
University of Technology Sydney

# Building Management Innovation Capability in Large Rail Organisations

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A thesis submitted in fulfilment of the requirements
for the degree of Doctor of Philosophy (PhD)

November 2017

Sydney, Australia

## Certificate of Original Authorship

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as part of the collaborative doctoral degree and/or fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

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Date: 05 November 2017

This research is supported by an Australian Government Research Training Program Scholarship.

## Abstract

Innovation is the implementation of a new or significantly improved product, service, process or marketing method, or a new organisational method in business practices. Management innovation, which has recently emerged in contemporary scholarship as a new type of innovation, refers to the invention and implementation of a change to management practice, processes, structures or techniques that are new to the state of the art and help achieve organisational goals.

The innovation capacity of public service organisations is under-researched particularly in the area of management innovation. Lack of innovation in public sector rail organisations in particular is attributed to a risk averse culture, regulatory red tape, cost cuts, change resistance, bureaucratic barriers, safety as the key focus, inadequate funding for innovation and cultural barriers to innovation. To address this gap, this thesis investigates how to develop management innovation capability to improve rail organisation performance and provide better rail services to customers.

Implementing management innovation requires multiple capabilities which are discussed in leadership and organisational theories. However, the innovation capabilities in these theories overlap in various stages of innovation which makes the practical application of management innovation difficult. Alignment of capabilities to various stages of management innovation can enable large rail organisations to understand and build capabilities to initiate and implement management innovation.

This research focused on how to build management innovation capabilities in large rail organisations in Australia using a mixed methodology of qualitative and quantitative research. A theoretical model for a Management Innovation Capability Framework was developed and three case studies in safety, maintenance and customer service were selected, with one from each of the participating large rail organisations in Sydney, Melbourne and Brisbane. The case studies were eliminating level crossing incidents, establishing a centre of excellence in rail maintenance and introducing a customer service model. Semi-structured in-depth interviews were conducted with 36 executives, general managers and senior managers to understand the management innovation capabilities in the case studies, followed by quantitative survey research

with 70 participants, mostly executives and general managers, in the three participating organisations.

The research started with three sets of capabilities including driving, developing and diffusing capabilities aligning with an input, process and output model. However findings from the three case studies suggested that five sets of capabilities including discovering, driving, developing, deploying and diffusing capabilities are a better model to assist large rail organisations at various stages of management innovation from initiation to implementation. Descriptive analysis and confirmatory analysis using structural equation modelling were conducted to validate the research model.

Aligning these stages into a framework, the research provides theoretical and empirical underpinning for the application of the Management Innovation Capability Framework to large Australian rail organisations. The Management Innovation Capability Framework can help not only managers in large rail organisations but also managers in any other similar large complex public sector organisations to understand the enabling capabilities required for each stage of management innovation, and to successfully implement and maintain a management innovation program to resolve major problems and to realise significant opportunities.

## Acknowledgements

I wish to acknowledge many people who have supported and motivated me in the last eight years. It was a great challenge as a part-time researcher to balance work, family commitments and research. I have the privilege of Professor Roy Green, Dean of Business School, as my principal supervisor. My sincere thanks to Roy for taking me on as his student and guiding me with his wealth of knowledge, experience and positive words. I am also grateful to co-supervisor Dr Shantha Liyanage, who motivated me to take up the research and guided me to carry out my research and is very supportive and understanding. It is a great privilege to have Associate Professor Renu Agarwal as my co-supervisor. Renu guided me in every step of this research. Renu's big picture view and attention to detail helped improve the quality of my research.

I have been extremely privileged to work in a large rail organisation and receive great support from my general managers and executive directors for this research. I would like to thank three general managers from the three rail organisations for sponsoring and supporting my research: Cliff Blackley, Nick Dickinson and Glen Barber. It is hard to get access to large rail organisations, and it is also hard to get the time of executives, general managers and senior managers for interviews and surveys. Without the support of these three general managers, this research would not have been possible. I would like to thank my wife Rosemary and my son Prem for their understanding, motivation and extended support. Finally I would like to thank my colleague Mark Worthington for proofreading my thesis and Dr Rhonda Daniels for professional editing.

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