**CREATE Project**

**D2.1 – Working material and questionnaires for sessions 1 and 2**

### HOW CREATE PROJECT WAS BORN:

**A THEORETICAL FRAMEWORK**

- Definition of creativity in organizational contexts
- Creativity as evolutive process
- Dichotomies of creativity
- Looking for a methodology
- Two industrial processes:
  - New product development
  - Customer care

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### CREATIVITY

"Creativity is the evolutive attitude of a system"  
Binnig, 1991

- **Attitude**: capability of modifying, changing, innovating
- **System**: subject of creativity are not just individuals, but social systems, organizations and enterprises too
- **Evolution**: it is not possible to foresee creative systems behaviour just considering their input

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### ORGANIZATIONAL CREATIVITY (1)

"Organizational creativity is not the same as individual creativity"  
Vicari, 1998

- it is not the sum of individual creativities: individual innovations have a sense in a social context
- it is the result of the conditions the organization is in: creativity as interaction among elements which are not necessarily creative

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### ORGANIZATIONAL CREATIVITY (2)

There’s no biunique relationship between individual and organizational creativity

<table>
<thead>
<tr>
<th>Kinds of creativity</th>
<th>Organizational creativity</th>
<th>Individual creativity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>low</td>
<td>high</td>
</tr>
<tr>
<td>Organizations based on continuous development, on systematic research of efficacy</td>
<td>Successful organizations</td>
<td>High rate of innovations</td>
</tr>
<tr>
<td>Few innovations, just imitations</td>
<td>Low rate of innovations, sometimes radical, based on entrepreneurial spirit of individuals</td>
<td></td>
</tr>
<tr>
<td>Not effective organizations</td>
<td>Innovation</td>
<td></td>
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### CREATIVITY & INNOVATION (1)

- Creativity as a milieu where innovative processes are most likely to take place
- Innovation is the result, creativity is the condition
CREATIVITY AS EVOLUTIVE PROCESS

- Evolution is the process by which organizational creativity reveals itself
- Evolution is essentially based on:
  - Production of existing genes’ variations
  - Natural selection and consequent elimination of not suitable individuals;
  - Retention of organisms which are most coherent with environment.

PRODUCTION OF VARIATIONS (1)

Innovation: variation with respect to the past
Variation: new combination of already existing elements

- a. Intentional combination
  Ex.1: H. Ford combined processes of postal selling and car assembling
  Ex.2: Ohno (Toyota): combined American supermarkets and cars production

- b. Mistakes
  Ex.: A product positioned in the market differently from what has been planned might offer a new market possibility

- c. Natural production of variations
  Ex.: variations produced by chance

PRODUCTION OF VARIATIONS (2)

Production of bonds: Creativity has to be guided; it requires objectives and bonds as a consequence

- a. External bonds
  - environmental origin
  - responsible for accepting and refusing innovation
  - they can be modified by innovation itself

- b. Internal bonds
  - self-produced (ex.: technical feasibility, number of potential customers …)
  - not rigid

PRODUCTION OF VARIATIONS (3)

3 kinds of creativity

1. New Darwinian creativity:
   - Production of variations
   - Selection of the best variations
   - Source: Vicari, 1998

2. Lamarkian creativity:
   - Production of variations
   - Selection of the best variations
   - Source: Vicari, 1998

3. Multistadium creativity:
   - Production of variations
   - Selection of the best variations
   - Source: Vicari, 1998

1. Bonds limit the number of variations
2. Selection is arbitrary and it deals with a few ideas
3. This kind of creativity is very efficient

Ex.: research of innovation opportunities in a certain market.
**SELECTION OF VARIATIONS (1)**

- Ideas are analyzed according to a selection code which is specific for each enterprise
- Selection code is concerned with internal and external evaluation elements

<table>
<thead>
<tr>
<th>Internal elements</th>
<th>External elements</th>
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</thead>
<tbody>
<tr>
<td>Mission &amp; vision</td>
<td>Image</td>
</tr>
<tr>
<td>Organizational culture</td>
<td>Positioning</td>
</tr>
<tr>
<td>Competences</td>
<td>Customers’ needs</td>
</tr>
<tr>
<td>Strategy</td>
<td>Competitors’ strategies</td>
</tr>
<tr>
<td>Existing products</td>
<td>Existing laws</td>
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<tr>
<td>Productive structure</td>
<td>Social and cultural values</td>
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<td>Financial parameters of</td>
<td>Competitive structure</td>
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<td>profitability</td>
<td></td>
</tr>
</tbody>
</table>

**SELECTION OF VARIATIONS (2)**

- Selection: choosing among existing variations
- Levels of selection:
  - a. individual
  - b. organization
  - c. market

The result of a selection at one level is a variation for the next level.

**RITENTION OF INNOVATION (1)**

"Novelty destroys and builds contemporarily"

J.A. Schumpeter, 1942

- Destruction deals with what already exists, i.e. market, products, needs, processes, structures...
- Construction uses material coming from destruction

**RITENTION OF INNOVATION (2)**

How to insert innovations inside existing structures: two fundamental factors.

1. **acceptance:**
   - It is strictly connected with destroying capability of innovations on pre-existing structures
   - How deep is the changing?
   - Which structures will be modified?
   - What kind of behaviour will not be coherent any more?
   - Who will be inserted and who will leave the organization?

**RITENTION OF INNOVATION (3)**

2. **ritention:**
   - It means using accepted innovations in order to solve a recurring problem
   - The system has to modify its structure in order to include innovations that work into enterprise’s relationships
   - Innovations are more easily accepted and retained by complex systems, where perturbations destroy just a part of the organization

**DICHOTOMIES of CREATIVITY**

"Enterprises should be replanned in order to enhance their evolutive capability with respect to the operational one"

R.N. Foster, S. Kaplan, 2001

- Continuity vs. discontinuity
- Operating vs. creating
- Convergency vs. divergency
- Control vs. risk taking
Continuity vs. discontinuity

- The assumption of continuity:
  Enterprises are subjected to cultural blocks which induce:
  - strategical planning mistakes
  - defensive routines
  - low capability to innovate

- The reality of discontinuity:
  Markets create more surprise and innovation than enterprises because they have:
  - no control systems
  - no culture
  - no mind models

Operating vs. creating

Operational excellence is no more sufficient to evolve with the same rhythm and intensity of the market

- Traditional management focuses on:
  - analysis
  - control processes
  - effective execution
  - high logistical competences

- Creative management focuses on:
  - taking action
  - transforming reality
  - building the future

Convergency vs. divergency (1)

- Diverging thinking:
  - variety of perspectives
  - unusual associations
  - "cross fertilization"

3 phases:
1. research: of a problem to be solved;
2. incubation: suspending judgment to increase the possibility of reaching an original vision of the problem;
3. collision: creating a new idea by connecting different information and perspectives.

Convergency vs. divergency (2)

- Convergent thinking:
  - measured by I.Q. testing
  - well-defined and rational problems
  - analytical thinking

THE ACT OF CREATION

- Research (observation)
- Incubation (reflection)
- Collision (conversation)
- Experimentation

Control vs. freedom of action and risk

"Putting into balance discontinuity and continuity means putting into balance control and freedom of action"
R.N. Foster, S. Kaplan, 2001

- Control aims to:
  - eliminate surprise
  - create a stable environment
  - avoid to take excessive risks

- Freedom of action implies:
  - a greater responsabilization
  - the possibility of "doing the right thing" avoiding to assign explicit targets
  - the freedom of risking and making mistakes

A practical approach

- How can we translate all these concepts into an operative approach?
- Does a universal recipe exist to enhance organizational creativity?
- Is it possible to approach such a topic with structured methodology?
1. Mapping specific literature in order to find out methodologies and techniques enhancing organizational creativity.

2. Evaluating methodologies, techniques and the relevant documents.

3. Suggesting a mixed methodology by using the best techniques.

### ANALYZED WORKS ABOUT ORGANIZATIONAL CREATIVITY

<table>
<thead>
<tr>
<th>TOPYC</th>
<th>Methodologies</th>
<th>Techniques</th>
<th>Other contributions</th>
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<tr>
<td></td>
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<td>Techniques</td>
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### WORK METHODOLOGY

**Methodological phases**

1. **Predisposition**: Creating internal conditions enhancing organizational creativity, pointing out business objectives, resource allocation, creative training and team building.
2. **External mapping**: Discovering new or unexpressed needs and desires, studying competitors’ strategies...
3. **Internal mapping**: Exploiting business resources to foster new business concepts emerging; internal inquiry.
4. **Creative process**: Ideas production.
5. **Evaluation**: Evaluation and selection of the best ideas accordingly to inner judgement criteria.

### BEST OF BREED METHODOLOGY

- Techniques for predisposition: n° 11
- Techniques for external mapping: n° 12
- Techniques for internal mapping: n° 10
- Creative techniques: n° 60
- Evaluation techniques: n° 12

Total number of techniques: n° 105

### RESULT OF THE STUDY: BEST OF BREED METHODOLOGY

New proposal from a mix of techniques:

- n. total techniques: 13
- Average mark assigned to techniques: 4.09/5
TWO INDUSTRIAL PROCESSES

- New product development → Derbi
- Customer care management → Merloni

Derbi
Merloni Elettrodomestici

TOOLS FOR THE SELECTED INDUSTRIAL PROCESSES

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<td>Average mark assigned to techniques</td>
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<table>
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<td>4. Evaluation</td>
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Average mark assigned to techniques 4.6/5
Total techniques 6

Tools

- Creative training
- Attributes
- Value chain
- SWOT Analysis
- Morph. Analysis
- Prov. & Mov.
- 6 Hats