

Institution: University of Brighton
Unit of Assessment: C19 Business and Management Studies
Title of case study: Managing Innovation ICS [3]
1. Summary of the impact

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Research undertaken at the Centre for Research in Innovation Management (CENTRIM) has demonstrated the company characteristics that contribute to successful innovation. The research provided the core body of knowledge used by the Managing Innovation training programme that has been used by more than 5,000 managers worldwide. The programme presents the findings of research in powerful, accessible and usable ways. It has been adopted by some of the world's most innovative companies, including Medtronic, Cisco Systems and Abbott Laboratories, to stimulate personal development and organisational change. A *Managing Innovation* train-the-trainer programme has been developed that has provided intensive development for certified trainers and facilitated the roll-out of this programme through Australia, Brazil, Chile, Denmark, Poland, Mexico, Tanzania, USA and Venezuela.

2. Underpinning research

The Managing Innovation training programme is underpinned by industry-based research. The project lead, FRANCIS, Principal Research Fellow, applied CENTRIM's action research methodologies, developed from an initial investigation instigated during a PhD, to investigate the common characteristics, mindsets and skills that organisations require for innovation to flourish. The research produced a robust body of evidence published in articles in leading refereed journals, a selection of which are listed in section 3.

The research methods included case analysis, action research and critical-incident analysis. These provided new knowledge on the conditions that enable value-creating innovation to take place. Using a grounded theory methodology, a reference model of innovation capability was developed from empirical data and revised following extensive testing procedures. The distinctive contribution of the research was to show that there is not a single set of cultural characteristics that promote innovation (as had often been claimed). Rather, the research demonstrated that organisational innovation requires the judicious application of five different micro-cultures or phases that require distinctive mindsets, skills and sets of activities (these were described as: 'searching', 'exploring', 'committing', 'realising' and 'optimising'). Accordingly, individuals and groups that undertake innovation initiatives will need to reconfigure their group's micro-cultures as they move through the five phases of each innovation journey.

In 1997, FRANCIS became the team leader of an EPSRC research programme on Agile Manufacturing (GR/L63037/01: P.I. Professor. J. BESSANT). The research identified the conditions that enabled smaller companies to reconfigure their strategies and operations rapidly in order to take advantage of opportunities and to mitigate threats; in short, the research showed that successful, agile firms needed to have institutionalised innovation capability. Using action-research techniques the researchers intervened frequently in the case-study companies and found that the five-phase innovation modalities model (outlined above) provided helpful sense-making frameworks.

The main output of the underpinning research, and its use in the Agile Manufacturing Research Programme, was a set of insights that challenged several assumptions typically adopted by managers, trainers and teachers of innovation. Specifically, the research found that there was not a single style of management that was 'innovation friendly'; rather, managers needed to change their style according to which of the five phases of innovation (see above) was required at that point on the innovation journey so as to create the required micro-cultures referred to above. In addition, the research found that innovation initiatives rarely followed a predictable step-by-step process that was capable of being entirely pre-programmed. Rather, innovation managers needed an agile mindset and the capacity to revise, review and reconfigure strategies, skills and practices as the situation demanded.

Subsequently, CENTRIM participated in a cross-border action-research initiative in co-operation with the University of Ulster, funded under the EU's Interreg II scheme. CENTRIM's role was to work with 55 smaller companies to develop their innovation capabilities. The innovation models

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outlined above provided the basis of these interventions and case studies revealed the different requirements of companies from different industrial sectors. These cross-border interventions demonstrated the relevance of the models described above in smaller organisations (that had not been included in the original research). This work was taken further when, in 2007 and 2008, the (then) newly developed Managing Innovation training programme was used in CENTRIM's ProfitNet initiative (see REF3b [1]), funded by HEFCE. In total, 83 owners and managers experienced Managing Innovation and it formed the basis of continuing peer-to-peer coaching and advisory support. This project provided substantial new insight into how Managing Innovation could be applied in practice.

Later, FRANCIS was approached by a specialist training company based in San Francisco to explore whether the research findings could form the core of a new training product and, following a joint programme of product development, a prototype two-day course entitled Managing Innovation was piloted in 2005, revised and launched in 2006.

Subsequently a Managing Innovation train-the-trainer programme was launched. For all apprentice trainers, this has required an extensive study of relevant academic literature, acquiring a detailed understanding of the findings of the underpinning research, an appreciation of the key techniques of experiential learning and a demonstration of proficiency in delivering the programme to varied audiences. As a unit, CENTRIM has facilitated the impact by developing 11 bespoke DVDs for trainers, training manuals, one-to-one coaching and a rigorous certification process.

Key researchers:

John Bessant: Professor of Technology Management (Oct 1984–Oct 2002).
 Dave Francis: Senior Research Fellow (July 1997–Dec 2003), Principal Research Fellow (Jan 2004-to date).

3. References to the research

- [3.1] BESSANT, J., KNOWLES, D., BRIFFA, G., and FRANCIS, D. (2002) Developing the agile enterprise. *International Journal of Technology Management*, 24(5), pp.484–497. [Quality validation: leading peer-reviewed journal.]
- [3.2] FRANCIS, D. and BESSANT, J. (2005) Targeting innovation and implications for capability development. *Technovation*, 25(3), pp.171–183. [Quality validation: leading peer-reviewed journal.]
- [3.3] FRANCIS, D. and BESSANT, J. (2005) Transferring soft technologies. *International Journal of Sustainable Technology and Development*, 4, pp. 93–12. [Quality validation: leading peer-reviewed journal.]
- [3.4] FRANCIS, D., BESSANT J. and HOBDDAY, M. Managing radical organisational transformation. *Management Decision* 41.(1) (2003), pp.18–31. [Quality validation: leading peer-reviewed journal.]
- [3.5] BESSANT, J. and FRANCIS, D. (2008) Editorial: special issue on developing capabilities for continuous innovation. *International Journal of Technology Management*, 44 (3–4). pp.293–297. Also, in the same journal an article by BESSANT J., FRANCIS D, (2008) developing capabilities for continuous innovation. pp.293–297. [Quality validation: leading peer-reviewed journal.]

4. Details of the impact

Between 2008 and 2013 CENTRIM records indicate that more than 5,000 people have experienced the Managing Innovation training programme. These include managers from companies and organisations that have purchased Managing Innovation training such as Abbott Laboratories (a leading international pharmaceutical company), Applied Materials (makers of manufacturing equipment for integrated circuits), BNDES (the Brazilian Development Bank), Cisco Systems, Citibank, Hass Business School, IBM, Johnson Controls (a global company with more than 170,000 employees), Liberty Mutual (the third-largest property insurer in the USA), Medtronic (on *BusinessWeek's* top 100 most innovative companies list) and UNESCO.

Some companies that have adopted Managing Innovation believe that the programme should be at the centre of their business model (source 5.1, 5.2). For example, UK Innovation Director of

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Logica (now part of CGI consultancy) observed that, ‘the training has been well received and is now becoming the standard for how we talk about innovation internally as well as how we work with clients externally’ (5.1).

The Managing Innovation train-the-trainer programme has now provided intensive development for trainers in Australia, Brazil, Chile, Denmark, Poland, Mexico, Tanzania, UK, USA and Venezuela. Fifty-four trainers have been certified to deliver Managing Innovation, all of whom have subsequently delivered successful programmes.

The detailed impacts of Managing Innovation on companies are best illustrated by examples of its use in different national contexts:

Venezuela: Members of staff from Eureka, a long-established consultancy company in Caracas, became certified trainers and delivered workshops throughout the country. As a result, 961 managers have experienced Managing Innovation since 2009 and the Managing Director of Eureka has stated that the programme has served them ‘a very strong and successful theoretical framework for all of our work’ (5.2). Recently, a random sample of past participants has been followed up and completed a questionnaire and/or were interviewed (19 interviews have been conducted). Using the Kirkpatrick evaluation model, it was found that the immediate level of satisfaction was very high (4.73 out of 5). In the Venezuelan steel company (Industrias Unicon CA), the manager in charge of innovation reports that within 18 months of the Innovation Management programme being introduced:

- 1,400 employees, from all levels, had received an Innovation Management training course, based on the Managing Innovation model
- innovation projects were in the pipeline
- more than 70 employees, from different levels in the organisation, directly participating in the active innovation projects
- widespread diffusion of the basic concepts of the Managing Innovation model, to assure the application of only one perspective, concept and language about the innovation process throughout the organisation.

The same manager also notes that, while unable to declare economic results as the projects have yet to be completed, there are been positive results in the following aspects:

- company-wide adoption of a solid concept of innovation and innovation management, which the company has been able to transmit to increasing numbers of employees at all levels
- increasing credibility and acceptance of the potential of the model at higher levels of the organisation.
- increasing numbers of employees expressing interest in participating in future innovation projects, (5.3).

Tanzania: Nearly all the senior managers of the National Security Fund (the largest pension provider in the country) attended a Managing Innovation course in March 2011 as a team. Having learnt the principles of innovation management they decided to apply them to increase electronic communication to facilitate communication with members. So, for example, a fund member can now pay contributions by mobile phone, which one of the senior managers confirms is a process innovation ‘having a tremendous impact on the efficiency of the Fund’s operations’ (5.4). The major upgrade in the use of electronic communication has, according to senior managers simplified communication with members, reduced cost, improved service levels and, importantly, improved decision making so that, ‘top management can (better) decide on cash-flow’. In addition, the Fund redefined its investment policy (an innovation for them) to part-fund a new multi-billion dollar gas pipeline (5.4).

Chile: Fundación Chile (the national innovation agency in Chile) has had eight of its executives and consultants trained, by CENTRIM, as Managing Innovation Certified Trainers. In 2009 they won a contract with one of Chile’s largest companies to develop innovation capacity in six of their largest divisions. The Grupo Claro Innovation Capacity Development Programme (GCICDP) began in 2010 by establishing a project organisation structure and in April of that year all participants attended the Managing Innovation training programme. The participants were prepared to develop an innovation plan for each division (June 2010) and developed further their innovation skills with follow-up workshops in each of the five phases (August to November 2010)

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(5.5). Implementation was on going throughout 2011 and each division presented its innovation plan to the company's directors in January 2012. A senior manager observed that: 'the methodology taught us... gave us a framework and a very efficient context in the management of ideas and we still use its structure' (5.5). Across the six divisions, more than 1,000 ideas were generated in workshops and 195 of these became projects (5.5). For example, one division (Mega Television) undertook a major structural reorganisation in order to increase 'openness and agility' (5.5).

<h3>5. Sources to corroborate the impact</h3>

- 5.1 Testimonial available from the UK Innovation Director, Logica, confirming that the training programme has become standard for internal and external communication.
- 5.2 Testimonial available from Managing Director of Eureka that confirms how the Managing Innovation programme underpins their work and the Innovation Manager of Industrilkas Unicon CA.
- 5.3 Eureka preliminary report, Caracas, Venezuela. Available on request. This confirms use of the Managing Innovation training programme as an organisation development company's core methodology for working constructively with clients. Report confirms numbers of managers involved and new projects undertaken.
- 5.4 Testimonial available from The Centre for Science, Technology and Innovation, Dar es Salaam, Tanzania. This provides evidence of the use of Managing Innovation as a key element in the development of a national strategy for innovation development and improvements to communication within the company.
- 5.5 'Case Study – Innovation Management Model for Grupo Claro'. Criatalerias, Grupo Claro, Chile. Available on request. This report confirms the use of the Managing Innovation training programme as the core of an innovation capacity improvement programme led by Foundation Chile. Quoted evidence appears on page 10 and details of outcomes, including further projects and a number of ideas generated, appears on page 22.