

Enterprise Essentials

**Class # 1: Setting the scene -
The economy and the firm as an
economic agent**

EPITA | Fall 2021

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Kick-Off



- Brief introductions
- Course outline
- Overall course schedule
- Organization, Admin

Course Outline

- The business organization, i.e. the enterprise, is the main player of any economic system.
- While its reason of being, form, size and structure may vary greatly from country to country and from industry to industry, there are several essential features that are common to all companies and distinguishes them from other types of organizations.
- In the context of the entrepreneurial surge driven by digital technologies and of the accelerated transformation of our modern societies and economic systems, this course aims at providing an introduction to the enterprise, its environment, its essential operating and organizational structures, and its core functions.
- Special attention will be paid to the concepts that are relevant in today's digitalized, globalized and highly interconnected economy and to the challenges and opportunities encountered by business organizations in the 21st century's rapidly changing business environment.

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 Course Wrap-Up					

Today's Reading:

Peter F. Drucker. *The Theory of the Business.* Harvard Business Review. September–October 1994 Issue



Before we get started

Organization

- Logistics:
 - ❑ WIFI
 - ❑ Video-projector
 - ❑ White board, paper board, pens, Post-It notes
- We will have several group work sessions during the various lectures, please organize yourselves in work groups
- Individual participation is expected and largely encouraged. Please try to participate not only to all team works but also throughout the sessions.



Organization: Remote Learning | COVID19

- Teams
 - Environment
 - Communications
- Create sub-teams
 - Class assignments
 - Student interaction
 - Quiz – Tool: MS Forms
- Course materials upload
- Breaks

Learning environment

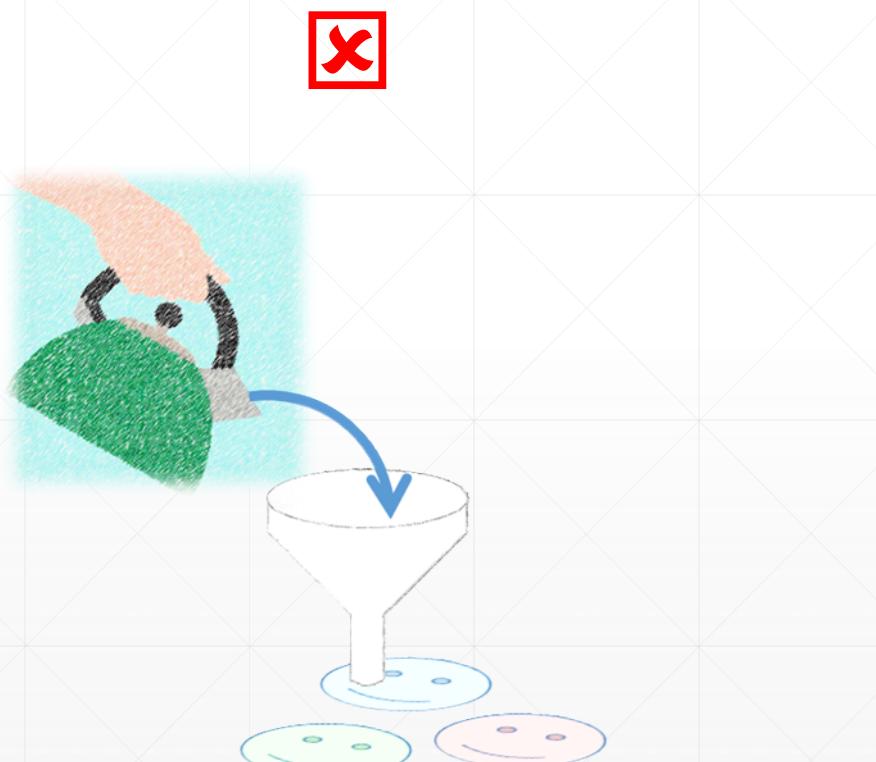
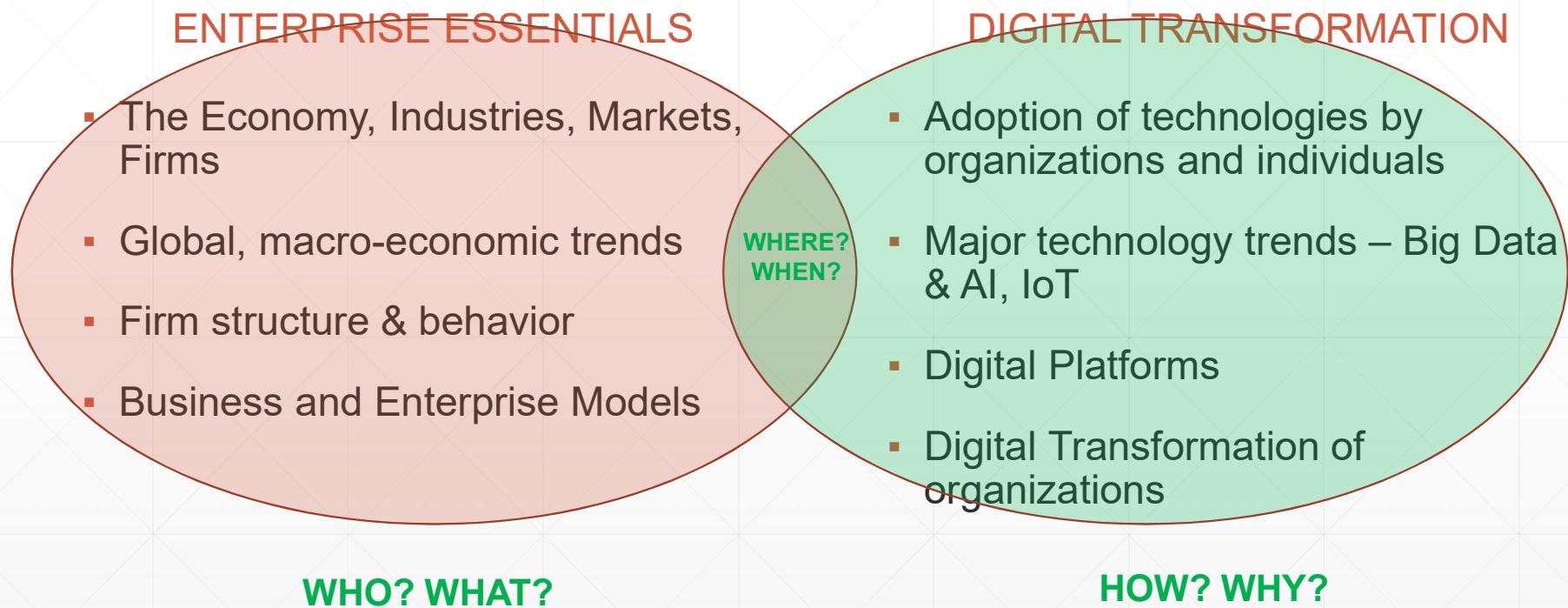


Image source: <http://clipart-library.com/clipart/1308819.htm>

Organization

Articulation between the 2 courses



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Final Grade

Final Composition	Grade	Class attendance and participation throughout course	Course quiz (MCQ)	Final presentation (group and individual)
Weight		30%	20%	50%
Presence Questions asked, "hands raised" Participation to class assignments and group discussions		A project (essay), in the form of a question to which students will answer through a carefully drafted presentation (.ppt presentation)		

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Final Presentation | Ideas for subjects

1. Elaborate on your own, present or future, entrepreneurial project: personal motivation, reason of being of business, structure (organization) of business, value proposition for your customers, business model.
2. Discuss, for an industry or company of your choice, the various growth stages the industry or the company has went through and how those crises have been overcome. Please draw the appropriate conclusions for future growth stages.
3. In an economic setting of your choice, present and elaborate on the comparative advantages of a new entrant (start-up) versus existing, established, businesses. Do existing businesses have any advantages on new entrants?
4. Imagine the corporation of the future and elaborate on: business model, work relationships, organization, clients, etc. Underpin your presentation with examples from existing situations that, you believe, should either change, or be maintained, in the future.
5. Elaborate on at least 2 different business models that you see co-existing in an industry of your own choice. Discuss differences, impact on firm organization and performance and consequences at the level of the industry.

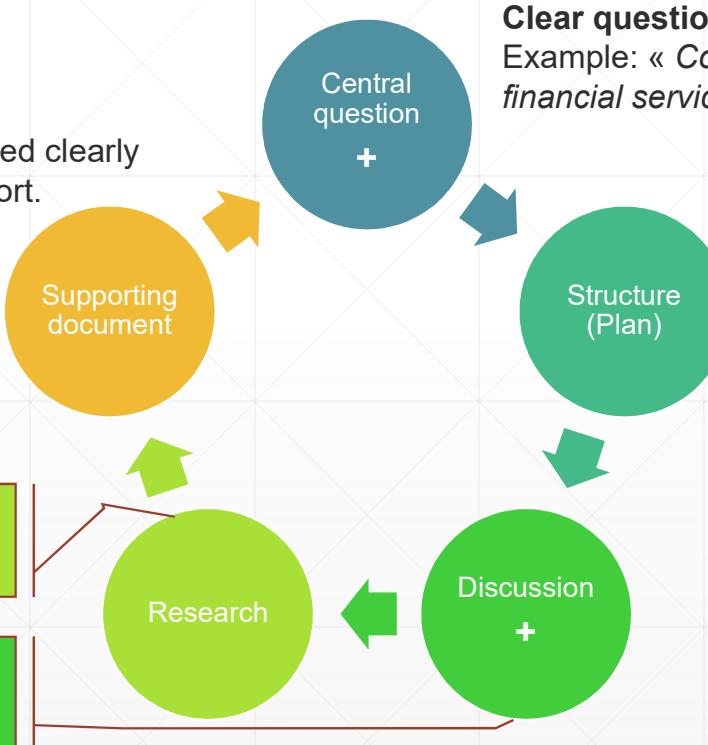
Final presentation Structure and expectations

In a **group presentation**, it should be stated clearly (in writing) 'who did what' in the overall effort.

A carefully drafted presentation (.ppt presentation), produced either individually or as a group effort

Original research (articles, figures, charts, ...) should be properly quoted

Utilization of the course's ideas and concepts in order to sustain the analysis



Clear question in close relationship with the course's topics
Example: « Could several business models coexist in the financial services industry (FSI) ? »

Outline of presentation
Example:

- FSI – an overview
- Existing Business models
 - Traditional Banks
 - Independent services providers
 - Neo-banks
 - ...
- Coexistence of business models:
 - A 5-F comparison between BM 1 and 2
- Conclusion:
 - Ex: "Traditional banks are challenged by new entrants but they're fighting back"

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Final Presentation | Timeline

1. (Class 1): Expectations
 - Note: You may develop your final presentation either as an individual project or a group endeavor
2. (Class 3-4): Subjects are chosen, precise formulation is communicated to professor
3. Class (4): Final tweaking and additional guidelines for final presentations
4. Class (5): Final presentations

Setting the scene: The economy and the firm as an economic agent

A Few Fundamental Concepts,
Economic theories of the firm, 21st
century challenges, Ownership,
Liability, Management, Forms of
business



Economy and Economics

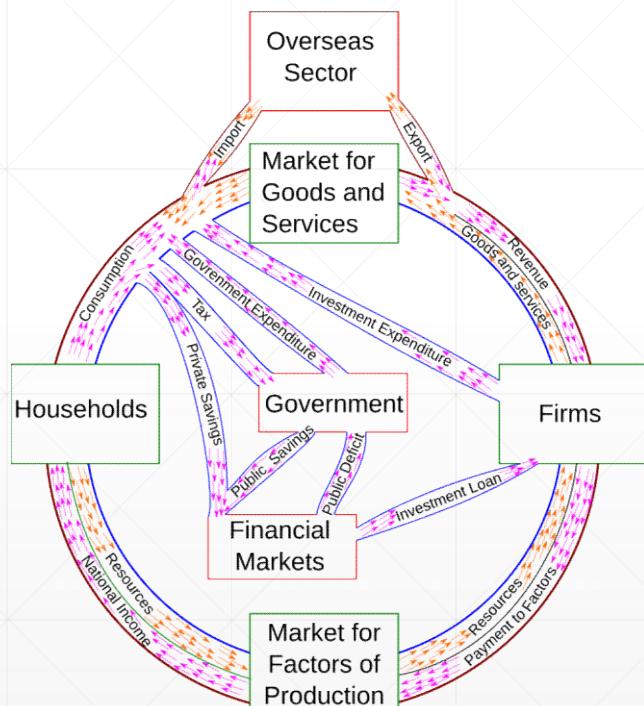
ECONOMY

- “The state of a country or region in terms of the production and consumption of goods and services and the supply of money.” (Oxford English Dictionary)
- “The system of trade and industry by which the wealth of a country is made and used.” (Cambridge Dictionary)

ECONOMICS

- “The branch of knowledge concerned with the production, consumption, and transfer of wealth.” (Oxford English Dictionary)
- “The way in which trade, industry, or money is organized, or the study of this.” (Cambridge Dictionary)

The Economy Circular Flow of Income



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

The **circular flow of income** or **circular flow** is a model of the economy in which the major exchanges are represented as flows of money, goods and services, etc. between economic agents.

The flows of money and goods exchanged in a closed circuit correspond in value, but run in the opposite direction.

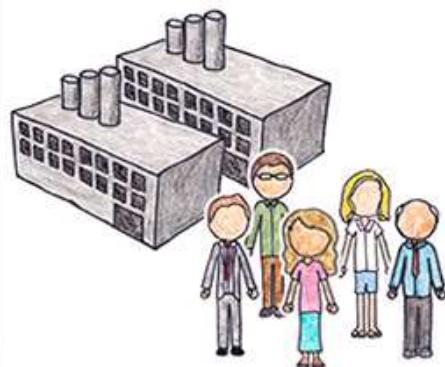
The Economy Important Distinctions

- Factor Markets – they include all factors of production, **including labor, and capital**
- Product Markets
 - Between Firms – B2B
 - Between Firms and Consumers – B2C
- Role of Banks
 - Trusted third-party
- Role of Governments
 - Income redistribution (through tax system)
 - Regulation

MACRO



MICRO



<http://courses.wallstreetsurvivor.com/is/17-understanding-the-economy/economics-101/the-basics/#/>

Macro and Micro Economics

Generally speaking, Macro and Micro Economics are the two main branches of this discipline. The former deals with global (aggregated) trends, i.e. at a society, or a nation's level; while the latter studies individual choices.

Note: There are many other sub-classifications in Economics, however, for the purposes of this course we've chosen to illustrate this particular one.

Macro and Micro Economics

Macroeconomics

- Players:
 - Countries, regions, continents, the world
- Indicators (example):
 - GDP – Gross Domestic Product
 - CPI, IPC - Consumer Price Index
- Institutions (example):
 - Central Banks
 - World Trade Organization
 - International Monetary Fund
 - World Bank

Microeconomics

- Players:
 - Consumers, companies (firms)
- Indicators (example):
 - Consumer demand curves
 - Market concentration
- Institutions (example):
 - National Competition Authorities (ex: DGCCRF in France)
 - Industry Regulatory Bodies (ex: ARCEP, CSA in France)

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A business cycles perspective

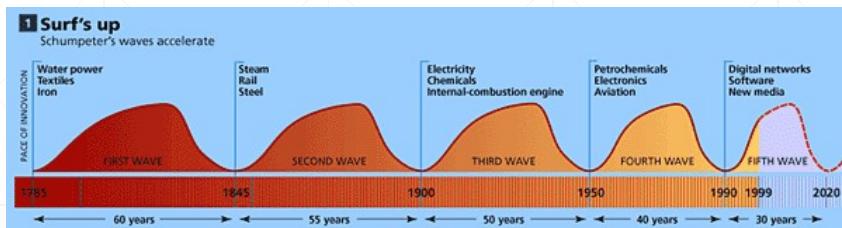
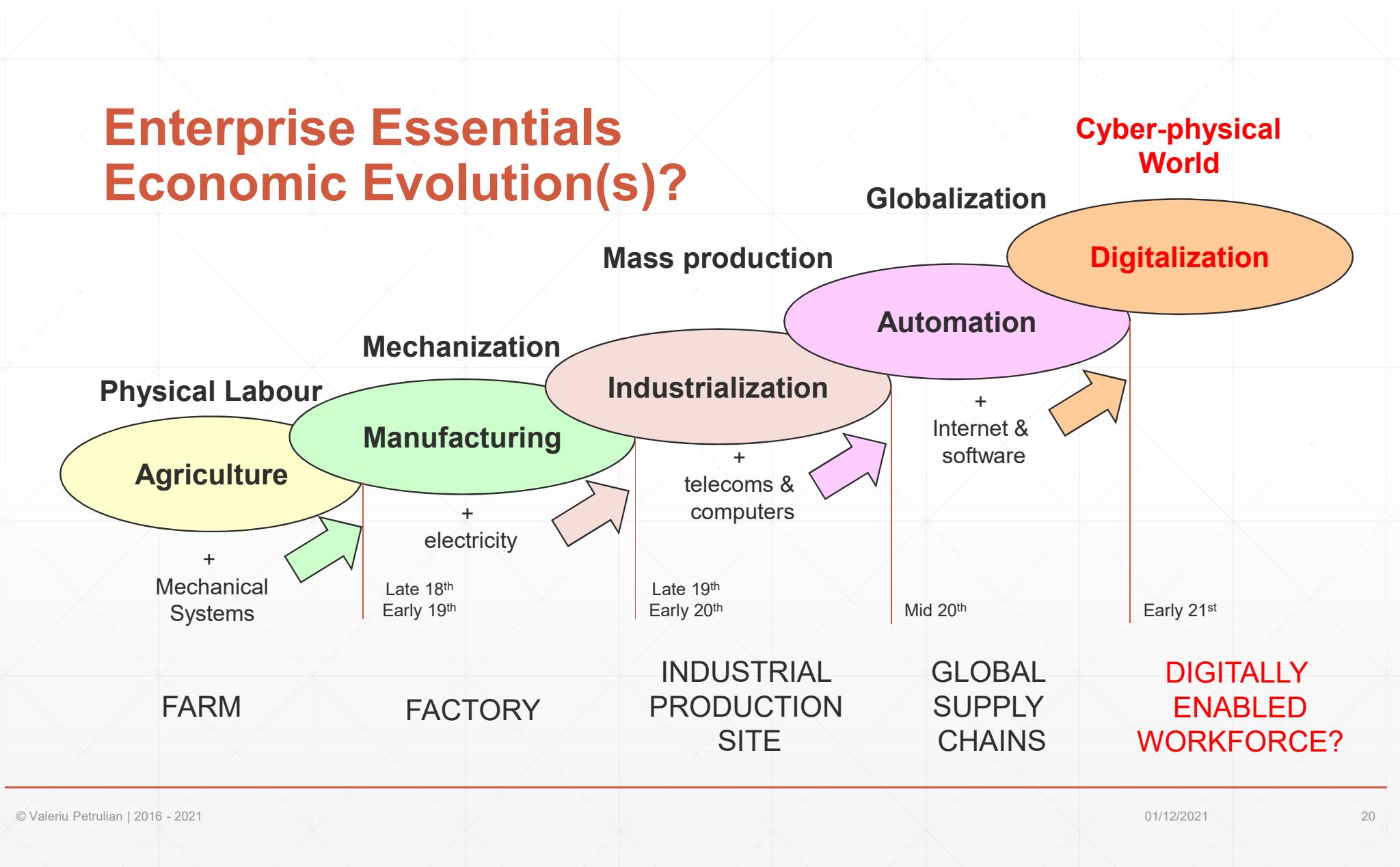


Illustration: Catch the wave, published by The Economist, 1999. <http://www.economist.com/node/186628>

- Each new innovation cycle is driven by innovation, coming from different industry clusters and affecting different needs
- Austrian economist Joseph A. Schumpeter has brought to fore the idea that the economy is permanently disrupted by technological innovation (*i.e. creative destruction*)
- According to Schumpeter, innovation and the entrepreneur are at the heart of the economy

Enterprise Essentials Economic Evolution(s)?



If we were having this course... Class discussion



30 years ago...

1990s

- End of a bipolar world, fall of the communist regimes in Eastern Europe
 - Triumph of market (v. centralized) economic systems
 - Globalization – early innings
 - Technology as a factor of production

10 years ago...

2010s

- Globalized society, realizing that reciprocal relationships are increasingly interconnected and interdependent
 - Internet as main place of exchange
 - The rise of the truly global corporation
 - Technology as a strategic asset



The Economy and the Firm as an Economic Agent

Class Discussion

Consider a traditional farming business

- Their roots go back to the origins of humanity
- Over the centuries, farms have become:
 - More productive, with mechanization and chemicals
 - More capital-intensive (as opposed to labor-intensive), ...
- Today's farms operate an even more challenging transition, towards ecological responsibility, environment-friendliness, and sustainable development

Consider a large manufacturing company, in any country

- They came into existence with the first industrial revolution
- Their production was local, initially
- Little by little, manufacturing became industrial production (mass production)
- Today's traditional industry businesses are multi-national companies, competing in a globalized economy

Consider a large communications company, in any country

- These companies were established - as national monopolies - at the beginning of the 20th century in order to provide Post, Telegraph and Telephony services, nationwide
- Little by little, their economic reason of being has evolved, due to regulation (from monopolies to competitors in a market)
- Today, these companies operate in a highly competitive business, are challenged by companies from other industries, and are under regulatory pressure



The Economy and the Firm as an Economic Agent

Class Discussion

Consider the early Internet pioneer companies (Yahoo!, AOL, ...)

Their “glory days” lasted for less than 20 years

- Their initial success is intimately related to the emergence of Internet and the www
- As Internet grew and changed rapidly, many of the pioneers had difficulties reinventing their businesses
- Today, after being successively transformed and acquired, most of them struggle to stay alive

Consider a famous rock band, active since the 1960s...

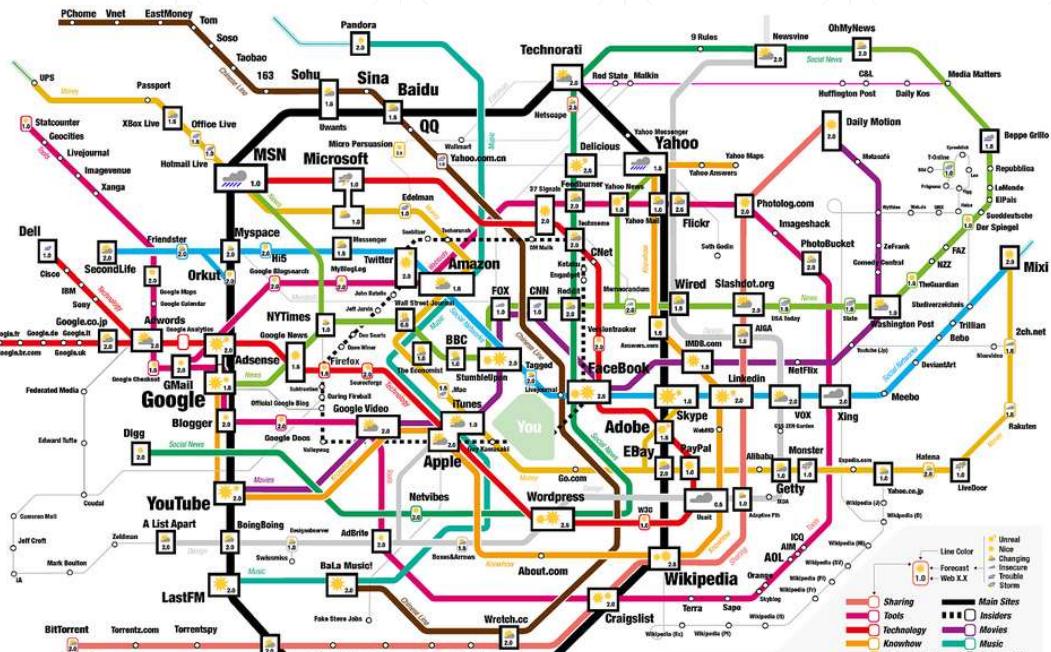
- Over the years, the « initial idea » has developed in a very profitable business, including, but not limited to:
 - Touring (concerts)
 - Recording
 - Publishing
 - Sponsorship, ...
- Further Reading:
<https://www.google.fr/amp/s/amp.theguardian.com/music/musicblog/2014/may/22/how-the-rolling-stones-became-musics-biggest-business>

Consider yourself, a student in a Computer Science and Engineering School

Would you, at some point in time, set-up your own company, like Bill Gates, Steve Jobs, Mark Zuckerberg, Larry Page, Sergey Brin, Elon Musk, and many others, did before you?

If you do, chances are that you will find that all 5 examples have things in common

Today's Digital Economy ...



[https://en.wikiquote.org/wiki/Information_age#/media/File:WebTrends_2007_otro_mapa_de_web_2.0_\(1149873101\).jpg](https://en.wikiquote.org/wiki/Information_age#/media/File:WebTrends_2007_otro_mapa_de_web_2.0_(1149873101).jpg)



- Highly interconnected
- Changing rapidly
- High pace of technology innovation
- Highly interdependent => Fragile ?
- Entrepreneurship wave driven by digital technologies

Today's Economy 21st Century Challenges



Choice of topics for our course:

Climate Change

Globalized
Economy

Entrepreneurial
wave

Labor Evolution(s)

Rising Services
Economy

Emerging
Economic Models

The Information
Society

Digital Economy



The Firm as an Economic Agent

Discussion 1

- An entrepreneur is, first, an individual existing in a wider social context ... :
 - He/She needs to understand his/her society's overall environment
 - He/She needs to understand who are the clients and what are their needs
 - He/She needs to understand in which market and industry his/her own company will perform and how the company positions itself in this environment
- This understanding of the firm's social role is critical as it defines **"what an organization is paid for"** (Peter Drucker).

21st century challenges

Climate change

- Human activity IS the main factor contributing to the global climate changes through the generation of greenhouse gases (GG) of a different nature than those naturally present in the atmosphere
- The economic activities with the highest emissions of GG are (source: COP21):
 1. Energy production (34%)
 2. Industrial production (18%)
 3. Transport (14%)
 4. Agriculture (14%)
- The challenge is to keep global warming below 2° C



Conférence des Nations unies
sur les changements climatiques
COP21/CMP11

<http://www.cop21.gouv.fr/en/>

Cop 21 summary to be found at:

<http://www.bbc.com/news/science-environment-35073297>

- The deal unites all the world's nations in a single agreement on tackling climate change for the first time in history.
- Coming to a consensus among nearly 200 countries on the need to cut greenhouse gas emissions is regarded by many observers as an achievement in itself and is being hailed as "historic".
- However, scientists point out that the Paris accord must be stepped up if it is to have any chance of curbing dangerous climate change.
- Pledges thus far could see global temperatures rise by as much as 2.7C, but the agreement lays out a roadmap for speeding up progress.

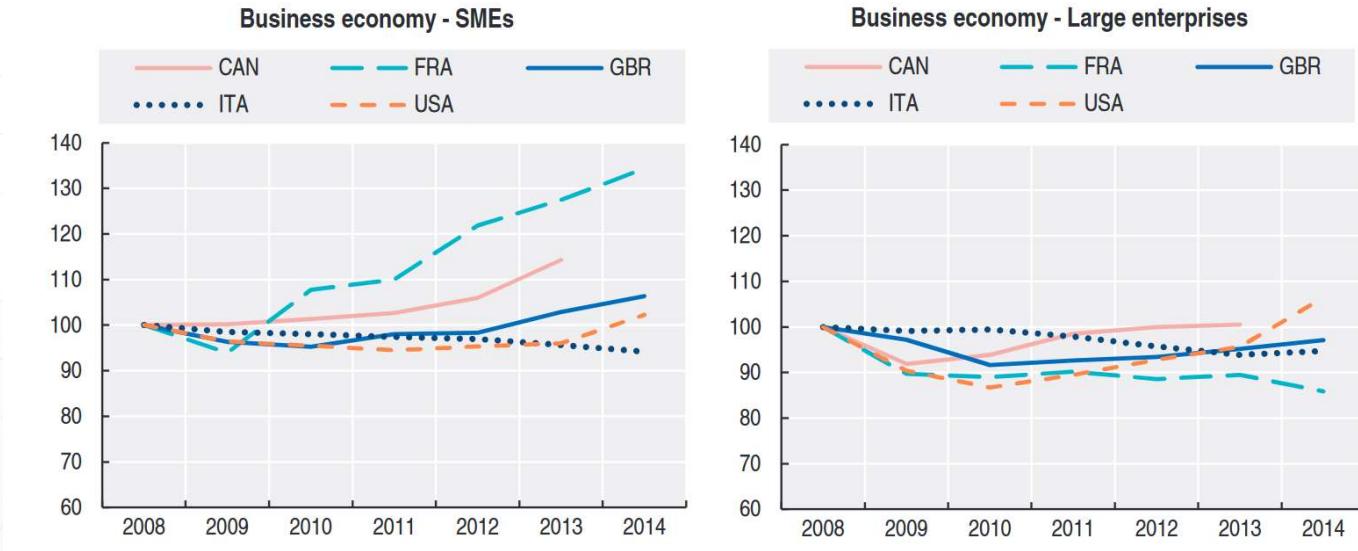
Climate change and the Information Age



- The infographic to the left shows an insight into the impact of the Information Age on environmental changes
- The economy of the information age is less intangible than it seemed...
- Few facts from ADEME:
 - 507 billion e-mails/day globally (2013)
 - One employee of a French company (of 100 employees) generates annually and through e-mail usage alone approx. 13.6 tons (equiv.) of CO₂
- For further reading and concrete steps:

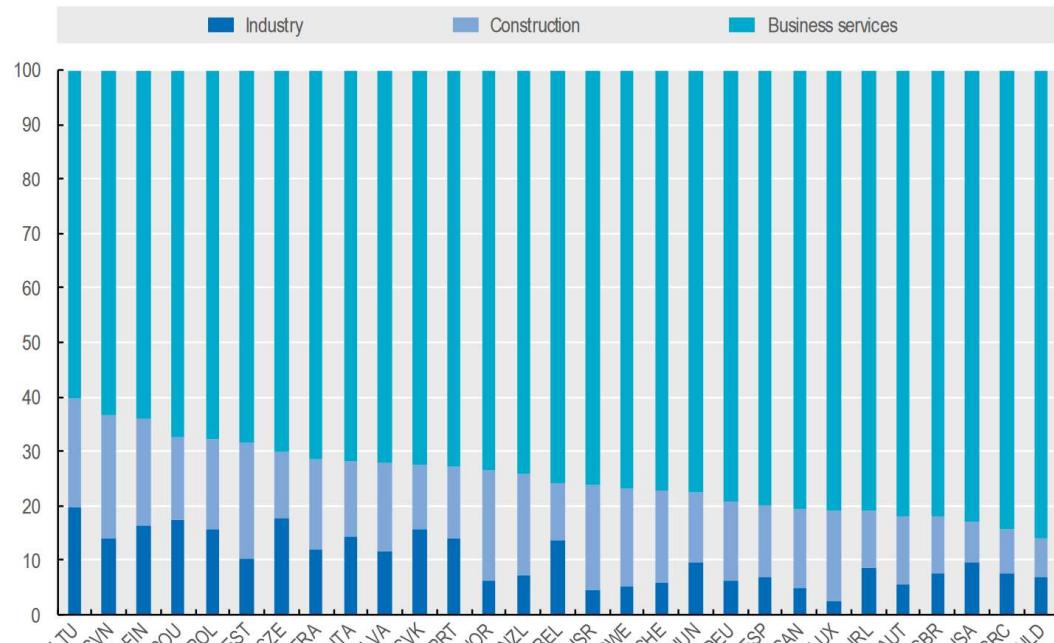
<http://www.presse.ademe.fr/2011/07/analyses-de-cycles-de-vies-des-technologies-courriers-electroniques-requete-web-cle-usb-quels-impact.html>
- ... and what if we get inspired by Nature (e.g. biomimetics)?
 - <http://www.dailymotion.com/video/x2joni8>

21st century challenges - Entrepreneurial Wave OECD – SME and Large



Source: OECD (2017), Entrepreneurship at a Glance 2017, OECD Publishing, Paris
http://dx.doi.org/10.1787/entrepreneur_aag-2017-enl

Entrepreneurial Wave OECD – by sector



Source: OECD (2017), Entrepreneurship at a Glance 2017, OECD Publishing, Paris
http://dx.doi.org/10.1787/entrepreneur_aag-2017-enl

Enterprise Definitions

- Oxford English Dictionary –
 - « **Enterprise** /'entəprāɪz/ **noun** – a company or business »
- Wikipedia -
 - “**Business** is the activity of making one's living or making money by producing or buying and selling products (such as goods and services).”
- The Free Dictionary –
 - “**Business** n. any activity or enterprise entered into for profit. It does not mean it is a company, a corporation, partnership, or have any such formal organization, but it can range from a street peddler to General Motors”

Note: « Enterprise », « business », “company” and « firm » shall be used indistinguishably throughout the course.

Enterprise Definitions bis

- Enterprise definition (French) – Wikipedia
 - « Une **entreprise** est une organisation ou une unité institutionnelle, mue par un projet décliné en stratégie, en politiques et en plans d'action, dont le but est de produire et de fournir des biens ou des services à destination d'un ensemble de clients ou d'usagers, en réalisant un équilibre de ses comptes de charges et de produits »
 - (translation in English) : « An **enterprise** is an organization or an industrial unit, driven by a project translated in strategy, in policies and in action plans, and whose purpose is to provide goods and/or services for a group of users or clients, while achieving a balance between expenditure and revenue accounts »

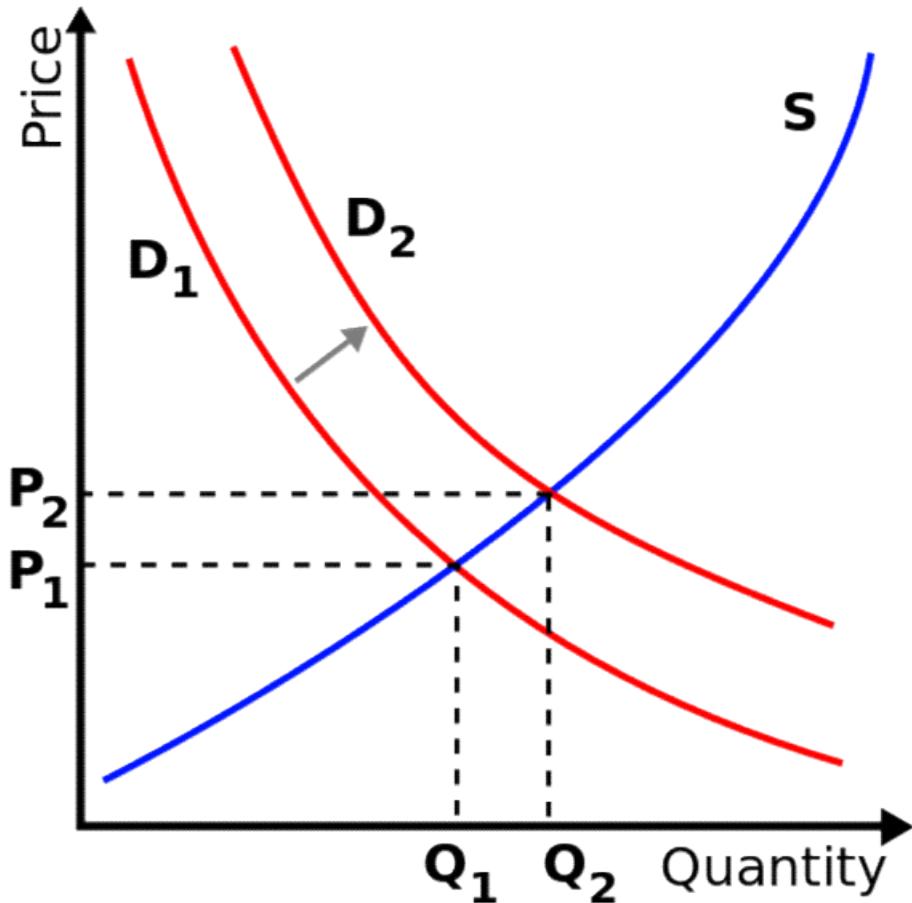
Enterprise Essentials

Market Economy

Wikipedia

- “A **market economy** is an economic system in which the decisions regarding investment, production and distribution are guided by the price signals created by the forces of supply and demand. The major characteristic of a market economy is the existence of factor markets that play a dominant role in the allocation of capital and the factors of production”

Factors + Production = Products (goods and services)



<https://en.wikipedia.org/wiki/Economics>

Supply and Demand

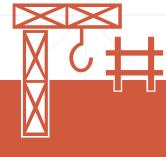
Supply and demand are two economic concepts that, combined, allow to show the forces at work in any economic system. They show, among others, how prices (that are function of the quantity, or output) vary with the production level and how an equilibrium between industrial output and consumer demand may be reached.



The Firm as an Economic Agent

Discussion 2

- Once the entrepreneur has understood the environment, he/she needs to define his/her own mission:
 - How he/she will solve a specific social concern
 - How his/her company will satisfy an existing need
 - How his/her business will be recognized as distinctive player (organization)
- « The assumptions about **mission** define what an organization considers to be meaningful results; in other words, they point to how it envisions itself making a difference in the economy and in the society at large.” (Peter Drucker)



Enterprise Essentials Class 1

Class Assignment

- Drawing on today's class reading, please discuss the social role (environment), mission (reason of being) and core competencies of one (or several) companies of your own choice.
- Please provide, minimally, answers to the following:
 - Which were the initial social role, mission and core competencies?
 - Are they still valid in today's context?
 - If not, what does it imply for the company's survival?

The Rising Services Economy

- Traditionally, **agriculture** was known as the primary sector, **manufacturing** as the secondary sector and **services** as the tertiary sector.
- Is this classification still valid today?

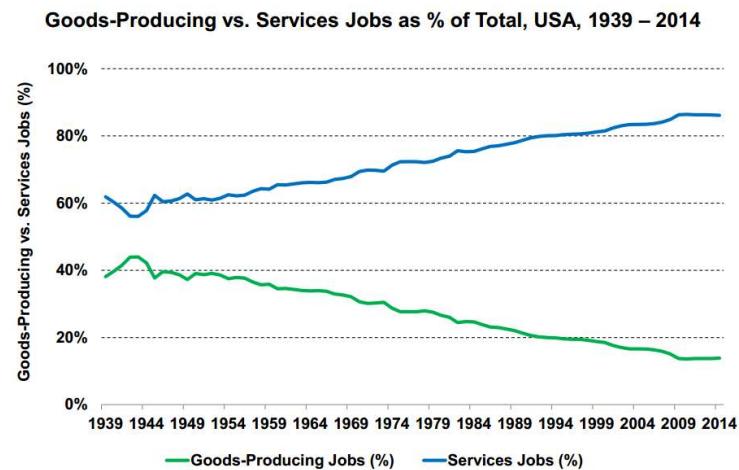
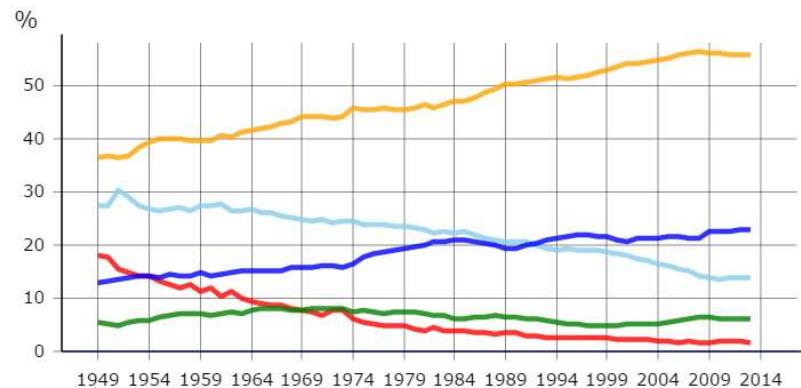


Illustration: KPCB. *Internet Trends Report* by Mary Meeker. May 2015.

Poids des principales branches dans la valeur ajoutée totale

Agriculture
Industrie
Construction
Services marchands
Services non marchands



<http://www.insee.fr/fr/themes/series-longues.asp?indicateur=poids-branches-va>

Good (economics)

From Wikipedia, the free encyclopedia

In economics, a **good** is a material that satisfies human [wants](#)^[1] and provides [utility](#), for example, to a consumer making a purchase. A common distinction is made between 'goods' that are [tangible property](#) (also called [goods](#)) and [services](#), which are non-physical.^[2] [Commodities](#) may be used as a [synonym](#) for economic goods but often refer to marketable [raw materials](#) and [primary products](#).^[3]

Although in economic theory all goods are considered [tangible](#), in reality certain classes of goods, such as [information](#), only take [intangible](#) forms. For example, among other goods an [apple](#) is a tangible object, while [news](#) belongs to an intangible class of goods and can be perceived only by means of an instrument such as [print](#), [broadcast](#) or [computer](#).

Main article: [Rivalry \(economics\)](#)

	Excludable	Non-excludable
Rivalrous	Private goods food, clothing, cars, parking spaces	Common goods (Common-pool resources) fish stocks, timber, coal
Non-rivalrous	Club goods cinemas, private parks, satellite television	Public goods free-to-air television, air, national defense

[https://en.wikipedia.org/wiki/Good_\(economics\)](https://en.wikipedia.org/wiki/Good_(economics))

Goods

"Goods" is a central economic concept which describes the items that are produced, sold, bought or consumed within an economic system. In general, "goods" are tangible items. Further classifications may include: public and private goods, rival and non-rival goods.

Information goods are typically non-rival goods.

Pure service

- Teaching
- House cleaning
- Plumbing repair
- Restaurant
- Made to measure clothing
- New car
- Radio
- Soft drinks
- Salt

Pure Commodity Good

[https://fr.wikipedia.org/wiki/Service_\(%C3%A9conomie\)](https://fr.wikipedia.org/wiki/Service_(%C3%A9conomie))

Services

A “service” is often described in economic terms by opposition to a “good” in that it’s intangible.

The Rising Services Economy

A question

- Are we heading towards the emergence of a 4th « sector », i.e. « the quaternary sector »?
- While there are still many debates around this concept, there are several commonalities that emerge:
 - It produces a combination of secondary sector elements (products) and tertiary sector elements (services)
 - It is a “knowledge-intensive” sector
 - It tends to be highly intangible (dematerialized), as it relies heavily on the digital infrastructure, i.e. the Internet

Labor Evolution(s)



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



<http://www.arte.tv/sites/fr/olivierpere/2013/12/29/les-temps-modernes-de-charles-chaplin/>

The evolutions so far have led to the emergence of the
« knowledge worker »



<http://imasters.expert/15-facts-programming-probably-know/>

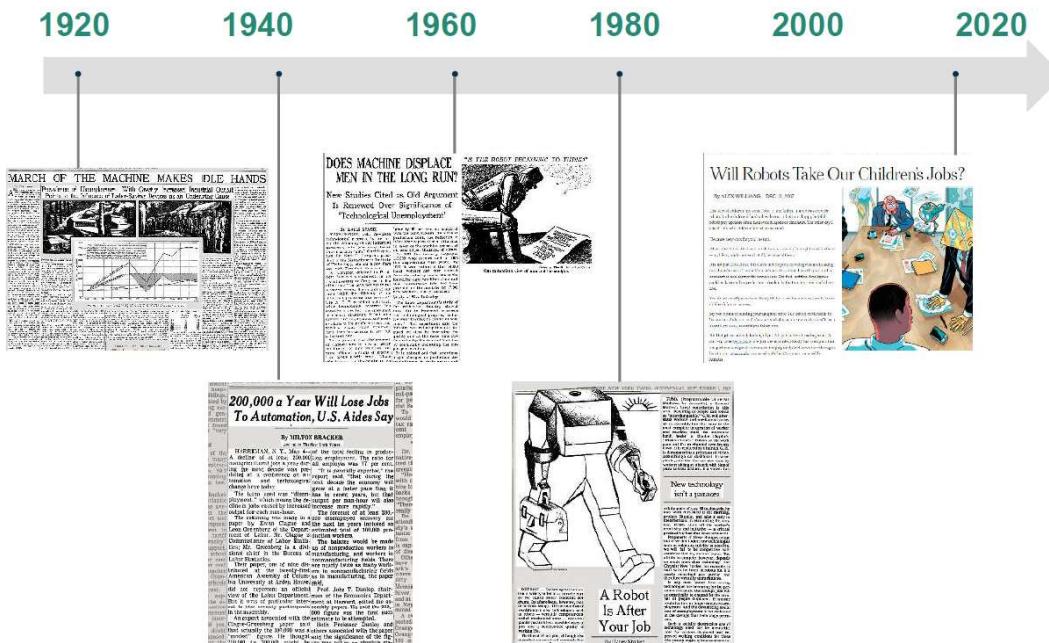
What does the future hold?

<http://www.capital.fr/enquetes/documents/nao-le-robot-made-in-france-942559>



<http://www.objetconnecte.net/quand-les-drones-sont-au-service->

Labor Evolution is NOT a modern concern



Kleiner Perkins. *Internet Trends Report* by Mary Meeker. 2018

Workforce evolution Beyond drones and robots...

- Civilian applications of drones
 - Farming
 - Delivery of goods,...
- Robotic applications in medicine:
 - Prosthetics, exoskeletons
- Artificial Intelligence in the workplace:
 - Translators, Artificial Assistants
- Driverless cars
- ...

AND YOU?
WHAT ARE THE CHANCES THAT YOUR JOB GETS AUTOMATED?
TAKE THE TEST
<http://www.bbc.com/news/technology-34066941>

Beyond the contributions of technology to the global workforce, it nonetheless appears that the next decade will face the following HR challenges:

- Shortage in number of workers in most countries
- Mismatch in skillsets
- A changing workplace mix, with:
 - More flexibility (on-demand, contract and freelancing)
- A shift in the age distribution (with the millennial generation progressively replacing baby-boomers)
- Corporate training and education will be increasingly important for a diverse and multicultural workforce

Further reading: <http://www.oxforeconomics.com/workforce2020>, https://www.ted.com/talks/rainer_strack_the_surprising_workforce_crisis_of_2030_and_how_to_start_solving_it_now

The Firm as an Economic Agent

Discussion 3



- Let's now imagine the entrepreneur who understands the environment and has defined his/her mission:
 - He/she needs to hire the right people (talent, skills)
 - He/she needs to organize work across the organization
 - He/she needs to build the work environment supporting the company's mission ...
- “The assumptions about **core competencies** define where an organization must excel in order to maintain leadership” (Peter Drucker)



The Firm as an Economic Agent

Putting it all together

- Once the entrepreneur has understood the environment, defined his/her own mission and its core competencies ...
 - He/she needs to be awarded contracts for work, goods or services,
 - He/she needs to source its basic resources (inputs)
 - He/she may need to source additional labor...
-
- ... there are situations where the costs associated with all these activities (in economic terms, the « transaction costs ») could be lowered when, instead of engaging in bilateral contracts on the markets for labor, goods and services and factors of production, the entrepreneur forms a business entity, i.e. a *firm*. (Ronald Coase. *The nature of the firm*. 1937)

The Firm as an Economic Agent

Liability, Ownership, Management

- **Liability**
 - “the state of being legally responsible for something” ()
- **Ownership**
 - “own (verb) - to have something that belongs to you, especially because you have bought it”
 - “ownership - the fact of owning something” ()
- **Management**
 - “the activity of running and controlling a business or similar organization”

All definitions are from the Oxford English Dictionary

The Firm as an Economic Agent

Forms of business - Examples

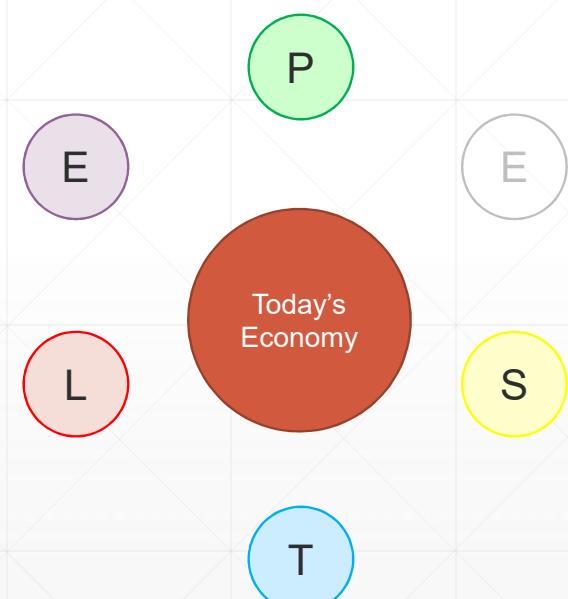
- **Sole proprietorship**
 - Business is not legally separated from its owner
 - Not a legal entity (in some countries)
- **Partnership**
 - Formal arrangement between two or more parties to share ownership and profits of a business
- **Company**
 - Legal identity
 - Limited liability

Important note: Legal forms of business vary greatly from country to country, because of the national differences in commercial, tax systems, etc...



Are we living in a Digital Economy?

- **Politically** speaking:
 - Government and country level policy implications
- **Economically** speaking:
 - Macro and micro implications
- **Socially** speaking:
 - Impacts of economy on social structures
- **Technically** speaking:
 - Ubiquity of technologies in the workplace and at home
- **Legally** speaking
 - Consequences on the legal environment and law-making process
- **Environmentally** speaking
 - Are economic activities adjusting themselves to global climate challenges?



Today's Digital Economy

POLITICAL

1. Threats to democracy (cyber crime)
2. Fragility of the global and highly interdependent supply chains
3. International coordination and solidarity (ex: COVID-19)
4. Global commercial wars
5. Global corporate taxation

ECONOMIC

1. Regulation of large internet players
2. Public debates on leading technologies such as 5G, Artificial Intelligence
3. Entrepreneurial wave driven by digital technologies

Today's Digital Economy

SOCIAL

1. Digitalization of social interactions
2. Emergence of the “gig economy”
3. Polarization of income distribution
4. Universal basic income
5. Work-life balance

TECHNOLOGY

1. Ubiquity of digital technologies in the workplace and at home
2. Fast pace of technology innovation
 - Obsolescence of products and goods
 - Obsolescence of knowledge and skills?
3. Polarization of R&D and investments

Today's Digital Economy

LEGAL

1. Privacy
2. Statute of “platform workers”
3. « The right to disconnect »
4. Intellectual Property rights and patents

ENVIRONMENTAL

1. Digital accounts for 4% of greenhouse gas emissions
2. ... nearly half of which is due to terminal (user) equipment
3. By 2025, its carbon footprint is expected to double

FOR MORE INFORMATION ABOUT THE GLOBAL BUSINESS ENVIRONMENT:

<https://www.doingbusiness.org/en/rankings>

Enterprise Essentials

Summary Class # 1:



- Economics is a social science that is studying the way goods and services are produced, allocated, exchanged or consumed, either at an individual (consumer, firm) or at an aggregated (nation, society) level. The 2 main branches of economics are “Macroeconomics” and “Microeconomics”
- The surge in recent years of enterprise (especially SMEs) creation, a phenomenon called “entrepreneurship”, calls for a good understanding of the role of the **enterprise** in our modern economics systems. As an economic agent, the enterprise has distinct features that sets it apart from other type of organizations
- The enterprise, or, « business organization » is an economic agent that contributes to the economy by providing efficiently goods and services, either to other companies (B2B) or directly to consumers (B2C)
- Today's social and economic challenges (environment, labor evolutions, urban transition, increased digitalization of economic activities, ...) are numerous and businesses have to take them into account.
- A firm's reason of being and founding principles are the lifeblood of any enterprise. They include: i) the firm's understanding of its social role, ii) its mission, and iii) its core competencies.

Class # 1 Wrap-Up

- Q&A
- Reading for next class

Thank You!

Valeriu Petruelian, PhD

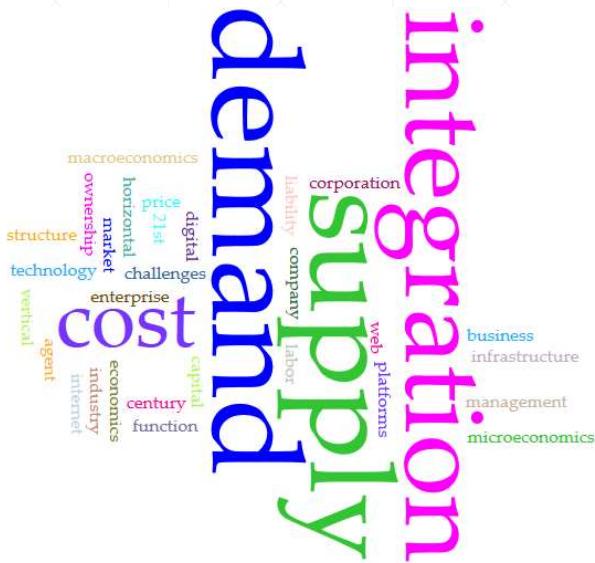
Enterprise Essentials

Class # 2 - The business environment: industries and markets

EPITA | Fall 2021

Valeriu Petruian

Enterprise Essentials Class 2



- 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 & Course Wrap-Up

Today's Reading:

Michael E. Porter. *Understanding Industry Structure.* Harvard Business School, case 9-707-493, August 13th, 2007

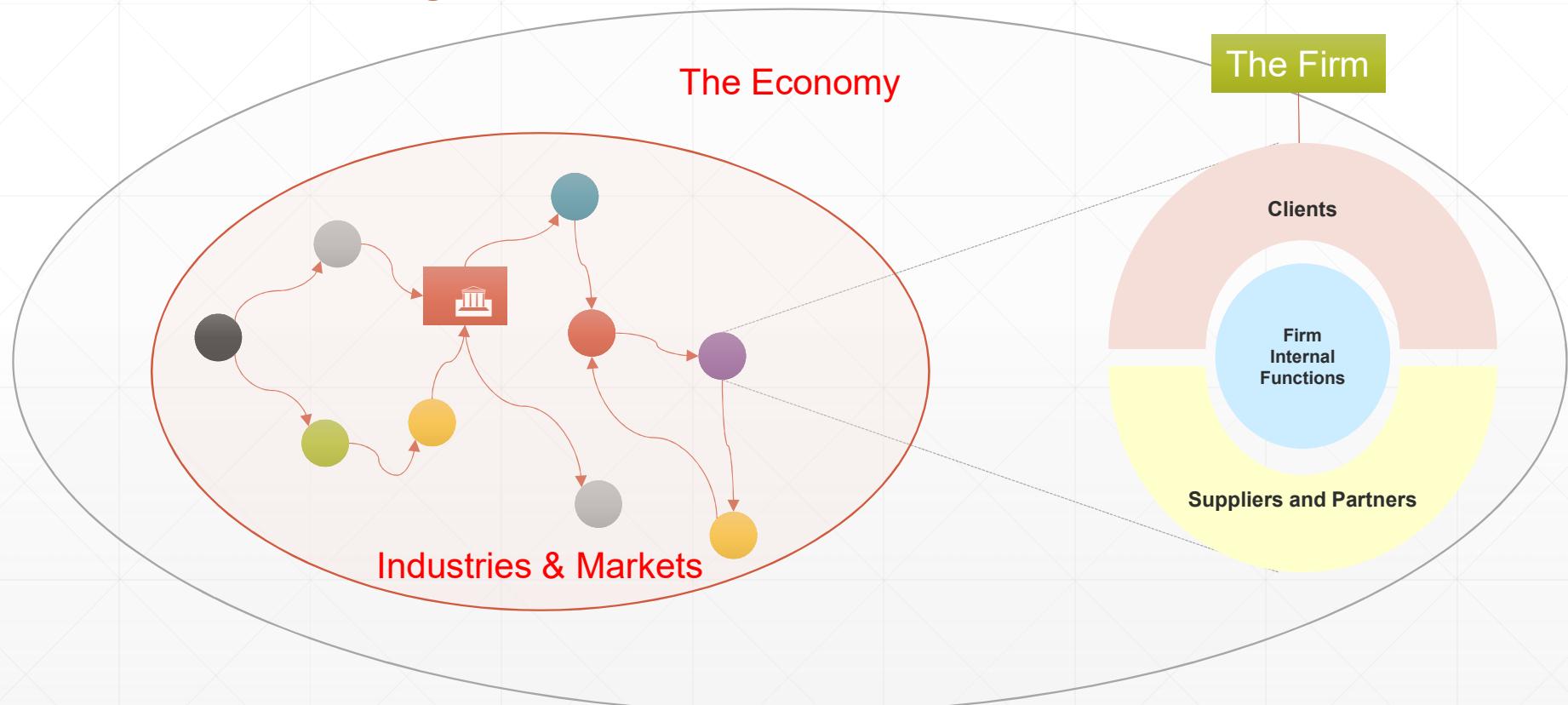
The Business Environment: Industries and Markets

Concepts: Industrial Organization, Market Dynamics, Integration, Barriers to Entry, Michael Porter's 5F Framework, SWOT, Information industries



Our playground

The economy; industries, markets, firms



Value (economics)

From Wikipedia, the free encyclopedia

Not to be confused with [Market value](#).

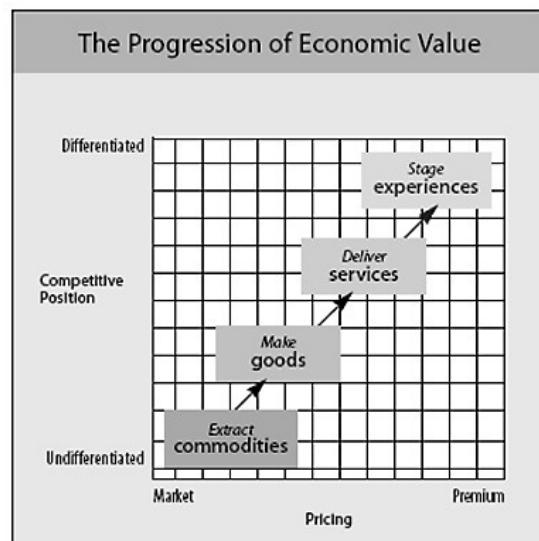
Economic value is a measure of the benefit provided by a [good](#) or service to an economic [agent](#). It is generally measured relative to units of [currency](#), and the interpretation is therefore "what is the maximum amount of money a specific actor is willing and able to pay for the good or service"?

Note that economic value is *not* the same as market price, nor is economic value the same thing as [market value](#). If a consumer is willing to buy a good, it implies that the customer places a higher value on the good than the market price. The difference between the value to the consumer and the market price is called "consumer surplus". It is easy to see situations where the actual value is considerably larger than the market price: purchase of [drinking water](#) is one example.

The economic value of a good or service has puzzled economists since the beginning of the discipline. First, economists tried to estimate the value of a good to an individual alone, and extend that definition to goods which can be exchanged.

From this analysis came the concepts [value in use](#) and [value in exchange](#).

[https://en.wikipedia.org/wiki/Value_\(economics\)](https://en.wikipedia.org/wiki/Value_(economics))



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>

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Value

"Value" measures the benefit that an economic agent (individual or firm) derives from a good or from a services. While a subjective concept in general, in economics, value is measured in currency units (monetary value).

In economic terms, one may also refer to the concept of "utility" which is the satisfaction an economic agent derives from the consumption of a good or service.

01/12/2021

6



<http://archive.francesoir.fr/pratique/argent/bourse-paris-cloture-en-baisse-98261.html>



<http://www.entreprises.gouv.fr/semaine-industrie/activites-industrielles/industrie-petroliere?language=fr>

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Industries and Markets

In Economics, an Industry defines a group of production activities classified according to the good or service it provides.

A Market, in turn, is an exchange mechanism that brings together buyers and sellers.

Examples:

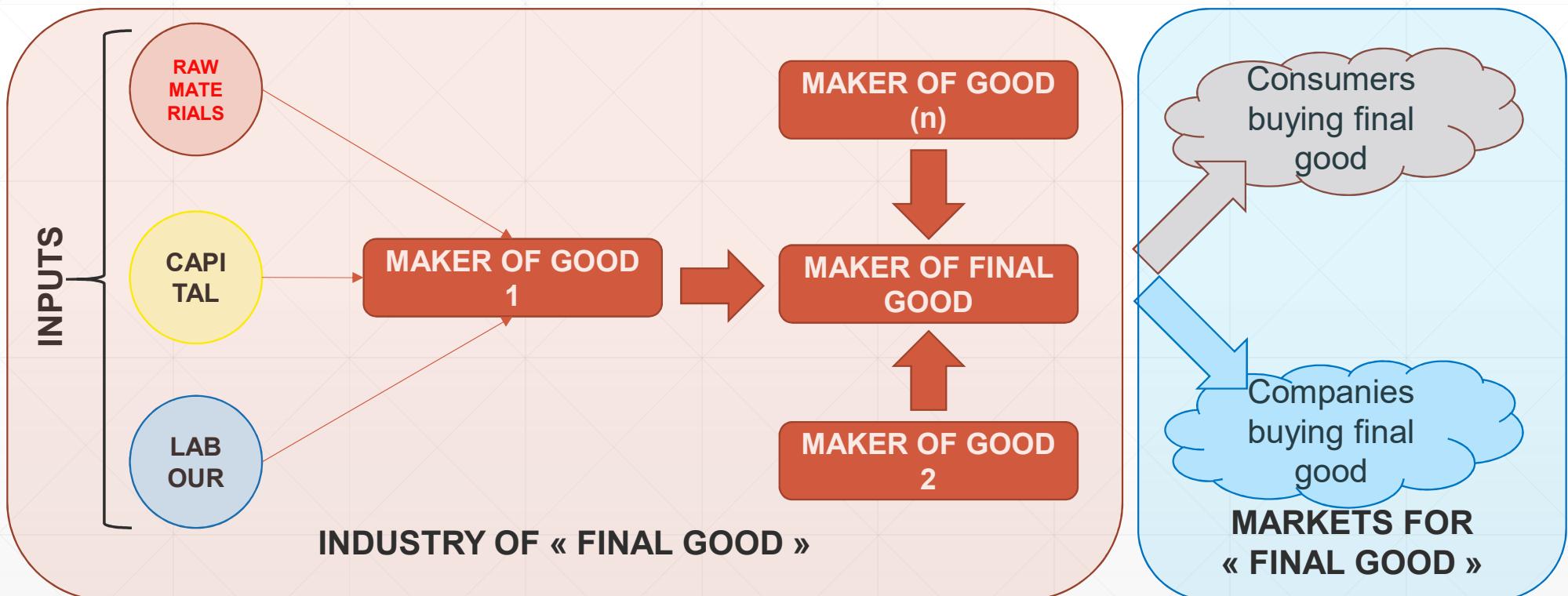
The industry of leather goods and the market of men shoes

The glass and metal industries and the market for packaging of soft beverages

01/12/2021

7

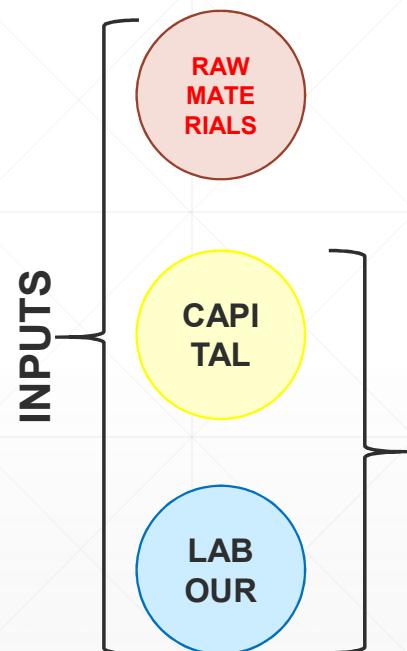
Industries and Markets Framework



NB. In a market economy, the « inputs, » good 1, ..., good (n), are tradeable as well, hence « markets. »

Digitalization of...

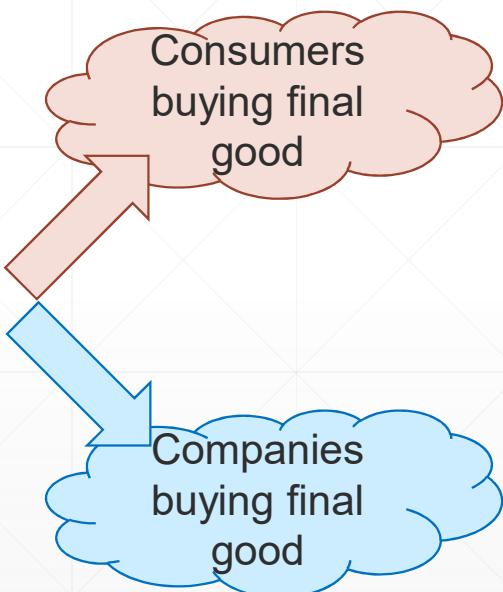
① Inputs



- **Capital** – is becoming increasingly digital, as more and more companies:
 - a) utilize Information Technologies
 - b) « digitalize » their assets
- **Labor** – is getting more and more « digitalized » as:
 - a) Professionals in all sectors and company functions acquire « digital » skills (ex: programming, data analytics, digital literacy and numeracy, digital marketing)
 - b) New skills are required (ex: Data Scientist, Data Analyst, cybersecurity experts, ML and AI experts, statisticians)

Digitalization of ...

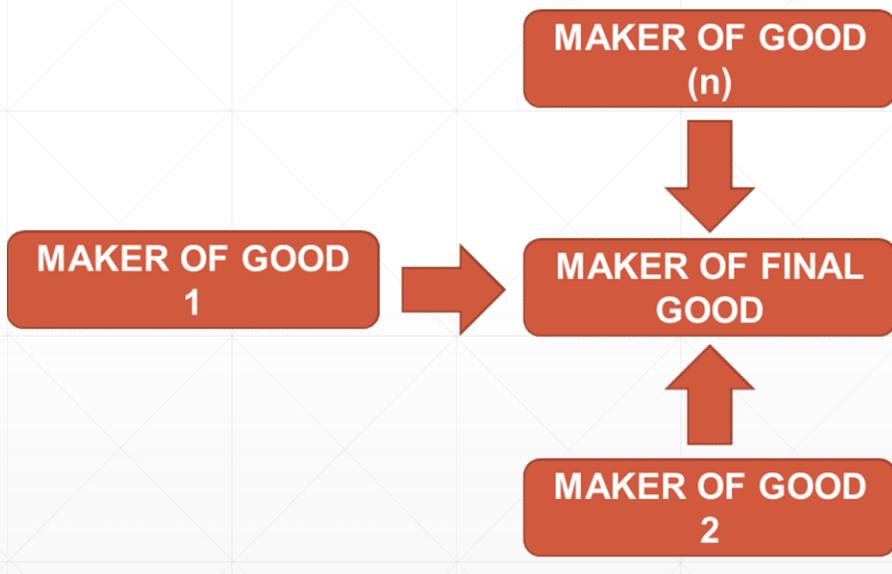
② Transactions



- **Example:** mobile Point of Sale payments
 - “Transaction value in the Mobile POS Payments segment is projected to reach €1,778,322m in 2020
 - Transaction value is expected to show an annual growth rate (CAGR 2020-2024) of 19.2% resulting in a projected total amount of €3,593,715m by 2024”
(source: Statista)
- **Examples of extreme situations:**
 - a) High frequency trading in financial markets
 - b) Real-time-bidding in online advertising

Digitalization of ...

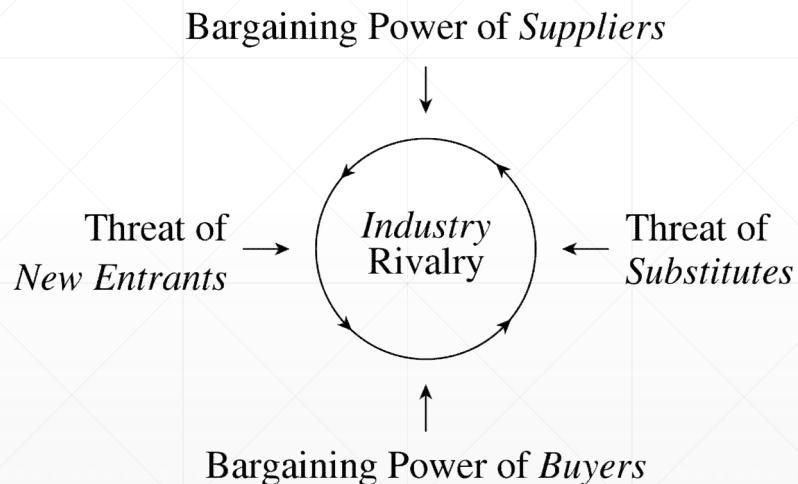
③ Value chains



- **Internally**, companies are transforming themselves through the deployment of Information Technology applications and systems, across the entire organization (ex: Marketing/Sales: CRM, HR: HCM, operations: SCM, finance & admin: ERP, ...)
- **Externally**, industry value and supply chains are becoming more digitally integrated (ex: procurement, Product Lifecycle Management, ...)

Industries and Markets

Michael Porter's « 5 Forces Framework »



https://en.wikipedia.org/wiki/Porter%27s_five_forces_analysis

According to Porter, a firm's competitive environment is determined by:

1. Threat of new entrants
2. Threat of substitutes
3. Bargaining power of customers
4. Bargaining power of suppliers
5. Competitive rivalry

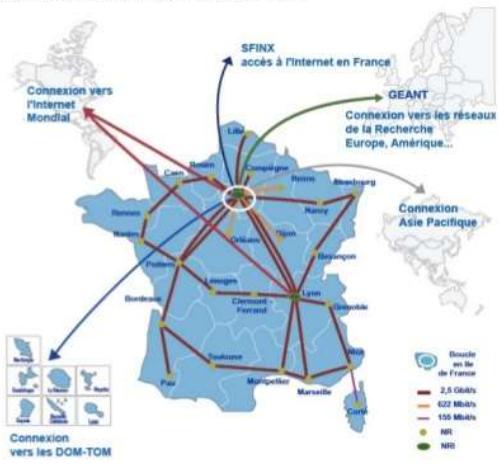
Industries and markets

The communications industry



<http://fr.freepik.com/photos-vecteurs-libre/ancien-telephone>

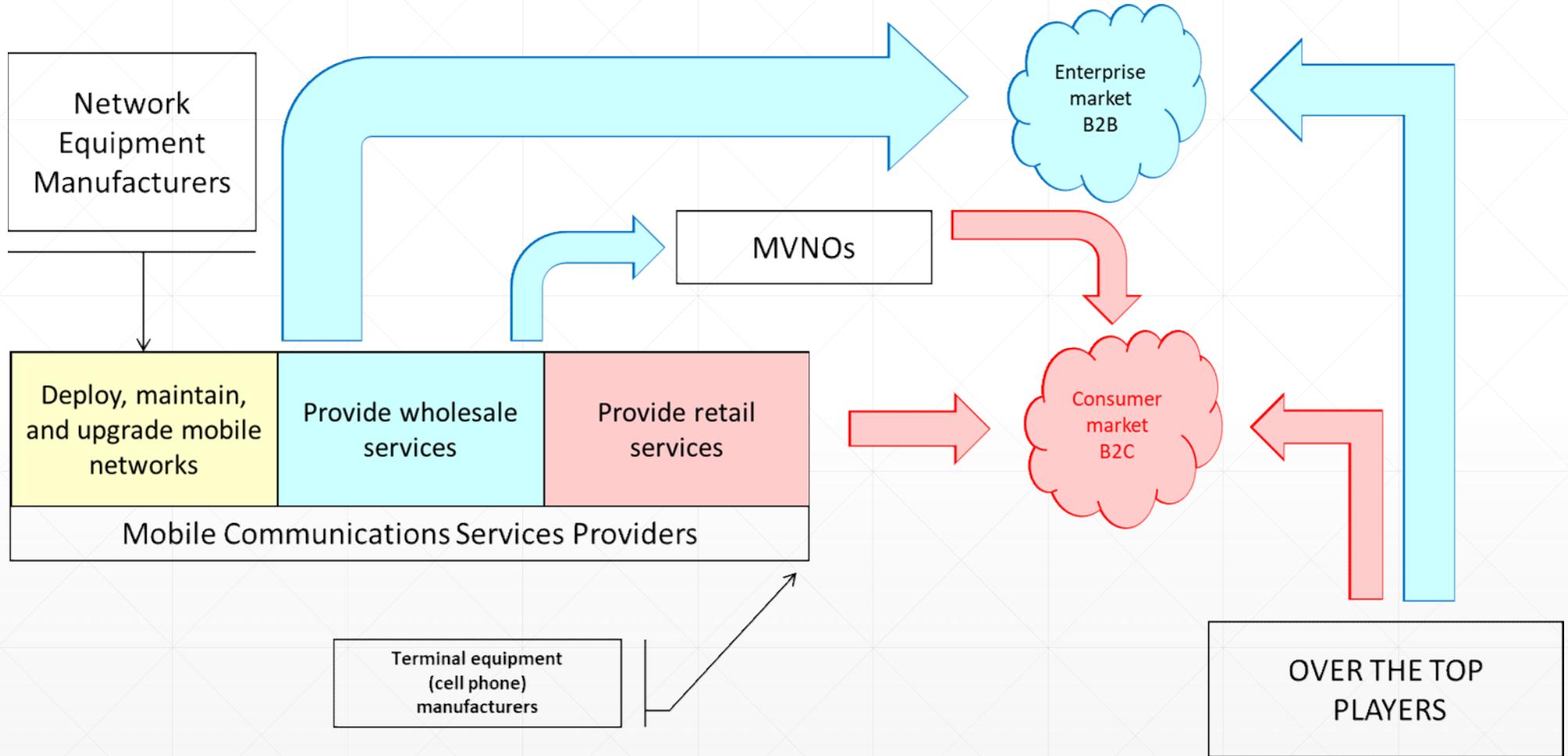
RENATER (réseau national de télécommunications pour la technologie, l'enseignement et la recherche) est le réseau informatique français reliant les différentes universités et les différents centres de recherche entre eux en France

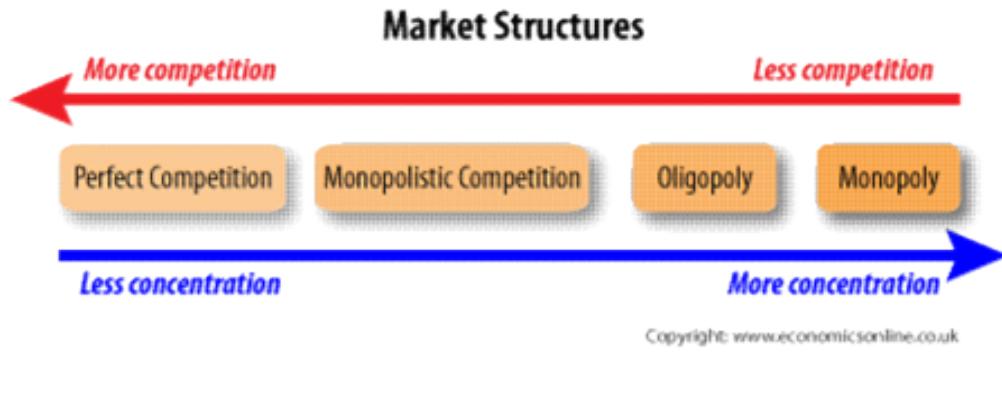


□ Based on the original patent of Alexander Graham Bell (1876), it has evolved in an “industry” thanks notably to Theodore Vail (1848 – 1920) who has set the basis and defined the principles for the organization of a national telephone system

- Economic concepts to be discussed:
- Industry Rivalry
 - Economies of scale

Mobile Communications Industry Structure

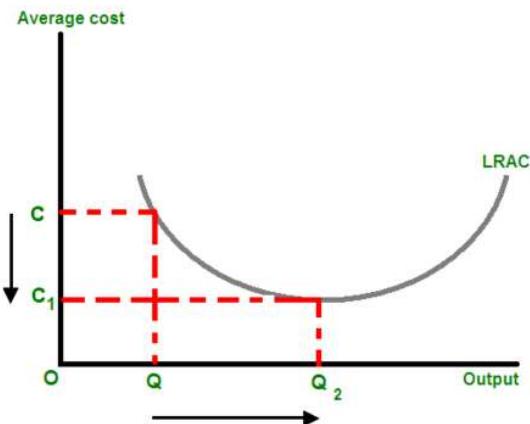




Market Structure

In general, a “market” is composed of a set of firms producing and selling similar goods or services.

The number of the firms will determine the market structure in terms, notably, of: competition and concentration.



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

On peut formaliser cette définition en écrivant:

$$C(X_1, X_2) < C(X_1, 0) + C(0, X_2)$$

Où C représente la fonction de coûts, X_1 et X_2 les deux biens produits.

https://fr.wikipedia.org/wiki/%C3%89conomies_d%27envergure

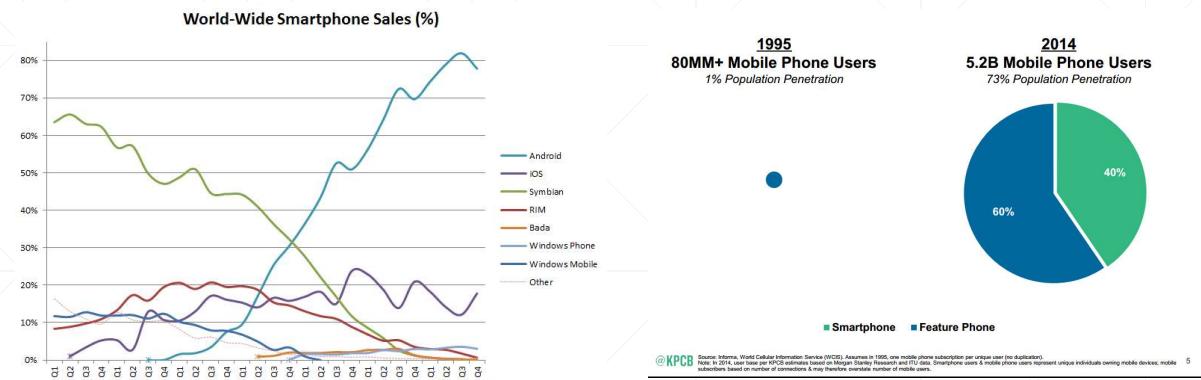
Economies of scale and Economies of scope

Economies of scale (can be internal or external) are cost advantages that enterprises obtain due to size, output, or scale of operation, with cost per unit of output generally decreasing with increasing scale as fixed costs are spread out over more units of output.

Economies of scope (John C. Panzar and Robert D. Willig, 1977, 1981) are economies that are generated through diversification of products (output).

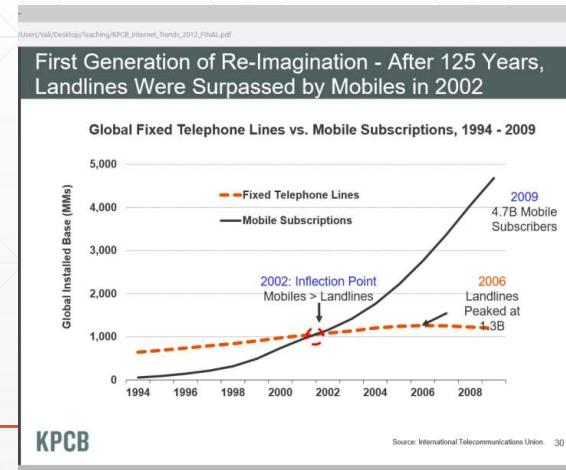
The telecommunications industry Snapshot

- Fixed | Mobile | Unified communications
- Longtime a monopoly
 - « Natural monopoly », Public (Universal) Service
 - Network effects
- Deregulation: first in the US (AT&T mid 80s) and then in Europe and the rest of the world
- In France:
 - At the beginning of the '90s: France Telecom
 - Now (March 2021): Orange, Altice SFR, Bouygues Telecom, Iliad-Free
 - RIP: Siris, Cegetel, LDCOM, ...



KPCB. Internet Trends Report by Mary Meeker. May 2015.

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



KPCB. Internet Trends Report by Mary Meeker. 2012.

Industries and Markets

Broadcast Media Industry - Radio

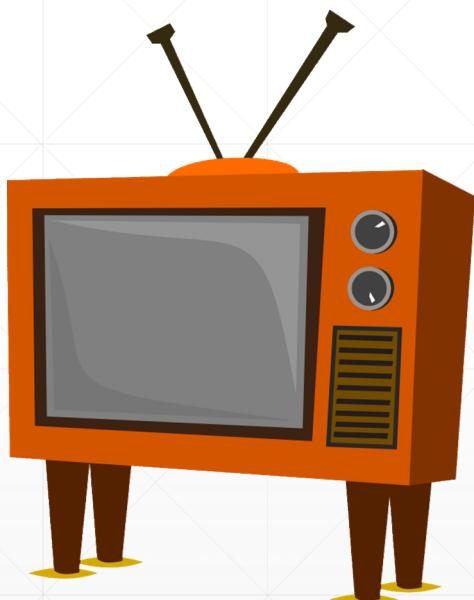


http://www.radiomuseum.org/r/ducretet_piano_7_lampes.html

- Marconi (1895)
- Mass broadcasting (1920)
- First transistor radio set (1954)
- Economic concepts to be discussed:
 - Threat of new entrants
 - Barriers to entry

Industries and Markets

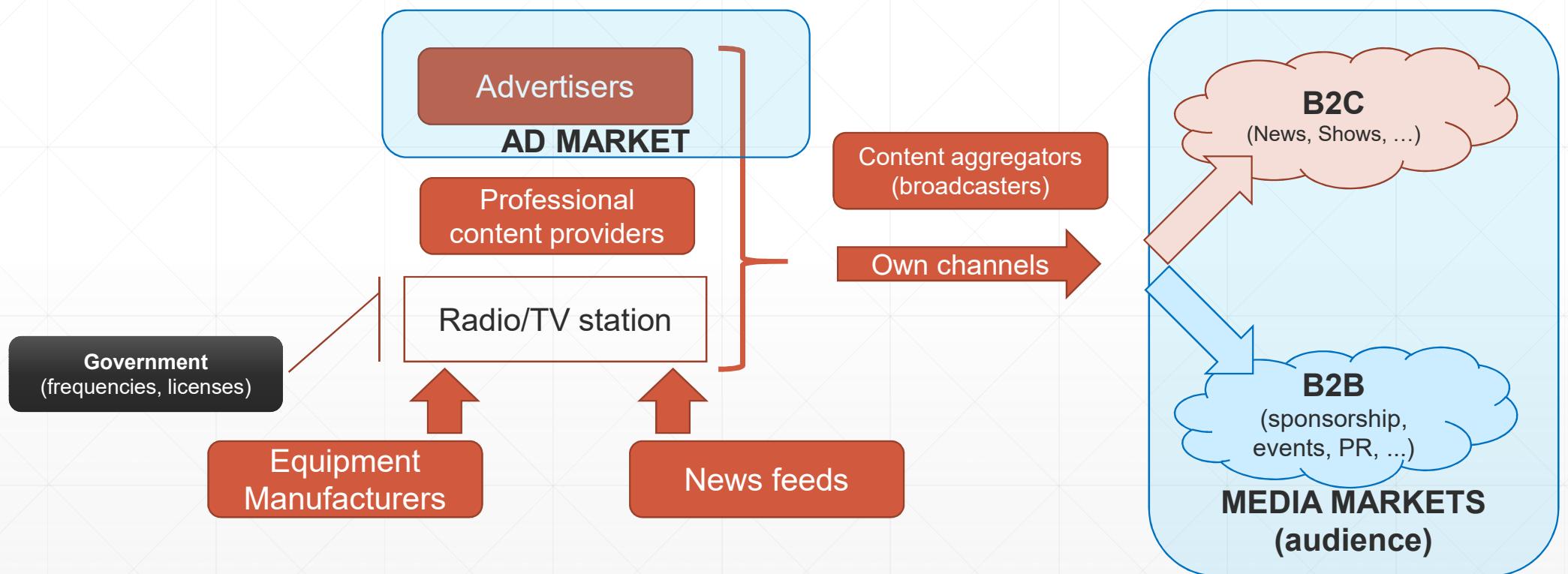
Broadcast Media Industry - Television

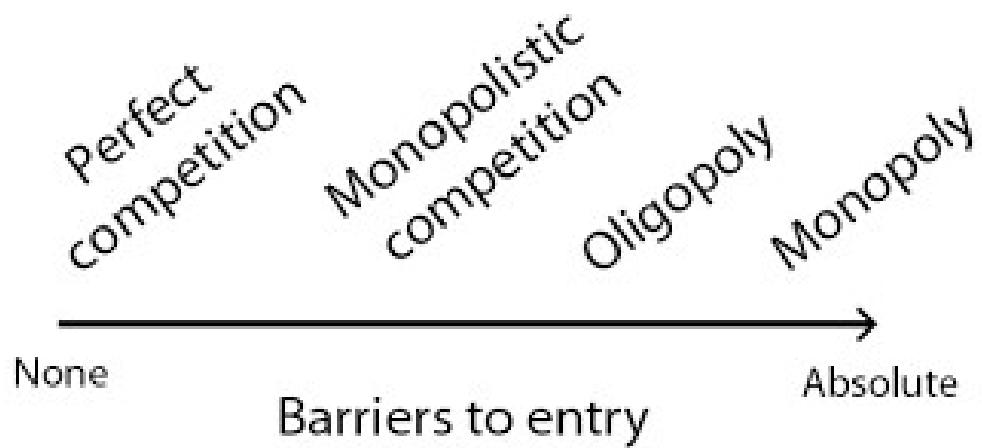


<http://www.clipartlord.com/free-vintage-television-set-clip-art/>

- ❑ Several technology innovations at the end of the 19th and beginning of the 20th century
- ❑ “Rich” and complex media
- ❑ Economic concepts to be discussed:
 - Threat of new entrants

Broadcast Media Simplified industry structure





<http://www.policonomics.com/lp-oligopoly2-entry-barrier/>

Barriers to entry

Anything that prevents a new entrant into a market.

Barriers to entry may be numerous: advertising, know-how, proprietary technologies, customer loyalty, government regulations, product differentiation, etc

In some cases, barriers may be « statutory » meaning that the firms existing in the market need special license in order to operate

Radio evolution Snapshot

- Vacuum Tube Radio | Transistor | MP3 | Audio streaming
- Radio utilizes scarce resources which are public goods (radio spectrum frequencies), Government intervention is necessary to allocate these goods among the various market players
- The FM radio stations (80') have introduced:
 - Interactivity into a broadcasting (one-to-many) medium
 - A form of competition in an industry traditionally dominated by one single player
 - User-generated content

TV (Video) Evolution Snapshot

- Video broadcasting| VCR | DVD Player | Video streaming
- In general, most countries have chosen an oligopolistic market structure (several players, with one of them owned by the Government)
- TV companies have, basically, 4 sources of revenues:
 - Public financing (through subsidies), Advertising-generated revenues (true for radio and print media, as well), Royalty fees (ex: “redevance” in France), Subscription-based models (PayTV, ex: Canal+ in France, HBO in the US)
- New entrants in the broadcast media arrive via:
 - News (24-H News, CNN, ...)
 - Content (movies, documentaries, ...): National Geographic Channel, Netflix, ...
 - Podcasters

Industries and Markets

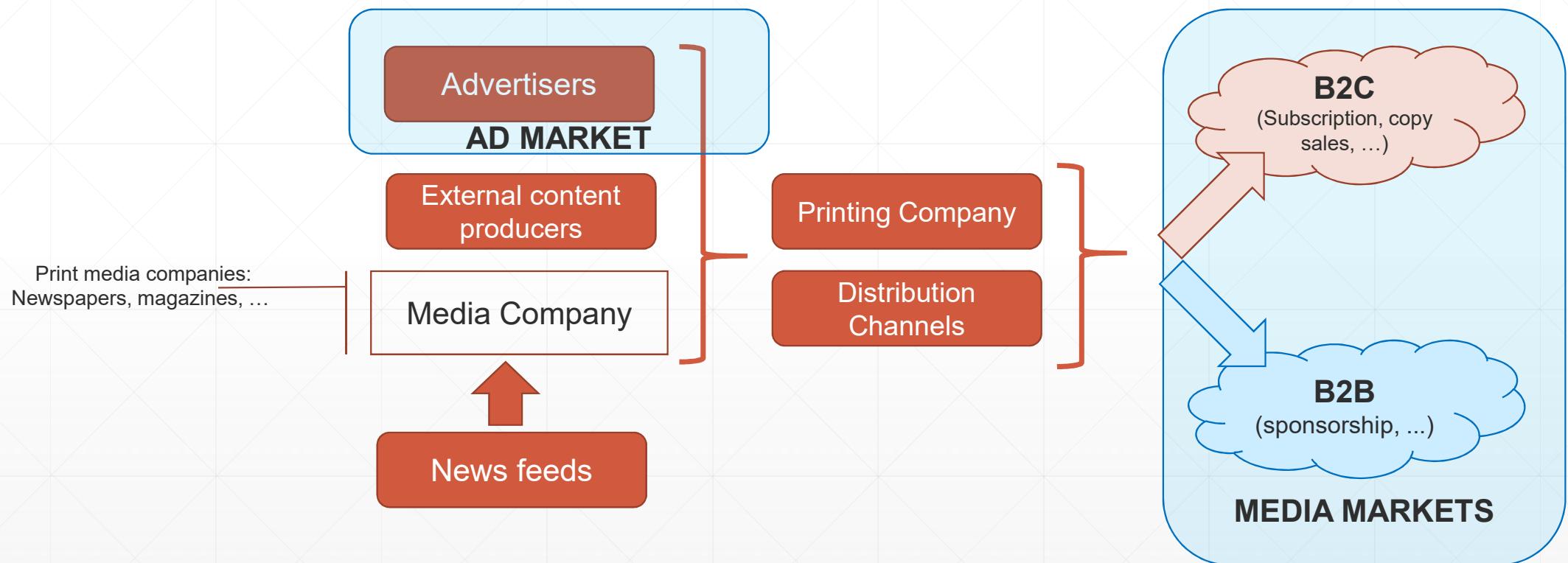
Media – Print Media (Newspapers)



- First “newspaper” published in Strasbourg (cca. 1600)
- New printing technologies made newspapers an affordable information means during the industrial revolution
- The decline in advertising revenues and the competition on online media have fundamentally shaken the traditional print media
- Economic concepts to be discussed:
 - Threat of substitutes

<https://www.independent.co.uk/news/media/press/the-media-column-the-newspaper-industry-is-still-fighting-for-life-but-there-is-hope-for-the-future-a6698871.html>

Print Media Simplified industry structure



Print Media

Threat of substitutes

PRINT MEDIA INDUSTRY

- A Journal/Magazine:
 - Provides content (articles, stories, news, cartoons, ...)
 - By leveraging contributing writers (journalists, columnists, novelists, cartoonists, ...) or
 - External contributions (writers, news feeds ...)
 - And advertising, to
 - Readers

SUBSTITUTES

- Free magazines (20Minutes, Metro, Direct Matin, ...)
- On-line information sources (MSN, Yahoo, AOL, etc)
- Online news aggregators (Feedly, Google news, news360, ...)
- Specialist information services (Bloomberg, etc.)

Industries and Markets

High Tech (Computer Hardware) Industry



https://fr.wikipedia.org/wiki/Machine_analytique

https://en.wikipedia.org/wiki/File:Turing_machine_1.JPG

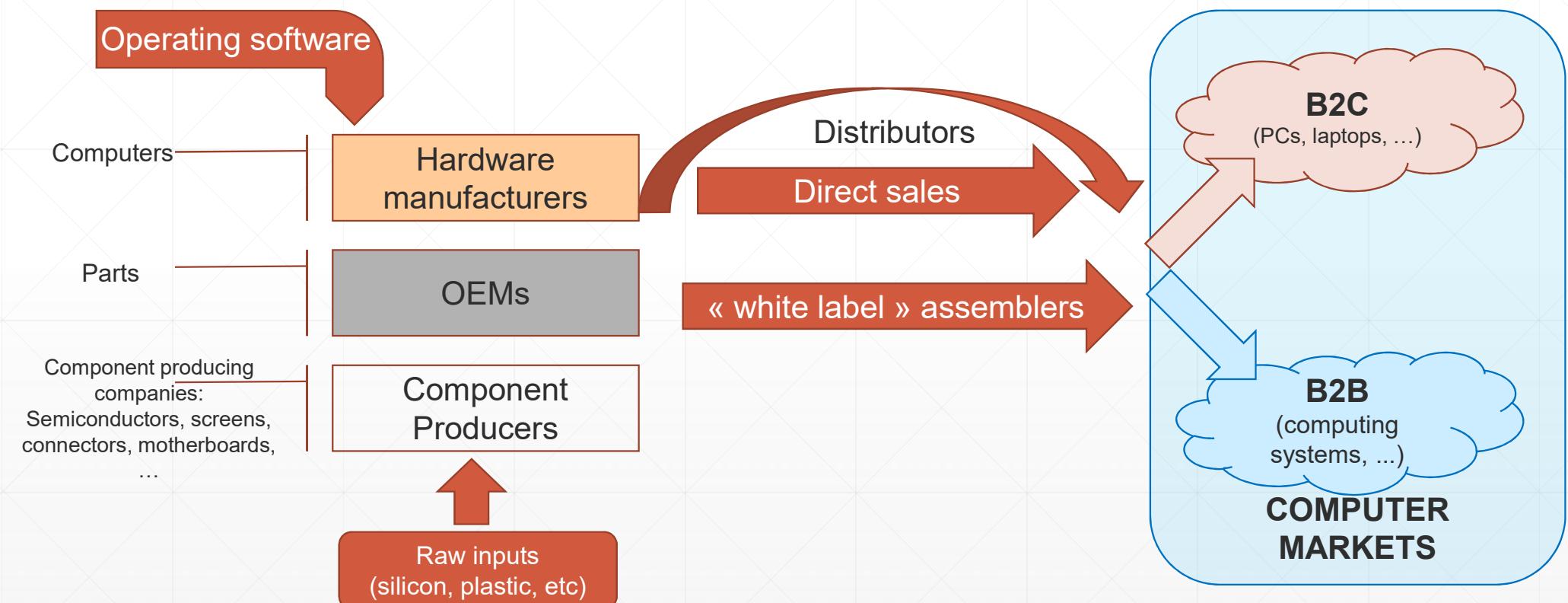
https://en.wikipedia.org/wiki/Mainframe_computer

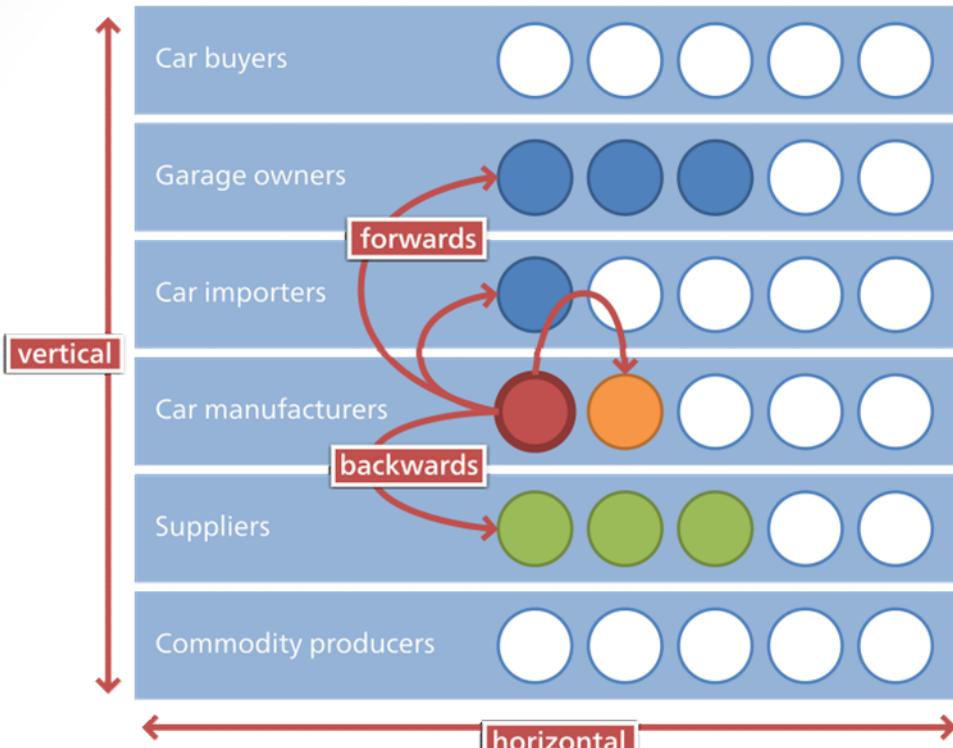
https://en.wikipedia.org/wiki/IBM_PC_compatible

<http://www.theguardian.com/commentisfree/2015/jun/25/wikipedia-editors-dying-breed-mobile-smartphone-technology-online-encyclopedia>

- ❑ Charles Babbage (1888) and Alan Turing (1945), among others
- ❑ Mainframes ('70s), PCs ('80s)
- ❑ TCP/IP (mid '70s) and WWW (early 90')
- ❑ Economic concepts to be discussed:
 - Supplier bargaining power
 - Horizontal and Vertical Integration

Computer Industry Simplified industry structure





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

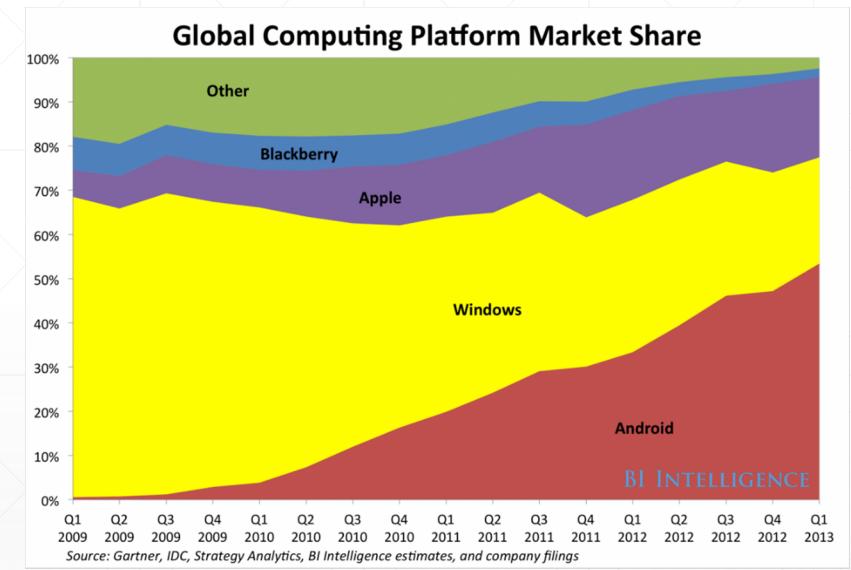
Vertical and Horizontal Integration

Vertical Integration is the situation where the supply chain of a product is controlled by a single company.

Horizontal Integration, in contrast, occurs when a company produces several products related to one-another.

Computer Hardware Evolution Snapshot

- Hardware | Software | Services |
 - Recently: SaaS | PaaS | IaaS
- Software – usually priced and sold as license
 - New models emerge:
 - Subscription (to cloud services)
 - Freemium models (for apps)
- RIP: DEC, Silicon Graphics, ...
- “Computing Platforms” emerge as fundamental building blocks of our increasingly interconnected world



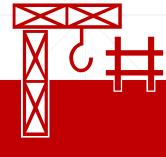
Computer Hardware Supplier Bargaining Power

HARDWARE MANUFACTURERS

- Around 150 companies listed currently, among which the most prominent ones are:
 - Apple
 - IBM
 - HP
 - Dell
 - Acer
 - Lenovo
 - Toshiba

CHIP MANUFACTURERS

- INTEL
- Taiwan Semiconductor Man.
- Qualcomm
- Broadcom
- Micron technology
- Texas Instruments
- ASE Technology Holding
- NVIDIA
- STMicroelectronics
- NXP Semiconductors



Class Assignment

Based on today's reading material and the discussion so far, please comment on a company's "market shift" and its consequence on industry structure

Ideas to choose from (non-exhaustive list):

- Apple entering the music market via iTunes and Beats Music
- Apple entering the mobile phone market via the iPhone, Microsoft entering the mobile phone market via Nokia, Google entering the mobile phone market via Android
- Facebook entering the communications market via Instagram and WhatsApp
- Amazon entering the IT market via AWS
- Amazon entering the entertainment market via Prime Video and Prime Music, Amazon entering the gaming market via Twitch
- Orange entering the financial services market via Orange Bank

Software and Services Industry

SOFTWARE PROVIDERS

Microsoft Remains the World's No. 1 Software Maker

Worldwide revenue of the world's largest software vendors in 2013

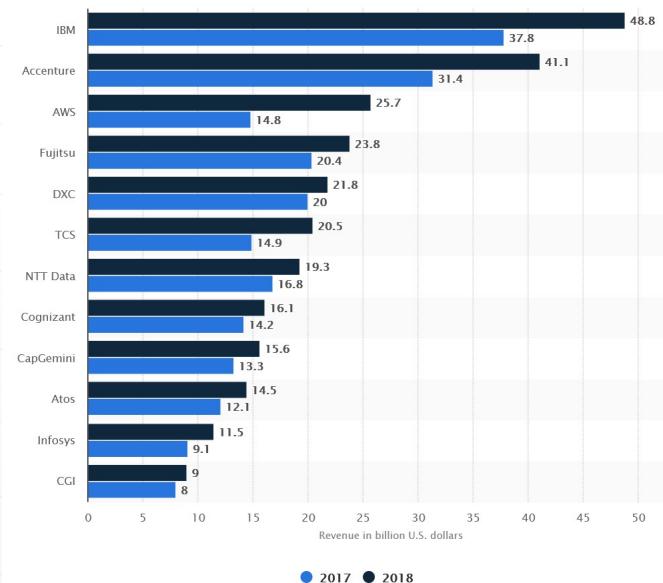


CC BY SA @StatistaCharts Source: Gartner

statista

Source: <https://www.statista.com/chart/2078/top-10-software-vendors-2013/>

SERVICES PROVIDERS

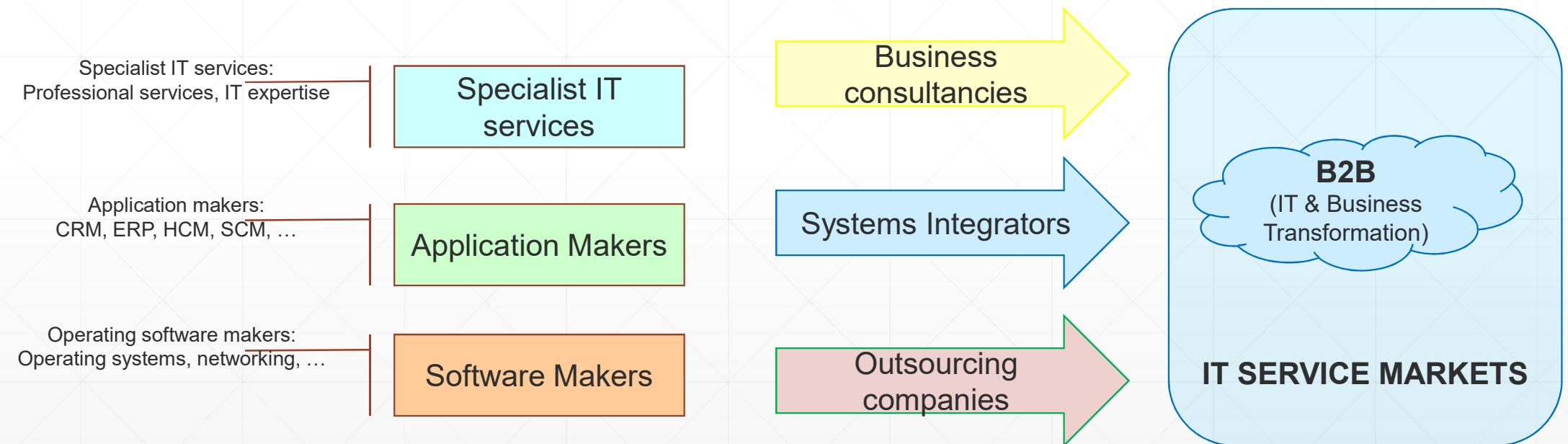


● 2017 ● 2018

Source: <https://www.statista.com/statistics/479308/it-services-provider-revenue-ranking/>

Software and Services Industry

Simplified industry structure

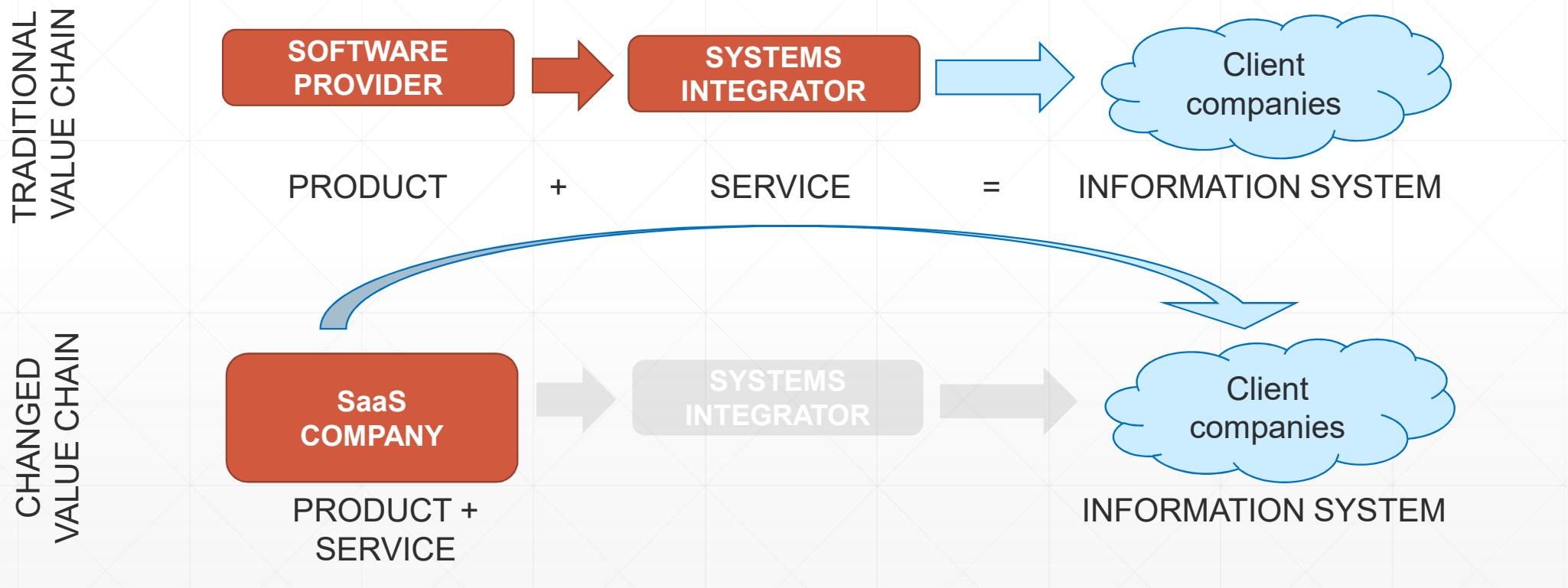


Software and Services Industry

Bargaining power of customers

- Companies (especially large ones) negotiate fiercely their IT-driven transformation programs
- As a result:
 - Software companies tend to bundle prices (for example: database and operation systems, operating systems and business applications)
 - IT services companies try to avoid « commoditization » of their services and develop additional (higher-value) consulting services (ex: management and business consulting, web design, etc)
 - Software-services partnerships emerge (for example: Oracle-Accenture in the early 2000s)
 - Cloud-based companies tend to develop their own services capabilities

Changing the value chain Software-as-a-Service (SaaS)



About disruption

DEFINITIONS

- “The action of completely changing the traditional way that an industry or market operates by using new methods or technology.” (Cambridge Dictionary)
- « (to somebody/something) a situation in which it is difficult for something to continue in the normal way; the act of stopping something from continuing in the normal way.” (Oxford Learner’s Dictionaries)

INTERPRETATIONS

- In **creative destruction**, the goal is to tear down/clear away the existing so that a new foundation can be built, and the economy can expand. (Joseph Schumpeter)
- In **creative disruption**, the goal is to expose flaws in the current business model, highlight areas where improvement/changes are needed, and to help inspire adaptation of the business model for future growth. (Jean-Marie Dru, TBWA)
- In **disruptive innovation**, the goal is to bring about a new market entirely, in general, through technical innovation. (Clayton Christensen)

About competitive advantage

Definition: “A condition or circumstance that puts a company in a favorable or superior business position.” (Oxford Languages)

Sources of competitive advantage (Michael Porter):

1. Cost advantage
2. Differentiation advantage
3. Specialization advantage (Niche focus)

NB. Digital technologies may enable any of the 3, hence the ways to implement those and the consequences may be totally different, depending on the context.

Industries and Markets

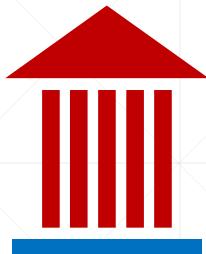
Government Intervention in the market



Industry regulation
Allocation of scarce resources
(example: spectrum auctions)

Industries and Markets

A 6th force? The role of regulation



« Regulation » covers a wide spectrum of external interventions into the market. These may be performed either by Governments, directly, or by dedicated organizations, called « Regulation authorities »

The reasons for such external interventions are, essentially, the following (Tirole, 2014):

1. Consumer protection (ex: addictions)
2. Negative externalities (ex: pollution)
3. Information asymmetry between firms and consumers (ex: prices and quality of consumer goods)
4. Equity considerations (ex: distribution of wealth)
5. Market power (ex: monopoly)
6. Long term (inter-temporal) protection (ex: bank deposits, insurance)



Industries and Markets

Class Discussion

Please comment on the potential differences between “traditional” industries and “high-tech” industries.

Traditional:

- Oil extraction, Mining
- Industrial manufacturing
- Traditional media
- ...

High-Tech:

- Software industry
- Internet (search, social networks, ...)
- On-line industries
- ...

“Should I stay or should I go?”

Analytical tool - SWOT Matrix

Strengths	Opportunities
<ul style="list-style-type: none">- Internal strengths- Comparative advantage- What makes us good at what we do	<ul style="list-style-type: none">- External positive factors- What is out there for us- Chances to seize, openings- Things we should « go for »
Weaknesses	Threats
<ul style="list-style-type: none">- Internal areas of improvement- Things that we need to reinforce, develop, or acquire	<ul style="list-style-type: none">- External factors of caution- Things we need to pay special attention to- External risks and uncertainties



Industries and Markets

Value chain of traditional industry (ex: petrochemicals)

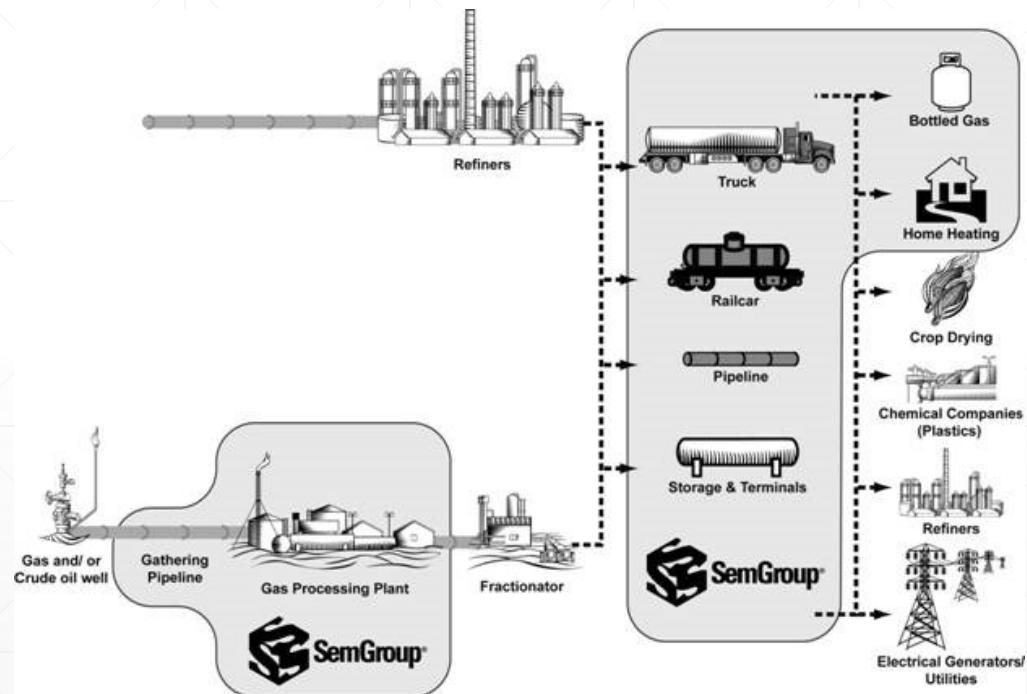
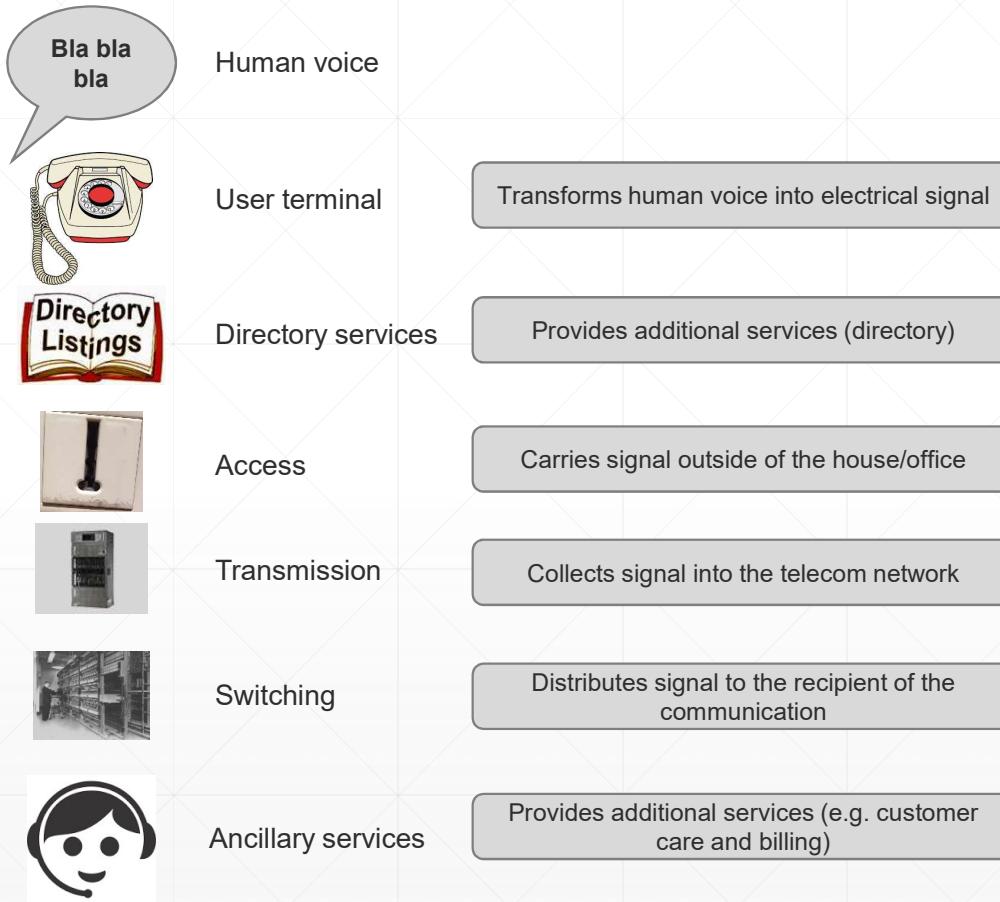


Illustration of petrochemical value chain:
<http://www.sec.gov/Archives/edgar/data/1489136/000119312510241187/d1012ba.htm>

Industries and Markets

Industries and Markets Illustration

Simplified value chain for traditional telecommunication services



Discussion:



- Ex. # 1:
 - Replace the user terminal with a mobile phone, a computer, or a car
- Ex. # 2:
 - Replace access with a set-top box, an ADSL modem, or a WiFi router
- Ex. # 3:
 - Add 'connected home', 'connected car', ... type of services

Transformation of value chains

DEMAND

SUPPLY

Network of type 1 users (ex:
buyers, travelers, movie-goers)

Network of type 2 users (ex:
sellers, drivers, movie makers)

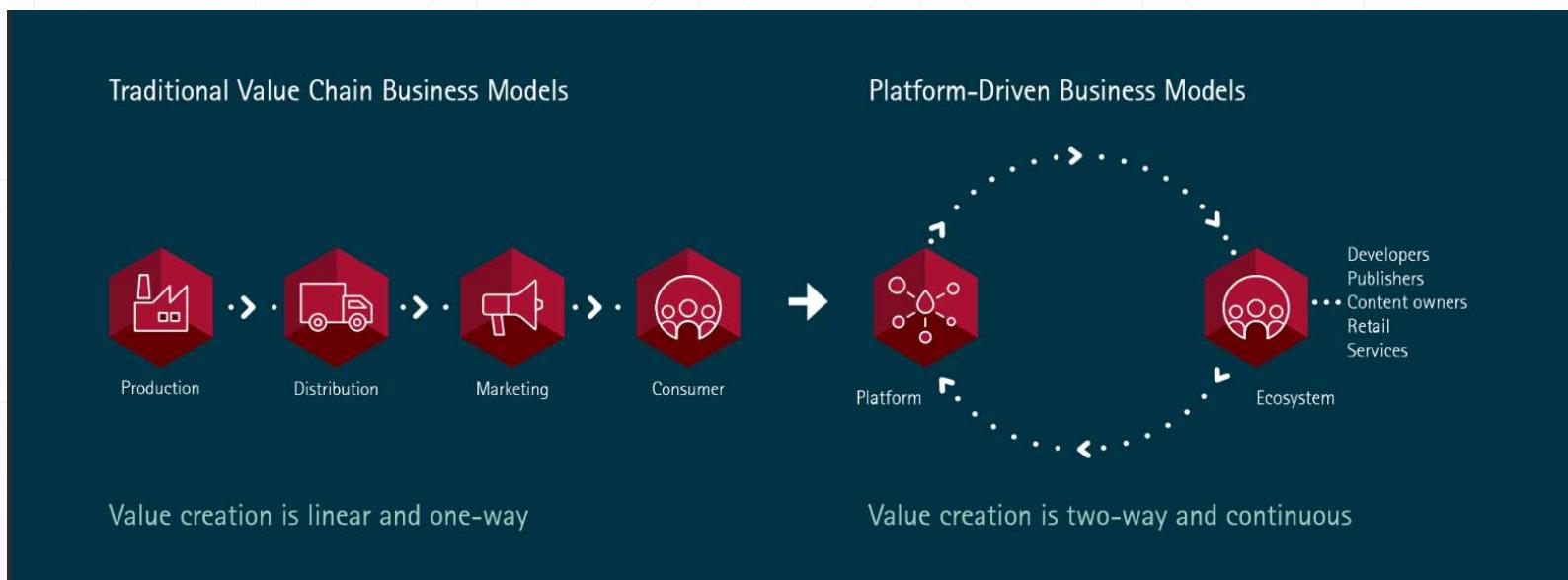
Technology
Platform

Platform company

Network of developers
(enhancers and
complementors)



Industries and Markets Value Chain Comparison



Source: https://www.accenture.com/fr-fr/_acnmedia/PDF-2/Accenture-Platform-Economy-Technology-Vision-2016-france.pdf



Industries and Markets

Discussion: Traditional industries “going digital”

Strengths	Opportunities
<ul style="list-style-type: none">- Control of an existing supply chain- ...	<ul style="list-style-type: none">- Entering new markets (for example, IT services markets)- ...
Weaknesses	Threats
<ul style="list-style-type: none">- Level of mastery of digital technologies- ...	<ul style="list-style-type: none">- Losing money and credibility- ...

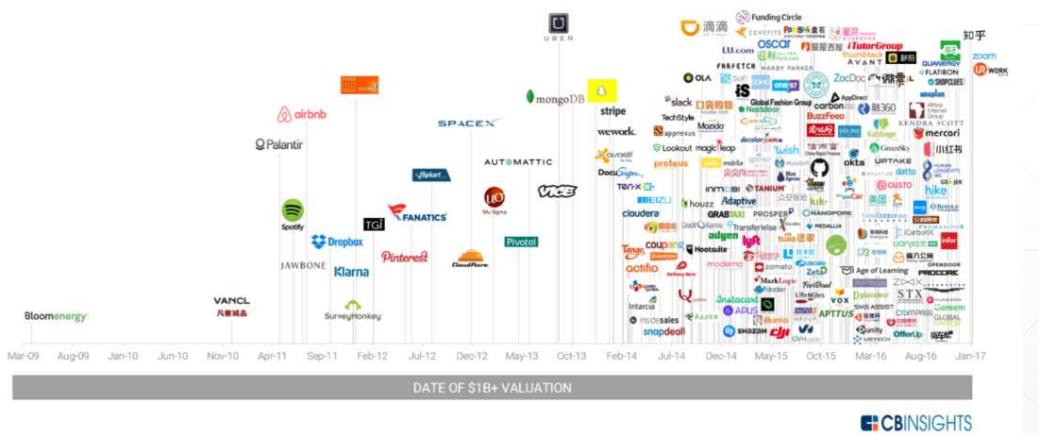
Industries and Markets Growth

- Growth **may be** one of the criteria in order for a business to determine whether it is successful or not
- Growth, in a market environment, is determined by:
 - The **growth of the market**, itself, the variation of the overall sales, year over year
 - The **overall size of the market**, the combined sales volume
 - The **market share** of a business, showing the percentage if its sales/total
 - **N-firm concentration ratio**, showing the combined market share of the N largest firms

Industries and Markets

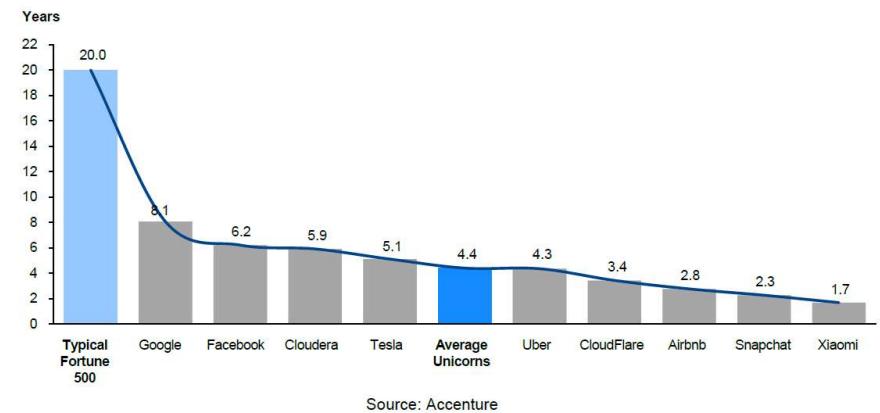
Market growth and Firm value - Illustration

 THE INCREASINGLY CROWDED UNICORN CLUB:
PRIVATE COMPANIES VALUED AT \$1B+
as of 1/31/2017



Source: <https://www.cbinsights.com/research/increasingly-crowded-unicorn-club/>

Figure 2: Time to reach a valuation of \$1 billion or more



Source: World Economic Forum, Accenture. 2016 Report

Enterprise Essentials Class # 2

Class Summary



- The business environment is composed of industries and markets, i.e. institutional arrangements whereby firms interact in order to produce together goods and services (industries) and exchange them with customers against money (markets)
- Industries allow firms to interact, according to certain rules, in order to produce goods and services. There are several forces shaping industry structure, Michael Porter has identified 5 of them (industry rivalry, threat of new entrants, threat of substitutes, bargaining power of supplier, and bargaining power of end-users)
- Market mechanisms allow, in most cases, the desired allocation and equilibrium between supply and demand. In other instances government intervention, through regulation, is necessary
- Growth may be one of the criteria of the success of a business. However, company growth is a long journey and there are crises to be expected along the way

Thank You!

Valeriu Petruelian

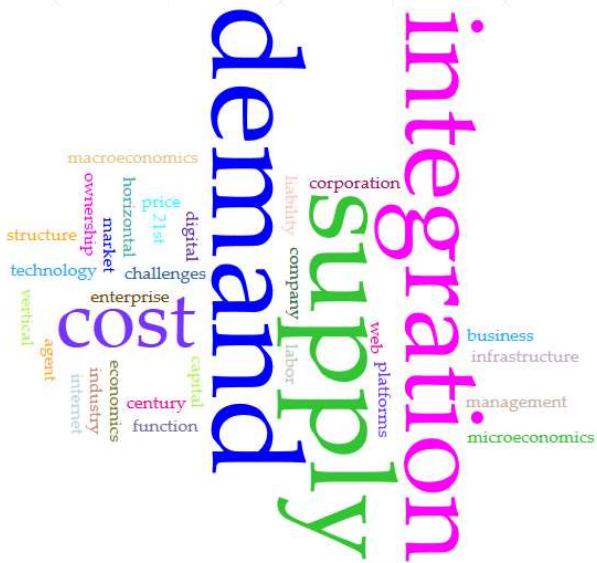
Enterprise Essentials

Class # 3: Enterprise Models

EPITA, Paris | Fall 2021

Valeriu Petruelian

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

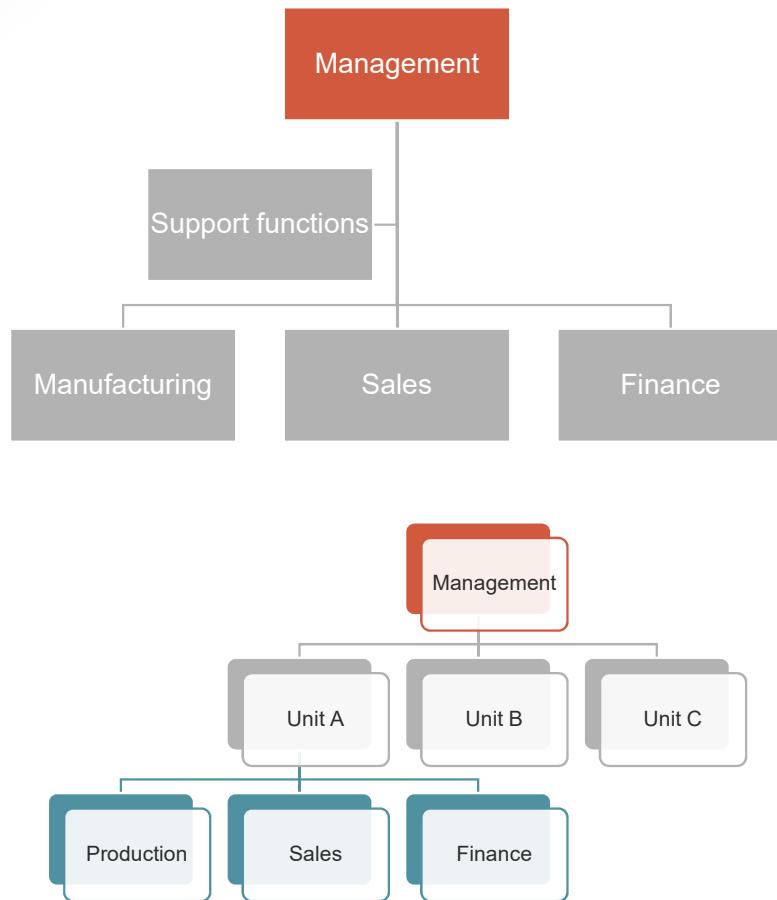
Enterprise functions and departments

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.”



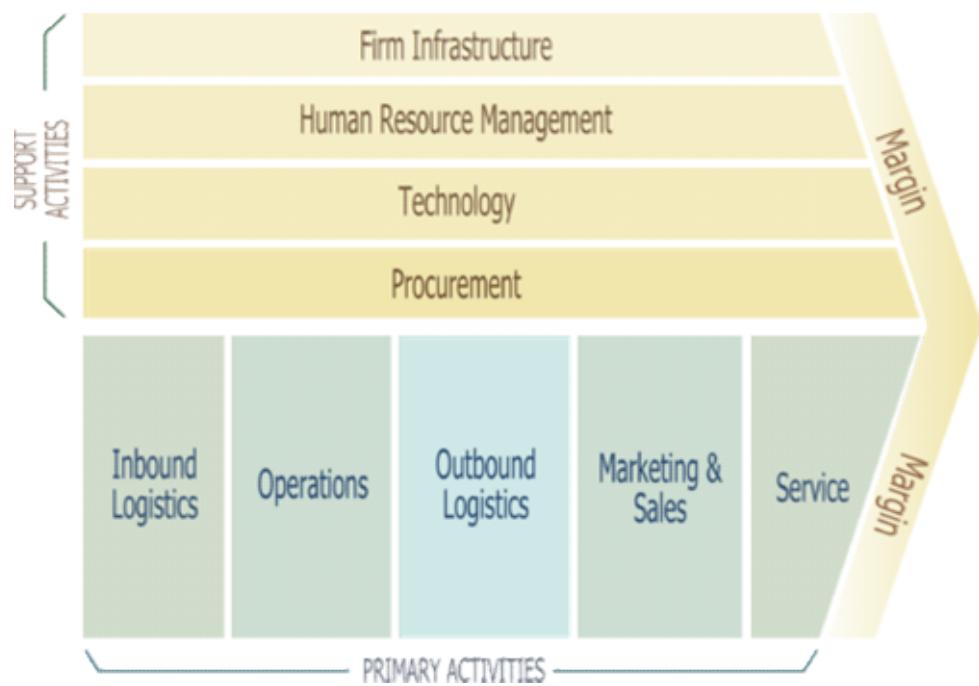
Illustrations adapted from Jean Tirole's « Theory of Industrial Organization »

Reminder The Firm (vertical view)

There are two prevailing hierarchical organization models:

U-Form – unitary form

M-Form - multi-divisional form



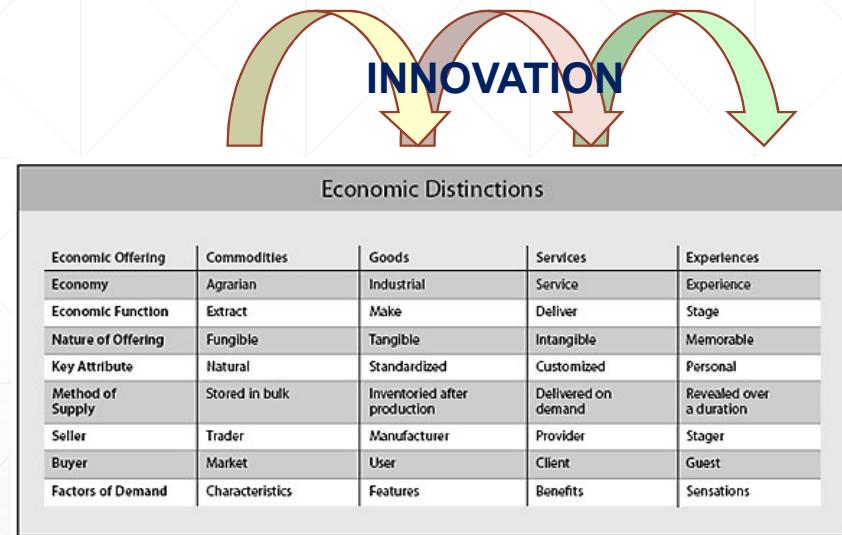
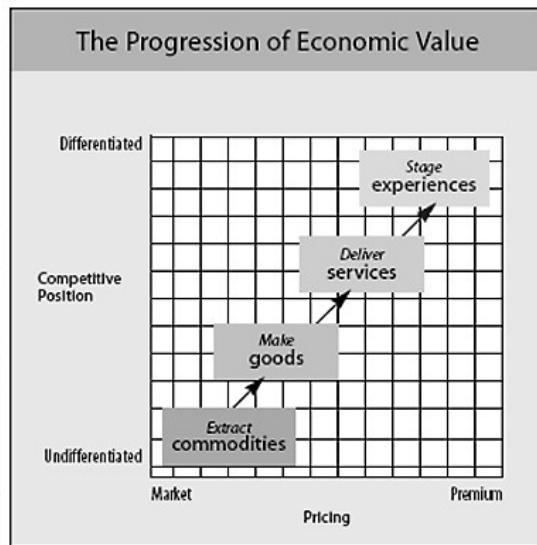
https://en.wikipedia.org/wiki/Value_chain

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



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



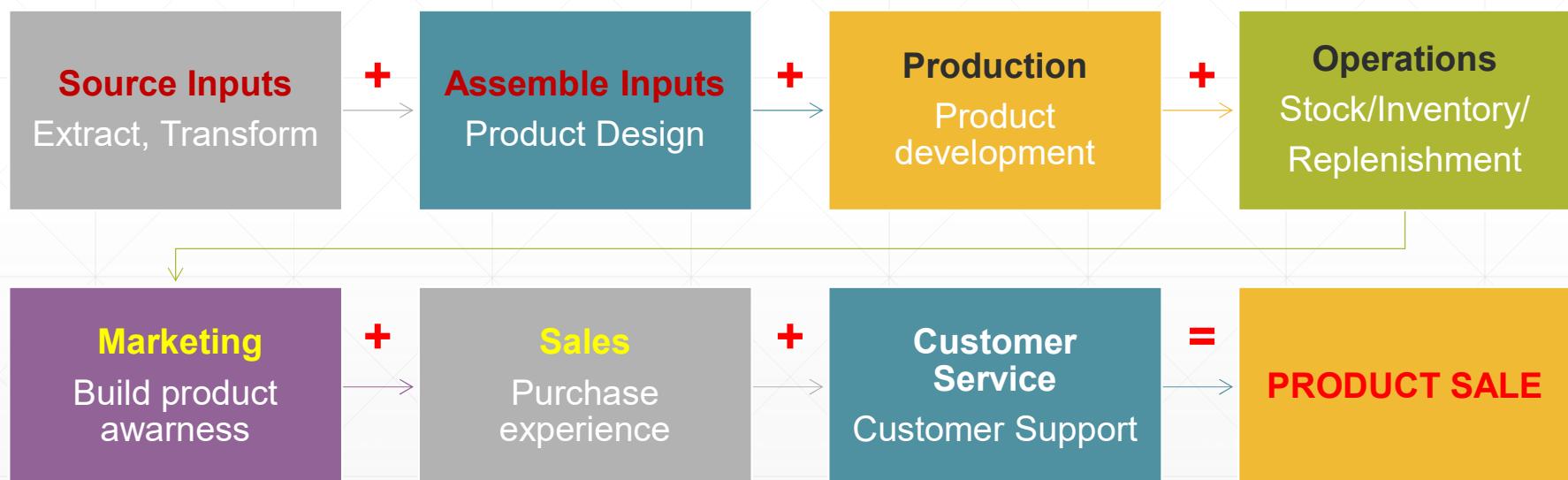
- Industrial factory
- Examples: automobile, home appliances, heavy machinery
- Traditional enterprise model going back to the 19th century
- **Tangible goods (products)**



- 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



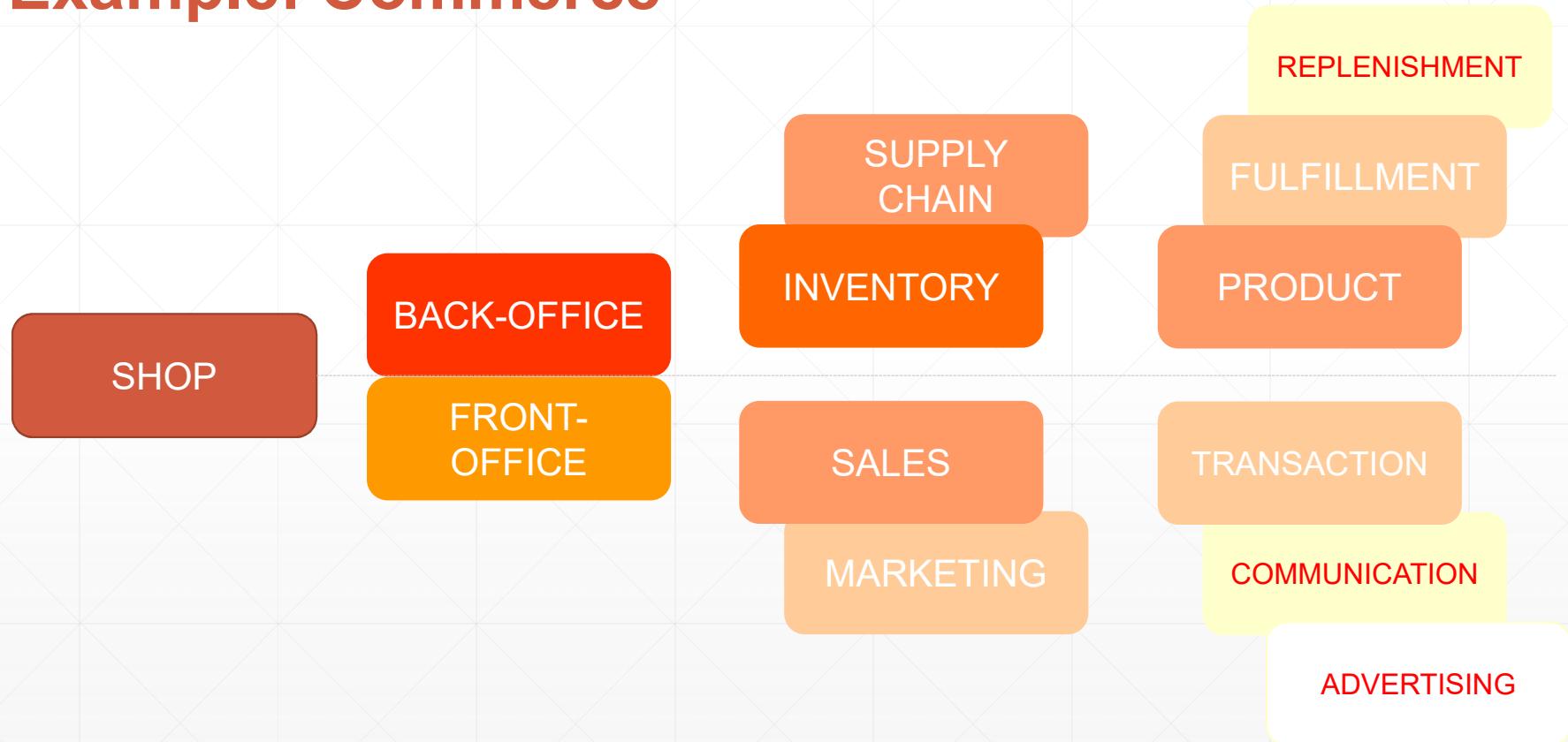
- Retail
- B2C commerce
- Groceries, consumer goods, fashion,
...
- Smaller quantities, great variety
- **Goods, Services**



- 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



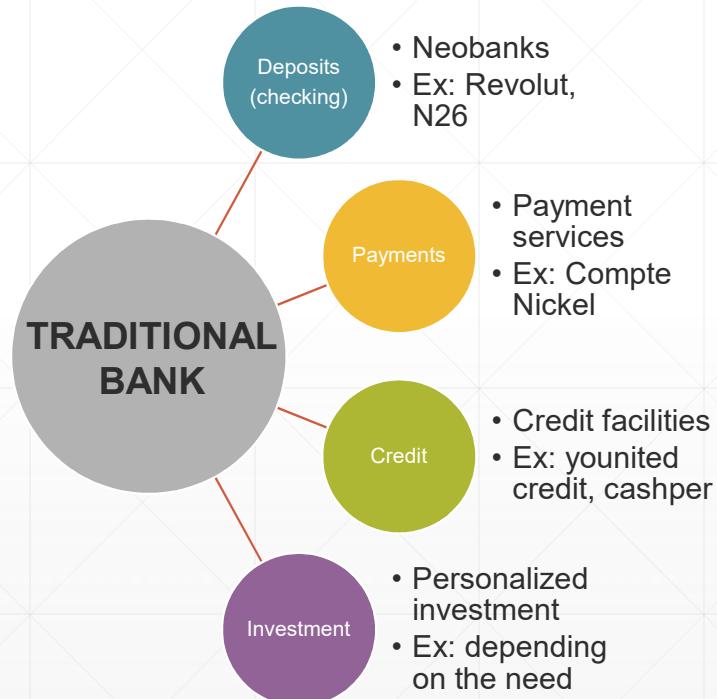
- Financial Services
- Example: banks, insurance
- Central role (banks) in any economic system
- **Money**



- 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



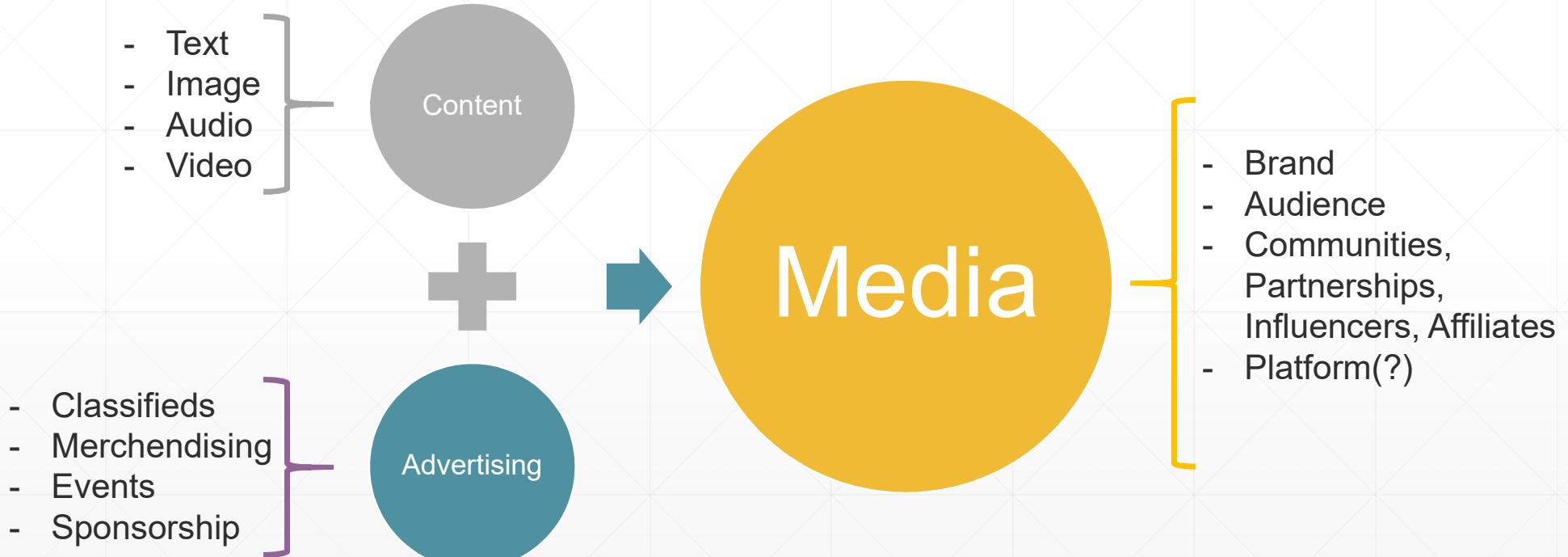
- Advertising
- Communication for promotion and selling of goods & services
- Originated late 19th century, boomed with advertising of manufactured products
- **Communication, Promotion**



- 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)

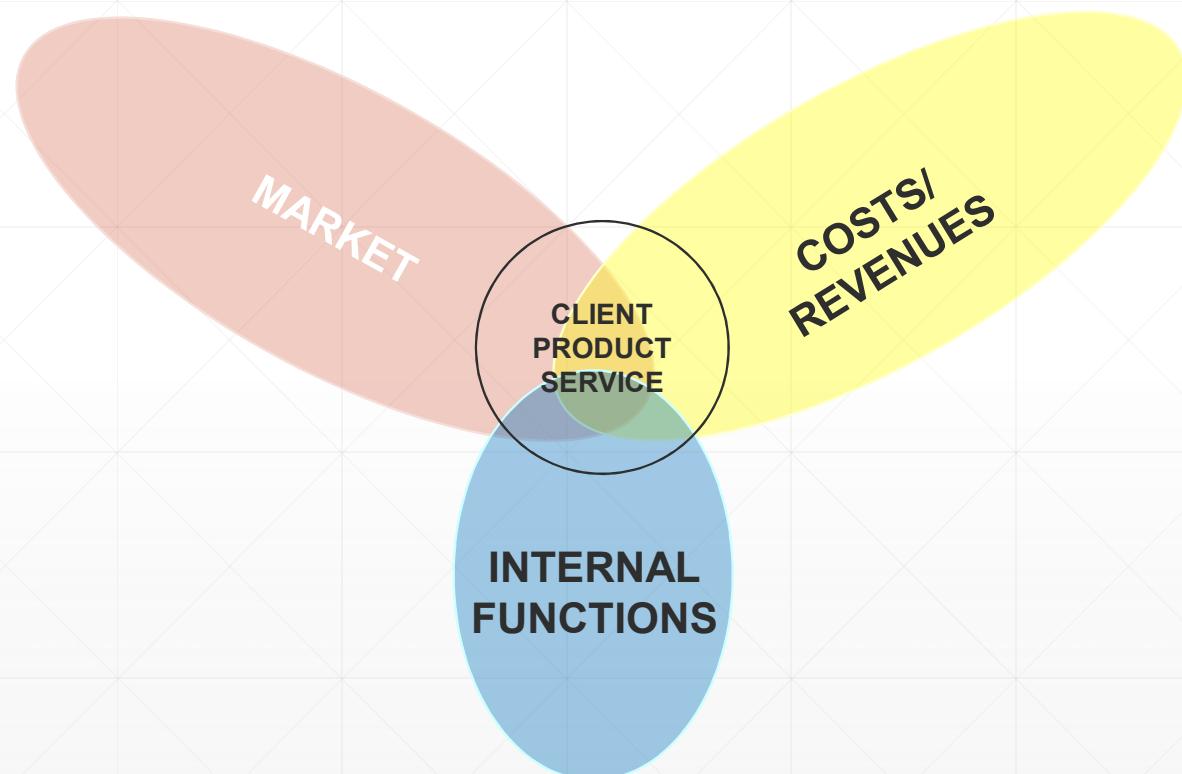
Production of Good/Service:

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

Client engagement:

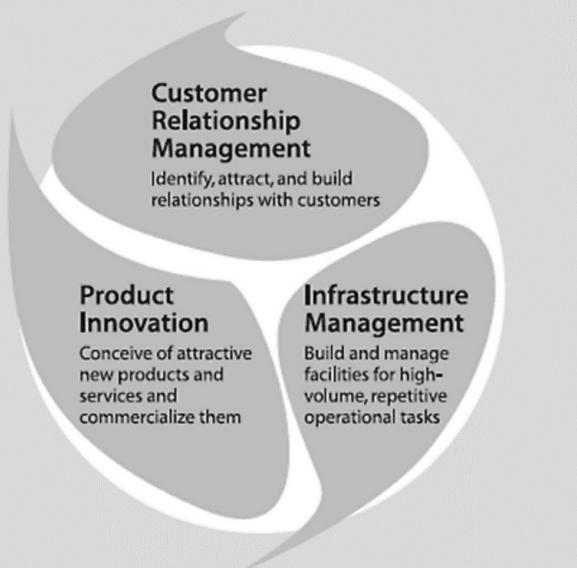
- Establish customer relationship
- Position product service to market

Enterprise Models



Enterprise Models

Rethinking the Traditional Organization



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

- 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

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>

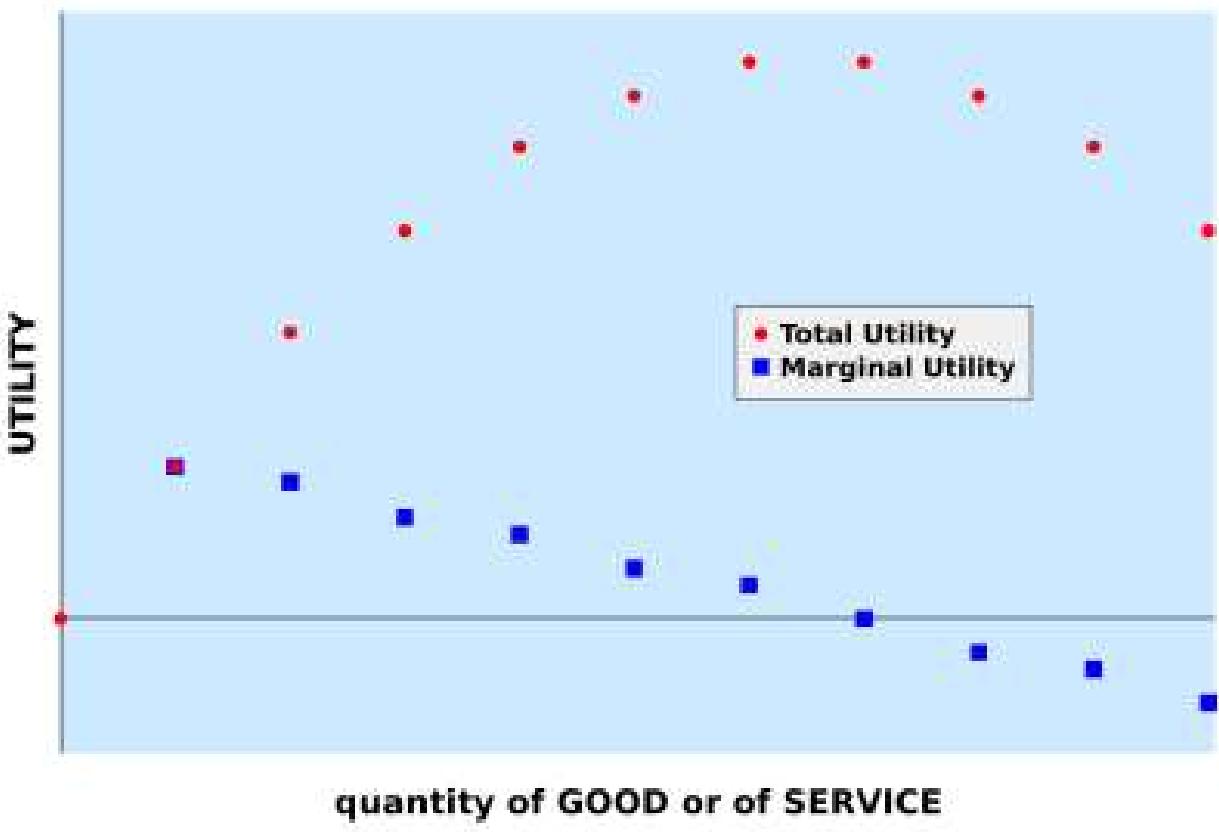
Pricing (and Prices)

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.



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:

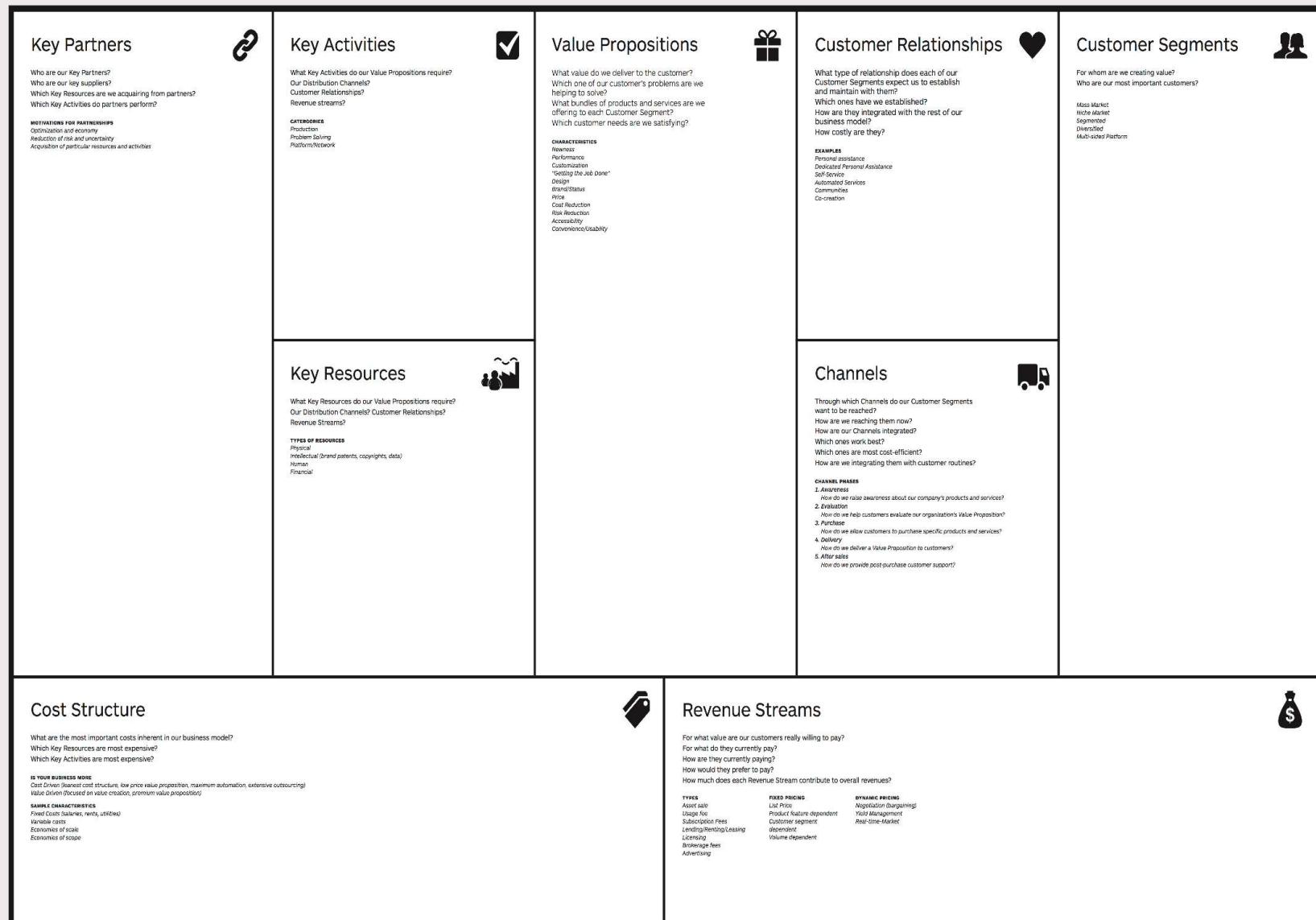
- Customer segments
- Distribution channels
- Key activities (internal)
- Key partnerships and external resources
- Revenue and cost (financial) flows

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

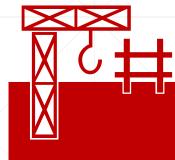
Designed for: _____
 Designed by: _____
 Date: _____
 Version: _____



The Business Model Canvas

by Alexander Osterwalder
and Yves Pigneur

https://en.wikipedia.org/wiki/Business_Model_Canvas#/media/File:Business_Model_Canvas.png



Class Assignment

LAUNCH NEW PRODUCT/SERVICE IN THE SAME 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

LAUNCH EXISTING PRODUCT/SERVICE IN DIFFERENT 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 <small>List your top 1-3 problems.</small>	SOLUTION <small>Outline a possible solution for each problem.</small>	UNIQUE VALUE PROPOSITION <small>Single, clear, compelling message that states why you are different and worth paying attention.</small>	UNFAIR ADVANTAGE <small>Something that cannot easily be bought or copied.</small>	CUSTOMER SEGMENTS <small>List your target customers and users.</small>
	KEY METRICS <small>List the key numbers that tell you how your business is doing.</small>		CHANNELS <small>List your path to customers (inbound or outbound).</small>	
EXISTING ALTERNATIVES <small>List how these problems are solved today.</small>		HIGH-LEVEL CONCEPT <small>List your X for Y analogy e.g. YouTube = Flickr for videos.</small>		EARLY ADOPTERS <small>List the characteristics of your ideal customers.</small>
COST STRUCTURE <small>List your fixed and variable costs.</small>		REVENUE STREAMS <small>List your sources of revenue.</small>		

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)

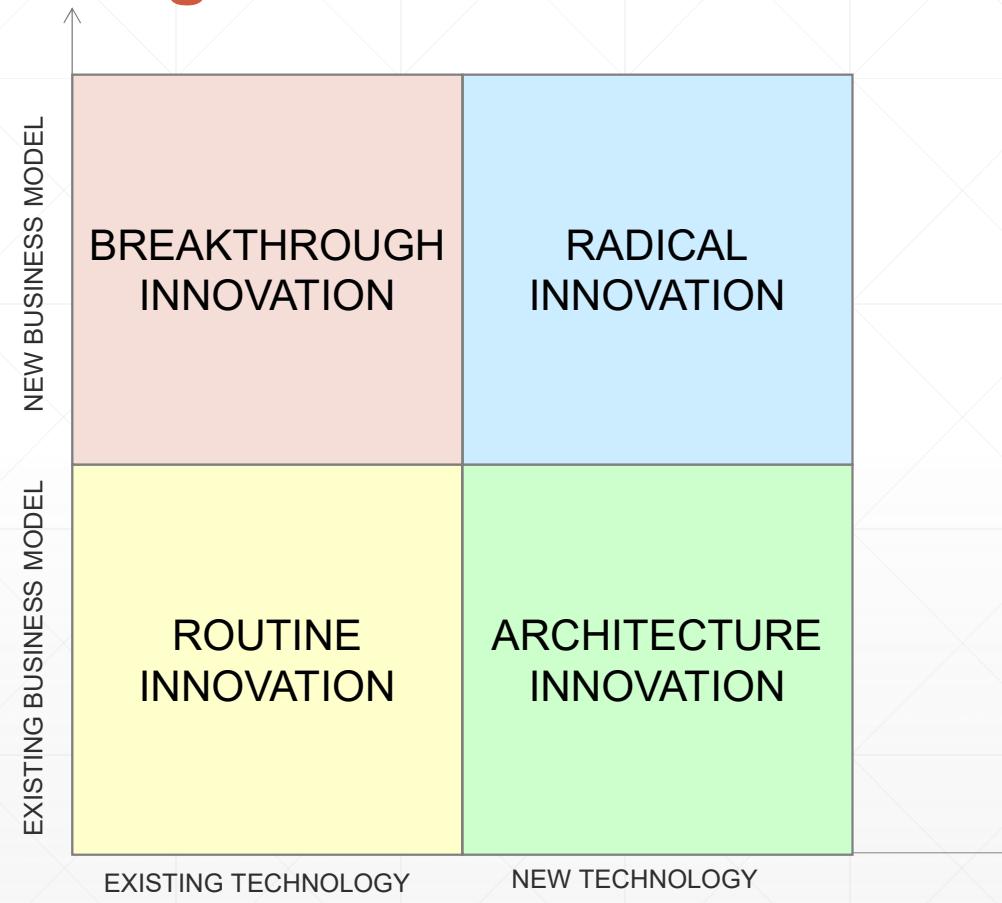
Innovation | An Overview

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)

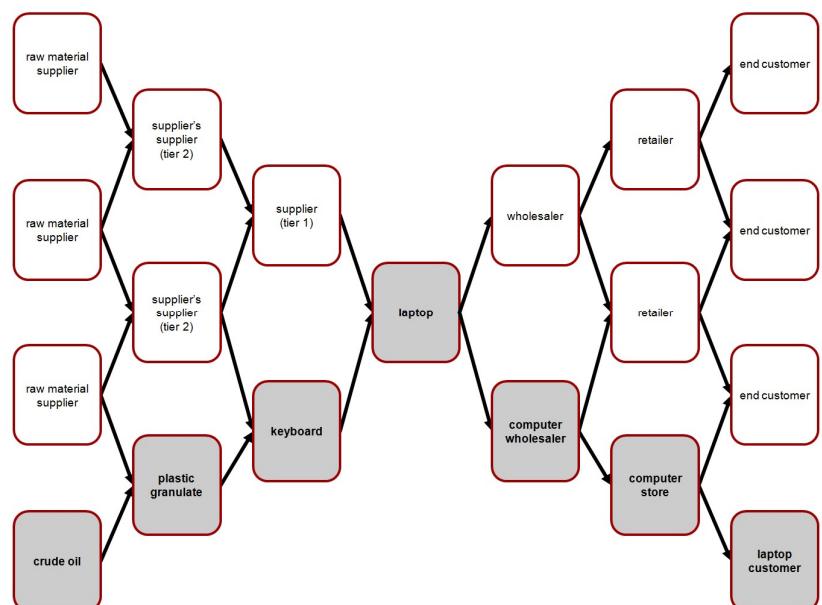
Innovation | An Overview

Putting it all together



Production & Operations

The Supply Chain

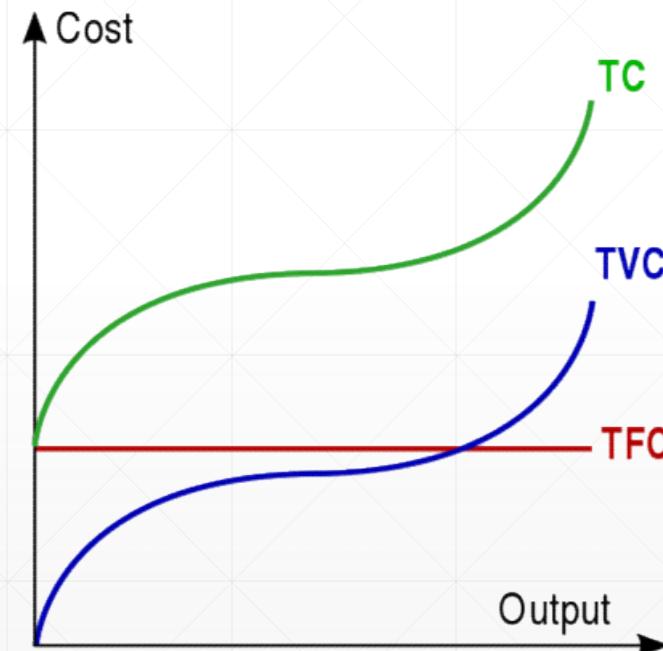


“In business, **supply chain** is a system of organizations, people, activities, information, and resources involved in moving a product or service from supplier to customer. Supply chain activities involve the transformation of natural resources, raw materials, and components into a finished product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

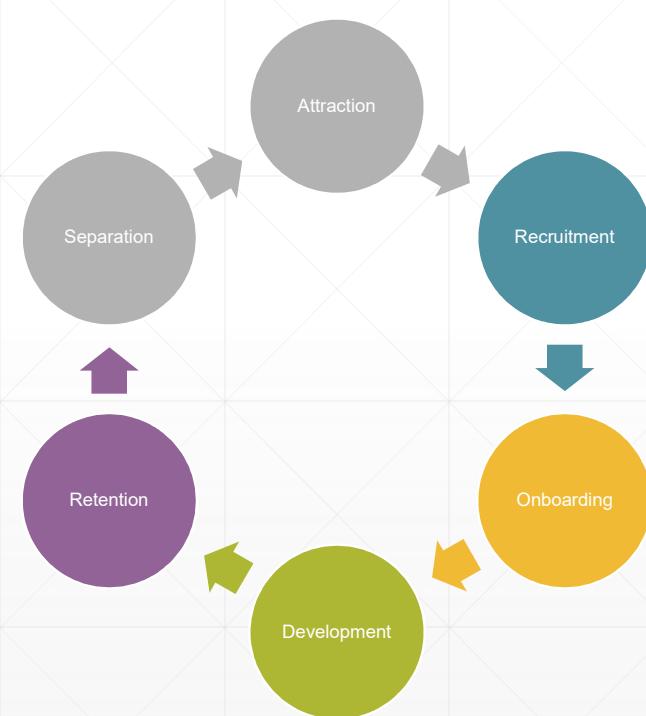
- **An operating expense, operational expense (OPEX or opex)** is an ongoing cost for running a business. In the case of a purchase of a printer, the cost of the printer will be accounted for as CAPEX, while the costs of paper and cartridges shall represent OPEX.

Support Functions

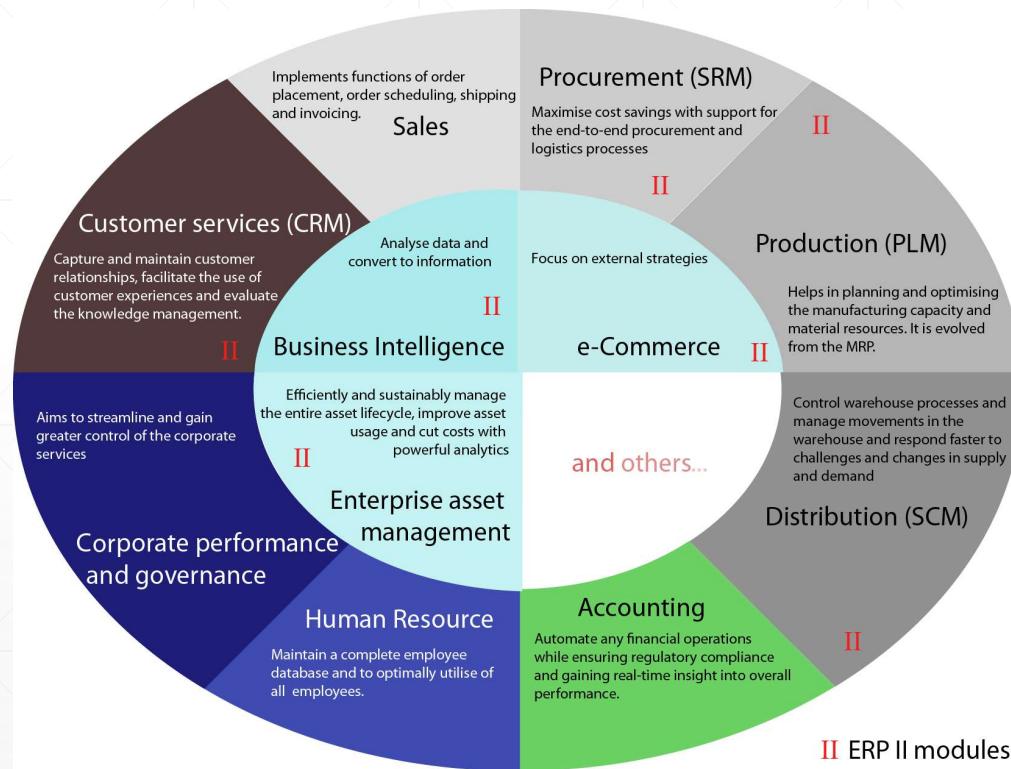
Human Resources Management

- 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 Petruelian

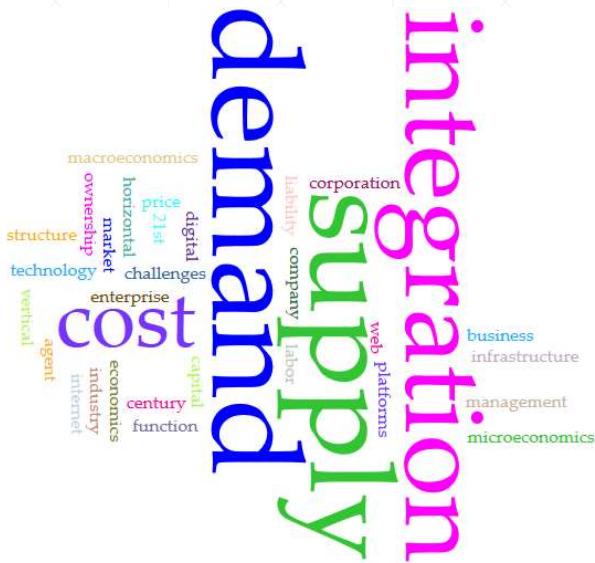
Enterprise Essentials

Class # 4: Managing a business organization

EPITA, Paris | Fall 2021

Valeriu Petruelian

Enterprise Essentials Class 4



- Admin
- Thoughts for the day
- Final presentations & grades – Q&A

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:

Jonathan Gosling and Henry Mintzberg. *The Five Minds of a Manager.* Harvard Business Review, November 2003 issue

Enterprise Essentials

Final Grade

Final Composition	Grade	Class attendance and participation throughout course	Course quiz (MCQ)	Final presentation (group or individual)
Weight		30%	20%	50%
<p>Presence Questions asked, "hands raised" Participation to class assignments and group discussions</p> <p>A project (essay), in the form of a question to which students will answer through a carefully drafted presentation (.ppt presentation)</p>				

Enterprise Essentials

Final presentations & grades – Q&A

- Class 5 : all students shall present their subjects
 - X minutes per student – depending on group
 - Class will start at the precise time – students welcome before to test connectivity
- You may communicate, if you wish – by email/Teams – the chosen subjects
- Expectations OK?
- Subjects OK?
- Quiz :
 - Shall be released **Monday the 24th of January 2022, for 24h**



Managing a business organization

Why are managers necessary?

The role(s) of the manager

Management principles and practices
– an overview

WATCH VIDEO: <https://www.youtube.com/watch?v=gcS04BI2sbk>

Management Introductory Thoughts

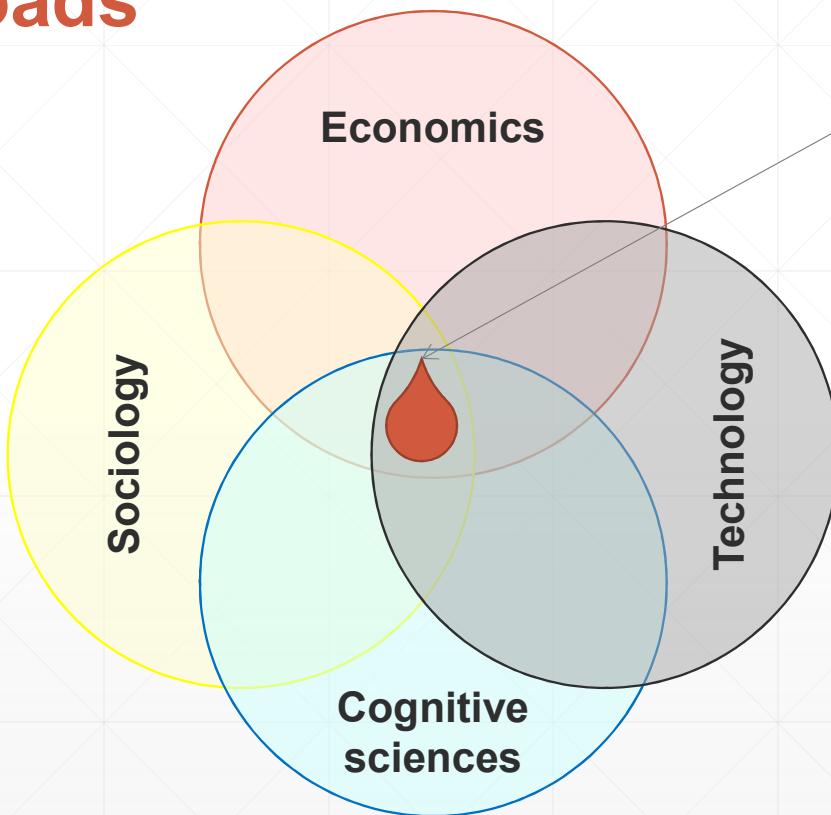


- 21st century global challenges, digital revolution, increased globalization and interconnectedness of the economy...
- ... contribute to the fact that management is currently at a crossroads, both as a science and as a practice
- Redefining it calls for understanding its fundamentals and its essential objectives

Further reading:

Frédéric Laloux. *Reinventing organizations*. Nelson Parker, 2014.

Management At a crossroads



WE ARE HERE!

Management Practices

Class discussion



- Few years ago, Google conducted a project called Project Aristotle, in order to identify which were the ingredients leading to success of high-performance teams
- Project Aristotle has managed to study 180 Google teams, conduct 200-plus interviews, and analyze over 250 different team attributes
- Further reading:

<https://www.nytimes.com/2016/02/28/magazine/what-google-learned-from-its-quest-to-build-the-perfect-team.html>

The results of Project Aristotle were made available publicly:

<https://rework.withgoogle.com/blog/five-keys-to-a-successful-google-team/>

Its main findings are summarized below:

1. **Psychological safety** – team members feel safe to take risks and show vulnerabilities
2. **Dependability** – the company can rely on each and every team member
3. **Structure & Clarity** – each team member has clear roles, plans, and goals
4. **Meaning** – work is important to team members
5. **Impact** – team members think their work is important and that it creates change



Class Discussion

Based on the previous example, please discuss:

- Do these findings surprise you?
- How do you interpret such findings?
- Could these findings be applied to a wider variety of company settings?

..., and:

If you were a manager, how would you go about “managing”?

Management Definitions

- **Oxford English Dictionary** – “the act of running and controlling a business or similar organization”
- **Frederick W. Taylor** – « A mental revolution »
- **Henri Fayol** – « Anticipation, organization, command, coordinate, control »
- **Peter Drucker** – « Something that deals with humans. Maximize collective efforts, make individuals more efficient, minimize individual weaknesses »
- **Henry Mintzberg** – « A process through which those who have the formal responsibility of the whole, or parts, of the organization, try to direct it or, at least, guide it in its action »

Important distinction:

- Team management – up to 20 people
- Enterprise (or organization) management – above 20 people

Management

Two possible dimensions

Strategic Management

- Long term
- Sustainability
- Durable competitive advantage
- Deals with the environment, first, then with internal resources

Operational Management

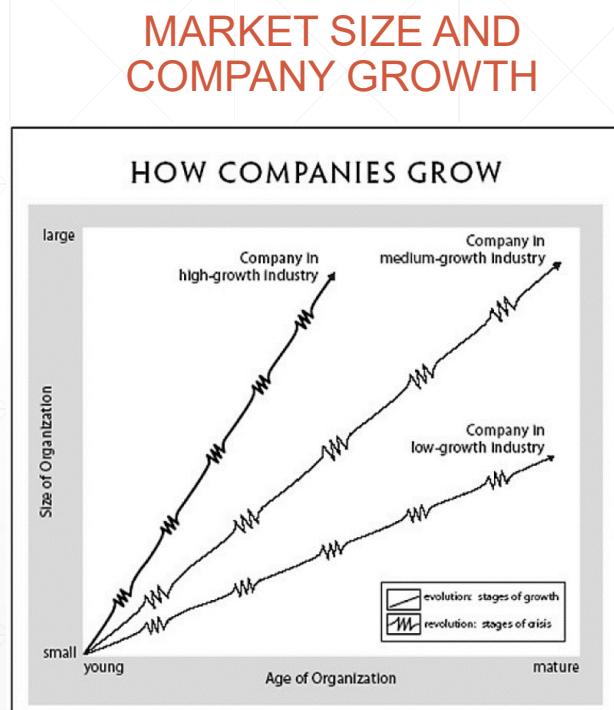
- Short term
- Optimization of resources
- Desired outcomes (management under constraint)
- Deals with internal resources first

Management

Other dimensions (according to Kotter)

Activity	Manager	Leader
Plan of action	Plan and budget	Set direction
Human relations	Organize and recruit	Cooperate and ally
Execution	Control and solve problems	Motivate and inspire
Results	Produce expected outcomes	Produce change

Market size and company growth



GROWTH AND CRISES

- According to Larry E. Greiner, each stage of growth (which he calls « evolution ») may create situations leading to the firm facing a crisis (phenomenon which he calls « revolution »)
- Crises are dependent on 1) the stage of growth and 2) specific factors
- Greiner emphasizes the role of management in the emergence of such crises (more in Class # 4)

Overcoming crises, from punch cards to AI Discussion - IBM



- 1924 - changes name to « International Business Machines » under the spur of Thomas J. Watson
- 1945 – first research lab
- 1948 – IBM SSEC – first electronic computer
- 1964 – IBM System/360 – first family of architected business computing systems
- 1981 – IBM PC
- 1997 – Deep Blue
- 2005 – PC division sold to Lenovo
- 2011 – Watson wins at Jeopardy!
- ...

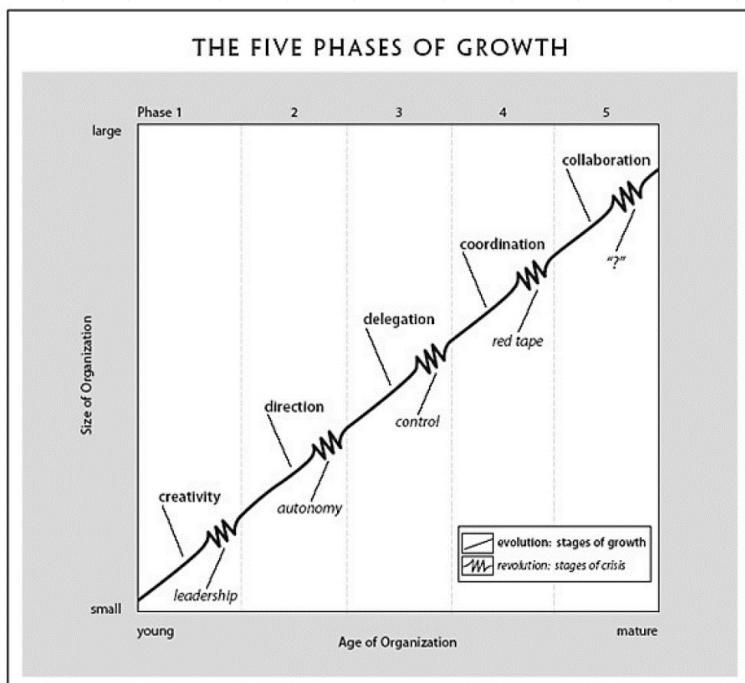
Analytical mindset

Analytical mindset is, among others, about:

- Understanding one's own organization, in the most intimate and finest details
- Decomposing work, and putting it back again:
 - Top-down: division of work, work breakdown structure
 - Bottom-up: how organization delivers upon expected outcomes
- Constantly challenging assumptions that lead to hasty conclusions

Growth and the company journey

The role of Management



Source: Larry E. Greiner. *Evolution and Revolution as Organizations Grow*. Harvard Business Review, May-June 1998

- Several disconnections may occur between stages of growth and management styles (Larry E. Greiner):
 - Creative evolution leads to leadership crisis
 - Strong leadership will become a burden leading to autonomy crisis
 - Delegation will lead to the emergence of « baronies »
 - Taking back control will increase bureaucracy and complicate management processes
 - Easing internal control procedures and encouraging increased collaboration leads to...

A successful come-back Discussion – Apple



- Established in 1976
- At the beginning, computers:
 - Apple II, Macintosh, Lisa...
- First CEO and co-founder leaves company in 1985
- Come-back in 1997
- Then:
 - iPod and iTunes => Music
 - iPhone => mobile communications
 - Ipad,
 - AppleTV => Entertainment, ...

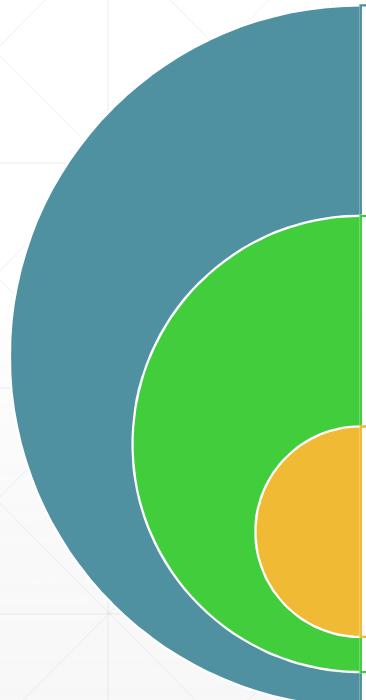


Reflective mindset

Reflective mindset is, among others, about:

- Learning from the past (from successes as well as from mistakes)
- Knowing oneself
- Understanding biases (especially one owns biases)
 - A manager's most common biases:
 - Overconfidence
 - “Shadow of the past” bias – difficulty in questioning past decisions
 - The result: management is not an individual feat but a team endeavor

Organizational Levels



Organization

- Management

Team

- Team player

Individual

- Contributor

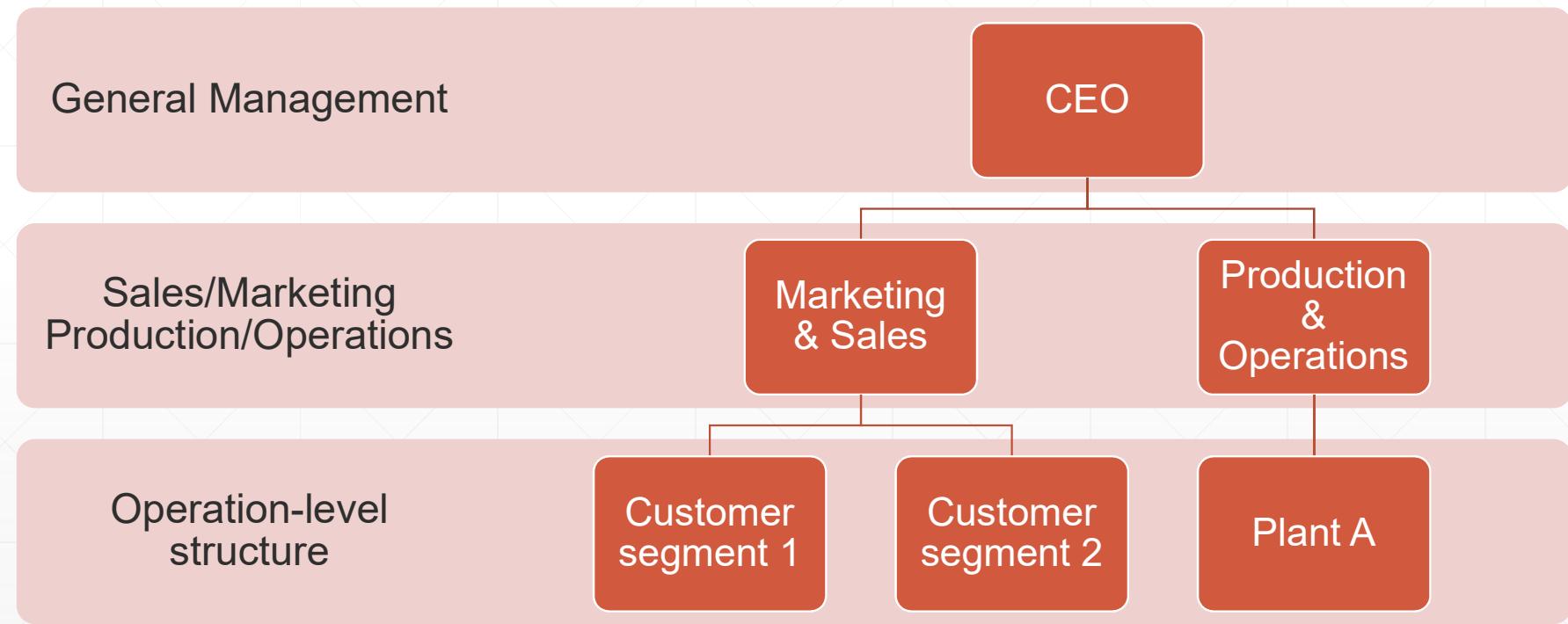
Enterprise Organization

- In order to carry out its mission, and to achieve its objectives, a business needs to implement some form of organization, allowing its people to work together towards the common goals
- The types of organizations a business could implement vary widely, depending on the nature of the business, its country of origin, local culture and management practices
- Several organizational models, however, are being commonly used across businesses. Among these, we shall discuss the following 3 models:
 - Hierarchical organization
 - Matrix Organization
 - Organization by projects

Hierarchical organization

- Main characteristics:
 - Vertical division of labor, i.e. separation between design & planning work, and execution
 - Span of control
 - Decomposition of work
- The 5 elements of business administration (according to Henri Fayol):
 - Plan (« anticipate the future »)
 - Organize
 - Command
 - Coordinate
 - Control

Typical hierarchical structure



« Real life » organization

HIERARCHICAL VIEW

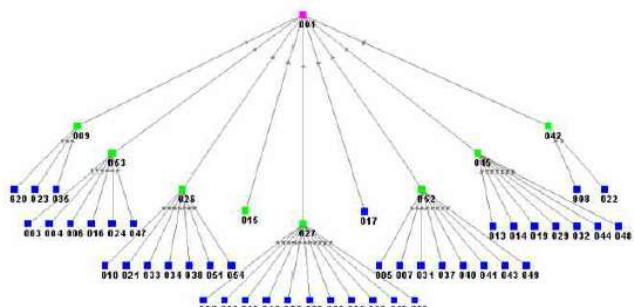


Figure 1. Hierarchy of the Traditional IT Department.

« REAL LIFE » VIEW

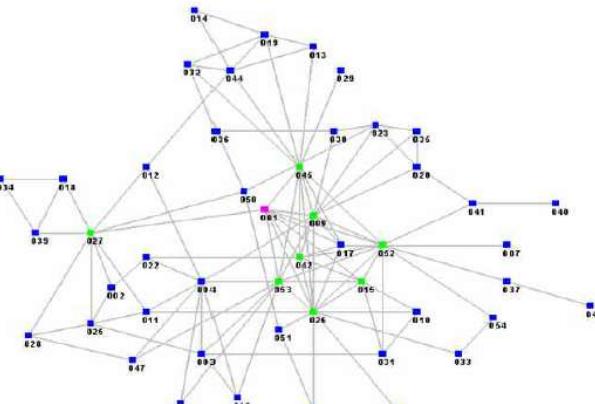
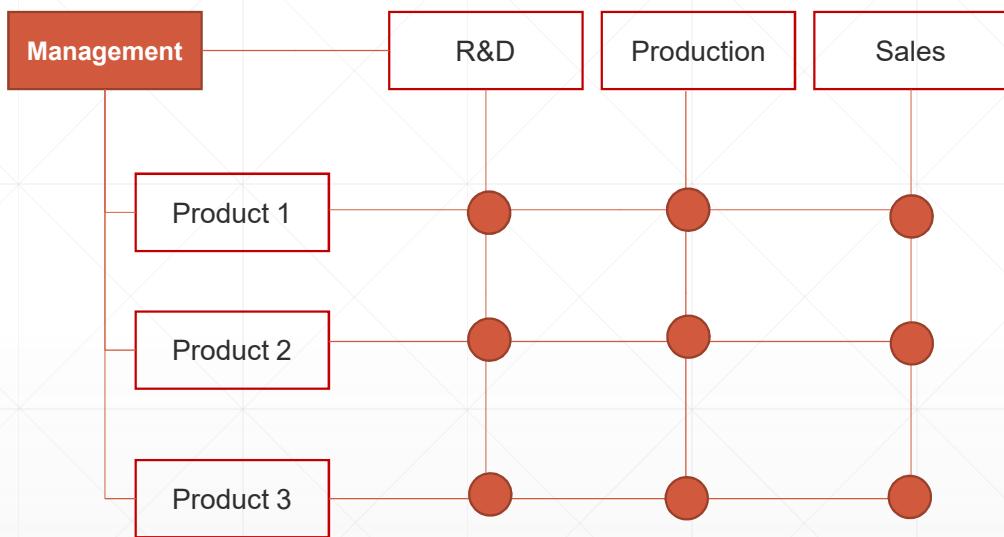


Figure 2. How Work Actually Gets Done in the IT Department.

Source: Valdis Krebs, orgnet.com. *Managing the 21st Century Organization*. 2007 • Volume XI, Number 4 • IHRIM Journal

Matrix Organization



- In between classical (hierarchical or functional) organization and pure project management
- Allows greater flexibility for company-wide initiatives related to innovation
- Due to the double reporting (dual management), the decision processes may prove to be more complex and management may become more difficult

Organization by Projects



When several projects are to be run in parallel, a program structure is set-up in order to manage a portfolio of projects

The PMO (Project Management Office) is the central team that oversees the various projects

Phases of a project (example: IT project.

Note: Each phase could be considered to be a project in its own right):

- Feasibility
- Scoping
- Design
- Development
- Integration
- Deployment

Team Roles

My RACI Matrix

	R	A	C	I
Project phase 1	✓	✓		
Project phase 2	✓			
Project phase 3			✓	✓

R – Responsible

A – Accountable

C – Consulted

I - Informed

Description

- Roles may vary, depending on the project phase
- A team member may « embrace » different roles, along the way
- RACI is the well-known Project Management role breakdown matrix, the roles definition may be adapted to fit the purpose of the project or initiative at hand

Team Roles

What do people actually do?

THINKERS, INTERACTIONERS

- **Coordinator** – enables processes
- **Collaborator** – enables team work
- **Pioneer** – explores possibilities
- **Inventor** – brings new ideas
- **Observer** – analyses feasibility

DOERS, IMPLEMENTERS

- **Executer** - executes upon the plan
- **Implementer** – overcomes obstacles
- **Finisher** – improves constantly
- **Specialist (expert)** – brings in expertise

Team Roles (continued)

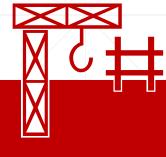
Role within the team	Contribution	Personality	Allowed to...
Orientation: Thinking Explorer	Brings new ideas	Constantly explores new domains	Get distracted easily
Orientation: People Coordinator			
Orientation: Action Maker, Doer	Improves decision making within group	Open, confident	Lack deep domain expertise

From Business Objectives to Individual Performance

An objective is about defining specific, time related targets.

Criteria for defining objectives:

- **Specific:** define precisely what shall be measured
- **Measurable:** should be possible to quantify
- **Agreed:** rather than imposed upon
- **Realistic:** targets should be attainable
- **Time-specific:** clear time limit for achieving the target



Class Assignment

On the basis of today's reading material and the discussion thus far, please choose a known company (it may come from any type of industry) and elaborate on the following:

- The chosen company's successes, failures, and challenges
- The way how its management has overcome such challenges

Examples:

- | | | |
|-----------------------------|------------------------------------|--|
| 1. Porsche AG (early 1980s) | 5. Kodak (2000-2015) | 9. Volvo (years 2000) |
| 2. Alcatel (2005-2015) | 6. Blackberry (origins to present) | 10. Motorola (2000-present) |
| 3. Yahoo (2010-2021) | 7. Sony (in the years 2000) | 11. Texas Instruments (origins to present) |
| 4. IBM in the 1990s .../... | 8. HP (2010-2020) | 12. Polaroid Corp. (origins to present) |

Collaborative Mindset

- Collaborative mindset is, among other things, about:
 - Managing relationships, not people
 - Network-style interaction, rather than hierarchical-style
 - Managing not « from the top » but « from within »

Company-wide shared values Discussion - Bose Corporation



- Established 1964 by Dr. Amar Bose
- Beyond electrical engineering and electronics:
 - Psychoacoustics, psychophysics
 - 1968 – First Bose speaker system: the « 901 Direct/Reflecting ».
 - 1972 – professional sound engineers
 - 1979 – car audio systems
 - 1989 – headsets, ...
- **Obsessed, since day 1, with sound quality**

Action mindset

- Action mindset is both about entrepreneurship and change, it encompasses:
 - The vision, purposefulness and energy to set-up the business organization
 - The drive to take it to its first successes
 - The wisdom to understand outside changes
 - The courage to instill internal change, in continuity

Change Management

	Mindful towards preserving-ness	Mindful towards novelty
Open, client-oriented	Process management (4)	Management by projects (3)
Closed, product-oriented	Structure management (1) Starting point	Project management (2)

Luc de Brabandère (*Le management des idées*. Dunod, 1998) proposes the following evolution path:

- (1) – self centered organization, routine oriented where management preserves structures
- (2) – implement projects in order to innovate, in selected, well defined areas
- (3) – the gradual realization of client (external) needs may lead to larger scale projects, to the detriment of existing structures
- (4) – to evolve, gradually, to a continuous client-centered organization, all while preserving the survival of the company



The rise and fall of a global brand

Discussion – Nokia

NOKIA
Connecting People

- Established 1865 – pulp paper
- 1960 – electronics
- 1970 – television sets
- 1992 – mobile telephony
- 2006 – world leader in the mobile phone market
- 2011 – “burning platform” speech
- 2013 – acquisition by Microsoft
- 2014 – Microsoft discontinues the Nokia product brand in mobile telephony

The five minds of a manager*

Analytical

Collaborative

Action

Reflective

Worldly

* Jonathan Gosling, Henry Mintzberg. *The Five Minds of a Manager*. Harvard Business Review (November 2003)

Inter-disciplinarity

From I-shaped, to T-shaped, to π -shaped people

I-shaped people

- Characterized by a single specialty or area of expertise. They demonstrate limited general knowledge of different disciplines and prefer to work in one single job type

T-shaped people

- Have vertical (specialized) skills but also horizontal (general) knowledge in other disciplines (according to IDEO's former Chief Executive Tim Brown).

π -shaped people

- Multifaceted (a term coined by Ashley Friedlein, CEO and co-founder of Econsultancy). They have broad mastery of general knowledge but also deep functional or domain expertise in two or more knowledge areas. Particularly adapted to organizations that have limited people resources.

Management Practices

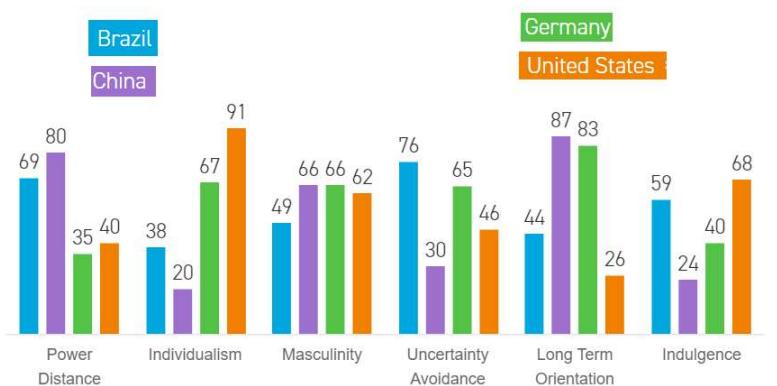
The Cultural Dimension (Geert Hofstede's Model)

Culture has a central role in all management practices. Management is rooted in local culture

- One of the first and comprehensive cross-cultural models was established by **Geert Hofstede**. It is known as the « ***Cultural Dimensions Theory*** »
- Hofstede's model comprised initially 4 dimensions:
 - **Power Distance** – attitude towards authority
 - **Individualism vs Collectivism** – integration of individuals in social groups
 - **Uncertainty Avoidance** – attitude towards the unknown
 - **Masculinity vs Femininity** – comparison of preferences towards social achievement and material rewards versus modesty, cooperation and quality of life
- Two additional dimensions were added later:
 - **Long term vs short term orientation** – comparison of attitudes towards the past (traditions) versus the future
 - **Indulgence vs. restraint** – degree of freedom of social norms towards the fulfilment of human desires

Management Practices

An illustration of the Cultural Dimension Theory



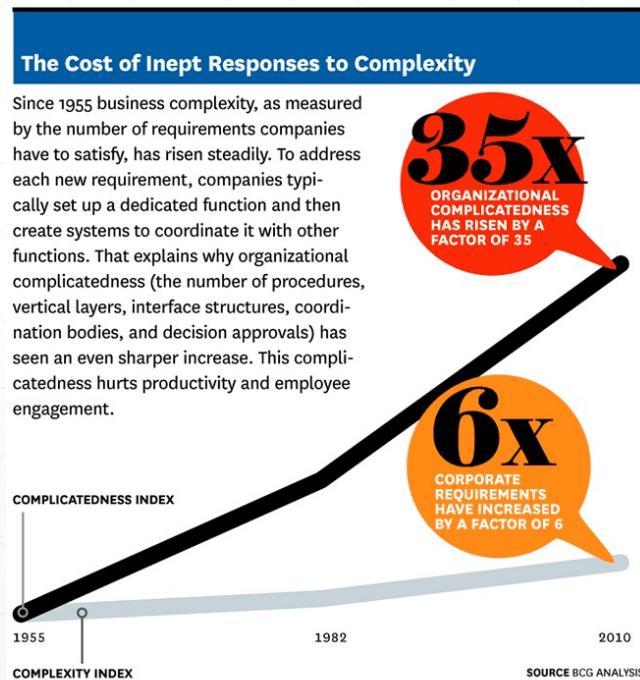
https://en.wikipedia.org/wiki/Hofstede%27s_cultural_dimensions_theory#/media/File:Hofstede_4_countries_6_dimensions.png

Hofstede's model illustrated for 6 countries

- Power distance is typically high in Latin America, Asia, parts of Africa and the Middle East. Lower scores are found in Anglo-Saxon countries
- Individualism tends to be high in the Western world
- Masculinity index is extremely low in Nordic countries
- High long-term orientation scores tend to be found in Asia ()

Management Practices

Managing Complexity



- According to a BCG study, the **complexity** of the modern corporate world has been multiplied over the last 25 years by a **factor of 6**
- Surprisingly enough, organizational **complicatedness** has risen by a **factor of 35**
- Further reading:
 - <https://hbr.org/2011/09/smart-rules-six-ways-to-get-people-to-solve-problems-without-you>

https://hbr.org/resources/images/article_assets/hbr/1109/R1109D_B_lg.gif

Management Practices

Heading towards simplicity [1/3] (according to BCG's Yves Morieux)

- BCG consultant **Yves Morieux** (with co-author **Peter Tollman**) have analyzed the organizational responses towards corporate complexity.
- They propose 6 rules for companies who wish to simplify their organizations all while answering to the increasing weight of rules and regulations on company's management structures
- Rules 1 & 2:
 1. Strive to understand what co-workers do
 2. Reinforce the people who are integrators
 - Explanation: instead of multiplying intermediate organizations, privilege and empower individuals to become coordinators

Management Practices

Heading towards simplicity [2/3] (according to BCG's Yves Morieux)

Rules 3 & 4:

3. Expand the amount of power available

- Explanation: increase responsibility levels, at the base of the hierarchy, in order to give people incentives to step-up and go beyond organizational silos

4. Increase the need for reciprocity

- Explanation: eliminate internal monopolies in order to spur the need for inter-department cooperation. This may be achieved by increasing the probability for reciprocal action

Management Practices

Heading towards simplicity [3/3] (according to BCG's Yves Morieux)

Rules 5 & 6:

5. Make employees feel the “shadow of the future”

- Explanation: long-term projects (above 1 year) have a tendency to de-responsibilize people. Future has to be brought closer

6. Sanction uncooperative behavior

- Explanation: appraise performance at an organizational level and place emphasis on inter-team cooperation

Further reading:

Six simple rules. Yves Morieux, Peter Tollman. The Boston Consulting Group. 2014

Management Principles

Strategy, Structure, Profits and Purpose

- According to Peter Drucker, profits are NOT the main purpose of a business
- A business cannot, therefore, be explained in terms of profits
 - Profitability is not the purpose of but a limiting factor on business enterprise and business activity. The first test of any business is not the maximization of profit but the achievement of sufficient profit to cover the risks of economic activity and thus to avoid loss
- The true purpose of any business is **to satisfy a need (or, serve a customer) and thereby to fulfill efficiently the business organization's mission**

Enterprise Essentials Course Wrap-Up

Management

Strategy & Structure

Environment

Mission

Today

Tomorrow

Core competencies

Collaboration

Change

“In an increasingly data-driven economy, the demand for “soft” social skills, like teamwork and communication, increase with greater demand for “hard” technical skills and tools”

Börner & al. 12630–12637 | PNAS | December 11, 2018 | vol. 115 | no. 50



Chart source: Börner & al. 12630–12637 | PNAS | December 11, 2018 | vol. 115 | no. 50

Enterprise Essentials Course Wrap-Up

The top 5 soft skills companies need most in 2019

Based on research from LinkedIn Learning

1. Creativity
2. Persuasion
3. Collaboration
4. Adaptability
5. Time Management

Source: LinkedIn

The top 5 hard skills companies need most in 2019

Based on research from LinkedIn Learning

1. Cloud Computing
2. Artificial Intelligence
3. Analytical Reasoning
4. People Management
5. UX Design

Source: LinkedIn

Source: LinkedIn <https://learning.linkedin.com/blog/learning-thought-leadership/most-in-demand-skills-2020>

LinkedIn Learning

The Skills Companies Need Most in 2020



Top 5 Soft Skills

1. Creativity
2. Persuasion
3. Collaboration
4. Adaptability
5. Emotional intelligence

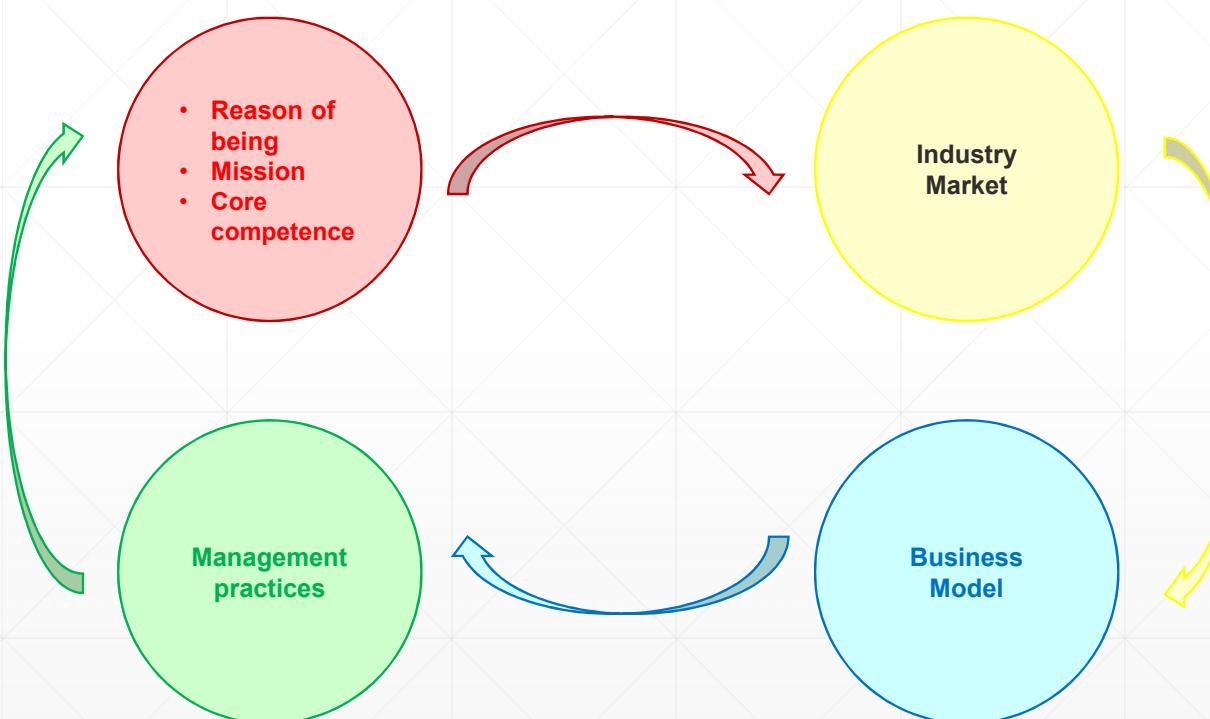


Top 10 Hard Skills

1. Blockchain
2. Cloud computing
3. Analytical reasoning
4. Artificial intelligence
5. UX design
6. Business analysis
7. Affiliate marketing
8. Sales
9. Scientific computing
10. Video production

means that it remains at the same spot as last year.

Enterprise Essentials Course Wrap-Up



Thank You!

Valeriu Petruelian