AIRPORT MANAGEMENT.
FLYING HIGH WITH ICT.

AIRPORT MANAGEMENT WITHIN APPLICATION SERVICES.

Airport Management is an integral part of the portfolio within T-Systems Application Services. Our portfolio incorporates the development, implementation, roll-out and operational services for industry specific applications. With the goal to provide end-to-end support for the industry-specific business processes we focus on the segments: travel, transport & logistics, the automotive/manufacturing industry, telecommunications, the public sector, retail, and financial services. T-Systems provides corresponding services for industry independent applications as well as add-on services to ensure operational performance throughout the entire lifecycle:

- Consultancy
- Software development
- Implementation
- Updating to a new release/upgrading
- Optimization
- Testing
- Application Management Services

DID YOU KNOW THAT …

- … **more than 40 airports** worldwide use solutions made by T-Systems?
- … T-Systems offers suitable solutions for **every size of commercial airport?**
- … **small and medium sized airports** can now benefit from our Application Service Provicer (ASP) solutions?
- … **10** out of 46 of the **biggest airports** in the world are customers of T-Systems?
- … **multiple airports** can be managed with our solution?
- … T-Systems now offers a solution suite for **ground handlers?**

WHY T-SYSTEMS?

- Our aviation solutions range from an extensive airport operations suite to ground handling services and slot allocation.
- T-Systems brings more than 30 years of experience to the table in the airport and airline industry and combines it with extensive IT experience, dynamic flexible ICT services out of the cloud, and cutting-edge technology to optimize your processes, helping you reap tangible benefits in all areas of your business.
- T-Systems delivers its aviation solutions around the globe, enabled by its international delivery network spread across 30 countries – from Miami to Frankfurt, from Dublin to Nanjing – to name but a few.

T··Systems··

1. AIRPORT OPERATIONS.

T-Systems offers a number of solutions covering major parts of an airport's value chain. While Airport Operations address airport operators and airlines (chapters 1 and 2), the Ground Handling element has the ground handlers in mind (chapter 3).
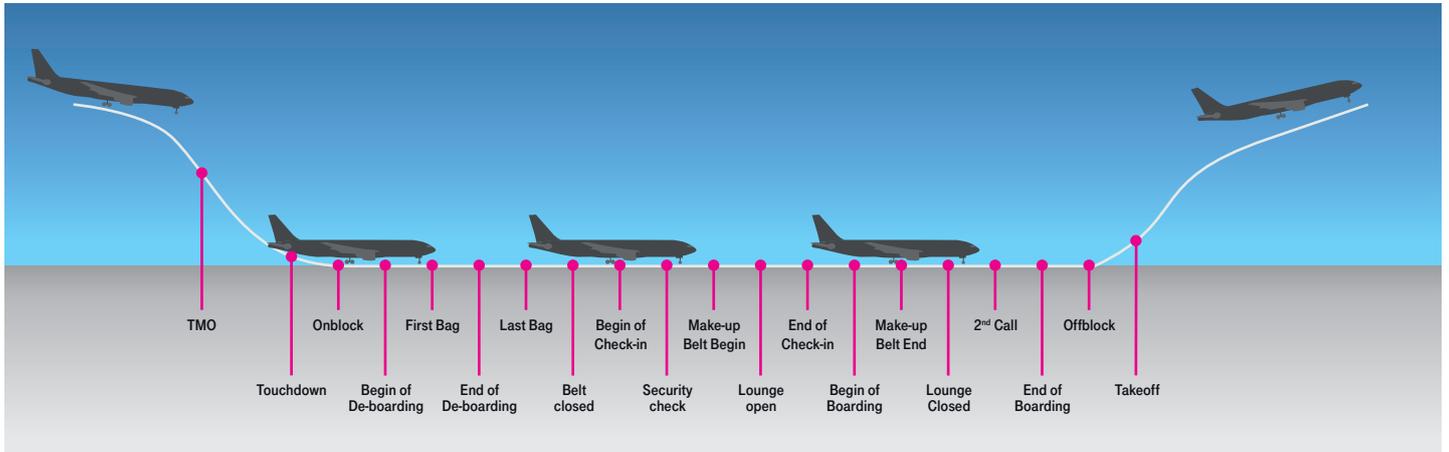
AODB. The Airport Operational Database and Flight Management System is our fully-fledged airport operations solution. It represents one of our core components. Based on a database containing all flight schedules, it comprises of a rich set of configurable business logic items that support airport operations and keep the data consistent. A sophisticated, intuitive and easy-to-learn user interface allows for easy administration and processing of the flight data. The solution is typically hosted at your premises, with the option of having T-Systems host it for you in our ASP scheme.

- **Reference data.** Comprehensive reference data provides the operator with all of the information necessary for operations. Amongst others the reference data contains information about airlines, any affected aiports, and the types of aircraft and fleets.

- **Seasonal flight scheduling.** During seasonal flight schedule processing the seasonal flight schedule becomes more and more elaborate – additional flights are added, arrival and departure times are updated, arrival flights and departure flights are linked. Updated flight information is provided by airlines (via SSIM and SSM) and integrated into the seasonal flight schedule.

- **Operational flight scheduling.** Increase your process transparency, obtain a complete and consistent set of data required for operation and invoicing, and benefit from rule-based data quality improvement.

RMS. The Resource Management System offers an efficient solution for the management of non-mobile airport terminal resources such as stands, gates, baggage bays, and check-in desks. As a component of a central information system, the RMS significantly contributes to the improvement of an airports' quality of service: Benefit from increased visibility into capacity and resources thanks to easy-to-read graphs, optimized allocation of resources and a more efficient management of tasks, live alerts informing users of possible conflicts, as well as configurable rules optimizing resource allocation and automatically finding the most cost-effective solution.

FIDS. Flight Information Display System, can take-on various forms: displays for standard passengers, meters and greeters and visitors, for

value-added information and advertising and for particular groups such as the police or customs authorities and including IPTV and CCTV. The T-Systems FIDS can be thought of as an internal and external information platform for flight and non-flight relevant information.

In addition to these standard components T-Systems offers various other modules, including:

Collaborative Decision Making. Compliance with the Airport CDM process (A-CDM) is of increasing importance for airports, even more so since Eurocontrol's request to apply the CDM process. T-Systems A-CDM module supports airports in the implementation of the A-CDM process in aspects of tracking and storing all dedicated CDM timestamps of the air-to-air process, computing all prescribed CDM alarms and DPI messages, and interfacing with ATC flight plans.

Information broker. A state-of-the-art solution for message based communication, supporting and automating the airport's business processes by minimizing manual user interaction and therefore improving overall efficiency. It connects external systems such as airlines, airport coordinators, IATA messages, and baggage handling.

Universal Mobile Display System. Obtain flight related information via any internet connection – to the second – with any browser enabled device. Airport operators, retailers and other interested parties at the airport campus and in its vicinity can now watch FIDS data on any kind of display.

Further solutions include:

Advanced IATA Messaging system **ASIMSplus,** Aerial View Display **AVD,** Baggage Claim Control and Information System **BCIS,** Check-In Allocation Tool **CAT,** Passenger Processing Control **PPC.**

2. DELIVERED AS DESIRED.

The airport operations solutions offered by T-Systems comes in two variations. There is an individual solution approach tailored to an airport's individual requirements as well as an off-the-shelf approach.

With both approaches you can discover the benefits of seamless airport management:

- Reduce manual labor by obtaining data such as departure times automatically.
- Increase the quality of your data both in terms of accuracy and real-time processing.
- Improve your passenger service by offering smartphone apps or an improved web offering.
- Gain revenue by integrating advertising space into your system (airlines, car rentals and other stakeholders).
- Analyze your data, something which often provides useful insight into one's business.

THE STANDARD AVIATION SOLUTIONS.

Over the years T-Systems sophisticated airport operations modules have grown into a set of standard solutions, which due to their favorable conditions may be particularly well-suited to medium and smaller sized airports. Standard aviation solutions are available for all of the core and many of the optional modules. Either they are installed on the airport's premises or, in our ASP scheme, on T-Systems ICT platform. In this case T-Systems hosts the standard solutions in its data centers for the airport staff to access out of the cloud.

Reduce your time to market: With our airport operations standard solutions you can go live before long. Benefit from the advantages of seam less air-port management and standard solutions, which are automatically kept up-to-date with planned release cycles and continuous improvements – from one of the world's first vendors of seamless airport management solutions.

THE CUSTOMIZED SOLUTIONS.

Based on the our vast experience in developing custom airport operational systems and our proven standard components and software kernels we create the customized solution according to your organization's requirements. The individual solution approach is very well suited for larger airports or extraordinary operational challenges within your organization.

OUR SERVICES ON TOP.

- Aviation Consulting.
- Have your system maintained by T-Systems so your staff is free to take over other tasks.
- If the software is run by T-Systems, your IT know-how remains even if your staff changes.
- Design your FIDS screen according to your corporate style guide, optionally using our preformatted layouts.
- The AODB / RMS and FIDS services are independent, you may use them both or either of them.

3. GROUND HANDLING.

For ground handlers T-Systems now offers ground handling services permitting the central management of multiple airports.

Demand Generation. The module allows to calculate resource demand based on standard rules, flight schedule information including specific workload requirements by given Service Level Agreements. The system also supports scenario based calculations of standard rules and displays results graphically.

Rostering and Time Management. The module allows automatic roster generation based on shift regulations, working rules configuration and analysis of overtime impacts. The application helps create and optimize rosters to match shift demand. The following settings are basis of this module:

- ▪ Assigned working hours and shifts
- ▪ Planned absences
- ▪ Non-business days and interruptions according to calendar
- ▪ Legislative regulations

Operational Management (Staff). The operational management (Staff) module is designed for use by the dispatcher to monitor and plan daily operations for ground handling activities at the airport. The module is required to plan and adjust the allocated resource assignments based on various inputs. The application provides a comprehensive and graphical scheduling functionality, which allows the user to pro-actively take decisions. If need be this may be supported by operational business intelligence for airports.

CUSTOMIZED AND STANDARD SOLUTIONS.

Ground handling by T-Systems is available both as a customized and a ready-made solution. While the customized solutions are tailored to a ground handler's individual needs, the standard solutions cover the functionality most ground handlers require at favorable conditions.

ON-PREMISES AND ASP.

Ground handlers may host the T-Systems ground handling software on their premises or choose to have it hosted by T-Systems, benefitting from:

- ▪ Central management of **multiple airports.**
- ▪ **Low up-front investment:** Given the fact that airlines tend to change destinations, investments can be difficult to make. With our hosted ground handling services you will be able to achieve a considerable reduction in your up-front investments in equipment, assets and operation staff.
- ▪ With our **pay-per-use plan** you can now tie your operation cost to your actual business, hence minimizing your risk in times when the going gets tough. You can order and adapt your service level agreements according to your needs.
- ▪ **Reduce your maintenance and operations cost,** since your ground handling software and, optionally, third-party software is hosted and maintained at T-Systems.

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