

Strategic Technology and Innovation Management Programme 2018



Digital Support for STM

An initial investigation into the potential to use digital support to assist in achieving efficient and effective strategic technology management (STM).

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Aims

Through literature review and interviews, to understand key STM objectives and processes used to achieve these; the extent of digitalization to date; and the potential trade-offs which might need to be considered if moving to digital.

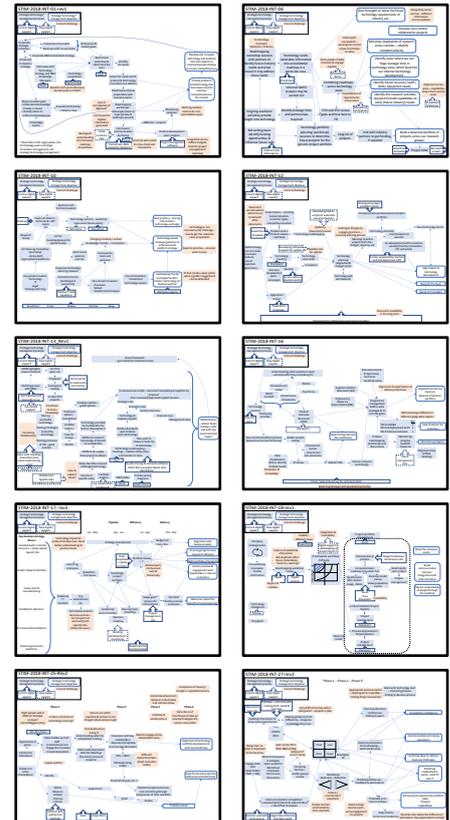
Progress

An initial literature review on STM, digital support, and evaluation found that STM has emerged as a key component of sustainable competitive advantage since the 1990s. STM is complex due to the inherent uncertainty coupled with the need to involve personnel from a broad range of functions who are not used to working together, and who are likely to not be co-located. There is little information relating to the evaluation of STM.

10 semi-structured interviews were held with organisations to investigate their STM objectives, the processes and digital support used, and any challenges experienced. Participants were provided with summary narratives and visual maps as outputs. The collated outputs have been summarised as a linkage grid showing common objectives, processes, and techniques / tools used to support these – both digital and non-digital.

Common challenges experienced include:

- Aggregation of information
- Attitudes to innovation
- Balancing strategic and operational activities
- Capturing information
- Communication
- Digital technology interface
- Protection of knowledge
- Understanding customer benefit.



Deliverables

- Map of key STM objectives, processes used, challenges seen and extent of digital support so far in different contexts.
- List of trade-offs which may need to be considered in different contexts for digital support.

Future Research Opportunities

To take this work further, there are opportunities to pilot digital support for STM activities, particularly focussing on the challenges noted from the initial interviews, to understand if efficiency and effectiveness can be improved.