SS3 – From Research to Business: socio-economic impacts

CENTRE D’ÉTUDE DE LA PERFORMANCE DES ENTREPRISES – CEPE – HEC ULIEGE

PROF. DIDIER VAN CAILLIE – D.VANCAILLIE@ULIEGE.BE

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No. 766347.
Science creates ...

- New scientific knowledge & dissemination through the literature
- Societal potential outputs that must benefit to the Society because the Society has financed research

How to generate these potential societal outputs?

- By protecting new knowledge & know-how with patents ... or secrets and by licensing them
- By creating new ventures!
  - Spin-offs from existing laboratories or Universities
  - Spin-outs from existing companies
From Research to Business: an holistic view of the aquaculture industry

- Producers of knowledge (our ESRs)
  - With their own field of research,
  - Competences,
  - Know-how
  - And focus

- Farm Fish Producers (Focus on Production)
  - With their specificities
  - Their own problems and requirements
  - Their own expectations

- Mass Retailers (Focus on Logistics & Distribution)
  - With their specificities, especially in terms of location
  - Their own problems & requirements
  - Their own expectations

- Final Consumers (Focus on Consumption Needs)
  - With their own individual needs & expectations

From Research to Business: B-to-B-to-C
Our agenda (1/2)

November, 20 :

9.30 – 10.15 : From Research to Business : an introduction (Didier Van Caillie)

10.15 – 11.00 : From Research to Business : the lessons from experience (Didier Allaer)

11.15 – 12.00 : From Research to Business : in search for New Ventures that are aligned with our current socio-economic environment (Didier Van Caillie)

12.00 – 13.00 : The context : a look at the BioTech Industry

*The frontiers of the BioTech Industry and its importance in Europe and the world* (Jean-Pierre Segers)

14.00 – 15.00 : The process : how to generate new ventures from research

*Open Innovation in the BioTech Industry: principles and key challenges for creating new ventures and protecting your Intellectual Property* (Jean-Pierre Segers)

15.30 – 17.00 : The content

*Creating new ventures from the BioMedAqu project – a methodology for supporting your creativity* (Didier Van Caillie)

Team assignment : what is expected from you for our next session on Monday, 23 ?
Our agenda (2/2)

November, 23 :

9.30 – 10.10 : From Research to Business : an entrepreneurial approach

10.10 – 12.00 : From Research to Business: initiating your own value proposition with the Jobs-Pains-Gains methodology (D. Van Caillie & C. Honhon – Moving from group to group on the Collaborate platform)

13.30 – 15.00 : Exploitation strategy : exploitation of results (Andrea Di Anselmo)

15:00 – 16.15 : From Research to Business: Creating your own Business Model with the CANVAS methodology – Feed-Backs from the groups

16.30 – 18.00 : Lessons from experience


16.30 The Artialis case (Yves Henrotin)

17.15 The Cytomine case (Grégoire Vincke)
9.30 – 10.15 : From Research to Business : an introduction

BY DIDIER VAN CAILLIE

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No. 766347.
What is a firm?

- A firm is a portfolio of scarce resources
- A firm is a living organism continuously adapting to its evolving environment (the biological metaphor)
1. A firm is a portfolio of scarce resources

- Competences, experience, know-how
- Image & Reputation
- Licences, patents & Goodwill

- Sites & infrastructure
- Machines, machinery & Tools
- Fleet of vehicles
- Under labor contracts (top, middle & FLW)
- Out of labor contracts (partnerships, subcontracting, outsourcing)

- Financial resources
  - Equities
    - From shareholders
    - From self-financing
  - Debts
    - From banks
    - From suppliers
    - From Public Authorities

- Intangible resources
  - Competences, experience, know-how
  - Image & Reputation
  - Licences, patents & Goodwill

- Tangible/technical resources
  - Sites & infrastructure
  - Machines, machinery & Tools
  - Fleet of vehicles

- Human resources
  - To motivate
  - To coordinate
  - To balance to find a trade-off

BIOMEDAQU – SS3

November 20-23, 2020
2. A firm is a living organism (the Biological Metaphor)

A firm is fundamentally a living organism impelled by Humans that continuously adapt its structure and its operating activities to the constraints and requirements of its EVOLVING environment.
2. A firm is a living organism

- A PESTEL analysis of the external environment
  - which are the threats & opportunities coming from our environment
2. A firm is a living organism

The 5 forces of our competitive model

The Porter’s model

Five Forces Analysis (Porter)

- Threat of New Entry:
  - Time and cost of entry
  - Specialist knowledge
  - Economies of scale
  - Cost advantages
  - Technology protection
  - Barriers to entry

- Competitive Rivalry:
  - Number of competitors
  - Quality differences
  - Other differences
  - Switching costs
  - Customer loyalty
  - Costs of leaving market

- Bargaining Power of Suppliers:
  - Number of suppliers
  - Size of suppliers
  - Uniqueness of service
  - Your ability to substitute
  - Cost of changing

- Rivalry Among Existing Competitors

- Threat of Substitutes:
  - Substitute performance
  - Cost of change

- Bargaining Power of Buyers:
  - Number of customers
  - Size of each order
  - Differences between competitors
  - Price sensitivity
  - Ability to substitute
  - Cost of changing
11.15 – 12.00: From Research to Business: in search for New Ventures that are aligned with our current socio-economic environment

BY DIDIER VAN CAILLIE

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No. 766347.
How does a firm operate?

- A firm is a Value Chain
- The Business Excellence Model (EFQM)
- The firm and its management system
- The firm and its SWOT analysis
- The firm and its Value Proposition
- The firm and its Business Model CANVAS
3. A firm as a Value Chain

- Michaël Porter’s original model (1982)
- Firm is a chain of interrelated activities generating internally costs & externally products/services
- The customer pays the price that allows for covering costs & generating profits IF ONLY price > costs
3. A firm as a value chain – A revised vision

- Management support
  - Strategy & Governance
  - Financial & Accounting Management

- Support to the Operating Activities
  - Quality, Safety & Well-Being Management
  - Human Resource Management
  - Facility Management
  - Procurement & Billing

- Design (R&D, engineering, planning ...)
- Production of goods & services
- Distribution (operational marketing, delivery & after-sales activities)

Resources are affected to activities → Activities consume progressively resources, generating costs → Goods & services are produced and delivered to the customer, generating turnover & cash flow
4. The Business Excellence Model - The EFQM model
5. The firm and its management system - The conditions for taking daily good decisions

- Control system
  - Rules & procedures
  - Organigram & Jobs description
  - Values as DNA for our strategy

- Cultural system
  - Hierarchy
  - Identity & Mission: who are we and why are we?
  - Codes of conduct

- Information system
  - Decision system
  - Rules & procedures for creating & communicating information
  - Hardware & Software system
  - Data management system

- Power system
  - Document system & Knowledge Transfer
  - Key Performance Indicators adapted to the culture
  - Codes of conduct
6. The firm and its SWOT analysis - Combining pressures from external environment with capabilities from internal environment.
7. The firm and its value proposition

- What value do we propose to our customer segments?

- How do we make them dream?

° Adjusting what you propose to what your customer segments do expect from you -> A customer-centric approach

° Adapted to each of your customer segments:
  - Producers
  - Mass retailers
  - Final consumers
8. The firm and its Business Model CANVAS - How do we operate daily?
8. **The firm and its Business Model CANVAS**

- **How do we solve strategic paradoxes?**

  - Working for shareholders or for stakeholders (customers, employees, Civil Society, ...)?
  - A long term sustainable strategy (combining People – Profit – Planet) or a short-term financial strategy (max. Profit)?
  - An inside-out strategy (our competences dominate) or an outside-in strategy (the requirements of our customers dominate)?
  - Cooperation with our near environment (customers – suppliers – competitors) or pure competition?
  - Building quality or reducing costs?
  - Speed of processes or adaptability?
9.

And finally, what is expected from you?

- Generating ideas for a new product or service
  - For the aquaculture industry: Producers or Mass Retailers or Final Customers
  - Based on the knowledge you are creating currently with the other members of your group

- Elaborating a Value Proposition for your new venture
  - Based on the Value Proposition Design methodology
  - For ONE customer segment only!
  - Based on your current perception of the Jobs – Pains & Gains of your customer segment

- Elaborating a Business Model CANVAS for launching your new venture
  - A schematic one!
  - Incorporating some of the strategic paradoxes presented