



Project Outline

Smart Service Toolbox



Introduction

With the project SmartBag we have shown that a system using RFID technology and the right software can be used to track the contents of a backpack. With GE Power we have found a project partner to apply this technology to an additional use-case. GE's tool center in Birr CH has the responsibility to provide tools and consumables for outages on combined cycle power plants. Minimizing costs for missing or lost tools as well as being able to invoice actually used consumables right at the end of the outage is critical for a successful project close out.

Aims of the project

Together with GE, we aimed at finding an automated inventory solution for the Standard Inspection Material (S.I.M.) for GE's turbines GT24 and GT26. Besides a solution for the consumable material of the S.I.M-Box, we also aim at tracking the inspection tools and instruments shipped in the Commissioning Tool Box.

Results

Together with the Institute for Software IFS we provided the necessary skills and know-how to develop a functional prototype to solve the given problem. The ILT developed the prototype concept, evaluated the right RFID technology and system components and applied them to the toolboxes, while the IFS developed the matching software to satisfy the customer's needs. The outcome is an application on a UHF RFID handheld device, together with a field-ready commissioning toolbox with its content tagged with passive RFID transponders. The logistics operator in Birr can now update the inventory list with the appropriate IDs directly with the handheld. Additionally, the service operator on site and the logistics operator in Birr can conveniently check the actual inventory of the entire toolbox.

Future Work

The prototype will now be taken to Algeria to be tested in real conditions on site during a turbine inspection outage. The ILT will brief all operators to introduce them to the workflow of the new system. Feedback from the field will then be gathered and analysed by the ILT. The results will be used to assess the developed tracking system with the aim of a broader application within the company.



Project partner

