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HOW TO USE IT INFRASTRUCTURE TO FUEL AIRPORT GROWTH

Network managers that oversee IT infrastructure and cable management have as their objective to turn the airport into the hub of choice for travelers and airlines. In this paper, we'll examine the role of technology in driving airport growth from their perspective.

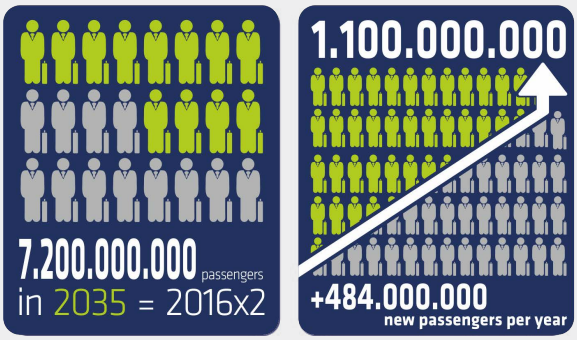
Network managers hold the key to enabling airports to thrive in the evolving air transportation market. When they deliver best-in-class IT services, they support sustainable revenue growth.

Being the hub of choice matters. It enables the airport to attract more airlines, travelers and vendors, which contributes to top line revenue growth. More funds are then available for discretionary spending, which the airport can use for improvement projects. Investing in the airport is necessary to succeed in today's ultra-competitive marketplace, both for large hubs and smaller airports. Today's savvy travelers have high expectations. If the airport doesn't meet the demands of travelers and the airlines that serve them, both will choose different hubs.

Network managers are in control

Network managers supply the technology that keeps the airport functioning. Aviation infrastructure supports everything that happens at the airport, from the runways and buildings to the technological systems and networks in the air and on the ground. Airports require an effective, high-performing infrastructure to maintain current service levels and keep pace with evolving capacity requirements.

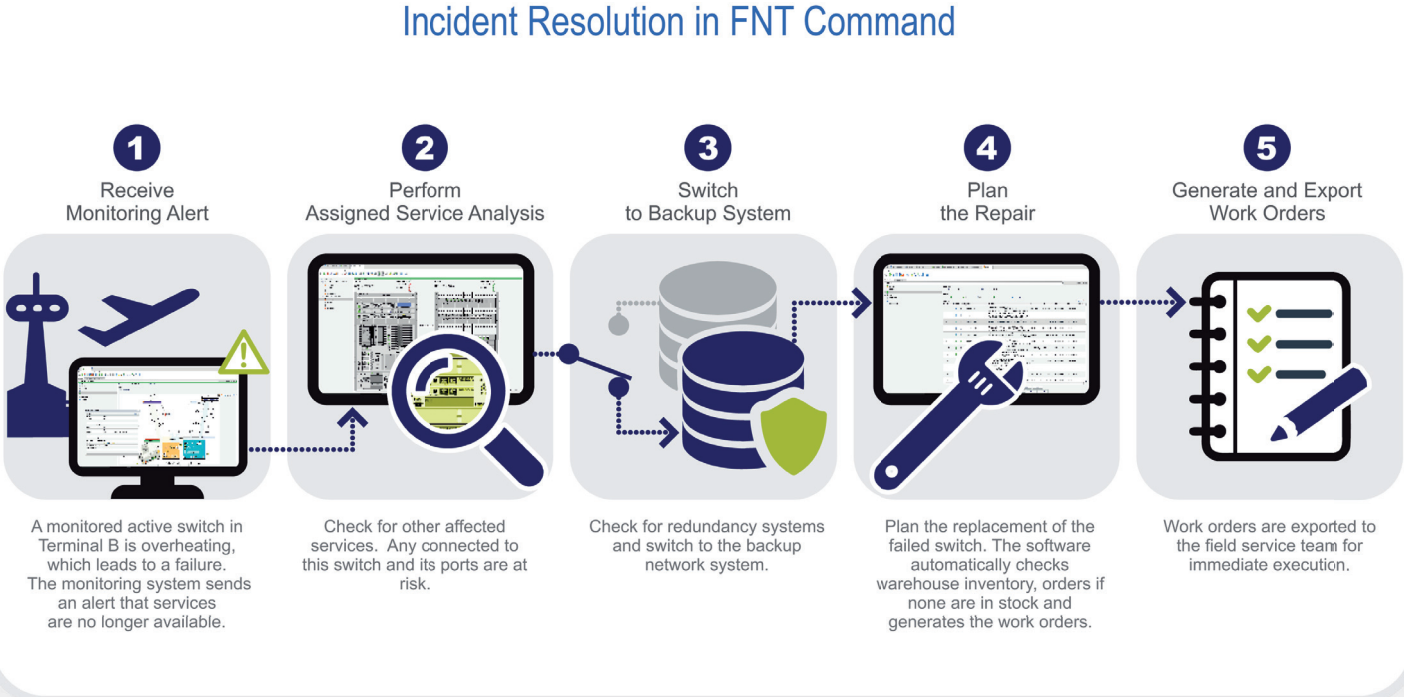
Evolving airport needs come from a variety of customer-driven changes. We are in an era of explosive global passenger air travel. The number of people traveling by air is expected to double between 2016 and 2035, and the global air cargo markets remain strong. Additionally, the digitalization of society is infiltrating airports. Today's travelers expect access to emerging digital services at airports and in flight for an overall enjoyable travel experience. These changes are putting a tremendous amount of stress on infrastructures.



Source: International Air Transport Association

The network manager can relieve this stress by building and maintaining a high-performing IT and cable infrastructure. Such an infrastructure does two things to deal with these changes while still supporting airport growth: (1) keeps airport functions operating reliably by providing uninterrupted service, and (2) it's flexible to provide new services as dictated by changing market dynamics. A high-performing infrastructure adapts to fit airport growth.

Example Workflow 1:



Uninterrupted service is not optional

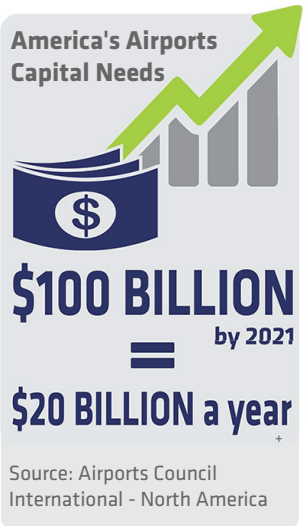
Airports aspire to improve customer experience as a means of driving growth. Technology plays an integral role by delivering always-on access to airport services. Since airports serve travelers, airlines and vendors, that means the network operator must meet a diverse array of demands.

The most important action network managers can take to provide continuous service is to fully document the infrastructure. This means identifying and itemizing all physical assets and how they are connected. The result? Deep visibility into the infrastructure. This foundational knowledge and visibility impacts all customers, in all areas of the airport.

To operationalize this inventory of assets, it must be housed in a central repository. It must also be integrated with a system that ensures its functionality throughout the airport. For example, an operations manager receives an error message from a network node that alerts him to a problem with lights on a runway. This initiates impact analysis protocol to drill down to the specific root cause of the problem and determine what services are affected. While the problem is being addressed, the operations manager can identify available servers, ports and switches and re-route those services to maintain their functionality.

Thanks to a centralized database with detailed information about all the configuration items of the IT and cable infrastructure, he can examine end-to-end connections via hubs and switches and the services provided via these connections. This enables swift action to minimize impact to the users of those services. The central database is critical to maintaining asset data and ensuring that all users have access to this single set of data.

The insight this type of solution provides is delivering uninterrupted service. The air transport industry is beleaguered with a high level of disruptive events. Reducing process exceptions and providing more certainty will be a cost saving for the airport and a benefit for everyone. Visibility into your network and powerful evaluation, reporting and dashboarding functionality of your system makes it easy to analyze asset and network performance and perform impact and root cause analysis when issues do arise.



Source: Airports Council International - North America

Service outages are costly, making proactive maintenance, repair and overhaul imperative. Graphical representation is also important for efficient infrastructure management. This enables you to visually identify where cables are going and what connectivity and services are used. This is especially critical when planning for building and construction work. Any monitoring system requires this information to perform the vital diagnostics that keep services up and running by avoiding physical damage.

The rise in global air traffic and the upgrading of fleets to larger aircraft are resulting in airport congestion and faster degradation of runways, roadways and buildings. Airports are therefore in a perpetual state of construction. To avoid inadvertently severing a cable, for example, you need to know precisely where each one is located.

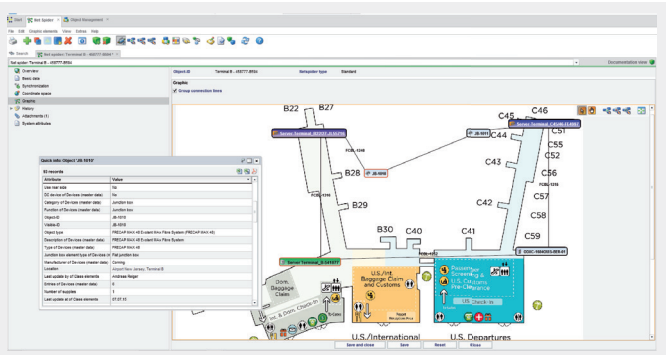


Fig. 1: Visualization using Schematic Network Representations

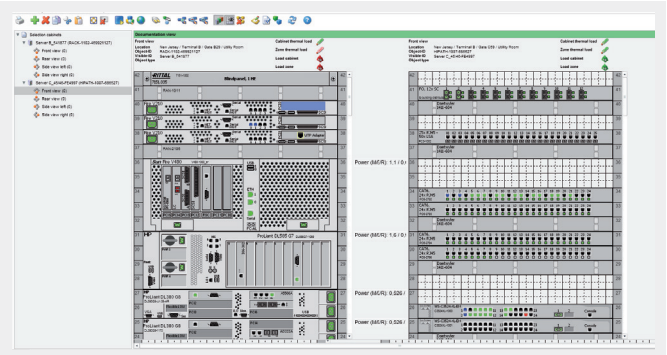


Fig. 2: Photo-Realistic Representation of Switch Cabinets

This is an easy task when you have a system with robust documentation and planning functionality to help maintain control over all work taking place at the airport.

Access to emerging technology is not optional

The airport ecosystem is driven largely by customer demands. The network manager that understands both existing and projected airport needs to accommodate these demands can develop a modern infrastructure that expands to keep pace. An infrastructure capable of adjusting to the changing environment will help propel your hub ahead of competitors.

The digitalization of airport customers is putting new capacity demands on infrastructure. Today's travelers expect information at their fingertips. They want easy connection to high-speed WiFi in traveler lounges and throughout the terminal, and the ability to wirelessly charge their mobile devices. They want information about flights as they progress through the terminal and real-time weather updates and notices about flight delays. Vendors want beacons and indoor positioning apps to target passengers with tailored advertising messages based on their location in the airport. Airlines want these technologies to help passengers find their gates. Airlines and vendors are evolving their apps to become more relevant for today's passengers. Airport infrastructure must evolve as well, to enable those expected services and apps.

Infrastructure must also enable the shift to self-service. Though not new, this is becoming more pervasive. Customers want to save time by ordering via apps, so on-demand in-flight retail services are emerging. Passengers want to order meals, snacks and drinks via an in-seat IFE system and shop duty-free from their smartphones. They want to scan and track their bags with smartphones using digital luggage tags. They want to print their own baggage tags and to check themselves in. New technology makes all these tasks more efficient, saves time for both the airport and passengers and requires fewer resources.

These are opportunities for airports – provided they have the IT resources needed to capitalize on them. Network managers will need to ensure their infrastructure can accommodate the new technologies and functionalities to enable these emerging value-added digital services. Planning is critical to determine what changes are required. For this you need consistent, up-to-date, and easily accessible data to make informed decisions about deployment of resources and capacities. Infrastructure managers who can access this data at any future point in time will be positioned to make better decisions.

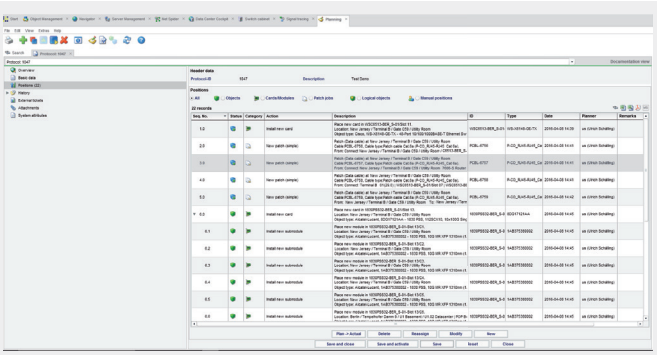


Fig. 3: Planning with Protocol

A controlled change process is critical for targeted management of infrastructure changes. A system that makes all logical and physical relationships associated with an IT service and service asset/CI available in their respective representations in both actual and planning states, gives network managers this control.

Example Workflow 2:

Planning a New Network Connection in FNT Command

They can test different scenarios in planning mode to gauge the impact on the infrastructure before moving forward. A system with reliable load and capacity displays and accurate prediction allow precise planning scenarios and efficient resource management.

The documentation and management capabilities of your system are important for these planning activities. Efficient analysis and planning of the IT environment is best powered by an integrated component library containing both active and passive IT components and clearly structured documentation and management of connections and services throughout the entire network, of both physical and logical objects. Any monitoring system requires a fully documented infrastructure to run capacity and resource analysis based on that data. This type of environment enables you to most accurately plan for modern technological environments.

Three Steps to Transform Airport Infrastructure into a Growth Engine: Document, Manage, Plan

These three activities are the key to turning an airport's IT and cable network infrastructure into a source of competitive advantage that drives growth in today's fast-paced and competitive business environment. The optimal IT infrastructure management solution encompasses all three in a single system that consists of:

- A central data repository of all relevant infrastructure information that is accurate, up to date and reliable
- Software that allows infrastructure managers to plan and track changes and work orders and to provide infrastructure-based services
- Incident management features that provide all airport customers and personnel uninterrupted technological services

The right solution will centrally manage all types of line-based and wireless network technologies. Its reporting capabilities will inform network operation personnel of bandwidth, made possible by comprehensive documentation of assets, end-to-end connections via hubs and switches and services provided via these connections. The right solution will depict and manage physical and logical network structures, including georeferenced representation of networks. This is helpful for the large sites and the many buildings at airports.

Finally, the right solution should be easy to integrate into existing IT environments for all relevant ITIL processes, such as incidents and problem and change management. The result? Solidify your customers' loyalty and increase their patronage. Infrastructure functions behind the scenes, but its visible output – uninterrupted service and ability to meet new demands – improves the customer experience at the airport.

Aviation infrastructure is the lifeblood of the modern airport, and it's up to the network manager to keep it pumping. There are solutions on the market today that make it easier to transform your IT infrastructure and cable network into a high-performing source of competitive advantage that keeps pace with capacity requirements, maintains performance standards and adapts to changing needs by optimizing the interplay between network, server and workstation. And airports with a high-performing infrastructure are at a distinct competitive advantage.

About FNT

FNT is a leading provider of integrated software solutions for IT management, data center infrastructure management and telecommunication infrastructure management.

FNT Command is our innovative software solution that is used worldwide as an OSS / IT management platform for businesses that span numerous industries. It's a modern, web-based standard software solution with a central data repository that enables customers to better manage their IT, cable network and telecommunications infrastructure. Its CI library contains more than 50,000 pre-configured, fully described assets based on technical details provided by the manufacturers. Eight of the 10 largest airports in Germany rely on FNT Command to manage their IT and cable infrastructure, including Frankfurt Airport, the third largest in Europe.

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