



Agile innovation/ Lean start-up

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Managing Innovation

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Agile innovation is a term used to describe a series of methods which originated in the field of software development. It has been increasingly applied to other development projects for new products, services and even process re-engineering. At its heart is an approach which emphasises focused high intensity team work (often called a 'scrum'), stretching goals and rapid cycles of prototyping, testing and learning. Where conventional project management techniques set a goal and then break down the various tasks needed to complete it into key activities and allocate resources to them agile methods are more open-ended, allowing considerable creativity and flexibility in the execution of activities which will move nearer to the stretch target.

The basic framework in an agile approach involves setting up a core self-managed team, drawing on different functions and with a clear and stretching target. The team use various creativity tools (such as brainstorming and design thinking) to generate a list of key features which they think will be of value to the end user. Two key roles operate – a team leader who represents the end user's point of view and ranks these features from that perspective, and a process facilitator whose role is to help manage the support and psychological safety aspects of the team.

Once the stretch goal (vision) is broken down into a ranked list of contributing projects the team work on short problem solving cycles ('sprints') around these issues. Typically there is a short review meeting at the start of each day to explore progress, challenge and strengthen ideas and develop experiments which they then test out during the day. The results of those experiments provide feedback and data to fuel the next day's review meeting and drive the sprint forward. Experiments may be of a technical nature – for example writing code or developing a working prototype – or they may be market tests, trying out the ideas with potential end users. In both cases the idea is to move through a fast cycle of experiment and learn, with the prospect of failure seen simply as a learning opportunity rather than a block to further progress.

Agile methods work – various reports suggest time savings of between 10 and 40% and the quality of solutions is often much better¹. Much of this success comes from focused creative teamwork and once again we can see many of our core competencies being deployed. The stretch target, the psychological safety which comes from having an autonomous and empowered group with the licence to experiment, the constructive controversy which emerges during the scrum process are all critical success factors in the agile approach.

Lean start-up

Lean start-up (LSU) is a similar approach for entrepreneurs developed by Eric Ries and popularised by him and Steve Blank in various books and articles. It draws on his own experience as an entrepreneur

¹ Beth Altringer, "A New Model for Innovation in Big Companies," Harvard Business Review, November 19, 2013, <https://hbr.org/2013/11/a-new-model-for-innovation-in-big-companies>

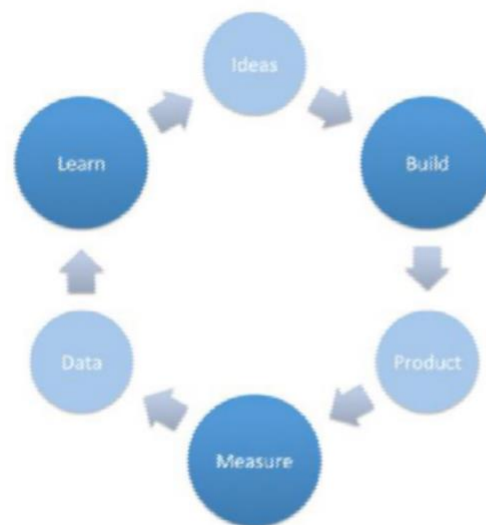
and his reflections on what went wrong with the process. At its heart is the view that starting a new venture is about a series of short fast experiments rather than a carefully planned and executed big project. Each cycle is carefully designed to generate information and test ideas out on the market – and after each prototype the venture idea is adjusted. Key principles are the 'minimum viable product' (MVP) which is a simple basic version of the overall product idea which can be tested on users to gain feedback, and the 'pivot', which is changes in direction as a result of that feedback.

The origin of the 'lean' idea comes from the low waste approach pioneered in manufacturing and widely used across all sectors. It has been applied to product development to reduce time and resources spent and in software in particular has been allied to a second principle, of 'agile' development. Here the main project is broken down into a series of fast short cycles of prototypes and learning, with the development team effort concentrated in fast bursts of intense activity – the 'scrum'.

LSU developed in the field of software and web applications but the underlying philosophy can be applied in any project. There are some core elements to the approach:

(a) Build-measure-learn

The principle here is to design a hypothesis to test an idea and then adjust the project on the basis of that feedback. So, for example, it can be used to test a particular feature where the hypothesis is that people will like and value it; if they do then retain the feature, if they don't, drop it.



Source: The Lean Startup

(b) Minimum viable product (MVP)

This is the minimum configuration of the new venture idea which can be used to run a build/measure/learn cycle – a simple prototype whose purpose is to generate data which helps adjust the core idea for the venture.

(c) Validated learning

An important element of LSU is to work with data which provides useful information and helps learning about the venture. Ries talks about the problem of ‘vanity metrics’ which might appear to be measures of success but don’t actually reveal anything useful. The number of people visiting a web-page for example is not helpful in itself but the amount of time they spend or the features they click on may be because it gives information about the underlying things that people are valuing – at least enough to send some time on. Equally the number of return visitors is a useful metric.

(d) Innovation accounting

Linked to validated learning is the idea of using data to ensure resources are being well spent. To do this requires establishing a baseline and then improving on the performance linked to that by varying elements in the MVP – a process Ries calls ‘tuning the engine’. For example a simple baseline could be set by a market survey which asks people if they would buy a product or service. Then launching an MVP cycle would generate data which suggested that more (or less) of them would be interested – and the core concept could be pivoted before a re test cycle. In this way the scarce resources associated with innovation can be carefully tracked.

(e) Pivoting

The core assumption in LSU is that the only way to get closer to what customers actually need is to test your idea out on them and adapt it according to feedback from several learning cycles. So there is a need to use data from experiments to adjust the offer – the idea of a pivot is not that you change the idea completely but pivot it around the core so that it more exactly meets market needs. YouTube was originally a dating site on which one of the many features offered was the ability to share short video clips. During MVP tests it became clear that this feature was particularly valued so the original idea was adapted to put this more up front; further tests showed it was sufficiently valued to make it the core feature of the new business venture.

The essence of pivoting and MVP could be summed up as ‘launch and see what happens’ – inevitably something will and if the experimental launch is well designed it will help sharpen and refine the final offering without too much resource waste. Even if the MVP is a ‘failure’ there is valuable learning about new directions in which to pivot.

Ries talks about several versions of the pivot:

- *Zoom-in pivot*, where a single feature in the product now becomes the entire product (as in the YouTube case).
 - *Zoom-out pivot*, where the whole product becomes a single feature in something much larger.
 - *Customer segment pivot*, where the product was right, but the original customer segment wasn't. By rethinking the customer target segment the product can be better positioned
 - *Customer need pivot*, where validated learning highlights a more important customer need or problem
 - *Platform pivot*, where single separate applications converge to become a platform
 - *Business architecture pivot*, essentially changing the underlying business model –for example from high margin, low volume, to low margin, high volume.
 - *Value capture pivot*, where changes involve rethinking marketing strategy, cost structure, product, etc.
 - *Engine of growth pivot*, where the start-up model is rethought. Ries suggests 3 core models for this – viral, sticky, or paid growth – and there is scope to change between them
 - *Channel pivot*, where different routes to reach the market are explored
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- *Technology pivot*, where alternative new technologies are used but the rest of the business model – market, cost structure, etc. – remains the same

(f) Single unit flow

An idea which originated in the Toyota Production System and is one of the cornerstones of 'lean' thinking. In essence it is about working in small batches and completing the tasks on those rather than working in high volume. Think about doing a mailshot which would involve stuffing envelopes, addressing them, stamping them, posting them, etc. Doing this in high volume one task at a time runs the risk of being slow and also of errors being made and not detected – for example, spelling someone's name wrong. Working one unit at a time would be faster and more accurate.

Applied to LSU the idea is to work at small scale to develop the system and identify errors and problems quickly; the whole system can then be redesigned to take out these problems.

(g) Line stop/ Andon cord

Another idea drawn from Toyota is the ability to stop production when an error occurs – in the giant car factories this is done by means of a cord and a light which flashes above the place where the employee has found a problem. In LSU it is the principle of making sure there are error checks and that the process is stopped until these are fixed.

(h) Continuous improvement

Another Toyota-based principle which is to keep reviewing and improving the core product and the process delivering it. By working in small batches (see (f) above) it is possible to experiment and optimise around the core idea.

(i) Kanban

Yet another 'lean' feature this refers to the system of stock management associated with just-in-time production. Applied to LSU it puts improvement projects around the core product/venture idea into 'buckets' which are processed and progressed in systematic fashion. It is a powerful aid to managing capacity since new projects cannot be started until there is room for them in the system.

(j) Five whys

A powerful diagnostic tool (see chapter xxx for more) this helps find root causes of problems and directs action towards solving those problems rather than treating symptoms.

Further links

[This is Eric Ries speaking at LSE explaining the lean startup approach](#)

[This is a good explanation of scrum methods](#)

[This is a useful overview of agile approaches](#)