

KANBAN HELPS POSIT SCIENCE IMPROVE SCRUM, DELIGHT CUSTOMERS

From its humble beginnings as a tech-sector startup to its renown as owner of the popular web-based brain-training platform BrainHQ, Posit Science built its success on systems of work that bridged the iterative approaches found in Scrum with the principles and practices of The Kanban Method. Posit incorporated advanced visualizations, new policies that included limiting work in progress, and managed evolutionary change to significantly improve their Scrum process.

Kanban is a powerful management method that enhances the efficiency and agility of teams delivering knowledge work using processes like Scrum. Unlike a methodology, Kanban does not prescribe a fixed set of behaviors or actions. Instead, it encourages continuous improvement by enabling teams to start where they are and improve from there using tools and techniques such as **visualizing workflow, limiting work in progress (WIP), and improving flow**. Kanban can be easily integrated with Scrum, making it an ideal tool for product development teams to improve their key processes.

Small Company, Big Dreams

Posit Science, a company that advocates for “brain fitness” and provides brain-training software and services, is a case study in innovation and achievement. However, its path to success wasn’t always smooth or assured. During its first seven years, Posit experienced many of the same growth-related challenges that small companies often experience: increasing customer demand and pressure to deliver.

Posit employed world-class neuroscientists, psychologists, and medical doctors, as well as game developers and other professionals to commercialize its then-unproven science—all in the highly regulated medical industry and located in the high-cost hub of the global tech industry: San Francisco, CA. The

Posit team initially consisted of three sub-teams: scientists who produced original research; game developers who produced the products; and businesspeople who took the products to market.

Those in need of it most, and of primary interest to Posit, were older Americans. What Posit aimed to do with its brain fitness program was to address three primary issues associated with brain decline: the slowing of the brain’s processing speed, the weakening of sensory brain signals, and the decrease in production of certain brain chemicals. The team, led by Posit founder Dr. Michael M. Merzenich, PhD, believed that by presenting the right stimuli—in the right order, with the right timing, and through progressively challenging programs—they could tackle those key issues through games and training.

Milestones

Posit’s¹ research showed that participants using the program had improved in neurocognitive status by ten or more years, on average. The following year, Posit released the first-ever Brain Fitness Program which it began selling through a partner network. It was pricey, but the team believed its value was limitless and they were hopeful Posit would soon become cash-flow positive, no longer in need of investment to operate.

Meanwhile, Posit had started to work on a new product, a set of games to be called Insight. As things got more complex, the heat started to rise. The urgency of the work was eroding the team’s work-life balance, causing anxiety and stress. To better manage

¹ <https://www.brainhq.com/news/brain-training-program-enhances-memory-cognition>

this change, Posit introduced a new way of working by adopting the Agile software development methodology known as Scrum. The change was welcomed, and consultants and trainers arrived to help everyone track their work and report progress.

Adopting Scrum changed many things at Posit, from the breakdown of work into smaller pieces that could be completed earlier, to the variety of new meetings such as the daily “scrum” and periodic “Sprint planning” meetings; change swept the employees off their feet and with time things started to improve. With a better idea of what was going on, they delivered faster. The switch to Scrum was widely regarded as a good thing as it gave the team a regular rhythm of work and the launch of Insight was successful.

The Challenge

Posit’s rapid success added new pressures on the team’s developers, impacting their use of Scrum. Aside from creating games, the developers also had to provide support to the users of the Brain Fitness Program and participate in scientific research for new games. Beyond that, they were also working with learning centers at retirement homes and needed to be aware of and adhere to federal and other compliance requirements. On top of all that, the developers also worked closely with the marketing and sales departments. The number of sources of demand and the impact it had on the day-to-day work of the developers was growing as time went by, occurring as Posit’s product lines and customer base expanded.

Almost always too optimistic, the development team took on more than they could deal with and missed deadlines, breaking promises in the process. The trust between the businesspeople and the developers began to deteriorate. Questions about their ability to deliver lurked ominously in the office atmosphere.

Meetings began to get longer to make up for the breakdown in internal processes. The conditions that had enabled a successful Scrum workflow no longer existed and no one really wanted to be involved with it any longer; they simply wanted to work.

Eventually, the team agreed that something needed to change. Enter Janice Linden-Reed, a senior project manager at Posit who had championed Scrum. She had heard good things about [Kanban](#) as an alternative path to agility. Kanban’s technique of limiting work in progress (WIP) sounded controversial, but eventually the team decided to give it a try. Janice, now the team’s Kanban coach, had to be patient.

The Results

Rather than implement wholesale reform at first, Janice slowly introduced a few tools from the Kanban tool kit, and she started to see positive change. Janice realized that the most valuable role she could play was to help the developers see what was affecting their performance. If they could see and feel it, perhaps they’d be motivated to implement more changes, little by little. This was why Janice liked Kanban in the first place. Its evolutionary nature seemed attuned to the nature of human behavior.

One of the ways she helped was to continually ask them during retrospective meetings how they

felt—to let them express their frustrations in a safe environment. She started to change their vocabulary, introducing them to language such as “work in progress,” “class of service,” “cost of delay,” and so forth. Armed with a better lexicon to express their troubles, they were able to see new ways to improve.

With Kanban, **managed evolutionary change** involves making small incremental changes. The current way of working serves as the starting point, with a goal of being fitter for purpose in a continuously changing environment.

After some months, they came to realize that they had to address the overburdening of the whole system of work if they were to improve their ability to deliver against customer expectations. They were breaking the rules of Scrum: urgent and critical items were added to existing Sprint commitments. This work was neither planned as part of a Sprint nor was it delivered at the end of the Sprint; rather, it was expedited to the customer whenever it was needed.

Soon the team was actively working on its third product, DriveSharp—a product consisting of three games—and was ready to embrace further change. Janice was asked if there was more change that could be implemented, and naturally



the answer was yes. So, she started to facilitate team collaboration on a better process: one based on, not just inspired by, Kanban.

DriveSharp appeared to be a winner. Consequently, the developers needed to focus on it immediately and deliver it quickly. However, they were hindered by continuing miscommunication between them and their stakeholders. Business owners would give them work without much thought for how busy they were or what other stakeholders had asked of them. The developers said yes to everything and missed most of their deadlines. There had to be a better way than constantly saying yes and letting everyone believe their request was the most important one. The conversation needed to shift to managing business risks.

When she proposed the new kanban system solution, she sold it to the team as a new “flow” system. She worked with the team to experiment to limit the WIP in the whole system, not just for each individual. After several months of watching their board and seeing the cause and effect of limiting WIP, the team now understood why it was necessary and the benefits it would bring. With the right WIP limits, Janice could create balance in which both developers and

testers were equally busy, yet never overburdened. Work would flow better!

Meanwhile, the executive team developed taxonomies centered around cost of delay and market risk for key product functions and features. Now, with a better means to assess risk and a new language for discussing comparative business risks, they were comfortable with the introduction of a kanban system.

Posit delivered new features to their customers, once a week on average. New work was chosen once an existing feature was delivered, and everything flowed smoothly. It was a true victory for the company, leaders within the business, and for individuals like Janice and her team members. The team members also benefited greatly by achieving a better work-life balance. Posit had showed resilience. The decision to retrench had come early enough that they were able to survive and thrive. Posit survived with a much-reduced cost base and recovered some years later with the release of their own web-based platform, BrainHQ².

² <https://www.brainhq.com/news/posit-science-launches-brainhq>

EVOLUTIONARY, NOT REVOLUTIONARY

“Start with what you do now” and improve upon it! We respect the existing business, its processes, and its capabilities. We seek to improve through safe-to-try evolutionary means. No reorganizations. No one gets a new job title, role, or responsibilities. We respect the identity of the organization, its employees, and groups.

About Kanban University

Kanban University works to assure the highest quality coaching and certified training in Kanban for knowledge work and service work worldwide. Our Accredited Kanban Consultants™, Accredited Kanban Trainers™, and Kanban Coaching Professionals™ follow the Kanban Method for evolutionary organizational change.

Kanban University offers accreditation for Kanban trainers and consultants, a professional designation for Kanban coaches, and certification for Kanban practitioners.



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