Innovative Iterations and Interactions

Part 1

When working with some of the most distinguished and effective companies, those with world class products in profitable and sustainable markets, there is one crucial organisational competency in evidence more than any other; and that is the ability of the engineering and scientific people to understand the markets which they are serving, and the ability of the marketing and sales teams to understand the design, development and industrial processes.

The principle reason for this success is that the builders with the operators, the constructors with the consumers, the technology with the market, are all interacting with each other. There is thus a continuing dialogue between cost and effort, value and application. This same understanding is at the heart of agile and innovative teams. Instead of making the relationship contractual and transactional, it becomes cooperative and transformational. It does not prejudge the solution, but rather sets out to understand the real problems. The approach is focused on the evaluation and delivery of valuable end results instead of assuming that the usefulness and usability of the end result are already a foregone conclusion.

Agile approaches set up a framework of stages (called sprints and timeboxes) and team sessions. The interactions are based on roles which enable the developers and the customer perspective to interact within a fixed deadline and level of effort. It produces prototypes and 'minimum viable products' that can be inspected and adapted in iterations that converge upon results fit for purpose: So far so good.

There are numerous and various questions to be asked when innovating, amongst which are "What will you tell a friend or colleague?" "What must it do in order to be used and useful in your life or work?" "How will you know when you have succeeded?" These are all customer questions and are most crucial when risks and opportunities are commercial.

But also there are scientific and technological questions such as "How can we integrate into the existing institutional framework, into the infrastructure, respect regulations, deploy, operate, ramp up, revamp, maintain, recycle, provide support and finance those services?" Whether commercial or technical, so-called 'Leap Of Faith Assumptions' require validation. They require a managed and scientific trial and error approach. The difference between technological risks and marketing risks is that the interactions will be with experts and systems, rather than customers and users.

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Part 2

Thus, innovation becomes a matter of setting up the most appropriate interactions and obtaining the most valuable feedback for minimum effort: (Maxi feedback for minimum effort). By definition, most of these interactions will be with the outside of the organisation, clients and suppliers. In fact, this process is similar to communication. Communication succeeds when it produces reliable information and comprehension. It also explains why innovation looks and feels so much like learning.

In a learning process it is of vital importance to identify the sources of learning; both inside and outside the organisation. One of the underlying reasons for the intensification of digitalization is that feedback loops have been accelerated and enriched by the ease of treating and transmitting data, and turning into usable information. Innovation is like risk management in that it is information and comprehension hungry. Good stakeholder management sets up communication, but instead of perceiving communication as providing information, consider it more as consulting stakeholders to obtain information and comprehension. Innovation is more than ever a managed learning process about the customer and the technology.

Neither of these commercial or technical channels should be too narrow. Customers are composed of buyers, users, operators and transporters, carers and consumers, while experts can really cover any activity that ends with “ility” and much more, such as availability, accessibility, portability, manufacturability, maintainability, as well as speed and performance, safety and security. Innovation begins to resemble the requirements management and elicitation process, but with one major difference: It builds upon the continuous interaction between perception of the problem, and delivery of the solution.

Among the key sub-skills are the ability to set up valuable experiments and prototypes, and the ability to extract valid and actionable metrics, which are leading rather than trailing indicators. In other words, these skills are all about the ability to obtain critical information early and to act by re-designing and co-creating the next steps. Current technologies allow us to advance much further and more quickly through more knowledge creation iterations.

Recently a team of six astronauts, four men and two women, spent 8 months simulating life on Mars in an isolated artificial environment on the slopes of Mauna Loa volcano in Hawaii. One of the critical learning messages was the challenge of having to wait 20 minutes to obtain feedback from the outside world and the massive amount of extra time necessary to solve problems simply due to a lack of interactive connections!

That’s how important innovation iterations and interactions have become!