Helping Matt…

Matt is a field technician who is inspecting and repairing systems and components for the customers of Sulzer's Rotating Equipment Services (RES) division.

He works in a small, localized and relatively autonomous teams to quickly respond to upcoming customer needs. However, this leads him with a constant challenge to maintain and share and obtain knowledge from the wider organization.

On the other hand, collaboration between locations, time zones and language boundaries has become significantly easier in the last decade thanks to widespread of Internet technologies, and the emergence of social platforms supports the formation of horizontal, self-organizing teams. Sulzer is therefore breaking new ground in improving the exchange of knowledge. Please contribute with your ideas to this journey to help Matt in better do his job.

About Sulzer

Sulzer RES offers maintenance services such as inspection and cause-and-effect research, repair and spare parts for pumps, turbomachinery, generators and electric motors. There are more than 100 service centers around the world with approximately 1200 employees. The activity of a field service technician is primarily concerned with disassembly, cleaning, inspection, repair processes such as machining, welding or replacement of parts before reassembly. This requires little interaction with the digital world. In many cases Laptops are not appropriate at the working site. However, since the intended user base is very heterogeneous in terms of age, cultural background, level of education, etc., you can expect all kinds of digital affinity from their private lives.

➔ [Want to learn more about a typical day of Matt?](#)

About the solution

the primary goal is to make tacit knowledge, which is usually stored only in people's minds, accessible and searchable for others.

The solution must be self-explanatory and intuitive to use. Content generation must not appear to be an additional administrative task, but must be seamlessly integrated into the value-added process (i.e. fixing the hardware problem).

The solution shall be suitable for smartphones in a production floor or construction site environment

Core functionality shall be possible from remote locations without a permanent Internet connection.

Ideally, the solution provides individual field engineers with additional functionality (capturing thoughts, image recognition, natural language processing, augmented reality) so that it will encourage use.

About the challenge:

We assume that there is no one-fits-all solution to the above problem. But we happily get demonstrated the opposite.

Otherwise, additions, plug-ins or add-ons are welcome that could address the specific weaknesses of the above tool.

It is your choice to address either all of Matt's issues or pick only individual aspects.

A typical day of Matt:

Hello, I'm Matt. I work for Sulzer RES. We are a team of 7 people and mainly service electric motors. Yesterday, my boss informed me that the cruise ship Ocean's Pride has reported a failure of the motor of one of main wastewater pump. I'll take you along my typical day.

🕐 I arrived at the harbor and boarded the ship. The ship is expected to leave at 12, so I will have to repair the motor during the trip.

🕐 Soon after my arrival I noted, that it is just a damaged switch which caused the motor to stop. However, the switch broke because the pump is blocked. This is a pity as I'm little experienced on the pump equipment. But since the ship left already, there is no way to bring another person on board.

🕐 Thus, I started to disassemble the pump. Unfortunately, the casing is stuck due to corrosion. Luckily, I can find some clever tips for disassembly in a forum.

🕐 The root cause is a clogged impeller. Luckily the impeller looks still ok. It just appears to me that it suffered from erosion over the years. However, since I'm rather a motor guy, I don't know with whom to clarify. Shouldn't it be possible for to suggest me an impeller erosion expert based on the earlier discussion happened within the forum?

I'll take a few pictures and check later if that might result into an opportunity for a follow up contract. It would already help me if I were able to comment or annotate the picture with my observations and directly submit the question to the forum, instead doing postprocessing from the cabin or office later.

🕐 While searching for the lifting issue, I remember one suggested to put a grease onto the split plane preventing the casing to stick, but another one replied that it needs to fulfill some environmental requirement. However, since I don't have a phone reception anymore I can't go back to the post to check if the grease we have on board satisfies that concern.

🕐 As we travel along the coast, the phone reception is very sporadic. It is basically impossible to find the right slot. As I can't submit question in offline either, I will drop an WhatsApp message - even if it is against the company rules - to my colleague to search for that post and check if the grease they have here could be used. But first, I need to go and take off my gloves and wash my hands. I really look forward to the time of speech control.

🕐 That was quick, he replied that the grease is good to go so I can start assembling and test the pump.

Work is finished and I'm back in my room at the laptop, so I drop another message to my boss, asking him to organize my travel back from the next harbor. Meanwhile, I use the time to issue my daily report. It would be great benefit if a draft were automatically compiled based on my searches, questions in the forum and pictures and videos and speech notes I have taken during the day. Then I could spend my time on the nice aspects of life.

Back to the challenge