**Feasibility study development methodology**

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| *The feasibility study is the assessment and analysis of the project's potential in order to facilitate the decision-making process by objectively and rationally identifying the advantages, disadvantages, opportunities and threats of the project, and identifying the resources needed for its implementation and, in general, the chances of success. In preparing documentation of the feasibility study, the beneficiary should take into account the information contained in this material on the preparation of a feasibility study. The information to be included in the feasibility study is not limited to the issues outlined in this material; the feasibility study should include comprehensive information and analysis of the commercialization potential of the study.* |
| Description of the technology and its application | * *Description of the technology, indicating the main principles and characteristics of its operation. Description of the problem solution of what is offered by the technology, i.e., the benefits of the technology and its purpose.*
* *Justification should be provided that the technology works and it is possible to attain results (information should be given on the tests and calculations performed so far and the data obtained that justify the application and results of the technology).*
* *The sources on which published or patented results the offered technology is based should be indicated.*
* *It is necessary to evaluate the technology at a stage of development and indicate the further and necessary steps to be taken to ensure the operation of the technology and the further commercialisation of the technology. It is necessary to indicate to what extent it is planned to develop the technology within this project, and what could be further development of the technology (future potential of the technology).*
* *The risks and technological challenges related with the development of the technology to the extent that it can be introduced in the market should be identified.*
* *The weaknesses of the technology and problems and limitations with its application should be assessed.*
* *Description of the current analogous solutions should be given and a comparison of the developed technology functionality and other characteristic indicators should be provided, justifying the benefits of the new technology (e.g. efficiency, benefits of use, lower manufacturing or operating costs, compatibility with other technologies, environmental impact, energy consumption, safety etc.).*
* *Justification of the link of the technology with the market demand should be given, namely, what could be technology application and in what services provision/product manufacturing the technology could be used.*
* *Regarding diversity of application of the technology it is necessary to assess whether it is specific in the terms of application and focused on a narrow services or products niche or, on the contrary, widely applicable.*
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| Market | * *Potential consumers of the technology (or the product/service, with which the developed technology is related) should be identified and the respective market demand should be assessed. Description should be given whether market penetration is associated with market pull or technology push strategy.*
* *Determining the size of the potential market there should be taken into account not only specific requirements and regulation in the sector, but also social economic and geographical circumstances (for example, the climate can affect the use of technology in selected regions), thus using for calculations data from practically accessible markets.*
* *An analysis of the target market should be made, indicating, among other things, whether the target market is a new market, a growing market, or a fully developed market with stable players, market availability should be assesses (the lower the market availability, the higher the marketing costs).*
* *It should be evaluated whether it is capable to „consume” the developed technology with the existing market situation and the created infrastructure (is the technology compatible with the existing technologies and processes). Technology or existing infrastructure may need to be additionally adapted in order to introduce the technology in the market.*
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| Economic justification | * *It is necessary to assess how much time and financial resources will be necessary for development of the technology to such an extent that it can be offered on the market.*
* *It should be justified that commercialisation of the technology will be profitable (in the results of technology development and introduction the gained benefit should outcast the investments made).*
* *The feasibility study should include a calculation, predicting not only the costs of introduction of the technology including costs of obtaining the necessary licences and licencing costs, but also the subsequent manufacturing, operation, marketing etc. costs of the particular product. It should be justified that the use of the technology or the manufacturing of the planned product is economically justified.*
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| Other essential information | * *Corroboration of intellectual property rights – can the technology be protected by patents, and what is the probability that a third party will be able to copy the technology, or is there currently any patent registered on the technology. It should be considered whether the introduction of the technology in the market will not infringe already corroborated intellectual property rights.*
* *Information about other research organisations or merchants working on similar technology development. How it can affect this project and what is the risk of someone „stepping in”, thereby reducing the value of the technology and its commercialisation opportunities.*
* *In the result of the feasibility study a conclusion should be drawn whether the technology is subject to commercialisation.*
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