



Title: Washington Health Benefit's Journey to Agile

Category: Business Process Innovation

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Executive Summary

Established in 2011 in response to the passage of the Affordable Care Act, the Washington Health Benefit Exchange (Exchange) is a public-private partnership that strives to deliver high-quality, affordable health insurance coverage for all Washington residents. It operates *Washington Healthplanfinder (HPF)*, a robust, innovative platform that enables individuals and families to browse, compare, and enroll in health and dental plans.

In the spring of 2018, the Exchange was faced with two key challenges – increase speed-to-market and improve delivery quality. Since 2012, the Exchange has been deploying one release every six months to meet policy, consumer and stakeholder needs, which were then followed by emergency releases to stabilize the deployed software.

The Exchange's experience with a hybrid-agile methodology positioned them to smoothly transition to an Agile delivery model. In software development, Agile refers to adaptive planning, evolutionary development, early delivery and continual improvement. It also encourages flexible responses to change.

Just as Washington state continues to grow its leadership role in technology, the Exchange continues to be the pioneer and torchbearer in the government space. Embracing Agile required the Exchange to build an infrastructure, train resources, onboard vendors and employ right-sized solutions and resourcefulness to deliver big results.

During the transition to Agile, Exchange ran into multiple obstacles including bringing an organizational change management approach where Healthplanfinder thought of as a product. The choice of tools, processes and continued learning promoted and reinforced collaboration with an emphasis on outcomes and technology as an enabler, not an inhibitor. Using Agile, the Exchange has continued to invest in the user experience leveraging direct customer feedback and partnerships across teams.

The results:

- Instead of one release every six months, Exchange was able to fast track delivery of changes by deploying to production every six-to-eight weeks and implement complex changes incrementally.
- The focus on integrated quality checks has resulted in the most stable Open Enrollment yet for coverage year 2020. During that Open Enrollment period there were no system performance issues and no emergency releases. The Exchange not only achieved agility but achieved agility with quality.

Jack Welch once said, "*Change before you have to.*" For the Exchange, change becomes an opportunity to innovate and improve. Their ability to transition to Agile without disruption, while continuing to improve core operating capabilities has made this change invigorating.

Concept: The need to innovate

From its inception, Washington Healthplanfinder was developed using the waterfall methodology as a framework for its software development life cycle. The waterfall methodology is a sequential design approach, where work is broken into phases (e.g., requirements gathering, analysis, design, development, testing, and deployment). This linear methodology afforded teams an extremely structured approach to system changes, where one phase of work must be completed to move to the next.

This approach was useful in the early years as Washington Healthplanfinder was being built, where system stabilization was paramount. As the organization, its processes, and products matured, there was a desire to move towards a more nimble, responsive, and customer-centric product development and delivery model which yields timely and relevant features to meet their customers' needs. This desire to further innovate revealed several pain points with the waterfall methodology.

Change Request Process

- Change requests took nearly 18 months to implement, often resulting in the delivery of features that were no longer relevant as expectations had shifted.
- Change requests were approved by a small group of senior managers, creating a lack of transparency and a very top-down approach to prioritization.
- Change requests were often based on assumptions rather than research and customer feedback.

Release Cadence and Design

- Due to major system releases happening every six months, teams had the mentality of *"get it while you can"*.
- Once implementation began, teams had little to no flexibility to course correct based on learnings that occurred throughout the project.
- Defect fixes had to wait at least six months before they could be deployed causing a significant number of non-critical issues to pile up.

Team Collaboration

- Hand-offs of work between phases became awkward, as the team receiving the work had not been kept apprised along the way.
- Rather than focusing on what gaps need to be addressed, teams focused primarily on which route the gap would be fixed. Tracking the gap as a defect so that the system integrator would need to fix or as a new change request as an additional expense for the Exchange.

Significance: How to innovate

The Washington Health Benefit Exchange started its Agile journey in June 2018 as a pilot. The goal was to use Agile for its iterative and incremental approach, where uncertainty is used as a resource for innovation. Agile was intended to combat the challenges faced with the strictly controlled waterfall framework.

After a pilot period, the Exchange adopted Scaled Scrum, which contains practices and values that are the key to coordinating development. Scrum is a simple Agile framework in which cross-functional teams deliver value in small increments, inspect the results, and change course based on feedback. Scaled Scrum extends the Scrum framework to join and guide multiple Scrum Teams on how to work together to deliver working products in every sprint. It ensures that Scrum Teams come together, the work is shared and coordinated, and dependencies are managed or minimized. Scaled Scrum is the approach that was selected as multiple Scrum Teams are working on Washington Healthplanfinder, which is integrated with other products such as a mobile app and internal support tools.

The first product backlog created with the goal of transparency

The Meta Scrum was developed to create a transparent forum for leaders, stakeholders, and other partners to express their preferences to inform priorities for system change requests. The team maintains a single product backlog and ensures that prioritized changes align with the organization's strategic initiatives. The prioritized, single product backlog provides context for Scrum Teams with appropriate guidelines for teams to make quality decisions.

The Meta Scrum consists of a network of cross-functional leaders with representation from the Washington Health Benefit Exchange, the Washington State Health Care Authority, and the Exchange's system integrator, Deloitte. The team works together to create a product backlog that is nimble enough to quickly respond to state or federal priorities, as well as technical needs.

Teams were merged, teams were divided.

There are six Scrum Teams at the Exchange that work on Washington Healthplanfinder, the mobile app, and supporting internal products. Each Scrum Team is a collection of cross-functional and cross-organization individuals who work collaboratively to deliver solutions that address the prioritized objectives in each sprint. Each Scrum Team consists of a Product Owner, Scrum Master, Designer, Functional Analyst, Developers and Testers. Scrum Teams often invite guests from shared teams, such as security or infrastructure, depending on the scope of their sprint. This removes any dependencies with communication barriers and ensures the right people are always present.

Each Scrum Team strives to deliver the work they committed to within their Sprint Backlogs, ensure that the work meets the Definition of Done, and work is delivered on-time with the utmost quality. Teams were merged, siloed teams were divided, and cross-collaboration became a key focus.

Doing the right things and doing things right

While the Meta Scrum ensures that teams worked on the right changes (product backlog and prioritization), there is also the need to build product features right. While Scrum provides the framework to deliver software in short iterations, it does not guide teams on how to design features that meet customer demands.

The Exchange invested in design resources that focused on user-centered research and design. User-centered design is a philosophy that places users at the center of the development process. It is also a systematic approach to gathering, understanding, and applying user data through the planning, design, and development stages of a product.

Key principles of user-centered design that the Exchange strives to follow:

- Goal driven: Early and ongoing focus on user and business goals
- Empirical: Based on data, not opinions
- Iterative: Recognizes that success requires drafts & revisions
- Collaborative: Multi-disciplinary, requires a team approach
- Scalable: Do what you can with the resources you have

User personas were built and integrated throughout the discovery, design, and development process. Teams became familiar with the characteristics of user personas and incorporated them in all newly developed features. The Exchange's user personas are representational of broad sets of Washington Healthplanfinder's population.



Shorter sprint cycles with more frequent releases.

The Washington Healthplanfinder Scrum Teams operate at the same cadence and duration to ensure that work is synchronized. Scrum Teams were given the opportunity to practice running different sprint lengths to find what fits. After experimenting with two-week, three-week, and six-week sprints, the Washington Healthplanfinder Scrum Teams landed on employing four-week sprints. The goal is to have a planned release every two-sprints with the flexibility to release every sprint, if needed. This structure allows teams to be nimble to respond to change with a focus on creating automation along the way while preparing business teams for a system release.

Improvement is constant.

An Organization Action Team was developed to lead the Agile transformation by continuously tracking clear and challenging goals as well as removing wastes that block agility. In addition, the Organization Action Team, is the final stop for impediments that cannot be removed by the Scrum Masters themselves. This forum creates and a path of escalation for Scrum Teams as they continue to deliver value each sprint.

As the Meta Scrum is the keeper of the overall product backlog, the Organization Action Team is the keeper of the Agile Transformation backlog. This backlog contains prioritized initiatives and improvements that drive continuous improvement throughout the software delivery life cycle. Similar to Meta Scrum, the Organization Action Team has cross-functional representation to drive action and support teams within the Scrum framework. One of the successes for both the Meta Scrum and the Organization Action Team has been to integrate Executive Leadership within these platforms so communication is transparent, and work is shared.

Impact: Benefits of Innovation

Agile dramatically increased collaboration across teams, which introduced efficiencies in the process and empowered teams to deliver the right features faster. Scrum Teams worked together as a cross-functional team rather than passing the work along to the next phase.

When comparing two change requests of equal size and complexity, we found:

- The total time resources spent on a change request decreased by 32% (452 hours vs. 670 hours) using Agile.
- A Tester's time was spread across various stages of the change request rather than only focusing during the test phase in waterfall, leading to improved quality as the count of escaped defects reduced.
- Teams were able to deliver 30% more features through an Agile development versus what was initially planned, using waterfall.
- The lead time to correct defects decreased by 50%.
- The total monthly defect resolution count increased by 55%.
- Testing automation was developed and integrated, creating efficiencies as changes were introduced – which had never been accomplished through waterfall.

The Agile journey at the Exchange is not yet complete. Agile has definitely given the Exchange the ability to deliver quality features faster. However, the Exchange is now onto the next challenges: to create the DevSecOps pipeline, further incorporate customer feedback to deliver even more innovative and relevant features, and to empower Agile leaders throughout the organization.