

Chapter 4

Innovation Strategy and Digital Maturity of Organizations

Ilham Firmansyah

 <https://orcid.org/0009-0007-6104-9966>

Universitas Esa Unggul, Indonesia

ABSTRACT

Innovation and digital maturity are essential pillars for organizational success in the digital age. This chapter explores how innovation strategies can align with digital maturity stages to drive sustainable transformation. Using frameworks like Three Horizons, Open Innovation, and Design Thinking, it outlines strategic approaches for innovation based on digital readiness. Case studies from Siemens, ING Bank, and Estonia illustrate how these strategies work in real-world settings. Common barriers such as legacy systems and cultural resistance are addressed alongside practical solutions. The chapter also highlights the role of innovation metrics in guiding progress. Ultimately, it positions innovation as both a result and a catalyst of digital maturity, enabling organizations to adapt and lead in an increasingly disruptive environment.

INTRODUCTION

In the era of accelerated technological change, digital transformation has become a fundamental imperative rather than a strategic option. Organizations across industries are compelled to redesign their operations, culture, and value propositions in response to shifting customer expectations, disruptive market forces, and emerging digital technologies. However, successful transformation does not begin

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with technology alone it begins with a clear innovation strategy supported by the organization's digital maturity (Meng et al., 2025).

Digital maturity, in this context, reflects an organization's capability to effectively leverage technology, human capital, and processes to create sustainable value. This capability varies widely across industries and organizations, depending on factors such as leadership commitment, investment in digital infrastructure, employee readiness, and agility in decision-making. Organizations with higher levels of digital maturity tend to demonstrate greater adaptability, speed of innovation, and operational resilience (Raza et al., 2025).

At the same time, innovation strategy defines the organization's approach to generating new ideas, implementing change, and delivering improved outcomes. In digitally mature organizations, innovation is not just isolated in R&D departments; it becomes embedded across all business functions from customer service to product development and supply chain management. Aligning innovation with digital capability allows organizations to unlock new growth opportunities while managing risks associated with transformation (Watson, 2025).

This chapter introduces the critical relationship between innovation strategy and digital maturity. It argues that digital maturity is not merely a technical achievement but a strategic enabler that shapes how innovation is conceived, delivered, and scaled. The chapter will examine established digital maturity frameworks and innovation models that guide organizations in aligning their vision with practical execution (Y. Wang et al., 2025).

Furthermore, this chapter explores how different maturity levels require tailored innovation approaches. For example, organizations in the early stages of digital maturity may focus on digital literacy, leadership alignment, and pilot initiatives, while more advanced organizations may prioritize data-driven innovation, platform ecosystems, and continuous optimization. By contextualizing innovation strategies within the spectrum of digital readiness, organizations can make more informed, realistic, and impactful decisions (Margaretha et al., 2025).

Finally, the chapter highlights key challenges such as legacy systems, fragmented data environments, cultural resistance, and short-termism, which often hinder innovation and digital progress. It also outlines how metrics, benchmarking, and innovation scorecards can be used to measure both digital maturity and innovation performance (Djatkiko et al., 2025).

Through a combination of theoretical insights, strategic frameworks, and real-world case studies, this chapter aims to provide actionable guidance for organizations seeking to align their innovation efforts with their digital capabilities. In doing so, it contributes to the broader discourse on how organizations can thrive in a digital-first economy where resilience, adaptability, and innovation are interdependent forces. As illustrated in Figure 1, innovation strategy and digital maturity share a dynamic

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