

## Strategic Technology and Innovation Management Programme

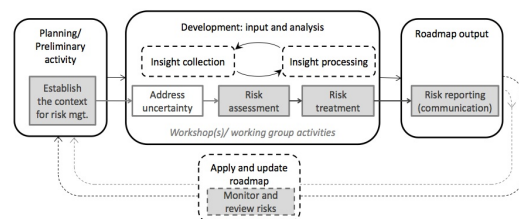
# De-risking projects early: risk-aware strategic roadmapping

Imoh Ilevbare,  
imi22@cam.ac.uk  
Rob Phaal,  
rp108@cam.ac.uk  
David Probert,  
drp1001@cam.ac.uk

Risk management in innovation has been largely focused on the latter stages. 'Risk-aware' roadmapping methods have been developed as part of a doctoral research project to address the front end of innovation and strategy.

## Aims

This project provides an opportunity to access recent PhD research outputs of direct relevance to this topic (risk-aware roadmapping), and to share company experience.

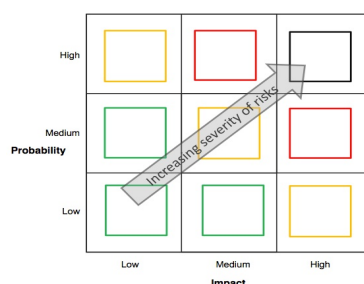


*Risk-aware roadmapping embeds risks (and uncertainty) management steps into the roadmapping process*

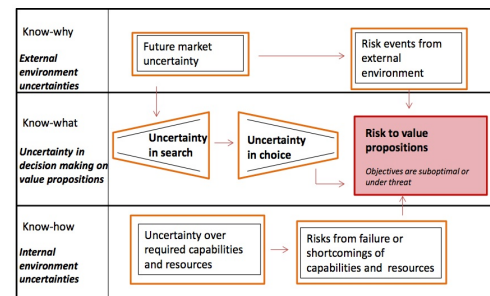
## Approach

By giving explicit attention to how risk (and uncertainty) can be managed right from the early phases of innovation (idea generation and selection, and opportunity identification and analysis), it may be possible to spot and mitigate some of these risks early on so that ideas can be formed into projects with greater confidence of success.

A practical method has been developed and tested in collaboration with firms in a range of sectors, building on the Cambridge 'fast-start' roadmapping workshop approach. A range of risk management tools and techniques have been integrated into the roadmapping approach, ranging from the probability-impact matrix shown below, to TRIZ. Which ones to apply depends on the context, and is considered during the planning phase, along with roadmapping aspects.



*Probability-impact matrix (adapted from Merna & Al-Thani, 2005)*



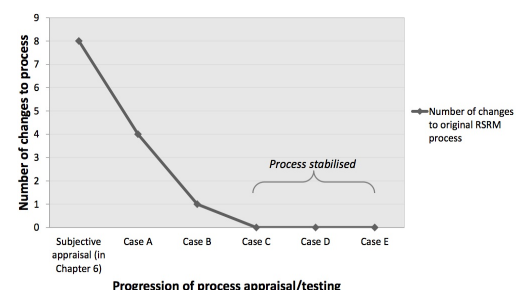
*Manifestations of risk and uncertainty on the roadmap framework (strategic context factors)*

## Progress

The PhD research is in the final stages of a three-year project, involving a review of the literature relating to roadmapping, strategy, innovation and risk management, in order to develop the conceptual foundations of the risk-aware roadmapping approach.

Building on this, a practical workshop-based method was developed and tested through a series of workshop applications, working in collaboration with companies in several sectors. Usability and coherence was tested through application by third-party consultants and a focus group.

A half-day training workshop was held in Cambridge on 12<sup>th</sup> June 2013 to support dissemination of the method, attended by 14 participants from the STIM consortium. A group activity focused on how creativity can reduce the risk of missing innovation opportunities, based on the TRIZ approach.



*Progression of process appraisal/testing*

*Number of changes to risk-aware roadmapping process as appraisal progressed*

## Deliverables

It is anticipated that the PhD thesis will be available by the end of 2013, which provides a complete account of the research and method developed.

A training module has been developed to support dissemination of the technique.