Innovation Planning Using Non-Traditional Methods

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Summary

"In preparing for battle, I have always found that plans are useless but planning is indispensable (D.D. Eisenhower)." Are our traditional planning methodologies (e.g., business, strategy, project, quality) applicable to innovation? Find out why or why not in this presentation, and come away with new thinking, approaches, and tools that can help with your innovation plans.

Keywords

Innovation; Project Planning; Agile; Innovation; Business Plan; Strategic Plan; Quality Plan; Lean Start-Up

Planning for Innovation – Are Traditional Methods Applicable?

Planning helps us accomplish the things we set out to do and achieve our goals and dreams. This is true for our innovation goals, too. Having the innovative idea is not enough – seeing it through is what makes it an innovation and this is unlikely to happen without a plan.

Over time, we've developed processes and methodologies for planning. These (now traditional) processes vary depending on the situation and include business, strategy, project, quality, etc.

How well do these traditional planning methods work for innovation?

To answer that question, let's review what we know about planning and managing innovation. Peter Drucker said "Innovation is a practice, not a flash of genius." Successful innovation results from analysis, systems, and hard work, and planning for innovation means setting direction, involving people, and giving them resources. As Drucker noted, innovation requires a process and your plan spells out how you will follow that process.

Traditional planning approaches offer sound principles in management, many of which can be applied to innovation; for example, innovation planning requires that the team be on the same general pathway, with a clear direction. Teamwork is essential, and managing the team contributes to the overall success of the innovation. Innovation requires resources; allocating resources ensures the level and timing needed for the innovation to proceed.

Traditional planning also includes the details of how processes will be followed. Organizations that are successful innovators have a defined innovation process. Planning for their innovations involves defining the application of the process, such as details of requirements gathering, what external inputs are planned, and how the target user or customer base will be determined.

There are some key areas where planning for innovation requires different approaches. Clayton Christensen said that plans for disruptive innovation 'must be plans for learning rather than plans for

implementation.' Innovation planning must acknowledge that the desired end goal or outcome is often not known at the beginning. Innovation planning sets out what critical information is needed, obtains that information, and then determines next steps. Key areas where innovation planning differs are in the need for value analysis, the approach to scheduling, and the importance of change management.

Value Proposition

We know it is important to develop the innovation vision and its value proposition. The value proposition is analogous to a high-level plan for the innovation, but this step may not be present in traditional planning methods. The value proposition is essential for communications and provides a basis to challenge and improve the innovation concept and clarify thinking about it.

The value proposition is in some ways similar to a traditional project charter, but with greater emphasis on the value perspective of the customer, as well as the innovation provider. The innovative solution must address the customer/users' needs, or pain points, but must also benefit the providing organization, most often in profitable sales. It has to 'work for both of us.' Figure 1 illustrates the different components of the value proposition (Osterwalder) and how they need to fit together.
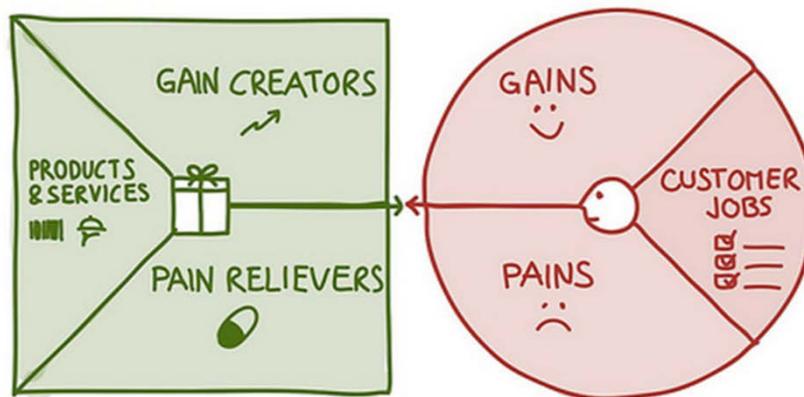

Figure 1. Value Proposition

Scheduling

While most types of planning include a time element, they typically assign a schedule of activities and then manage to it. For innovation, planners need to understand the innovation process and allow for the necessary time in the early phases to adequately research user needs and evaluate solutions. This takes time; the project may benefit from a period of 'incubation' - time for thoughts to gel and early vetting to occur.

As the innovation progresses, speed becomes the critical element, and this may not be adequately managed by adhering to a project schedule. Innovation plans must allow for rapid shifts in direction and frequent and multiple adjustments to activities, all while staying true to the overall objectives of the innovation. This is best accomplished by using shorter, more frequent cycles in a circuitous, rather than linear fashion. Building in time for regular re-assessment of the value proposition is an important activity for innovation planning, as well.

Change Management

Traditional planning methods also require major assumptions up front that are often based on poor projections and a lack of suitable data. Moreover, these planning approaches typically contain only limited customer/user inputs until the end, which may force untimely decision points and cause schedule extensions that are too long in the world of 'first-to-market' competitiveness.

As with scheduling, frequent and regular reassessment of the initial assumptions and innovation data, then modifying the plan as necessary, will help to ensure a successful outcome. In many situations, daily touch-base meetings are used to enable rapid changes and adjustments. The key is to act promptly and not wait for a predetermined 'change point' to decide what and how to change the plan.

In order achieve such rapid change management, decision-making processes must be clear and not cumbersome. Push decision-making authority to the lowest level possible without losing leadership oversight. Requiring every decision to go 'to the top' will slow down the process, lose momentum, and impede successful delivery of the innovation. Acceptance criteria should be set in advance, as early as possible, and appropriate measurements built into the plan. Then, when data are available, the decision is objective and easily made, and decision points and next steps are clear.

So what methods and tools have been shown to work well for innovation planning? A few alternative models, based on traditional business, strategic, project and quality planning methods, follow.

The Innovation Business Plan

The traditional business plan typically describes the concept and plans for a new business idea. The target customer base is defined and the expected timeline is projected, usually drawn out for 3 to 5 years. There may be an analysis of business risks, and most likely there will be a financial profit and loss estimate. This plan is often directed to the financiers (bank, investors, etc.) and is most likely based on untested assumptions, with little accommodation for changes and adjustments. Significant resources are spent in developing this plan, which may never be read in its entirety and once financing is obtained, may never be revisited or updated.

One business planning methodology that has been shown to succeed in getting innovations to the marketplace is Lean Start-Up (LSU; Ries). Ries noted the 'waste' inherent in many business plans for startup companies, including his own failed startup attempts. He set out to 'lean out' the wasteful steps and shorten the time from business concept to marketable deliverable. The objective of LSU is to learn how to build a sustainable organization around an innovative idea with the fewest cycles.

The LSU method assumes that successful entrepreneurship depends on a systematic approach and good management, not unlike a traditional business plan. However, LSU recognizes that startups and innovation initiatives are highly unpredictable with little to base accurate forecasts on. The method focuses on rapid cycle times, involving customers at every step, and a scientific approach to decision-making, unlike most traditional business plans. The method begins with a Minimum Viable Product, which is tested with potential or real customers against a pre-determined 'hypothesis' and measurable criteria. This scientific approach provides empirical evidence of the product's appeal and business potential. Based on validated customer feedback, adjustments (major or minor) are made and the process repeated.

These rapid iterations with measurable results reduce the time wasted on alternatives that don't meet customer needs, supporting the rapid decision making needed for successful innovation plans more accurately than market forecasting or other classical business planning techniques. They also help prevent executing a plan that ultimately leads to failure.

With the validated learning from customer feedback, the business can now make informed decisions about next steps – what adjustments or tweaks are needed? What additional or modified features will help address the user's pain points? Should the product be made over entirely (pivot), or even shelved until a better solution presents itself? This 'Build-Measure-Learn' cycle is an effective way to make progress on product development along the most efficient pathway. It is a steering process that replaces traditional complex business plans based on untested assumptions.

The key to moving through the 'Build-Measure-Learn' cycles of the LSU approach is to use objective and actionable metrics at each step. Use real data for the present situation (e.g., prototype, smoke test, pilot) and test the riskiest assumptions first, using pre-determined acceptance criteria to decide if the test was successful. Adjust the criteria as you make progress – you may start with wide tolerances and big losses, until you have enough information to minimize risk and make more accurate predictions.

Many 'Build-Measure-Learn' cycles and the accompanying measures and data analysis will be required to get to a fully viable product; this is the hard work, but well worth the effort in the end because you will have reduced the chances of development dead-ends and wasted time and resources to get your product to the end user.

Applying a planning system in this way helps to connect the 'opportunity' to the 'solution' and improves the success rate of innovation endeavors. LSU has been successfully applied to a number of start-up businesses, such as SnapTax (Intuit) and Toyota's Sienna mini-van. It continues to drive the planning of more and more startup companies worldwide, with LSU chapters, workshops, and online communities available to support LSU practitioners.

Innovation and the Strategy Plan

Organizational strategy plans are typically an annual exercise that updates the organization's strategic objectives and defines or redefines its future direction. Inputs include SWOT analyses, market information, supplier and partner involvement, and resource needs. Strategic plans are often generated by leadership in special meetings, sometimes held off-site in a 'retreat' environment. The organization may follow its Strategic Planning Process to ensure the proper steps are completed and the expected inputs received.

Unfortunately, the value of these planning efforts is often in the discussions themselves, as the Strategic Plan is then filed away and forgotten until the next year. The Strategic Plan often takes too long to write and approve, is not updated with any regularity, and is almost never read by others.

Organizations looking to streamline their strategic planning process and keep it focused on innovative solutions may want to consider a business model canvas approach (Figure 2; Osterwalder). The 'canvas' refers to the visual chart on which the organization's key strategic elements are summarized. The canvas provides a hands-on tool for groups of people to quickly collaborate, make changes to the plan,

and easily visualize it from day-to-day. Lean Canvas (Maurya) and other niche canvases have been developed since the original work of Osterwalder.
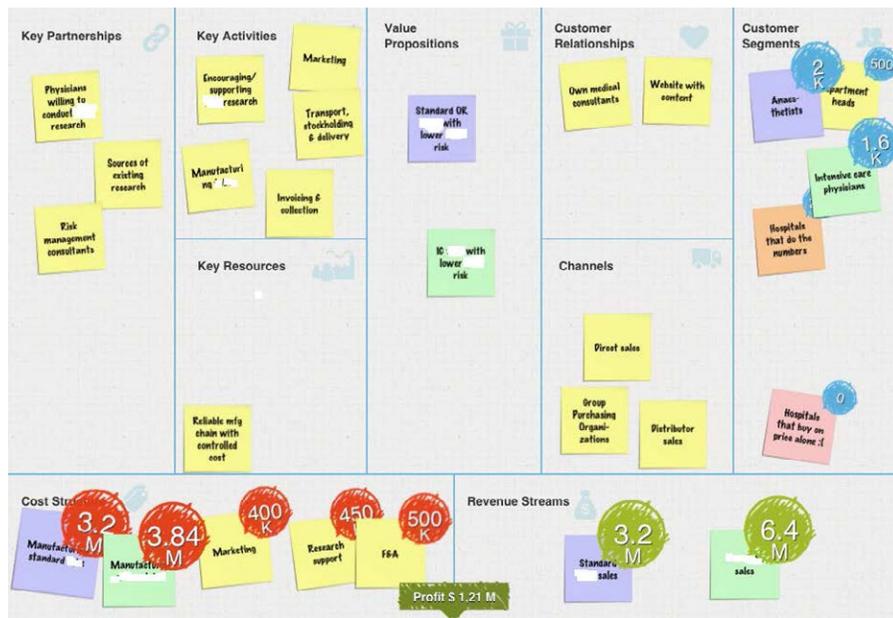

Figure 2. The Business Model Canvas

The core of the Business Model Canvas is the value proposition – the description of the needs and opportunities to be addressed and the innovative solutions the organization will pursue to meet those needs. From this central objective, other elements of the business strategy are laid out on the canvas, including the potential market segments, competitive situation, key metrics, and revenue and cost estimates. All of this information is displayed on one sheet that can be kept – physically or electronically – in a location where all those involved can easily see it and changes can be made quickly by moving, adding, or removing a sticky note or two.

Innovation Project Planning

Traditional project planning has a well-defined methodology and is consistently and successfully practiced by many industries worldwide. Standard elements of many project management processes include the Project Charter; the work breakdown structure; regular review and adjustments of scope, time/schedule, and costs; and focus on timely deliverables. Communication among team members, stakeholders, and sponsors and customers is integral, as is assuring quality of the project outcome.

Although these methods have been largely successful, they may not be sufficient to support innovation projects. Traditional project planning is being supplanted by methods learned from the agile software community. Agile techniques are applicable to non-software projects, as well, and data show that agile methods are rapidly gaining on more traditional project management methodologies.

Planning for agile projects involves defining and scheduling the work to be done at the higher, overall level, but more importantly, in shorter project iterations, and even day-by-day increments. Whereas traditional project planning is done with a fixed set of features or outcomes, and the plan to achieve them by adjusting time and cost, agile project planning focuses more on the features or outcomes that

can be completed within fixed time and cost units. This allows more flexibility, more rapid changes and adjustments when needed, and ultimately higher quality outcomes because changes have been built in along the way and not discovered and addressed at the end of (or even after) the project's completion. For agile projects, the focus is on rapid completion of a defined set of tasks and moving them through testing and approval, before moving on to the next set of tasks.

Communication in these more agile project plans is still integral, as all project team members must be tuned into the plan. They need to be aware of the frequent project updates as new information becomes available, priorities shift, and tasks are added or removed. Traditional project plans may store up this information till the weekly or monthly team meeting; however, for innovation, things must move more rapidly and team members must be able to make decisions and adjustments more quickly.

Automated tools or plain old office tools like whiteboards and sticky notes are useful to keep innovation project team members current. Kanban, initially developed as an inventory flow methodology, can be used to manage the throughput of project tasks (Figure 3; atlassian). Kanban is Japanese for "visual signal" or "card." Toyota line-workers used a kanban (i.e., an actual card) to signal steps in their manufacturing process. The system's highly visual nature allows teams to communicate more easily on what work needs to be done and when. It also standardizes cues and refines processes, which helps to reduce waste and maximize value.

Figure 3. Kanban Board

Planning for Quality in Innovation

Quality planning is another area that may need to be modified in the world of innovation. While quality plans define how a product's quality will be assured, defining standards and procedures to be followed and specifying testing requirements and oversight, they are often seen as the boat anchors in the innovation process, causing delays and adding unnecessary steps and activities.

Scrum, a type of agile, offers an update on planning for quality. In keeping with the agile concept of completing work in increments, scrum quality is built into those increments. Testing of user requirements and documentation are done throughout, not at the end, helping to reduce defects and issues earlier in the development process and identifying opportunities for improvement sooner. Scrum relies on well-developed acceptance criteria, which provide an empirical basis for measuring quality. This is similar to the Build-Measure-Learn cycle of the LSU methodology.

The three levels of scrum testing are performed at different times in a project.

- Early feasibility testing (also known as unit testing in the software world) should be completed before the project starts or as a first project phase. This testing is part of the early definition of the need or pain point.
- Product functionality testing is done to verify the deliverable. In scrum, this testing may take the form of system or verification testing and is done in cycles along with product development, so that findings can be addressed and fixed immediately, rather than at the end of the project. A final round of testing is done against the requirements and specifications.
- The third level validates that user needs were met and it involves the customer or user; depending on the project, the end user may be involved in testing cycles throughout development, helping to reduce time needed at the end of development for user validation.

The iterative approach of scrum allows the testing of features immediately after they were implemented. This continuous approach to testing during the project reduces the overall risk of the project. The earlier the testing starts, the earlier any problems can be addressed.

Conclusion

These models offer examples of alternative approaches to traditional planning that may be more effective for innovation work. Adapting our thinking about planning, and incorporating concepts such as these into our business systems can improve our success rate with innovation and enhance our organizations' outcomes.

"You need to plan the way a fire department plans. It cannot anticipate fires, so it has to shape a flexible organization that is capable of responding to unpredictable events." (Andy Grove)

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