

# Project Management and Sustainable Development Principles

Roland Gareis, Martina Huemann, André Martinuzzi  
WU Vienna University of Economics and Business, Austria

## ABSTRACT

### KEY WORDS

*Sustainability*  
*Uncertainty and Risk Management*  
*Evolvability strategies*  
*Requirements management*  
*Stakeholder management*

This research describes Sustainable Development as a new project management paradigm. Here, practitioners will find insights on how to initiate and manage projects following sustainable development principles. The case studies highlighted in this research, namely the establishment of a hospital in Austria, and two wind parks in Romania and Brazil, provide corporate and cultural diversity in the study.

## THE PROBLEM

*[Sustainable development] meets the needs of the present without compromising the ability of future generations to meet their own needs.*

The concept of sustainable development (SD) attracted wide attention following the publication of the "Brundtland Report" by the World Commission for Environment and Development in 1987. The Report defines SD as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". The international interest in this report culminated in the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro (aka the 'Earth Summit'), where the Rio Declaration was signed by 153 nations.

By signing the Rio Declaration, the European Union (EU) committed itself to draw up a cross-sectoral SD strategy. In 2001, the European Council decided on the first EU Strategy for Sustainable Development, which was renewed in 2006. The United States has no single SD policy document or process in place. The governance mechanisms in the US are mainly coordinated through partnerships and agencies, and subordinated to individual states. Canada has assigned SD responsibility to individual government departments and agencies. Recently, China started to turn its attention to sustainable development issues. In 2002, India outlined a detailed study entitled, "Empowering People for Sustainable Development" (EPSD), and the National Five Year Plan outlines the main development trends for the whole country.

Not only are countries the main boosters for SD policies, but during the last several years, businesses all over the world have committed themselves to implementing SD as an active corporate engagement that goes beyond legal compliance. Since 1996, more than 223,000 companies in 159 countries have implemented and certified environmental management systems following ISO 14001 requirements. The European Eco-Management and Audit Scheme (EMAS) has been implemented by about 4,500 organizations in Europe. In 2010, the International Organization

## THE PROBLEM *(continued)*

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for Standardization launched an additional international standard named ISO 26000 to provide globally relevant guidelines for social responsibility among private and public sector organizations.

In 2000, the OECD re-edited its “Guidelines for Multinational Enterprises,” including recommendations for voluntary responsible business behavior concerning employment, natural environment, industrial relations, corruption, consumer interests, and competition. In 2010, approximately 1,500 companies published sustainability reports based on the Global Reporting Initiative (GRI) “Sustainability Reporting Guidelines.”

Among others, banks and funding authorities play an important role in establishing and disseminating these procedures for impacts on the environment and society. Many companies are the main target groups of these procedures, because they are the owners and drivers of the assessed investments. However, these assessment and evaluation procedures are not well integrated into project management and therefore do not have relevant effects on project management procedures and tools.

## RESEARCH IMPLICATIONS

The research was designed as a cooperative project between academics and practitioners. The research process was explorative and experimental. Purposeful sampling was applied for selecting adequate projects as case study projects. The case studies served the purpose of analyzing the consideration of SD principles in project initiation and project management and to demonstrate viable research solutions. The three case studies conducted are shown in Table 1.

The case studies demonstrated how project management methods could be further developed considering SD principles. The case studies used in this research provide corporate and cultural diversity in the study.

Project	Company	City, Country	Perspective
Hospital North Planning	Vienna Hospital Association	Vienna, Austria	Investor
Engineering, procuring, constructing (EPC) - Wind Park Farm	Siemens Ltd.	Sao Paulo, Brazil	Main supplier
Wind Park Dorobantu	OMV Petrom	Bucharest, Romania	Investor

Table 1: The Observed Projects

## THE FINDINGS

### General Findings

SD is a new management paradigm relevant to projects and programs that requires a careful consideration of economic, ecologic, and social issues. Moreover, the goals of SD projects span a wide spectrum with regard to length (from short to long-term) and geographical focus (local, regional, or global).

## ■ THE FINDINGS *(continued)*

The research suggests that a formal procedure to design for evolvability may offer a superior approach to help teams in dealing with the characteristics of SD projects. This approach provides the right balance between short-term affordability and long-term adaptability.

The long-term orientation of SD can contradict short and mid-term objectives. This contradiction can be resolved by the understanding that a project contributes to realizing long-term investment objectives.

*To ensure sustainability, stakeholder participation is critical.*

### **Stakeholders' findings**

To ensure sustainability, stakeholder participation is critical. Stakeholders must participate in the design of the project initiation process in order to increase the probability of success.

Due to the multiplicity of stakeholders, the definition of project scope must consider the multiple dimensions of investor organizations and stakeholders. Stakeholder analysis considering SD principles includes directly and indirectly affected stakeholders, considers relationships among stakeholders, and analyzes the impacts of a project for each. The use of a participatory management approach optimizes the quality of the relationships with stakeholders.

A holistic and consistent application of investment analysis and project management methods is the basis for a good investment decision and a good organizational decision. An investment should not be analyzed in isolation, independent from others, because its costs and benefits may be interrelated. Projects are defined within the context of the project portfolio of the investor. Some of the projects of the portfolio might have synergetic or conflicting relationships with the project under consideration. These relationships might influence the objectives, costs, schedules, or the risks of the considered project.

### **Methods and Tools findings**

The mandatory use of project management methods in the design of the management process allows structural clarity, and provides orientation to the project organization. SD projects are complex and dynamic. Hence, management of these projects requires dealing with complexity and dynamism. Consequently, working styles and formality should be customized to cope with these characteristics.

Realistic and complete work breakdown structures, project schedules, resource plans, budgets, and risk analyses provide orientation to the members of the project organization. Objective assumptions and honest reporting meet the basic values of transparency and fairness in communicating with members of the project organization and with representatives of project stakeholders.

In identifying project risks, differentiation among economic, ecologic, and social risks, as well as among local, regional, and global risks enables differentiated risk response measures.

### **Organizational and human resources findings**

SD is a value-based concept, which requires matching the values of the organizations with those of individuals involved in the project. Ethics, openness, social sensitivity, fairness, integrity, transparency, traceability, respect, efficiency, participation, respect and learning are some of the key values that offer a good basis for SD.

It is necessary to create project boundaries by differentiating the project from its contexts according to content, time, and social dimension. One of the project manager's responsibilities is to specify these boundaries, allowing a common understanding of the project scope by clarifying what is within and outside of the scope.

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## ■ THE FINDINGS *(continued)*

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Empowerment is a key element for the organizational design of these projects. The descriptions of project roles must include their responsibility towards sustainability. The integration of these responsibilities provides orientation to the personnel and contributes to assure SD principles. In addition, a specific role of an SD expert should be included in the organization. Such a role is similar to that of a quality expert, ensuring that SD issues are considered in the project.

Personnel development contributes to long-term capacity building for the companies undertaking a project. Project personnel need to work under the pressure of time. However, the long-term objective of capacity building from the company's point of view also needs to be considered. Plans to assure the health and safety of the project personnel should be applied in projects where health and safety are issues.

## ■ FULL CITATION

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