



## INTRODUCTION

The On-Site Inspection Division has long-operated an off-the-shelf asset management software to record and track items. While such software have their place, the need for cross platform integration and treaty specific considerations has led to the development of a bespoke application for managing OSI equipment and software that is fully integrated with other OSI data management systems. The application is in line with the standard operating procedure on equipment certification, which includes equipment authentication, calibration, testing and certification for OSI deployment.

The application has been developed to meet both HQ and OSI deployment needs and incorporates the use of RFID tags to track items as they move around the TeST Centre in Seibersdorf and also out of the Centre for maintenance, training, testing and exercise purposes.



Air transport containers with inspection equipment at the TeST Centre, Seibersdorf



Members of the OSI 3<sup>rd</sup> Training Cycle on a logistics training course in Götzensdorf

## Concepts

The application aims to capture information about all items required during an inspection, from the most sophisticated sensor and its components to a power cord. In short, the most sophisticated sensor is of little use unless it can be powered and has the relevant fuses installed.

The application incorporates the concept of configurations to meet a particular OSI capability e.g., the airborne multi-spectral system is comprised of up to five sensor systems that can be installed on different airframes i.e., several different possible configurations of the same sensors. The application hierarchically identifies current status and logs all activities performed on an individual item or system and provides a ticketing interface for preventative and reactive maintenance.

When fully implemented the application will act as a one-stop shop for information relating to OSI inspection and support equipment including:

- Item specifications (including. dangerous goods)
- Item, system and configuration management
- Maintenance schedule and maintenance history
- Item and system calibration
- Item, system and configuration certification
- Reporting
- Shipping paperwork
- Resourcing as part of OSI Step 4 of Inspection Team Functionality

## APPLICATION DESIGN

User friendliness has been central to the development of the application. The application is browser-based and is fully deployable for OSI activities. Graphical user interfaces have been carefully crafted to ensure that workflows are clear and intuitive. Items – the building blocks of the database – have tailored input requirements based on item type with users encouraged to add photographs to speed up identification of items and to track their physical condition.

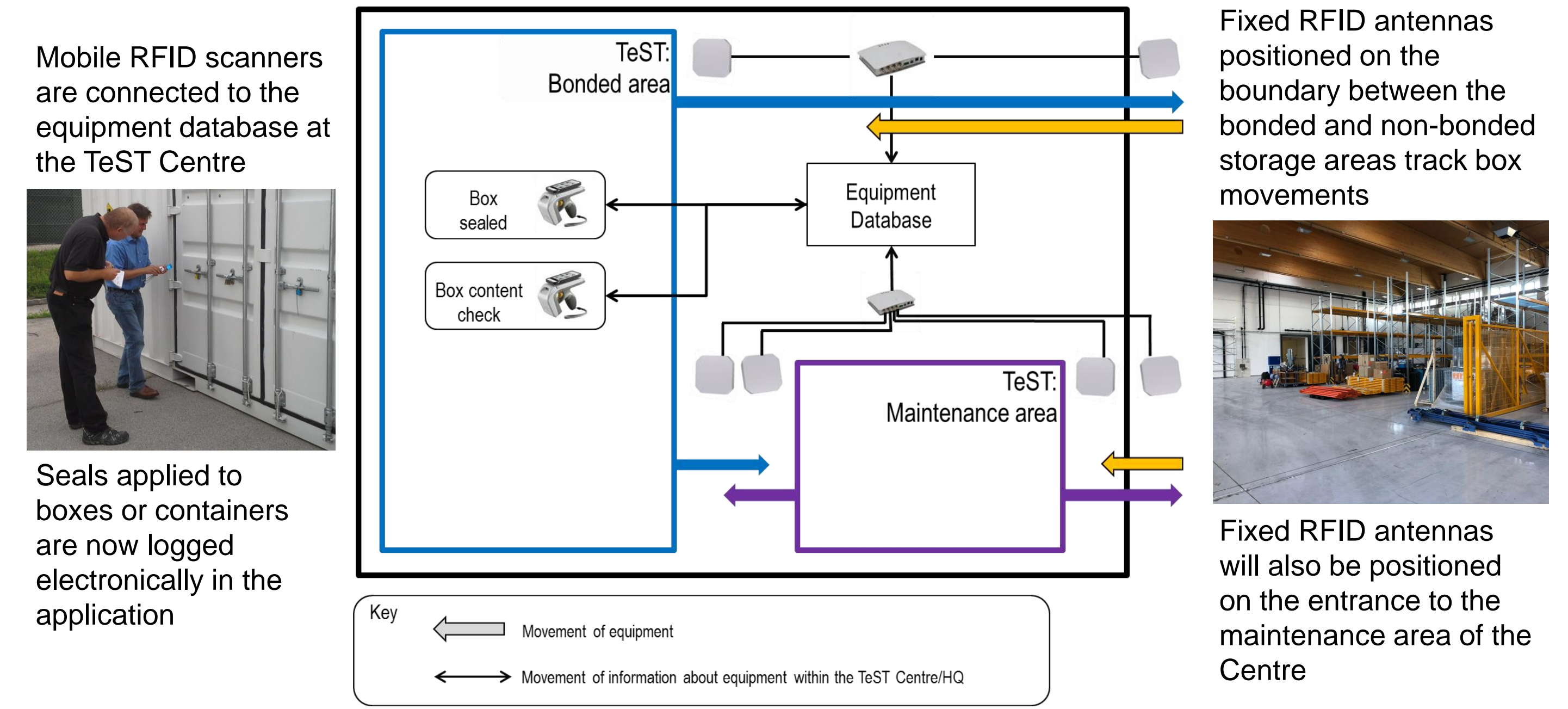
A screenshot of the 'main' tab for an item. This tab is designed to show key information so that an item is easily identified – hence the prominence given to item photographs.

For practical purposes, the application introduces the concept of virtual systems that describe the items required to make a system function. These virtual systems are then populated by physical items. The advantage of this approach is that items due for maintenance or any faulty item will trigger status updates for a system – rendering it incomplete and not deployable.

## ACTIVITIES AT THE TeST CENTRE

Development, testing, maintenance, calibration and certification of items and systems at the TeST Centre is tracked by the application. The history of an item from purchase onward, including use as part of testing and training events is logged.

Moreover the application is integrated with fixed RFID antennas and receivers that enable item movement to be tracked. Rather than tracking individual items directly, the application tracks box or container RFID tags. The workflow requires the content of a box to be verified by a handheld RFID reader following which a seal is applied to the box or container. The RFID of the box is then tracked as it moves through fixed RFID antennas.



Mobile RFID scanners are connected to the equipment database at the TeST Centre



Seals applied to boxes or containers are now logged electronically in the application

Fixed RFID antennas positioned on the boundary between the bonded and non-bonded storage areas track box movements



Fixed RFID antennas will also be positioned on the entrance to the maintenance area of the Centre

## DEPLOYMENT ACTIVITIES

A subset of the database is deployed for field activities – depending on the systems and configurations deployed. For an OSI, the database and application would be required at the Point of Entry/Exit as well as in the Joint Area to support maintenance, dispatch and mission planning purposes.

Mobile RFID readers and equipment database would be used at the Point of Entry to support equipment checking. Fixed RFID readers would be used to track the movement of boxes in and out from the base of operations.