

INNOVATION MANAGEMENT

supporting students training materials

Innovate!

Steady...

Ready...

This project was financed by the EU programme ERASMUS+.

The information and views set out in this publication are those of the authors and do not necessarily reflect the official opinion of the European Union.

The course consists of three stages and six units



The course consists of three stages

Ready....

- Typology test
- Team forming
- “Break the ice”

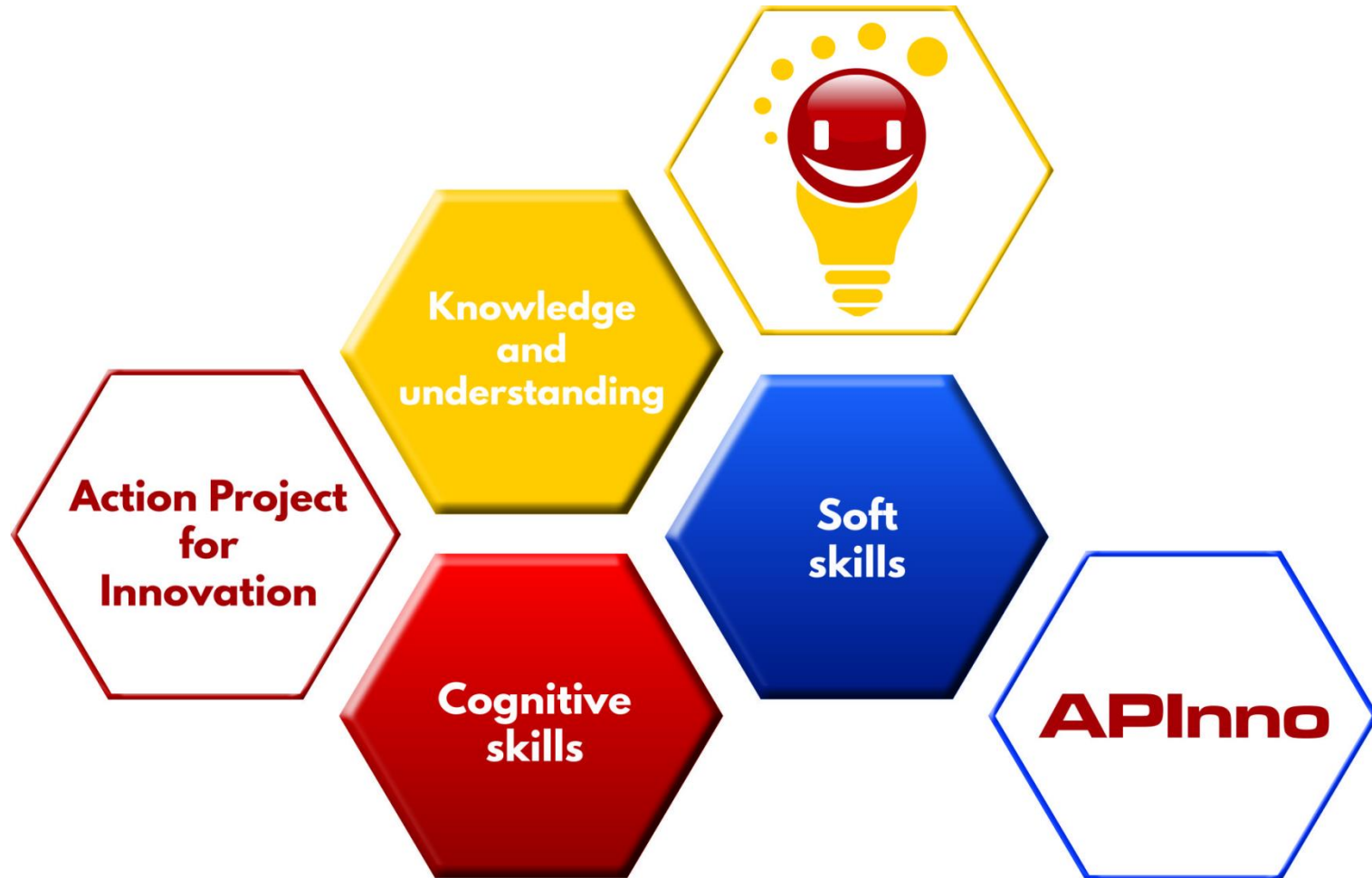
Steady....

- Introduction to innovation management
- Key concepts
- Frameworks
- Tools

Innovate!

- Work on real innovation case provided by a real organisation

Three sets of skills and knowledge are



READY...

Break the ice

Introduction

Games

Exercises

Case studies

STEADY...

Preparation

Ideation

Consolidation

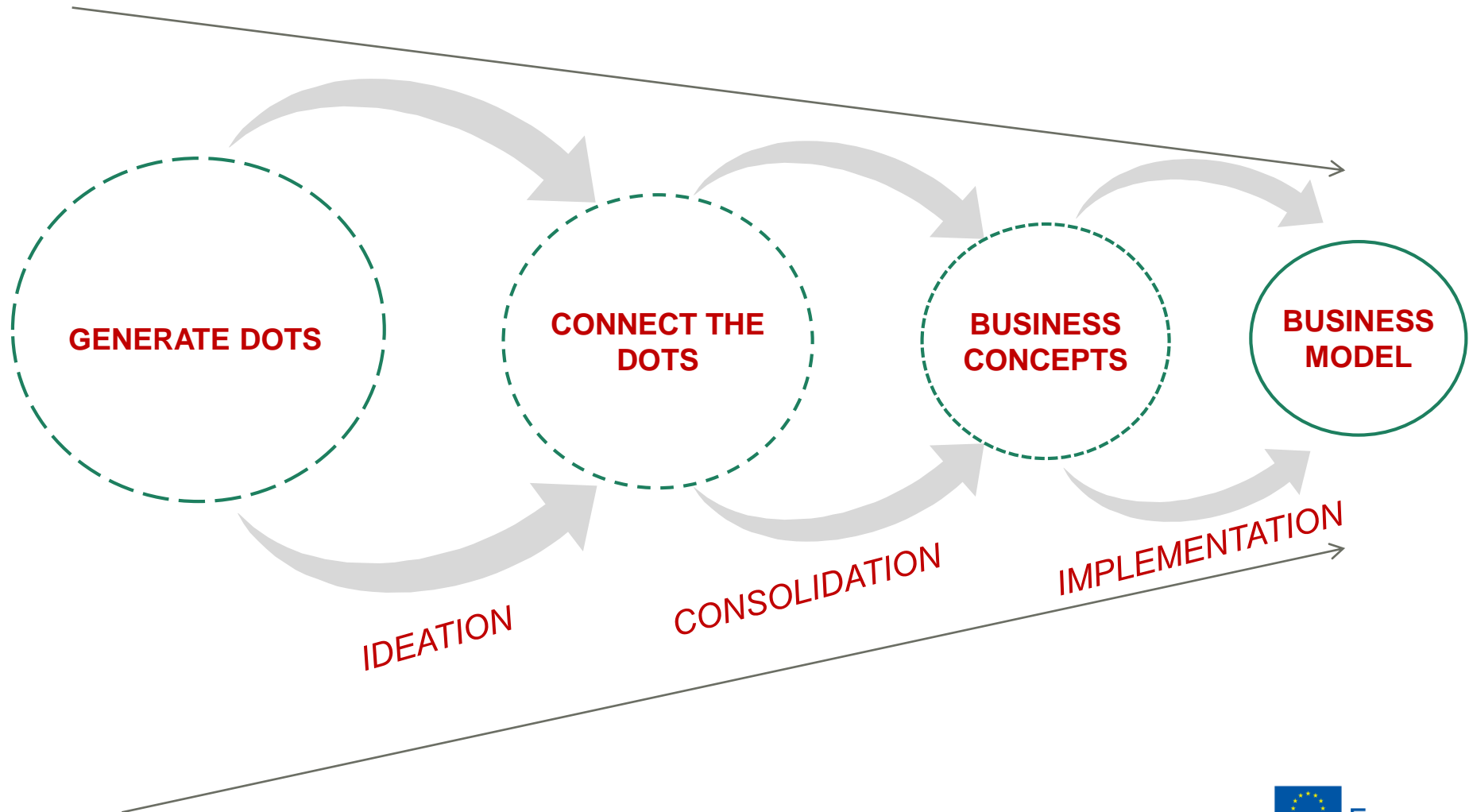
Theory
Case studies
Exercises
Templates

INNOVATE!

Implementation

Business model
Action plan

Working on a real innovation case is not a linear process but rather follows iterative pattern of diverge-converge stages to prepare ready to use business model



Goals and expectations

WHAT IS IT?

- A real cooperation between real business and current students
- Application of all acquired knowledge during university studies, as well as acquiring new knowledge
- The working cases are in the area of innovation and business development
- The programme allows testing “in a safe environment” of the students’ readiness for realization at a real job

WHAT IT ISN'T?

- Is not meant to present the specifics of a particular business area and/or industry
- Does not provide a job – there is only the option of limited time internships in case the client agrees
- Do not provide thorough detailed information from and about the client
- The students do not choose the team and mentor they will be working with

Experiential learning

The course is designed as a real experience where students act as advisors to real business and other organisations to help them innovate

Mentor support

Students work in teams supported by mentors and trainers whose roles are clearly defined in the beginning – they combine business and academic background

Innovation Challenge

The course is based on solving real challenge provided by business (or other) organisation

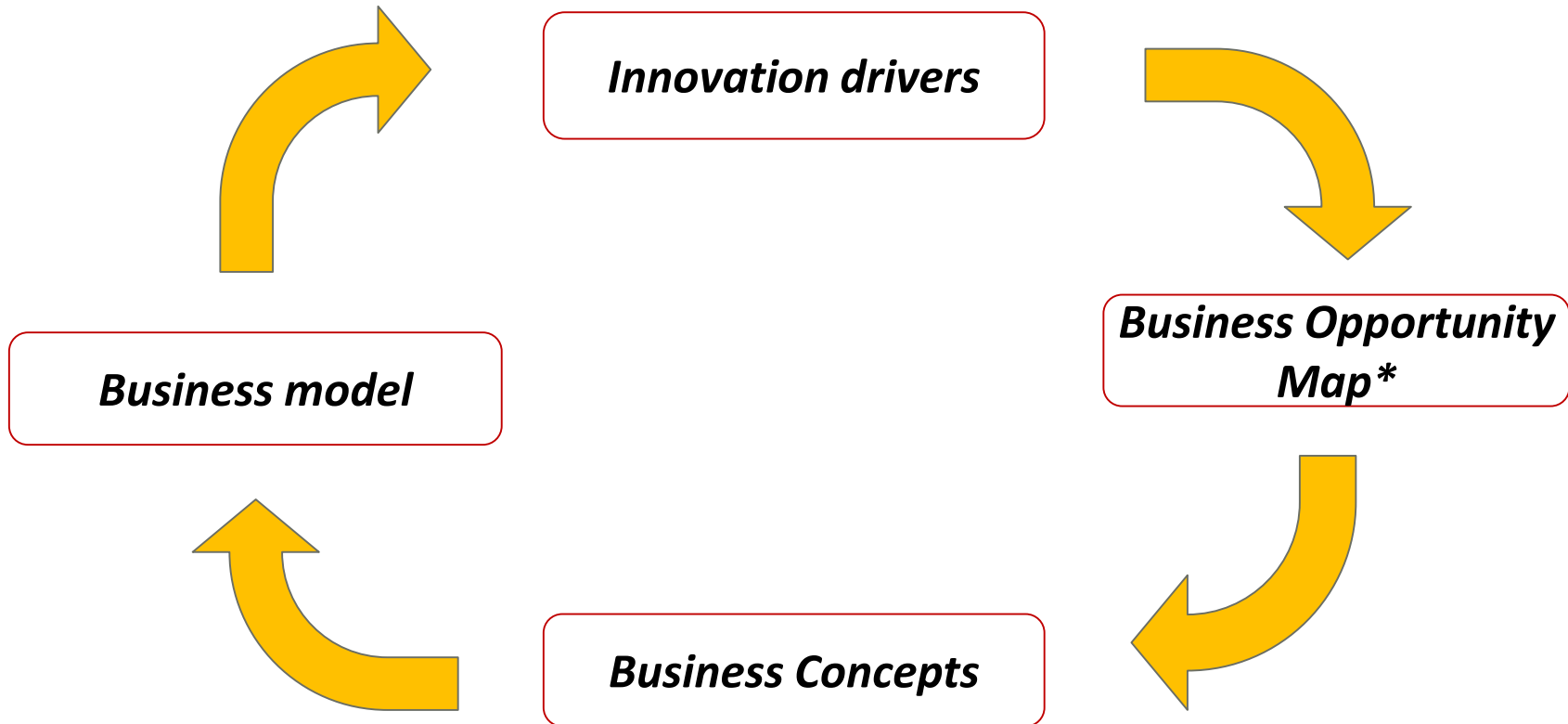
Innovation management

Students learn about the process of innovation and its management and not only generating new ideas

Work process

Following a proven approach, process and instruments the teams focus on developing business model and present to the management team of the “client” organisation

Upon completion of the course students are prepared to create business innovation concepts and acquainted with key aspects of innovation management



* Business opportunity map is a term introduced by IXL Center, www.ixl-center.com It is a popular tool and framework for consolidation of ideas and information

Based on the MBTI™ typology tests each student should get a four-letter type



- The assessment helps you develop a better understanding of your personal style and preferences and that of others.
- We are 'hard-wired', but strength of preference may change over time.
- Every single person uses all types.
- You determine the validity.
- Different situations require different types if you're going to be most effective.

There are four main dimensions and sixteen four-letter types based on them which helps form the teams with complimentary personalities

| | |
|--|---|
| <ul style="list-style-type: none"> ▪ If you prefer Extraversion, you focus on the outside world to get energy through interacting with people and/or doing things. | <ul style="list-style-type: none"> ▪ If you prefer Introversion, you focus on the inner world and get energy through reflecting on information, ideas, and/or concepts. |
| <ul style="list-style-type: none"> ▪ If you prefer Sensing, you notice and trust facts, details, and present realities. | <ul style="list-style-type: none"> ▪ If you prefer Intuition, you attend to and trust interrelationships, theories, and future possibilities. |
| <ul style="list-style-type: none"> ▪ If you prefer Thinking, you make decisions using logical, objective analysis. | <ul style="list-style-type: none"> ▪ If you prefer Feeling, you make decisions to create harmony by applying person-centered values. |
| <ul style="list-style-type: none"> ▪ If you prefer Judging, you tend to be organized and orderly and to make decisions quickly. | <ul style="list-style-type: none"> ▪ If you prefer Perceiving, you tend to be flexible and adaptable and to keep your options open as long as possible. |

READY...

STEADY...

INNOVATE!

Break the ice

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Templates

Business model

Action plan

**COULD YOU GIVE EXAMPLES OF INNOVATIVE
COMPANIES?**

**WHAT ABOUT
BULGARIAN ONES?**

Innovative companies



Innovation is of critical importance for the business development and when looking for new solutions to existing problems.

- The world's largest public transport business owns no vehicles (Uber)
- The world's largest accommodation provider has no buildings (Airbnb)
- The world's largest phone companies have no telephone infrastructure (Skype/WeChat)
- The most valuable retailer has no inventory (Alibaba)
- The most popular media content providers do not create content (Facebook/YouTube)
- The fastest growing bank has no cash deposits (SocietyOne)
- The world's largest movie house has no cinemas (Netflix)
- The largest software vendors do not to write apps (Apple/Google)

EXERCISE

Thinking about your daily life can you identify a change that has enhanced either a product or service that you use in the last 2 years? An example may be the introduction of an electronic ticketing system for public transport, or the introduction of touch and go payments using your debit card.

Each person in your group needs to identify at least one product or service then you should answer the following questions. Finally create a table that shows the relationship between your answers.

What is the change?

Who does it impact on (everyone, only people who use the product or service)?

What are the wider implications of the change (who may be indirectly affected)?

Has everyone benefited from the change and why?

Most innovations are not just changes in products/services but also changes in business models, partners, experience, delivery & markets



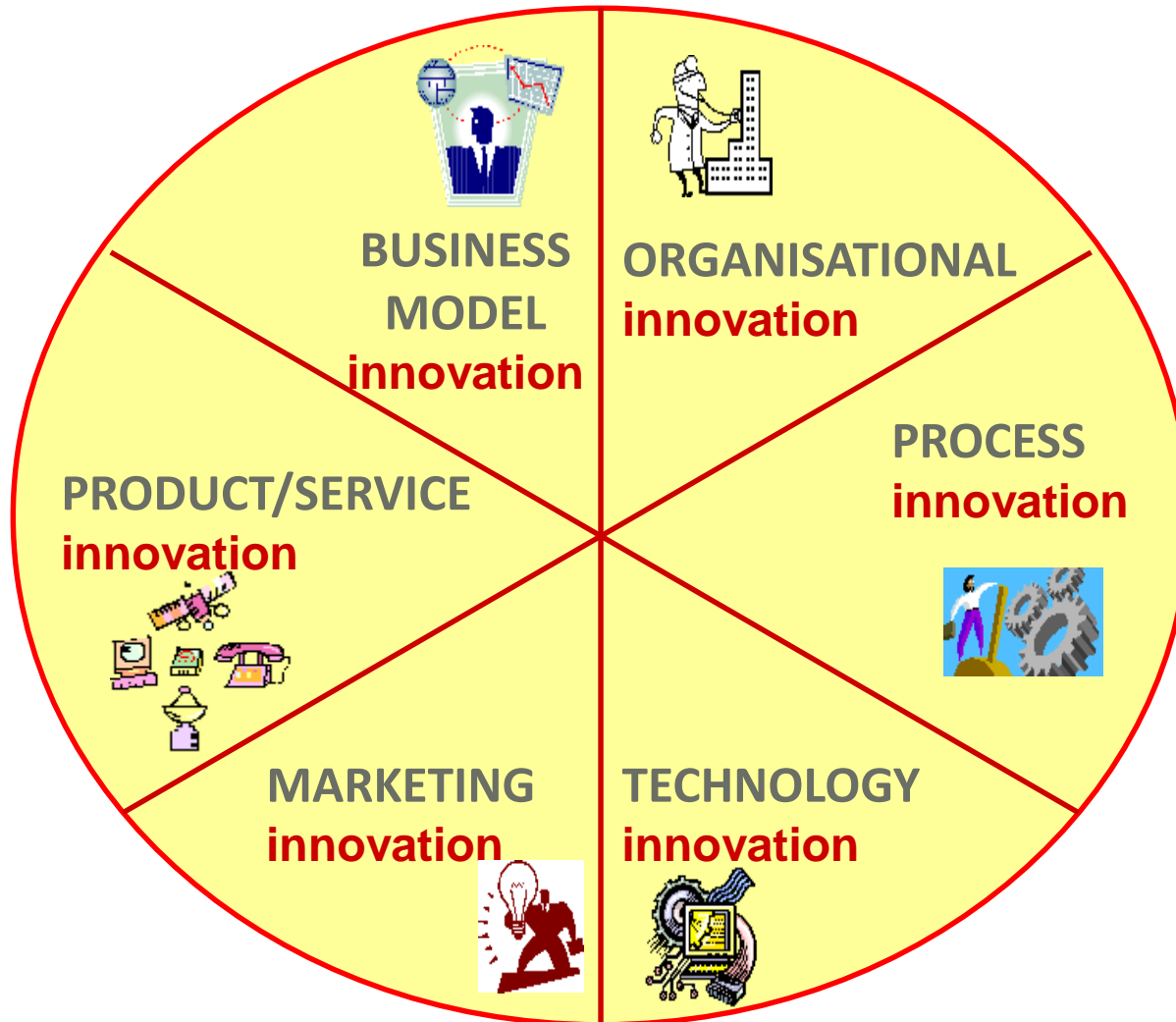
The word *to innovate* comes from the Latin word *innovare*, which means to change. There are many myths and misunderstandings of what innovation is and is not. One common myth is the idea that people have a sudden insight to a solution to a problem – “EUREKA” moment

However, research shows that in fact big insights occur after a long and deep period of incubation, often when we are thinking of other things.

An epiphany is only the very last moment when all the pieces come together. Another myth is that innovation can solve everything. There are problems and there are problems. Some problems are not necessarily easy to solve because there are not enough pieces of the puzzle yet. They are connected to the myth of the epiphany; you have the epiphany because all the pieces are in place.

Other problems are easy to solve because the pieces are all there. What these myths suggest is that while you cannot innovate out of every situation you can use innovation in a structured way to find solutions to problems.

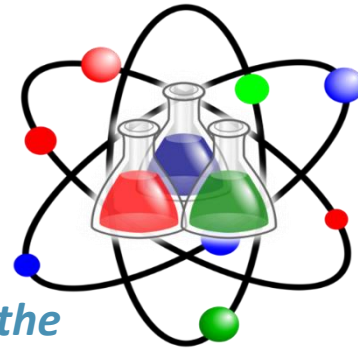
There are different types of innovation although the most common ones are product/service and technology



Innovation vs. invention - it is critical to not confuse innovation with science

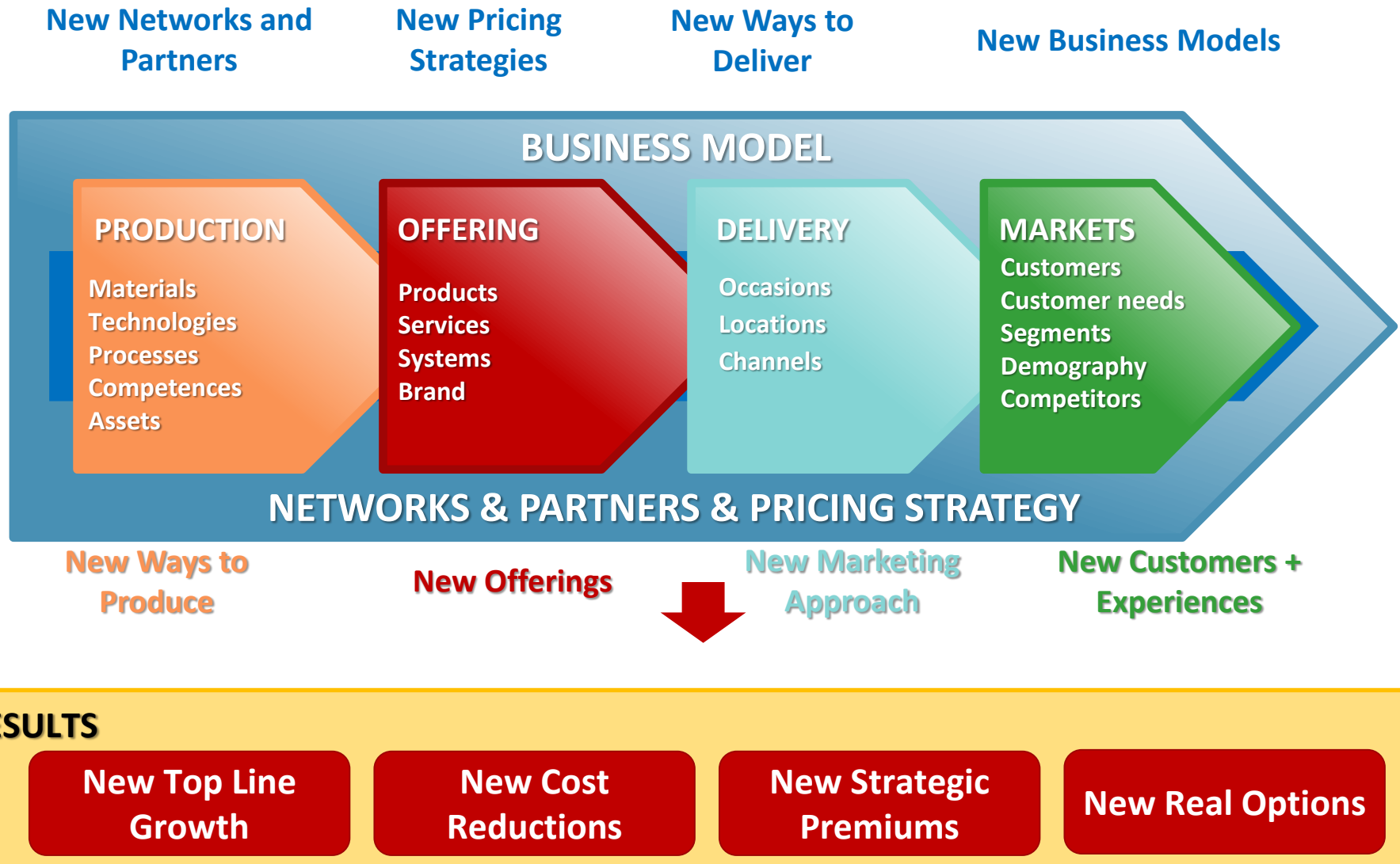
The goal of science is to understand the world around us. Innovation is a process of value creation, which consists in changing the composition of a set of variables describing a system.

“Research is the transformation of money into knowledge. Innovation is the transformation of knowledge into money.” Geoffrey Nicholson, 3M



Science

Innovation - the creation and capture of new value – i.e. generating results from this in new ways



Innovation and Innovation Management are related but distinct – the focus of this course is on Innovation Management, i.e. how to manage innovation as a business process

Innovation

The creation and capture of new value in new ways

Innovation is a process

Innovation management

It enables organizations to identify and implement innovations in consistent and repeatable ways

Innovation management is a business discipline

A 2015 “APIInno – Action Project for Innovation” research indicates the importance of innovation to the business across EU countries



Within an innovative company each employee is an innovator!

- 1 Experiment and create innovative concepts, being proactive and driving change
- 2 Considering next opportunities and emerging trends, while working on ongoing projects and goals
- 3 Various and diverse information sources – work in cross-functional and multidisciplinary teams
- 4 There is always someone who acts as a creative agent – “Idea King”
- 5 Strategy requires a clear scope and area for innovation; defining the types of innovation and forming “pipeline of innovations”

Company's culture and leadership to stimulate innovations – key elements and success factors

Senior management's commitment and support; systematic approach

Direction and area of development of the company; portfolio of innovations' development

“EVERYBODY WORKS TOGETHER FOR THE GOOD OF APPLE” attitude – creative and motivated talent

Idea generation and a moderate risk toleration

Communication, sharing and access for every employee

Open innovation has been variously described as a process, a set of inter-firm relationships, and a cognitive paradigm

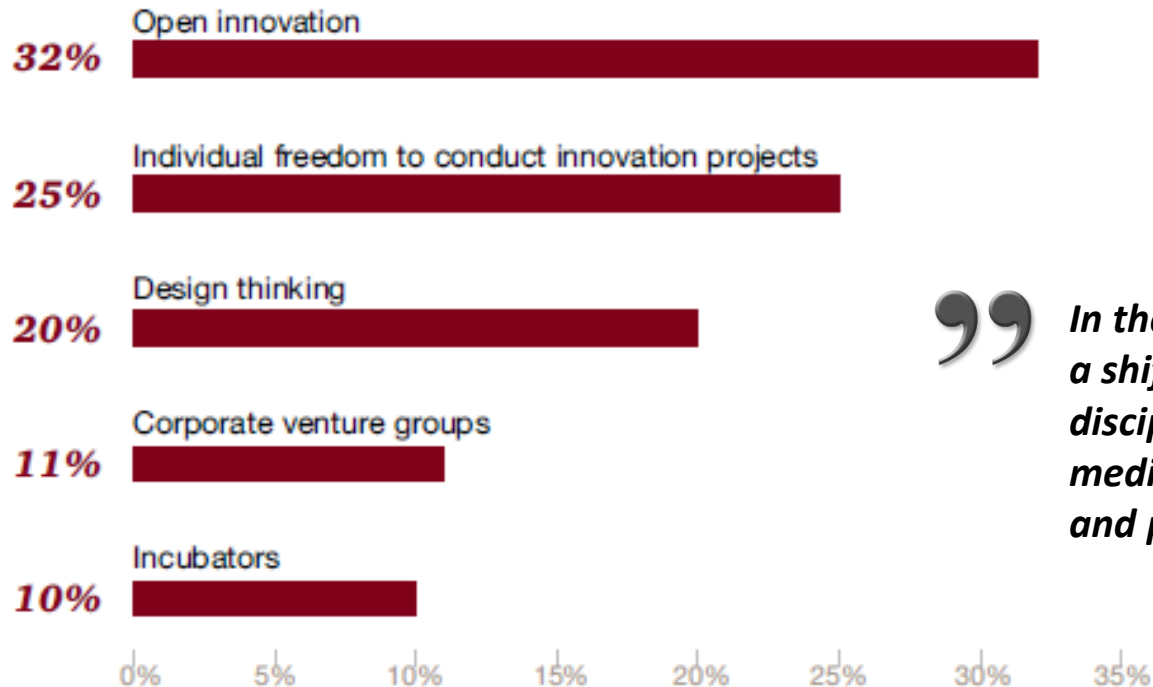
As originally explained by Henry Chesbrough:

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.

and more recent definition (2006) by Dr. Chesbrough :

Open innovation is the use of **purposive inflows and outflows of knowledge** to accelerate internal innovation, and expand the markets for external use of innovation, respectively.

Open innovation is key approach to innovate a business



” *In the long-term we would expect a shift towards more structured and disciplined approaches to social media to collect ideas from employees and partners*

Open innovation is implemented via crowdsourcing tools (platforms)

Crowdsourcing



Internal platforms



Public crowdsourcing



- Partnership networks
- Crowdsourcing
- Inside-out + outside-in

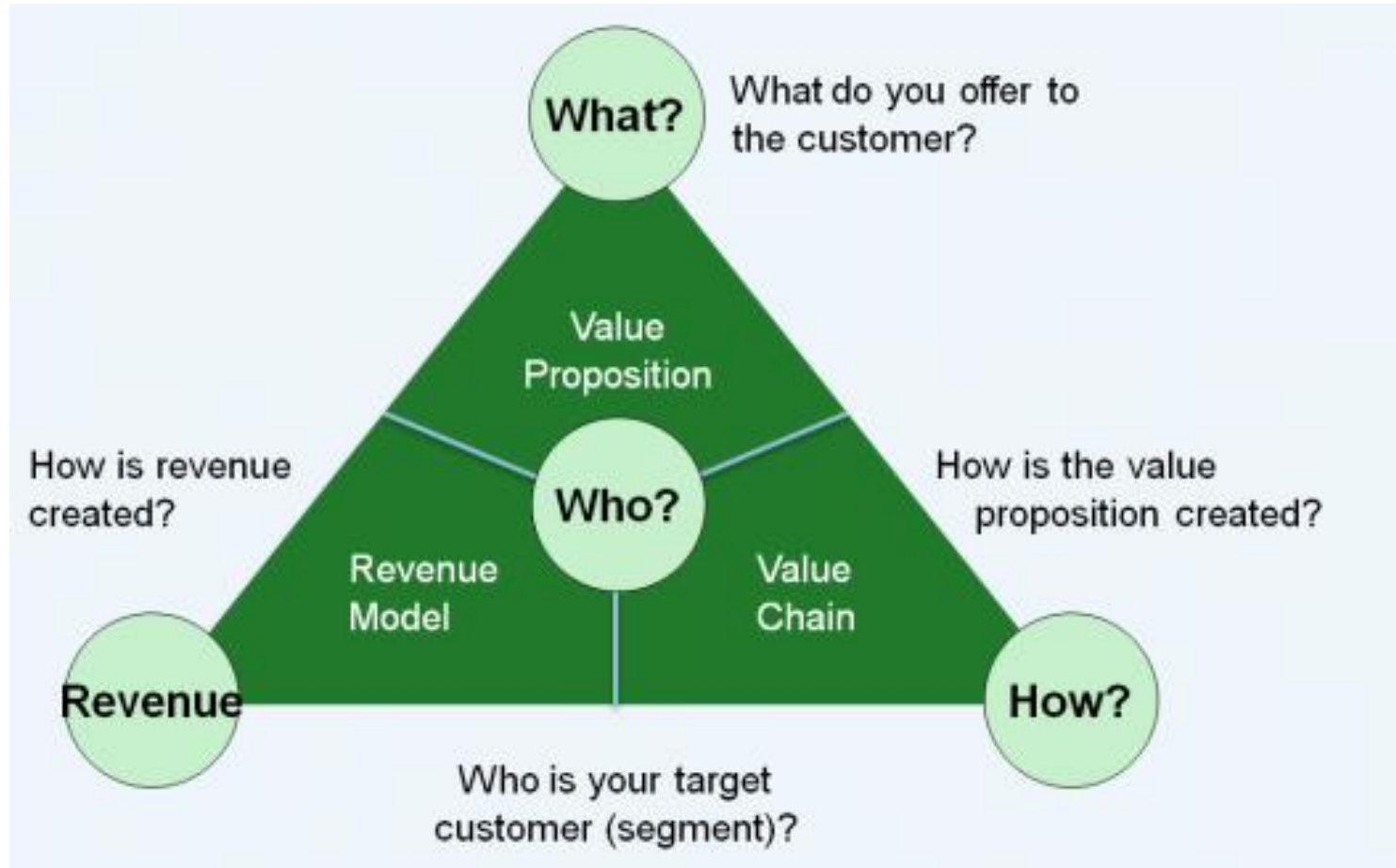
Open innovation software



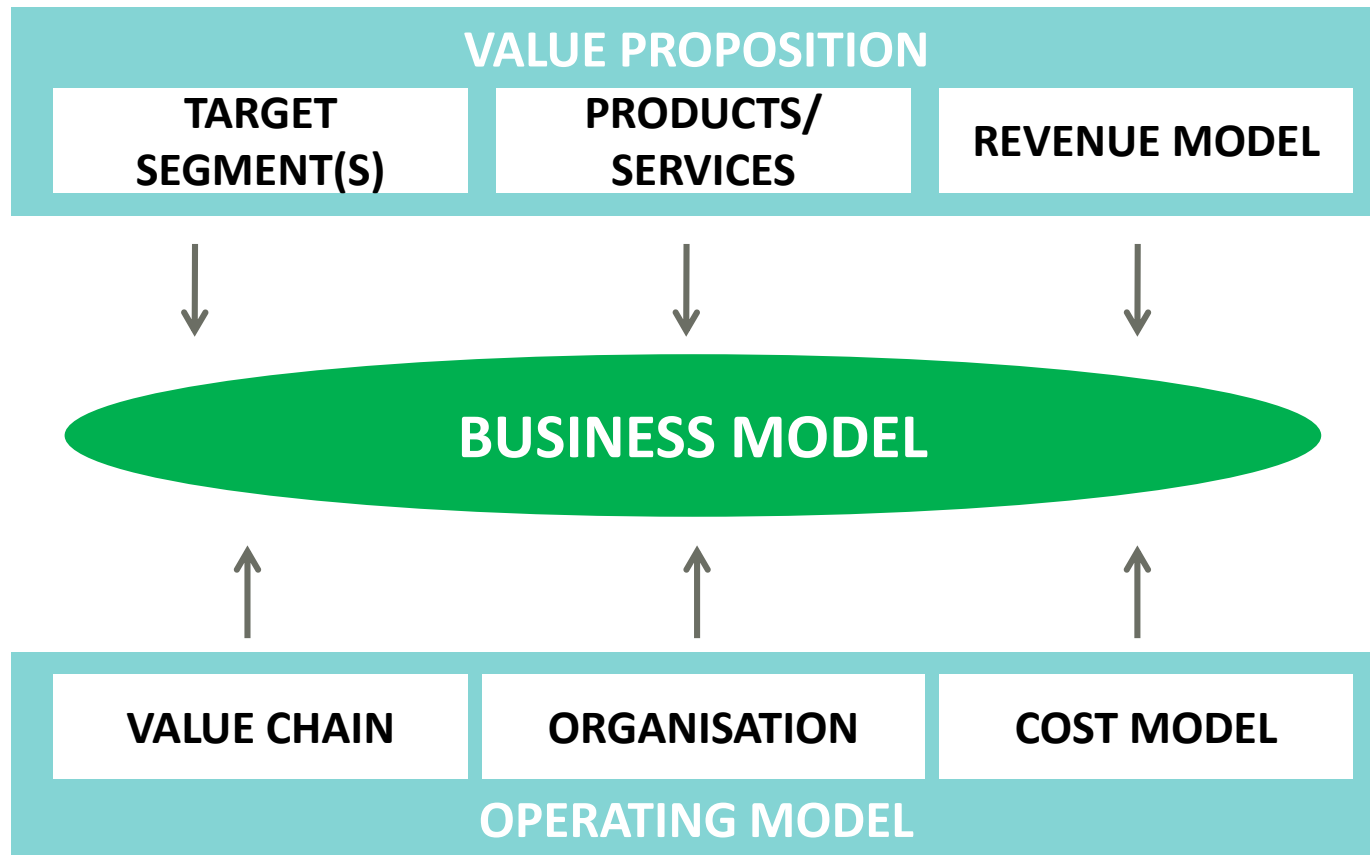
Co-creation



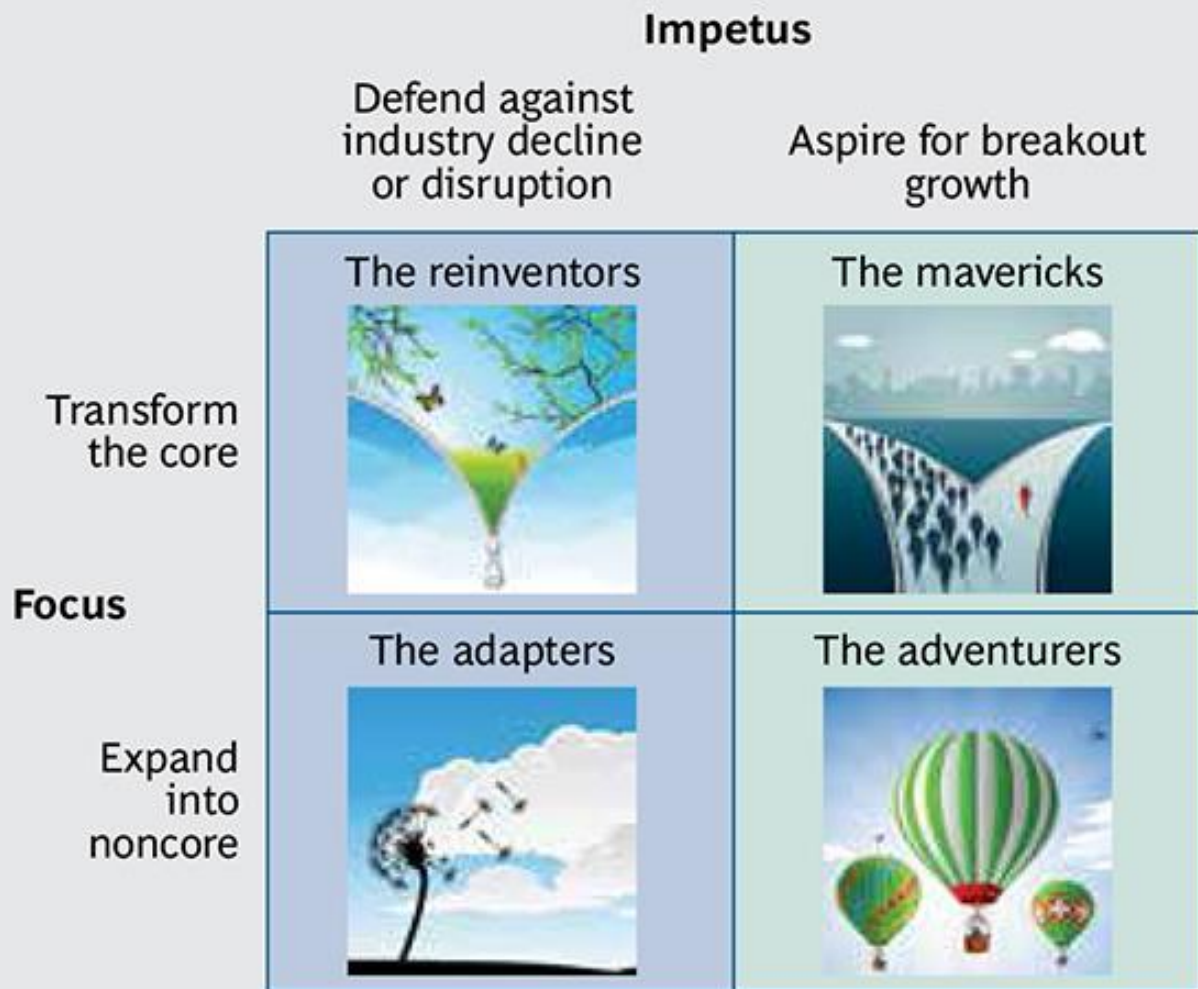
Business model innovation



According to BCG: Business model innovation involves making simultaneous, coordinated, and internally consistent changes to multiple aspects of the business model to reignite growth, combat disruptions, or access new markets



Four Approaches to Business Model Innovation



To be truly competitive, companies need to think not just about what they produce, but what they know and how they plan to innovate as well

Strategy includes thinking about three positions:

- first, product and market;
- second, knowledge;
- third, innovation.

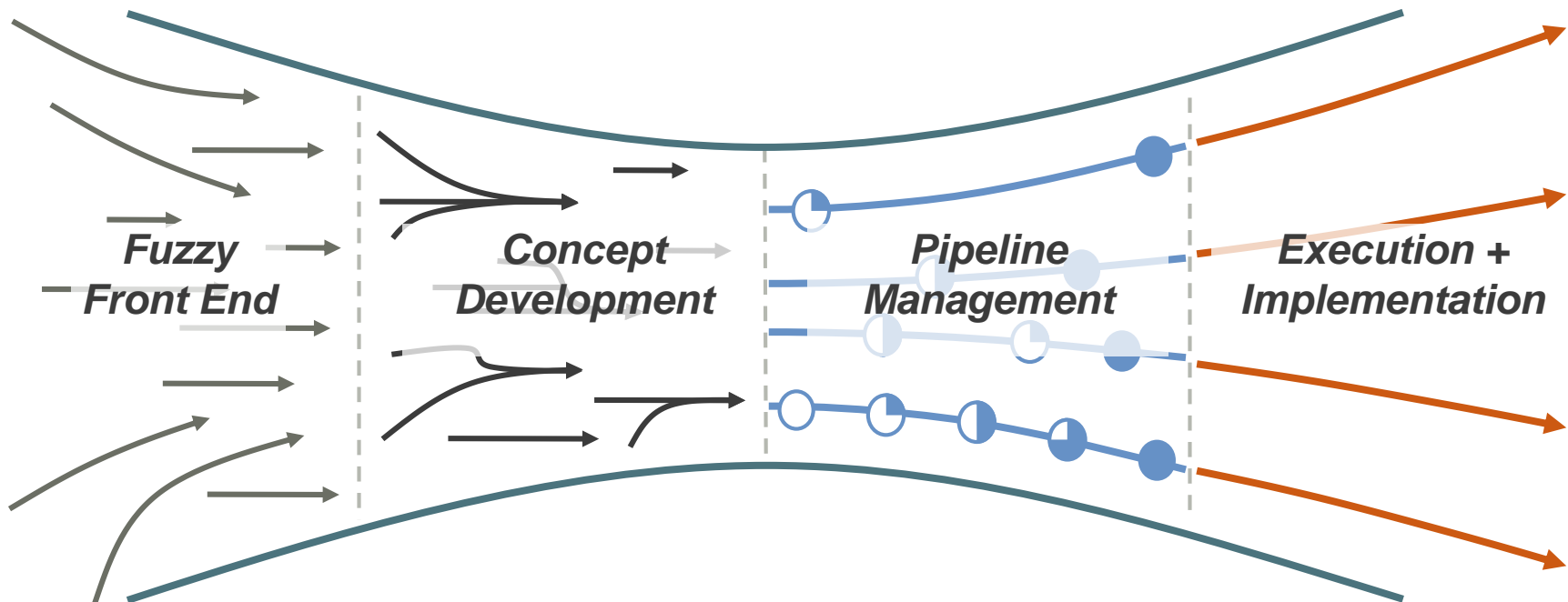
And as the competitive landscape changes, organizations must continually realign these positions. Thinking more broadly about innovation can also help a company considering its strategy. That is, don't just look at the innovation process, but look at a variety of key strategic drivers and consider how extensive they are: knowledge technologies, new and better services, lower prices, better operational execution, better understanding of customers and markets. Taken as a whole, that is a company's innovation position.

Clear definition of innovation drivers, the need for change

- Individual - “The weakness of “we” and the power of “I” in innovation.” *
- Building relationships
- Encouraging a culture of innovation
- Nurturing talent and creativity
- Economic climate/market conditions
- Geopolitical culture
- Business processes
- Competition
- Advanced technologies

* Top 10 Innovation Drivers, by Bob Eckert, <http://innovationexcellence.com/blog/2011/12/23/top-10-innovation-drivers/>

During the course we will do a simulation of a successful innovation process with open front and back end – depicting the concept of pursuing various ways for implementation and prioritization of innovation concepts in order to create a balanced innovation portfolio



Disruptive innovation

A **disruptive innovation** is an **innovation** that creates a new market and value network and eventually disrupts an existing market and value network, displacing established market leading firms, products and alliances.

The term was defined and phenomenon analyzed by Clayton M. Christensen beginning in 1995.

It describes a process by which a product or service takes root initially in simple applications at the bottom of a market and then relentlessly moves up market, eventually displacing established competitors.

Different types of innovation require different strategic approaches.

To put it another way, succeeding as a disruptive innovator (or defending against a disruptive challenger) will not apply to every company in a shifting market.

Blue ocean strategy – definition and case study

Blue ocean strategy is the simultaneous pursuit of differentiation and low cost to open up a new market space and create new demand.

There are two ways to create blue oceans.

- one is to launch completely new industries, as eBay did with online auctions;
- it's much more common for a blue ocean to be created from within a red ocean when a company expands the boundaries of an existing industry.

Creating blue oceans builds brands.

=> So powerful is blue ocean strategy, in fact, that a blue ocean strategic move can create brand equity that lasts for decades.

Cirque du Soleil - case study: Cirque created what the authors call a blue ocean, a previously unknown market space.

CIRQUE DU SOLEIL®



In blue oceans, demand is created rather than fought over.

Despite a long-term decline in the circus industry, Cirque du Soleil profitably increased revenue 22-fold over ten years by reinventing the circus. Rather than competing within the confines of the existing industry or trying to steal customers from rivals, Cirque developed uncontested market space that made the competition irrelevant.

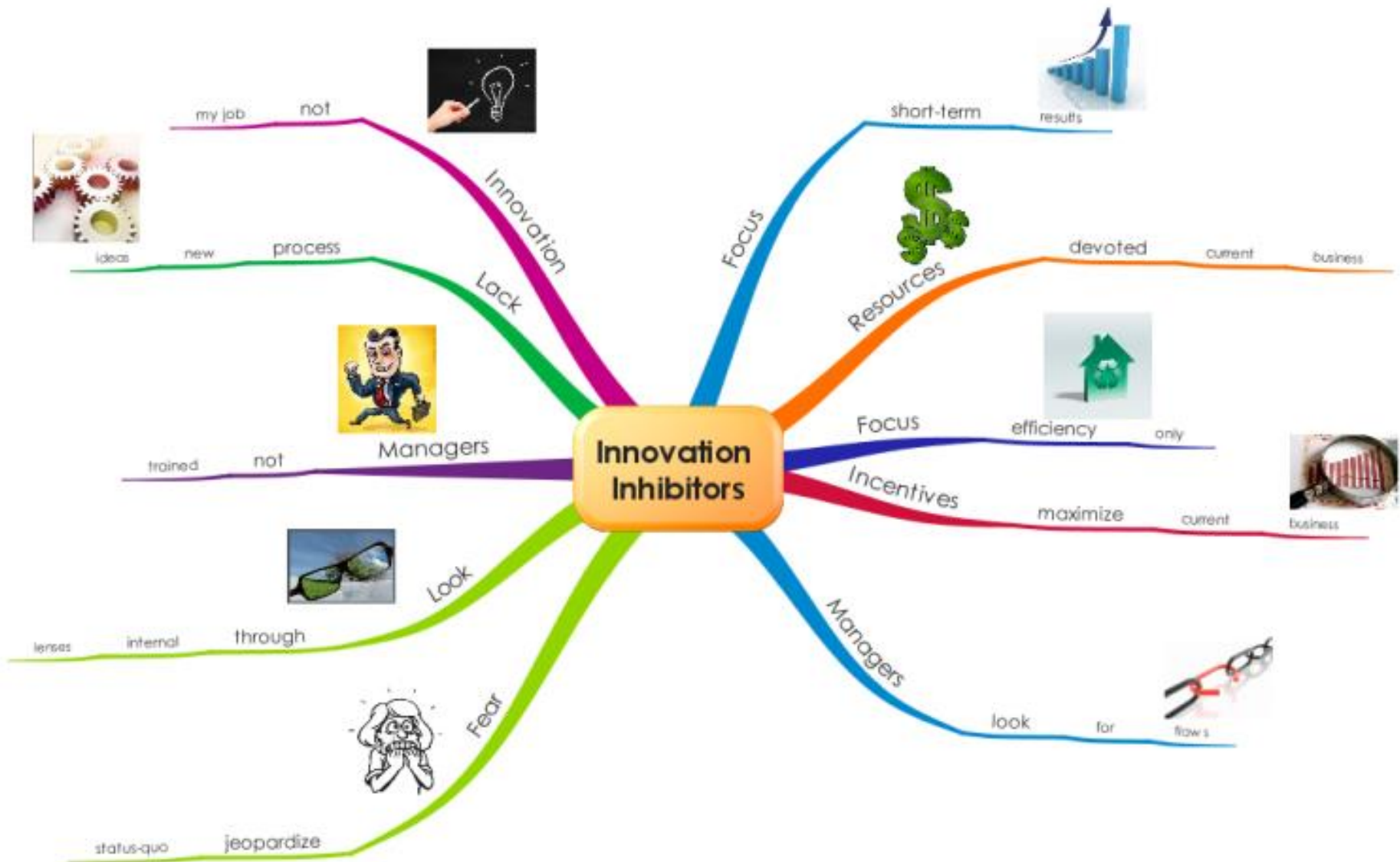
Cirque created what the authors call a blue ocean, a previously unknown market space. In blue oceans, demand is created rather than fought over. There is ample opportunity for growth that is both profitable and rapid. In red oceans—that is, in all the industries already existing—companies compete by grabbing for a greater share of limited demand. As the market space gets more crowded, prospects for profits and growth decline.

EXERCISE: What are the key drivers for change of the organization, i.e. the need for innovation

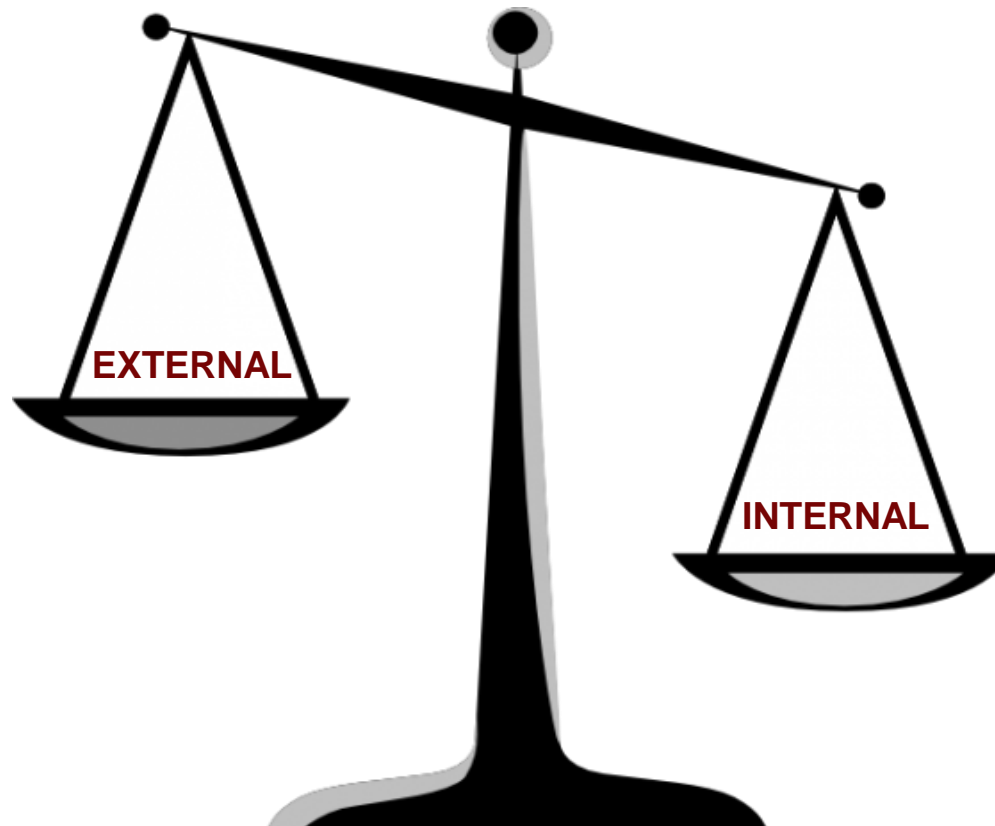
INTERNAL

EXTERNAL

Innovation inhibitors



Investigating innovation that way will help an organization decide to develop external innovations for customers vs. internal innovations for its own use



EXERCISE: link knowledge and innovation positions

- What does the organization need to know in order to innovate in a way that supports its products and markets?
- How does the organization's knowledge limit the kinds of innovations it can successfully execute?
- Finally, a company needs to align all three positions:
 - where it is in its markets and what products it produces;
 - how much it knows;
 - how much it can innovate.

CASE STUDY

Buckman Laboratories – innovation strategy case study



Buckman Laboratories International Inc., a Memphis, Tennessee-based specialty chemicals manufacturer operating in more than 90 countries, is a company that has been able to do this successfully.

Since 1945, Buckman has gone through three phases of strategic transition.

- product leadership, aiming to manufacture the most effective microbicides and to sell them competitively. It didn't focus on market segments. It did focus on broadly acquiring knowledge of chemistry and chemical engineering associated with microbicides, hiring people with advanced degrees in these areas. The company focused on internally driven innovation — advancing its products' chemical properties.
- Then, as its industry became more competitive, Buckman found many of its key products becoming commoditized. Prices went down and margins began to shrink. So the company shifted its strategic focus from a product-oriented position to a knowledge-based one. It decided to learn more so that it could create leading-edge products.
- Buckman again had to innovate not only with regard to its products and services but also internally with its organizational structure and processes.

As important as aligning these three positions is,

maintaining that alignment as competitive landscapes change provides an even greater challenge.

General Assembly – an example of an ambitious leader and a strategic initiative

The standard form of business education takes of students valuable time, money and key early years of professional experience



Jake Schwartz



Changing environment

Young people seeking real skills for real life combined with the opportunity to work

<https://www.youtube.com/watch?v=jvmcQ-5GVKg>

Strategic goals

„We wanted something with the same educational value as the standard business school, but with a much higher return on investment and more directly linked to the economic reality of the 21st century.“

Teaching skills that business requires now: digital marketing, mobile application development, data management

Results

- 90% of the students trained find a job within 3 months after the course
- 99% of the students trained find a job within 1 year after the course
- 10 000 trained students in 1 year

Source:

<http://www.fastcompany.com/3039596/most-innovative-companies-2015/general-assembly>

Melissa Climate – a Bulgarian innovation stimulated by the changing environment

Ambitious leader

How to achieve a favorable temperature for intelligent forms of life? How to save on the electricity bill?



Lyubomir Yanchev

Competition

- This idea is not something new to the market.
- What distinguishes the Bulgarian product from its competitors is the lower cost and the company's flexibility.

Strategic initiative

- To create a home steward to manage the operation of the air conditioner in our absence
- To optimize the cost of electricity

Stretch target

- It should be compatible with different models of air conditioners and be able to control the temperature and flow of an air conditioner in an effective manner.

Benefits

- Saves up to 25% of electricity consumption.
- For about a week the device "learns" how to adjust to the needs of its users

Source:

<http://www.capital.bg/printversion.php?storyid=2611277>

EXERCISE

Video

1. Watch the video

Exercise

1. **Write down the drivers for innovation** Ask the question – Why are they doing this? (Is this a CEO initiative or because of consumers or because of competition etc.)
2. **Write down innovation and growth strategy**
 - Initiatives?
 - Changes – drivers for change? (target dates, financial targets, etc...)
 - Benefits?

EXERCISE: Complete the Drivers for innovation template

In your groups define the changes in the landscape of the company we are working with: what is happening with the competition, the demand, the customers.

- Why do we need to change?
- How much and what needs to be changed?

Try to develop a case for need for change, i.e. innovation and present it in a compelling way to your peers.

Look at a variety of key strategic drivers and consider how extensive they are:

knowledge and technologies, new and better services and products, lower prices, better operational execution, better understanding of customers and markets, unmet and unknown customer needs

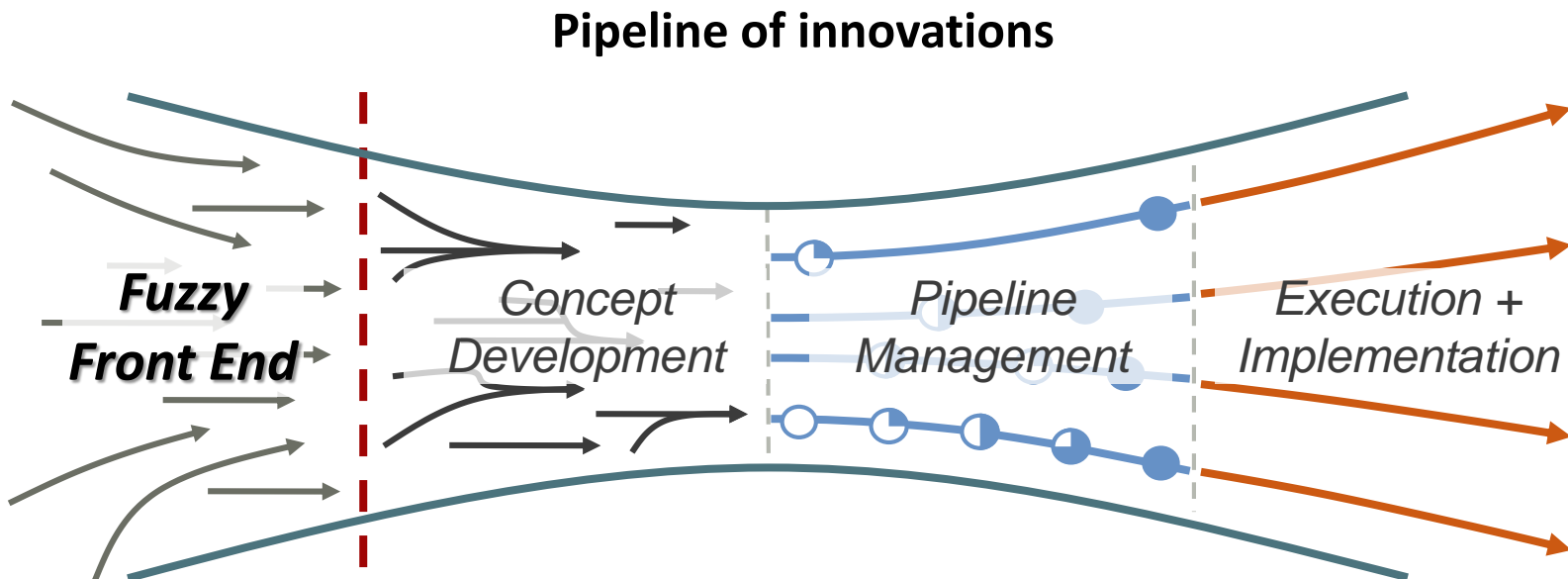
EXERCISE: Which are the trends that influence your business?

Emerging trends







Social, technological, economic, environmental, political

- SOCIAL
- TECHNOLOGICAL
- ECONOMIC
- ENVIRONMENTAL
- POLITICAL

The process needs a “fuzzy front end” – free and unlimited idea generation in order to “open the entrance” of the pipeline of innovation

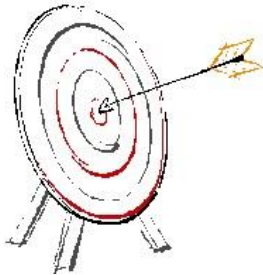


One widely used creativity technique is the “six thinking hats” which we use in this course

| Thinking Style | Description | | Associated “Thinking Hat” |
|-------------------------------|--|---|--|
| Organized, controlled | Organizes thinking & actions, lays out and controls objectives, purposes & processes | ➡ |  Blue Hat |
| Creative, new thinking | Puts forward new ideas, lays out options and alternatives, modifies & improves ideas | ➡ |  Green Hat |
| Optimistic, positive | Focuses on capturing the opportunity, seeks out value, reasons for taking chances | ➡ |  Yellow Hat |
| Cautious, critical | Focuses on detecting risks and faults, reasons for caution | ➡ |  Black Hat |
| Analytical | Focuses on information and facts required and how to obtain them | ➡ |  White Hat |
| Emotional | Expresses feelings, emotions and intuition | ➡ |  Red Hat |

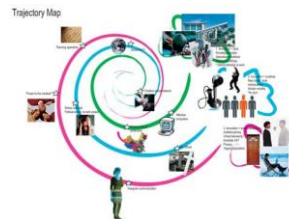
In order to do so we use different information sources, perspectives and creativity techniques

Circle of Opportunity



Force Field Analysis

Mind mapping



Future perfect

Brainstorming



Fresh View

In order to collect information and generate insights the team should plan where and how the data will be gathered – i.e. define sources and techniques to use

Sources

- Management
- Employees
- Customers
- Consumers
- Competitors
- Suppliers/Partners
- External Experts
- Other

Techniques

- Phone interviews
- In-person interviews
- Surveys
- Focus groups
- Ethnography
- Pilots
- Other

When using the primary research as approach/technique by interviewing people, the team should prepare a script for each set of interviews

1. Define objective for the interview
2. Write Interview Guide
 - Write introduction
 - Create a short list of brief (open-ended) questions
 - Plan for follow-up questions
 - Write closing remarks
3. Role play this with at least one team member
4. Adjust your script based on the role play

| Interview Guide | |
|-----------------------------|-------|
| Introduction | _____ |
| | _____ |
| | _____ |
| Opening questions | |
| 1. | _____ |
| | _____ |
| 2. | _____ |
| | _____ |
| 3. | _____ |
| | _____ |
| Follow-on questions | |
| 1. | _____ |
| | _____ |
| 2. | _____ |
| | _____ |
| 3. | _____ |
| | _____ |
| | _____ |
| Conclusion of the interview | _____ |
| | _____ |
| | _____ |

Plan for the interviews and define the objectives

Key questions to ask when planning for interview:

- What information do we need?
- What do we need to confirm?
- Who knows the answer to the questions?
- Who is willing to answer the questions?
- Who will be a credible source to my client?

ADVISE:

- Plan to contact a large number of people
- When the interview subject is unavailable by phone, typically, calling back is more productive than leaving a message
- Plan enough time to complete series of interviews
- Conduct background research - knowing something about the interviewee / industry dynamics will help you establish credibility during the interview

EXERCISE: In your small groups, create the BOM by following the provided templates and key questions

- of the current business and industry
- based on a “future perfect scenario” – what would be wishful future situation for our business
- from a different point of view – we can choose a certain competitor, partner, supplier or other partner from the value chain – each team decides which perspective to use.



| | | | | | |
|------------------------------|--------|-----------------------|--------------|--------------------------------|---------------|
| Who is targeted? | Trends | Segments and niches | Clients | Customers needs | End users |
| | | Competitors | | | |
| What is offered? | Trends | Products | Brand | Applications/Solutions | Services |
| Where and when is delivered? | Trends | Distribution channels | | | Logistics |
| How do we produce? | Trends | Equipment | Technologies | Competencies and possibilities | |
| What is our Business model | Trends | Pricing strategy | | | Revenue model |
| | | Partners | | | |

EXERCISE: Start consolidating the generated ideas and research findings into a structured Business opportunity map – use the below questions as guidance

Which partners and networks should we use?

- Who (will) we partner with?

What is the Offering?

- What experiences does the offering involve?
- What products does the offering involve?
- What services does the offering involve?

Whom do we target with this Offering?

- What market segment do we target?
- What need do we serve?
- What else are they using?
- Who could be a lead user?
- Where do we start?

How is the Offering made?

- What technology?
- What production process?
- What materials?
- What assets?

| | | | | | |
|------------------------------|--------|-----------------------|--------------|--------------------------------|---------------|
| Who is targeted? | Trends | Segments and niches | Clients | Customers needs | End users |
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| What is our Business model | Trends | Pricing strategy | | | Revenue model |
| | | Partners | | | |

Where and when should we offer it?

- On what places is the offering provided?
- Through which channels is the offering provided?
- What is the logistics of the offering?
- When do we offer it?

What business model do we use?

- What prices?
- What expenses?
- What income (where does it come from)?

Business opportunity map is a tool which helps structure ideas and collected information across the key elements of a company/other organisation

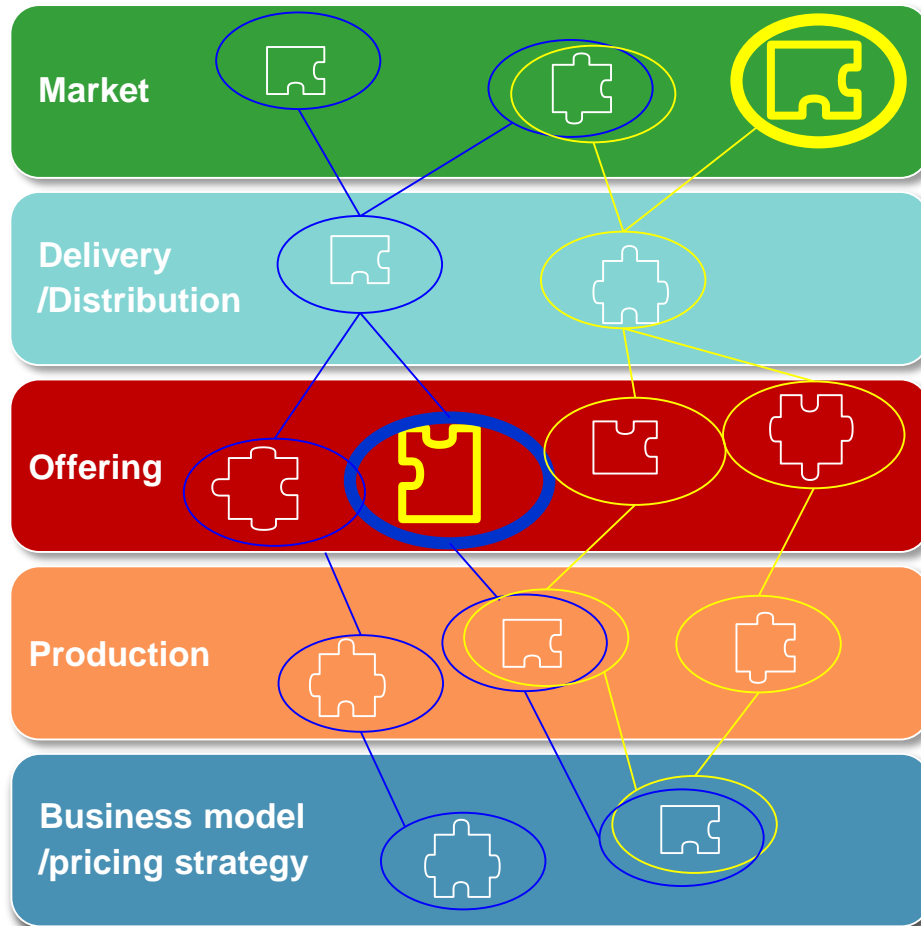
| | |
|-------------------------------------|---|
| Who is targeted? | Trends Segments and niches Clients Customers needs End users Competitors |
| What is offered? | Trends Products Brand Applications/Solutions Services |
| Where and when is delivered? | Trends Distribution channels Logistics |
| How do we produce? | Trends Equipment Technologies Competencies and possibilities |
| What is our Business model | Trends Pricing strategy Revenue model Partners |

Business opportunity map is a tool which helps structure ideas and collected information across the key elements of a company/other organisation

| | |
|---|--|
| trends, segments, customers, needs and behaviour,etc. MARKET WHO IS TARGETED? | |
| trends,products,services, brand,experience, applications,etc. OFFERING WHAT IS OFFERED? | |
| trends,distribution channels, logistics, marketing,communication, etc. DISTRIBUTION WHERE AND WHEN WE DELIVER? | |
| trends,equipment, technologies, competences, processes, etc. PRODUCTION HOW DO WE PRODUCE? | |
| trends,pricing strategy,partners, cost and revenue,etc. BUSINESS MODEL WHAT AND HOW DO WE PROFIT? | |

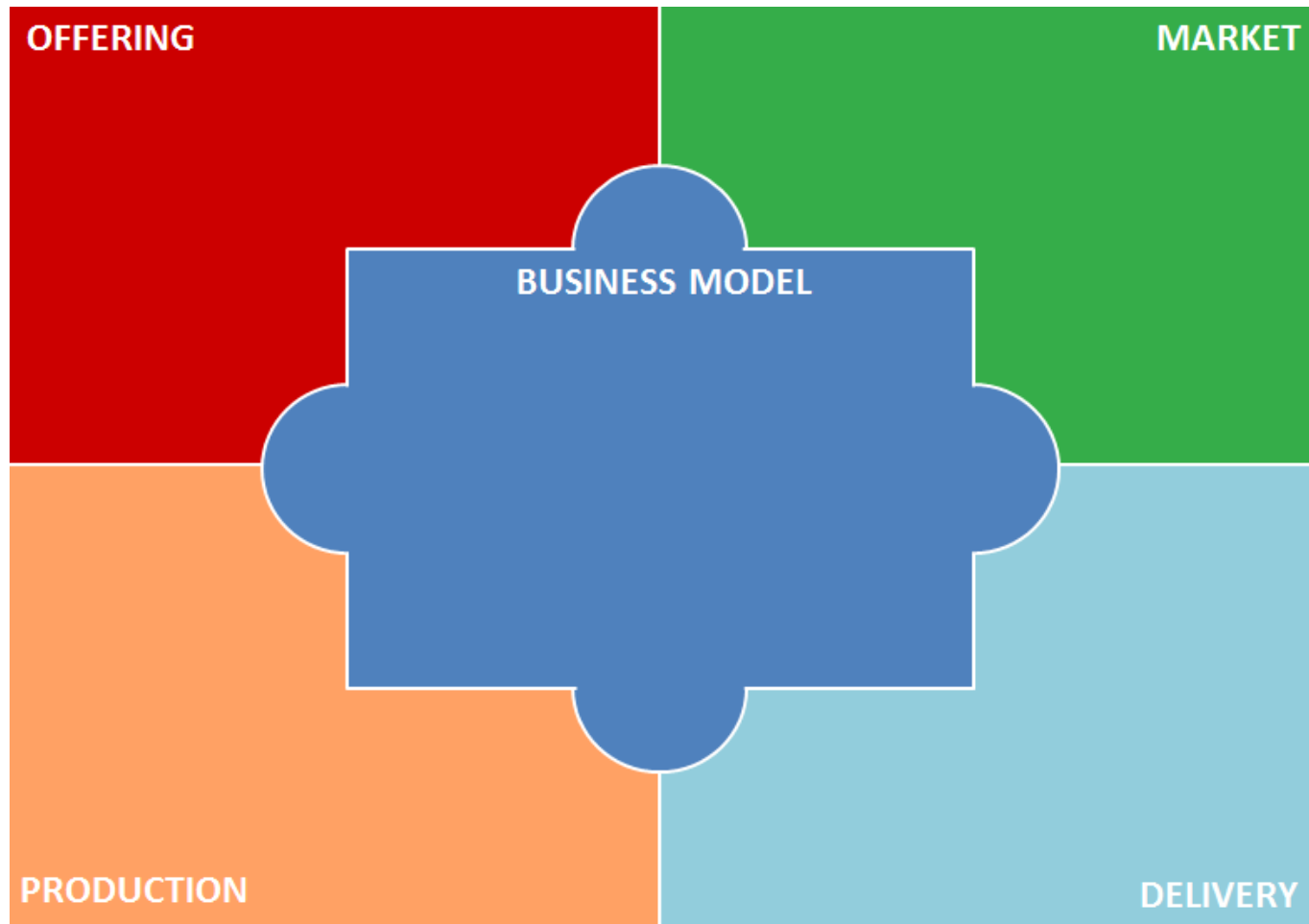
Based on the information, analyze and create a presentation of three to five concepts

Example of a concept



For young boys and girls who need to learn and want to enjoy, we will offer **mobile application** that **educates on different topics and subjects learnt at school** through **online platform and mobile devices**, using **advanced technology, videos and gamification**, provided **for free and earning from cross-selling and advertising**.

Innovation concept is generated by consolidating all information which is structured into the BOM



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STEADY...

INNOVATE!

Break the ice

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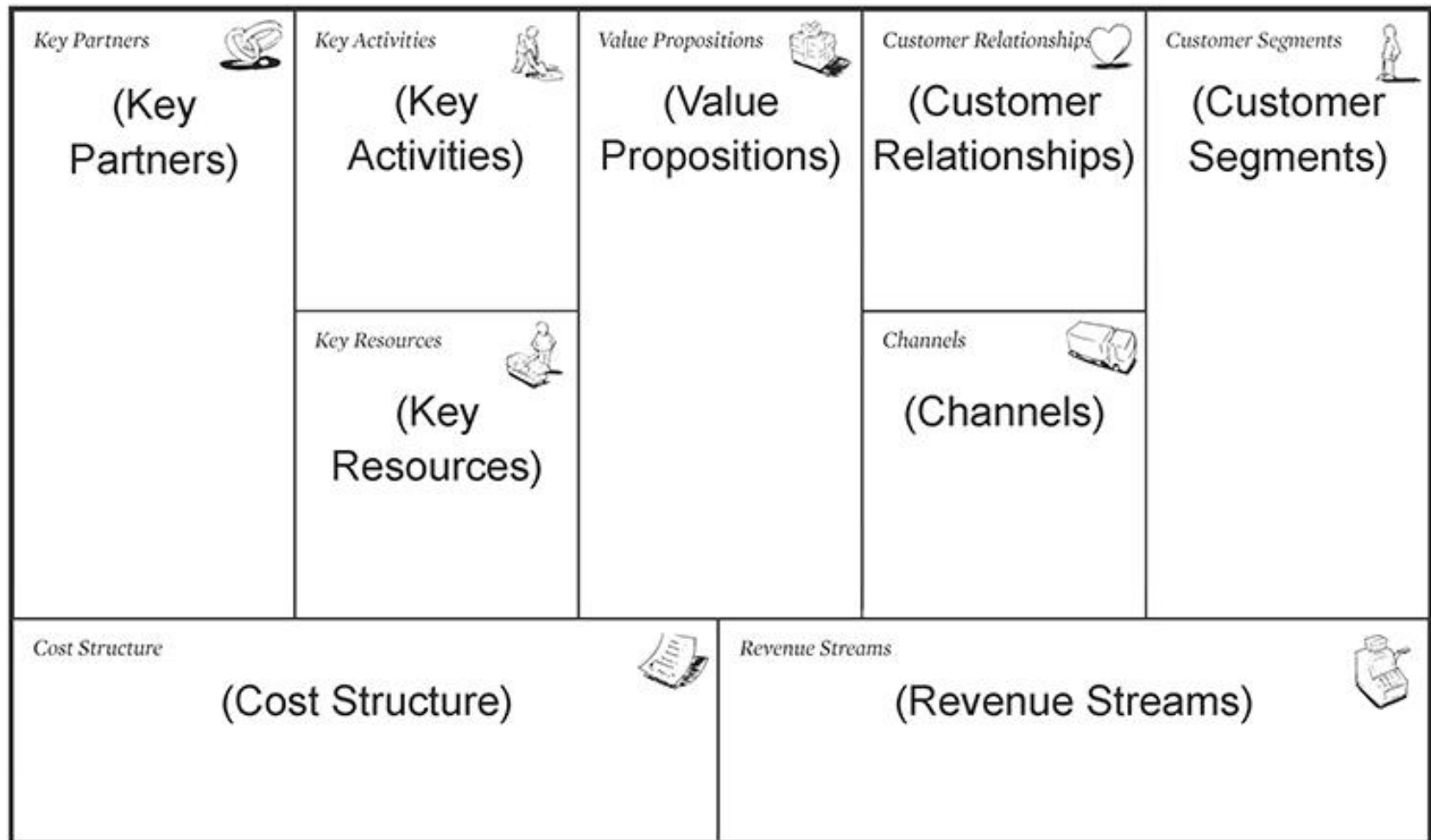
COMPANY X reaps benefit of CONCEPT Y, stock hits \$110.19 July 30th, 2021

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On account of the smart decision taken by **Company X** to enter into the field to **CONCEPT Y**, stock of **Company X** has finally hit \$110.19. This was an idea that emerged from bright students from Bulgaria. **Company X** showed great leadership and believed in the vision for the future.....



Business model canvas is widely used by entrepreneurs and investors when evaluating businesses / start-ups



All final presentations should include a robust action plan to demonstrate readiness for implementation

Key elements and information to be included:

- ✓ Value proposition
- ✓ Target market and customers
- ✓ Financial projections
- ✓ Resources
- ✓ Risk management
- ✓ Time-line (Gantt chart)
- ✓ Partnerships and networks