

## **Building Ecosystem Capacities for Innovation in Regulated Industries: Insights from the pharmaceutical Sector**

**Christina Rettig, Wim Vanhaverbeke**

University of Antwerp, Faculty of Business & Economics

### **ABSTRACT**

An unresolved question in ecosystem theory is how capacity building unfolds across complex, highly regulated industries. It has been proposed that ecosystems play a crucial role in enabling industries to innovate by facilitating the collective development of capabilities among independent actors. This is particularly important for digital transformation, where ecosystem actors must collaborate closely as they venture into uncharted territory together. In this study, we investigate these dynamics within the pharmaceutical sector, an industry characterized by a strict regulatory environment, expansive global supply chains, and the vital role it plays in public health. Using a case study approach, this paper tests a theoretical model developed in prior research, focusing on the collaborative efforts of pharmaceutical ecosystem actors. Specifically, the study investigates how capacities such as digital literacy, regulatory knowledge, and other organizational resources are jointly built, distributed, and leveraged to foster digital transformation. The findings offer insights into how coordinated capacity building enhances both the resilience and adaptability of innovation ecosystems within a highly regulated environment, ultimately contributing to ensuring that digital transformation translates into practical benefits for the industry and for public health.

**Keywords:** Capacity Building; Case Study Research; Digital Transformation; Ecosystem Theory; Pharma 4.0