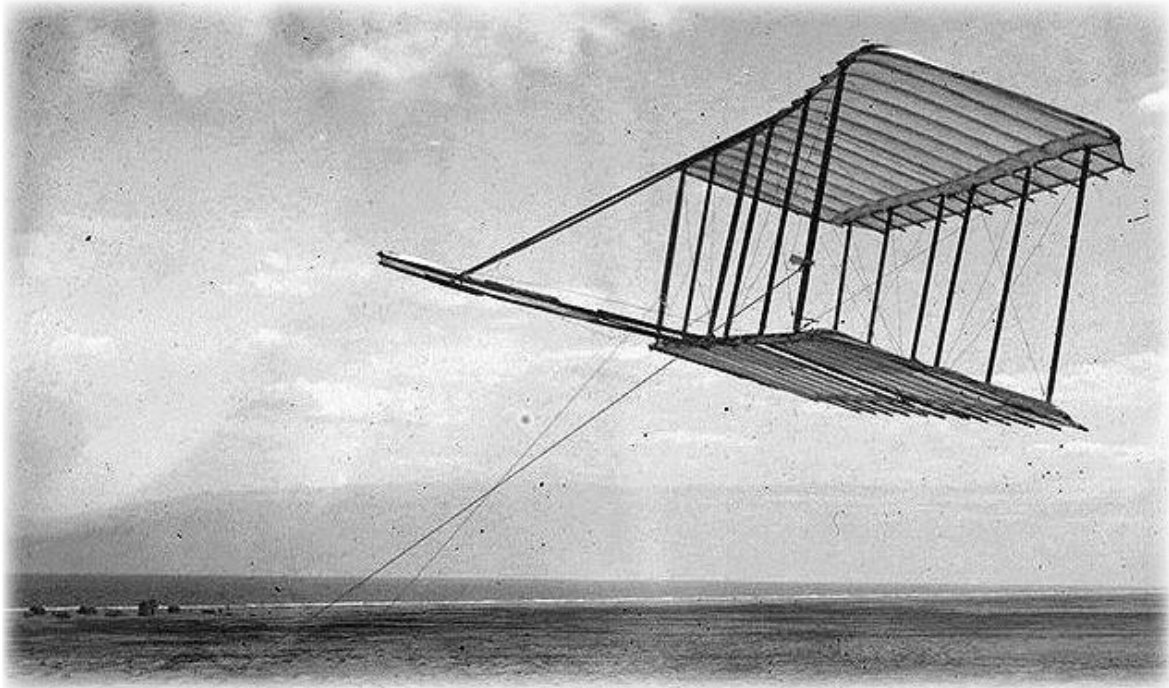


# The Structure to Grow Ideas into Solutions

The Rapid Learning Cycles Framework as the Engine of Innovation

---

By Katherine Radeka



*The Wright Brothers' Kite, used to (safely) test how their airplane's wing design responded to controls*



# The Structure to Grow Ideas into Solutions

## The Rapid Learning Cycles Framework as the Engine of Innovation



### Key Takeaways

- **The need to protect the status quo is a powerful barrier to Innovation.**
- **The Rapid Learning Cycles framework provides a structured process to help companies override their tendency to kill off new ideas and protect the status quo.**
- **The Rapid Learning Cycles framework helps teams fail fast to learn fast and build the knowledge to overcome objections while giving leaders visibility to progress.**

When the Wright Brothers set out to build an airplane, they knew that if their design had any flaws, their test pilot may not survive to make a second attempt. It had to be right the first time.

Not every innovation is like this - in fact, experts in innovation know that some types of products, such as Web services, get better traction when they get released to the early adopter community in unfinished form. These first users shape the product by giving feedback, helping the team find problems and generating ideas for ways to enhance the product. This strategy has worked well for companies like Twitter and Facebook in their start-up days, and even early versions of PDAs and cell phones.

But the fiasco with Apple's Maps app shows that customers tend to hold established companies to a higher standard. Once your product category is out of the hands of the early adopters, the rest of your customers expect your company's newest products to work, just like the familiar ones do. There are a lot of novel solutions built into the Maps app to make it better than its competitors, but most people using iPhones didn't have the patience to deal with the problems, especially since Apple's flagship innovations - the iPod, iPhone and iPad - worked well from the beginning.

Your brand equity and your customers' expectations can be seen as barriers to innovation, since the need to serve existing customers tends to kill immature technology rather than incubate it. These barriers have been given as reasons to take extreme measures, like separating Innovation teams from the rest of the company or spinning off start-ups, to keep the established organization from squashing compelling yet immature investments - and keep these immature technologies from harming the company's reputation. More typically, a compelling innovation collapses under the weight of all the work required to ensure that the product meets company standards, and never sees the light of day. Fortunately, there's a better way.

The same methods the Wright Brothers used to minimize risk as they built the first working airplane can help your company release innovative products that also stay true to your company's reputation for quality and a good customer experience. In the past five years, we have resurfaced, refined and integrated these methods with best practices from Agile Software Development and Lean Thinking into the Rapid Learning Cycles framework.

## The Rapid Learning Cycles Framework Leads to Mature Innovations

The Rapid Learning Cycles framework is a synchronized set of problem solving activities to manage risk, eliminate uncertainty and capture knowledge before key decisions need to be made in a product development program.

Allen Ward first described Rapid Learning Cycles in his book, the LPD Skills Kit, published in 2003. He based his work partially on his studies of the Wright Brothers' process for evaluating wing designs in wind tunnels. But Allen had not seen many examples of Rapid Learning Cycles in action on a real product development team, even inside Toyota. Allen wrote about "combat planning" as a model for dealing with uncertainty but didn't know about the body of knowledge that thought leaders in Agile Software Development had been developing for about twenty years to solve the same problem. It took a few people who had solid grounding in both Lean and Agile, like Tim Schipper at Steelcase, to put the pieces together. In the last two years, this has been the primary focus of my own work.

Along the way, we've learned that the Rapid Learning Cycles framework helps avoid a lot of the problems that established companies have when they try to innovate, by helping the Innovation Teams understand what they need to learn in order to mature a technology to the point where it's ready to release with the company's reputation behind it, and by providing structured time frames that prevent innovators from getting thrown off-course by shifting priorities and the needs of the current business. When your Innovation Process combines structure, agility, the ability to solve problems and the ability to know what problems to solve, then you have an engine to drive the most disruptive innovation over all the hurdles that the status quo puts in your way.

## The Rapid Learning Cycles Framework is the Engine of Innovation

In an established company where survival is not at stake in any one innovation's success or failure, the Innovation Process needs an engine to pull its best ideas through to the market. In the Five Disciplines of Innovation Through Lean, I described the important role that discipline has, and always has had in the process of innovation. It's hard to do something new, and passion only carries you so far. All that passion doesn't guarantee that the idea is a good one, that the teams are working on the right activities to learn what they need to learn for it to succeed. In innovation, passion is necessary but not sufficient, and that's where the discipline of the Rapid Learning Cycles framework takes over.

People have had a lot of great ideas that never made it to the starting gate, because they, or their organizations lacked the discipline to invest the time and resources into developing the ideas enough to effectively evaluate them. Companies get stuck in the "innovator's dilemma" where their most profitable products are also the ones most vulnerable to obsolescence - and yet it is so hard to pull money away from the goose laying the golden eggs. It helps - a lot - to give an innovation team a framework to help them structure their work - that is flexible enough to allow for their creativity and passion, and yet disciplined enough to drive them forward towards a conclusion. The Rapid Learning Cycles framework provide the structure to get the work of Innovation done despite competing demands, and pulls out the best ideas by helping teams fail fast to learn fast.

## We Need to Fail Fast to Learn Fast

When a concept fails, it's disappointing for the team and the organization, but it shouldn't be. If a product is simply not going to work in the market, or not technically feasible, wouldn't you want to know before you had invested much of your precious time and money?

At the same time, we have to be careful not to kill off ideas too quickly - especially in an established company where there are a lot of internal roadblocks to innovation. When faced with a person or a team that is fired up about a potential innovation, the typical leadership team operates as a group of skeptics that the team needs to convince. But that's not healthy for the team, and not healthy for the leadership team, either. It works better when oversight operates as an increasingly difficult set of hurdles to overcome that drive the team to close their knowledge gaps.

The Rapid Learning Cycles framework structures the work of Innovation into a series of problem-solving activities to overcome those hurdles, with clear deadlines and check-in points. The idea is to force the experimentation into short cycle times that aren't quite comfortable for the team - they have to push a little bit to have something meaningful to say. As both the team and their leaders learn from the failures, the concept itself either gets stronger or encounters an insurmountable obstacle. Either outcome is a win for the company and team members, who don't waste time on unworkable ideas. From the beginning, fast feedback loops drive rapid improvement.

## Fast Feedback Leads to Fast Maturation

The Rapid Learning Cycles framework offers opportunities to get feedback from stakeholders on a much more frequent basis. Companies normally only do management reviews at checkpoints, and when the fuzzy front end is especially fuzzy - as it is on your most innovative projects - months and months can go by without any kind of review. This gives the team all kinds of opportunities to go off the rails, get out of synch with each other and with the leadership team, and fall in love with ideas that have fundamental flaws.

The Rapid Learning Cycles framework prevents this problem by providing lots of natural opportunities for feedback without being a flow interruptor. In practice, people see the issues that management has added, and do their best to address them prior to the next meeting. At the same time, the structure of the process helps your leadership with patience and persistence on the journey to build your next innovation. That's especially important when your best idea is so disruptive that it could turn your company upside down.

## The Rapid Learning Cycles Framework Fosters Disruptive Innovation

Disruptive innovations being developed inside an established company fit the Rapid Learning Cycles framework the best. Leaders have the visibility to understand the teams' progress, and the structure to scale up investment over time. The structure helps the teams prioritize the knowledge they need to gain so that they are prepared to confront the nay-sayers within their own organizations and demonstrate to leaders that the innovation is worth the investment to bring to market. Meanwhile the team can leverage the company's market research, core technologies and testing facilities to close its Knowledge Gaps quickly.

At the same time, the Rapid Learning Cycles framework is not that different from the approach that Eric Ries describes in *The Lean Start-Up*: release a "minimum viable product" onto the market quickly and then rapidly iterate on it. Eric's work represents his own synthesis of agile software development with the needs of a start-up to prove itself quickly to get funding for growth.

For both the start-up and the established company, the Rapid Learning Cycles process is the engine of innovation. 

Like this Knowledge Brief? Find more like it at the Rapid Learning Cycles Resource Center:

<http://rapidlearningcycles.com>

Here are a few other Knowledge Briefs that might interest you:

- [Rapid Learning on the Frontiers of Technology: Three Steps to Adapt the Rapid Learning Cycles Framework for Adv Dev Teams](#)
- [Events to Drive Knowledge Capture: How the Rapid Learning Cycles Framework Supports Real Time Knowledge Capture](#)
- [Promises You Can Keep: Why the Rapid Learning Cycles Framework Builds Confidence in R & D's Ability to Deliver](#)



## About the Author

Katherine Radeka has a rare combination of business acumen, scientific depth and ability to untangle the organizational knots to remove the barriers to change. Since 2005, Whittier Consulting Group, Inc. has helped some of the world's leading companies get their products to market faster.

She has a global reach with clients in Europe, North and South America, Asia, and Australia/New Zealand. She has worked with companies in pharma, biotech, medical device, high tech, consumer electronics, food and beverage, and consumer packaged goods, among others. She currently supports more than 75 implementations of the Rapid Learning Cycles framework through the Rapid Learning Cycles Certified™ Professionals Community.

Katherine is the author of two books. Her first book, *The Mastery of Innovation: A Field Guide to Lean Product Development* won the Shingo Research Award in 2014. This book contains 19 case studies of companies, including Steelcase, Ford, Novo Nordisk and Phillips Electronics, who have used lean ideas in product development to get their ideas to market faster.

Katherine's second book is *The Shortest Distance Between You and Your New Product: How Innovators Use Rapid Learning Cycles to Get Their Best Ideas to Market Faster*. This book summarizes Katherine's ground-breaking work to integrate Agile Development with her work on Knowledge Capitalization into a proven method for accelerating innovation.

Katherine has climbed seven of the tallest peaks in the Cascade Mountains and spent ten days alone on the Pacific Crest Trail until an encounter with a bear convinced her that she needed a change in strategic direction.

