

HOSPITAL SÍRIO-LIBANÊS USES SCRUM TO RESPOND TO THE COVID-19 PANDEMIC BY REDUCING LOSSES AND DELIVERING SAFETY TO FRONTLINE WORKERS



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CASE STUDY



THE ORGANIZATION

Through its service units, and social responsibility, teaching and research efforts, Hospital Sírio-Libanês helps an increasing number of Brazilians to have a better and healthier life including more than 120,000 patients annually.

Recognized worldwide for the standard of excellence and relevance in health, Hospital Sírio-Libanês occupies a consolidated position as a Brazilian care entity built over the past 100 years. Through its service units, and social responsibility, teaching and research efforts, it helps an increasing number of Brazilians to have a better and healthier life. This includes the more than 120,000 patients seen annually at its facilities and citizens who benefit from public-private cooperation, projects supporting the Sistema único de saúde (SUS) and medical knowledge disseminated in their health care programs. With an area of approximately 100 thousand m² in the Bela Vista neighborhood in São Paulo, it serves more than 40 specialties and has 710 beds and an investment in social responsibility of R\$150 million in the same period. They are a family owned and operated organization.

The Challenge

Hospital Sírio-Libanês wanted to find a way to respond more efficiently to the individualized needs of customers and operational needs. They previously followed a waterfall process and were experiencing a lack of a vision, resulting in poor prioritization and misalignment. The projects and results were measured manually on a spreadsheet, which in more complex cases would generate inconsistencies or errors in the measurements of the progress and outcomes of the project. It was very unclear if they were being successful.

They also had a clash of working models. The organization was functioning in a hierarchical, departmental model and they were prioritizing local problems ahead of institutional ones. Each group worked in different ways.

Due to these challenges and others, the hospital began its journey to become an Agile organization. They started by adding an Agile mindset to its culture, with the goal of enabling the different areas of the Hospital (IT, HR, Legal, Commercial, Surgical Center, Quality and Safety, Emergency Care and others) to respond more efficiently to the individualized needs of patients and the focus of the business. They decided to focus on maximizing value delivery by reducing waste of materials, money, effort and intellectual capital.

The Solution

The first step of their Agile transition was the creation of an Agile Center of Excellence to coach people in Agile including training on tools to support the execution in a way adapted to the context of each of the areas formed, in large part, by healthcare professionals. They chose Scrum as their primary framework to use because:

"Scrum is a simple model to teach," said Conrado Tramontini, Head of Agile Transformation. "Scrum has well-described events and accountabilities in addition to the empirical model well known by health professionals. These characteristics are in line with our needs, plus Scrum is well known."

From there, the first project chosen was one with high complexity that involved different areas of the organization. The name of the project was Revenue Cycle ART. The revenue cycle project aimed to reduce the average bill receipt period and reduce the number of initial disallowances reported by health operators. As a part of this effort, they worked on automation processes, improvement of medium protocols, improvements in the databases for registering medicines and medical materials, in addition to improving the packages of products offered.

The Revenue Cycle ART had 40 Developers, divided into 5 Scrum Teams. Each Scrum Team had different competencies - doctors, nurses, financial analysts, technology, pricing and registrations, as well as software developers. The Scrum Team Members came from all different areas related to revenue, such as finance, clinical governance, care teams, products, registration, human resources and software development. There were three

Scrum Masters. They worked in 2 week Sprints and incorporated 3 month PI planning sessions from SAFe.

The Product Owner had deep knowledge about the product and the business, and was responsible for maximizing the value of the product and the work of the Development Team. The Product Owner exercised leadership over the product being developed and made the bridge between the business and the Scrum Team, understanding the needs and priorities of all those involved in the organization to act as their spokesperson. Others on the Scrum Team also engaged with stakeholders to better understand their needs and clarify questions.

They also utilized the product and solution management role of SAFe as a member of the Scrum Teams aligned to Lean's Value Stream Manager in a role called Value Stream Owner, considering them working with the Product Owner to help:

- Identify business needs and opportunities from the customer's point of view
- Prioritize Backlog Items
- Guide the Release Train's work through the definition of vision and roadmap
- Analyze costs, impacts on the value chain, payback and return on investment from a business point of view
- Identify business needs and opportunities from the point of view of the client aligned with the Business Owner (role within SAFe)
- Guide the work of the Release Train through the definition of vision and roadmap
- Work together with the RTEs and Architect Owners to ensure technical feasibility and the cadence of the ART's deliveries

Their initial approach consisted of an immersive workshop with all of the people involved in the problem, with the objective of creating an MVP vision (Minimum Viable Product) and empowering both leaders and other employees from different areas with the Agile mindset and operation of their teams to build solutions.

“As we brought the Agile mindset to the business areas, all of them worked with more autonomy and in a more sustainable way,” said Tramontini. “The directors stopped coming up with solutions so that the team could work together to develop a solution.”

With the positive impact of this initial work providing a cultural transformation of mindset, other areas sought the Agile approach to be used on new projects, bringing improvements and impacting different sectors.

Next, the focus of the Agile Center of Excellence was on operations and strategy. Additionally they focused on the realization of workshops, enabling leaders to enable agility and to anticipate the needs of patients and respond to them in an institutional way. They eventually started to take an Agile approach in their open innovation projects.

As an initial step, they trained the whole team in Scrum, which was new to the vast majority of them. In addition, they needed to integrate the entire team of almost 40 people at the time, in which many did not know each other.

After a month and a half of work, they were impacted by the COVID-19 pandemic, causing them to transition to working remotely, yet the teams were still learning. At this point, Scrum helped a lot, because it provided transparency in the daily work of the teams and each team member. The Scrum Events ensured communication and collaboration and, consequently, the cadence of deliveries. From a tools perspective, they implemented the following to help foster transparency and collaboration:

- Azure DevOps as a Kanban board
- Miro for team visualization
- Teams / Sharepoint for communication

They also incorporated the following practices:

- Lean Inception
- AWS Working Backwards
- SAFe PI Planning

“A great benefit of using Scrum is how it provides the opportunity for many collaborators to have autonomy in decisions, greater visibility, development of new skills, and have a macro view of the processes that permeate the cycle chain.” - Diego Aristides, Executive of Innovation and Agile Transformation for Sírío-Libanês

They transitioned to have a focus on developing products to bring efficiency to each value stream while improving their patient and employee experience. Some examples are:

- The products that automated different processes of information exchange with operators, reducing the amount of charge rejections and improving the time of receipt in a very significant way. The initial losses (loss of revenue) were reduced by R\$4.5 million/month, from 10% in 2019 to 7.5% in 2021.
- Solutions were built in 4 days, which allowed them to respond quickly to the needs created by the pandemic, such as a tool to control the vaccination agenda against COVID-19 by priority, an Emergency Care flow control solution, maximizing care capacity and reducing patients' wait time by providing them with a better experience.

There were some anticipated issues and problems that the organization had in relation to this project. One of these was that they wanted to positively impact employees and managers in a way that they saw the real benefits of adopting the Agile approach. Fortunately, full acceptance was naturally happening as the results were emerging and widely disseminated.

They also faced the need for social distancing and work in the home office because of the pandemic. To solve this problem, a group-based approach and face-to-face conversations were adapted to a teleworking model with the use of collaborative tools and more inclusive facilitation. This allowed people who are working on a day-to-day basis with patients and people from other areas related to the problem to participate more actively.

Throughout this project, they needed to adapt Scrum for health professionals, since the framework was initially created for software development. They realized Scrum was a basic framework they didn't need to change. However, they added the use of examples and practices related to the teams' day to day activities. They also

provided practical training for the teams. Second, with necessary adaptations in their execution model, testing and evaluating the adoption scenarios with the teams, they listened to the people who were working and collected suggestions for improvement.

Another need the organization had was for the continuity of Scrum Events and collaborative workshops for product discovery as the second wave of COVID-19 arrived. They needed to improve their approach in responding to change. They used the knowledge of the Agile Center of Excellence and the people involved in the process. Next, they identified pain points they found along the way and opportunities to reduce them. Regarding the metrics they used to measure progress, at a product level they used OKRs, KPIs, NPS and other product specific metrics such as number of successful consultations, waiting time for service, number of consultation data/medical records in the ministry's physician base and response time in sending billing items.

Results

Today, The Hospital Sírio-Libanês is composed of approximately 9,000 employees, of which 7,000 work in operational areas and 3,000 in administrative areas such as HR, Finance and other areas and an Agility Center of Excellence with 6 people who disseminate agility to the entire organization.

Among the done Increments the Scrum Teams delivered, they have seen improvements in processes and products, the contribution of automation technology that streamline scans, the addition of robots that replace repetitive, scalable and high-volume activities, development of applications that bring data democratization and assistance in decision making, reducing the amount of charge rejections in finance and improving the time of payments received. The initial losses (loss of revenue) were reduced by R\$ 4.5 million/month, from 10% in 2019 to 7.5% in 2021.

"At all stages, the use of Scrum in an Agile culture led to impressive results in a turn around time never before seen or even imagined," said Ailton Brandão, CIO of Sírio-Libanês. "Scrum increased the ability of teams to deliver value, gave more autonomy to professionals, improved quality and clarity of communication and, especially, gave the various areas of the institution the ability to respond quickly to complex health demands."

About Scrum.org

Scrum.org, the Home of Scrum, was founded by Scrum co-creator Ken Schwaber as a mission-based organization to help people and teams solve complex problems. We do this by enabling people to apply Professional Scrum through hands-on training courses, globally recognized certifications and ongoing learning all based on a common competency model.

Scrum.org supports people wherever they are on their learning journey from beginner to highly experienced practitioner, helping them to grow over time with ongoing learning opportunities and resources. Community members share knowledge and gain new insights from each other leveraging forums, blogs and more.