


# Chapter 9

## ESG–Aligned Governance in Software–Driven Business Projects: Strategic Integration of Sustainability, Risk, and Stakeholder Management

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### **ABSTRACT**

*The rapid development of digital technology has made software-driven initiatives crucial for enterprises worldwide. However, traditional project management methods often lack sustainability and responsible governance. This chapter explores project governance in digital projects and software engineering using ESG principles. It emphasizes the importance of energy-efficient systems, transparent development processes, and transparency in project advancements. Baku offers a sustainable governance model, incorporating ESG frameworks, Agile and DevOps method-*

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*ologies, and case studies. It also emphasizes the importance of managing human resources, involving stakeholders, and using sustainability performance indicators for green initiatives' success.*

## **INTRODUCTION**

The rapid advancement of technology has pushed companies to improve their services and products. Customers, once passive, now actively express their perspectives and expectations. Customer feedback and insights from web platforms provide valuable input. This information helps businesses improve, innovate, and expand their reach (Hans & Khera, 2021; Sauvola et al., 2015). In software application development projects, defining the product scope based on the expectations and views of diverse stakeholders not only directly supports the company's objectives from a software quality perspective but also helps integrate Environmental, Social, and Governance (ESG) factors into the development process. By including ESG considerations, organizations can align their product scope with long-term sustainability goals, ensuring that software projects not only meet user expectations but also contribute positively to environmental and social outcomes (Ignaim & Fernandes, 2025).

This chapter introduces a product scope model based on stakeholder expectations. It formalizes the Project Charter, which can be mathematically expressed using set theory. The Fusynation aspect is derived through meticulous Project Examination, employing Project Mapping Techniques and General Considerations. Adapting the Project Charter's structure enables responsiveness to evolving stakeholder expectations, serving as an initial step toward achieving project quality/control.

Modern software development projects have become foundational to emerging industries and business systems. However, users and developers often hold divergent views and expectations. These complex constraints challenge project managers to consolidate diverse stakeholder inputs and deliver tailored preliminary responses, especially when integrating ESG considerations into the project's scope. This challenge becomes more pronounced as project managers must balance both technical and non-technical perspectives while aligning the product with broader sustainability goals (Udhayakumar & Sivasubramanian, 2024). Project managers must navigate new, formalized processes to synthesize active stakeholder feedback. By integrating ESG considerations into the Project Stakeholder Management process, project managers can ensure that environmental, social, and governance factors are incorporated from the outset, contributing to long-term project success (Silva et al., 2024). This renewed emphasis aims to iteratively refine the Product Scope perspective beyond mere product quality. Environmental, Social, and Governance (ESG) factors are

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