Chapter 1: The Information Systems Strategy Triangle

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Information System Strategy Triangle

Strategy Triangle

Business (Firm) Strategy

Where is the business to go and how to get there and why?

Organizational Strategy
Needs and priorities
Infrastructure and services

IS/IT Strategy

How it can be delivered?
1. Architecture/Infrastructure
2. MIS organization (Sourcing, Governance etc.)
3. Funding
4. Project Management

DBQ: Why IS Strategy Triangle Model Matters?

• #2. In 2015, the NFL decided to hand out Microsoft Surface tablets to all coaches for use during games, and there are reports that in the future, they will add HoloLens devices to provide augmented reality. A HoloLen device is a high-definition, head-mounted display that allows coaches to see the plays with text and animation superimposed right on the live images. If the NFL simply handed them out without making any other formal changes in organization strategy or business strategy, what might be the outcome? What unintended consequences might occur? (Why IS Strategy Triangle Model Matters?)

DBQ (answer)

• Coaches might not use them, without training and modifications to their jobs. They may be accustomed to a manual, voice and paper system and resist moving to the tablet devices. They might not appreciate the added benefits of the dynamic animation, choosing familiar business processes instead. If they do use the devices, there will eventually be strain on the rest of the organization if it doesn’t adapt to this new technology.

DBQ (answer) – cont.

• For example, messaging might become ineffective if a head coach only uses voice messaging and special team coaches use animation to simulate plays. The head coach will never see those plays and coordination will suffer.

• Support systems must also be redesigned. It does a coach little good to have to give up the device during a game for repairs, and a sufficient quantity of ready-to-use backups should be available. Minor problems could be disastrous, and some moderate troubleshooting skills should be provided to coaches. Employees are adept at creating their own “workarounds,” particularly when they do not support a mandatory change.
Planning is everything ...
What are Two Major Outputs for an organization?

<table>
<thead>
<tr>
<th>Vision</th>
<th>Mission</th>
<th>Strategy</th>
<th>Products, Services</th>
</tr>
</thead>
</table>

Customers, market, competition

devlop

guide

create

Learning Objectives

- Determine the role general managers must take in decisions about IS
- Define and explain the Information Systems Strategy Triangle
- Understand the alignment between decisions of business strategy, information systems, and organizational design
- Identify and define the various business strategy frameworks
- Explain the information system strategy matrix
- Understand and apply these models to different organizations

Opening Case: Kaiser Permanente (KP)

1. What was KP’s business strategy in 2015?
   - To promote better health care at lower cost
2. What goal alignment has helped KP’s success?
   - Alignment between business strategy, organizational design, and IS strategy
3. What IS components are part of this?
   - Fast communication with patients outside of face-to-face appointments; automatic email reminders to patients for exercise or medications
4. Could only the IS components be changed to achieve their success?
   - No, the business strategy must be aligned with the IS, in addition to incentives (organization strategy)

What is a “Strategy”?

- Coordinated set of actions to fulfill objectives, purposes, or goals
- It sets limits on what the organization seeks to accomplish
- Starts with a mission (we will study Google mini case)

<table>
<thead>
<tr>
<th>Company</th>
<th>Mission Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zappos</td>
<td>To provide the best customer service possible. Internally we call this our WOW philosophy.</td>
</tr>
<tr>
<td>Amazon</td>
<td>We seek to be Earth’s most customer-centric company for three primary customer sets: consumer customers, seller customers and developer customers.</td>
</tr>
<tr>
<td>L.L. Bean</td>
<td>Sell good merchandise at a reasonable profit, treat your customers like human beings and they will always come back for more.</td>
</tr>
</tbody>
</table>

Information System Strategy Triangle

- A business strategy is a well-articulated vision of where the business seeks to go and how it expects to get there.
  - It is not a business model, although it includes business models as one component of a business strategy
- An organizational strategy is the organization’s design, as well as the choices it makes to define, set up, coordinate, and control its work processes.
- IS/IT strategy is the plan the organization uses in providing information systems and services.

Example

- Give an example in which a company fails to perform well because it does not align its three strategies.
- Any?
  - too much focus on IT
  - used to be considered as a “hardware” company (Mainframe, Mini-computers, PC, DOS etc.)
  - new division established in early 1990: GLOBAL BUSINESS SERVICE DIVISION
  - it now becomes a “Service” corp. – “TOTAL solution”
IBM IS Strategy Triangle: Old Strategy

Business (Firm) Strategy

Revenue Creation (from Hardware)

The triangle becomes unbalanced!

WHY

Organizational Strategy

IS/IT Strategy

COMPLICATED and inflexible structure

Too much focus on hardware

WHY

IBM IS Strategy Triangle: New Strategy

Business (Firm) Strategy

Revenue Creation (Service Corp.)

The triangle is balanced!

Organizational Strategy

IS/IT Strategy

Re-structured/Re-engineered Organization (e.g., Global Business Service Division)

IT is a supportive tool for entire organization worldwide

Louis V. Gerstner, Jr., IBM former CEO and president (1992-2002)

Prior to joining IBM, Mr. Gerstner served for four years as chairman and chief executive officer of RJR Nabisco, Inc. This was preceded by an 11-year career at American Express Company, where he was president of the parent company and chairman and CEO of its largest subsidiary, American Express Travel Related Services Company. Prior to that, Mr. Gerstner was a director of the management consulting firm of McKinsey & Co., Inc., which he joined in 1965.

In January 2003 he assumed the position of chairman of The Carlyle Group, a global private equity firm located in Washington, DC.

An another Example?

• Give another example (not in the high tech industry) in which a company fails to perform well because it does not align its three strategies.

• Any?
  – too much focus other than IT
  – inefficient organization structure
  – Inefficient IT usage

FORD IS Strategy Triangle: Old Strategy

Business (Firm) Strategy

TOO MANY BRANDS/FOCUSES

Organizational Strategy

IS/IT Strategy

COMPLICATED and inefficient structure

Inefficient and ineffective IT usage

FORD IS Strategy Triangle: New Strategy (ONE FORD)

ONE FORD STRATEGY:
One Team, One Plan, One Goal

Business (Firm) Strategy

A simple-sounding plan with big consequences

Organizational Strategy

IS/IT Strategy

SIMPLE and Efficient Structure

Efficient and Effective IT Usage and Support
Prior to joining Ford in September 2006, Mulally served as executive vice president of The Boeing Company, and president and chief executive officer of Boeing Commercial Airplanes. In that role, he was responsible for all of the company’s commercial airplane programs and related services. Mulally also was a member of the Boeing Executive Council and served as Boeing’s senior executive in the Pacific Northwest.

Management style
Mulally negotiated four new agreements with United Auto Workers, which has brought down labor costs from $76/hour to $55/hour.

The Information Systems Strategy Triangle

- Successful firms’ business strategy drives both their organizational and IS strategies:
- They must, therefore, seek to balance business, organizational, and IS strategies
- Changes in any strategy requires changes in the others to maintain balance.
- IS Strategy is affected by the other strategies a firm uses.
- IS strategy can have (sometimes unintentional) consequences on business and organizational strategies

Striving for Competitive Advantage

- Firm level: Industry & Competitive Analysis (across the firms)
  - Competitive Forces Model (more details will be discussed in chap.2)
  - Competitive Strategy
  - D’Aveni’s Hypercompetition Model/ Framework (7S)
- Business level (inside the firm)
  - Value-Chain Analysis (more details will be discussed in chap.2)
Generic Strategies Framework

- Michael Porter describes how businesses can build a sustainable competitive advantage
- “fundamental basis of above-average performance in the long run is sustainable competitive advantage.”
- He identified three primary strategies for achieving competitive advantage:
  - **Cost leadership** - lowest-cost producer
  - **Differentiation** - product/service is with unique feature
  - **Focus** - limited scope; occupy narrow market niche where the products/services can stand out by virtue of their cost leadership or differentiation.

Figure 1.3: Porter’s Generic Strategy Framework – 3 Strategies for achieving Competitive Advantage

<table>
<thead>
<tr>
<th>Strategic Advantage</th>
<th>Industrywide (Broad Target)</th>
<th>Particular Segment only (Narrow Target)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unique Perceived by Customer</td>
<td>Differentiation</td>
<td>Focus</td>
</tr>
<tr>
<td>Lower Cost Position</td>
<td>Cost Leadership</td>
<td>Ritz Carlton</td>
</tr>
</tbody>
</table>

Business Strategies and its Competitive Advantage (cont.)

<table>
<thead>
<tr>
<th>Competitive Scope</th>
<th>Brandenbug and Nalebuff’s competition model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Target</td>
<td>Industrywide (Broad Target)</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>Diffentiation</td>
</tr>
<tr>
<td></td>
<td>Overall Cost Leadership</td>
</tr>
<tr>
<td></td>
<td>Alliance/Co-operation</td>
</tr>
<tr>
<td></td>
<td>Growth</td>
</tr>
<tr>
<td></td>
<td>Industrial economy</td>
</tr>
<tr>
<td></td>
<td>Knowledge-based economy</td>
</tr>
</tbody>
</table>

Dynamic Environment Strategies

- Porter’s model is useful for diagnostics, or understanding how a business seeks to profit in its chosen marketplace, and for prescriptions, or building new opportunities for advantage.
- Porter model was developed at a time when the rate of change in any given industry was relatively slow and manageable, i.e., stable
- Newer models (i.e., dynamic strategy) were developed to take into account the increasing turbulence and velocity of the marketplace.
- Beware of Hypercompetition
  - Strategy focus on gaining C.A. in currently existing industries and marketplace can lead to a “red ocean” environment.
  - Better adopt “blue ocean strategy” as “red ocean” strategy is a cutthroat competition - zero sum game

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**Hypercompetition and the New 7-S’s framework (D’Aveni)**

- Every advantage is *eroded* (becoming a cost)
- Sustaining an advantage uses too much time and resources that can be a deadly distraction
- The goal should be *disruption*, not *sustainability* of advantage
- Initiatives are achieved with a series of small steps
- Hypercompetition occurs when technologies or offerings are so new that standards and rules are in flux, resulting in competitive advantages that cannot be sustained. It is characterized by *intense* and *rapid* competitive moves, in which competitors must move quickly to build new advantages and *erode* the advantages of their rivals.
- Successful concepts in hypercompetitive markets: 1) dynamic capabilities, 2) creative destruction, and 3) blue ocean strategy

**D’Aveni’s Hypercompetition Model (cont.)**

- **Hypercompetition Strategies for Disruption**
  - 1. **Stakeholder satisfaction** is key to winning such dynamic interaction with competitors
  - 2. **Strategic outmaneuvering** is the process for seeking out new knowledge for predicting what customers will want in the future
  - 3. **Speed** is crucial to take advantage of opportunities and respond to counterattacks by competitors
  - 4. **Surprise** enhances a company’s ability to stun a competitor, to build up superior position before a competitor can counterattack

- **Hypercompetition Tactics for Disruption**
  - 1. **Shifting rules of the market** to create tremendous disruption for competitors
  - 2. **Signals** out to (a) make announcements of strategic intent to dominate a marketplace, or (b) manipulate the future moves of rivals
  - 3. **Simultaneous or sequential strategic thrusts** using several moves to mislead or confuse a competitor

**Examples of Competitive Dynamics Models**

- A similar strategy of *cannibalizing* their own products was used by Apple® and Gillette™.
- Apple introduced the iPhone® while iPod® sales were *brisk*. and the iPad® while its Macintosh sales were *strong*.
- Apple continues to exhibit this strategy with subsequent releases of new models of all of its products

**Porter’s Model vs. Hypercompetition Model**

<table>
<thead>
<tr>
<th></th>
<th>Industries</th>
<th>Competitive Advantage (Characteristics)</th>
<th>Competitive Advantage (How to)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Porter’s</strong></td>
<td></td>
<td>Establish a strong, long-term position</td>
<td>Attain a fit with the environment as in traditional markets</td>
</tr>
<tr>
<td><strong>Model</strong></td>
<td></td>
<td>and defend it.</td>
<td></td>
</tr>
<tr>
<td><strong>Hyper-</strong></td>
<td><strong>Dynamic</strong></td>
<td>Short-lived, take advantage of any</td>
<td>1) change rules of competition</td>
</tr>
<tr>
<td>competition</td>
<td></td>
<td>small window of opportunity that</td>
<td>2) create disruptions (during which temporary advantages can be exploited)</td>
</tr>
<tr>
<td><strong>Model</strong></td>
<td></td>
<td>arises (thus speed and aggression)</td>
<td></td>
</tr>
</tbody>
</table>

**An Example in Beijing (Residential Housing Industry)**

- Say “Good Bye” to the *air conditioning era* 
  - (告别空调暖气时代)
- Selling house based on the *actual living size* (not including common areas)
- 按照使用面积售房
- Recruiting *members of communist party* 
  - 招收 *中共中央* members

**What S’s fit into this scenario?**
Summary of Key Strategy Frameworks (revised)

<table>
<thead>
<tr>
<th>Strategic Approach</th>
<th>Key Idea</th>
<th>Applications to Information Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Porter’s generic strategies framework</td>
<td>Firms achieve competitive advantage through cost leadership, differentiation, or focus.</td>
<td>Understanding which strategy is chosen by a firm is critical to choosing IS to complement that strategy.</td>
</tr>
<tr>
<td>D’Aveni’s hypercompetition model</td>
<td>Speed, agility and aggressive moves and countermoves by a firm Create competitive advantage.</td>
<td>IS are critical to achieving the speed needed for moves and countermoves. IS are in a constant state of flux or development.</td>
</tr>
<tr>
<td>Brandenburg and Nalebuff’s co-opetition model</td>
<td>Companies cooperate and compete at the same time.</td>
<td>Being cooperative and competitive at the same time requires IS that can manage these two roles.</td>
</tr>
</tbody>
</table>

One IS Strategy: Social Business Strategy

Most of the social business opportunities (using social IT) fall into one of three categories:

- **Collaboration**
  - Extend the reach of stakeholders to find and connect with one-another
- **Engagement**
  - Involve stakeholders in the business via blogs; communities
- **Innovation**
  - Identify, describe, prioritize new ideas for the enterprise.

Major Issues for the Next Society

1. Internationalization  
2. Technology  
3. Population

- **4I + 1K**  
- **Internationalization**  
- **Information**  
- **Integration**  
- **Innovation**  
- **Knowledge**

Disruptive versus Sustaining Technology

- **Sustaining technologies** – produces an improved product customers are eager to buy, such as a faster car or larger hard drive
  - Sustaining technologies tend to provide us with better, faster, and cheaper products in established markets
  - Sustaining technologies virtually never lead in markets opened by new and disruptive technologies
- **Disruptive technologies** – a new way of doing things that initially does not meet the needs of existing customers
  - Disruptive technologies redefine the competitive playing fields of their respective markets
  - Disruptive technologies tend to open new markets and destroy old ones
  - Disruptive technologies typically cut into the low end of the marketplace and eventually evolve to displace high-end competitors and their reigning technologies

“Be fearful when others are greedy, and be greedy when others are fearful.”

-- Warren E. Buffett, CEO, Berkshire Hathaway, Inc.

HWs to be done by next class

- **HBP case**
  - Swimming in the Virtual Community Pool with PlentyofFish
  - Make sure you know what you have to do and turn in next class
  - UPLOAD (both *.docx and *.pptx files) to Bb (under “Assignments & Cases) by midnight Sunday.
  - Bring a hardcopy to the class next Monday
- **Please name your files as follows:**
  - mbus626-YourLastname-Firstname-PlentyofFish.docx
  - mbus626-YourLastname-Firstname-PlentyofFish.pptx
End of Chapter 1

Mini Case Study

- Case Study 1-2 (p. 31)
- Google
- Questions #1 thru #5

Information System Strategy Triangle

![Information System Strategy Triangle](image)

Q#1. How is Google’s mission statement related to its business strategy?

- Ans: Google’s primary goal is to “organize the world’s information and make it universally accessible and useful” (mission statement).
- Google continues to take risks and expand into new markets to further its reach into the information world. It takes advantage of new avenues to expand its market share by making information freely available on its Intranet, and by willing to take risks by investing in speculative and strange projects if they see a large potential payoff.

2. How does Google’s information systems strategy support its business strategy?

- Ans: Through openness and innovation. It permits users to download their own software, maintain official and unofficial blogs, and buys and makes software to suit the needs of the business.
- IT encourages innovation by allowing employees to spend 20% of their time on a project of their own choosing. This “flexible” IT structure supports the innovation and creativity that its business strategy espouses.
3. How does Google’s organizational strategy supports its business strategy?

• Ans: Google has a culture of innovation and creativity. However, it still provides a level of structure when making decisions. Specifically, Google’s mission statement relates to its business strategy by making data on all ongoing projects and systems available to all of its employees through its corporate Intranet.

• Any employee can see what is transpiring in other areas and can lend a hand through Google’s “free day” policy and other open work-environment strategies.

4. Which of Porter’s three generic strategies does Google appear to be using based upon this case? Provide a rationale for your response.

• Ans: Differentiation, though one may argue that cost leadership is also utilized with its very reasonable ad costs. However, though the use of its innovative processes, and unique business model, Google has differentiated itself from its competitors by keeping a clean and simple interface (which most of the other search engines have emulated), and by continuing to invest in its employees, to provide innovation on a large scale.

5. Analyze Google’s strategy and the type of market disruption it has created using a dynamic environment perspective (D’Aveni’s Hypercompetitive Framework)

• Ans: In some form or another Google has utilized a blue ocean strategy, which changes an entire industry. Specifically, it has gained superior stakeholder satisfaction through offering a superior product to its customers and adding new products that provide value to its customers (Adsense, etc.).

• It is continually seeking out new knowledge through its innovative management styles and by its willingness to invest in risky projects that have a high-return potential.

• Google positions for speed and surprise by constantly innovating by setting limitations on how long it will take to make changes to its products and services.

• Through its new products and services (AdSense, Google Apps, etc.) and its low cost marketing, it changes competition by finding new and better ways to serve its customers.

D’Aveni’s Disruption and 7-S’s (for #5)

- Values for Disruption:
  - Identifying and creating opportunities for temporary advantage through understanding and stakeholder satisfaction
  - Strategic Soothsaying directed at identifying new ways to serve existing customers better or new customers that are not currently served by others

- Capability for Disruption:
  - Speed
  - Surprise
  - That can be applied across actions to build temporary advantage

- Market Disruption

- Tactics for Disruption:
  - Shifting the initiative to gain advantage by shifting the rules
  - Speeding
  - Simultaneous and sequential strategic thrusts

By Richard D’Aveni, professor of business strategy at Dartmouth College