

Strategic Technology and Innovation Management Programme

Technology leadership and deployment – sharing best practice

David Probert,
drp1001@cam.ac.uk
Rob Phaai,
rp108@cam.ac.uk

The establishment of an effective and enduring technology management system is a key objective for many organisations. Key elements of such a system are the effective deployment of technology (from research and development into use), and the activities of technology leaders. This project addresses these two aspects in a practical manner, building on prior research on the role of the CTO.

Aims

To capture and share practices and experiences in the deployment of technology, and the role development and training of technology leaders, underpinned by a review of the relevant academic literature review.

Approach

Two student projects supported this STIM theme:

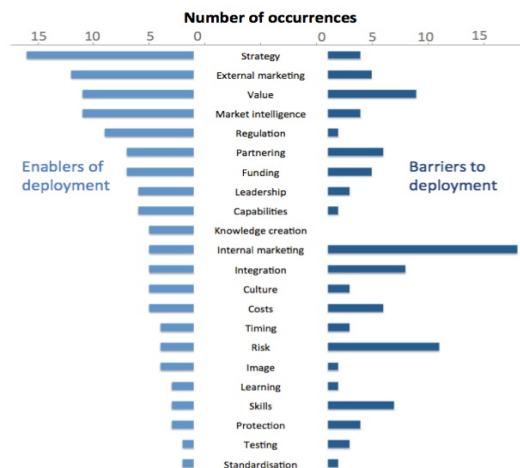
1. Audrey Dallamaggiore (ISMM MPhil student) focused on technology deployment.
2. Nitish Gupta (MBA visiting student) explored the technology leadership themes.

Progress

Working in collaboration, the relevant literature was explored, and companies in a range of sectors engaged with, to capture business issues and practices. This allowed leadership considerations to be positioned with respect to technology deployment.

Company case number	Company	Deployment case
1	Scientific instruments	New system into existing product Transfer of technology from another site Deployment of software platform into products
2	Oil and gas	Technology supporting exploration or production
3	Electro-mechanical devices	New service Radical innovation for new products Environmentally friendly technology
4	Printing technologies	New technology platform for a product
5	Software development	New software
6	Transportation	Technology supporting maintenance
7	Healthcare	Manufacturing technology New manufacturing process Manufacturing process for new products Laboratory automation
8	Technical consultancy	Decommissioning service Additive manufacturing technology Coating technology

Company technology deployment cases



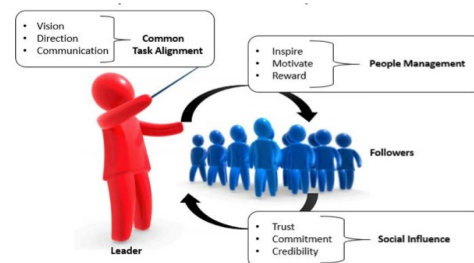
Comparison of the occurrence of enablers and barriers (workshop)

Technology deployment

Relevant literature was reviewed to explore the meanings of, types and approaches to, technology deployment. Building on this, industry case studies and workshops have been used to capture company practices, including enablers and barriers and success factors. A summary for practitioners is provided.

Technology leadership

Literature on leadership in general was reviewed to supplement the CTO-focused PhD research undertaken by Chris van der Hoven. These frameworks provided the structure for interviews to capture company perspectives, and internet research to identify leadership development programmes.



Key drivers of leadership (Chemers, 1997)

Deliverables

Dallamaggiore, A. (2013), *Technology deployment: meanings, challenges and practices*, MPhil thesis, IfM ISMM.

Gupta, N. (2013), *Technology leadership and deployment*, MBA research report, IfM CTM.