FNT
// simplify complexity


Photo: Stuttgart Airport

CUSTOMER SUCCESS STORY

STUTTGART AIRPORT

Stuttgart Airport and Living IT Documentation

The FNT Command Platform enables efficient infrastructure management from planning through implementation to documentation.

Stuttgart Airport is one of Germany's biggest airports. It links to long-distance rail and bus services, and the city's subway network. All are increasingly making it an intermodal hub for travelers. Alongside its core aviation business, Flughafen Stuttgart GmbH also operates numerous infrastructure facilities that provide more than 250 B2B customers with power, water, and information and communications technology. These customers account for some 40 percent of its total revenues. For both parts of its business – aviation and infrastructure facilities – the airport needs to operate, maintain, upgrade, and expand a complex network of diverse and highly critical infrastructures. To do this, it deploys the FNT Command Platform, an integrated software system for planning and documenting complex and hybrid IT and telco infrastructures. As "living documentation," it makes it easier to maintain an up-to-date record of the many different infrastructure components, thereby enabling greater efficiency, professional change implementation, and rapid fault resolution. B2B customers thus receive the best possible services.

Airport
Sector

1,000
Employees

4
Terminals

EXPANSION REQUIRES PROFESSIONAL INFRASTRUCTURE MANAGEMENT

Looking at planned growth, it soon became clear that the airport's existing IT infrastructure documentation – a mix of paper, CAD drawings, and Excel lists – was not a sustainable option for efficient centralized operations. The airport operator decided to look for a database solution that would simultaneously cover planning and documentation, allowing it to serve as a single source of truth. "Our aim was to implement an interdisciplinary infrastructure and service management tool, a 'living managed database,'" recalls Matthias Kolb, Head of Information and Communication Services at Flughafen Stuttgart GmbH.

Alongside functions to aid faster fault rectification, the ideal solution would also include cable and tray management and provide scalable support for other areas. The company chosen to provide advice and handle implementation was planning specialist and consultancy Geiger, which has core competencies in the fields of data center and network infrastructure, cable documentation, infrastructure management, and monitoring. The company has worked with Stuttgart Airport for more than 20 years.

After conducting proof-of-concept (PoC) tests with solutions from three providers, the decision was made to deploy the FNT Command Platform, which is already being successfully used by many German and international airports.

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> Mike Fischer, CTO at Geiger – A brand of Legrand

The key factor behind the choice of FNT Command as an integrated documentation solution was the platform's broad functionality coupled with the flexibility to meet individual requirements over time. "FNT Command integrates IT asset management, cable and infrastructure management, data center management, and telecommunication resource management in a central and scalable platform. As such, the solution is very well suited to the complex demands of airports and supports phased deployment," explains Mike Fischer, CTO at Geiger – A brand of Legrand.

Intermodal hub in southern Germany

More than 12 million passengers pass through Stuttgart Airport each year. The 400 hectare airport site is home to four terminals, 70 gates, some 6,000 square meters of retail space, and around 3,800 square meters of food outlets, plus two data centers. More than 55 airlines fly from here to over 140 destinations.

In 2020, the year of the pandemic, the airport posted revenues of EUR 142 million, of which EUR 66.1 million was from aviation and EUR 75.9 million from other business activities.

As a regional airport, Stuttgart Airport makes a crucial contribution to mobility in the state of Baden-Württemberg. More than 300 s business entities and public agencies operate on the airport campus. The operators have set themselves the goal of making Stuttgart Airport one of the best performing and most sustainable airports in Europe, in an initiative dubbed "fairport STR".

Photo: Stuttgart Airport

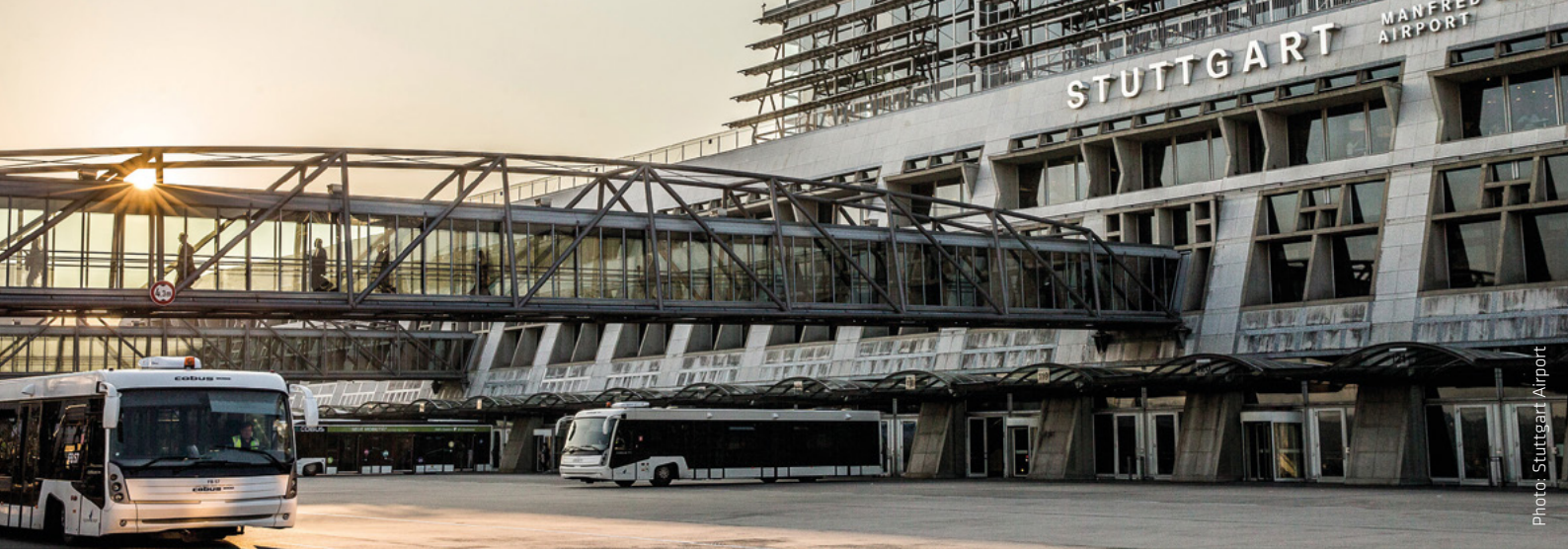

Photo: Stuttgart Airport

RIGOROUS APPROACH TO IMPLEMENTATION

From their extensive experience, Geiger knows that even the best documentation solution can only deliver maximum added value if it is properly implemented. In this case, that means seamless integration into existing business processes. Geiger relies on a proven six-stage implementation strategy to achieve this:

1 **Identify and prioritize requirements** – What are the specific requirements of the company, the individual departments, and other stakeholders? What is the aim of the documentation? What needs to be documented and what must be implemented first?

2 **Standards and policies** – Work together to specify user permissions, nomenclature, and general documentation rules.

3 **Proof of concept** – Implement the documentation on the basis of the standards and policies in a discrete, predefined area. Conduct testing, make changes as necessary, and update the standards accordingly.

4 **Large-scale rollout** – Apply best practices from the PoC across the entire site.

5 **Create acceptance** – Provide training and information and introduce the documentation solution to all departments and stakeholders in order to maximize the benefits for all.

6 **Integration** – Integrate the documentation into the organization's IT and business processes to ensure living documentation.

IMPLEMENTATION OF DOCUMENTATION AT STUTTGART AIRPORT

In line with the above implementation strategy, the team headed by Matthias Kolb worked with Geiger to establish the requirements of all stakeholders and then to prioritize them, install the system, and define standards. The first step was to capture data on physical hardware, such as cables, patches, splices, and similar items. The defined standards were initially tested in the data center in the air traffic control building to obtain proof of concept. This was the fastest way to check whether the designations of cable panels, patch panels, and individual cables were consistent and, ultimately, whether all the requirements could be met. Rollout then took place in several stages over a period of three years. First, all fiber optic connections and fiber distribution technology, together with the tertiary user-agnostic communications network, were documented, including copper cables. That involved 4,429 fiber cables inside and outside buildings, two data centers, 94 secondary concentration points, 225 tertiary concentration points, and around 15,000 data connection units.

FNT COMMAND PLATFORM AT STUTTGART AIRPORT: HOW IT'S USED TODAY

The steady addition of components saw cable management evolve into comprehensive infrastructure management. Between four and six airport employees are regular users of the system, with two of them using the solution almost constantly for planning purposes. Documentation via the FNT Command Platform is also the ideal solution for external service providers. The software is not just utilized as the basis for implementation planning on projects or as part of the order documentation process for smaller interventions, it is also important for quality assurance and acceptance checks. "It enables our service providers to bill their services much faster and I can be sure that everything has been implemented as it should be," explains Matthias Kolb. Moreover, documentation from the FNT Command Platform is an integral part of the cable handbook made available by the airport to external service providers. This handbook makes it much easier for contractors to understand the

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requirements and prepare quotations.

Training by FNT and instruction from Geiger ensured that all internal and external stakeholders were soon up to speed with the system. "FNT Command is simple and intuitive to use and was quickly accepted by our employees. Being comfortable with the system made deployment easier and facilitated the incorporation of documentation data into other IT and business processes," explains Matthias Kolb.

FAULT RECTIFICATION: WHEN EVERY MINUTE MATTERS

Even a small outage can have a major impact at Stuttgart Airport, which supplies more than 250 shops and business with key infrastructure services, such as energy and WLAN. The aim is to ensure same-day fault rectification, or within 90 minutes in the case of some public agencies and businesses. FNT Command makes this process much easier. If there is a fault on the network, the solution flags the affected node. This helps to identify the impacted route and quickly narrow down the possible sources of the problem. Fault rectification is also much more efficient. Service technicians know precisely where the fault is located and have access to all the data on the device or cable in question. They can get down to work quickly and with the right tools. Switching to alternative routes is also very easy. "When a fault is identified, FNT Command suggests alternative signal paths. Switching takes just a few clicks. It used to involve several hours of work," recalls Matthias Kolb. "Now it's a matter of minutes."

FROM DOCUMENTATION TO PLANNING: CLOSING THE CIRCLE

Another benefit for infrastructure operation arises if the data contained in the documentation is simultaneously used as the basis for change planning. To do this, the target status is defined in the documentation solution. When the changes have been implemented, inspected, and reviewed on site, the status is changed in the tool from planned to current. This integration into IT management processes allows data to be updated on the fly without any additional effort, ensuring that it remains aligned with reality on the ground. Or, as Mike Fischer puts it: "Before any change is made to the infrastructure, it has to be planned in advance in the system. That has the advantage of documenting changes ahead of time so the documentation always remains up to date."

MLAT PROJECT AS AN EXAMPLE – PLANNED, IMPLEMENTED, AND DOCUMENTED USING THE FNT COMMAND PLATFORM

Integrated use of the FNT Command Platform as a planning and documentation tool is important for achieving acceptance across all departments, improving data quality, and for integration into other IT and business processes. Only then is it possible to create a kind of "living documentation" – and to add real value, as the following example shows. The German air traffic control service's MLAT project was fully planned, implemented, approved, and documented using FNT Command. As the

Photo: Stuttgart Airport

campus provider for the German air traffic control service, Flughafen Stuttgart GmbH is responsible for reliable signal tracing. There was significant time pressure: the existing multilateral radar system was no longer up to the job. To support the new MLAT system, more than 70 percent of the cabling had to be re-planned, moved, patched, and documented, totaling several installed kilometers. Two employees completed this project from planning through implementation to documentation in just nine weeks. "Without the support provided by FNT Command, we would have needed significantly more people to get the project over the line so quickly," comments Matthias Kolb. "FNT Command has really boosted our efficiency."

LOOKING TO THE FUTURE: EXTENDED DOCUMENTATION PLANS

Full documentation of Stuttgart Airport's complex infrastructure is an ongoing task. The current focus is on capturing the telecommunications cables running between the buildings. Work is also being undertaken on the SAP-based configuration management database (CMDB), with the intention of hooking it up to FNT Command via a bidirectional interface. Extensive automation of IT management processes is another step. "FNT Command is an efficient planning tool that allows processes to be managed and automated across departments and service providers. It delivers significant time savings and greater transparency without losing data sovereignty. FNT and 'living documentation' have future-proofed the airport's infrastructure management for the long term."

BENEFITS OF THE FNT COMMAND PLATFORM

- **Simple handovers by external service providers:** Approval of work done on the campus by contractors is handled directly in FNT Command. All service providers use the same documentation method.
- **Central information database:** Having a single source of truth means that all knowledge acquired remains within the company, even when employees leave or service providers change. It also makes inducting new staff members and briefing service providers simpler. Important additional information, e.g., regarding building tenants or network connections, can be accessed immediately online.
- **Faster fault rectification:** Employees can identify and resolve sources of faults more quickly.
- **Efficiency:** The system's transparency allows targeted planning and deployment of resources, which leads to significant operational cost savings.
- **Reduced workload for staff:** The solution reduces the burden on IT staff by boosting the efficiency of ongoing documentation work.
- **Paperless processes:** Documentation is purely digital and no longer generates mountains of paper – neither in the office nor in the archives.

About FNT

FNT GmbH, headquartered in Ellwangen (Jagst), Germany, simplifies the management of highly complex digital infrastructures in companies and public authorities with its FNT Command Platform. With the cloud-enabled "software made in Germany", IT, telecommunications and data center infrastructures can be efficiently recorded as digital twins and documented across all levels from buildings to digital services. The software also offers open interfaces and numerous functions for planning, implementing and automating transformations and changes in an integrated manner. FNT's customers include more than 500 companies and government agencies worldwide, including more than half of the DAX-40 listed corporations. FNT operates offices in several locations in Germany as well as in New York, London, Singapore and Timisoara and has an international partner system with market-leading IT service providers and system integrators.

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