

290T: The Business of Software: Evolution of Business Models

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EECS

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Common problems?

What problems did

- Documentum
- Profitlogic
- Collabrys

all have in common?

Common problems?

Who are we? What are our core competencies?

Who is our customer?

How do we make money?

I.e., what is our business model?

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Business Model: A Detailed Model of Your Business Enterprise

Executive Management

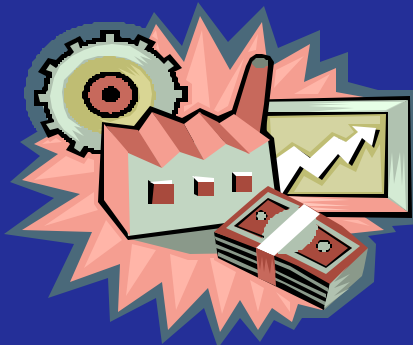
- CEO
- Mktg, Engr, Sales VPs

Factory/tooling

- Infrastructure
- Computing
- R&D Staff
- Support

Capital

- Self-funded
- Angel, VC



Products/Services

- Product/service definition

Marketing

- Market sizing
- Competition

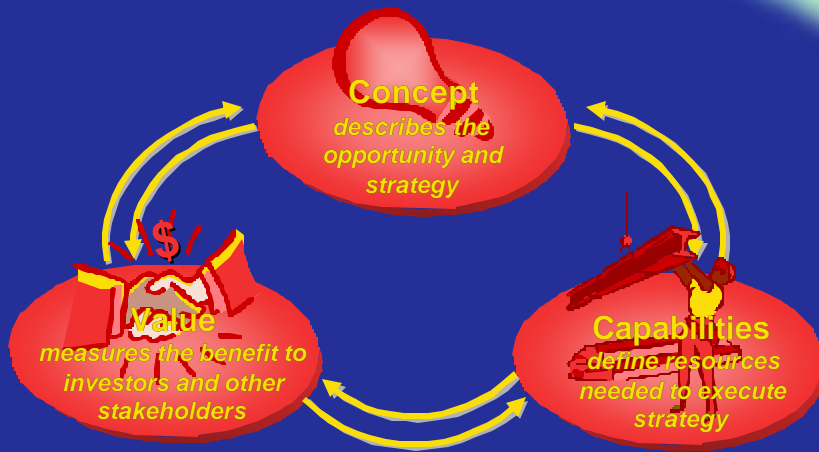
Mktg/Sales

- Customers
- Model of sales engagement

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What is a Business Model?



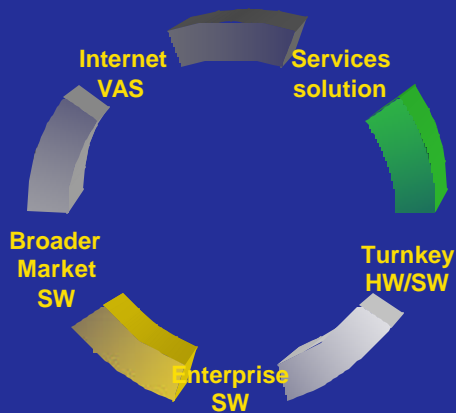
Adapted from Applegate et al, *Corporate Information Strategy and Management*, Chapter 2
McGraw-Hill/Irwin 2003

Adapted by Ray Trygstad, Illinois Institute of Technology

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Each Point in the Cycle has its Own Business Model



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Geoffrey Moore



- 55 years old
- University of Washington Doctor of Philosophy in Literature
- Stanford University Bachelors Degree in Literature
- Chairman, Founder and a principal of The Chasm Group services company offering marketing strategy consulting with a focus on high technology clients.
- He is also a Venture Partner with Mohr, Davidow Ventures, a California-based venture capital firm.
- (Bill Davidow , former VP of marketing at Intel:
 - Responsible for “Intel Inside”
 - Wrote: Marketing High Technology)

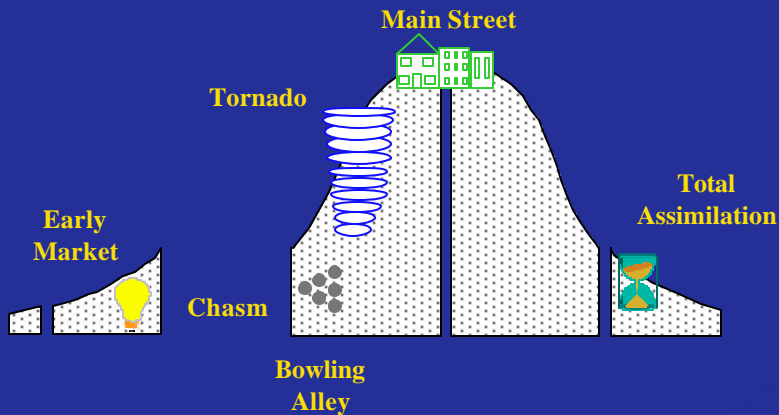
Mr. Moore has written several books, including

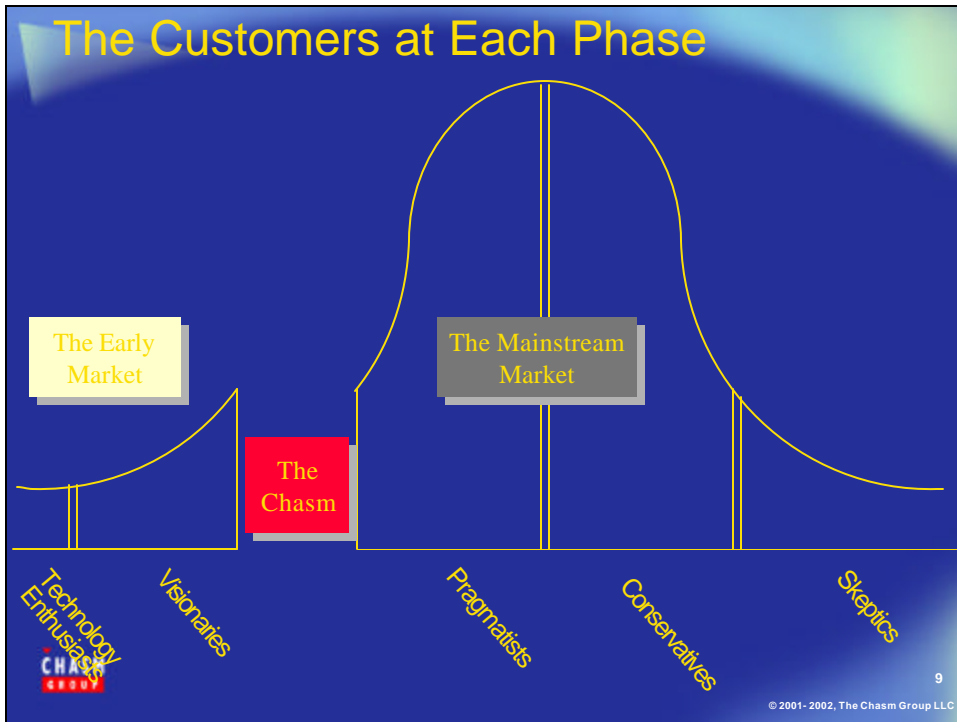
- Crossing the Chasm, published in 1991,
- Inside the Tornado, published in 1995,
- The Gorilla Game, published in 1998, and
- Living on the Fault Line, published in 2000.

- Prior to founding The Chasm Group, Mr. Moore was a principal and partner at Regis McKenna, Inc., a marketing and communications company focused on high technology clients.
- Prior to that, he held various executive and marketing positions at three different software companies: Rand Information Systems, Enhansys and Mitem.



High-Tech Market Development Model





- ## Technology Adoption Life Cycle - Discontinuous Innovations
- **Innovators** = **Technology enthusiasts (techies)**
 - Technology eventually helps improve lives; No money; Have influence; Gatekeepers to the life cycle; If they hate it implies trouble
 - **Early adopters** = **Visionaries**
 - Believe in competitive advantage via discontinuous innovation; Bring \$\$ to table & demand modifications; Techies explore-visionaries exploit
 - **Early majority** = **Pragmatists**
 - Do not love technology for its own sake; Believe in evolution not revolution; Want to improve organizational effectiveness; Difficult to convince them to shift paradigms; Prefer to buy from market leaders
 - **Late majority** = **Conservatives**
 - Technology skeptics; Price sensitive; Demanding consumers; Largely untapped opportunity for high tech
 - **Laggards** = **Skeptics**
 - Gadflies of high tech; Challenge the hype; Need to **sell around them**
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Early Market



- **Visionary LOB executives going ahead of the herd**
 - Driven by competitive advantage
 - Will help pay for new paradigm
 - Demand “whatever it takes” commitment
 - Rely on their own judgment
- **Deal-driven marketing prevails**
 - Breakthrough technology gets center stage
 - Senior service partner leads behind the scenes
 - Think *project* not product
- **Example:**
**Electronic commerce, 64-bit computing,
Cable modems**

Techies

- **Are inventors**
 - “Doc Brown” in Back to the Future
- **Spend hours making the product work**
- **Forgive bugs, glitches, poor documentation**
- **Make great critics - they care**
- **Write software, share them and discuss on bulletin boards**
- **Want truth, no sales pitch.**
- **Need access to most tech person in the company**
- **Want to get products first and cheaper**
- **Use them to kindle the fire**

Visionaries

- **Have a knack for matching technology to strategic opportunities**
 - Steve Jobs, Max Hopper (AA + Sabre)
- **Seek major breakthroughs, develop a highly visibility, high risk project plan**
- **Have charisma to get organization to buy-in**
- **Highly motivated, driven by a dream**
- **Not price sensitive, will provide visibility to small company's technology**
- **Start with a small project, closely monitor, are in a hurry, and are never satisfied.**
- **Keep in touch with techies looking for opportunities**



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Bowling Alley



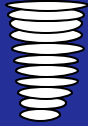
- **Pragmatist departmental managers adopting before the herd**
 - Fix a broken mission-critical business process
 - Must have complete whole products
 - Rely on customer references
- **Niche marketing prevails**
 - Value-added reselling
 - Healthy price margins
 - Restricted competition
 - Think *whole product* not product
- **Example:**
 - Groupware, GIS, CAD, Workflow, Document management



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Tornado



- **Pragmatist infrastructure managers adopting with the herd**
 - Transition to the new infrastructure
 - Must have standards
 - Rely on market share
- **Mass marketing prevails**
 - Streamlined one-size-fits-all whole product
 - Low-touch, high-volume distribution
 - Margin-based competitions
 - Think *product*
- **Examples:**
Browsers, Web sites, NT servers, routers, inkjet printers

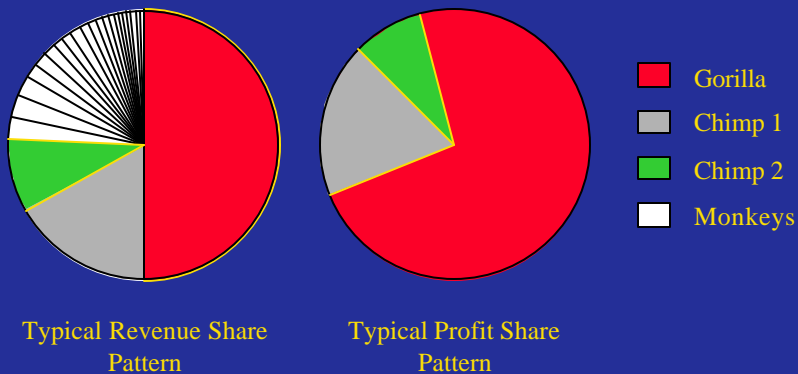
Pragmatists

- Represent the bulk market, play safe, do not want to be pioneers, never volunteer to be an early test site
- Rely on the advice of close set of advisors and within their own industry
- Seek incremental, steady, & measurable progress – no disruption
- Will take risks when required and after due diligence
- Will prefer established products, or those that they believe will be the standard – seek developers of related products
- Once satisfied, they are loyal
- Like to see competition – reduces their risk
- Seek best deals at high quality levels

To sell to pragmatists...

- **Make systems compatible: Oracle ported SQL to every hardware – which IBM was not willing to do.**
- **Show that you are matching competitors advances**
 - SQL*Star and SQL*net in response to Ingres/Star and Ingress/Net
 - Client server architecture in response to Sybase
- **Do not stop investing in market**
- **Do not shoot yourself in the flagship – Ashton-Tate DBASE IV failed**

Impact of the Tornado



**Monkeys sell clones of the gorilla.
Chimps sell incompatible alternatives.**

Main Street



- **Installed base driving the after-market**
 - Want better values, no disruption
 - Two paths: commodity vs. differentiation
 - Rely on trial
- **Mass customization prevails**
 - Standard core for price-sensitive sales
 - Customizable surface for differentiated offers
 - High-touch, high-volume distribution direct to end users
 - Think *end-user experience* not product
- **Examples:**
Modems, cell phones, NICs, Quicken, MS Office



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Conservatives

- **Look to pragmatists as leaders**
- **Buy technology just to stay on par with competition**
- **Invest in mature, products that are like commodities – will not support high margins**
- **Want pre-assembled packages at discounted prices. Like single function gadgets**
- **Far east has taken over these markets due to lower costs**
- **Zilog still makes 4-bit, 8-bit microprocessors that are used in auto seat belts.**



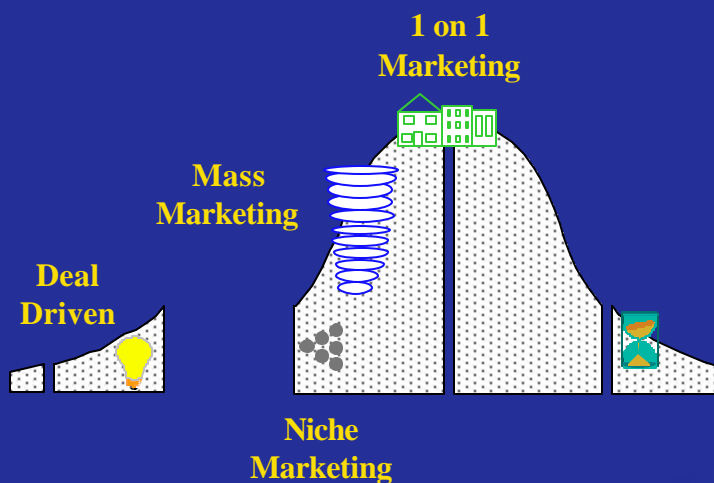
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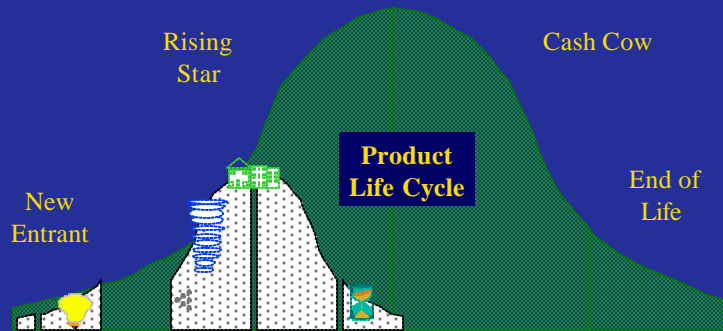
Skeptics

- **Do not participate in high tech**
- **Block purchases**
 - Eg. Believe that all this office automation has not improved office productivity
 - Scanner data and productivity

Four Market Development Strategies



Technology vs. Product Life Cycles



Projects - Status

- Program Analysis for Security – Jimmy Su (need an MBA)
- Turbo Texas Hold 'em – Leo de Luna (need SIMS & EECS?)
- TCAD Pattern Matcher – Scott Hafeman (need SIMS & MBA?)
- Schwab (SVP=>VP handoff) – Satrajit Chatterjee, Arkadeb Ghosal -
- BWRC –(Gary Kelson) Egan Lau (need SIMS & EECS?), Jennifer Lung, Myra Liu , Florian, Christian -
- Tablet PC Scientific Calculator – Ram Rajagopal, Kevin Clugage

Students with common interests

- PandoraBots – Gabriel Eirea, Brian Park, Ashley Tan
- NP-Click – Arkadeb Ghosal, David Gelbart, Will Plishker
- ReShape - Gabriel Eirea, Arkadeb Ghosal
- Catalytic - Gabriel Eirea, Arkadeb Ghosal, Jennifer Lung
- Oceanstore (buy in from Kubi?) – Rachel Rubin (need SIMS, MBA)

Business Model Migration

Geoffrey Moore
Chairman, The Chasm Group
Venture Partner, Mohr Davidow Ventures



Agenda

- **Two Trends in the Technology Sector**
 - Business model proliferation
 - Market maturation

- **Implications**
 - Business model migration
 - Multi-model strategy and execution
 - Organizational impact
 - Strategic consequences



Tech Sector Trend #1: *Business Model Proliferation*



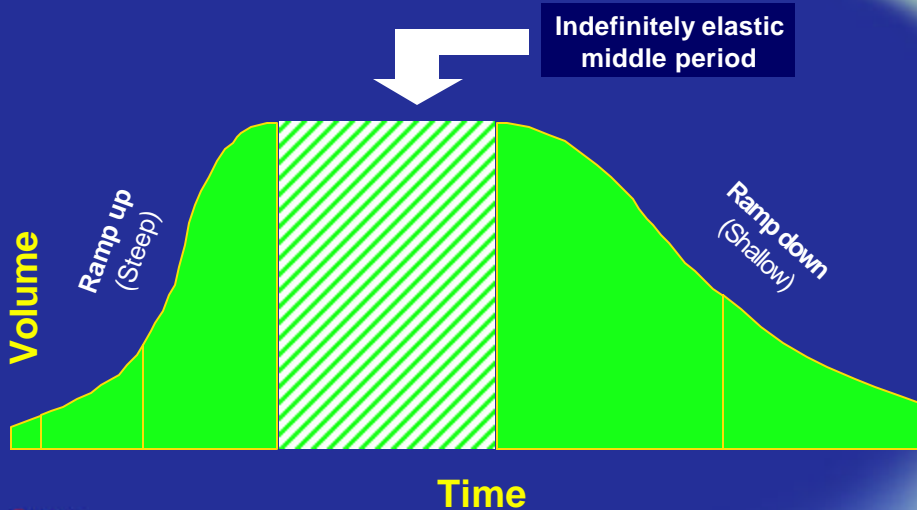
A Business Model Is

- **A way of making money that specifies**
 - The form an offer takes
 - The manner in which it is paid for
- **An implicit contract that governs**
 - Customer expectations
 - Vendor commitments
- **A foundation for execution that implies**
 - Infrastructure and resource commitments
 - Points of leverage to exploit

Implications for Strategy

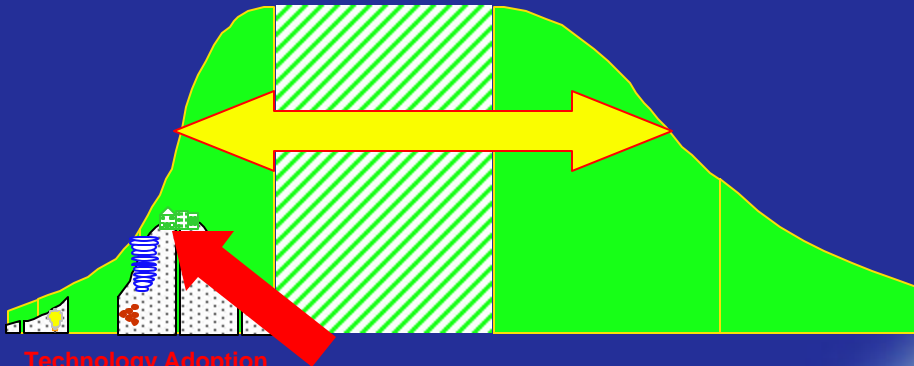
- **Creating competitive advantage**
 - Differentiation via business models
- **Managing execution**
 - Synergy gained or lost
- **Cooperating with partners**
 - Leveraging each other's models
- **Exploiting competitor weaknesses**
 - Targeting what they can't change

Tech Sector Trend #2: Market Maturation



Technology-Based Businesses Begin to Shift Their Focus

Optimize for staying power



Technology Adoption
Life Cycle

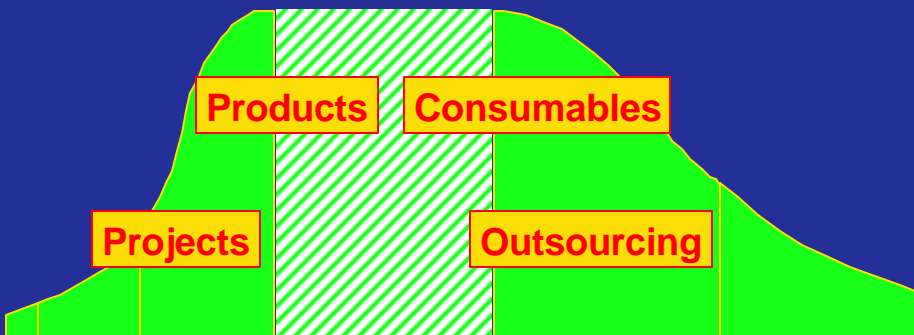


Optimize for fast ramping

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New Dynamics Are Driving *Business Model Migration*



Different models are privileged
At different stages



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The Significance of Market Dynamics

- **Free markets are Darwinian**
 - Competition neutralizes advantages
 - Companies must continually innovate
 - *Business model migration is voluntary*
- **When markets mature**
 - Whole products become institutionalized
 - Expansion models yield to maintenance models
 - *Business model migration is forced*



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What Changes with Model Migration?

- **Vendor commitment to customer**
- **Infrastructure to meet the commitment**
- **Gross margin to fund the infrastructure**
- **Operating ratios to achieve the gross margin**
- **Resource deployments to match operating ratios**
- **Management systems to govern the resources**

Projects

Products

Consumables

Outsourcing

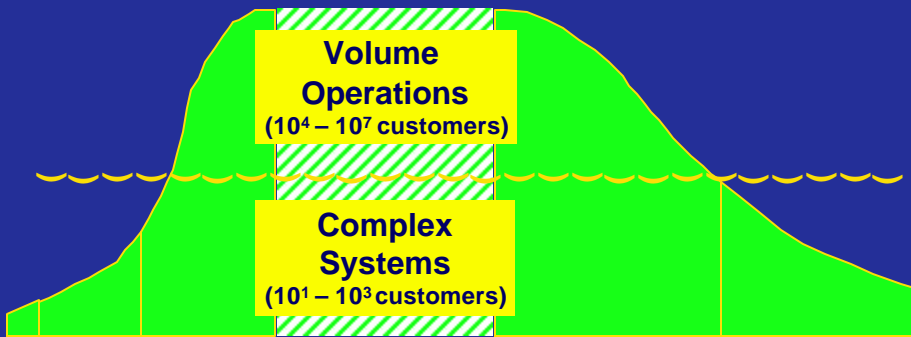
Lots!



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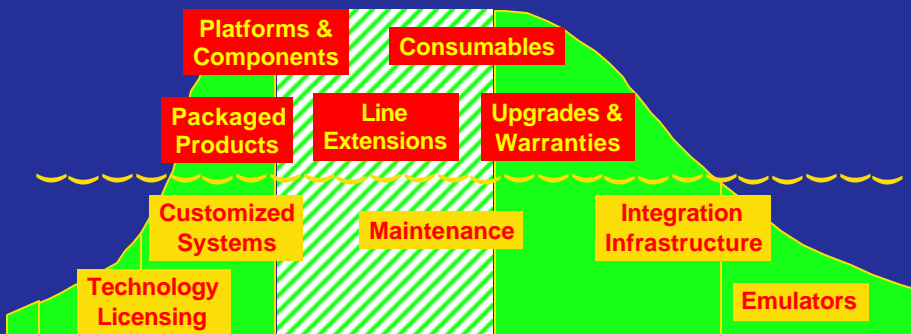
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A Simplifying Distinction

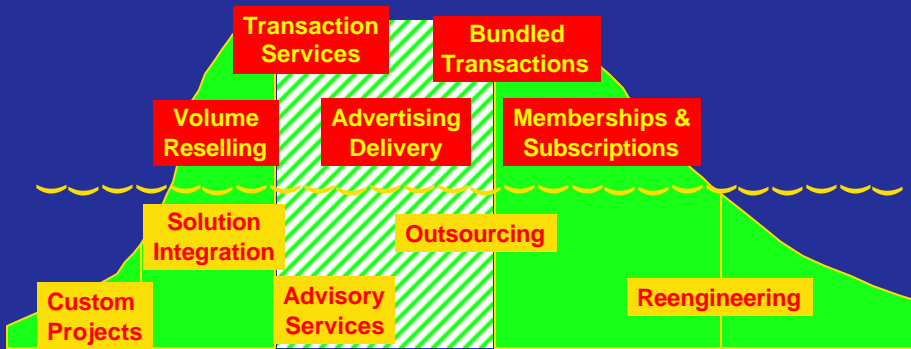


Deep implications for organization

A Representative Sample of Product-Centric Models



A Representative Sample of Service-Centric Models



Thinking in Sets

	Products	Services
Volume Operations	Packaged Products Platforms & Components Line Extensions Consumables Upgrades & Warranties	Volume Reselling Transaction Services Advertising Delivery Bundled Transactions Memberships & Subscriptions
Complex Systems	Technology Licensing Customized Systems Maintenance Integration Infrastructure Emulators	Custom Projects Solution Integration Relationship Management Outsourcing Reengineering

1. Where do you play?
2. Where do your partners play?
3. How do your competitors do it?

Sony?

Products

Services

Volume
Operations

Packaged Products
Platforms & Components
Line Extensions
Consumables
Upgrades & Warranties

Volume Reselling
Transaction Services
Advertising Delivery
Bundled Transactions
Memberships & Subscriptions

Complex
Systems

Technology Licensing
Customized Systems
Maintenance
Integration Infrastructure
Emulators

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Solution Integration
Relationship Management
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Reengineering



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Sony

Products

Services

Volume
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SAP?

Products

Services

Volume
Operations

Packaged Products
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Line Extensions
Consumables
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Volume Reselling
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Reengineering



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SAP

Products

Services

Volume
Operations

Packaged Products
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Reengineering



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Yahoo? [Ebay?]

	Products	Services
Volume Operations	<ul style="list-style-type: none">Packaged ProductsPlatforms & ComponentsLine ExtensionsConsumablesUpgrades & Warranties	<ul style="list-style-type: none">Volume ResellingTransaction ServicesAdvertising DeliveryBundled TransactionsMemberships & Subscriptions
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Yahoo

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Accenture? - www.accenture.com

	Products	Services
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Accenture - www.accenture.com

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Dell

Products

Services

Volume
Operations

Packaged Products
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Dell

Products

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Oracle?

	Products	Services
Volume Operations	<ul style="list-style-type: none">Packaged ProductsPlatforms & ComponentsLine ExtensionsConsumablesUpgrades & Warranties	<ul style="list-style-type: none">Volume ResellingTransaction ServicesAdvertising DeliveryBundled TransactionsMemberships & Subscriptions
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Oracle

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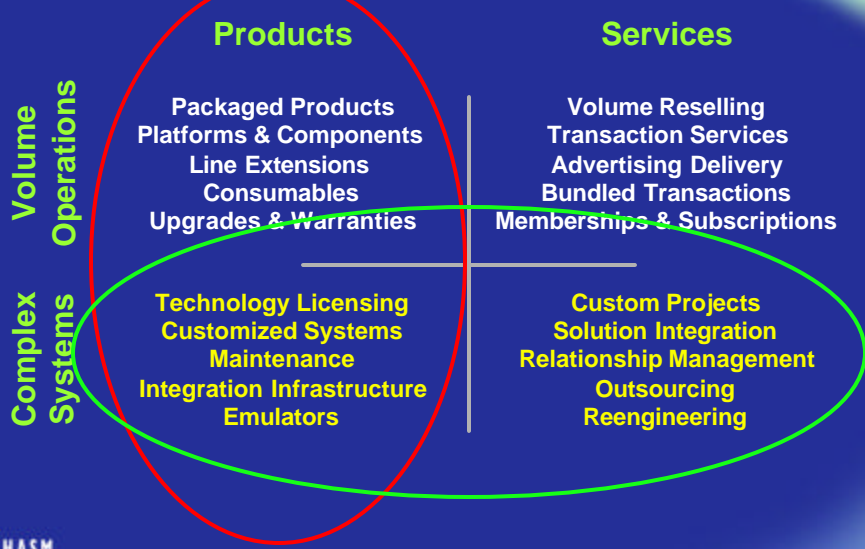


Business Model Migration

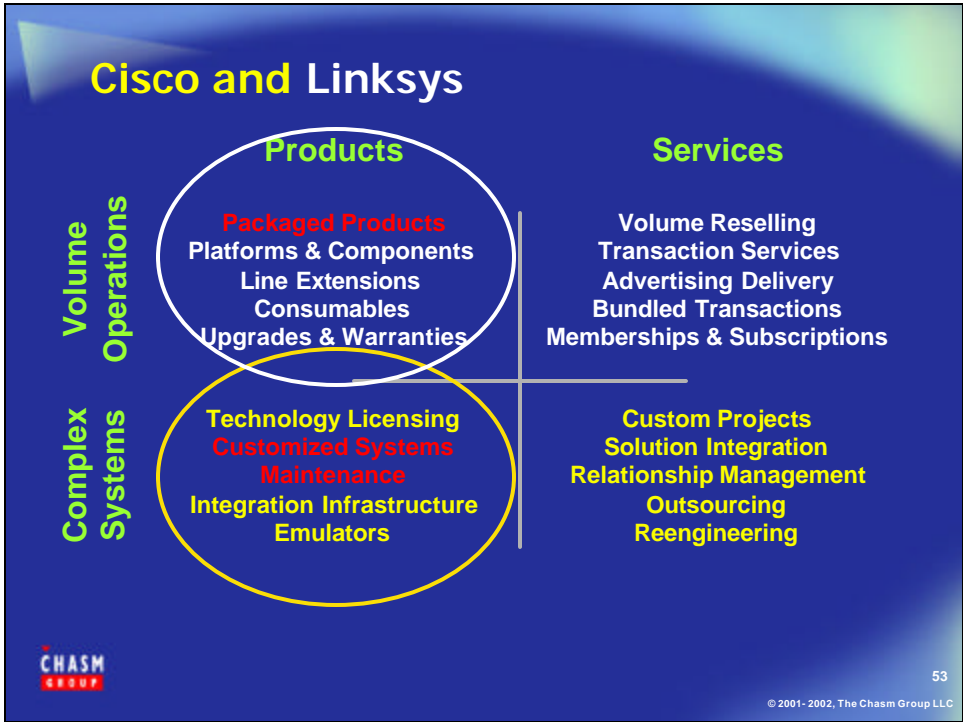
Volume Operations vs. Complex Systems



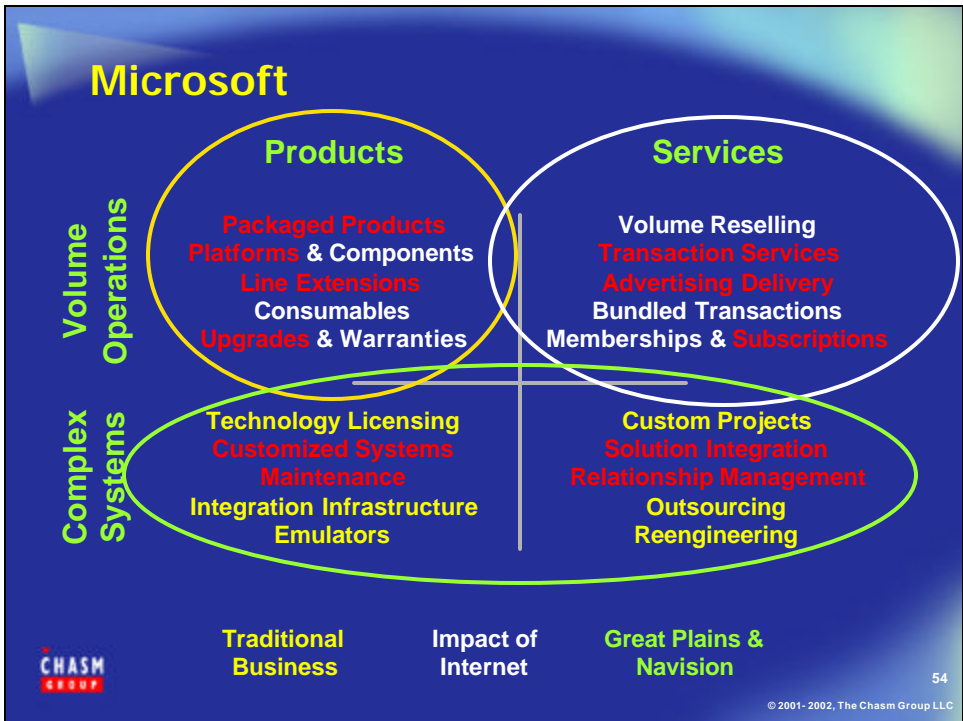
IBM-1 IBM-2



Cisco and Linksys



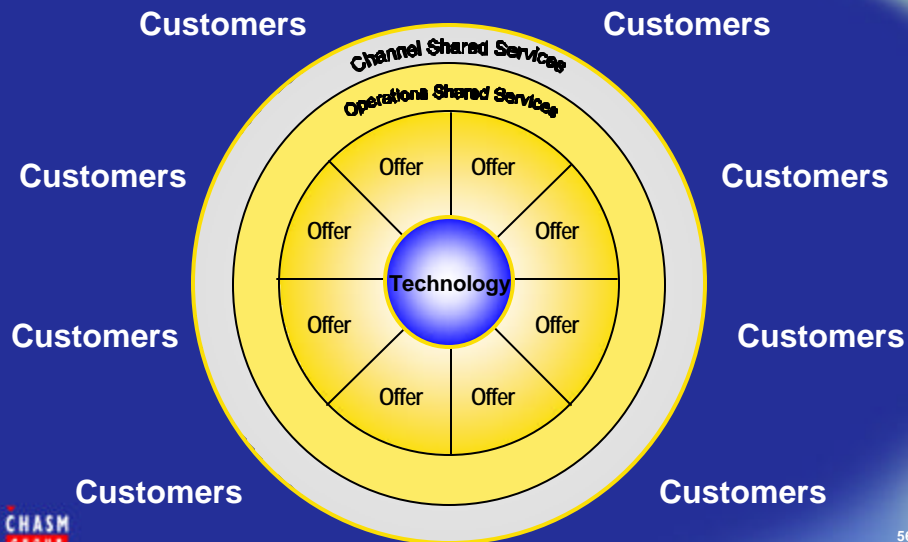
Microsoft



Why Mixing North and South is Hard

- **Volume Operations**
 - Organize around the means of production
 - Vendor power >> customer power
- **Complex Systems**
 - Organize around the customer engagement
 - Vendor power < customer power
- **Result is two different paradigms**

Volume Operations Paradigm



Complex Systems Paradigm



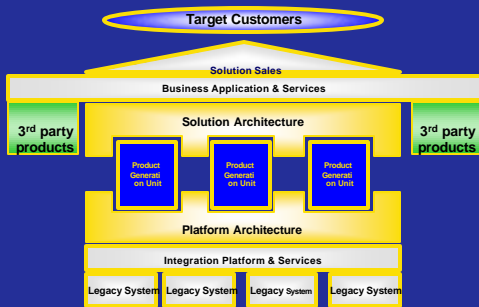
Why Morphing Between Groups is Hard

Complex Systems

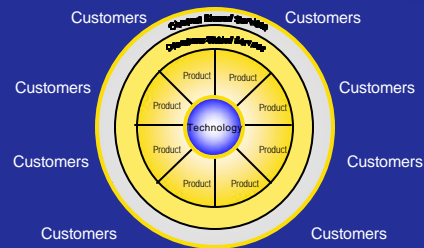
Volume Operations

- | | |
|--|---|
| <ul style="list-style-type: none"> ▪ Sales <ul style="list-style-type: none"> • High-touch sales • Complex sales cycle | <ul style="list-style-type: none"> ▪ Sales <ul style="list-style-type: none"> • Low-touch sales • Single decision-maker |
| <ul style="list-style-type: none"> ▪ Services <ul style="list-style-type: none"> • Consultative • Planned | <ul style="list-style-type: none"> ▪ Services <ul style="list-style-type: none"> • Transactional • Reactive |
| <ul style="list-style-type: none"> ▪ Marketing <ul style="list-style-type: none"> • Whole-product focus • Value-chain orientation | <ul style="list-style-type: none"> ▪ Marketing <ul style="list-style-type: none"> • Feature-benefit focus • End-user orientation |
| <ul style="list-style-type: none"> ▪ Engineering <ul style="list-style-type: none"> • Configuration • Customization | <ul style="list-style-type: none"> ▪ Engineering <ul style="list-style-type: none"> • Mass-produced • Mass-customized |

The Challenge of "Handed"-ness



“Left-handed”



“Right-handed”

- Organizations become left- or right-handed over time
- Markets eventually privilege the other hand
- How do you become ambidextrous?

Some Rules of Thumb

- Realize that you have a dominant hand and that is not going to change
- Whenever possible, partner for the opposite hand
- When you must be ambidextrous, manage each hand *very separately*
- Ambidexterity is not sustainable; plan to revert to your dominant hand, or
- Move to a holding company structure

Final Thoughts

Some Strategic Implications

- **Growth dynamics**
 - Pre-tornado, all markets are complex systems
 - This is why volume leaders struggle with chasms
- **Competitive dynamics**
 - Like-handed models compete to the death
 - Opposite-handed compete over a DMZ
- **Management dynamics**
 - Complexity or volume: pick one for your friend
 - Drive all other variables to conform

Thank You

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