

Commercialization of Autonomous Drones in India: A Case-Based Analysis of Market Adoption Barriers and Strategic Pathways

Debashish Das^{*}, Vatsal Gahlot^{**} and Narendra Babu

Indus Business Academy, Bangalore, India

Abstract: The commercialization of autonomous drones in India presents a complex interplay of technological innovation, regulatory evolution, and market readiness challenges. This case-based research examines the commercialization journey of an emerging Indian drone start-up (anonymized as "SkyVenture Robotics") specializing in autonomous aerial systems for warehouse management and outdoor surveillance. The research documents how SkyVenture navigates these through pilot training programs, exhibition participation, educational webinars, and relationship-building initiatives. Findings reveal that successful drone commercialization requires comprehensive ecosystem development addressing regulatory literacy, market education, trust-building, and stakeholder engagement. This study contributes empirical insights into emerging market technology commercialization and offers practical implications for drone enterprises, policymakers, and potential adopters.

Keywords: Autonomous Drones, Commercialization Barriers, Market Adoption, Warehouse Automation, UAV Technology

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* PGDM Student.