



# DATA ANALYTICS

Airport operations generate an increasing amount of data from an expanding number of sources. One area in particular that can provide essential operational information is the baggage handling system, but data is only useful if it is analysed and understood properly. This is particularly important in view of the baggage handling system's key role in achieving shorter connection times, handling an increasing number of passengers and delivering a superior passenger experience in an environment with increased dynamics.

These are among the drivers that put pressure on how a baggage handling system is maintained, operated and managed. With this in mind BEUMER Group has established a data warehouse to which data is streamed in real time from a growing number of sites.

## FEATURES

- Real time dashboards
- Customisable
- Central data storage
- Broadened learning perspective
- Abnormality detection
- Trend detection

## BENEFITS

- Predictive and prescriptive maintenance
- Supporting operational decisions
- Enabling data-driven asset management
- Visualisations tailored for specific roles and/or focus areas
- Moving from 'What we think' to 'What we know'.

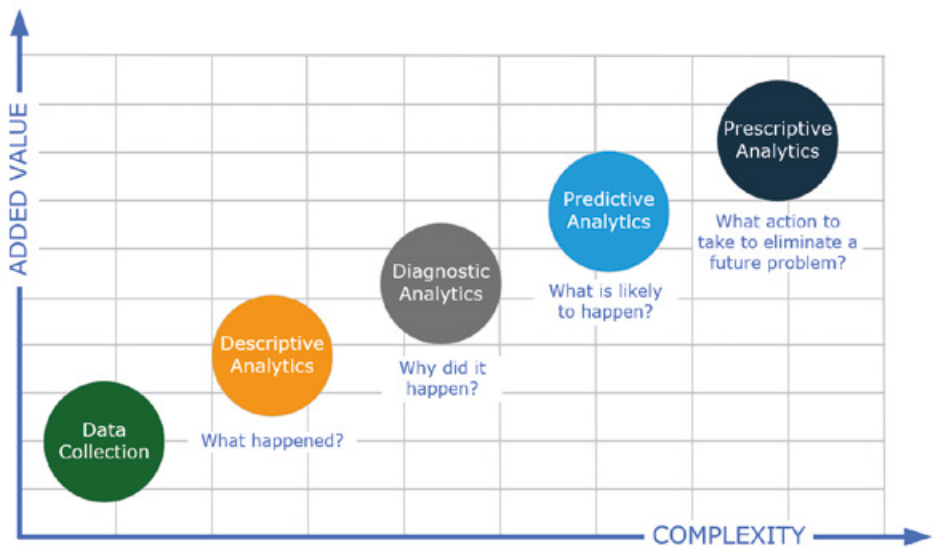
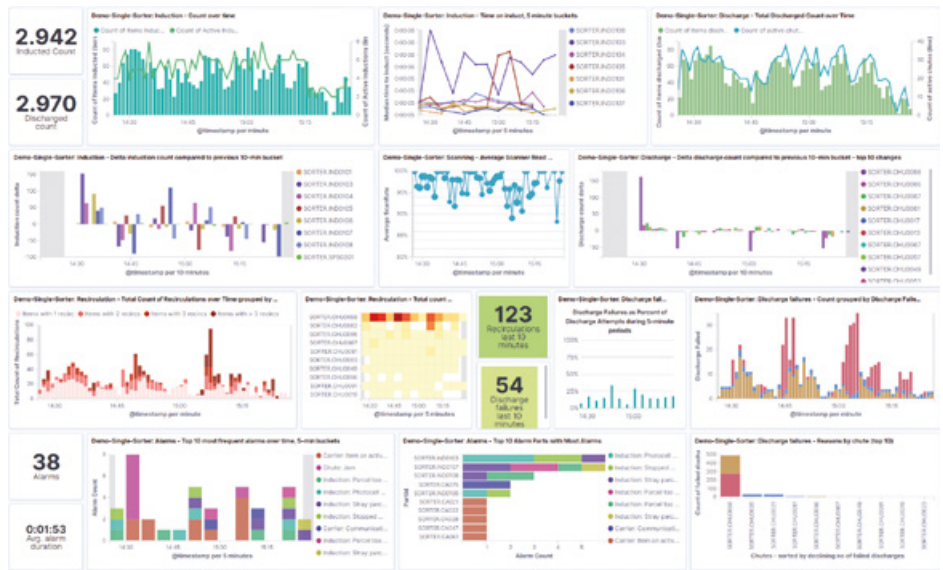
Streamed data is enriched and filtered to secure the quality of the data, which is aggregated and prepared for simple visualisation. BEUMER Group relies on standard commercial-off-the-shelf tools for data mining to ensure full flexibility in this rapidly developing environment. This central data storage not only provides insight into the current performance of the baggage handling system, but critically also enables the build-up of a historical record for future investigations and learnings across a number of systems. Having such data provides the ability to compare system performance with similar baggage handling systems and equipment and acquire knowledge that goes beyond your own system.

As an option, users can have cloud based access to their data via BEUMER Group's digital services. Customisable dashboards enable users to tailor their view of data on-the-fly for real time and fully tailored insight into their preferred areas of interest. These real-time dashboards offer a dynamic, up-to-the-minute view of metrics, as opposed to simple historical statistics. Customers who opt for this cloud-based access to data will receive training to enable them to manage their own dashboards.

Users need have no concerns about data privacy, as all data is collected according to local legislation and can not be accessed from outside the server due to BEUMER's sophisticated and robust data protection.

### PREDICTIVE AND PRESCRIPTIVE

At BEUMER Group we have been collecting data for a number of years and have used these learnings to move us to the predictive and prescriptive level. BEUMER's data analytics offers a growing suite of data-driven services that use data and artificial intelligence (AI) to enable employees at the maintenance, operational and



management levels to make better decisions – which may be fully manual, semi-autonomous or even fully autonomous.

### BEUMER GROUP'S SUITE OF DIGITAL SERVICES COMPRISES

- Alarm - supervision of logs and detection of abnormalities to alert the BHS operator.
- Prediction - predictive maintenance.

- Digital twin - a real time visual representation of the BHS.
- Vision - image classification.
- Optimisation - data driven approach to system optimisations.



Data Analytics