

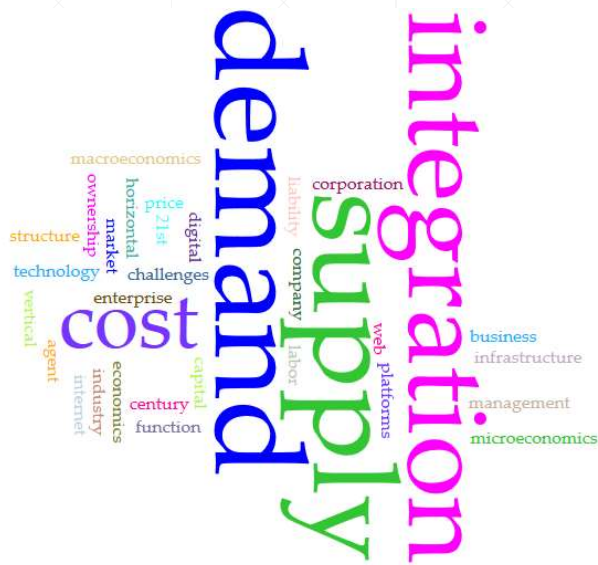
Enterprise Essentials

Class # 3: Enterprise Models

EPITA, Paris | Fall 2021

Valeriu Petrulian

Enterprise Essentials Class 3



- Admin
- Recap
- Thoughts for the day

Course Breakdown

EPITA | Fall 2021

Class	Date & Time Topics
Class 1	Setting the scene: The economy and the firm as an economic agent
Class 2	The Business Environment: Industries and Markets
Class 3	Enterprise Models
Class 4	Managing a business organization
Class 5	Final Presentations

Today's Reading Material:

Andrea Ovans. *What is a Business Model?* Harvard Business Review. January 23rd 2015 Issue
Alexander Osterwalder, Yves Pigneur. *The Business Model Canvas.* **Strategyzer**



Enterprise Models

Organizational models

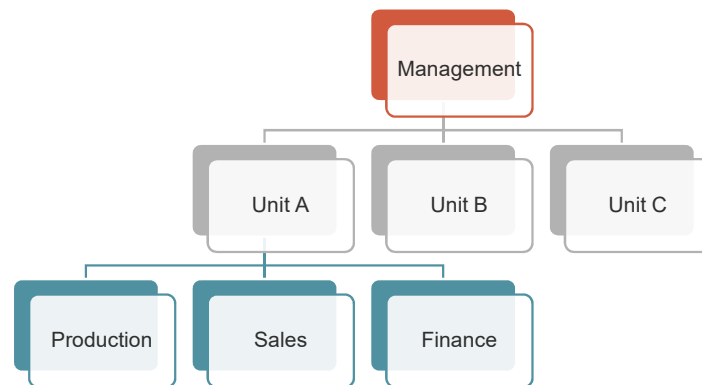
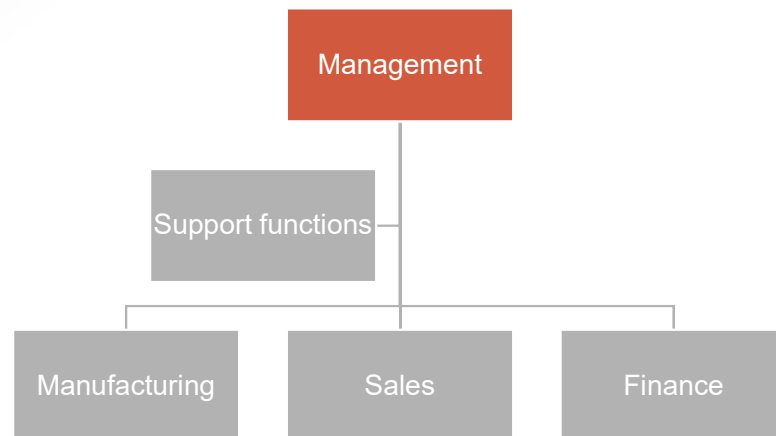
Enterprise functions and departments

The business model

Model - Definitions

Oxford English Dictionary

1. “A three-dimensional representation of a person or thing or of a proposed structure, typically on a smaller scale than the original.”
2. “A thing used as an example to follow or imitate.”
3. “**A simplified description**, especially a mathematical one, of a system or process, to assist calculations and predictions.”



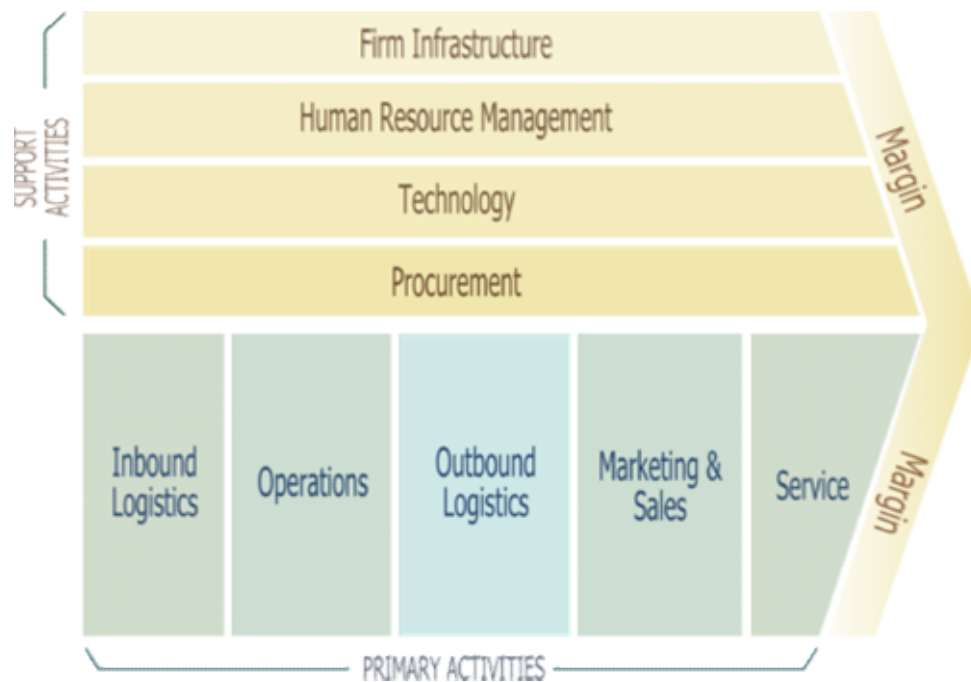
Illustrations adapted from Jean Tirole's « Theory of Industrial Organization »

Reminder The Firm (vertical view)

There are two prevailing hierarchical organization models:

U-Form – unitary form

M-Form - multi-divisional form



https://en.wikipedia.org/wiki/Value_chain

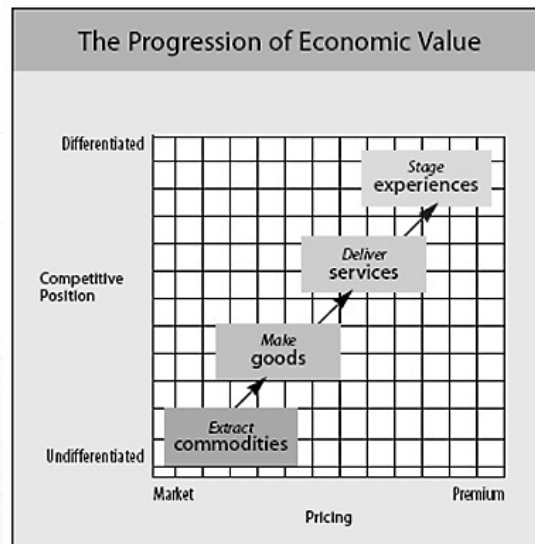
Reminder: The Firm (horizontal view) - Value Chain

A firm can be described as a **value chain**, i.e. a set of activities that a firm operating in a specific industry performs in order to deliver a valuable product or service for the market.

The concept was first described by Michael Porter (Competitive Advantage: Creating and Sustaining Superior Performance, 1985).

The evolution of value

From mass production to extreme personalization



Economic Distinctions				
Economic Offering	Commodities	Goods	Services	Experiences
Economy	Agrarian	Industrial	Service	Experience
Economic Function	Extract	Make	Deliver	Stage
Nature of Offering	Fungible	Tangible	Intangible	Memorable
Key Attribute	Natural	Standardized	Customized	Personal
Method of Supply	Stored in bulk	Inventoried after production	Delivered on demand	Revealed over a duration
Seller	Trader	Manufacturer	Provider	Stager
Buyer	Market	User	Client	Guest
Factors of Demand	Characteristics	Features	Benefits	Sensations

Welcome to the Experience Economy. By B. Joseph Pine II, James H. Gilmore.
Published in the July–August 1998 HBR Issue
<https://hbr.org/1998/07/welcome-to-the-experience-economy>

Enterprise Types

Traditional industries



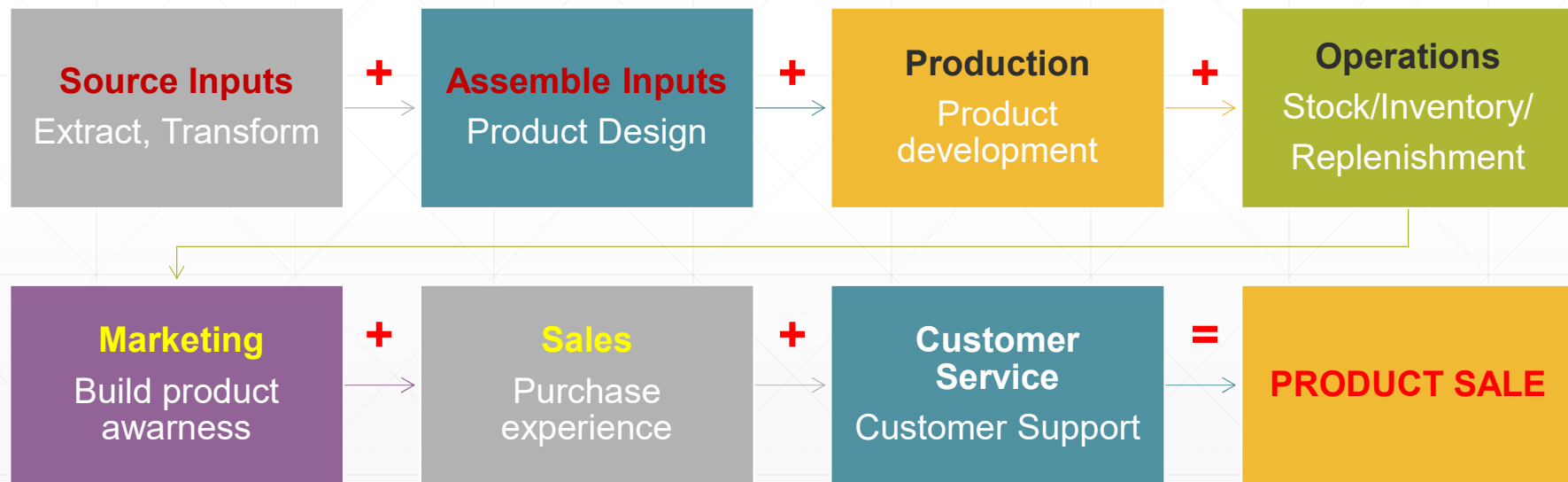
- Industrial factory
- Examples: automobile, home appliances, heavy machinery
- Traditional enterprise model going back to the 19th century
- **Tangible goods (products)**



- Infrastructure company
- Examples: energy (electricity, water, gas), transportation (railroads)
- Their development reached a peak in the 20th century
- **Utilities**

Unbundling the business model

Example: Traditional manufacturing



Traditional Industries Evolution(s)

Phase I

- Just in Time Production
- Total Quality Management
- Outsourcing

Phase II

- Personalization
- Servicification
- Social and Environmental Consciousness:
 - Localization
 - Shorten(ed) supply chains

Innovation | An Overview

Type 1: Routine (incremental) innovation

- Routine innovation is about improving incrementally existing products, technologies, or processes, constantly and repeatedly, over time
- Examples:
 - Intel microprocessor chipset family x86
 - Windows operating system versions 8 vs 7
 - Pixar 3D movie series « Toy Story » 2 vs 1

Enterprise Types Commerce



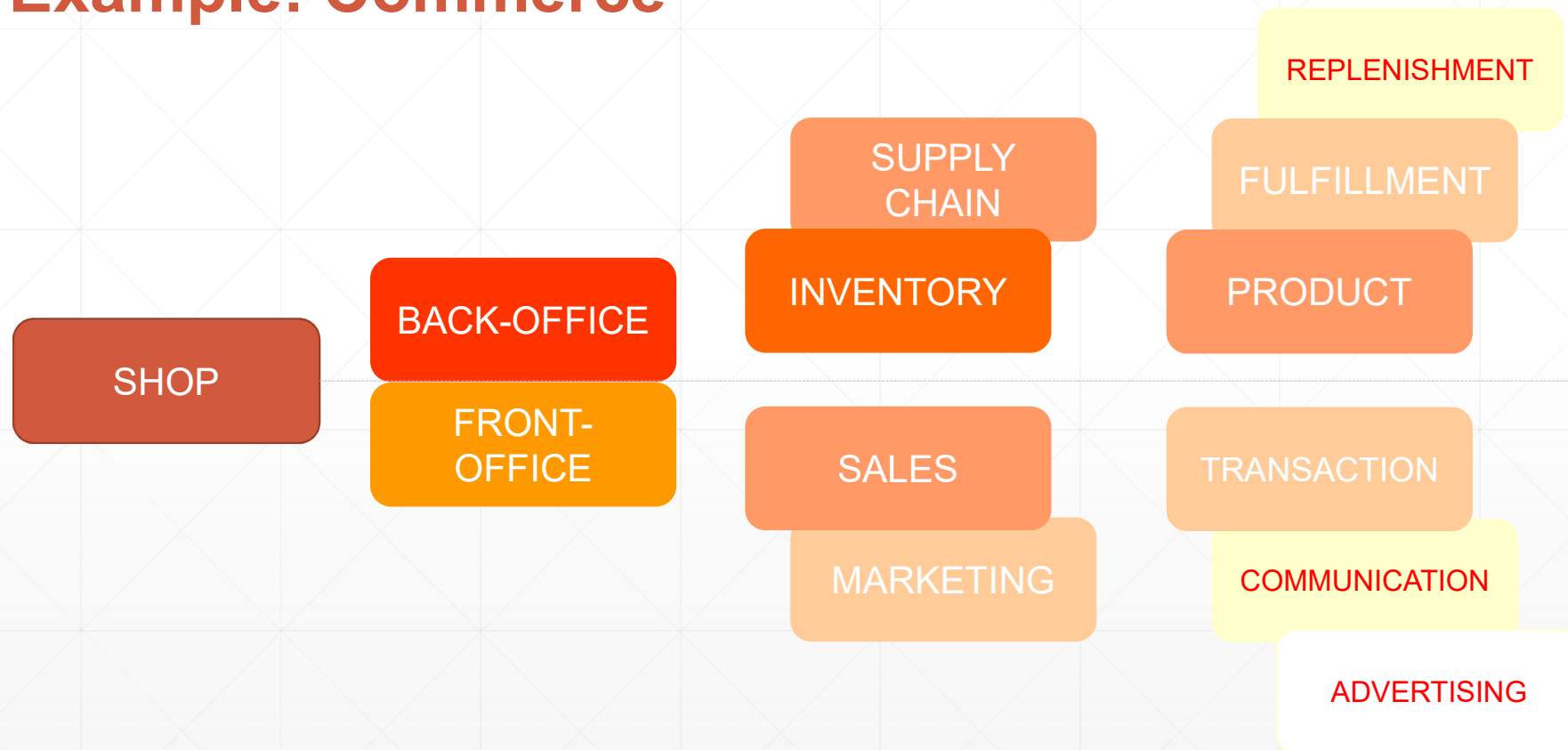
- Retail
- B2C commerce
- Groceries, consumer goods, fashion, ...
- Smaller quantities, great variety
- **Goods, Services**



- Wholesale (including international trade)
- B2B commerce
- Inter-enterprise commerce, intermediate goods or factors or production
- Large volumes, “bulk sales”
- **Goods, Factors of production**

Unbundling the business model

Example: Commerce



Commerce Evolution(s)

Phase I

- Customer segmentation
 - Low-end: mass-selling, discounting
 - High-end: exclusivity
- E-commerce

Phase II

- “Phygital” (Physical and digital)
- Customer experience across multiple channels:
 - Consistency
 - Contextualization

Innovation | An Overview

Type 2: Breakthrough Innovation

- Breakthrough innovation is about finding new markets, perhaps new business models, without necessarily a major technology leap
- Examples:
 - Open source software (for established software companies)
 - Shuttle services (for traditional taxi companies)
 - Online selling (for traditional resellers)

Enterprise Types Services



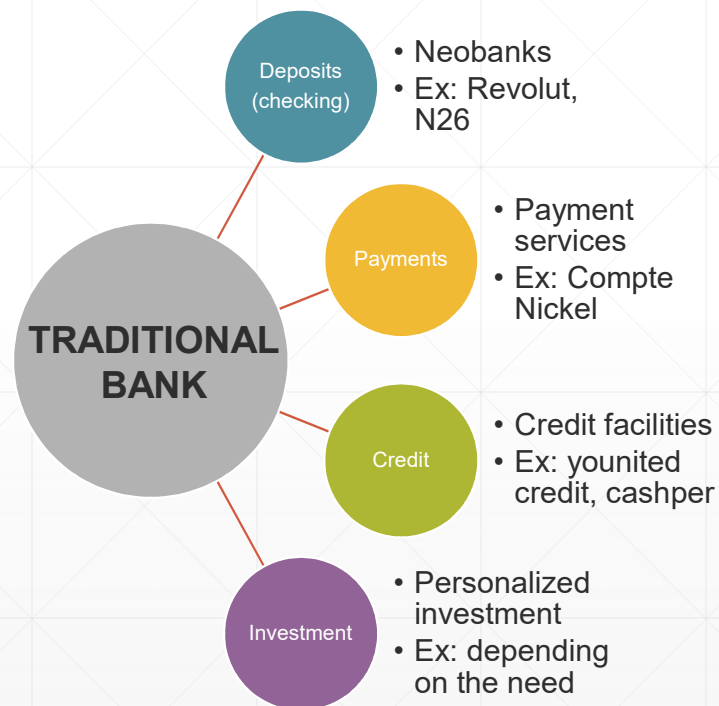
- Financial Services
- Example: banks, insurance
- Central role (banks) in any economic system
- **Money**



- Information technology
- Software & services, essentially
- Originated late 20th century
- High pace of technology innovation
- **Knowledge (brain power)**, in the form of licenses or services

Unbundling the business model

Example: Traditional banks



Services Evolution(s)

Phase I

- The « poor relative » of the economy
- Complement to product
- Often, an option

Phase II

- Customer-centric
- Product-service continuums, as in
 - Product-service-systems
- Service as a substitute for products
 - Ex: car rental
- Permeating throughout the economy

Enterprise Types

Information



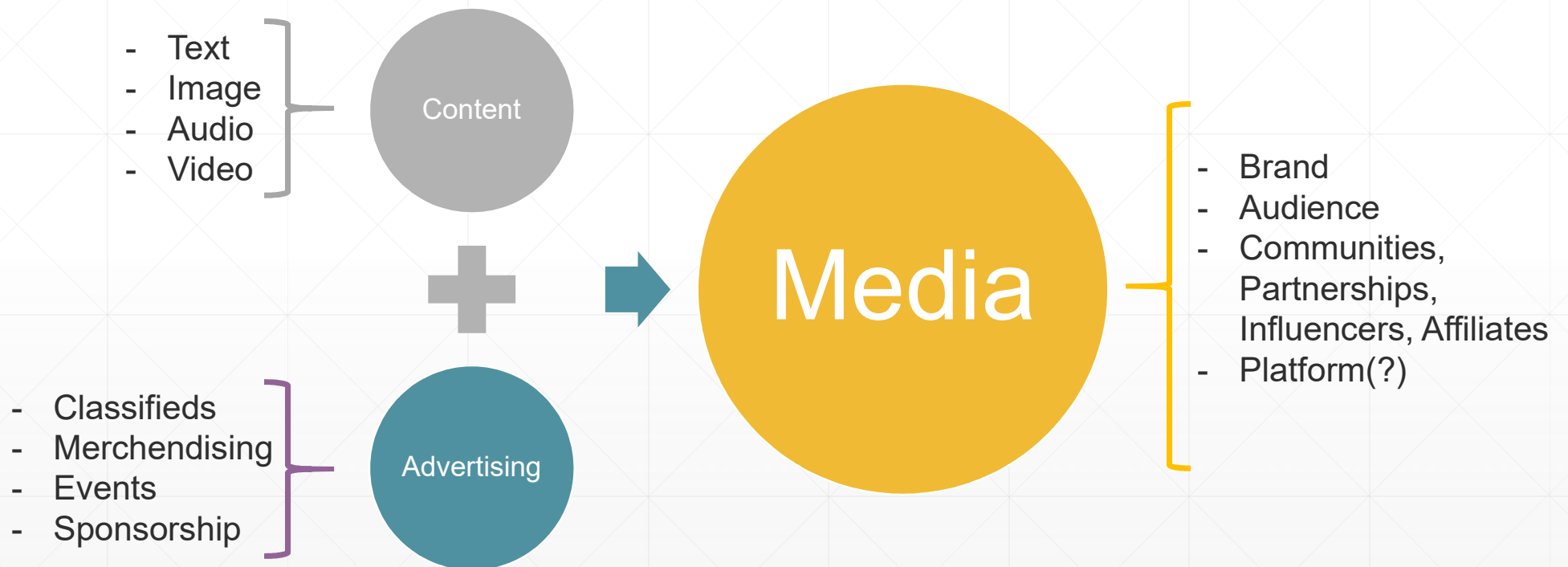
- Advertising
- Communication for promotion and selling of goods & services
- Originated late 19th century, boomed with advertising of manufactured products
- **Communication, Promotion**



- Media
- Examples: newspapers, magazines, TV
- Mass media is a fundamental 20th century trend
- **Information services => entertainment**

Unbundling the business model

Example: Media



Information Evolution(s)

Phase I

- Broadcasting (one-way, on-to-many)
- « Gate-keepers »

Phase II

- User-generated content
- P2P exchanges (social media)
- The « attention economy »
- Combination of information, entertainment, advertising

Enterprise Structure Discussion 1



Please compare, from the point of view of the goods/services delivered, the various business organizations presented thus far. Are there any commonalities? Which are the main differences?

Group 1: Tangible goods (**Product**)

- Factory
- Material good
- Tangible
- Cost of production
- Capital - intensive

Group 2: Intangible goods (**Service**)

- Service groups
- Knowledge
- Intangible
- Cost of engagement
- Knowledge and labor intensive

Enterprise Structure Discussion 2



In your opinion, which could be the core functions of any business? Please consider the following 2 dimensions (what it takes to produce the good or to provide the service, what it takes to engage with clients)

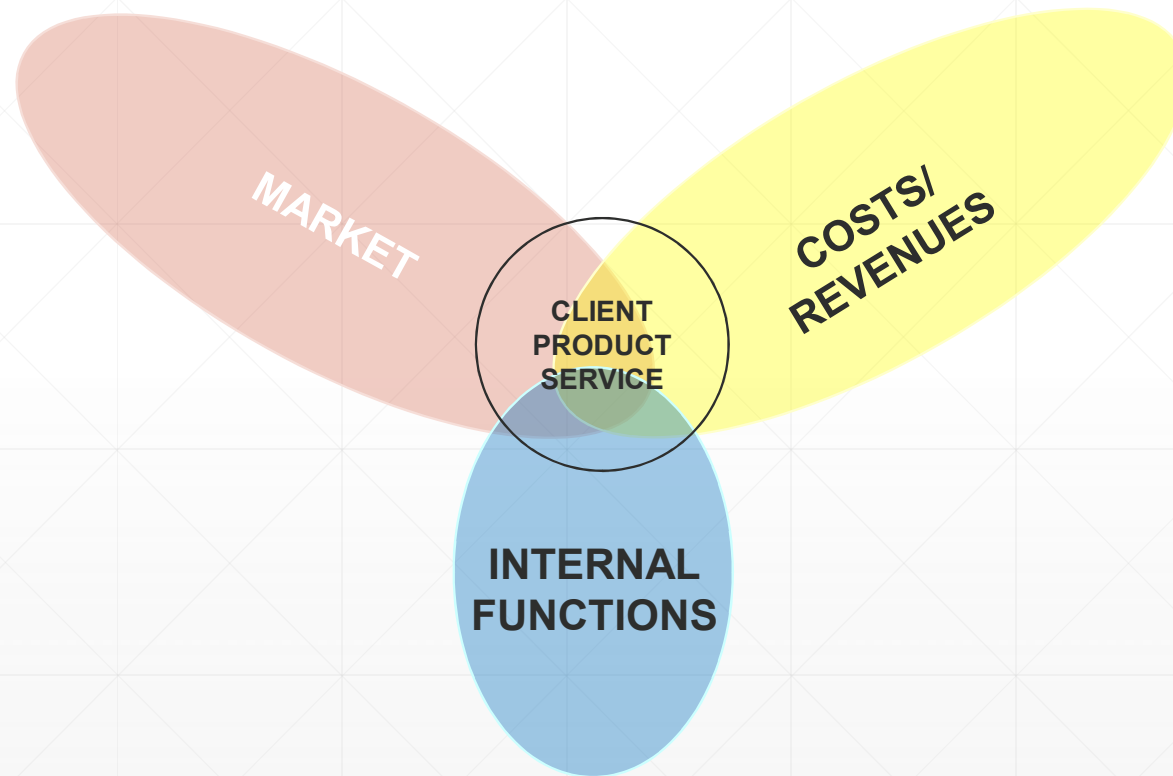
Production of Good/Service:

- Creation and evolution of product (Design)
- Production of product, delivery of service

Client engagement:

- Establish customer relationship
- Position product service to market

Enterprise Models



Enterprise Models



- Each company is composed of three fundamentally different types of businesses:
 - Customer relationship
 - Product innovation
 - Infrastructure
- In some companies the three functions exist in scattered mode, while some other companies are organized purposely along these three dimensions

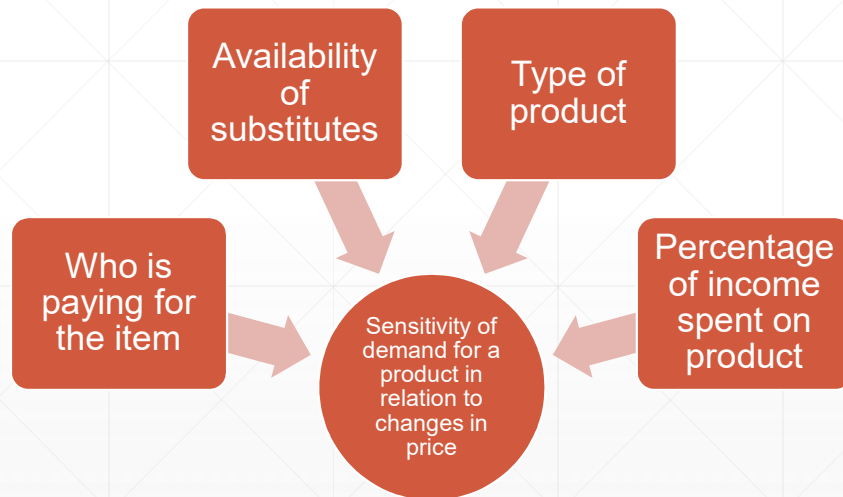
Source: **John Hagel III, Marc Singer.** *Unbundling the Corporation.* Harvard Business Review, March–April 1999 Issue

Enterprise Models and Functions Fundamentals

- Fundamentally, an enterprise should manage:
 - **Revenue** = the income that a business obtains from performing its activities, usually from the sale of goods and services to customers
 - **Cost** = the value of money that has been used up to produce something or deliver a service, and hence is not available for use anymore
- There are certain functions that are common to most businesses:
 - Sales & Marketing activities
 - Innovation activities (including product, and R&D)
 - Financial activities
 - Production & Operations activities
 - Information Technology (IT) activities
 - Human Resources activities

Marketing & Sales

Understanding demand (Price Sensitivity)



- Availability of substitutes
 - Ex: smartphones (Apple and Android)
- Type of product
 - First necessity, convenience, luxury
- Percentage of income spent on product
 - Substantial investments (ex: first house)
- Who is paying for the product
 - Ex: parents pay for holidays



<http://www.tf1.fr/tf1/le-juste-prix>

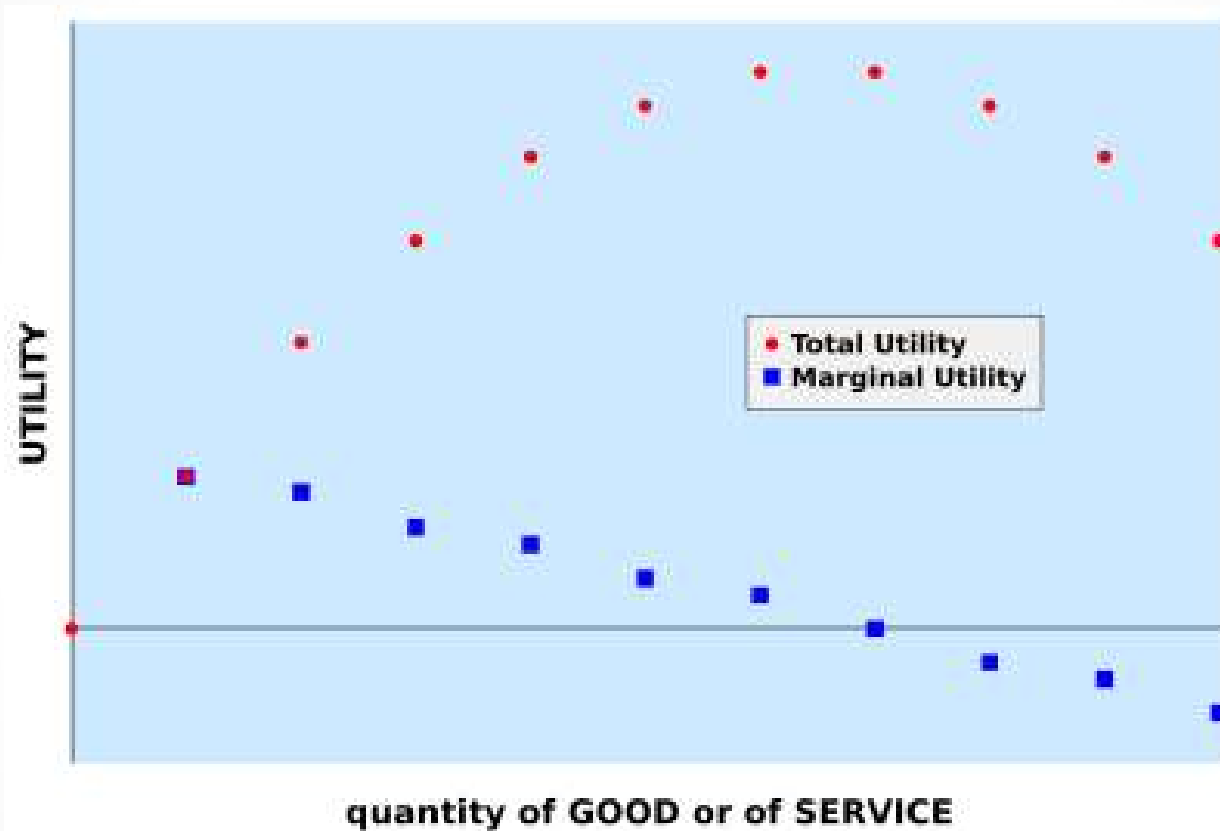
Pricing (and Prices)

At the heart of any market lies “pricing” which encompasses the mechanisms through which the money value is set for a unit of a product or a service.

Generally speaking, in some markets, prices are set by the forces of supply and demand. In some other markets, powerful suppliers may have the ability to set prices at their discretion.

A fundamental distinction is to be made between “cost” and “price.”

In information markets, prices should be set according to their value, not their cost.



https://en.wikipedia.org/wiki/Marginal_utility

The other side of the coin: Consumer Utility

In economics, the **marginal utility** of a good or service is the gain from an increase, or loss from a decrease, in the consumption of that good or service. Economists sometimes speak of a **law of diminishing marginal utility**, meaning that the first unit of consumption of a good or service yields more utility than the second and subsequent units, with a continuing reduction for greater amounts.

Revenue-generating models

1. **Transaction** – i.e. **sell and buy**, **ex:** traditional manufactured products
2. **Licensing** – i.e. **right to use and/or own for a limited time** of technology or other intangible assets, **ex:** software
3. **Subscription** – i.e. **arrangement for right to use** products/services, regularly, **ex:** magazine subscription
4. **Commission** – i.e. **fee for matching buyers to sellers** for a given product/service, **ex:** freelance skills and availability matching to company's needs
5. **Advertising** – i.e. **selling ad space inserts in media or entertainment content**, **ex:** advertisement pages in traditional print media
6. **Capacity leasing** – i.e. **monetization of asset capacity by making machines available, on demand**, **ex:** cloud computer services
7. **Trading** – i.e. **monetize fluctuations in demand and supply**, mostly in financial markets, **ex:** stock exchange
8. **Subsidies** – i.e. **complementing revenues, for instance in** public service organizations where the cost to provide the service is higher than income; **ex:** public financing for cultural activities in some European countries

Marketing & Sales

The impact of technology on price sensitivity

- Digital technologies allow businesses to gather more accurate information on the customers' buying habits and sensitivity to price changes
- Dynamic pricing, i.e. the ability of a business to change prices frequently over time, is also allowed by technology, notably by providing information on:
 - The number of visits to online site,
 - The other articles that one has purchased
 - The search history
 - Type of browser (mobile, desktop, etc)
 - Postcode
 - ...
- Examples: raise in VTC fares during transportation strikes, prices set by travel sites depending on the IP address, ...

Enterprise Models

The Business Model

- **Wikipedia** – « A **business model** describes the rationale of how an organization creates, delivers, and captures value, in economic, social, cultural or other contexts. The process of business model construction and modification is also called *business model innovation* and forms a part of business strategy. In theory and practice, the term *business model* is used for a broad range of informal and formal descriptions to represent core aspects of a business, including purpose, business process, target customers, offerings, strategies, infrastructure, organizational structures, sourcing, trading practices, and operational processes and policies including culture. “
- **Cambridge Dictionary** – « **business model**, <Noun>, <commerce, finance>: a description of the different parts of a business or organization showing how they will work together successfully to make money.”

The Business Model

Core Ingredients:

- Customer segments
- Distribution channels
- Key activities (internal)
- Key partnerships and external resources
- Revenue and cost (financial) flows

Core Functions:

- Articulate the value proposition
- Identify market segments
- Define the corporate value chain
- Specify the revenue generation mechanisms
- Position the company in the industry/market global value chain
- Define the competitive strategy

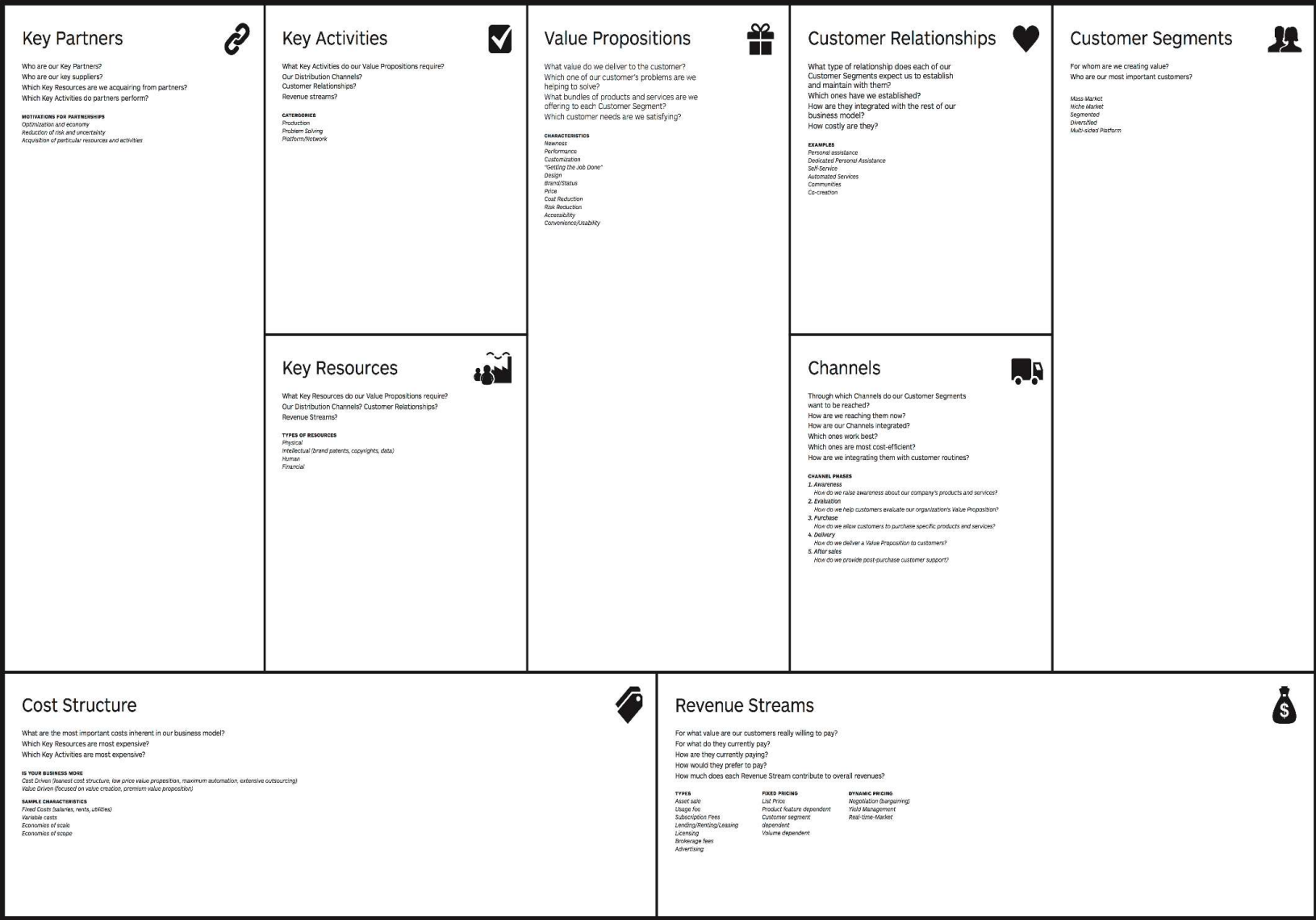
The Business Model Canvas

Designed for:

Designed by:

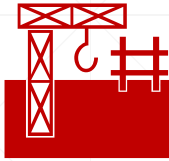
Date:

Version:



The Business Model Canvas

by Alexander Osterwalder
and Yves Pigneur



Class Assignment

LAUNCH NEW PRODUCT/SERVICE IN THE SAME MARKET

LAUNCH EXISTING PRODUCT/SERVICE IN DIFFERENT MARKET

- You are the Chief Innovation Officer of a company and want to launch or develop a product/service line for your company:
 - Either in the same market
 - Or, in a different market

Example: as a professor, I may choose to develop additional courses for students in engineering & business, or leverage my existing courses for professionals and executives (executive education). In the first case, I need to make sure that the new courses are consistent with my current students' expectations and with my existing courses, in the second, I most probably need to adapt the contents to the new audience (market, in my case).

Please elaborate on your idea, its value proposition, your customer(s), the channels, and revenue stream(s), depending on the context. You may illustrate your choice with an example of your own

PROBLEM <i>List your top 1-3 problems.</i>	SOLUTION <i>Outline a possible solution for each problem.</i>	UNIQUE VALUE PROPOSITION <i>Single, clear, compelling message that states why you are different and worth paying attention.</i>	UNFAIR ADVANTAGE <i>Something that cannot easily be bought or copied.</i>	CUSTOMER SEGMENTS <i>List your target customers and users.</i>
EXISTING ALTERNATIVES <i>List how these problems are solved today.</i>	KEY METRICS <i>List the key numbers that tell you how your business is doing.</i>		CHANNELS <i>List your path to customers (inbound or outbound).</i>	
	COST STRUCTURE <i>List your fixed and variable costs.</i>		REVENUE STREAMS <i>List your sources of revenue.</i>	

Source: Ash Maurya. <https://leanstack.com/leancanvas>

Lean Canvas Model

A refinement of the original model

Created by Ash Maurya, based on A. Osterwalder’s Business Model Canvas.

As compared to the original model, the Lean Canvas Model focuses on early stage innovation, making it, according to its author: « *ideal for early stage innovation projects and startups.* »

Innovation | An Overview

Type 3: Architecture Innovation

- Architecture innovation is about a major technology change
- Examples:
 - Personal computers (as compared to mainframe computers)
 - Smartphones (as compared to 2G traditional feature phones)

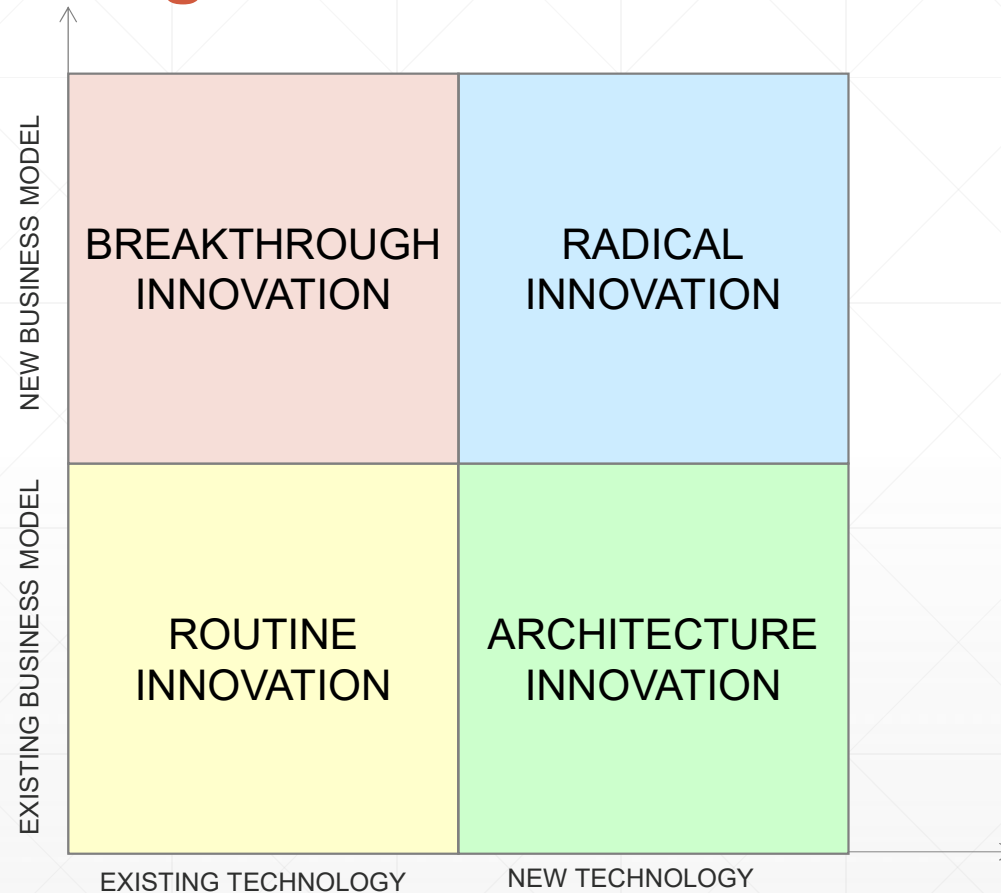
Innovation | An Overview

Type 4: Radical Innovation

- Radical innovation is about changing two paradigms simultaneously: business model and technology
- Examples:
 - Music streaming services (as compared to traditional CD-based music industry)
 - Cloud services (as compared to software-hardware)

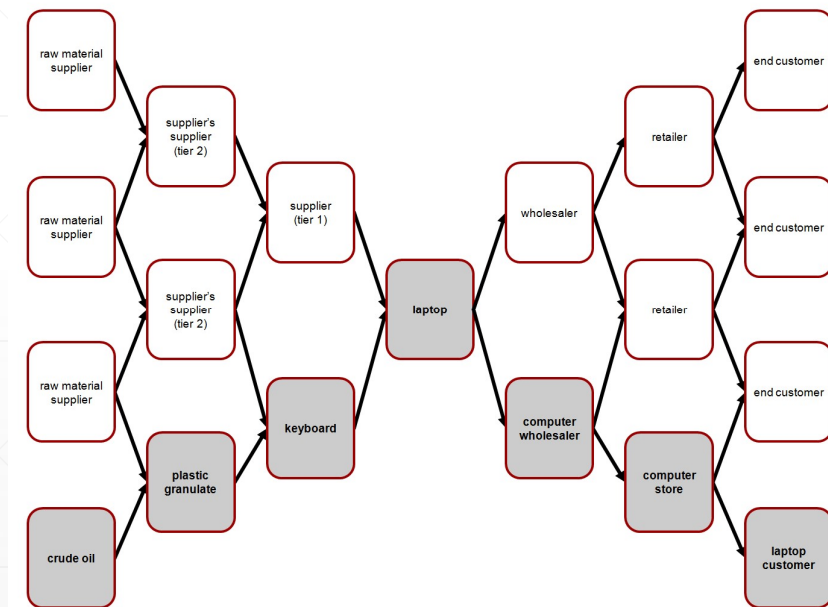
Innovation | An Overview

Putting it all together



Production & Operations

The Supply Chain

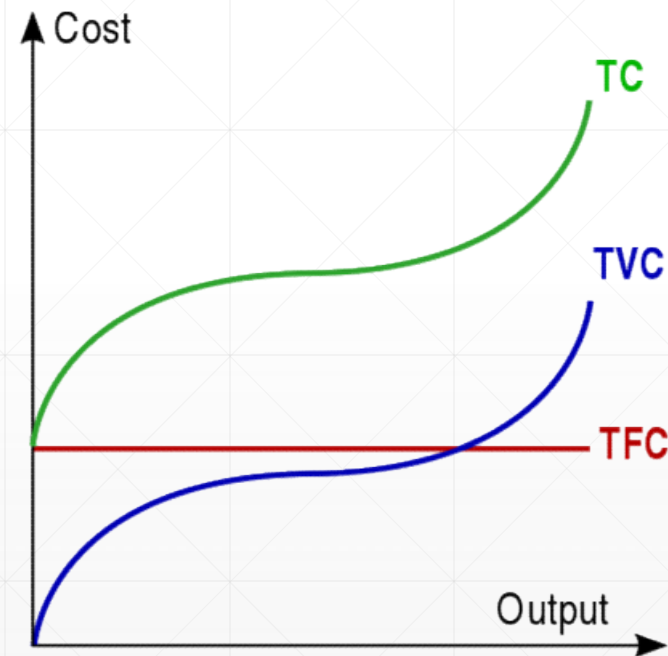


“In business, **supply chain** is a system of organizations, people, activities, information, and resources involved in moving a product or service from supplier to customer. Supply chain activities involve the transformation of natural resources, raw materials, and components into a finished product that is delivered to the end customer.”

https://en.wikipedia.org/wiki/Supply_chain

Production & Operations Cost Curves

- **A cost** is the value of money that has been used up to produce something or deliver a service, and hence is not available for use anymore
- In relationship to the output function, there are **fixed** and **variable** costs
- For example, **manufacturing costs** are those costs that are directly involved in manufacturing of products. They can be further divided in direct **materials cost**, **direct labor cost**, and manufacturing **overhead cost** (i.e. costs which are not directly attributable to production activities, such as cleaning, lightning, maintenance, etc ...)



https://en.wikipedia.org/wiki/Cost_curve

Support Functions

Finance & Accounting

- Finance deals with the flows of money within the organization or between the organization and the outer world
- Finance decides, for instance:
 - Funding for the projects that have been identified to the period
 - The sources of capital to be used to fund such projects
 - How the company's profits will be managed (either through reinvestment in company's R&D, for example, or distribution of dividends to the investors and shareholders, or a combination of both)
- Accounting will be concerned to keeping accurate records (book-keeping) of all financial transactions performed by the company and producing documents required by the tax, revenue or commercial authorities

Finance and Accounting Cost Management

Another important distinction is the one between:

- **Average cost** – the cost per unit produced = total cost divided by output (quantity produced)
- **Marginal cost** - the cost of an extra unit

Finally, from a time perspective, one should make a distinction between:

- **Short run** – a period of time when at least one factor of production is fixed (for instance, labor)
- **Long run** – in the long run, all factors are variable (example: capital and labor both vary)

Cost Management, alongside Revenue Management, are fundamental management activities

Finance & Accounting

CAPEX & OPEX

CAPEX

- **Capital expenditure or capital expense (capex or CAPEX)** is the money a business spends to buy, maintain, or improve its fixed assets, such as buildings, infrastructure, fleet, etc... It is considered a CAPEX when the asset is newly purchased or when money is used towards extending the useful life of an existing asset, such as upgrading a computer system.

OPEX

- An **operating expense, operational expense (OPEX or opex)** is an ongoing cost for running a business. In the case of a purchase of a printer, the cost of the printer will be accounted for as CAPEX, while the costs of paper and cartridges shall represent OPEX.

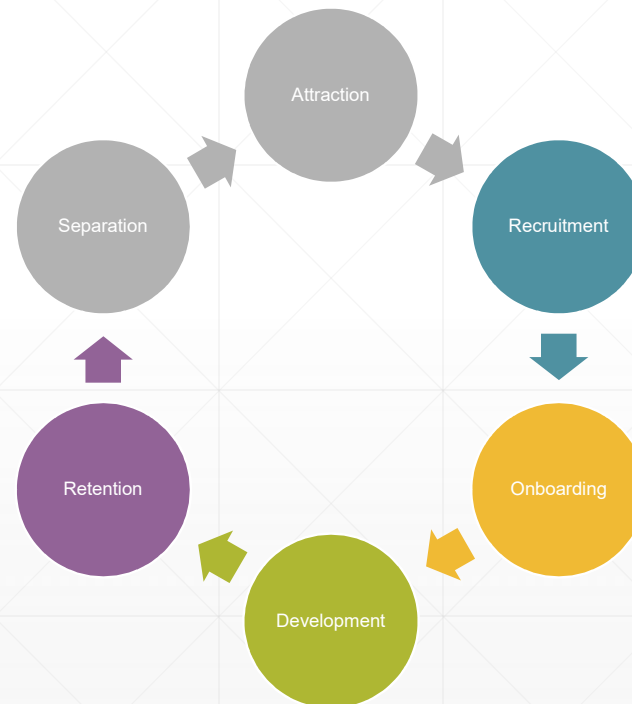
Support Functions

Human Resources Management

- Human Resources Management deals with all the aspects of an employee's activity within the company:
 - Recruitment
 - “Onboarding” process
 - Employee performance evaluation
 - Payroll
 - Employee internal mobility
 - Corporate procedures
- The HR function is one of the corporate functions which is largely dependent on the local culture and country-specific labor regulations

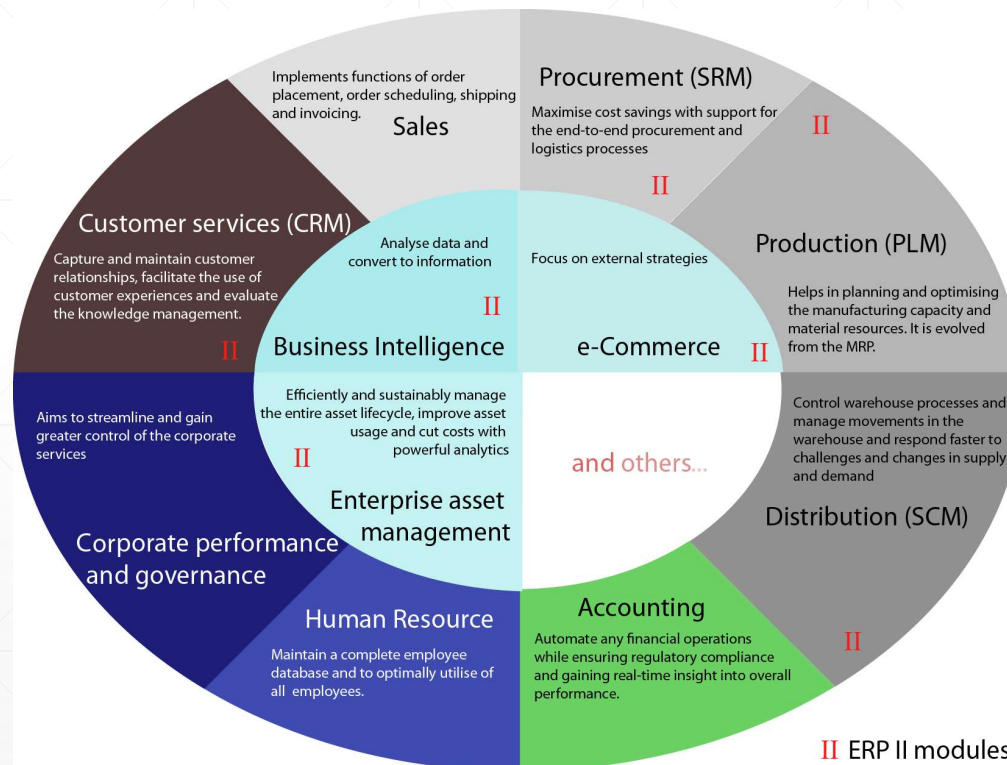
Support Functions – HR

Employee Lifecycle



Information Technology Function

Typical Enterprise Management Information Systems



https://en.wikipedia.org/wiki/Enterprise_resource_planning

Enterprise Essentials Class # 3

Class Summary

- In order to fulfill its purpose, a business needs to set-up internal processes, functions and structures. The firm, relying on its internal structure, together with its partners and suppliers, shall ultimately bring to the market the goods or services required in order to satisfy the customers' needs
- Business functions are largely dependent on the size of the business; however several business functions are common to almost all businesses, such as : Marketing and Sales, Product Management (R&D), Finance and Accounting, HR, IT, and Production & Operations (including supply chain)
- The « Business Model » is a convenient way to describe a business, across its multiple dimensions, several such modeling frameworks exist, such as the “Business Model Canvas” and the “Lean Canvas Model”

Thank You!

Valeriu Petrulian