Closing the gap between University R&D and Industry Products.
Joseph P. Lane, Jennifer L. Flagg

Abstract

Governments fund universities to conduct technology-based research and development activities, under the assumption that the outputs will eventually contribute to new or improved commercial products. This is a common practice for niche markets lacking sufficient market incentives such as Assistive Technology devices and services. Despite sustained R&D investment over several decades, government policy makers and the public are questioning the lack of results. The assumed transition from laboratory to market does not reflect the reality of a gap that exists both in theory and in practice. New product developers are required to understand and apply a wide variety of processes and tools as they produce new devices or services. However, academics tasked with doing the same to prepare their R&D for this transition may not be trained in the downstream industry requirements. Further, they may be overwhelmed by the amount of academic and practice literature documenting "best practices." This paper presents a model linking the processes of technology transfer and knowledge translation in order to offer an operational framework to academics who are attempting to move their work from lab to market. The model is grounded in a literature review designed to consolidate information on effective new product development practices into a comprehensive knowledge base. Scientists and engineers in the role of inventors or entrepreneurs will find value in the consolidated presentation of new product development practices.

Summary

The paper describes an evidence-based, state-gate framework, designed to close the gap between government sponsored R&D conducted in universities, and the application of their results by private industry. Closing this gap is crucial for niche markets like Assistive Technology, which lack adequate market incentives to spur private investment in innovation.