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SMART DIGITAL STRATEGY IN AIRPORT PLANNING

TEXT: ADAM SYMALLA

DIGITAL TRANSFORMATION IS AN IMPERATIVE – AND A CHANCE

Despite ongoing climate debates, experts at the International Air Transport Association (IATA) predict a twofold increase in global airport traffic in the next 20 years. Yet it is unlikely that the development of airport infrastructure will be able to keep the pace.

Such a dramatic expansion is difficult not only in terms of financing and securing enough land. Lengthy planning and approval processes also present sizable obstacles. The growing need for new and improved infrastructure is undebatable. To make it happen, well-executed digital integration will be an absolute must.

Passengers today often encounter a vast array of digital concepts, systems and applications during a single trip. How can digital solutions be integrated in airport master plans and development projects to make processes more profitable for airport operators and stakeholders while supporting a smoother, more positive airport experience for travelers?

WHY AIRPORTS, AIRLINES, AND PASSENGERS SHOULD EMBRACE DIGITAL

Digital technologies offer a host of advantages for airports. Here are just a few examples:

› When automated systems supply passenger data, authorities can screen passenger documents and profiles more reliably. The result is enhanced overall **security**.

› Digital solutions can improve the speed and efficiency of numerous processes, so airports can handle more traffic and baggage and potentially even **minimize space requirements**.

› Going digital can help ensure more stable, efficient and hassle-free passenger processes – resulting in great **cost-cutting potential**. On the other hand, passengers can be moved more rapidly through terminals so they have more time to shop, yielding **higher non-aviation revenues**. In addition, operative transactions can be used to generate further business through additional services (ancillary revenues).

› Airport operators strive to make the passenger's stay as stress-free and convenient as possible, because satisfied passengers contribute to **higher revenues** in the non-aviation segment.

❯ Flight operators want to **avoid delays** in order to maximize flight rotations. Passengers need to arrive at their gate with time to spare to ensure efficient on- and off-boarding.

❯ Passengers' specific needs depend on the purpose and duration of air travel. But nearly all passengers want their flight to be f**ast, safe, and on time**, from departure to landing. Far less important is who is offering their digital services.

STUMBLING BLOCKS AND PERKS OF DIGITAL TRAVEL

One of the greatest challenges to the introduction of digital systems and concepts in airports is finding a holistic, passenger-centric approach. Right from the get-go, airport planners are often reluctant to consider new technologies. This is due in part to the inherent complexity of digital transformation. Responsibilities are often unclear. Defining a legal framework is therefore a crucial first step in order to enable an efficient and mutually beneficial exchange of between all parties.

Nevertheless, intelligently integrated digital solutions offer a multitude of opportunities for airports as well as all stakeholders. Instead of merely pro-

viding physical infrastructure, airports should expand their role in the future to include IT solutions and services for ground processes.

HOW CAN WE IMAGINE THE AIRPORT OF THE FUTURE?

The airport of the future will transform multiple touchpoints and processes. Here are six areas where we're likely to see changes.

CHECK-IN

Thanks to new digital solutions, spacious halls with row upon row of check-in counters will most likely be downsized or even cease to exist. Automated mobile applications will allow passengers to complete most of the check-in process before they reach the airport. On arrival, they will deposit their bags into automatic bag drops. Additional solutions, such as off-airport check-ins through partnerships with courier services or other specialist providers, are also conceivable. Integrating service providers who handle luggage will make it easier to plan and govern the capacity of baggage handling systems, which would simultaneously reduce the required floor area for technical equipment.

SECURITY CHECKS

Security checks are by far the most stressful touchpoints in the passenger journey. Their configuration and efficiency vary considerably. Passengers are thus often told to arrive at the airport well in advance of their departure times to ensure that they can safely pass through all necessary checks. New tech-nologies such as CT scanners will allow more passengers to move through individual security checkpoints. But the specific devices, design and processes at these touchpoints also need to be well-integrated. By coupling standardized processes with highly trained and motivated personnel, airports will be in a good position to handle growing passenger streams.

BORDER CONTROL

Widely used automated and biometric screening procedures at national borders have already accelerated the border control process and improved the passenger experience. Reconsidering aspects of the air-to-ground transition could make data collection even more efficient. For example immigration formalities, such as filling out visa applications on arrival, could be offered as an in-flight service with the support of a personalized inflight entertainment (IFE) system to collect biometric data and transmit it to authorities at the final destination.

NON-AVIATION

With the introduction of new technologies and ongoing process improvements, it will be easier to predict the time spent by passengers at the airport. Passengers will also be able to plan their airport experience more effectively and even minimize the duration of their stay. But this change could also harm commercial activities and revenues from hospitality and retail.

More intelligent approaches will be necessary for both retail and food and beverage (F&B) concepts. Airports may be able to entice passengers with smart to-go or "delivery to gate" concepts for F&B. Retail spaces could be designed as interactive experiential marketing venues, which would need less space for in-store displays, as well as storage and equipment.

BOARDING

Much like border control stations, automated checks could also be installed at boarding gates, resulting in more compact waiting areas and shorter lines. When planning these areas, airport planners could shift their focus to interaction and experience, which could very well contribute to a positive passenger journey.

BAGGAGE AREAS

Faster processing at border control stations will make it necessary to create larger baggage pickup areas, and put more pressure on ground handling agents to deliver baggage to the belt even faster. Time gained earlier in the journey through efficient digital solutions could quickly be lost here for pas-

sengers due to increased waiting times for baggage. Smart collaborations with baggage delivery services could be one approach that makes long minutes spent at the baggage carousel a thing of the past.

MAKING DIGITAL STRATEGY A REALITY

Digital transformation is an essential element of future airport management and a must-have in terms of business strategy. Getting airports fit for the future will require the integration of digital strategies in the master planning stage. Master plan development isn't merely a technical blueprint. Instead, it defines the strategic focus of an airport's business model. These are some essential ingredients of a successful digitalization strategy:

❯ All stakeholders must pursue digital solutions as a top priority that provides meaningful and efficient avenues to capacity planning.

❯ Digital and IT CAPEX must be viewed as essential to the general investment strategy. Investments in IT, process improvements and training should be increased over classic CAPEX.

❯ Equipment and infrastructure solutions only work when processes have been optimized and staff trained to use them. As new digital technologies minimize personal interactions at various touchpoints, the need for well-trained personnel becomes crystal-clear.

❯ It will also be vital to break down data silos between airport operators and their stakeholders to enable a productive exchange of information and data.

❯ Airport operators are not only responsible for physical infrastructure, but also provide IT systems as well as a host of processes.

CONCLUSION: HOLISTIC DIGITAL STRATEGIES WILL LEVEL UP AIRPORT PLANNING

Digital transformation is about more than technology. Instead, it offers the chance to create a holistic, company-wide strategy connecting multiple teams and touchpoints. In that sense, it needs to include specific objectives as well as guidance for implementation. This new breed of strategy is a management topic – so management also needs to walk the digital talk. When digital integration is taken seriously, it cannot be managed solely as the task of individual departments. At the end of the day, when airport planning is enriched by a well-connected digital strategy and clear business focus, its potential and impact can only stand to grow.

Adam Symalla is senior consultant at amd.sigma with more than 15 years of professional global experience in airport planning and management. He is amd.sigma´s expert for airport development with a strong passenger focus.
email: symalla@airport-dm.com