

# e-Business Design

A Shift to Adaptability

**David A. Marca**

# Welcome!

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July 7, 2009

# e-Business Design

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## Disclaimers

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# e-Business Design

A Shift to Adaptability

## Part I – Business Context

- Economic Downturn
- Evaporating Mass Market
- More Niche Marketing
- Adaptive Business Needed

# e-Business Design

A Shift to Adaptability

**Part I – Business Context**

**Part II – Design Framework**

- Atomic Relationships
- Unbalanced Designs
- Balanced Designs

# e-Business Design

A Shift to Adaptability

**Part I – Business Context**

**Part II – Design Framework**

**Part III – Business Design**

- Business Profiles
- e-Business Profiles
- e-Business Shifts

# e-Business Design

A Shift to Adaptability

**Part I – Business Context**

**Part II – Design Framework**

**Part III – Business Design**

**Part IV – e-Business Design**

- Adaptive e-Commerce
- Adaptive e-Broker
- e-Barter Issues

# e-Business Design

A Shift to Adaptability

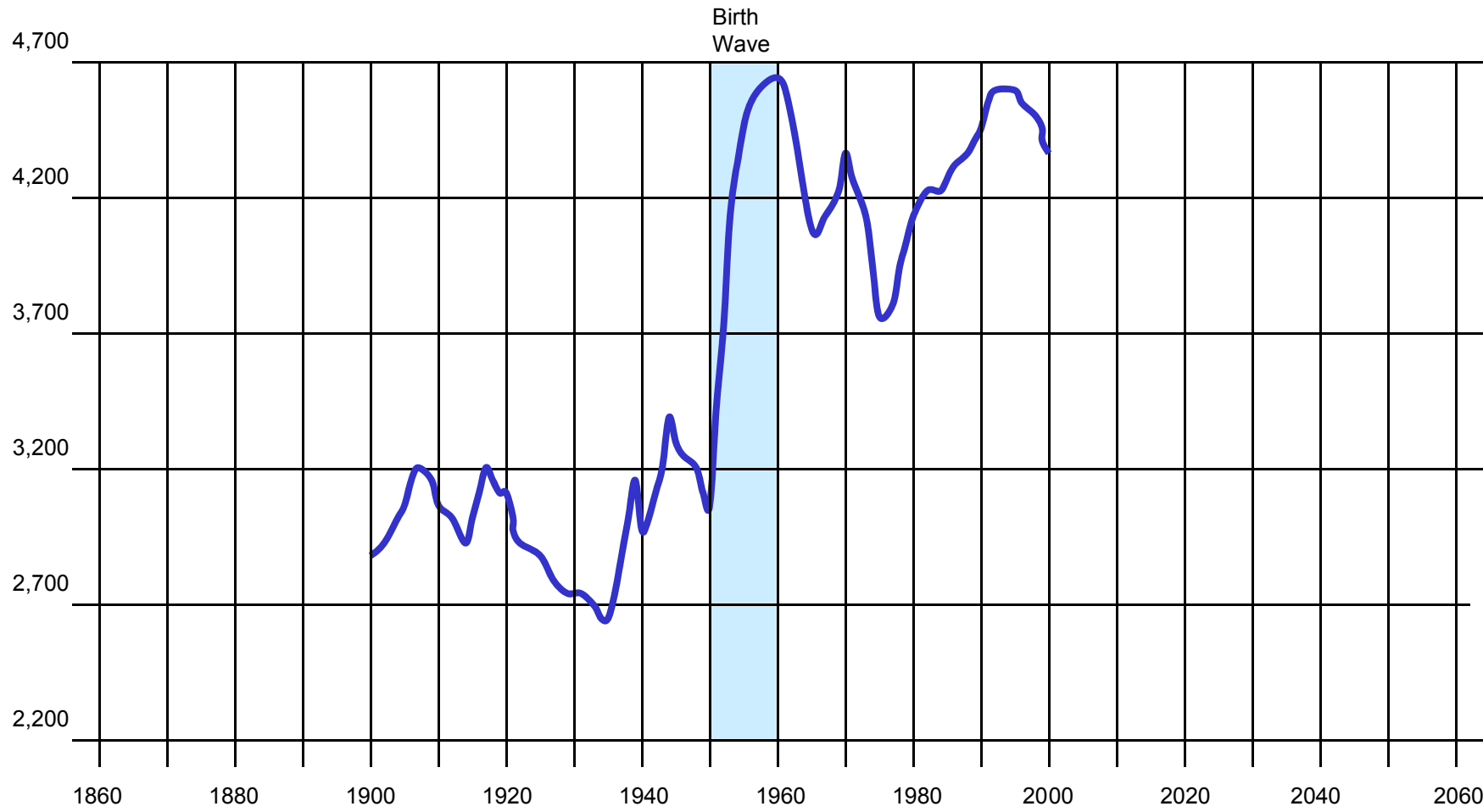
## Part I – Business Context

- Economic Downturn

# Economic Downturn

# The Economic Driver – U.S. Births

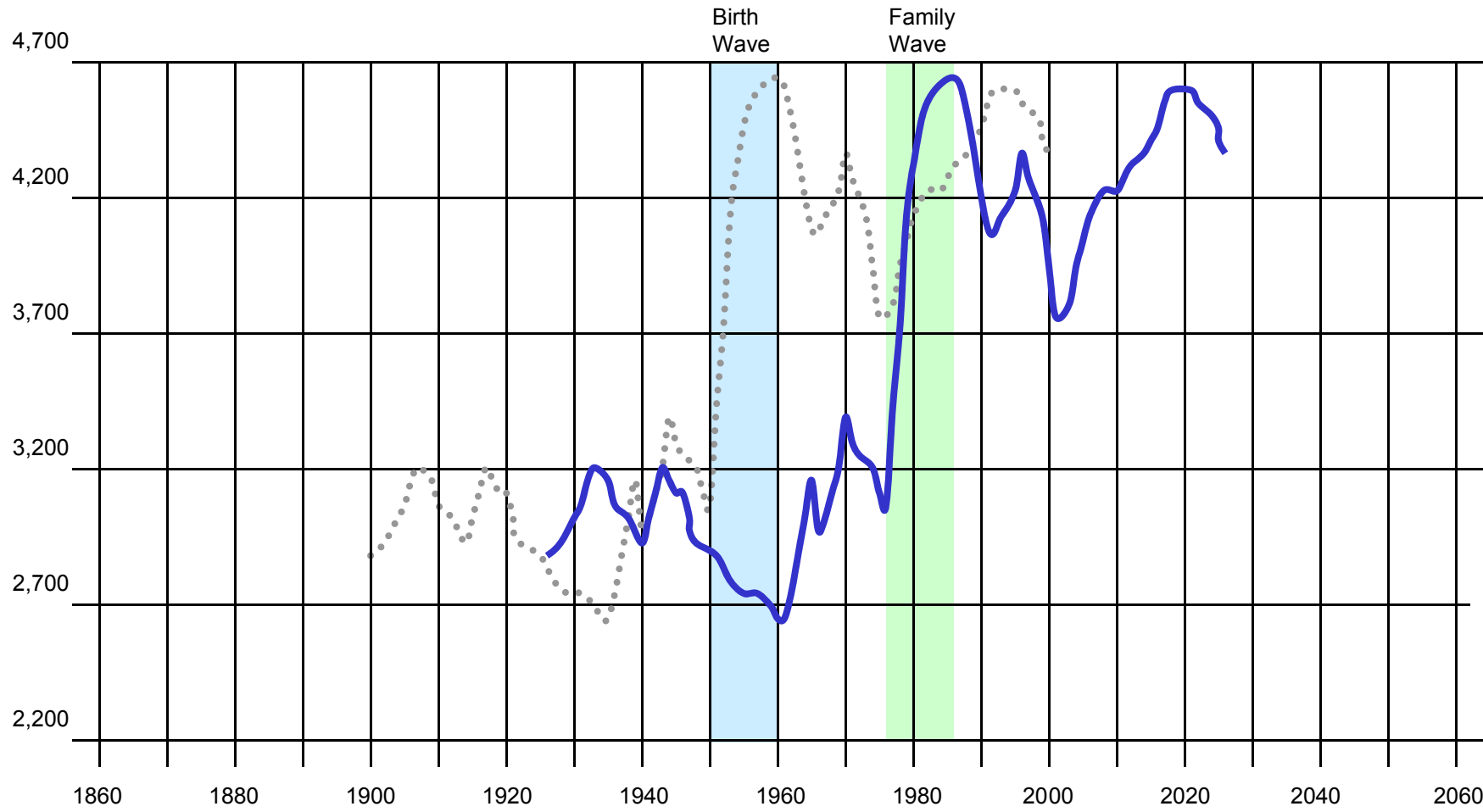
References:  
1,2.



# Economic Downturn

# Second Wave – U.S. Family Formation

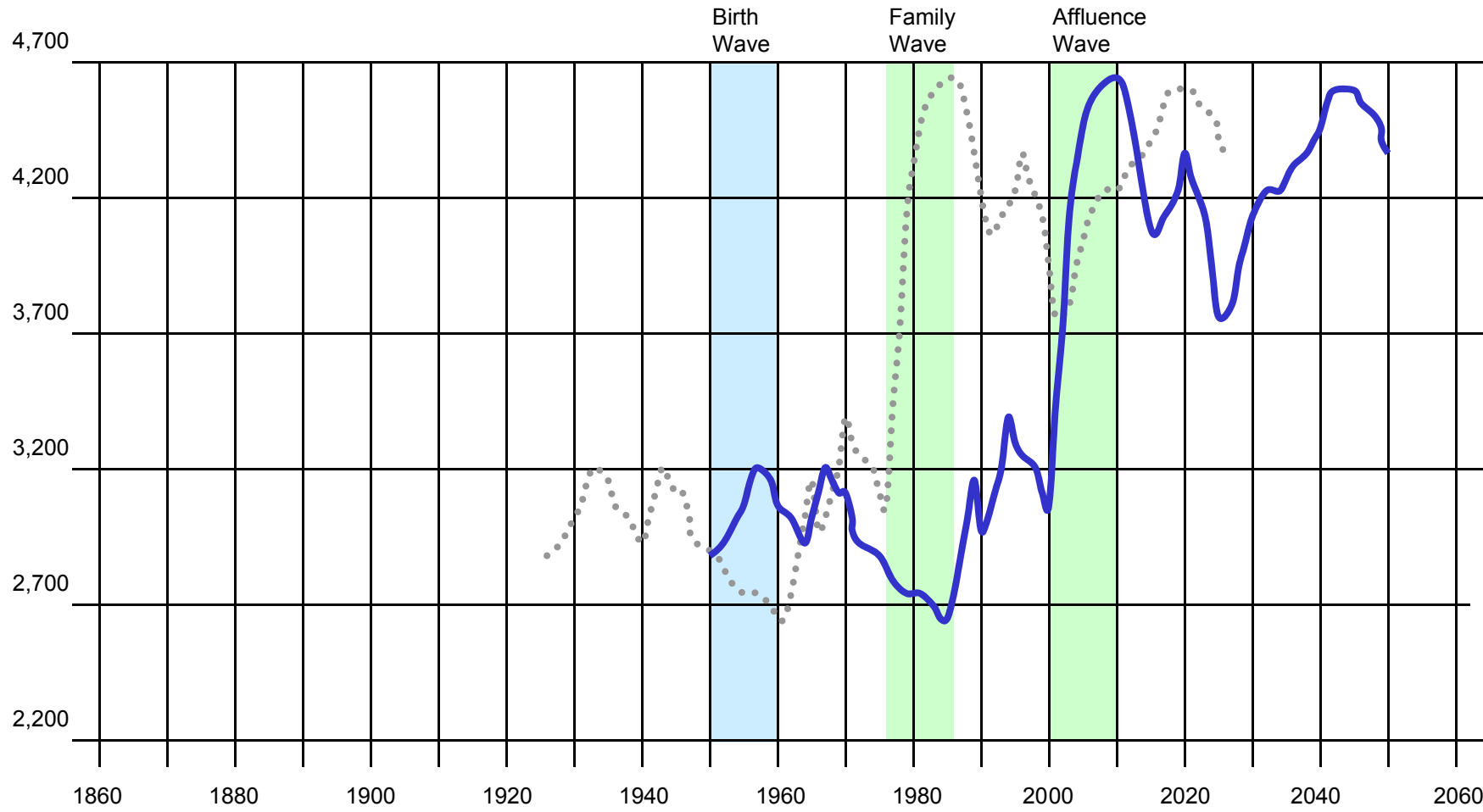
References:  
1,2.



# Economic Downturn

# Third Wave – U.S. Peak Spending

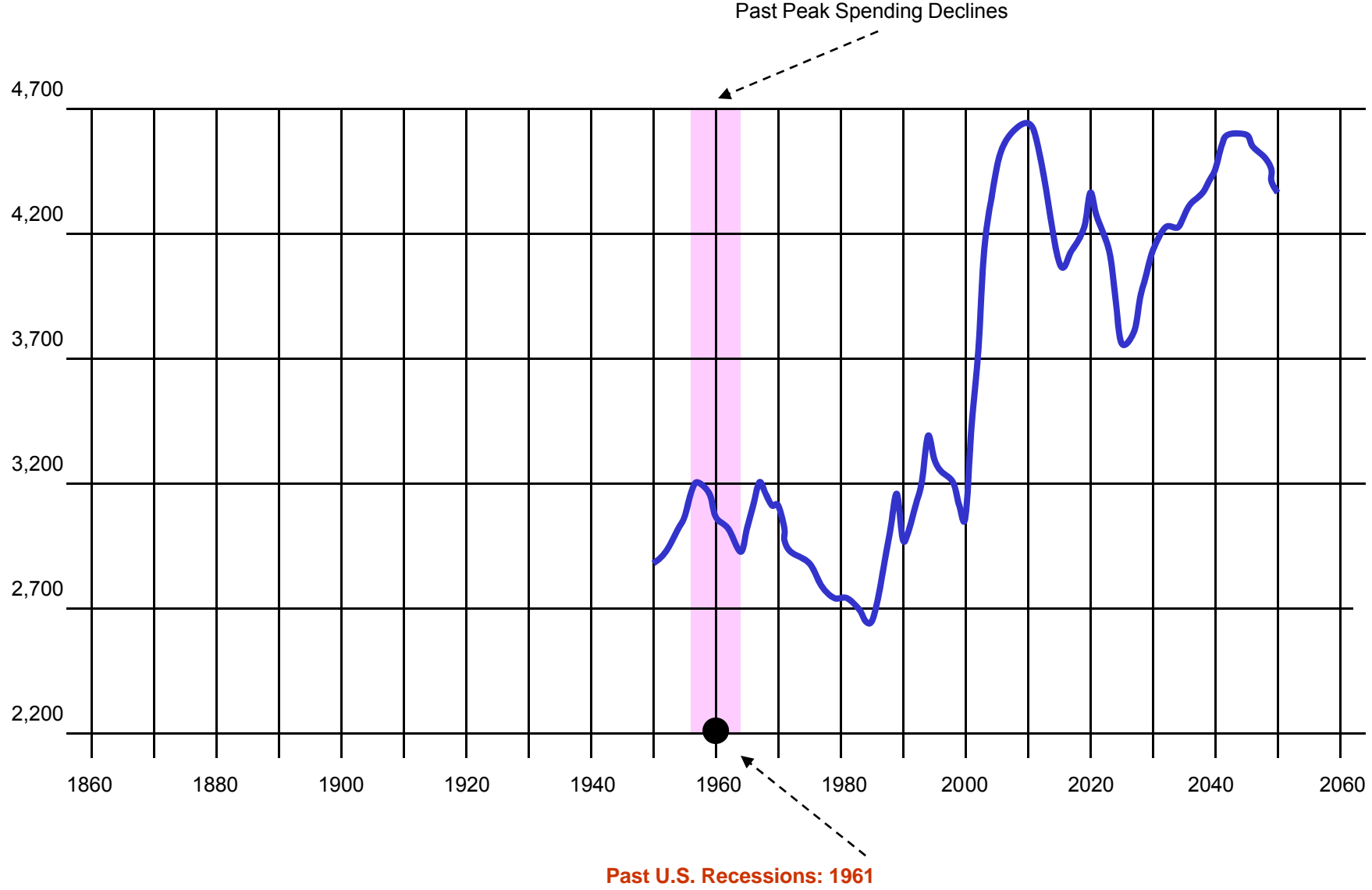
References:  
1,2.



# Economic Downturn

# Peak Spending Decline → Recession

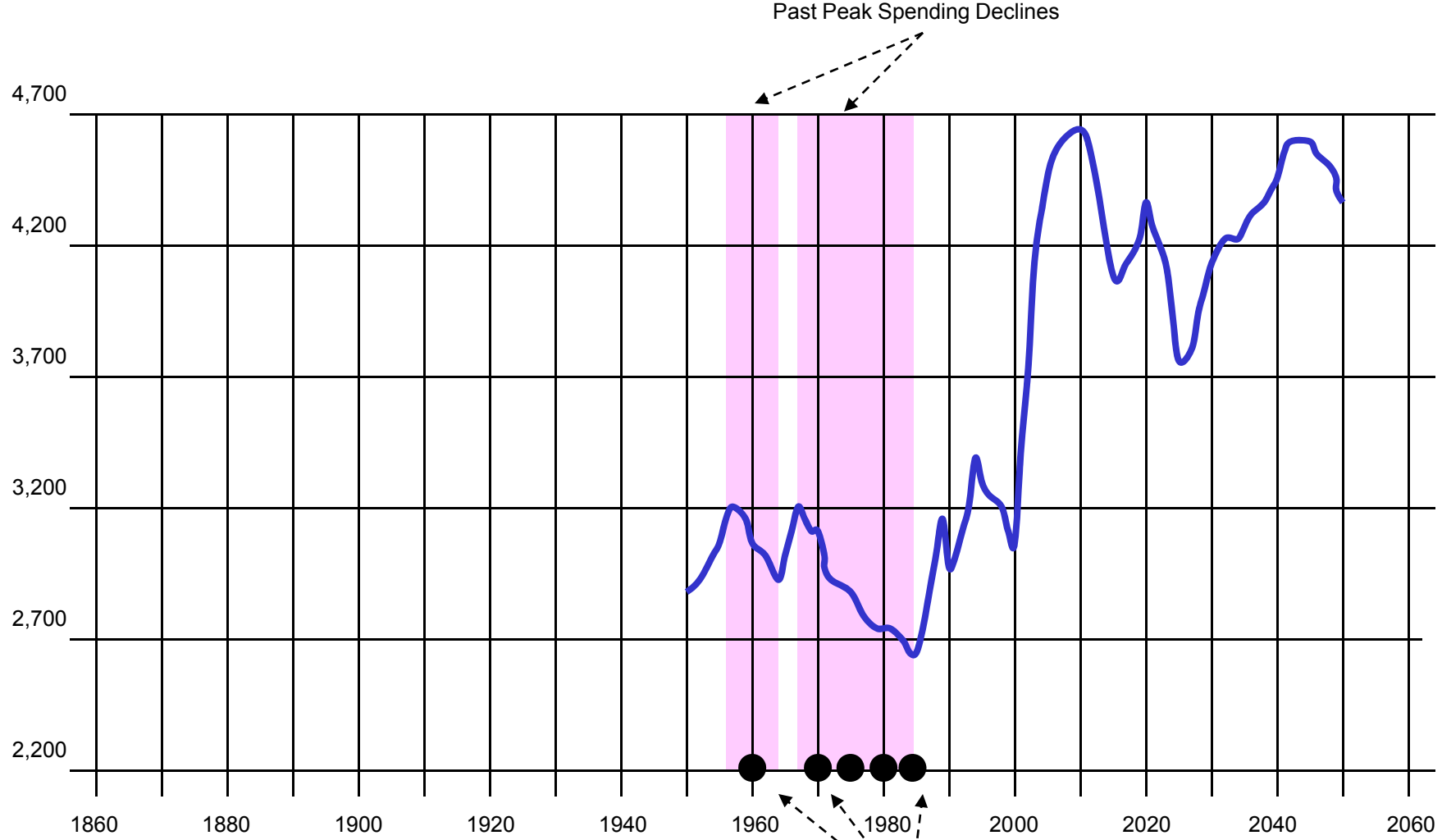
References:  
1,2,3,4.



# Economic Downturn

# Peak Spending Decline → Recession

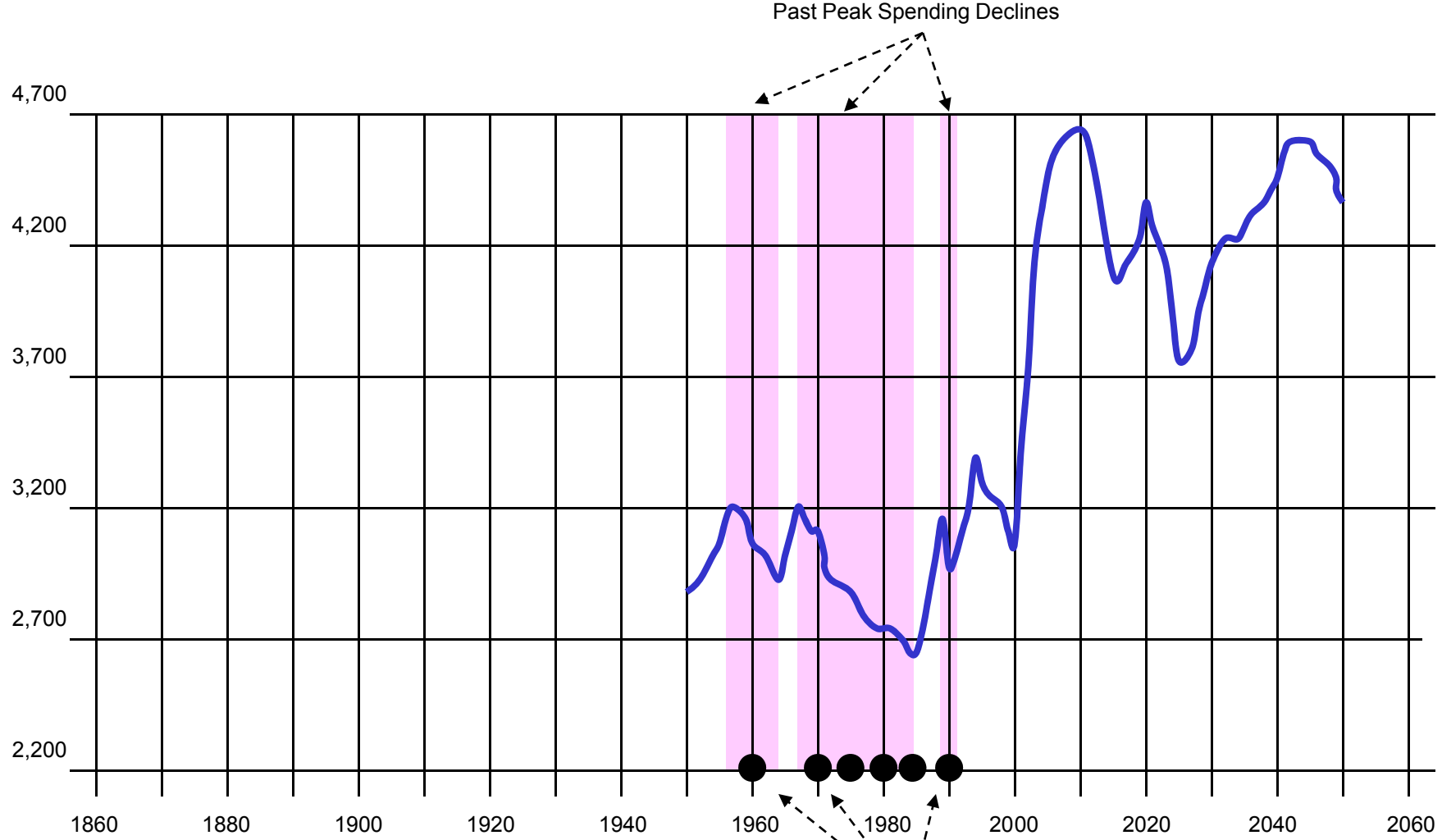
References:  
1,2,3,4.



# Economic Downturn

# Peak Spending Decline → Recession

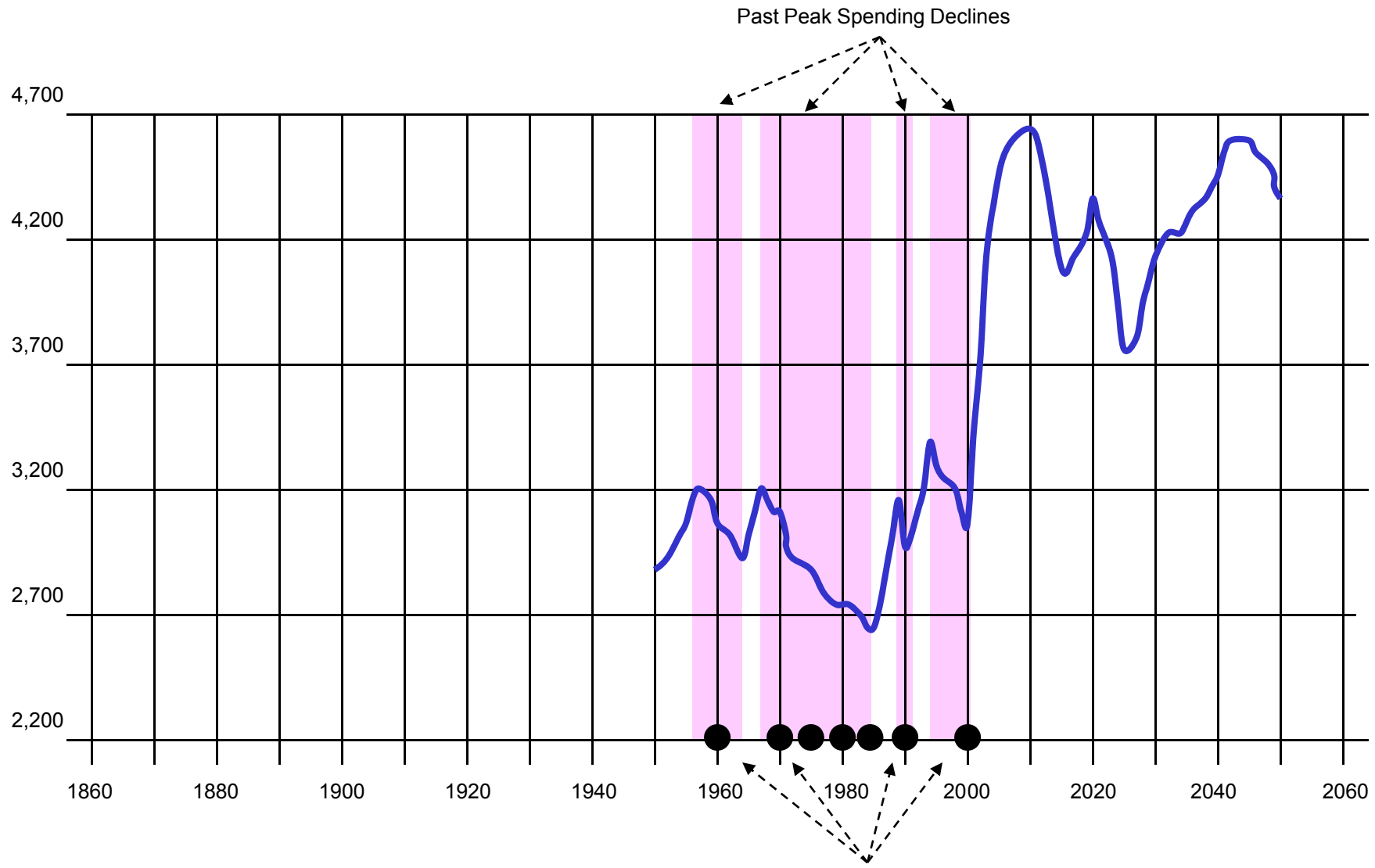
References:  
1,2,3,4.



# Economic Downturn

# Peak Spending Decline → Recession

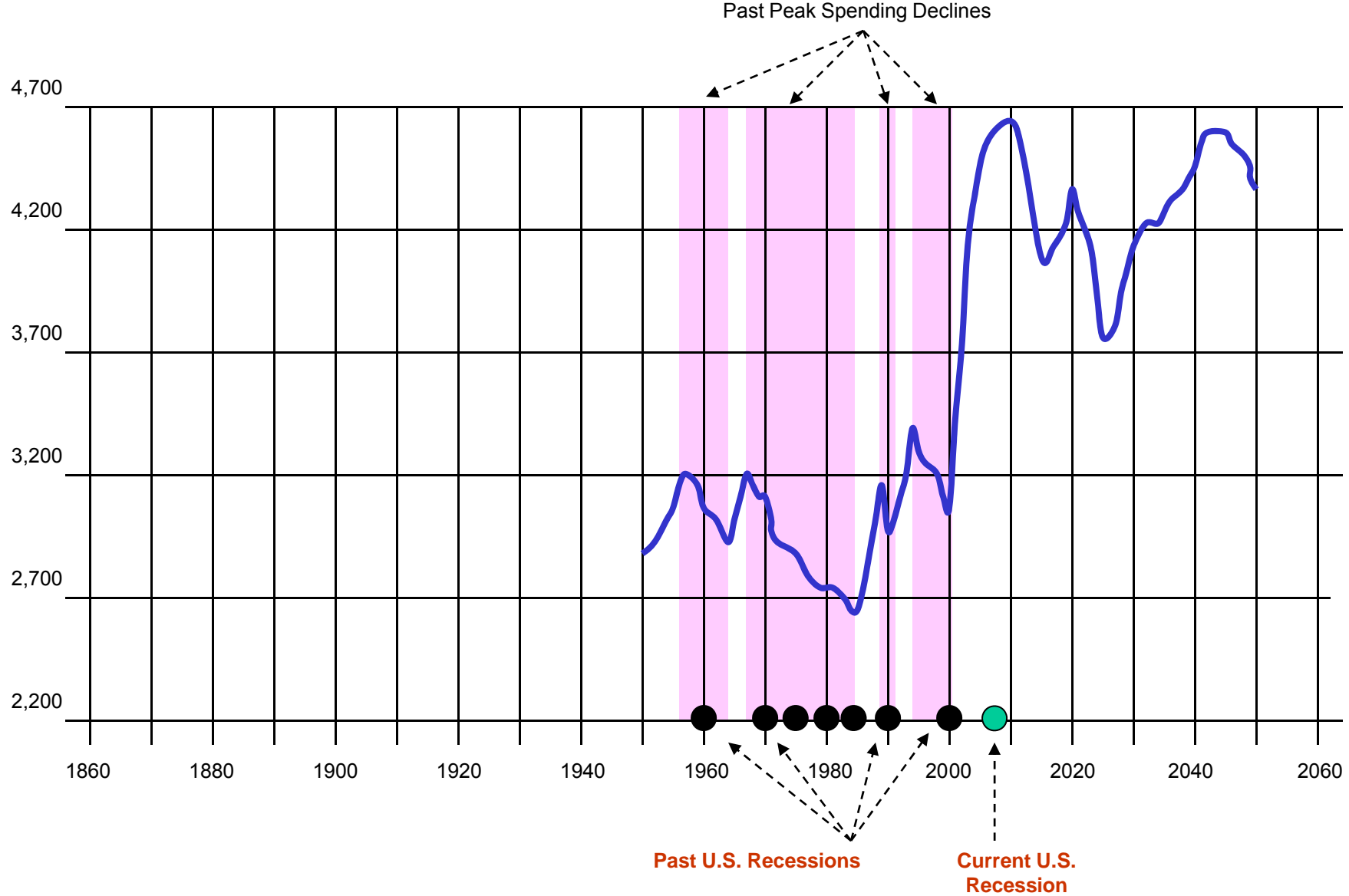
References:  
1,2,3,4.



# Economic Downturn

# Current Recession (Housing Bubble)

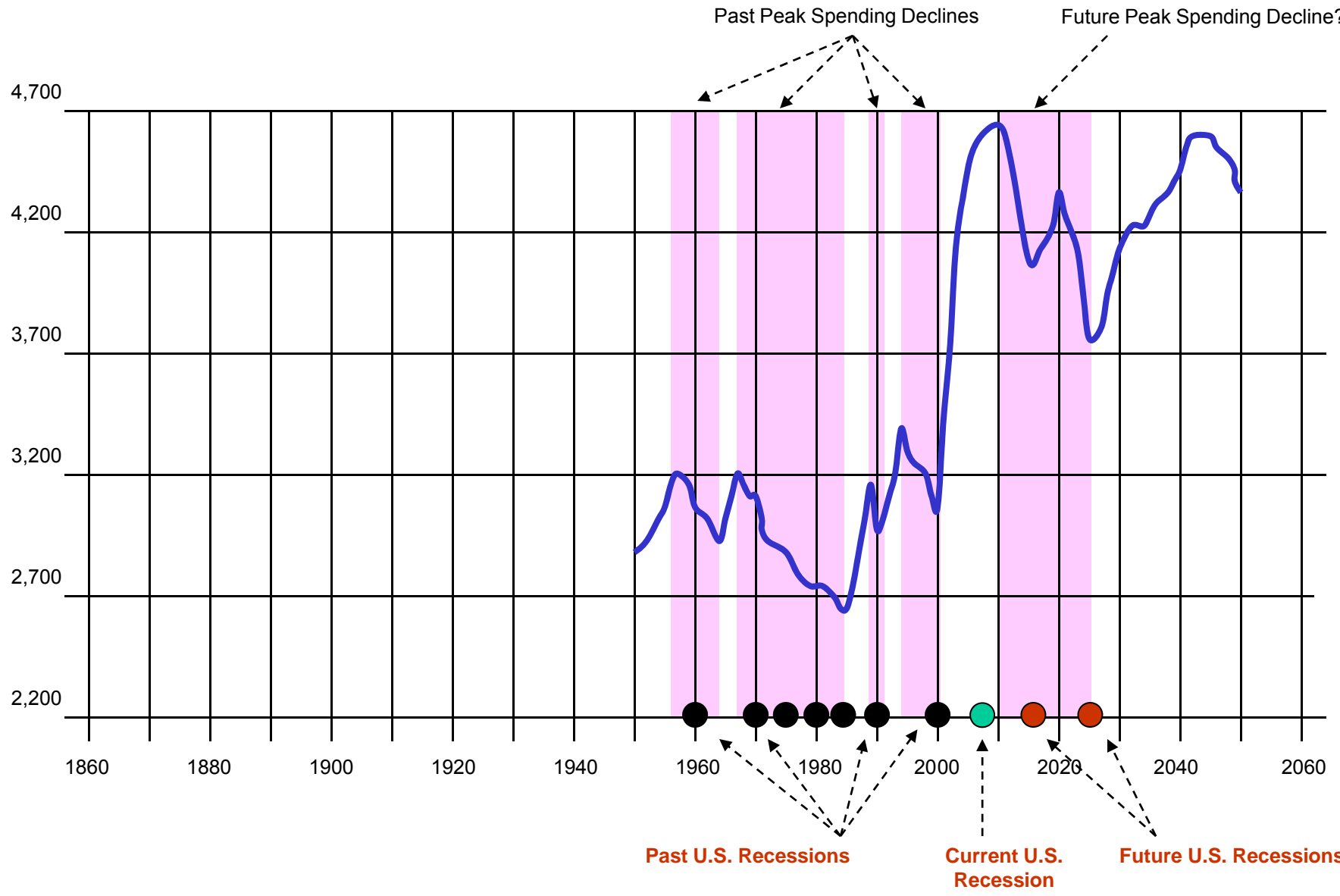
References:  
1,2,3,4.



# Economic Downturn

# Recessions at 2015 and 2025?

References:  
1,2,3,4.



# e-Business Design

A Shift to Adaptability

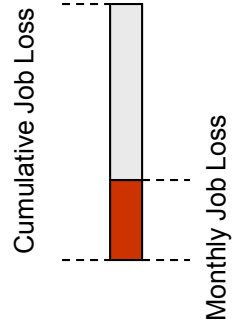
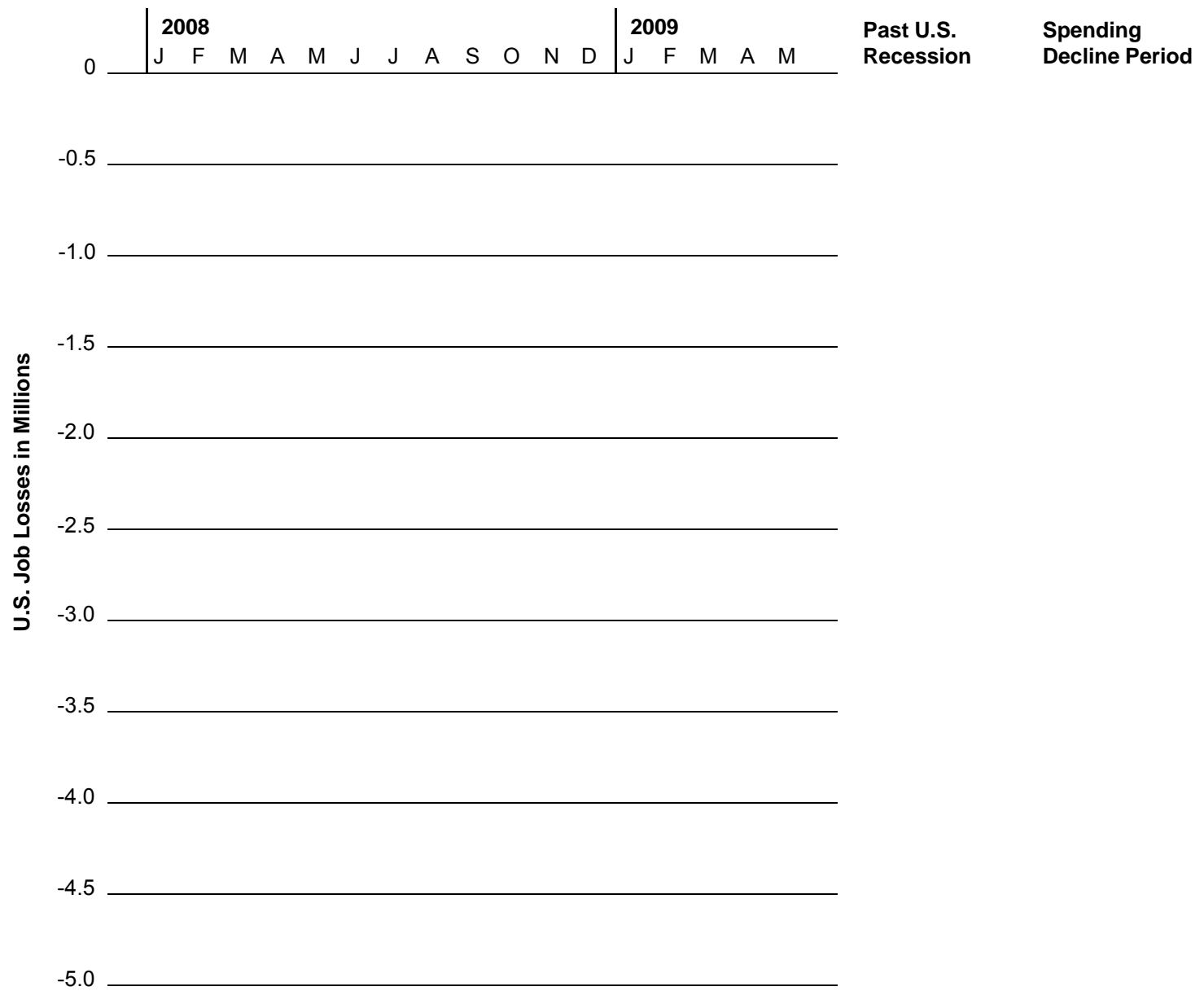
## Part I – Business Context

- Economic Downturn
- Evaporating Mass Market

# Evaporating Mass Market

# Cut Jobs + Wait for "Recovery" ...

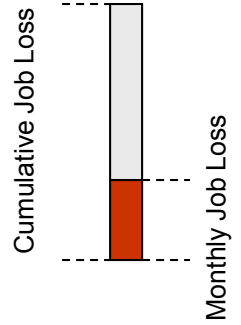
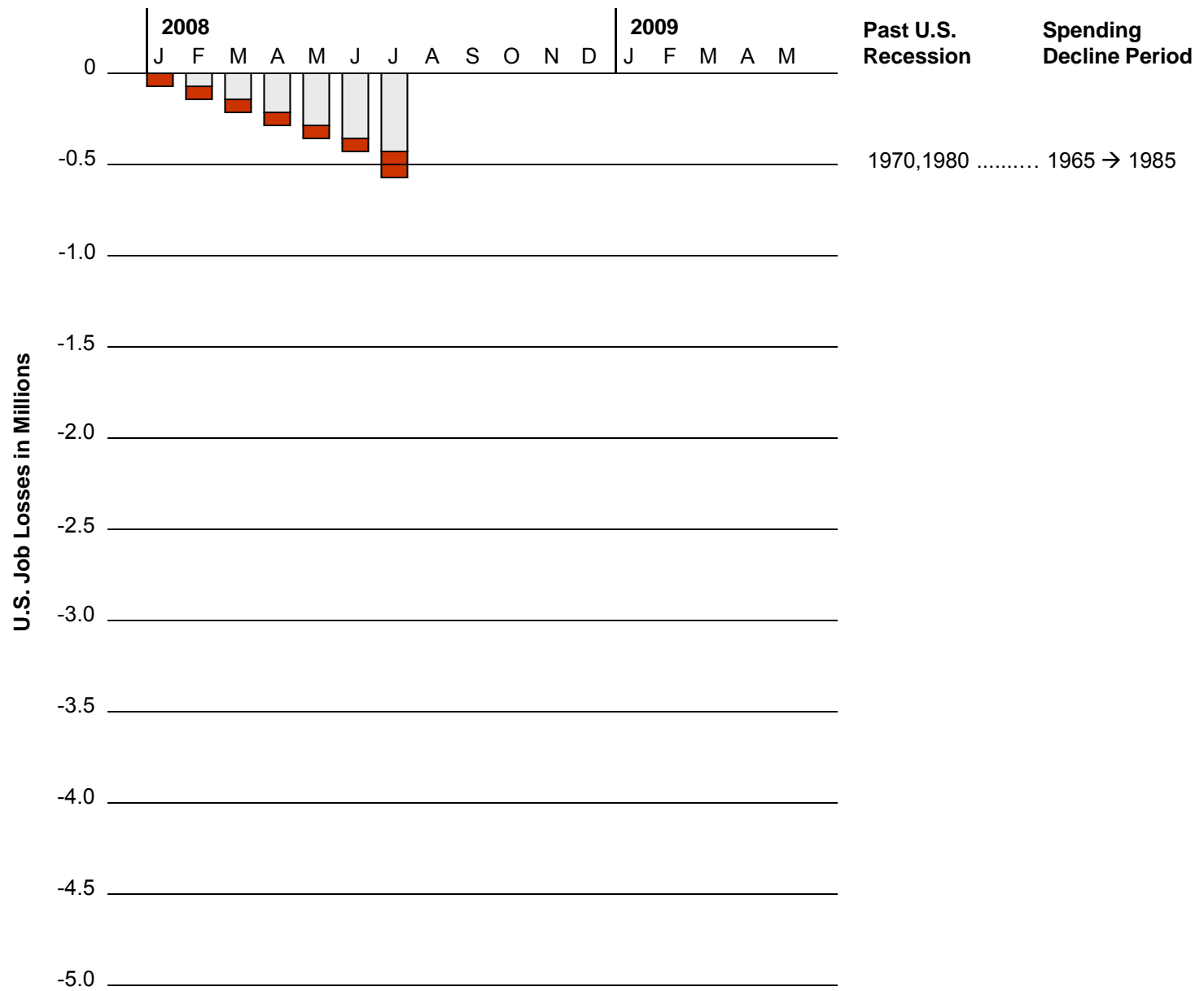
References:  
5,6,7.



# Evaporating Mass Market

# Cut Jobs + Wait for "Recovery" ...

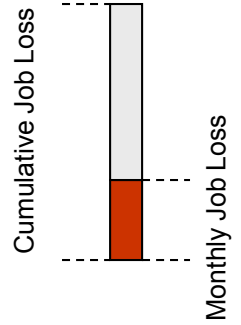
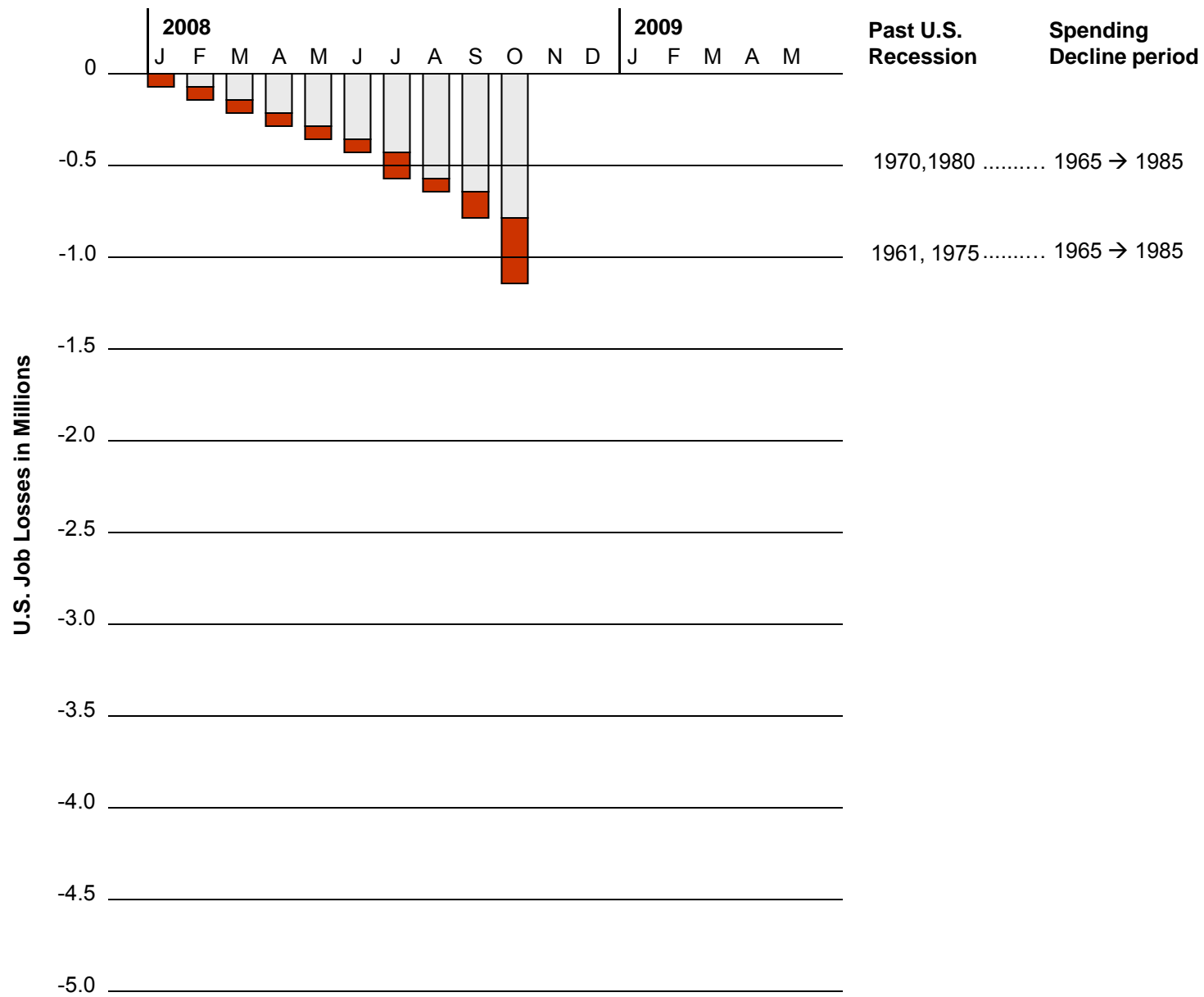
References:  
5,6,7.



# Evaporating Mass Market

# Cut Jobs + Wait for "Recovery" ...

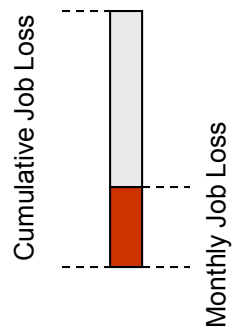
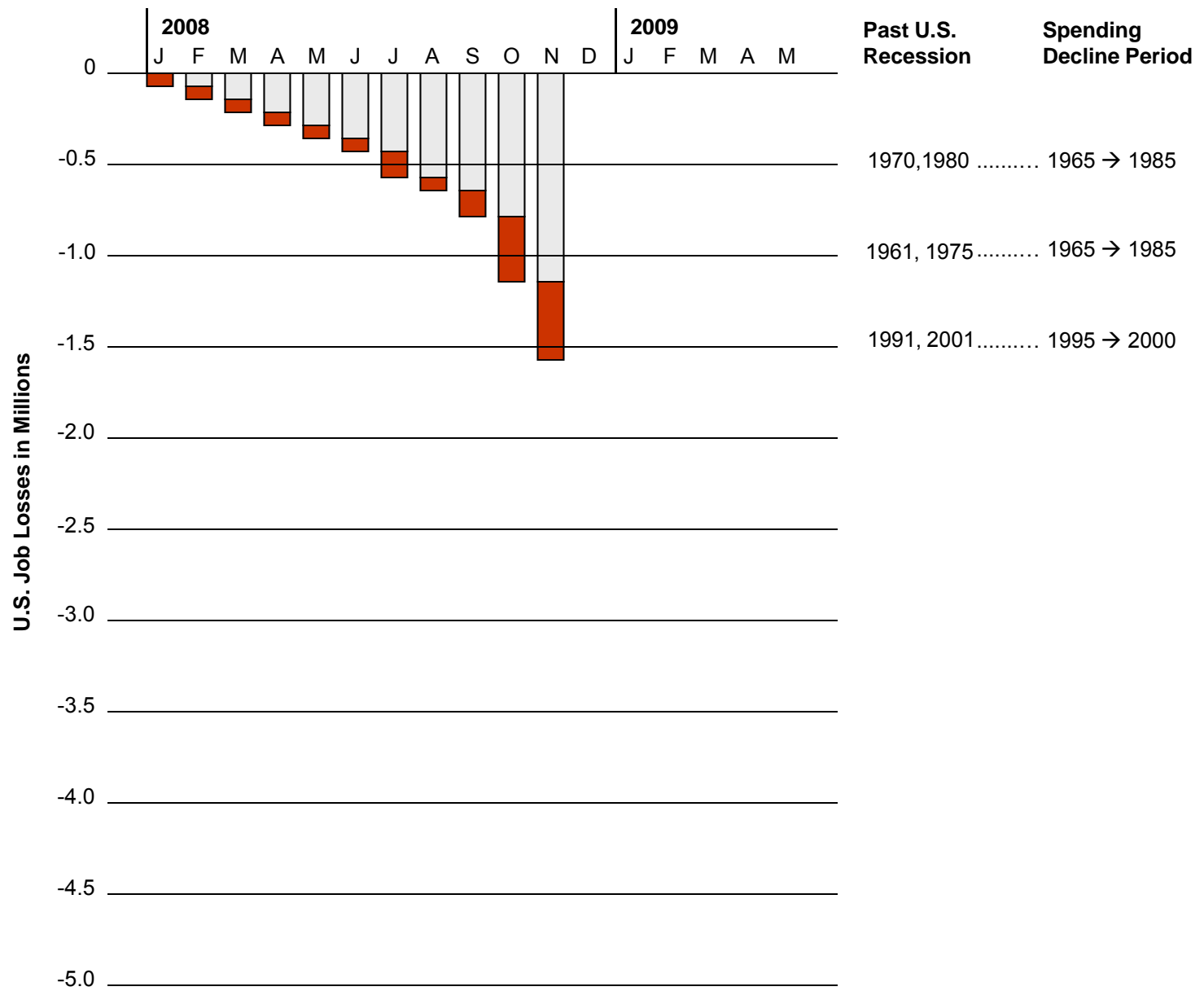
References:  
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# Evaporating Mass Market

# Cut Jobs + Wait for "Recovery" ...

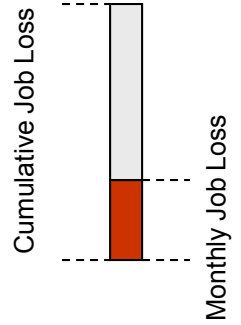
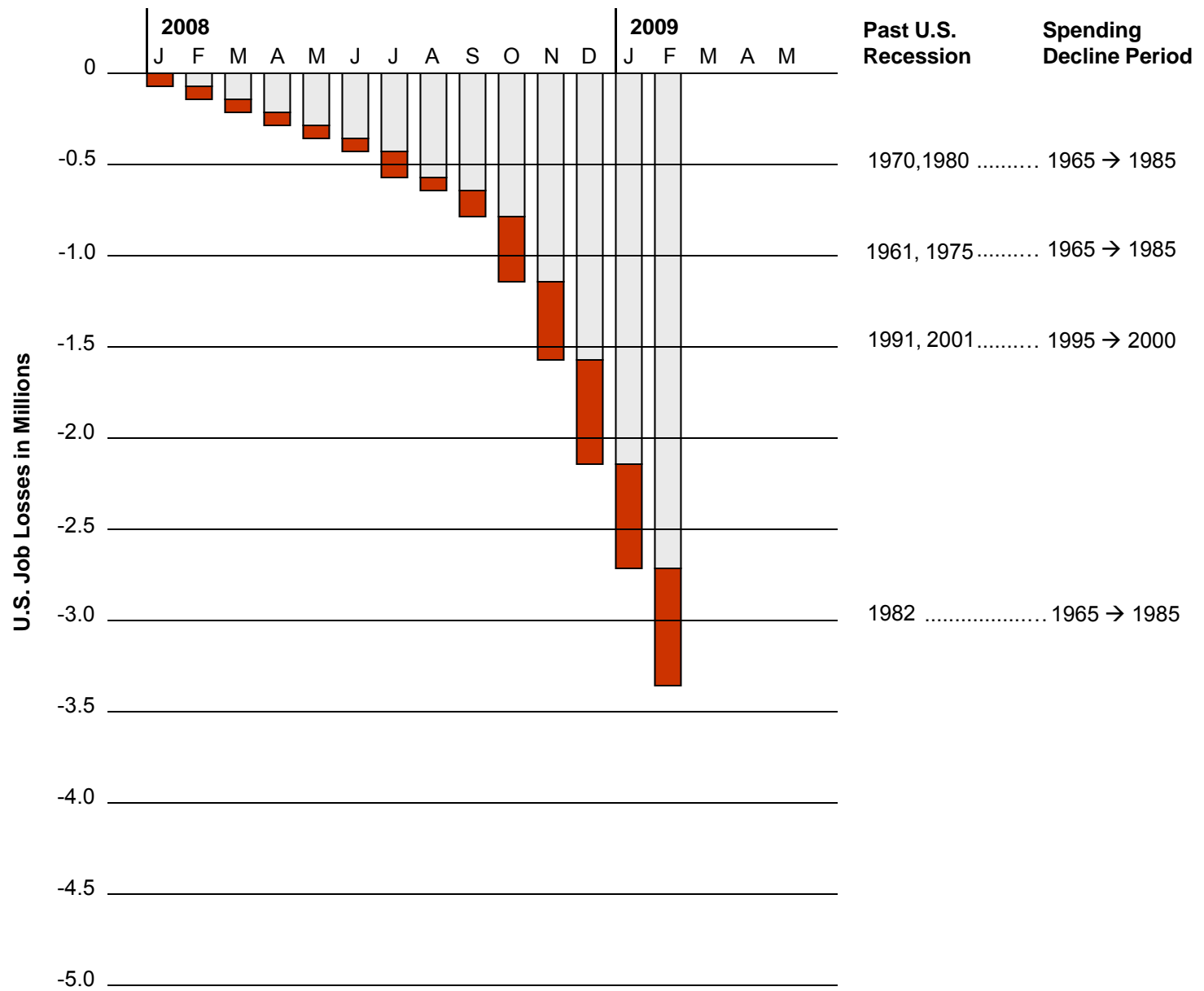
References:  
5,6,7.



# Evaporating Mass Market

# Cut Jobs + Wait for "Recovery" ...

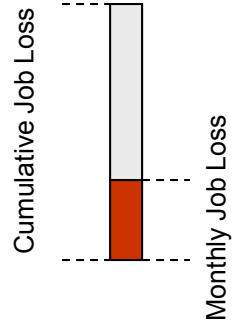
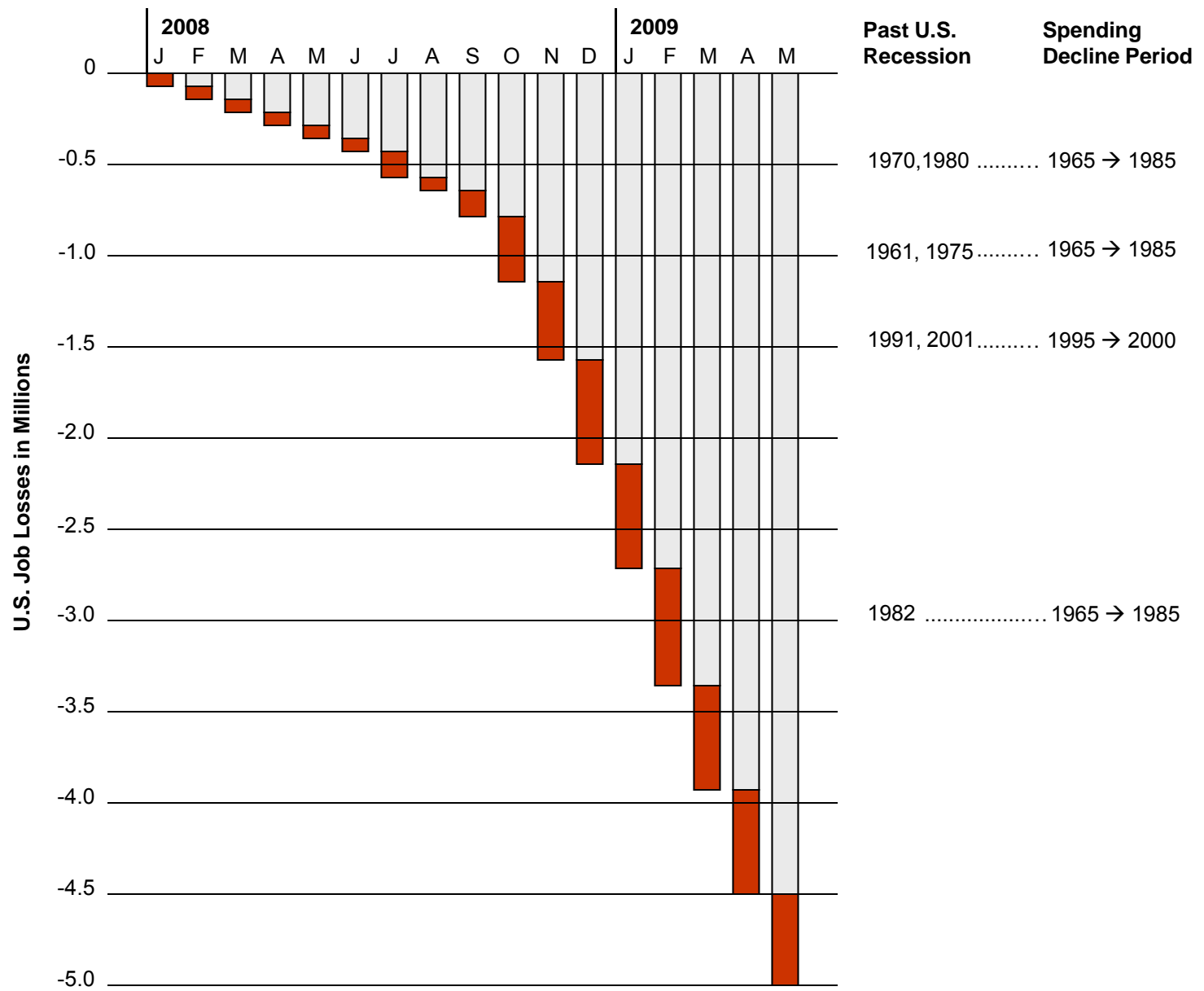
References:  
5,6,7.



# Evaporating Mass Market

# Cut Jobs + Wait for "Recovery" ...

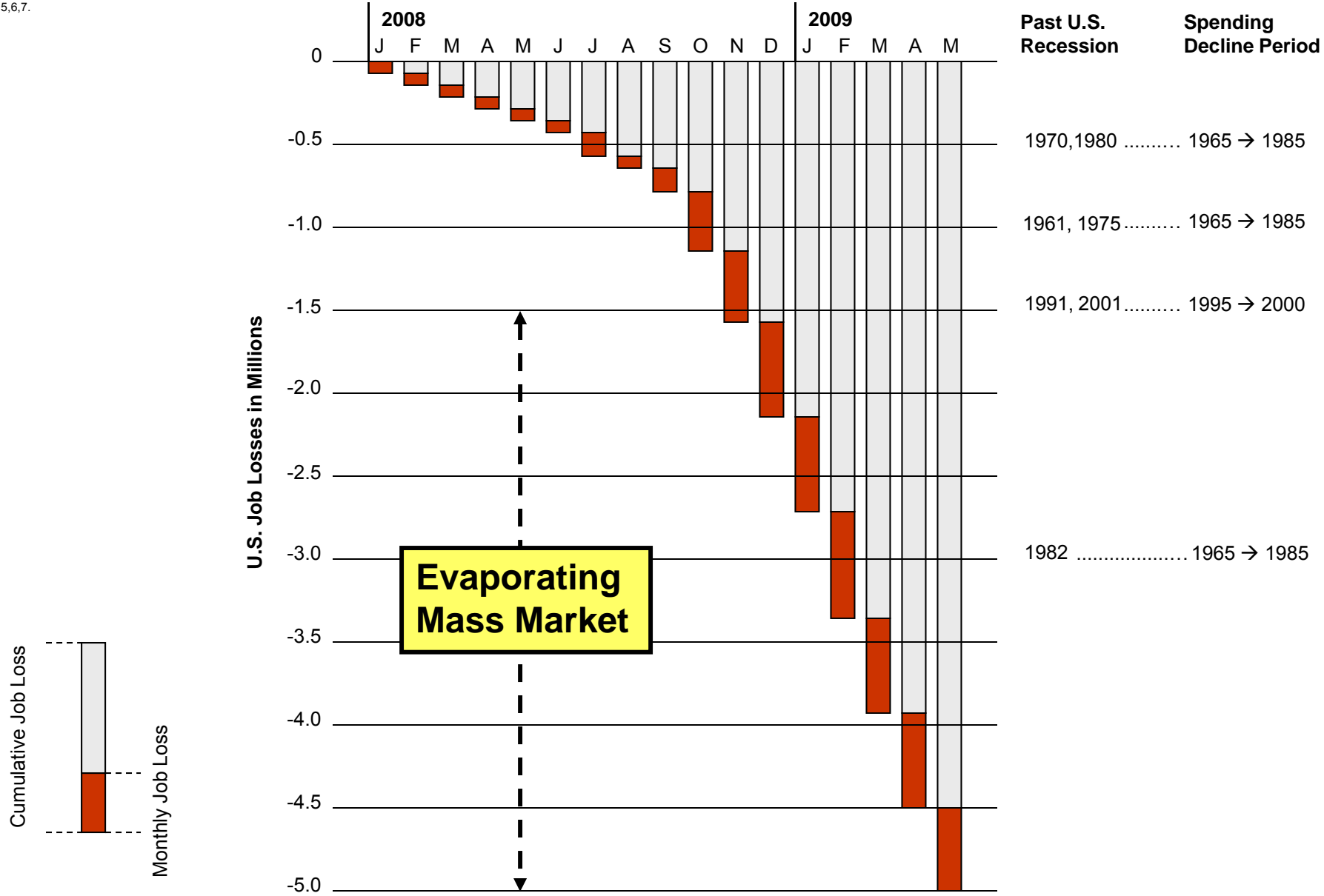
References:  
5,6,7.



# Evaporating Mass Market

# Wait for "Recovery" ... Sound Strategy?

References:  
5,6,7.



# e-Business Design

A Shift to Adaptability

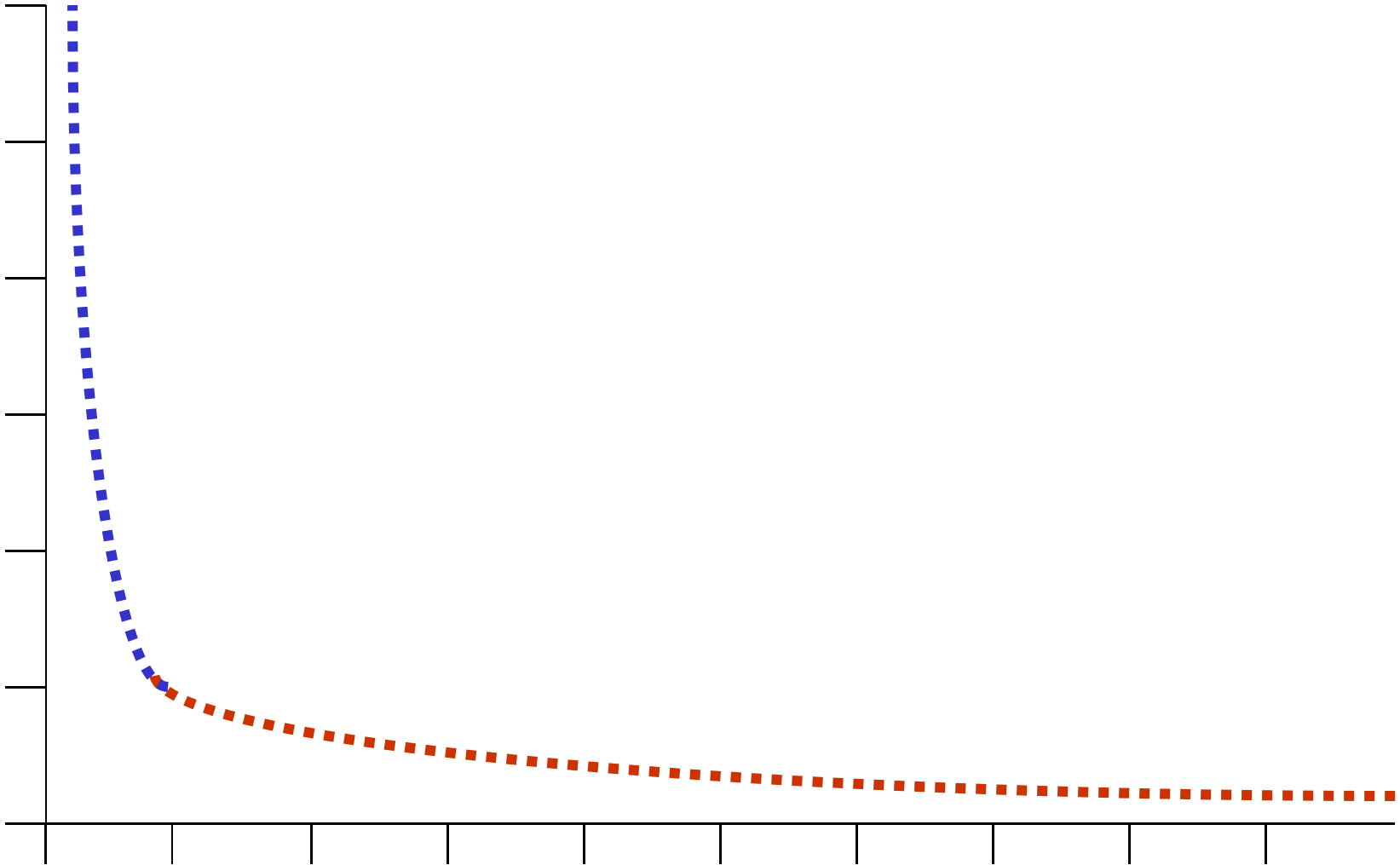
## Part I – Business Context

- Economic Downturn
- Evaporating Mass Market
- More Niche Marketing

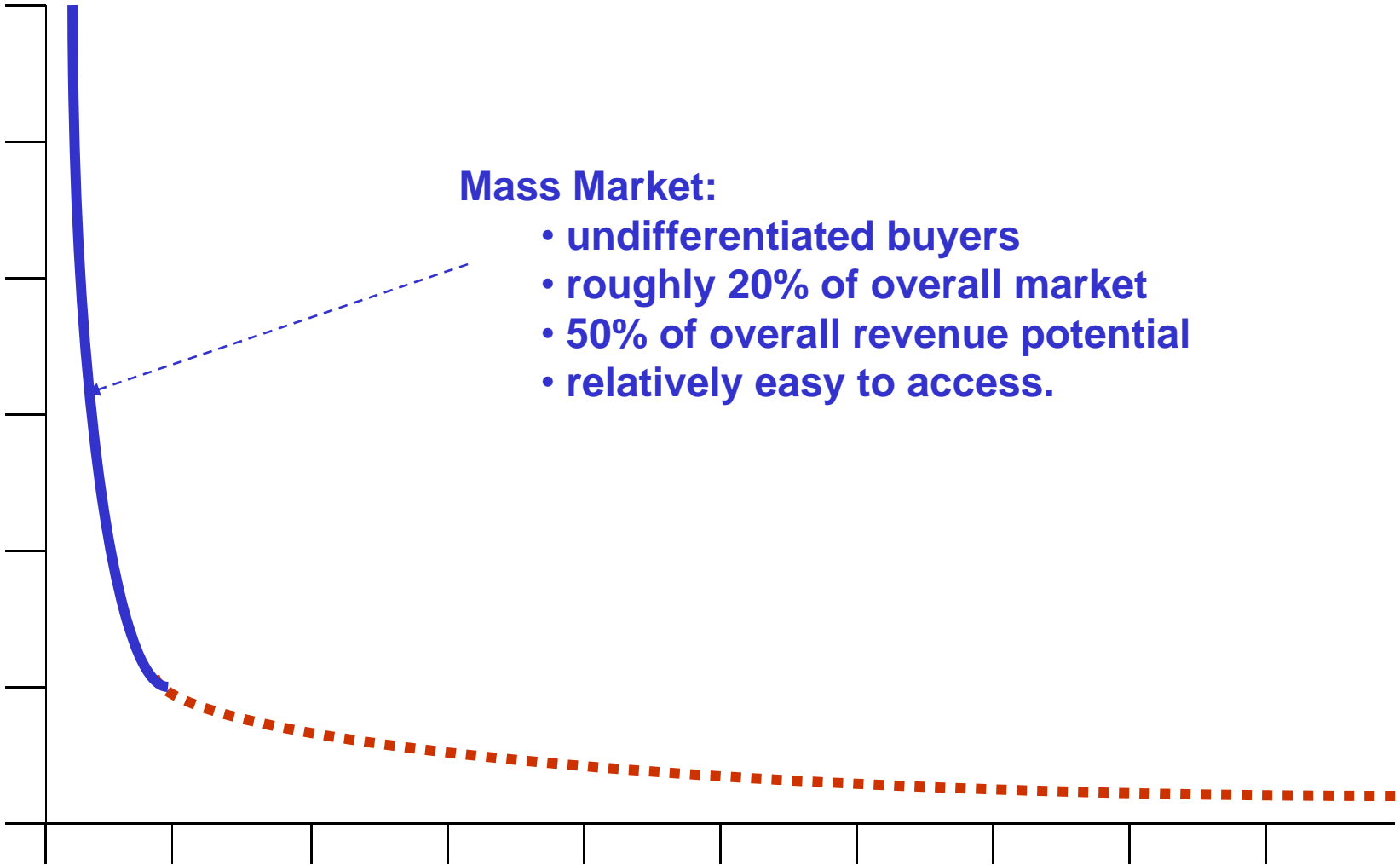
# More Niche Marketing

# Classic Market Profile (Pareto)

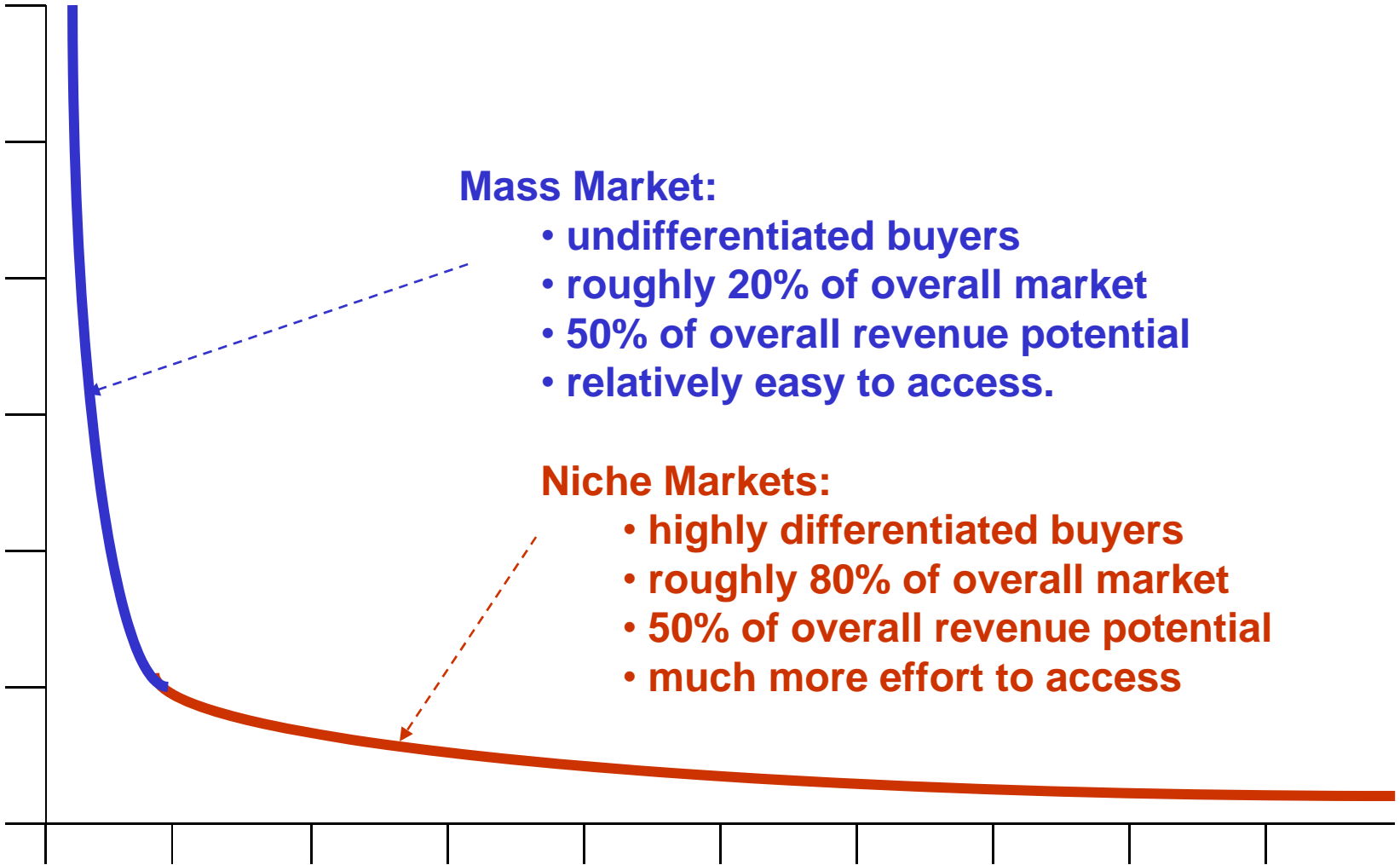
References:  
8,9.



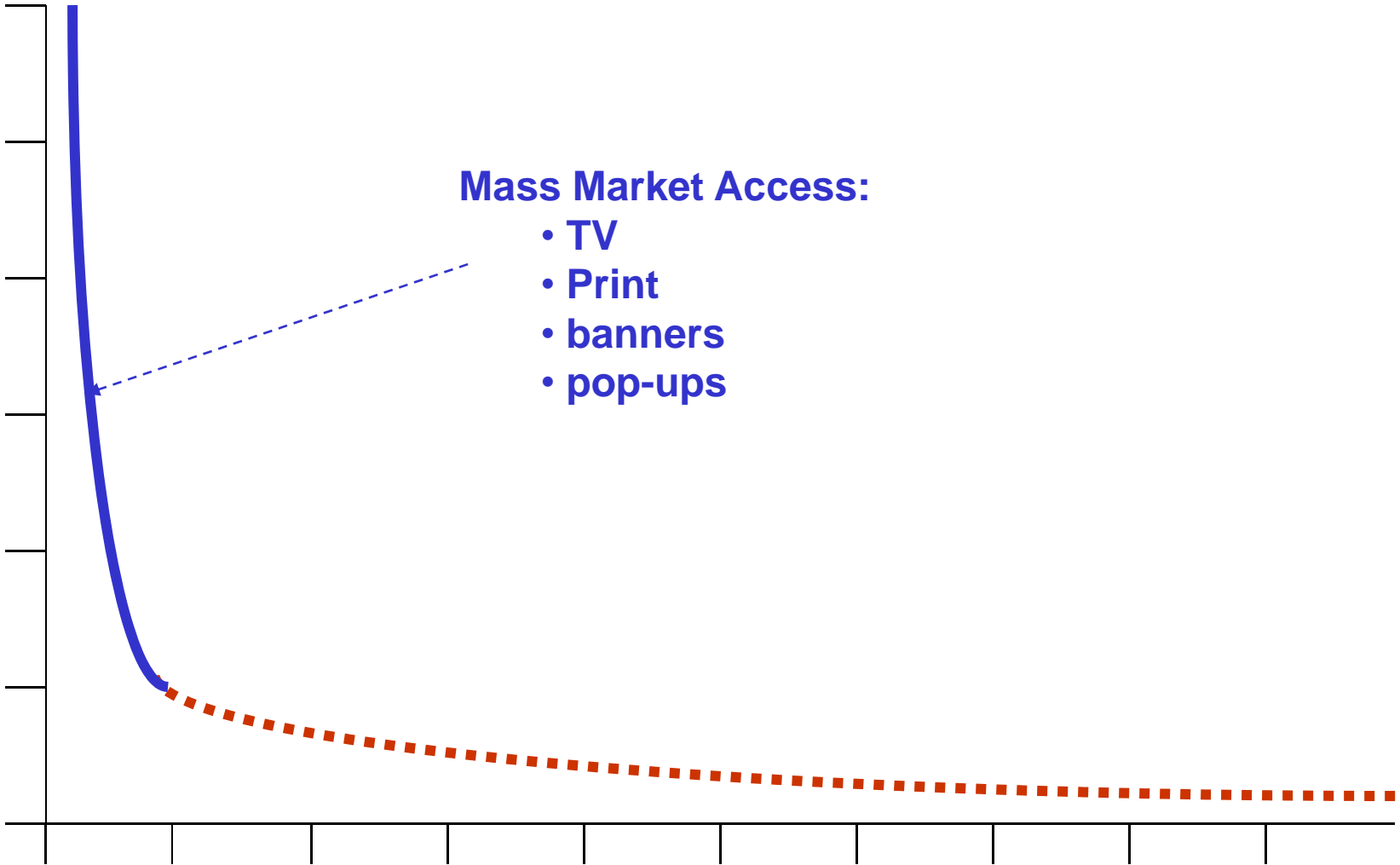
References:  
8,9.



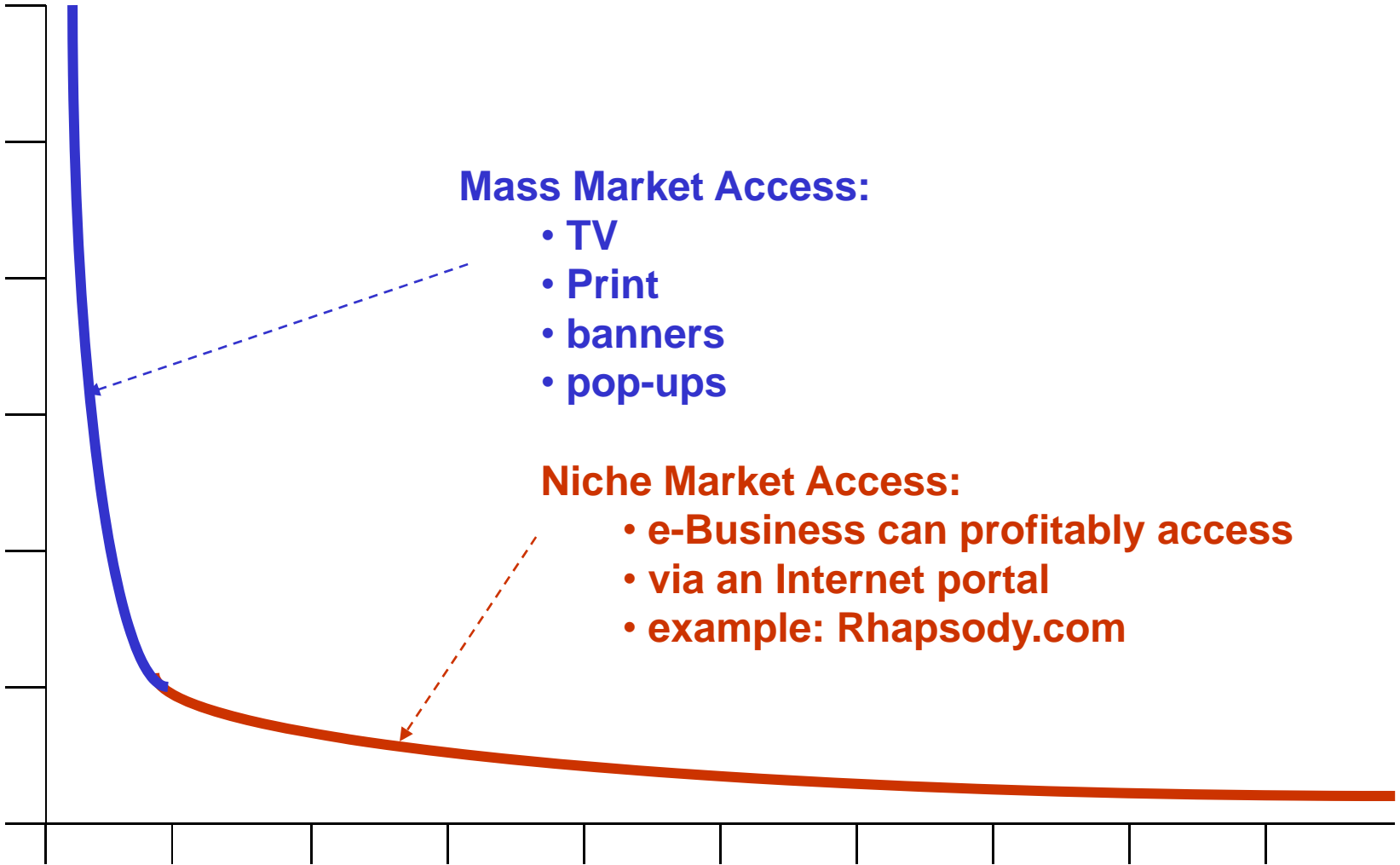
References:  
8,9.



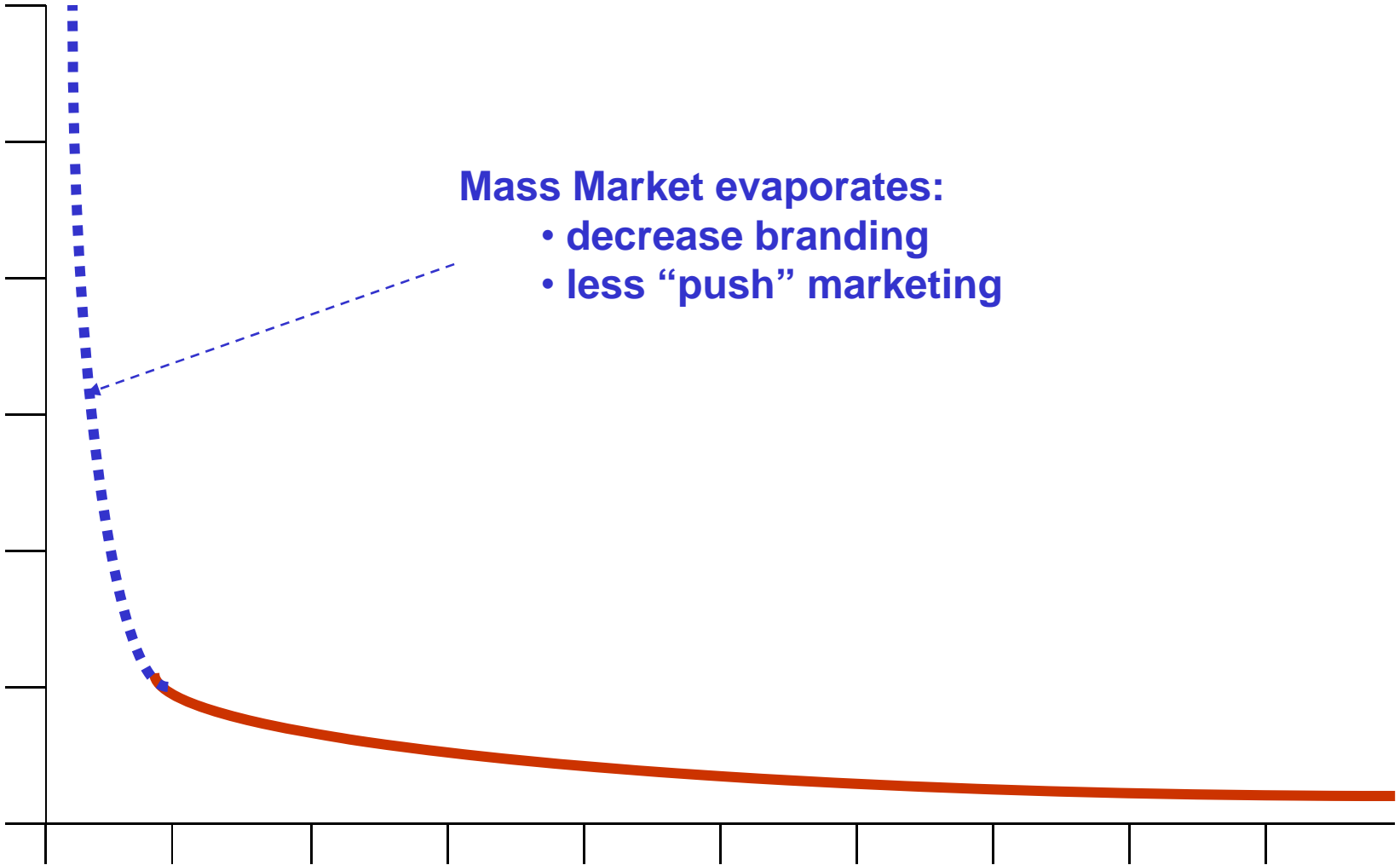
References:  
8,9.



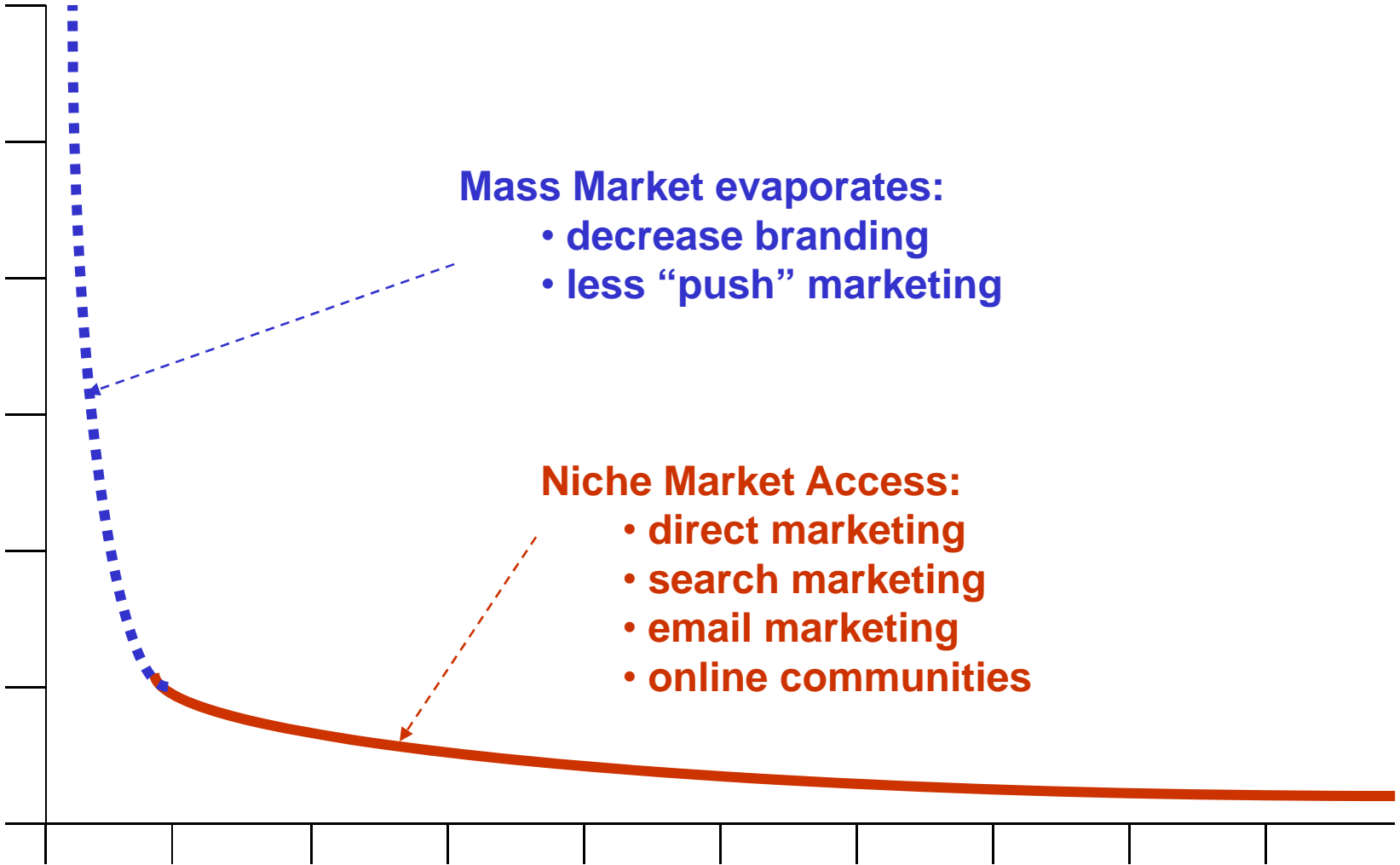
References:  
8,9.



References:  
8,9,10.



References:  
8,9,10,11.



# e-Business Design

A Shift to Adaptability

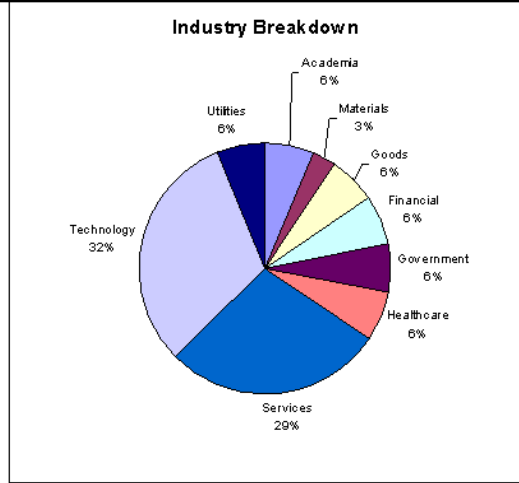
## Part I – Business Context

- Economic Downturn
- Evaporating Mass Market
- More Niche Marketing
- Adaptive Business Needed

References:  
12.

## Industry Span

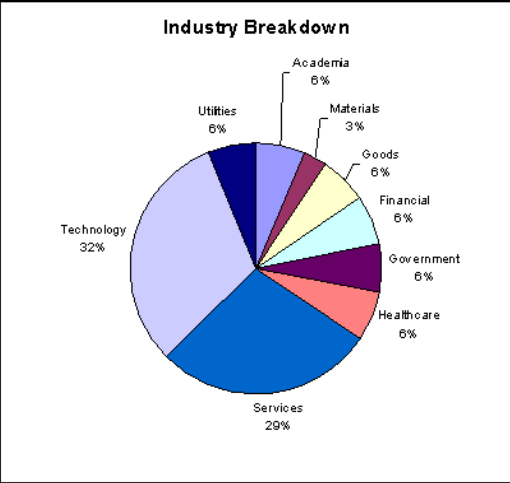
- Services, Technology
- Academia, Government
- Goods, Materials
- Utilities, Healthcare



References:  
12.

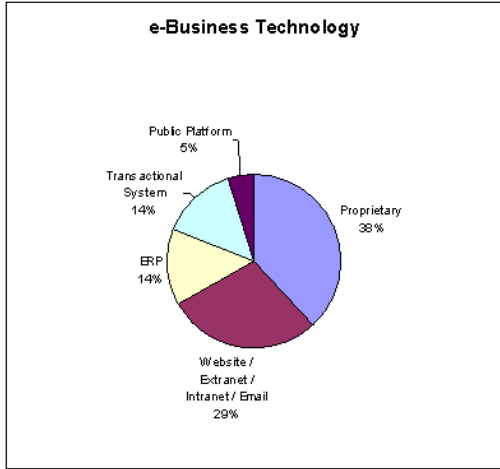
## Industries Surveyed

- Services, Technology
- Academia, Government
- Goods, Materials
- Utilities, Healthcare



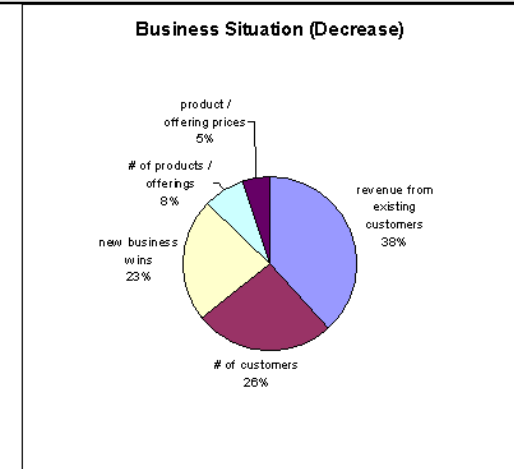
## e-Business Technology Utilization

- Proprietary Transactional System
- Web Site / Extranet / Email
- ERP System
- Commercial Transactional System
- Public Platform



## Decrease in Business...

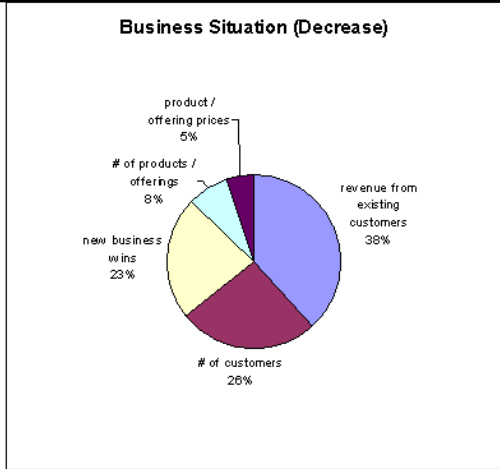
- Revenue from existing customers
- Number of customers
- New business wins
- Number of products / offerings
- Product / offering prices



References:  
12.

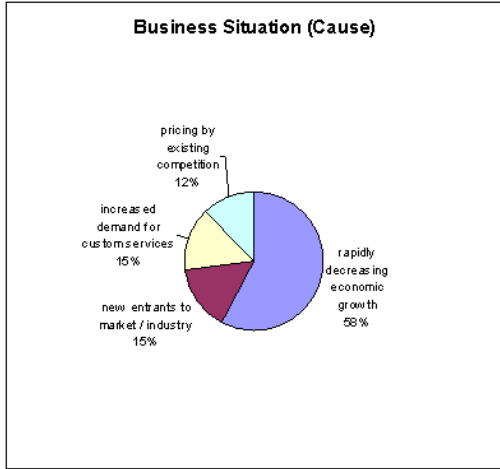
## Decrease in Business...

- Revenue from existing customers
- Number of customers
- New business wins
- Number of products / offerings
- Product / offering prices



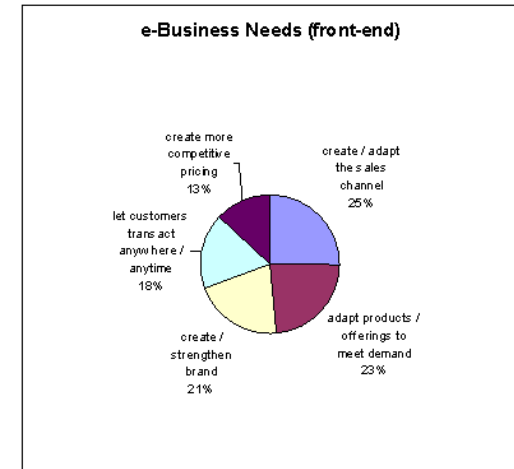
## Caused by...

- Rapidly decreasing economic growth
- New entrants to market / industry
- Increased demand for custom services
- Pricing by existing competition



## Front End Requirements...

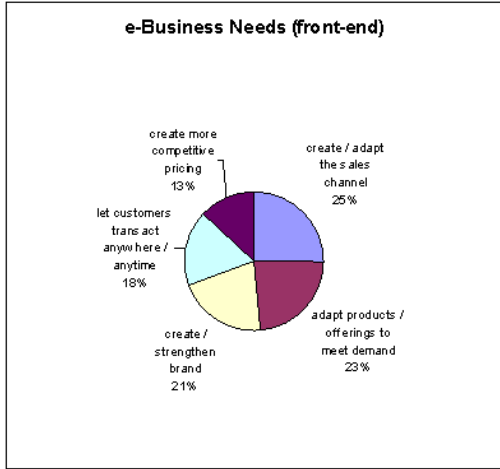
- Adapt the sales channel
- Adapt offerings to meet demand
- Create / strengthen brand
- Anywhere / anytime transactions
- More competitive pricing



References:  
12.

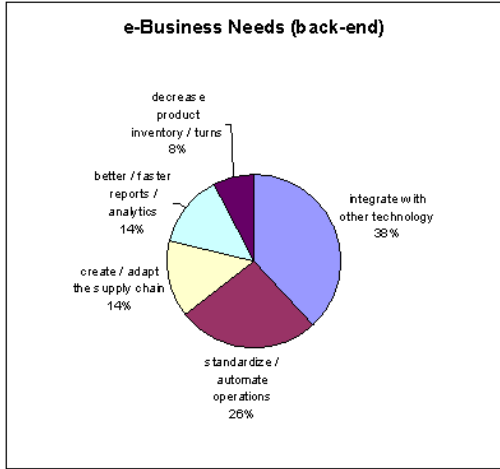
## Front End Requirements...

- Adapt the sales channel
- Adapt offerings to meet demand
- Create / strengthen brand
- Anywhere / anytime transactions
- More competitive pricing



## Back End Requirements...

- Integrate with other technology
- Standardize / automate operations
- Adapt the supply chain
- Better / faster reports / analytics
- Decrease inventory / turns



# How to Shift?

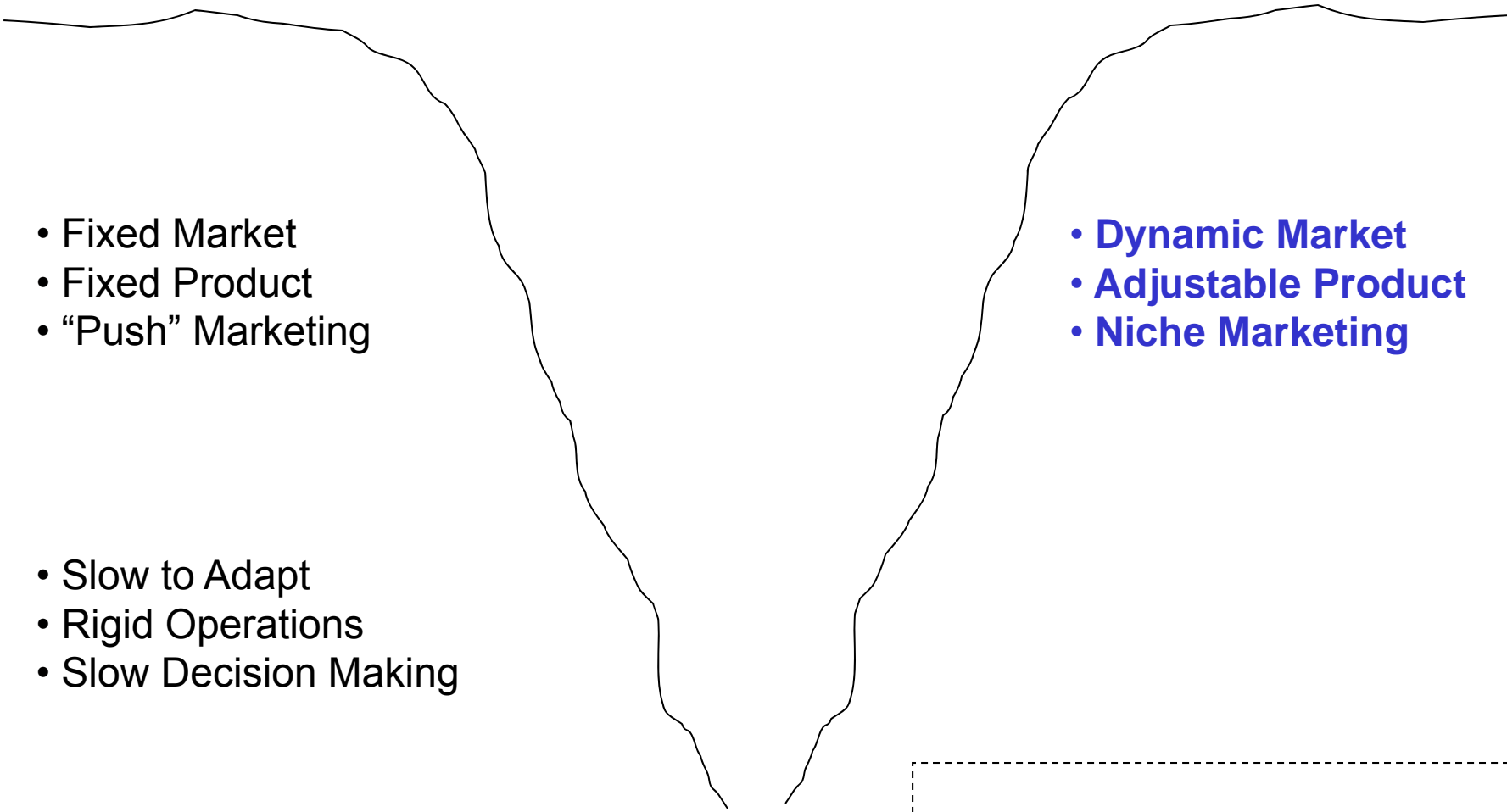
- Fixed Market
- Fixed Product
- “Push” Marketing

- Slow to Adapt
- Rigid Operations
- Slow Decision Making

# How to Shift?

Intend to adapt to changing markets.

References:  
13.



- Fixed Market
- Fixed Product
- “Push” Marketing

- **Dynamic Market**
- **Adjustable Product**
- **Niche Marketing**

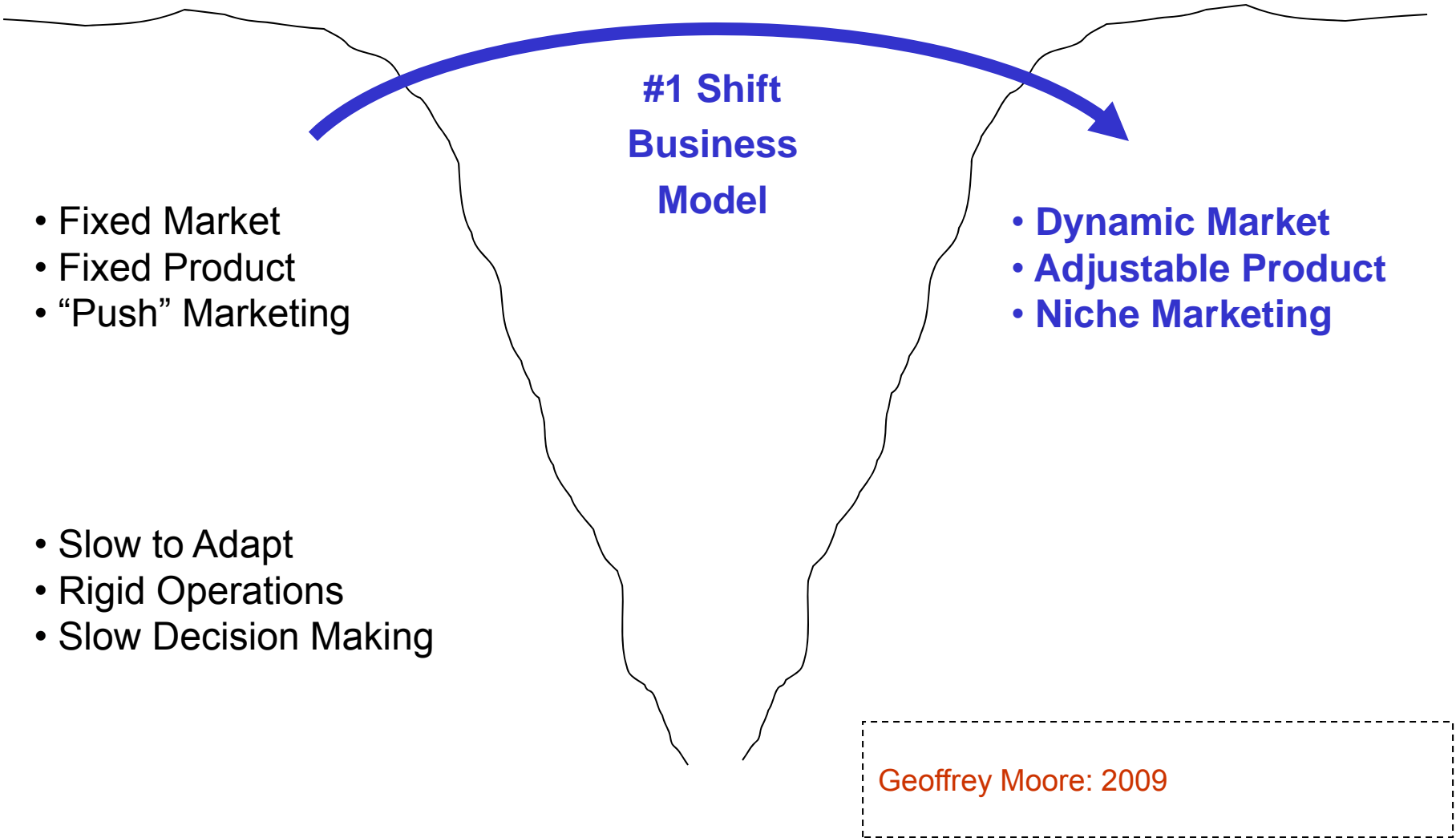
- Slow to Adapt
- Rigid Operations
- Slow Decision Making

Geoffrey Moore: 2009

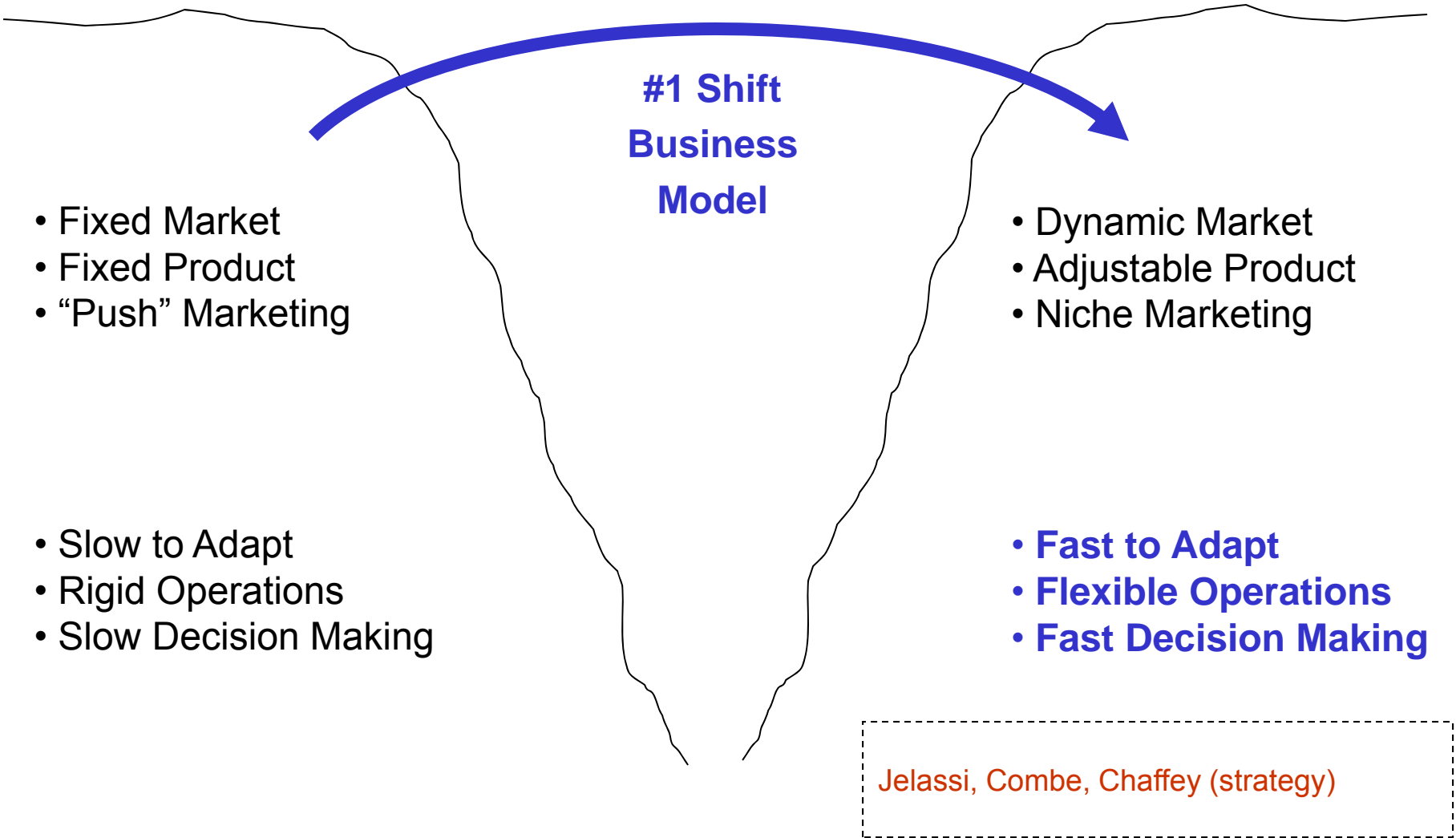
# How to Shift?

# Shift the business model first.

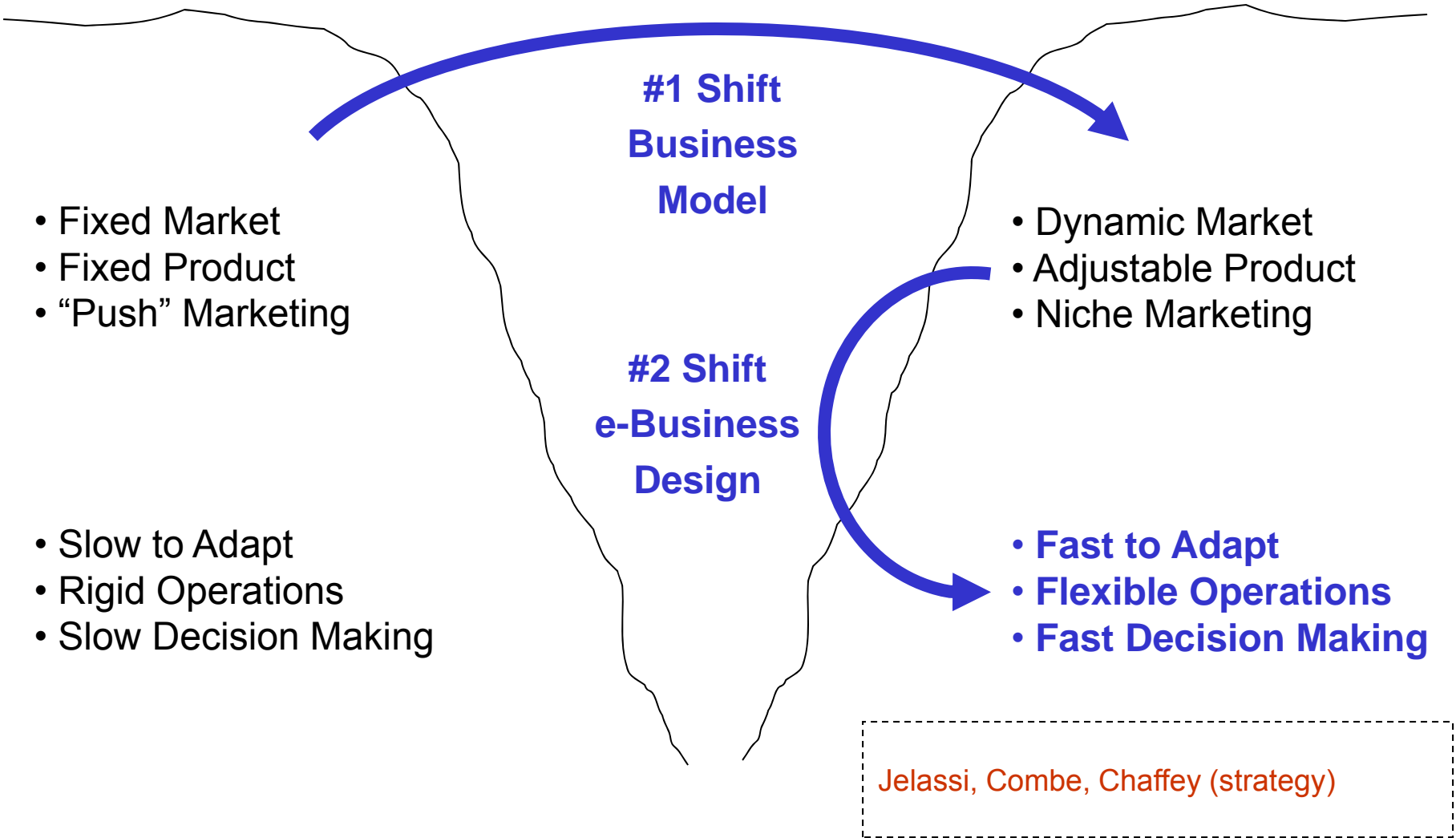
References:  
13.



References:  
13.



References:  
13.



# e-Business Design

A Shift to Adaptability

**Part I – Business Context**

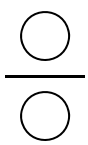
**Part II – Design Framework**

- Atomic Relationships

References:  
13.

Attribute	Control
Relationship	Subordinate
Work	Managed
Communication	Dictate
Buzzwords	Downsizing Rightsizing Restructuring Reengineering

## Control



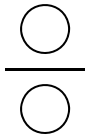
Hierarchy + Rules

References:  
13.

**Cooperation** 

Attribute	Control	Cooperation
Relationship	Subordinate	Integrate
Work	Managed	Together
Communication	Dictate	Viral
Buzzwords	Downsizing Rightsizing Restructuring Reengineering	Quality Involvement Teamwork Multi-skilling

## Control



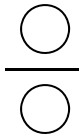
**Teamwork + Process**

References:  
13.

**Cooperation** 

Attribute	Control	Cooperation	Autonomy
Relationship	Subordinate	Integrate	Separate
Work	Managed	Together	Apart
Communication	Dictate	Viral	Dialog
Buzzwords	Downsizing Rightsizing Restructuring Reengineering	Quality Involvement Teamwork Multi-skilling	Diversity Empowerment Entrepreneurial Decentralization

**Control**



**Autonomy** 

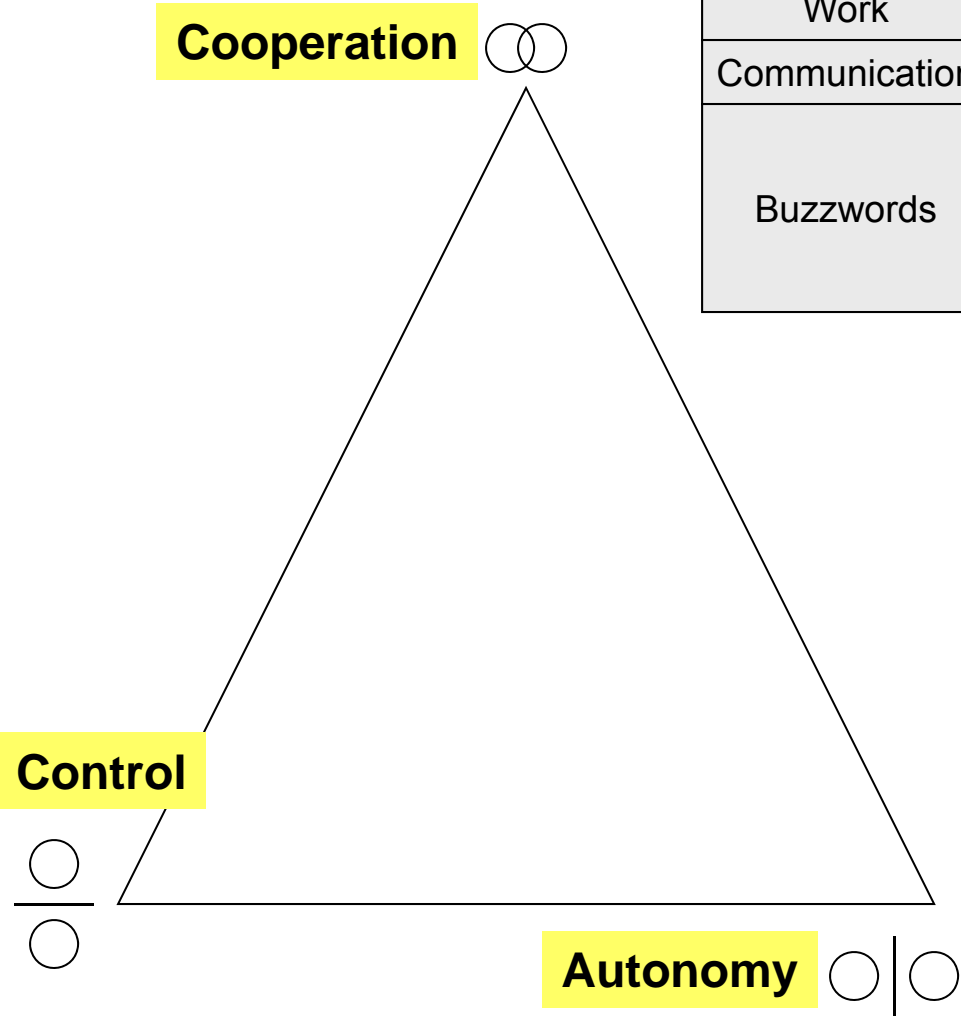


# Atomic Relationships

# Design is a Tradeoff Among All Three

References:  
13.

Attribute	Control	Cooperation	Autonomy
Relationship	Subordinate	Integrate	Separate
Work	Managed	Together	Apart
Communication	Dictate	Viral	Dialog
Buzzwords	Downsizing Rightsizing Restructuring Reengineering	Quality Involvement Teamwork Multi-skilling	Diversity Empowerment Entrepreneurial Decentralization



Priority + Tradeoff

# e-Business Design

A Shift to Adaptability

**Part I – Business Context**

**Part II – Design Framework**

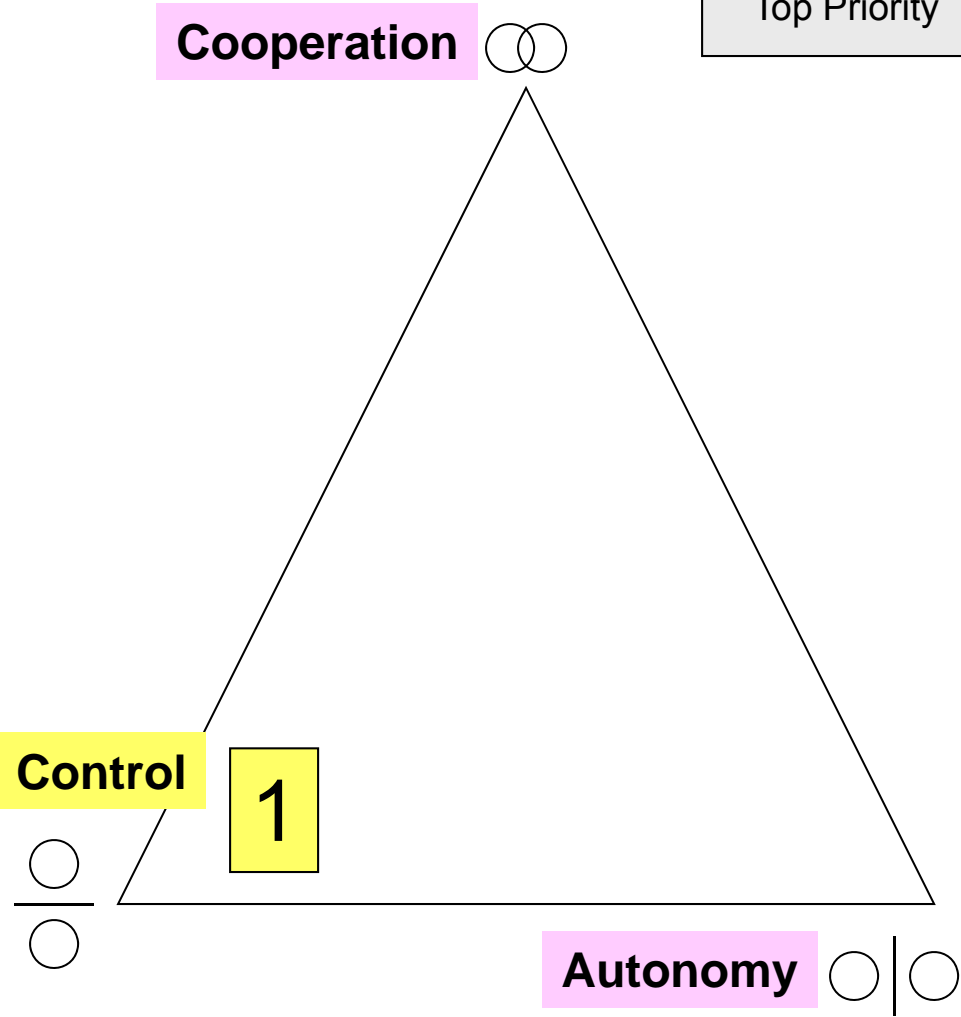
- Atomic Relationships
- Unbalanced Designs

# Unbalanced Designs

# #1 – Over Prioritize One Element

References:  
13.

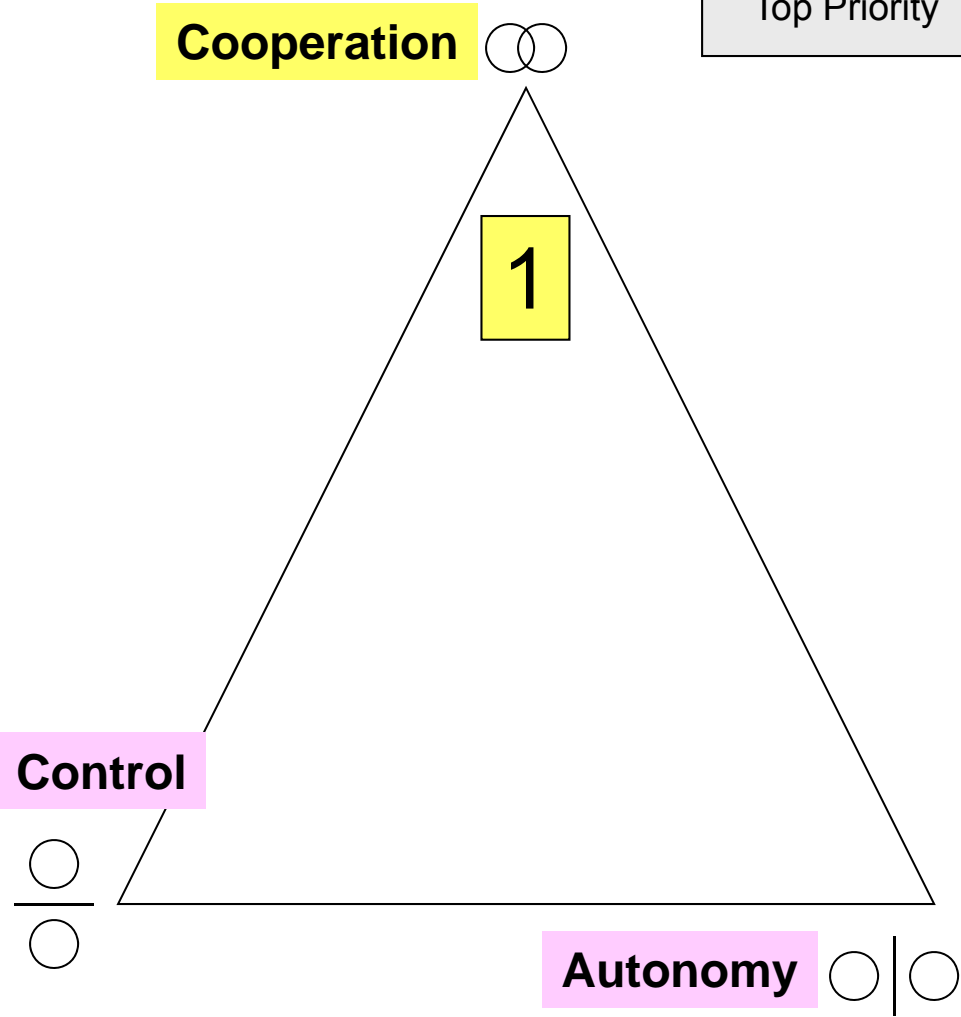
Cause	Control
1. Overdo Top Priority	Cut cost + sacrifice flex, quality, learning.



U.S. Post Office: 1975 + 2009

References:  
13.

Cause	Control	Cooperation
1. Overdo Top Priority	Cut cost + sacrifice flex, quality, learning.	Consensus decisions. No structure.



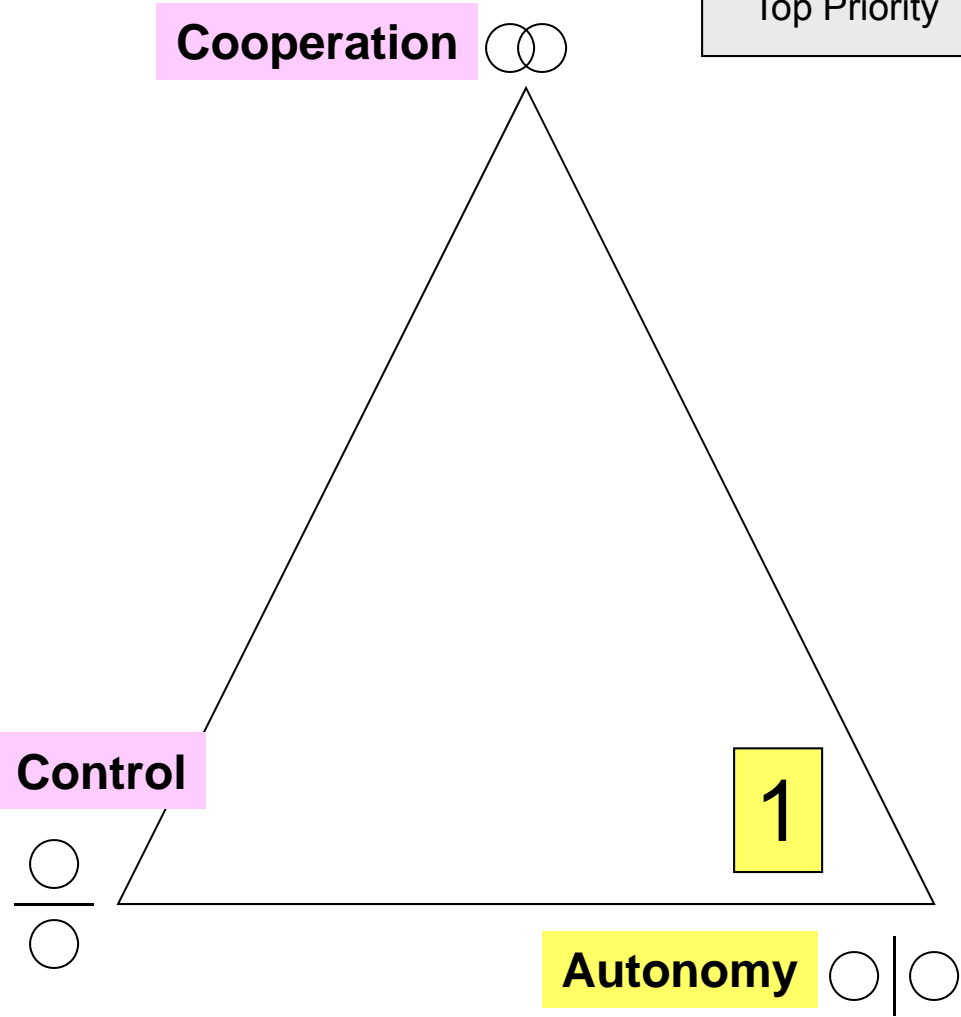
People Express Airline: 1987

# Unbalanced Designs

## #1 – Over Prioritize One Element

References:  
13,14.

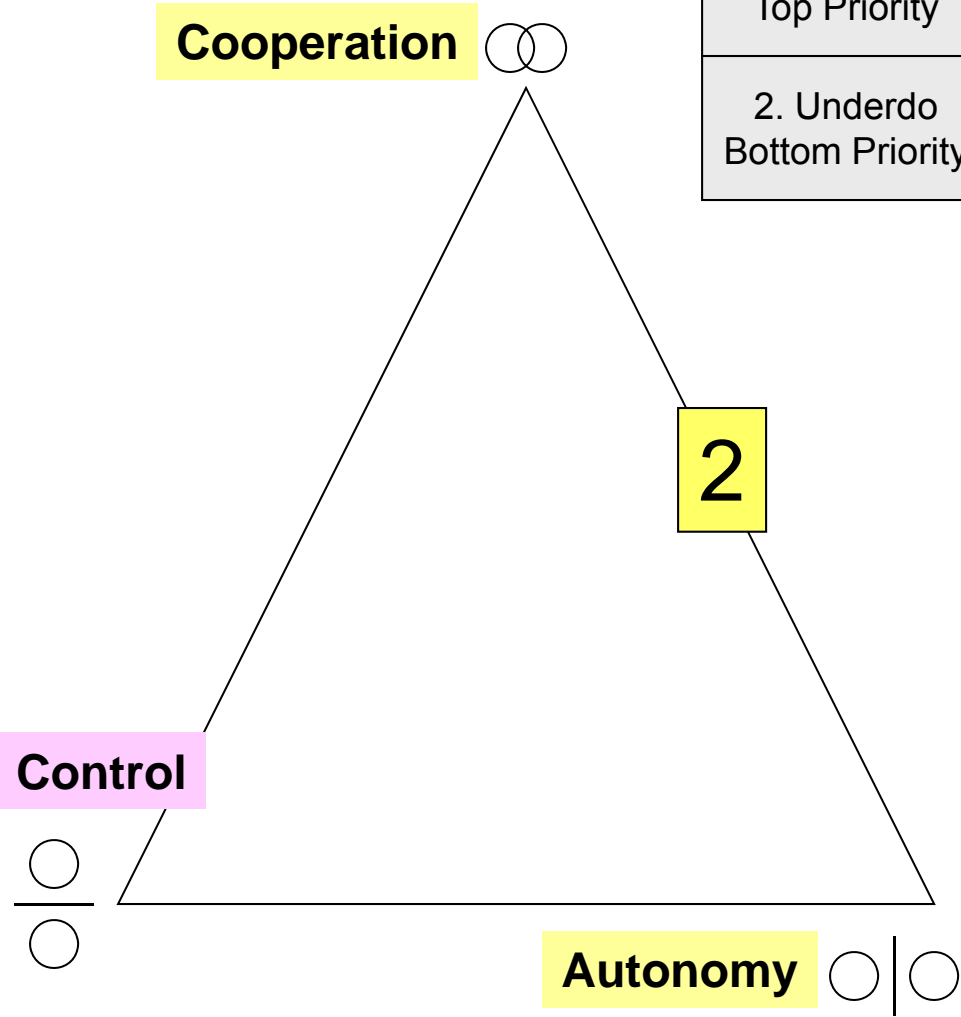
Cause	Control	Cooperation	Autonomy
1. Overdo Top Priority	Cut cost + sacrifice flex, quality, learning.	Consensus decisions. No structure.	Excessive product diversification.



IBM copiers unit sold to Kodak: 1988

References:  
13.

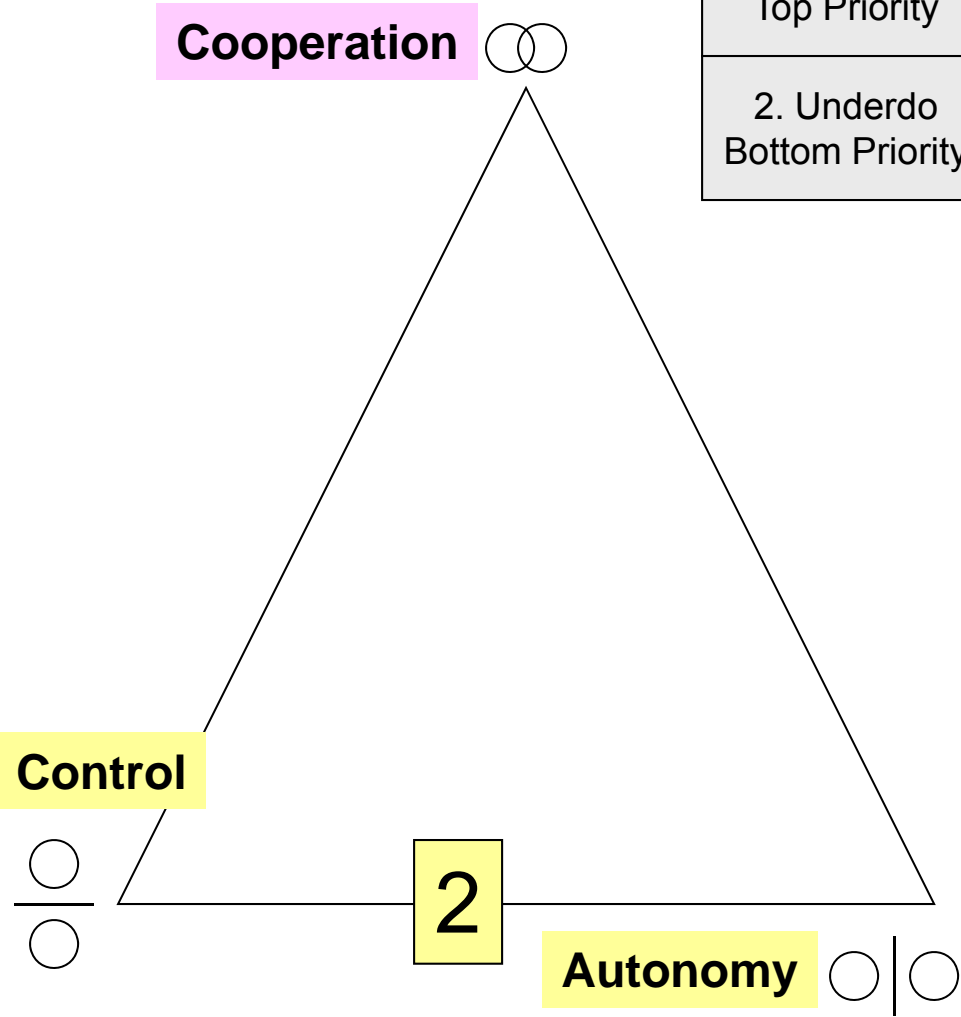
Cause	Control
1. Overdo Top Priority	Cut cost + sacrifice flex, quality, learning.
2. Underdo Bottom Priority	No hierarchy or boundary. Deregulation.



U.S. railroads: 1870s

References:  
13.

Cause	Control	Cooperation
1. Overdo Top Priority	Cut cost + sacrifice flex, quality, learning.	Consensus decisions. No structure.
2. Underdo Bottom Priority	No hierarchy or boundary. Deregulation.	<b>No teamwork. No projects.</b>



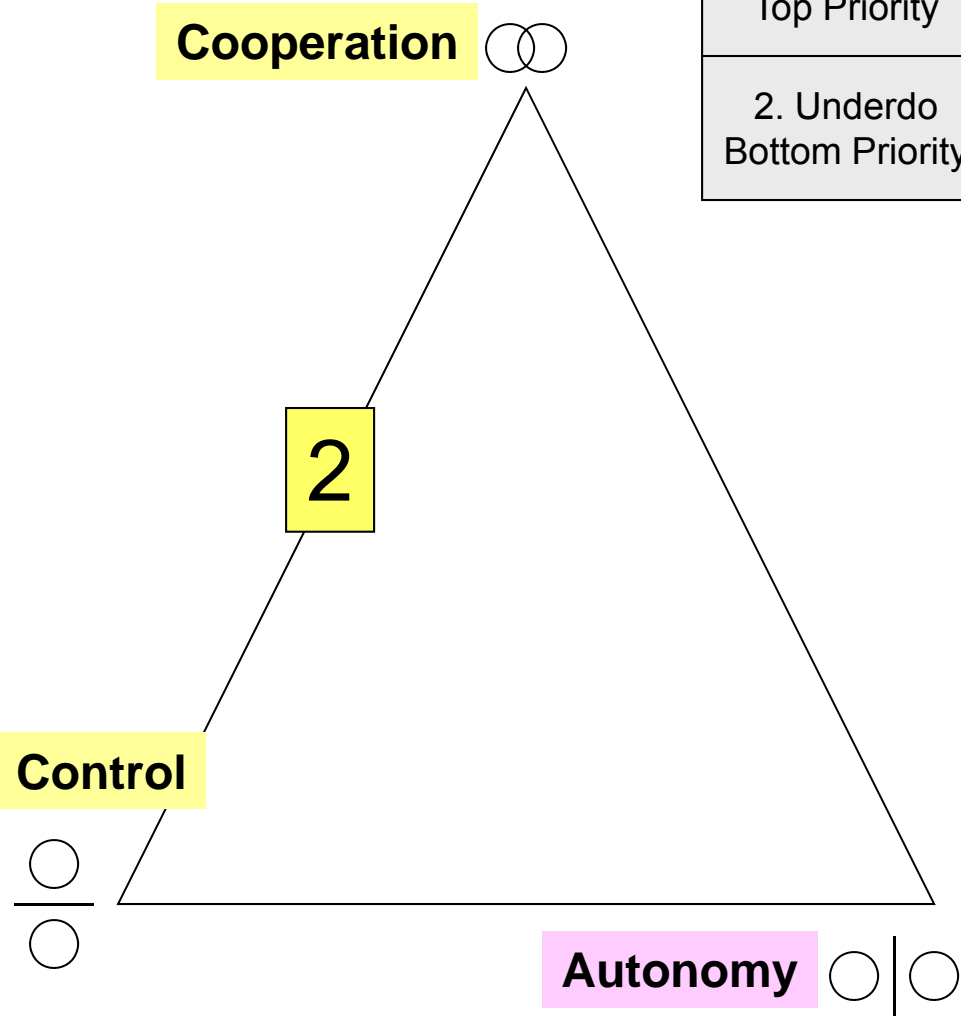
C-level groupthink, bad customer service

# Unbalanced Designs

## #2 – Under Prioritize One Element

References:  
13.

Cause	Control	Cooperation	Autonomy
1. Overdo Top Priority	Cut cost + sacrifice flex, quality, learning.	Consensus decisions. No structure.	Excessive product diversification.
2. Underdo Bottom Priority	No hierarchy or boundary. Deregulation.	No teamwork. No projects.	Devalue individual contributions.

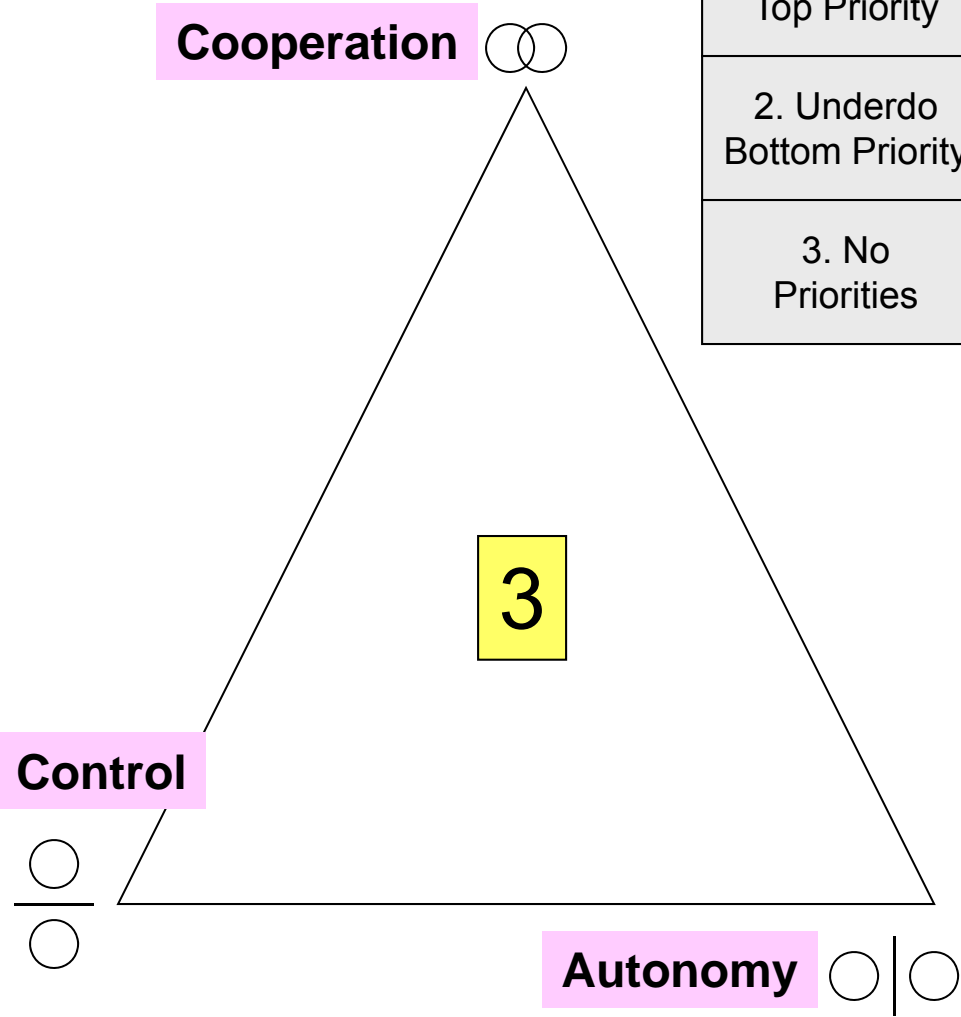


1<sup>st</sup> PC firms: Osborne, GM Research

# Unbalanced Designs

## #3 – Set No Priorities

References:  
13.



Cause	Control	Cooperation	Autonomy
1. Overdo Top Priority	Cut cost + sacrifice flex, quality, learning.	Consensus decisions. No structure.	Excessive product diversification.
2. Underdo Bottom Priority	No hierarchy or boundary. Deregulation.	No teamwork. No projects.	Devalue individual contributions.
3. No Priorities	No vision/mission. Slogan-driven. Excessively matrixed organization.		

Stopped matrix management: HP, AT&T

# e-Business Design

A Shift to Adaptability

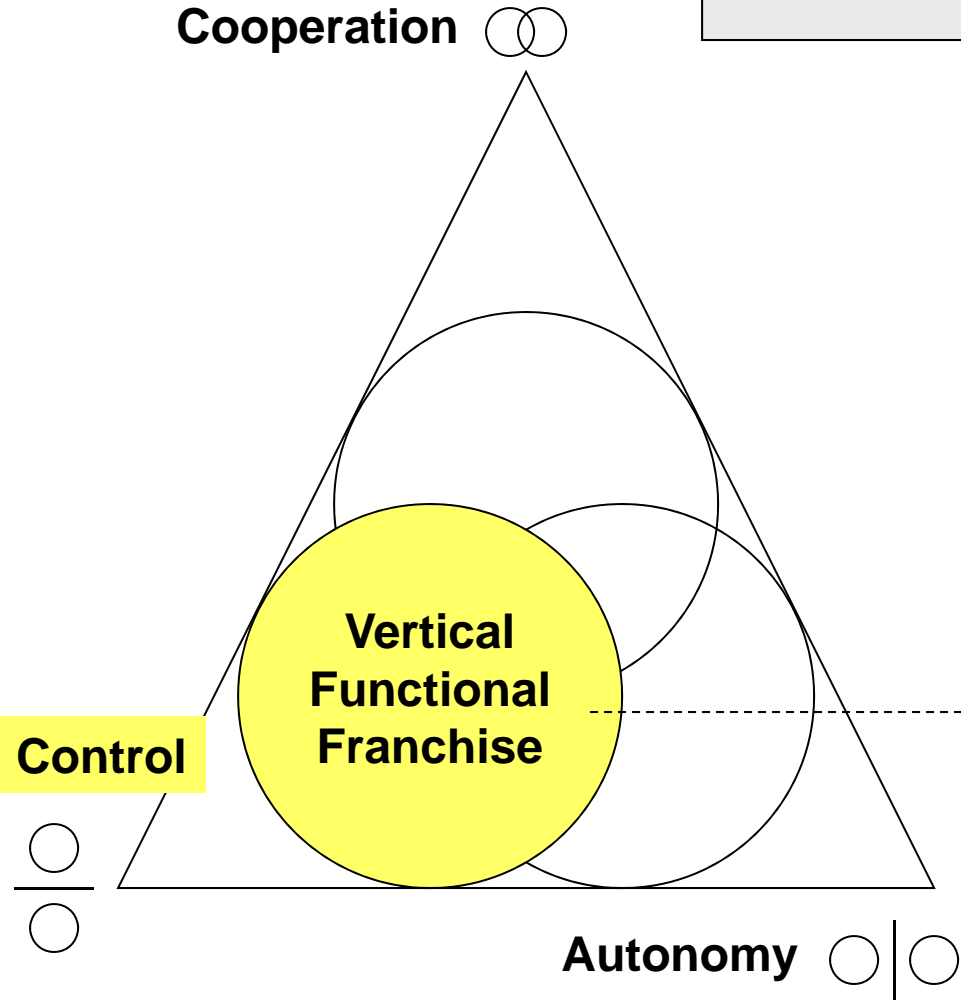
**Part I – Business Context**

**Part II – Design Framework**

- Atomic Relationships
- Unbalanced Designs
- Balanced Designs

References:  
13.

Bias	Control	Cooperation	Autonomy
Control	Vertical Functional Franchise	Humanistic hierarchy	Division



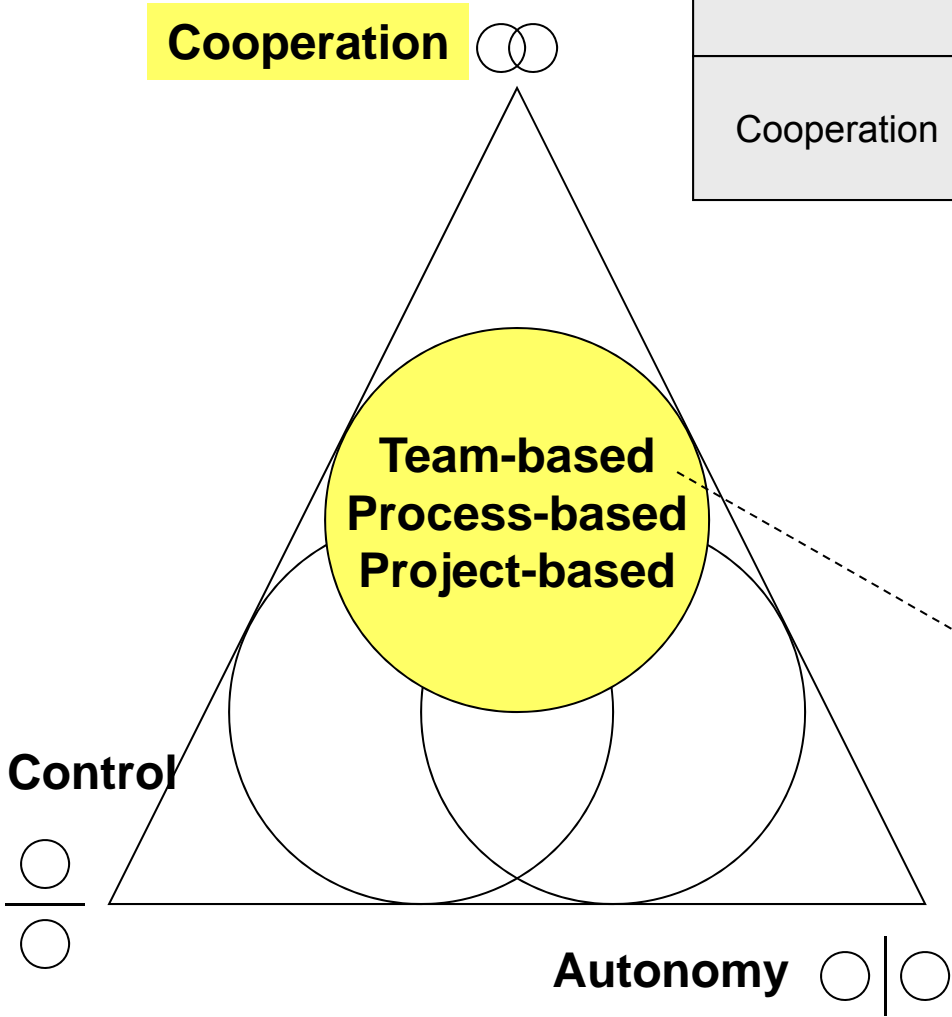
Examples:

- Manufacturing ..... High Tech
- Process Engineering ... Control Systems
- Auditing ..... Financial Firms

McDonald's (fast "food")

References:  
13.

Bias	Control	Cooperation	Autonomy
Control	Vertical Functional Franchise	Humanistic hierarchy	Division
Cooperation	Humanistic hierarchy	Team-based Process-based Project-based	Hybrid teams

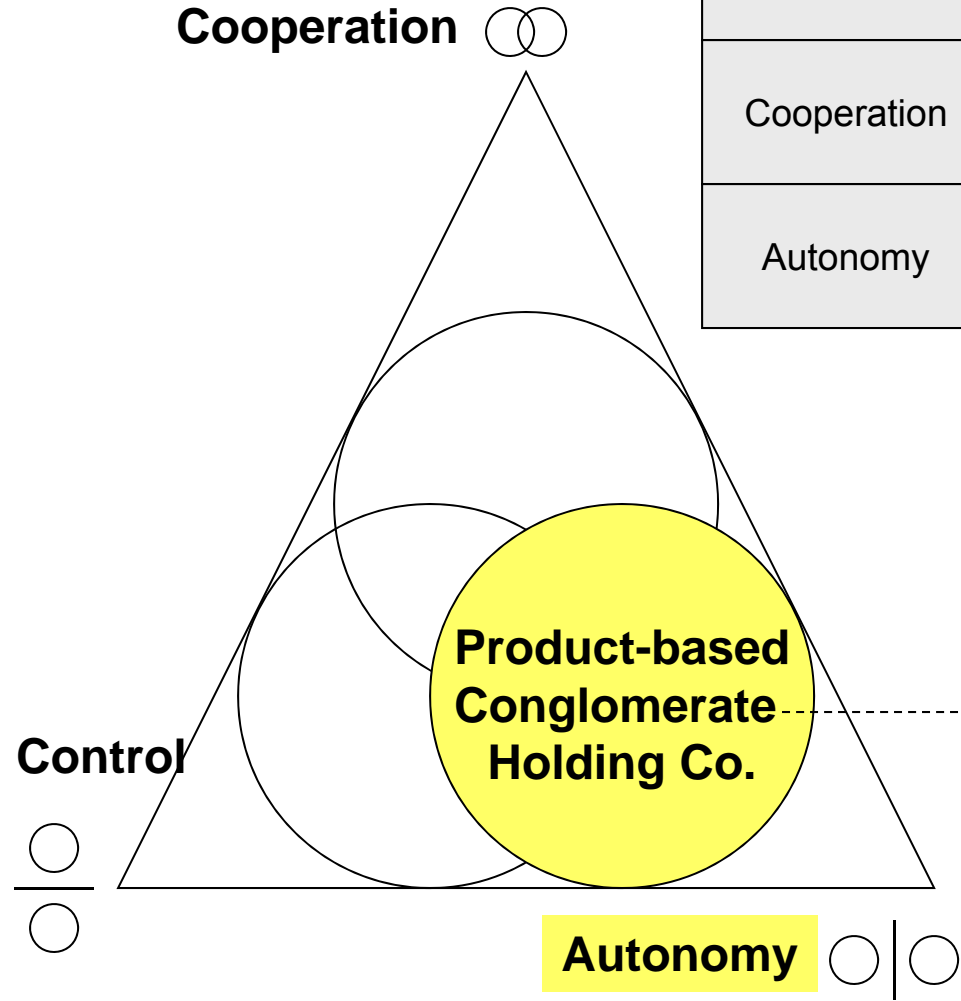


Examples:

Applied R&D .....	Auto Supply Chain
Marketing .....	“Marcom” Firms
Human Resources ...	Staffing Industry

Starrett (gauges and screws)

References:  
13.



Bias	Control	Cooperation	Autonomy
Control	Vertical Functional Franchise	Humanistic hierarchy	Division
Cooperation	Humanistic hierarchy	Team-based Process-based Project-based	Hybrid teams
Autonomy	Division	Hybrid teams	Product-based Conglomerate Holding Co.

Examples:

Basic R&D .....	Pharmaceuticals
Sales .....	Common Brands
Commodities .....	Agribusiness

**Genzyme (disease therapy)**

# e-Business Design

A Shift to Adaptability

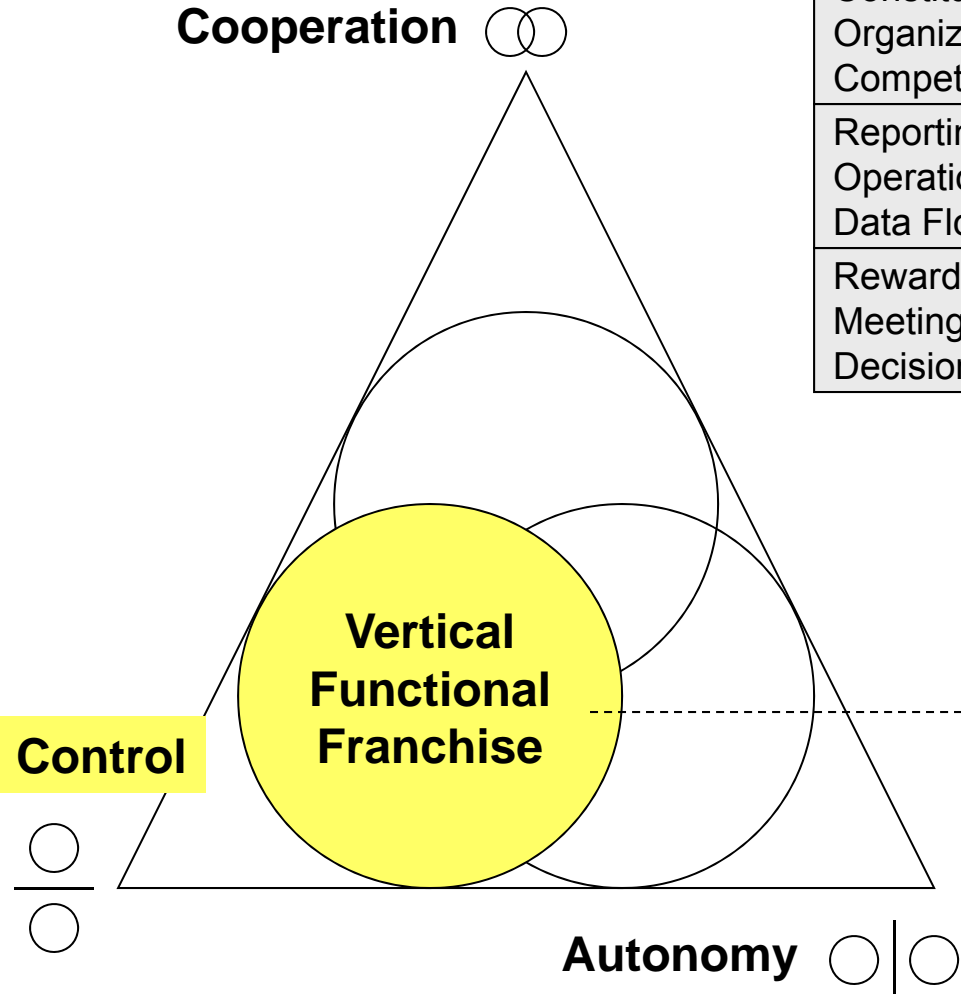
**Part I – Business Context**

**Part II – Design Framework**

**Part III – Business Design**

- Business Profiles

References:  
13,15.



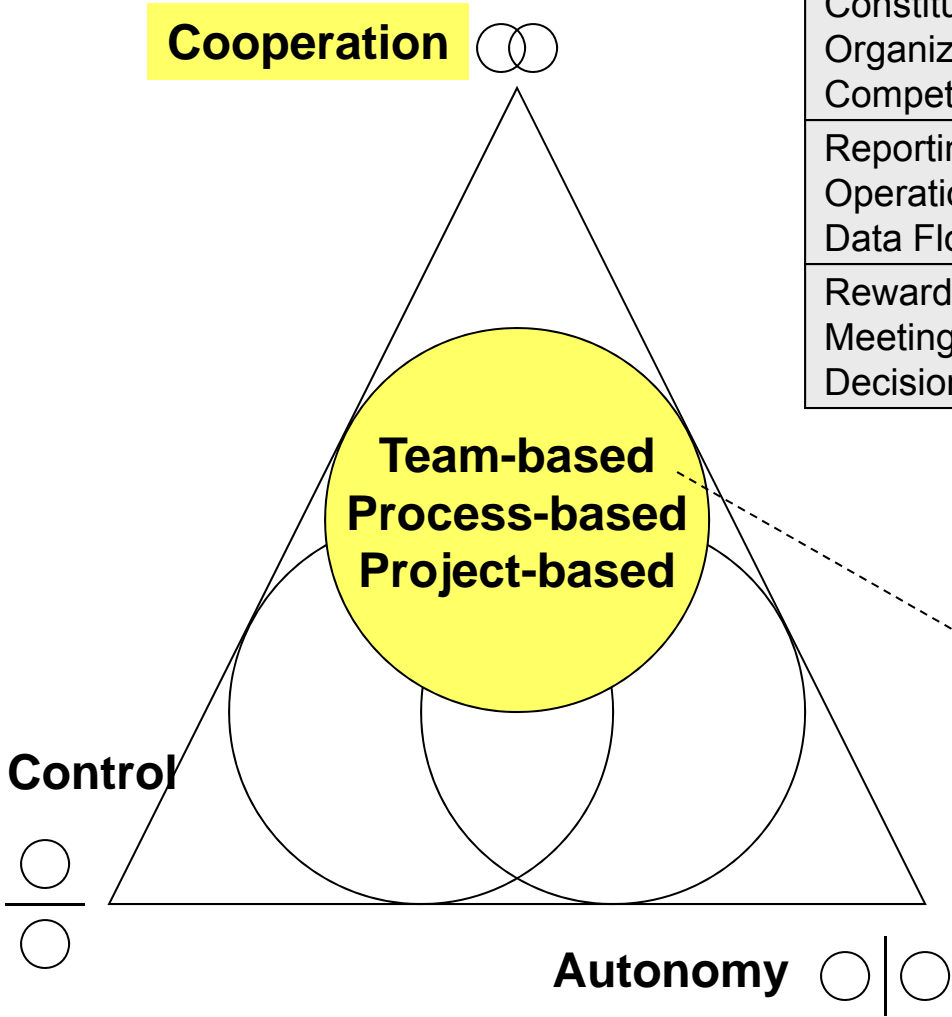
Aspect	Control
Constituency...	Shareholders
Organization....	Directives
Competition.....	Cost
Reporting.....	Steep
Operation.....	Programmed
Data Flow.....	Sequential
Rewards.....	Hierarchic
Meetings.....	Managed
Decisions.....	Mandated

Examples:

- Manufacturing ..... High Tech
- Process Engineering ... Control Systems
- Auditing ..... Financial Firms

Cisco (network technologies)

References:  
13.



Aspect	Control	Cooperation
Constituency...	Shareholders	Employee
Organization....	Directives	Teamwork
Competition.....	Cost	Flexibility
Reporting.....	Steep	Flat
Operation.....	Programmed	Spontaneous
Data Flow.....	Sequential	Reciprocal
Rewards.....	Hierarchic	Mutual
Meetings.....	Managed	Teams
Decisions.....	Mandated	Shared

**Examples:**

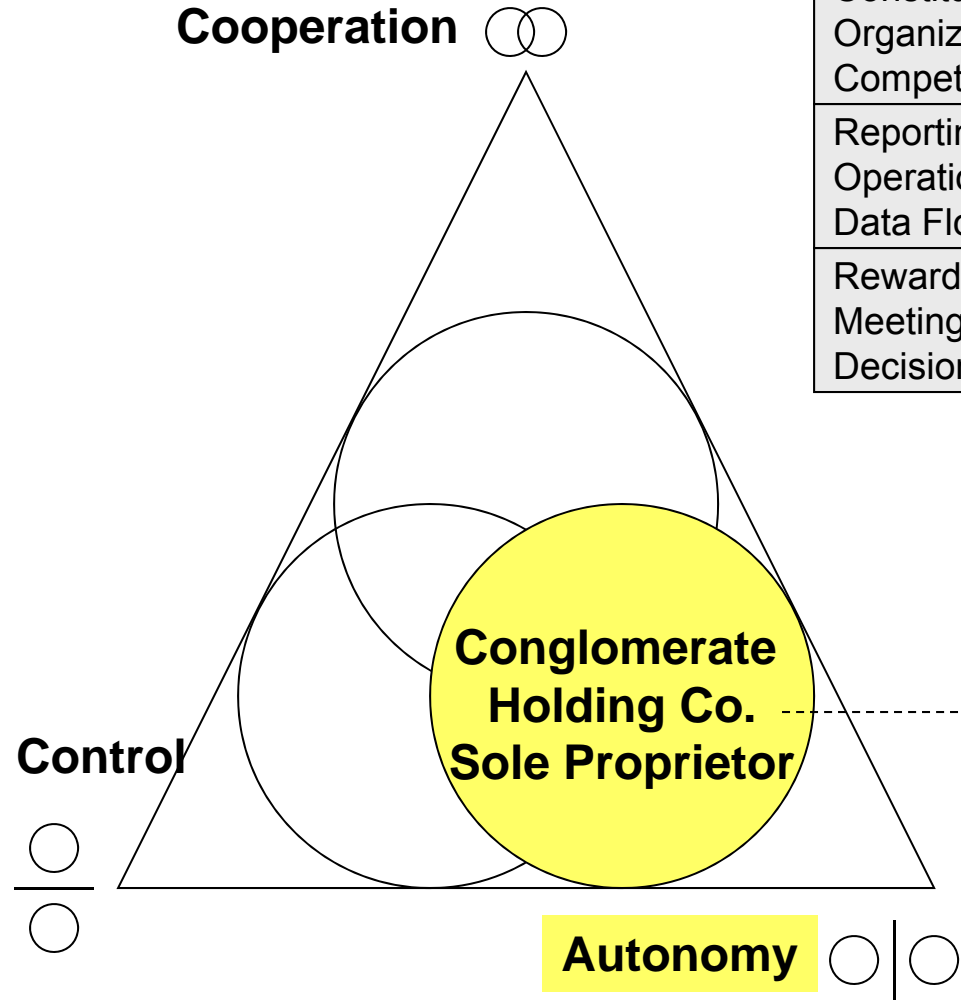
Applied R&D .....	Auto Supply Chain
Marketing .....	“Marcom” Firms
Human Resources ...	Staffing Industry

**Brady (marketing and communications)**

# Business Profiles

# Autonomy Bias – Customer Focus

References:  
13.



Aspect	Control	Cooperation	Autonomy
Constituency... Organization.... Competition.....	Shareholders Directives Cost	Employee Teamwork Flexibility	Customer Partnership Differentiation
Reporting..... Operation..... Data Flow.....	Steep Programmed Sequential	Flat Spontaneous Reciprocal	Flat Independent Pooled
Rewards..... Meetings..... Decisions.....	Hierarchic Managed Mandated	Mutual Teams Shared	Individuals Forums Delegated

Examples:

Basic R&D .....	Pharmaceuticals
Sales .....	Common Brands
Commodities .....	Agra Business

Schlumberger, Bruker (instrumentation)

# e-Business Design

A Shift to Adaptability

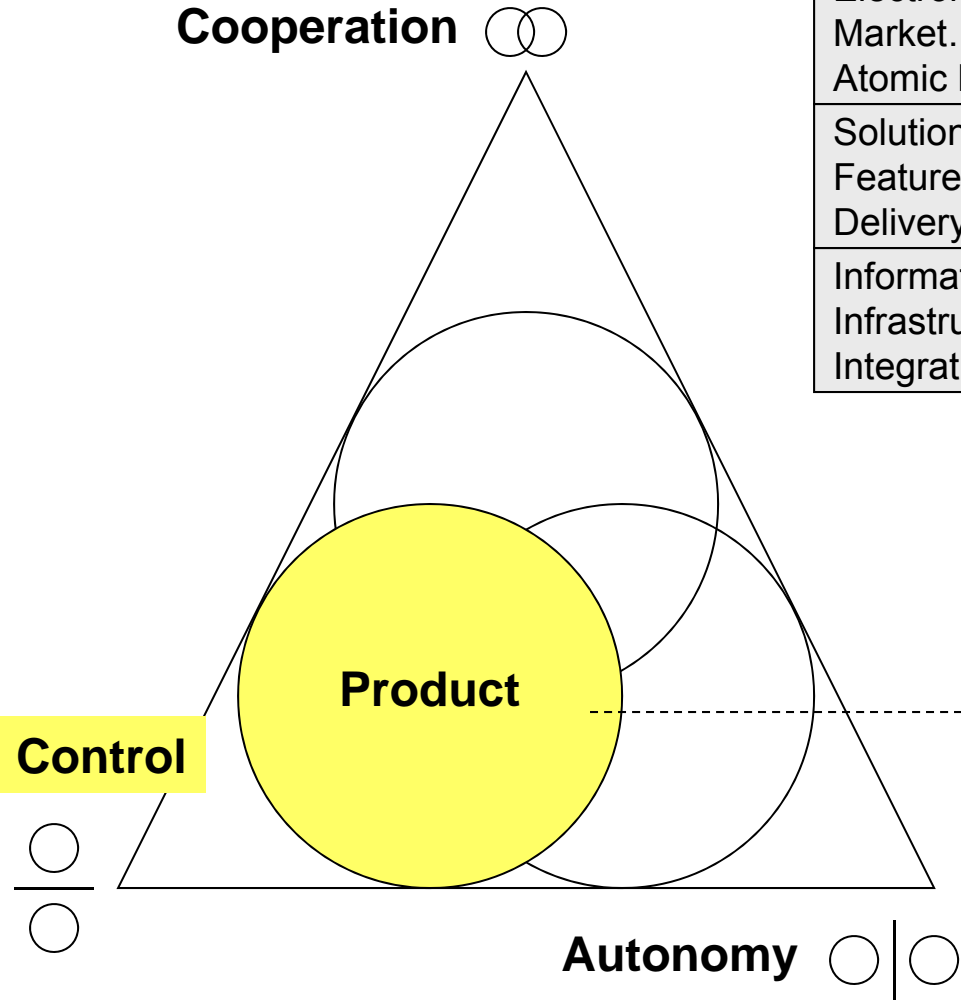
**Part I – Business Context**

**Part II – Design Framework**

**Part III – Business Design**

- Business Profiles
- e-Business Profiles

References:  
13,16.



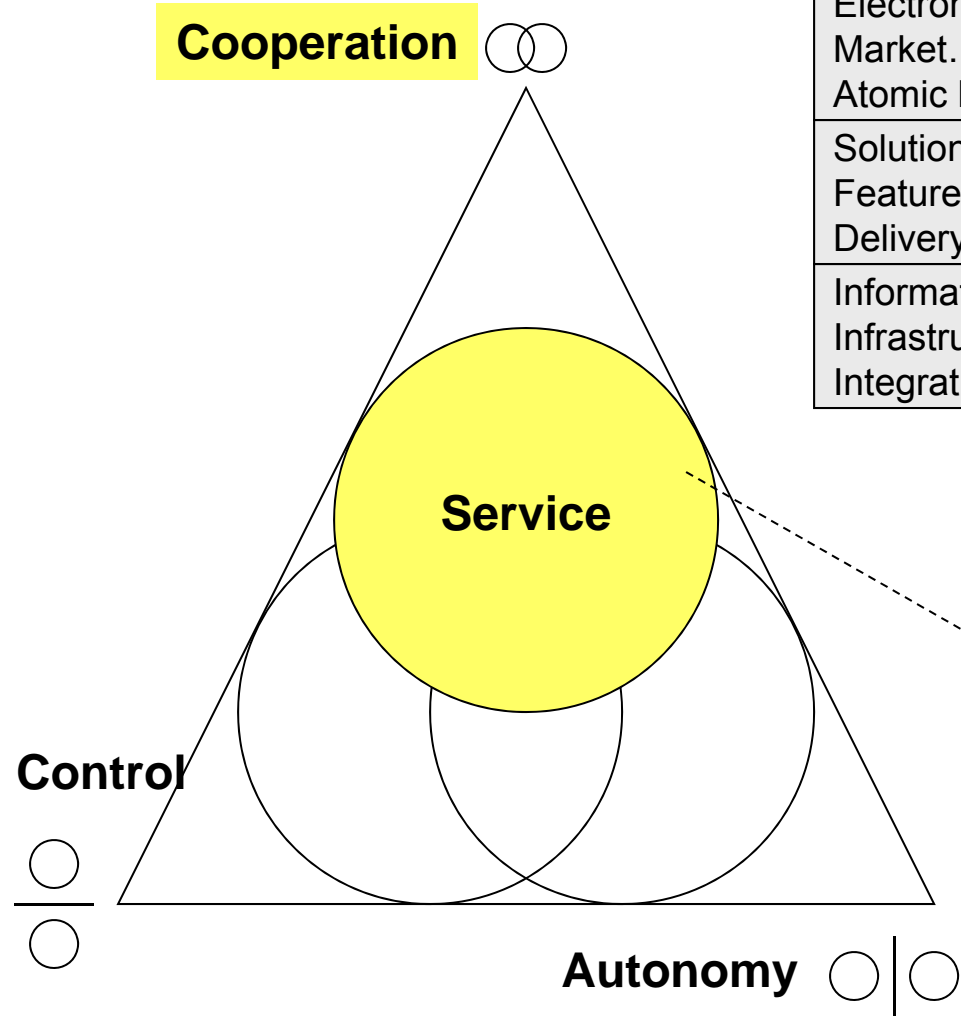
Aspect	Control
Electronic..... Market..... Atomic Model..	Commerce Mass B2B/B2C
Solution..... Features..... Delivery.....	Product Standard Portal
Information..... Infrastructure... Integration.....	Workflow Client-Server Constrained

Examples:

Mass Market ..... Amazon.com  
 Standard Product ..... Zappos.com  
 Cross Sell ..... Continental Air

Target.com (clothing, household items)

References:  
13,16,17,18,19.



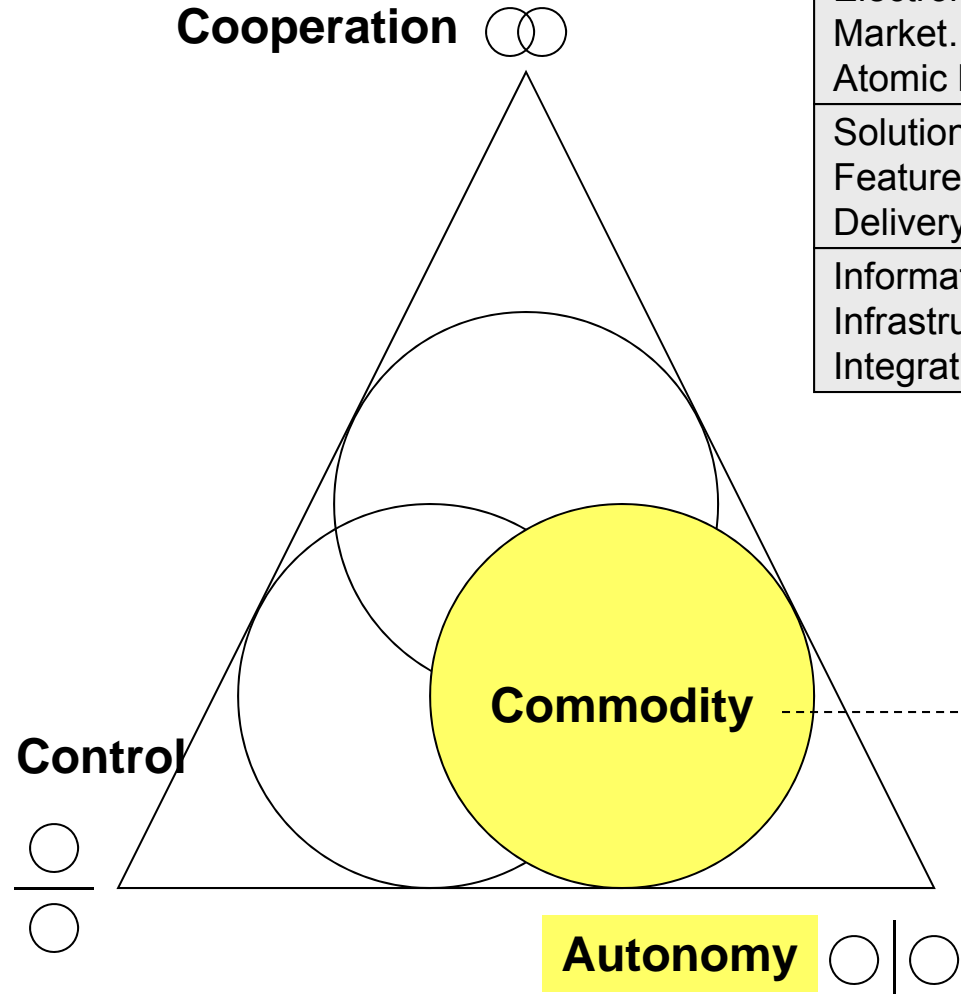
Aspect	Control	Cooperation
Electronic..... Market..... Atomic Model..	Commerce Mass B2B/B2C	Broker Niche C2B/C2C
Solution..... Features..... Delivery.....	Product Standard Portal	Services Configured Agent
Information..... Infrastructure... Integration.....	Workflow Client-Server Constrained	Network Grid/Cloud Standard

**Closest Examples:**

- Broker Services ..... Mortgage.com
- Intelligent Agent ..... SORMA
- Social Network ..... Dooce.com

**Priceline.com (discount travel)**

References:  
13,16,20,21,22.



Aspect	Control	Cooperation	Autonomy
Electronic..... Market..... Atomic Model..	Commerce Mass B2B/B2C	Broker Niche B2C/C2C	Barter Individual C2C
Solution..... Features..... Delivery.....	Product Standard Portal	Services Configured Agent	Commodity Custom Exchange
Information..... Infrastructure... Integration.....	Workflow Client-Server Constrained	Network Grid/Cloud Standard	Recommend P2P None

Closest Examples:

Exchange ..... eBay.com  
 e-Money ..... PayPal, Visa Cash  
 Recommender ..... eBay, Amazon

Gruen, et. al. 2005 (MOA theory)

# e-Business Design

A Shift to Adaptability

**Part I – Business Context**

**Part II – Design Framework**

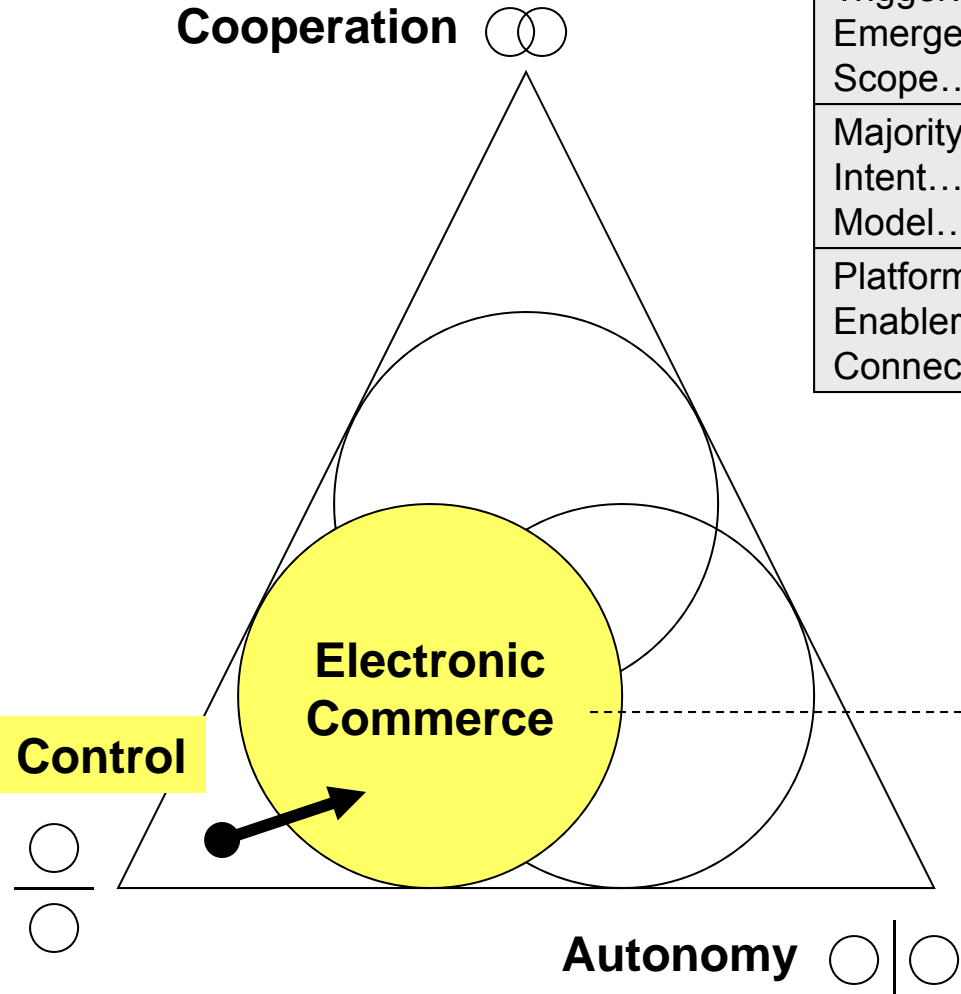
**Part III – Business Design**

- Business Profiles
- e-Business Profiles
- e-Business Shifts

# e-Business Shifts

# e-Commerce: More Balance

References:  
13,23,24.



Aspect	Control
Trigger.....	Internet
Emergence.....	1995
Scope.....	Macro
Majority.....	Mass Market
Intent.....	Nice to Have
Model.....	Statistical
Platform.....	Computer
Enabler.....	Multi-Media
Connection.....	Network

Examples:

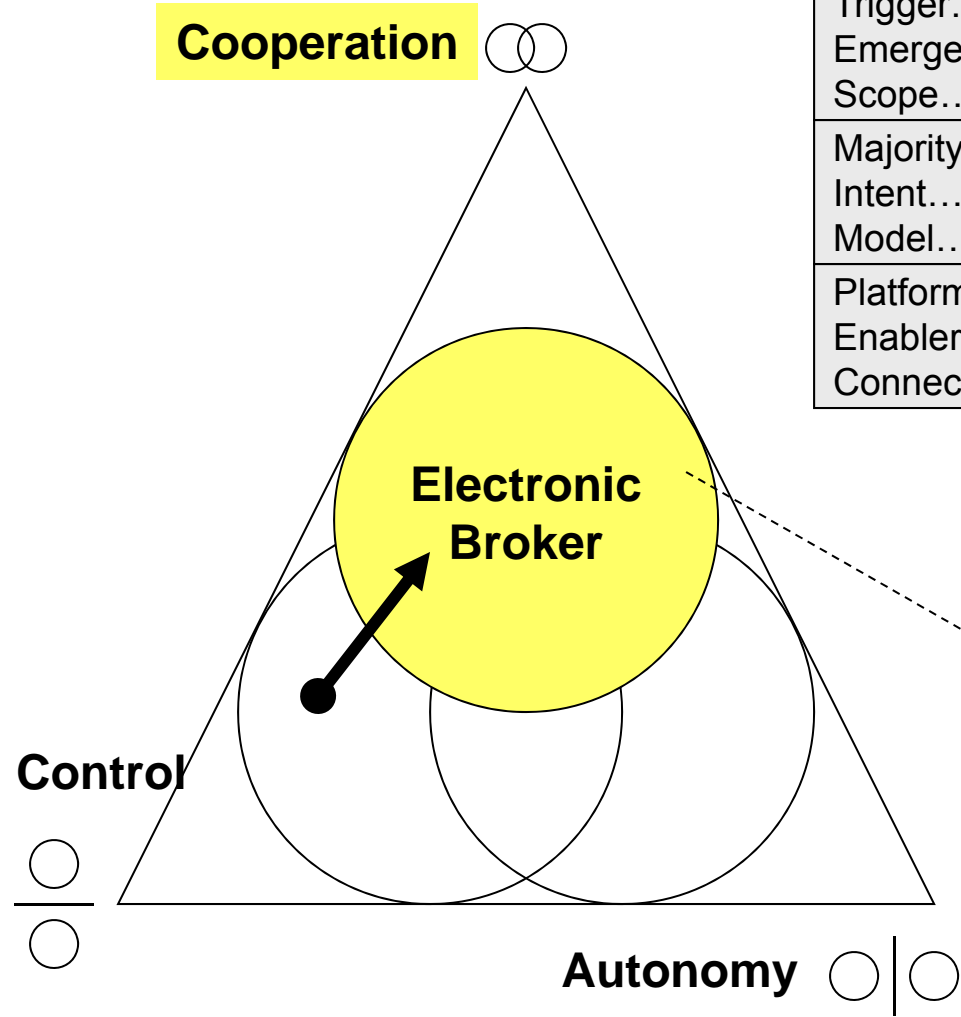
C2C Forum ..... c2c Rail Info (UK)  
 Personalization ..... Dell (corp clients)  
 Whole Solution ..... Continental Air

**BuyBookShop.com (buyer forum)**

# e-Business Shifts

# e-Broker: More Common after 2010?

References:  
13,25,26,27.



Aspect	Control	Cooperation
Trigger.....	Internet	Spending
Emergence.....	1995	After 2010?
Scope.....	Macro	Macro/Micro
Majority.....	Mass Market	Group/Swarm
Intent.....	Nice to Have	Need to Have
Model.....	Statistical	Agent-Based
Platform.....	Computer	Agent
Enabler.....	Multi-Media	Forum
Connection.....	Network	SOA

**Closest Examples:**

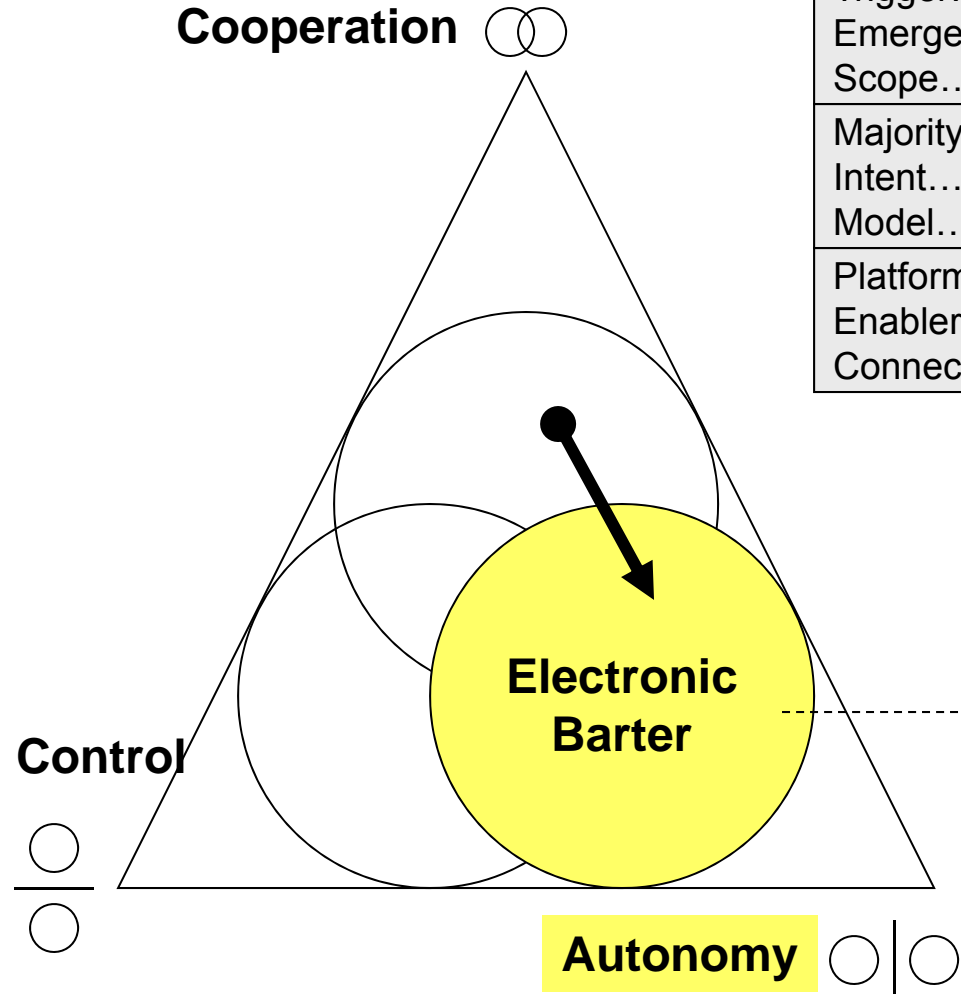
- Web Services ..... Amazon suite
- Intelligent Agent ..... e-Negotiation
- Social Network ..... Dooce.com

**Watson: CauseWired (virtual coalition)**

# e-Business Shifts

# e-Barter: Needed after 2050?

References:  
13,28,29,30,31.



Aspect	Control	Cooperation	Autonomy
Trigger.....	Internet	Spending	Oil
Emergence.....	1995	After 2010?	After 2050?
Scope.....	Macro	Macro/Micro	Micro
Majority.....	Mass Market	Group/Swarm	Individual
Intent.....	Nice to Have	Need to Have	Must Have
Model.....	Statistical	Agent-Based	Agent-Based
Platform.....	Computer	Agent	Exchange
Enabler.....	Multi-Media	Forum	e-Credit
Connection.....	Network	SOA	Phone

Closest Examples:

Exchange .....	Craig's List, eBay
e-Money .....	PayPal, TimeBank
Recommender .....	eBay, Amazon

[TimeBanks.org](http://TimeBanks.org)

# e-Business Design

A Shift to Adaptability

**Part I – Business Context**

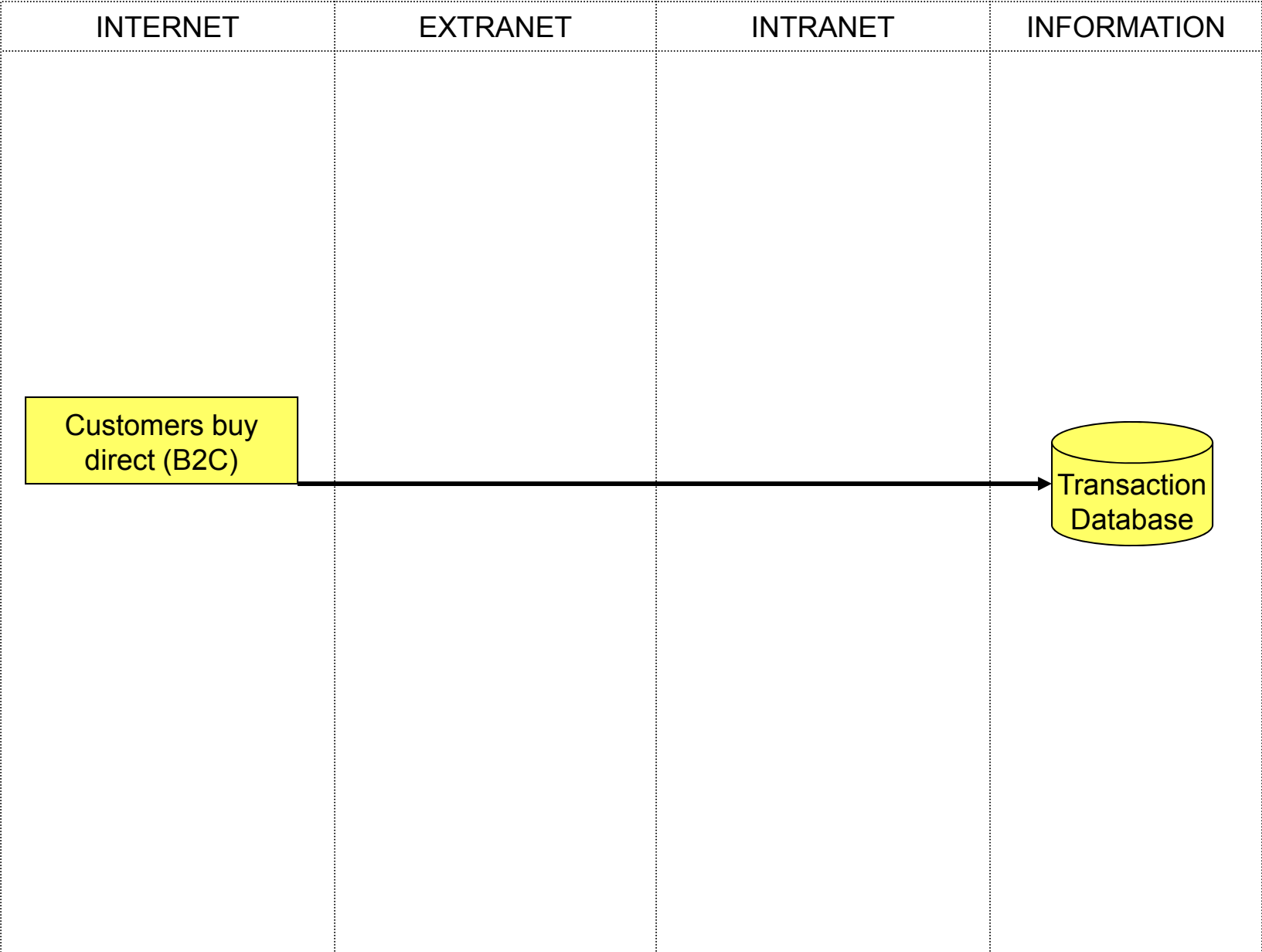
**Part II – Design Framework**

**Part III – Business Design**

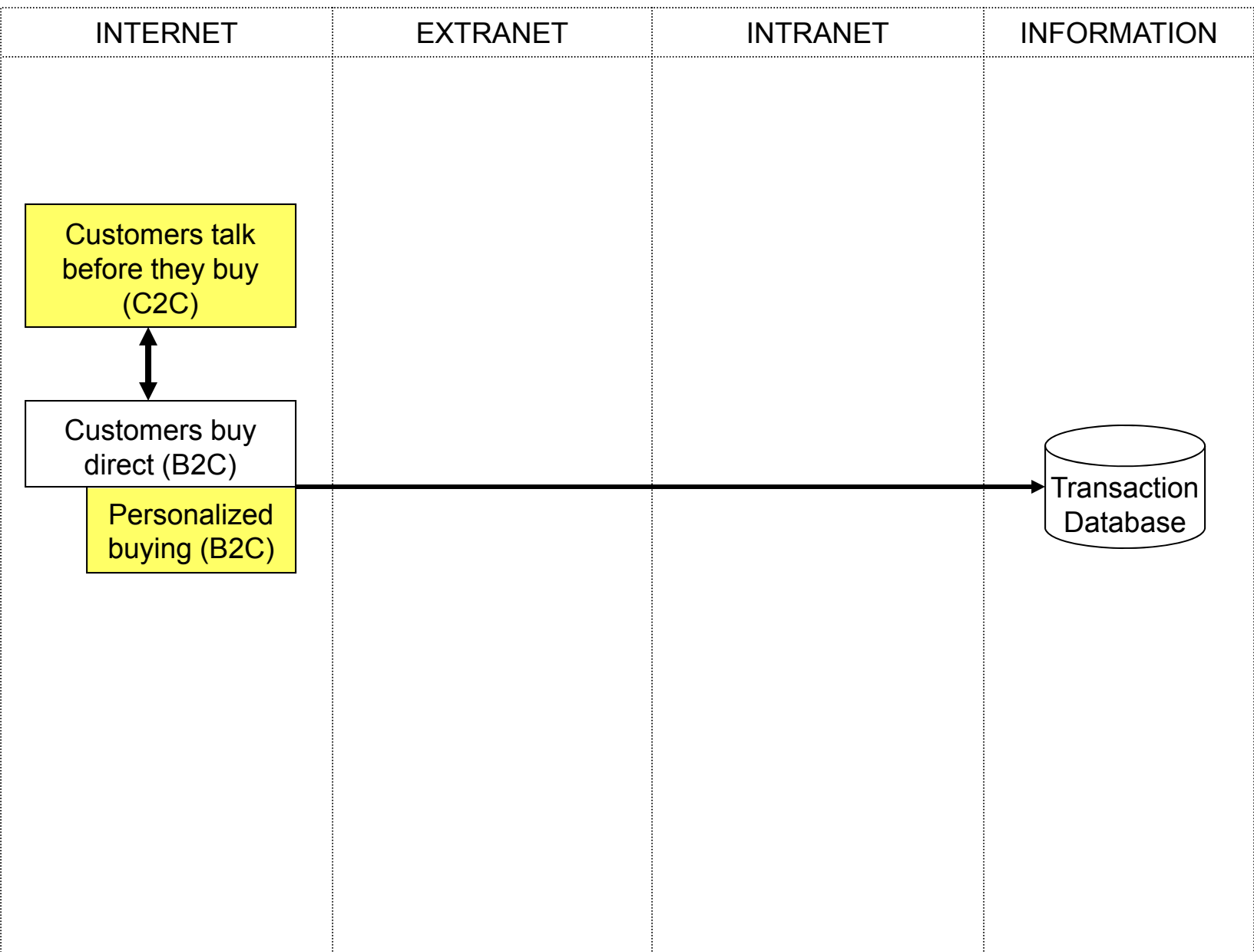
**Part IV – e-Business Design**

- Adaptive e-Commerce

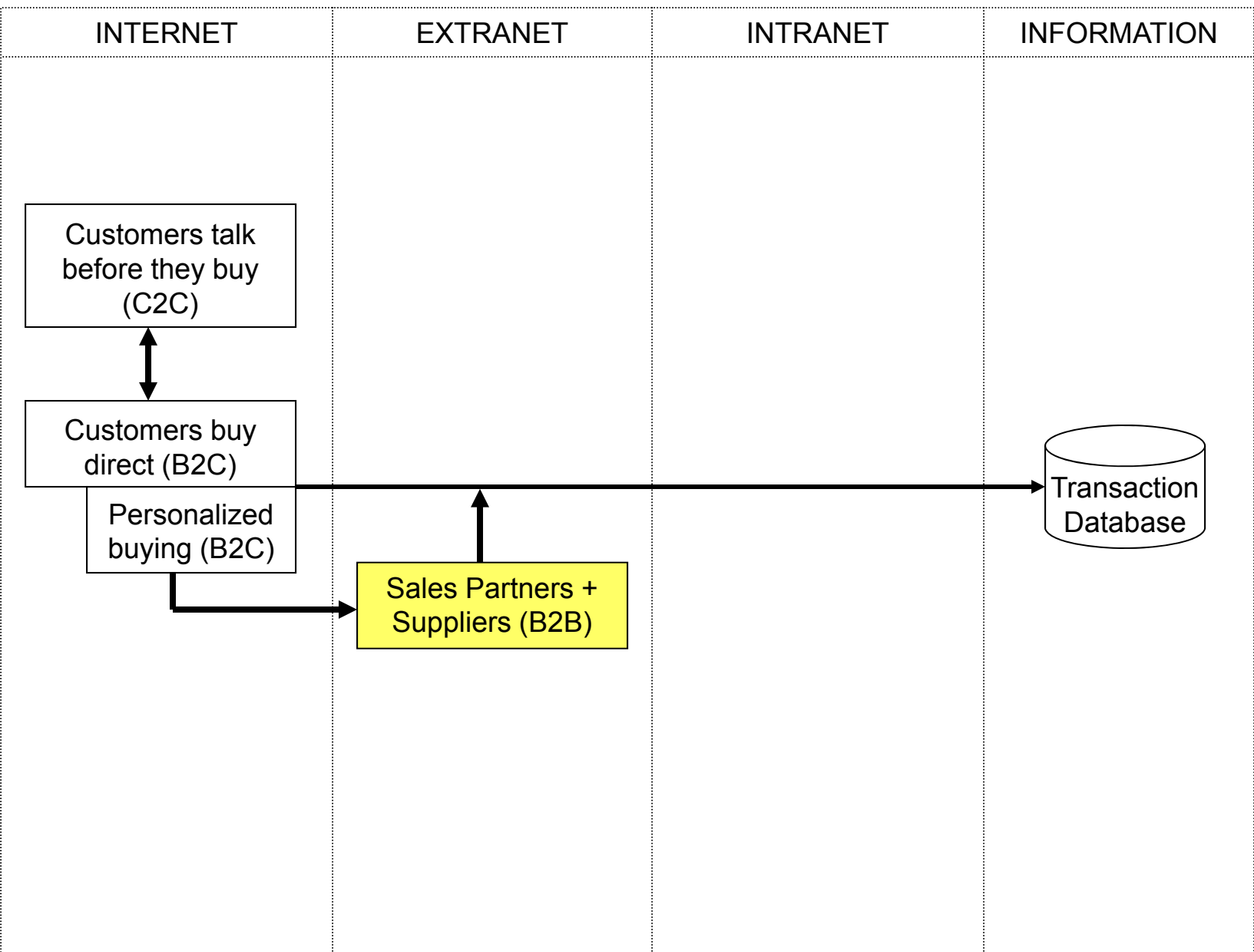
References:  
24.



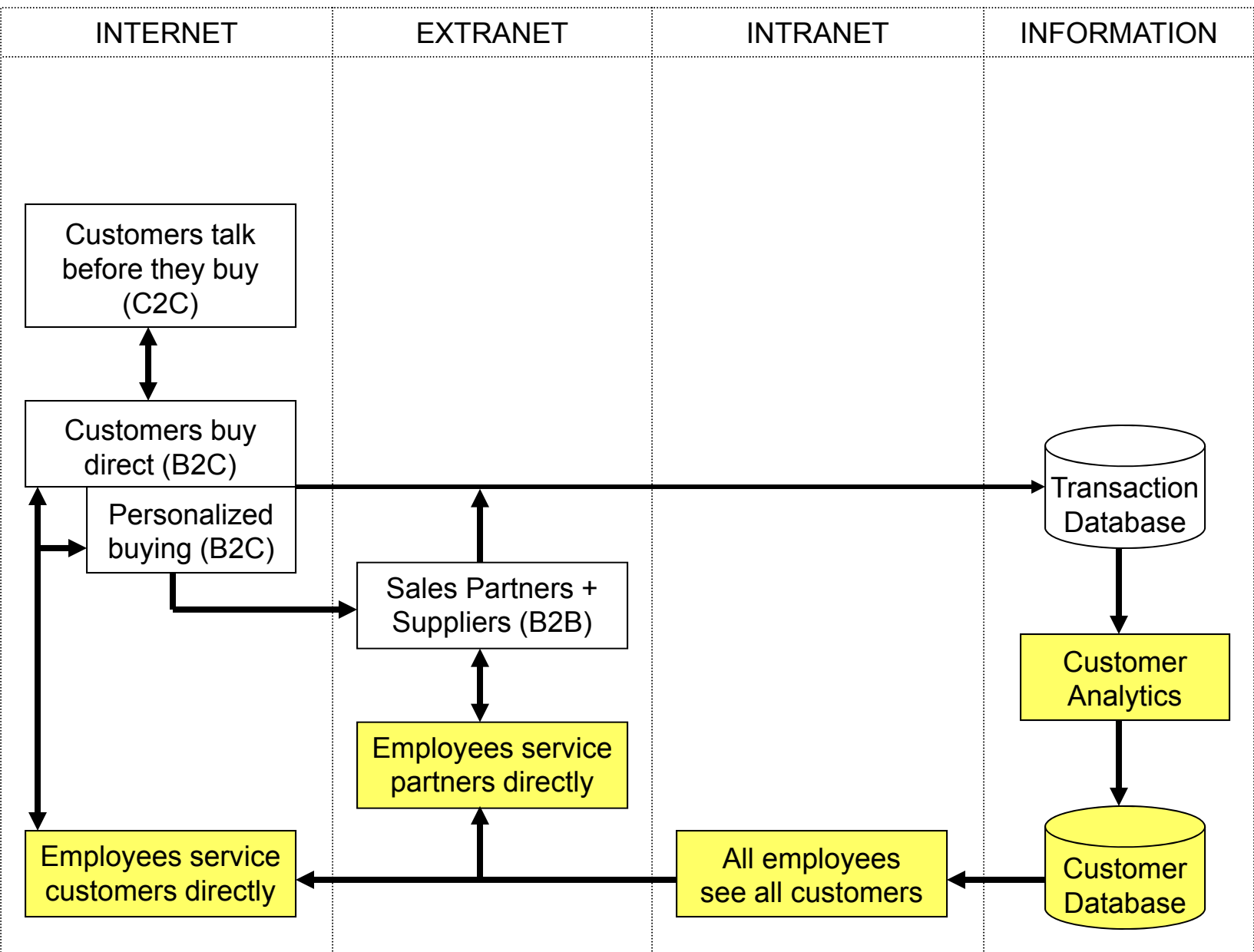
References:  
16,25,32,33,34,  
35,36,37,38,39.



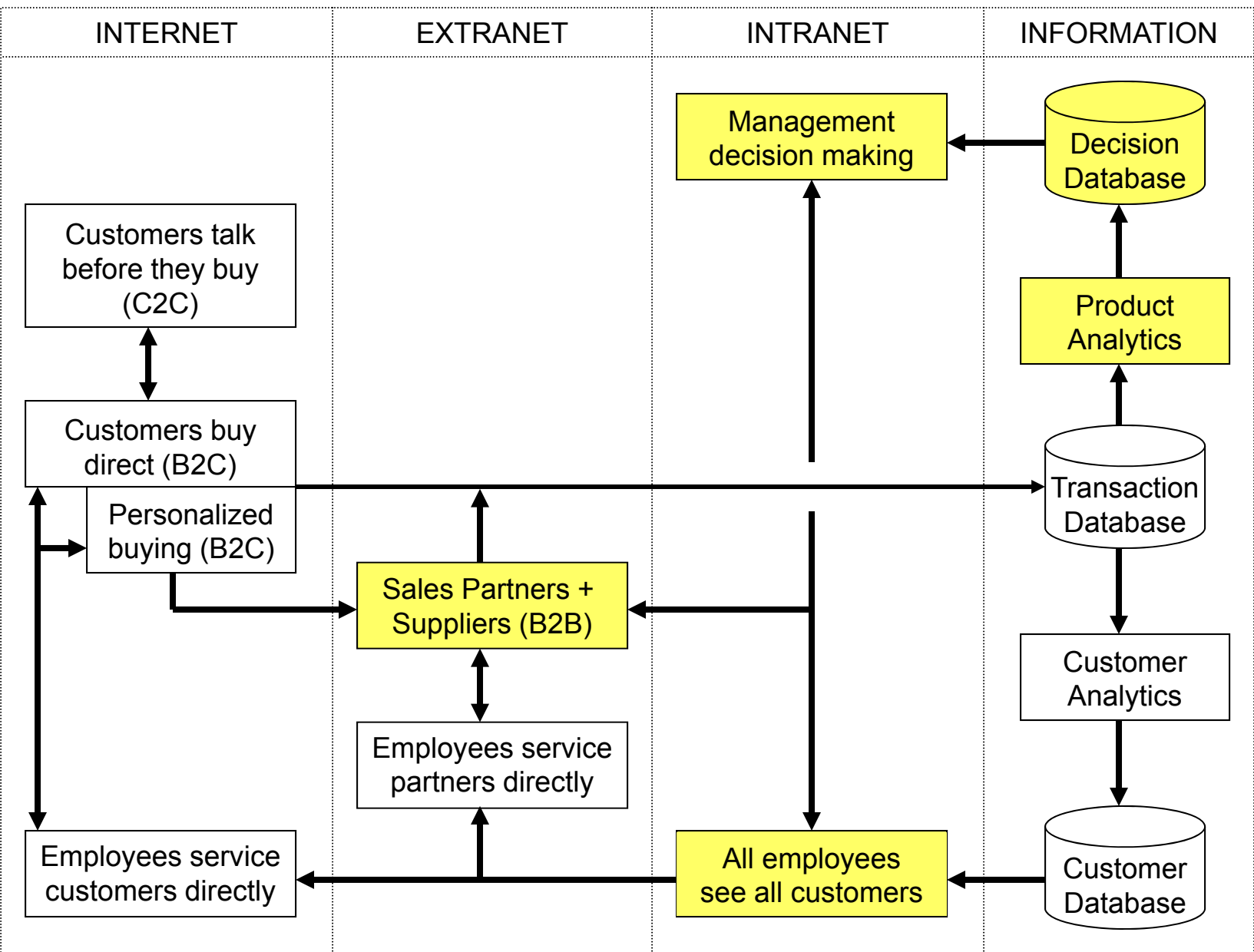
References:  
16,25,40.



References:  
25,40.



References:  
25,40.



# e-Business Design

A Shift to Adaptability

**Part I – Business Context**

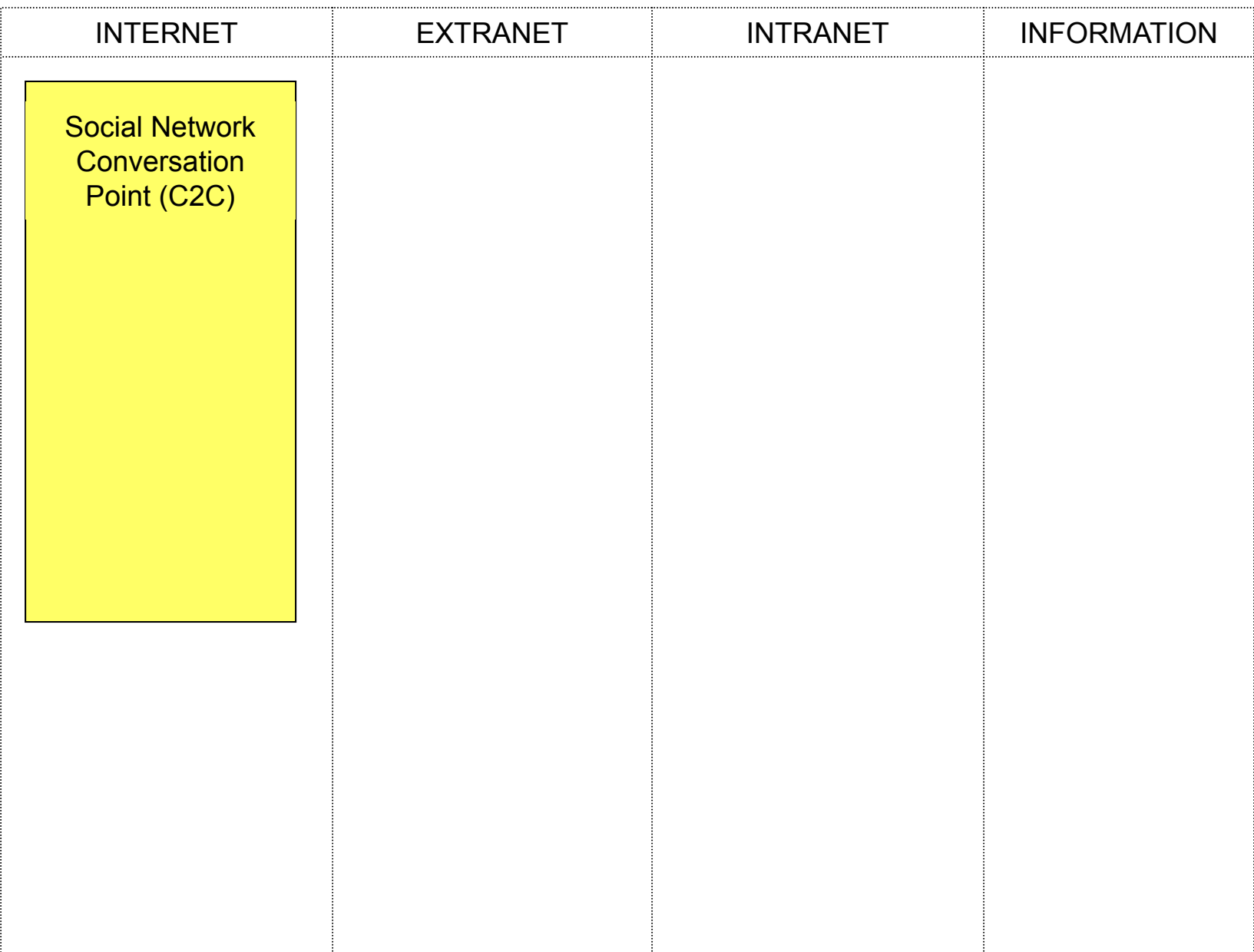
**Part II – Design Framework**

**Part III – Business Design**

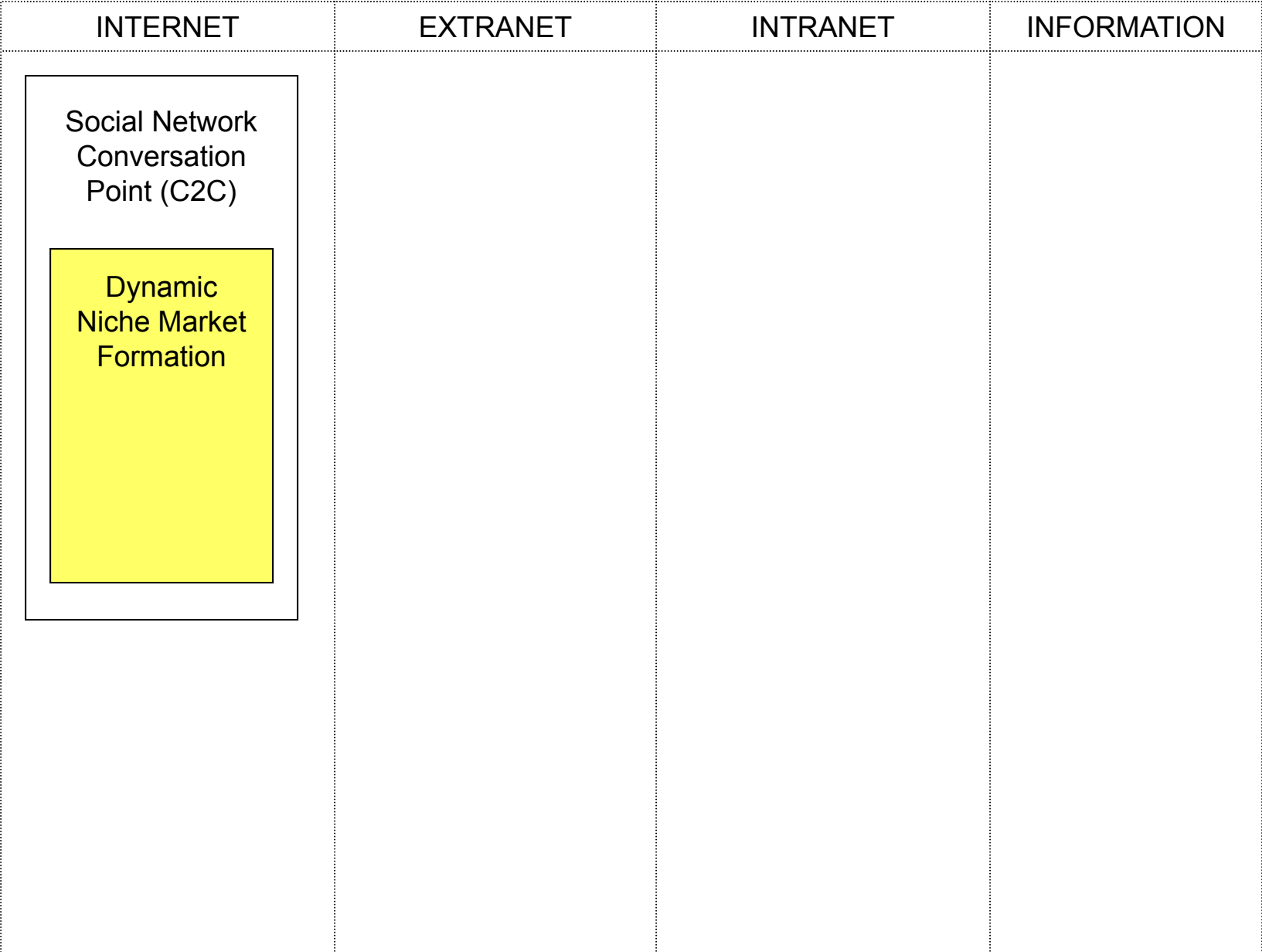
**Part IV – e-Business Design**

- Adaptive e-Commerce
- Adaptive e-Broker

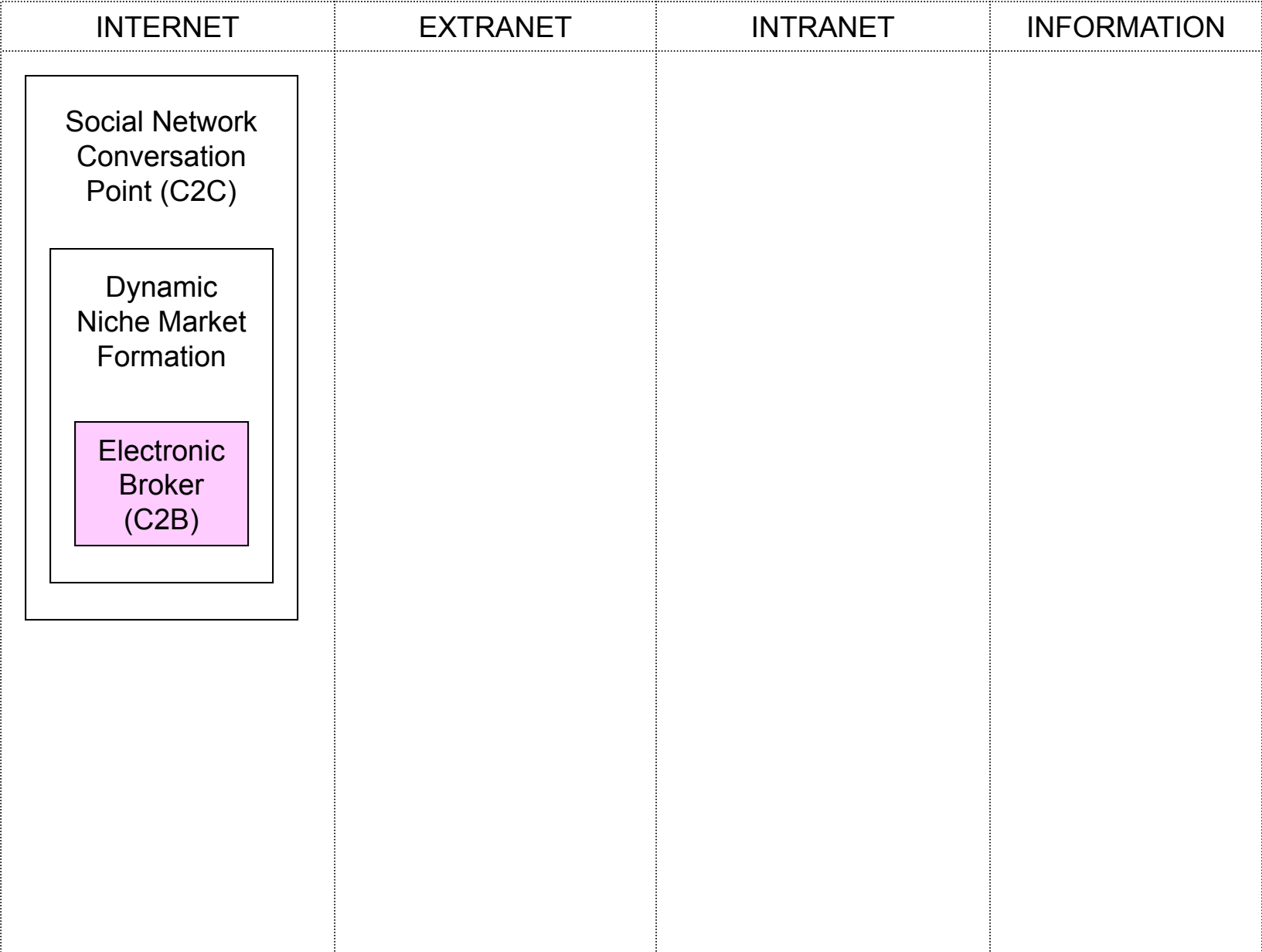
References:  
25.



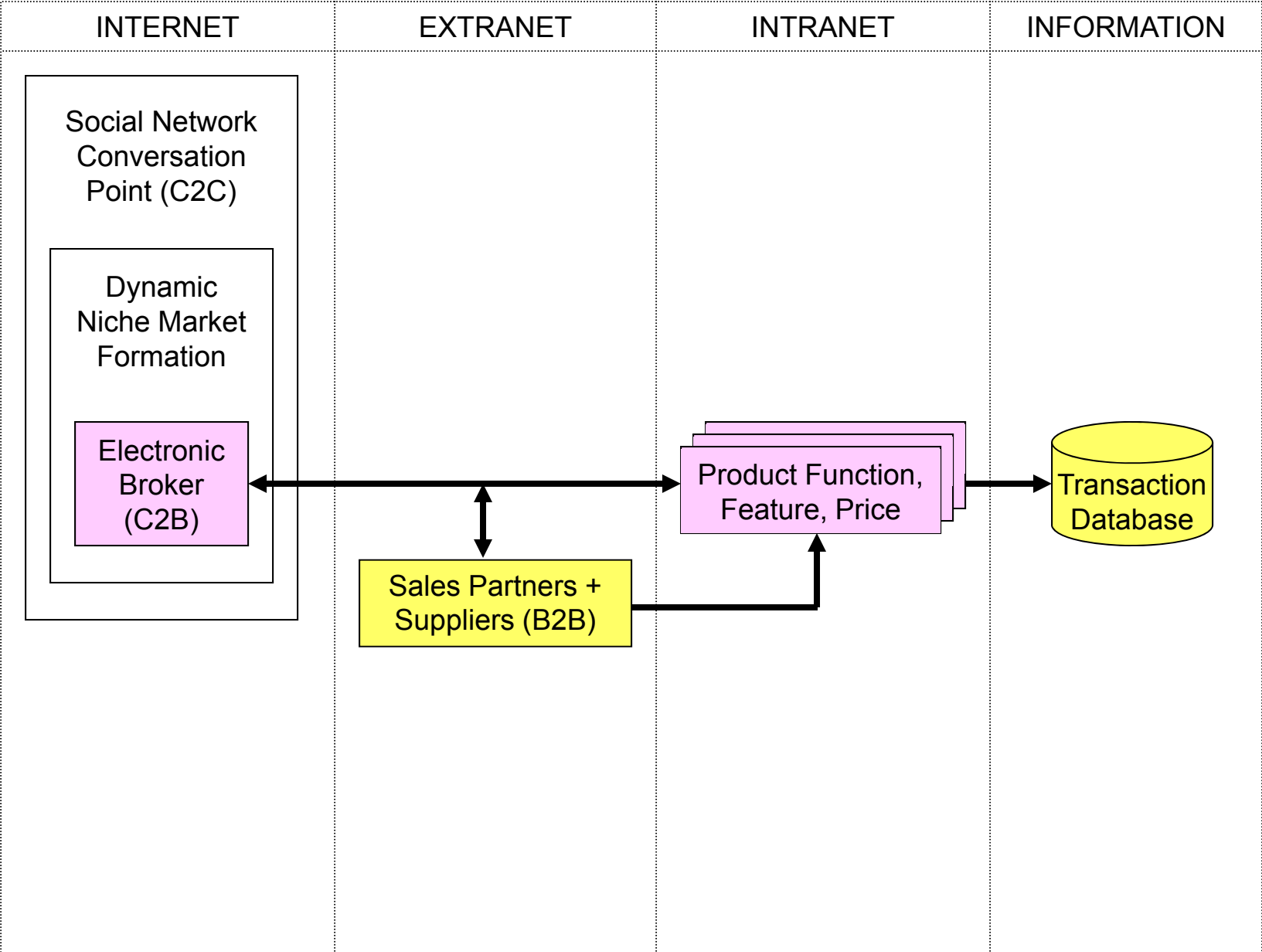
References:  
25,42,43.



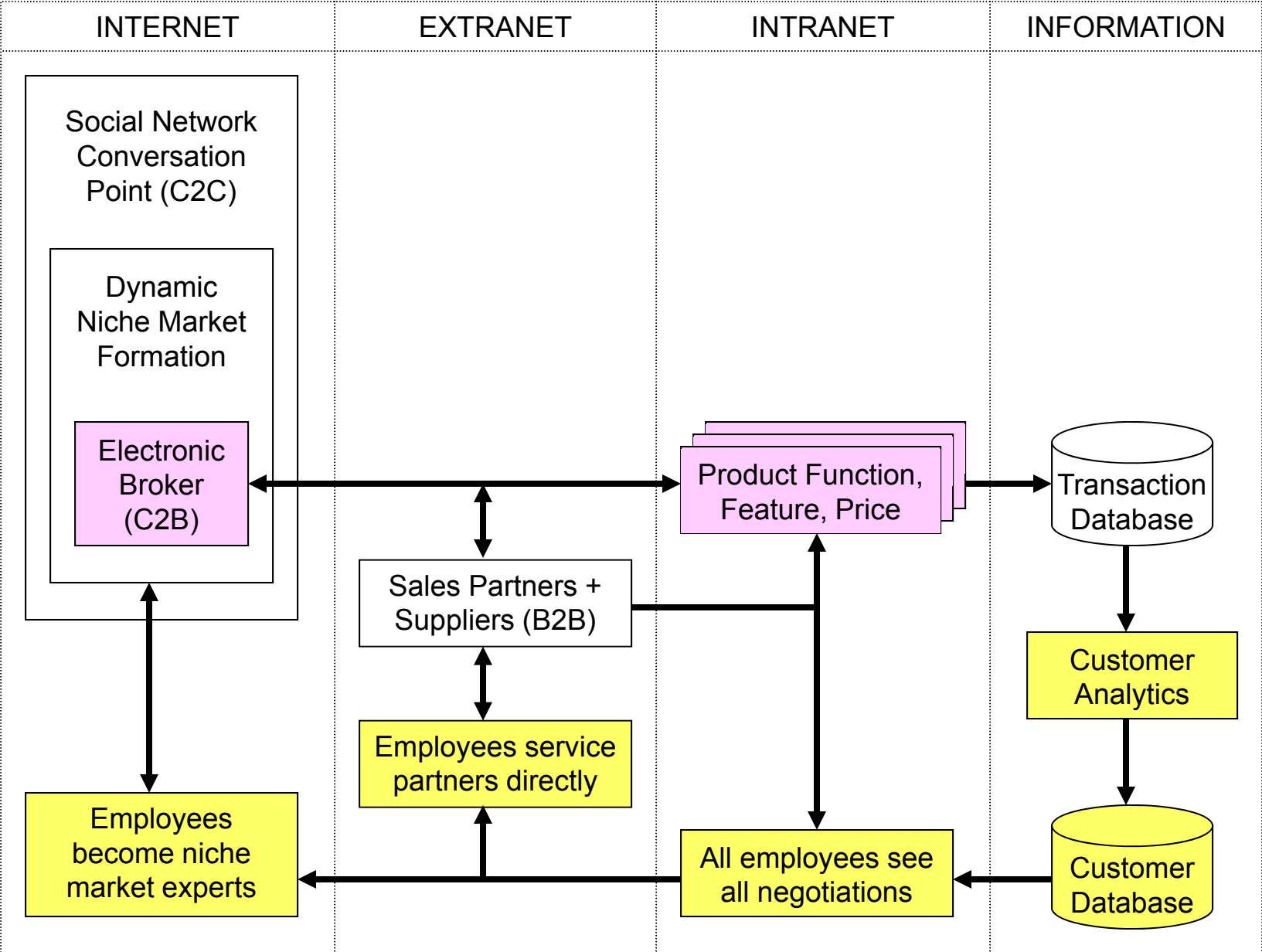
References:  
25,44,45,46.



References:  
25,40.



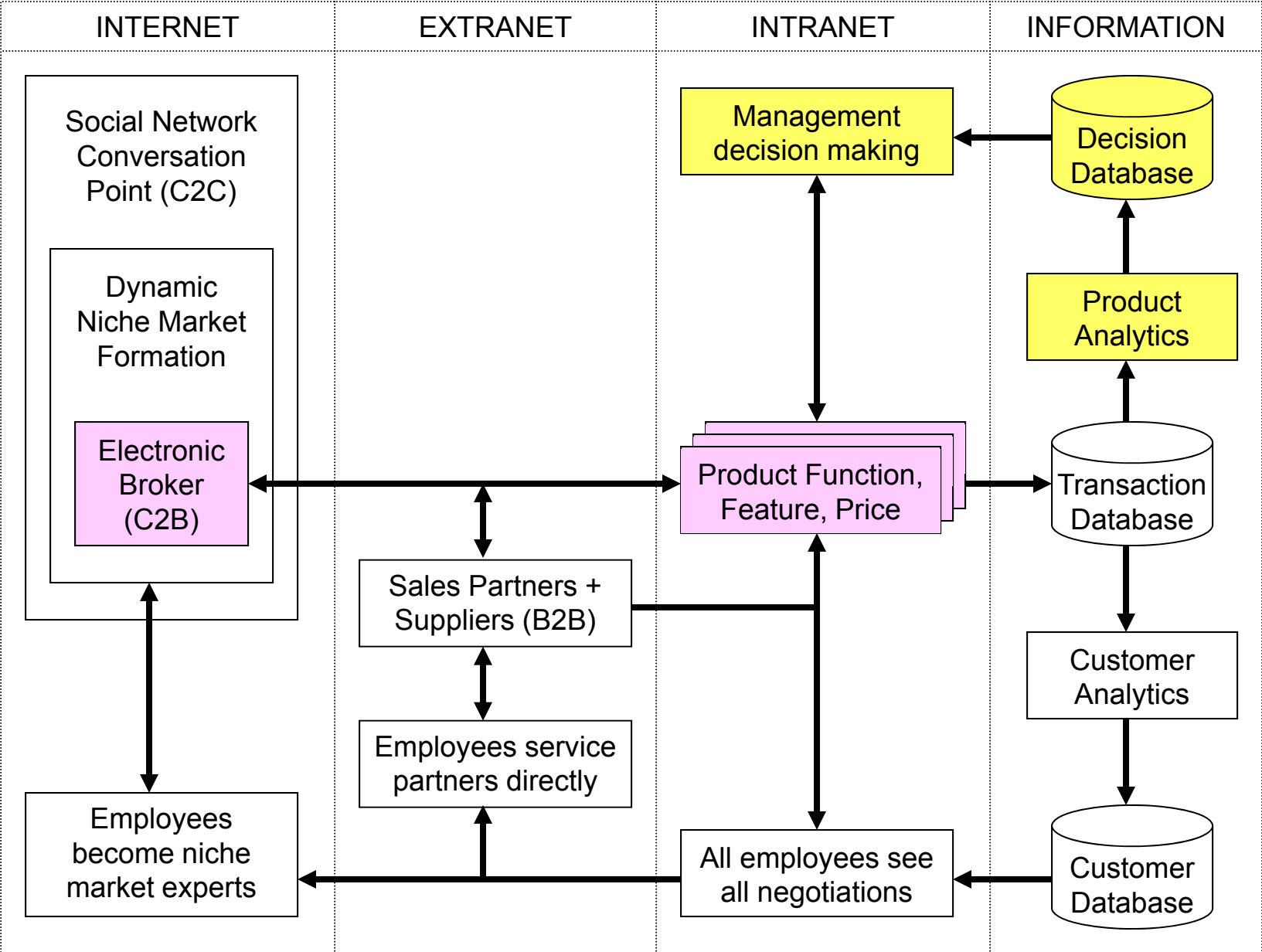
References:  
25,40.



# Adaptive e-Broker

# ... Including Management (Li, 2008)

References:  
25,40.



# e-Business Design

A Shift to Adaptability

**Part I – Business Context**

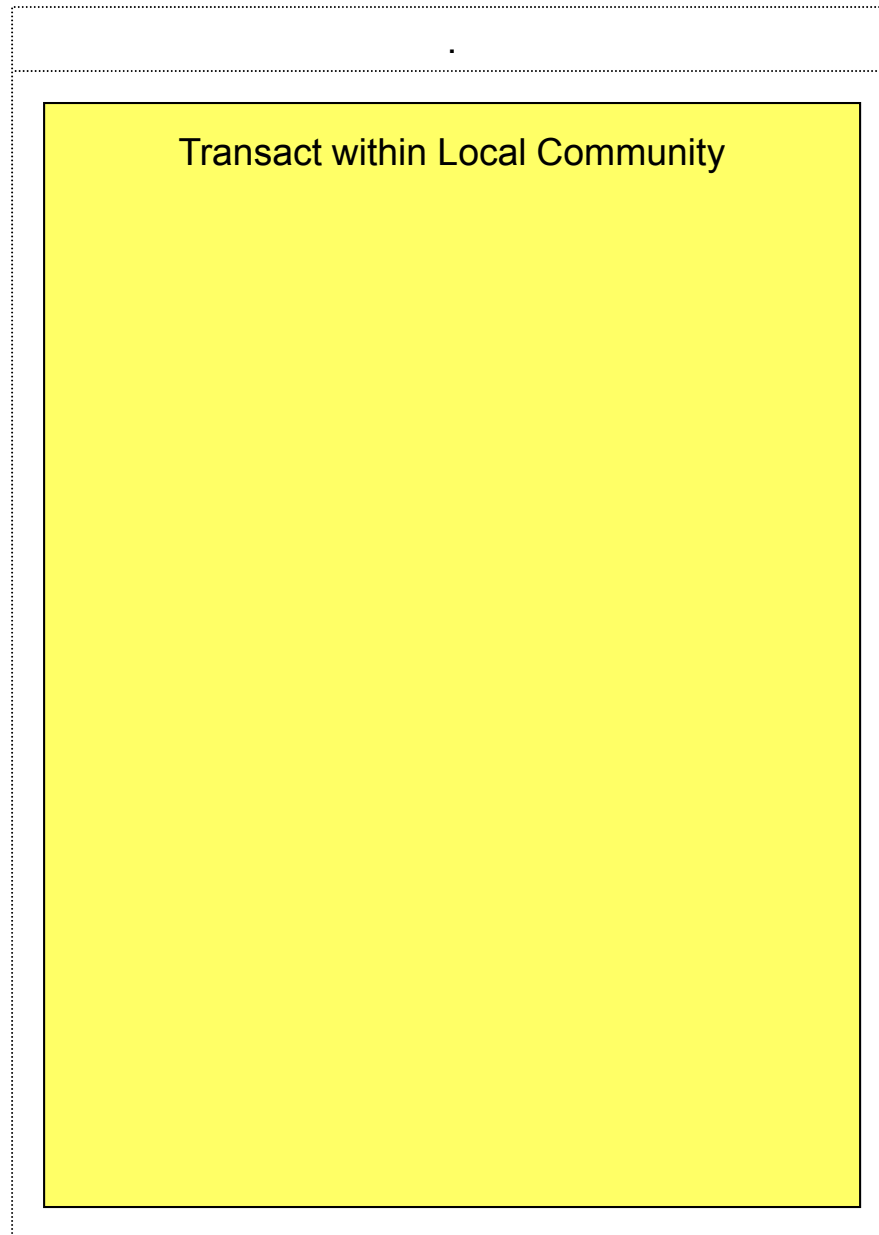
**Part II – Design Framework**

**Part III – Business Design**

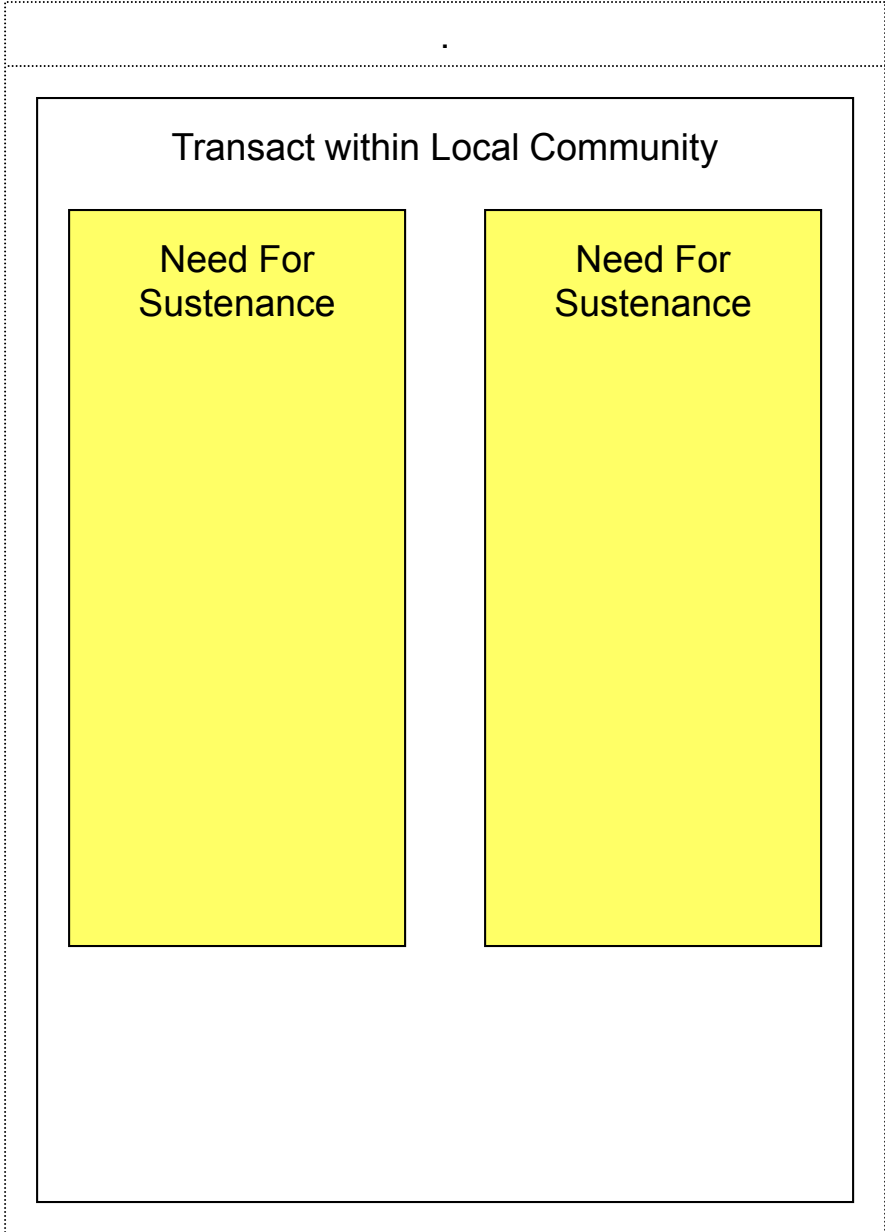
**Part IV – e-Business Design**

- Adaptive e-Commerce
- Adaptive e-Broker
- e-Barter Issues

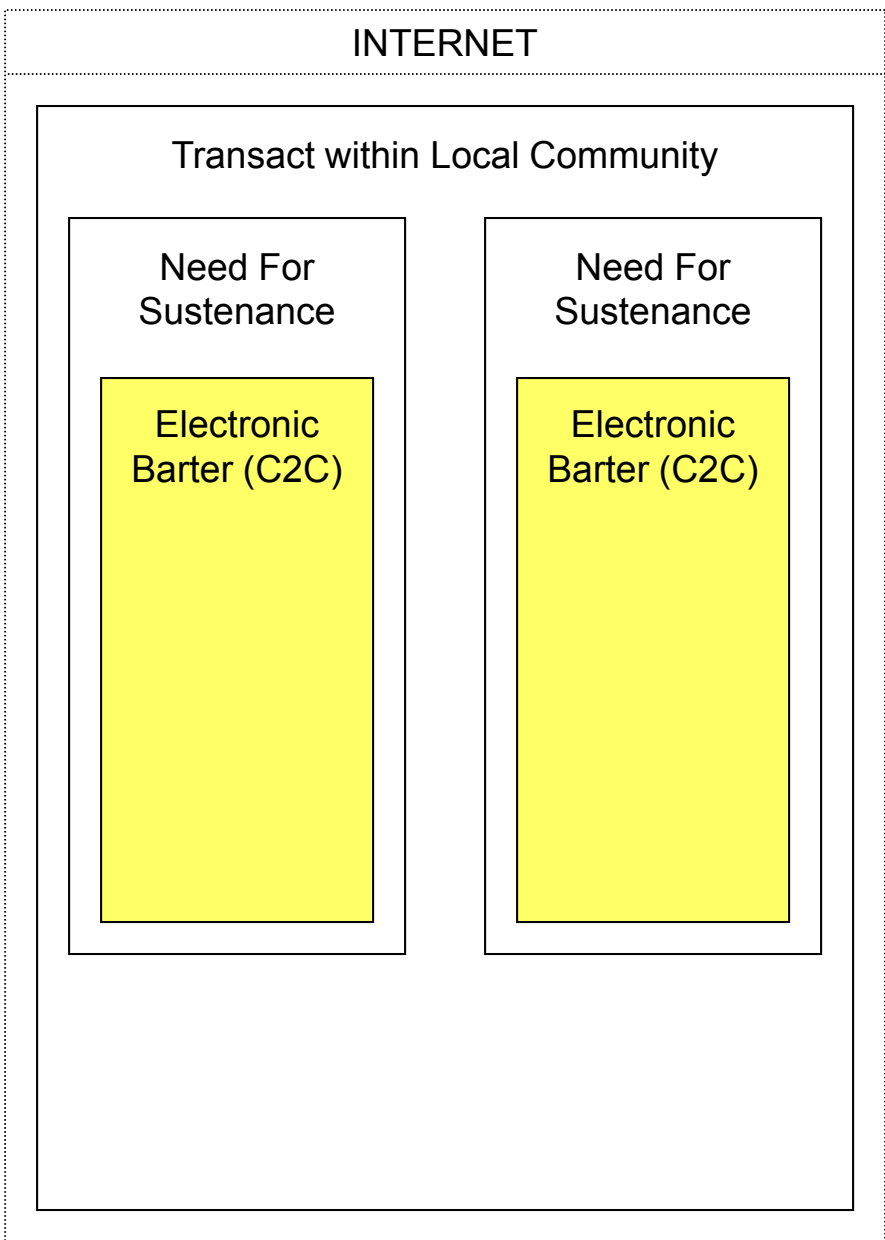
References:  
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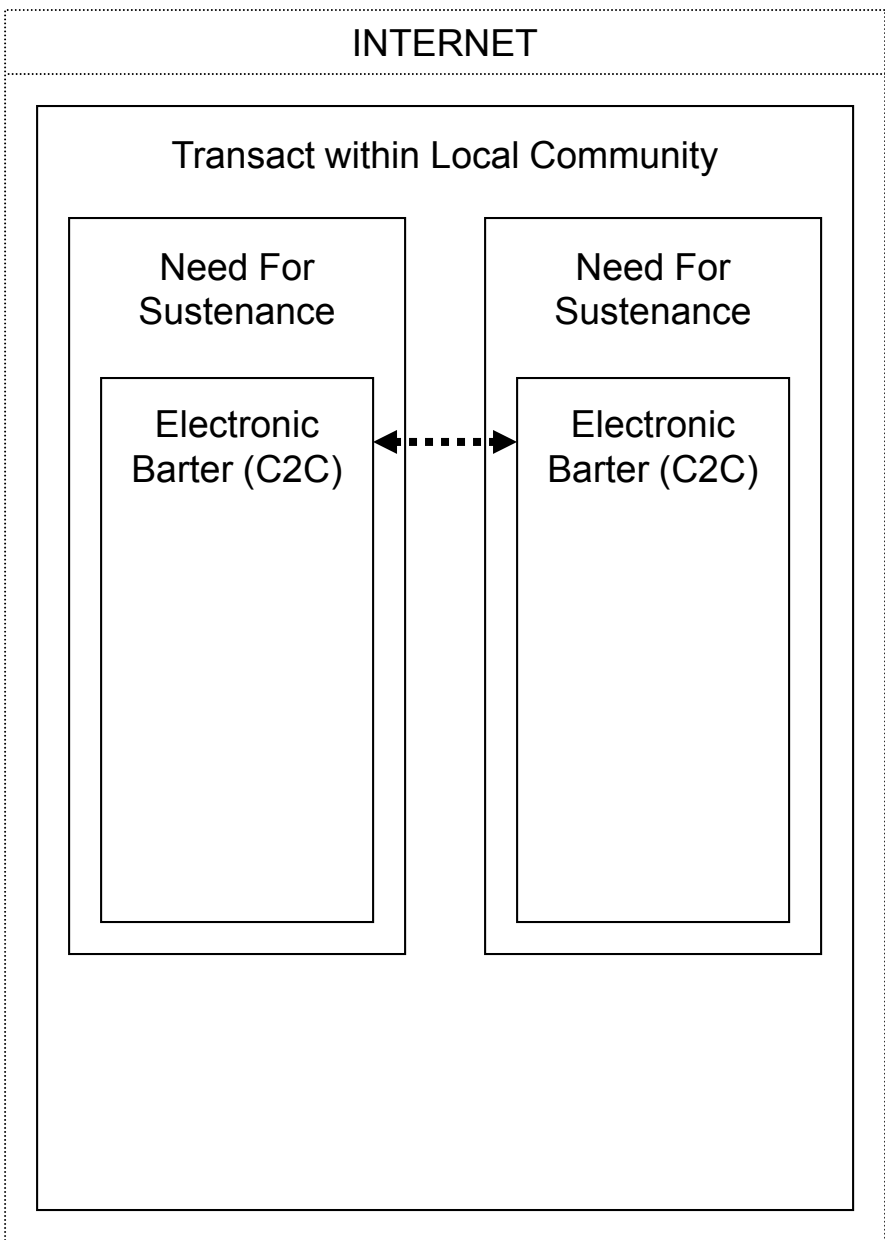
References:  
25.



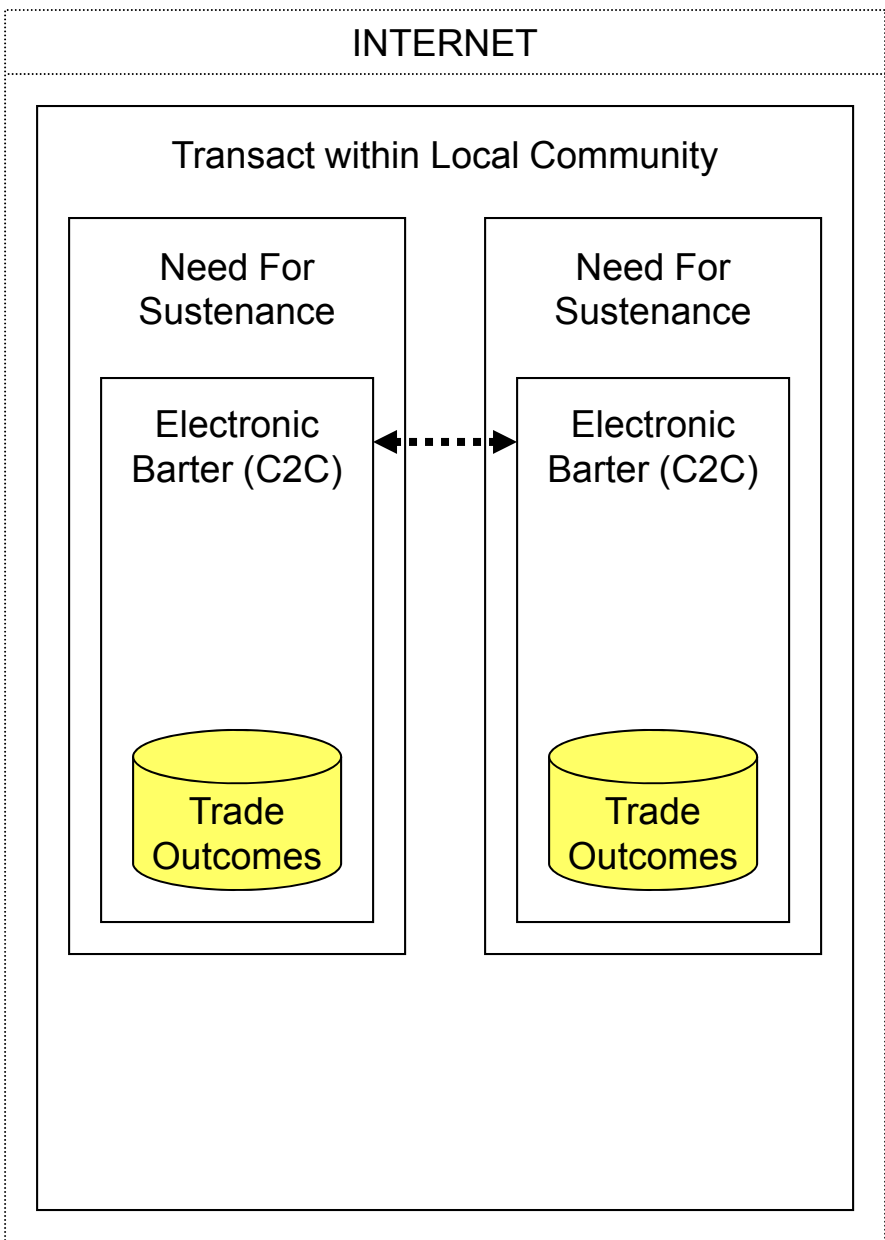
References:  
25.



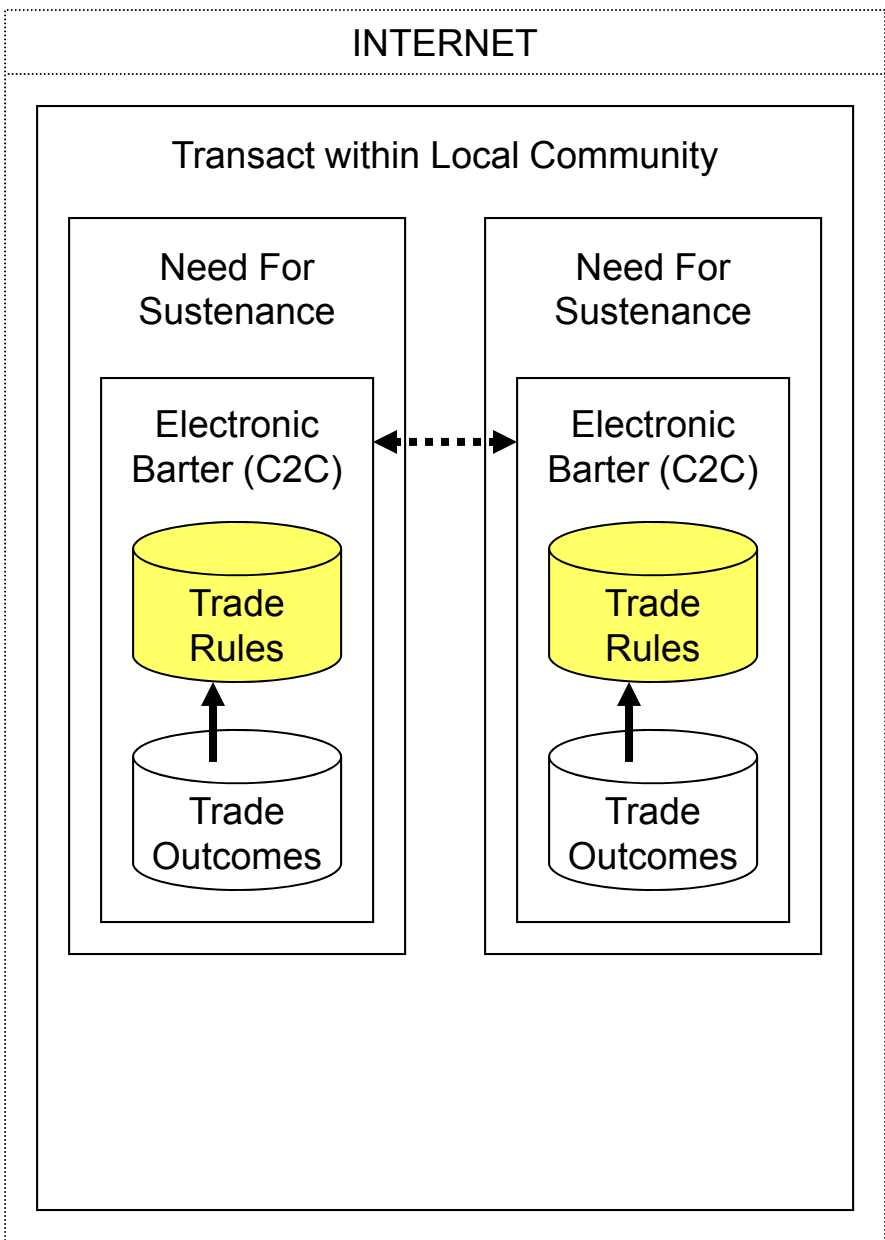
References:  
25.



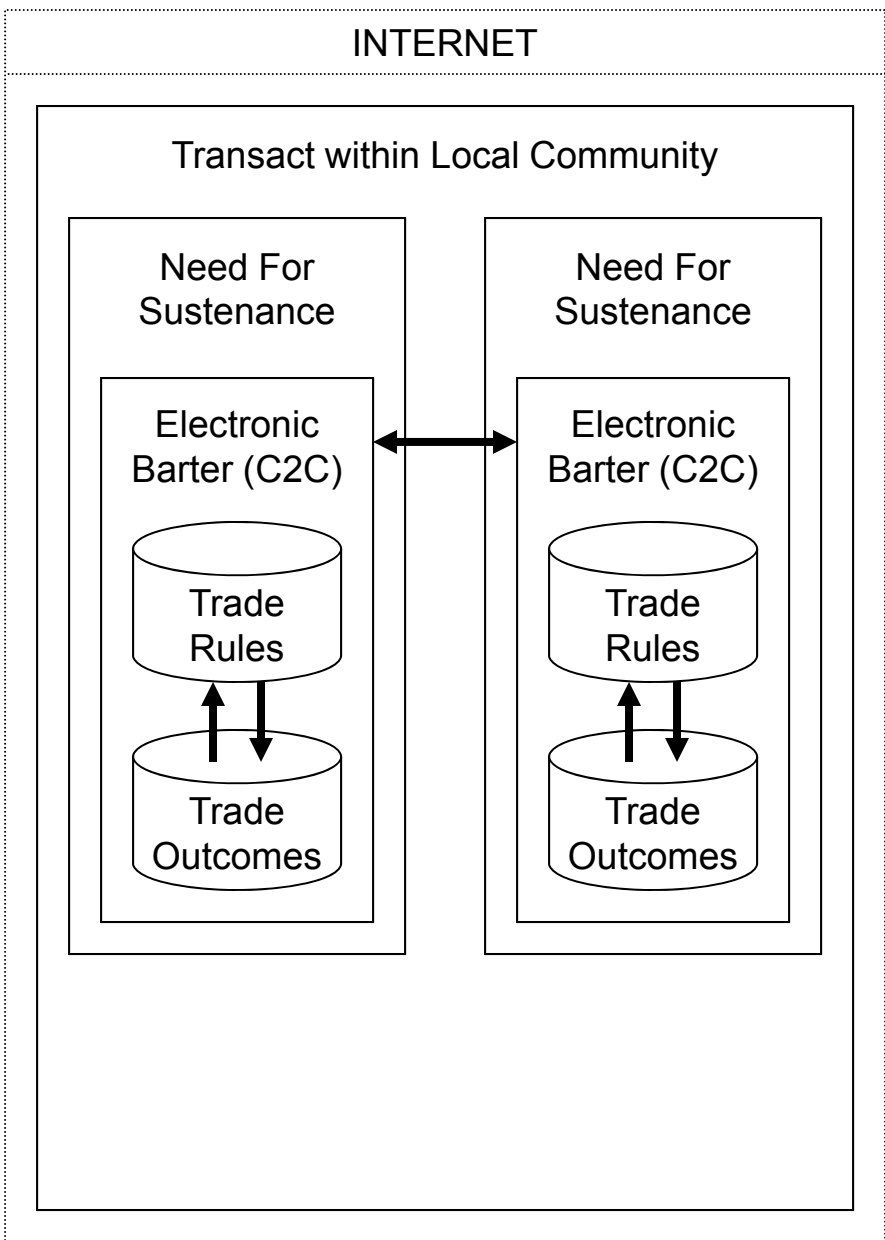
References:  
25.



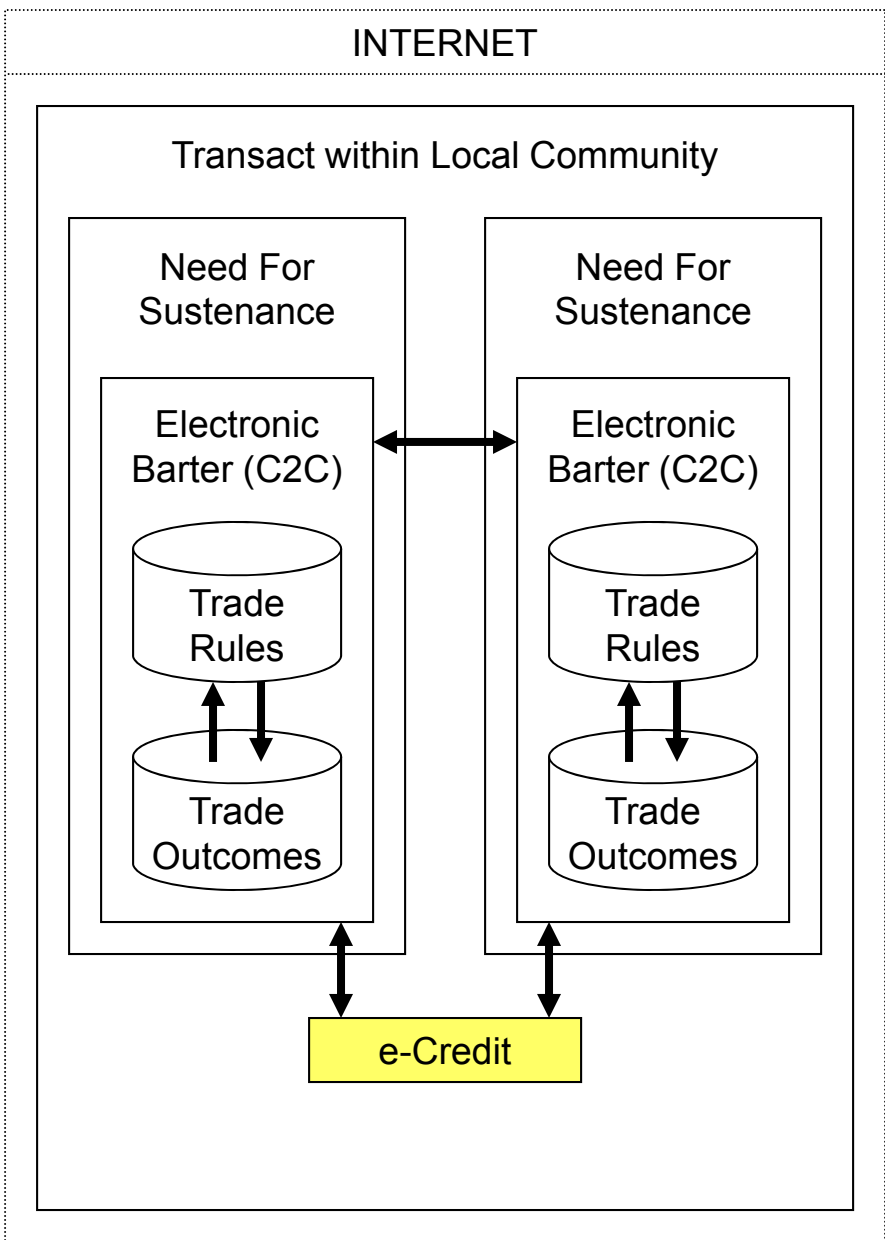
References:  
25.



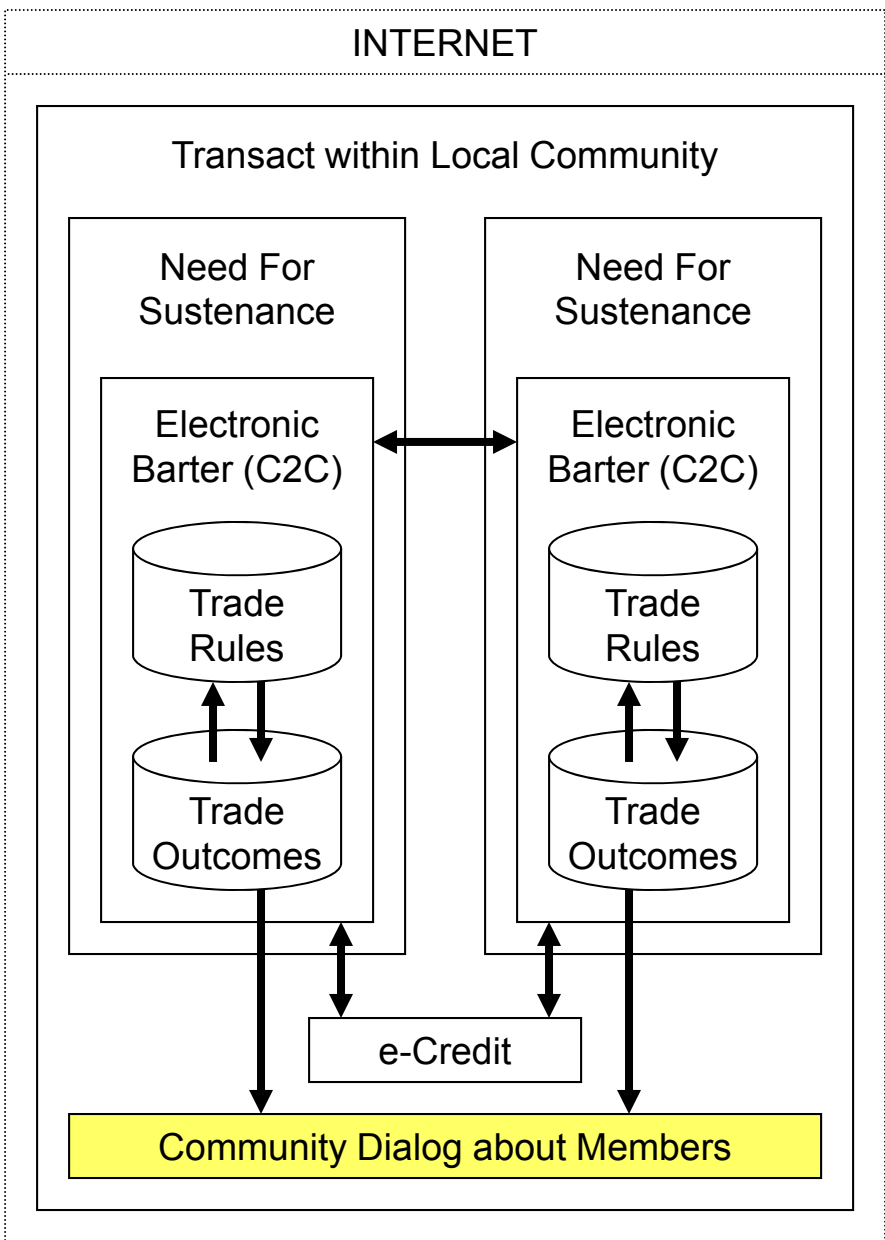
References:  
25.



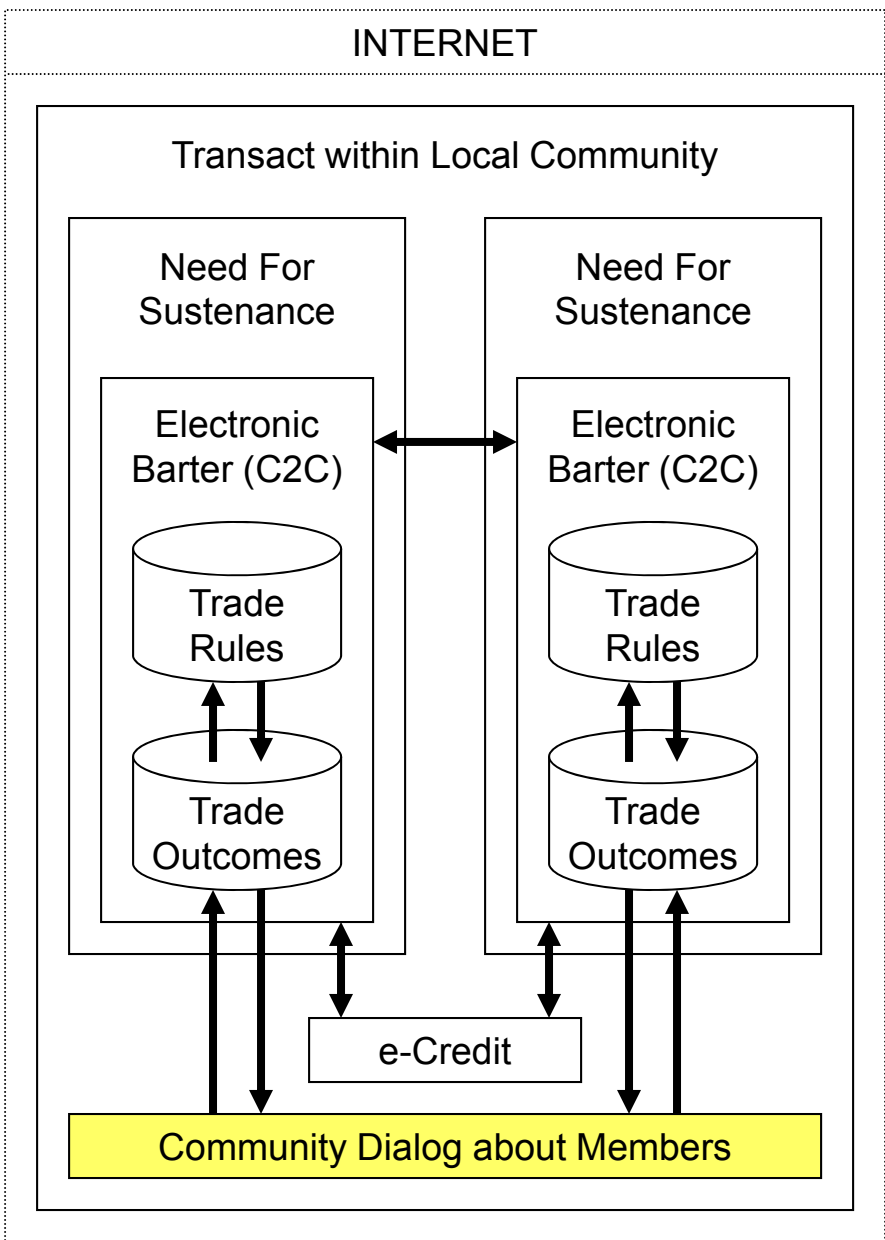
References:  
25.



References:  
25.



References:  
25.



# e-Business Design

A Shift to Adaptability

**Part I – Business Context**

**Part II – Design Framework**

**Part III – Business Design**

**Part IV – e-Business Design**

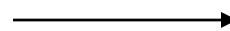
**Summary**

# e-Business Design

A Shift to Adaptability

**NOW**

Electronic Commerce



**SOON?**

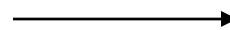
Electronic Broker

# e-Business Design

A Shift to Adaptability

## NOW

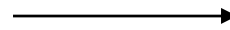
Electronic Commerce



## SOON?

Electronic Broker

Triggered by Internet  
Mass Market Dominance



Triggered by Spending  
Niche Market Dominance

# e-Business Design

A Shift to Adaptability

**NOW**

**SOON?**

Electronic Commerce →

Electronic Broker

Triggered by Internet  
Mass Market Dominance →

Triggered by Spending  
Niche Market Dominance

Computer Network  
Multi-Media →

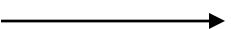
Social Network + Forum  
Web Services + SOA

# e-Business Design

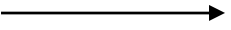
A Shift to Adaptability

## NOW

Electronic Commerce



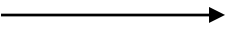
Triggered by Internet  
Mass Market Dominance



Computer Network  
Multi-Media



Pushed Ads + Portal Buy  
Fixed Product/Price



## SOON?

Electronic Broker

Triggered by Spending  
Niche Market Dominance

Social Network + Forum  
Web Services + SOA

Common Need + Agent Buy  
Adjustable Product/Price

# e-Business Design

A Shift to Adaptability

## NOW

## SOON?

Electronic Commerce	—————>	Electronic Broker
Triggered by Internet Mass Market Dominance	—————>	Triggered by Spending Niche Market Dominance
Computer Network Multi-Media	—————>	Social Network + Forum Web Services + SOA
Pushed Ads + Portal Buy Fixed Product/Price	—————>	Common Need + Agent Buy Adjustable Product/Price
Control Design Bias	—————>	Cooperation Design Bias

# e-Business Design

A Shift to Adaptability

**David A. Marca**

Thank you!

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July 7, 2009

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