

The Agile Innovation Sprint

Moses Ma and Langdon Morris

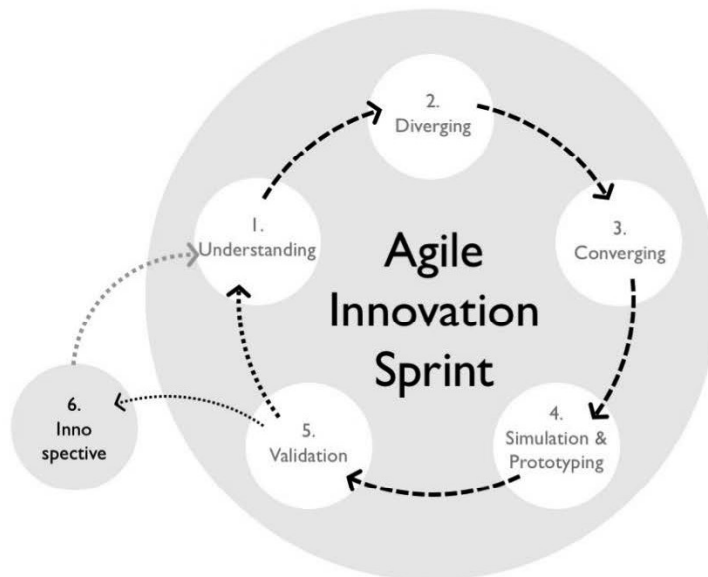
FutureLab Consulting, CA, USA

Recently we set about to understand how the recent breakthroughs in Agile software programming could be carried into the more general work of innovation, and as a result I wrote the highly successful book *Agile Innovation* together with Langdon Morris and Po Chi Wu. We then started looking in even more deeply, and in this paper we describe the process in even greater detail.

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The core Agile process for innovation-related work is called an “innovation sprint.” This process fuses the design thinking approach that was developed at Stanford University’s d school (the “d” stands for “design”) with the time-boxed, iterative workflow process as Agile software developers have defined it. The merger of design thinking and Agile was first proposed in our book *Agile Innovation*, and has since become very popular. It’s being used widely throughout Silicon Valley, including at Google, Nest and many others firms. At root, the innovation sprint is a systematic process for understanding current and future market needs, creating brilliant new ideas, tracking, reviewing, and assessing them to assure that strategic priorities and the ideas are brought into alignment, developing, testing and validating them, and thus it is a disciplined process which assures that the best ideas are identified and brought forward for development. Hence, this approach breaks down complex thinking, design, and creative tasks into a logical sequence of six stages that support our quest for optimal solutions by melding the art of creative thinking with the science of sound management.

The Innovation Sprint looks like this: In this paper we’ll look at each of the steps in more detail.



Phase I. Understanding

To discover or invent great new products and services you have to learn to see the world differently. That is, you’ll have to see what *could be* rather than what merely is. So you can never be contented and satisfied with the current state of knowledge and practice. To see differently, you’ll have to learn to change the way you go about looking, which means you’ll also have to change the way you think. Or, as they say, “If you always do what you always did, you will always get what you always got.”

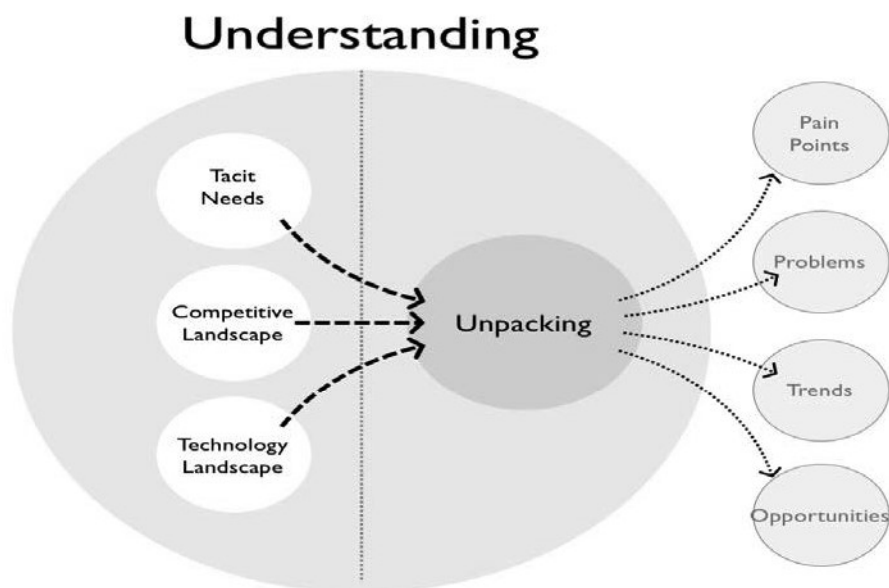
Since “what we did” and “what we’ve got” isn’t going to cut it in the era of exponential change and hyper-competition, we are compelled to find the critical differences. Hence, we must understand the future, and the means to doing so is to continuously expand our methods of perception. Consequently, the initial phase of the Design Sprint is perceptual: using a wide range of observation tools to gain a profound understanding of the current and future needs of your entire market ecosystem, which includes users, customers, and markets.

One of your key goals is to discover “tacit” or hidden needs throughout operational eco-system, because it is these hidden, unspoken, or unarticulated needs that often provide the keys to creating genuinely new products, services, and business models. Consequently, the initial phase of the Innovation Sprint requires that you apply your perceptive skills by using a wide range of observation tools and methods to gain a profound understanding of these hidden needs. This applies to everyone in your market ecosystem – your customers of course, and also your future customers (who may be different than your current ones), as well as your partners, suppliers, staff, and any other stakeholders.

Leading marketing practitioners and product designers know that it’s mandatory to study user behavior and user needs quite deeply before leaping into the product design process. The intensity of study that is required has increased with the increasing complexity and sophistication of both the products (technology) and of the customers (ever more enabled and engaged).

Research methods including “design ethnography” and “observational field work” can be used to expose these needs, focusing particularly on detecting needs on which to build breakthrough products, services, and business models. Thus, the first step in developing a profound understanding is collecting relevant observations. This is not done in a laboratory setting, but in real life situations where people are engaged in their day to day activities, and where the full context of their actions, attitudes, and aspirations may be revealed through what they do and say. Frequently those experiencing them (a customer, perhaps) is not consciously aware that this dimension of their own experience is even occurring, and so it’s up the observer to discover what’s going on, and what could be better. This approach to research is described in more detail in Chapter 5, The Innovation Process.

Another dimension of understanding you’ll need to attain is about the current and future competitive landscape in your marketplace. Who are your current competitors, and what is the structure of competitive market? How are the various competitors positioned, and how do you offers compare with theirs? A third key element is the impact of technology, and it’s particularly important to gain a deep understanding of the ways in which new and emerging technologies may impact on the future business landscape.



As you gather these insights you should find yourself with a rather large collection of observations, impressions, facts and factoids, opinions, and speculations. To make sense of it all you'll next engage in what we refer to as "unpacking." Here your task is to figure out what it is that your team has actually observed. "Unpacking" is a term used in clinical psychology that means carefully sorting and distinguishing the rich complexity of emotional experiences. Here we are extending its meaning to encompass not only the critical emotional dimension of tacit needs and end user experiences, recognizing and understanding the intense emotional forces, hopes, and dreams, the energies that are central to transforming tacit needs into the basis of great designs, but also including the market, business, and technology dimensions. What we're after is an integrated understanding of the present and the likely future.

During the unpacking process, team members present and discuss their observations and impressions, and through discussion they seek a shared understanding of the research findings and priorities. These they then translate into agreed upon "pain points" and "problem statements," which become the conceptual bases of the innovation work going forward.

Pain points and problem statements are concise expressions of the needs, challenges, and goals of customers and other stakeholders – both conscious and unconscious – which will then be translated into ideas for the design of new products, services, and business models. Here's an example: during the early days of the Internet we were tasked with producing a vision paper for a "unified internal desktop" for a financial services firm. Senior managers wanted to validate the ideal of a standard internal desktop using HTML, and were focused on the cost savings that could be achieved by using a standard navigation and presentation layer to integrate the many stove-piped applications then in use throughout the organization.

During the understanding phase of our work we asked subjects to recount a "day in their life," and a common thread emerged that many people were turning their computers off at break time to get coffee, and drilling down more deeply we discovered that it took between 30 and 60 minutes to log into all the various databases and portals the organization had created. The concept of a "single sign on" was only then being invented, and employees simply assumed that waiting nearly an hour to get back to work was "just the way it is." The entire organization had formed a blind spot around this process. Digging deeper still, this also revealed that a core element of the cultures was "no whining or complaining." Interestingly, the complaint-free culture was therefore impeding the possibility of making important process improvements and innovations. Looking for blind spots and rituals that don't make sense is key to successful research.

Another tip to accelerate your research process is to look at the dominant business models in your industry – the sacred cows. Explore more deeply to identify underlying and perhaps long-held core beliefs about how value is created, and then consider how changes in markets, mindsets, and technology can enable new ways to create value. A recent example of this is Uber, which killed the sacred cow of taxi medallions and exposed a huge opportunity to create value. Another example is Paypal which decided to simply pay its customers directly for referrals and expanded its referral base enormously by doing so.

Uber and Paypal were willing to kill those sacred cows, and that's what you should seek to do also. Dissect the most important and long-held beliefs into their supporting notions. How do notions about customer needs and interactions, technology, regulation, business economics, and ways of operating underpin the core beliefs? How have core beliefs slowly turning into self-limiting beliefs? Once you've unpacked your extensive observational inventory, you should end up with a clear list of pain points, problem statements, trend maps, and tacit needs. What we do with them now is use them as a basis for coming up with opportunities and solutions through brainstorming and other creativity techniques.

Phase II: Diverging

Pain points, problem statements, trend maps, identified tacit needs are all elements from which your team can begin generating solution ideas, which is the divergent process of exploring what *could* be done across a very wide field of possibilities. This is classically known as "brainstorming," but that's just one of a great many approaches that could be fruitful here. We know that great innovations are often stimulated not so much with a focus on coming up with the "right answers" as it is by asking the right questions. Such questions are "ideation lenses" or "innovation perspectives" that boldly illuminate the challenges, problems,

shortcomings, and needs, and goals. And when these have been nicely illuminated the ideas tend to flow readily along. One way to stimulate the formation of great questions is to apply the process called multi-visioning, during which we adopt a particular perspective for inquiry for a short amount time, perhaps 10 – 15 minutes, and then we switch perspectives. Through multiple iterations we sample a variety of perspectives and engage in coming up with ideas from each perspective. This often leads to a lot of promising ideas, and it's fast.

Successful divergence results in a vast inventory of possibilities, which are sometimes recorded on post-it notes. When we display them on a large surface, the wide range of ideas can be viewed and assessed at a single glance. The goal is usually to turn an underlying limiting belief on its head, which may lead to a radical new hypothesis about how to create value:

- What if people who shopped in discount stores would pay extra for designer products? That's what Target discovered.
- What if consumers want to buy electronics in stores, even after Dell taught them to prefer direct buying? That's what Apple created.
- What if LED technology puts an end to the lighting industry as a replacement business? That's what Philips embraced.
- What if lumber and hardware and home improvement are really one business, not three? That's what Home Depot pioneered.
- What if everyday drivers could become part-time taxi drivers? That's what Uber invented.

This is the kind of thinking you need to do; instead of doing what everyone else is doing, investigate deeply, think broadly, and dare to be different.

Phase III: Converging

The purpose of diverging was to come up with a very large number of extraordinarily great ideas. It's naturally followed by convergence, which is when we identify the best ones, or "the spine of the story" we're seeking to tell, the central core of the innovation narrative that explains who the customers are and how we are creating unique value for them.

The spine of an innovation story is not just a core feature set or the "minimal viable product," but the meaning of both as part of the overall vision that connects with users at an emotional level as well as a practical level. Entrepreneurs must not only understand what their invention/innovation does at a functional level, they should also strive to understand why it *matters*.

We seek to identify this spine by using clustering and multi-voting techniques to identify which themes or directions are most promising, and thus to pinpoint the key elements of the narrative. We can gather ideas by moving the post notes around to cluster similar themes into related families of topics, which often then forms the spine itself. Multi-voting with sticky dots gives a voice to each team member, and ensures that more forceful speakers cannot dominate the conversation.

At this point we may find convergence on a single idea and story spine, or we may have identified a few major alternative possibilities that we then need to explore in more depth, in order to arrive at the one that best crystalizes our intent and is most likely to result in the creation of maximum value.

The story spine must link the user's objectives – tacit and explicit, emotional and practical – together into a single coherent thread, which then pushes the underlying concept forward to the full expression of its meaning. Hence, we focus not only on the what, but equally or even more importantly, on the why. The spine thus acts as a compass, guiding the direction in which the energy of the innovation team will flow constructively. In the Converging stage we have focused and narrowed the design to what we believe will be the most viable solution or solutions, thus enabling us to figure out what needs to be built, tested and validated.

Phase IV: Prototyping and Simulation

Nothing is more compelling than a good working prototype, which appeases even the most wary and pragmatic stakeholder, because they, too, can then see, touch, and understand for themselves. The additional value of prototypes lies not just in their persuasive value, but in the fact that working prototypes validate underlying concepts by making them actually work, thus demonstrating feasibility, even if it's just in a crude way. Hence, in this phase the team fleshes out their designs to a level of detail sufficient to validate the core design direction in way that is not just hypothetical, but tangible.

For an innovation master plan the prototype isn't a physical thing, it's probably a simulation of the business model. This may be done using Excel, or through what if analysis, or in a Business Model Canvas. Some have even used tools like chem lab pipettes to simulate cashflow through a business to simulate the model. One of our friends has participants act out a Star Trek scenario, complete with yellow and red alerts. Yet another way is to use business model simulation software, which our partner firm FutureLab enables using technology disruption maps to drive simulations to test business strategies and models. However you approach them, remember that prototypes and simulations are a compelling way to formulate still better questions, for having the right questions is the heart of the path to optimizing any design.

Remember also that various elements of a prototype can vary in fidelity. The parts that model what must be validated or implemented sooner may need to be more detailed than the rest of the prototype. We refer to this as high fidelity vs. low fidelity prototyping, and a typical prototype will combine high and low fidelity elements as required by the logic of what needs to be demonstrated to gain the required knowledge in a just-in-time modality. After all, some questions simply cannot be answered until others are fully in place and operational.

Phase V: Validation

Once you're done with your prototype or simulation you'll show it to real users, to gain their feedback. If the prototype addresses genuine and unfulfilled needs in a genuinely value-adding way, it will feel to user like the heavens opened, and for you it may be that vast opportunities suddenly become conceivable, as new ways to interact with customers, organize your operating model, partner up, create new ways to virally market, or generate revenues start emerge with a fury.

Embodied in the innovation may be a new business model, a description of a whole business system, or better yet an entire eco-system that provides rich, compelling and fulfilling experiences to customers. Such a business model describes how those transformative user experiences are created, delivered and evolved in alignment with the changing needs and preferences of customers.

This is what you seek to articulate in your validation presentation, to rise above individual products and services, to look for the meaning of those products and services, and the value-creating meaning of your relationship with your customers. Validation is thus a sanity check on your dreams and fantasies about where potential value may lie, an opportunity to take a minute and realize exactly how close you are, and how far you still need to go, or if perhaps you need to pivot to a different approach. Hence, this has elements in common with the observational field work you did in Phase I, except now its "validation ethnography." Whereas before you were looking for insights into the needs and expectations of customers, and particularly the unspoken ones, now you circle back to some of those same customers and explore with them the newly created value proposition that you have achieved through your prototypes.

Functionally, this often means that you'll need to conduct interviews with people as they use your prototype. Do they like it? Do they love it? Do they hate? Do they understand it? To integrate your finding, you may ask yourself, How do your finding reinforce the narrative thread that is part of your concept? What are the additional stories and observations? What did you learn about the flow of interaction, the key learnings?

Phase VI: The Innospective

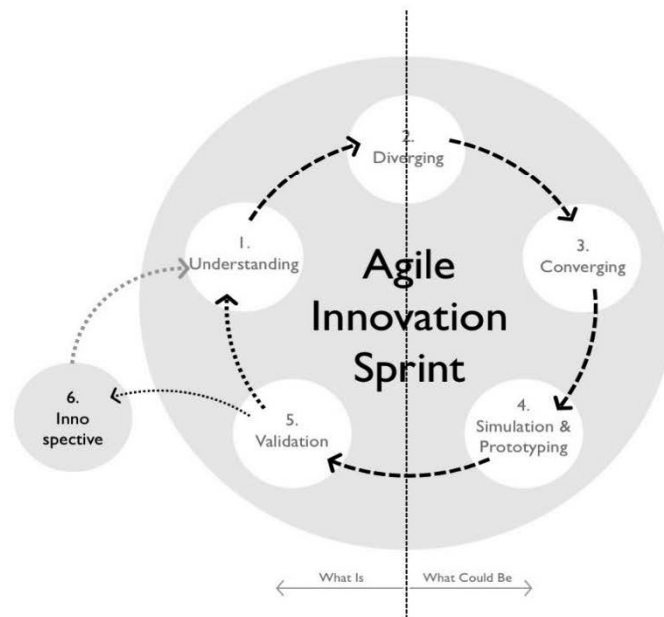
The final phase to the innovation sprint process is the "innospective," the retrospective assessment of the

innovation process that has been completed, the results that were achieved, and just as importantly, an opportunity to consider new ideas for improving the Agile innovation process itself. This is of course an essential way to improve the capabilities of team members, the performance of the organization, and the results that overall innovation process achieves.

Your entire team should participate, and everyone should be expected to share their highs and lows, and to reflect on and share the lessons they have learned through the process. Were the tools adequate? Was communication within the team effective? What worked out exceptionally well? Where did we fall short of our own expectations? What worked should be kept or refined, what didn't work and should be dropped or fixed... and what out of the box ideas can we come up with to disrupt and renew our own Agile Innovation world?

What Is and What Could Be

As we look at the overall process diagram for the Agile Innovation Sprint, one observation that immediately jumps out at us is that the left side of the diagram is concerned primarily with what is – understanding the current situation and using that understanding as a basis for creating what then lies on the right side of the diagram, which is what could be.



And of course this is the essence of the innovation journey – our entire purpose is to create what can and should be, and by definition this also must be better than what is. In summary, then, the Agile Innovation Sprint is a powerful tool you can apply to give useful structure to the innovation process, while still enabling a wide range of quite useful and creative explorations. Balancing these two, the need for rigor and the need for creativity, is a central challenge of all innovation efforts, and the Agile Innovation Sprint provides a compelling model that can be readily adopted. We've seen it work marvelously well in our own work, and we're confident it can work for you, too.

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Professor Moses Ma is a co-founder of FutureLab Consulting, Inc., and a technology visionary who has created and patented a wide range of innovations. He is the chief software architect of OS/i, the Operating System for Innovation, a breakthrough technology product from FutureLab Software. He is also author of the forthcoming book *MindSpark*, and co-author of the recent breakthrough books *Agile Innovation* (Wiley,

2014) and *Soulful Branding* (FutureLab 2016). He has been praised in *Time Magazine*, the *New York Times* and other publications, and has enjoyed a rich and diverse professional life spanning academia, science, technology, philosophy and business. Over the years, he's been involved in the forefront of many exciting technologies. He created two of the world's best selling computer games, including SpectreVR, which invented the category of networked games; took an uncapitalized software startup and built it into the 97th largest, 7th fastest growing, and 11th most profitable in the country; he co-developed with IBM the first specification for universal identity on the Internet; and at the CommerceNet thinktank, he invented the concept of eMarkets and helped to establish the foundational guidelines for the semantic Web.

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