FEASIBILITY STUDIES

A feasibility study is an evaluation framework to support decision making (Räikkönen et al., 2016). It evaluates the viability of a plan or project considering economic, technical and legal factors and the schedule of activities to determine if a project can be successful. It is carried out before the project's launch to identify possible problems that could arise during its execution. Likewise, feasibility studies must consider sufficiency of resources, personnel, and appropriate technology selection (Investopedia, 2021).

Typically, the feasibility of a project depends on its cost and the return on investment; however, benefits of projects can go beyond financial aspects. Although each project has particular characteristics, it is recommended that the objective of the projects consider social and environmental impacts in terms of sustainability, acceptance and impact on society (Porter et al., 2012). In this way, decision-making of the project aims to capture vision and opinions of all interested parties and the historical and spatial context where the project is intended to be implemented (Räikkönen et al., 2016).

Feasibility studies help to discern the pros and cons before making a significant time and capital investment. They can also serve for development of new businesses, improvements in operation, market and competition of the projects, and the attention of risks and barriers.

Modified from Compass Consultores: http://compassconsultores.com/feasibility.html

Some of the best practices for conducting these studies are:

- **Preliminary analysis** – It is carried out considering stakeholders' feedback from stakeholders, as well as other scenarios and ideas that help find a solution to the same problem.
- **Data collection** - data must be robust and reliable.
- **Market study** - identify the de mand for the product or service provided by the project and its business opportunity.
- **Organisational plan** - establish the structure and form of operation of the project, including personnel, capital and duration.
- **Income statement** - prepare a report on costs, income and profits.
- **Identification of obstacles and vulnerabilities**
- **Evaluation criteria for decision making**

It is recommended to have a contingency plan that presents alternatives in case of changes in the project or lack of viability.

The elements of feasibility studies are:

- Executive summary
- Technological considerations
- Existing market
- Marketing strategy
- Staffing required (including an organisation chart)
- Calendar and schedule
- Project finances
- Findings and recommendations

It is essential to consider all externalities, positive and negative, that are not reflected in the costs of products or services that a project seeks to provide and whose effects can be significant in social, environmental and economic contexts.

EXAMPLE

In 2016, as part of the studies carried out by the World Bank to support the implementation of CCUS in Mexico, a pre-feasibility study was carried out to evaluate and recommend suitable technologies for the development of a pilot project to capture CO_2 at the combined cycle plant in Poza Rica

References

Investopedia, 2021, https://www.investopedia.com/terms/f/feasibility-study.asp

Porter, M., Hills, G., Pfitzer, M., Patscheke, S., & Hawkins, E. (2012). Measuring shared value: How to unlock value by linking social and business results. Conference Report Available, 1–24.

Räikkönen, M., Kunttu, S., Uusitalo, T., Takala, J., Shakeel, S. R., Tilabi, S., Forss, T., & Koivunen, J. (2016). A framework for assessing the social and economic impact of sustainable investments. Management and Production Engineering Review, 7(3), 79–86.

Pre-feasibility study for establishing a Carbon Capture Pilot Plant in Mexico, 2016. https://www.gob.mx/sener/en/documentos/pre-feasibility-study-for-establishing-a-carbon-capture-pilot-plant-in-mexico?idiom=en