

MANAGEMENT INNOVATION CAPABILITIES: CASE STUDY OF A RAIL ORGANISATION

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Abstract: Management innovation is a research area which can contribute at the policy and strategic levels to innovate management models and principles. To initiate and implement a management innovation requires multiple capabilities. Entrepreneurship and leadership theories discuss various capabilities for innovation, however capabilities for management innovation are not defined, moreover capabilities discussed in these theories overlap. Understanding the capabilities can enable managers to implement a management innovation. The purpose of this article is to show capabilities to initiate and implement a management innovation using driving, developing and deploying framework, with empirical evidence from a large rail organisation in Australia.

Key words: Management innovation, Centre of Excellence (CoE), Capability, Entrepreneurship, Leadership, Dynamic Capability, knowledge Management

DOI: 10.17512/pjms.2017.16.2.21

Article's history:

Received September 20, 2017; *Revised* November 15, 2017; *Accepted* November 25, 2017

Introduction

There is increasing interest in management innovation, which has recently emerged in the field of innovation. While literature covers the types and processes of innovation, such as technological, scientific and organisational innovation, limited knowledge is available specifically on management innovation which is defined by Birkinshaw et al. (2008) as: "Invention and implementation of a management practice, process, structure, or technique that is new to the state of the art and is intended to further organisational goals". Management innovation capability is regarded as an important element to facilitate innovation (Parlier, 2008). Previous research on innovation capability includes technological capabilities (Saada and Zawdie, 2005), knowledge acquisition capability (Liao et al., 2010), and dynamic capability (Eisenhardt and Martin, 2000). There is limited empirical and theoretical knowledge on capabilities for management innovation. Also the terms capacity and capability are often used interchangeably, Mumford et al. (2007) define capacity as what leaders possess and capability as what leaders do. This paper provides capabilities discussed in entrepreneurship, leadership, knowledge management and dynamic capabilities in a framework to implement management innovation.

To construct the theoretical model, a three-stage approach similar to Tranfield. et al. (2006) is used: discovering the need stage, or what is driving the organisation to take up management innovation; the realisation stage or development of an idea as

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a potential solution to a management issue; and the nourishment stage or diffusion of management innovation to other situations. The capabilities for the three stages of driving, developing and deploying management innovation are discussed below.

Literature Review

Driving capabilities

Driving management innovation requires a strong commitment, passion and resource capabilities to develop and deploy an innovative solution (Deschamps, 2005). These capabilities are discussed in the entrepreneurship, leadership and dynamic capability theories.

Entrepreneurship perspective capabilities: According to Shane (2003) entrepreneurship is an individual ability to sense opportunities by scanning markets, technology and customer needs. Neck and Manz (1996) note that entrepreneurs determine business opportunities for creating and delivering stakeholder value. Similarly, Kor et al. (2007) claim that entrepreneurship capabilities determine the new opportunity sources and the capability to exploit such opportunities, including sensing the need for management innovation driven from technology and market forces. Entrepreneurial motivation and intention is strongly linked with risk taking capability (Nabi and Liñán, 2013).

Leadership perspective capabilities: Leadership theories describe the driving capabilities for innovation in various ways such as providing direction and support, ensuring capabilities are available, and providing vision and facilitation. For example, innovation requires active coordination and senior management commitment (Klein and Sorra, 1996), influence of top management is critical to support and make capabilities available in an organisation (Norrgrén and Schaller, 1999). Bossink (2007) insists that top management commitment and facilitation of innovation capabilities are the two most important aspects of strategic leadership. An interactive leadership style enables engaging internal and external stakeholders to innovate (Eisenbach et al., 1999), transformational leadership creates intellectual stimulation (Sosik, 1997), empower staff and enable them to share innovative ideas (Hoch, 2013) and has a strong influence on innovation capabilities of strategic alliance and development of operational capabilities (Schweitzer, 2014).

Dynamic capability perspective: According to Teece (2007), sensing and shaping opportunity is an important capability that helps to reconfigure the tangible and intangible resources. Rindova and Kotha (2001) claim that dynamic capabilities can shape and sense threats and opportunities, seize opportunities and sustain competitiveness through combining, enhancing and reconfiguring the leadership's tangible and intangible assets. Management innovation creates major changes in an organisation, impacting operational processes and resources significantly; therefore, dynamic capability plays a significant role when a management innovation occurs.

Innovation requires active coordination and senior management decision-making (Klein and Sorra, 1996). Unless a senior executive is made responsible for

introducing a new approach to change the old ways and develop a novel idea, it is difficult to commit and drive a big change. Appointing an internal change agent sets an agenda to resolve a problem which cannot be resolved using an existing solution (Birkinshaw et al., 2008). Once the desire for management innovation is driven by a significant issue, performance gap or opportunity, a clear vision, strategy and commitment to support enables the organisation to move forward. Thus, driving capabilities for management innovations are sensing opportunities, sensing threats, sensing technology needs, top management commitment to provide resources and support, articulating vision and formulating strategy.

Development capabilities

Once top management is committed to drive a management innovation forward, they support to develop the novel idea into practical solutions. The capabilities required for the development stage are discussed in dynamic capability, knowledge management and leadership theories.

Dynamic capability perspective: Dynamic capability enables firms to develop resources from the internal and external environments (Weeks, 2009). Reconfiguring resources to respond to the need is dynamic capability that enables firms to innovate (Jianwen et al., 2009). Making resources available is important for a management innovation, it is also important to have a methodology available for the resources to innovate, collaborate and achieve the desired outcome. According to Birkinshaw et al. (2008), the outcome of management innovation is a system development, difficult to observe rather than a tangible output such as a technological innovation.

Leadership perspective capabilities: Various leadership capabilities, in terms of establishing process, roles and responsibilities, play a significant role in the development stage. For example, charismatic leadership focuses on providing a process for innovation (Nadler and Tushman, 1990, Barczak and Wilemon, 1989). Instrumental leadership also supports the innovation process (Nadler and Tushman, 1990). A process or methodology is vital for development of the initial management innovation concept to a potential solution. For management innovation Mol and Birkinshaw (2006) and Hamel (2006) recommend that a systematic approach encompassing processes and methods is required to further develop a management idea into practice. Transformational leadership empowers team members to challenge existing management processes or practices (Avolio et al., 1999), motivates employees to attain organisational goals (Bass et al., 2003), and inspires, influences and stimulates intellect (Rowold and Heinitz, 2007).

Knowledge management: Amabile et al. (1996) suggest that the role of innovation is to transform ideas into something usable and profitable. Interactive leadership encourages participants to share information (Lee et al., 2015, Kazemek, 1991). Sharing tacit knowledge is key to innovation, (Nonaka and Kenney, 1991, Howells, 1996). Internal change agents communicate constantly to transform original idea by evaluating its progress (Birkinshaw et al., 2008). Thus, for the development

stage, the concept of dynamic capability provides resources to develop the concept by sharing knowledge and the leadership provides process and methodology.

Deploying capabilities

Once the concept is developed, the next stage is the deployment of the concept. Leadership theories discuss capabilities for deployment.

Leadership: Transformational leadership creates a climate for creativity (Kim and Yoon, 2015) and associated with innovation culture (Songkhla, 2014). For deployment, it is important that people understand the purpose of change due to management innovation and adopt the changes. Leaders should create the environment for change and motivation. Charismatic leadership motivates staff (Bossink, 2007, Nadler and Tushman, 1990). Motivation could arise from either a big problem or an opportunity. Communication also establishes the interface between an organisation and its stakeholders, and plays a major role in the success of an organisation (Moenaert et al., 2000, Luoma-aho and Halonen, 2010, Keramati and Azadeh, 2007). Thus, deploying capabilities for management innovations are organisational climate, leadership motivation, communication and staff engagement. These capabilities to drive, develop and deploy management innovation are tested through a case study in a large rail organisation in Australia.

Methodology

The methodology used in this research to understand the capabilities required to build management innovation is a qualitative case study in a large rail organisation. Passenger railway networks provide vital public transport services, and have both high customer demands and high reliability and safety needs. The rail maintenance industry is complex, and requires special skills to manage a network of large assets with complex technology. Factors which add to complexity are the entrenched traditional practices and a complex bureaucratic organisational structure driven by external factors such as industrial and political influence. This case study investigates the establishment of a Centre of Excellence for a new passenger fleet maintenance centre by a major rail operator in Australia through interviews with selected management staff. A Centre of Excellence (CoE) is a cross-functional or a functional team which manages operations across the entire business to incorporate new practices into the existing management structures. Frost et al. (2002) define a Centre of Excellence as: “an organisational unit that embodies a set of capabilities that has been explicitly recognised by the firm as an important source of value creation, with the intention that these capabilities be leveraged by and/or disseminated to other parts of the firm”. In this case, 60 new staff were hired for the CoE to work in fresh cultures with fresh ideas in establishing the CoE in a new \$200 million rollingstock maintenance facility. This new development required a high degree of planning, methodology development, and ideas generation, which makes it an ideal case study. The 12 participants included the general manager responsible for establishing the CoE, the depot manager and the CoE manager,

along with several depot management staff. The interviewees provided a high degree of insight about the capabilities for management innovation.

Results and findings

Driving capabilities

Table 1 shows responses on driving capabilities for management innovation.

Table 1. Driving capabilities

Driving capabilities	Number of participants commented
1. Sensing opportunities	12/12
2. Sensing threats	5/12
3. Sensing technology needs	5/12
4. Top management commitment	9/12
5. Vision and strategy	8/12

Sensing opportunities is a significant capability to drive a management innovation. The participants' comments indicated that sensing new opportunities and using them efficiently is significant in building management innovation: "newly built depot to meet capacity requirements; we thought we would take the opportunity to set a new standard for maintenance". The primary focus of threat-based comments was the fear of losing business: "the business comes up for refranchise in a couple of years and there might be other parties externally that might be interested in going for the franchise". Comments also supported the need to sense technology: "the CoE also gives the best in class usage of technology that's out there today". Managers also indicated top management commitment: "Yeah the government was very supportive... the CEO...was very keen for it to occur". Vision and strategy was also discussed as an important capability to drive management innovation. The capabilities identified for driving a management innovation including; sensing opportunities, sensing threats, sensing technology needs, top management commitment, appointing change agent and creating vision and strategy.

Developing capabilities

Table 2 shows responses on developing capabilities for management innovation.

Table 2. Developing capabilities

Developing capabilities	Number of participants commented
1. Process for management innovation	12/12
2. Resource configuration	10/12
3. Facilitation	12/12
4. Generating ideas	11/12
5. Stakeholder collaboration	9/12

Implementing innovation requires a sound process (Mol and Birkinshaw, 2006, Hering and Phillips, 2005). Participant comments highlighted the processes

implemented as part of establishing the CoE: “visualisation, the visual boards that is a quick snapshot of how the depot or the projects are tracking” and “there is a process that we call the innovation process where we look for ideas”. The organisation assembled internal resources and also employed some external competencies for specialist needs. Many participants commented on the need for recruiting external competencies: “we deliberately targeted people from outside of the railway industry”. Dynamic capability theory emphasises the sourcing and configuration of appropriate interchangeable resources for management innovation. Research shows that facilitation is important for management innovation (Bossink, 2007, D'Amato and Roome, 2009). Participants highlighted the need for facilitation. Comments by the respondents support that ideas generation is one of the most important capabilities for management innovation. Hamel and Heene (2003) emphasise the importance of collaboration for management innovation. Participants insisted on the importance of both internal and external stakeholders: “I’m quite certain that all the stakeholders would’ve come together for this”. Capabilities identified for developing a management innovation including; process, resource configuration, facilitation, generating ideas, stakeholder collaboration.

Deploying capabilities

Table 3 shows responses on diffusing capabilities for management innovation.

Table 3. Diffusing capabilities

Deploying capabilities	Number of participants commented
1. Organisational climate	6/12
2. Top management communication	10/12
3. Staff motivation	12/12
4. Staff and union engagement	6/12

Hamel and Breen (2007) define management innovation as a total change of institutional culture. Participants agreed on the need to create organisational climate for change. High work standard, a modern facility, diversity and a continuous improvement culture seemed to create the culture for innovation. Communication is another key capability to diffuse management innovation (Ackermann, 2013). Pfeffermann et al. (2008) state that the communication of innovation is a key component of a firm’s cross-functional dynamic capabilities. Participants insisted on the importance of communication: “the whole awareness is based on making sure that you’re having an open dialogue and communication with everybody”. Fleishman et al. (1991) suggest that motivational behaviours promote team members by putting forth a continual effort. Participants suggested that new staff, new working conditions and new forms of monetary recognition and staff engagement are key tools for motivating staff. According to McMullan (2013), the engagement of an employee is considered important for the implementation of management innovation. Capabilities identified for developing a

management innovation including; organisational climate, top management communication, staff motivation, staff and union engagement.

Table 4 summarises the capabilities for management innovation in three stages.

Table 4. Management innovation capabilities framework

Driving capabilities	Developing capabilities	Deploying capabilities
Sensing opportunities	Innovation Process	Organisational climate
Sensing the threats	Resource configuration	Top management communication
Sensing technology needs	Facilitation	Staff motivation
Top management commitment	Generating ideas	Staff and union engagement
Appointing change agent	Stakeholder collaboration	
Vision and strategy		

Conclusion, implications and significance

Capabilities discussed in the entrepreneurship and leadership theories have been extracted, tested through the Centre of Excellence case study and summarised for managers to understand the capabilities to implement a management innovation. Management innovation gives the competitive advantage by making significant changes. The suggested three stage approach enables managers to understand how management innovation can be initiated, developed and implemented by sensing opportunities, threats, technology needs and driving forwards through commitment, support and vision. The initial vision is further developed through idea generation, providing resources and facilitation and then deploying through motivation and creating right climate and staff engagements. Implementing a management innovation can bring significant benefits to organisations, due to changing organisational principles drives changes to operations, integrating technology, optimising resources and making processes effective. This research has limitations, including limited context due to management innovation is new to the innovation typology, there are limitations in the theoretical and empirical studies, and only one case study is discussed in this article which also limited the content. As the body of management innovation literature grows there are number of opportunities for further research on the application of management innovation in various industries, benefits of implementing a management innovation and how various leadership style support or hinder management innovation, the relationship between management innovation and other innovations.

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MOŻLIWOŚCI ZARZĄDZANIA INNOWACYJNEGO: STUDIUM PRZYPADKU PRZEDSIĘBIORSTWA TRANSPORTU KOLEJOWEGO

Streszczenie: Innowacje w zakresie zarządzania to obszar badań, który może przyczynić się do rozwoju modeli zarządzania na poziomie strategicznym i taktycznym. Inicjowanie i wdrażanie innowacji w zakresie zarządzania wymaga wielu możliwości. Teorie przedsiębiorczości i przywództwa omawiają różne możliwości innowacji, jednak możliwości innowacji w zakresie zarządzania nie są zdefiniowane, ponadto możliwości omówione w tych teoriach pokrywają się. Zrozumienie możliwości może umożliwić menedżerom wdrożenie innowacji w zakresie zarządzania. Celem tego artykułu jest pokazanie możliwości zainicjowania i wdrożenia innowacji w zarządzaniu za pomocą kierowania, rozwoju i wdrażania systemu, popartymi empirycznymi dowodami z przedsiębiorstwa transportu kolejowego w Australii.

Słowa kluczowe: innowacja w zarządzaniu, centrum doskonałości (CoE), potencjał, przedsiębiorczość, przywództwo, zdolność dynamiczna, zarządzanie wiedzą.

管理創新能力：以鐵路組織為例

摘要: 管理創新是一個研究領域，可以在政策和戰略層面為創新管理模式和原則做出貢獻。啟動和實施管理創新需要多種能力。創業精神和領導力理論討論了創新的各種能力，但是管理創新的能力並沒有被定義，而且這些理論所討論的能力是重疊的。

了解這些能力可以使管理人員實施管理創新。本文的目的是通過澳大利亞一個大型鐵路組織的實證證據，展示使用駕駛，開發和部署框架來啟動和實施管理創新的能力。

關鍵詞: 管理創新，卓越中心 (CoE)，能力，創業精神，領導力，動態能力，知識管理