

IT Documentation as a Solid Foundation for the Digital Transformation of the German Federal Armed Forces

Acting as the German Federal Armed Forces' central IT partner, BWI GmbH is supporting their digital transformation and securing the future viability. Modern and powerful software support is required to efficiently manage the complexity of the existing IT infrastructure while simultaneously meeting strict security requirements. FNT was awarded the contract for the Command Platform as part of an EU-wide tender.

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Complex IT Landscape with High Security Requirements

As their central IT partner, IT system house BWI GmbH supports the digital transformation and ensures the future viability of the German Federal Armed Forces. BWI is a wholly owned subsidiary of the German government and is responsible for the secure operation and further development of the armed forces' IT landscape. This comprises around 5 million IT assets spread across five data center locations and more than 1000 properties. BWI's scope of services includes the design and implementation of needs-based services as well as their IT operation and support. In order to efficiently manage the associated complexity and the strict security requirements, modern and powerful software is required.

The FNT Command Platform was awarded the contract in an EU-wide tender. The platform simplifies the management of highly complex digital infrastructures in companies and public authorities. It maps infrastructures across all levels, from buildings to active components and cables to digital services and

stores the data as a digital twin. This makes it much easier to manage the IT landscape and ensures stable and smooth operation. Among other things, FNT Command will enable BWI to harmonize the tool landscape, achieve a high degree of standardization and significantly improve data quality. In this way, the solution supports BWI in the digitalization of the German Federal Armed Forces and creates a basis for driving forward automation.

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The systems that BWI is responsible for, operates and develops for the German Federal Armed Forces are critical and are subject to the strict requirements of **IT baseline protection***. The previous documentation solution, which BWI used to manage some of the systems and assets, particularly the area properties and the areas of telephony and unified communications, had served well for many years. However, the solution needed to be modernized. This prompted BWI to reassess the situation. After much deliberation, the team decided to retender the software for IT documentation and infrastructure management in line with modern requirements. At the same time, BWI aimed for company-wide harmonization and standardization. The contract was awarded to FNT GmbH with its FNT Command Platform, which offers great potential thanks to an open interface connection, numerous functionalities, and a high degree of standardization. The platform also offered the opportunity to standardize data and processes company-wide in the future with a tried-and-tested central tool.

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A proof-of-concept (PoC) phase preceded the start of the project. BWI set up a pilot infrastructure so that the IT team could focus intensively on the basics and characteristics of the system. The FNT Command Platform offered the opportunity to standardize data and processes company-wide with a tried-and-tested central tool and ensure that FNT Command met all requirements. BWI placed a particular focus on the detailed documentation of the telecommunications infrastructures, as these were of great importance and scope in the old system and the new solution had to provide at least the same quality and granularity. It was also necessary to connect a large number of third-party systems. Only after the PoC team was convinced that FNT Command would cover all requirements was the go-ahead given for implementation.

*WORTH TO KNOW

The IT Baseline Protection (IT-Grundschutz), developed by the German Federal Office for Information Security (BSI), is a framework for implementing and maintaining information security in organizations. It offers a comprehensive and systematic approach to managing risks and securing IT systems effectively.







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BWI – Facts and figures

-  **Industry:** IT service provider for military/defense
-  **Employees:** 7,000
-  **Locations:** 14 major locations, 130 properties
-  **Managed IT systems:** more than 5 million assets
-  **Revenue:** 1.5 billion euros

-  **Fiber optic WAN:** 13,000 km
-  **Speed:** with 100 Gbit/s, BWI operates the fastest fiber optic connections in Germany
-  **Servers:** around 11,800 (hardware and virtual servers)
-  **Telephones / smartphones:** 250,000

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Four Phases to the Finish Line

Together with an external implementation partner, BWI structured the project into four sub-projects:

1 Analysis of the current situation and recording of all objectives and systems

To get started, the implementation partner and BWI analyzed all current processes in the legacy system, documented workflows, recorded use cases and drew up a detailed catalog of requirements. In doing so, they determined which role and rights management, and which data fields were required in the database. Next, they recorded all systems that need to be connected to the FNT Command platform as well as those that could potentially be replaced by FNT Command. The project team also drew up a training plan for the employees who would be working with the new solution, including the necessary resources. In total, this project phase lasted about one year.

2 Design of the target system

After the analysis, the project team developed the design of the target system in order to map all the requirements from the analysis in concrete terms with FNT Command. This was accompanied by the creation of a migration concept. The analysis and design phases overlapped considerably in some cases due to the high complexity of the project. Results from the analysis phase were often transferred directly into a new design for FNT. The basic design phase was completed approximately six months after the analysis phase was completed. Some design specifications were only finalized during the implementation phase.

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3 Implementation and migration of data

During implementation, it was initially important to define the basic configuration and master data types and to migrate the first master data into the system. There were a few hurdles to overcome here. *“The old system had been adapted quite a lot over the years, which meant that our data was stored very differently. The different data quality and presentation posed a major challenge, particularly in the area of geodata for the various properties,”* recalls Heiko Schulz, product responsible service architect at BWI GmbH. *“FNT Command sets very high standards in terms of nomenclature and data structures. As part of the migration, the team therefore had to and still has to clean up and standardize a lot of data.”* The implementation phase began parallel to the design phase with the provision of the IT system infrastructure. It continues well into the introduction phase (phase 4).

4 Introduction and training

Parallel to the implementation, the conceptual development of the required training activities began. The following had to be clarified: Who should be trained and how? Which formats, such as webinars or on-site sessions, should be offered? Which user groups are we addressing and what documents do they need? In the course of this, the project group also worked out which manuals and documentation would be required to support the new system in operation later on. Due to the different functionality compared to the old system, the team also had to align the IT service management processes with the new software. The implementation phase is scheduled to last one year, which includes a three-month hypercare phase after the go-live date.

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Particularities of the German Federal Armed Forces

Another specific challenge was to ensure the highest possible level of data security and protection. Many security-relevant requirements originate directly from the BSI and IT baseline protection, but some also come from the German Federal Armed Forces and BWI itself. For example, all communication must be encrypted; the login for administrators is secured by multiple authentications.

The trick here is to balance the implementation in such a way that usability does not suffer. *“The more secure a system is, the more inconvenient it is to use,”* says Heiko Schulz. *“One example of this is session time-out times. We force employees to log out after a few minutes if they have been inactive in the system. In other companies, this is usually several hours. With us, a short, distracting phone call is enough, and any unsaved plans are lost. Security and usability are always a balancing act and require special understanding and discipline from the users.”*

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Why FNT?

The open API of FNT Command offers great value. It allows third-party systems to be integrated easily, flexibly, and dynamically without having to reprogram interfaces. FNT Command forms the collection point for this data and thus enables the holistic visualization of all infrastructure levels and areas, including their dependencies. It is therefore the single source of truth. As the roadmap envisions connecting many third-party systems to FNT Command, the team expects a major advantage over the legacy system in this respect and a high savings potential.

Thanks to the clear structuring and preparation of data, the FNT Command Platform enables efficient management of IT services. Information on all customer-related technical services is documented and historicized in the database. This also includes all service assets across their entire lifecycle.

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The long-term goal is to significantly increase the level of automation and to completely digitalize order and incident management. Doing so will speed up IT operating processes while simultaneously further increase operational efficiency. The system also contributes to this desired state with its comprehensive functionality, high degree of standardization and extensive configuration options. The IT documentation tool will be used without any customizing from the software manufacturer. This makes release updates significantly easier, and they can be rolled out in a relatively uncomplicated manner.

“Using FNT Command in an organization like BWI, with high security requirements and a highly complex system environment as well as numerous operating teams involved, is a challenge. The fact that we nevertheless have or are able to find a solution for everything shows that our platform meets the highest requirements.” says Torsten Fitzner, Senior Account Manager at FNT GmbH, about the project. He adds: *“BWI is already planning to expand the solution in order to manage topics such as GIS integration and business intelligence via our platform in the future.”*

“FNT brings us more standardization, options for harmonizing the tool landscape and a significant improvement in data quality. This lays the foundation for us to drive forward automation and increase our service quality,” says Heiko Schulz, outlining his expectations. The migration, including data cleansing, is currently around 90 percent complete. Schulz expects the new system to go live in the first half of 2025. *“We will finally have a uniform foundation and a powerful planning tool to support the German Federal Armed Forces’ future digitalization projects holistically and efficiently. Because we all know that only with stable, secure, and efficient IT services at home and abroad can the armed forces ensure their command and operational capability and combat strength.”*

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About BWI GmbH

BWI is the German Federal Armed Forces' primary digitalization partner and IT system house. It provides stable, secure, and efficient IT services – at home and abroad, from basic operations to the operational area. In this way, it contributes to continuously increasing the command and operational capability and combat strength of the German armed forces. With more than 7000 employees, it operates and develops the IT of the German armed forces. As a partner of the German Federal Armed Forces, BWI supports the digital transformation of the armed forces towards modern standards, industry-standard processes, and a harmonized software landscape. BWI is a development partner for new applications, but also offers needs-based services. These include the design and implementation of applications as well as IT operations and 24/7 IT support throughout Germany. BWI GmbH generated a revenue of 1.68 billion euros in 2023 and is one of the top 5 internal IT service providers in Germany. It is a wholly owned federal company and was recognized as a “Great Place to Work” in March 2024.

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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, Singapore and Timisoara and has an international partner system with market-leading IT service providers and system integrators.



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