

SolutionsIQ

A Ticket to Transformation

Case Study



How Agile practices and principles guided a major airline through stormy skies toward business agility

Abstract

Over the years, this major national airline carrier with annual revenues of roughly \$4 billion had tried several times to move toward a more Agile state of being and delivering consumer value, but each time they landed short of their desired destination. After several failed attempts to adopt Agile company-wide, in 2014 the airline decided to bring in SolutionsIQ. Our expert coaches worked with them to address long-standing issues delivering high-quality products to the market quickly and consistently. Using a multi-pronged, organization-wide approach, SolutionsIQ was able to help the client's teams build on their positive experiences, step by step. With our guidance, they finally saw the positive and long-lasting effects of a successful Agile transformation that enabled them to visualize—and hopefully achieve—a nearly limitless future.

Client Outcomes

- Delivery cycles tremendously reduced
- Teams implementing continuous integration, with some working toward continuous deployment
- Teams releasing consumable value in smaller increments of better quality faster
- Improved alignment between teams and between department groups
- Transformed company culture, extending agility beyond software teams

Just the Facts

Industry

Airline Carrier

Number of Employees

10K+

Annual Revenue

\$4 Billion+

Length of Engagement

12 Months

Number of Coaches

8

People Served

200+

“For the first time since I’ve been here, I understand how to make program and portfolio decisions.”

Director, e-Commerce

Engagement Type

Agile Transformation

The Challenge

Find a way to respond to an increasingly changing competitive landscape, including a much larger direct competitor

The Goal

Better follow-through on execution, faster speed to market, higher quality

The SolutionsIQ Solution

- Assess the current situation and rally leadership around an organization-wide change roadmap.
- Design a plan leveraging Scrum, XP, Lean Startup and other change approaches and techniques and begin execution.
- Adjust the plan as needed, scale out small successes, and offer recommendations toward sustaining results.
- Help client initiate culture shifts throughout the organization.

What the Client Got

- A comprehensive assessment of the client’s cultural and business baseline, from which to work toward an organization-wide culture, delivery, and leadership shift
- Increased visibility into product delivery obstacles
- Drastically decreased delivery cycle time, removing an “integration window”
- Workflow and technical training and coaching to stand up high-performance teams
- Program coaching to ensure leadership decisions supported transformation goals and objectives

A Ticket to Transformation

Case Study

Overview

Business agility isn't a destination; it's a state of being Agile at all levels of an enterprise. However, achieving agility throughout your organization isn't a simple matter of implementing new rules and flattening out your hierarchy. The average enterprise has to undergo a major transformation to begin reaping the long-term benefits of Agile. That journey often begins with a series of frustrating stops and starts interspersed with seemingly interminable layovers.

That was the case with this SolutionsIQ client, a major national airline carrier with annual revenues of roughly \$4 billion. Their consumer products division had been trying—and failing—to implement Agile off and on for over ten years. Each failure soured the group's opinion of Agile processes in general, and each misstep took them further away from their desired destination. At the same time, the company knew they needed to deliver products that would make consumer interaction with mobile, kiosk, and web-based services seamless and easy. Company leadership wanted these products to contribute to the overall vision of being

the most innovative airline in the nation—one recognized for delivering the highest value to its customers every day.

To achieve this vision, two new leaders, one from business operations and one from technology, decided that the time was right to try Agile again—and this time they were determined to find their way past any initial obstacles. This pair of transition leaders decided to implement a full-scale Agile transformation that would necessitate changes in culture and work flows at all levels of the organization. The goals of the transformation were to enable all team members to own and improve the product delivery cycle, create an environment and culture where teams may respond quickly to changing business needs and customer desires, and provide a platform to facilitate design thinking. Underpinning the success of such an ambitious endeavor were the synthesis and sharing of existing ideas and the creation of new knowledge through close collaboration and cross-pollination, which are key to success in the innovation economy we live in today.

Assess

In 2014, transition leadership engaged with SolutionsIQ to initiate an organizational change program, which included leadership coaching, overall systems and workflow coaching, product planning and execution, as well as technical coaching to improve software delivery planning, execution, and release. To demonstrate the power of its simplicity and efficacy, SolutionsIQ's coaches and consultants used an Agile approach on the engagement: find the highest-priority area for the client to focus improvement efforts and help deliver big wins in small increments.

To start, we assessed the delivery teams' Agile software development capabilities, on which basis we delivered Certified Scrum Developer training using SolutionsIQ proprietary material. We also delivered a two-day workshop aiming to organize a cross-section of business and technical leadership, which consisted of managers, directors and VPs from across the product and technical

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groups, to identify organization and product delivery pain points and improvement opportunities. This workshop resulted in the initial change management program that would transform the people and product delivery processes.

Launch

Technical Excellence

Soon after the initial training workshops, a set of SolutionsIQ technical coaches began to train the client's delivery teams in Extreme Programming (XP) practices, such as pair programming, refactoring, and continuous integration. SolutionsIQ's proprietary Certified Scrum Developer course got the teams excited about how increased technical excellence through a Scrum+XP approach would result in a quicker, better-quality market release—a massive win for all involved. Coaches also partnered QA team members with software engineers to blend roles and set teams on a path toward becoming more cross-functional—a key ingredient in all high-yield software teams. We then provided one-on-one coaching to individual team members, showing the teams the power of continuous integration (see inset), the value of using tests to develop software (i.e., test-driven development), and

Game Changer:

Continuous Integration

One of the biggest initial wins for the systems teams was a shortened delivery cycle. What used to take months now took weeks. Quality improved too. One of the ways SolutionsIQ accomplished this was by introducing teams to continuous integration.

In a continuous integration environment, code is checked in frequently. As new code is added, it triggers a suite of tests that search for any integration issues. If a check-in breaks the build, visual indicators alert team members, who immediately stop what they are doing to fix the problem. A series of monitors signal green when all is well and red when the build is broken. The health of the system is available at a glance to everyone involved.

SolutionsIQ was there for each step of the teams' journey to continuous integration. We went from a blank monitor, to a single running process, to 11 processes under version control and build-quality checks. The teams were soon so confident in their quality and felt so safe checking in new code that they were able to visualize a not-too-distant future where they could implement continuous deployment, wherein code that passes through the gamut of automation tests is released to a live production environment and directly into the end user's hands.

how to slowly build a suite of automated tests to facilitate accelerated market release.

While our technical coaches helped the airline's software delivery capabilities soar, our process coaches were focused on getting more Scrum teams off the ground. Scrum, being one of the foundational Agile processes, provides a new structure, or framework, along with new roles and responsibilities all designed to surface underlying dependencies and "invisible" obstacles preventing teams from **delivering high-quality consumable value quickly before the relevant market opportunity is past**. (See "*Game Changer: Continuous Integration*.") Through onsite training, we helped the client's teams understand the Scrum framework and the cultural shifts necessary. Of tremendous benefit was decomposing large work items into small chunks, generally in the form of user stories, which the teams could "consume" more readily in short iterations, thus producing something of value more rapidly.

Transformational Management

While the delivery teams iterated toward excellence, another SolutionsIQ coach began to work as a managing consultant with the Director of IT on the overall transformation effort. This coach's responsibilities included:

- » Advising leadership and helping lead the transformation program, implementing just-in-time changes so that the airline could excel in a rapidly changing business landscape
- » Looking for opportunities to align people and processes to ensure continuous improvement
- » Leading the coaching community in the execution of the change management program
- » Restructuring the thinking and organizational execution patterns so that portfolio planning and execution is used to manage key initiatives

Together, the Director of IT and our coach looked at high-level strategies for **reducing cycle time, improving the quality of both the existing and future code base, eliminating silos of information, demonstrating what Agile leadership looks like, and ensuring program leadership participated in the decision-making regarding changes on the technology side.**

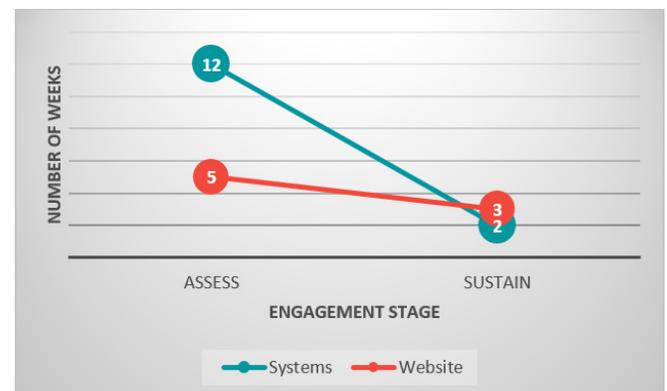
Results from the overall effort were visible and quick. In just a few months, the teams responsible for the airline's website had reduced their delivery cycles from five weeks to two weeks plus what's called a hardening Sprint. They decreased their delivery cycle by two weeks—which means a 40% improvement in speed. The systems teams,

meanwhile, made great strides, reducing their cycle time from three months to just two weeks. That means that **systems teams were delivering consumable value 550% faster!** They went on to continue striving toward deploying new code continuously using another XP practice befittingly called continuous deployment.

Teams also started delivering monitoring and automation frameworks that implemented continuous integration and automated deployment. This eliminated the need for the client's traditional change advisory board, as releases were a frequent and standard event.

Maintain

These wins were very motivating for teams and leadership alike. But like most improvements, the faster delivery cycles began to expose issues beyond the development teams. For example, although the four teams responsible for website



Decrease in Time to Market

development were working on the same product, they were not aligned in their vision, strategy, or timelines. Every team had its own Product Owner, none of which were talking with the others about their delivery plans. We brought leaders from product and technology together and taught them how to establish a cohesive program map with a unified objective for the website. As a result, leadership had visibility into what each team was doing, and could see the impact of one decision on the overall portfolio of work. As the director of e-Commerce put it, “For the first time since I’ve been here, I understand how to make program and portfolio decisions.”

Eventually, the client could clearly see the value of reducing both complexity and coordination up front. To further growth, in the beginning of 2015, our program consultants worked with the transformation leadership to reform the website development group from four siloed teams into six business feature teams. Doing so required a few innovations, including:

- » Ensuring that all teams were cross-functioning and fully capable of producing and releasing consumable value in a Sprint
- » Sharing code-base ownership
- » Creating a business-centric work flow

- » Developing the capability to build out multi-level planning events
- » Building continuous integration capabilities so that coordination, formerly part of the planning process, is built into the delivery process
- » Creating a portfolio leadership team to manage and implement one Product Backlog with multiple Product Owners
- » Working with HR to define business analyst and product manager roles

One of the principle purposes of implementing these changes was making visible the entire portfolio of work, which was decomposed into small releasable feature sets. Doing so made it easy for Project Management to see and report on progress for initiatives.

“For the first time... I understand how to make program and portfolio decisions.”

Scale

Sometimes it is difficult for groups working in their individual silos to see how their work connects to that of other groups, and ultimately to the customer. The gravity of failing to connect the dots became apparent when the client rolled out a new program to enable passengers to pre-order meals onboard the aircraft. This product offering involved multiple groups—including supply chain, kitchen staff, and technology—all aligned on a single strategy. Yet, in the past, each group had worked in isolation, counting on someone down the line to put all the pieces together.

Every group is part of the product arm of the company... [and] the goal of every department is to satisfy and delight customers.

SolutionsIQ was onsite when the client started this new initiative. We sat down with the mobile and airport systems groups to determine all of the work involved to deliver the product to the customer. We facilitated conversations necessary to prioritize the work and coordinate all of the moving parts. We discussed how business operations could

interface better with the technology group, and vice versa. Ultimately, we helped them visualize how to integrate all of the pieces while they were being developed and how to manage dependencies. This shift to a more holistic perspective had a tremendous impact on the teams involved—and even more so when the rollout was a success.

This is just one example of how we helped shift not only team practices but also the business and leadership processes, in addition to the airline's deeply ingrained culture. In IT, it's easy to focus solely on programming, testing, and releasing—especially in groups that solely serve internal clients (e.g., Operations). In reality, every group is part of the product arm of the company. SolutionsIQ's coaches worked with the Enterprise Project Management Office to improve in the following areas:

- » Formulating a visible product portfolio and product management strategy
- » Formulating a cohesive why message and communicating it throughout the organization
- » Limiting team work-in-progress to help them focus on the products that are most important to the bottom line

Overcoming Obstacles: Financing

A common obstacle that many of our clients face, regardless of their size, is how to fund their Agile transformation. Because of the deep and wide implications of even small changes—such as reorganizing departments into Scrum teams of seven plus or minus two members—making the leap to Agile often requires innovations in financing that new solutions in Agile capitalization aim to address.

SolutionsIQ's airline client took a pragmatic approach to this problem: using available delivery budget toward much of the transformation work in lieu of using funds set aside for professional services or consulting, as is the traditional case. This arrangement was especially useful at this client because our technical coaches also contributed heavily to the end product, often donning the XP programmer hat to do capitalizable work.

- » Understanding the true cost of change by comparing past incursions due to legacy code and antiquated workflows with future savings and increased revenue due to faster delivery

As these changes took effect, all parties were able to see the release from a program point of view and to truly understand that the goal of every department is to satisfy and delight customers.

We also began looking at roles and responsibilities in the organization and how they align with Agile values. We asked questions such as “What does it mean to be a Product Manager in general and at this client in particular?” We also worked with HR on ways to recruit the best candidates for future job openings. In one particular instance, this involved crafting a detailed description of the ScrumMaster/Agile coach position including a salary range in line with industry standards for the client's location.

By becoming intimately acquainted with both the technical and business requirements implied in “delighting customers”, the client came to understand that agility is not just a “development thing”; achieving true business agility, at some level, requires the investment of every individual in every department throughout the entire organization.

Sustain

The Agile journey takes time and patience, perseverance and quite a bit of guidance. Like many journeys, getting started in the right direction is the hardest part. Our airline client now understands how far-reaching an Agile transformation is—and, in many ways, the journey has only just begun. The client has since asked for help shifting the leadership thinking from managing people to managing the system and ecosystem of the organization. For example, as part of the client's commitment to continuous improvement and becoming a more Lean organization overall, the client formalized a leadership role called the Agile Delivery Manager. This person would own the organizational transformation roadmap and manage all of the Agile coaches. In

general, the Agile Delivery Manager would oversee the staffing and execution for all the improvements the client identified—be they related to leadership, technical, or process. This airline is one of the first companies SolutionsIQ has worked with to have followed through on formalizing this role.

A commitment to innovation is also part of an Agile mindset. To that end, our coaches also delivered several Lean Startup workshops to the product strategy innovation group. These one-to-two-day sessions are designed to help company leaders choose future products and investment opportunities. These and other workshops are teaching groups to think about what to deliver as opposed to focusing solely on how to deliver it.



The Bottom Line

Before engaging with SolutionsIQ, the client was faced with the all-too-common dilemma trifecta that all enterprises in our current economy face: **how to deliver to a rapidly changing marketplace a product of better quality more quickly in greater quantity.**

To help the client achieve an effective and sustainable solution, SolutionsIQ had to change the organization at every level, transforming the technical and workflow delivery processes, business operations and—possibly most importantly—the culture.

Today, the airline's culture and people have transformed: Teams are more productive and happier largely because they own the process of delivery. Management fosters an environment of improving the system, and leadership is invested in ensuring that the Agile transformation they wanted and paid for is successful.

SolutionsIQ ushered in a new era of product and engineering quality where other consultancies had failed. We did this through understanding that the change is not about Agile; it's about people, practices, and principles. This improved culture shows up time and time again in portfolio, program and team execution patterns; alignment between technical and business leadership; alignment with the program management office; and in leadership's newfound commitment to continually improve the system over time. Agile organizations understand that their journey will take time and expand to cover more and more territory. Each step on the path opens doors to new opportunities. Each positive experience leads to another. And like a photo or postcard from a treasured vacation, every win leaves a lasting impression on the culture that changes it just a bit more for the better.

Big Wins

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Want to be the next
success story?

Contact us now to learn more about how
SolutionsIQ can guide your Agile transformation!

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