Create sustainable Innovation in SMEs using creative methods and processes

CreaInnovation

Priority Axis 1: Promoting Mediterranean innovation capacities to develop smart and sustainable growth
Specific Objective 1.1: To increase transnational activity of innovative clusters and networks of key sectors of the MED area

CISET (CreaInnovation Sustainability Evaluation Tool)

Project partner in charge:
University of Zagreb – Faculty of Electrical Engineering and Computing, Croatia
Project partners involved:
Chamber of Commerce of Viterbo, Italy
University of Algarve – CRIA - Division of Entrepreneurship and Technology Transfer, Portugal
Centre for Research and Technology Hellas, Greece
Barcelona Official Chamber of Commerce, Industry, Services and Navigation, Spain
Scientific Research Centre Bistra Ptuj, Slovenia
Gers Chamber of Commerce and Industry, France
Sarajevo Economic Regional Development Agency, Bosnia & Herzegovina
Ministry of Economy, Montenegro

Project co-financed by the European
Regional Development Fund

Public

Work Package 3 – Testing
Activity 3.2. Development of a sustainability assessment model for SMEs innovation projects
Version: FINAL – Date: May 2018

CISET (CreaInnovation Sustainability Evaluation Tool)

Sustainability assessment model of regional and transnational innovation projects

Main purpose

The tool has been developed to be used both as a tool for the qualitative assessment of economic, social and environmental sustainability of innovation projects, and as a checklist, on sustainability, to be used in the generation of innovation projects, stimulating reflections on the areas important to be able to set them with a right perspective of attention to sustainability criteria. If those who are preparing to generate new ideas of innovation, be it product, process, market or organizational, leaf through the CISET (CreaInnovation Sustainability Evaluation Tool) evaluation sheets could focus their attention on the relevant criteria to ensure the sustainability of their ideas. The use of the posteriori model, to evaluate the sustainability of the ideas of innovation generated, allows then to validate the level of sustainability of the innovations that are to be pursued. The simplicity of use of the model allows all those who wish to pursue a sustainable innovation to evaluate it both in the design phase and in the implementation phase.

Tool summary

An Innovation sustainability assessment model suitable in the evaluation process of the economic, social and environmental sustainability of business innovation solutions generated during the project implementation.

Tool version, Date

Version 3, May 2018

Author & contact

Prof. dr.sc. Mario Kovač (mario.kovac@fer.hr), Faculty of Electrical Engineering and Computing, University of Zagreb, Croatia

Activity

3.2 Development of a sustainability assessment model for SMEs innovation projects

Deliverable

3.2.1 Sustainability assessment model of regional and transnational innovation projects (to evaluate the economic, social and environment sustainability of an innovation project)

Contents

1 CISET TOOL DESCRIPTION

The CISET (CreaInnovation Sustainability Evaluation Tool) tool has been developed to be used both as a tool for the qualitative assessment of economic, social and environmental sustainability of innovation projects, and as a checklist, on sustainability, to be used in the generation of innovation projects, stimulating reflections on the areas important to be able to set them with a right perspective of attention to sustainability criteria.

If those who are preparing to generate new ideas of innovation, be it product, process, market or organizational, leaf through the CISET evaluation sheets could focus their attention on the relevant criteria to ensure the sustainability of their ideas.

The use of the a posteriori model, to evaluate the sustainability of the ideas of innovation generated, allows then to validate the level of sustainability of the innovations that are to be pursued.

The simplicity of use of the model allows all those who wish to pursue a sustainable innovation to evaluate it both in the design phase and in the implementation phase.

The CreaInnovation Sustainability Evaluation Tool performs evaluation through series of statements divided in five main categories:

- Company

- Innovation

- Social sustainability

- Environmental sustainability

- Finance

Based on the inputs entered in five categories (Company, Innovation, Social sustainability, Environmental sustainability, and Finance) evaluation is performed and reported for each category and in the Evaluation Summary.

In addition to the detailed Evaluation Summary, brief version is also generated in the Executive Summary worksheet.

2 ENTERING THE DATA

Each main category is presented in a separate worksheet tab where users can provide data regarding the evaluated innovation project. Worksheets are show on the bottom of the workbook as shown in *Figure 1*.
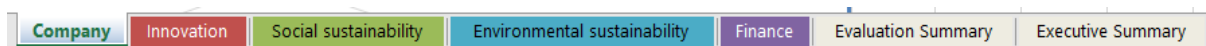

Figure 1 Worksheets

As shown in the *Figure 2* selection is made by clicking on the dropdown menu marked by the down arrow next to the validation column. Selection is made for each of the statement in the worksheet.

Figure 2 Validation column selection

Following the click on the menu click, dropdown list shows as presented in the *Figure 3*.

Figure 3 Possible validation selections

Input is provided by selecting one of the possible values from the validation dropdown list. Possible values with the associated weights are:

- Very Strong YES   10

- Strong YES   9

- YES   7

- Weak YES   5

- Neutral   3

- NO   2

- Strong NO   0

After each change in the validation value the tool will refresh visual representation of the data (Figure 4), recalculate the scores for that category and update calculations in Summary Reports.
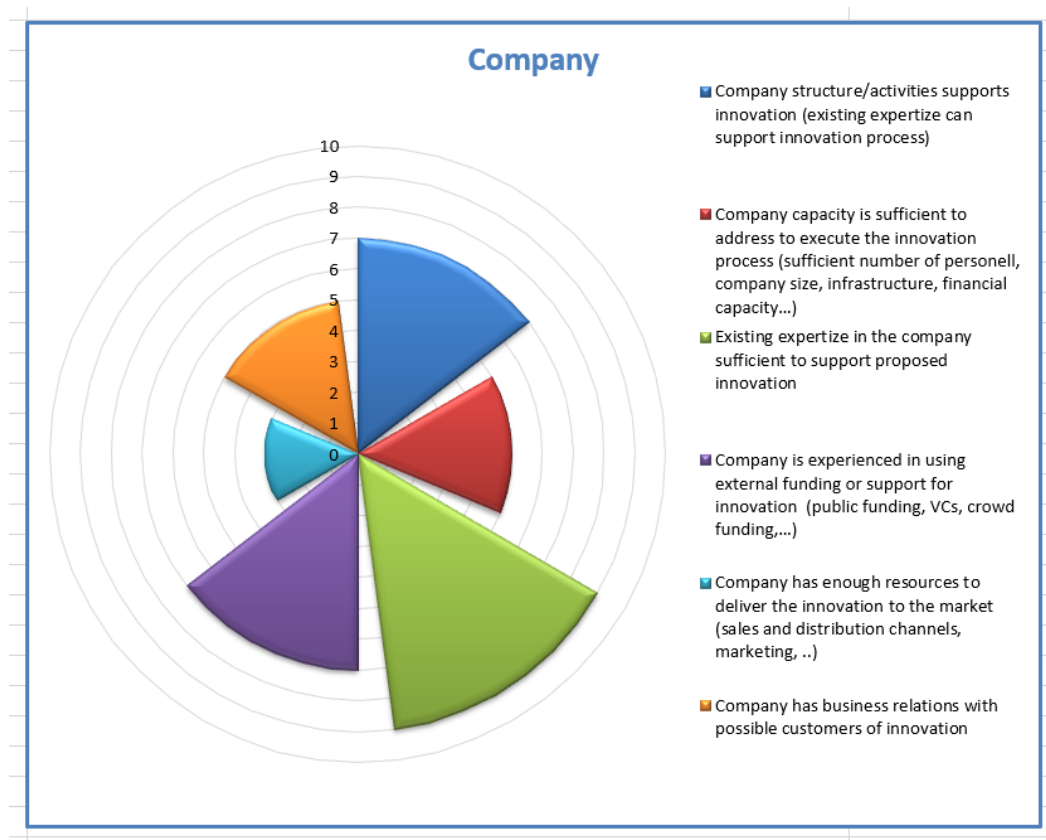
Figure 4 Data visualization

Based on input data several numerical evaluation values are generated:

- Total   Sum of all input weights for the category
- Average   Average of weights for the category

In addition, two Balance scores are also given to represent imbalance of the considered factors for each of the categories. Smaller balance value represents better balance of all individual inputs for that category.

- Balance 1   Presents the imbalance of inputs within given category (calculated as MSE vs. Company Average)
- Balance 2   Presents the imbalance of inputs compared to average of all categories (calculated as MSE vs. total score)

Scores are presented in the *Figure 5*

TOTAL	36
Average	**6.00**
Balance1 (MSE vs. Company Avg.)	3.67
Balance2 (MSE vs. Total SCORE)	9.43

Figure 5 Total, average and balance scores

2.1 Categories

For the innovation project, five main categories can be validated using this tool. Each of the categories is presented in the following figures:

COMPANY (SME)	
Statement	**Validation**
Company structure/activities supports innovation (existing expertize can support innovation process)	Neutral
Company capacity is sufficient to address to execute the innovation process (sufficient number of personell, company size, infrastructure, financial capacity…)	Neutral
Existing expertize in the company sufficient to support proposed innovation	Neutral
Company is experienced in using external funding or support for innovation (public funding, VCs, crowd funding,…)	Neutral
Company has enough resources to deliver the innovation to the market (sales and distribution channels, marketing, ..)	Neutral
Company has business relations with possible customers of innovation	Neutral

Figure 6 Company

INNOVATION	

Statement	Validation
Innovation targets the wanted product/service (innovation is significant enough and will enable some/all of the required features of the wanted product/service)	Neutral
There is a need in target market for such innovation	Neutral
Innovation is in line with obligatory regulations (safety requirements, data protection, legal ,....)	Neutral
Innovation implementation process is in line with product/service planned time to market (R&D, testing, deployment...)	Neutral
TRL (technology readiness level) of the innovation is adeqate for exploitation	Neutral
Innovation allows sustainable evolution (innovation will enable future invetments in continuous innovation process)	Neutral
Innovation is unique on the market	Neutral

Figure 7 Innovation

SOCIAL SUSTAINABILITY	

Statement	Validation
Innovation facilitates and/or promotes healthy lives and well-being	Neutral
Innovation facilitates and/or promotes Inclusive and equitable quality education and lifelong learning	Neutral
Innovation facilitates and/or promotes gender equality	Neutral
Innovation facilitates and/or promotes clean environment and waste management	Neutral
Employment of human resources engaged in innovation mostly from the local community	Neutral
Use of resources (materials, services, ..) needed in innovation mostly from the local sources	Neutral

Figure 8 Social Sustainability

ENVIRONMENTAL SUSTAINABILITY	
Statement	**Validation**
Innovation facilitates and/or promotes clean environment and waste management	Neutral
Innovation facilitates and/or promotes affordable and clean energy	Neutral
Innovation facilitates and/or promotes sustainable cities and communities	Neutral
Innovation facilitates and/or promotes climate change awareness	Neutral
Company participates in sustainability initiatives	Neutral

Figure 9 Environmental Sustainability

FINANCE	
Statement	**Validation**
Planned innovation exploitation business model is well suited for target market (licensing, sales, subcontracting, consulting,,....)	Neutral
Cost of the innovation implementation can be financed from available sources	Neutral
Innovation added-value exceeds all costs related to implementation of the innovation (innovation R&D costs, transition costs, ...)	Neutral
Innovation can be monetized in several products/services	Neutral
Creative factor of the innovation is fairly compensated (creativity is not only encouraged but also financially rewarded)	Neutral
Innovation value directly contributes to sustainability of innovation process financing (increased profit is partially reinvested in innvation processes)	Neutral

Figure 10 Finance

3 EVALUATION SUMMARY REPORT

Evaluation Summary presents all data inputs in a radial-pie manner for better perception of the key elements of the innovation project. Together with the visual data, textual presentation of the statements describing key points of each category are presented as shown in *Figure 11*.
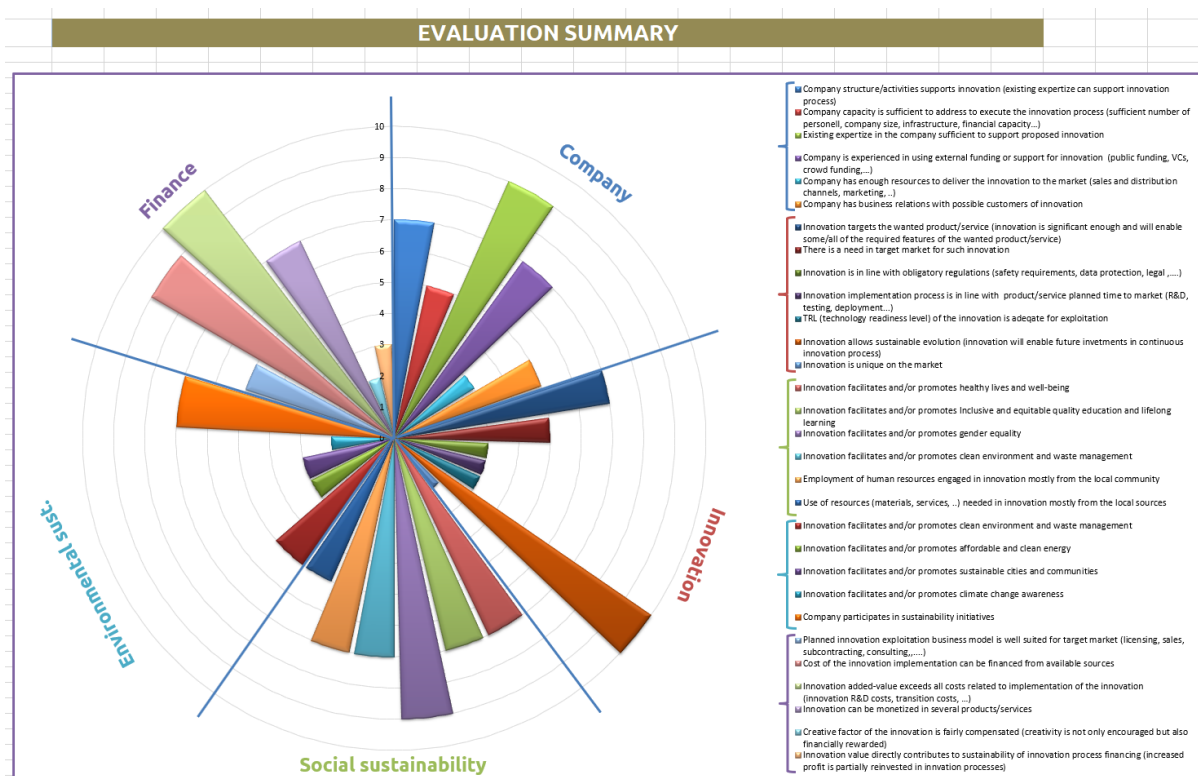

Figure 11 Evaluation Summary

Following the visualisation, each category is presented with corresponding Averages and Balances (as described earlier), the total average of all inputs and with the TOTAL SCORE that is calculated as average of 5 category averages.

	Avg	Bal1	Bal2
Company	6.00	3.67	3.88
Innovation	4.71	7.06	7.75
Social sustainability	7.00	1.33	3.46
Environmental sustainability	4.00	3.20	5.58
Finance	6.00	8.67	8.88
Total avg. (average of all inputs)	5.57		
TOTAL SCORE (average of 5 group averages)	**5.54**		

Figure 12 Evaluation Summary Scores

TOTAL SCORE represents level of sustainability as follows:

a. Total score between 8 and 10 = **High sustainability**
b. Total score between 6 and 8 = **Medium sustainability**
c. Total score between 4 and 6 = **Low sustainability**
d. Total score between 0 and 4 = **Unsustainable**

4 EXECUTIVE SUMMARY REPORT

Executive Summary presents, in brief, key scores of the innovation project which were calculated based on the input data as presented in the *Figure 13*.
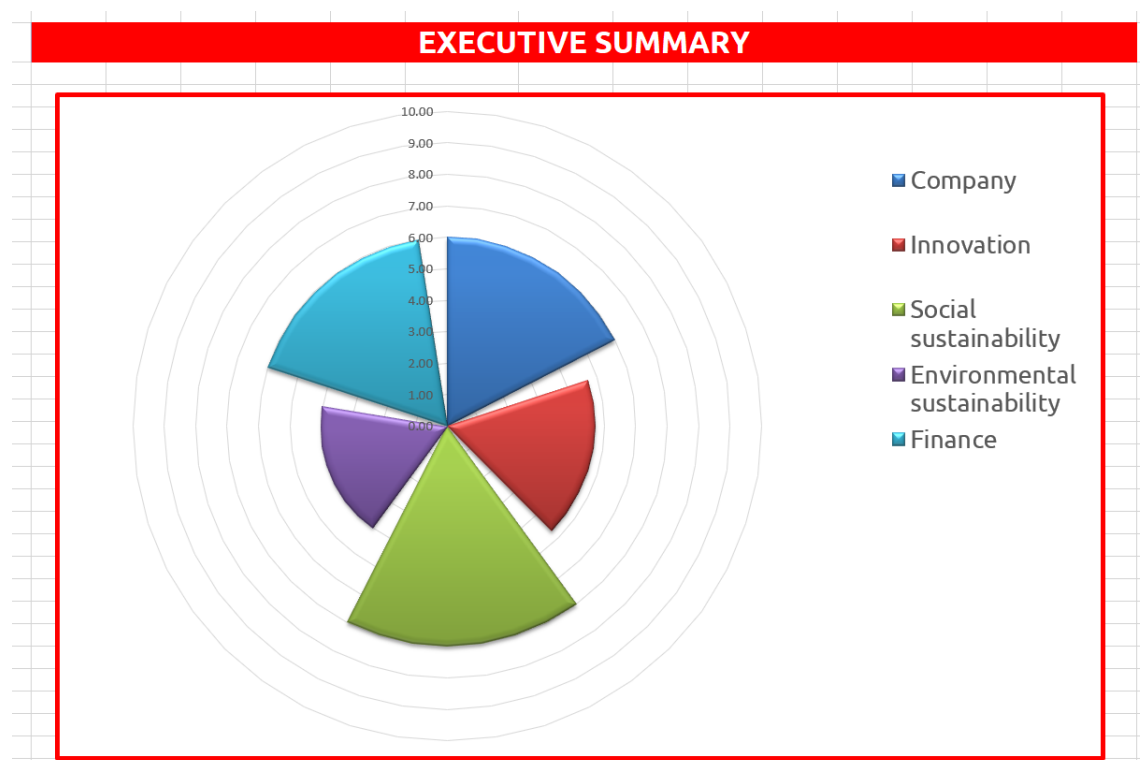

Figure 13 Executive Summary

Following the visualisation, table is presented with main scores and total score of the innovation project as shown in *Figure 14*.

	Avg	Bal1	Bal2
Company	6.00	3.67	3.88
Innovation	4.71	7.06	7.75
Social sustainability	7.00	1.33	3.46
Environmental sustainability	4.00	3.20	5.58
Finance	6.00	8.67	8.88
TOTAL SCORE	**5.54**		

Figure 14 Executive Summary Table

TOTAL SCORE represents level of sustainability as follows:
a. Total score between 8 and 10   =   **High sustainability**
b. Total score between 6 and 8   =   **Medium sustainability**
c. Total score between 4 and 6   =   **Low sustainability**
d. Total score between 0 and 4   =   **Unsustainable**