InLoox Case Study

Modern, digital resource management

Internal engineering office of SBB AG automates its PM

Complex tools are needed to modernize trains, which happens about every 20 years. For example, if the doors in a train series need to be serviced, repaired or painted, SBB requires special lifting equipment - cranes - as well as transport containers, which have to be designed specifically for each case, as soon as the doors are removed in the maintenance halls.

In the overhaul and maintenance of Swiss Federal Railways (SBB) trains, an in-house engineering office specializing in operating and auxiliary equipment for assembly services supports the complex maintenance projects at SBB's Olten plant. Its goal is to simplify maintenance while optimally coordinating the company's own resources for project requests from internal customers. The specialists from the vehicle and systems engineering department are tasked with redesigning operating and lifting equipment for internal production for internal customers - for example, transport containers for doors of the train series currently being maintained.

Until a few years ago, it was still sufficient in the engineering office to manually plan the resources, availability and workload of the employees on a blackboard in the office. Appointments, time sheets and orders were displayed on an additional board. But once the number of projects reached 20, it became difficult to get a grip on the deadlines with this planning system.

Challenge

Given the high number of projects and the growing number of large-scale projects, comprehensive team coordination was becoming difficult at SBB AG's internal engineering office. The analog planning system was to be replaced by a modern digital tool for resource management, workload planning and project coordination.

Solution

With InLoox, they found a cloud solution that makes all relevant data available digitally through the automated use of emails in the project and the storage of all important project information. The creation and expansion of dashboards was to provide the necessary overview for the best possible capacity planning.

"As our team had to take on and handle more and more projects, the previous system for workload planning increasingly hit its limits. Too many projects from internal customers coming in at the same time meant that we didn't know to whom projects would be assigned. When six to eight large modernization projects had to be taken over from 2017/2018, it was no longer possible to meet deadlines," says Elvis Icic about the initial situation and the reason why the SBB team had to digitize its resource planning and use a new solution for it. Icic, who works as a design engineer for operating and lifting equipment, selected a modular solution for resource planning in accordance with the requirements and tested tools from six suppliers for several weeks.

Resource allocation, status transparency and automated email communication

InLoox was ultimately awarded the contract because the solution could be used to create a resource plan as well as customizable dashboards that could replace the previous Excel tables [for controlling]. Furthermore, project requests can be collected in a pool, project information can be easily created in the system and - very important - emails can be stored directly in the project folder. Installing this Outlook add-in was worth it, according to Icic. Even if it took a while, because beforehand the IT department had to check that SBB's strict security requirements were met. Automation also saves time. For example, if one of the partners or internal customers needs information, they now simply receive a screenshot sent from the engineering office.

Project controlling, quality management and learning effects

Icic has now created 20 dashboards in the solution itself. The goal is to use them to evaluate projects, determine key figures and derive optimization potential.

One dashboard, for example, provides an overview of the status of the projects with regard to deadline postponements. Another shows whether the quality targets have been achieved in each case.

With a third one, it is possible to learn lessons if projects have not gone so well. According to Icic, the main reason for this is usually because the general conditions have changed: For example, because a train line was assigned a new hall whose ceiling height was then too low for the necessary crane design. The engineering team has responded to such problems by creating checklists for projects to avoid receiving too little information from their clients.

Always ready for telecommuting and home office arrangements

In the spring of 2020, the engineering company started to work fully

Results

Since all projects are managed digitally, the move to the home office during the CoVid pandemic was an easy one. The overview and process optimization gained led to a time saving of 9 working days in project planning and shortened team meetings by 50%. The planning reliability for SSB's internal customers increased and the transparency, plannability and communication for meeting deadlines improved noticeably.

SBB CFF FFS

Quotes

"When everyone had to work in the home office during the Corona pandemic, we were already equipped for it[[...]] because SBB was prepared, having already completely digitized our resource planning. Without our cloud-based InLoox solution, we wouldn't have been able to do our work at all."

"In our regular team meetings, we reduce the time by about half compared to the past. The meetings now last only 15 to 20 minutes instead of 40."

Elvis Icic, Vehicle and Systems Engineering, Resources & Additive Manufacturing, SBB AG Passenger Traffic Maintenance Rolling Stock

with its new solution, as Icic reports: "When in April 2020, at the beginning of the Corona pandemic, everyone suddenly had to work from home, we were already prepared for this. Even if the timing was a coincidence, it meant a huge advantage that SBB was prepared after we had already completely digitized our resource planning. Without our cloud-based InLoox solution, we wouldn't have been able to do our work at all."

As of April 2020, the engineering firm has been able to take advantage of many of the benefits of its cloud-based solution. Before that, according to Icic, "you have to dive in to enter the data into the system and also invest time in training, but then countless opportunities open up afterwards to evaluate the project data or increase productivity." With the templates in place, the engineering firm has been able to significantly speed up planning times. For example, templates for future project plans can be created for medium- and long-term projects based on previous projects, so that processes that used to take ten days can be completed in less than a day.

About SBB AG

SBB AG's internal engineering office and its team are responsible for the design of auxiliary and operating equipment for the modernization of trains.

At the SBB plant in Olten, Canton Solothurn, Switzerland, the internal engineering office not only carries out the maintenance of the train lines, but also designs the necessary devices such as cranes or transport containers beforehand.

The Swiss Federal Railways (SBB CFF FFS) employs 34,200 people and transports over 1.16 million passengers and 180,000 goods to their destinations every day.

Greater transparency, significant time savings, planning reliability and adherence to schedules

Since the project data is in the system, the engineering team is able to reconcile all parallel projects even at regionally distributed workstations. To display the resources across projects, the head of project planning only needs to share the screen.

Another advantage is that everyone in the office has an overview of all the projects of each employee or project member. Since the projects are easy to track, absent project members can be easily substituted - for example, in case of vacation or illness.

Third, the engineering firm is seeing big time savings because resource planning meetings have been cut by 50 percent, according to Icic: "Meetings now take 15 to 20 minutes, not 40."

Since the engineering office can plan the individual projects more precisely, rolling planning is now possible. Specifically, this means that the next employee with free resource capacity can be deployed, allowing projects to be lined up one after the other. "We can communicate whether we can meet a deadline or not, unlike in the past. This gives internal customers at SBB planning certainty and they can then decide whether they want to order our engineering services or commission external parties.

Image sources: Elvis Icic; SBB logo: © SBB CFF FFS

Über InLoox

Das Münchner Unternehmen InLoox GmbH wurde 2001 gegründet und entwickelt innovative, ready-to-use Projektmanagement-Lösungen, die Geschäftsprozesse vereinfachen und beschleunigen. Die komfortablen Integrationsmöglichkeiten in andere Systeme machen InLoox zur zentralen Plattform für das Projekt– und Tagesgeschäft. Die einfache Bedienbarkeit erleichtert den Arbeitsalltag und Projektleiter, Teams und Entscheider können sich auf die zuverlässigen Planungs-, Steuerungs– und Monitoring-Funktionen von InLoox verlassen—im Web, auf dem Desktop und auf mobilen Geräten.

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