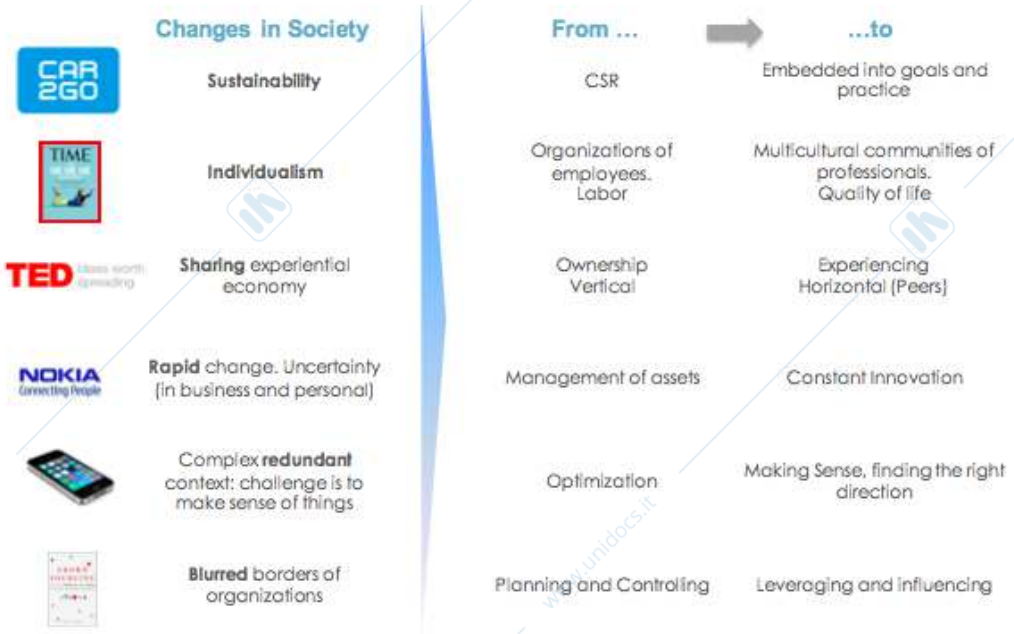
Appunti, tutte le lezioni - Leadership & innovation - a.a. 2015/2016

Leadership & innovation (Politecnico di Milano)

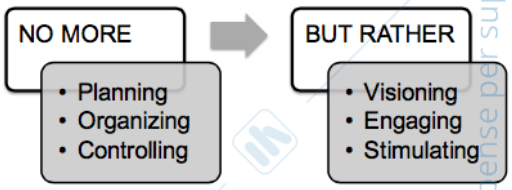
7/3/16

LEADERSHIP & INNOVATION – Opening Lecture

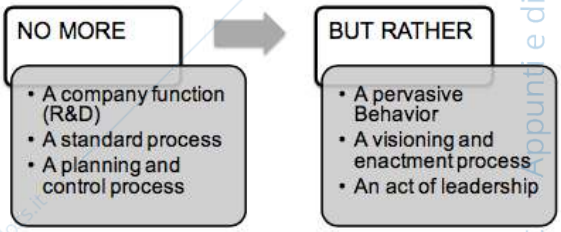
WHY LEADERSHIP AND INNOVATION



- **Management** = coordinating the efforts of people to accomplish goals and objectives using available resources efficiently and effectively.
  In a changing environment all terms of this definition keeps changing.
  To manage a company nowadays implies to be an INNOVATOR.
  Management is:



- **Innovation** = a novel, more valuable, solution.
  In blurred environments, where the concept of value is undefined, solutions are complex and resources are not controllable, innovation requires an act of making sense, setting directions and influencing, rather than just planning and controlling (i.e. an act of leadership). *To promote and realize innovation nowadays implies to be a LEADER.* Innovation is:



In 2020	In 2015
1. Complex Problem Solving	1. Complex Problem Solving
2. **Critical thinking**	2. Coordinating with others
3. **Creativity**	3. People Management
4. People Management	4. Critical thinking
5. **Coordinating with others**	5. Negotiation
6. **Emotional Intelligence**	6. Quality control
7. Judgment and Decision Making	7. Service Orientation
8. Service Orientation	8. Judgment and Decision Making
9. Negotiation	9. Active listening
10. **Cognitive flexibility**	10. Creativity

HR members have been asked: what are the main features people must have to be considered as talented people in the future (2020)?
Emotional intelligence is very important.

STORIES OF LEADERSHIP AND INNOVATION AT POLITECNICO DI MILANO

- **Francesco Brioschi:** in 1863 he founded the Polytechnic University of Milan, where he worked until his death, lecturing in hydraulics, analytical mechanics and construction engineering
- **Giuseppe Colombo**: he was an engineer, entrepreneur and Italian politician. He covered a fundamental role in the industry development both in Milan and in Italy. He was the first rector of Politecnico di Milano and created the Manual of Engineer

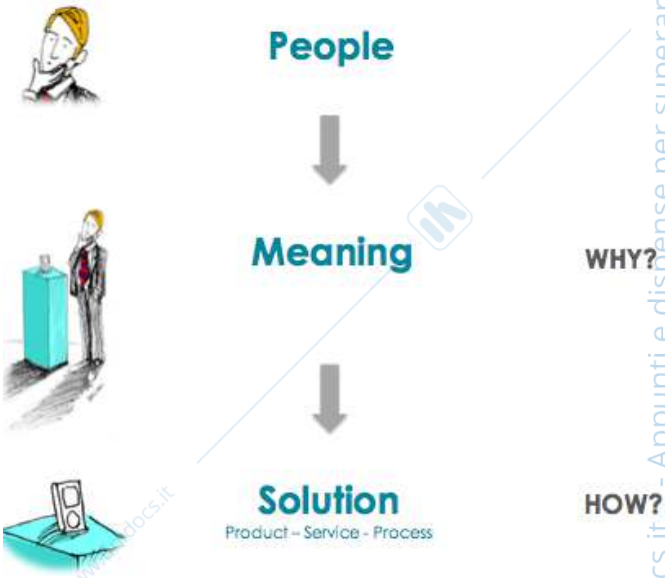
- **Enrico Forlanini**: he was an Italian engineer, inventor and aeronautical pioneer, well known for his works on helicopters, aircraft, hydrofoils and dirigibles. He was born in Milan. His older brother Carlo Forlanini was a famous Italian physician
- **Giovanni Battista Pirelli**: he was an entrepreneur, engineer and Italian politician founder of the famous Pirelli company based in Milan. He graduated at Politecnico di Milano
- **Giulio Natta**: winner of a Nobel Prize in Chemistry
- **Giulio and Anna Castelli**: founders of Kartell

Poll: Brioschi, Colombo

CARLO PURASSANTA: General Manager Microsoft Italy, alumnus school of management Politecnico di Milano. His point of view about leadership and innovation:

1. **Wright spirit:** being disrupted sometimes, understanding if we are in line with the values of what we are doing and be able to change
2. **Taking risks**: being able to change the boundaries and work close to them. Pushing the boundaries somewhere
3. Eagerness of **continuing learning**: merging idea of different fields
4. **Collaboration** and sharing of information between people
5. **Imagination**: being creative to create something new
6. **Execution**: doing it in the proper way
7. **Sustainability**: whatever it is it should last over the years, creating value over time.

OUR VIEW OF LEADERSHIP AND INNOVATION
WHY: innovation as vision design
HOW: innovation as problem solving



LEADERSHIP:

- Build the vision
- Inspire people
- Motivate people

COOPERATION: Yuval Noah Harari
It's important to have different people working together on different topics. We can have two different solutions:

Mechanistic system:

- Organization as a "machine"
- Objective: predictable and finalized behaviours
- Clearly defined and specialized tasks and roles
- Centralized decision-making structures and vertical information flows
- Process standardization and direct supervision
- High formalization of the organization
- Individuals as "spare parts"

Organic systems

- Organization as a "living organism"
- Objective: ability to adapt to the context
- Broad and rich roles, evolving, not univocally allocated
- Decentralized decision-making, flat and lean structures, horizontal relationships and flows between peers
- Mutual adjustment and competence standardization
- Low formalization of the organization
- Individuals as "organs"

Video: https://www.youtube.com/watch?v=nzj7Wg4DAbs

LEADERSHIP:
Drew Dudley

Alternative views of organization and the role of people

Traditional Model	Human relations model	Human resources model
• Work is inherently distasteful to most people. • What workers do is less important than what they earn for doing it. • Few want or can handle work that requires creativity, self-direction, or self-control.	• People want to feel useful and important. • People desire to belong and to be recognized as individuals. • These needs are more important than money in motivating people to work.	• Work is not inherently distasteful. People want to contribute to meaningful goals that they have helped to establish. • Most people can exercise far more creative, responsible self-direction and self-control than their present jobs demand.

Video: https://www.youtube.com/watch?v=uAy6EawKKME

THE IMPORTANCE OF PEOPLE SKILSS

The company point of view: *what determines whether the organization will continue to deliver sought-after products, will continue to develop cutting edge technology, will continue to anticipate the market directions, will continue to make sound investments?* It is the people and the organizational culture and structure.
Organizational Behaviour studies the influence and impact that individuals, groups, and organizational structure have on behaviour within organization for the purpose of applying such knowledge toward improving an organization's effectiveness. Leadership is a key part of it.
Organizational Behaviour is an essential tool for managing effective teams and it helps to understand and predict human behaviour in an organization

The individual point of view: managers need to know how to get the most out of people.
Teamwork, cross-cultural, communication, conflict handling and negotiation skills are needed early and often in today's organizations. Individuals that understand the organization and its behaviours have the advantage to manage an organization. Understanding how organizations really work, is key to rising to the top levels of management. When you become some sort of supervisor or manager, your people skills will make or break your career.

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INNOVATION – INTRO

WHAT IS AN INNOVATION?

Video COCA COLA: https://www.youtube.com/watch?v=UZ3iLo9RrSg

What are the dimension of innovation that we can see in the video?

- Coca-Cola as a company produces many different products, on which it can do product innovation
- Coca-Cola is very innovative in terms of packaging
- The company is very capable of using threats (environmentalist's complaints about non-efficient refrigerators) as opportunities (eco-friendly refrigerators)
- The company communicate very effectively (innovation in communication)
- They invest in process innovation. In particular, the bottling process allow them to be very efficient and productive and to produce the product locally in an efficient and effective way.

With reference to the frame of Purassanta (3 types of companies: successful with always the same product, successful by changing over time, unsuccessful), Coca-Cola belongs to the first group.

Poll: **What are those words that are linked to innovation?**

Most used words are: new, change, improvement, creativity, technology, ideas, long-term (disruption innovation).
Change and improvement are two different aspects of innovation, but both essential.
Clearly innovation refers to something new. Change is like new, but highlights the aspect of the process the brings from old to new. Creativity is then surely an important ingredient of innovation. Long-term is crucial because it refers to the sustainability of an innovation over time (Purassanta highlighted this as well). Innovation has to do with solutions, which may be products, services or combinations of different things. Innovation is not only about the output, but also about the internal environment that enable an organisation to be innovative.

The most traditional definition of Innovation is the one given by the Oslo Manual 2005:
An innovation is the **implementation** of a **new** or significantly **improved** product (good or service), or process, a new marketing method, or a new organisation method in business practices, workplace organisation or external relations.

What do we learn?

Every time you are changing significantly something you are doing innovation.

- New
- Improved
- Implementation: innovation is not just about having a new idea, but also, in particular, about transforming an idea into something that can be used
- All the following elements: innovation is not only about products and services, but about whatever can be innovated

What can be innovated in a company?

- Products
- Processes (production, assembling, etc)
- Services (intangibility, but services need products to be delivered. The idea of intangible services and tangible products is old, because today we think they are very connected. Almost all services are based on physical products and people buy products for the services they can provide to them)
- Packaging (like *Tetrapack*, *Active-packaging*, like salad and tuna that are immediately ready to be eaten, without cleaning them and without oxygen inside because it would react with the food and ruin it, but with argon)
- Business model (Marketing strategy, logistics, etc)

We can innovate everything in a company and we need to do it.

Let's backtrack a bit. We started talking about innovation, doing researches and studies in recent years, less than 100 years ago.
An early definition of Innovation was given by economist **SCHUMPETER (1934)**: innovation is the implementation of new combinations.

Schumpeter contributed significantly to understand the power and limits of Capitalism. In particular, he highlighted that capitalism has an inner capability to foster innovation. In addition, he said that entrepreneurs are the most likely to bring innovative ideas, but large companies are the most likely to implements these ideas and actually innovate, because they have the resources (money, people, etc.) to implement ideas -> dichotomy between the role of entrepreneurs and large companies. This view is rather dated, yet these ideas are still very true. E.g. Google gives free time to its employees in order to cast entrepreneurship within the large company.

Another theory comes from **FREEMAN (1974)**. He stressed the difference between Invention and Innovation.
Invention = "an idea, a sketch or a model for a new or improved device, product, process or system".
Innovation (in the economic sense) = "it is accomplished only with the first commercial transaction involving the new product, process". If we do not make money out of it, so if we are not able to transform our ideas into something that is able to relate with the market and create money, it is not innovation.
-> It is not an innovation until the invention is implemented and transacted.

Then there is an interesting aspect that emerges from the **MANAGERIAL POINT OF VIEW**: to shift the trade-off among performance to better fulfil existing needs or to generate new performance dimensions for new needs.
-> innovation is not about moving on the trade-off curve, but about transforming the trade-off curve itself.
E. g. When there are two different performances, we have to choose what to focus on, so different performance measures mean that there is always a trade-off. We can move on the trade-off curve (like in the cost and service curve, increasing service keeping costs fixed), but to innovate we need to transform the trade-off curve itself, creating something new. In management we are more interested in innovation rather than inventions.

EX) **ROYAL CROWN COLA**: RC Cola Diet, very unknown to us, was the very first diet Cola drink that was developed. RC Cola is a US based company, one of the main competitors of COCA COLA and PEPSI and the top brand in Philippines, able to to introduce some astonishing products, like RC Cola Diet and RC 100 (caffeine-free cola) . In 1982, 20 years later RC Cola Diet was launched, Coca-Cola Light came on the market. Why did Coca-Cola succeed while RC Cola did not?

- Partly because RC Cola did not have the very good distribution network that Coca-Cola had
- Partly because Coca-Cola already had a very broad customer base, that made it easy to the company to spread the product
- Partly because of the timing, in the sense that when RC Cola Diet was launched people were not interested in a diet cola

➔ **INNOVATION ASSET**: those assets necessary to enter in a new market with innovation, to create innovation. (ideas, engineers, etc)
➔ **COMPLEMENTARY ASSET:** it is an asset that is not needed to create innovation. They are used to win on the market, once the innovation has already been created (advertising, efficient production, etc)

RC Cola had a lack in complementary assets, it did not have the resources to transform an Invention into a sustainable Innovation.

Another point. Despite the first diet cola was not developed by Coca-Cola, Coca-Cola Light is still an Innovation. Why? Because they had to create a new product, therefore it was an Innovation for the company.
Poll: Coca Cola Light and Diet Pepsi are both innovations.

They are two different typologies of innovation:

- **INNOVATION FOR THE MARKET**, like RC Cola Diet -> External challenge
- **INNOVATION FOR THE COMPANY**, like Coca Cola Light and Pepsi (they changed things to innovate) -> Internal challenge

Sometimes these two don't match, for example, there can be a product that is innovative for a market but is not for company distributing it in that market. We have the highest grade of innovation when a product is new for the company as well as for the market.

➔ There are different tactics: the first mover takes higher risk, while the followers have lower risks but many cons.

INVENTORS VS INNOVATORS

Let's come back to the difference between Inventors and Innovators.
EX) Meucci was the Inventor of the telephone, he invented something that completely new for the market, but he did not have the resources to implement it and defend the idea. Graham Bell started from something already existing and used it to create real value for people, he took the idea and had the resources to implement it: he was the Innovator. Read Meucci's and Bell's history to understand where their story merge.

INNOVATORS

Many times Innovators are nothing more than (very) smart **Technology/Solution Brokers.** They are able to bring one technology from one market to another one, creating value for people that ever used it before. They look outside with a critical view towards everything they see and they find solutions from different industries, putting them together to fit the solution in the best way, creating value for customers.
The main ability is to understand who has the same problems and to use them as inspirations, not copying them because it wouldn't be an innovation. This means contextualizing the problems.

Innovation is more than simply coming up with good ideas; it is the process of growing them into practical use.
Innovation is composed by two parts:

1. Idea generation (value creation) = **Invention**
2. Conversion of the new idea in business opportunity (value appropriation) = **Innovation**

INNOVATION = INVENTION*EXPLOITATION

It is very important and useful to learn the difference between the two processes.
An interesting Accenture report shows that the number of ideas that become concepts is very little, and the number of concepts that become real products is even littler.
This is not to discharge ideas, ideas are fundamental if we want to innovate, but the report highlights the importance of the process of exploitation and implementation.

HISTORICAL EXAMPLES

EX) The typewriter was invented by Mr Scholes (a Mechanical engineer from Milwaukee) in 1866 as a combination of existing technologies:

- Forward movement (one step for each pressed key): from watches
- Back movement leverage: from sewing machine (macchina da cucire)
- Keyboard: from telegraphs
- Hammer mechanical movements for printing each letter: from Pianoforte

Yet, the first typewriter was an Innovation, because it was a new **composition** of existing technologies for a new function.

Others innovation not related to the product, but to the business model of the company. What do United Colors of Benetton and Dell have in common? They both adopt a *postponement strategy* to deploy the assembly-to-order model. United Colors of Benetton postpones the painting stage of clothes in order to better match market trends, and Dell produces many modules that the customer can request to assemble as they prefer. The Dell one was an Innovation for the company and for the computer industry.

EX) **DELL** customized computers according to customers' requirements. They started from reassembling computers and instead of putting in the WH final products they keep components for the POSTPONMENT strategy. Instead of creating different versions of the same computer, they decided to let the customer chose how to assemble the different computers. In this way they can provide a huge variety of products.

EX) **Benetton** is famous for the different colours. Traditionally, companies coloured raw materials and then they created different products with the existing colours (Wool, colour, product), but in this way they don't know if stock problems are related to a specific colour or product, so they decided to create a new technology. They take the wool, the create the pullover and only at the end they colour it, using a postponement strategy (wool, product, colour).

As a conclusion we can say that innovation many times comes from the ability to draw solutions from different sectors into our sector.

The innovator is able to **replicate** the innovation process

EX) **APPLE**: Apple II was a new product in a new market and it was a successful innovation, because they completely rethought the input/output interface of the Central Unit. The growing market brought growing sales for products, but the value of the stocks started to go down, why? Because the market started to slow down instead of growing, also products started to slow down. Apple II was not a success and only lasted three years on the market.
Apple III was a disaster, because they needed too much time to develop it and they were not able to sell it for almost a year. After that, they stopped the production and recollect all of them. Apple was almost dead, but they started a new project, less innovative for the market, but innovative for the company. The Machintosh was again an Innovation

In order to consider a company as Innovative, we need to see if the company is capable of keep putting innovation on the market over time. If the company manages to be innovative just once, it can't be considered as innovative.

PRODUCT SERVICE SYSTEM

What is a product-service system? A product-service system is the sum of a product, a service and all the communication that is built around the combination that allows to create value for the customer and/or create a new meaning.

PRODUCT SERVICE SYSTEM: product + service + communication

EX) **NESPRESSO**: Is Nespresso innovative because it is a new coffee or a new coffee-machine? Not really. Yet, Nespresso totally re-shaped the shopping experience and, in general, the product-service system, shifting the product from a commodity to a luxury good.
From this case we learn that sometimes Innovation comes from different sources, not necessarily from the core product itself.

Poll: Give an example of product service system: car + transportation service + ads

TYPES OF INNOVATION

We have a clear idea of what Innovation is. Let's deepen now the different types of Innovation.

The very first framework that we want to discuss is the **Solution-Meaning-People framework**.
When dealing with Innovation, you have two main questions that you want to answer.

- HOW? The answer is the solution that you want to deliver in order solve the problem fulfil the need.
- WHY? This deals with what is the meaning that we are delivering to the customer. This concept is particularly known in the marketing field. What is the meaning that the customer attaches to the solution? Different individuals will attach different meanings to the same solution. In order to understand this, we need to study people (the customer).

Not only this framework helps us to understand the innovation process, but also let us understand that Innovation is not only in terms of solution, but also in terms of meaning. This concept was introduced by Roberto Verganti and his research team, at Polimi.

INNOVATION OF MEANING

Some examples:

1. The case of thermostats. Nest changed the meaning because it simplified the product a much, making it capable of the same functionality but with just one control. How? It learns your habits and preferences in order to auto-adjust in terms of what are the perfect conditions that you want in your house.
2. Design lamps. Artemide used to design beautiful lamps, until it developed a new meaning, where the lamp disappeared. You just have light, that changes accordingly with the mood you are seeking.

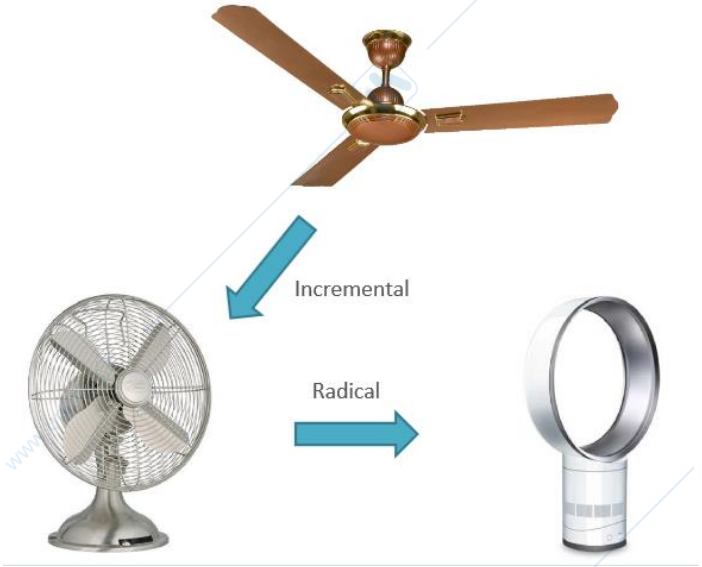
When companies innovate the meaning of their products, they often don't source innovation by the market, but they instead push innovation by proposing a new meaning to their customer.

EX) **THERMOSTAT**: there are many types of thermostat on the market. We can measure the quality of the product according to its accuracy, its aesthetic and the number of functions it can provide. More complex, more functions, more expensive.

EX) **NEST**: it's a thermostat and you don't have to customize it, you only have to chose high or low temperature, it's a basic product. It has a software inside able to learn from human actions: it is able to understand when you are at home, when to increase/decrease the temperature, who is in the room. It is different from the thermostat, but with the same functions. It can provide also a wearable sensor able to understand when you are sleeping and when not, so it changes the degrees according to human actions. It can also be connected with the car navigator: when you insert the home destination in the car navigator, the thermostat automatically changes the degrees according to the right temperature required by the owner. NEST has been bought by Google.

INNOVATION OF SOLUTION

- Incremental vs radical
- Architectural vs component based
- Competence enhancing vs competence destroying



RADICAL and INCREMENTAL INNOVATION

Let's focus now on the **Innovation of solutions**.
This introduces the difference between **incremental innovation** and **radical innovation**:

- ⇨ Incremental innovation: the ceiling fan becoming a fan is an incremental innovation, because the way the product works does not change, there is no a big change but only an adaptation.
- ⇨ Radical innovation: the fan becoming a bladeless ventilator is a radical innovation, because the new product is based on a brand new technology which is completely changing the systems itself, without simply adapting to it.

EX) **BLADELESS VENTILATOR**: it is a radical innovation, a new technology based on fluid dynamics to create a fan. People would buy it even if it is really expensive (300€) only because nobody has it, so they can show it to everyone. Those people are called *early adopters*.
EX) Siri is an incremental innovation, while smartphones are radical.

Functionalities and performances are fundamental to describe a product and define if it is an innovation or not.
To call a product **radical innovation**, there must be at least changes in functionalities and/or performances (like multiplying the performance by 10 and not to by 1/2 because in this case it would be an incremental innovation).

Poll: What companies prefer? Incremental innovations because they are less risky, with radical ones the change is too big that brings too many threats.

What is better between radical and incremental innovation?
In general, there is no always-best. Some ideas from students:

- You can go on with incremental innovation for a while, but at a certain point there will be the risk of being overcome by a radical one
- It depends on your position in the market: if you are a big company, incremental innovations may be sufficient
- Radical innovation comes with higher risks and resource-requirements

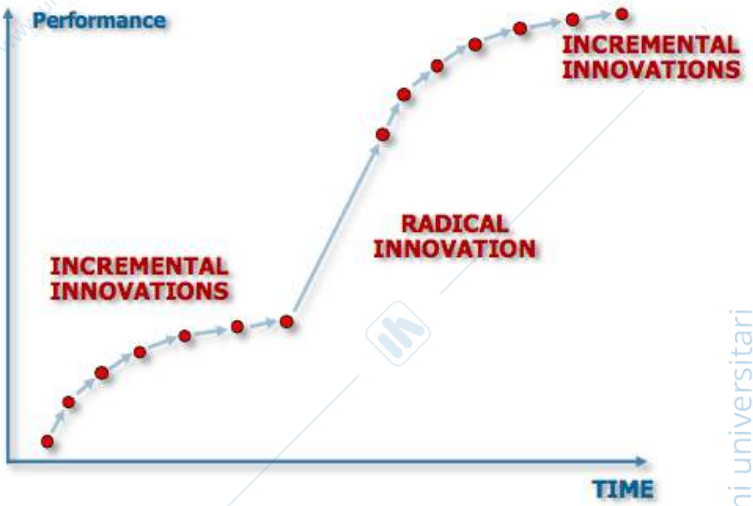
In conclusion, innovation may be both incremental and radical, and both are needed.
The success of a company comes from many different sources

- Effective management of ordinary activities
- Innovation
  - Incremental and continuous innovation
  - Radical and discontinuous innovation

Incremental innovation: the marginal gaining in performance is decreasing along time. The more the innovation increases during time, the less the marginal advantage. In order to go on, companies need to invest a certain amount of money to make the system perfect. When it is perfect, companies need to change strategy, which should be:

- manageable
- controllable
- easy to be planned

We need to look at the incremental value NPV and define it in a clear way.



Radical innovation: also in this case the product is affected by incremental innovation. When we think at radical innovation, we do not have to look at incremental value NPV, because we offer something completely new without numbers that support the idea because we don't know it.

Here a very important concept is the ***ambidextrous organisation***.
The idea behind it is that in a brain there are two part: rational and irrational. Some people have by nature a dominant part. Being ambidextrous means being balanced among the two.
An ambidextrous organisation is one that is able to run its daily activities effectively and efficiently and to be a disruptive innovator at the same time. The radical innovation and continuous improvement parts should be sufficiently separated in order not to confuse the organisation too much as well as sufficiently integrated to manage the process of innovation.

ARCHITECTURAL and COMPONENT INNOVATION

PRODUCT ARCHITECTURE

Products can be seen as a whole (like mozzarella, paper, etc) as well as the sum of their component. The architecture of a product is the set of components that make the product and the way the components are combined together. In other terms, (Ulrich 1993) product architecture is:

- the arrangement of functional elements
- the mapping from functional elements to physical components
- the specification of the interfaces among interacting physical components.

We can make a distinction between a product composed of components and the product architecture and we can change the components or/and the architecture to innovate products:

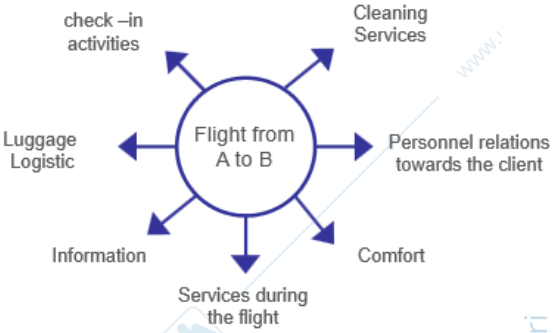
- Architectural innovation
- Component innovation

EX) From Atari Joystick to PlayStation Joystick there is an *architectural innovation*, because the components in the end are the same with the same function, but assembled in a different way and more in number.
From previous joystick to Wii Joystick, there is a *component innovation* as well, because they introduced brand new component in the product. The function is the same, but components change a lot.

There is not a strong relationship between *architectural vs component* and *radical vs incremental*, but in general you perform a radical innovation when you innovate both a component and an architectural component (but not always).

What's the point of differentiating between architectural and component innovation? Designing an architecture and defining standards about how components are combined allows you to change components without changing the

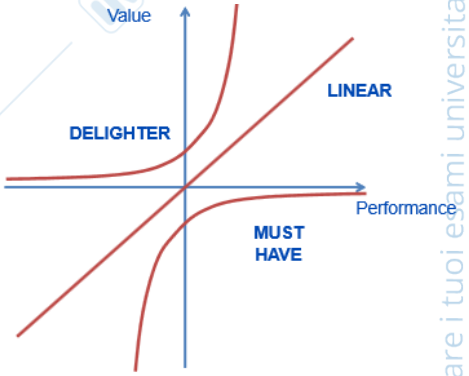
architecture, hence innovating the product more efficiently, with less resources. Of course there is a threshold, because at a certain point, if you change too many components, you will need to rethink the architecture as well.



This applies to services as well, where the **SERVICE CONCEPT** requires the additional definition of a group of components (products and services). A service architecture is often called service concept.

KANO MODEL: value vs performance

In order to understand where is it more important to invest the resources, we can cluster the different performance according to the Kano's Model:



- Linear functionalities: products are used by customers for specific functionalities. The better the performance, the better the value.
- Delight services: not necessary services, but if present customers are delighted. They are value added that make new customers buy the service.
  E.g. a chocolate at the end of a flight.
- Must have: if not present, customers are very upset. They are those performances that must be included in the service, otherwise customer will very likely exclude us.

When you think about component innovation you have to bear this model in mind: the components that you want to innovate are those that improve linear or delighter performances, while must have just need to be developed to a certain level.
Another useful model here is the trade-off curve. When innovating a component, you often just move yourself on the current trade-off curve, while if you want to shift the curve itself, you will want to perform the architecture itself.

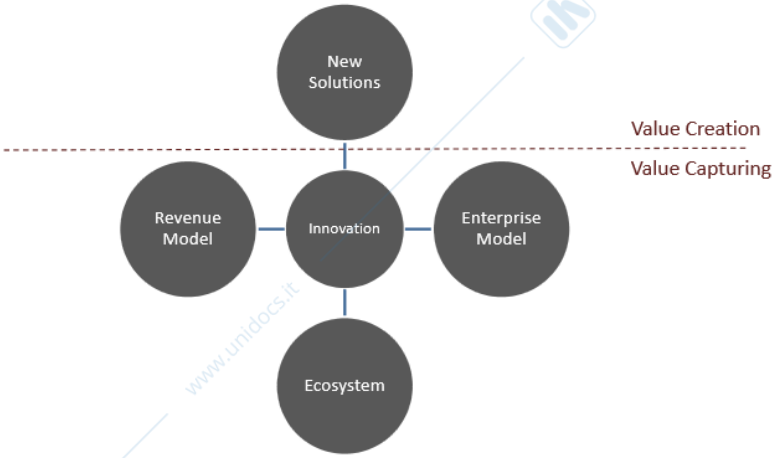
INNOVATION AND COMPETENCES

What do we learn from the two videos of the tablet? There is a strong link between competences and the ability to innovate. The effort of the first man of the ad shows how you can use technology (many ways), especially as competence-enhancing technology.
It introduced the difference between competence-enhancing and competence-destroying technology.

- **Competence-destroying:** discontinuities require new skills, abilities, and knowledge in either process or product design. The skills needed for the core technology shift, causing power and structure shifts in organizations. They are much more difficult to be developed by companies because they are riskier and require totally new internal environments to be developed, in fact they are usually initiated by new firms. It looks like competence-destroying innovations are more long lasting.
- **Competence-enhancing:** discontinuities are "order-of-magnitude improvements in price-performance that build on existing know-how within a product class". These discontinuities tend to consolidate industry leadership.

VALUE FOR WHOM?

Value is not only to be intended towards the customer, through new solutions and meanings, but also for the company. Once you have created value for customers, you have done half of the job.
Innovation for **value capturing** is crucial:

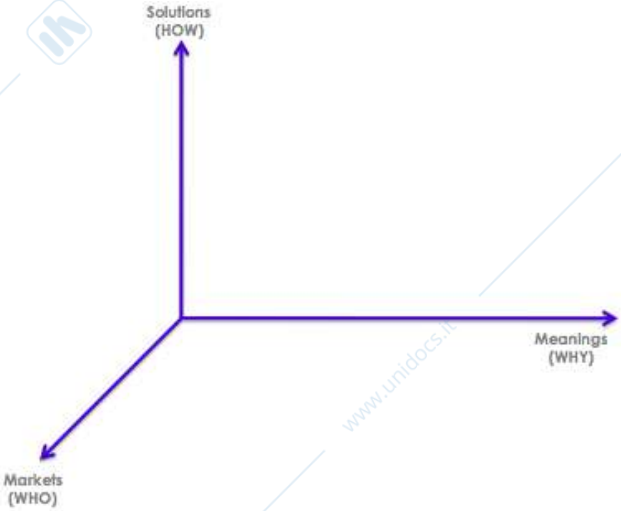


- Revenue model: you design the business model in order to get money, like in the case of blade and coffee capsules.
- Enterprise model: Zara innovated the enterprise model by inventing the fast-fashion model. The traditional fashion model was based on two collections per year, and Zara thought of faster collections in order to keep up better with

trends and desires. This entailed a totally new enterprise model which is cheaper and with a very flexible process of production, changing collection every six weeks. The innovation is not on products, but on the ability to capture value of products, looking at luxury goods and replicating luxury collections in a cheaper way.

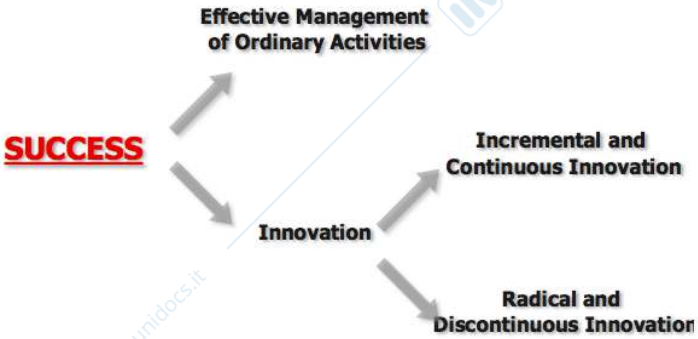
- Ecosystem: The iPhone innovated the ecosystem. iPhone is not better because of phoning or because of email (BlackBerry was better), but because of the opportunity for everyone to sell their app on the App Store, hence innovating the way the company interacts with stakeholders.

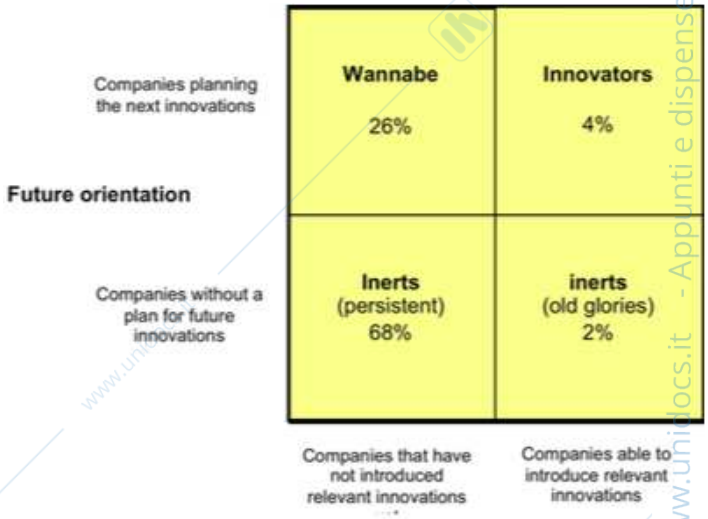
DIMENSION OF INNOVATION

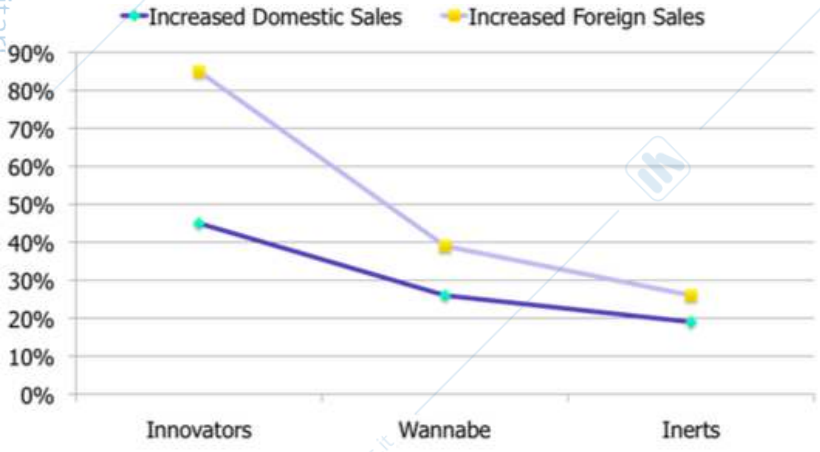


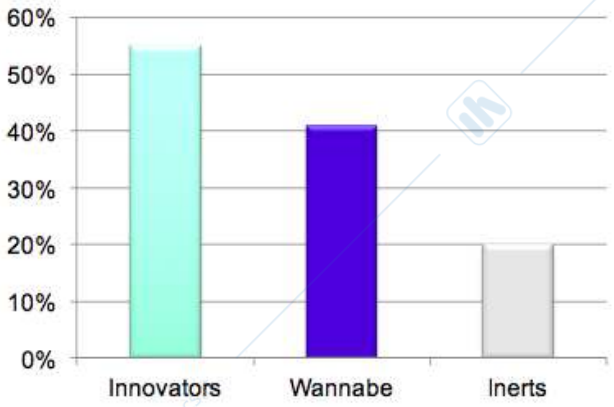
WHY TO INNOVATE?

It is almost obvious that in most industries you need to innovate in order to survive: "Innovate or perish"
Studies show that innovation is a key driver of growth.









Could you have introduced more innovations during the last years?

In addition, there is the issue of the **FIRST MOVER ADVANTAGE**. Being a first mover provides you with the opportunity of making profit from the temporary monopoly.

Profit = Volume * Price – Cost

More than that, innovation has an impact on the differentiation of many different assets:

- Reputation gets better (brand)
- Knowledge (learning economies) improves, hence enabling even further innovations
- Costs decrease (economies of scale)
- You can try to set standards and rules of the game. Being the standard- or rules-setter provides a lot of advantage. There is no sharp link between first in the market and being the standard-setter
- Positive externalities
- If switching costs are very high in your industry, being the first mover is an advantage
- You can access to complementary assets more easily (e.g. distribution network, maintenance network etc.)

There are many reasons to be the first in the market, yet it is not always true that first movers are the most successful. The choice of the timing to enter a market is a complex decision to make, and "as soon as possible" is not always the best answer.

WHAT ARE THE CHALLENGES?

We saw many good aspects of innovation, but there are also some pitfalls and challenges.
Examples:

- Bang&Olufsen used to be very innovative, but at a certain point did not manage to keep up with the innovation rate. The blind competition demonstrates that they were not able to think outside of their scheme.
- Gillete is stuck in a model where there is no more space for innovation: 3 blades, 4 blades, 5, 6.. And then?

You can get stuck in innovation because you find yourself in a blind path. Radical change is hard because of:

- Risk
- Investments (marginal versus lump)
- There are still margins for incremental improvements
- Competence enhancing versus competence destroying
- Success
- Customers keep you there
- The new innovation is for a small market (disruptive innovations)
- No competitor is changing
- Our niche or our market is protected
- Cannibalization
- Complementary assets, standard and ecosystem
- Innovation is impossible, NIH Syndrome

How to overcome the problem? We use dynamic capabilities:

- **Capability to reframe** (reinterpret) the problem. This deals with exogenous aspects
- **Capability to Change** (mobilize the organisation). This deals with endogenous aspects

14/3/16

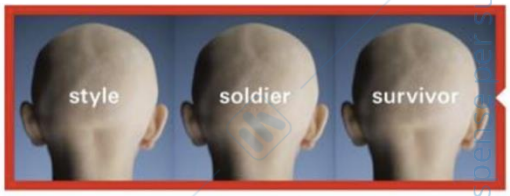
WHAT IS LEADERSHIP AND "HOW" TO READ A LEADER

What leadership is for you?
The main words are: people, ability, goal, guide (me and the others, I'm guiding myself but also others), inspire, influence. All these things are connected with leading people to do something to get results.
→ There are different dimensions: you as a leader and your goals.

EX) **BANKSY: is it art or vandalism?** It is ART. It is an English artist and we do not know his identity. We are not sure if it is a single man or a group of people, even if today there are some rumours.

Few hours after their creation on a New York City wall, the Banksy pieces have been vandalized, cancelled by the owner of the building. This fact is considered as a real vandalism of a piece of art, but we should accept the fact that people have different opinions.

The Banksy artwork was misinterpreted as a racist message and deemed offensive, thus it being scrubbed. People thought it was very aggressive and racist, so the mayor of the small town in the UK decided to remove it. When they discovered it was made by Banksy they recognised they were wrong. The same thing would have been unacceptable if it was made by others, but Banksy's pieces are considered art.
The point is the difference between vandalism and art.



EX) **STYLE, SOLDIER OR SURVIVOR?** SURVIVOR. Which is the correct one? We cannot apply the way of thinking in term of right and wrong, as from an engineering point of view. In this case the same picture can have different meaning for different people.
EX) **DISCIPLINE:** saving money, lose weight or sex?
EX) **LEADER and FOLLOWER**: we see things in different ways

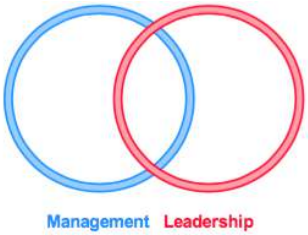
We found that everything we saw until now makes sense, so the real problem is: everything is one against the other, there are always opposite points of view.
Every day and in every situation, especially when we face problems, we have to deal with **AMBIGUITY** which is the quality of being open to more than one interpretation; inexactness: *we can detect no ambiguity in this section of the Act* | [count noun]: *ambiguities in such questions are potentially very dangerous.*
→ On one side we have theory and models, with examples and we will text them.
→ On the other side we will face with real things and their ambiguity.

ARE LEADERSHIP AND MANAGEMENT DIFFERENT?

BERNARD BASS: leaders manage and managers lead, but the two activities are not synonymous.
They are different, because they might have different attitudes compared with each other:

- **Leaders manage:** they normally have charisma and soft skills. They are more related to people than managers. They need to be followed to be considered leader.
- **Managers lead:** they normally have skills. They are more connected with technical assets. They do not need to be followed.

You can be both: like Del Vecchio, Steve Jobs, etc.



CLASSWORK: write down 5 adjectives that describe an effective manager and 5 that describe an effective business leader. Are the two lists different?

EFFECTIVE MANAGER	EFFECTIVE BUSINESS LEADER
MINE: ▪ Precise ▪ Entrepreneurial ▪ Efficient ▪ Critical ▪ Dedication	MINE: ▪ Guidance ▪ Creativity ▪ Sociable ▪ Prepositive ▪ Open-minded
MINE and GABRIELE: ▪ Flexible ▪ Entrepreneurial ▪ Hard-worker ▪ Precise ▪ Open minded	MINE and GABRIELE: ▪ Charismatic ▪ Innovative ▪ Motivating ▪ Creative ▪ Sociable
CLASS: ▪ Skilled ▪ Efficient ▪ Organized ▪ Reliable ▪ Responsible ▪ Rational ▪ Competent	CLASS: ▪ Charismatic ▪ Creative ▪ Motivator ▪ Persuasive ▪ Visionary ▪ Competent ▪ Inspiring

MANAGEMENT: the aim is to get things done through other people in organizations (they have things done at the end). We should expect:

- <u>Functions of a manager:</u> planning, organizing, directing and controlling activities and resources. They get a result.
- <u>Roles of a manager:</u>
  - **Interpersonal**: ceremonial/symbolic duties
  - **Informational**: collect/transfer information. One of the main roles of a manager is to align people communicating right information and understanding which information should be given to whom.
  - **Decisional**: choose between alternatives. They must be able to take decisions.
- <u>Skills of a manager:</u>
  - **Technical**: apply specialized expertise
  - **Human**: work with other people. To manage a group of people you should be able to interact with them.
  - **Conceptual**: diagnose complex situations. They must be able to create models and analyse how variables are connected and work on them.

LEADERSHIP: the aim is to influence (group of) individuals toward the achievement of a vision or goals. At the end they have more than things done, because they also have a vision for the future.

- **Create and communicate a vision**: it is connected with inspiring, setting the tone, articulating a vision, communicating and aligning, so making people able to share the same vision.
  It is not simple to communicate something new like a vision you have in your mind, explaining it to others. You need to give it a form and phrase the vision to other people.
- **Manage people:** also leaders should manage people like managers. Managers already know what they have to do, they only need to convince people doing it. Leaders need to communicate and convince people to do something risky, insecure and different, something connected with the vision leaders have in mind but completely insecure. (Motivate, influence, changing behaviours).
- **Provide the support for performance achievement**

Leadership definition: leadership is a process whereby an individual influences a group of individuals to achieve a common goal

1. Leadership is a process between a leader and followers
2. Leadership involves social influence
3. Leadership occurs at multiple levels in an organization
4. Leadership focuses on goal accomplishment: you are not a leader if you do not succeed and you do no get your results.

JACK WELCH: ***Before you're a leader, success is all about growing yourself. When you become a leader, success is all about growing others***

WHAT ARE THE MAIN FUNCTIONS OF A LEADER?

EX) Sustainable leadership: **PATAGONIA** video: https://www.youtube.com/watch?v=EHS2X-KoN_w
At the core of Patagonia is its founder, Yvon Chouinard, a man who is saving the world one fleece jacket at a time. A legendary climber, surfer, entrepreneur, environmentalist, and philanthropist, he is justly famous for success on his own terms.

Poll: What are the functions of a leader?

- Inspire
- Motivate
- Achieve goals
- Being an example
- Guide
- Inspire

We can cluster leadership functions in:

PURPOSE: you need to be able to describe and understand what is the purpose of a leader.

- Envision
- Align
- Establish direction

PEOPLE: once you have a vision, you engage, inspire, etc people according to your purpose

- Engage, inspire, motivate
- Empower, coach
- Lead by example

PERFORMANCE: how do you support and challenge people to make them doing things

- Support
- Challenge

EX) Patagonia values/vision:

- PURPOSE: Quality
  Patagonia stuff need to have very high quality, which is connected with functionality: they became very famous thanks to their multi-functionality products. There is no reason to chase fashion, so quality is not following fashion.
- PEOPLE: Self Motivation
  They do not control people, but they just communicate and inspire them.
- PERFORMANCE: Support and Challenge

PURPOSE

Vision: a big picture on the way things ought to be. A billboard image of what you are working towards.

Jhon F.Kennedy: Let both sides seek to invoke the wonders of science instead of its terrors. Together let us explore the stars, conquer the deserts, eradicate disease, tap the ocean depths, and encourage the arts and commerce.

How to create a vision?

1. Dreaming: dreaming is the first step. Dare to dream. Dreaming big allows you to think about ideas that may not seem likely, yet are in fact possible. But people may think your big picture is a meaningless mirage if you don't give them some ideas as to how things can actually change. So, you should develop also practical details.
   (Managers focus on short term achievements, while leaders on long term achievements)

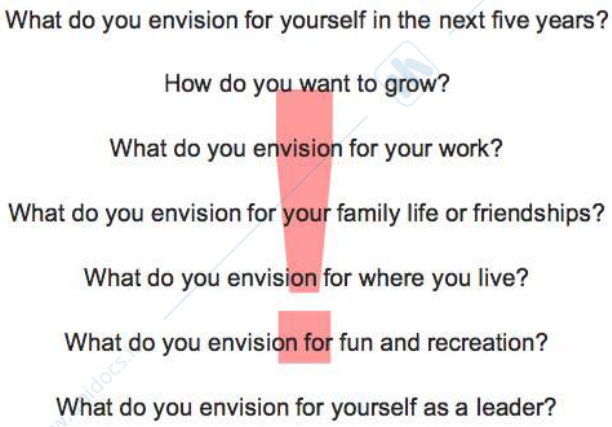
Lili Fini Zanuck: Nothing happens without a dream. The daydreaming mind will wander to something greater than the conscious mind could ever have imagined. The more you visualize your dream, the more you understand it. That's how you begin. Soon you're on the road to realizing your dream.

2. Communicate your vision to others:
   - **Inform**: no one can decide to follow you until they know what direction you're headed in
   - **Inspire**: if your vision is one that touches a chord with many people and if you can communicate it well, people will join you in reaching towards your goals
   - **Engage**: meet people where they are and challenge them at the same time

ENGAGEMENT

- Employee engagement describes the *level of passion and excitement* people feel about their work
- It consists of *extra attention, thought, and energy* put into work beyond the minimal job requirements to achieve company goals
- People become engaged when their workplace activities connect to *what matters in their lives* and *what makes them happy*

DEVELOP YOUR PERSONAL VISION



EXAMPLES

Mother Teresa	Steve Jobs
PURPOSE: "A life not lived for others is not a life" PEOPLE: "Do not wait for leaders to come. Do it yourself, people after people" PERFORMANCE: "I alone cannot change the world, but I can cast a stone across the waters to create many ripples"	PURPOSE: "Computer for the rest of us", "Stay hungry, stay foolish", "I think if you do something and it turns out pretty good, then you should go do something else wonderful, not dwell on it for too long. Just figure out what's next." PEOPLE: "My job is not to be easy on people. My job is to make them better." PERFORMANCE: "I think if you do something and it turns out pretty good, then you should go do something else wonderful, not dwell on it for too long. Just figure out what's next.", "Innovation distinguishes between the leaders and the followers"

Mark Zuckerberg	Donald Trump
PURPOSE: "Facebook's mission is to give people the power to share and make the world more open and connected." PEOPLE: "At Facebook we have tradition where...the whole company gets together and stays up all night and tries building things – whatever they want" PERFORMANCE: "The biggest risk is not taking any risk... In a world that changing really quickly, the only strategy that is guaranteed to fail is not taking risks"	PURPOSE: "I mean, part of the beauty of me is that I'm very rich", "I like thinking big. If you're going to be thinking anything, you might as well think big." PEOPLE: "Leaders, true leaders, take responsibility for the success of the team, and understand that they must also take responsibility for the failure." PERFORMANCE: "Part of being a winner is knowing when enough is enough. Sometimes you have to give up the fight and walk away, and move on to something that's more productive"

First theory: WHAT ARE THE TRAITS OF A LEADER?

Poll: What are the traits of a leader?

- Self confidence
- Dominance
- Public speaker
- Energetic people
- Persuasive: the way they look, behave, talk
- Bravery
- Empathy

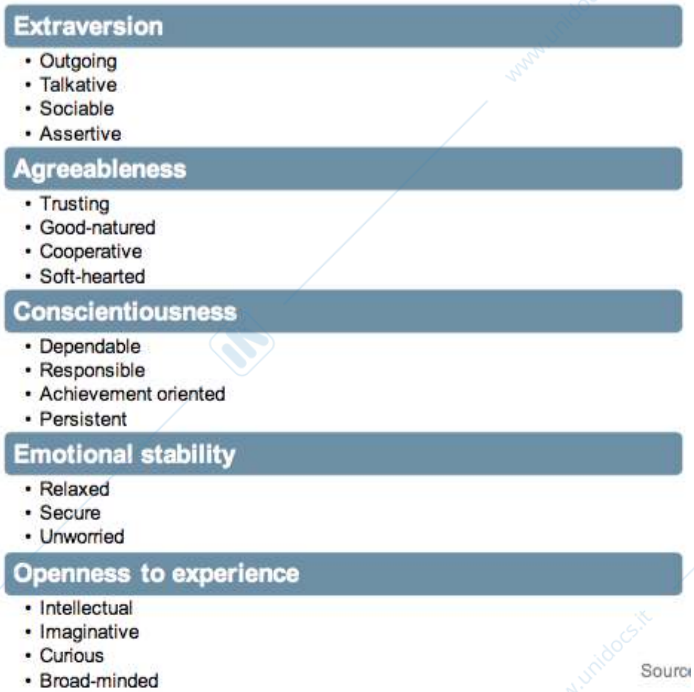
Leaders were **born** with some inborn abilities to lead. A leader trait is a **physical** or **personality** characteristic that can be used to differentiate leaders from followers.

The main traits are:

- ⇨ Intelligence: normally leaders are intelligent, like Albert Einstein
- ⇨ Dominance: like Mother Theresa and Napoleon
- ⇨ Self-confidence: like Iron Man
- ⇨ Level of energy and activity
- ⇨ Task-relevant knowledge: very skilled in what they do

Anyway, there are many examples of people without any of these characteristics, like the owner of Patagonia.

Second theory: THE BIG FIVE PERSONALITY DIMENSIONS



Introversion VS* **Extroversion**

- Private
- Independent
- Work alone
- Reserved

- Assertive
- Sociable
- Warm
- Optimistic

Disagreeableness VS* **Agreeableness**

- Sceptical
- Questioning
- Tough
- Rude

- Tactful
- Trusting
- Humble

Unscrupulousness VS* **Conscientiousness**

- Impulsive
- Careless
- Irresponsible

- Orderly
- Neat
- Dependable

Tight-mindedness VS* **Openness**

- Unimaginative
- Dull
- Literal minded

- Imaginative
- Curious
- Original

Emotional instability VS* **Adjustment/Emotional stability**

- Excitable
- Worrying
- Reactive
- High strung
- Alert

- Secure
- Unflappable
- Rational
- Unresponsive
- Guilt-free

➔ **Introversion vs Extroversion**

EX) Mother Theresa: she is more on the introversion side, because she operated in a private way

Traits are good in predicting the emergence of leaders, but <u>may fail in distinguishing between effective and inefficient leaders</u> (to define if a leader is successful or not).

NATURE VS NURTRURE: to what extent can we learn?

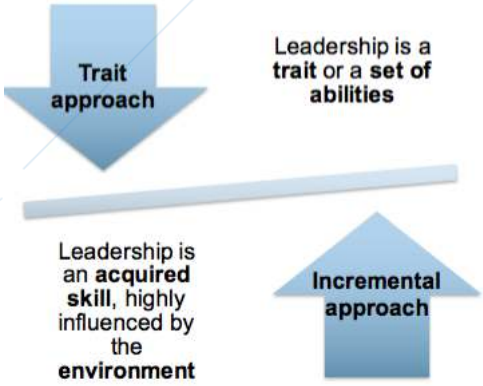
Did you born leader or do you become it during your lifetime?

- ⇨ **Alex Zanardi** experience video
  Typical reactions are: wow I can do everything (nothing is impossible) or I'm losing my time.
  He learnt something that is mechanical and physical at the same time.
- ⇨ **Adam** 2009 video: Adam has a lack in physical terms.
- ⇨ **Bram Cohen** is th CEO of BitTorent. He was 28 years old when was diagnosed with Asperger's syndrome: an autism spectrum disorder (ASD) that is characterized by significant difficulties in social interaction and nonverbal communication, alongside restricted and repetitive patterns of behaviour and interests.
  He learnt how to understand human expressions, follow social cues, use eye contact, developing a kind of social algorithm. He learned everything.

Through <u>practice, learning, dedication and motivation</u> it is possible to <u>overcome nature</u>. We can still improve.
The same with leaders, some people are born leader, but it is not enough, they need to train themselves.

IS LEADERSHIP A TRAIT?

- Leadership skills of CEOs are not predictive of which companies succeed: there are no connections with the traits of a CEO and companies results.
- Little evidence linking personality to leadership
- Head of the table effect
- Fewest chair effect



There are 2 different approaches:

- ⇨ <u>TRAIT APPROACH</u>: leadership is an acquired skill, highly influenced by the environment
- ⇨ <u>INCREMENTAL APPROACH</u>: leadership is a trait or a set of abilities

Could it be more related to leaders BEHAVIOURS rather than to leaders TRAITS?
Leadership is highly linked with behaviours.

15/3/16

TEST on paper and poll: How do you behave?

There are two dimensions of human behaviour:
X axis → CONCERN FOR PRODUCTION: Task-oriented behaviours
Focus on tasks, interest in structure, control and routines to attain organizational goals and objectives.
Y axis → CONCERN FOR PEOPLE: Relationship-oriented behaviours
Focus on people's well- being, interest in promoting collaborative interaction among organizational members and supportive social climate.

We can have both of them and we are able to combine them, to maintain good relationships.
Studies studied the behaviour of different leaders and they get the same results, the two dimensions.

LEADERS' BEHAVIOUR
Now we see 4 different movies: observe carefully the behaviours to provide examples and judge them.

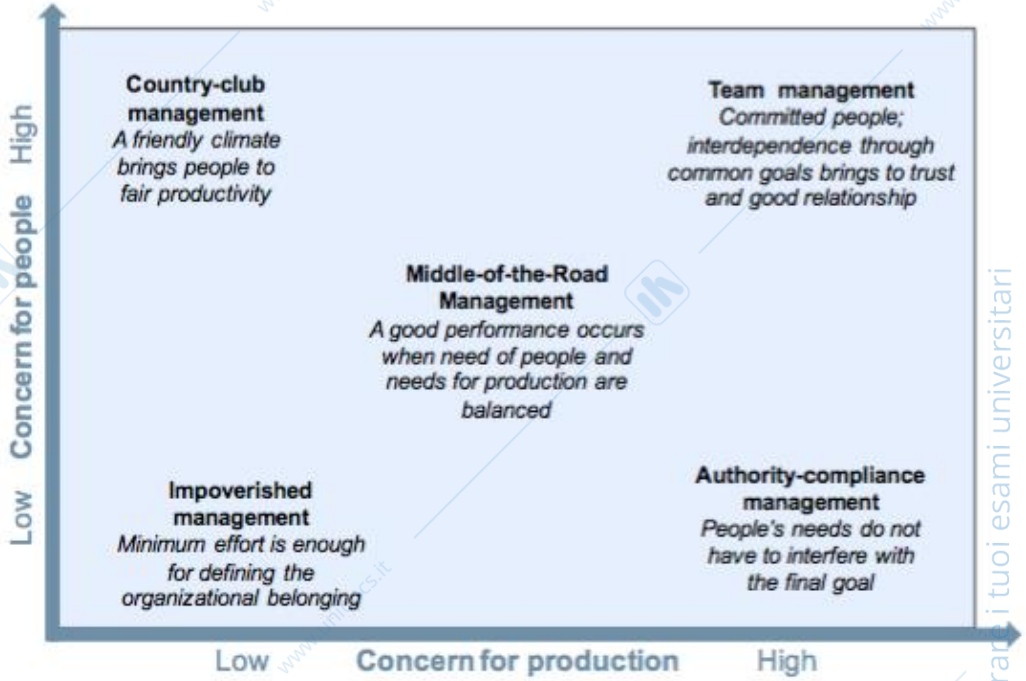
1. The Devil Wears Prada (2006)
2. Sister Act (1992): listen to each other in a group, encouraging group members, work a lot and continuously
3. Any given Sunday (1999): difference from young and old people, experience, the same in football, team encouraging
4. School of Rock (2003)

Dewey Finn (School of Rock)	**Sister Marie Clearance (Sister Act)**
<u>Low concern of production</u> – Only and always recess – You will always fail, quit. He was depressed at that time <u>Low concern of people</u> – He is not taking persons seriously and he doesn't respect them (Shut up and he doesn't care about other people's point of view) – He doesn't care stealing food from students	<u>High concern of people</u> – Enjoy coaching people in new tasks and procedures – Listen to each other – Always smiling, positive – Correcting mistakes <u>High concern of production</u> – Working hard and continuously – She specifies what are the tasks needed to succeed – She teaches how to do things
Coach Tony D'Amato (Every given Sunday)	**Miranda Priestly (Devil wears Prada)**
<u>High concern of people</u> – Counselling team-mates to improve performances – Honour other people's boundaries and limits <u>Low concern of production</u> – The more challenge a task is, the more I enjoy it – He doesn't talk about specific task to win, even if you have to fight to win – He doesn't explain how to play the game but he only motivates the team stressing on cooperation	<u>High concern of production</u> – Monitoring the schedule to ensure a task – Finding easy to carry out several complicated tasks – Managing time efficiency – Believing that what is important is only achieving the task <u>Low concern of people</u> – The incompetence of employees does not matter – Not interesting for people but only for tasks and her appointments – Strict rules for employees who change their attitudes and behaviours when she arrives

MANAGERIAL GRID – Blake & Mouton

We can identify different basics leadership behavioural styles

Authority compliance management like Miranda Priestly.
Country-club management, like Coach Tony D'Amato. (They are the opposite).
Impoverished management, where I do almost nothing, is more like Dewey Finn of School of Rock.
Team management, is more like Sister Marie Clarence of Sister Act.
Middle-of-the-road management: in many case people behave in this way do not have a strong connotation, they only try to do all things



Each one of these styles make sense or only some of them, according to different cases.

In which situations these behaviours have positive effects in a company?

- Authority compliance management: when unpopular measures are taken (like cutbacks or reorganization).
  EX) The army. Someone is focusing on what you must do, like training and not about your feelings.
- Country-club management: when an employee is dealing with personal problems.
  EX) Patagonia is not focused on controlling, planning, but it is more focused on interpersonal level.
- Impoverished management: if adopted consciously, it can allow employees to grow and gain autonomy and maturity. There are two different approaches:
  - You don't care about anything, you are useless, lazy, not a leader nor a manager
  - You are a leader and you want autonomous people able to develop skills themselves and to manage their own growth, like Professors.
- Team management: easy to put in place in short-term projects that are carried out by experienced employees.
  EX) Toyota: in time production implies a very high relationship between scheduling of production and people
- Middle-of-the-road management: when there is pressure of time (such as meeting deadlines), it is a good way to encourage the employees

There are two performances in make decisions: time is in trade off with the level of consensus.
When you take decisions, you need to convince people wasting a lot of time and the contrary.
This is especially referred to country-club and authority management.

FIXED BEHAVIOURS?

Managerial grid assumption is that a manager adopts "fixed" behaviours. She may be good in some situation, but not fitting in others. There is the right leader for the right occasion, so you can be the right leader in the right occasion only. Can really managers become effective leaders?
Leadership can be trained. We want to discover other theories in which leadership can be trained.

IS LEADERSHIP A FOLLOWER THING?

PFEFFER (1970): Leadership, as a phenomenon, has nothing to do with the exceptional qualities of gifted individuals, but rather with the **gullibility** of their followers.

Attribution theory

Attribution theory is a well-researched psychological theory that has shown that people tend to simplify reality when they make causal inferences.

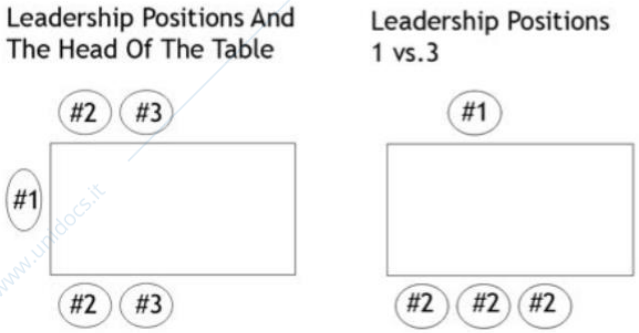
People have a tendency to analyse the world and make *causal inferences*, which seem to trigger effects around them. The problem is that *reality is frighteningly complex*, and people have *limited cognitive abilities*. They thus need to simplify the world when they make attribution judgments.

One way in which they do so is to look for salient objects, circumstances, or people in their environment.

A person or object is salient when she stands out in contrast to the back-ground. For example, in a group of all-white people, a dark-skinned person stands out. Research on attribution theory has shown that people mistakenly tend to attribute more causal power to salient objects.

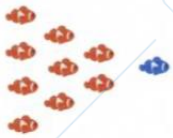
GOING LEADERSHIP: searching in google images, the leader has always a different colour and position from others. Simplification of reality

HEAD OF THE TABLE EFFECT



THE ROLE OF THE FOLLOWERS

There are no leaders without followers (and vice versa). Followers vary in terms of the extent to which they commit, comply, and resist a leader's influence attempts. A follower should:



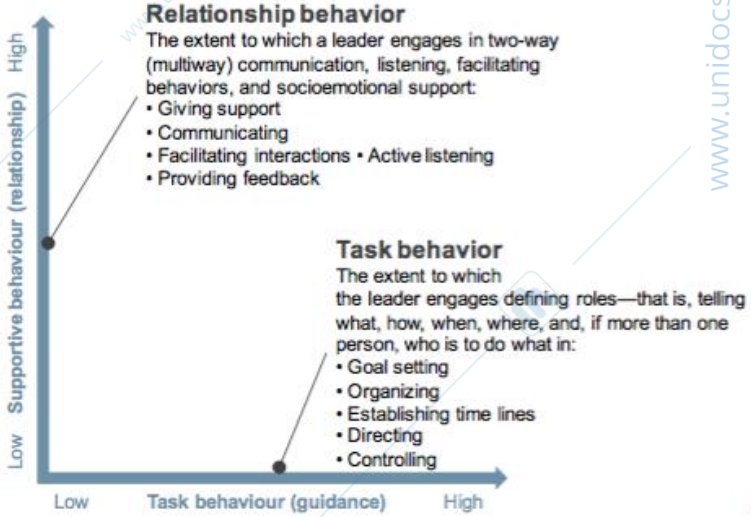
- Understand the leader
- Understand him/herself
- Understand the gap and "accommodate" the leader

OR MAYBE IT IS ALL BASED ON A LEADER-FOLLOWERS RELATIONSHIP?

The role of followers is crucial in term of leadership. The two things mix together.

Theory: **SITUATIONAL LEADERSHIP - HERSEY & BLANCHARD matrix**

They do recognize that the point is on behaviour and not on tasks.



- ♦ **Task behaviour (guidance)**

The extent to which the leader engages defining roles—that is, telling what, how, when, where, and, if more than one person, who is to do what in:

- Goal setting
- Organizing
- Establishing time lines
- Directing
- Controlling

- ♦ **Supportive behaviour (relationship)**

The extent to which a leader engages in two-way (multiway) communication, listening, facilitating behaviours, and socio-emotional support:

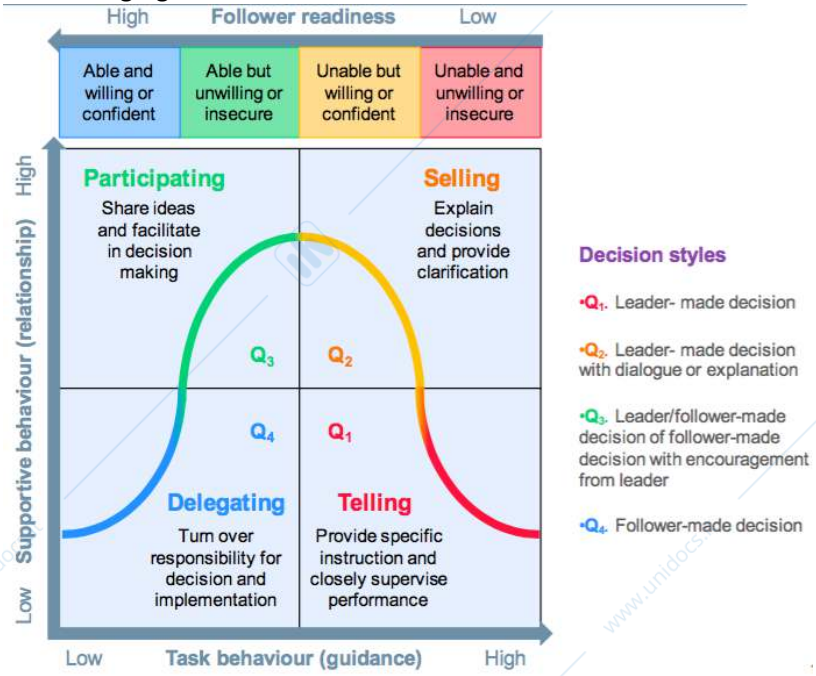
- Giving support
- Communicating
- Facilitating interactions
- Active listening
- Providing feedback

It seems to be not too much innovative compared with the managerial grid, they look quite similar.
EXAMPLE: Karate Kid Videos

Video 1	Video 2
Low supportive behaviour - No questions accepted - No explication needed - No listening at all High task behaviour - He says what to do - He controls the progression of the activity - He corrects errors **TELLING (OR DIRECTING):** he provides specific instructions and controls the performance, the things are proceeding in the right way.	High supportive behaviour - He is explaining why he is doing things High task behaviour - He is still specific in telling exactly what to do and when, describing him exactly what to do **SELLING**: he is still explaining, controlling and correcting mistakes but at the same time he is increasing the explications, in term of supporting behaviour
Video 3	**Video 4**
High supportive behaviour - He is asking questions in order to help him to understand. He gets to conclusions thanks to the answers obtained during the conversation. The big picture explains why he is doing karate Low task behaviour - He is not checking on every single movement of the kid, he just stands there looking at his equilibrium and fishing. The point is not telling him exactly what to do and when it is done. **PARTICIPATING**: facilitating. A facilitator helps to take decisions	Low task behaviour Low supporting behaviour **DELEGATING**: when people already know what to do and what is the best to do, you can delegate them giving them all the responsibility just watching and doing nothing.

Poll classwork: Why Sensei changed its behaviour?

- Because at the beginning he needs to teach the discipline (the kid does not respect the knowledge of Sensei) and tactics, with a specific explanation of the movements, then it has to motivate him giving the right explanation of the reason why he is doing so and then it has to leave him alone to experiment on his own the lessons learnt.
- Because the boy was changing both on technical skills side and on the human side.



The main idea of the theory disagrees with the managerial grid: you should choose the right style, way to behave according to the situation.
There is a kind of progress described by the coloured curve that starts from the bottom from people who do not know what and why are doing things and then grows, which means explaining people why they are doing like this and at the end comes back at the bottom, because once people have reached the right knowledge of things, they can start learning to take their own decisions, the right ones. The training starts when people are let free to take their own decisions, because if they will never try they will never be able to.

The basic idea of this matrix is the fact that the two things are connected with **FOLLOWER READINESS**: you have to guide people who are scared and insecure. Then, even if people is still unable, they start to be more willing and less insecure, because they want to learn more, to grown their knowledge. Then they become able but still insecure, because even if they have enough knowledge they do not know how to do things, because they never did them. Thanks to supporting activity, people become able and willing to do, confident.

Theories of leadership are one against the other. From now on, things seem not to be anymore exclusive, but they interact in different stages of the leadership model.

WHAT IS A TRANSACTION?

Transactional theory: in term of transaction cost in make or buy decisions.
It is a kind of exchange, trade, with costs and benefits connected.
Newton 3 law: To every action there is always opposed an equal reaction.

Transactional leadership involves *motivating* and *directing* followers primarily through appealing to their *own self-interest*. Sequence of transactions where the actions of subordinate result in either a reward or a punishment.

You can follow (you are awarded) or not follow the rules (you are punished). Managers are usually paid according to this, as MBO: management by objective. Leadership is managed like this in companies.

EXAMPLE: **Vincent Thomas "Vince" Lombardi**
best known as the head coach of the Green Bay Packers during the 1960s, where he led the team to three straight and five total National Football League championships in seven years, in addition to winning the first two Super Bowls following the 1966 and 1967 NFL seasons. Lombardi is considered by many to be *one of the best and most successful coaches in professional football history.* The NFL's Super Bowl trophy is named in his honour.
“The difference between a successful person and others is not a lack of strength, not a lack of knowledge, but rather in a lack of will”, “The only place success comes before work is in the dictionary”, “There is only one kind of discipline, and that is the perfect discipline. As a leader, you must enforce and maintain that discipline; otherwise, you will fail at your job”
The point is that we give rules and you need to follow them, as a follower you need to do what you are expected to do.

TRANSACTIONAL LEADERSHIP

- Contingent Rewards: Transactional leaders link the goal to **rewards**, clarify **expectations**, provide necessary resources, set mutually agreed upon goals, and provide various kinds of **rewards for successful performance**. They set SMART (specific, measurable, attainable, realistic, and timely) goals for their subordinates. They work on the positive instead on the negative side, focusing themselves on warning the subordinate instead of punishing he.
- Active management by exception: Transactional leaders **actively monitor** the work of their subordinates, watch for deviations from rules and standards and taking **corrective action to prevent mistakes**.
- Passive management by exception: Transactional leaders **intervene only when standards are not met** or when the performance is not as per the expectations. They may even use **punishment as a response to unacceptable performance.**

The main difference is the fact that in passive I punish you if you fail, waiting to intervene until you fail (you are expected to behave in a certain way, I wait and then if contrary you will be punished), while in active I take an eye on you and if I see that you are not following the rules I intervene before you fail, adopting a more active behaviour (instead on working on the punishment side, you work on the corrective side).

- Laissez-faire: The leader provides an environment where the subordinates get **many opportunities to make decisions**. The leader himself abdicates responsibilities and avoids making decisions and therefore the group often lacks direction.

The main idea of transactional leadership is related to **ACCOUNTABILITY: the fact or condition of being accountable; responsibility.** Because everyone is responsible for what he/she does. We must assume our responsibilities and if we do not accomplish our objectives, we are responsible. Excuses are not accepted. This is a strong way to be the best leader.

21/3/16

TRANSFORMATIONAL LEADERSHIP

Videos: Pay it forward "Think of an idea to change our world and put it into action"
Transformational attitudes towards leadership:

- There is a connection with what you do and your world. The professor is giving accountability to students.
- The professor shows the lack of respect when students are late or not in class, because there is like a mutual agreement between professor and students
- The professor is asking kids to change the world, but in practice he wants to change the way they think and see the world. He tells students that it is possible, proposing them a new vision. The professor shows his vision, while students have to follow it in different ways, according to their point of view and behaviours.

This is not only transactional leadership, but also *transformational leadership*, trying to transform other people, informing them about things which were unknown, pushing them beyond their limits, to improve and transform them in something better.

Video: Invictus
To be leader giving example, like Mandela said to the football player. He provided an example about himself: when I was in jail and I couldn't do anything, I had to find something to help me to find inspiration, looking outside. He found a poem which inspired him lot and pushed him behind his limits.

Transformational leadership attitudes are:

1. Individualized consideration (IC): Transformational leaders demonstrate **genuine concern** for the needs and feelings of followers. This **personal attention** to each follower is a key element in bringing out their very best efforts, to push them beyond their limits. You must be focused on every single people, creating a connection between you and the other, based on a with a very specialized relationship.
2. Intellectual stimulation (IS): the leader **challenges followers to be innovative and creative**. A common misunderstanding is that transformational leaders are "soft", but the truth is that they constantly challenge followers to higher levels of performance. Sometimes it is not successful, but it worth a try.
3. Inspirational motivation (IM): Transformational leaders have the ability to **inspire and motivate followers**. Combined these first two, I's are what constitute the transformational leader's charisma.
4. Idealized influence (II): the leader serves as an **ideal role model for followers**; the leader "walks the talk," and is admired for this.

Poll: transactional and Leadership difference?

1. Transactional leadership try to maintain the same contest; instead transformational leadership try to change the contest (environment).
2. In transactional leadership the leader gives objectives and expects results based on accountability. In transformational leadership the leader wants to empower his followers.
3. Transactional keeps the people in line, whereas transformational pushes them beyond the limits.

HOW LEADER TRANSFORM FOLLOWERS

Once you have got some leader characteristics, you act in a certain way to encourage the follower to do something.

Video: Whiplash (2014)

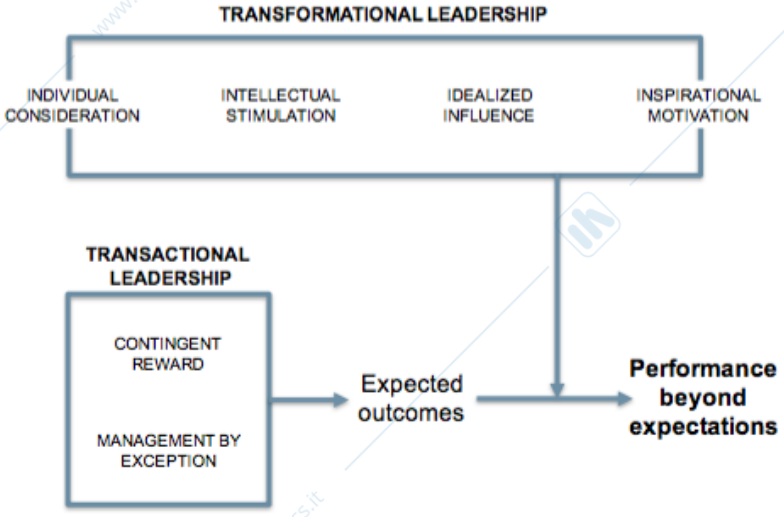
What do you think of Terence Fletcher? Only negative comments:

- Aggressive
- Violent
- Perfectionist
- Impatient
- Stressful
- Arrogant
- Bad
- Rude

How his leadership style is? More transactional or transformational? Transformational. He is not patient, nor sweet. He is pushing the guy to do his best, but after his career he committed suicide. His parents said that the main responsible of that was Fletcher, because he was too much demanding, stressing the guy a lot.

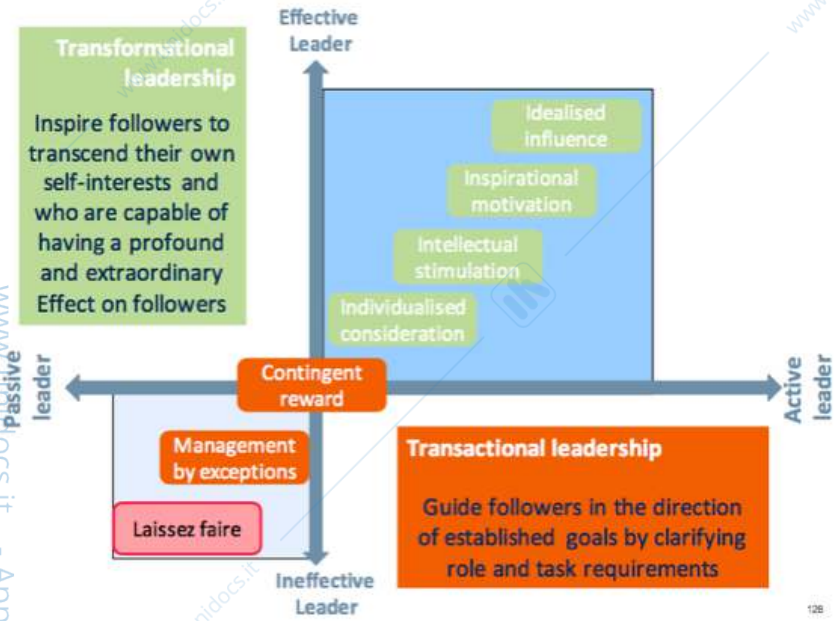
→ Never say "good job". There are many ways doing things: AMBIGUITY. He just wants to find and prepare the guy in the best way, pushing a lot.

TRANSFORMATIONAL VS TRANSACTIONAL



Transformational leadership can move you behind expectations. The only way is to start believing in the transactional leadership and then adding something from the transformational leadership tactics. Everything depends on the environment.

FULL-RANGE MODEL: from laissez-faire to transformational leader (Avolio and Bass 1991)



From bottom left to top right:
If you are a passive leader, you can be ineffective. The situation can work, but it is not working: **laissez faire**.
The more you change your style, the more you become active and the more you become effective: moving from transactional to transformational leadership (individualized consideration, …)

IS LEADERSHIP ONLY VERTICAL? No, it is also horizontal.

SHARED LEADERSHIP

Shared leadership is a **dynamic, interactive influence process** among individuals in **groups** in which people share responsibility for leading. It involves *peer, or lateral, influence* and upward/downward hierarchical influence.
Shared Leadership occurs:

- Self-managed teams
- Group of people working on task or projects requiring interdependence and creativity
- Often in executive boards

It requires:

- A leader above who empowers, enables, creates the condition for the team to be self managed/lead
- Team design, on boarding, training and development

The leader is always the leader and the follower always the follower?
Video: The power of shared leadership: gooses rotate the leader.

In some cases, you need a leader with a set of followers, but for example in a football team, everyone is following the same person? It's better to follower the best player with the best performance according to the situation.

ETHIC LEADERSHIP DOES SUCH A THING EXIST?

It is possible that a leader does something not correct?
First of all, what is **ETHICS**?
Ethical behaviour reflects a value system that grows out of a coherent view of the world, based on equity, justice, the needs and rights of others as well as oneself, a sense of obligation to others and to the society, and the legitimate needs and standards of the society
A practical definition:

- Kid on Your Shoulder: Would you do it if your kids were watching?
- Front Page of the Newspaper: Would you like to see it published on page 1 of your local newspaper?
- Golden Rule: Would you be happy being on the receiving end of the decision or action?
- Rule of universality: Would it be okay if everyone did it?

WHEN IS THE LAST TIME YOU SERVED SOMEONE?

Serving is a noble thing, not only slaves do it.

Video: Patch Adams

He is convinced he is doing the right thing, even if he is doing something against the law. He cannot build an hospital in a house and treat people as patients, laws have been created to support the society and to protect people, to be sure that only trained and prepared people as doctors can take care of patients.
Is there any good reason to go against the law? Is it this acceptable? NO

- Laws change, so going against them is the only way to show that they are not anymore valid and they should be updated. In this way we can go on behaving this way, without breaking rules.
  → Different perspective: YES
- He does not accept rules and he wants to be a doctor, but there are people like him believing in a set of values they have, even going against people who believe in rules.

The more transactional you are, the more you believe rules cannot be broken, but you put effort in creating a new system without breaking rules.

Video: Gandhi

1. Gandhi is serving THE to everyone. He wants to embarrass everyone who treats people as a slave, included the most influential people of India at that time
2. He just gives the idea, leaving them to understanding it, to understand the full power of the idea. Everyone of them is looking to the idea in a different way, with different eyes and thinking: for someone it is a revolution and for others it is something relevant for newspapers.

→ The connection point between Gandhi and Patch Adams clips is one word said by both of them: they want to SERVE PEOPLE. They both want to do something for people beyond their own interest.
Gandhi was very rich and he had the power in its hands, so he was already on the powerful side and he used it to serve people.

SERVANT LEADERSHIP

Leaders put other people in front of them, thinking before about them instead of themselves.

GREENLEAF (1972)

"This is my thesis: **caring** for persons, the more able and the less able serving each other, is the rock upon which a good society is built. Whereas, until recently, caring was largely person to person, now most of it is mediated through institutions – often large, complex, powerful, impersonal; not always competent; sometimes corrupt. If a better society is to be built, one that is more just and more loving, one that provides greater creative opportunity for its people, then the most open course is to raise both the **capacity to serve** and the very **performance as servant** of existing major institutions by new regenerative forces operating within them.

SAMUEL PALMISANO

Over the course of my IBM career I've observed many CEOs, heads of state, and others in positions of great authority. I've noticed that some of the most effective leaders don't make themselves the centre of attention. They are respectful. They listen. This is an appealing personal quality, but it's also an effective leadership attribute. Their selflessness makes the people around them comfortable. People open up, speak up, contribute.
They give those leaders their very best.

BIBLE

And Jesus called them to him and said to them, "You know that those who are considered rulers of the Gentiles lord it over them, and their great ones exercise authority over them. But it shall not be so among you. But whoever would be great among you must be your servant, and whoever would be first among you must be slave of all. For even the Son of Man came not to be served but to serve, and to give his life as a ransom for many.

Mark 10:42-45

WRAP-UP

- What is leadership? Leadership vs Management
- Leadership Functions
- Leadership Traits (and big 5 personality dimensions)
- Leadership Behaviours (Managerial Grid)
- The role of followers
- Situational leadership
- Transactional leadership
- Transformational leadership
- Shared leadership
- Servant leadership

21/3/16

INNOVATION STRATEGIES AND THEORIES

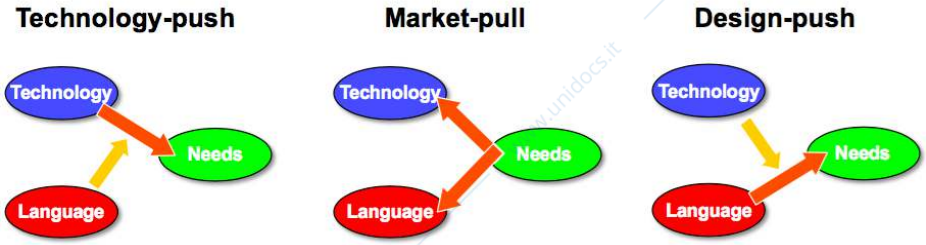
Why people buying collars like this? Why companies offer collars like this? 1.8 million collar for a dog.
Service and products do not have only functions and performances. Every single product talks to people in different ways.

This product is telling something to you, even if you do not know it, you imagine something. This was meant not to speak in a clear way, but to tell people something else (it is colourful, plastic): it is a toilet brush!

NB) In English products means both products and services. Good is only a product.

INNOVATION STRATEGIES

There are three different strategies towards innovation:



- Technology-push approach: Process driven by **scientific or technological competencies**. Product/process innovation that typically revolve around the **physical attributes** of the product. When technology is pushing the innovation you can propose to customers something which they do not expect.
  EX) The first smartphone of Motorola was a technology push innovation, because no one knew it before and it had a very innovative technology. The internet, the rubber and the GPS navigator system are the same.
- Market-pull approach: Innovations that typically involve **the way in which the product is commercialized** in terms of organization, distribution and/or advertising:
  • Product presentation
  •Distribution channel innovations
  •Incremental product performance innovations
  • Sales process innovations
  In this case the starting point for innovation are customers, we need to know them, understand their needs and adapt innovation to their requirements. For example, customers asked for new functionalities like the light on smartphones. Light already existed, but it was adapted to smartphones.
- Design-push approach: Process **driven socio-cultural and semantic competencies**. Product/process innovation that typically revolve around **intangible attributes** of the product. In this case, you are proposing new solutions to customers, even if you do not know if they are going to work or not. You can even do not know customers to innovate.
  EX) Steve Jobs developed the MacBook Air which is very thin without the DVD writer. He didn't know what would have been customers' reaction.

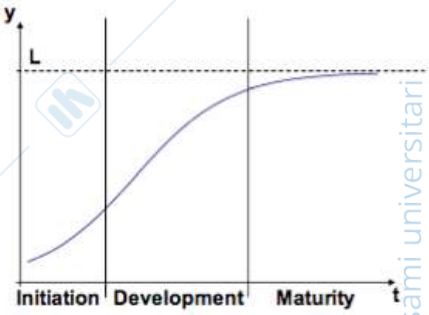
→ In the literature the first two were the only approaches used for innovation. Probably, there is also a new option (Prof of Polimi invented it). We can innovate also "*why people buy products*", not only performances and functions.
EX) Waze: tool offering a service to go from a place to another one we do not know. There is a problem even if you already know were you are going: TRAFFIC. The system provides the fastest path to get to the destination, so you need to have it ready always to be updated.

TECHNOLOGY PUSH APPROACH

DOSI in 1982 defined technology as "... a set of practical and theoretical knowledge, Know-how, methods, procedures, success and failure experiences and, obviously, of physical assets and machineries..."
→ very broad view of technology
ZELENY in 1982 defined technology as "a set of hardware, software, brainware and their sustain network"
→ technology is not the hardware part, but how we create and we put things together.

A MODEL FOR TECHNOLOGY INNOVATION: S-SHAPE CURVES

Technology have an S-shape curve that represents the time based evolution of a single parameter of a technology.



HP:

- Limited growth (L): technology cannot evolve forever; at a certain point it reaches a limit which you cannot overcome (EX: there is a physical limit for example for airplanes which cannot go faster than the speed of sound)
- 3 phases
- Constant innovation effort (b): every single moment of time we will have the same effort in improving the technology. We assume that the effort for the unit of time is constant. The improvement is reached thanks to constant investments.

$$\frac{dy}{dt} = b \cdot y \cdot \left(1 - \frac{y}{L}\right) \quad \Rightarrow \quad y = \frac{L}{1 + a \cdot e^{-b \cdot t}}$$

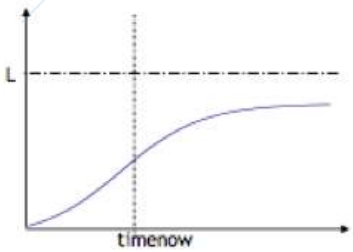
Considerations:

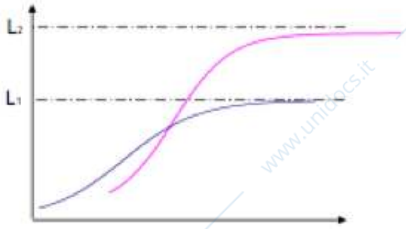
- When you start a new technology, you do not know anything about the technology and improving something that you do not know is very difficult. Only when you know it you can improve it. The more we learn the more we can improve it.
- There is a technical limit: the more we are near the technical limit, the more is difficult to improve it (when the right side of the left formula tends to zero). Improving is very difficult. The integration of the left formula provides an S shape curve with the formula on the right (y=…).

DEVELOPMENT STAGE OF A TECHNOLOGY AND INVESTMENT POLICY

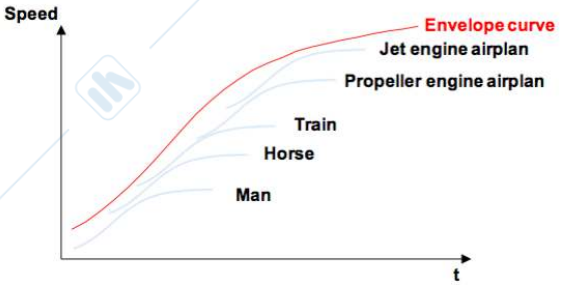
It is worth to invest more money on it or it is time to change it? At the beginning or in the middle of the development stage it is better to stay with the already existing technology, while in the maturity phase it is better to put money on a new technology which can grow faster without losing money.
If we have the perception to be in the beginning phase or in the maturity phase we would take different decisions about investments. But we do not know where the technological limit (L) is, in the developing or in the maturity stage? It is very difficult to identify it. We need to understand when it is time to jump in a new technology: technology switch.

MEDIUM PERIOD

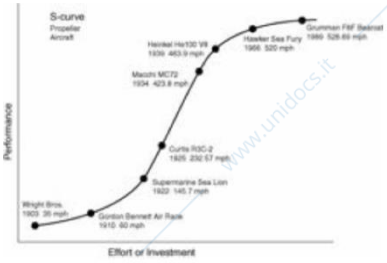




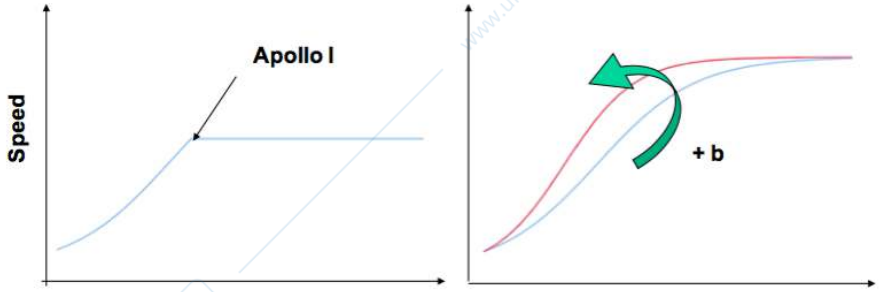
LONG PERIOD



EXAMPLE:

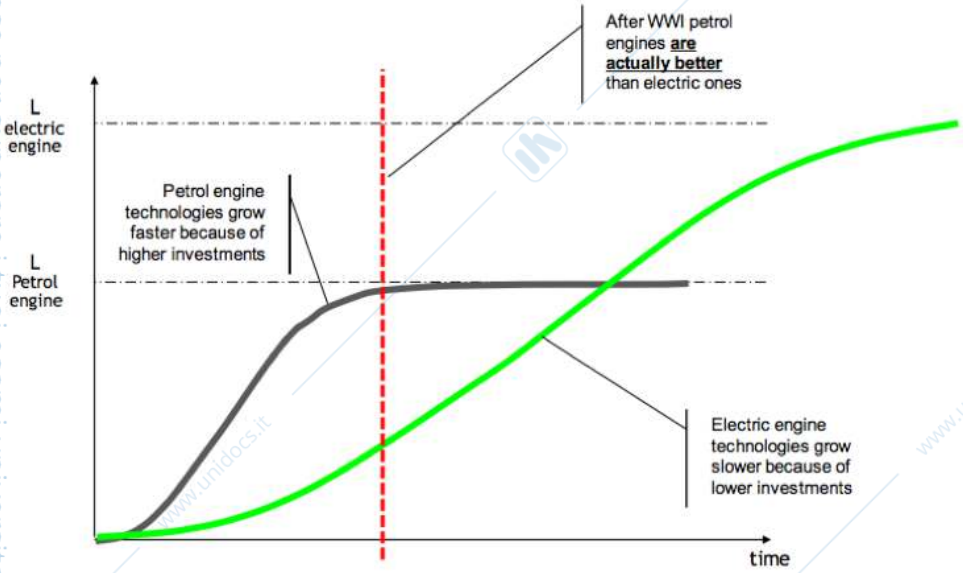


LIMITS



We assumed so far that the b parameter is constant.
The technology of an engine grew up until the Apollo I mission. Then NASA developed a new engine to reach the moon, so they decided to stop investing on the improvement of it: the technology stopped growing.
On the horizontal axis we have the quantity of the effort/investment used for the investment in the technology and in the vertical axis we have the performance.

EX) Tesla car video: electric vs petrol engine in automotive
The idea of a car being powered by a battery is nothing new. In fact, the first model of this type was invented way back in the **1830s**, and the first one to be made commercially available, complete with rechargeable batteries and all, hit the market in **1881**. So what happened?
Following the end of World War I, it was believed petrol cars were more reliable, **especially with the improvements being made to the internal combustion engine at the time**. Couple that with the fact that petrol was more available at the time and highway infrastructures were rapidly expanding, the electric vehicle quickly fell out of favour with the consumer.



The technical limit of electrical engine is very high, higher than petrol one.

Electric engine went slow because no one invested in it. Petrol engines grew faster because of high level of investments: in the past petrol was better so they invested in it, even if electric ones had more potentials.

Video: Games theory: there are some case in which we are sure to have the best technology, but this is not the most important thing. At the beginning we do not know what is the technological limit and which technology is the best.
If there are many companies investing in the same technology (different from ours), even if it is not the best one, it is more important to be with them investing on the same technology, instead of being alone investing on the one we think is correct. The risk is that, even though we identify that the technological limit of our technology is the highest, so our technology is the best one, if everyone else is investing in something else, they will go faster then us.
This is really connected with Game theory: in some case we should take decisions even that at the end they do not give us the maximum payback, but the *possible* payback. We should convince others to follow us or not.

INNOVATIVE MARKETS DYNAMICS
- Technology push, market pull innovation
- Product, process innovation
- Radical, incremental innovation

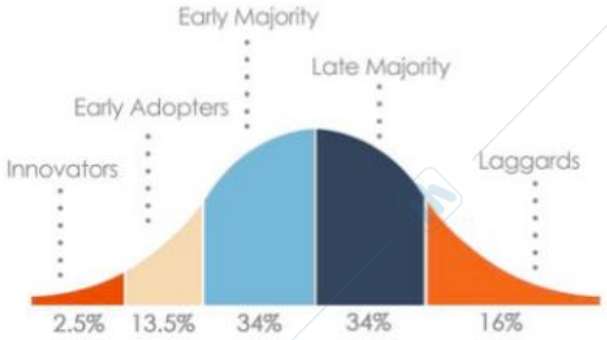
How do they interact?
Once we know the S-shape curve, what is happening in a market with technological discontinuities?

EXAMPLE: Typewriter case

- 1866 Mr Sholes (a mechanical Engineer form Milwaukee) creates the first TYPEWRITER by combining (brokering) existing technologies:
  - Forward movement (one step for each pressed key): from watches
  - Back movement leverage: from sewing machines
  - Keyboard: from telegraphs
  - Hammer mechanical movements for printing each letter: from Pianoforte
  - Bracci con lettere: da pianoforte
- **1873: Remington** (weapon producer looking for diversifying) buys the exclusive licence
- **1874: Remington N1**
  - Hammers hit the paper inside the typewriter body
  - Only upper-case letters
  - Hard to use (75 words/min., handwriting 30 words/min., stenography 70 words/min.)
  - 4000 units sold
- **1878: Remington N2**: the only big innovation was the fat that it has upper and lower case letters
  - Upper and Lower case letters (shift key)
  - 100.000 units sold

Poll: Why Remington N2 was more successful the Remington N1?
Because innovation was limited and the market started to know and appreciate it later.

ROGERS DIFFUSION OF INNOVATION



- Innovators: Innovators are willing to take risks, have the **highest social status**, have financial liquidity, are social and have closest contact to scientific sources and interaction with other innovators. Their risk tolerance allows them to adopt technologies that may ultimately fail. Financial resources help absorb these failures.
- Early adopters: these individuals have the **highest degree of opinion leadership** among the adopter categories. Early adopters have a higher social status, financial liquidity, advanced education and are more socially forward than late adopters. **They are more discreet in adoption choices than innovators**. They use judicious choice of adoption to help them maintain a central communication position.
  Those who do not know what it is, but they are curious, they want it to show it and they are able to change people's mind and influence them
- Early majority: They adopt an innovation after a varying degree of time that is significantly longer than the innovators and early adopters. **Early Majority have above average social status**, contact with early adopters and **seldom hold positions of opinion leadership** in a system.
- Late majority: They adopt an innovation after the average participant. These **individuals approach an innovation with a high degree of scepticism** and after the majority of society has adopted the innovation. Late Majority are typically sceptical about an innovation, have below average social status, little financial liquidity, in contact with others in late majority and early majority and little opinion leadership.
- Laggards: They are the last to adopt an innovation. Unlike some of the previous categories, **individuals in this category show little to no opinion leadership.** These individuals typically have an aversion to change-agents. Laggards typically tend to be focused on "traditions", lowest social status, lowest financial liquidity, oldest among adopters, and in contact with only family and close friends.

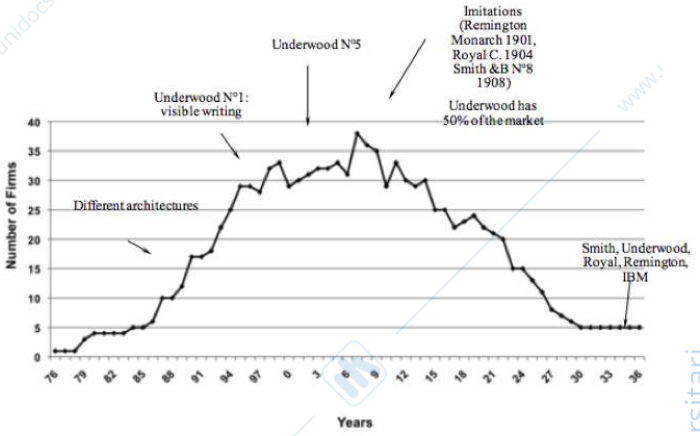
There is always someone proposing alternatives!!!

→ We never see the full impact of something in the market until the large majority adopts the innovation.

COMPETITION

Other companies started proposing different types of writing machines with different architectures.

There is an inversion in the trend. After a certain point, where you reach the highest number of companies present in the market, the number diminish, which means that something happened. We should search the reason of the discontinuity some years before, because the moment in which there is discontinuity is not the moment in which the cause of the discontinuity takes place.



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DOMINANT DESIGN - technological discontinuities and its effects in markets

EX) Underwood N5

At a certain point, in the US market there were many companies producing many different typewriter machines with different architecture (components linked and interacting in a certain way) to answer the same need. This happens also in many other industries, like automotive industry.

At a certain point, we identified the winning architecture in the market: Underwood N5. This is not a simple typewriter machine, but **the** typewriter machine. The market was saturated and when they released this product, this became the **DOMINANT DESIGN;** out of many proposals, the market chose this.

If companies didn't release a typewriter with the same architecture of the DD, they would have gone out of the market.

The relevant question is how to build a dominant design or what are the characteristics to identify a dominant design?

Characteristics:

1. QWERTY Keyboard (Remington) STANDARD
   → **Locked in effect**: what is the cause effect relationship? Once the Underwood N5 became the dominant design, then the qwerty keyboard became the standard. It won not for the qwerty keyboard, but the keyboard became standard because Underwood N5 won. If you win you can impose standards.
2. Hammer mechanical movement (copy from Remington N 1)
3. Upper/lower case letters and Shift key (copy from Remington N 2)
4. Visible writing (innovation of Underwood N 5)
5. Tab key (innovation of Underwood N 5)

All those characteristics are not enough to fully explain why this typewriter machine is a dominant design.

The DOMINANT DESIGN is the architecture winning on the market:

- Winning architecture able to **summarize innovations introduced by previous products:** by looking at different examples of DD in the history, we discover that they were very incredible innovations.
  They were able to take and put together what was good in many different solutions, but it is not only a matter of understanding what is good in other products, but also to understand what is really needed by users. In most cases it was mostly a process od *rationalization of existing solutions*.
  Another important point is that, in many cases the DD is generated starting from a very essential approach to the product: very disruptive things are understood by just few people and not by the mass, so companies need to avoid them to have get a DD. They need to focus only on good ideas and put them together, to offer simple and immediate comprehensible goods for the majority of customers.

  EX) Google: if we go back to the time when Google arrived in the market, all other products were completely different. There were search engines in websites that offered also other services. For example, MyYahoo was able to recognize the computer of the user, so people were able to customize their own website: they wanted to provide customers the more information possible.
  Google was completely different, because it provided only a white page with the search box: they understood people wanted to search for information where they want to find them. They simplified the system.

EX) iPod: there is no radio inside, because otherwise the product wouldn't be innovative. It is a very simple device with a very clear communication to customers in the market.

- **Archetype of the product** in both the designer and the user imagination:
  DRAW A NEW CAR: a car with 8 wheels instead of 4. It's easy to identify that this is a car, but when we have to develop new idea we always start from the dominant design, the archetype we are used to see around us.
- It gives an answer to the need of a **large number of people:** it is more challenging and complex to do product for the mass instead of a niche of customers, only in this way companies can win.
- It **reduces the number of requirements** to be satisfied
- It may imply **constraints**: the characteristics of the previous DD
- It normally **freezes the socio-economic context**: once a DD is present in the market, is very difficult for small companies to grow against these incumbent companies, with a lot of market share and power. Once it is clear what the market wants, there will always be incumbents and companies which are not able to reach their level. In conclusion, there are only few companies with DD.

HOW DOES THE DD EMERGE

It comes from:

- Different technology opportunities (different architectures)
- Hardly one outperforms the others along each possible performance

How can we predict DD?
It's not all about the product/service: you might have the best products and you might not win on the market. If the product is not providing good quality and features you will obviously lose, but it is not enough to have a perfect product to win. There are 3 main drivers that help a good product to become a DD:

1. Complementary assets: distribution, brand, services, capacity → There are some assets that are needed to innovate.
2. Strategic Manoeuvring: you need to have a strategy to win on the market, keep the positioning and defend it. → EX) Beta and VHS
3. Better understand of the customer needs: one of the main reasons why Americans loved VHS is the fact that they could change the quality of the video (increasing or reducing it). Their main need was having a VHS lasting many hours to record the SuperBowl: they were not concerned with the quality but more with the duration. The same did Google, which understood what customers wanted.
4. Rules and laws: you can push governments in promoting a technology instead of another.

Example: Beta vs VHS
They are two standards: VHS was invented by JVC and Beta by Sony. VHS won in the market.
HP:

- The video quality was higher in Beta than VHS. VHS never matched the standard quality of Beta: from a technical point of view Beta was better.
- Sony arrived after JVC, so VHS didn't come before Beta and we do not clearly understand why it has lower quality.
- Sony had a very better market penetration, thanks to the huge distribution channel and its brand reputation in consumer electronics

So why VHS won?

- Network externalities: the number of connections in a network is connected with the value of the tool.
- VHS was not asking for royalties, while Beta yes:

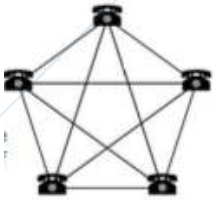
VHS strategy main idea was to look around in the market, offering its technology for free to other companies. Sony would have never done this because it wanted to win in the market, so it asked for royalties: companies would have had to pay to use Beta, while not to use VHS. It happened that VHS was provided by different companies with lower price and people started using it in a very diffused way. After a while, the mass of people started buying it.
At a certain point, every customer who needed to evaluate these two choices took into account not only performances and functions, but also connections (how to interchange products with someone else).

NETWORKS EFEFCTS IN TECHNOLGY BASED INNOVATION

Metcalfe's Law

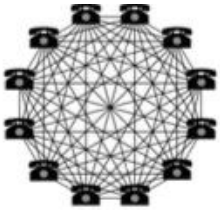
Number of unique connections = n*(n-1)/2

Network Externalities



Network externalities are the effects on a user of a product or service of others using the same or compatible products or services. Positive network externalities exist if the benefits are an increasing function of the number of other users.

- What could do a person with a phone if he is the only one having it? The more people have phones, the higher is the value of phones.



Lock-in effect

When the cost for switching is higher than the benefit.
You start working on different networks and at a certain point one platform becomes better then the others and the market goes in that direction, where that platform becomes the DD. The value of the network becomes even higher then the benefit provided by the product itself.
Even if you provide something perfect to the market, the cost for changing it is too high.
EX) Keynote:

- You need to learn how to use it
- Your previous files might not be compatible with the system
- Many other reason for which the switching costs are very high.

EX) Petrol cars: the switching cost is too high to start using electric cars. We already have a lot of gas stations around the world, while electricity recharging stations are only few.

Critical mass-bandwagon effect

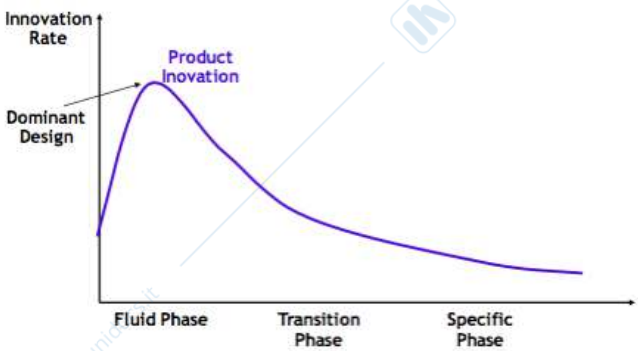
<u>When the benefit from externalities outperforms the benefit from product usage.</u>
Given that, the utility function is equal to *features, functionalities and performances of the product + benefits in accessing a network*, at a certain point if too many people are in a network and only few in the another one, the presence of more people is more influent in a decision making process: people would choose the product linked with more populated network, because the benefits of the network are more important those of the features.
→ This is the way VHS won over Sony.
→ Windows and Macintosh: how did Windows won? It was not the best operating system, but they opened their platform allowing many other people to build software on their operating system, increasing the perceived value for consumers. They offered many more applications. On the contrary, Macintosh allows to work only on its own applications provided by Apple, and anyone who would have bought it wouldn't share anything with anyone else.
There is value in the network.

INNOVATION DYNAMICS: **Abernathy - Utterback**

Abernathy - Utterback are famous writers and researches about innovation. They identified three main phase in a technology based market with technological discontinuities.

PRODUCT INNOVATION:

1. **Fluid phase:** very high rate of product innovation. Different companies propose different architectures on the market. They all want to be the DD.
2. **Transition phase:** the degree of innovation of products is lower, because people not continuously try to change, but they start developing more or less the same products, respecting what the market is asking for.



EX) Today cars are almost all the same, within the same market segments. The same innovation is provided them by the same company, like Bosch.
The most important things customers look at to make their choice is <u>PRICE</u>. If at the beginning the options are different and hardly comparable, now products are more or less the same, so customers can compare them using only pri--

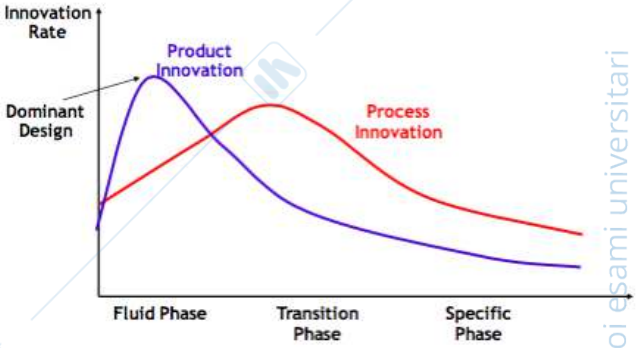
3. **Specific phase:** in this phase products are the same, like gasoline. The most important innovation introduced in petrol stations was fidelity cards: this affects customers' choice.

DD for airplanes

DD for mouse

PROCESS INNOVATION (production process):

1. **Fluid phase:** companies do not invest a lot, proposing something they are not sure it will work.
2. **Transition phase:** customers consider the <u>PRICE</u>, so here there is the peak of the curve, where companies invest a lot to offer the product on the market with the lowest price possible.

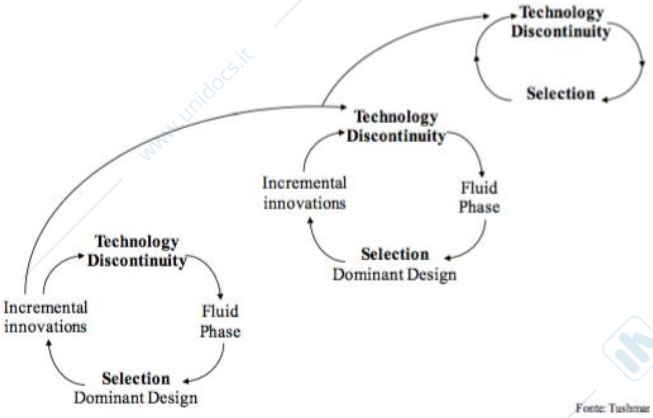


INNOVATION AND COMPETITION DYNAMICS

	Fluid Phase	Transition Phase	Specific Phase
Product	Different architectures	Dominant Design	Standard products
Process	Qualified Manpower, general purpose equipment	More rigid equipment	Unskilled manpower and automated equipment
Organization	Organic	Projects, Teams	Hierarchical based
Competition	Functions and performances	Performances, customization, price	Price
Competitors	Many SMEs	Concentration	Oligopoly
Innovation	Radical on products	Radical on Processes	Incremental
Innovation surces	New Entrants and lead Users	Firms and users	suppliers

Organic: in term of start-up
Suppliers are the main source of innovation: the price depends strictly on production costs

CYCLIC MODEL FOR INNOVATION



Fonte: Tushman

They said that once there is a technological discontinuity, companies should start again

<u>Innovations introduced after technological discontinuities:</u>
established companies were not able to manage the situation after a technological discontinuity. They became incumbent and they were overcome by new incumbents. They didn't identify that this cycle can be repeated ad infinitum

- Valve (RCA, GE, Philco)
- Transistor (Motorola, Fairchild, TI): none of the former top ten
- Processors (Intel, AMD, STM)

- Type writers: Remington (weapon)
- Electric Typewriter: IBM (No Remington)
- PC: Apple (No IBM)

Poll: Why is it difficult for incumbent firms to react to technological discontinuities?

INCUMBENT CURSE

WHY ARE RADICAL INNOVATIONS SO DIFFICULT FOR THE INCUMBENTS?

- Marginal Costs (path dependency): once you are on a S shape curve, doing just one more step in it is not so expensive, while to rebuild the solution for another innovation (building a completely new curve) is more expensive. But companies do not fully understand the risk they are taking.
  Companies usually do this only when they see that something is happening (for example if customers prefer a new technology), but it is too late, because they put inertia in a situation where the risk they are facing is very big. They should be able to listen weak signals:
  - Strong signals: customers say they don't like the product
  - Weak signals: companies are able to react or invest in new technologies.
    EX) Microsoft survived because invested in every new technology, without bearing any risk.
- Uncertainty about feasibility and profits: if you stay on your curve you know what you are doing, otherwise you will have higher risk and uncertainty
- Over estimation of the technology potential (technology Myopia): you know so well your technology and you might not see clearly that you are already at the end of the curve, so you are not able to see far enough. When companies do not know where the technical limit is, they tend to overestimate it and even if they have many ideas, they do not see that there is enough space for improvement. This is the reason why companies have a lot of difficulties in jumping from a technology to another.
- Innovation implies change management: routines and ways we are doing this, must be changed.

INCUMBENT REACTION: **Olivetti vs. Wang example**

WANG Lab – Wang 1200 Word Processor (1974)

In 1974, Koplow's interface program was developed into the Wang 1200 Word Processor, an IBM Selectric- based text-storage device. The operator of this machine typed text on a conventional IBM Selectric; when the Return key was pressed, the line of text was stored on a cassette tape. One cassette held roughly 20 pages of text, and could be "played back" (i.e., the text retrieved) by printing the contents on continuous-form paper in the 1200 typewriter's "print" mode. The stored text could also be edited, using keys on a simple, six-key array. Basic editing functions included Insert, Delete, Skip (character, line), and so on.

→ They invented the first World processor.

OLIVETTI ET3500 (1988)

In 1978 Olivetti (one of the most influential company around the world) was one of the first manufacturers to introduce electronic daisywheel printer-based word processing machines called TES 401 and TES 501. Later the ET series typewriters without (or with) LCD and different levels of text editing capabilities were popular in offices.
In **1988** Olivetti released the **last and most advanced electronic typewriting machine named ET 2500**

→ Olivetti is a clear example of not being able to jump in a new technology: they remained in their curve without sustaining innovation.

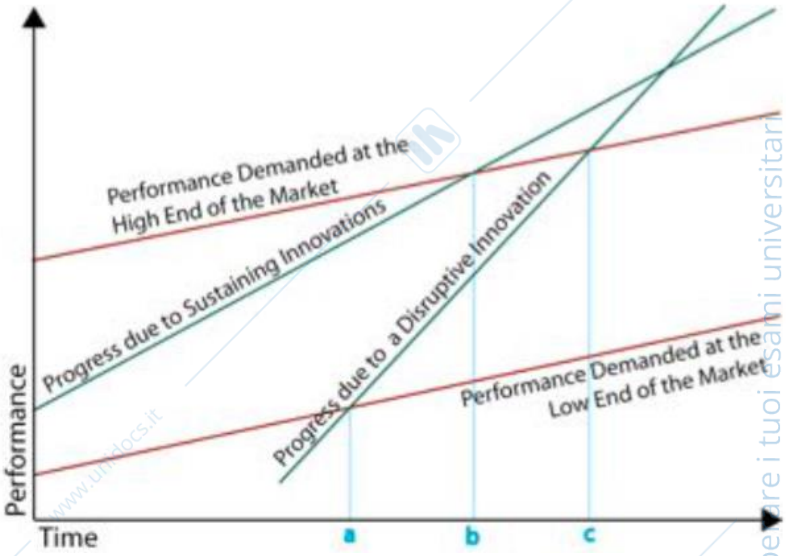
DISRUPTIVE TECHNOLOGIES - Christensen and Rosembloom, 1995

Example: At the beginning the 14" disk drives dominated the market, thanks to their large storage for mainframe computers and because they could hold a lot of data (by today's standards). Then the technology went very fast and in few years the market was dominated by 8-, 5.25-, 3.5-, 2.5-, 1.8- and 1-inch HDDs.
This is not the case of a single technology moving along the curve, but we are considering different technologies coming from different companies.
It happened that the 8" disk drive was based on a similar technology, architecture and company's organization capabilities of the previous one, but why companies that dominated 14" market failed to transition to 8" market?
Because it was considered as inferior: their customers (*mainframe computer makers*) had no interest in the 8" because it had less storage capacity, even if it was better in term of physical dimension than the previous version.
Companies decided not to invest in it, because customers were no interested in it. Otherwise, someone found an emerging second/poorer/smaller market interested in this technology: *mini computer makers* which needed a product with smaller dimension, cheaper, even with lower performances.
Overtime, the 8" drives developed all the storage capacity of 14" drives, and drove them out of the market
→ The main idea is to start in a secondary market and then grow very fast to reach and win in the main market.

5.25"

The story is the same, because the 8" players missed the transition. 5.25" drives lacked the capacity of 8" drives, viewed as inferior (in terms of storage). Because minicomputer makers were not interested in buying these, the established disk drive suppliers were not interested in making them. However, there WAS a market: the *new PC makers* wanted 5.25" disk drives because they were smaller and new suppliers entered to fill the needs of that market. Eventually, the 5.25" drives improved enough so that their capacity matched and surpassed 8" drives.

→ The main idea is to start in a secondary market and then grow very fast to reach and win in the main market.

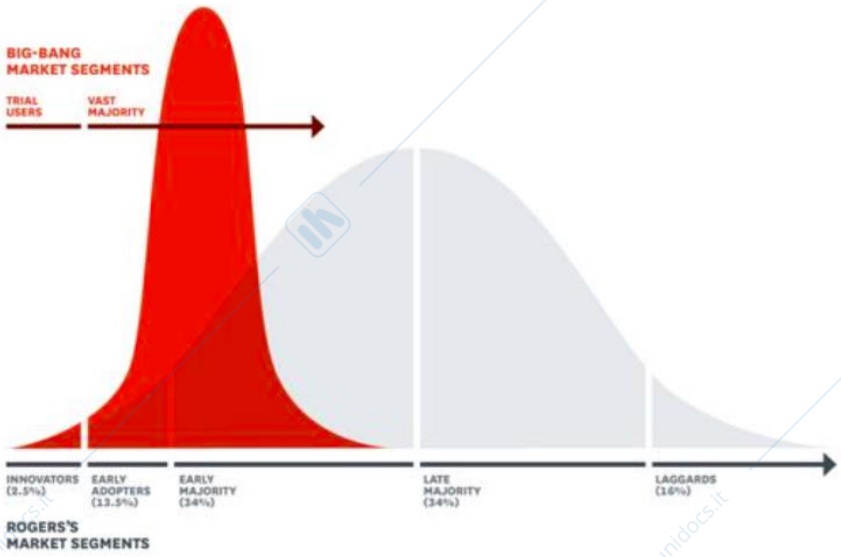


The **normal technology** progress is due to sustaining innovations and it grows fast enough to maintain itself within the boundaries of the market demand or to improve faster than the demand.
But sometimes we can find a new technology, **disruptive technology**, which is not able to satisfy the market demand at the beginning, so we would never invest in it. But this technology could also find a parallel market, maybe not as interesting as the main one, with slightly different needs. According to this market this technology may be suitable. If we are able to find a market where it is more important what our technology gains than what it looses, we should be interested in it, investing in this technology and growing along the curve thanks to disruptive innovations, probably discovering that this technology grows faster then the others of the main market and it is also able to disrupt them.

BIG BANG DISRUPTION – Downes and Nunes, 2015)

In 2015, the disruption thing seems quite slow, due to the time needed to go through it. Today, we see that there are many disruptions, but they are all like Big Bang, very fast and with no time for reaction.
Examples:

1. *"An ad-supported version of the game Angry Birds was downloaded over a million times in the first 24 hours it was available on Android devices"*
2. *"Upstart products and services in a slew of industries have likewise grown fast enough to leave incumbents gasping. Consider **CampusBookRentals** and **Khan Academy** in education, **Pandora** and **Spotify** in radio and recorded music, **Skype** and **FaceTime** in voice and video calling"*
3. *"Food and Cars can't be replaced by smartphone apps. But restaurants now depend on online reservations, customer-generated reviews, coupons delivered through mobile devices, and location-based services to drive business"*



The time needed in the past for disruptive technologies was accounted in years, while now for Big Bang disruptions we use hours. There is a catalyst which is accelerating the process in an incredible way.

The catalyst is **INFORMATION**: the more you are able to spread effectively the information, which goes around rapidly, the more "early adopters" you will have. The effect is that all information we have are compressing the time.

CONVENTIONAL WISDOM		BIG BANG WISDOM
Focus on only one strategic "discipline" or "generic strategy"—low cost, premium product, or customer intimacy.	STRATEGY	Compete on all strategic dimensions at once. Enter the market better, cheaper and customized; innovate constantly.
First target a small group of early adopters and later enter the mainstream market.	MARKETING	Market to all customer segments immediately, and be ready to scale up—and exit—swiftly.
Seek innovation in lower-cost, feature-poor technologies that meet the needs of underserved customer segments.	INNOVATION	Launch low-cost experiments directly into the market. Combine reusable components rather than designing from scratch.

Something: cheaper, faster and better
UNICORN: billion dollar start-ups. Many of them introduced something better, cheaper and more customized than before. All of a sudden someone was better in any performance than others.

Examples: **Tomtom, Garmin and Waze**
Tomtom in EU and Garmin in USA were offering portable navigation devices and they were expensive.
With the launch of Waze, for the first time customers didn't have to buy an hardware to have a portable navigation.
At a certain point, Tomtom and Garmin started to propose new solutions in the fluid phase: they created their own application, selling it for 100€ and then for free, adding new features not present in the device, which was not sold anymore.
→ Waze just understood that with the device the experience of customers was limited, while with apps they could be part of a community.

RECAP:
- S shaped curve
- Abernathy - Utterback
- Rogers diffusion of innovation
- DD – Dominant Design
- Standard wars
- Network externalities
- Lock-in phenomenon
- Bandwagon effect
- Incumbent curse
- Disruptive innovation
- Big-bang innovation

MARKET-PULL APPROACH

In this case the starting point are customers and not technology, the POV is different. In fact, market-pull approach is synonymous to a **user-centred approach to innovation.**

- Focused on analysing the current socio- cultural context
- Focused on understanding what the consumer wants from the products/services she purchases

*"Our market is people. **We therefore need to know what they want**. But asking them directly rarely works, because **they often have no idea what they want until they see and experience it.** That means we need to get information about them indirectly, particularly information about what they value. Rather than focus on products as such, we need to look at the wider context in which people use them"*

Stefano Marzano, CEO Philips Design

By asking people what they want, they answered with:

- Unfeasible, but cool ideas
- Feasible, but incremental ideas

From this perspective, innovation should be analysed using USER NEEDS ANALYSIS, but why?:

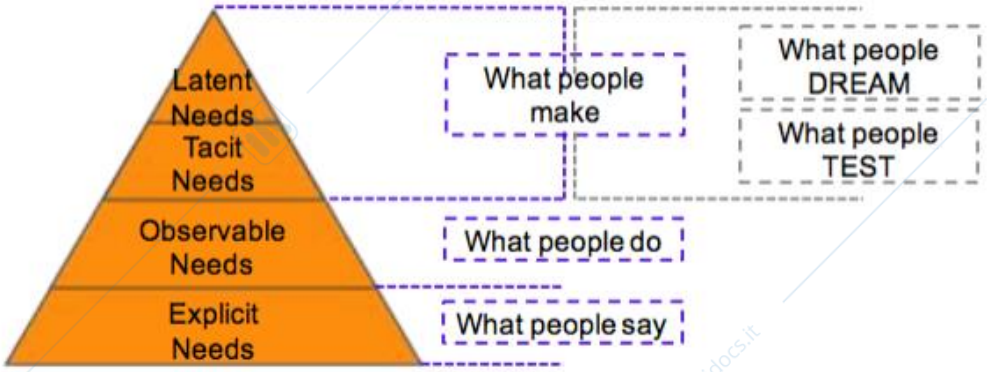
- To better understand the **current underlying context**
- To **reduce the uncertainties** inherent in the NPD process
- To better satisfy the **explicit and latent needs** of our consumer
- To **streamline and optimize the costs**, duration and quality of the **NPD process**
- To generate knowledge that will allow the company to survive in tomorrow's markets

Evaluating customer needs is a subtle process and even companies with elaborate processes in place to gather consumer input are not always successful. Why? What happens? Some <u>problems</u> are:

- The **information** that was accumulated: its quality
- The **methods** used to accumulate information: if people knows to be observed they may behave differently. Methodologies can interfere with the information collected
- How it was **translated** into product requirements: we should be able to translate needs in requirements, in a list of performances
- The **timing** of the user investigation: it takes time to take information to be put into products and sometimes they could be too old to be useful

THE COMPLEX CONTEXT OF A CONSUMER

If we want to understand things from people, we can listen what they say, see what they do and observe what they make. They are not exclusive approaches; we can mix them or use the separately.



Say	Do	Make
Questionnaires, focus groups, interviews	Ethnographic research	From applied ethnographic research to lead user analysis & beta testing

<u>LISTEN TO WHAT PEOPLE SAY</u>

Questionnaires

- Personal/Mail/Telephone interviews: the easiest way is to ask them what innovation they wan, but the main drawback is the fact that we collect millions of different answers. We could first propose them solutions and then observe what they prefer, doing like surveys.
- Choice is based on the type of information seek and the allocated budget
- Questionnaire design is fundamental to minimize biased information
    - Start with defining the sections of the questionnaire in order to:
        - Make rational trade-offs between the length and necessity of various sections
        - Ensure all necessary information is collected
        - Eliminate redundancy in the questionnaire
        - Construct a smooth flow of responses throughout the questionnaire
        - Check ordering requirements
    - Develop the questionnaire in order to maximize response rate and minimize information bias

- Pre-test the questionnaire with a sample group of experts
- Conduct a pre-analysis to identify if the data gathering and data analysis can be conducted as defined in the design of the questionnaire
- Issue the questionnaire to the chosen sample

But asking people about something that they can not use or try, makes very difficult to collect good information, because they will never be able to say if they really like it or not. The missing thing is the *customer experience*, linked with sensations and feelings connected. The quality of the information collected with questionnaires is only speculative and not based on experience.

Focus groups

It consists in giving to a group of people the opportunity to experiment the innovation. They are fundamentally different from quantitative surveys/questionnaire methods in their purposes, procedures and results.

Pro:

- the information collected is real, linked with sensations, so with very high quality

Con:

- the company is losing the volume of information: lower number of customers are taken into account (maybe only those who are really interested in it)
- usually customers are guests in a new context, different from the usual context of use, so this might interfere with the information collected. Not always valuable information collected.

Elements	Focus Group
Format	Group sessions
Size	8-12 participants per session
Lenght	1.5 to 2 hours
N° of sessions	Should be more than one to be representative
Participants	Selected by invitation only Should have similar characteristics
Forms of data	Conversations (including tone of voice) Silence (words and issues) Body language
Data Collection	Audio and videotapes AND transcribing
Moderator	Flexible yet focused with the use of an interview guide
Formats for Reporting	Selected quotes and statements Analysis of all report themes

<u>SEE WHAT PEOPLE DO</u>

Video: Amos Winter video and wheelchair for rural areas:

1. Engineering science + user-cantered design focusing on user feedback
2. Constraints push innovation
3. Stakeholder involvement in the product design

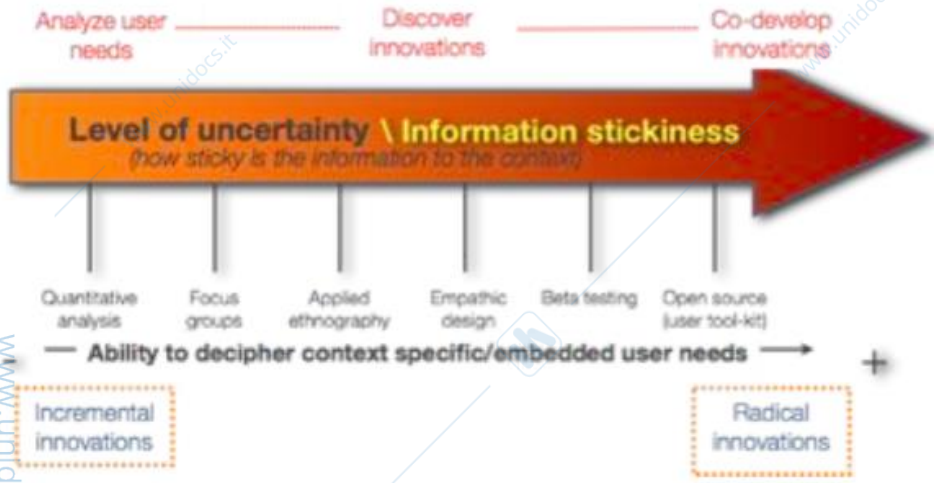
ETNOGRAPHY

- ⇨ Origins:
  - Rooted in the fields of anthropology and sociology
  - Based on naturalistic or participant observation or study of the native aspects of a culture (Organizations, point-of-sales, schools, airports, households can and should be thought of as culture and as such, can be studied through ethnography)
- ⇨ Characteristics:
  - The orientation of the ethnographer is to passively and subjectively observe a given context: the researcher must become part of the research situation
  - Objectives...not hypotheses: even though an ethnographic researcher needs only a general question as a starting point for an ethnographic study, he/she must be well versed and documented in the art and science of ethnographic observation
- ⇨ No statistics
- ⇨ Highly descriptive and qualitative data: interviews, artifacts, contextual descriptions and the triangulation of data
- ⇨ No desire to be generalizable: the strength of an ethnographic research is to be specific and detailed

It is a way of making a research by observing people in their own context, not simply asking them what they want. You can be the most incredible engineer in the world, but you need to be in direct contact with people to understand how to answer their needs. It is one of the main tools used to develop user-centred innovations.

<u>SEE WHAT PEOPLE MAKE</u>

There is a theory talking about the stickiness of information. It's difficult to open the brain of people and bring out information.



From left to right, the number of people we are analysing decreases because the analysis is more profound and we are devoting more attention on time to people: problem of generalization of results. We lose generalization, but we develop a more detailed analysis.

Empathic design: the best way to understand customer is to be the customer.

EX) **Patagonia**: all workers are potential customers of their products.
EX) **Tommy Hilfigher**: they put designers living in the Bronx because the main events tend to start there, so they should know what is going to happen before the others. They are more and more focused on a single user.
The right extreme is "do it yourself" in an **Open source**:
EX) **Nike iD:** possibility to personalize shoes starting from an existing model. This method avoids to understand what customers wants, letting them choosing freely.
EX) **3D printing**: manufacturing idea translated directly at customers' level

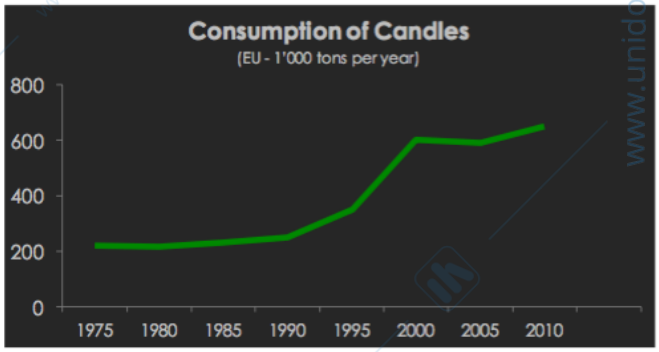
5/4/16

DESIGN – PUSH APPROACH

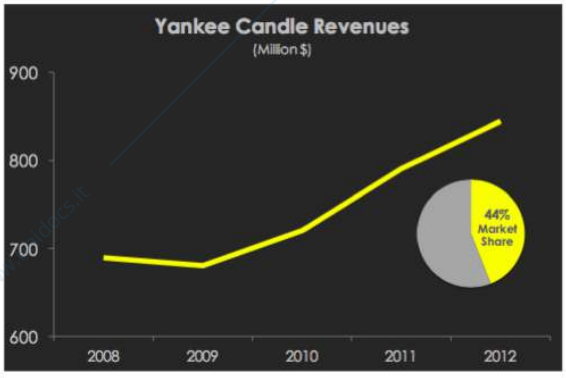
Push: it's you proposing something new to the market, through technology or design. You propose to a market you already know (needs and preferences).
Pull: the perspective is different, because you look at customers trying to understand their characteristics, so you follow the market.

→ Your house is burning and you have a chance to get inside and pick just one object. What would you pick? And Why? Phones and computers mainly. Why?

- It is a gift. We are *emotionally attached* to it.
- Because it is not easy to replace it (very expensive) and it is a functional product with a lot of documents and files. We are *functionally attached* to it.



Candles: the major reason we buy a candle is because we need light. The biggest producers of candles of the past, like PRICE'S, now are out of the market, because their products are not requested anymore. They went out of the market, but today the market is growing very fast. So why they went out?
Today we use candles not for light anymore, but to create an atmosphere in the room thanks to fragrances, which are present in many many variances.
New companies didn't change the solution, improving the existing performances or functionalities of candles, but only the reason why people buy candles. They even created stores selling only candles and their revenues grew a lot in the last period.



From the perspective of traditional chandlers, the candles made by the **Yankee Candle are a non-sense**.
The wax is typically contained inside a thick jar, covered by an outsized label. The flame is therefore often screened and non visible; definitely not the best solution for an illumination device

What makes their candles unique however is their *fragrance*, that is visibly depicted in the large label. Yankee Candle has more than 150 fragrances, ranging from traditional flower and fruits bouquets such as Jasmine or Apple, to mood and context inspired scents such as Summer Wish or Beach Walk, to more venturous twists such as Bacon and Riding Mower, targeted to men.

Why people buy candles?
It is not anymore a matter of light, but more a <u>matter of mood</u>.

It is pox to develop products and services that people love by creating an emotional attachment, surprising them somehow proposing something new. There is no technology at all. People buy it because companies change completely the **<u>meaning</u>** why they buy it.

Examples of products loved by people. How to create products and services that people love? People have feelings and they usually choose following them and not focusing on rational reasoning

INNOVATION OF MEANING: VALUE FOR PEOPLE

Meaning has 3 levels in its definition:

1. The thing, idea or feeling that a **sound, word, sign** represents (e.g., "the meaning of the word 'friendship'"):
   <u>Basic idea</u>: you can make a connection between a felling and a sound/word/sign.

2. The things or ideas that somebody wishes to **communicate** (e.g., "by offering you this gift I mean we are friends"), and the ideas that writers, artists, musicians try to express in their work (e.g. "the meaning of this song is about friendship"):
   <u>More complicated level:</u> words and sounds already known are used to communicate and send a message, proposing something. We need a matrix and a sort of code as a starting point to communicate a message which then is decoded by others. The decoding is not always simple (if I talk in Japanese it is not said that other understand me)

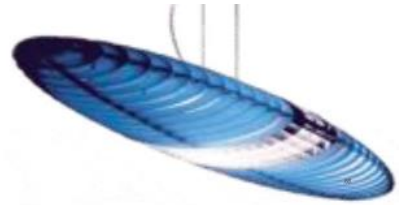
3. The special importance or **purpose** of something; the sense of purpose that makes you feel that your life is valuable (e.g. "friendship means a lot to me; friendship gives meaning to my life").

First level of meaning

EX) **ALESSI**: Italian designed products. Why people buy this kind of stuff? They want to show them to others. Design innovation is not all related to forms and colours.
EX) **KARTELL**: they started from plastic changing the meaning linked with it.
EX) **ZANOTTA**
EX) **EDRA:** Marilyn is the name of a sofa with lips form

"...Modern architecture has modified the logic of space within apartments. There is not anymore a central - square - room, acting as the center of the life in home. In each room we can today perform several actions. The dining room is simultaneously also a library, a kitchen, a studio. There is not a center anymore. Hence we decided to modify the typical spherical morphological code of several lamps, inherited by Gropius lamps.
<u>[...] We had the idea of designing an elliptical lamp, which would remove the sense of a central locus. [...]</u>
Then came the need to make the lamp to lose weight and become lighter. Hence the modern inspiration to the lamps of Mies van der Rohe, which reflects light through free spaces between blocks..."

Paolo Rizzatto. Founder and Designer, Luceplan



The way of thinking is based on the fact that the space around us is changing: now we have multifunctional spaces, where there are different areas with different functions.
→ They are talking to people through products.

"I express concepts not shapes. Drawings are not intrinsically beautiful or ugly but they just say in a correct and proper way what could be said by telephone, it happens to me many times"

Vico Magistretti, lecture all'Università di Genova, 12.02.2003

"A designer must be able to catch the essentiality of things. I often compare my work to Latin [a language!]. A design manufacture must be able to express a concept in a complete and precise way keeping it simple"

Vico Magistretti, Il Secolo XIX, 30.01.2003

→ **Every single product or service talks to us using words connected between each other to deliver a message.**

THE LANGUAGE AND THE SIGNS

- Form:
  - Topology: surface, form, texture, colour, contrasting interaction with the background, materials
  - Mereology: continuity, interruptions, holes, boundaries, hierarchies, dimensions, orientation
  - Morphology and Morphogenesis: reflection, aggregation, separation, transformation
- Name
- Functionalities
- Indexes
- Symbols, Codes
- Icons

SECOND LEVEL OF MEANING

We need to mix things together to communicate.

"The etymology of design goes back to the Latin: **de + signare** and means making something, distinguishing it by a sign, giving it significance, designating its relation to other things, owners, users or gods.
Based on this original meaning, one could say: **design is making sense (of things)**."

Klaus Krippendorff, Design Issues, 1989

Design is giving a meaning to things. Design functionalities and performances, means that we are able to use words to propose something to who is interested in our products.

Mini Sosia, by Ing. Castaldi Illuminazione (Based on Sosia, 1983)
Design - Bertoni, 1996

INDUSTRIAL PRODUCT: this is a simple metallic lamp, very functional to illuminate large spaces.

Bauhaus School of Arts and Crafts

The form must follow the function.

Bookworm, by Kartell
design Ron Arad

Language for Bookworm:
Book
Curve
Plastic
Colour
Not parallel lines

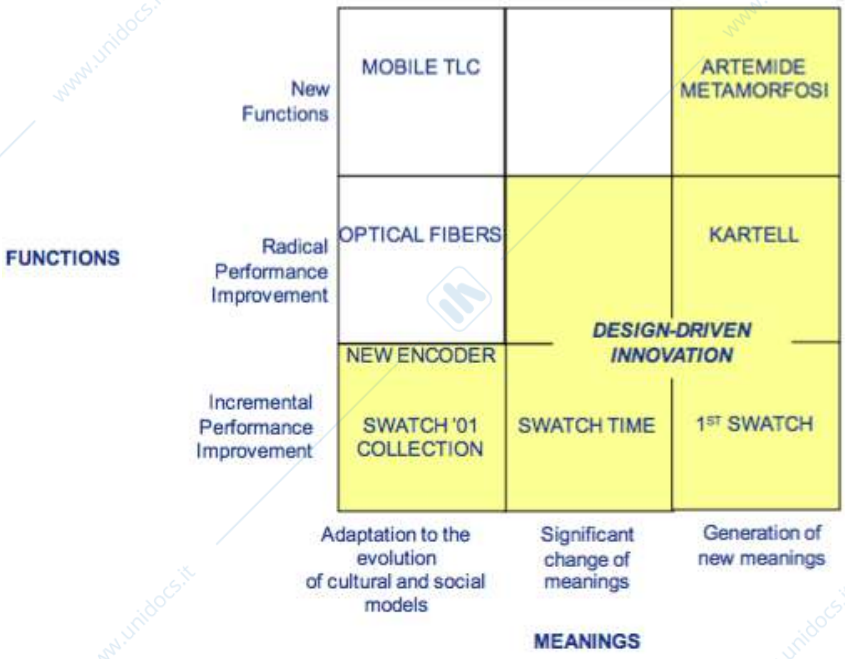
These are the things we see. We answered the wrong question: what is the message? What are the things we perceive? Creativity, movement, design. They are the result we want to obtain looking at it.

THE MESSAGES

We must be able to speak a language and communicate a meaning.

- Indications about the product:
  - Working principle
  - Performance
- Formal-aesthetical: beauty
- Symbolic: affective and expressive (about the user and its socio-cultural context): rituality, poetry, fancy and dreamy, individualism, ownership, gender, social status, paradox, irony, playful, wellbeing, conformism, membership, nationality, provocation

DESIGN – DRIVEN INNOVATION

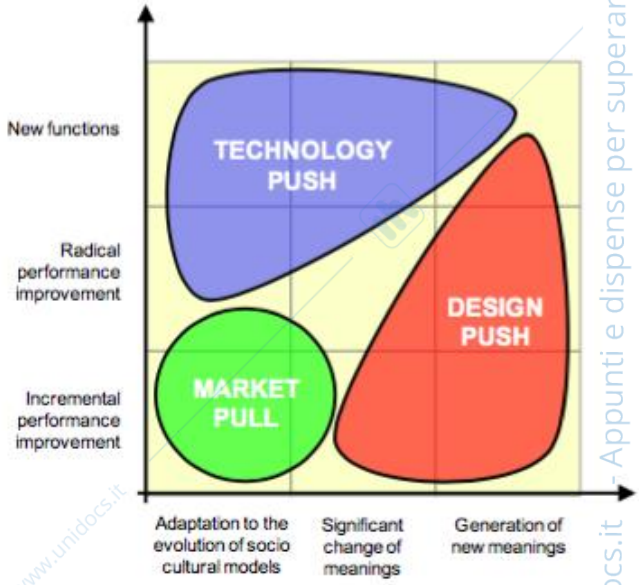


EX) **SWATCH**: at the beginning it was a generation of a new meaning with incremental performance improvement.
Why people wanted to buy a cheap product made of plastic instead of a Rolex? The same for bookworm.
The reason why it is known it is the fact that they related a completely new generation of meaning.

INNOVATION STRATEGIES

We can innovate the meaning (adaptation to socio cultural changes) and the functionalities (technologies).

- MARKET-PULL: they do not normally lead to innovation, because customers just say something different starting from current products and services.
  It is difficult to obtain a big innovation.
  You spend a lot of money and time to obtain a little and not so significant result, because you do not push something in the market.
- TECHNOLOGY PUSH
- DESIGN PUSH



ARTEMIDE: classic products

*Every market-oriented company has understood that **design is an advantage**. As a result, all companies can use it. Design must not only be the instrument that gives a nice form. Rather it must anticipate a need, proposing a vision*

Carlotta De Bevilacqua, Vision Group Artemide

In a moment of total disarray in the world of design, we decided to work not only on the object, but more so on light, in particular its colour.

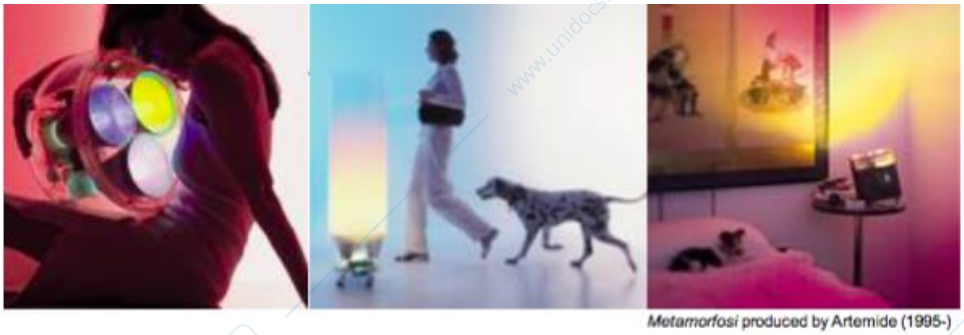
Ernesto Gismondi, President of Artemide

... Light becomes an idea, which can be accessed only through imagination. Then it becomes everything. It is a light that cannot be "seen" but perceived and that makes you feel well ...

... I imagine light in ways you cannot imagine it ...
Stephen Kuusisto, the blind American writer and poet. Photographed by Elliott Erwitt

... I imagine light as a game without rules ...
Seguei Krylov, the blend Russian chess champion. Photographed by Elliott Erwitt

... I imagine light that touches and runs away ...
Alberto Colombo, the blind Italian concert artist. Photographed by Elliott Erwitt



Metamorfosi produced by Artemide (1995-)

Language	Message	Meaning
• Combination of primary colours • Coloured light • Chromatherapy • Light that changes over time	• Moving from lamp to light • Moving from white light to coloured light • Adaptable light to any situations	• The human light • A light that contributes to the wellbeing • A light that provides emotions

<u>Difference between market pull (market centred approach) and design push (user centred approach):</u>
How companies can do what they do? What kind of tools and methodologies do they use?

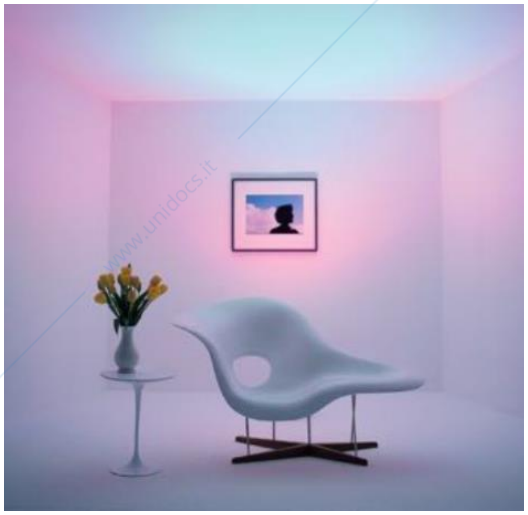
Our market is people. We therefore need to know what they want. But asking them directly rarely works, because they often have no idea what they want until they see and experience it. That means we need to get information about them indirectly, particularly information about what they value. Rather than focus on products as such, we need to look at the wider context in which people use them.

Stefano Marzano, CEO of Philips Design

Market? What Market? We do not look at market needs. We make proposals to people.

Ernesto Gismondi, President of Artemide

They do not look at the market, but they only try to understand what is going to be valuable for customers in the future.



EX) Lamp advertising: there are no lamps, but only light.
In the mid 90s companies started proposing light as an instrument for the well being of customers, because they foresaw that well being would have been crucial in the future.

Working within the meta-project transcends the creation of an object purely to satisfy a function and necessity. Each object represents a tendency, a proposal and an indication of progress which has a more cultural resonance

Alberto Alessi, CEO of Alessi

<u>THE PARADOX OF CHOICE</u>
In this consumer era the most crucial thing is to choose what to buy: there are so many things out there.
For example, people look at Amazon reviews. In the past the most important thing was to provide solutions in term of functionalities and performances, but today we have to give a meaning to things, because it is the only thing that can make a different between too much alternatives.
→ Working on a meaning, the single user is not so important, but the approach is based on *humans in the future* and their future needs.

New Solution	New Meaning
User	Human
Need	Proposing
Expectations	Unexpected
Problems	Gift
Solutions	Meaning
Performance	Meaningfulness
Best	Change

THIRD LEVEL OF MEANING

Now we move the process through which we create a new meaning.

First of all, we consider the purpose, so why we are doing this. There are 3 types of purpose:

- **Utilitarian:** I light a candle because I want to cover, with its fragrance, the bad smell of smoke from the kitchen.
- **Symbolic:** I light a candle because I want to show that I care for visitors.
- **Emotional:** I light the candle because it reminds me of Christmas or because my senses are pleased by its scent.

Examples

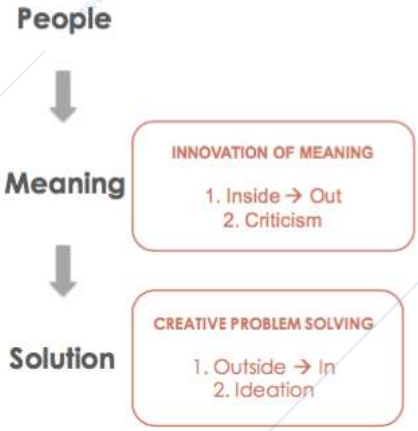
- Muller: they changed the meaning of yogurt, which usually is consumed during the day as breakfast or snack. They made it as a dessert, to be consumed after dinner or lunch.
- Wheelchair: people buy it even if it is more expensive, because it is very fast.
- Vox: it is a living bed. Staying in a bed for elderly people is very sad, so they made it as a living house: the bed is a place to stay with the family, something multifunctional.
- M-pesa: changing the meaning of the telephone putting yourself in a poor country where people do not have bank account and they do not put money in their house because they are not safe, so Vodafone became as a bank
- Whole foods' market: changing the meaning of organic food shops
- Automation: new meaning in unexpected places, like robo-coasters (B2B: companies buy robots not to be faster but to create fun). They give the perception of moving, while you are immobilized. Harry Potter @ Universal Studios in Orlando Florida.

STAMPA DA SLIDE 126 IN POI

5/4/16

VISION AND CRITICISM

THE ROLE OF CRITICISM



IDEA GENERATION

We go outside our companies, searching for other styles and users. Once we generate new ideas, we need to understand how to use them. We select them starting from a large amount of data. It is an outside → in process.

- **Design thinking**: EX) IDEO develops projects in every fields from sport to healthcare. For example, "By looking at what users do, we learn how to design a better shopping kart" David Kelley, IDEO.
- **Crowdsourcing**: EX) InnoCentive total registered solvers are 365000+ from nearly 200 countries. It is a forum where companies and people can write their technical issues.

RESEARCH AND CRITICAL THINKING

"I'm always offended when they say that I play when I do Memphis work, actually I 'm very serious I'm never more serious than when I do Memphis work. It's when I design machines for Olivetti that I play"

Ettore Sottsass

CREATIVITY?

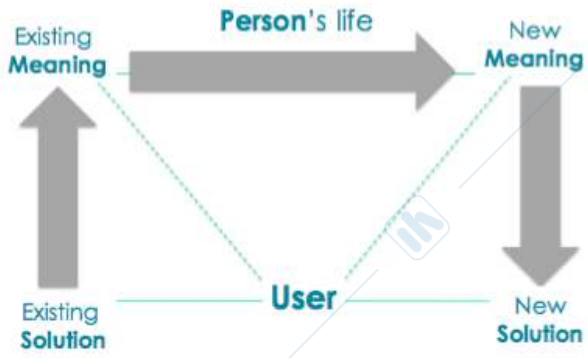

Siena Cathedral
Madonna of the Large Eyes
(1260)


Raffaello,
Madonna del Cardellino
(Madonna of the Goldfinch, 1505-1506)

Artists and designers are creative people. Seeing these paints, we see that there are differences. They do not depend on creativity but the main different thing is the meaning: everything is symbolic in the left one.
When we are trying to innovate the meaning, we are thinking outside the box and not just understanding consumers' needs.
EX) **Apple:**
"People will never love a product that you do not love"
"We do not think most users will gonna miss the optical driver. We do not think they will gonna need an optical driver".
Steve Jobs, CEO, Apple
Apple market research consisted of "Steve looking in the mirror every morning and asking himself what he wanted."
A Marketing Manager at Apple

THE PROCESS

Everything starts from a vision, something an innovator has inside, which needs a process to make it real.
Starting from the existing solution, what we can see, we need to go ahead, finding a new proposal. To do it, we need to understand what is the existing meaning and why we are using a certain product and the existing experience of customers, then we need to go back and use this information to propose a new solution.
Dotted lines: when we are looking at the solution we usually take into account the single experience of customers, but in reality we need to focus our attention on a wider perspective and possible experience for customers.



GIFTING PEOPLE

We are not searching solutions for existing needs, but we gift people proposing a new vision.
EX) The market at the beginning was not able to understand the gift of no keyboard for cell phones.
"Users do not always know what they need.... We propose new visions instead of simply following market needs. I use the metaphor of the good father: he is not who gives his children what they want, but what is more meaningful. A father pursues a vision."

Stefano Marzano, CEO and Chief Creative Director of Philips Design.

THE DDI (DESIGN DRIVEN INNOVATION) PROCESS

We need to explicitly question existing assumptions about what is good or valuable and what is not, so we need to criticise existing paradigms and understand the real meaning of **criticism**: it comes from the Greek word *krino*, which means "able to judge, value, interpret".

NB) It doesn't just mean saying something in contrast with something else, but it also means building something new starting from it.

We need to step back to existing solutions, looking at them from a different perspective and understand what are the issues to find new solutions. We want **wild ideas** to build on them and to innovate.

The need for criticism can be explained by Bertrand Russell: wild ideas cannot be used if they are seen only as wild ideas, but if we see them from a different perspective, we can see its real power, like improving something. Anything is perfect!

→ **Criticise means building on an idea, not destroying it. Only criticising we can innovate.**

THE DDI PROCESS:

Criticism need not be negative; in this context it involves:

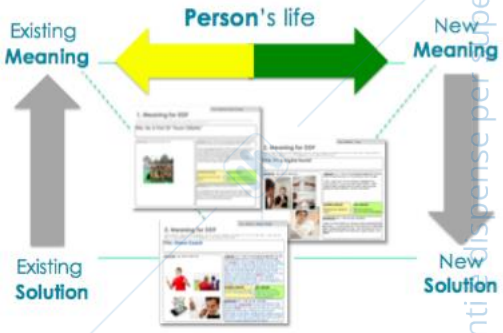
- surfacing different perspectives
- highlighting their contrasts
- synthesizing them into a bold new vision

Criticism innovates through judgment.

It is a **4 step process** based on an **inside out approach**:

1. We start from **YOU**, a single person: INDIVIDUAL REFLECTION.
   - Objective is to create a vision: My New Meaning. A heterogeneous group is asked to spend time thinking about one or more proposals for products/services or business models.
   - Input: YOU, not customers, as human being and a user and not as an employee of the company. They start from different people, who have different experiences
   - Time: 1 month

   Stretching your mind: →



2. We need **PAIRS**, two people reasoning on the same idea.
   - Objective is to create criticism around the created vision, to build on it Pair, this create a protected environment in which the person can dare to share his or her ideas
   - Input: your vision
   - Time: days

   Example: Steve Jobs and Steve Wozniak, Monet and Renoir are a famous example of two people doing the same thing but with different perspectives, learning the one from the other. There are many famous pairs in the world, like Dolce and Gabbana and so on: they all generated big ideas challenging themselves.

3. Now we go outside with a **TEAM** creating **RADICAL CIRCLES**, team of people working on the same idea.
   - Objective is to stimulate criticism and a deeper discussion around the best hypotheses, not to decide which one is the best, but judge why and how they are different. Team 10/20 people who have envisioned new directions. Keep the circle focused on where not to go.
   - Input: visions, meanings
   - Time: 2 or 3 days

   Example: Memphis (team of people believing in their idea and criticising) and Slow Food (small team of people challenging fast foods (dominant paradigm in the world): slow food movement comes from Italy, focusing on the timing of the eating process).

   → **RADICAL CIRCLES** are restricted group of individuals that collaborates beyond formal organizational structures and by challenging one another draft a vision in clear contrast to the dominant rules of their industries:

   Four main characteristics:

   1. The Malaise
   2. Voluntary Participation (by invitation)

3. The Power of Group Validation
4. Vision as opposed to Solution

EX) Radical circles of painters, they were sharing paradigms

4. We need to understand how we can build on our vision, how to innovate the meaning of the product.
   We use **INTERPRETERS** (**outsiders**, people outside our industry)
   - Objective is not to create new ideas, but to challenge the proposed innovative directions. Outsiders are the so called interpreters, a small group of people (10- 15) who starts working on visions and meanings proposed by the team
   - Input: visions, meanings
   - Time: 2 or 3 days

   →**INTERPRETERS:** are **forward-looking researchers** who are developing, often for their own purposes, **unique visions** about how meanings could evolve in the life context we want to investigate. We are looking at experiences, so we involve people able to understand experiences.
   EX) Razor blades commercials were promoting the product competing on the number of blades, so they focused their attention on a single perspective and experience of the user. Then, they understood that shaving was not only a single act, but it was an experience part of the process of making themselves more attractive and taking care of their look. They give the product a new meaning.
   EX) IVE of Apple: he is a designer and his previous job was for a company producing bathroom stuffs. The selected him because they needed a new perspective to realise their new vision (a product for everyday life used in people houses).

   *"Very often design is the most immediate way of defining **what products become in people's minds**. It is important to understand that our goal wasn't just to differentiate our product, but to create products that people would love in the future"*

   Jonathan Ive, VP of Industrial Design, Apple

5. We are going to do some tests on **USERS**, to prove if our vision can be a good solution. It is very difficult because we need the right way to communicate it.

HOW TO TALK ABOUT MEANINGS

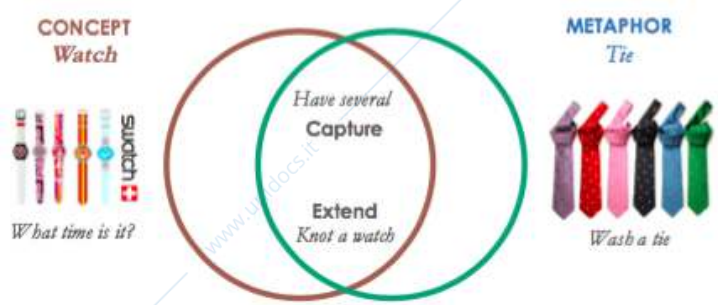
In the first stages of our process, we use metaphors to communicate.
METAPHOR = understanding and experiencing one thing in terms of another

Metaphors as imaginative form of rationality

Metaphors can help us extend concepts beyond the ordinary
"There is no 'real' expression and no real knowing apart from metaphor, but deception on this point remains [...]
The most accustomed metaphors, the usual ones, now pass for truths and as standards for measuring the rarer ones.
The only intrinsic difference here is the difference between custom and novelty, frequency and rarity.
Knowing is nothing but working with the favourite metaphors, and imitating which is no longer felt to be an imitation.

Nietzsche

How to talk about meaning?
Looking at a traditional watch we see only a tool to see time. Today watches are not seen anymore as a tool.
"A watch is a tie" → Understanding and experiencing one thing in terms of another.



A watch is a tool

A watch is a tie

Example: Kinder Sorpresa
A simple chocolate bar has been transformed in a game for everyone, not only for kids.
Poll: New meaning: fun, experience, surprise. Easter is a holiday time, so with this product it is like Easter every time.
It is a playful moment.

Example: Airbnb
They are selling the opportunity to live in a different city in the same house where someone else does.

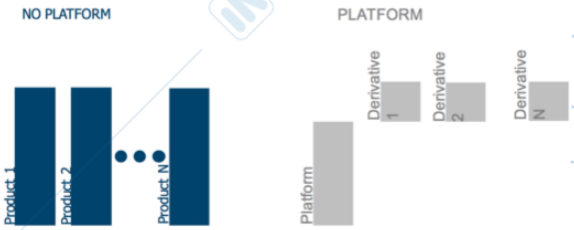
12/4/16

PLATFORM STRATEGIES: from Sony Walkman to Uber

We already talked about the architecture of products, composed of many components put together in many different possible ways. Managing the architecture of products is fundamental.
The idea of platform changed a lot during the years. We start talking about the Walkman until Apps and smartphones.

PRODUCT PLATFORM

→ **Platform:** a set of components, along with and the linkages among them, common to different products.
Note: a platform is NOT a product itself



What used to be a platform? Platform used to be connected with products, so we refer to product platforms.
To create a new product, we have two possibilities:

- We can start from scratch every time, putting different things together
- We can take a part of a product and keep it constant for a certain period of time (long time) and create new products only adding other parts, called *derivatives*.
  EX) The automotive industry works like this: if we compare different cars, we can observe that a certain amount of the product is exactly the same. They usually start developing a platform, which is composed by already existing parts and create new cars just adding new parts (features).

PLATFORM STRATEGY

A platform strategy should encompass:

- Platform development (new architecture): FIAT Platform B
- Derivative: Fiat Punto, Lancia Y
- Shelf Component: Fire Engine
- Basic Knowledge development (R&D)

Following a platform strategy, means putting a lot of effort in doing the platform, also much more money that the ones used to develop a single product, in order to use it as a starting point to develop many different products.
At the end, the quantity of money invested to build the product is huge, but you get paid back from the family of product developed starting from the platform.
The risk of doing a mistake in developing a platform (only 2 years of validity instead of 10/20) is higher than the the one for developing a single product, due to the higher investment needed.
On the other side there are few big decisions to take in order to develop a platform:

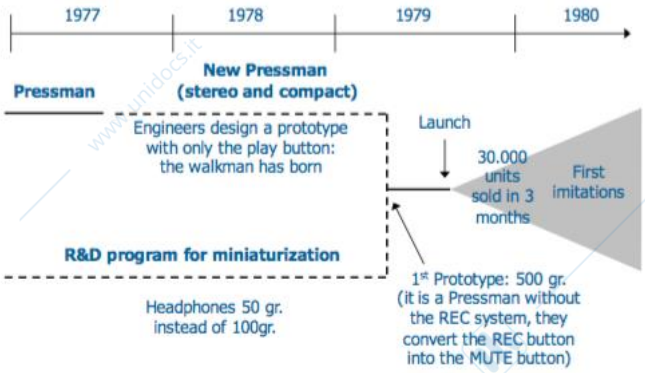
- The platform should be suitable for the product of the next 5/10 years, it should be over-dimensioned to exploit it along the time
- What do we put in the platform and what in the derivatives? If some components are linked, they should be put together. The more we can put in the platform the better is, because the less we will spend to create a single product.

→ GGP project work: they have got a physical product and today the main trend is the fact that people prefer using the product instead of buying it. The service is the key point to leverage on. The main problem is the fact that services are changing faster than products, so the platform which is the basic component of the product should be ready and suitable for possible new services and features, in order to build sustainable products and enable customers to use them in the next years (across time).

THE CASE OF SONY WALKMAN

Sony Walkman was so successful that the name of the specific object turned out to become the name of the object itself and its category. This product influenced so much our society: it was the first time we started listening to audios/music walking, in mobility, instead of doing it in a room as we were accustomed to do.

In the '80s 40% market share in volume and 50% in $
20$ Premium Price



What kind of research in the development process they went through in order to create something like this?
They did nothing. They already produced a product called ***pressman***, a portable tool for recording, usually used by journalists. They had the idea to change only one component, adding headphones. In the pressman there was a key for recording and with the new product they didn't know how to use it: they decided to use it to develop the MUTE feature (the situation is the contrary of the usual one).

From this point on, Sony added this feature to all its products, to make customers aware that all Sony products have this feature and they can easily identify them in the market.
All of this was only an experiment but they went sold out and only after 3 months other companies started to copy Sony products. They arrived first, but they didn't dominate the market, due to imitations (it was not difficult to imitate it). When followers arrived, the market was free, so how they were so successful?

PRODUCT STRATEGY

Some researches discovered that Sony was able to develop 20 new models each year (250 in the 80s), 50% models more than the competitors. They expected that Sony, as market leader and able to develop the release of more products than competitors, was gaining money from the new products, but not from the previous ones due to *cannibalization effect*.

Product longevity

- **Average obsolescence time** (from launch time to the 50%-off time): it means measuring the time between the moment in which you release a new product and the moment in which that product is on the market at the half of the price: with cannibalization this time should be shorter, but on the contrary that time was longer in the case of Sony Walkman
  - Sony: 2 years
  - Competitors: 1,2 years
- Longevity due to **market strategy: niches** (sport, Kids, Hi-Fi addicted...): remembering the elasticity of demand, each company alone in the market (as Sony) wants to max its profit, which is possible to obtain with the monopolist price. Once another company enters the market, firms will compete on the price: they probably will decide to set the price together sharing the demand in an equal way. Being alone is enough to cover the investment done to enter in the market, while the money obtained by two or more companies would probably not be enough to pay back the investment used to develop the product to enter the market. The less money you spend to enter in the market, the small the segment targeted (niche).
  Sony found a way to develop a new product spending a very small amount of money and filling niches.
  → Competitors cannot get into the niches already filled by Sony and are forced to stay on the mass market competing through higher innovation frequency

AGGREGATE PROJECT PLAN

- Generational Projects (5 in ten years): to develop platforms
- Derivative Projects (250 in ten years): to focus on technological innovation to provide new functionalities
  - Incremental innovations (20-30): functional or miniaturization innovations (e.g. autoreverse, graphic equalizer, chromo tape readers Dolby Stereo)
  - Topological (220-230): changes in the look and feel
- Constant miniaturization project

Sony just reshaped things, finding a way to enter a new market starting from existing products.

GENERATIONAL PROJECTS

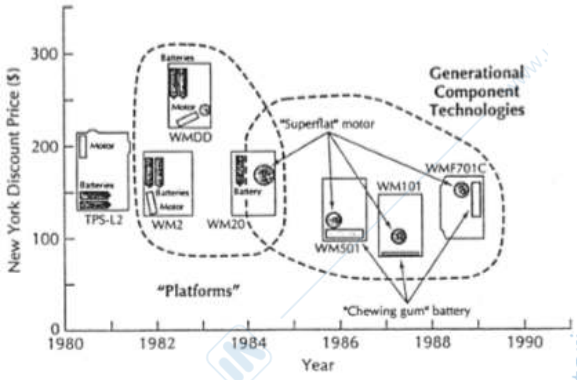
The 5 generational projects are 3 platforms and 2 shelf innovations (components).

3 PLATFORMS:

- WM 2 (1981): compact and lightweight (300 gr. + 30 gr. headphone). Renewed only in 1990 (cost reduction)
- WM20 (1983): 50% thinner
- WMDD (1982): hi-fi platform (direct transmission and tape speed control)

2 SHELF INNOVATION:

- Superflat Motor (1983): thin and low consumption
- NiCd Battery "Chewing Gum" (1986)



Management of generational projects:

- Multi disciplinary Taskforce
- High Skilled Human resources
- Strong commitment from the Top Management
- Leadership: product engineering and/or manufacturing engineering
- Remarkable effort in the architecture design
- Innovation of both product and process (ad hoc production plant)

EX) Engine (consumption and performances): VW developed a new platform related to the engine to provide better performances to customers: selling this new product will pay back the investment.
At a certain point, companies may want to build different platforms for different products, but the main solution they should adopt is develop an engine which can be used for both platforms. This is an example of on-shelf component.
Once a company has both platforms and shelf components, can start developing a new product just deciding how to put them together, like Sony did with Walkman (their investment was very small).
Every time a company develops a new platform, at the same time it develops a new production plant.
Many companies work in this way, like Black and Decker.

DERIVATIVE PROJECTS

Management of derivative projects:
Channel Driven Changes

- Topological projects from market analysis
- Leadership: Marketing

Lifestyle Design Changes

- Projects leveraging more on design than on technology (e.g.: Sport: listening music in unexpected activities like running)
- Leadership: Industrial Design
- Low Top Management commitment

Sony secrets for success

- Development of Knowledge (miniaturization)
- Platform Strategy: Platforms + derivative + components
- Different project Organization for different project Typology
- Centralization of technological Knowledge
- Decentralization of Industrial Design: knowledge of local markets

At a certain point, some companies decided to share their own platforms with other companies. The more you want to leverage on it, the more units you will sell: the payback is higher.
The risk of this tactic is the fact that products become very similar, lowering the degree of differentiation and turning the competition only on price. The cost strategy is never the best way to compete in the market. In many cases it is easier to differentiate the product, so there is always a limit on this approach of sharing platforms.

PLATFORM STARTEGIES

New scenario:
We are tied to innovations by others to make OUR innovation valuable. If we do an innovation in the processor, and Microsoft or independent software parties don t do a corresponding innovation, our innovation will be worthless. So it really is a desperate situation for us.

David B. Johnson, Director of the Media and Interconnect Technology Lab, INTEL Architecture Lab.

He is describing a new point from the previous case of Sony Walkman: cars and Walkman examples highlighted the presence of different layers in each product (platform + derivative complex system). In the case of Sony Walkman both elements are in the only company's hands

He is describing a phenomenon, like from the pov of a computer creator: process + operating system + software (applications layer). Customers see the final product composed of different layers which must be bought all together to get functionalities. The interesting thing in the computer product is the fact that different layers are owned by different companies, so the coherence of innovation of each layer is not guaranteed. He is just saying that:

1. Layers are independent: they are produced by different companies and they may work in different ways. Customers may not appreciate not linked layers, without functionalities.
2. Layers are different between each other: one is more connected with products while the others not.

We need to understand who as the power and how to manage it. Who is making more money according to different layers? Today there are many app providers and few processor providers.

Evolutions in the platform concept

- Static: auxiliary innovations
  Incumbent companies can find on the market all the components they need and fit them in their architecture. Providers could introduce innovations but they are largely independent one another and the system integrator still rules the game (e.g. automotive industry)
- Dynamic: complementary innovations
  Providers make complementary innovations that affect heavily the platform value. The value balance may shift rapidly (e.g. IBM and Microsoft+Intel)

The new platforms

These new platforms are not completely owned by a company. Different companies operate at different layers. The platform components are interdependent and the innovation may ask to change more than one at the same time

- INTERDEPENDENT INNOVATIONS
- RAPID INNOVATIONS

EX) Macintosh: Motorola processor → Apple: both the operating system and the App development were put in a single platform, which is closed. They arrived first and dominated the market.
Windows: intel processor → How to win a battle against who is dominating the market? They **opened their platform** (operating system, through API: applications, programs and interfaces) to make people free to develop software for their platform. They succeeded.

→ The innovation power of a single company is always lower than the one of the entire world. Cooperation is the solution.

Problems with platforms, challenges:

- ⇨ How to become platform leader? (Microsoft-Windows; Sony-Betamax, Nintendo-Mario bros) Opening but also doing something more: applications are a critical element of choice for customers and they must be good, so companies should find good people developing apps in order to simplify the life of the company (the more is managed internally, the less others have to develop externally)
- ⇨ How not to loose the leadership? (IBM PC architecture; java virtual machine)
- ⇨ How to evolve the platform? (Microsoft .NET, direct X)

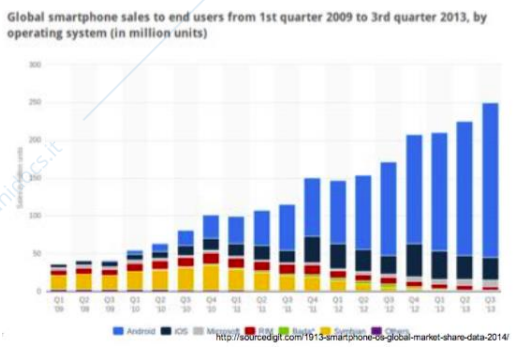
APP INDUSTRY

Emergent trends.
Creating values and extracting part of the value to sustain innovation processes → We need to find a new way to make money, because today people more and more want things for free.

Smartphone industry

- 1973, the prototype device used was capable of less than 30 minutes of battery life and took 10 hours to re-charge
- By the end of 2013, global smartphone penetration had exploded to 22% of the global population, from 5% in 2009. That is an increase of nearly 1.3 billion smartphones in four years

The most diffused operating system is *Android*. The large majority innovations are developed by Apple and then spread through different operating systems. Compatibility problems for Android is still a key weakness.



Complementary assets (Teece, 1986)
You might win in a market thanks to complementary assets and not only because one solution is better than the others. The main complementary assets are:

- Distribution channels
- Complementary technologies
- Services
- Competitive manufacturing

One effect, once the DD is designed, it is very difficult to understand what innovation is good or not.

Video: launch of Apple Store by Steve Jobs. Business deals: developers fix the price, 70% of revenues (30% to run the apple store). No credit card fees, no hosting and marketing fees and paid monthly. No charge for free apps. Limitations: some apps have been discarded.

The App Store was not invented by Apple, but for example Vodafone already thought about something similar. Apple created the better offering for that time. They made the industry more democratic, rebalancing the system, because:

- **Distribution**: App distribution is managed by the primary marketplaces (App Store and Google Play), which handle and distribute each App in the same way. There is no difference between the providers and they all share complementary technologies.
- **Complementary technologies**: Players in this industry share the same complementary technologies because the Apps all run on the same devices. Every App developer can leverage cameras, gps antennas, and compasses because these tools are embedded in the device and accessible to every developer.
- **Services**: As with distribution, the large majority of the relevant services in this industry are managed centrally by the marketplaces, which provide storage, payment management, downloads, reviews, and ratings, in the same way for all players.
- **Competitive manufacturing:** In this software-based and virtual industry, the results for this complementary asset are not relevant.

EX) All these things are very difficult for small companies. Marketing programs are able to do them, while small companies not → in the App store all players have the same possibility to do it for free.
Students who develop a game can sell it on the Apple Store instead of selling on a general website, in this way they could collect money in a secure way thanks to Apple reputation (otherwise no one would have given money to a small company)

➔ They made the industry more democratic, rebalancing the system: small companies are at the same level of big corporations and they can compete at the same level with the same instruments.

ONE EMERGING TREND IN THE INDUSTRY

MEDIA EVOLUTION

At the beginning, using *theatres* to show movies was not appreciated by customers. They invented the *drive-in*, something completely different, because in this way customers can achieve something different.
Doing something with a new medium is what we normally do. Like the *TV* invention. At the beginning we used it to distribute movies in small screens, black and white, and then we understood how to use it in an efficient way.
The first thing that we started to do was creating a new content not visible in theatres or cinemas: *quiz shows*.
It changed the world because it is a specific content for the TV, like also *TV series* (Lost). They also created specific contents starting from *newspapers*.
In the media evolution, the main character is the SMARTPHONE, something very important and strong. It is something more than a computer, even if at the beginning it was born with the same services provided and available in computers. Its main characteristics are:

- **Replica of internet services**: at the beginning it was a technology substitution and the main difference was the different interfaces (part of the experience) and customer experience.
- **Background information:** it can provide background information like for example, if you use Yelp on smartphones, you can skip some mandatory steps of the website version thanks to background information directly provided by the smartphone to the application.

- **Specific characteristics of mobile devices** (touch, accelerometer): we investigated how to use this tool only after a while. The common threat is that we are using something proper of smartphones and not of any other device (it would be different, because smartphones have specific devices and features not present in other devices)
- **Game Changer:** there is a progressive integration between the real and the virtual world, especially in games.

VIRTUAL-REAL INTEGRATION

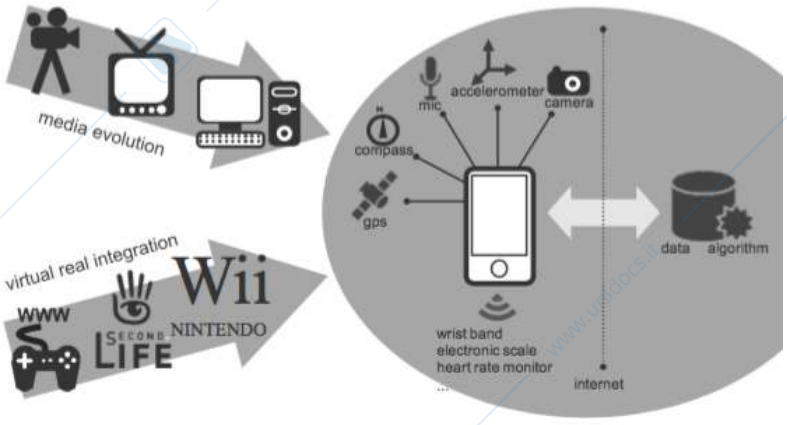
- **World of Warcraft:** there are some games which do not stop when you switch off your computer. It is like a parallel world, a virtual reality always present and we can interact with it. WoW gamers spent 5.93 million years solving the virtual problems of Azeroth.
- **Second life:** Launched by Linden Lab in 2003, SL had 21.3 million registered accounts as of November 2010. It is a virtual world existing even if you are not connected. The main difference is that when you are playing with WOW you interact with other players generated by the computer, but with SL we can interact with other people represented by virtual characters. It's more like a virtual world.
- **Nintendo WII**: the main interesting point about the reason why it is a game changer is the fact that in this case the interaction is human, while in the previous cases it is not absolutely human. WII introduced the idea that you can interact in a virtual world in a very human way.

We do believe that:

Virtual and real world have never been so overlapped and smartphones are the communication gate between them.

Because we consider the smartphone as:

- The point of connection of both media evolution and virtual-real integration
- A collection of "wearable" sensors: normal things are recorded and collected as data by the sensors of smartphones. As watches for runners 10 years ago. But smartphones have internet, so they can also transfer data!
- A tool to use internet



How to use it?

VALUE CREATION FOR CUSTOMERS

ZOMBIE, RUN!: you are living in a future world with zombies. When you go to run you ear a story about what happens in this future world and you are a runner (in charge of getting out the place with zombies). It is interesting when you meet zombies, a voice suggests you to run faster (fast enough to let the level of the audio slow down). The right speed is monitored by the GPS and defined according to previous performances of each person. They want you to increase enough your speed according to what you are doing.

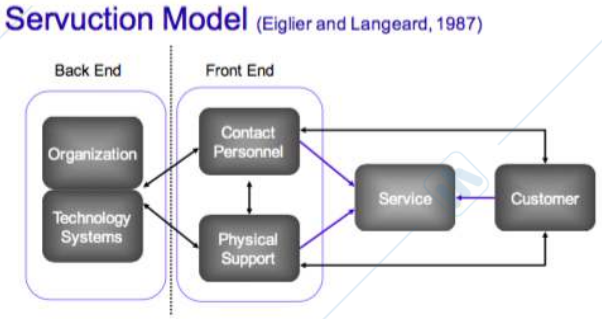
→ Personalised service, according to real performances measured by the app which learns from your habits.

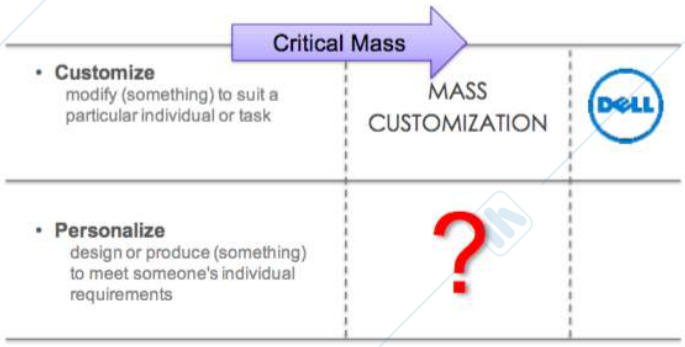
UP: the app is linked with a wrist bend that measures your performances and habits (when you go to bed and how you sleep). Big change in meaning, because the app is like a coach that monitors us. The main interesting thing is the smart coach provided who suggests you what to do in real life, very specialised.

RUNKEEPER: the app is base on a community where people can share objectives and achievements. A new function has also been released. If you want to run a marathon you can tell the system what are your goals and they give you your plan for the next days. If you reach your goals the next week they increase the level of your goals while on the

contrary if you didn't succeed in completing your goals, the next week goals will slow down. This happens thanks to a software able to know what you are doing and what are your goals and adapt to them just for you.

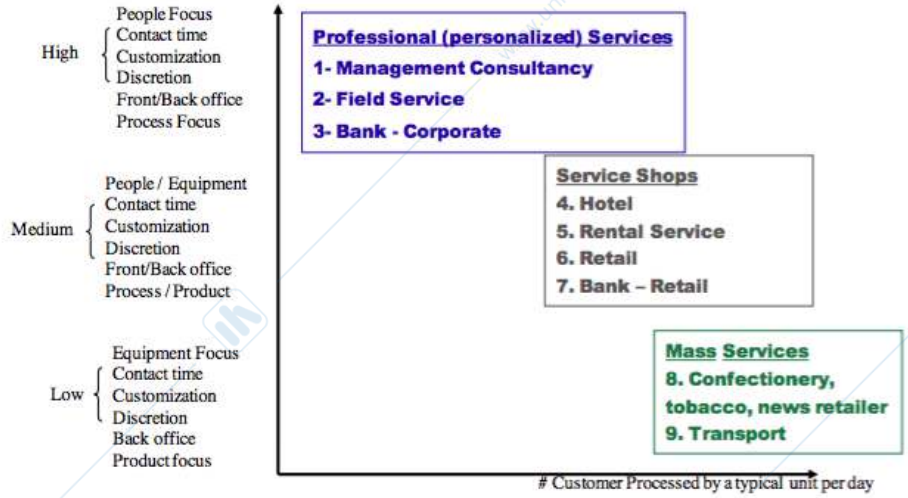
APPS are services





- **Customization:** the number of combinations are fixed and you may not be satisfied by them
- **Personalisation:** the characteristics of the products are defined starting from your preferences, you are always satisfied

Personalization in services



Services cover an incredible range of different things. Services are different due to different way they have been designed:

- **Mass service**: large amount of customers in a small period of time (very fast). Normally, the service is provided by a machine with a high degree of standardization
- **Professional (personalized) service:** it is a service provided in a different way to each single user. They are based on people and not machines, because they are more flexible and more discretionally. The time needed is very large.
- **Service shops:** like hotels

MASS PERSONALIZED SERVICES

Mass services provide more money due to the large number of people involved and the specialization allows companies to sell the service with a premium price, so higher revenues.

EX) **Waze** is the best navigation system, bought by Google. This app is learning from you. It has changed the why (why do we use it and not other devices): they replicated the previous services in this new medium, adding services not already provided by old services. For example, people use Waze even if they already know where they have to go thanks to additional services, like info about traffic jams.
They are able to tell you at what time you reach your destination, according to traffic and external conditions. Waze consider also people habits to provide better solutions, according to the way of driving of users (data mining: they know you slow down when it is dark outside)
→ Wazedates: NOT TRUE

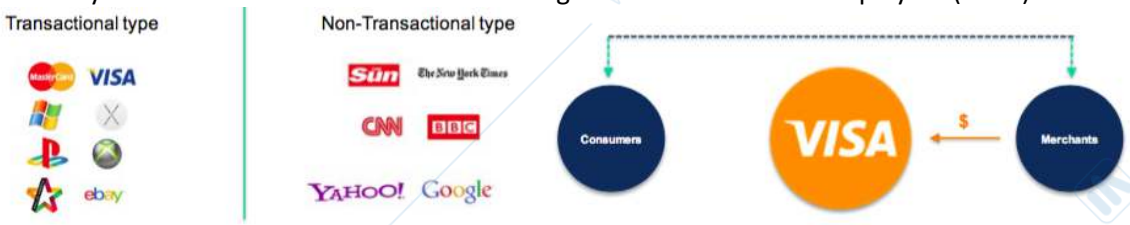
VALUE FOR COMPANIES

Twist: big brothers for moving around. It is not an application which people didn't not want to use, the idea was working but they shut down. They couldn't get enough money. The big threat is where do you get money from.

FREECONOMICS: future in which the electric energy will be so cheap that it will be useless to measure it.
What is almost free today? Internet, music, data. Storage is very cheap thanks to networks. Technologies are growing so fast that services connected with them are almost free. Info, games, social networks, music and so on.
How do these people face this problem?
Free services like Facebook and Google need a pay back. The business model of newspaper is the same of Facebook and so on.

TWO-SIDED MARKET: a market in which all systems have the same system model. They are active in two different markets: visa → free service for customers, paid by merchants. Visa is a service provided by merchants to customers, thanks to visa platform developed by a different firm.
Transactional two sided market: Visa created only a platform for who wants to buy something and who looks for buyers to make them meeting. Like UBER.

We have a two sided market when we have **cross network externalities**: the value perceived by merchants increases with the increase of number of customers. The more merchants accept Visa the better is for consumers. The network externality value increases the more it is the bridge between two or more players (cross).



ORTHOGONAL TWO SIDED MARKET
Newspaper: the reader pays something which is not enough to pay the paper. It would be impossible for me selling the newspaper with such a low price, so the advertising system is the one supporting the newspaper industry.
I create a very good journal, read by millions of people, so companies as advertiser pays for the advertisement on the newspaper, which is a platform. Like Google, that creates free services with a targeted and segmented market.

This is not scalable, because advertisers won't have enough money in the future due to the fact that people look for even better variety and even more services for free:

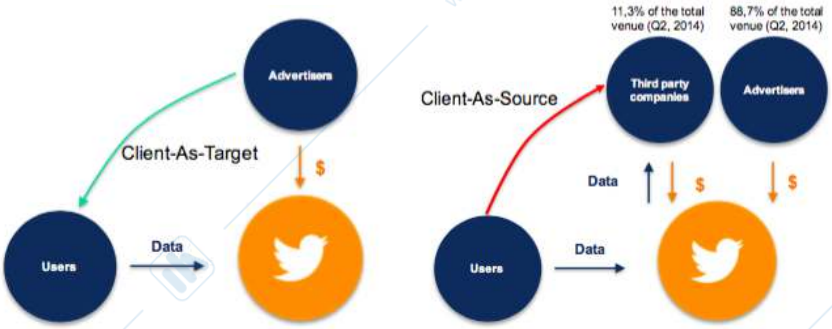
- Money for the App: Zombies,Run! The price per unit is very low, so it is not possible to gain a lot of money
- Premium Service: Runkeeper Elite
- In-App Selling: Candy crush. They sell virtual digital candies and their revenues 1 million € per day.
- Cross-Selling: Up wrist band
- Advertising: Waze

How can companies capture the created value?
They are finding different ways to charge customers, because it is not possible to use apps for free without advertising.

Can digital services be offered for free to final customers leveraging on the value embedded into the big data generated through the customers' service usage?

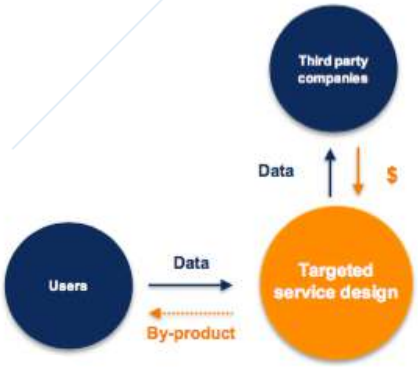
EX) Twitter sell advertising space for advertisers.
EX) Obama and Romney campaign: **sensitive analysis**, through which you can understand what people is talking about in a positive or negative way. They looked #Obama tweets: then they looked to other words in the tweet, to found if there were positive or negative considerations.
TWINDEX

- **Twitter** started to think about: I'm the only one with database with past tweets that could be used for sensitive analysis, so companies pay for these sensible data. Companies can do it on their own, but it would be very expensive (twitter gains a lot of money from this). New business model: customers are a source of free data.



- **Google street view**: the cost to get views is extremely expensive, probably there are no more than 10 companies able to do such investments to provide something for free.
- **Google image labeler**: they understood that people are connected to internet while working. This game is simple: they show you a photo for some seconds and to another people. Both have the same time to write down a description. The description is then analysed and attached to the picture, using the same words used by both players. We are the players and we provide a service for free.
- **Re-captcha:**
- **Health graph** is a database of many applications which share information.
- **BeMyEye:** they started from the potentiality of data, as Twitter. They give data about products of the supermarkets (price and so on) and data is collected directly by customers, who are in the shops everyday without sending proper employees to check it.

The power of the platform
How can a major business segment be invaded and conquered in a matter of months by an upstart with none of the resources traditionally deemed essential for survival, let alone market dominance? And why is this happening today in one industry after another?
The answer is the *power of the platform*—a new business model that uses technology to connect people, organizations, and resources in an interactive ecosystem in which amazing amounts of value can be created and exchanged.



Managerial implications
How to design a service based on the Client-As-a-Source two- sided markets.

26/4/16

INFINITY – SELF LEADERSHIP

Aline Pierrard **www.infinity.it**

The topics of this lesson are:

- Framework
- Practical concepts
- Group polls
- Self reflection
- Sharing with sidekick

Coca Cola video, **POLL**: *Leading myself to me means*

- Fix achievements: achievements
- Believe in what I do: self-confidence
- Organization (time, objectives, ...)

Self leadership means:

- Management
- Control: having control about things and ourselves, to do ponderate decisions
- Autonomy: feeling free and autonomous
- Self-control
- Self-motivation and motivation
- Guidance
- Goals

Self leadership DEF: "I get knocked down, but I get up again. You're never going to keep me down". Even if we fall, we should be able to get up again, every time.
Being a manager is something we should be able to do by ourselves, even if there are hard times today.
→ What leads me? Who or what guides me? What makes me grow as a person? What makes my life meaningful?
→ What suggestion would you give your future manager to make you grow, to LEAD YOU?

- To motivate giving achievements to be accomplished
- To be a guidance in difficult situations, being a reference point
- To give advice and criticism to grow by myself

GESTALT THEORY

It is a German term used in psychology. It explains 3 ways to stand and behave in life:

1. **About-ism**: it is a person who talks a lot about things, without really living them. What he says is not connected with reality, he says something, but in reality things are different.
2. **Should-ism**: it is a person who lives by a set of rules and values, but he actually never investigated if these rules and values come from someone else or from the external world.
3. **Is-ism:** it is a person who lives his life in a spontaneous and authentic way. He feels ok about what he is and he is happy.

"YOU ARE HERE": her experience was really about-ism (she followed the same steps of her father, but behaving like she was different). When she went to university she decided to do PHD under the suggestion of her parents but she failed, this was her first failure. She decided to move to Italy putting away all her 15 years of studies.

The symptoms are:

- **About-ism person:** it is a person who talks a lot about his life, projects and nothing happens
- **Should-ism person**: it is a person who tries to control himself and every situation, but we can see that he is not very comfortable with himself. He may be a good person, but with like an automatic pilot without being conscious of what he does.
- **Is-ism person:** it is a very spontaneous and authentic person

Many times we *manipulate* ourselves, we do *self-control*. What happens is that we feel like being in a rigid suit or with 12 cm heels, without being comfortable with. If we do not live with *authenticity* and *spontaneity*, very bad things happen:

- feeling like and imposter
- feeling uncomfortable and unhappy
- inadequacy

HIT ZERO

What is-ism means for us? Hit zero means that our map of life, made of knowledge, experiences and opinions, is just a map and maybe others have different maps. Our map is a PARADIGM, like the glasses we use to look into the reality and sometimes they are not synchronized with reality, so is it correct?
Moreover, it is not easy to change our map and the map of other people.

We have 3 type of maps to read reality:

- **About me:** "I'm the kind of person who…, My particular way of being is…, I always…"
  - I'm the kind of person that is concrete
  - I'm the kind of person that is realistic
  - I always want to the best thing
  - I always want to be precise
- **About others:** "People are..." how I see other people, "The others in the group…"
- **About life/reality:** "Life is…"
  - You only live once
  - Life is a mess and then you die
  - Life is good
  - Cease the day

"OUR LENSES ARE BI-FOCAL": we can have two lenses to watch the life, we can see *life as it is* and *life as it should be values.* How can we identify if our paradigms are correct? 3 things can give us the answer:

1. What are its effects: if it is able to guide my behaviours
2. Confront your paradigm with others
3. "Hit-zero": decisions that we make, prove and see if it is really true.

How can we put on the RESET button?

LIFE CENTER

To discover it we should answer to these 4 questions:

1. In what kind of thoughts do you spend your time?
2. What occupies most of your time and energy?
3. What is your driving force?
4. Who or what is your obsession?

The most traditional life centres are:

- Family
- Health
- **Self**
- Partner
- **Work/career**
- Friends/Being popular
- Stuff: having things, like money, clothes, cars
- Pleasure/sex

Life centre guides us in what we do and in the next steps we are going to take. There is a limit in the life centre, because there can be also a dark side which makes us disappointed (due to fails and achievements not achieved, also obsessions).

Video: Social Network film: the life centre of the boys is career, self. Who is right: The Winkelevoss twins or the dean?
Video: What is Liddell's driving force? Faith and values

→ Brothers have very clear life centre, but they do not convince too much. In the second video, the man is very fixed in his position and he stands strong.

Principles: they are the guidelines to reach a life centre and we always need to use them to make sense to us our life centre. They are present in any culture and whenever we are. If the life centre changes and/or disappoints us, we have to look at principles, that are:

- Responsibility
- Loyalty
- Integrity
- Gratitude
- Respect
- Hard-work
- Service
- Love
- Honesty
- Justice

Video: Alexander. Why doesn't Alexander listen to his army's needs? He is obsessed by glory.
He is one of the strongest leaders of all times, but what made his such a strong leader? He clearly knew where to go.

When you have a goal in your life, to define **SELF-LEADERSHIP:** Where do you want to go?

- ⇨ You have to find the NORTH STAR:
  - **Professional vision**: identify a project you will be facing in the near future. Write down the results you desire and what steps will lead you to those results.
  - **Personal vision:** what you want to reach on a more personal and individual level.
  - **Spiritual vision:** What are you here for? What do you want your life to mean?
- ⇨ You have to know what can you STAND

Video: Luther King: both sides have in common the same life centre (faith). What is Luther using his principle for? Justice and coherence.

→ **Luther situation:** what is a dilemma you are struggling with? On what situation do you want to take a stand?

SHINKANSEN

Poll: What's wrong with a typical day in the office? Stress, pressure and on the other side routine and boredom.
Shinkansen is one of the fastest train ever. Life is passing by very fast like these trains.
What kind of experience do you want to build for yourself? Based on principles, very difficult or based on many other possibilities.

- ⇨ **Find out what your principles are is the objective of self-leadership.**

What do you **commit** to offer to the team to make your journey adventurous and fun?

RECAP:

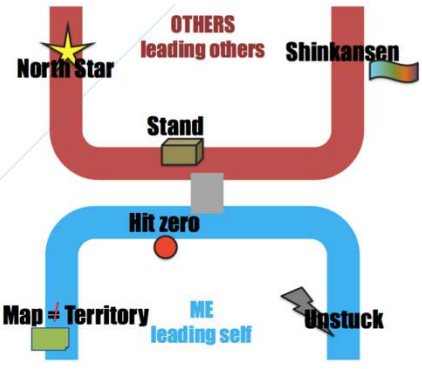
The journey of today:

ME leading self

- ⇨ Be aware, the map is not a territory
- ⇨ Hit zero: take decisions and compare it with others
- ⇨ Unstuck: life centres are important. How to reach them? What there is behind them? Principles. How to connect them?

OTHERS leading others

- ⇨ North star: coherence, being professional
- ⇨ Stand: taking also unpopular decisions
- ⇨ Shinkansen: where is my signature



2/5/16

WHOLE BRAIN
MAPPING YOURSELF AND THE STAKEHOLDERS

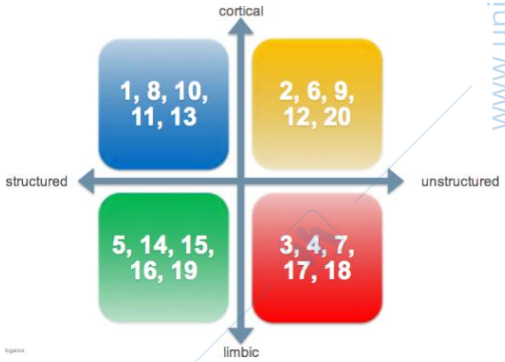
Managing a team means working together and build relationships, which means not behaving in the same way we behave with others (family and friends for example). We classify people and adapt our behaviour according to the typology of persons we have in front of us. We use a specific model to study this: **WHOLE BRAIN.**
The human brain is very powerful:

- It is composed of a lot of neurons (100.000.000.000). Each of them can be connected up to 10.000 other neurons and they can pass signals to each other via 1.000 trillion synaptic connections. It is like a computer with a 1 trillion bit per second processor: today computers are becoming more and more powerful and consuming a very huge amount of energy.
- The most amazing things about human brain are:
  - *Power*: with human brain we can do everything, while computers are mostly specialized in a sector, thing.
  - *Memory*: brain's memory capacity is very big. Brain's memory capacity is closer to 2.5 petabytes. Equivalent to about 3 millions hours of TV shows or about 2.2 trillion of pictures
  - *Low consumption*: the human brain needs a very low amount of energy to work, in comparison to the amount of energy required by a computer. How can the human brain consume so low amount of energy? There is a kind of default software in our brain and we do not use it always.

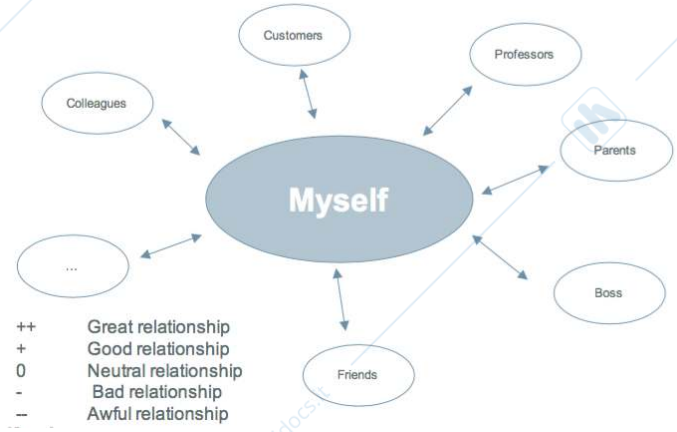
TEST: You have 20 statements about working in a team for a project work. Choose 8 out of them, the ones that describe you better. Select the one that fits you the most and, among the 12s you didn't choose, the one that fits you the least.

1. Deadlines have to be respected, no matter what	11. I like schemes and logical thinking
2. I always think out of the box	12. I like to experience unconventional approaches
3. I am always enthusiastic in doing what people ask me	13. I like to fix problems
4. I am good in influencing my teammates' mood	14. I think rules are important
5. I don't like changes, it's hard for me to handle them	15. I like to go in depth in what I'm doing
6. I don't like schemes and procedures, it's hard for me to handle them	16. I like to plan my activities
	17. I like to share my personal experiences
7. I don't like to be on my own	18. I like to work in team
8. I don't like to have unproductive time	19. I need time to take decisions in order to be completely sure about that
9. I have tons of innovative ideas	
10. I just consider facts, not opinions	20. I take decisions leveraging on my intuitions

The 8 selected are: 1 blue, 7 red, 8 + blue, 11 blue, 13 blue, 16 + green, 17 red, 19 green, NOT 12 yellow
Results: BLUE 6, GREEN 2, YELLOW -2, RED 2
Your actions determine your colour →



SHAREHOLDER MAP



--: people can be dumb, idiot, awful.

How to adapt and change ourselves according to other people, in developing a relationship?

WHOLE BRAIN MODEL

It is an old and criticised model and many other models are more interesting and complete, but a lot more complex.
"How can people be so clever and so dumb at the same time?"

- **Ned Herrmann**, former head of Management Development at General Electric, developed the Whole Brain Model
- He was interested in how the brain could help explain the clever/dumb issue
- Leveraging on previous brain researches and on his own studies, he discovered four patterns that emerged in terms of how the brain perceives and processes information.

There is a list of companies around the world which are current clients of the Hermann Foundation, so they are using this method.

We want to use a model with a scientific root. Thanks to the research pioneered by Roger Sperry, awarded with the Nobel Prize in Physiology or Medicine in 1981, we know that the human brain, from a scientific point of view, is divided into 2 hemispheres: the right and the left.

- The two hemispheres control vastly different aspects of thought and action.
- Each half has its own specialization and thus its own limitations and advantages.
- We know that the left part of the brain is very structured while the right part is completely unstructured, with difficulties in connections.

For example, Einstein was very creative and at the same time scientific.
The main difference is the structured and unstructured thinking: scientists who studied the human brain, gave to people calculations, done by the right part and a picture of the sky, done by the left one.

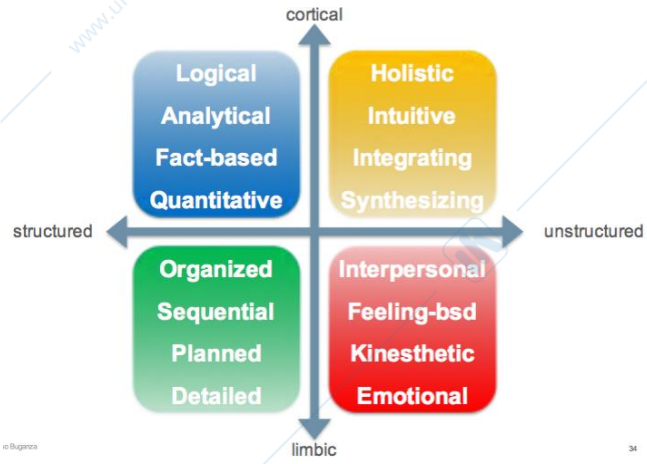
Triune Brain

Model of the evolution of the vertebrate forebrain and behaviour, proposed by the physician and neuroscientist Paul MacLean in the '60s. If we consider the human brain we can find 3 different layers, corresponding to 3 different parts:

1. Reptilian brain: we share this part of the brain with reptiles. This part is in charge to react in an instinctive way.
    - Vital functions
    - Instinct
    - Rigid and compulsive
2. Limbic brain: thoughts connected with this part of the brain are emotions and social things (social thinking). This part is owned also by many other beings, animals who have social life.
    - Emotions
    - Value judgement
3. Neocortex brain: the most complex thought we can think about is *self-consciousness* (perception of ourselves) and it happens in this layer of the brain. It is not owned by all beings, only some animals have it.
    - Language
    - Abstract thoughts
    - Imagination
    - Consciousness

The Whole Brain model tries to find the default setting for all human beings (graph): any thing and emotion can be classified with this graph.
Our brain is famous to have a low consumption, because we usually use a specific part of the brain more than others, in fact some of us behave in a more structured way, others in an unstructured way and so on. All of us have a primary kind of behaviour.

EXAMPLES



Video: Miss. Blue (https://www.youtube.com/watch?v=D1nsKT9zHnI) Her behaviour is BLUE: – Very structured – Cortical (with no emotions)	**Video: Mr Yellow (https://www.youtube.com/watch?v=b9mZXcloriA)** – Unstructured – Cortical
Video: Mister Green (https://www.youtube.com/watch?v=Ln2OfGU594w) His behaviour is GREEN: – Very structured – Limbic: anxiety is limbic and not cortical (guided by emotions)	**Video: Mr Red (https://www.youtube.com/watch?v=WRamB2TB0_E)** – Very unstructured – Limbic

EX) Professor's behaviour: he hit the table (NOT "he was aggressive", because it is a judgement!!!)
Describe her behaviour: self confident, influent, bossy and so on → they are judgements and perceptions!!!

- FACTS ARE TRUE, INTERPRETATIONS NOT: we should always start our description from something true and not something that can be misjudged or simply an interpretation.

To be sure about a description of a behaviour we must be able to provide an example.
Her behaviour: self confident (she speaks very fast).

BLUE PEOPLE: Goal oriented people

Strengths:

- Concise and clear
- Ask for facts: we should always bring facts, because blue people will always ask for facts, otherwise will never trust you
- Tendency to do: they always organise the work, doing everything they could do
- Quantitative
- Time and resources management: the worst thing we can do is losing time, because blue people always speak fast, act fast, think fast.
- Logical reasoning

Weaknesses:

- Criticism just to criticise
- Harsh and without empathy: they do not care about people (if you are in the middle is your problem, not mine). They are empathic only when this is linked with the goal to reach. They are very **transactional people**: they decide what to do according to the achievement of the goal.
- Minimizes
- Quibbles: they take wrong decisions many times because they do not consider in a detailed way the situation

EX) Marie Curie, Stephen Hawking

YELLOW PEOPLE: Vision-oriented

Strengths:

- Choice based on intuition
- Is parallel (multi tasking)
- Has innovative ideas: he is able to think out of the box
- Takes risks and tries out changes
- Likes to differentiate himself from others
- Likes unconventional approach: managing parallel things
- Can be provocative

Weaknesses:

- Is unrealistic
- Takes too many risks
- Focuses on marginal things
- Can be confused and confusing

EX) Einstein, Steve Jobs, JFK

GREEN PEOPLE: Details oriented people	RED PEOPLE: Relations-oriented
Strengths: • Very organized • Likes methods and procedure • Needs time to trust • Everything need to be in order • Needs time for decisions • Follows rules and rituals • Precise and meticulous • It is simple to make them change their mind (like Sheldon who goes to bed immediately), they listen to others who prove them they are wrong • They are very powerful and good in what they do, without leaving anything unexplored Weaknesses: • Closed, rigid, slow: they are not flexible and very slow in analysing the situation • Fears of changes • Does not likes surprise EX) Caesar (obsessed in details), Tiger Woods	Strengths: • Enthusiastic • Shares emotions and sensations: he gives bits of personal life to people • Likes to be in the spotlight • Social intelligence: he is able to find the way to connect with all different guys at the same time • Is sensitive and passionate: "cry people" • Open and talkative: if there is silence they feel awkward • Team worker Weaknesses: • Insisting and excessive • Can be naive and touchy-feely: red people get offended by blue people • Is too compliant EX) Patagonia, Sister Act, Gandhi, Mother Teresa

➔ You can be a great leader starting from every position

How the different colors...

	Blue	Yellow	Green	Red
Work	Being challenged Analyzing and diagnosing Logical processing Finance and numbers Making things work Solving problems Clarifying issues Explaining things	Dealing with the future Seeing the Big Picture Inventing solutions Developing new things Providing vision Taking risks Integrating ideas Bringing about change	Administering Attending to detail Being in control Building things Establishing order Timely implementation Planning things out Providing support	Coaching Working with people Communicating Building relationships Expressing idea Teaching/Training Persuading people Being part of a team
Communicate	Facts, no fluff Technical accuracy Articulated ideas Brief, clear, precise Critical analysis Straight forward	Metaphors Big Picture overview Imaginative Conceptual framework Exploration Visual	Details Thoroughness Rules and procedures Action plans Explanations Stay on topic	Feelings and values Open discussion Expression Personal touch Empathy and consideration Stories, examples
Work in team	What's the theory of the case? **GETTING DOWN TO BUSINESS**	Challenge the Status quo **BREAKTHROUGH THINKING**	How can we make this happen? **MOVING TOWARD CLOSURE**	Being part of the team **KINDLING THE SPIRIT OF COMMUNITY**
Lead	Authoritative Directive All-business Analytical Factual	Adventurous Visionary Entrepreneurial Idealistic Holistic	Traditional Conservative Organized Accountable Safe-keeping	Team oriented Supportive Personable Intuitive Communicator

10/05/2016

One first way of using this model is to understand how you behave and how people perceive your behaviour. On the other hand, this model may be used to cope with different kinds of person, in order to react and to face different behaviours, since every different person will perceive the same behaviour in different ways.

I can behave according to every colour:

- It can happen that someone else sees me in a different way from who I really am
- Why? Because I'm not able to express with my behaviour who I am or I do not want
- If I behave as red and I normally do that I've got some strengths in doing that, but I have some weaknesses (tend to behave according to our personal colour), with the weaknesses people give you negative feedback, at a certain point I will recognize that weaknesses and compensate my behaviour, readapting my brain (changing the activities)
- You interact with people basing on the real behaviour of the people, so the other people are right in saying something about a colour, even if I consider myself in a different colour (get a great level of knowledge of yourself in order to understand the colour, but also understand how other people perceive you)
- Try walking in my shoes: try you to behave as me
    - Should you behave like a blue if you need to convince a blue? No, you only understand the other's needs, what is important for the other and go in that direction
    - You must be able to wear different colours, adapt your behaviour with different people and build relationships

GLOP (General labeling of people)

"You are unfriendly", "You always do this…", "It's again the same story…"

They are not descriptions. They are judgments. That means jumping from focusing on specific behaviors to conclusions. Why is it that we automatically put labels on people and then start acting in accordance with those labels?

We tend to categorize or type people based on that judgment, and then act as if it's a fact which in turn, determines how we treat them.

- It can be very dangerous for people, because normally people takes 7 seconds on average to judge people when they meet for the first time.
- To reduce the consumption of energy of the brain we label a person, in order to not doing anything when I will meet again this person (the brain is lazy). Using labels is easier to focus on differences and we go on searching for behaviours that confirms judgement.
    - If I label in blue, every single time he behaves in blue is ok, on the other side if he behaves in green you do not consider it because otherwise you have to re-discuss your opinion.
- Every time we are labeling someone we're just considering those behaviors that fits with our judgment, but we need to consider all the behaviours of people and re-discuss the label that you have for them.
- We should not keep the same behavior toward a label, since the counterpart may change or the label itself may be wrong. Labels and judgment on people should be periodically and commonly reviewed.

Human brain takes shortcuts…we should use behaviors, not labels, to describe people without judgments.
We need to learn how to overcome these labels through critical and constant observation and analysis.

ASCOLTARE AUDIO

10/5/16

FEEDBACK AND ACTIVE LISTENING

Feedback is asked in order to evaluate a performance or a service or an action (airports, employees to make them improving, etc..) and it is a very powerful managerial tool. There are different kinds of feedback:

- **Corrective Feedback** (Negative): you are doing something that I would like you not to do anymore (try to make a change in your behaviour). There are 4 main steps:
  1. Describe the behavior: the more you stay on the behavior the more precise would be the feedback;
  2. Effects of the behavior
  3. Positive alternative behavior (I try to propose to you a behavior that would work in this situation)
  4. Why it is better?
  ⇨ Only the first two steps for positive feedback

- **Supportive Feedback** (Positive): support a behaviour
  1. Describe the behaviour
  2. Effect of the behaviour

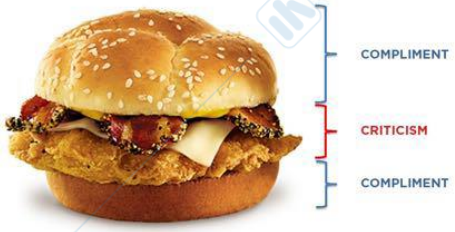
SEEK FOR NEUTRAL DISPOSITION

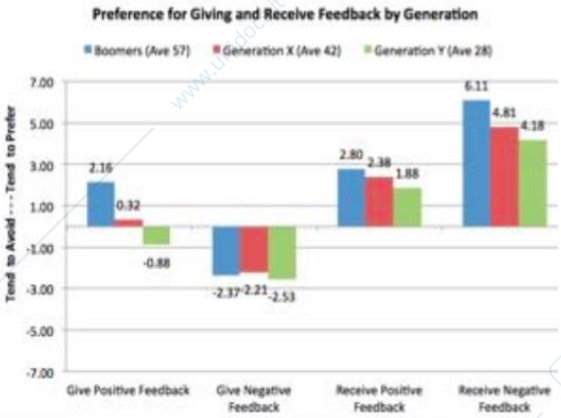
- The angrier you are, the more emotional you are, the more difficult is giving corrective feedback
- The more you are neural and calm, the more you are not interacting with the context, the better is the feedback

The less you are <u>neutral</u> the better will be the feedback, so a greater contact is better for giving a better feedback, emotional contact is required.
QUALE DEI DUE???

AVOID GENERALIZATIONS

- Avoid generalizations like *always* and *never* (because it is not precise, the communication is blocked because you can discuss with the other in the first step)
- Avoid *feedback sandwich:* first of all compliment, then criticism, finally another compliment (to another thing)





Active Listening

Reflect the feeling and make the people free to express. It is something you should do, but firstly you have to understand the <u>listening principles</u> (how to do that):

- **Acceptance:** there must be a reason why someone is showing something to you, you should accept that things happen to people, you should acknowledge that feelings are always true (even if I am wrong, the feelings are something that I have really experienced), accept what are the feelings of the people in front of you
- **Empathy**: feeling with people, taking the perspective of the person in front of you, without judging and solving a problem, just sharing the feelings

- **Genuinity**: you need to show that you are listening, in order to listen you really want to listen

Three main steps for active listening:

- **Door openers** (to start): in many cases I can open the doors for what you want to tell me, that I'm ready to listen.
  - What's up, how things are going, what's going on lately
  - I see you are a bit worried, do you want to talk about it (I'm here to talk when you want)
- **Listen is silent**: without speaking, without doing something else.
  - Do not speak
  - Right time and place
  - Non verbal and verbal cues (No cell phone, no distraction, non verbal attention feedbacks)
- **Mirroring**: mirror the content (I give you back the same things that you tell me) and the feeling, only mirror in what the other person says.
  - Content & Feelings

12 communication roadblocks:

1. Ordering, directing and commanding: you are destroying the communication.
   EX) Child says to parent, "I want another drink of water." Parent says, "You've had enough - get to bed right this minute!"
2. Warning, admonishing and threatening: I'm saying that because I need some help, if you admonishing me it is not a help
   EX) Teenager says to dad, "I really don't want to do a speech in front of the class." Dad says, "If you don't, you'll probably fail the class."
3. Exhorting, moralizing and preaching: this is not listening
   EX) Daughter says to you, "Melissa called me a 'meanie' and she won't play with me." You say, "You should tell her you're sorry."
4. Advising, giving suggestions or solutions
   EX) Teenager says to friend, "School sucks -- I want to quit." Friend says, "Why don't you make an appointment with the school counsellor?"
5. Lecturing and giving logical arguments
   EX) Child says to dad, "Daddy, my tummy hurts – I don't want to go to school today." Dad says, "Well, maybe if you hadn't eaten so many cookies last night, you wouldn't feel sick."
6. Judging, criticizing, disagreeing and blaming
   EX) Child says to mom, "Why do you always make me do more chores than Casey? It's not fair. " Mom says, "You're just lazy -- that's your problem."
7. Praising and agreeing
   EX) Teenager says to mom, "I just can't seem to get along with Linda any more. We never agree on anything." Mom says, "You're such good friends -- I'm sure you'll be able to work it out. You can get along with anybody."
8. Shaming, ridiculing and name-calling
   EX) Teen says to brother, "I got a 'D' on that test. I was sure I'd get at least a 'B'." Brother says, "You're just stupid."
9. Interpreting, analysing and diagnosing
   EX) Friend says to friend/teammate, "Now that you're team captain, you always defend the coach." Friend saya, "You're saying that 'cause you're jealous."
10. Supporting, consoling, sympathizing and reassuring
    EX) Child says to parents, "You guys argue SO much. Sometimes I wish I didn't have to come home." Parents say, "Oh, come on! It's not that bad. All parents fight."
11. Probing, questioning and interrogating: never asking questions
    EX) Son says to mom, "Dad is pressuring me to try out for the football team. I hate football and I'm no good at it." Mom says, "Do you think he wants you to play because he was on his school team?
12. Withdrawing, distracting, humouring and diverting: what you say does not exist
    EX) Daughter says to dad, "Chris isn't texting me back. I bet he wants to break up with me." Dad says, "Hmmm ,...well, come on...let's go get something to eat."

DA SLIDE 32??

16/5/16

OPEN AND COLLABORATIVE INNOVATION PARADIGM

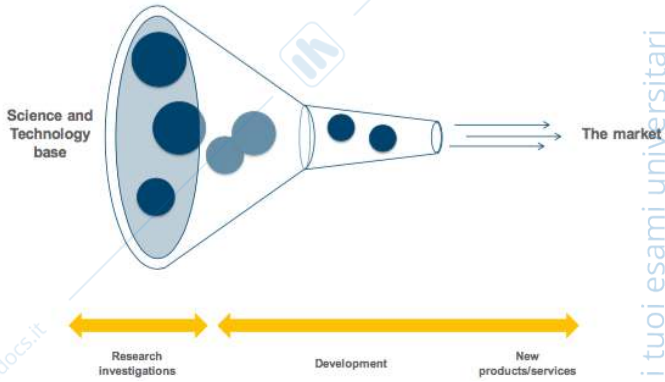
THE OPEN INNOVATION PARADIGM

What is it and why it is different, what are its characteristics?

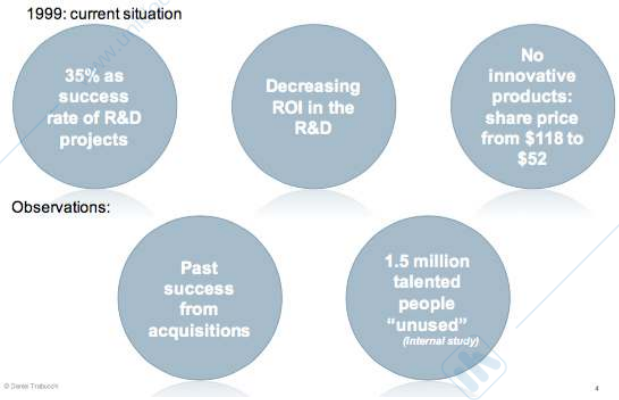
Traditional innovation funnel is the traditional innovation process that we should follow to develop an innovation.
It is more related to the creativity part of the innovation process, rather than the change of meaning process.
First of all, we should start analysing what is happening around us and then we should select one idea.
It is divided into 3 phases:

1. Researching and investigation part: we start with huge amount of ideas and projects
2. Development part (start-up, corporation): we select them, they are usually filtered by the R&D department
3. New products/services: they are placed in the market

This is an old way to think about innovation.



CASE STUDY: PROCTER & GAMBLE



In 1999 they saw this situation. Then, they started doing some kind of analysis (internal analysis) inside the company, questioning themselves to find the reason of that situation.
The large amount of their success came from acquisitions, so acquiring ideas from other companies and from the outside, only in this way they were able to propose something interesting in the market.
They did also an analysis form which they understood that outside the company there are many talented people who are not working for them.

The people in charge for this project said:

*Innovation is all about making **new connections**. Most breakthrough innovation is about combining known knowledge in new ways or bringing an idea from one domain to another"*

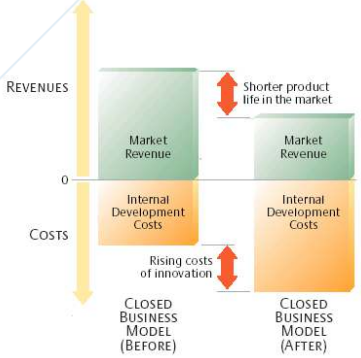
Dr Mike Addison @ Connect & Develop Symposium 2013

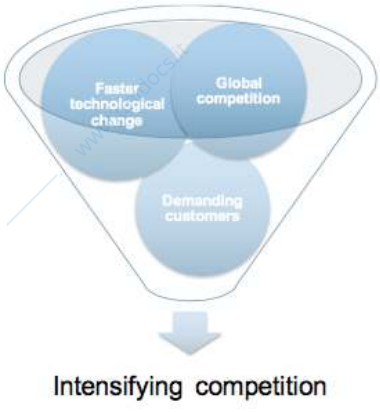
In order to be innovative, it was not enough to focus only on what they are already good in doing (focusing on R&D), but they should change their approach to innovation creating new connections and going behind the boundaries to search for new ways to create innovation.
They created a portal **(connect + develop)** where everyone can provide new ideas to the company in a free way.
They wanted to reach everybody with a good idea to implement it in the company.
"The site has been created to help external innovators and companies learn how to submit innovations to P&G's Connect + Develop" and in this way they were able to reduce the spending for R&D activities, so they were able to collect ideas from outside reducing costs, compared to competitors. At the same time, they were able to connect people from all over the world and asking customers what they want, because collecting customers' idea they can also understand what customers are looking at. They are just collecting ideas, not products.
This is another way to search for innovation.

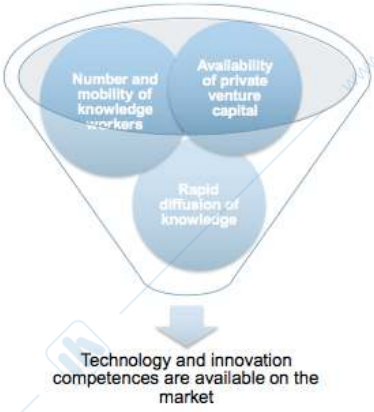
The crisis of the traditional approaches

At a certain point something started changing in the environment.

- **Rising costs of innovation development:** there was a higher competition in the technological field, so it was difficult to build something unique because other companies were working on the same thing. It was more expensive.
- **Shortening life cycles of innovations:** the lifecycle of products became shorter, with an increasing trend every year the lifecycle of product decreased, so it was difficult for companies to innovate.







There is a *global competition* were companies are working on the same topics and so it is increasing the probability that someone else will propose something better. Also customers are changing a lot, so companies need to be able to know them in a reactive way. Companies are facing a very complex and competitive scenario and they need to be flexible to face all these challenges.

← Opportunities for changes in the innovation landscape

Technology and innovation competences are available on the market and we need to consider them. To do that we need to change the paradigm companies are using to do innovation.

Managing innovation

Historically, focused on *internal organizational issues*

- Creating an innovative climate
- Selecting the right projects
- Executing projects

These are all still important, but increasingly, innovation is a *networked activity.*
We need to rethink everything about innovation. How can we maintain our competitive advantage when many other players are working on the same thing? We need to build a community to work together, but how can we engage them and how can we manage them? For example, we can work with skilled people, but they are not employees of the company, so how can we deal with them?

New challenges of innovation:

1. How do you maintain an advantage in a world where "99% of the smartest people work elsewhere"?
2. How do you engage the right "communities"?
3. How do you manage a network of collaborators?

Open innovation is:
"Open innovation is a paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology"

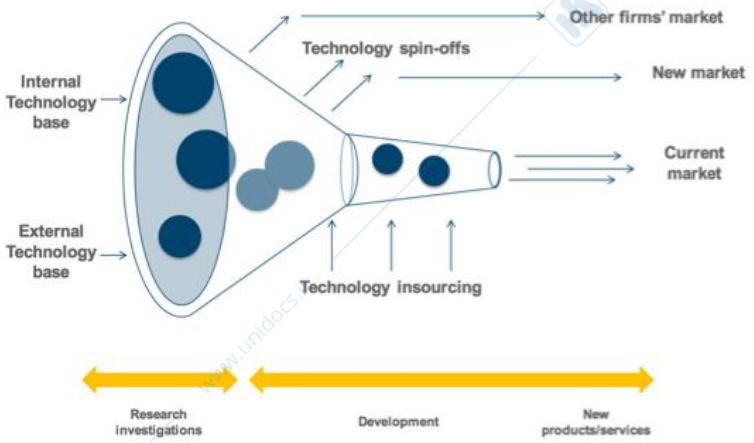
(Chesbrough, 2003)

AUDIO 25
We need to open everything searching new ideas outside and external paths from the market.

*From **«know-how»** to **«know-where»** as a distinctive capability in technological innovation.*
We are changing completely the perspective, KNOW-WHERE, which means where to find people with specific capabilities, not only for developing new ideas but also technologies. We can go on searching for new ideas internally, but it s not enough, we need to go outside and engage people.

Open innovation paradigm

We can change the perspective, focusing not only in the existing market, but we can go in new markets and other firm's markets to find something unexpected. We can change also the target point of our process, getting to addressing different needs and customer, increasing the chance to propose something radical in the market.



"OLD WINE IN NEW BOTTLES?"

"There may be many scholars of R&D management and innovation management who would argue that this paradigm represents little more than the repackaging and representation of concepts and findings presented over the past forty years within the literature on innovation management" (Trott and Hartmann, 2009)

- The network model of innovation, advocated by Rothwelland Zegveld (1985) more than 20 years ago, emphasised the need for external linkages within the innovation process.
- In1959, Carter and Williams found that a key characteristic of technically- progressive firms was the quality of incoming information.
- Thomas Allen's work on "gate keepers" in the 1960s also showed the importance of good external linkages in acquiring information and knowledge from outside the organisation (Allen, 1969)
- SPRU's Project SAPPHO (1974) also confirmed the need for high quality external linkages in successful innovation.
- The need for firms to adopt a more outward-looking focus to their R&D, technology management and NPD has been repeatedly stressed by many

We are talking about something that already exists but in a different way? It is the repackaging of the same ideas? Like outsourcing, co-design for example. It is not completely true. If we compare the two paradigms, the assumptions are different.

- In the first case smart people in the field are working for us, but in the second case there are start-ups that can disrupt the market in a very rapid way in a single day and they are people who are not working for us. We need to find a way to cooperate with them, so we should add to *technology insourcing* also *technology spin-offs,* to reach new and other markets.
- Another aspect is the fact that we can leverage on external R&D and not only internal one.
  If we are able to develop something internally it is easier to protect it, so we are safer in the competition, but we cannot go on behaving like this because we live in a connected world where we know what it is happening around us and we cannot be open to external opportunities, like being the first mover than the follower to get a greater success.

And so on many other principles.

Table 2. Contrasting 'closed innovation' principles and 'open innovation' principles.

	Closed innovation principles	Open innovation principles
i	The smart people in our field work for us.	Not all of the smart people work for us so we must find and tap into the knowledge and expertise of bright individuals outside our company.
ii	To profit from R&D, we must discover, develop, produce and ship it ourselves.	External R&D can create significant value; internal R&D is needed to claim some portion of that value.
iii	If we discover it ourselves, we will get it to market first.	We don't have to originate the research in order to profit from it.
iv	If we are the first to commercialize an innovation, we will win.	Building a better business model is better than getting to market first.
v	If we create the most and best ideas in the industry, we will win.	If we make the best use of internal and external ideas, we will win.
vi	We should control our intellectual property (IP) so that our competitors do not profit from our ideas.	We should profit from others' use of our IP, and we should buy others' IP whenever it advances our own business model.

Source: Chesbrough (2003).

Merits of Open Innovation

- It is simple and provides an **integrated view** of the reasons underlying the use of several unrelated R&D and innovation management practices
- It captures **the increased strategic importance attached to «opennes»** by many firms, even in mature, asset-intensive industries
- It gives weight to the **outbound side of «openness»,** which has received more attention in business practices only recently

- It is able to reach new audiences in the strategy field (e.g., CEOs), by creating linkages with the **business model concept**

Major concerns (critics)

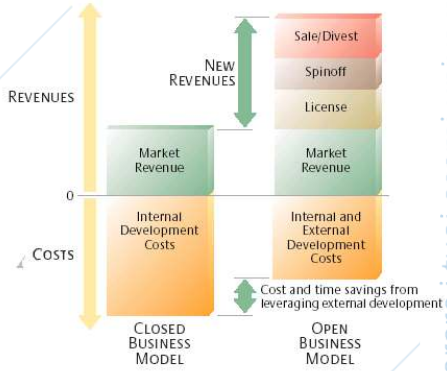
- The open versus closed systems of innovation are presented as **two alternatives faced by firms**. (one perspective does not eliminate the other one, we consider a multi perspective innovation)
- This lends credence to the larger argument by giving the impression that the **options are mutually exclusive**, even though this is not the case.
- This opens up interesting avenues for research, as **integrating/balancing Closed and Open Innovation** is something that has been overlooked so far.

ADVANTAGES, ENABLES AND BARRIERS

Advantages of open innovation

- Lower time and costs to generate innovations
- Lower risks in the generation of innovation: we are taking ideas generated from other companies of the market
- More revenues
- More profitable innovations
- Stronger internal growth

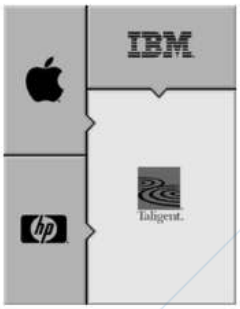
Spinoff: you develop a technology which value can be used by other players and not for the company itself



Advantages of collaborating

- Faster way to get needed skills or resources
- Reduce asset commitment making the company more flexible
- Learning from partners
- Sharing costs and risks
- Build cooperation around a common standard (developing something working with other companies and not only on their own)

Being collaborative does not mean being successful in any case: failures exists.



- **1992**: IBM,HP and Apple create a Join Venture called Taligent to develop a new OS that could overthrow Microsoft
- After **3 year and $50 Million** promoting the new standard the venture was dissolved

Enablers

Companies have specific needs to apply this type of innovation:

- Development of **technological and social infrastructure**
- Rise of **active users**
- Acceleration of **knowledge production** (they also need to understand how to use this knowledge)
- **Global distribution** of knowledge (to get people around the world)

They ask help outside they company, but they need to manage the relationship with different stakeholders and sometimes there are some barriers.

Barriers

- **Not-Invented-Here (NIH)** and **Not-Sold-Here (NSH) syndromes**
- Lack of **absorptive capacity** (how to internalize the knowledge that comes from outside, it is difficult to understand deeply something that has not been developed by you)
- **Loss of control** over core competencies (bringing ideas from outside may worry companies about the fact that they have no control on innovation)
- Managerial **complexity**

These are the disadvantages and challenges to be faced

Reasons for going solo

There might be reasons and drivers to push people working solo.

Whether a firm chooses to engage in solo development or collaboration will be influence by:

- Availability of specific capabilities
- Protecting proprietary technologies

- Controlling technology development and usage
- Building and renewing capabilities

TYPES OF COLLABORATIVE ARRANGEMENTS

There are different ways to implement open innovation and there are numerous types of collaborative arrangements, each with its own advantages or costs.

- **STRATEGIC ALLIANCES:** formal or informal agreements between two or more organizations (or other entities) to cooperate in some way.
  EXAMPLE: "HP and Disney have a long-standing alliance, starting back in 1938, when Disney purchased eight oscillators to use in the sound design of Fantasia from HP founders Bill Hewlett and Dave Packard. When Disney wanted to develop a virtual attraction called *Mission: SPACE*, Disney Imaginers and HP engineers relied on HP's IT architecture, servers and workstations to create Disney's most technologically advanced attraction." Disney has the capability to create movies (creativity) and HP has technological capabilities.
- **JOINT VENTURES:** a particular type of strategic alliance that entails significant equity investment and often establishes a new separate legal entity. They create a new company to do that.
  EXAMPLE: *Illy issimo*. Illy and Coca Cola created a company together to present this product to the market. Coca cola is one of the biggest companies in the world, with one of the biggest commercial network in the world. They wanted to produce a cold coffee product and they needed someone else to share the risk with, to present something different from what they usually do, which is a hazard. Illy sells coffee and needed Coca Cola to produce a product like this because of its complementary assets, their consolidated distribution network. They needed each other.
  EXAMPLE: *Fresh surfer.* Alessi, one of the most famous design company in the world, worked with Bref, but this product was not successful because of its price. Why they did this? Bref wanted to collaborate with Alessi to do a powerful marketing campaign, while Alessi wanted to work with Bref because they are now producing bathroom products, so they wanted to enter in a new market with the help of someone already there.
- **LICENSING:** is a contractual arrangement granting a licensee the rights to an asset (proprietary technology, trademark, copyright, etc.) owned by the licensor.
  EXAMPLE: Distributed Mode Loudspeaker (DML) is a flat panel loudspeaker technology, developed by NXT, [citation needed] in which sound is produced by inducing uniformly distributed vibration modes in the panel through a special electro-acoustic exciter. Distributed mode loudspeakers function differently from most others, which typically produce sound by inducing piston motion in the diaphragm. NXT licenses two classes of distributed mode loudspeaker: SurfaceSound for traditional flat-panel applications, and SoundVu for applications in which sound is produced directly in front of the display.

COLLABORATIVE INNOVATION FRAMEWORK

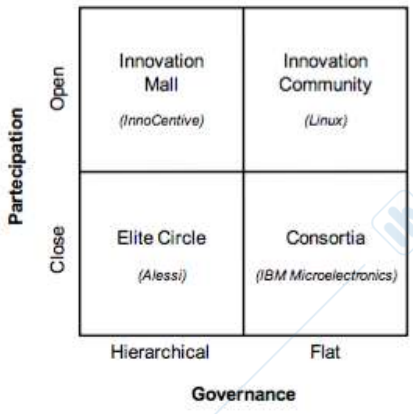
Two different success stories:

Linux: operating system developed through the collaborative effort of a thousand independent developers, no one owning the intellectual property.

- Everybody that owns a computer and an internet connection can participate
- The whole community can decide which contributes implement and use

Alessi: Italian company working in the kitchen wear industry, it is worldwide famous for its products design. It has no in-mouse designer and collaborate with more than 200 hundred freelances.

- The company decides who can enter in this network
- The company evaluate the proposals and decides which products present to the market



Two critical decisions:

Collaborative innovation comes in a variety of forms, no one best approach. Understanding the trade-offs:

- How open or closed should we make our network? **"by invitation only**" vs. **"open house"**
- How are decisions made? **"hierarchical"** vs. **"flat"**

Innovation community

Linux

- 15,004,006 lines of code in the Linux Kernel
- 10,935 lines of code per developer (on average)
- 3,059 lines of code added per day (on average)
- 1,316 developers involved in the last kernel version

Local Motors (https://youtu.be/qj28q7HvfJ4) (https://www.youtube.com/watch?v=azCRuwtE_n0)

Apple iPhone

- 6 March 2008: Apple launches the iPhone Developer Program (enrollment $99) Free SDK and iPhone Simulator
- Nurturing the ecosystem: With VC firm KPCB it launches the 100 mln iFund
- Apple sells in App Store (keeps 30% if not free)
- In 4 days: 100'000 downloads, by June 2008: 250'000 SDK downloaded
- July 2008: App Store opens with 800 applications (200 free)
- First weekend: 10 million applications downloaded

Apple was able to create an innovation community: everybody is able to join and propose its own app, using some kind of filters, but it's the crowd who decides what is the successful app through downloads.

Innovation Mall

InnoCentive

We use this platform to propose our issue to be solved and more than 140000 scientists around the world may try to propose a solution to your issue. It is completely open and everybody can potentially propose a solution: the best solution is going to be picked up by the company with a reward. It is hierarchical, because the best solution is selected by the company, so the crowd has not all the power.

Netflix price

It is a service and not a product and according to the vision of the company has an algorithm to suggest TV series and movies to customers according to their assets and to customers' characteristics.

They were searching for abilities in data analysis recently, creating Netflix Price, a competition where everybody (with certain capabilities) could propose an algorithm to select the best movie for customers. At the end of the competition Netflix took the best solution giving a reward, after having collected many proposals coming from many people with different backgrounds and knowledge.

Competition is a systematic way to approach to open innovation, leveraging on the power of the crowd to create something new.

Consortia

IBM Microelectronics

Closed competition where decisions are taken in a flat way. There is a certain amount of companies involved in the project by invitation, so someone decided who to invite. The aim was to create a standard and the decisions are taken according to the participation of customers.

Elite circle

Alessi

- 200+ designers
- Investments to identify best talents earlier than competitors
- Search in novel domains
- Privileged relationships

The resources are taken from outside and decisions are taken within the company at the top level (hierarchical governance). A lot of design companies work in this way, like Alessi. Having many designers inside the company where design in the core business, they will probably propose the same products across time, so they should leverage on continuously new designers to propose new solutions coherent with the ideas of the company.

EXAMPLES

Apple possible strategies. How does Apple works according to open innovation?

Apple was a vertical integrated company and completely closed. Across time, they changed their strategy opening the innovation to everybody, outsourcing innovation searching for somebody to innovate for them. One of the most important decision they took was to let everybody creating a mobile app.
For some kind of strategic decision, they are still closed about certain features of products.
Open innovation may be useful for single projects.

Suggestions from Dr. House, his team and the crowd. The team worked on the same issue and they lost their core competences, they were lost, because the patient tried to outsource the issue. He posted it online to collect solutions from the crowd: some ideas are only a try, but maybe others are very successful. Leveraging on open sources and the crowd is completely stupid? No, it could be useful and successful only focusing on a part of it, and not addressing the whole issue.

What is the difference?
We are looking for a specialized knowledge, so experts in a specific domain who are more successful than the others, and for a solution made by an innovative community. If the proposition for a solution is opened to everybody it is very difficult to find a good one, we should focus on a small number of very good and talented people.

Comparisons

Open	Closed	Hierarchical	Flat
• **Advantages**: number and breadth of potential solutions	▪ **Advantages:** solutions from best experts in selected domain	▪ **Advantages:** control the direction of innovation	• **Advantages:** share the risk
• **Challenges**: attracting and screening ideas	▪ **Challenges**: finding the right domain and the best experts	▪ **Challenges**: choosing the right direction	• **Challenges:** getting convergence on a desirable solution
• **Enablers**: ability to test proposed solutions at low cost; information platforms; modular problems; design tools	▪ **Enablers**: privileged relationships with best experts; capability to spot talent first, develop relationship	▪ **Enablers:** capability to understand customer needs; capability to integrate work across partners	• **Enablers**: processes and rules that facilitate coordination and focus on common objectives

Closed advantages: you can select and get a better focus on the knowledge.

Open advantages: if you are searching for as much ideas as you can, you are also looking outside the box. In this case, you are not selecting anybody, but just creating something for everybody in order to make them go there. To attract them, you are leveraging on specific drivers like money. If you are searching for someone who might collaborate with you, it is difficult to find them and attract them. Capability to spot talents and build relationships.

Hierarchical advantages: you can control the direction of the innovation people are proposing.

Competitive markets and collaborative communities

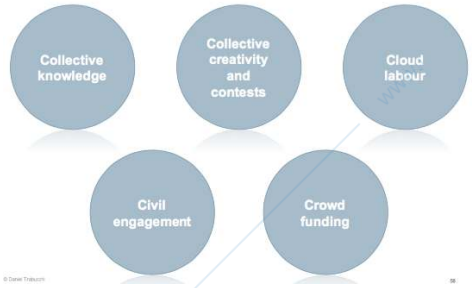
Collaborative communities

- Contributions of external innovators range from mix-and- match offerings to coproduction
- Governance is informal with orientation toward highly socially embedded, norm-based interactions
- External innovators primarily have cooperative relationships among one another
- A range of extrinsic and intrinsic motivations may drive external innovators' activities

Collaborative markets

- External innovators supply variants of mix-and-match, substitutable components
- Governance is formal with orientation toward arm's-length, rule-based, contractually oriented and market relationships
- External innovators primarily have competitive relationships among one another
- Profit motive is central to driving distributed innovation

FOSTER INNOVATION LEVERAGING ON THE CROWD



Crowdsourcing is defined as the process of obtaining needed services, ideas, or content by soliciting contributions from a large group of people, especially an online community, rather than from employees or suppliers. (Wikipedia)

There are companies which are using the crowd as enablers to propose something new. There are 5 ways to leverage on crowdsourcing:

- **Collective knowledge:** Development of knowledge assets or information resources from a distributed pool of contributors.
  EX) Wikipedia is not paying someone, but leveraging on the crowd to collect information and knowledge
  EX) "By the city, for the city" is a platform where everybody in the city can show the issues of the city in order to collect knowledge about the city

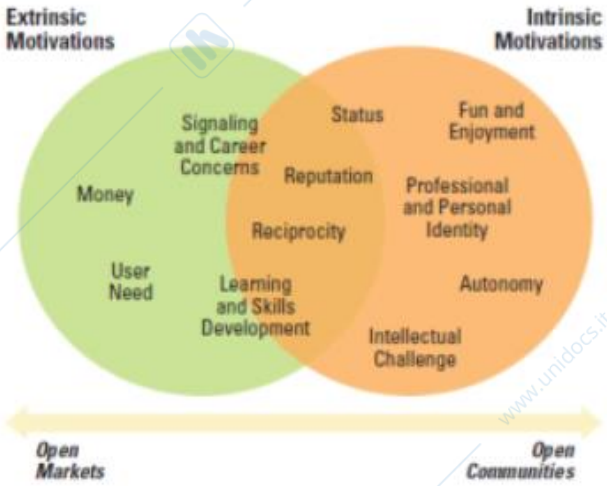
- **Collective creativity and contests:** Tapping on creative talent pools to design and develop original art, media, content or business ideas.
  EX) Threadless is a platform where designers can propose their drawings on a t-shirt and a crowd vote for it and the best ones get a price. Designers are not paid and people just express their preferences
  EX) S2P: switch to product is a challenge where Polibhub search for new ideas and foster creativity
  EX) Deloitte creates contests to collect new ideas outside the company and then they select those who will enter the company

- **Cloud labour:** Leveraging of a distributed virtual labour pool, available on-demand to fulfil a range of tasks from simple to complex
  EX) Microtask combines the human intelligence coming from all over the world and algorithms to get the chance to digitalize what algorithms alone cannot understand
  EX) Freelancer media is a platform used by people to ask to the crowd to solve their issues, paying something. It is a way to outsource a problem.

- **Civil engagement:** Collective actions that address issues of public concern
  EX) OurSay is a community that help organizations, governments to make decisions collecting what people think about certain issues
  EX) Folding@home was proposed as a game and leveraging on the power of the PlayStation platform they decided to make it useful for the society, using the computational power of the technology to get results from something that already exists

- **Crowd funding:** Financial contributions from online investors, sponsors or donors to fund for-profit or non-profit initiatives or enterprises
  EX) Kickstarter, Indiegogo

Why do people participate?



	Fuller's motivations categories	Description
Intrinsic Motivation	*Skill Development - Knowledge Acquisition*	People are motivated because they want to improve their skills and enhance their knowledge.
	Autotelic-Playful Task	Individuals engage in tasks due to the feelings of pleasure that they derive from performing the task. The activity is considered rewarding.
	Curiosity - Exploration-Arousal Seeking	Participation is driven by the satisfaction of exploring new information. Curiosity is the desire for knowledge rather than the desire to obtain the results that may be gained from such knowledge.
	Altruism-Community Support	Participation is done for help others and the community. The possibility to improve the company thought the program can motivate the employees.
	Achievement-Challenge-Self Efficacy	The opportunity to prove oneself motivates participation.
	Make friends	Beneath the interest for the topic, the possibility to get in contact other people can be a reason to get involve in process.
Extrinsic	*Recognition-Visibility*	Visibility, fame and reputation gained from the activity motivate participation.
	Compensation-Monetary Reward	People engage in innovation activities for immediate or delayed compensation.

17/5/16

LEADING TEAM

INTRODUCTION TO TEAMS

Think about a team sport that best represents what a Team is and what are its dynamics.

1. What sport best represents Team dynamics? Football, volleyball, …
2. What are the key elements of Teams that you draw from it?
   Share the same goal, everybody's performance is key
3. What is the role of the team leader?
   To remind you the goal, like in football to push you towards the goal and assigning responsibilities and specific tasks.

How would you define a team inside a firm? A group of people sharing the same goal.

Why organizations use Teams?

- To better compete, organizations are using teams
- In particular: many organizations use *cross-functional teams* to lead and manage innovation processes (to develop talent and foster creative outputs, like innovative solutions)

Teams:

- Offer a better way to use employee talents
- Are more flexible and responsive to changing events
- Can quickly assemble, deploy, refocus, and disband
- Facilitate participation in operating decisions

Affect social interactions and outputs of the firm.

We should look to 2 different perspectives:

ORGANIZATIONAL FUNCTIONS	INDIVIDUAL FUNCTIONS
1. Accomplish complex, interdependent tasks that are beyond the capabilities of individuals.	1. Satisfy the individual's need for affiliation.
2. Generate new or creative ideas and solutions.	2. Develop, enhance, and confirm the individual's self-esteem and sense of identity.
3. Coordinate interdepartmental efforts.	3. Give individuals an opportunity to test and share their perceptions of social reality.
4. Provide a problem-solving mechanism for complex problems requiring varied information and assessments.	4. Reduce the individual's anxieties and feelings of insecurity and powerlessness.
5. Implement complex decisions.	5. Provide a problem-solving mechanism for personal and interpersonal problems.
6. Socialize and train newcomers.	

Teams are an effective tool but very costly, because they take a lot of time to take decisions due to the coordination of more people and they also need to pay more people to accomplish a single task.
To decide whether to use teams or not, we should answer these questions:

- Can the work be done better by one person?
- Does the work create a common goal or purpose?
- Are the members of the group interdependent?

Group definition

A group is defined as two or more individuals, **interacting** and **interdependent**, who have come together to achieve particular **objectives**, and that share **collective norms** and have a **common identity.**
Groups can be:

- Formal: defined by the organization's structure.
- Informal: alliances that are neither formally structured nor organizationally determined

Why people tend to associate them in groups, putting an effort in the performance of the group?

Social identity theory to explain why people form groups

Social identity theory considers when and why individuals consider themselves members of groups:

- People have emotional reactions to the failure or success of their group because their self-esteem gets tied into the performance of the group
- Social identities help us understand who we are and where we fit in with people.

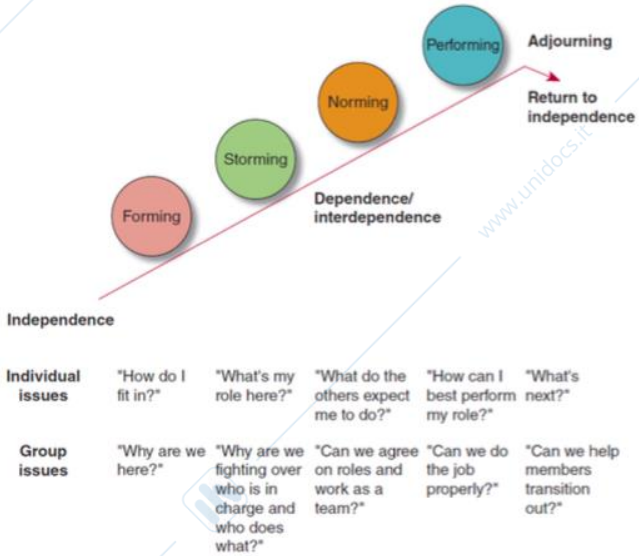
When do people develop social identity?

- Similarity: same characteristics
- Distinctiveness: because the group is different from the others. There is the tendency to see our distinctive characteristic as the best and we see other groups without this characteristic
- Status
- Uncertainty reduction: being part of a group reduces the uncertainty about many things

What is the **difference** between a group and a team? A group misses the *common responsibility* characteristic.
Team is a small number of people with complementary skills who are committed to a common purpose, performance goals, and approach for which they hold themselves mutually accountable.
We can compare them according to different dimensions:

STAGES OF GROUP DEVELOPMENT

Tuckman's Five-Stage Theory of Group Development



- **Forming:** first meet where people define their roles
- **Storming:** once people have developed the awareness of being part of a group, there is the storming phase where conflicts arise. Conflicts are good or a bad thing? There are different kind of conflicts: on the relationship plan (fighting for the personalities that may overcome the others) or on the task plan (it means that we have different and complementary opinions). After this we have defined what are the attitudes and leadership personalities, so for this reason it is a crucial phase
- **Norming:** expected behaviours of everybody are settled
- **Performing:** there may be conflicts on tasks to reach a goal

A group that manages to evolve through these stages becomes a team.

- **Adjourning phase:** to close the experience of the team, because people have to elaborate the abandon of the team, like celebrating a sort of funeral of the team after having accomplished a goal

EX) There are engineering teams that work on projects for many years, so this kind of cycle need to be sustained by specific actions.

Group Effectiveness

Groups proceed through the stages of group development at different rates:

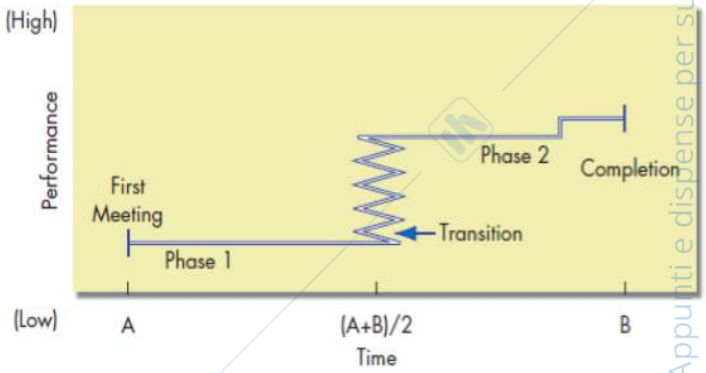
- Those with a **strong sense of purpose and strategy** rapidly achieve high performance and improve over time
- Similarly, groups that begin with a **positive social focus** appear to achieve the "performing" stage more rapidly

Groups don't always proceed clearly from one stage to the next

Movie clip: the leader brings the team to a camp to start the development of the team as a team.
In the forming stage, when they were on a bus, the leader said to consider themselves not as black and white people, but as football player.
In the storming phase they behave aggressively and they honestly reveal the hidden conflicts and opinions.
After this, they move to the norming phase, because they already really know each other.
In the performance stage, players during the match are responsible for their performances, for the results of the whole team.

An alternative model of Group development – temporary groups

The main driver is time, and how drivers of team members change across time. The team meets for the first time, then starts a phase when nobody does nothing until the deadline is coming, so halfway towards the deadline, there is the transition moment when the group realises the performance needs to be implemented.
Phase 1 not productive, but phase 2 very high productivity, where the group divides goals and performances until the goal is reached.

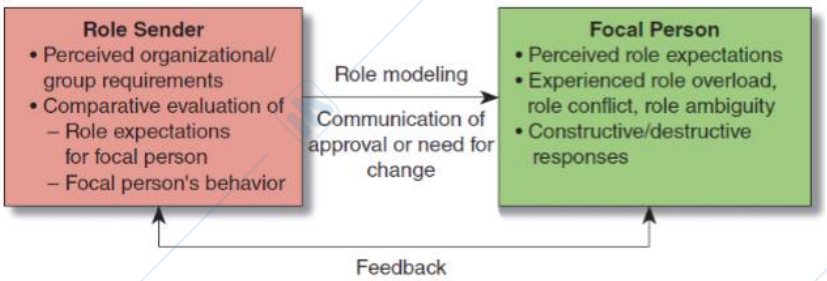


ROLES AND NORMS

Role is a set of expected behaviour patterns attributed to someone occupying a given position in a social unit.

- **Role perception** – one's perception of how to act in a given situation
- **Role expectations** – how others believe one should act in a given situation (ex. my expectations about professor behaviour in evaluating my exam)

There are usually some problems in the role definition and they are described by the **role episode**.
Role sender explains to the focal person how to behave, but in the communication there could be problems like misunderstanding.



- **Role conflict** – different role senders expect divergent roles from the focal person
- **Role overload** – the sum of expectations from role senders from a focal person far exceeds what the focal person is able to do
- **Role ambiguity** – role sender fails to communicate role expectations to the focal person

EXAMPLE: Reducing role ambiguity at Tesco

- Good leaders excel at converting something ambiguous into something behavioural.
- Take Terry Leahy, one of the leaders responsible for reversing the fortunes of Tesco, now the UK's No 1 grocer. One of Tesco's ambiguous goals was to do a better job "listening to customers."
- Leahy broke down that goal into a set of specific actions. For instance, cashiers were trained to call for help anytime more than one person was waiting in the checkout line.
- In addition, Tesco received 100,000 queries per week from customers. Leahy's team made sure that all Tesco managers had access to customer concerns … As a result, they learned counterintuitive lessons, such as that customers dislike stainless-steel refrigerators, which remind people of a hospital—not an ideal association for a grocer.

Functional roles preformed by Group members

TASK ROLES	DESCRIPTION
Initiator	Suggests new goals or ideas.
Information seeker/giver	Clarifies key issues.
Opinion seeker/giver	Clarifies pertinent values.
Elaborator	Promotes greater understanding through examples or exploration of implications.
Coordinator	Pulls together ideas and suggestions.
Orienter	Keeps group headed toward its stated goal(s).
Evaluator	Tests group's accomplishments with various criteria such as logic and practicality.
Energizer	Prods group to move along or to accomplish more.
Procedural technician	Performs routine duties (e.g., handing out materials or rearranging seats).
Recorder	Performs a "group memory" function by documenting discussion and outcomes.
MAINTENANCE ROLES	**DESCRIPTION**
Encourager	Fosters group solidarity by accepting and praising various points of view.
Harmonizer	Mediates conflict through reconciliation or humor.
Compromiser	Helps resolve conflict by meeting others half way.
Gatekeeper	Encourages all group members to participate.
Standard setter	Evaluates the quality of group processes.
Commentator	Records and comments on group processes/dynamics.
Follower	Serves as a passive audience.

- **Task roles:** how to reach the goal
- **Maintenance roles:** relationship oriented roles, to positive affect the relationships and interpersonal dynamics between the team members.

The building blocks of group behaviours: Roles and Norms

Norms are acceptable standards of behaviour (attitude, opinion, feeling, action) within a group that are shared by the group's members.

- Performance norms
- Appearance norms
- Social arrangement norms
- Resource allocation norms

How Norms are developed?

- Explicit statements by supervisors or co-workers
- Critical events in the group's history
- Primacy
- Carryover behaviours from past situations: for example, due to the fact that sometimes we keep using the same things and pov of previous course/lectures

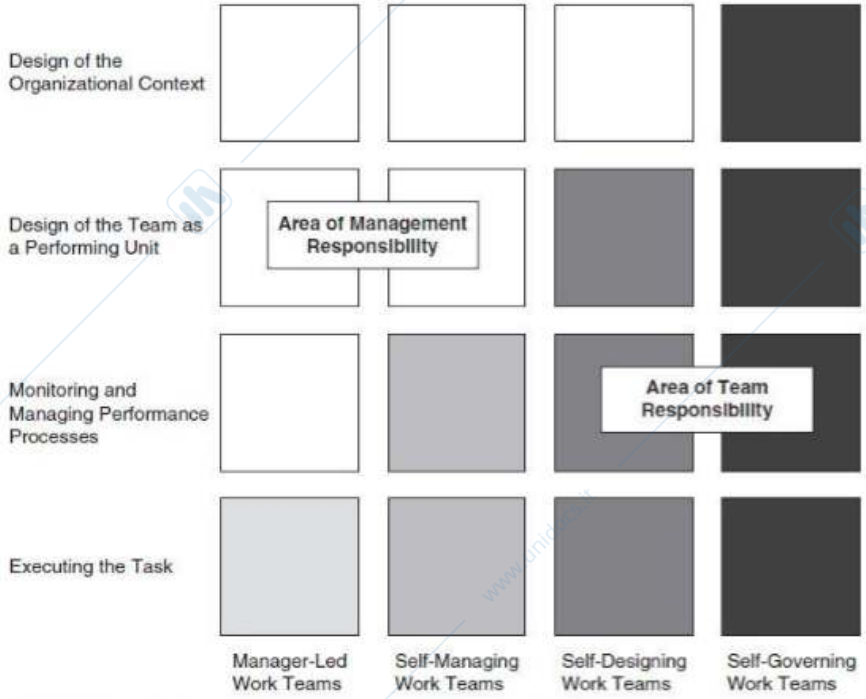
TEAM TYPES

There can be different types of teams according to their objectives:

Advice	Production	Project	Action
Committees Review panels, boards Quality circles Employee involvement groups Advisory councils	Assembly teams Manufacturing crews Mining teams Flight attendant crews Data processing groups Maintenance crews	Research groups Planning teams Architect teams Engineering teams Development teams Task forces	Sports teams Entertainment groups Expeditions Negotiating teams Surgery teams Cockpit crews Military platoons and squads Police and fire teams

Design and leadership

According to the degree of autonomy of the team in the x axis (the manager has the total responsibility of the team or self managed teams). In fact, there are different areas: area of management responsibility and area of team responsibility.



TEAM EFFECTIVENESS

The simulation helps us to understand how we evaluate effectiveness in teams.

Why work teams fail:

Mistakes typically made by management

- Teams cannot overcome weak strategies and poor business practices.
- Hostile environment for teams (command-and-control culture; competitive/individual reward plans; management resistance).
- Teams adopted as a fad, a quick-fix; no long-term commitment.
- Lessons from one team not transferred to others (limited experimentation with teams).
- Vague or conflicting team assignments.
- Inadequate team skills training.
- Poor staffing of teams.
- Lack of trust.

Unrealistic expectations resulting in frustration

Problems typically experienced by team members

- Team tries to do too much too soon.
- Conflict over differences in personal work styles (and/or personality conflicts).
- Too much emphasis on results, not enough on team processes and group dynamics.
- Unanticipated obstacle causes team to give up.
- Resistance to doing things differently.
- Poor interpersonal skills (aggressive rather than assertive communication, destructive conflict, win-lose negotiation).
- Poor interpersonal chemistry (loners, dominators, self-appointed experts do not fit in).
- Lack of trust.

Team performance and effectiveness

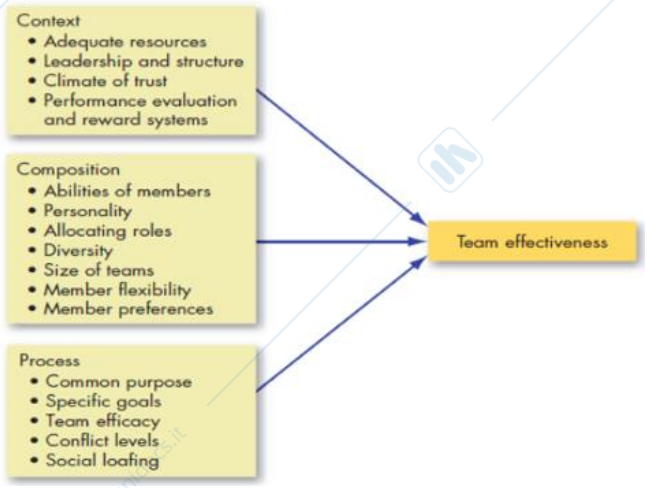
External performance dimensions:

- **Productivity:** The extent to which team's output meets the standards of those who have to use it – the end user
- **Learning**: The extent to which Team members grow and develop as a result of team experience
- **Integration**: Level of integration achieved by the team with other groups, departments, units within (and outside) the organization

Internal performance dimensions:

- **Cohesion**: The willingness of Team members to work as a united team
- **Viability**: Team members' satisfaction and continued willingness to contribute

MODEL for team effectiveness



Designing team composition: team size

- Team size may range from a few members to hundreds
- Keeping teams as small as possible while providing adequate diversity of views and skills is a key to improving group effectiveness:
  - Large teams are good for gaining diverse input
  - Smaller teams are better doing something with the inputs received
- But large teams:
  - Create more administrative costs and communication problems
  - Have higher potential for social loafing – the tendency for individuals to expend less effort when working collectively than alone

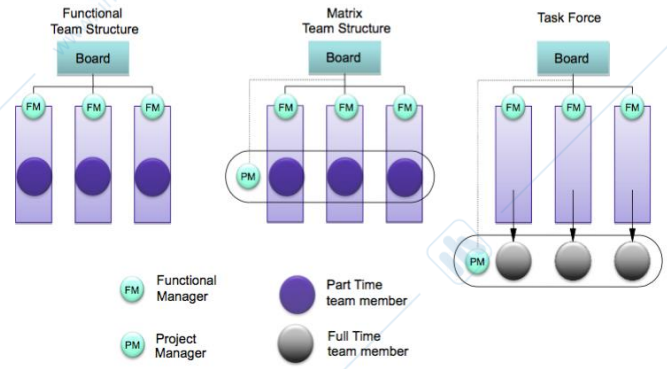
Team design: team composition

- Including members from multiple functions of firm ensures greater coordination between functions
- Diversity in functional backgrounds increases breadth of knowledge base of team
- Other types of diversity (e.g., organizational tenure, cultural, gender, age, etc.) can be beneficial as well:
  - Provides broader base of contacts within and beyond firm
  - Ensures multiple perspectives are considered
- However, diversity can also raise coordination costs:
  - Individuals prefer to interact with those they perceive as similar ("homophily")
  - May be more difficult to reach shared understanding
  - May be lower group cohesion
- Proper leadership and extended contact can overcome some of these challenges

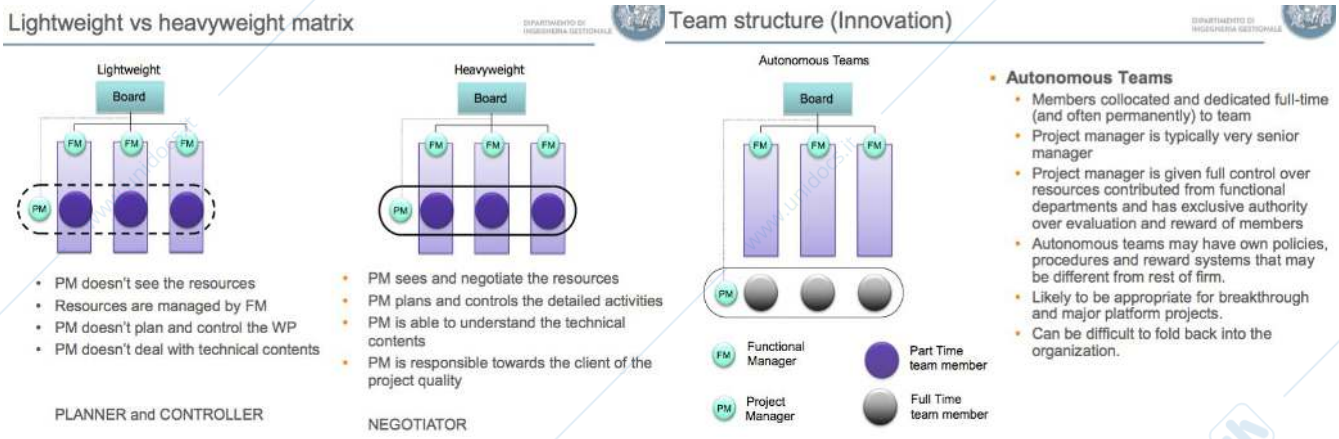
Team knowledge, skills and abilities

- For teams to perform effectively, members must have the expertise to accomplish the task
- Sets of skills to consider when forming a team:
  - Technical or functional expertise: depends on activities and tasks to be performed
  - Task-management skills
  - Maintenance (Interpersonal) skills
- Key KSAs:
  - Conflict resolution
  - Collaborative problem solving
  - Communication
  - Goal setting and performance management
  - Planning and task coordination

Team composition and team structure (innovation process):



Structure	Advantages	Disadvantages	When to use it
Functional Structure	Efficiency in the use of resources Focus on functional-specific development of resources Similar to day-by-day operations	Low control on project objectives Coordination difficulties Interferences/noises from activities external to the project	When it is possible to divide the project into autonomous sub-projects that can be entrusted to functions; usually they are not very innovative
Project Structure (Task Force)	Focus on project objectives and results Clear responsibilities No interferences/ noises from external activities Higher motivation for team members	Duplication/low flexibility of resources Difficulties in finding resources Problems in resources release Detachment from functions (excessive autonomy)	Used for strategic projects, where failure is not accepted at all
Matrix Structure	Efficiency in the use of resources Focus on project objectives and results	Complexity (dual command, responsibility without authority) Interferences/noises Conflicts and negotiations	When the project is innovative or a good result is desired, but it is not such strategic to justify very high expenses



TEAM EXERCISE: how would you assess the effectiveness of teams according to the values collected?
The goal was to achieve the lowest score possible. We can compare individual average scores with team average scores: team > individual → the team works better
At the same time, from a different pov, the team has been able to change individual scores?
What is the purpose of ranking as a team?
If I am an organization which has to pay teams to get outputs. If team outputs are worst than individual ones it does not make sense. Using teams to do activities is to improve not only the average of the individual, but also the best performance.
At the beginning we discussed about the fact that surviving means moving in search for help and not staying fixed in a position.

Lesson learnt:
An effective team process should bring to improve the best performer.
Importance of setting and specifying the common purpose:

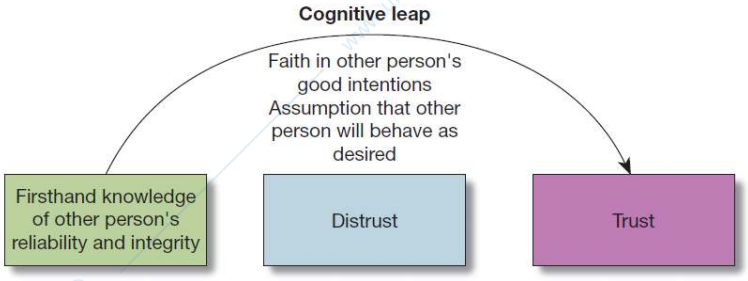
- First agree on the strategy/goal (staying and waiting)
- Then prioritize specific actions
  - Being spotted by rescue people
  - Protecting from the sun at day and cold at night
  - Water

Stages of development of the team affect the effectiveness of the decision making process

Golden rules for effective teams

1. **Cooperation**:
   - Individuals are said to be cooperating when their efforts are systematically integrated to achieve a collective objective
   - The greater the integration, the greater the degree of cooperation
2. **Trust**: reciprocal faith in others' intentions and behaviour. This because people have the tendency to distrust from people they firstly meet, as in our case for the group work. To overcome this problem, we should do

the cognitive leap.



3. **Cohesiveness**: a process whereby a sense of 'we-ness' emerges to transcend individual differences and motives. Team members act only for team objectives and not individual ones.

Team working pitfalls

1. Asch Effect
2. Groupthink
3. Social loafing
4. Escalation of Commitment

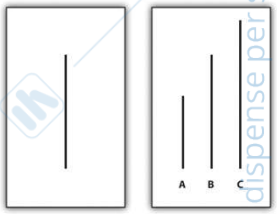
ASH EFFECT

- Group polarization: tendency for group discussion to intensify group opinion, producing extreme judgment
- Asch Effect: the distortion of individual judgment by a unanimous but incorrect opposition [Conformity pressure]

Dark side of *cooperation*, because individual judgments sometimes are distorted by unanimous and wrong believes.

Ash did an experiment*: Which of the three lines in the right panel of the figures is equal in length to the line in the left panel? …76% made a conforming judgment!*

This experiment has been shown to be real: we are afraid of other judgments



GROUPTHINK

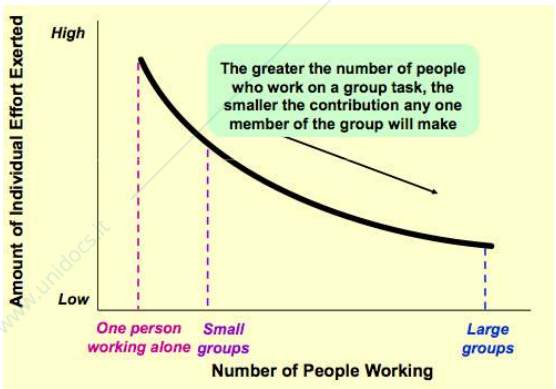
Dark side of *cohesion*.

- A mode of thinking that people engage in when they are deeply involved in a cohesive in-group
- Groupthink occurs when:
  - Members' strivings for unanimity override their motivation to realistically appraise alternative courses of action
  - Consensus is above all other priorities – including using good judgment
- It has been studied and observed in failure of some US political strategies
- This phenomenon is dangerous because it brings to an impairs decision making process. Deterioration of mental efficiency.
- To avoid groupthink:
  - Monitor team size
  - Face-savings mechanisms, risk techniques, devil's advocate, problem solving
  - Different perspectives

SOCIAL LOAFING

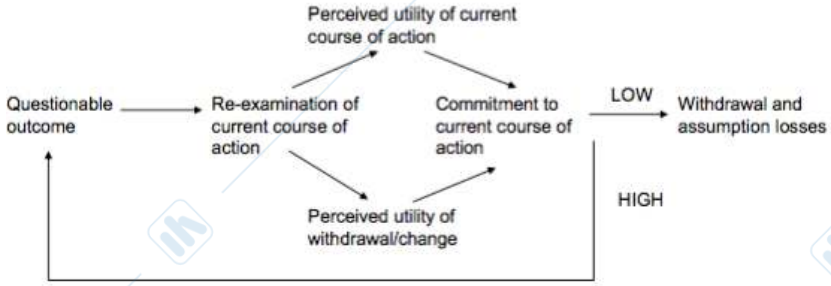
The individual effort decreases when the size of the group increases.

- Tendency for individual effort to decline as group size increases
- The "rope-pulling" experiment used to scientifically measure this phenomenon
- People in groups often do not work as hard as they they do when alone
- Linked to team size



ESCALATION OF COMMITMENT

Persisting with a losing course of action, even in the face of clear evidence to the contrary.



LEADING TEAMS

Team leadership roles:

- **Sponsor**: give authority, resources (Professor, thanks to his proposal)
- **Team coach:** mentor, coach (Professor, thanks to review moments)
- **Team leader**: set goals, vision, leads (the main function is to keep in contact and manage the communication)
- **Team member:** foster trust, cooperation

EX) Mass animation: it is a project based on an experiment which consists in building short animated movies and launching a call on Facebook to collect the cooperation of many people all over the world.

Mass Animation – the challenge

«the largest global animation collaboration ever»

Launch of the challenge on Facebook for development of 5 min animated film; free animation software made available

- 500.000 fans from 101 countries
- 17.000 amateur and professionals downloaded the software
- 124 contributed scenes

Votes from Facebook followers and international jury

Mass Animation Producer/Director took over the final cut

They created a coherent piece of art through crowdsourcing

It is possible to identify a team leader? No.

The process

Mass Animation ...

- developed the story, dialogue and soundtrack
- Made the first scene to set the style and look
- Designed setting, characters, modelled movements

Open the challenge for contributions. Animators picked specific scenes and developed them independently.

They could ask help through Facebook but not change the scene, characters, etc.

Director/Producer took over the final cut, Mass Animation staff refined scenes for consistency, took over final rendering, lighting and compositing.

Teams dynamics and leadership

1. Who in the process decides what to make?
2. Who generates creative ideas?
3. What is this group good at doing?
4. How does leadership function, how much control over the outcomes does the leader have?

Shared leadership

Shared leadership is a dynamic, interactive influence process among individuals in groups in which people share responsibility for leading.

It involves peer, or lateral, influence and upward/downward hierarchical influence

Leadership is not only vertical, but also horizontal!

It is a new form of leadership, very used by organizations. We do not have to look at individual leaders, but at leadership as a horizontal phenomenon, instead of vertical. We are changing the meaning of leading teams.

Two meanings:

1. leadership **OF** a collaborative effort
2. leadership **AS** a collaborative effort: the leader is not in control of the group, but has responsibility for guiding and coordinating the process by which the group decides upon and carries out actions to accomplish its goals

Collective leadership is:

- Concurrent
- Collective
- Mutual
- Compassionate

Requires to:

- Invest in group processes
- Be open to multiple perspectives
- Relinquish individual control over
- process and outcome
- Shift attention from self to other
- Listen, practice empathy

Advantages:

- Ownership and involvement
- Trust building
- Richer and better ideas
- Generation of new leadership

Suitable for:

- Complex problems
- Many stakeholders
- Issues of general interest
- When inclusiveness and empowerment are goals in themselves

30/5/16

CHALLENGING CONVERSATIONS

There are many situations in which is difficult to manage conversations.

HOT	HOTTER
Sometimes feelings erupt. The 2011 sale of a $3 million brownstone in New York's Greenwich Village almost fell apart because of a dispute over an old washing machine that the sellers had removed from the premises two days before the closing. Stephen Raphael, the lawyer for the owners, told the New York Times that it really wasn't worth fighting over, "but the buyers had already felt pressured to up their offer and to concede many things, and this was the last straw." At the closing the sellers still refused to replace the machine. One of the buyers ripped up a seven-figure cashier's check for the balance due, put a match to the scraps, and stomped out of the room. The sellers finally relented and agreed to reduce the price by $300. The brokers found the angry buyer at a nearby bar, nursing a drink. They coaxed him back and the deal was done.	Yet while some people boil over in negotiations, others freeze up. Take Chris Robbins, an emergency room physician at a Boston hospital. Day and night Robbins makes tough decisions when lives hang in the balance and seconds count. He's exactly the kind of doctor you'd want if you were wheeled in on a stretcher: calm, cool, and collected under stress. But his composure dissolves when it comes to negotiating. Robbins craved a spot in a highly selective clinical training program but was tied up in knots about asking for the two-month leave it would require. Such requests were unusual, and given staffing problems at the time, he risked seeming disloyal to the ER team. The mere prospect of a confrontation was so intimidating that Robbins never even raised the issue.

HOT: someone having a strong reaction in a difficult situation
HOTTER: someone avoiding the conflict and the challenging conversation

Conflict

DEF) A process that begins when one party perceives that another party has negatively affected, or is about to negatively affect, something that the first party cares about.

Why people avoid conflicts? Class answers:

- When a conflict starts, the team performances can be affected
- Escaping reality
- Facing a conflict is difficult and if I believe that anything is going to change, I have no reasons to put effort in doing a conflict
- If you know that you are wrong, with a conflict your situation will be worse
- I do not confront other people because I have to be sure of my idea, my info.
- There is the risk of losing

We avoid conflicts because we fear various combinations of the following things:

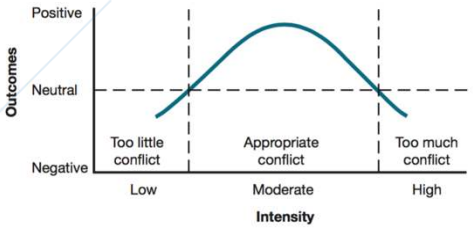
- Harm (hurt someone)
- Rejection
- Loss of relationship
- Anger (risk of being aggressive)
- Being seen as selfish
- Saying the wrong thing
- Failing
- Hurting someone else
- Getting what you want: some people do not really want to achieve what they want, but they want to keep something to comply about, because they are scared of performing well.
- Intimacy

Can conflicts be constructive? Class answers:

- It depends on the perspective we use to analyse a conflict: it can be seen as a war or as an opportunity to see something different useful to change our way of thinking.
- Yes, if it is an interchange of opinions and both parties change their point of view.
- Conflict is a way to change, as in politics: it is impossible to solve some problems without facing a conflict.
- It depends on the management of the conflict: only if you have the right skills to manage it, you can turn it into something constructive
- It depends on decision making: EX) Doctor House, with his colleagues, communicate trying to destroy others' theories ("Devils Advocate"). Only if others are not able to destroy your idea, it is the right one.

Functional and Dysfunctional conflicts

According to the intensity of the conflict, the outcomes are different. The problem is not having a confrontation and different pov, but the problem is how the conflict is managed. The more you stay quiet, the more is difficult to develop new ideas. There is a good level of conflictuality in each organization, and the same in teams. If there are no conflict it means that something is wrong.



Metaphors of conflict

- Conflict as a war: we shot down that idea
- Conflict as opportunity: what will take to resolve this agreement? There might be something that can be considered to make us learn how to solve the problem
- Conflict as a journey: let's search for common ground and all learn something useful
  People are sick of conflicts, the more they disagree the more they grow. Sometimes companies want to hire people that always disagree and not *yes man*, in order to learn from the conflicts. The more is the level of disagreement, the more powerful is the outcome.

→ Book: POWER OF CRITICISM (Verganti)

Challenging conversations

Video: Modern Family. Two different ways of managing conflicts: the dad avoids it, while the kid faces the situation. The kid didn't do it immediately, but after some time he did it. The main difference between them is the fact that:

- the father is scared and he doesn't want to face the situation, so he decides to avoid it for many reasons
- the kid has different behaviours towards the father and the mother:
  - He says "I love you mom, this is not singing, it is screaming". He is not selfish, but he cares about the other
  - He does not care about his father feelings

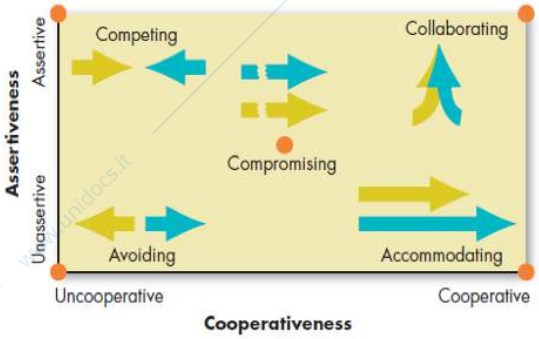
See picture of the model:

- Competing: as the kid did with the father
- Avoiding: as the father did
- Collaborating: as the kid did with the mother (he showed a trait of collaboration, saying to the mother what she wants to be heard)

The five Conflict-Handling modes

The Thomas-Kilmann Conflict Mode Instrument (TKI) is designed to assess an individual's behaviour in conflict situations. That is, situations in which the concerns of two people appear to be incompatible. In such situations, we can describe a person's behaviour along two basic dimensions:

- **Assertiveness:** the extent to which the individual attempts to satisfy his or her own concerns.
  Focusing on myself and my needs
- **Cooperativeness:** the extent to which the individual attempts to satisfy the other person's concerns
  Get in a conflict and try to understand the other persons' need



These two basic dimensions of behaviour can be used to define five specific methods of dealing with conflicts.

COMPETING

Competing is assertive and uncooperative, a power-oriented mode. When competing, an individual pursues his or her own concerns at the other person's expense, using whatever power seems appropriate to win his or her position. Competing might mean standing up for your rights, defending a position you believe is correct, or simply trying to win.

Uses

➨ When quick, decisive action is vital (for example, in an emergency)

➨ On important issues where unpopular courses of action need implementing (for example, cost cutting, enforcing unpopular rules, discipline)

➨ On issues vital to company welfare when you know you are right

➨ To protect yourself against people who take advantage of non competitive behaviour

COLLABORATING

Collaborating is both assertive and cooperative, the opposite of avoiding. When collaborating, an individual attempt to work with the other person to find a solution that fully satisfies the concerns of both. It involves digging into an issue to identify the underlying concerns of the two individuals and to find an alternative that meets both sets of concerns. Collaborating between two persons might take the form of exploring a disagreement to learn from each other's insights, with the goal of resolving some condition that would otherwise have them competing for resources or confronting and trying to find a creative solution to an interpersonal problem.

Uses

➨ To find an integrative solution when the concerns of both parties are too important to be compromised

➨ When your objective is to learn (for example, testing your own assumptions, understanding the views of others)

➨ To merge insights from people with different perspectives on a problem

➨ To gain commitment by incorporating other's concerns into a consensual decision

➨ To work through hard feelings that have been interfering with an interpersonal relationship

COMPROMISING

Compromising is intermediate in both assertiveness and cooperativeness. When compromising, the objective is to find an expedient, mutually acceptable solution that partially satisfies both parties. Compromising falls on a middle ground between competing and accommodating, giving up more than competing but less than accommodating. Likewise, it addresses an issue more directly than avoiding, but doesn't explore it in as much depth as collaborating. Compromising might mean splitting the difference, exchanging concessions, or seeking a quick middle-ground position.

Uses

➨ When goals are moderately important but not worth the effort or the potential disruption involved in using more assertive modes

➨ When two opponents with equal power are strongly committed to mutually exclusive, as in labor-management bargaining

➨ To achieve temporary settlement of complex issues

➨ To arrive at an expedient solution under time pressure

➨ As a backup mode when collaboration or competition fails

AVOIDING

Avoiding is unassertive and uncooperative. When avoiding, an individual does not immediately pursue either his or her own concerns or those of the other person. He or she does not address the conflict. Avoiding might take the form of diplomatically sidestepping an issue, postponing an issue until a better time, or simply withdrawing from a threatening situation.

Uses

➨ When an issue is trivial or of only passing importance, or when other, more important issues are pressing

➨ When you perceive no chance of satisfying your concerns (for example, when you have low power or you are frustrated by something that would be very difficult to change (national policies, someone's personality structure, and so on)

➨ When the potential costs of confronting a conflict outweigh the benefits of its resolution

➨ To let people cool down, to reduce tensions to a productive level and to regain perspective and composure
➨ When gathering more information outweighs the advantages of an immediate decision
➨ When others can resolve the conflict more effectively
➨ When the issue seems tangential or symptomatic of another, more basic issue.

ACCOMODATING
Accommodating is unassertive and cooperative, the opposite of competing. When accommodating, an individual neglects his or her own concerns to satisfy the concerns of the other person; there is an element of self-sacrifice in this mode. Accommodating might take the form of selfless generosity or charity, obeying another person's order when you would prefer not to, or yielding to another's point of view.
Uses
➨ When you realize that you are wrong, to allow a better solution to be considered, to learn from others, and to show that you are reasonable
➨ When the issue is much more important to the other person than to yourself, to satisfy the needs of others, and as a goodwill gesture to help maintain a cooperative relationship
➨ To build up social credits for later issues that are important to you
➨ When continued competition would only damage tour cause, when you are outmatched and losing
➨ When preserving harmony and avoiding disruption are specially important
➨ To aid the development of your employees by allowing them to experiment and learn from their own mistakes

TEST: vedi foglio e slides con risultati

All these strategies can be useful according to different situations.

- **Competing:** power to win a position, standing out our rights. It can be used when: SEE THE LIST
  - the other is doing something unacceptable (making him stopping doing like this) → important issues, unpopular
  - you are challenged publically → vital issues for the company
  - there is no time to adopt another approach
- **Collaborating:** "win win", situation where you try to fulfil your and your opponent needs.
- **Compromising:** in some cases, you give something to get something back. The most wrong thing about compromise is the fact that both parts are not fully happy, because they have to bargain the solution. This is applied when collaboration is not possible to be implemented, because it is not the best way to manage a conflict. It is acceptable to have a compromise when the situation is not so important.
- **Avoiding**
- **Accommodating**

Video:
- Competing: focused on achieving the final result. He has been challenged and keen on his objectives.
- Collaborating: he cares about the other part, because he says that if he does not know something he says the truth, so he is honest. He also says that he is not dressed in the right way and he has not a right point to sustain. He also understands well the person he has in front (CEO): changing his position/pov and understanding his needs. The CEO gets an honourable way to change his attitude in front of everyone.
- Avoiding: in the last scene when his friend comes to the elevator, he knows that he wants money, so he does not say anything to change the situation, getting in the conflict in another way.

6/6/16

SUSTAINABLE INNOVATION

Sarah Behnam

SUSTAINABILITY

Why sustainability?

There are some statistics:

- Each of the 7 billion global citizens in 2010 used an average of 1.7 earths.
- Global population is excepted to increase to 9 billion people by 2050.
  - The first concern comes from the fact that population is increasing very rapidly, while resources are decreasing. What should we do to to balance them?

⇨ 93% of CEOs believe that sustainability issues will be critical to the future success of their business.

⇨ Over half of high-level managers (53%) believe that their companies' investment into sustainability increased between 2012 and 2015; 39% expect it to stay at least on the same level.

- Business pov: sustainability will be the future success of companies, who will invest more or even equally in sustainability. CEOs believe sustainability will be the main concern in the near future.

What is sustainability?

DEF) "Meeting the needs of the present without compromising the ability of future generations to meet their own needs". "**Sustainability**" or "**Triple Bottom Line**" encompass three pillars:

1. Conserving the environment along with using resources efficiently (<u>environmental</u>)
1. Improving the standard of human living (<u>social</u>)
2. Advancing long-term economic competitiveness (<u>economics</u>)

<u>VIDEO: Anthony Cortese, Second Nature President: Why sustainability is important?</u>
https://www.youtube.com/watch?v=K7d2eo3YQvA

➔ The basic idea is the fact that sustainability is not only about conserving air, but also about what can we leave to future generations.

Models of the tree dimensions of sustainable development

Sources: Barbier, E. (1987). The concept of sustainable economic development. *Environmental Conservation, 14*(2), 101–110; United Nations. (2005). *2005 World Summit outcome* (p. 12). New York: United Nations.

There are 3 main models of sustainability:

1. Sustainability is the result of the conjunction of the 3 pillars (the more common and established method)
2. The 3 pillars are independent: they contribute independently to define sustainability
3. Economy is the centre of the society, while environment englobes all the others

Theoretical history and advances

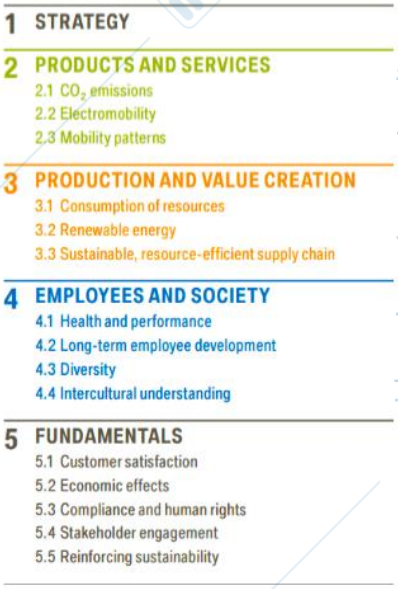
The concern started in 1789, when people started questioning with what degree the population will grow in the future. In fact, in the 70s the main concern was the economic problem related to population growth.
Then, also the environmental perspective was added.
In 1987 the prime minister started including sustainability in his speeches to the population.
In 1999 there was the PEAK of the sustainability concern.

Sustainable leading: case studies

It is a growing field not well established in term of theories. The main leaders in term of sustainability are those present in the slide (BMW, Adidas, ENI, Philips, L'Orelal): not only companies producing products, but also companies delivering services, like banks that have very high investments in sustainability. All sectors have different initiatives in sustainability to increase its impact. There are also other companies present in other rankings.

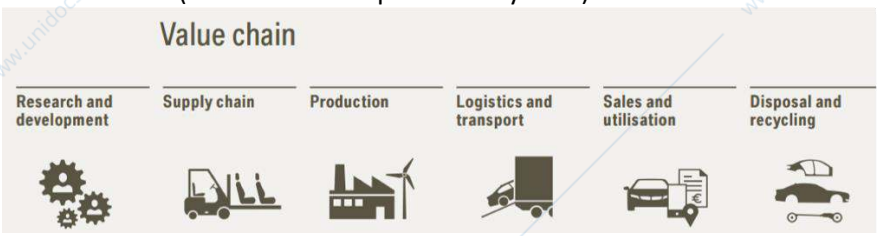
BMW areas of sustainable development

- Production and value creation: sustainability is not only about the business itself, but also about value creation (the process of creating value), making reference also to suppliers and third parties involved.
- Fundamentals: it is mainly about customers' satisfaction, related to an increase degree of customers involved in sustainable initiatives



BMW value chain initiatives

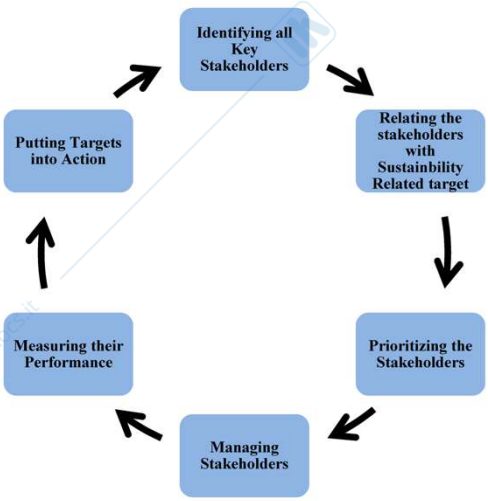
BMW is a pioneer in sustainability because it has sustainable initiatives in all the phases of its value chain (like better transportation system).



Role of stakeholders in sustainability

Stakeholders: anyone who is affecting the business or is affected by the business. They are shareholders, employers, customers, etc.

- **1 step:** who are the key stakeholders. There are different varieties of stakeholders and we need to identify them. Customers are the primary stakeholders and they are prioritised and managed in a different way to get the maximum level of satisfaction.
- **2 step:** what is their demand



Business case for sustainability

What is "Business case for sustainability"? Increasing corporate economic value through an intelligent design of voluntary environmental and social activities:

- which are not just a reaction to regulations and legal enforcement
- which create a positive business effect or a positive economic contribution to corporate success
- which are done by a certain management activity

The return of the investment happens in the long term, so many years after the investment (20, 30 years). Especially for small companies, this kind of investments are very difficult to be implemented.
Earning money from the social and environmental context.
What drives businesses to be sustainable? **Core business case drivers**:

- Costs and cost reduction: using less energy and materials in the production system leads to a reduction of costs
- Risk and risk reduction: if a product is not sustainable, there will always be stakeholders against you
- Sales and profit margin: better
- Reputation and brand value
- Attractiveness as employer
- Innovative capabilities: think out of the box

Implementing ongoing business cases for sustainability through ***Sustainable Business Models***

Business models are concerned with how the firm defines its competitive strategy through the design of the product or service it offers to its market, how it charges for it, what it costs to produce, how it differentiates itself from other firms by the value proposition, and how the firm integrates its own value chain with those of other firm's in a value network.

➔ These described until now are the basic theories and terminologies of sustainable innovation.

SUSTAINABLE INNOVATION

Why sustainable innovation?

There is a TRADE OFF between economic and environmental/social pillars.
To face this trade off, businesses started doing more innovation.

What is sustainable innovation?

BASIC DEF) The establishment of new products, processes, and/ or management systems, where environmental, social, and economic goals are their foundations.

Merits of sustainable innovation concept

NOT ONLY: Innovation act as a persuasive means to cope with economic trade-offs of sustainability
BUT ALSO:

- Sustainable development act as the driver of innovation in businesses.
- Support businesses in enhancing strategic orientation toward sustainable development or innovation.
- It is able to grow the market, by creating new sustainable business models. (Business models are growing a lot!)

Why businesses started to do sustainable innovation?
Sustainable orientation has a double implication: it makes businesses more innovative, but at the same time sustainable innovation initiatives enable businesses to be more oriented towards sustainability.

Other terminologies

Sustainability oriented innovation (SOI)/Sustainability driven innovation (SDI)

The main difference is related to business intentionality for sustainable development (in case of SOI) or impact on actual sustainability performance (in case of SI) → Both have pros and cons!

- SOI is thinking about the intention of the business: if the business has the intention to be sustainable. → Orientation of the business (Low KPIs in term of sustainability, so low reliable)
- SI (Sustainable Innovation) is am innovation that increases the sustainable performance of a business, where sustainability is the final objective to be reached → Outcome of the business
- **SDI:** initiatives driven by stakeholders who drive businesses to innovate in a sustainable way

Environmental technological innovation (ETI)/Green-innovation (GI)/ eco-innovation/Social Innovation (SI)

Here, the terms focus on only one of the sustainability dimensions.

- SI: only directed towards social pillars
- ETI and GI: only directed towards environmental pillars

We in general refer to sustainable innovation as a wide range theory

Case: sustainable innovation

Potential safe, environmental friendly housing for refugees

How we can build the shelter for refugees in order to be sustainable over time?
We need some refugees to test. After testing, we will came up with a new type of shelter.

Case: green-innovation

Barilla

Barilla introduced a new-generation packaging for Mulino Bianco's products with enhanced 5% recyclability (from 90% to 95%) by using less-plastic formula leading to homogeneity in the composition for disposal.
Barilla has started investing in new technologies to reduce the amount of plastic in its products, thanks to a lot of feedbacks from users regarding their packaging.

Case: social innovation

- Code world club: every child in the world has the chance to learn code
- Blind square: helping the visually impaired interact with their surroundings. It is an app that helps blind people walking around the city

➔ To improve social life and the environment, improving profit as well.

SUSTAINABLE AND CONVENTIONAL INNOVATION

We compare them:

	Sustainable	Conventional
Business Model	Strategically create business cases (plural!) for sustainability on a continuous basis, requires an innovative business model which supports the management of voluntary social and environmental activities in addressing the business case drivers in a systematic manner.	Creating profitable business cases with an innovative business model for economic reasons.
Drivers	The most promising innovations pursue a more complex and diverse set of goals with their initiatives including environmental, social and positive response to stakeholders' interests.	The main goal includes achieving economic benefits directly (cost/ revenue) or indirectly (e.g. market grow)
Determinant	Regulations are taking increasing attentions towards both environmental and social demands. Market-pull from the external relations point of view and pressure from stakeholder. Design-driven are when the proposed innovations put forward new meanings for sustainable behavior. Sustainable Values-driven initiatives which are in alignment with the core sustainability oriented values.	Conventional innovations are mainly pushed by the advancements in technology, consumer demands (market) or giving new meanings to products/services by design driven initiatives.
Process	Mainly Chaotic especially in case of more complex SOIs (without clear environmental/social outcomes) and business model innovations for sustainability.	The innovative outcome is typically easier to be recognized in advance, thus the process can be linear or chaotic (in complex projects).
Stakeholder approach	SOI requires engaging in collaborative, multi-stakeholder problem solving and learning esp. with secondary stakeholder (e.g. NGOs, Local communities/ municipalities, Sustainability expert organizations)as well as supply chain partners.	The key stakeholders in conventional innovations are customers, chain network and the shareholders.

Poll: Considering sustainable innovations around you, how do they differ from conventional forms of innovation?

- ➔ Stakeholder
- ➔ Process
- ➔ Determinants
- ➔ Above all

???

BUSINESS MODEL

Business model innovation for sustainability

The types of changes for sustainable business model require a fundamental shift in the purpose of business and almost every aspect of how it is conducted.
Business model innovation offers a potential approach to deliver the required change through re- conceptualizing the purpose of the firm and the value creating logic, and rethinking perceptions of value.

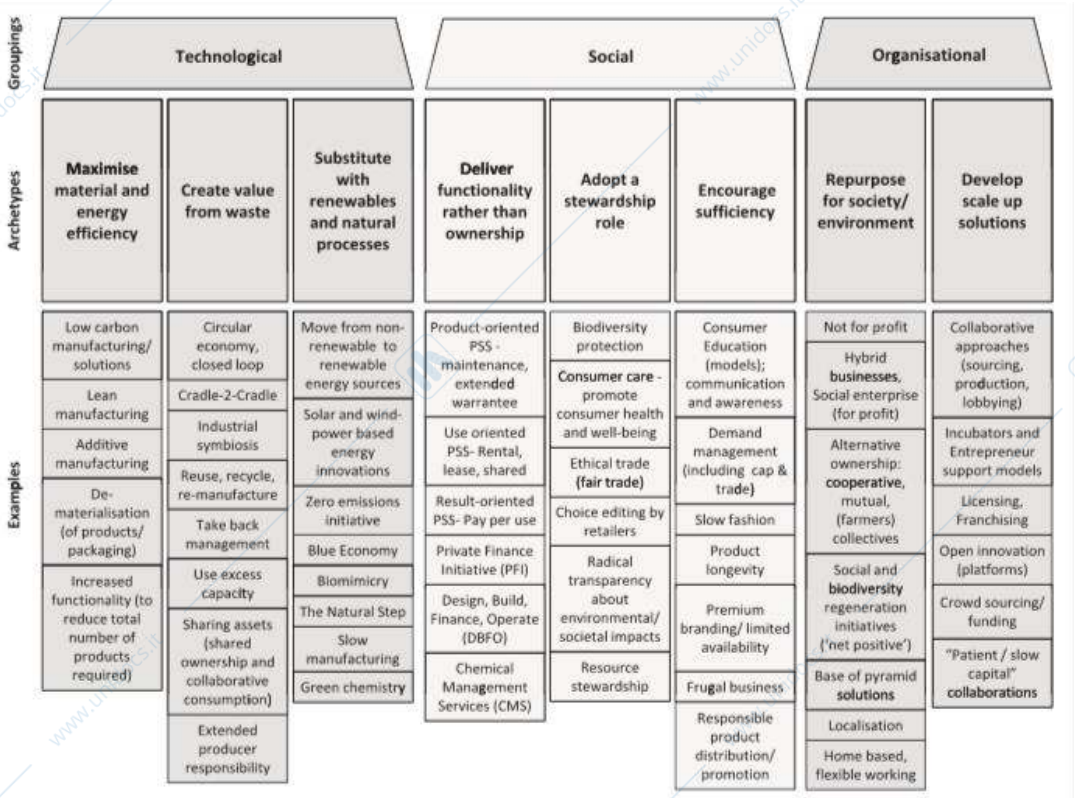
DEF) Business model innovations for sustainability are defined as:
Innovations that create significant positive and/or significantly reduced negative impacts for the environment and/or society, through changes in the way the organization and its value-network create, deliver value and capture value (i.e. create economic value) or change their value propositions.

Strategically create business cases (plural!) for sustainability on a continuous basis, requires an innovative business model which supports the management of voluntary social and environmental activities in addressing the business case drivers in a systematic manner. To achieve this, it can be necessary to adapt or even radically change a company's business model.

- **Business model adjustment:** just adjusting one of the pillars (the way we create value or the way we deliver value)
- **Business model adoption:** some of the competitors have their own business model and if we adopt it based on what others do, we are adopting
- **Business model improvement:** if we bring sustainability in both value creation and value delivery, the business model is improvement
- **Business model redesign:** creating a totally new value for our business it means that we are trying to capture value in a completely different way

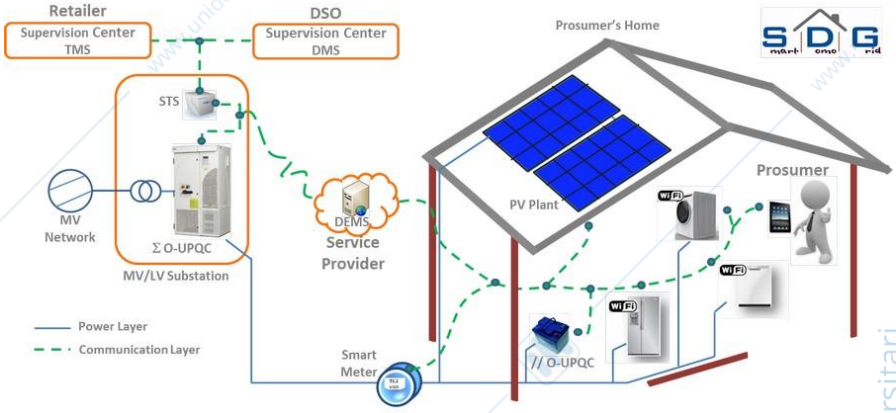
Businesses are trying to adopt at least one of them. Redesign is adopted by companies in a parallel production line.

They can be done through 3 different areas: n each of them values and activities driven by stainability are proposed.



Smart appliances

They are trying to understand how smart cities can be designed. They started by smart houses, which use renewable energy like solar energy; the main drawback is the fact that it cannot be stored for a long period of time.
Pilot test: smart appliances and energy coming from the roof are linked together.
There are a lot of value network: many actors are involved in the development of the technology and user experience.
Businesses are pushed to work together as different people with different knowledge and experiences.



DRIVERS

Although the economic drivers cannot be denied as a force to motivate or sustain efforts to build more sustainable supply chains (e.g. cost/risk reduction-profit margin-employee attractiveness- brand value-innovative capability): the most promising innovations pursue a more complex and diverse set of goals with their initiatives.

Usually economy (earning more money) is the main one for businesses. In a lot of sustainable innovation cases there are also different drivers:

- ➔ Social
- ➔ Environmental
- ➔ Stakeholders
- ➔ Triple Bottom Line: equity, environment, economy

EX) Barilla (customer satisfaction and not only economy)
Driver: consumer demands for convenient waste disposal and environmental-friendly packaging:

- Enhancement of environmental impact of packaging → Less plastic (10% to 5%) in the material composition.
  - Innovative capability and learning
- Increase reputation and Brand value by supporting sustainable behaviour and user convenience in the waste disposal.
- Sustaining durability and taste of the cookies with the new packaging.

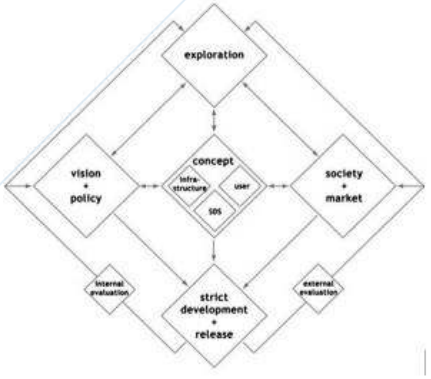
DETERMINANTS

In sustainable innovation projects, the main determinants are:

- ⇨ **Value-driven:** initiatives driven by the value.
  EX) Whirpool and smart cities: one is providing a service and the other a product, they have different vision and projects. They are completely different, but both are driven by the value: being more sustainable.
- ⇨ **Regulatory push:** green buildings are typical examples of regulatory push, technology push and market pull sustainable innovative projects

PROCESS CYCLE

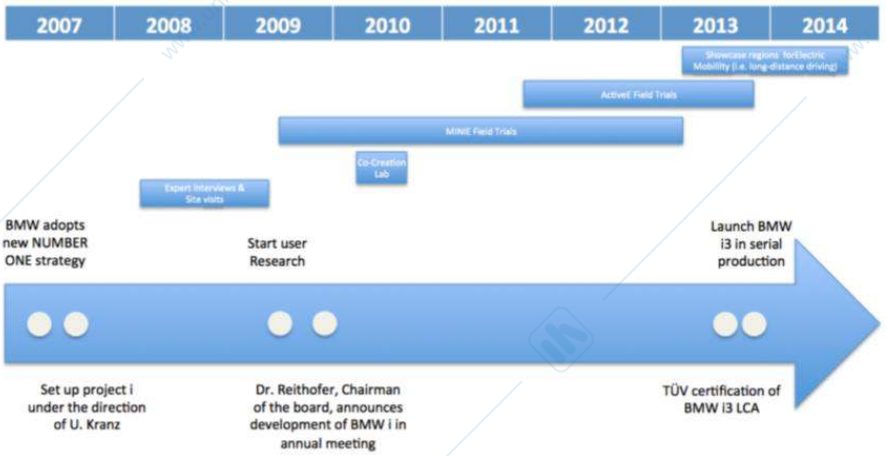
Diamond ... process cycle
Development of different scenarios to, at the end, identify the most effective with the higher effect on sustainability.
Idea generation and other process are *chaotic*, so they do not follow a linear path.



EX) Case BMW:
Core industry is electric mobility. They also went behind this core industry, building different type of cars according to different types of traffic flows in cities. They wanted to create something new and redesign one area of their business model being sustainable and really innovative. To do something different from competitors.

- ⇨ Test
- ⇨ Lab to develop ideas

These processes have been done together in a chaotic way.



STAKEHOLDER

A central element in most cases is stakeholders' role. In a sustainable context, all stakeholders have to change their mind-set: (in order to decrease food consumption).

Case of Multi-stakeholder approach Food waste in enterprises

In today's startup business culture, food has become one of the hottest employee benefits (esp. free or subsidized food). The successful technology companies particularly have taken food programs to new heights with free meals, continuously available all you can eat snacks, and special meal events

- aimed at attracting good employees, allowing them to positively interact at work, supporting relationships with vendors and customers and contributing to employee productivity.

But when offering food, these same companies must also address the sustainability concerns of their many stakeholders.

- As a result, many of these companies develop food policies that speak to social and environmental impacts of their food programs.

Given the number of employees and institutional purchasing power, they can make a significant impact on sustainability and stakeholder impressions of the company.

It has been shown that big companies are starting new projects to give food to its employees. Given the number of employees, offering a food in a business means developing a food management. Most firms are hiring people specialised or outsourcing this activity. (Google example)

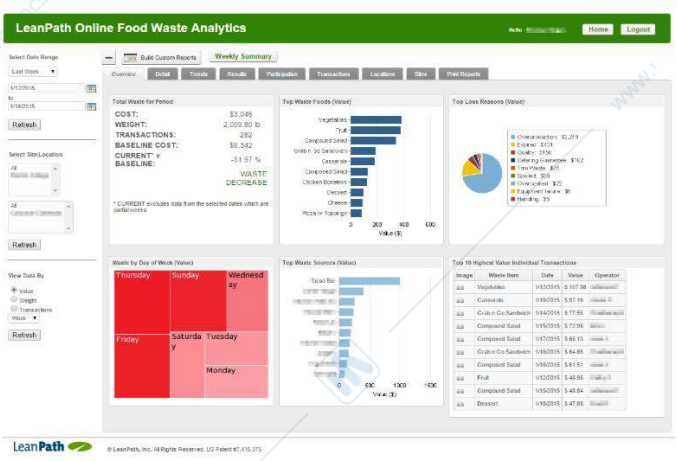
In a sustainable context, all stakeholders have to change their mind-set: (in order to decrease food consumption).

Google Food Program

They want to redesign the business model:

- Consumer/customer/channel:
  Co-ownership. In this program employees believe food is for them, so they all believe they need to reduce their food surplus.
  Personalised approach. Imagine to ask people what they prefer in order to inform them about the impact of their needs in term of sustainability. Social perspective is linked with psychological aspect: air conditioning or coffee in the class? According to the choice, people should be aware of the consequences of their choice (importance of turning off the airC)
- Community/society: support and engagement.
- Co-creators: how to talk and deal with suppliers, vendors and Google food team.
- Investors: important in sustainability issue. It is a huge element which need to be transparent. Small businesses are not very well known and they cannot ear a lot of money. Fair trade organizations are a kind of

non profit organization that can help suppliers and small businesses in making their transaction transparent; they earn thanks to the transparency they bring to small businesses.

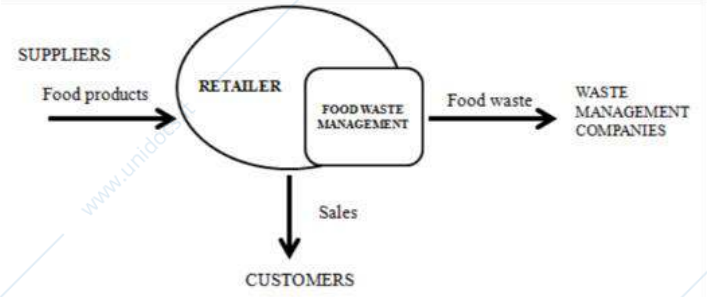


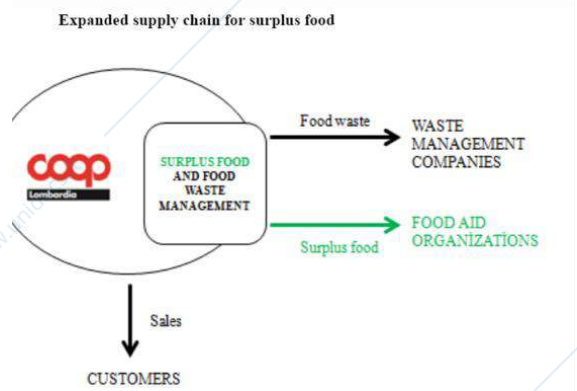
In their journey to reduce food waste, Google has taken a dual approach that focuses on employee behavior modification and new product development.

Coop Lombardy

Surplus food is food good in quality but not fresh enough to be sold. Before Coop was organised like this:

Conventional Retail Outputs





Now supermarkets: surplus management is internal.
Surplus food is given to food organizations because it can still be used, while food waste, which exceeds the time of expiration, is managed by waste management companies. Law says that all supermarkets have to manage their food waste. Coop is pioneer in this area.

The basic idea of the comparison is based on the differences and similarities of them.

Conclusion on SOI development

The ability to incrementally or radically change an organization's business model, will place new demands on an organization's competencies, processes, and management organizations should:

- implement many sustainable practices and innovate their conventional tools (Similarly to the project of … and Google)
- engage in collaborative, multi-stakeholder problem solving and learning esp. with secondary stakeholder.
- acquire new skills and knowledge, develop new architectures, designs, processes, and systems, and learn to balance, integrate, or trade off a variety of outcomes. Being open to risks to get good outcomes.
- develop new competencies, such as *multi-stakeholder level analysis*, *social-environmental-economic integration*, in addition to *conventional management systems for sustainability*.

Poll: How is sustainable leadership linked to innovation leadership?

- Sustainable leadership enhances innovative leaders
- Highly effective corporate management enables sustainable innovative leaders

They are positively coordinated or there is a factor that enables both?
They tested a lot of combinations and there is any type of positive correlation. To find an enabler effect we need to look across time all rankings for a leader: high ranking in 2003 for a leader and its ranking in other years are compared. Sustainable leaders ten years ago nowadays are more innovative leaders than the others. Sustainable leaders have more chances to be innovative leaders.

- When averaged across multiple rankings: sustainability leaders are more than 400 percent more likely to be considered as innovation leaders.
- Remark: "companies that pursue sustainability significantly increase their chances of becoming innovative leaders in the process."