Case Study for Information Management

Telecommunications, the Internet, and Wireless Technology:
Google, Apple, and Microsoft (Chap. 7)

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http://mail.tku.edu.tw/myday/
2015-11-03
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2  2015/09/22, 24  Information Systems in Global Business: UPS (Chap. 1) (pp.53-54)
3  2015/09/29, 10/01  Global E-Business and Collaboration: P&G (Chap. 2) (pp.84-85)
4  2015/10/06, 08  Information Systems, Organization, and Strategy: Starbucks (Chap. 3) (pp.129-130)
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8  2015/11/03, 05  Telecommunications, the Internet, and Wireless Technology: Google, Apple, and Microsoft (Chap. 7) (pp.318-320)
9  2015/11/10, 12  Midterm Report (期中報告)
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Chap. 7
Telecommunications, the Internet, and Wireless Technology: Google, Apple, and Microsoft
Case Study:

Google, Apple, and Microsoft (Chap. 7) (pp. 318-320)

Apple, Google, and Microsoft Battle for Your Internet Experience

1. Define and compare the business models and areas of strength of Apple, Google, and Microsoft.

2. Why is mobile computing so important to these three firms? Evaluate the mobile platform offerings of each firm.

3. What is the significance of applications and app stores, and closed vs. open app standards to the success or failure of mobile computing?

4. Which company and business model do you believe will prevail in this epic struggle? Explain your answer.

5. What difference would it make to a business or to an individual consumer if Apple, Google, or Microsoft dominated the Internet experience? Explain your answer.

Overview of Fundamental MIS Concepts

Understanding **Business Model**

- Business Model
- Revenue Model
- Business Strategy
- Business Strategy and Information System Alignment
Business Model
Value
### Business Model

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<td>Customer Relationships</td>
<td>Revenue Streams</td>
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**Value Proposition**

- **Customer Segments**: Identify the different groups of customers to whom your product or service is directed.
- **Channels**: Outline how you intend to reach your target customers.
- **Customer Relationships**: Describe the relationship you want to maintain with your customers.
- **Key Resources**: Identify the resources needed to create value for customers.
- **Key Activities**: Define the activities necessary to create and deliver the value proposition.
- **Key Partners**: Identify any external parties that are essential to the business model.
- **Revenue Streams**: Specify how the business will make money.
- **Cost Structure**: Outline the costs involved in delivering the value proposition.
Definition of Business Model

A business model describes the rationale of how an organization creates, delivers, and captures value.

E-commerce

Business Models

1. Portal
2. E-tailer
3. Content Provider
4. Transaction Broker
5. Market Creator
6. Service Provider
7. Community Provider

E-commerce

Revenue Models

1. Advertising
2. Sales
3. Subscription
4. Free/Freemium
5. Transaction Fee
6. Affiliate

**Types of E-commerce**

1. Business-to-consumer (B2C)
2. Business-to-business (B2B)
3. Consumer-to-consumer (C2C)
4. Mobile commerce (m-commerce)

Business Model Canvas

https://www.youtube.com/watch?v=QoAOzMTLP5s
Business Model Canvas Explained

Source: http://www.youtube.com/watch?v=QoAOzMTLP5s
The 9 Building Blocks of Business Model

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<th>Key Activities</th>
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<th>Key Resources</th>
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<th>Cost Structure</th>
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The 9 Building Blocks of Business Model

The 9 Building Blocks of Business Model

1. Customer Segments
   – An organization serves one or several Customer Segments.

2. Value Propositions
   – It seeks to solve customer problems and satisfy customer needs with value propositions.

3. Channels
   – Value propositions are delivered to customers through communication, distribution, and sales Channels.

4. Customer Relationships
   – Customer relationships are established and maintained with each Customer Segment.

The 9 Building Blocks of Business Model

5. Revenue Streams
   – Revenue streams result from value propositions successfully offered to customers.

6. Key Resources
   – Key resources are the assets required to offer and deliver the previously described elements...

7. Key Activities
   – ...by performing a number of Key Activities.

8. Key Partnerships
   – Some activities are outsourced and some resources are acquired outside the enterprise.

9. Cost Structure
   – The business model elements result in the cost structure.

Business Model

1. Customer Segments
2. Value Proposition
3. Channels
4. Customer Relationships
5. Revenue Streams
6. Key Activities
7. Key Resources
8. Key Partners
9. Cost Structure

Business Model Generation

Business Model Generation

THE CANVAS OF BUSINESS MODEL GENERATION

Facebook – World’s leading Social Networking Site (SNS)

Key Partners
- Content Partners (TV Shows, Movies, Music, News Articles)

Key Activities
- Platform Development
- Data Center Operations Mgmt

Key Resources
- Facebook Platform
- Technology Infrastructure

Value Propositions
- Connect with your friends, Discover & Learn, Express yourself
- Reach, Relevance, Social Context, Engagement
- Personalized and Social Experiences, Social Distribution, Payments

Relationships
- Same-side Network Effects
- Cross-side Network Effects

Channels
- Website, Mobile Apps
- Facebook Ads, Facebook Pages
- Developer Tools and APIs

Customer Segments
- Internet Users
- Advertisers and Marketers
- Developers

Cost Structure
- Data center costs
- Marketing and Sales
- Research and Development
- General and Administrative

Revenue Streams
- Free
- Ad Revenues
- Payment Revenues

Source: http://bmimatters.com/tag/business-model-canvas-examples/
Twitter Business Model

Key Partners
- Search Vendors
- Device Vendors
- Media companies
- Mobile Operators

Key Activities
- Platform Development

Key Resources
- Twitter.com Platform

Value Propositions
- Stay connected
- News/Events
- Targeted Marketing
- Twitter Apps

Relationships
- Channels
  - Website, Desktop Apps, Mobile Apps, SMS
  - Twitter API

Customer Segments
- Users
- Enterprises
- Developers

Cost Structure
- Employees
- Servers

Revenue Streams
- Licensing Data Streams
- Promoted Accounts
- Promoted Tweets
- Promoted Trends
- Analytics

Source: http://bmimatters.com/tag/business-model-canva-examples/
Business Model of Banking companies

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<td>Personal Assistance</td>
<td>Retail and Corporate Customers (Depositors)</td>
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<tr>
<td>Technology vendors</td>
<td>Call center operations</td>
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<td>Automation where possible</td>
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<td>Regulatory Agencies</td>
<td>IT Operations</td>
<td>Loan Products (Higher Interest Rates)</td>
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<td></td>
<td>Key Resources</td>
<td></td>
<td>Channels</td>
<td>Retail and Corporate Customers (Borrowers)</td>
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<td>Physical and IT Infrastructure</td>
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<td>Bank Branches, ATMs, Call centers, Internet, Mobile Devices</td>
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Cost Structure
- Interest Expenses
- Channel Costs

Revenue Streams
- Interest Income
- Fee Income

www.businessmodelgeneration.com

VISA – Leader in Global Payments Industry

Key Partners
- Technology Alliances
- Commercial Partners

Key Activities
- Payments Network Management
- Transaction Processing
- Value-added Services

Key Resources
- Payment Products Platform
- VISA Brand

Value Propositions
- Payment Product Platforms for card programs and cashless payments
- Convenience, Security, Rewards associated with card payments
- Improved Sales, Customer Convenience

Relationships
- Channels
  - Sponsorships (FIFA World cup, Olympics)
  - TV ads, Tradeshows, Conferences

Customer Segments
- Financial Institutions (Issuers)
- Financial Institutions (Acquirers)
- Card Holders
- Merchants

Cost Structure
- Personnel
- Network, EDP, & Communications
- Brand Promotion
- Litigations Provision

Revenue Streams
- Services Revenues
- Data Processing Revenues
- International Revenues

Source: http://bmimatters.com/tag/business-model-canVAS-canvas-examples/
Customer Value
Marketing

“Meeting needs profitably”

Value

the sum of the tangible and intangible benefits and costs

Value

Total customer benefit

Total customer cost

Customer perceived value

Customer Value Triad

Quality, Service, and Price (qsp)

Value and Satisfaction

• Marketing
  – identification, creation, communication, delivery, and monitoring of customer value.

• Satisfaction
  – a person’s judgment of a product’s perceived performance in relationship to expectations.

Building Customer Value, Satisfaction, and Loyalty

Customer Perceived Value

- Product benefit
- Services benefit
- Personnel benefit
- Image benefit

Total customer benefit

- Monetary cost
- Time cost
- Energy cost
- Psychological cost

Total customer cost

Customer perceived value

“a person’s feelings of pleasure or disappointment that result from comparing a product’s perceived performance (or outcome) to expectations”

Loyalty

“a deeply held commitment to rebuy or repatronize a preferred product or service in the future despite situational influences and marketing efforts having the potential to cause switching behavior.”

Customer Perceived Value, Customer Satisfaction, and Loyalty

Source: http://www.r3now.com/what-is-the-proper-relationship-for-the-cio-ceo-and-cfo/
Adapted from: http://www.r3now.com/what-is-the-proper-relationship-for-the-cio-ceo-and-cfo/
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<td>Operations</td>
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Adapted from: [http://www.argowiki.com/index.php?title=The_Relationship_Between_the_CEO_and_CIO](http://www.argowiki.com/index.php?title=The_Relationship_Between_the_CEO_and_CIO)
Nothing is so practical as a good theory

Components of a Simple Computer Network

Corporate Network Infrastructure

Packet-Switched Networks and Packet Communications

The Transmission Control Protocol/Internet Protocol (TCP/IP) Reference Model

Functions of the Modem

The Domain Name System

Internet Network Architecture

Client/Server Computing on the Internet

- Web browser
- Other client software
- Web (HTTP) server
- Simple Mail Transfer Protocol (SMTP)
- Domain Name Serving (DNS) utility
- File Transfer Protocol (FTP)
- Network News Transfer Protocol (NNTP)

How Voice over IP Works

A Virtual Private Network Using the Internet

The Global Internet

• Search engines
  – Started as simpler programs using keyword indexes
  – Google improved indexing and created page ranking system

• Mobile search: 20% of all searches in 2012

• Search engine marketing
  – Major source of Internet advertising revenue

• Search engine optimization (SEO)
  – Adjusting Web site and traffic to improve rankings in search engine results

The Global Internet

• Social search
  – Google +1, Facebook Like

• Semantic search
  – Anticipating what users are looking for rather than simply returning millions of links

• Intelligent agent shopping bots
  – Use intelligent agent software for searching Internet for shopping information

Top U.S. Web Search Engines

- Google: 78%
- Baidu: 7%
- Yahoo: 7%
- Bing: 5%
- Others: 3%

How Google Works

1. User enters query

2. Google’s Web servers receive the request. Google uses an estimated 450,000 PCs linked together and connected to the Internet to handle incoming requests and produce the results.

3. Request is sent to Google’s index servers that describe which pages contain the keywords matching the query and where those pages are stored on the document servers.

4. Using the PageRank software, the system measures the “importance” or popularity of each page by solving an equation with more than 500 million variables and two billion terms. These are likely the “best” pages for the query.

5. Small text summaries are prepared for each Web page.

6. Results delivered to user, 10 to a page.

Web 2.0

• Second-generation services
• Enabling collaboration, sharing information, and creating new services online
• Features
  – Interactivity
  – Real-time user control
  – Social participation (sharing)
  – User-generated content

Web 2.0 services and tools

- **Blogs**: chronological, informal Web sites created by individuals
  - RSS (Really Simple Syndication): syndicates Web content so aggregator software can pull content for use in another setting or viewing later
  - Blogosphere
  - Microblogging
- **Wikis**: collaborative Web sites where visitors can add, delete, or modify content on the site
- **Social networking sites**: enable users to build communities of friends and share information

Web 3.0: The “Semantic Web”

• A collaborative effort led by W3C to add layer of meaning to the existing Web
• Goal is to reduce human effort in searching for and processing information
• Making Web more “intelligent” and intuitive
• Increased communication and synchronization with computing devices, communities
• “Web of things”
• Increased cloud computing, mobile computing

A Bluetooth Network (PAN)

An 802.11 Wireless LAN

How RFID Works

A microchip holds data including an identification number. The rest of the tag is an antenna that transmits data to a reader.

Has an antenna that constantly transmits. When it senses a tag, it wakes it up, interrogates it, and decodes the data. Then it transmits the data to a host system over wired or wireless connections.

Processes the data from the tag that have been transmitted by the reader.

A Wireless Sensor Network

Case Study: Summit and SAP (Chap. 9) (pp. 396-398)

Summit Electric Lights Up with a New ERP System

1. Which business processes are the most important at Summit Electric Supply? Why?
2. What problems did Summit have with its old systems? What was the business impact of those problems?
3. How did Summit’s ERP system improve operational efficiency and decision making? Give several examples.
4. Describe two ways in which Summit’s customers benefit from the new ERP system.
5. Diagram Summit’s old and new process for handling chargebacks.

2015/11/10
Midterm Report (期中報告)

• 請各組組長整理期中報告資料檔案，於2015/11/10 (週二) 上午 9:00 前，完成Email 寄出以下兩個壓縮檔的下載連結，給所有組員和老師 (正本to: 老師，副本cc: 所有組員)。

  - 1. 整組各次簡報的 ppt (含整組期中報告目錄 ppt) 壓縮檔
    • (例如：MI4C_資訊管理個案_第1組_期中各次簡報.zip)。
  
  - 2. 整組各組員的
    [(1) 個人期中報告.ppt
      (2) 個人期中書面報告.pdf] 之壓縮檔
    • (例如：MI4C_資訊管理個案_第1組_組員個人期中報告.zip)。
資訊管理個案
(Case Study for Information Management)

1. 請同學於資訊管理個案討論前應詳細研讀個案，並思考個案研究問題。
2. 請同學於上課前複習相關資訊管理相關理論，以作為個案分析及擬定管理對策的依據。
3. 請同學於上課前先繳交個案研究問題書面報告。
References


– Kenneth C. Laudon & Jane P. Laudon原著，游張松主編，陳文生翻譯 (2014)，資訊管理系統，第13版，滄海