



# WHITE PAPER

## Opportunities and Challenges for Small Airport Passenger Communication

Passenger communication presents a significant and costly challenge for small airports, which struggle to keep up with trends in digitization, automation, and self-service processes. Central management tools like the PADS4 FIDS Operator by NDS could present a cost-effective solution.

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# White paper

As airports across the globe heavily invest in IT and communication, small airports struggle to keep up. Airports spent a record \$50 billion in 2019, moving to digitization, automation, and self-service initiatives aimed at improving customer satisfaction, reducing costs, and speeding up the curb to gate transitions. Yet, for many small airports, optimization is at a standstill. Legacy infrastructure, data silos, and costly upgrades remain significant barriers to digitization.

Small airports recognize the need for improving passenger communication. Multi-component systems with large-scale digital signage installations may be out of reach for many, there are still other options. Single platform solutions that offer data management with Flight Information-, Passenger Information, and Gate Information Display offer attractive solutions, especially when paired with affordable display technology like System on Chip.

## Communication Problems Facing Small Airports

Passenger communication remains a key problem for airports of all sizes. Communication barriers – including timely distribution of updates, comprehensive wayfinding, and multi-lingual support – keeps customers from finding and boarding flights in a timely manner, reduce customer satisfaction, and increase demands on already overburdened staff and service desks.

**Timely Distribution of Data** – Pushing data to passengers in a timely and convenient way remains a key problem for airports of all sizes. Notifying passengers of delays, gate changes, check-in desks, and baggage drop locations is critical to ensuring that passengers can make flights. This is especially critical for transferring passengers, who must locate and move to their next terminal and gate in a timely fashion.

**Wayfinding and Location Management** – Navigating terminals has traditionally demanded a complex system of signage, transportation, and wayfinding for passengers, presenting a significant challenge for airports. Yet, legacy architecture and FIDS structures raise concerns regarding passenger confusion and disorientation, with passengers expressing difficulty in identifying their terminal, finding their gate, and [finding bag drop-offs](#). This leads to missed flights, frustration, and customer dissatisfaction.

**Multilingual Support** – Most airlines carry an increasingly large number of international passengers, creating a need for multi-lingual support across signage, wayfinding, and advertising. Many small airports serve as endpoints for low-cost airlines, bringing passengers with diverse communication needs.

**Baggage Belt Confusion** – Incorrect information at baggage belts is a source of irritation for many travelers. Baggage belts need to be linked to the right flights and airlines, and when changes occur, those changes need to be visible immediately.

With the [PADS4 FIDS Operator](#), airports have an easy-to-use Flight Information Management System (FIMS) that sends real-time updates across the airport. This not only ensures a better passenger experience with less missed flights or transfers, it also boosts sales of restaurants and duty-free shops, since passengers are up-to-date on flight status. Combined with the PADS4 platform, wayfinding can be automated which prevents passenger confusion and disorientation. Integration of baggage belts makes it possible to always deliver up-to-date information. And with the translation tables, flight information and wayfinding is understandable for different nationalities.



## Inhibitors to Digital Communication in Small Airports

[The SITA and Airline Business Airline IT Trends Survey](#) showed that 97% of small airports want to improve how they share data to passengers. Most airports understand improving passenger communication infrastructure would reduce costs and improve the boarding process, but face barriers including resources, existing legacy systems, and knowledge gaps.

**Costs** – Many small airports operate using legacy Flight Information Display Systems, typically patched with new modules and new add-ons to ensure continuing capability. As these systems continue to age, they fail to keep pace with modern digitization needs. Replacing them can be costly, in terms of acquiring new software and solutions, down-time while migrating data, and in training staff to use new systems. Therefore, FIDS upgrades, which have traditionally involved purchasing a completely new data management system, can be prohibitively expensive for small airports.

**Knowledge Barriers** – Many small airports face significant knowledge gaps, preventing development or innovation in digital communication. While most are aware of and utilize social media, only 83% of airports express interest in programs to improve business intelligence, and just 88% are interested in initiatives to [move digital communication to the cloud](#). Differences in adoption typically relate to profitability and performance of aviation based on sector, with many small airports seeing smaller profit margins. In short, respective airports are unaware of their options and opportunities for potential improvements presented by implementing digital signage.

**Resources** – Small airports are often not only unaware of the opportunities there are. With less employees, they simply do not have the resources that larger airports have. Less people work on developing the airport, leaving little time to actually improve and update the Flight Information Display Systems.



## Opportunities in FIDS Integrated with Digital Signage

FIMS systems combined with digital signage offer airports a low-cost opportunity for digitizing their FIDS data. Solutions like the [PADS4 FIDS Operator](#) allow airports to manually import flight information, airlines, flight statuses, check-in desks, gates, and baggage belts. Combined with the PADS4 digital signage platform, the PADS4 FIDS Operator pushes real-time updates across the airport in the same way that AODB systems do at larger airports. Modern solutions like System on Chip [SoC] displays afford cost-effective solutions to the traditionally costly display, media player, and server combination. The PADS4 FIDS Operator in combination with the PADS4 digital signage platform creates an affordable, multi-use communication solution, capable of handling flight information display, and passenger updates and alerts. This could result in significant cost saving to airports, all while driving revenue for duty-free shops and eateries, and boosting customer



**Start with the PADS4 FIDS Operator instead of an AODB** – The PADS4 FIDS Operator makes the use of an AODB unnecessary, saving small airports money. Enter airlines and flights, and flight schedules are automatically generated. All flight data is centralized in one, web-based, easy-to-use system. PADS4 pulls data from the PADS4 FIDS Operator. Airports apply their own look and feel easily with PADS4, matching displays with the airport environment. The small airport solution makes for a long-term solution that grows with the airport. Once small airports decide to invest in an AODB, PADS4 connects to the AODB and pulls data from that database.

**Enhanced Opportunities for Data Security** – Solutions like the PADS4 FIDS Operator improve security across airports by collating data into a single web-based program, with full encryption. The PADS4 installation at ANA Aeroportos de Portugal, seamlessly delivers signage across numerous airports in real-time, with central management and local control, offering seamless remote distribution and security at every level.

**Passenger Wayfinding** – Airport wayfinding is crucial to providing a seamless passenger experience. Integrate airport maps in PADS4 and pair with indoor positioning technology to guide passengers to the correct terminal and gate in real-time. The integration offers “at-a-glance” information for passengers. In [airports like Lublin, Poland](#), digital signage displays present a clear overview of flights, with self-service terminals allowing passengers to zoom in on their own flight details, use search functions, and potentially even contact support right from a kiosk.



## A Cost-Effective Solution for Small Airports

There is little doubt that digital signage communication greatly improves the customer experience. Digital signage delivers the possibility of personalization, real-time multi-lingual support, destination and origin-relevant information and updates, and guidance or wayfinding delivered in a medium and [language most useful to the customer](#). This greatly reduces manned service-desk interactions, while speeding up customer journeys through the airport. Billund Airport was voted one of [Denmark's top 3 brands](#), just a year after completing a renovation, installing digital signage and streamlining the passenger experience with wayfinding, personalized data, and live flight information data across the airport. The [SITA Passenger Insights Survey](#) reports a 20% year-on-year improvement in customer satisfaction and process speed in airlines installing digital signage FIDS linked to Gate Management and digital notifications. Tools like the [PADS4 FIDS Operator](#) reduce the costs and complexities of these installations, affording a cost-effective solution and new opportunities for digitization to small and low budget airports.

**About NDS** – NDS launched its first FIDS solution in 1994 at the start of the digital signage revolution. Today, the software guides passengers with real-time flight information and wayfinding in 80+ airports. We've come a long way from “just” FIDS, with high-end digital signage solutions for targeted display communication including digital advertising, interactive wayfinding, menu boards, touchscreen, queue management, and more, but FIDS is still our core product. With one solution to help you make the most of every display on your network, smart airport signage has never been easier. We're here to help you guide passengers – from curb to gate – with one simple, platform solution.

[www.fids.com](http://www.fids.com)