

Additive manufacturing and Innovation ecosystems: between competition and collaboration

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Abstract

The purpose of this research is to investigate how additive manufacturing technology influences the dynamics of collaboration and competition within innovative ecosystems. Grounded in Chesbrough and Enkel's Open Innovation theories, we explore how the unique characteristics of the Italian context shape collaborative and competitive innovation processes. A single-case study is conducted at the Kilometro Rosso innovation district, focusing on a sample of companies with significant interests in leveraging additive manufacturing for innovative product development. Our findings underscore the pivotal role of the orchestrator in the innovation ecosystem, who acts as an innovation catalyst to integrate diverse companies from various sectors through the application of additive manufacturing technology. Additionally, the presence of competitors within the ecosystem is identified as a catalyst for technology transfer, particularly when these entities engage collaboratively in research consortia or shared laboratories utilizing additive manufacturing. From a theoretical perspective, this paper enriches our understanding of Open Innovation theories by introducing a new context-specific framework and extending Enkel's model. Practically, this research equips managers with strategies to harness additive manufacturing technology to foster both collaboration and constructive competition, thereby enhancing the development of individual companies and the ecosystem as a whole.

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