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Effective Technology Transfer Offices

A Business Model Framework

 Springer

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*To my loving family Sammi, Aiden and Riley
and to a wonderful great granddad Derek
(JC)*

Preface

Historically there has been a failure to capitalise on the true value of university business collaboration and thus realise the potential that benefits business and society. Successful universities in the twenty-first century need to excel in teaching and research as well as in developing complementary third stream activities to exploit research for private and public good outcomes. With public funding for science becoming more demanding in terms of demonstrating impact, this in turn impacts researchers and universities. The role of technology transfer offices (TTOs) has become even more strategic in ensuring that more technology transfer activities are delivered for less for private and public outcomes. TTOs are now regarded as key actors in regional and national innovation systems. Given the multiple roles of TTOs as information brokers, science marketers and catalyst for academic entrepreneurship, TTOs provide a crucial mechanism to allow universities respond to this challenge. However, in spite of the increased emphasis placed on the TTO to deliver, little is known about the ‘black box’ of the TTO (Sanders and Miller 2010).

While international evidence from best practice provides a basis for understanding the requirements for success, individual universities will have to find their own solutions to these issues, depending on their size, disciplinary base and the economy of their region. A key challenge for universities is how best to organise and differentiate their third mission activities that ensures sustainable, effective and impact-orientated technology transfer? University research commercialisation has grown and developed in the USA since the Bayh Dole Act in 1980. Many countries and universities in established and emerging markets have imitated many aspects of US university technology transfer offices activities, structures and processes. TTOs worldwide are looking to emulate the blockbuster technology success of American universities. The growth of TTOs and personnel has been the subject of growing empirical investigation and studies. However, a core challenge remains for TTOs and practitioners by way of accessible tools and frameworks that allows them to understand the key success factors and the strategic issues to become effective with respect to effective technology transfer that combines key strategic and operational issues.

In developing accessible frameworks for TTOs, the core understanding is that a ‘variety of excellence’ exists and allows each technology transfer office and university to choose its own distinctive strategy. Therefore, an overarching business model framework for TTOs is appropriate for practitioners which recognises the varieties of excellence but also one that draws on elements of best practice elsewhere, acknowledging that policy choice and implementation will have to be adapted to suit local circumstances and contingencies.

Combining elements of best practices, previous empirical studies and our own research on TTOs, ecosystems and scientists in the principal investigator role, we have developed a business model framework for TTOs, which captures key elements of their strategic and operational activities that need effective management and leadership from a practitioner perspective.

Our business model framework for TTOs addresses strategic issues including strategy, organisational structure, staff and resources, activities, mechanisms, policy and procedures and evaluation and outcomes. The business model framework considers contextual factors that directly and indirectly impact on TTOs’ commercialisation culture and ethos and researcher commitment, awareness and motivation. For each element of our business model framework the core key success factor and the facilitating factors that enable effective technology transfer with TTOs are outlined.

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Reference

Sanders CB, Miller FA (2010) Reframing norms: boundary maintenance and partial accommodations in the work of academic technology transfer. *Sci Public Policy* 37(9):689–701

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