IS Architectures as Strategy
Weill, Ross & Robertson, “Enterprise Architecture as Strategy”

Day 3 CIS 8090
Enterprise Architectures
Essential tasks to build a “Foundation for Execution”
How do you build the ‘foundation for execution?’

Three required disciplines

1. Operating Model
   - Requisite level of business process integration and standardization.

2. Enterprise Architecture
   - ‘The’ organizational logic

3. IT Engagement Model
   - Governance mechanisms
   - Linkages between senior level IT decisions and implementation
There Are Four Operating Models
or Organizing Logics

<table>
<thead>
<tr>
<th>Business Process Integration</th>
<th>Coordination</th>
<th>Unification</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Unique business units with a need to know each other’s transactions</td>
<td>Single business with global process standards and global data access</td>
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<tr>
<td></td>
<td>Examples: Merrill Lynch GPC, PepsiAmericas, MetLife</td>
<td>Examples: Southwest Airlines, Dow Chemical, UPS Package Delivery</td>
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<tr>
<td></td>
<td>Key IT capability: access to shared data, through standard technology interfaces</td>
<td>Key IT capability: enterprise systems reinforcing standard processes and providing global data access</td>
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<tr>
<td>Low</td>
<td>Diversification</td>
<td>Replication</td>
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<tr>
<td></td>
<td>Independent business units with different customers and expertise</td>
<td>Independent but similar business units</td>
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<td>Examples: Johnson &amp; Johnson, GE, ING</td>
<td>Examples: Marriott, CEMEX, ING DIRECT</td>
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<td>Key IT capability: provide economies of scale without limiting independence</td>
<td>Key IT capability: provide standard infrastructure and application components for global efficiencies</td>
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Different Standardization Requirements of the Four Operating Models

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<th>Business Process Integration</th>
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<tr>
<td>High</td>
<td>Customer and product data</td>
<td>Operational and decision making processes</td>
</tr>
<tr>
<td></td>
<td>Shared services</td>
<td>Customer and product data</td>
</tr>
<tr>
<td></td>
<td>Infrastructure, portal, and middleware technology</td>
<td>Shared services</td>
</tr>
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<td>Low</td>
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<td>Replication</td>
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<td></td>
<td>Shared services</td>
<td>Operational processes</td>
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<tr>
<td></td>
<td>Infrastructure technology</td>
<td>Shared services</td>
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<tr>
<td></td>
<td></td>
<td>Infrastructure technology and application systems</td>
</tr>
<tr>
<td>Low</td>
<td>High</td>
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Firms learn by building management competencies.

<table>
<thead>
<tr>
<th>Architecture Planning and Design</th>
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<tr>
<td>Senior executive oversight</td>
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<tr>
<td>Enterprise architecture guiding principles</td>
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<td>Enterprise architecture graphic</td>
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<tr>
<td>Process owners</td>
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<td>Full-time enterprise architecture team</td>
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<th>Project Management</th>
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<tr>
<td>Project methodology</td>
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<tr>
<td>Post-implementation assessment</td>
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<tr>
<td>IT program managers</td>
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<td>Business leadership of project teams</td>
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<th>IT Funding</th>
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<td>Business cases</td>
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<tr>
<td>Centralized funding of enterprise apps</td>
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<tr>
<td>Infrastructure renewal process</td>
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<tr>
<td>IT Steering Committee</td>
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<th>Standards Management</th>
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<tr>
<td>Architects on project teams</td>
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<tr>
<td>Technology research &amp; adoption process</td>
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<tr>
<td>Architecture exception process</td>
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<tr>
<td>Formal compliance process</td>
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<tr>
<td>Centralized standards team</td>
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Management practices within each practice set are statistically significantly correlated with each other. All four competencies are significantly correlated with architecture benefits.
Getting from ‘as-is’ to ideal state

Operating Model
- Defines integration and standardization requirements
- Defines core capabilities

Enterprise Architecture
- Updates and evolves architecture

Engagement Model

Foundation for Execution
- Core Business processes
- IT infrastructure

Strategic Initiative
Example Operating Models: Core Diagrams
How UPS delivers business agility

- Proprietary Delivery Apps
- Package Tracking App
- DIAD/Handheld Device
- Package Data
- Middleware
- Global Networks & Centralized Infrastructure Services
- Internet Apps
- Links to Partners
Delta’s Unification Operating Model

Operational Pipeline

Allocate Resources
Prepare for Flight Departure
Load Aircraft
Flight Departure and Closeout
Monitor Flight
Flight Arrival and Closeout
Unload Aircraft
Clean/Service Aircraft

Business Reflexes

Pagers
Voice
Video
Cell Phones
Desktops

Employee Relationship Management

Delta Nervous System

Location
Flight
Schedule
Maint.

Nine Core Databases

Equip.
Employee
Aircraft
Customer
Ticket

Electronic Events

Gate Readers
Kiosks
Hand Holds

Profile

Reservation Systems

Personalization

Digital Relationships

Loyalty Programs

Customer Experience

Source: Adapted from Delta Air Lines documents. Used with permission.
P&G's Diversification Operating Model

- Strong marketing and customer focus
- Ownership of unique business processes
- Product and service innovation and delivery

250 Brands

GBS Shared Solutions

- Catalogue of services—some mandatory, some optional
- Marketing approach to build “brand” awareness and loyalty to GBS services
- Ownership of shared solution business processes
- Unit price management with guaranteed reductions over time
- Scorecard of GBS performance with variable compensation
- Architecture interconnecting the different solutions to be building blocks for innovation
- New product development group to add new solutions
- Management of outsourcing partners

Source: MIT CISR Briefing by Peter Weill, Christina Soh, and Siew Kien.
MetLife’s Coordination Operating Model

Source: Adapted from MetLife documents. Used with permission.
ING DIRECT’s Replication Operating Model

External Services
- Prospect Fulfillment
- Statement Fulfillment
- Payments
- Checks
- Reports Local/HQ/Tax

Customer Relationship Services
- CIF
- CRM
- Contact History
- Product Info

Core Banking Services
- Mutual Funds
- Brokerage
- Banking Engine
- Credit Score

Common Business Services
- Transactions
- Customers
- Products
- Services

Channel Services
- IVR/CTI Server
- Imaging Server
- E-mail Server
- Web Server
- Gateway Server

Customer Contact: Call Center, IVR, E-mail, Direct Mail

Self-Service: Internet, MinTel, ATM, WAP, (WebTV)

Carlson’s Diversification Operating Model

Customer Requirements

Business Initiatives
- Travel Management
- Loyalty
- Hotel Distribution
- CRM

Middleware

Data Object

Platform

Network

Enterprise Portal

Presentation

Application

Data Trust

Source: Carlson Company. Used with permission.