



UNIVERSITY ROME TOR VERGATA SCHOOL OF ECONOMICS PRESENTS

## INNOVATION MANAGEMENT METHODOLOGY: THEORY & PRACTICE

- A COURSE BY: - CORRADO CERRUTI
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**TWELVE LESSONS TO BECOME AN INNOVATION MANAGER FEBRUARY – MAY 2018 EVERY FRIDAY AFTERNOON** 

In collaboration with



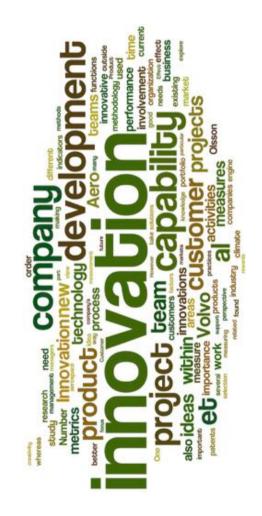
## Index



- Why a course in Innovation Management
- Tor Vergata Previous experiences
- For the MBA University Tor Vergata students
- For the external students
- For the Companies
- Objective of the course
- Participation rules and certifications
- NAUTILUS<sup>©</sup>
- Course structure
- How to attend
- Cost participation for external students
- Company Sponsorship
- Who are the teachers



## Why a course in Innovation Management



- The capability of managing Innovation processes within any organisation, from SMEs to large companies to public organisations is today seen as a fundamental competence.
- Today no organisation can afford not to implement continuous innovation activities in order to remain competitive, thrive and grow.
- To do this they need people with a full and deep understanding of these processes and the capabilities to implement them.
- The EU framework program Horizon 2020 (2014-2020) is the financial instrument implementing the Innovation Union, a Europe 2020 flagship initiative aimed at securing Europe's global competitiveness.
- The Italian national program Industry 4.0 recently approved by the Italian Government includes the objective of training 3,000 managers capable of innovating the business models and the productive processes of the companies.



## **Tor Vergata Previous experiences**



 MARTING FRIDAY FEBRUARY 24 FOR 6 WEEKS 2-6 ptm ROOM P37

- The University of Rome Tor Vergata's Master of Science in Business Administration, in 2017 already added a specific course on Innovation Management Methodology: Theory and Practice, which was received with great enthusiasm by the students. The course's objectives were that the students should be able to apply the models to real cases based on the theoretical background that they received.
- This success combined with the arrival of Industry 4.0 have led us to open up the course to external students and companies as well as the MBA students with the higher objective of generating a creative environment for confrontation between students with varying levels of company experience and direct knowledge of internal innovation processes.



## For the MBA University Tor Vergata students



- Give them practical knowledge and skills in applying a wide range of tools to better understand, manage and monitor company innovation activities
- Provide them with a solid platform for successfully building their own start-ups
- Reinforce their CV's by providing cutting edge skills which all companies are now looking for
- Complete their management skills to open up top positions in leading organisations
- Gain an enormously satisfying experience working alongside top professionals and interacting with the most innovative organisations
- Receive full recognition (6 credits) from one of the top Economics faculties in one of Italy's leading Universities



## For the external students



- Accelerate their existing career.
- Give their alternative career opportunities an extra gear
- Round-off their competence track record with high level innovation skills
- Become one of Industry 4.0's top professional innovation managers
- Showcase their knowledge and skills directly to companies who are involved in the course



## For the Companies



- Select and build the company's key resources
- Plan their short and long term innovation goals by building starting from their human resources
- Prepare the future success of the company
- Find highly motivated people within the course who could help them build their future
- Open up channels to identify a Chief Innovation Officer and his/her staff.



## The advantages of the course alumni community

- Become part of a growing club of top level alumni of innovation managers across the business environment
- Increase job opportunities through the course "opportunity matching" platform, where companies will be able to "pick-up" promising candidates





## **Objective of the course**



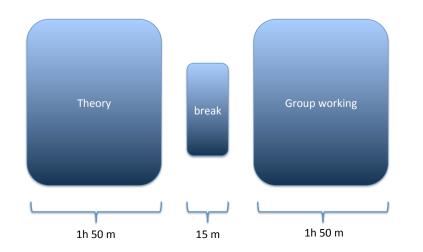
- What does Innovation mean and how do you manage it?
- Which are the business models that allow innovation to be managed correctly?
- This course aims at providing answers to these questions by providing the students with competencies relative to Company Innovation and Business Models.
- At the end of the 12 lessons the participants will have knowledge and understanding about innovation management, the modeling of complex situations, and the combination of various economic, technological and organizational elements to design the development of innovation projects.
- They will be able to communicate the conclusions and the knowledge acquired and the underlying rationale to both specialists and non-specialists, and will have applied their knowledge to real case studies by applying all the models that they will learn during the course.



## **Participation rules and certifications**



- The course has a duration of 48 hours distributed over 12 lessons of 4 hours.
- Each lesson will be made up of the first two hours dedicated to theory and the second two hours to group work.
- At the beginning of each lesson the participants will be registered.
- A participation to at least 80% of the course is required to receive the 6 University credits for the MBA students.
- A participation to at least 80% of the course is required to receive the certification of "Innovation Manager".







### The Innovation Management Methodology

# The Ten Commandments for effective innovation.

A 10 step proven Methodology to achieve business growth and success through an effective and guided Innovation process:

- 1. UNDERSTAND Business
- 2. DISCOVER Market Opportunities
- 3. ANALYSE Competition
- 4. GENERATE Innovation Strategy
- 5. ANIMATE Creativity Process
- 6. DEVELOP Innovation Roadmap
- 7. DESIGN the Solution
- 8. TEST the Solution
- 9. IMPLEMENT the Solution
- **10.LAUNCH** the Solution

© Management Innovation

The shell called **Nautilus**, in nature, is perfectly approximated by a sequence of numbers of the Pisan mathematician Leonardo Fibonacci (1170-1240). Each square inscribed within the spiral is related to the previous one by this series of numbers.

NAUTILUS©





## Lesson 1 Getting Started

### ARGUMENTS

- Course overview
- The 5Ws of Innovation
- How to Innovate
- An introduction to NAUTILUS<sup>©</sup>

### **KNOWLEDGE ACQUIRED**

- Participants will analyse their course case study assignments to get a first picture of why they need to innovate and what type of innovation they are going to need.
- They will also be led in how to organise their roles in group analysis to assure the most effective results of their work.





## Lesson 2 Innovation & Strategy

Lecturer: prof. Corrado Cerruti

### ARGUMENTS

- Competitive forces and innovation potential
- Innovation paths and strategic choices
- Focus on the digital technologies driven innovation
- Blue ocean vs. red ocean strategies
- Innovation value chain
- introduce testimonials

### **KNOWLEDGE ACQUIRED**

- Participants will learn how to define the basics of an innovation strategy.
- They will also apply strategic management tools to the innovation domain.



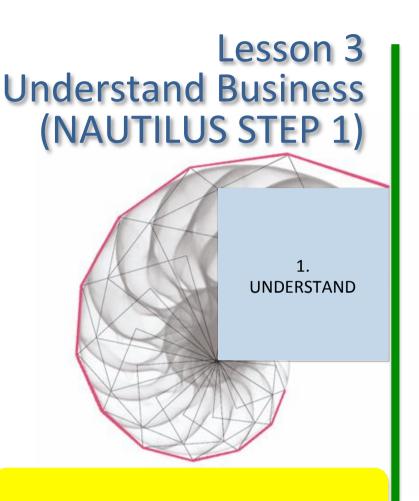


### ARGUMENTS

- Understand the company business line and industry
- Assess the current portfolio of Product-Services/Market
- Review the company value proposition and growth targets

### **KNOWLEDGE ACQUIRED**

- Participants will learn how to analyse their case study's activities using the product/market matrix to understand the relevance and trend of each element.
- They will also use a first level of the value proposition analysis for each product and it's market segments.



Only a few companies will survive the crisis. Clatifying the selection process of the right business priorities helps to focus on the main initiatives to be undertaken to achieve success, even in times of crisis.





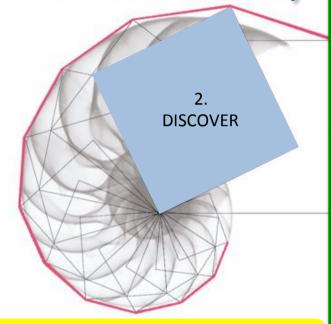
## Lesson 4 Discover Market Opportunites (NAUTILUS STEP 2)

### ARGUMENTS

- Define the target Customers
- Discover hidden Customer Needs
- Prioritize Customer Needs and identify Opportunity areas for Company Core/ non-Core business lines
- Size and forecast market demand (addressable Market)

### **KNOWLEDGE ACQUIRED**

 Participants will combine the product/ matrix, this time looking beyond its existing dimensions, and combine this with an explorations of possible user needs/expectancies that could be identified in order to identify opportunities for market diversification relative to their case studies.



*To succeed in growing their business companies MUST know the real Needs of their potential Customers.* 

A new Product/Service, although innovative, will not succeed in the market without a real demand and need from Customers.





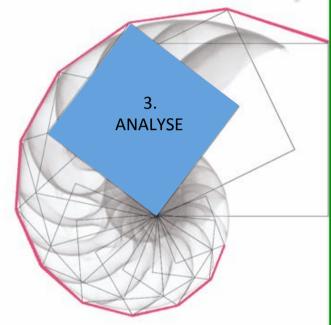
## Lesson 5 Analyse the Competition (NAUTILUS STEP 3)

### ARGUMENTS

- Identify and profile existing Competitors and Products
- (Porter's Five Forces Competitive Landscape Analysis)
- Identify Competitor weaknesses and strengths and potential partnerships (SWOT, analysis)
- Identify Environmental factors (Political, Economic, Socio-Cultural, Technological) to be considered (PEST analysis)
- Assess each Product's value proposition, communication and cost.
- Value Proposition Canvas

### **KNOWLEDGE ACQUIRED**

 Participants will learn and apply these models to generate the Competitive Landscape of their case studies. They will then apply the SWOT analysis to further analyse some elements of the competitors' market position to verify the Landscape.



Knowledge is key in determining the right strategy for a Company. Analyzing the Competition is crucial to improving the Company's positioning, and

*improving the Company's positioning and finding the success path to innovation.* 





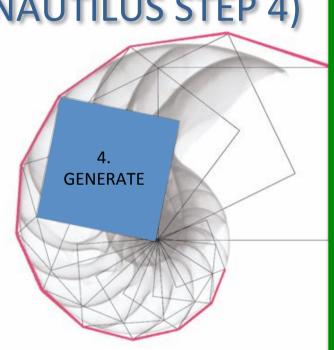
### Lesson 6 Generate Innovation Strategy (NAUTILUS STEP 4)

### ARGUMENTS

- Identify the strongest combination of Product-Services on the Market Opportunities
- Analyse pros and cons of using different innovation approaches (Open Innovation)
- Design the Innovation Strategy Matrix

### **KNOWLEDGE ACQUIRED**

 Participants will get an understanding of the options available for innovation design and use this knowledge to define possible innovation strategies for their case studies. They will also build an Innovation Strategy Matrix for them.



An innovation strategy is a plan to grow market share or profits through product and service innovation. When it comes to creating the solution, an innovation strategy must also indicate whether a product improvement, or a disruptive or breakthrough innovation approach is best.





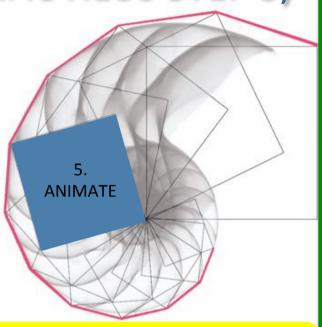
## Lesson 7 Animate Creativity Process (NAUTILUS STEP 5)

### ARGUMENTS

- Explore relevant and disruptive Technologies and Trends
- Scan/solicit external communities (Universities, Research Centers, startups, new patents)
- Conduct Innovative ideas generation Workshop
- Use Creative Problem Solving methods (Mindmapping, Six thinking hats, Lateral Thinking etc.)

#### **KNOWLEDGE ACQUIRED**

 Participants will get an understand of the vast possibilities open to them for sourcing ideas for innovation. They will learn and apply creativity techniques to explore the potential of group creativity, and be able to apply these techniques in productive environments.



The creative process is a fundamental step for a successful Innovation Strategy.

Creativity, however, must be put into a specific context and focused in identifying specific solutions, otherwise there is a concrete risk to have useless and time consuming brainstorming sessions.





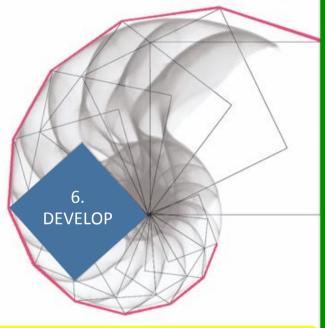
## Lesson 8 Develop Innovation Roadmap (NAUTILUS STEP 6 – 1<sup>st</sup> part)

### ARGUMENTS

- Describe next steps and initiatives
- Develop the Strategy Implementation Roadmap to achieve target objectives

### **KNOWLEDGE ACQUIRED**

 Participants will learn how to build a roadmap with timing and costs for the innovation strategy, including human resource planning other key investments necessary. They will apply the model to their case studies.



A Roadmap is more than just a mediumlong term Plan. It is rather a "Radar", a tool to look ahead with the final goal of improving the understanding of what will be the future scenario.





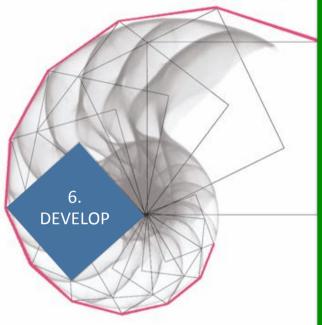
## Lesson 9 Develop Innovation Roadmap (NAUTILUS STEP 6 – 2<sup>st</sup> part)

### ARGUMENTS

- Formulate high level business case.
- Define and clarify all the elements of a Business Model.
- Business Model Canvas

### **KNOWLEDGE ACQUIRED**

 Participants will get a deep understanding of the Business Model Canvas and apply it to their Case Studies. They will use this as a verification of the innovations strategy they have defined.



Simplifying the business model in a basic graphical understandable form means making sure that a company has clear idea of its inner mechanisims – that is "what makes it tick"



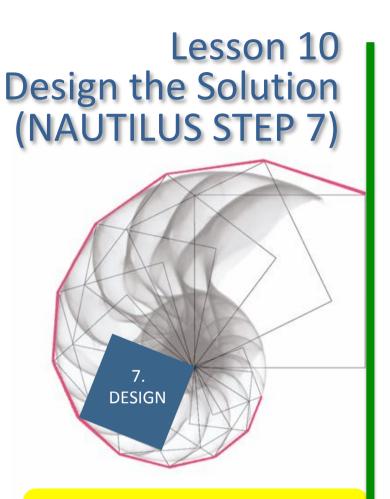


### ARGUMENTS

- Analytical Design and Technical Feasibility of the Solution
- Estimate Solution costs
- Explore funding and financing alternatives
- Update Business Case and prepare Development Plan for the Solution

### **KNOWLEDGE ACQUIRED**

 Participants will learn how to understand the financial and organisational implications of the innovation strategy. They will explore fund raising techniques and design a fund raising campaign for their case studies.



Define a Solution also means discard all the other possible alternatives. It is a detailed and accurate process that must consider and analyze all the alternatives and identify the most suitable.





## Lesson 11 Test, Implement and Launch the Solution (NAUTILUS STEP 8,9 and 10)

### ARGUMENTS

- Detailed Design of the Solution and Perform Solution Test
- Summarize positive aspects, negative aspects and suggestion for improvement.
- Engineering of the solution/production process
- Ensure feasibility of full scale production
- Setup Production facilities and/or outsourcing partners
- Define Marketing and Launch Plan
- Position and Launch the Solution on the Market
- Analyse customer feedback and adjust.

### **KNOWLEDGE ACQUIRED**

 The participants will explore in depth all the possible consideration for a "go-to-market" strategy of their planned innovation strategy. They will build a Strategy Map (Kaplan and Norton - Strategy Map) for their case studies.



To engineer and implement a solution often means facing many problems and being able to solve them by using all the previous experiences but also inventing original solutions.





## Lesson 12 Pitching the Company Innovation Strategy

### ARGUMENTS

- Each group will pitch their case study innovation strategy to the rest of the course participants using the acquired models
- Each member of each group will be present one or more of the concepts
- Other participants will be have the possibility to request further insights

### **KNOWLEDGE ACQUIRED**

 Participants will have the opportunity of demonstrating the level of understanding that they have gained from the course, their comprehension of their particular case study, the ability of collaborate in groups, and their individual communication skills.





## Participation fees for external students



For participation in the whole course

- € 1.950,00 regular fee
- $\in 1.450,00$  if you sign up before December 31, 2017
- Certification of "Innovation Manager" signed by University of Rome "Tor Vergata" for a regular participation (see course participation rules)





\* All amounts are VAT not included

## Sponsorship opportunities for the Companies

### **GOLD SPONSOR**

- Company Logo on all documentation
- 4 course participants included
- Option of show-casing the company as a case study in the course
- Invited talk of a company manager to present the Company's innovation strategy
- € 10.000,00 regular rate
- € 8.000,00 if you sign up before December 31, 2017

### SILVER SPONSOR

- Company Logo on all documentation
- 3 course participants included

- € 6.000,00 regular rate
- € 4.000,00 if you sign up before December 31, 2017

#### PARTNER

- Company Logo on all documentation
- 1 course participant included

- € 3.000,00 regular rate
- € 2.000,00 if you sign up before December 31, 2017





## Who are the teachers

#### **Corrado Cerruti**



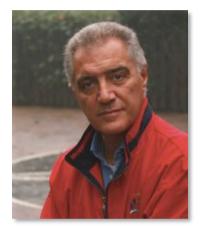
From Genoa, professor of Management, born in 1963

- Graduated in Economics and business at the University of Genoa (Italy)
- M.B.A. INSEAD (Fontainebleau France)
- Ph.D. in Management at Cranfield University (Cranfield UK)
- From 1986 to 1997 has worked in the organizational and business development of CPC/ Knorr (now part of Unilever) and Ansaldo (now part of Leonardo), working in Europe as well as in USA
- From 1998 has joined academia as a researcher, then associated professor (2000) and full professor (2005) at the universities of Rome "Tor Vergata" and Macerata.
- Since 2008: full professor in Management at the University of Rome "Tor Vergata", Department of Business and Law where he teaches: Innovation Management, General Management and Management Consulting. He has also taught the courses of Procurement and Supply Chain Strategies and Start-up/ SMEs Management.
- Since 2012: Director of the MSc in Business Administration
- Since 2015: Rector delegate to the development of the Young European Research Universities Network (YERUN)
- Since 2010 he is in charge of the yearly report of "Management Consulting industry in Italy" of Assoconsult-Confindustria and since 2015 of the yearly report of "Management Consulting industry in Europe" of the European Federation of Management Consulting Association (FEACO).
- Main areas of research (mainly based on University/Regional/EU funded research projects):
  - Innovation Management, mainly related to digital transformation and the role of management consulting [Publications include: Frey M, Cerruti C e Binci D, Innovation Management (in Italian), Cedam, Padova, 2012; Kazemargi N., Cerruti C., Appolloni A, "Adopting open innovation in supply networks]
  - Supply Chain Management, mainly related to supply chain partnerships and global supply chains [Publications include: Cerruti C., Mena C., Skipworth H. and Tavoletti E., "Characterizing Agile Supply Partnerships in the Fashion Industry", International Journal of Operations and Production Management, vol. 36, No. 8, 2016; Delbufalo E, Cerruti C., "Supply network configuration and the capability of firms to innovate: A theoretical framework". International Journal of Management, Vol. 29, No.4, 2012]



## Who are the teachers

#### **Emilio Sassone Corsi**



From Naples, physicist, born in 1955

- For over thirty years ICT professional and manager. He held positions in Italian and Multinational Enterprises:
  - Head of Research & Development of Systems & Management SpA (Pisa);
  - Technical manager at Sperry Univac (Florence);
  - Managing Director of Sistemi & Tecnologie SpA (Naples);
  - Managing Director of Eurobit Sistemi SpA (Rome);
  - Executive Director EDS Electronic Data Systems Italy, Banking Sector;
  - Managing Director of Roma Servizi Informatici SpA (Rome).
- Since 2008: Founder and Executive Officer of Management Innovation Srl, a consulting firm specialized in the management of innovation in the ICT and energy sectors.
- Since March 2015: Founder and Board Member of Green Energy Storage Srl (Trento), a Company that has acquired and industrially developed a Harvard University patent concerning organic flow batteries.
- Since September 2016: Founder and Chief Executive Officer of Glass to Power Srl (Milan), a University of Milan Bicocca spin-off Company that acquired the patents related to the transparent photovoltaic windows.
- "Economics of Innovation" Professor at the University of International Studies of Rome (UNINT).
- Professor of "Innovation Management" within the Master in Business Administration at the University of Rome "Tor Vergata" Department of Management & Law.
- Professor of "Innovation Management" within the PhD School at the Univ. of Milano Blcocca
- Passionate about Astronomy and President from 2002 to 2010 Italian Amateur Astronomers Union (UAI).
- Author of three books:
  - "Il Sole Nero" (2005),
  - "Occhi al Cielo" (2010),
  - "Il Signore degli Anelli" (2015)

all published by Gremese (Roma) in Italian.



## Who are the teachers

#### **Stephen Trueman**



From Manchester, mathematician, born in 1960

- Graduated in Mathematics at Oxford in 1981
- Early experience in ITC working for IBM in the UK, and later Olivetti and Auselda in Rome, followed by a move to Expert Systems.
- From 1989 to 2015 has worked in R&D environments supporting technology transfer, spinoffs, start-up and EU funding:
  - EU funding and Industrial Liaison Office at FBK (Trento);
  - EU funding University of Trento (Trento);
  - Head of Research University of L'Aquila (L'Aquila);
  - Head of Sapienza Innovazione (Rome);
- Between 1998 and 2000 completed the following Business Management specializations with the Open University (UK):
  - "Foundations of Senior Management" B800
  - "Strategy" B820
  - "Creativity, Innovation and Change" B822
- Since 2015: Senior Partner of Management Innovation Srl, a consulting firm specialized in the management of innovation in the ICT and energy sectors.
- Since 2015: Business Coach for EASME, has now supported 20 different companies (winners of the SME Instrument program) in planning their business strategies around their innovation goals.
- Since June 2016: Owner of Trueman Consulting, a company dedicated to business coaching and innovation.
- "Business and Start-Ups" Member of Faculty at MeliusForm Business School (Rome and Milan).
- Professor of "Innovation Management" within the Master in Business Administration at the University of Rome "Tor Vergata" Department of Management & Law.





Fly High, See Far Volare Alto, Osservare Lontano



#### **MAIN - MANAGEMENT INNOVATION Srl**

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