INFO- 2125 UDK : 005.8:367..633:111.4
Primljeno / Received: 2014-06-11 Pregledni rad / Authors Review

IMPLEMENTING AN INTEGRATED MODEL OF PROJECT ASSESSMENT IN COMMUNICATION PROCESS FOR SELECTION OF QUALITY PROJECT PROPOSALS

PROVEDBA INTEGRIRANOG MODELA PROJEKTNOG VREDNOVANJA U KOMUNIKACIJSKOM PROCESU ODABIRA KVALITETNIH PROJEKTNIH PRIJEDLOGA

Matej Požarnik[1], Urška Sešek[2], Lea Robič Mohar[1]

ProFUTURUS d.o.o., Maribor, Slovenia[1], Faculty of Arts, University of Ljubljana, Ljubljana, Slovenia[2]
ProFUTURUS d.o.o., Maribor, Slovenija[1], Filozofski fakultet, Sveučilište u Ljubljani, Ljubljana, Slovenija[2]

Abstract

In preparing proposals in response to public calls for drawing on EU structural funds, the key question is how to assess the proposals so that the right projects will be selected. In this paper we analyse the classical project proposal assessment model and develop the integrated model. We study the issue how to select the projects which will increase economic activity and competitiveness, consolidate human potential and bring about new knowledge and technological innovation. Because supporting unsuccessful projects and rejecting promising ideas is detrimental to economies at national level, it is necessary to develop an assessment model which will reliably distinguish between strong and weak projects while leaving no room for bureaucratic error. The purpose of the integrated model of project proposal assessment presented in this paper is to support both investors and assessors. Its key feature is a comprehensive approach in which evaluation does not begin only once the business idea is fully developed, but builds up value gradually, from inception to sustainable impacts. Each of the phases consolidates the knowledge and experience of the investor, call issuer and assessor.

Sažetak

Kod priprema javnih natječaja za pridobivanje sredstava iz europskih strukturnih fondova uvijek se nanovo postavlja sljedeće pitanje - Na koji način izvesti postupak vrednovanja kako bi se poduprli oni pravi projekti? U ovom radu analiziramo klasični model vrednovotanja projekata I razvijamo integrirani model. Postražujemo problematiku kako odabrati projekte koji bi podigli stupanj gospodarske aktivnosti, poboljšali gospodarsku konkurentnost, ojačali ljudske potencijale te predstavili nova istraživačka, tehnološka i inovacijska znanja. Podupiranje neuspješnih projekata i odbacivanje perspektivnih ideja šteti čitavoj državi. Stoga je nužan razvoj modela vrednovanja koji bi odvajao loše od dobrih projekata te koji bi sprječavao pojave birokratskih grešaka. Svrha razvijenog integriranog modela vrednovanja projekata je da investitorima i ocjenjivačima olakša posao. Pruža cjeloviti pristup. Proces ne započinje tek tada, kada je poduzetnička ideja već u potpunosti razvijena. Radi se o procesu postupnog dodavanja vrijednosti, od same osnove ideje pa sve do trajnih učinaka. Kroz svaku se pojedinačnu fazu konsolidiraju znanja i iskustva investitora, organizatora i procjenitelja.

INTRODUCTION

One of the fundamental goals of the European Union (EU) is to achieve steady development in all areas. The finances from the Structural Funds and the Cohesion Fund are an important source of income for the less developed member states and regions. The Structural Funds follow certain priorities in directing funding into the different regions, and these priorities, set by the EU to guide structural policies, are the first criterion in deciding which projects to support /**1**/. The purpose of the European cohesion policy funds is the financing of development-oriented projects which contribute to greater competitiveness and productivity, reduce unemployment and strengthen the innovation potential of the economy. The structural funds in the form of indirect and direct stimulation of micro, small and medium enterprises (SME) serve a restructuring of the industries through technological and non-technological innovation, better exploitation of the natural resource potential of the member states and improved access to human capital /**2**/. A climate of enterpreneurship increases the state's income, creates quality new jobs and strengthens general awareness of environmental and social responsibility. In order to support these goals, we have taken up the challenge of several years of research work to create a model which will ensure correct allocation of financial stimulation.

METHODS

There are two categories of evaluation and selection methods proposed in the literature:

- **compensatory methods,** which reduce a multi-dimensional evaluation into a single-dimensional one through an aggregating value function, thereby establishing a trade-off between criteria and
- **non-compensatory methods**, where trade-offs between criteria are restricted; they require at least a ranking of criteria, if not the explicit values of the weights to be assigned to the criteria. /**3**/

According to Saaty, „there are two fundamentally different kinds of topologies: **metric topology** and **order topology**. The first is concerned with how much of a certain attribute an element has as measured on a scale with an arbitrary unit and an origin that is applied uniformly to measure all objects with respect to the given property. The second kind of topology is concerned with measurement of the dominance of one element over others with respect to a common attribute. Order properties belong to the mental world with regard to the importance of its happenings according to human values, preferences and estimation of likelihoods and thus always need judgment before the measurements are made, and not after, as with metric properties." /**4**/ In assessing project proposals, economic, demographic and techonological criteria do not suffice – assessors need to take into consideration a project's endogenuous potential and spill over effects. The assessment methodology should draw upon knowledge in many fields including economics, computer technology, mathematics, behavioral decision theory and information systems. The literature clasiffiies 28 Multi-Criteria Decision Analysis (MCDA). The most appropriate models for selecting the best projects are:

- Analytic Hierarchy Process – AHP; structured technique for organizing and analyzing complex decisions, based on mathematics and psychology,
- Elimination and Choice Expressing Reality – ELECTRE; choosing, ranking and sorting,
- Aggregated indices randomization method – AIRM; targeting complex objects subjected to multi-criteria estimation under uncertainty,
- Preference Ranking Organization Method for Enrichment of Evaluations – PROMETHEE; helps decision makers to find the alternative that best suits their goal and their understanding of the problem.

A key feature of MCDA is its emphasis on the judgement of the decision making team, in establishing objectives and criteria, estimating relative importance weights and, to some extent, in judging the contribution of each option to each performance criterion. /**5**/
Unfortunately, in practice the criteria for quantitative assessment are often weighted on an

experiential basis, without taking into consideration the effects of a multi-criterion analysis. The weighting stems from the goals of the state and its cohesion policy and results in the selection of economically and technologically promising projects.

ASSUMPTIONS

Evaluation, measurement and description are fundamental to management and progress. »If you can't measure something, you can't understand it. If you can't understand it, you can't control it. If you can't control it, you can't improve it.« /**6**/.

The assumptions underlying the research work presented in this paper are:

- There are individuals with excellent business ideas in all areas (manufacturing, environment remediation, energy management, construction, agriculture, information and communication, marketing etc.).
- There are experts with enough expertise to develop ideas into marketable products. These experts are capable of working successfully even in unstimulating environments with a negative climate preventing development.
- To bring projects to life, financing is required. Businesses can provide a part of the necessary funding themselves, but an additional, alternative source of funding needs to be sought. One of the options is grants from the EU structural funds.
- The classical model of assessing proposals, used in most of the decentralized actions today, is inadequate. Its ineffectiveness stems from a poor connectedness of investors, call issuers and assessors and the one-way communication between them. A bureaucratic approach to project proposal assessment leaves room for major errors. Poor assessor competences result in selection of projects 20 % of which are poor quality and never get completed. In this way, investments are supported which are not realistic and only exist on paper.

ANALYSIS OF THE PROJECT PROPOSAL ASSESSMENT CRITERIA

Quantitative and qualitative criteria

The core of project proposal assessment is judging the quality of a proposal using predefined quantitative and qualitative criteria. Quantitative criteria are based on clearly specified absolute, relative or descriptive values. Qualitative criteria are used by assessors to make subjective assessments based on verbal descriptors.

The criteria for assessing projects proposed by enterprises are divided into the following groups:

- economic vulnerability (the geographical aspect),
- the economic aspect,
- the technological aspect,
- the social aspect,
- the environmental aspect.

Economic vulnerability (the geographical aspect)

One set of criteria concerning economic vulnerability focuses on the location of the investor's business and the location of the investment. The goal is to stimulate investments which will be implemented in economically vulnerable regions, for example in municipalities with a high unemployment rate. This provides solutions for populations with lower purchasing power, more limited employment opportunities and fewer personal development options compared to the populations of more developed regions. However, experience shows that location by itself is not related to the effectiveness of the project and, of course, does not guarantee its successful completion. Because of this, economic vulnerability should not be a key criterion; forced investments in areas with poor infrastructure will often not strengthen a business but weaken it. Technologically intensive projects have to be located in areas with excellent infrastructure which are conducive to a healthy climate of enterpreneurship and well connected to transport routes. Favourable locations can be found both in cities and in the countryside, near traffic

junctions, airports, railways, highways and ports.

The economic aspect

This aspect of project proposal assessment relates to a number of financial criteria used by the assessment committee to study the capacities of the investor and the planned project results. Some of the criteria require absolute values and some relative values, measured per capita in terms of the number of employees. Here, higher scores are achieved by the investors with less debt, higher income, added value, more exports and employees with higher qualifications. Another criterion is whether the company has received subsidies in the past and the amount of subsidies per employee.

The technological aspect

The criteria in this group include the innovative value of the project, the level of the technological solutions which will be developed, the investor's certificates and past research & development activities. The technological aspect is particularly important in cases of investment into modern equipment and infrastructure for the development of SME.

The social aspect

This set of criteria includes the age, gender and education of the responsible person and the number of female employees. These criteria reflect the goal of ensuring equality, non-discrimination and inclusion of young people and women.

The environmental aspect

Contributions to environment preservation such as energy efficiency, use of renewable resources, reduction of use or reduction of emissions of dangerous substances and recycling of waste products are the principles of transitioning to a low carbon economy.
The five key targets of the EU in the area of environment preservation include a reduction in greenhouse gas emissions by at least 20 % compared to the 1990 levels (conditions permitting, by 30 %), an increase of the share of renewable energy resources in our final energy consumption by 20 %, and a 20 % increase in energy efficiency. In order to limit emissions, it is important to increase the efficiency of resource use, which also results in savings and stimulates economic growth. These targets relate to all economic sectors, not only the emission-intensive ones.

Table 1: Analysis of clusters and sub-clusters of criteria set in different calls

Call	Economic vulnerability (%)	The economic aspect (%)	The technological aspect (%)	The social aspect (%)	The environmental aspect (%)
Action 312, *MKO*[6]	8	46	5	28	13
Action 311, *MKO*	15	37	5	20	23
Product P1 TIP, SPS[7]		65	30		5
Product P4, SPS	10	25	55		10
Technological investment, *MGRT*[8]	10	65	20		5
SMER[9]*, MGRT*		40	55		5

[6] MKO – Ministrstvo za kmetijstvo (Ministry of Agriculture)
[7] SPS - Slovenski podjetniški sklad (Slovene Enterprise Fund)
[8] MGRT – Ministrstvo za gospodarski razvoj in tehnologijo (Ministry of Economic Development and Technology)
[9] SMER – a public call for stimulating technological development projects in SMEs in 2013 and 2014

QUANTITATIVE ASSESSMENT

The quantitative aspect of assessment involves establishing the degree to which a project fulfils predefined quantitative criteria by using absolute or relative numerical data (e. g. the amount of added value per employee) and nominal data (e. g. gender). It is, however, not enough to merely look at the accounting data found in annual reports. According to Kaplan and Norton, "the financial accounting model is too narrow because it does not contain an evaluation of the non-material assets and intellectual capital of a company" /**7**/. Pučko argues that "revenue on its own cannot be a measure of how successful a business is; we need to take into consideration the company's ROI" /**8**/.

An additional source of information that should be checked is the financial projections, prepared on the basis of the company's current situation, expectations, market situation, signed business contracts and available macro-level information (expected economic growth, inflation, government reform etc). Providing this information, financial projections allow us to assess how successful the business under consideration will be in the future.

By clearly defining the quantitative criteria, the call issuer announces priorities to potential investors. A potential investor can use this for self-evaluation before beginning to prepare a proposal.

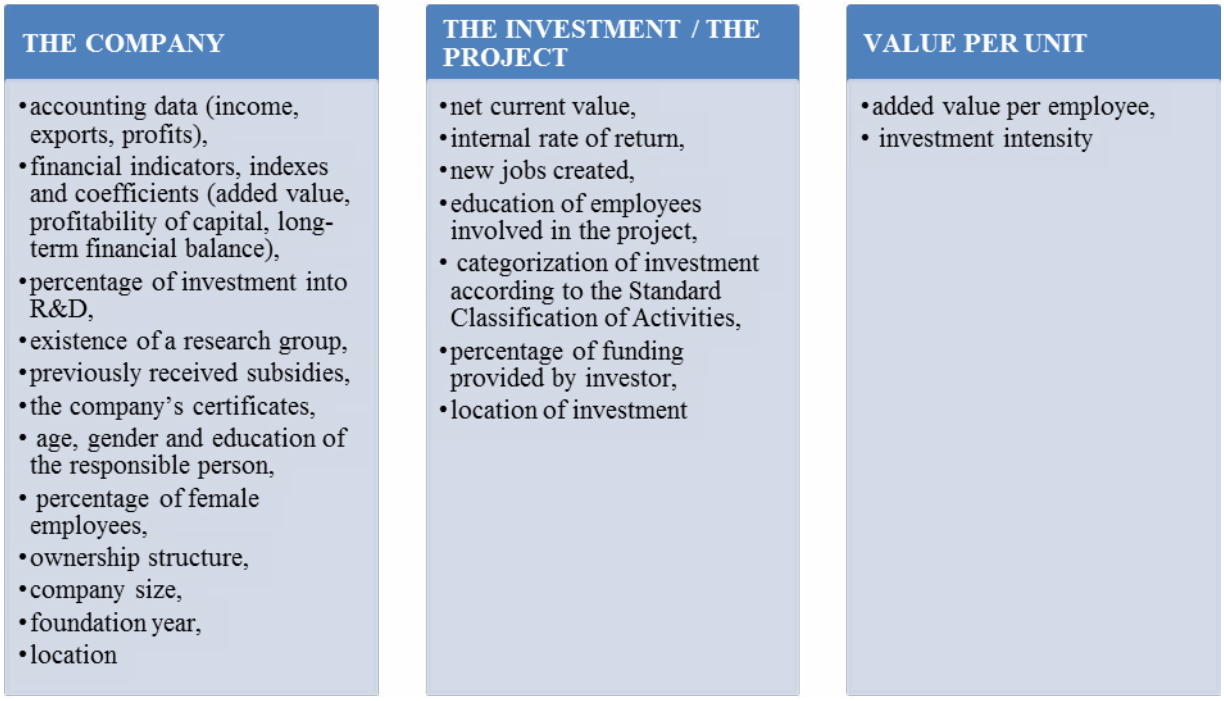

Figure 1: Examples of the most common quantitative criteria

In practice, project assessors may have insufficient experience working in authentic business environments and may not study the project proposal thoroughly enough. Due to a lack of understanding of financial explanations in the documentation, a promising project can be rejected and vice versa.

The most frequent cases of misjudgement in quantitative project proposal assessment include:

- **Short-term fluctuation**: Because of losses of key markets, entry of new competitors or currency fluctuations, financial indicators for the running year can be poor, but the company is still in good standing due to capital reserve. The risk of making a wrong decision can be avoided by looking at the company's balance sheets over several consecutive years.

- **A company under development:** The development phase of a company can be longer than average. The breakthrough point and transition into the phase of maturity will in this case occur relatively late in its life cycle. The fact that the company may be making losses for a year or two is not a result of market failure but of intensive investment into R&D before launching a new product or service. In order to assess such a company's standing objectively, we need additional information about the business ideas of its management structures.
- **Company start up:** In its first years, a company is often developing an innovative business idea and looking for sources of funding and appropriate personnel, which can lead to poor financial indicators. Again, to evaluate the potential of the proposed project, we need a broader knowledge of the strategic plans of the company's management structures.

QUALITATIVE ASSESSMENT

In qualitative assessment, we look at the content of the application, the company's business plan, the investment program, credit rating certificates and / or other documentation. The criteria include the content and economic justification of the project, coherence of work plans, feasibility of the investment, analysis of the investor's financial situation and sustainability. Qualitative assessment can have serious drawbacks as assessors cannot avoid subjectivity. It is never quite clear whether an assessor's interpretation is in accordance with the original text and which subjective elements have been added. Bias mostly stems from a lack of experience as members of assessment committees are often individuals with no practical experience in project management or even in the broader field.

The validity of qualitative assessment mostly depends on the following factors:

- the clarity of the expectations and criteria as formulated in the call,
- the breadth of an individual assessor's views,
- the scope of the assessors' knowledge, competences and experience,
- the interests of the assessment committee.

An assessor with practical experience in project management can assess a proposal much more objectively than someone who has never been in the role of an investor themselves. The difference between a realistic and unrealistic project can be minimal and will only be detected by a careful and experienced assessor.

The most frequent cases of misjudgement in qualitative project proposal assessment include:

- **Poor presentation of a business idea:** When a business plan is prepared by the investor themselves, they often use a simple style of writing. They have expertise in technological and manufacturing processes and equipment but not in preparing investment documentation. They tend to produce poor descriptions of processes which they implement on a daily basis in their R&D or manufacture. At the same time their descriptions are often too technical and thus incomprehensible to assessors who have no technology expertise or practical business experience.
- **Poor knowledge of the basics of cohesion policy:** Most businesses have insufficient knowledge of the principles and goals of cohesion policy. Superficial explanations of how their project fits in with these can result in the rejection of an excellent project.
- **Poor financial situation of the investor:** An investor's poor credit rating in a recession period can be a result of broader trends in society as liquidity issues tend to affect whole supply chains (suppliers, manufacturers, distributors, buyers). An assessor with insufficient knowledge of macroeconomic trends, the market in general and the specific sector will be inclined to reject excellent, innovative projects because of an overly critical assessment of the investor's financial situation.

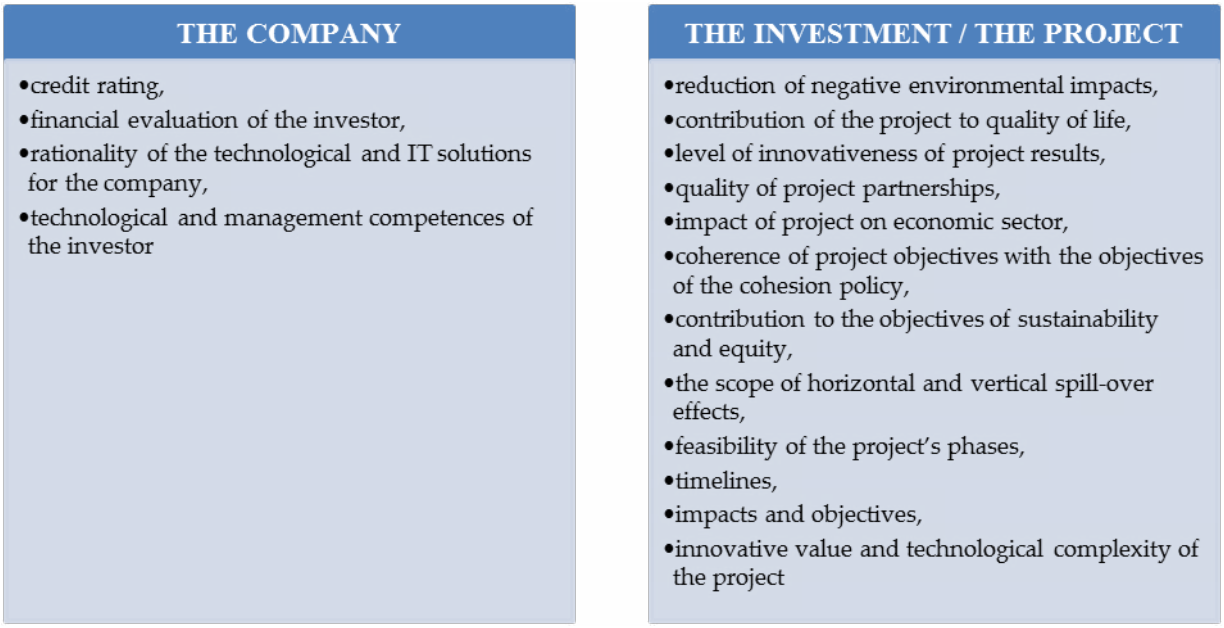

Figure 2: Examples of the most common qualitative criteria

5. THE CLASSICAL PROJECT PROPOSAL ASSESSMENT MODEL

In the classical model of collecting projects prepared in response to a public call, investors send in the required documentation, which is then evaluated by an assessment committee following a specified procedure within a set time frame. The assessment committee consists of two or three selected assessors, usually independent external experts. Their identity is not disclosed to the investors, neither in terms of their names nor in terms of their competences and interests. The quality of the assessment committee is controlled by the call issuer or their agent. The assessors submit assessment sheets, providing brief justifications for all their decisions and comments on individual elements of the assessment. Usually, the final score for a project is the average of the scores of two assessors. A third and potential additional assessments are sought when the difference in the scores of the two primary assessors exceeds a certain limit and when one score is below and the other above the threshold.

An assessment committee faces the highly responsible task of recognizing in the multitude of applications the best projects and those investors who will contribute to the achievement of the economic, social and environmental strategic objectives of the EU member states. Supporting economically unviable projects or projects which will not be completed while rejecting projects with a high potential is irresponsible on the part of individual assessors and assessment committees and impacts entire economies. In extreme cases, when the selected projects are not completed, the level of consumption of EU structural funds is too low and the drawing on these funds at national level ineffective. This leads to lower living standards, difficulties in implementing national reforms and drops in credit ratings.

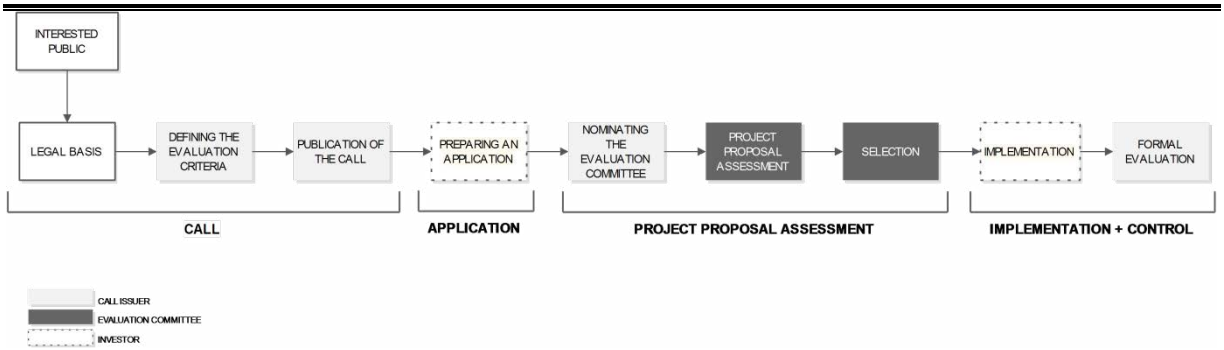

Figure 3: The classical model of project proposal assessment

The classical model of project proposal assessment does not enable two-way communication which would entail informing the investor through a feedback loop. Each person carries out their task regardless of the work of the others: the call issuer determines the conditions and criteria of the call, the investor prepares the application, the assessor evaluates the project proposal. There is no cooperation. The professionalism of each of the links in the chain determines how many good projects are funded. We estimate that because of this, at least 20% of the funded projects are actually mischosen.

6. THE PROPOSED METHOD: THE INTEGRATED MODEL OF PROJECT PROPOSAL ASSESSMENT

The aim of this work was to develop the model of integrated proposal assessment which is a dynamic approach that brings together the efforts of the call issuer, investor and assessor. It involves preliminary activities, preparation and assessment, with full consideration of the investor's development possibilities, coherence of the project with requirements of the call and the principle of sustainability. The key principles of the model are preliminary selection of promising project ideas, use of a combination of quantitative and qualitative criteria and keeping the investor informed throughout. The duration of each phase of the process is carefully planned. The model ensures effective allocation of European cohesion policy funds, investor satisfaction and effective addressing of societal challenges. As opposed to the classical model, the integrated model focuses on cooperation.

From a decision analytical perspective, the two most troublesome challenges in dealing with strategic decisions are the inescapable presence of high levels of **uncertainty** and **decision complexity**. /**9**/ The integrated model of project proposal assessment takes into account both of them.

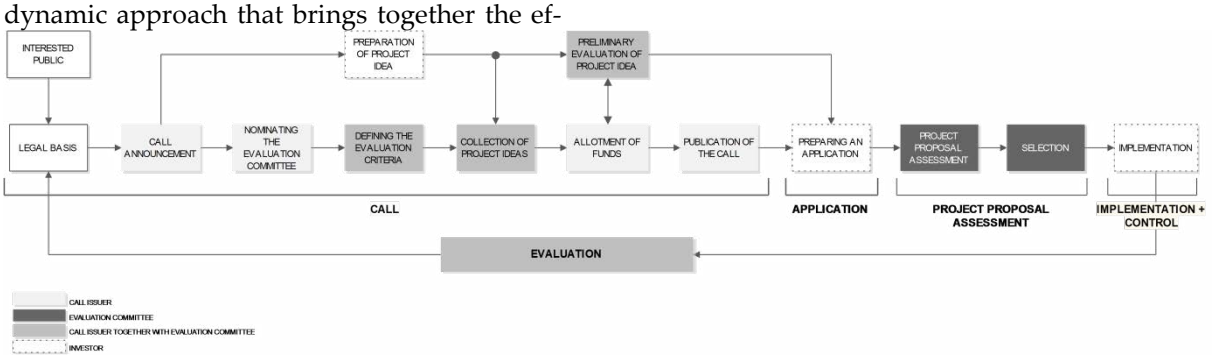

Figure 4: The integrated model of project proposal assessment

The phases of the integrated model of project proposal assessment:

- announcement of expected public calls,
- defining the assessment criteria,
- collection of project ideas,
- publication of the call,
- collection and assessment of applications,

- assessment with a feedback loop (within a financial period).

6. 1 Announcement of expected public calls

To prevent projects being proposed merely because funds become available rather than out of a company's genuine development needs, information about expected calls should be published well in advance. For all the funds available within a certain period, e. g. two years, the basic information should be published such as the subject and objectives of the expected calls, expected call publication date and application deadlines, justified costs. Enterpreneurs can then decide in advance which calls are in line with their development plans and can start preparing a project proposal early enough.

6. 2 Defining the assessment criteria

Separate funding packages are allotted to micro and small companies, to medium companies, and to large companies. The financial quantitative criteria (e. g. added value, profitability of capital, EBITDA per employee) are set, taking into consideration the fields of the investors' business activity and the sector characteristics. In this way we avoid comparing incomparable investors, for example a micro manufacturing company with a medium size construction company. The added value of the latter can normally be up to three times lower. The qualitative criteria are used to evaluate project feasibility from the perspective of financing, personnel resources that can be allocated to the project, technological advances and innovative value. An investor can also provide an audio-visual presentation as part of the application.

6.3 Collection of project ideas

The purpose of colleting project ideas is to direct investors towards the most appropriate calls and rationalize project selection. The call issuer sets a deadline for the collection of project ideas. Potential investors submit preliminary proposals, which serve as an indication of interest in the call. The funds are then allotted with a consideration of the interest, which enables a control of the consumption of funding at national level.

Before submitting a draft proposal, an investor should:

- define the technological equipment needed for the project, taking into consideration the latest technology trends and compatibility with their existing equipment: acquire the necessary technical information as well as information about the suppliers, prices and delivery times.
- analyze the market potential of the products manufactured using the new equipment: demand, competitors, the new products' innovation value, selling prices, logistics.
- analyze the technology: assess the capacities of the new equipment, the duration of the manufacturing process, the technical characteristics of the new products.
- prepare the financial projection: gains and costs, time frame of the investment, production and sales.

Before the review of project ideas, the call issuer nominates an assessment committee. The members of the committee participate actively in preliminary activities such as the defining of assessment criteria and ensure that they are well prepared for their main task. The assessment committee carries out a preliminary assessment of project ideas which includes personal presentations by representatives of the investors. The investors get specific feedback to help them improve their project ideas and prepare applications. Ineligible project ideas and investors are directed to other calls.

6. 4. Publication of the call, collection and assessment of applications

A public call is published in the Official Gazette of the Republic of Slovenia and on the website of the call issuer. The investors with confirmed project ideas are also informed about the call via e-mail. The call issuer organizes a public presentation of the call and prepares guidelines for the preparation of a quality application. The applications are collected for at least 45 days. A review of the submis-

sions begins immediately after the application deadline. Submission before the deadline does not result in extra credit. Grant decisions are issued within 30 days of the opening of the applications. If the call issuer takes longer to inform the investors, this increases the risk of delays in the realization of the selected projects and their decreased efficiency. The assessment committee carries out both the formal / administrative review and the assessment of the content of the proposals smoothly and efficiently; this is made easier since they are familiar with the projects in advance. Immediately after the issuing of the grant decisions, the call issuer prepares a presentation of the results, either in the form of an event or a published written report. It is important that the presentation makes publicly available the information about the selected projects and the amounts of funds allotted to them. Each investor can view the assessment documentation concerning their project. After the selected projects are launched, the call issuer monitors their progress and publishes reports. The first evaluation ensues after the projects are completed, i.e. immediately after the review of the payment requests and the transfer of funds (approximately 1'5 to 2 years after the issuing of grant decisions). The second evaluation takes place a few years later with the purpose of comparing the planned and realized impacts of the selected projects and their sustainability. Publication of the evaluations increases investors' confidence in the funding system and contributes to a rational consumption of funds.

In order to avoid incorrect decisions being made by the assessment committee, the following conditions have to be fulfilled:

- clearly defined call conditions (the subject and objectives of the call),
- well-chosen assessment methods (a combination of quantitative and qualitative methods),
- clear eligibility criteria (allowing an elimination of the projects that are not coherent with the objectives of the call; the assessment criteria then eliminate the eligible, but less promising projects),
- a highly competent assessment committee with members covering different areas according to their individual expertise (finances, technology, the humanities, research, health etc.) and experience (business, public administration, education),
- transparent management of the proposal assessment process.

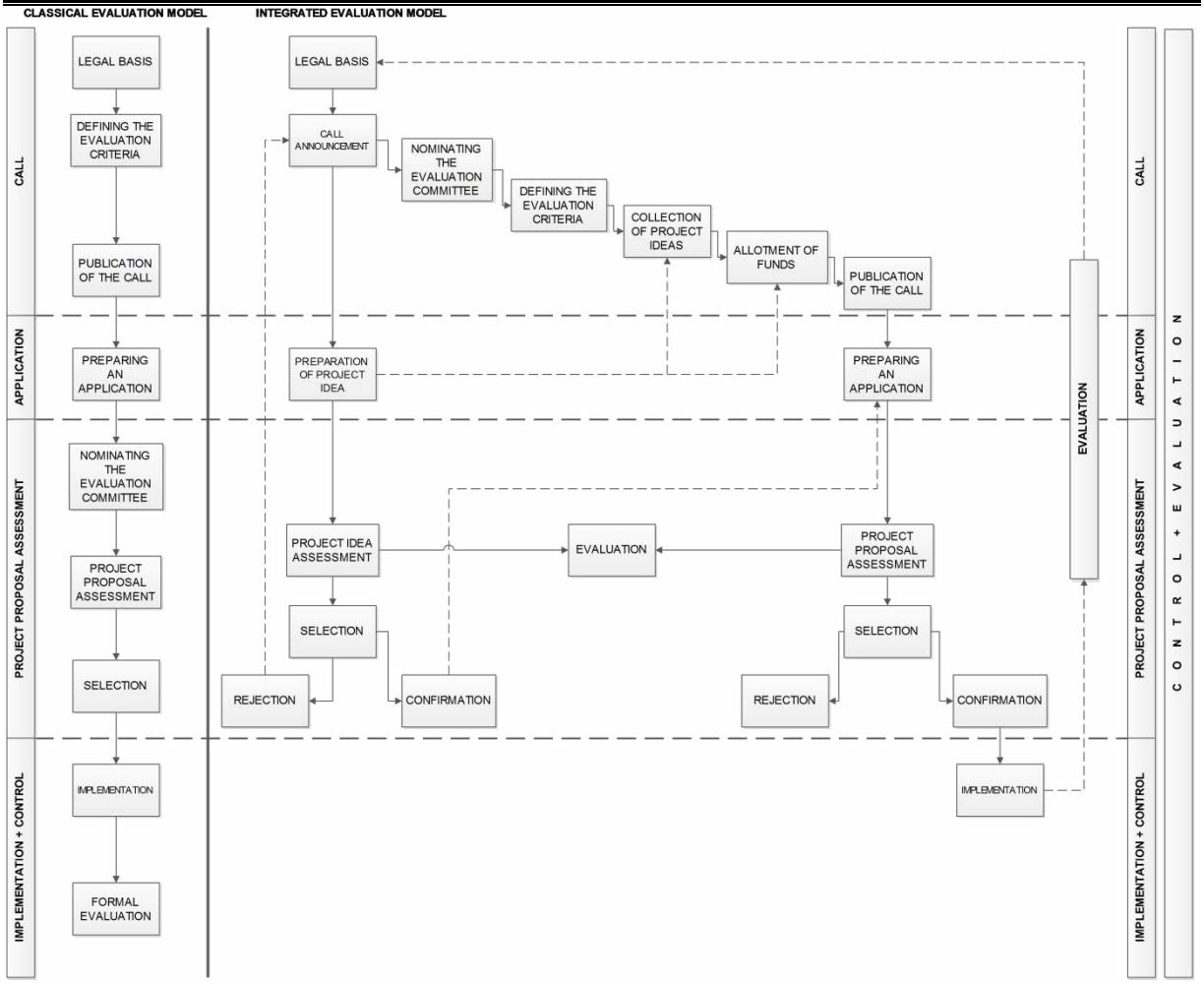

Figure 5: A comparison of the classical and integrated model of project proposal assessment

RESULTS

In contrast to the now common classical model of project proposal assessment, the proposed integrated model is conceived as a comprehensive system connecting all the stakeholders through an in-built feedback loop reaching back to the point of departure – the investor. Two way communication and transfer of information provide the environment for the shaping of projects of higher quality. Through the phases of preliminary activities, proposal preparation and assessment, the project matures in accordance with both the goals of the investors and the guidelines of cohesion policy. By engaging experts hired by the call issuer in the early phases of project preparation, better quality projects are prepared whose realization is more efficient. The consolidation of knowledge and exchange of experience benefits all the stakeholders and reduces the risk of rejecting excellent projects.

The advantages of the integrated model of project proposal assessment compared to the classical model:

- **Gradual maturing of a business idea over a period of time:** An investor has at least six months to define the necessary technology, personnel and facilities, calculate the benefit-cost ratio and make a decision about the investment.
- **Feedback to the investor:** Before finalizing the proposal, the investor gets feedback from the call issuer and the assessors about the eligibility of the project. This information can be used for a gradual development and improvement of the project.
- **Targeted allocation of funding:** The call issuer allocates the available funds with a view to the interests of the investors. The

type and scope of the needed project grants is measured before call publication, in the phase of the collection of project ideas.
- **Transparency:** Citizens are informed about the allocation of funding. Potential investors are informed and directed through the publication of evaluation results.

CONCLUSION

Implementation of innovative projects with high marketing potential is an opportunity for companies to break out of stagnation, unfavourable market positions and funding issues. The European Structural Funds provide enough means, but these have to be allocated to financially able investors with promising projects. The developed integrated model of project proposal assessment answers the question of how to recognize promising investors who are financially able to sustain the realization of their project. It enables the selection of projects with sufficient marketing potential to contribute to the creation of a stable, knowledge-based society. The project proposal assessment has to be based on quantitative and qualitative criteria, used with a consideration of the type of call and the interested investors. The publication of evaluation results increases public confidence in alternative sources of funding and contributes to progressive enterpreneurship with added value which will be acknowledged in the global market.

Notes

/1/ Mulec B. *Kohezijska politika Evropske unije in problemi njene implementacije s poudarkom na Republiki Sloveniji in državah jugovzhodne Evrope*. Ljubljana : Koščak, 2008.

/2/ *Operativni program za izvajanje Evropske kohezijske politike v obdobju 2014-2020, osnutek*. Ministrstvo za gospodarski razvoj in tehnologijo, 2014. Available:http://www.mgrt.gov.si/fileadmin/mgrt.gov.si/pageuploads/EKP/Prvi_OSNUTEK_OP_20_01_2014_redakcijski_popravki.pdf [19.11.2014].

/3/ Oral M., Kettani O., Çinar U. *Project evaluation and selection in a network of collaboration: A consensual disaggregation multi-criterion approach*. European Journal of Operational Research. (2001), vol. 130, iss. 2, p. 332-346.

/4/ Saaty T.L. *Relative Measurement and Its Generalization in Decision Making Why Pairwise Comparisons are Central in Mathematics for the Measurement of Intangible Factors - The Analytic Hierarchy/Network Process*. RACSAM Rev. R. Acad. Cien. Serie A. Mat. VOL. 102 (2), 2008, pp. 251–318.

/5/ Multi-criteria analysis: a manual. London : *Department for Communities and Local Government*, 2009.

/6/ Harrington H. J., Tumay K. *Simulation modeling methods*. New York, London : McGraw-Hill, 2000.

/7/ Kaplan R. S, Norton D. P. *Uravnoteženi sistem kazalnikov : preoblikovanje strategije v dejanja*. Ljubljana : Gospodarski vestnik, 2000.

/8/ Pučko D. *Analiza in načrtovanje poslovanja*. 2. izd. Ljubljana : Ekonomska fakulteta, 2005.

/9/ Montibeller G., Franco A. Multi-Criteria Decision Analysis for Strategic Decision Making. In: Zopounidis C, Pardalos P. M. (eds.). Handbook of Multicriteria Analysis. Berlin, Heidelberg : Springer Verlag, 2010, p. 25-48. Available: http://dx.doi.org/10.1007/978-3-540-92828-7_2 [19.11.2014].

Literature

1. Jordan, W. P. *An introduction to usability*. London : Taylor & Francis, 2002.
2. Pearman A. D., Mackie P. J., May A. D., Simon D. The use of multi-criteria techniques to rank highway investment proposals. In: Lockett A.G. and Islei G. (eds.). *Improving Decision Making in Organisations*. Berlin : Springer Verlag, 1989, p. 158-165.
3. Saaty, T. L., Peniwati, Kirti. Group Decision Making. *Drawing out and Reconciling Differences.* Pittsburgh, Pennsylvania : RWS Publications, 2008.
4. Brans J. P., Mareschal B. PROMETHEE Methods. In: Figueira J., Greco S., Ehrgott M.(eds.). *Multiple Criteria Decision Analysis: State of the Art Surveys*. Boston, Dordrecht, London : Springer Verlag, 2005, p. 163-196.
5. Spitzer, D. R. *Transforming Performance Measurement. Rethinking the Way We Measure and Drive Organizational Success*. New York : Amacom, 2007.
6. Kaplan R. S., Norton D. P. *Strategy maps : converting intangible assets into tangible outcomes*. Boston: Harvard Business School Press, 2004.
7. Behzadian M., Kazemzadeh R.B., Albadvi A., Aghdasi M. PROMETHEE: A comprehensive literature review on methodologies and applications. *European Journal of Operational Research*. (2010), vol. 200, iss. 1, p. 198–215.

8. Slovenski inštitut za revizijo. *Slovenski računovodski standard 29*. Ljubljana : Uradni list RS, 2006.
9. Vlada Republike Slovenije. *Uredba o standardni klasifikaciji dejavnosti*. Ljubljana : Uradni list RS, 2008.
10. *Evropa 2020, Strategija za pametno, trajnostno in vključujočo rast.* Evropska komisija : 2010. Available: http://ec.europa.eu/europe2020/index_sl.htm [19. 11. 2014].
11. Javna agencija za raziskovalno dejavnost Republike Slovenije. *Pravilnik o postopkih (so)financiranja, ocenjevanja in spremljanja izvajanja raziskovalne dejavnosti*. Ljubljana : Uradni list RS, 2011.
12. Walliman, N. *Research Methods: The Basics*. London : Routledge, 2011.
13. Ministrstvo za kmetijstvo. *6. javni razpis za ukrep 312 – Podpore ustanavljanju in razvoju mikropodjetij za leto 2012.* Ljubljana : Uradni list RS, 2012.
14. Ministrstvo za gospodarski razvoj in tehnologijo. *Javni razpis za pridobitev sredstev evropskega sklada za regionalni razvoj – ESRR za sofinanciranje tehnoloških investicij, ki so v neposredni navezavi na rezultate razvojno – raziskovalnih aktivnosti »TI 2012«*. Ljubljana : Uradni list RS, 2012.
15. Slovenski podjetniški sklad. *Javni razpis Garancije Sklada za bančne kredite s subvencijo obrestne mere namenjene tehnološko inovativnim projektom (P1 TIP 2013)*. Ljubljana : Uradni list RS, 2013.
16. Ministrstvo za kmetijstvo. *Drugi javni razpis za ukrep 311 – diverzifikacija v nekmetijske dejavnosti za leto 2013*. Ljubljana : Uradni list RS, 2013.
17. Slovenski podjetniški sklad. *Javni razpis za sofinanciranje nove tehnološke opreme v letih 2013 - 2014 (P4)*. Ljubljana : Uradni list RS, 2013.
18. Ministrstvo za gospodarski razvoj in tehnologijo. *Javni razpis za spodbujanje tehnološko razvojnih projektov v letih 2013 in 2014 – SMER+*. Ljubljana : Uradni list RS, 2013.
19. *Strategija razvoja Slovenije 2014-2020, osnutek*. Ministrstvo za gospodarski razvoj in tehnologijo, 2013. Available: http://www.mgrt.gov.si/si/delovna_podrocja/evropska_kohezijska_politika/razvojno_nacrtovanje_in_programiranje_strateskih_in_izvedbenih_dokumentov/strategija_razvoja_slovenije_2014_2020_srs_2014_2020/ [19.11.2014].