

Managing Innovation and Entrepreneurship

From Idea to Result

Dr. Jack M. Wilson, Distinguished Professor of Higher Education, Emerging Technologies, and Innovation



Themes

- Innovation as a process
- Patterns of behavior which become embedded in routines – structures, procedures, policies – for making innovation happen
- Varies between organizations – particular culture – ‘the way we do things round here’

Bessant and Tidd Process Model

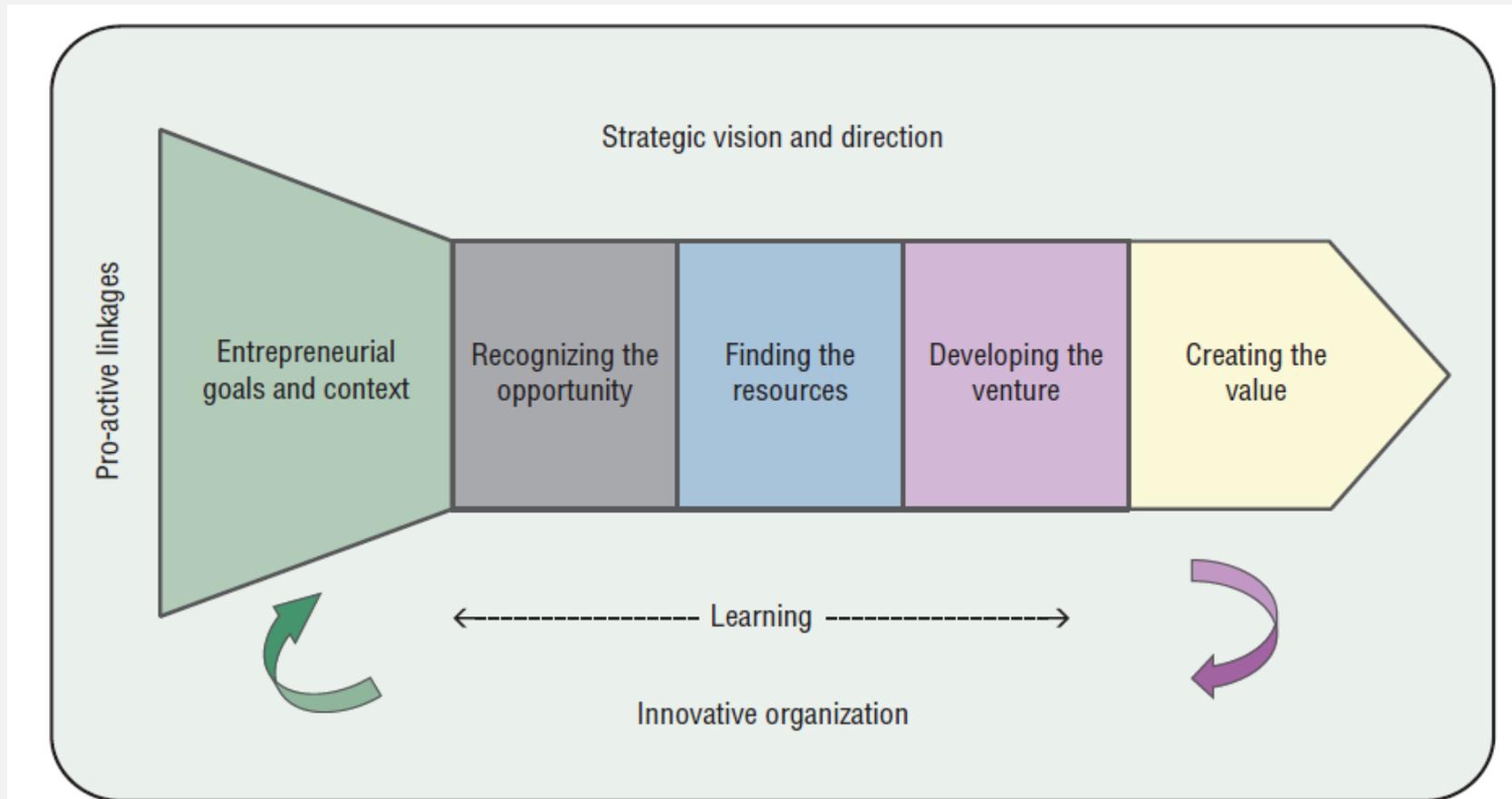
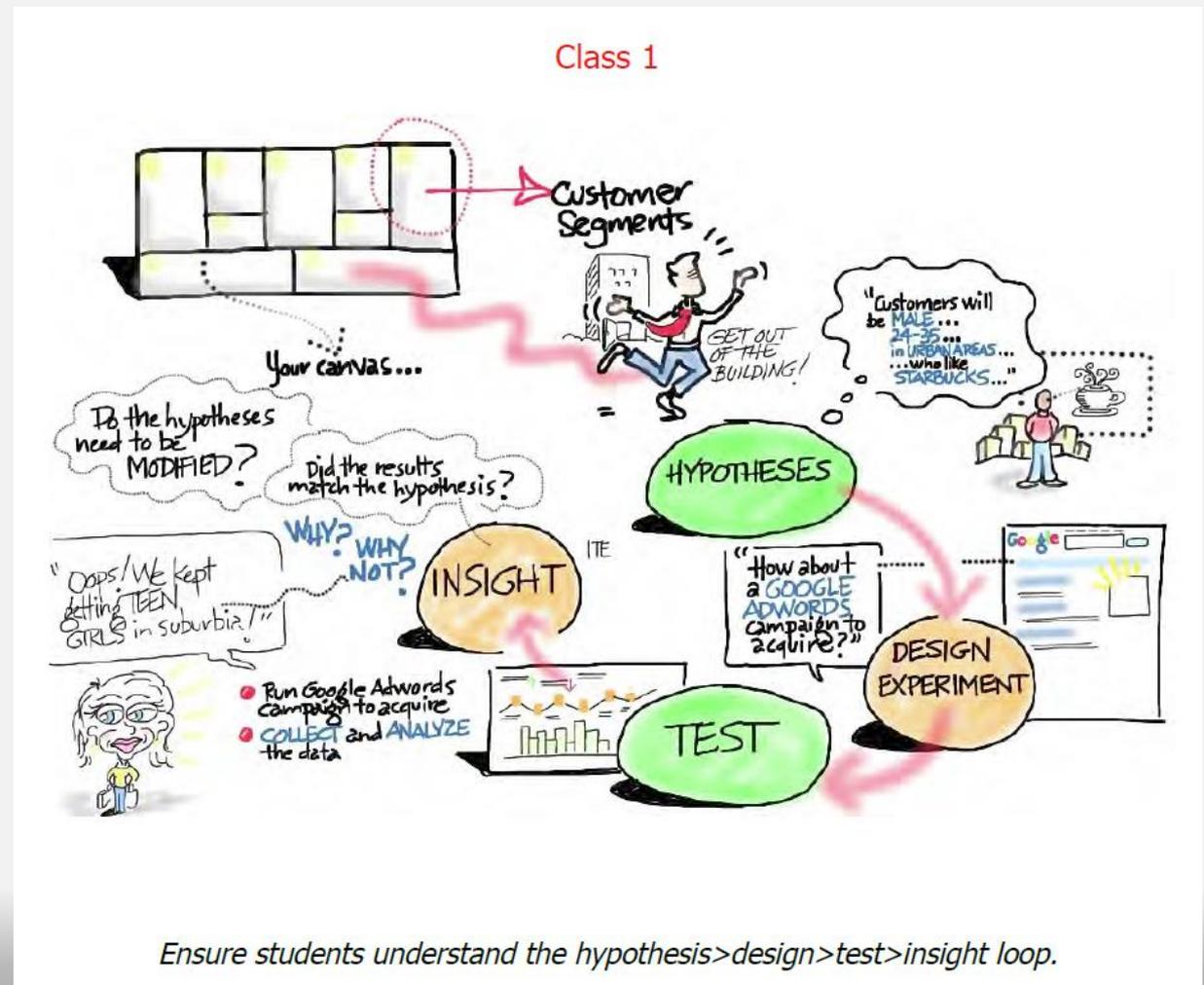


FIGURE 17.1 Simplified model for innovation management

Agile Process

Back in chapter 10 on the Steve Blank's Lean Launchpad we saw that most entrepreneurial research now views the process as far less linear and far more flexible and cyclic. We go around and around the learning process and make adjustments constantly.



Failure is a necessary learning process.

- Provides insights about what not to do
 - Failure helps build capability
 - Failure helps others learn and build capability
 - So how to learn?
-
- As we saw, both Effectual Entrepreneurship and Steve Blank's Lean Launchpad enshrine failure as an important part of the process.
 - The **Pivot** is defined as the response to learning (or failure).

- **Dynamic capability**

- The ability to review and change the way innovation is managed
- Steve Blank (and I) would call this a Pivot.

3M - from Innovative Leader to Incremental Innovation

- <http://www.innovation-portal.info/wp-content/uploads/3M.pdf>

Background

- Large (70K employees, \$15bn sales), global operations (200 countries), multi-product (50K range), multi-market business.

Innovation 'Claim to Fame'

- This company has been around for just over 100 years and during that period has established a clear reputation as a major innovator. Their technical competence has been built up by a long-term commitment to R&D on which they currently spend around \$1bn p.a.; this has yielded them a regular position in the top 10 in US patents granted. They have launched a number of breakthrough products which have established completely new markets and they have set themselves a consistent stretch target of getting 30% of sales turnover from products launched during the past four years.

How Do They Manage Innovation?

- The company presents a consistent picture in interviews and in publications – innovation success is a consequence of creating the culture in which it can take place – it becomes 'the way we do things around here' in a very real sense. This philosophy is borne out in many anecdotes and case histories – the key to their success has been to create the conditions in which innovation can arise from any one of a number of directions, including lucky accidents, and there is a deliberate attempt to avoid putting too much structure in place since this would constrain innovation.

The 3M approach.

- Recognition and reward.
 - Reinforcement of core values.
 - Sustaining 'circulation'.
 - Allocating 'slack' and permission to play.
 - Patience.
 - Acceptance of mistakes and encouragement of risk-taking.
 - Encouraging 'bootlegging'.
 - Policy of hiring innovators.
-
- The post-it note story is one of the wonderful examples of failure. A 3M scientist was trying to develop a super strong adhesive. He failed miserably by creating a very weak low tack adhesive. After ten years of trying to figure out a use for it, they tried post-it notes. The rest is history.

3M –from hero to also ran.

- For many years 3M was in the **top three** of Business Week's list of most innovative companies.
- A new CEO came in who shifted the emphasis from "breakthrough innovation" toward incremental and process innovations. The "Six Sigma" approach is one of the very best tools for process innovation and incremental innovation, and the new CEO, James McNerney came from a long career at GE, which was one of the leading practitioners of Six Sigma.
- The history notes that: "One of McNerney's first initiatives was to launch Six Sigma, a quality control and improvement initiative that had been pioneered by Motorola, Inc. and AlliedSignal Inc. and then adopted by GE in the late 1990s. The aim of the statistics-driven program was to cut costs by reducing errors or defects.
- McNerney's cost-cutting focus was shown in other early initiatives, and 3M during his first year saved more than half a billion dollars through various efforts, including the layoff of 6,500 of the company's 75,000 workers and a major streamlining of purchasing functions. Another initiative, dubbed 3M Acceleration, involved expending more product development funds on the most promising ideas, dropping weaker ideas earlier in the process, and in this way getting the best products to market much faster. In implementing this and other initiatives, most of which focused on making the company more efficient, McNerney had to be careful not to drive out 3M's culture of innovation on which both the company's fame and its long history of success rested. Nevertheless, one apparent victim of McNerney's efficiency drive was 3M's revered "15 Percent Rule," which had allowed its employees to spend up to 15 percent of company time on independent projects, a process called "bootlegging" or "scrounging." Although the rule still existed in theory, it was increasingly difficult to act upon it within the evolving culture at 3M, which was seemingly becoming more short-term oriented."
 - <http://www.fundinguniverse.com/company-histories/3m-company-history/>
 -
- The result was that by 2006, they fell to **7th** on the list of most innovative and to **22nd** in 2007. But by that time McNerney was gone to Boeing as their CEO.

Kolb's Learning Cycle

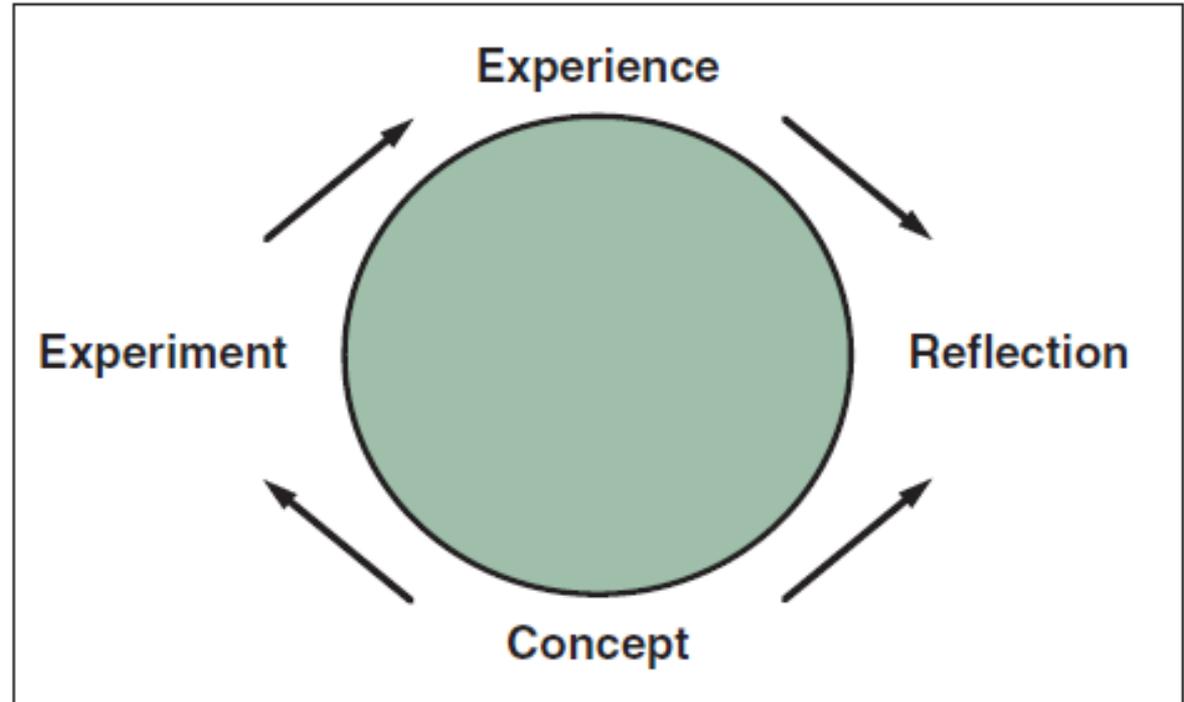


FIGURE 17.2 Simple model of the learning cycle

- In other words, learning is not a serial process, it is a cyclical process that repeats. Note how the Lean Launchpad model adopts this cycle.

Structured Learning

- Internal: Rather than simply stepping back for a reflective pause we could employ some structured question frameworks. And we could ask others to help us in the process, acting as critical and challenging partners to help us learn.
- External: We can develop our own concepts, but we can also use, adapt and try out new ideas developed elsewhere. The 'theory' of innovation has emerged from many experiences codified into a rich body of knowledge and this is available to draw upon. We don't have to reinvent the wheel.
- External: Similarly, we don't have to make all the mistakes ourselves. We can learn from other's experiences

Open Collective Innovation

- http://www.innovation-portal.info/wp-content/uploads/Open_Collective_Innovation.pdf
- open – involving multiple and distributed players;
- collective – based on the principle that many minds generate a high volume and variety of ideas; and
- purposive, in that it is organized as an innovation system. Making OCI happen may involve learning new skills, developing new structures, understanding and harnessing new technologies and finding new ways of organizing and operating at a network level.

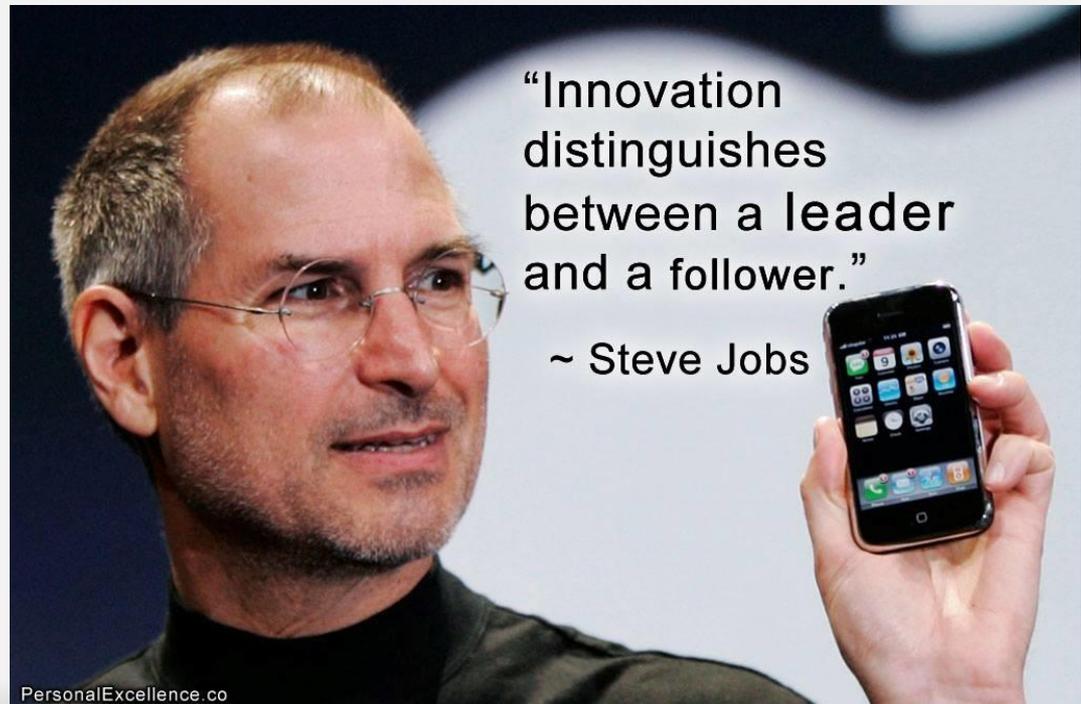
-
- How well do we manage innovation?
 - How well do we manage service innovation?
 - Start-up phase for new ventures.
 - Do we engage our employees fully in innovation?
 - How well do we manage discontinuous innovation?
 - How widely do we search in an open innovation world?
 - Do we have a creative climate for innovation?
 - Can we make the most of external knowledge for innovation?
 - Absorptive capacity audit
 - (<http://www.innovation-portal.info/wp-content/uploads/absorptive-capacity-audit.pdf>)

A Strategy?

- A clear roadmap for change
- Does the innovation we are considering help us reach the strategic goals (for growth, market share, profit margin – or changing the world in some way through creating social value, etc.) which we have set ourselves?
- Do we know enough about this to pull it off (or if not do we have a clear idea of how we would get hold of and integrate such knowledge)?

Innovation Enterprises -characteristics

- Shared vision, leadership and the will to innovate
- Appropriate structure to support innovation
- Identifying and supporting key individuals
- Effective team working
- High involvement innovation
- Creative climate
- External focus.



Things to remember

- Open innovation and the changing landscape for searching
- User innovation and the growing importance of active stakeholder involvement in innovation
- Discontinuous innovation – learning to cope when the underlying rules of the game are changing
- Developing and emerging economies and the way the innovation game is changing as these places become the central focus for economic and social growth
- Social innovation – where the core motivation for change becomes improving well-being. It can be for-profit or non-profit.
- Sustainability-led innovation – where the question of how we deal with the resource, energy and environmental challenges of living on the planet take center stage.

Three things to help an organization develop an innovative approach.

- **Innovation Audit**
 - A structured review of the innovation capability across any organization
- **Innovation Strategy**
 - A statement how innovation is going to help an enterprise full fill its mission, and how it does that.
- **Innovation Strategy Deployment**
 - The process of communicating and implementing the strategy, and enabling people to do their part.