



TEACHING INNOVATIVE
WAYS OF WORKING
IN THE DIGITAL ERA

The Kanban Method as an Engineering Solution

FEBRUARY 2021 — MAY 2021



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General Context

Challenge: Körber Supply Chain has in hands several enormous projects with different clients. This organization is involved in the design and implementation of solutions all over the world, solutions that are entirely personalized and tailor-made for the client's needs. A solution includes working with people from several areas, such as Automation, Mechanical Engineering, Software, and Project Management. After it's installed and delivered, the Customer Service's area would oversee supporting any requests and setbacks during the time needed, which can last for years.

Context: Fitting a company for its purpose can be an extremely elaborated challenge, as Körber Supply Chain is composed of two teams: one (Project Team) is responsible for developing new software solutions to provide better customer service. The other team (Customer Service Team) focuses on providing Support for the solution alongside people from the sales department to maintain the relationship and search for new customer offers. People from Software Engineering, Sales, Project Management, and people allocated to the Support of these solutions are involved. With such a complex environment, these teams expect to increase their awareness of the "Agile mindset" to provide more capacity, knowledge, and competencies to their people on agile practices and develop cross-functional skills for working with shared processes.

Solution: Enterprise Agility

Results:

- + Increased Visibility of the Work in Progress and future initiatives
- + Team Organization - "Synchronizing Moments" brought everyone together for team working and search for "quick wins"
- + Communication and Collaboration increased as team members now participate in dailies of different teams to share information regarding ongoing projects and tasks.

Assessing the Needs

To commence this 8-week journey, we needed to understand the customers' problems, current way of working and desires to increase the performance in which work tasks have been finalized. The first step to engaging this yet unknown environment was to perform a Value Stream workshop. With this, we could identify how the work flows and the relationship between the two teams involved in this project (the Customer Service Team and the Project Team), as figure 1 represents, and the main steps to complete a project or a complex initiative. With the help of an Agile Thinkers psychologist, we were also able to become acquainted with the current situation, how people communicated and what was the attitudes and behaviors.

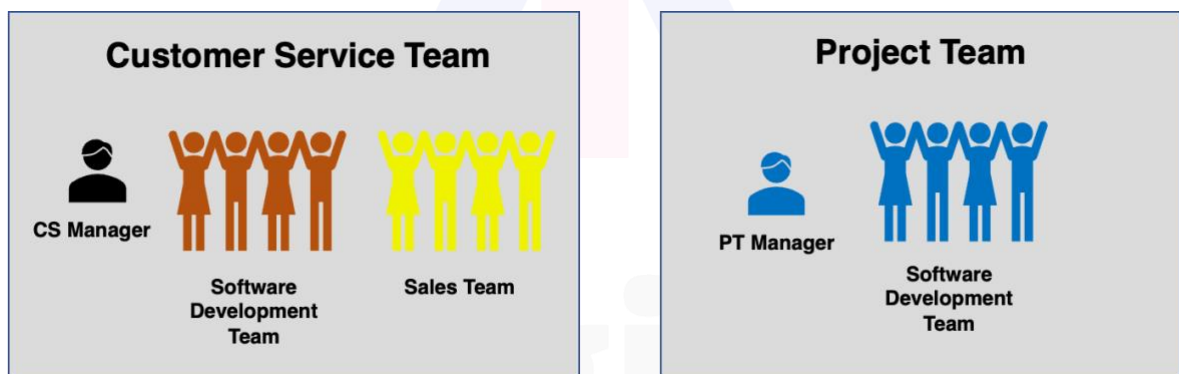


Figure 1: A representation of the teams involved

A Phoenix Project workshop was performed to test the communication channels under pressure to learn how to work and their communicative behaviors between peers and other team members. Some of the main patterns and key findings were:

- + Lack of planning shared information and knowledge between individuals
- + The structure and architecture of a given solution, where there are too many tailored solutions, which involve more time and care to each customer

The main problems were also about dealing with the following:

- + Interruptions & debilitated communication;
- + Legacy, as projects have a low delivery rate, there are some delays;
- + Due to the workload, there was no time to sense, think and act with the right approach to the problem;
- + The prioritization that was missing unleashed the spontaneity in deciding what tasks to do, and
- + Ending up in a nonexistent continuous delivery cadence, there was too much focus on tools and platforms and less on methods, culture, and practices.

““The planned work is always in change, we have lots of interruptions and we cannot finish a task without other 2 or 3 problems. We spend most of the time in meetings, answering phone calls and emails... Lack of availability to do what matters the most and so we are always running behind the train of work. There is no room for re-thinking processes and to evolve””

Körber Supply Chain team member

The solution had to guide these issues and an alignment between people from teams with different yet dependable work. The founded solution was the implementation of the Kanban Method across these teams, and the Kanban itself brings the visualization of the work in its different stages (for example: to do; next; doing; done). However, teams only start to improve with collaboration and communication, things that, on the first assessment, would be lacking. Converting the current way of working into a “pull system” can be the trigger to an exponential evolution with the guidance of the Kanban practices. This relevance appears when relating to the organization metrics and the related work that allows a gradual evolution of the business with the possibility of reducing risks and dependencies associated with predictability on the delivery.

As an introduction to the Kanban Method, a day-long workshop aimed to clarify the Lean-Agile Mindset, its principles, and how a team can focus on customer needs and potential benefits Kanban could. This initiative also helped the team to experience how a “pull system” works in the first place. It also helped highlight the importance of every moment in a week of work, not only the daily meetings but also the improvements that could be made with the retrospectives and planning sessions.

Evolutionary Approach in Customer Service

Starting with the Customer Service team, the first moment with the team was to get the first visualization and bring awareness to the people of where the team focused. As figure 2 shows, the start was made with a basic visualization and the implementation of the first crucial moments associated, such as the Daily Meetings and Retrospective sessions. These daily moments were essential for everyone to be aligned with the team goal.



Figure 2: First Kanban board of the Customer Service team

Conversations around the work in progress and the work to be done started to surge. After some days of observation, we could see that different areas of the Customer Service team have different paces of delivery and work completion. Starting with a different swimlane, so the type of work that both sub-teams share does not become invisible, and retrospective and daily meetings could also be with everyone, as figure 3 shows:

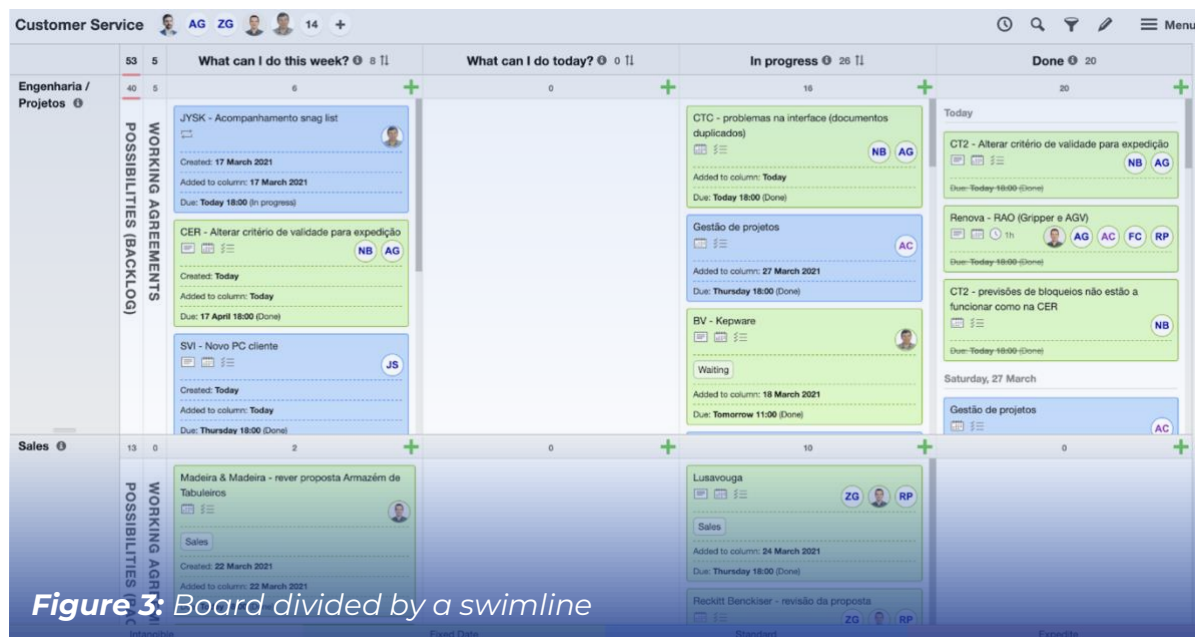


Figure 3: Board divided by a swimlane

Retrospective moments help the team introduce service classes, as well as the “frightening” Work in Progress (WIP) limits and Policies, such as Definitions of Done. These moments help to think about the current involvement of the team in the tasks, what can be done to improve this, and also to discuss the different matters where Kanban is helping and where it is not, to drive different improvements. Figures 3 and 4 represent the results of some of these moments. The main topic was to discover and debate what to do to improve the communication between the CS and PT teams and what was not working so far on this initiative and needed an adjustment.

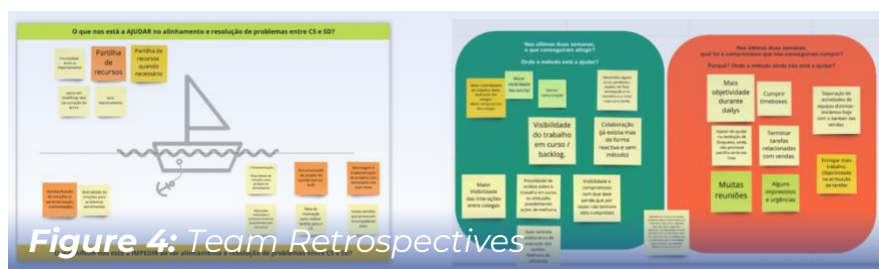
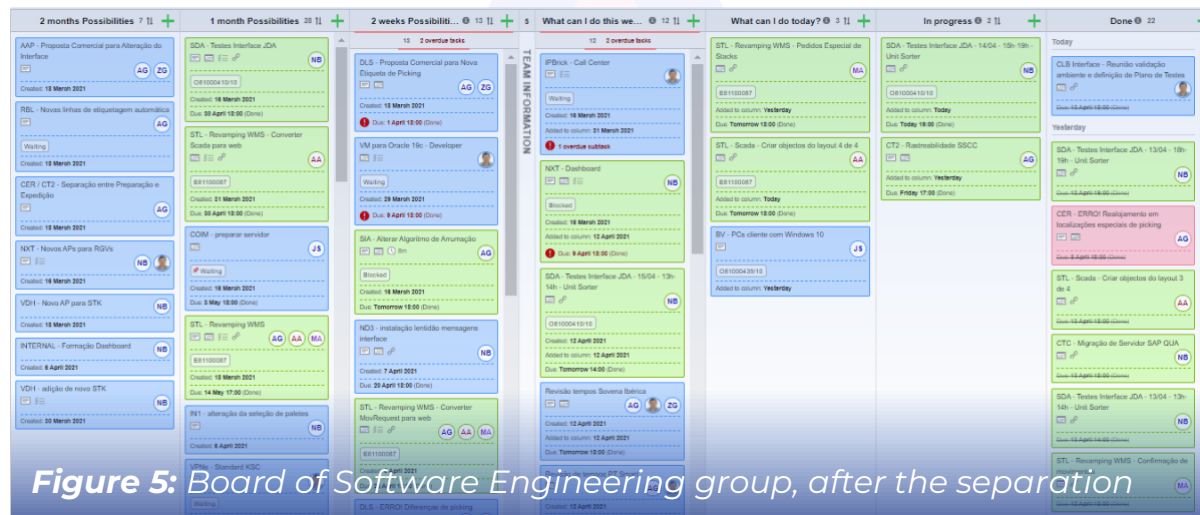


Figure 4: Team Retrospectives

After observations and the introduction of WIP Limits, exists a clear sign of different delivery rhythms that these two teams have, distinguishing workflows and dependencies. The Software Engineering group has a workflow with fewer dependencies with third parties and a faster and more predictable flow. At the same time, the Sales group awaits answers from other teams, customers, and suppliers. The work that these groups do is shared, or it requires much collaboration between one another. Therefore, the following natural step was the board separation (represented in figures 6 and 7).

In order to provide a clearer view of the future work for Software Engineering, the “To Do” (Possibilities) area was divided into different options: By cascading them into 2 months, 1 month, 2 weeks, it is possible to prioritize the work to do in a better way, as figure 5 shows, while figure 6 represents the Kanban board of the Sales team, after the separation.



Key takeaways – Customer Service Team

“A lot of times I take tasks as they were mine but they are not, which creates an additional stress in me that can be avoided. Nowadays I have a different way of dealing with these, a new way when it comes to dealing with customers. Now I feel I can make provide an helping-hand, and there are more people that can execute this work”

Körber Supply Chain team member

The Cumulative Flow Diagram (CFD), of the Software Engineering group represented by figure 7, shows that there was a positive impact of the Kanban Method, as with the implementation of the WIP limits, the team increased the delivery rate by 30%. However, on the right side of this graph, we can see that the delivery rate decreased due to the existing dependencies of work with other teams across the organization.

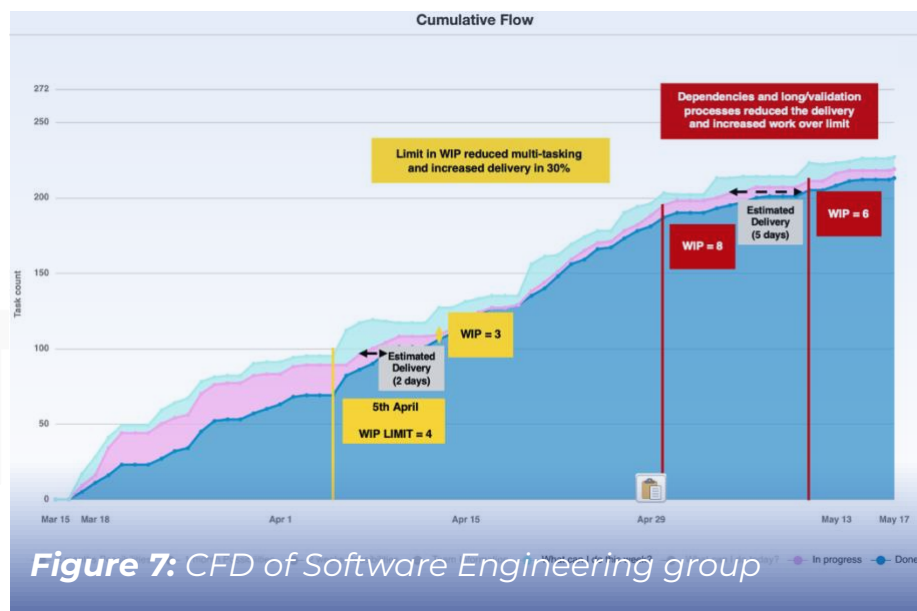
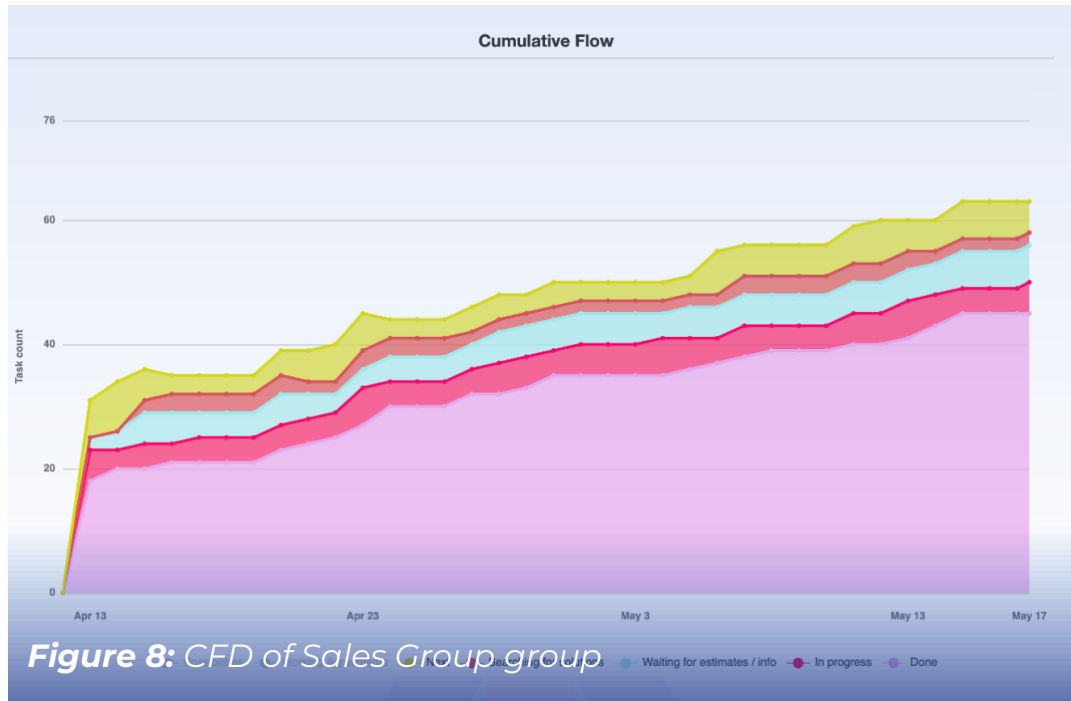


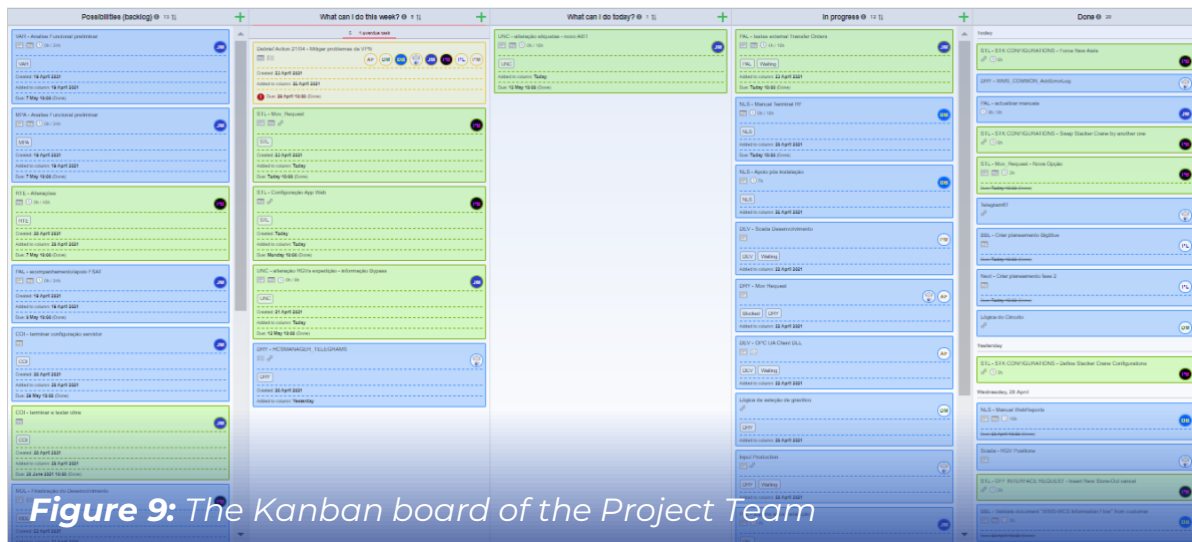
Figure 7: CFD of Software Engineering group

On the other hand, the Sales group has different data associated with the CFD, as the delivery rate and the workflows are also different, as figure 8 shows. The delivery rate is lower due to being related to the creation of proposals and other sales-related subjects that take more time and are dependent on third parties.

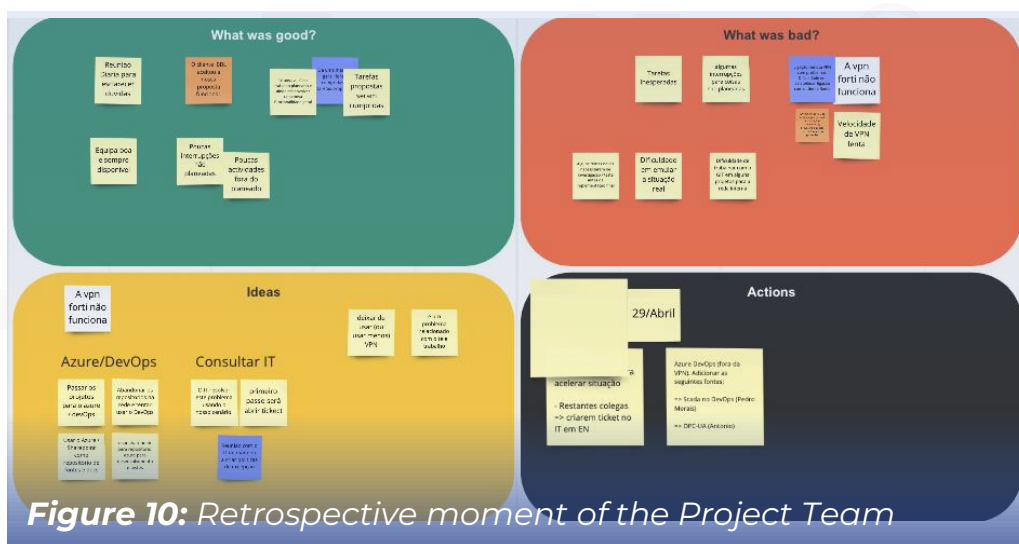


Evolutionary Approach in Project Team

To introduce the method to the Project team, this team participated as observers at the moments of the Customer Service team in daily and refinement meetings. From the very beginning, this team approved the method's benefits, the conversations around the board, and the visibility it brings to everyone. The Kanban Method is present on both teams, with different work-paces and dailies happening at different timings: when there was a theme or a subject that needed to be discussed, they were able to go to these meetings, see for themselves the work status, and also save time on their schedule. The Kanban board of this team is represented in figure 9, and it has the following columns: "Possibilities (backlog)"; "What can I do this week?"; "What can I do today?"; "In Progress"; "Done".



In a retrospective moment, one of the principal needs that were assessed in the first place was the Definition of Done to create an alignment between everyone about what needs to be created or what documentation must be completed and delivered to tasks considered “Done”. Figure 10 is the result of this moment, with the following implementation of these definitions of Done.



The next step of this team was implementing the Work in Progress Limits to create focus and commitment to the work that is already in progress and stop multitasking in the team.

Key Takeaways - Project Team

“We start the day with the daily meeting, where we discuss the tasks and main topics about difficulties and pendent work from the previous day, afterwards we make a planning and create a commitment about the tasks that are going to be completed on the day”

Körber Supply Chain team member

This team's delivery rate was not a problem, as we see by its associated CFD in figure 11. The main advantage that was brought is the alignment of the Kanban method. Meaningful discussions for improving the current way of working were happening, either if it was about refining the tasks that must be completed or what the following tasks that are going to be delivered are going to be.

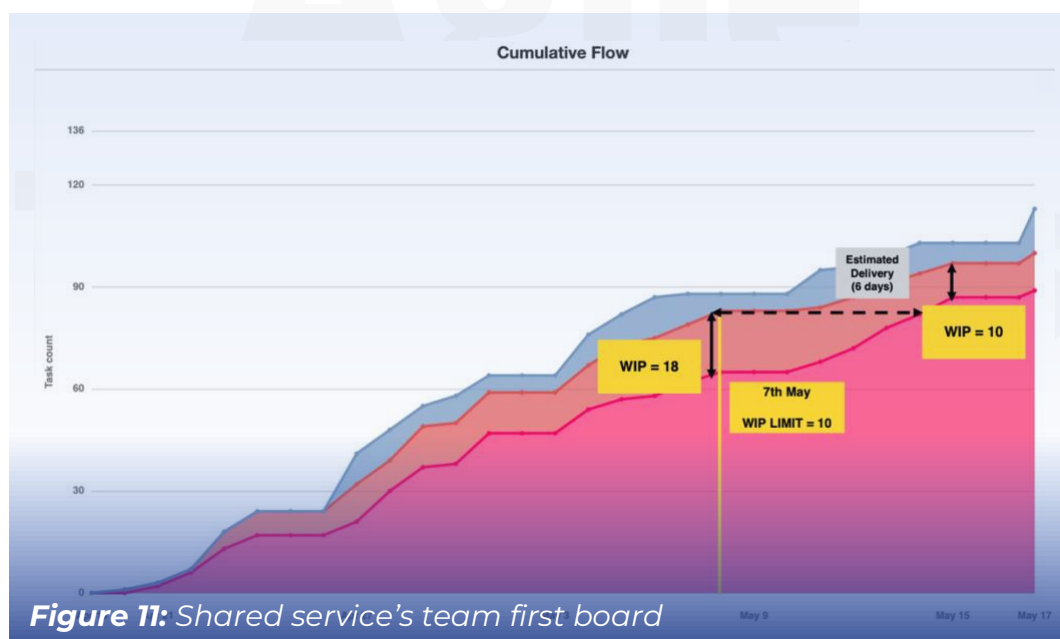


Figure 11: Shared service's team first board

Future Challenges for Körber

This journey toward agility is only starting. Struggling with stress, endless ongoing problems, problems that surge in the early hours of the morning, which can result in sleepless nights, and some other external factors can drive everyone crazy. The Kanban method cannot avoid those factors, but it can contribute to collaboration just by the Visualization that is brought by the board.

There is a sense of improvement in the relationship of both teams and, working together to solve daily problems and challenges. Despite the improvements, some problems remained, such as the main issue as some people have the same tasks. When changes occurred, the other team had visibility of those changes only once in a while, as this fact is still a challenge for the future.

Everything achieved so far has to be a part of Körber's ADN. Every day during the last months generated discussions around how to make work easier for everyone. However, now the challenge might be to start sharing different competencies between one and other team members. This situation can solve the issue of "one-person dependency" like other people, in time, can learn how to do different tasks. When someone needs to talk about shared work, they can be in the other teams' daily meetings and discuss what needs to be done to complete the current work in progress. Another topic that has to improve is the collaboration with the sales team to drive the customers to better solutions and better and improved technology.

The Kanban method was able to help Körber align its strategy with planning and delivery, making everyone more focused and committed to the work that matters.



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