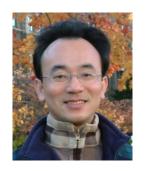
#### 資訊管理專題



#### **Hot Issues of Information Management**

### Information Systems in Global Business: UPS (Chap. 1)

1051IM4C02 TLMXB4C (M0842) Thu 7,8 (14:10-16:00) B613



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淡江大學 資訊管理學系



#### 課程大綱 (Syllabus)

- 週次 (Week) 日期 (Date) 內容 (Subject/Topics)
- 1 2016/09/15 中秋節 (放假一天) (Mid-Autumn Festival)(Day off)
- 2 2016/09/22 Introduction to Case Study for Information Management Hot Topics
- 3 2016/09/29 Information Systems in Global Business: UPS (Chap. 1) (pp.53-54)
- 4 2016/10/06 Global E-Business and Collaboration: P&G (Chap. 2) (pp.84-85)
- 5 2016/10/13 Information Systems, Organization, and Strategy: Starbucks (Chap. 3) (pp.129-130)
- 6 2016/10/20 Ethical and Social Issues in Information Systems: Facebook (Chap. 4) (pp.188-190)

#### 課程大綱 (Syllabus)

週次 (Week) 日期 (Date) 內容 (Subject/Topics) 7 2016/10/27 IT Infrastructure and Emerging Technologies: Amazon and Cloud Computing (Chap. 5) (pp. 234-236) 2016/11/03 Foundations of Business Intelligence: IBM and Big Data (Chap. 6) (pp.261-262) 2016/11/10 Midterm Report (期中報告) 10 2016/11/17 期中考試週 11 2016/11/24 Telecommunications, the Internet, and Wireless Technology: Google, Apple, and Microsoft (Chap. 7) (pp.318-320) 12 2016/12/01 Enterprise Applications: Summit and SAP

(Chap. 9) (pp.396-398)

#### 課程大綱 (Syllabus)

```
週次 日期 內容(Subject/Topics)
13 2016/12/08 E-commerce: Zagat (Chap. 10) (pp.443-445)
14 2016/12/15 Enhancing Decision Making: Zynga
               (Chap. 12) (pp.512-514)
15 2016/12/22 Managing Projects: NYCAPS and CityTime
               (Chap. 14) (pp.586-588)
16 2016/12/29 Final Report I (期末報告 I)
17 2017/01/05 Final Report II (期末報告 II)
18 2017/01/12 期末考試週
```

#### **Management Information Systems:**

Managing the Digital Firm

Organization, Management, and the Networked Enterprise

Information Technology Infrastructure

Key System Applications for the Digital Age

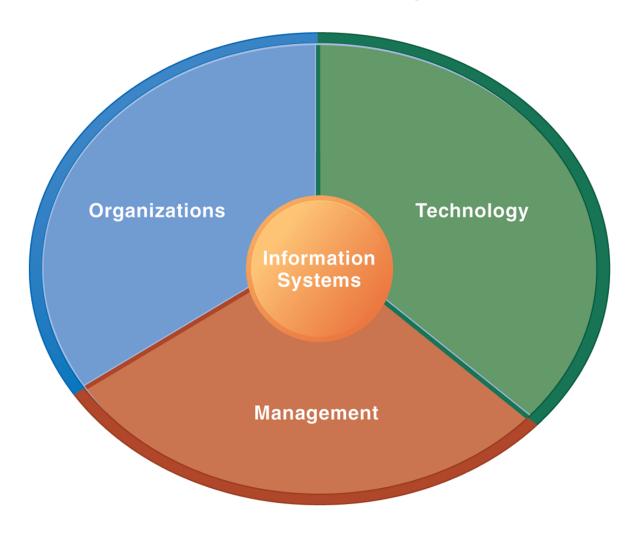
**Building and Managing Systems** 

# Chap. 1 Information Systems in Global Business: UPS

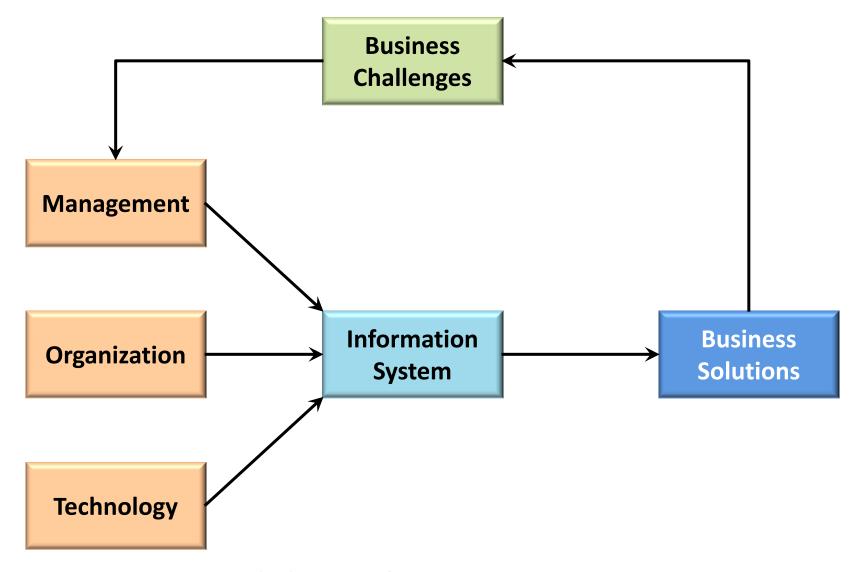
# Case Study: UPS (Chap. 1) (pp.53-54) UPS Competes Globally with Information Technology

- 1. What are the inputs, processing, and outputs of UPS's package tracking system?
- 2. What technologies are used by UPS? How are these technologies related to UPS's business strategy?
- 3. What strategic business objectives do UPS's information systems address?
- 4. What would happen if UPS's information systems were not available?

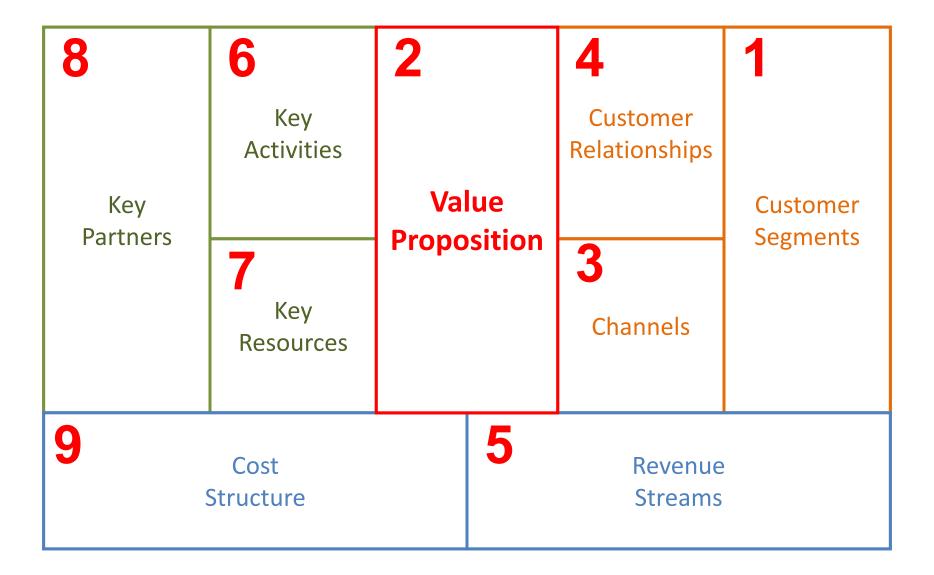
# Information Management (MIS) Information Systems



# Overview of Fundamental MIS Concepts



#### **Business Model**



#### **Ponsse:**

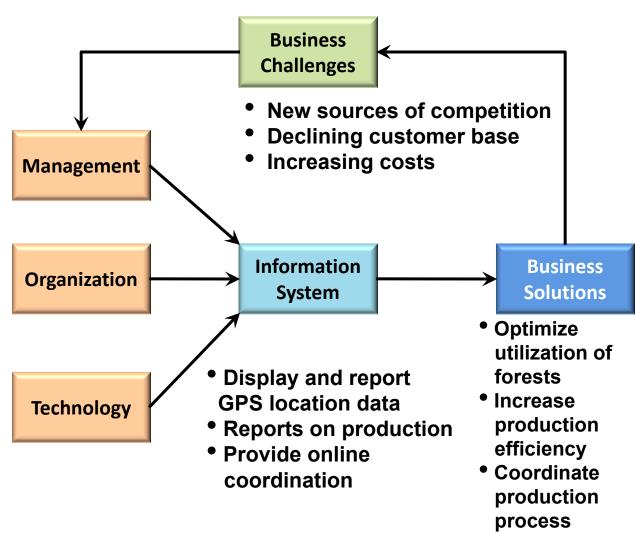
# Efficiency in Wood Harvesting with Information System



Source: http://www.ponsse.com/

# Overview of Fundamental MIS Concepts using an integrated framework for describing and analyzing information systems

- Develop new production processes
- Develop new management techniques
- Increase use of data by managers
- Build new business production processes
- Train new channels of information flow
- Train employee in use of the systems
- Develop GPS systems for field use
- Create email links with operators
- Develop data base to receive information



# Information Systems in Global Business

- 1. How are information systems transforming business and what is their relationship to globalization?
- 2. Why are information systems so essential for running and managing a business today?
- 3. What exactly is an information system? How does it work? What are its management, organization, and technology components?
- 4. What are complementary assets? Why are complementary assets essential for ensuring that information systems provide genuine value for an organization?
- 5. What academic disciplines are used to study information systems? How does each contribute to an understanding of information systems? What is a sociotechnical systems perspective?

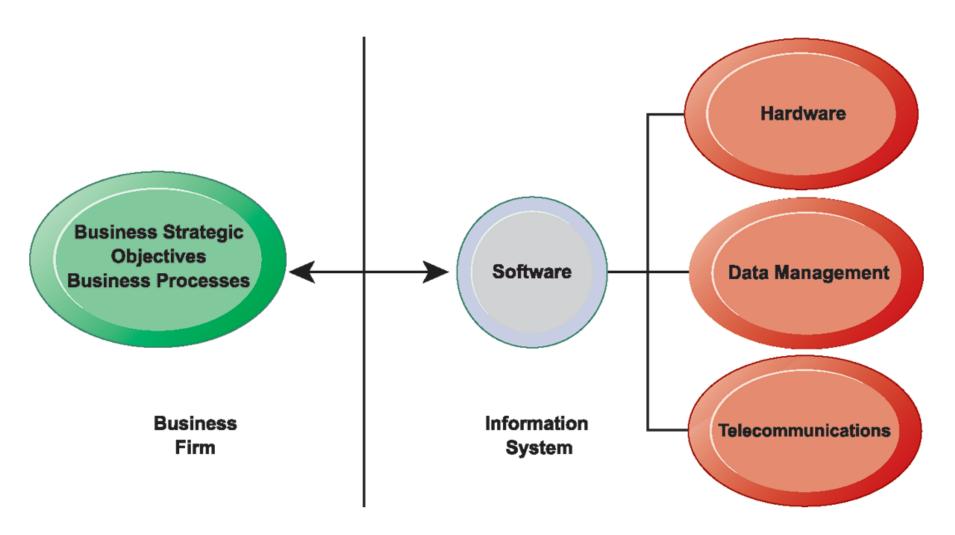
# How information systems are transforming business

- Emerging mobile digital platform
- Growing business use of "big data"
- Growth in cloud computing

#### Globalization opportunities

- Internet has drastically reduced costs of operating on global scale
- Increases in foreign trade, outsourcing
- Presents both challenges and opportunities

### The Interdependence Between Organizations and Information Technology



# Strategic Business Objectives of Information Systems

- 1. Operational Excellence
- 2. New Products, Services and Business Models
- 3. Customer and Supplier Intimacy
- 4. Improved Decision Making
- 5. Competitive Advantage
- 6. Survival

#### 1. Operational Excellence

- Improvement of efficiency to attain higher profitability
- Information systems, technology an important tool in achieving greater efficiency and productivity
- Walmart's Retail Link system links suppliers to stores for superior replenishment system

# 2. New Products, Services, and Business Models

- Business model: describes how company produces, delivers, and sells product or service to create wealth
- Information systems and technology a major enabling tool for new products, services, business models
  - Examples: Apple's iPad, Google's Android OS, and Netflix

#### 3. Customer and Supplier Intimacy

- Serving customers well leads to customers returning, which raises revenues and profits.
  - Example: High-end hotels that use computers to track customer preferences and used to monitor and customize environment
- Intimacy with suppliers allows them to provide vital inputs, which lowers costs.
  - Example: JCPenney's information system which links sales records to contract manufacturer

#### 4. Improved Decision Making

- Without accurate information:
  - Managers must use forecasts, best guesses, luck
  - Results in:
    - Overproduction, underproduction
    - Misallocation of resources
    - Poor response times
  - Poor outcomes raise costs, lose customers
- Example:
  - Verizon's Web-based digital dashboard to provide managers with real-time data on customer complaints, network performance, line outages

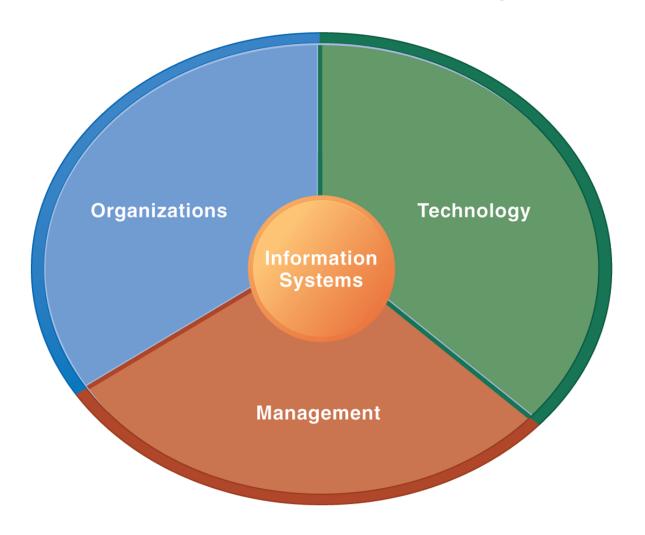
#### 5. Competitive advantage

- Delivering better performance
- Charging less for superior products
- Responding to customers and suppliers in real time
- Examples: Apple, Walmart, UPS

#### 6. Survival

- Information technologies as necessity of business
- Industry-level changes
  - Example: Citibank's introduction of ATMs
- Governmental regulations requiring recordkeeping
  - Examples: Toxic Substances Control Act, Sarbanes-Oxley Act

# **Information Systems Are More Than Computers**



#### **Dimensions of Information Systems**

#### Organizations

 People, structure, business processes, politics, and culture.

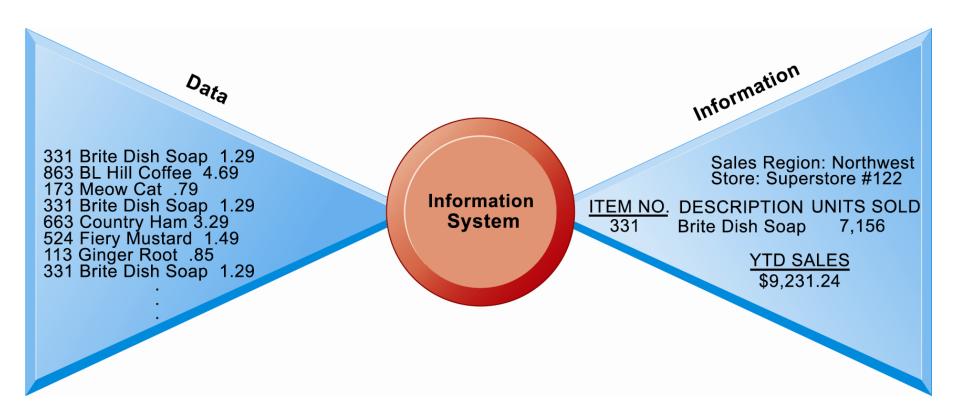
#### Management

 Make sense out of the many situations faced by organizations, make decisions, and formulate action plans to solve organizational problems.

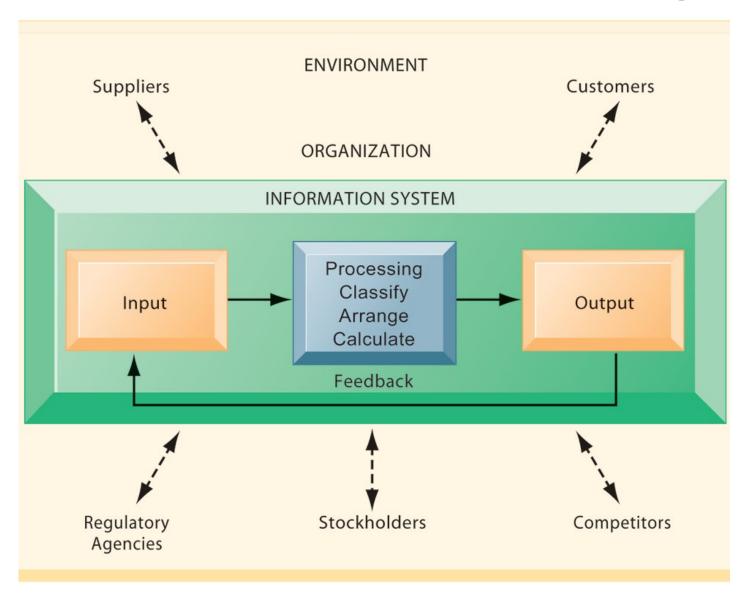
#### Information Technology

 Computer hardware, software, data management technology, networking and telecommunications technology

### Perspectives on Information Systems: Data and Information



#### **Functions of an Information System**



#### Levels in a Firm

Senior Management

Middle Management
Scientists and knowledge workers

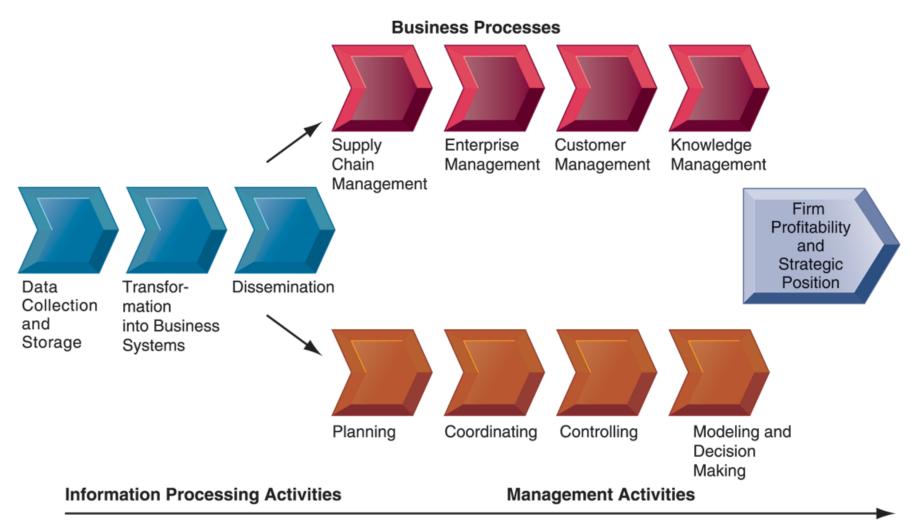
Operational Management
Production and service workers
Data workers

#### **MAJOR BUSINESS FUNCTIONS**

FUNCTION	PURPOSE
Sales and marketing	Selling the organization's products and services
Manufacturing and production	Producing and delivering products and services
Finance and accounting	Managing the organization's financial assets and maintaining the organization's financial records
Human resources	Attracting, developing, and maintaining the organization's labor force; maintaining employee records

# IT ISN'T JUST TECHNOLOGY: A BUSINESS PERSPECTIVE ON INFORMATION SYSTEMS

#### The Business Information Value Chain



#### **Business Value**

#### The Business Information Value Chain

 From a business perspective, information systems are part of a series of value-adding activities for acquiring, transforming, and distributing information that managers can use to improve decision making, enhance organizational performance, and, ultimately, increase firm profitability.

#### COMPLEMENTARY SOCIAL, MANAGERIAL, AND ORGANIZATIONAL ASSETS REQUIRED TO OPTIMIZE RETURNS FROM INFORMATION **TECHNOLOGY INVESTMENTS**

#### Organizational assets

- Supportive organizational culture that values efficiency and effectiveness
- Appropriate business model
- Efficient business processes
- Decentralized authority
- Distributed decision-making rights
- Strong IS development team

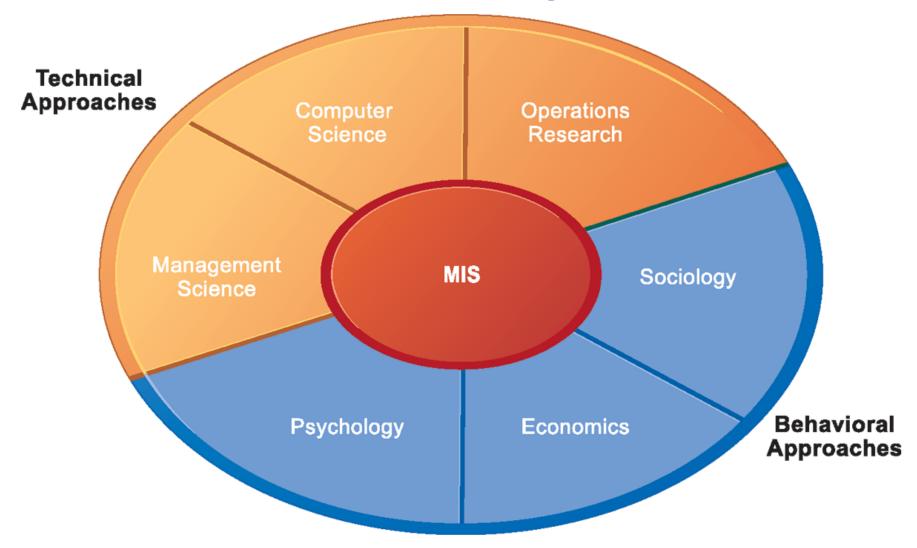
#### Managerial assets

- Strong senior management support for technology investment and change
- Incentives for management innovation
- Teamwork and collaborative work environments
- Training programs to enhance management decision skills
- Management culture that values flexibility and knowledge-based decision making.

#### Social assets

- The Internet and telecommunications infrastructure
- IT-enriched educational programs raising labor force computer literacy
- Standards (both government and private sector)
- Laws and regulations creating fair, stable market environments
- Technology and service firms in adjacent markets to assist implementation

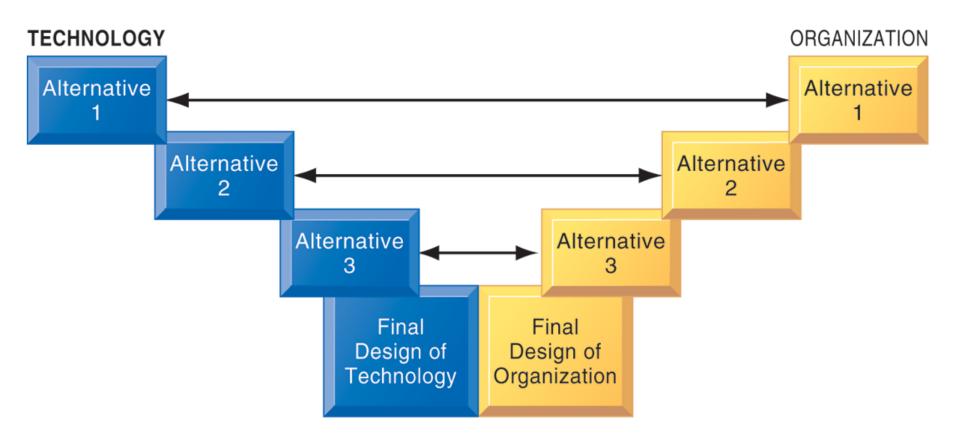
## Contemporary Approaches to Information Systems



## Contemporary Approaches to Information Systems

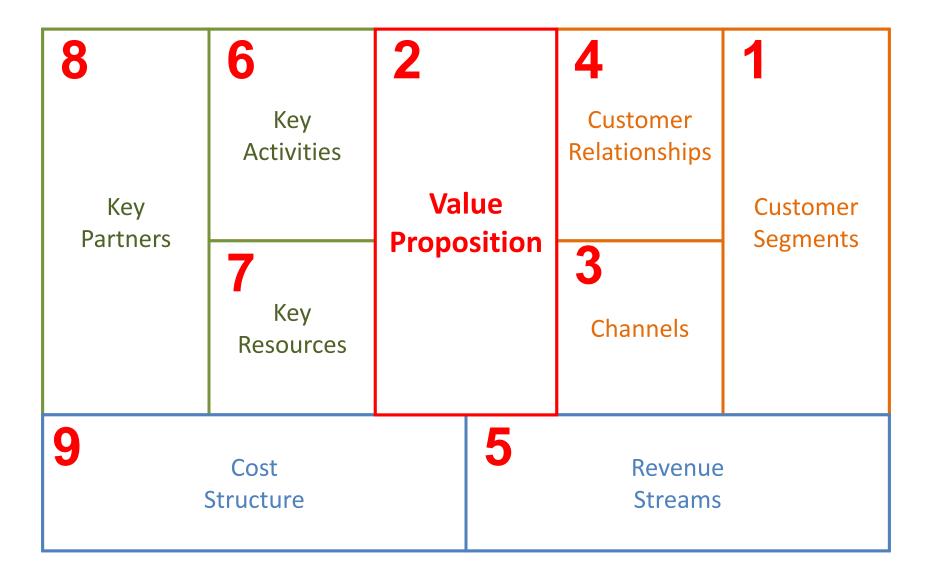
- Technical Approach
- Behavioral Approach
- Sociotechnical Systems

## A Sociotechnical Perspective on Information Systems



## Business Model

### **Business Model**



### **Definition of Business Model**

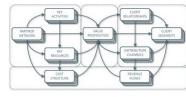
A business model describes the rationale of how an organization creates, delivers, and captures value.

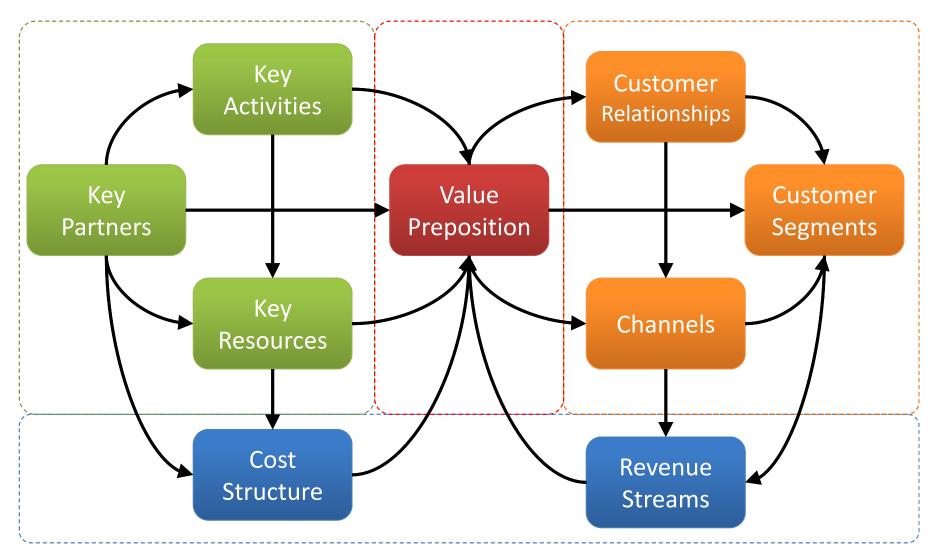
## **Definition of Business Strategy**

A business strategy
is
a long term plan of action

designed to achieve a particular goal or set of goals or objectives.

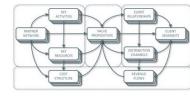
## **Business Model Canvas**





Source: <a href="http://nonlinearthinking.typepad.com/nonlinear\_thinking/2008/07/the-business-model-canvas.html">https://nonlinearthinking.typepad.com/nonlinear\_thinking/2008/07/the-business-model-canvas.html</a>
<a href="https://www.youtube.com/watch?v=QoAOzMTLP5s">https://www.youtube.com/watch?v=QoAOzMTLP5s</a>

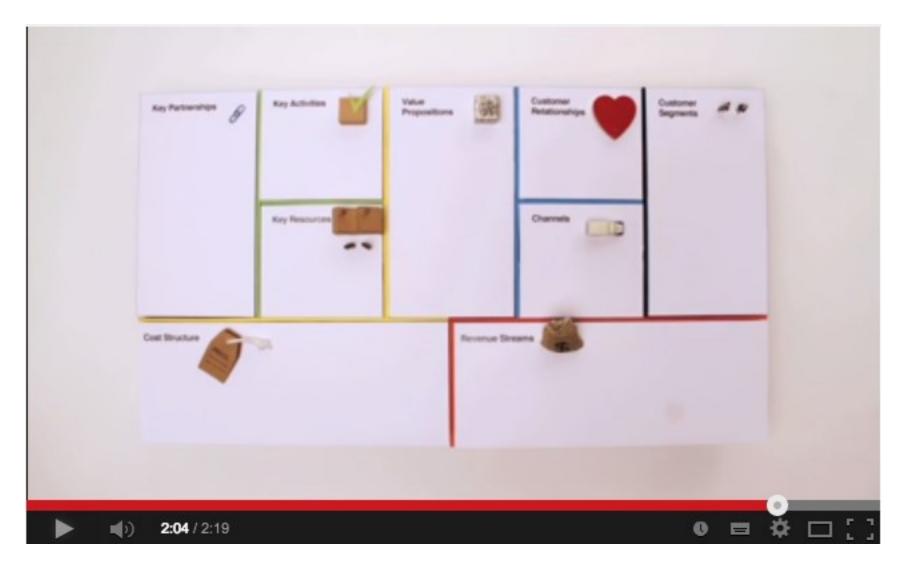
## **Business Model Canvas**



Infrastructure Customer **Product Interface** Management **Financial Aspects** 

Source: <a href="http://nonlinearthinking.typepad.com/nonlinear\_thinking/2008/07/the-business-model-canvas.html">http://nonlinearthinking.typepad.com/nonlinear\_thinking/2008/07/the-business-model-canvas.html</a>
<a href="http://nonlinearthinking.typepad.com/nonlinear\_thinking/2008/07/the-business-model-canvas.html">https://nonlinearthinking.typepad.com/nonlinear\_thinking/2008/07/the-business-model-canvas.html</a>
<a href="http://nonlinearthinking.typepad.com/nonlinear\_thinking/2008/07/the-business-model-canvas.html">https://nonlinearthinking.typepad.com/nonlinear\_thinking/2008/07/the-business-model-canvas.html</a>
<a href="https://www.youtube.com/watch?v=QoAOzMTLP5s">https://www.youtube.com/watch?v=QoAOzMTLP5s</a>

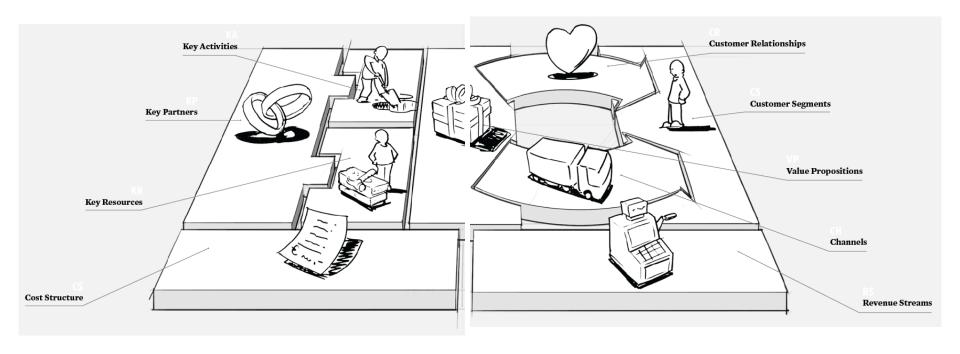
## **Business Model Canvas Explained**



## The 9 Building Blocks of Business Model

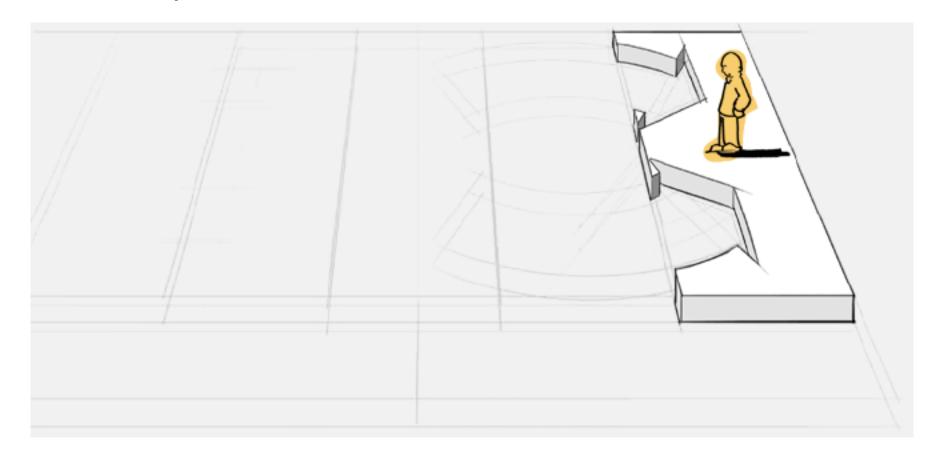
Key Partners	W.	Key Activities	N.	Value Proposition		Customer Relationships	$\bigcirc$	Customer Segments	
8		6		2		1		1	
					•	_		•	
		Key Resources				Channels			
		7				3			
				_					
Cost Structure		9			Revenue Streams	5			
		<b>J</b>				<u> </u>			

## The 9 Building Blocks of Business Model



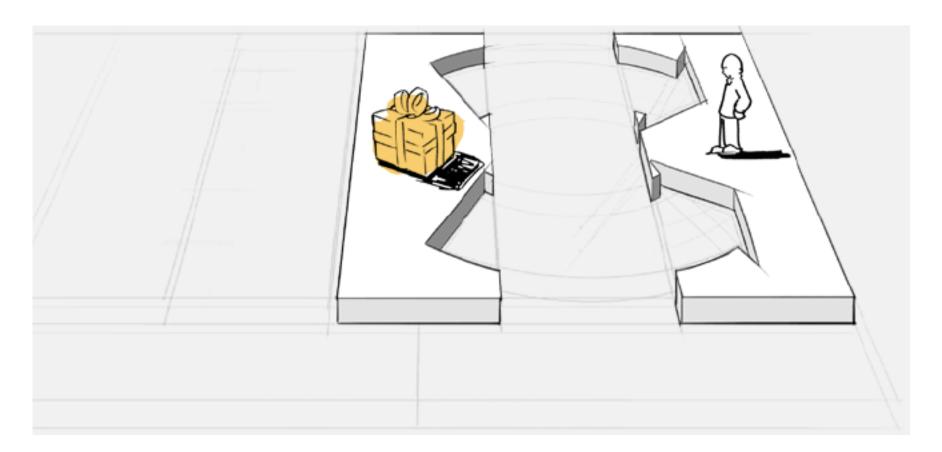
## 1. Customer Segments

Defines the different groups of people or organizations an enterprise aims to reach and serve



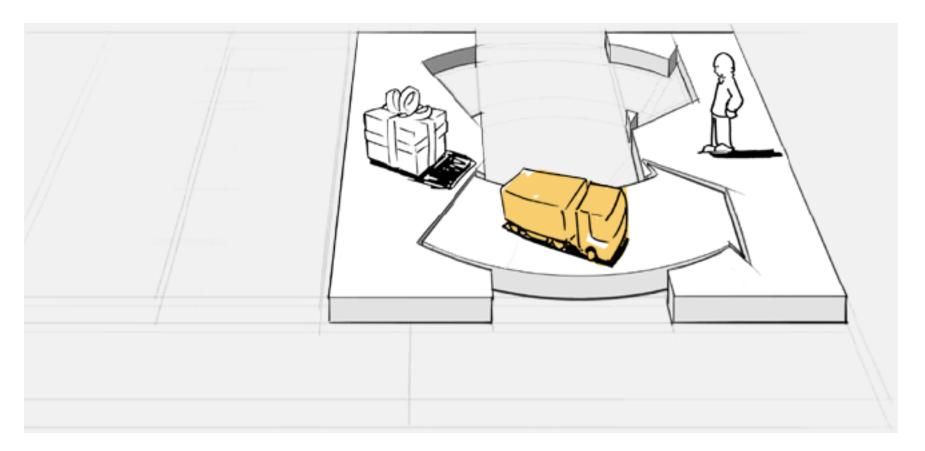
## 2. Value Propositions

Describes the bundle of products and services that create value for a specific Customer Segment



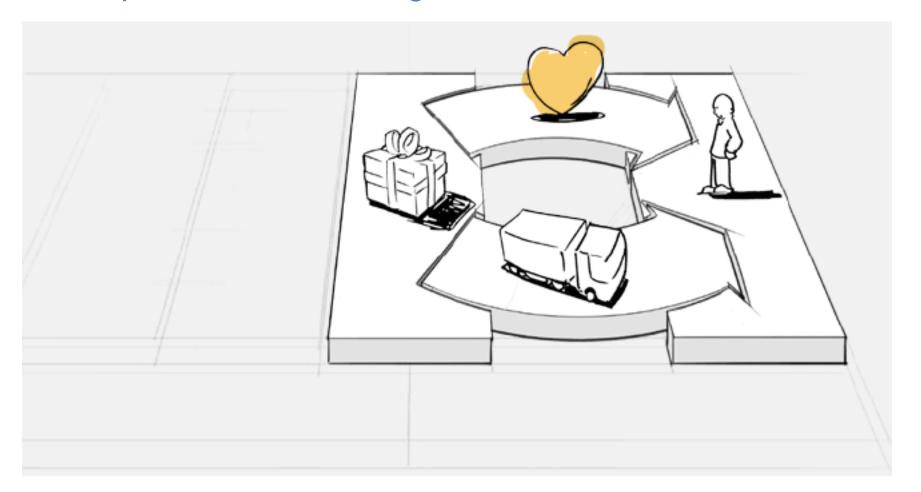
## 3. Channels

Describes how a company communicates with and reaches its Customer Segments to deliver a Value Proposition



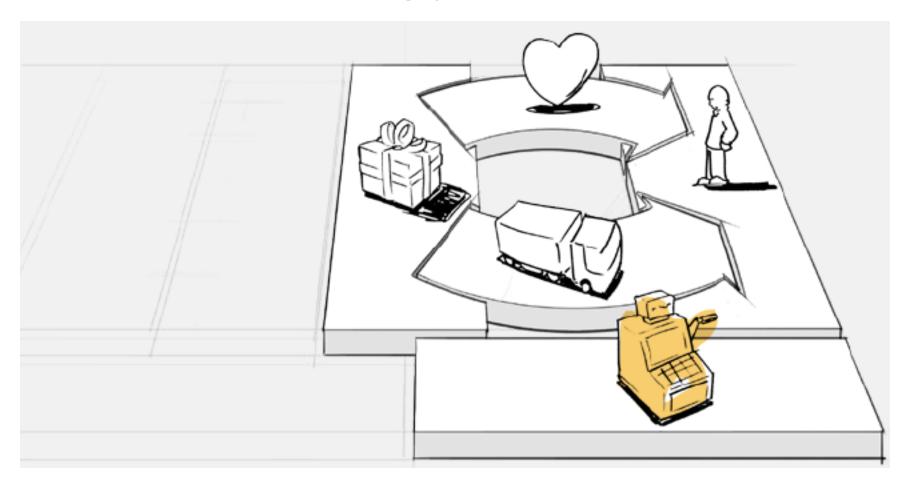
## 4. Customer Relationships

Describes the types of relationships a company establishes with specific Customer Segments



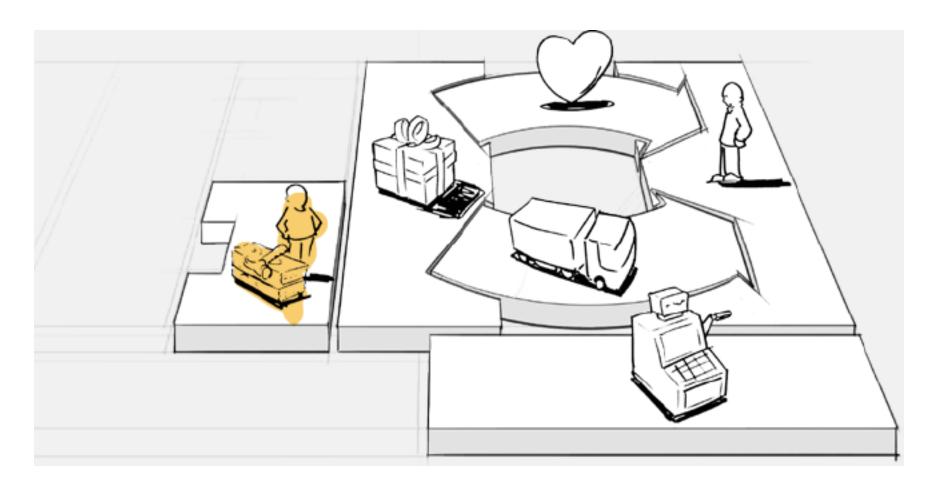
### 5. Revenue Streams

Represents the cash a company generates from each Customer Segment (costs must be subtracted from revenues to create earnings)



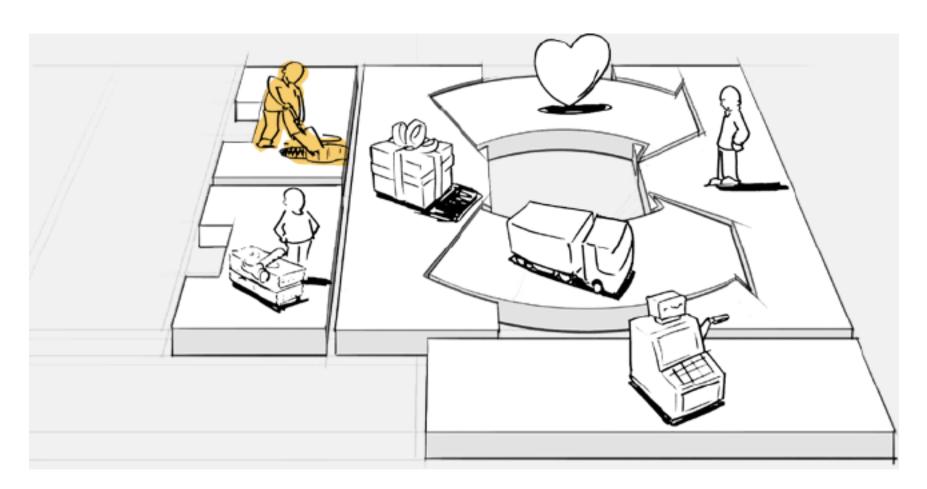
## 6. Key Resources

Describes the most important assets required to make a business model work



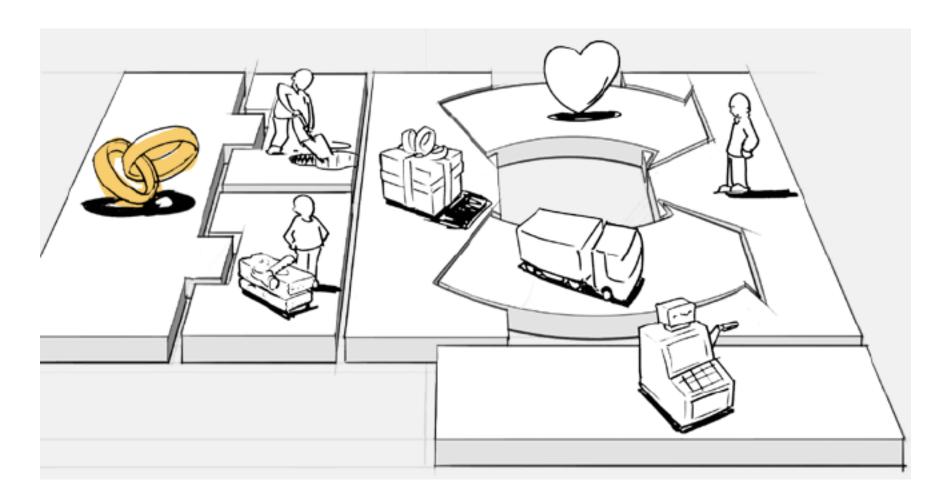
## 7. Key Activities

Describes the most important things a company must do to make its business model work



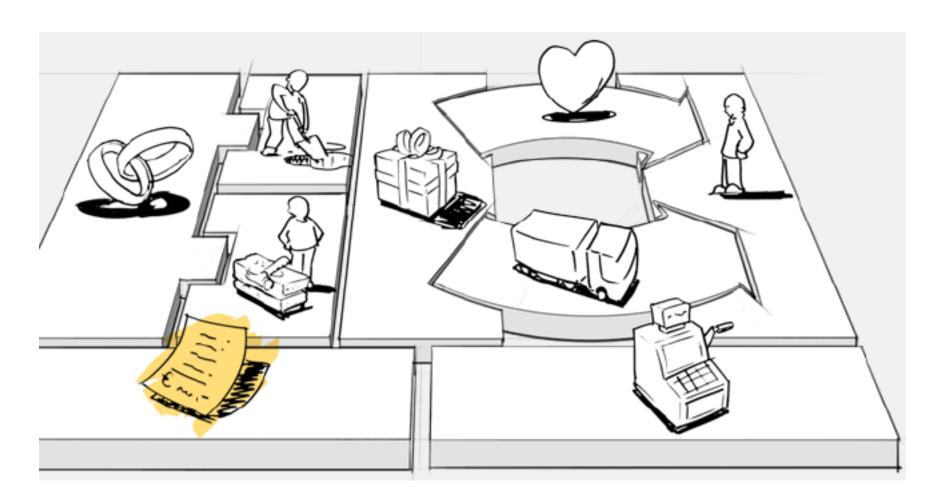
## 8. Key Partnerships

Describes the network of suppliers and partners that make the business model work



### 9. Cost Structure

#### Describes all costs incurred to operate a 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.

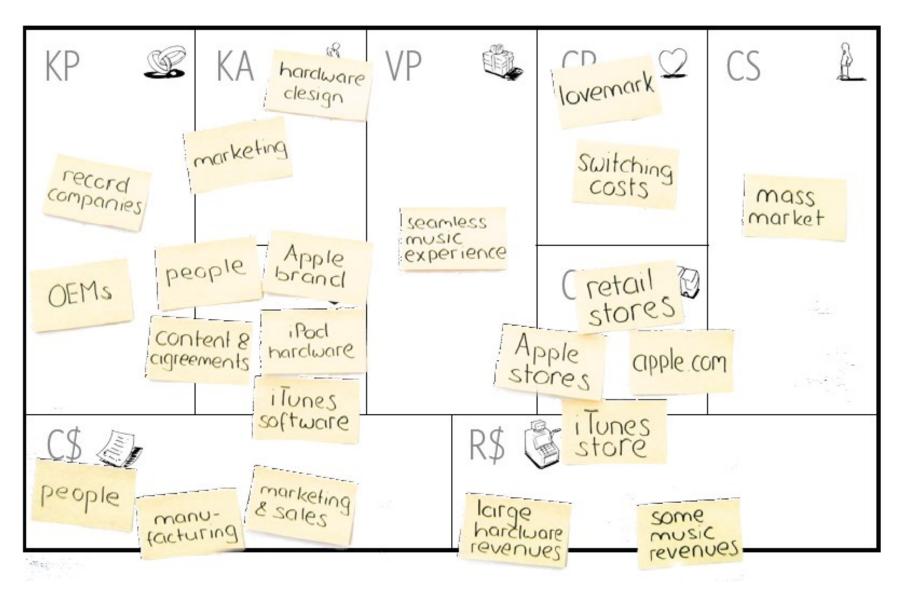
#### 8. Key Partnerships

 Some activities are outsourced and some resources are acquired outside the enterprise.

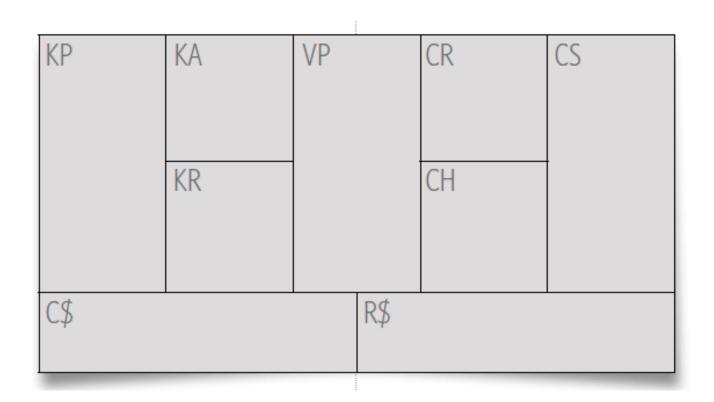
#### 9. Cost Structure

The business model elements result in the cost structure.

### **Business Model Generation**



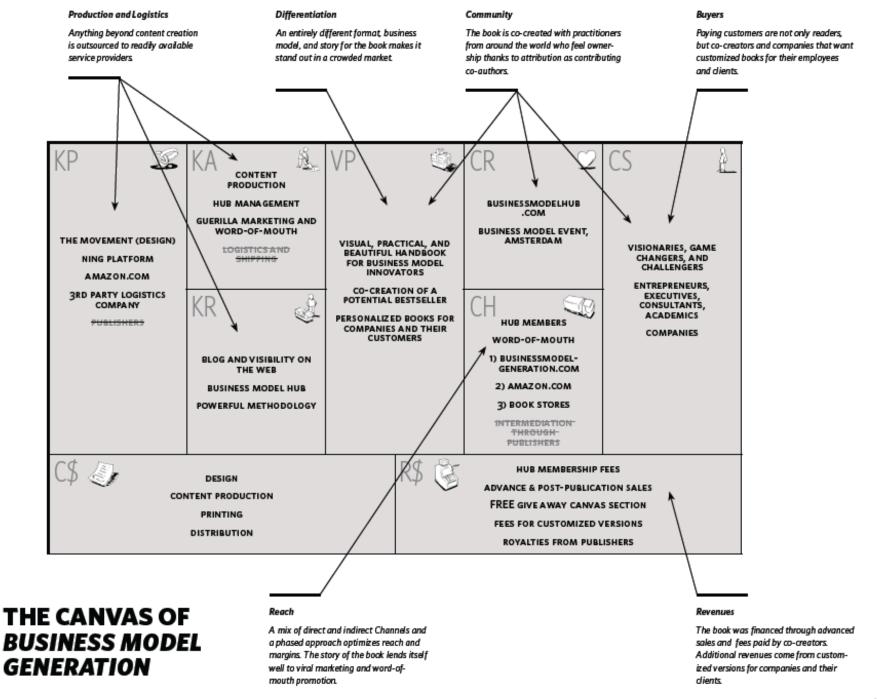
### **Business Model Generation**



efficiency

value

RIGHT CANVAS



#### Facebook – World's leading Social Networking Site (SNS)

							1
<b>Key Partners</b>	Key Activiti	es	Value Pro	positions		Relationships	Customer Segments
	Platform Development  Data Center Operations Mgmt		Connect with your friends, Discover & Learn, Express yourself		Same-side Network Effects  Cross-side Network Effects		Internet Users
Content Partners (TV Shows,				Reach, Relevance,			Advertisers and
Movies, Music,	Key Resources		Social Context, Engagement		Channels		Marketers
News Articles)	Facebook Platform		Personalized and		Website, Mobile Apps		Developers
	Technology Infrastructure		Social Experiences, Social Distribution, Payments		Facebook Ads, Facebook Pages		
						Developer Tools and APIs	
			ams				
Data center costs			earch and elopment	Free		Ad Revenues	Payment Revenues
General and Administrative							

#### **Twitter Business Model**

Key Pa	Key Partners Key Activities		Value Pro	positions	Rel	ationships	Customer Segments		
		Platform Development							
Search Ve	endors		Stay con	nected			Users		
Device Ve	endors		News/E	vents			Users		
Medi		Key Resources	Targe	Targeted Marketing		Channels	Enterprises		
compar	nies	Twitter.com	Marke			Website,			
Mobile Ope	erators	Platform	Twitter Apps		De	sktop Apps, obile Apps, SMS	Developers		
					Т	witter API			
	Cost Structure			Revenue Str			eams		
	Employees Servers			Licensing Stream		Promoted Accounts	Promoted Tweets		
			Promoted <sup>-</sup>	Trends	Analytics				

#### **Google Business Model**

Key Partners	Key Activities		Value Pro	positions	Relationshi	ps	Customer Segments
	Prod	Products Improve		ch, Gmail, gle+	Automation (where possible)		Internet Users
Distribution	Manage Massive IT Infrastructure		Targeted Ads using Adwords (CPC)		Dedicated Sales for large accounts		Advertisers, Ad Agencies
Partners			Extend Ad using A	campaigns dsense			Google Network Members
Open Handset Alliance	Key Resources		0		Channels		
OEMs (for Chrome	Г	Datacenters	Display Advertising Mgmt Services		Global Sales and Support Teams		Mobile device owners
OS devices)		OS and Plate Android, Chro			14 111		Developers
			Hosted w Google	eb-based e Apps			Enterprises
	ructure			Revenu	e Strea	ams	
Traffic Acquisition Costs		R&D Costs (ma personnel)	inly		d Revenues – pogle websites		d Revenues – gle n/w websites
Data center operations		S&M, G&A		Ent	erprise Product Sales		Free

#### **LinkedIn – World's Largest Professional Network**

Key Partners	Key Activit	ies	Value Pro	positions	Rela	ationships	Customer Segments
	Platform					ame-side vork Effects	
	Key Resources		Manage Professional Identity and Build Professional Network		Cross-side Network Effects		Internet Users
Equinix (for data center			Identify and Reach				
facilities)			the Righ	the Right Talent		hannels	Recruiters
Content Providers			Reach th Audi	ne Target ence		dIn Website, bile Apps	Advertisers and Marketers
			Access to LinkedIn Database Content via APIs and Widgets		Field Sales		Developers
	Cost Structure					ams	
Web Hosting costs			roduct elopment	Free Offe and Pren Subscrip	emium Hiring Solution		Marketing Solutions
General and Administrative							

#### **Business Model of Banking companies**

Key Partners	Key Activities	Value Pro	positions	Relati	ionships	Customer Segments	
	Branch Operations				rsonal stance		
Investments	Call center operations	Deposit Products (Lower Interest Rates)		Automat	tion where	Retail and	
partners  Technology	IT Operations			possible		Corporate Customers (Depositors)	
vendors	Key Resources	Loan Products (Higher Interest Rates)		Channels  Bank Branches, ATMs,		Retail and	
Regulatory Agencies	Physical and IT Infrastructure					Corporate Customers (Borrowers)	
	Loan Assets			Call centers, Internet, Mobile Devices		, ,	
				mediie Devises			
C	Cost Structure			Re	evenue Strea	ıms	
Interest Expenses	Channel Costs			Interest Income Fee Income			

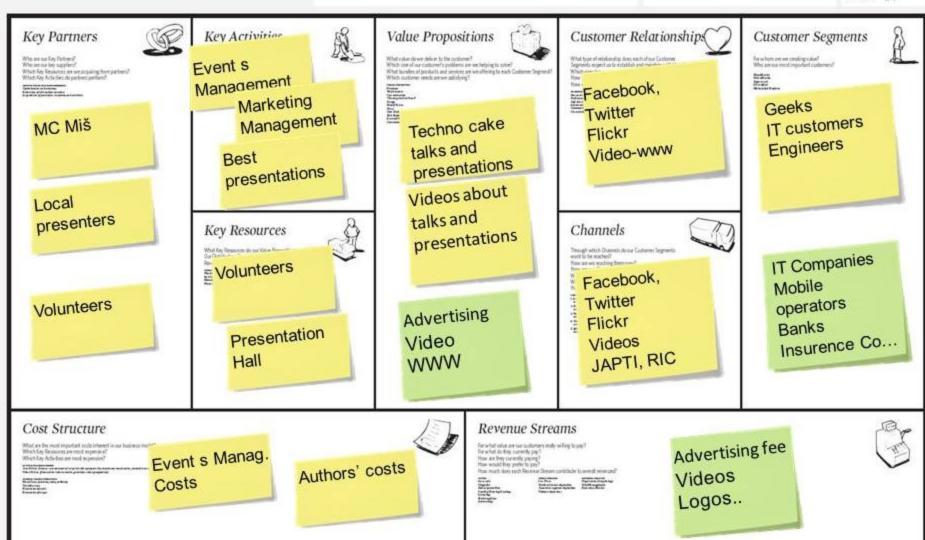
#### VISA – Leader in Global Payments Industry

Key Partners	Key A	ctivities	Value Pro	positions	Re	lationships	Cu	stomer Segments
		s Network gement	Daymant	Dradust				
		Transaction Processing	Payment Platforms program cashl	for card is and	card and			Financial Institutions (Issuers)
Technology Alliances		Value-added Services		payments				Financial Institutions (Acquirers)
Commercial	Key Re	esources	Conven Security, f			Channels		( coquinos)
Partners		Payment Products Platform	associat card pay	ed with	Sponsorships (FIFA World cup, Olympics)  TV ads, Tradeshows, Conferences		Card Holders	Card Holders
	VISA	Brand	Improved Custo Conver	mer			ľ	Merchants
	Cost Structure					Revenue Strea	ams	
Personnel	Network, EDP, & Communications		Brand omotion	Servic Revenu			ng	International Revenues
Litigations Provision								

#### The Business Model Canvas

Designed for: Techno Cake Designed by: Danilo Tič

1.2.2011 Benefite: "01



www.businessmodelgeneration.com

# **How Airbnb Works?** Insights into **Business Model**

Revenue Model



## **Airbnb Business Model Canvas**

#### Key Partners

- Hosts (People who rent their space)
- Guests (People who book spaces)
- Photographers (Freelance)
- Investors
- Payment Processors

#### Key Activities

- Product Development & Management
- Building Host network and Managing hosts
- Building travelers network and managing guests

## Key Resources

- Local Hosts
- Skilled Employees
- Technology

## Value Propositions

#### Hosts

- Hosts can earn money by renting their space.
- Airbnb offers insurance to house owners.
- Free photo shoots for property listings through photographers.

#### Guests

- Guests can book a homestay instead of hotel.
- Prices are often less as compared to hotels.

## Customer Relationships

- Customer Service
- Social Media
- Promostional Offers
- Home Insurance

#### Channels · · ·

- Website
- Mobile App for Android
- Mobile App for iOS

#### Customer Segments

#### Hosts

- People who own a house and want to earn extra money.
- People who want to meet new people.

#### Guests

- People who love to travel.
- People who want to stay comfortably at a cheap price.

#### Cost Structure



- Technological Set up & running costs
- Salaries to permanent employees
- Payments to freelance photographers

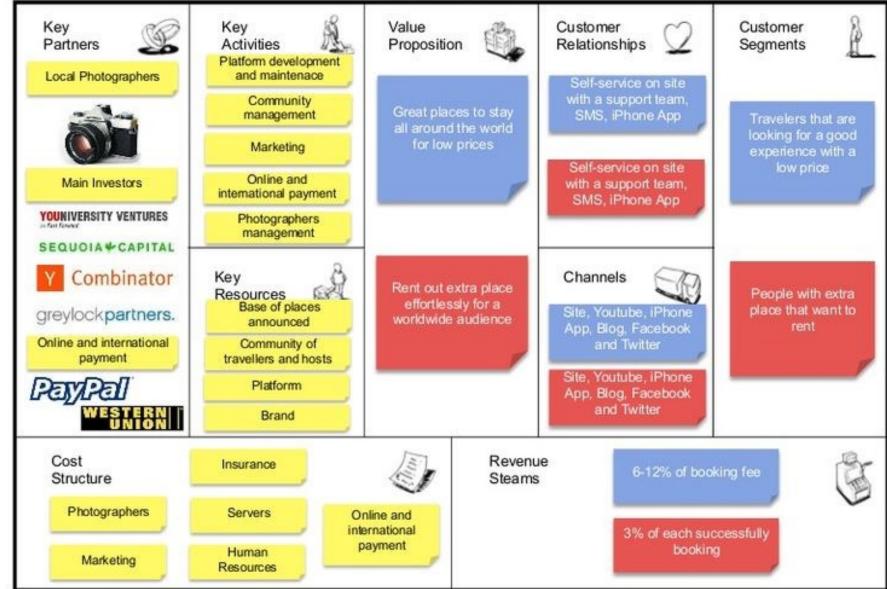
#### **Revenue Streams**



- Commission from Hosts upon every booking
- Commission from Guests upon every booking







# Case Study: P&G (Chap. 2) (pp.84-85) Piloting Procter & Gamble from Decision Cockpits

- 1. What management, organization, and technology issues had to be addressed when implementing Business Sufficiency, Business Sphere, and Decision Cockpits?
- 2. How did these decision-making tools change the way the company ran its business? How effective are they? Why?
- 3. How are these systems related to P&G's business strategy?

## 資訊管理專題 (Hot Issues of Information Management)

- 1. 請同學於資訊管理專題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 先繳交資訊管理專題個案研究問題書面報告。
- 4.上課時間地點: 週四 7,8 (14:10-16:00) B613

### References

- Kenneth C. Laudon & Jane P. Laudon (2014),
   Management Information Systems: Managing the Digital Firm, Thirteenth Edition, Pearson.
- 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