

Making Digital Business Pay

ATOMIC eBUSINESS MODELS:
Early Evidence of Success

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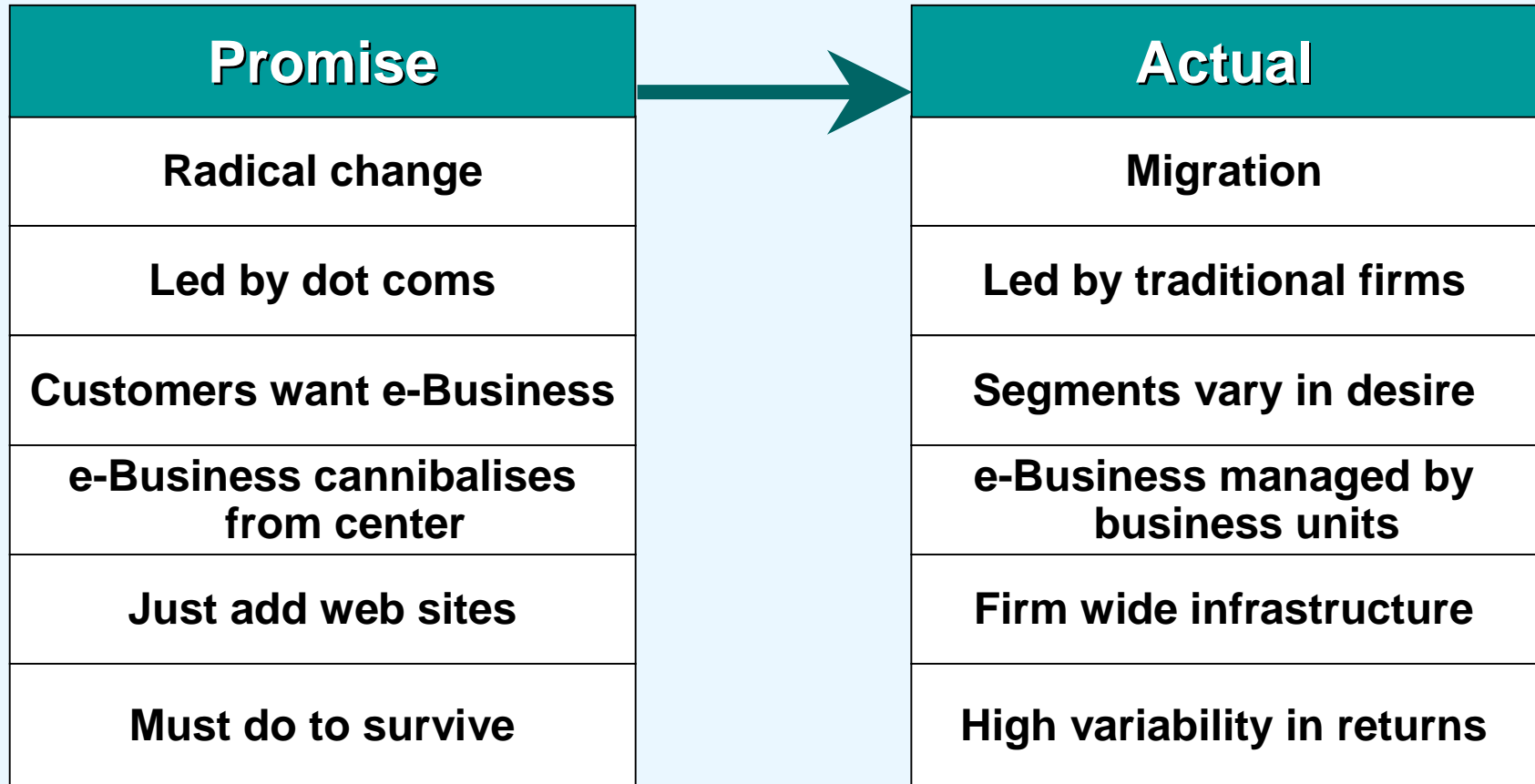
Atomic e-Business Models

AGENDA

- e-Business Health Check
- Atomic e-Business Models and Initiatives
- e-Business Model Schematics
- Case Studies
- Profit, Growth, and Customer Uptake
- Implementing e-Business – IT Infrastructure

e-Business Health Check

“Times they are a changing ... !”



eBusiness Models

- Describe the way a firm does business electronically
- Roles and relationships between consumers, allies and suppliers
- Flow of the product, service and information
- Description of the benefits and revenues to participants
- Who owns – data, transactions, relationships, & intellectual property
- Emerging from strategic experiments
- Many different ways to classify
- Atomic eBusiness models

Source: P. Weill & M. Vitale, [Place to Space: Migrating to eBusiness Models](#), Harvard Business School Press, April 2001.

Atomic eBusiness Models

Content Provider	Provides content (e.g. information, digital products & services) via intermediaries.
Direct to Consumer	Provides goods or services directly to the customer often bypassing traditional channel players.
Full Service Provider	Provides a full range of services in one domain (e.g. financial, health) from own products and best of breed, attempting to own the consumer relationship.
Intermediary	Brings together buyers and sellers by concentrating information (e.g., search agent, auctions).
Shared Infrastructure	Brings together multiple competitors to cooperate by sharing common IT infrastructure.
Value Net Integrator	Coordinates the value net (or chain) by gathering, synthesizing, and distributing information.
Virtual Community	Facilitate and create loyalty to an online community of people with a common interest enabling interaction and service provision.
Whole of Enterprise / Government	Provides a firm-wide single point of contact consolidating all services provided by a large multi-business organization organized by customer events.

Note: All atomic models are both B2B and B2C except content providers.

Source: P. Weill & M. Vitale, [Place to Space: Migrating to eBusiness Models](#), Harvard Business School Press, April 2001.

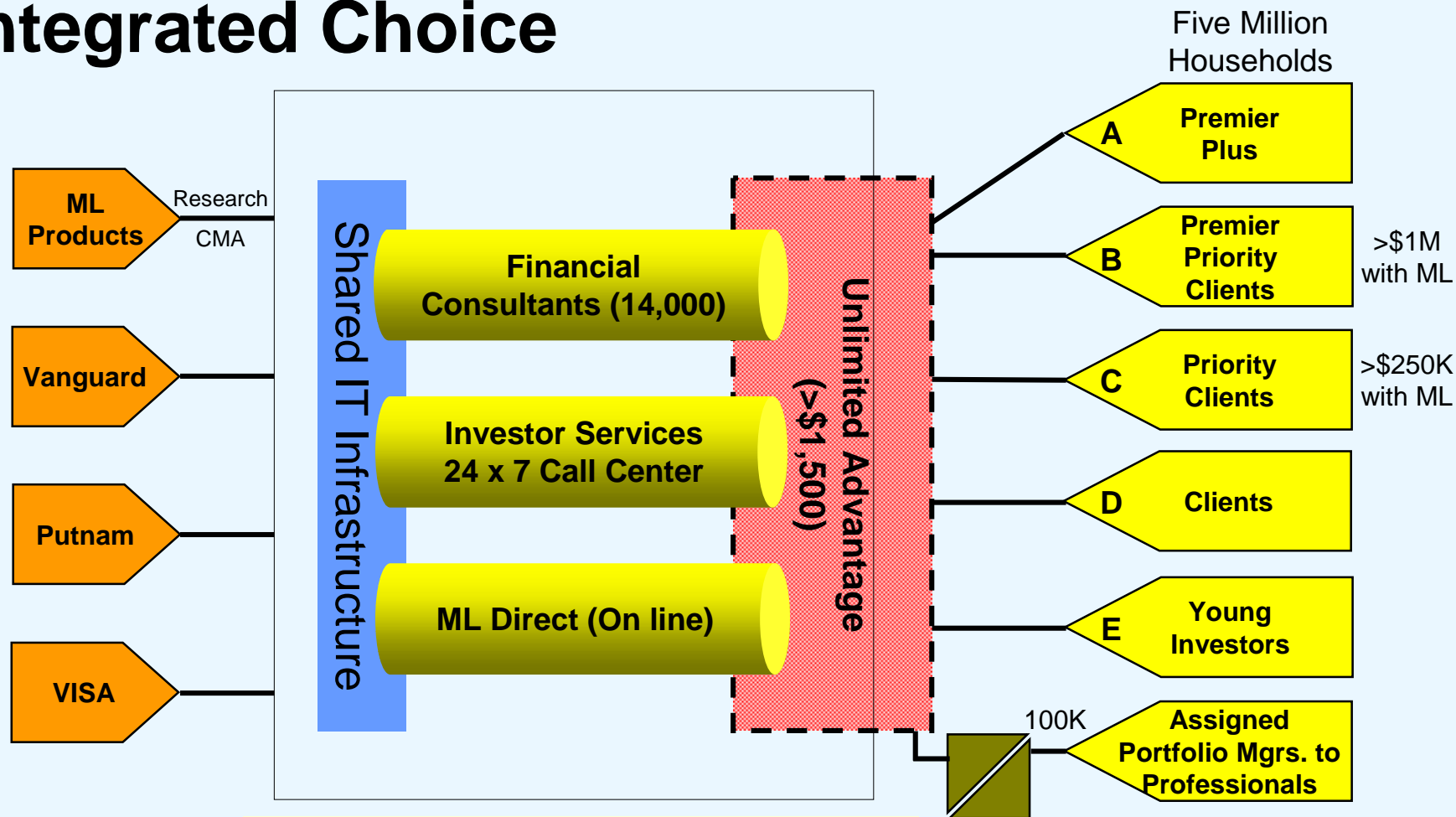
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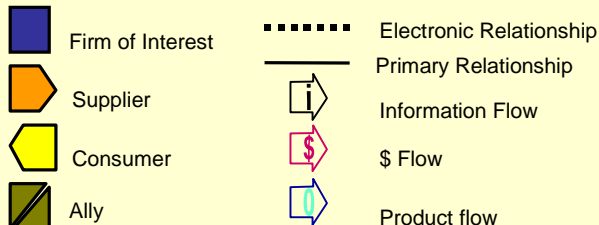


Merrill Lynch Integrated Choice

Combination { Full Service Provider
Direct to Customer



LEGEND:



FSP = "All Things to Some People."

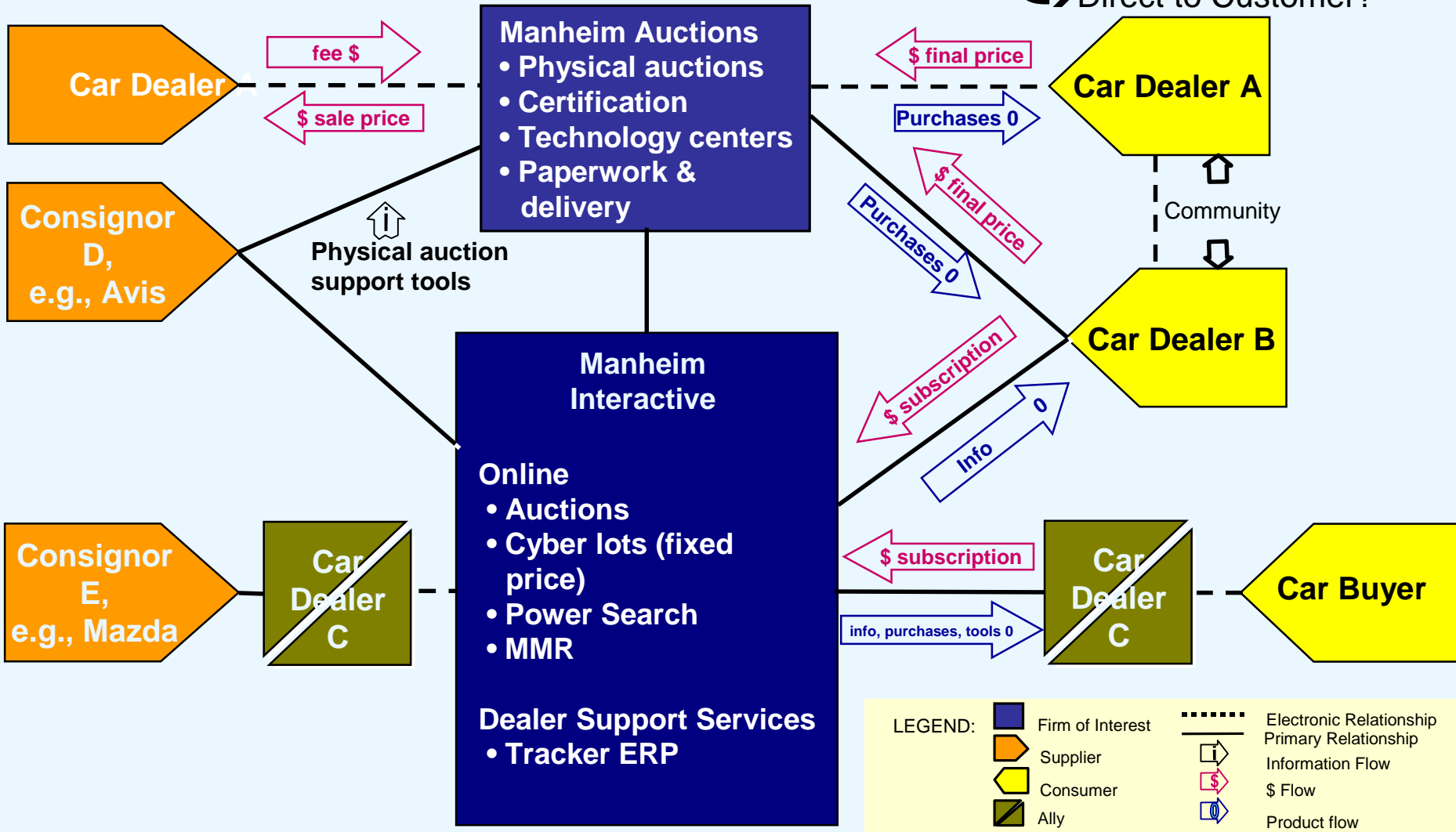
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Manheim Car Auctions



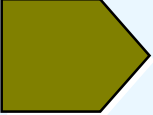

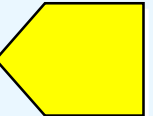


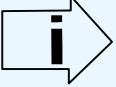

- Manheim Auctions founded in 1945 is #1 in car auctions –115 physical sites worldwide, gross 2001 revenue \$54b, net of \$2b+, 9(5)m cars offered (sold)
- Customers – car dealers, fleet owners, consignors
- Launched Manheim Interactive early 2000
- Cyber Auctions, Cyber Lots, Power Search, Physical auction support tools, MMR, Dealer Exchange, Dealer Software
- Subscription \$50/mo.
- 2001: 140k cars sold, gross revenue of \$2b online

Manheim e-Business Model

- Intermediary (Auction)
- Virtual Community
- Value Net Integrator
- Direct to Customer?



Schematic Legend

	<p><u>Firm of interest</u> The organization whose business model is being illustrated by the schematic.</p>		<p><u>Primary relationship</u> The firm with the greatest potential to own the customer relationship. Owning the customer relationship provides the opportunity to know the largest amount of useful knowledge about the customer.</p>
	<p><u>Supplier</u> An organization or individual from which the firm of interest obtains goods, services, or information. There is generally a flow of money from the firm of interest to its suppliers.</p>		<p><u>Flow of money</u> This flow is one-directional and indicates a payment from one party to another, in exchange for goods, services, or information. Often there is a flow of product in the opposite direction.</p>
	<p><u>Customer</u> An organization or individual who consumes the firm of interest's goods, services, or information. There is often a flow of money from the customer to the firm of interest's service.</p>		<p><u>Flow of product</u> This one-directional flow indicates a transfer of physical goods or digital products from one party to another. Often there is a flow of money in the opposite direction.</p>
	<p><u>Ally</u> An organization whose products help to enhance the demand for the firm of interest's products.</p>		<p><u>Flow of information</u> Messages flow through all the electronic relationships, therefore only those flows of information that are not digital products are represented by this icon. This information is often the result of research about a product or service and is often free.</p>
	<p><u>Electronic relationship</u> A digital connection, through which messages flow in both directions. Often, but not always, this connection will be the Internet.</p>		

Source: P. Weill & M. Vitale, [Place to Space: Migrating to eBusiness Models](#), Harvard Business School Press, April 2001.

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Profit, Growth and Customer Uptake[#]

Business Model	% Use	Description	Rank by B/C Ratio*	Management Skill†	Revenue Growth	% of Customers	
Full Service Provider	4	Provides a full range of services in one domain (e.g. financial, health) from own products and best of breed, attempting to own the consumer relationship.	1	3		+	
Content Provider	5	Provides content (e.g. information, digital products & services) via intermediaries.	2	2			
Direct to Customer	13	Provides goods or services directly to the consumer often bypassing traditional channel players	3	1			
Whole of Enterprise / Government	10	Provides a firm- wide single point of contact consolidating all services provided by large multi-business organization organized by customer events.	4	7	+		
Shared Infrastructure	9	Brings together multiple competitors to cooperate by sharing common IT infrastructure.	5	4		-	
Intermediary	5	Brings together buyers and sellers by concentrating information (e.g. search agent, auctions)	6	5			
Virtual Community	2	Facilitate and create loyalty to an online community of people with a common interest enabling interaction and service provision.	7	8			
Value Net Integrator	15	Coordinates the value net (or chain) by gathering, synthesizing, and distributing information.	8	6	+	+	
Based on 50 initiatives in operation at least one year.			Average	14	1.8	3%	23%

* Benefit/cost ratio is the net present value (NPV) of revenue divided by the NPV of expenses using a cost of capital of 10%

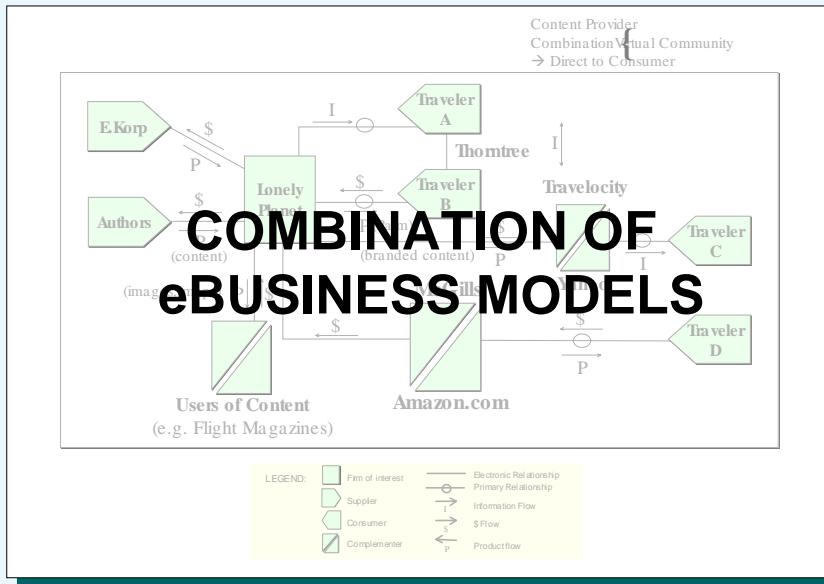
† Estimated by the ratio of standard deviation/average of B/C ratio

± = statistically significant relationship

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Evaluating an eBusiness Initiative

①



③

Channel

Channel

Channel

②

CUSTOMER SEGMENT

CUSTOMER SEGMENT

④

IT INFRASTRUCTURE CAPABILITY



























Source: P. Weill & M. Vitale, Place to Space: Migrating to eBusiness Models, Harvard Business School Press, April 2001.

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Synergies and Conflict between Atomic Models for an eBusiness Initiative

	CP	D2C	FSP	I	SI	VNI	VC	WOE
Content Provider (CP)								
Direct to Customer (D2C)								
Full Service Provider (FSP)								
Intermediary (I)	<u>Sources:</u> 1. Channel 2. Competency 3. Infrastructure 4. Information							
Shared Infrastructure (SI)								
Value Net Integrator (VNI)								
Virtual Community (VC)								
Whole of Enterprise (WOE)								



= clear conflict



= caution possible conflict



= clear synergy



= neutral

Source: P. Weill & M. Vitale, Place to Space: Migrating to eBusiness Models, Harvard Business School Press, April 2001. (Study of 50 eBusiness initiatives.)

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Summary of IT Infrastructure Investments for Atomic Models

Atomic eBusiness Models	Application Infra.	Communication	Data Mgt.	IT Mgt.	Security	Architecture & Stds	Channel Mgt.	IT R&D	IT Education
Number of Services	13	7	6	9	4	20	7	2	2
Content Provider		✓	✓	✓	★	✓	✓		
Direct to Customer	✓ ✓	✓	✓	✓ ✓	★				
Full Service Provider	✓	✓	✓	✓	★		✓	✓ ✓	
Intermediary	✓ ✓	✓	✓	✓ ✓	★				
Shared Infrastructure					★	✓ ✓			
Value Net Integrator	✓	✓	✓		★	✓	✓ ✓		
Virtual Community	✓			✓ ✓	★			✓	✓
Whole of Enterprise	✓ ✓	✓	✓ ✓	✓	★			✓	

✓ ✓ = very important

✓ = important

★ = required

Source: P. Weill & M. Vitale, [Place to Space: Migrating to eBusiness Models](#), Harvard Business School Press, April 2001. (Study of 50 ebusiness initiatives.)

IT Services for eBusiness (excerpt)

		% Have	Relative Investment
Communications		81.3%	3.7
2.1	Communications network services <i>(e.g., full Service TCP/IP networks linking all points within a business)</i>	100.0%	4.7
2.2	Broadband communication services <i>(e.g., higher bandwidth activities such as video)</i>	71.4%	2.4
2.3	Intranet capabilities <i>(e.g., an intranet to support a variety of applications including publishing, company policies, directories, message boards, etc)</i>	100.0%	6.0
2.4	Extranet capabilities <i>(e.g., providing information and applications via TC/ICP protocols to a select group of customers and suppliers)</i>	93.3%	6.4
2.5	Workstation networks <i>(e.g., workstation networks, LANs and POS networks)</i>	100.0%	2.8
2.6	EDI linkages to customers and suppliers	84.6%	-0.1
2.7	Electronic support to groups <i>(e.g., groupware)</i>	20.0%	2.0
Data Management		78.0%	4.8
3.1	Manage key data independent of applications <i>(e.g., centralized product data)</i>	100.0%	5.2
3.2	Centralized data warehouse <i>(summarizes key information from decentralized databases)</i>	86.7%	4.5
3.3	Data management advice and consultancy	69.2%	3.7
3.4	Electronic provision of management information <i>(e.g., EIS)</i>	71.4%	4.3
3.5	Storage farms or storage area networks <i>(e.g., major storage separate from LANS and workstations)</i>	86.7%	4.6
3.6	Knowledge management <i>(e.g., contact database, knowledge management architecture, knowledge databases, communities of practice)</i>	53.8%	6.3

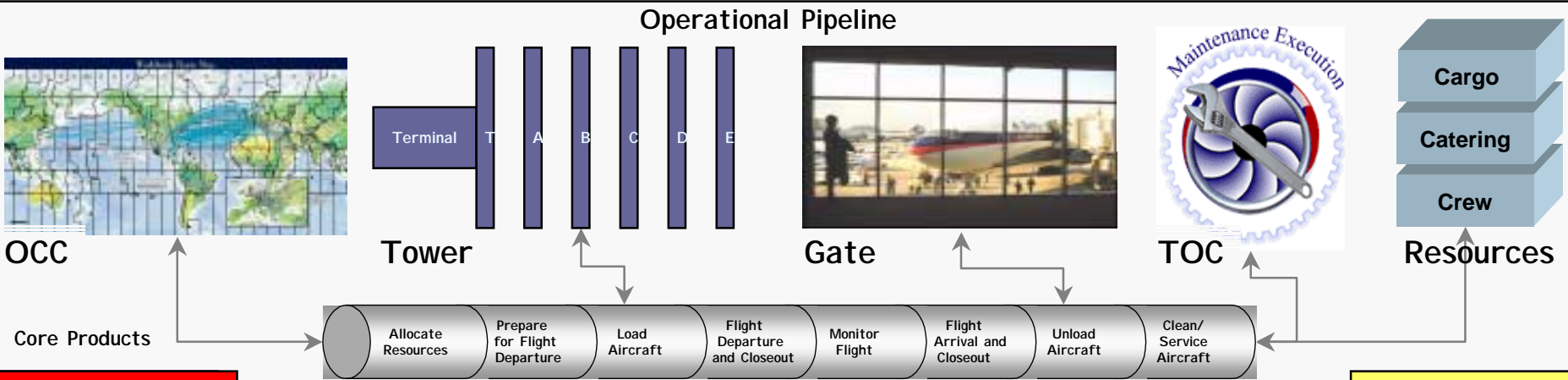
Source: P. Weill & M. Vitale, [Place to Space: Migrating to eBusiness Models](#), Harvard Business School Press, April 2001. (Study of 50 eBusiness initiatives.)

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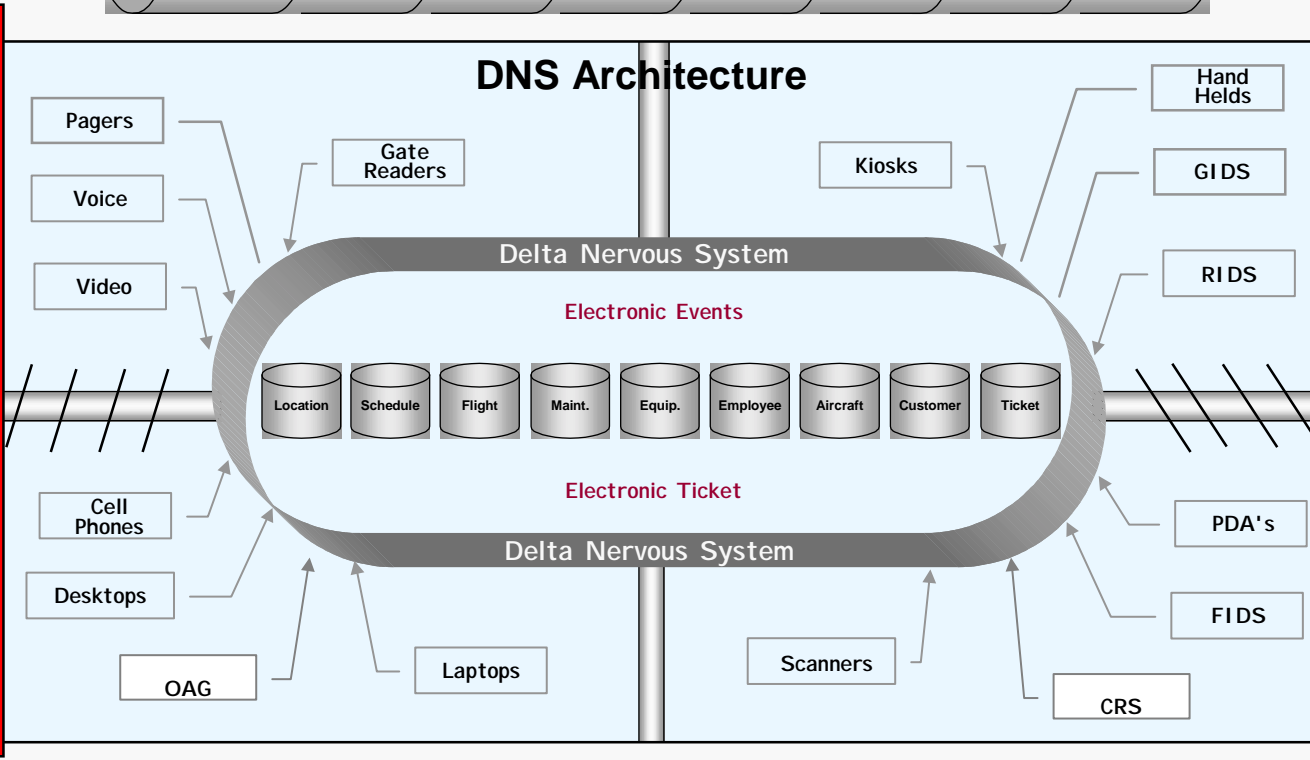
DELTA's Nervous System



Revenue Management Architecture

Support pricing and scheduling decisions:

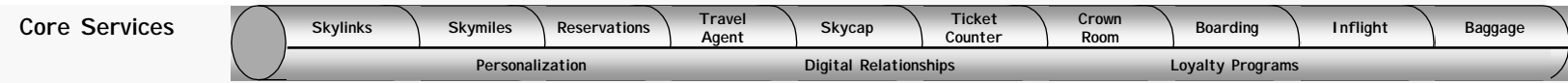
Convert transaction data (flight, customer, fares) using decision models



G&A Architecture

Efficiently handle financial, human resource, and administrative needs:

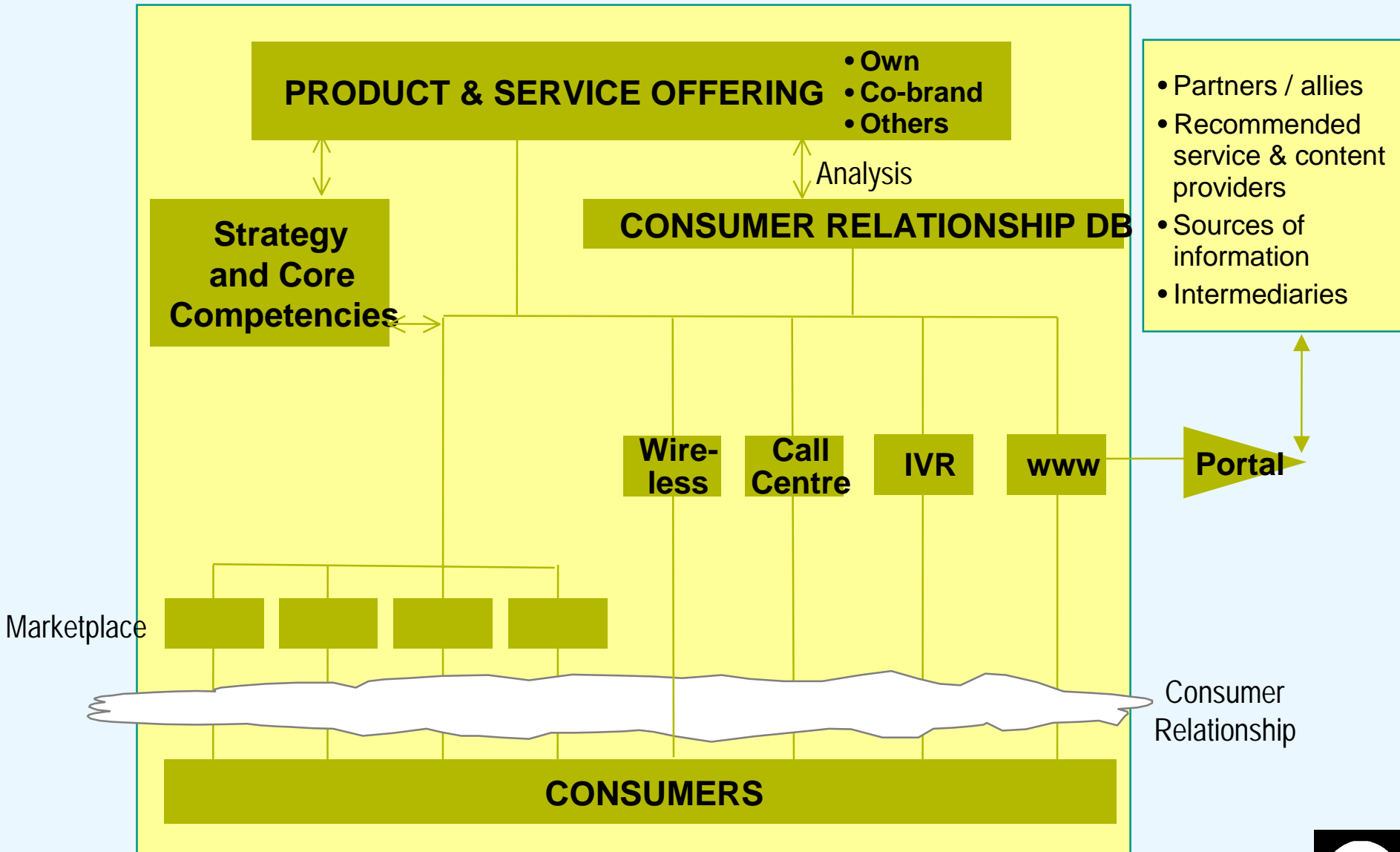
ERP system provides architecture



Value Added Services

For further reading see *E-Business at Delta Air Lines: Extracting Value from a Multi-Faceted Approach*, J. Ross, MIT CISR Working Paper # 317, August 2001

eBusiness Ready Organizational Form



Insights for Place to Space Migration via Atomic eBusiness Models

- 1 Atomic eBusiness models (compose \Leftrightarrow de compose) eBusiness initiatives.
- 2 Finite number of atomic eBusiness models – each with different characteristics and early evidence of profitability.
- 3 Strive for primary customer relationships. Intermediaries will be powerful.
- 4 Analyze eBusiness initiatives with schematics
- 5 Leverage what you own: relationship, data, transaction, IP
- 6 Where are the conflicts and synergies?
- 7 Identify infrastructure needs for each model and initiative.
- 8 Identify and invest in eBusiness building blocks (e.g., infrastructure) and portfolio of initiatives

Strategic Objective and How Money is Made for Each Atomic Model

Chapter	Business Model	Strategic Objectives	Sources of Revenue or Value
4	Direct to Customer	<ul style="list-style-type: none"> offer a lower price or be more customer intimate than marketplace bypass other value chain participants increase geographical reach without physical infrastructure or salesforce facilitate competition based on objective measures such as price or independently rated quality 	<ul style="list-style-type: none"> income for services provided to customers lower cost channel of distribution increased margin via bypassing intermediaries
5	Full Service Provider	<ul style="list-style-type: none"> own the primary customer relationship meet the complete needs of a target customer segment in one domain (financial services, travel, etc.) integrate the firm's own products and services with a selected set of third-party providers 	<ul style="list-style-type: none"> annual membership fees fees as a percentage of assets under management transaction fees margins on in-house products commissions on third-party products advertising or listing fees from third-party providers fees for selling leads or aggregate data about customers
6	Whole of Enterprise	<ul style="list-style-type: none"> implement a single point of contact for certain customer segments of a multi-business unit enterprise organize by life events or areas of interest so that the customer is able to navigate through the enterprise-wide offerings help the customer identify the need for, choose, and acquire services provided by a number of different business units 	<ul style="list-style-type: none"> in the for-profit sector provision of services to the customer by the business unit, annual service or membership fees are possible in the government sector improved service (e.g.24/7), reduced costs from sharing more infrastructure, and removing the need to perform the same transaction (e.g., address change) in multiple agencies
7	Intermediaries	<ul style="list-style-type: none"> provide a single point of access bringing together buyers and sellers make a market by concentrating information 	<ul style="list-style-type: none"> transaction fees listing fees referral fees on the basis of clickthroughs sales commissions

Source: [P. Weill & M. Vitale Place to Space: Migrating to e-Business Models](#), Harvard Business School Press, April 2001.

Strategic Objective and How Money is Made for Each Atomic Model (continued)

Chapter	Business Model	Strategic Objectives	Sources of Revenue or Value
8	Shared Infrastructure	<ul style="list-style-type: none"> multiple providers cooperate in some areas in order to compete more effectively remove competition in some areas sharing infrastructure and aggregate industry information resident in the shared systems reduce cost via economics of scale make a defensive move against a potentially dominant player provide a powerful barrier to entry for alternative providers 	<ul style="list-style-type: none"> membership fees from shared infrastructure customers transaction fees from alliance partners and customers sale of data summarizing customer and partner activity proprietary equipment rental logistics services
9	Virtual Community	<ul style="list-style-type: none"> build a community of members around a common interest capture increasing returns as community grows 	<ul style="list-style-type: none"> membership fees advertising revenue from third parties (e.g., vendors) wishing to gain access to the community clickthrough fees or commissions on purchases made by members sale of aggregate or profile data on members direct sale of goods and services
10	Value Net Integrator	<ul style="list-style-type: none"> coordinate the value net (or chain) by gathering, synthesizing and distributing information occupy a central position in an industry value net (or chain) with the best access to information improve the effectiveness of the value net (or chain) by working with other participants 	<ul style="list-style-type: none"> franchise fees or a share of profit/revenue of other value net participants from controlling the virtual value chain share in increased revenues or decreased costs of the members of the value net
11	Content Provider	<ul style="list-style-type: none"> develop and provide information or digital product content via allies world-class in area of expertise 	<ul style="list-style-type: none"> monthly fees for content fees for content or pages accessed by end consumer

Source: P. Weill & M. Vitale [Place to Space: Migrating to e-Business Models](#), Harvard Business School Press, April 2001.

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Critical Success Factors and Core Competencies for Each Atomic Model

Chapter	Business Model	Critical Success Factors	Core Competencies
4	Direct to Customer	<ul style="list-style-type: none"> • create and maintain customer awareness directly or via intermediaries • increase repeat customer purchase rate and size of the average transaction • reduce customer acquisition costs • managing potential brand and channel conflicts • offering fast and efficient service, including transaction processing, logistics, and payment • insuring adequate security for organization and customers • providing interfaces that combine ease of use and richness of experience • balancing availability of multiple channels with cost of supporting them • easy and secure payments 	<ul style="list-style-type: none"> • form and manage strategic partnerships with suppliers, fulfillment houses, and others in supply chain • use customer information to increase sales and service • marketing and effective customer prospecting • manage business processes and systems integration • create own content
5	Full Service Provider	<ul style="list-style-type: none"> • be a leader in the domain (e.g., financial services) • create the brand, leadership, credibility, and the trust necessary for a customer to look to the firm for its complete needs in an area • own the customer relationship in one domain, integrate and consolidate the offerings of many third parties into a single channel or channels • own more of the customer data in the domain than any other player • manage tension between internal and external products • create and enforce policies to protect interests of internal and external providers as well as customers 	<ul style="list-style-type: none"> • form and manage strong, enduring relationships with customers • create a strong value proposition involving brand, the breadth of offerings, the price/value equation, and the completeness of the consolidation into a single offering • collect, synthesize, and analyze information about customer segments and match these with existing and new service offerings • develop and integrate firm-wide transaction processing, customer databases, and electronic linkages to suppliers and security • develop and nurture a trusted brand to set the expectation to credibly deliver all needs in one domain, scan the environment to identify third party products and establishing partnerships • maintain and use a customer relationship database, and anticipate changes in customer needs
6	Whole of Enterprise	<ul style="list-style-type: none"> • change customer behavior to make use of the new enterprise-wide model • reduce costs in the business units as the direct demands on them fall, manage transfer pricing • take an enterprise-wide view that includes broad product awareness, training, cross-selling, and incentives • identify compelling and practical life events that customers use as triggers to access the enterprise • reengineering business processes to link to life events at the front end and to existing legacy processes and systems at the back end 	<ul style="list-style-type: none"> • identify channels and life events that are meaningful to customers • move the enterprise from a business unit orientation to an enterprise-wide orientation • negotiate (and police) agreements among managers of different organizational units

Source: P. Weill & M. Vitale, [Place to Space: Migrating to eBusiness Models](#), Harvard Business School Press, April 2001.
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Critical Success Factors and Core Competencies for Each Atomic Model (cont.)

Chapter	Business Model	Critical Success Factors	Core Competencies
7	Intermediaries	<ul style="list-style-type: none"> attain a critical mass of users capture data of customer needs, completed and uncompleted transactions scale up infrastructure quickly increase level of service completeness over time own customer relationship, resulting in high level of "stickiness" 	<ul style="list-style-type: none"> evolve a business model that meets changing customer expectations achieve the desired level of service completeness customer information analysis and segmentation collect, synthesize, and use information about products prices, and customer needs
8	Shared Infrastructure	<ul style="list-style-type: none"> share benefits with no dominant partner present product and service information objectively achieve a critical mass of both alliance partners and customers manage channel conflict with the ongoing e-business initiatives of the alliance partners compile and deliver accurate and timely statements of the services and benefits provided to each member of the alliance create and maintain systems interoperability 	<ul style="list-style-type: none"> deliver the infrastructure service(s) around which the alliance was formed manage a focused coalition of competitors, generally having diverse backgrounds, resources, and goals run complex infrastructures efficiently
9	Virtual Community	<ul style="list-style-type: none"> find and retain members who share common interests build loyalty to the community by providing attractive content maintain privacy and security of member information balancing commercial potential with members' interests leverage member profile information with service providers 	<ul style="list-style-type: none"> discover customer needs and understand the value customers attach to meeting those needs build an enduring sense of community source attractive content
10	Value Net Integrator	<ul style="list-style-type: none"> reduce ownership of physical assets while retaining ownership of data assets own or have access to the complete industry virtual value chain establish a trusted brand recognized at all places in the value chain operate in markets where information can add significant value, such as those that are complex, fragmented, regulated, multilayered, inefficient, large with many sources of information, and require specialized knowledge present the information to customers, complementors, partners and suppliers, in clear and innovative ways that provide value help other value chain participants capitalize on the information provided by the value net integrator 	<ul style="list-style-type: none"> manage relationships with customers, and all other major players in the value chain manage information assets by collecting synthesizing, distributing, and presenting information link the information technology architecture to strategic objectives develop and manage the brand analyze and interpret information from multiple sources identify and use levers of influence, rather than direct control evaluate cost and customer benefit from various types of information
11	Content Provider	<ul style="list-style-type: none"> provide reliable, timely content in the right format, and at the right price brand content to create customer recognition recognized as best in class establish a network of allies through which content is disseminated 	<ul style="list-style-type: none"> provide leadership and expertise in the field maintain a critical mass of professional content creators modularize, store, retrieve, combine, and distribute content at reasonable cost understand marketplace value and price of content

Source: P. Weill & M. Vitale, [Place to Space: Migrating to eBusiness Models](#), Harvard Business School Press, April 2001.

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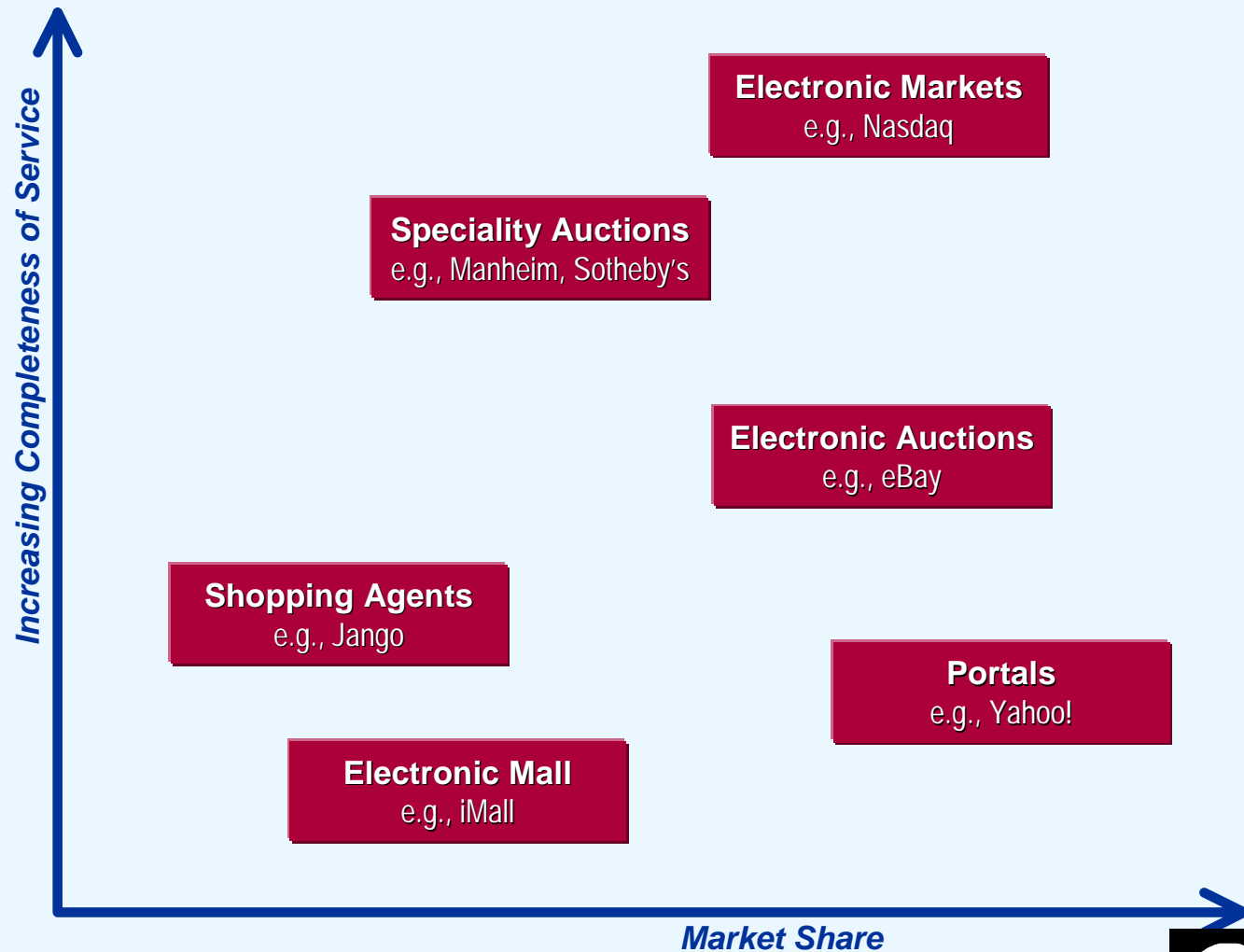
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eBusiness Intermediary Business Models

Components of service:

- Search
- Specification
- Price
- Sale
- Fulfilment
- Surveillance
- Enforcement



Source: P. Weill & M. Vitale, *Place to Space: Migrating to eBusiness Models*, Harvard Business School Press, April 2001.

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