Innovation Manager: Job of the present and of the future

Organismo di Ricerca

Centro di Trasferimento Tecnologico Industria 4.0 certificato - Cod. CTT_I_4.0_019
What do you expect from this lecture?
A brief presentation of C2T

Consorzio per il Trasferimento Tecnologico C2T is a not-for-profit research organization founded in Milan in 2012.

- Qualified as Research center by European Union
- Registered at MIUR as Research Center and one of the 34 national company acknowledged by MISE as Research center and center of technological transfer Industry 4.0.
- Acknowledged as Research center and center of technological transfer by Regione Lombardia.
A brief presentation of C2T

Consorzio per il Trasferimento Tecnologico C2T has the aim of promote Research & Development at enterprises of all sizes, with a special focus on SMEs.

Our clients:
- PMI
- Startup
- Big firms
- University – Research center
Our business model

- C2T wants to support companies and organizations in turning their ideas into project development, through:
  - a scientific approach to problem solving;
  - the coordination of human and economic resources;
  - the management of partnerships and collaborations;
  - IT support, when needed.
Our Innovative startup

- **Find Your Doctor**, an innovative startup participated by C2T, is the first employment agency in Italy specializing in profiles with research background: a fast and flexible recruitment service to identify specialized consultants or highly educated figures to be placed on staff, suitable for management, R&D, analysis and responsibility roles.

- With this tool, C2T can reach qualified specialists in several fields.
Our services

Business Unit ICT LAB

- Digitalizzazione
- Data extraction & management
- Integrazione di sistemi e custom software
- Progettazione portali, dashboard e sistemi esperti
- Data analytics, Big Data
- Ricerca & sviluppo
- Data mining
- Artificial Intelligence
- Machine Learning
- Blockchain

Business Unit SUPPORTO ALLA CREScitA

- Analisi organizzativa e supporto fiscale
- Analisi organizzativa e mappatura processi
- Ottimizzazione economico-finanziaria
- Supporto agevolazione, pianificazione fiscale
- Interazione con funzione amministrativa e fiscale
- Credito d’Imposta R&D e formazione
- Bandi
- Piano Nazionale 4.0 e bandi
- Supporto a startup e PMI innovative

Business Unit TRASFERIMENTO TECNOLOGICO

- Sportello Doc
  - Analisi tecnico-scientifica preliminare
  - R&D
    - Integrazione di competenze specialistiche
    - Piano nazionale Industria 4.0

Business Unit FORMAZIONE

- DocEdu
  - Percorsi formativi ad alta specializzazione per l’impresa
- Orientamento PhD
  - Percorsi formativi in università

Business Unit AGENZIA DEL LAVORO

- Recruiting e consulenza HR
  - Ricerca e selezione di risorse umane altamente specializzate (dottori di ricerca)
- ADoc
  - Pubblicazione e diffusione di offerte di lavoro (job ad)
Who has talked about us
A brief presentation of myself

- MSc in Mechanical Engineering with a specialisation in Industrial Production, obtain in 2018 at Politecnico di Milano.

- In 2019 began my working experience at Consorzio per il Trasferimento Tecnologico as Innovation Manager.

- My everyday agenda:
  - Implementation in various business entities (especially SMEs) of the Open Innovation paradigm;
  - Digital integration and development of business processes through the implementation of enabling technologies defined by the Enterprise 4.0 plan;
  - Technology transfer to the SME world by providing consulting services, training and innovative production methods related to the Industry 4.0 paradigm;
  - Development of ideas and projects leading to the defense of intellectual property (Patents, Utility Models, Designs and Industrial Patents) as well as implementation of Project Management activities related to their prototyping and industrialization;
  - Support for the creation of innovative startups;
  - Advice to businesses on the subject of analysis and possibilities of access to public incentives to support entrepreneurial activities and more specifically all actions related to R&D, innovation, Open Innovation programs, Enterprise 4.0, digitization and business reorganization including through new ways of working (i.e. smartworking);

Ing. GIANLUCA MUSTILLO
(Innovation Manager at C2T)
Let me know about you

A voluntueer that describe shortly this course and your course of study
Who is an innovation manager?

First definition (Survey of Digital Transformation Academy - Politecnico di Milano):

The innovation manager is:
- **an explorer** - the figure who selects partners, who evaluates opportunities through careful scouting, who has a vision of the digital trends of the future, who analyzes the company's demand for digitization (DIGITALISATION)
- **an innovation evangelist** - the figure who analyzes and introduces new technologies in the company by activating proper cultural change (CULTURAL CHANGE)
- **enabler** - the figure who evaluates and analyzes projects placed in the company and liaises with all business functions (NETWORKING ABILITY).
Who is an innovation manager?

Second definition (Bureau Veritas – Certification center):

The innovation manager:
- operates as a company employee or consultant (ENDOGENOUS VS EXOGENOUS)
- interfaces with the managers of all areas of the organization in order to identify innovations considered strategic for the organization and identifying development processes functional to set up the progressive advancement of technological and digital transformation. (NETWORKING ABILITY)
- promotes solutions and methodologies that foster cultural change in the company (CULTURAL CHANGE)
- Not only new technologies, but also competitive innovation projects that take into account the integration of technologies with other relevant factors (sustainable innovative technological solutions, digital maturity of the organization, strategic objectives and constant updating) (NOT ONLY DIGITALISATION BUT ALSO INNOVATIVE PROJECTS)
Who is an innovation manager?

An innovation manager deals with different types of innovation:

**Product innovation**
A good or service that is new or significantly improved. 
E.g.: improvements in technical specifications, components and materials; developing software associated with the product; user friendliness or other functional characteristics.

**Process innovation**
A new or significantly improved production or delivery method. 
E.g.: significant changes in production techniques; equipment and/or software in aid to the process.

**Marketing innovation**
A new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing.

**Organisational innovation**
A new organisational method in business practices, workplace organisation or external relations.
Who is an innovation manager?

- One figure, multiple background.
Who is an innovation manager?

- In 2019, Ministry of Economics Development (MISE) has opened the possibility to subscribe to an Innovation manager list.

- The manager must have a high degree of formation in areas such as Big Data, Cloud Computing, Cyber Security, and Next Production Revolution.

- They must have experience in fields such as Simulazione e Sistemi Cyber-Fisici, Prototipazione Rapida, Realtà Virtuale e Aumentata, Robotica Collaborativa, Interfaccia Uomo-Macchina, Manifattura Additiva e Stampa 3D, Internet of Things (IOT), Processi Aziendali Digitali, Digital Marketing, Open Innovation, and Metodi Organizzativi Innovativi.

- They must have either a Doctorate in research or a Master's degree of the same level, and at least 3 years of experience in managerial roles or 7 years in management roles.
Who is an innovation manager?

<table>
<thead>
<tr>
<th>Ambito più diffuso:</th>
<th>Ambiti più ristretti:</th>
</tr>
</thead>
</table>
| Integrazione e sviluppo digitale dei processi aziendali | Robotica  
Cyberfisica |

### Vetrina - Ambiti di Specializzazione

<table>
<thead>
<tr>
<th>AREA Di SPECIALIZZAZIONE</th>
<th>% SUL TOTALE MANAGER</th>
<th>NUMERO MANAGER</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROCESSI AZIENDALI DIGITALI</td>
<td>64%</td>
<td>5.777</td>
</tr>
<tr>
<td>METODI ORGANIZZATIVI INNOVATIVI</td>
<td>62%</td>
<td>5.555</td>
</tr>
<tr>
<td>BIG DATA</td>
<td>39%</td>
<td>3.150</td>
</tr>
<tr>
<td>DIGITAL MARKETING</td>
<td>34%</td>
<td>2.741</td>
</tr>
<tr>
<td>INTERNET OF THINGS (IOT)</td>
<td>30%</td>
<td>2.341</td>
</tr>
<tr>
<td>OPEN INNOVATION</td>
<td>26%</td>
<td>2.011</td>
</tr>
<tr>
<td>INTERFACCIA UOMO-MACCHINA</td>
<td>20%</td>
<td>1.785</td>
</tr>
<tr>
<td>CYBER SECURITY</td>
<td>17%</td>
<td>1.575</td>
</tr>
<tr>
<td>CLOUD COMPUTING</td>
<td>17%</td>
<td>1.517</td>
</tr>
<tr>
<td>PROTOTIPIAZIONE RAPIDA</td>
<td>15%</td>
<td>1.399</td>
</tr>
<tr>
<td>NEXT PRODUCTION REVOLUTION</td>
<td>14%</td>
<td>1.280</td>
</tr>
<tr>
<td>ACCESSO A MERCATI FINANZIARI E DEI CAPITALI</td>
<td>13%</td>
<td>1.226</td>
</tr>
<tr>
<td>REALTÀ VIRTUALE E AUGMENTATA</td>
<td>12%</td>
<td>1.105</td>
</tr>
<tr>
<td>MANIFATTURA ADDITIVA E STAMPA 3D</td>
<td>8%</td>
<td>749</td>
</tr>
<tr>
<td>ROBOTICA COLLABORATIVA</td>
<td>7%</td>
<td>619</td>
</tr>
<tr>
<td>SIMULAZIONE E SISTEMI CYBER-FISICI</td>
<td>7%</td>
<td>645</td>
</tr>
</tbody>
</table>
Example of innovation management – Case study

- Fasb Linea 2 s.r.l. - founded in 1981, specialized in metal tube processing. Over the decades, has seen the transformation of the very small "domestic" workshop of founder Luigi Fumagalli into an industry that currently occupies an area of 10,000 square meters, half of which is covered, offers work to about 30 of employees with a continuously growing turnover, both nationally and internationally
Example of innovation management – Case study

- **Product innovation**
  
  Developed and engineered a new product in the field of Health and Safety. The idea of explore a new market share in HSE equipment and HSE consultancy lead to a constitution of a new societary company: Avan s.r.l. – innovative startup with client of the caliber of Barilla, Luxottica, Kone.

- **Process innovation**
  
  The introduction of the new sheet processing department (two new machine: laser sheet metal cutting and sheet metal bending) led to the introduction of Industry 4.0 concepts in the control of this processing department.

- **Marketing innovation**
  
  Developed a new B2B e-commerce to better perform and innovate the way the product “Transenna” is sold.

- **Organisational innovation**
  
  Introduction of smartworking for the adminstrive department thanks to the subscription of individual work contract settlement with the workers.

  Assessment of the workforce digital skills in order to study a new training program in order to reduce the digital gap in order to cope with the digital transformation the Fasb Linea 2 began.
Innovation management – Case study

■ Product innovation

Idea:

Developing a new tool utilized in the field of work safety in case of extraordinary maintenance in order to individuate a zone called «Straordinary risk area». This areas are one of the most recurred area where work incident happen because of its straordinarety

Developing:

- Economic support:
  project financed through European fund and support on the development of business model of the newco Avan s.r.l. and its constitution.

- Human resource:
  Team of development composed of: 1 PhD in Informatics, 1 PhD in IoT, 1 PhD in Health & Safety Engineering, several mechanical engineers and product designers.

- Informatic support:

- IoT sensing of the barrier (Patent pending)
Innovation management – Case study

- **Product innovation**

Before...

- Low stability
- Low portability
- No intelligence
Innovation management – Case study

Product innovation

- New design
- 100% Eco-Textile drape
- Improved portability
- Improved transportation
Innovation management – Case study

- Product innovation
Innovation management – Case study

- Product innovation
  - Sensorized barrier
Innovation management – Case study

■ Process innovation

Idea:
Remote control of the machinery in the new sheet processing department; with the aid of a CAD/CAM program, instruction for the machining are sent from the technical department directly to the machine in order to start the processing. The idea is to control the process from the beginning (order from client) to the shipping of the final goods thanks to the ERP of the firms and thanks to an automatic system of barcoding.

Developing:
- Economic support:
Project financed through European fund
- Human resource:
Team of development composed of: 1 PhD in Informatics, 1 ICT manager, 1 Process Engineer
- Informatic support:
Development of the code to permit the ERP integration with the machinery (middleware) in order to control in real time any work orders.
Innovation management – Case study

- Process innovation

Step 1 – Commercial department, insert and order in X1 in the specific interface dedicated to the specific process machine
Innovation management – Case study

■ Process innovation

Step 2 – Our software takes the order and send it to the software of the machine
Innovation management – Case study

- **Process innovation**

Step 3 – The operator selects the order, creates the specific job according to the number of pieces that must be produced.
Innovation management – Case study

Process innovation

Step 4 – The operator launches the job program
Innovation management – Case study

■ Process innovation

Step 5 – During the operation, Connect elaborated in real time the data of the job and communicates it with the ERP.
Innovation management – Case study

- **Marketing innovation**

**Idea:**

Innovate the way the product «Transenna» is sold thanks to the development of a B2B E-commerce. The new e-commerce is connected directly to the CRM adopted in Fasb in order to collect data to conduct focused lead marketing actions.

**Developing:**

- **Economic support:**
  project financed through European fund

- **Human resource:**
  Team of development composed of: 2 IT Deveoper, 1 expert in digital communication,

- **Informatic support:**
  Development of the code of the e-commerce platform and of the integration between CRM and E-commerce
Innovation management – Case study

- Marketing innovation

https://www.transenne.net/it/

Transenne metalliche colorate Spazio MP2

€850,00 – €1.715,00 IVA esclusa

- Bancale da 10 Pannelli
- Bancale da 20 Pannelli
- Piedino doppio
- Piedino piatto
- Blu
- Rosso
- Verde
Innovation management – Case study

- **Organisational innovation**

**Idea:**

Implement a new way of working and an goal based evaluation work performance instead of a simple time based evaluation method

**Developing:**

- Economic support: project financed through European fund
- Human resource:
  
  Team of development composed of: 1 PhD in Labour law, 1 PhD in Management Engineering
- Informatic support: Not needed
Innovation management – Case study

- Organisational innovation

Idea:
Assessment of the workforce digital skills in order to study a new training program in order to reduce the digital gap in order to cope with the digital transformation the Fasb Linea 2 began

Developing:
- Economic support: project financed through European fund
- Human resource:
  Team of development composed of: 1 PhD in Economics with expertise in Industry 4.0, 1 PhD in Occupational psychology
- Informatic support:
  Not needed.
Q&A – Question and answer
Thank you!!!