Innovation
How do ideas turn into innovations?

Jason Moccia
The word “innovation” has been overused in some circles over the past decade; however, its relevance is still very much alive. Some companies have gone as far as to create Innovation Labs within their organizations with the sole purpose of exploring new product concepts. Although many companies have achieved great success creating their own labs, streamlining the approach to defining and validating ideas still has its challenges. Typically the reason for creating a lab is to create a singular focus on exploring and evolving ideas. Select industries have mastered the art of research and idea exploration, because innovation within their market is required not only for growth but for survival. For example, the pharmaceutical, entertainment, and automotive industries all have proven processes for creating new ideas, and test-driving those ideas in the market place. This is precisely why the automotive industry creates concept cars, and the entertainment industry runs pilot programming. This article explores several concepts of how companies can become more innovative in their pursuit of the next big idea, specifically how ideas can quickly be piloted to prove potential value within an organization.

Every industry has some way in which it goes about innovating and creating new ideas. Let’s look at the scientific community as an example, specifically the pharmaceutical industry. Pharmaceutical companies spend a tremendous amount of money on Research and Development (R&D) each year. For example, Merck spent $8.2 billion in 2012 on R&D, and employs 13,600 people as part of their researching efforts. This equates to approximately 17% of Merck’s revenue! I am not proposing all companies need to spend this kind of money researching new ideas or products; however, the numbers are compelling and illustrate the level of investment required by some companies to innovate.

Another example is the movie and entertainment industry. The Walt Disney Company® has its own version of R&D, which it calls Walt Disney Imagineering. According to the company’s 2012 10-K statement, “Walt Disney Imagineering provides master planning, real estate development, attraction and show design, engineering support, production support, project management and other development services, including research and development for the company’s operations.” The movie and television industries produce thousands of shows every year of which only a small percentage become blockbusters. The movie industry is starting to hedge its bets by doing something called “pitch visualization.” This allows studios to create visual scripts in a low resolution format on a computer. They can setup scenes and piece together movies to evaluate market potential prior to heavy investment.

In comparison, the automotive industry starts with sketches of product concepts and then uses sketches to create functional prototypes. This allows for quick testing and validation of ideas. It’s not about ideas alone, the true value is in the exploration and study of ideas that ultimately drive results.

1. Data was taken from Merck & Co., Inc. 2012 10-K
2. Quote was taken from The Walt Disney Company 2012 10-K
Computer Aided Design (CAD) software to create 3D renderings. BMW, for example, starts with a piece of paper and sketches new car designs in two dimensions. This gives designers the ability to quickly and cost effectively explore ideas. In fact, most manufacturers use CAD throughout the design process to continuously explore and create detailed specifications.

This leads us to an interesting question; how can businesses use best practices from these and other industries to evolve their thinking and create new innovative products? If we start by agreeing that the premise of any venture worth pursuing starts with an idea, then we’re off to a great start. However, it is not about ideas alone. The true value is in the exploration and study of ideas that ultimately drive results. The industries mentioned above illustrate various approaches, all working from a central theme or goal (i.e. cure cancer, create the next blockbuster movie, etc). If we blend together the three examples given above, we have a recipe to start with. The scientific community has proven procedures for experimenting in a lab that follow a rigorous process of trial and error while capturing and analyzing results until they get it perfect. The movie and entertainment industry explores new ideas through creativity and collaboration, which are validated through visualization and pilot programming. The automotive industry explores car design through lightweight / low cost sketches. They combine artistic talent with engineering to create models of proposed ideas. They also create concept cars to gather information from the market that helps lead to go / no go decisions on production. Of course there are many phases and steps all these industries follow to validate ideas, but even at a high-level, we can draw insights from these examples to deduce the following best practices for innovation:

- Develop a disciplined and well-defined process for idea experimentation (e.g. scientific rigor and the lab environment)
- Blend in elements of creativity within the experimentation process (e.g. storyboarding, brainstorming, and focus groups)
- Create a lightweight and low cost medium in which people work to explore ideas (e.g. sketching, prototyping/visualizations, and CAD)

Let’s think about how we can encapsulate these insights into a model that may work for your organization, by going back to the Innovation Lab idea mentioned above. Where within your organization do ideas come from? This may be a new idea or an enhancement to an existing product or application. Most companies have many different ways to foster ideas, but all of them share common steps. Travelport, one of the largest travel content aggregators and distributors in the world, is a leader in the area of innovative thinking. Travelport recently created an innovation lab called JUICE Labs. JUICE stands for Joint User Interaction Concept Experiments. According to the company, “JUICE Labs is our structured idea center for capturing concepts, blending them together, and then testing them with

customers for direct input and feedback. Our customers are part of the innovation process by collaborating on Travelport’s latest prototypes and concepts before development ever begins.” As depicted in Figure 1.0, JUICE Labs resides within the “idea” phase. This is where ideas are tested and validated. Their goal is to give customers a way to participate in the creative process and to influence the output. Notice that this occurs very early in the lifecycle, where cost and risk is low.

![Figure 1.0](image)

The first step for any company thinking about being more innovative is to simply commit to trying something new. This sounds simple enough, but many companies find it challenging to deviate from their existing processes. There is also a concern that with change comes disruption to the corporate culture. Most companies follow the same budgeting process every year for vetting new ideas. It is at this phase, usually toward the end of a company’s fiscal or calendar year, that they spend a large amount of time analyzing which ideas will be funded for the upcoming year. This is an optimal time for companies to become more innovative in their thinking.

Once a company has committed, I recommend taking one or two ideas and starting to explore different approaches to vetting those ideas that enhance current techniques. The use of rapid prototyping or visualization in conjunction with market research is a great way to gain traction. Rapid prototyping allows you to create working models of user interfaces, which can be used for market research. The idea is to be fast and nimble in your pursuit of validating ideas. For example, let’s say one of your ideas is a mobile application. You have a business case in hand that describes the high-level vision and financial goals for the product. What if you could also create a working prototype of the application in conjunction with the business case? Would that add more value? Let’s also assume you can take the prototype and perform quick market testing to gain valuable feedback from current customers. The goal is to create a reusable mechanism that allows you to circulate and explore ideas in a low risk and fast environment prior to heavy investment. Going back to one of the examples mentioned above, the automotive industry does this through concept sketching. It’s fast and affordable for designers to test concepts through two dimensional drawings, as opposed to creating an entire car. Another technique is storyboarding. Storyboarding allows you to quickly sketch product concepts while focusing on end customer needs.
As you may have noticed, design plays an important part in evolving ideas. The reason for this is simple; design helps build consensus by giving people the ability to tell a story. The easier you make your idea to understand, the more viable your idea will become. There are several other important skill sets that come to mind, such as; user experience, market research, visualization, and requirements analysis. As an example, think about the automotive designer sketching out a new car design. The design is what gives people the ability to react to the idea; therefore, the key is to put ideas in a form anyone can understand.

Figure 3.0 Capabilities
This is precisely why storyboarding has been used successfully for decades. Employing design skills upfront in the lifecycle should not be a luxury, it should be required. Travelport does just this within its JUICE Lab. The skill sets employed within their lab rely heavily on design. This allows firms to create a simulated environment in which potential ideas are vetted, before investing in development. The economics of such a move can have a significant impact to an organization’s bottom line. Not only do you increase the chances of developing the “right” product, you also decrease your chances of developing the “wrong” product. This has an exponential effect on potential future revenue streams, while reducing potential unwanted costs. As a result, the process of creating new ideas evolves into something better. This approach transcends idea validation and has the potential to change the way companies adapt to market changes. By improving your odds of creating the next big idea, you are also evolving the way your organization competes. This gives companies a competitive edge in terms of speed to market and waste reduction. The key is finding the right balance early in the lifecycle that blends business acumen with creative thinking and design.

About the Author

Jason Moccia has over 16 years of experience in the software development field and is the CEO of OneSpring LLC (www.onespring.net). OneSpring helps companies evolve ideas and to innovate more effectively through the use of design and rapid prototyping.