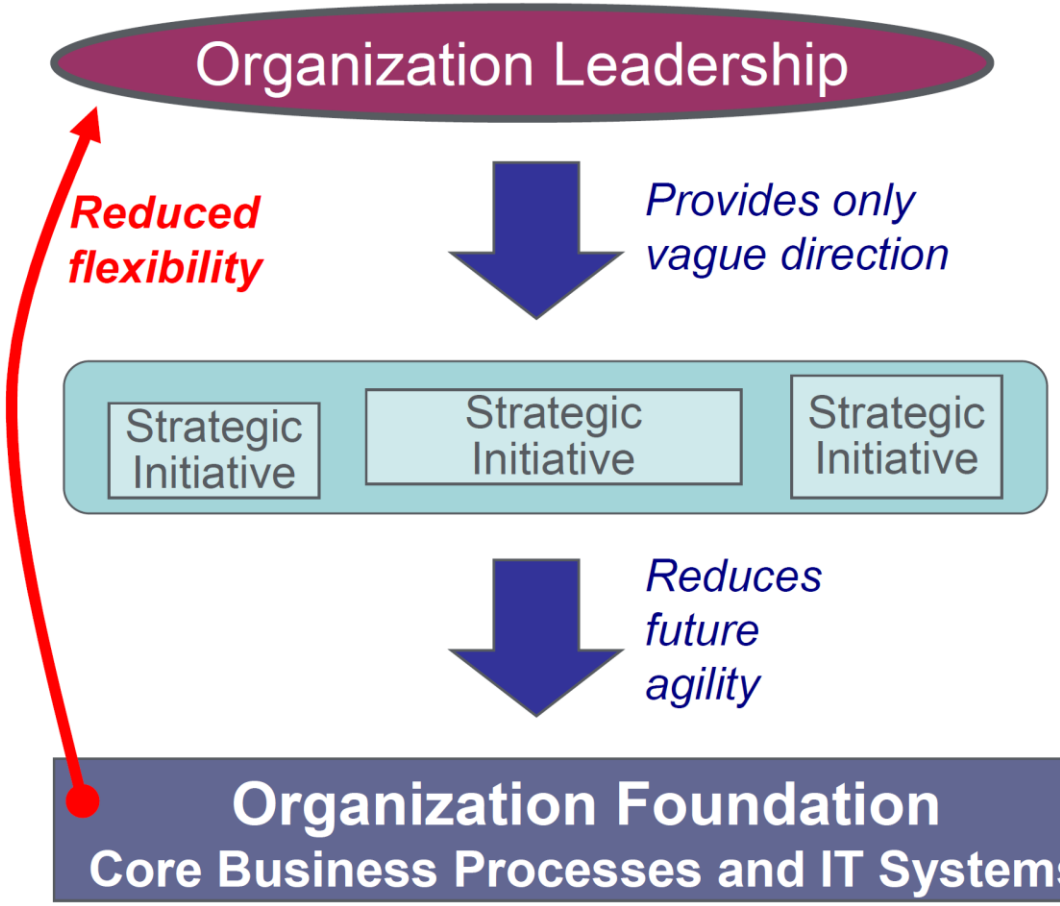
Recap: How alignment really works



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Strategy provides little information on long-term direction of organization

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The resulting IT legacy makes the organization *less* flexible in the future

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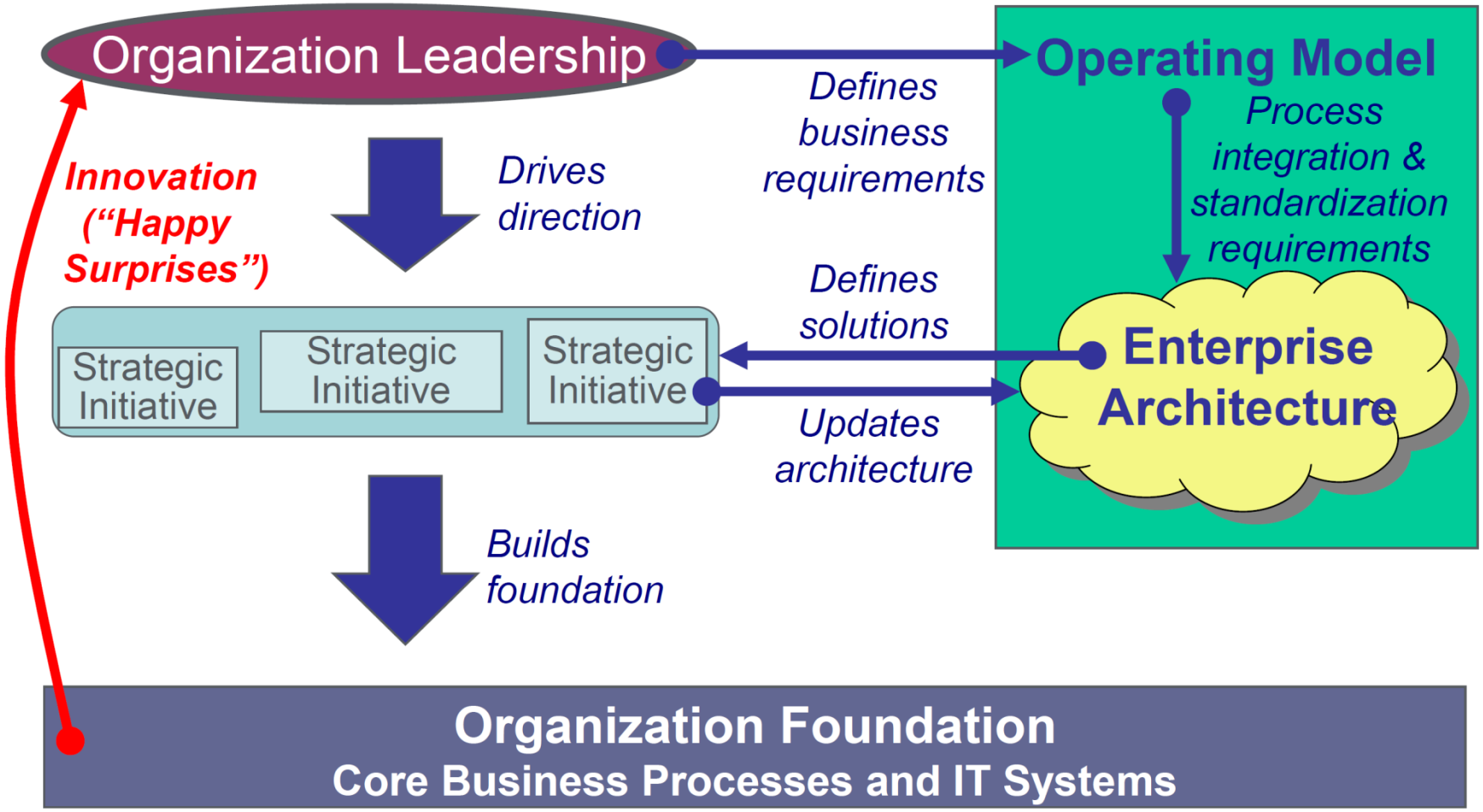
Architecture guarantees strategic alignment, and provides a foundation for innovation



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Enterprise Architecture Maturity Stages

Enterprise Architecture is the organizing logic for work processes and IT systems in an organization

Business Silos

- Collection of separate departments/units rather than integrated enterprise
- Separate choices made for each product, function, and segment
- Investments based on project ROI

Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

Enterprise Architecture Maturity Stages

Enterprise Architecture is the organizing logic for work processes and IT systems in an organization

Business Silos	Standardized Technology
• Collection of separate departments/units rather than integrated enterprise	• Centralized standardization of technology platforms with exception management
• Separate choices made for each product, function, and segment	• Business process and IT application decisions made locally
• Investments based on project ROI	• Investments based on cost reduction

Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

Enterprise Architecture Maturity Stages

Enterprise Architecture is the organizing logic for work processes and IT systems in an organization

Business Silos	Standardized Technology	Optimized Core
• Collection of separate departments/units rather than integrated enterprise • Separate choices made for each product, function, and segment • Investments based on project ROI	• Centralized standardization of technology platforms with exception management • Business process and IT application decisions made locally • Investments based on cost reduction	• Standardization/ integration of processes and data • Separation of decisions about processes, applications, data, and infrastructure • Business case made on performance

Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

Enterprise Architecture Maturity Stages

Enterprise Architecture is the organizing logic for work processes and IT systems in an organization

Business Silos	Standardized Technology	Optimized Core	Business Modularity
• Collection of separate departments/units rather than integrated enterprise • Separate choices made for each product, function, and segment • Investments based on project ROI	• Centralized standardization of technology platforms with exception management • Business process and IT application decisions made locally • Investments based on cost reduction	• Standardization/ integration of processes and data • Separation of decisions about processes, applications, data, and infrastructure • Business case made on performance	• Information and process interface standards defined • Business process ownership defined • Business case made on time to market, flexibility

Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

Key Findings

The transition from one stage to the next is difficult and time consuming

Moving from one stage to the next requires a business transformation as well as a technical one

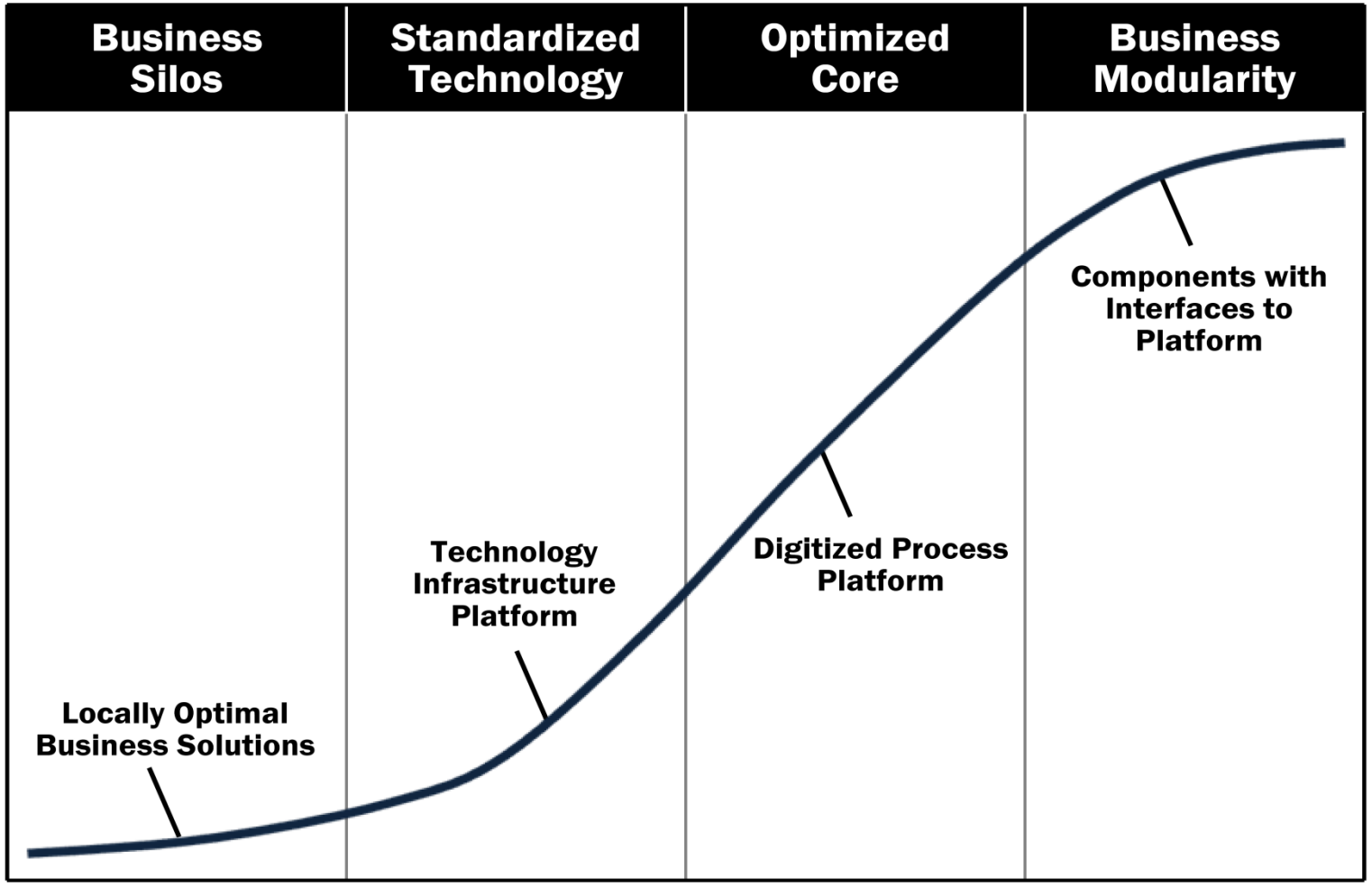
Companies that try to skip a stage are usually unsuccessful

Each stage involves a very different view of the value of IT and the role of IT in the organization

The leadership challenges are very different for each transition

Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

Firms design and build digitized platform in stages



Benefits

- Operational excellence
- Business agility
- Managerial satisfaction
- IT responsiveness
- Risk management

Framework Source: *Enterprise Architecture as Strategy: Creating a Foundation for Business Execution*, J. Ross, P. Weill, D. Robertson, HBS Press, 2006.

Percentage of firms in each stage updated based on a 2010 CIO Magazine/MIT CISR survey of 205 IT executives.

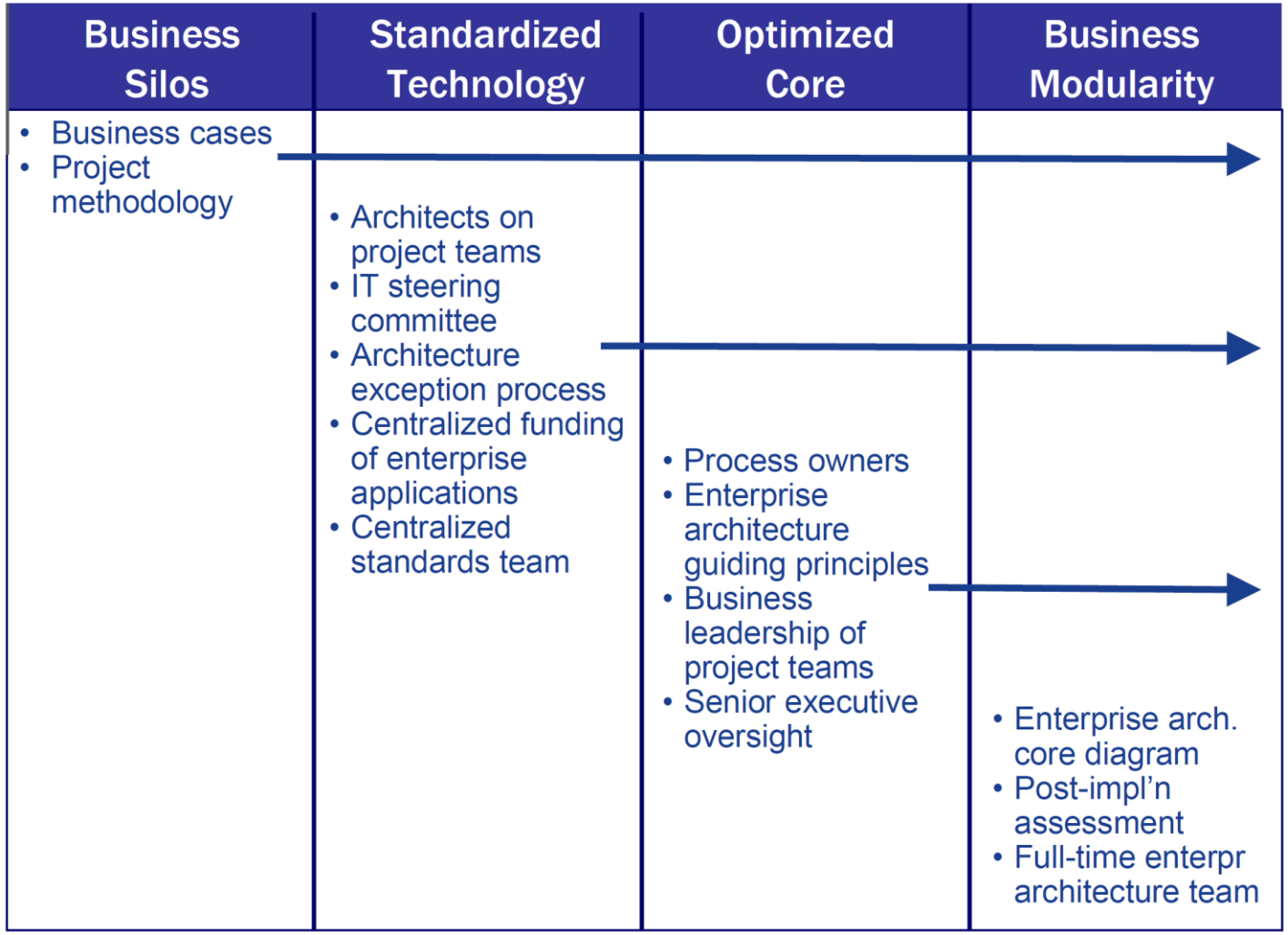
The role of the CIO changes as organizations move through the stages

Stage	Business Silos	Standardized Technology	Optimized Core/ Business Modularity
Key Skills of the CIO:	▪Technical knowledge to help with standards decisions ▪Ability to implement standard project methodology and oversight ▪Ability to work with top management team to establish basic governance ▪Ability to make business case for standardization	▪Detailed knowledge of how the organization functions ▪Ability to manage large organizational change efforts ▪Credibility with business unit or functional heads ▪Ability to manage large central budget ▪Understanding of architecture as a business enabler	▪Ability to facilitate innovation off new platform ▪Detailed knowledge of core business - could potentially run a business unit if necessary ▪Ability to delegate ownership of key process and data modules, while still ensuring adherence to standards ▪Understanding of strategic benefits of architecture
Reports to:	**CEO or CFO**	**CEO**	**CEO**
Percent of IT heads with second title:*	**0%**	**26%**	**50%**

* Percent of CIOs having second VP title, from sample of 26 CIOs in US and Europe

Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

Management practices by stage



Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

Recap: European Products Producer - challenges

<u>Branded products producer</u>

19 different country business units, each independently managed, with separate system, processes and staff

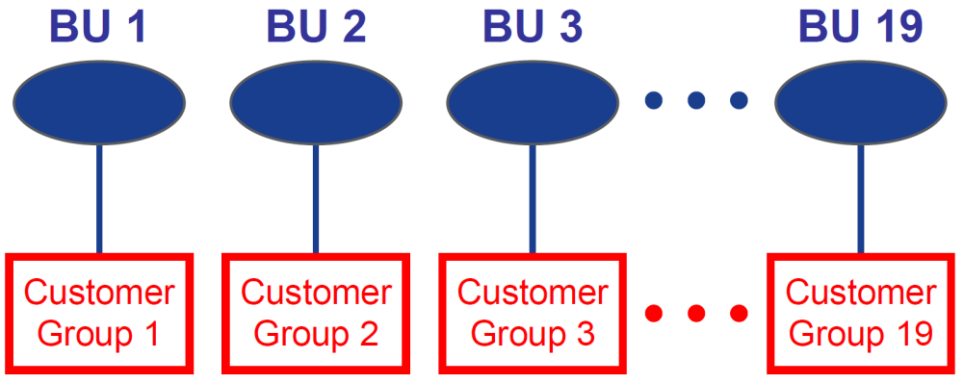
Business units sell approximately the same products

<u>The Problems</u>

Slow to change

Expensive to run

Global customers took advantage



Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

The challenge of transformation

<u>The business</u>

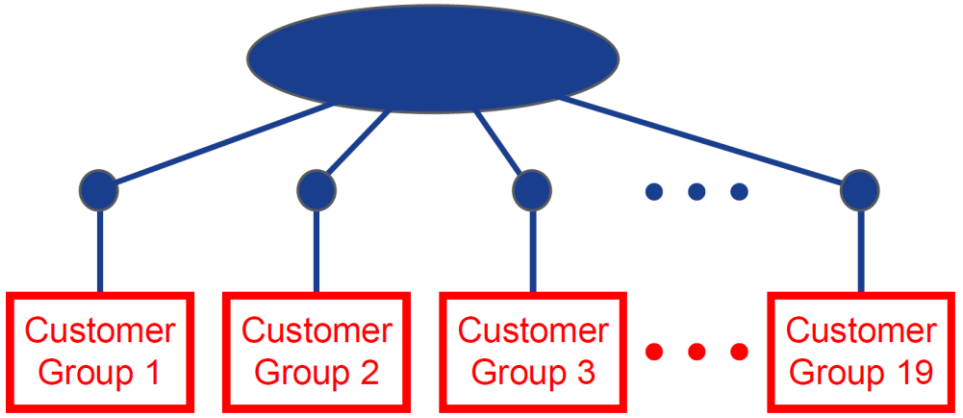
19 different country business units, each independently managed, with separate system, processes and staff

Business units sell approximately the same products

<u>The Solution</u>

Ripped out all systems in country BUs

Replaced with standard system, centrally designed and controlled



Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

Conclusions

Enterprise architecture is the organizing logic for the foundation of the organization: work processes and IT systems

In most organizations, architecture is hindering execution and preventing innovation

Defining the operating model is the first step in choosing the right architecture for an organization

Transforming architecture is a difficult and time-consuming process, but the benefits begin immediately

Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson


Questions?

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