

Advanced Guide

Innovation Roadmap



© 2005–2015/16, Future Think LLC. All rights reserved. All other trademarks are the property of their respective companies. futurethink clients may make one attributed copy or slide of each figure contained herein. Additional reproduction is strictly prohibited. For additional reproduction rights and usage information, go to www.futurethink.com. Information is based on best available resources. Opinions reflect judgment at the time and are subject to change. To purchase reprints of this document, please email innovate@futurethink.com.



INTRODUCTION

Innovation is certainly about big ideas. However, in most organizations, there's a big difference between a grand vision and the reality on the ground. This guide can help you close this gap. Remember: what separates leading innovators from others is their focus on execution.

Think big, aim high, and be inspired about what a process can ultimately do for your organization. We want you to remember to think through tactics that are rooted in the reality of your business. It's a surefire way to make a meaningful and lasting difference in your organization.

This tool will help you create a roadmap to take your ideas from generation to launch. Your goal is to define a roadmap with clearly differentiated steps that acts as a funnel, starting with many raw ideas and gradually focusing only on those that have the required potential to bring you success. Each successive step will involve larger teams, resources, budgets, and timelines. This way, you'll devote more of your investments on fewer, more viable projects.



REAL-LIFE EXAMPLES

The best innovators use a roadmap that is widely understood within their organizations. Let's look at some real-life examples. The number of steps may vary in these examples; however, the goal is essentially the same: define the activities that go with each step and create a common ground for how an idea develops towards launch.

Bank of America: This financial company uses the following five-phase roadmap (this is akin to the Six Sigma process):

- 1. Define:** State the issue and the solution simply.
- 2. Measure:** Evaluate and validate the ideas.
- 3. Analyze:** Develop the final design of the product or service.
- 4. Improve:** Build and prepare for launch (coding, training, marketing).
- 5. Control:** Launch the innovation and monitor for improvements.

BMW: BMW uses three detailed steps in its roadmap.

Phase 1: Research. In this phase, the innovation team identifies new technologies and ideas. BMW uses a mix of global technology scouts, trend analysis, and idea submissions to their online portal.

Phase 2: Innovation management. Ideas are evaluated and the selected ones are handed off to Innovation Councils (BMW has a number of these councils across its divisions) for further development. The ideas are closely monitored by a Steering Committee that oversees all innovation projects. Throughout this process, ideas are reprioritized, stopped, or reshaped depending on the current market conditions. The best ideas—BMW calls them “Breakthrough innovations”—are presented to the company’s Board of Management on an annual basis.

Phase 3: Innovation transfer. Those ideas that pass through the previous phase are then offered to project managers who work on the actual vehicles, who take the innovations into production.

DuPont: This chemical giant has a well-defined five-step innovation roadmap:

- 1. Strategy development:** Define core mission, growth criteria, and growth domain.
- 2. Idea generation:** Create growth hypotheses. What's the future? How do we get there? What are the key uncertainties?
- 3. Concept selection and validation:** Validate concepts with real data (in-depth needs analyses, rapid market assessment).
- 4. Product and technology development:** Market validation, business modeling.
- 5. Commercialization and value capture:** Launch and refine.

GE: The company has a three-step process to help leaders throughout the company reach their ambitious annual growth targets set by CEO Jeffrey Immelt.

1. Identify the trends shaping the business landscape. Conduct annual global survey around key areas such as emerging markets, infrastructure growth, major demographic shifts, and value shifts towards environmental awareness among consumers.
2. Apply business goals that are unachievable if the units stay focused on the current business environment. Focus on three segments: 1) managing the core business, 2) moving into adjacent markets, and 3) creating entirely new businesses.
3. Lay out the challenges, the trends, the targets, and have a discussion with key team members. Assemble business unit leaders around surveys to set plans and goals. The Chairman reviews innovation projects once a month.



REAL-LIFE EXAMPLES *(continued)*

Harley-Davidson: Harley has a roadmap it calls a “Concurrent Product & Process Delivery Methodology” (CPPDM).

It outlines the following phases:

Phase 0: Expectations of the project are identified.

Phase 1: Project is shown to be feasible with enough confidence to deliver product expectations that launch date can be set.

Phase 2: Project is verified to show that the design solution meets the expectation of the project.

Phase 3: Project is validated and shown ready for production.

Phase 4: Capture the learning and project close out.

John Deere: In order to accelerate innovation, John Deere has established a multi-phased framework called the Business Growth Process (BGP), designed to help the enterprise achieve sustained, profitable growth from a mix of new innovative offerings and enhancements to existing products and services. The four key phases of the BGP are:

- 1. Defining key hunting grounds:** Enterprise strategy and aspirations define key “innovation spheres” or realms in which Deere has both the right to and the ability to participate. An example of an innovation sphere is renewable energy.
- 2. Identifying opportunities:** In the next phase, opportunity identification, Deere conducts “ideation” sessions, analyzes mega-trends, and works closely with marketing organizations, strategic partners, and suppliers to define ideas that are true breakthroughs.
- 3. Prioritizing:** Next, opportunities are prioritized. This process requires a close alignment between engineering resources and divisions’ marketing organizations. It also creates higher visibility of opportunities across business units and to senior management so that resources can be assigned effectively.
- 4. Facilitating with tools and metrics:** Finally, a set of tools and metrics are used to ensure that consistent approaches are used throughout the enterprise.

Shell: Shell uses three broad stages in its roadmap:

Stage 1: Idea creation and definition. Generate ideas and nurture them to see if a potential business opportunity can be derived from them. Key objectives are to identify potential customer value and strategic alignment with the company. Chaos is accepted; creativity and diversity of thought and ideas are actively encouraged.

Stage 2: Development and demonstration. Approved ideas from Stage 1 are now tested for viability. Missing capabilities in key areas, from technology, environmental impact, products, and logistics, are identified and discussed. Feasibility studies in all these areas are conducted. The goal is to build a working prototype and a quantified business plan. The team then starts to minimize any risks of investing further in an idea. External partners, from academics to scientific researchers, and business partners with commercial and technological capabilities in the area, collaborate with the viability analysis and help come to conclusions about the probability of external value and success.

Stage 3: Production and application. This stage is essentially building capabilities and preparing for market launch. Launch and execution plans are developed, including financial investments into facilities, recruiting, and customer satisfaction analysis.

Now that you’ve seen some real-life examples, let’s apply these learnings to your organization.



HOW IT WORKS

As we've seen, there are a number of ways to define the steps in your process roadmap. Now, it's time to create your own.

We begin with providing a sample roadmap on the following pages with five distinct steps. The steps are:

1. Idea Development:

Raw ideas are generated from a wide net of sources.

2. Concept Development:

Here, selected ideas are quickly expanded into business concepts to see if they present an opportunity worth more investigation.

3. Business Development:

In this step, selected projects are expanded into business plans that include financials, potential revenues, market estimates, pricing, development plans, competitive reviews, and technical specifications.

4. Technical Development:

Here, projects get "built," including prototyping, features/functions, packaging, etc.

5. Market Development:

Finally, teams prepare for launch with final refinements and a rollout strategy.

For each step, we've outlined important aspects you need to consider. These include the following:

- **Activities:** What are project teams doing in this step?
- **Deliverables:** What are the final deliverables due from project teams?
- **Evaluation Tools:** What evaluation tools should you use to make the best decision?
- **Evaluation Decision:** What specific decision are you making when you judge each idea?
- **Participants:** Who is involved in this step (both evaluators and project teams)?
- **Metrics:** How do you know if this step in your process is working smoothly? What measures will you use?
- **Post Evaluation at Each Step:** What happens at the end of each step (communication, pipeline status, and so on)?

You will use the sample innovation roadmap and blank worksheet on the following pages as a jump-start to develop your own innovation roadmap.

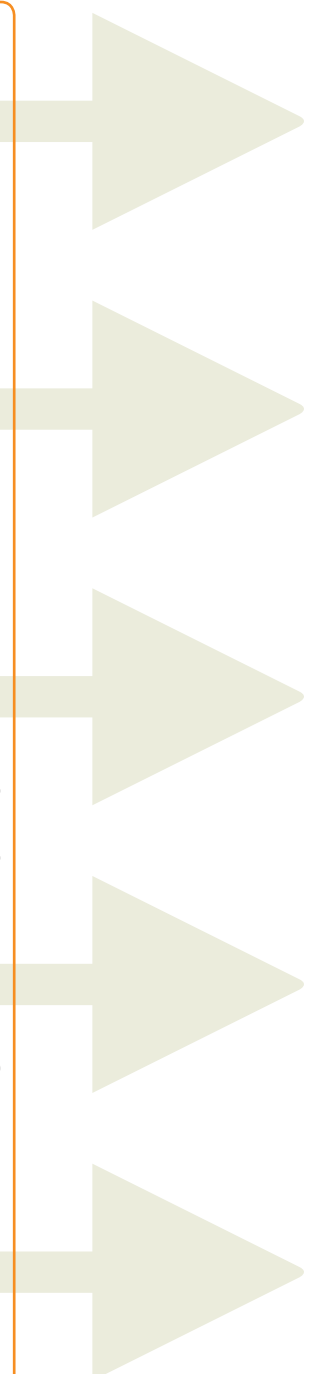


SAMPLE INNOVATION ROADMAP

	1. Idea Development	2. Concept	3. Business Development	4. Technical Development	5. Market Development
a. Number of Ideas/Projects These numbers are for illustration only.	Hundreds	20-25	20-25	3-5	1-3
b. Activities	<p>Conduct ongoing research Keep on top of emerging business, cultural, and customer forces that are affecting your organization. Identify unmet customer needs. Look beyond your industry.</p> <p>Generate ideas Establish a process and central repository for gathering ideas. Create a central idea bank/pipeline. Provide multiple channels for submitting ideas. Hold ideation sessions Tap vendors and other partners for ideas.</p>	<p>Put a brain behind it Assign approved ideas to an individual or team for further exploration.</p> <p>Craft raw concepts Expand ideas into more detailed concepts. Ask: >What's in it for us? >Who's the audience? >How does it meet a customer need? >What are the potential revenue streams? >What are the critical success factors? >What makes it unique and innovative?</p> <p>Seek feedback and refine Seek internal and external feedback</p>	<p>Duplicate project teams Provide sufficient resources for a rapid investigation.</p> <p>Build business case Expand selected concepts into business plans Customer requirements, detailed value proposition Competitive review Financials: revenue estimates, market size Features/functions. technical specifications Pricing Development plans, operational details, roll-out strategies Research potential partners/vendors Metrics/ROI for success</p> <p>Seek feedback and refine</p>	<p>Provide additional resources Provide project team with necessary resources (more headcount, sufficient budgets).</p> <p>Build business case Initial prototype/experience with features/functions/design. Conduct pilot test Define information areas for feedback. Gather customer feedback early. Debrief Review test results and chart next steps. Refine Refine business plan, ROI, and specs. Refine sourcing, sales, distribution, and pricing. Conduct subsequent pilot tests (larger, more detailed tests).</p>	<p>Expand the team Provide project team with all the resources it needs to implement the project in a timely fashion.</p> <p>Make final revisions Build and test final prototype or experience.</p> <p>Package Design packaging, marketing, messages, and other materials</p> <p>Roll-out strategy Define timelines/milestones. Select markets/geographies. Communicate and test plan with key stakeholders (product, marketing, customer service, legal, logistics, etc.).</p>



	1. Idea Development	2. Concept	3. Business Development	4. Technical Development	5. Market Development
c. Deliverables	1-page submission form	1-3-page concept description for each idea 15-minute presentation to evaluate team	20-30-page business plan 1-hour presentation to evaluation team	Product/service prototype Revised business plan/test results 1-hour presentation to evaluation team/upper management	Launch plan 1-2-hour presentation to evaluation team/upper management
d. Evaluation Tools	Screeners Review ideas in pipeline on a quarterly basis.	Scorecard Evaluate concepts using scorecards with evaluation team.			
e. Evaluation Decision	Does this idea warrant additional investigation?	Portfolio matrices Evaluate project against existing portfolio.	Does this project warrant a substantial investment for development?	Do we make a go or no-go decision?	Do we launch this offering?
f. Participants	Individual submitters Screeners on evaluation team	Innovation team Cross-functional management team Outsiders: subject matter experts, partners, vendors? Hand off to eventual business team?		Innovation team Senior management Outsiders: subject matter experts, partners, vendors? Hand off to eventual business team?	
g. Metrics for Success	Number of ideas submitted Number of idea submitters Diversity of ideas (incremental vs gamechanging)	Number of approved vs. rejected projects Average scores for projects Average time taken at this stage Average time to market			
h. Post Evaluation at Each Step	Define next steps. Clearly articulate the next steps for project teams. Build your pipeline. Update your centralized innovation pipeline and store unused/rejected ideas/projects Post key learnings. Identify areas of improvement, pitfalls etc. and make information publicly available. Communicate. Update participants on status of their ideas/projects. Ensure teams are motivated enough to continue their participation.				





INNOVATION ROADMAP WORKSHEET

	Step 1:	Step 2:	Step 3:	Step 4:	Step 5:
a. Number of Ideas/Projects					
b. Activities					



INNOVATION ROADMAP WORKSHEET

	Step 1:	Step 2:	Step 3:	Step 4:	Step 5:
c. Deliverables					
d. Evaluation Tools					
e. Evaluation Decision					
f. Participants					
g. Metrics for Success					
h. Post Evaluation at Each Step					



TIPS TO ENSURE BUY-IN

It's important that your innovation roadmap becomes widely accepted and used in your organization. Use some of the tips below to ensure that your roadmap becomes accessible and utilized throughout your organization.

Do not build financials too early.

A funnel approach should streamline activities and quicken projects. A common mistake to avoid is making teams develop financial projections too early in the process. Looking for information like ROI too soon can slow your teams down and rule out ideas prematurely on the basis of inaccurate projections.

Allow some “freedom in the framework” by fast-tracking projects.

A process should enable teams, not debilitate them. If you over-formalize your process, you might be losing time-sensitive opportunities. Some highly important projects, for example, can be “fast-tracked” where certain steps are skipped.

Make a checklist of “necessary nods.”

Make a list of people in your organization who will be critical to making the roadmap a success. Ensure that you've presented the roadmap “behind closed doors” to them before publicizing it to the rest of the organization.

Test and refine your roadmap.

It can be challenging to introduce a new roadmap into an organization. Test-drive the roadmap with just a few small projects and then expand the initiative. Once stakeholders see the value the process brings, you'll have more success integrating future projects.

Get behind teams; don't get in the way.

With clearly defined goals and timelines for each step in the process, teams will have the freedom and flexibility to manage projects as they see fit. However, too many restrictions and deadlines can induce some teams to “hide in a corner” until evaluation. The innovation team's role will be to prevent the latter from happening by touching base with the team on an ongoing basis.

Use emerging technologies to streamline projects.

Technology can be a good enabler to hasten your innovation process. Here are some techniques that are quickly gaining ground among leading innovators:

Crowdsourcing.

Companies are increasingly turning to crowdsourcing by obtaining ideas from the public rather than restricting product development to within the company.

Unilever is asking customers, stakeholders, entrepreneurs, inventors, and the general public to submit ideas for a next-generation sustainable shower. Submitted ideas will then be voted on by the public and winning ideas will win cash prizes. Unilever recognizes the potential of crowdsourcing to find solutions to complex challenges. There has not been radical innovations in the shower for many decades, and they hope to reinvent the shower by minimizing its environmental impact, whilst enhancing the user experience.



TIPS TO ENSURE BUY-IN *(continued)*

Hackathons.

A hackathon is an event in which computer programmers and others involved in software development collaborate intensively on software projects. Hackathons are gaining popularity as a way to solve problems.

NASA has collaborated with a number of organizations including the World Bank, Microsoft, and Google on a project called “Random Hacks of Kindness.” This growing initiative involves a community of over 5,500 innovators in over 30 countries who develop practical, open source technology solutions to solve real-world problems during hackathons. An example of one of the thousands of solutions that have come out of this is Bushfire Connect, an online bushfire crisis service that alerts Australians on bushfires.

Prediction markets.

Prediction markets are virtual stock exchanges with a twist. Participants place their bets on particular events; for example, “who’s going to be the next United States president?” or “what will be our revenue for next quarter?” The market prices serve as an indicator of the probability of these events occurring. Prediction markets have been applied to innovation efforts in a variety of contexts. For example, many corporations are beginning to use the concept during idea evaluation to gauge which ideas might be successes in the marketplace (in a way that’s much faster than traditional processes). Examples include HP, Intel, Microsoft, and Google.

Online labs.

Many organizations use the power of the Internet to “beta” their projects, showcase them online, and get instant feedback from customers and other stakeholders. Here are some good examples of online labs that we’ve seen:

- **Autodesk:** beta.autodesk.com
- **The New York Times:** beta620.nytimes.com
- **The Guardian:** theguardian.com/info/series/guardian-beta