Innovation velocity

Developing a set of parameters that could be used by companies to assess emerging technologies.

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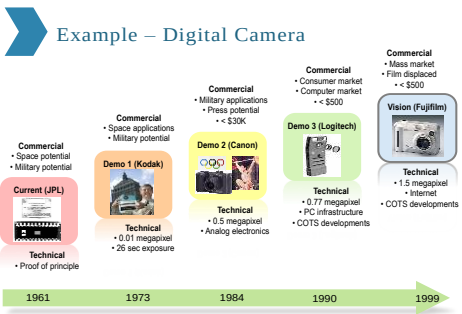
Aims

To develop more understanding of the concept of "innovation velocity" i.e. how quickly an emerging technology could be implemented and commercialised.



Progress

A review of internal and external research was presented at a STIM workshop in April 2018 and resulted in good discussions. Building on this a definition has been proposed: "*Innovation Velocity is the rate at which an emerging technology is becoming relevant to your organisation, measured in terms of the improvement of one or more specific parameters of technological, organisational and infrastructural performance relative to your organisation's zone of opportunity".*

Two main areas of current work are:

- Adapting an existing review process based on assessing the market potential of new materials[1]
- Developing a profiling approach linked to the definition above and the process

Profiling: draft overview of key elements

Relevant aspects for company		Typical characteristics of innovation			
Areas	Factors	Niche	Regular	Revolutionary	Architectural
Technology	Attractiveness in terms of: -Problems it may solve -Opportunities	Narrow Low High Low			Wide High Low High
	Current activities/ position	Low Early Slow Slow			High Late Fast Fast
Internal/ Organisational context	Readiness Control	Low			High
	Appropriability regime (Likelihood of capturing value/return)	Established Available			Non-existent
External/ Environmental context	Market structure and prices Government regulations Turbulence Predictability Diffusion	Established Low cost incentives Extensive regs Low turbulence High predict Well diffused			Emergent High cost incentives Low regs High Turb Low predict Low diffusion
	Infrastructure Progress in closely related technology clusters Ecosystem	Weak Slow Loose			Strong Fast Tight knit

Outline draft process:

Step 1 – Profile
-WHAT the technology does and WHY will it be important to you?
-HOW supportive is the environment?
-HOW well prepared is your organisation - do you have the capability?

Step 2 - Analyse
Assessing market potential and size & speed of take up:
-Performance/cost trade offs versus current levels
-Innovation category mapping
-Historical speed of adoption curves for similar innovations
-Modelling effect of new technology on wider supply chain

Deliverables

Briefing note describing process and profiling approach; STIM 2019 project to test approach.

[1] *Succeeding with New Materials (Maine & Ashby 2002)*