▸ Mastering global airport competition

Increasing airport attractiveness
through successful collaboration

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INSIGHTS

//01

The passenger of the
future will increasingly
value seamless mobility.

//02

The airport is evolving
into an integrated
mobility hub.

//03

Successful cooperation models
are the first step on the path
to a passenger-oriented and
attractive airport ecosystem.

Introduction

Competition among global hub airports is undergoing radical change. Airport attractiveness is playing an ever greater role here. In additional to established competitive factors like punctuality, flight price and total travel time, passengers are focusing increasingly on differentiating factors like travel and airport experience as well as personalized services offerings. The role of the airport is thereby evolving from that of an infrastructure manager to a provider of mobility services, shopping experiences and the designer of airport cities. This is calling existing business models into question and requiring new ways for the partners involved to work together. Airport attractiveness can only be improved through the collaboration of all stakeholders involved, such as airlines, retail stores, and mobility service providers. In this way the numerous touchpoints for the passenger can be linked into a seamless journey.

Airports that do not take the opportunity to address this transformation are in danger of losing attractiveness. Lower attractiveness means fewer passengers and less willingness on the part of existing passengers to spend time and money at the airport. Although the overall market is seeing unbridled growth, average revenue per passenger in the industry is declining.[1] One way to counter this trend is to implement a business model that identifies both passengers and non-flying guests as major customers with an increased focus on their needs. Airports should thereby link customer lifestyle expectations with connectivity. In the process, they could develop beyond "airport cities" into small metropolises with their own residential, business, and shopping centers. Structural changes in the mobility landscape—including electromobility, ridesharing, and air taxis—also have significant effects. Airports of the future will not only serve as international mobility hubs but also be of crucial importance for regional connectivity. Through the intelligent combination of local and intercontinental mobility, the airport can assume an important role in the future as a provider of mobility solutions.
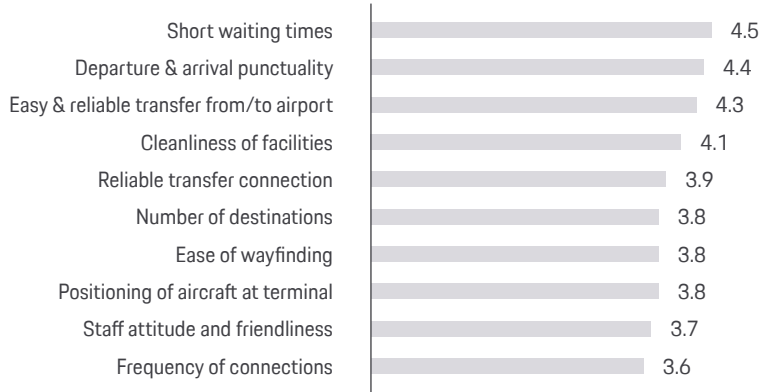
Airports face complex challenges

CHALLENGE 01
ADAPT TO CHANGING CUSTOMER EXPECTATIONS

A recent survey by Porsche Consulting of more than 400 frequent flyers examines current and future passenger expectations regarding airports. The study shows that passengers today attach great importance to operational stability, reliable connections, and efficient infrastructure (see Fig. 1). Short waiting times and punctual departures and arrivals are the main criteria here. Passengers also consider rapid and convenient accessibility to be an attractive feature.

"How important are the following attractiveness criteria for you?"

Criterion	Rating
Short waiting times	4.5
Departure & arrival punctuality	4.4
Easy & reliable transfer from/to airport	4.3
Cleanliness of facilities	4.1
Reliable transfer connection	3.9
Number of destinations	3.8
Ease of wayfinding	3.8
Positioning of aircraft at terminal	3.8
Staff attitude and friendliness	3.7
Frequency of connections	3.6

1 = not relevant   5 = absolutely essential

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Figure 1. Primary attractiveness criteria from today's perspective[2]

But how will passenger expectations regarding their travel experience change in the future? The Porsche Consulting study identifies seamless end-to-end travel, integrated multimodality, and personalized products and services as the top three customer requirements for airports of the future (see Fig. 2). Passengers will be placing an ever greater focus on a seamless door-to-door travel experience, on integrating a wide range of transportation services into their overall experience, and on personalized products and services.

"What are your expectations for future travel experience?"

01 End-to-end seamless travel

02 Integrated multimodal transportation

03 Personalized products & services

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Figure 2. Expectations for future travel experience[2]

The challenge for airports and their stakeholders is to position themselves in the future travel chain which is becoming ever more digital and individualized. Passenger data will play an increasingly important role, as Dr. Pierre Dominique Prümm, member of the executive board of Fraport AG, confirms in an interview with Porsche Consulting:
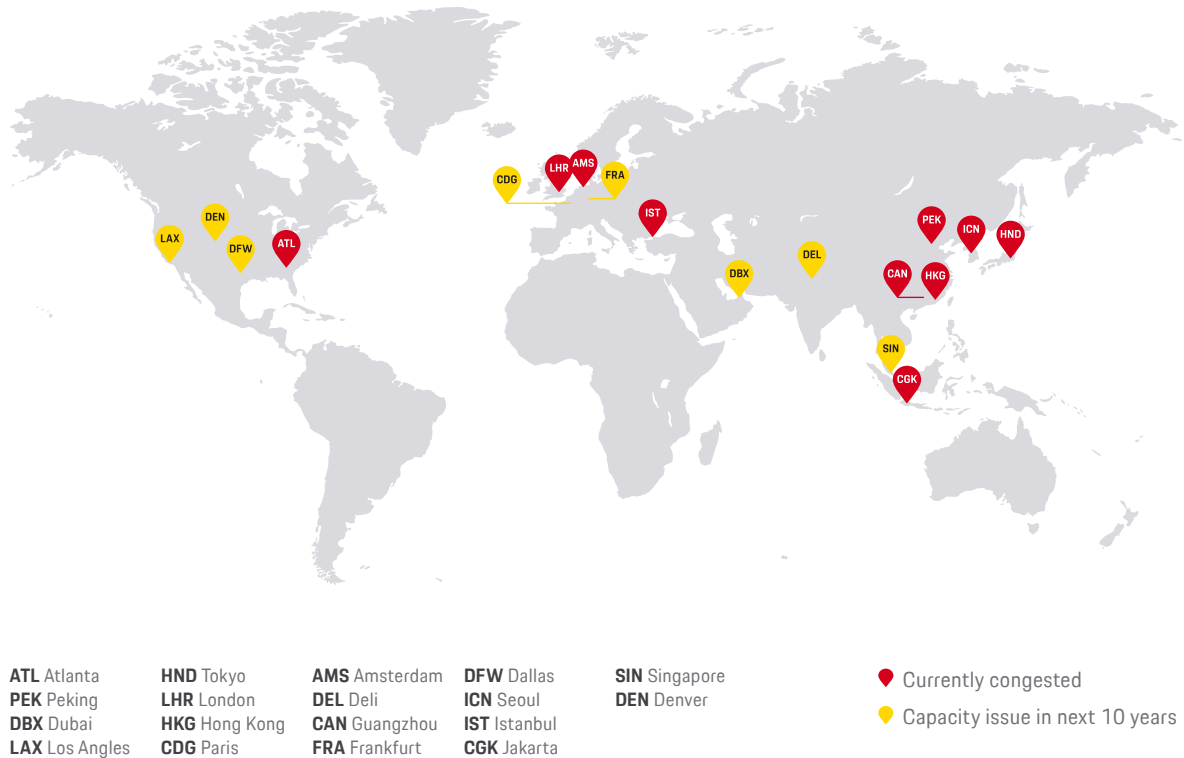
"Access to passenger data and the conversion into products and services with real added value will become a significant differentiation factor for players on the mobility landscape."

CHALLENGE 02
TACKLING CAPACITY CONSTRAINTS

Many airports are already operating beyond capacity. Clearly felt by passengers looking at flight cancellations and delays as well as long waiting times at security check points. Flight cancellations and delays hit a ten-year high in 2018.[3] Worldwide passenger numbers are expected to double by 2037, meaning that airports will have to handle even more passengers and flights.[4] The top 20 global airports by passengers numbers are all operating above their capacity limit or will run into capacity problems within the next 10 years (see Fig. 3). This leads to long waiting times for passengers, operational instability for airlines, as well as a negative perception of the airports.

ATL Atlanta	HND Tokyo	AMS Amsterdam	DFW Dallas	SIN Singapore
PEK Peking	LHR London	DEL Deli	ICN Seoul	DEN Denver
DBX Dubai	HKG Hong Kong	CAN Guangzhou	IST Istanbul	
LAX Los Angles	CDG Paris	FRA Frankfurt	CGK Jakarta	

🔴 Currently congested
🟡 Capacity issue in next 10 years

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Figure 3. Top 20 global hubs (based on 2018 passenger numbers) operating at critical capacity utilization (runway or teminal capacity)[5]

To deal with these constraints, the first step requires using existing capacities more efficiently. It is also necessary to expand land- and air-based airport infrastructure to meet demands in more flexible and continuous ways. The prevailing shortage of labor, especially in economic centers, is presenting ever greater challenges to service providers as they seek to fill open positions in such areas as ground handling and security.

SURVIVE IN GLOBAL COMPETITION

The competitive forces are shifting in large hubs across the globe. Airports would previously thrive in their role serving their home carriers and the success of these airports was directly correlated to the strength of the airlines. The recent trend of creating hubs, initially designed as connecting airports (e.g. Dubai, Doha) are serving to bring passenger traffic from Europe/North America to Asia/Oceania. Figure 4 demonstrates how the growth of these newer mega-hubs has impacted the European hubs through shifting away transfer passenger volume to China and the Middle East.
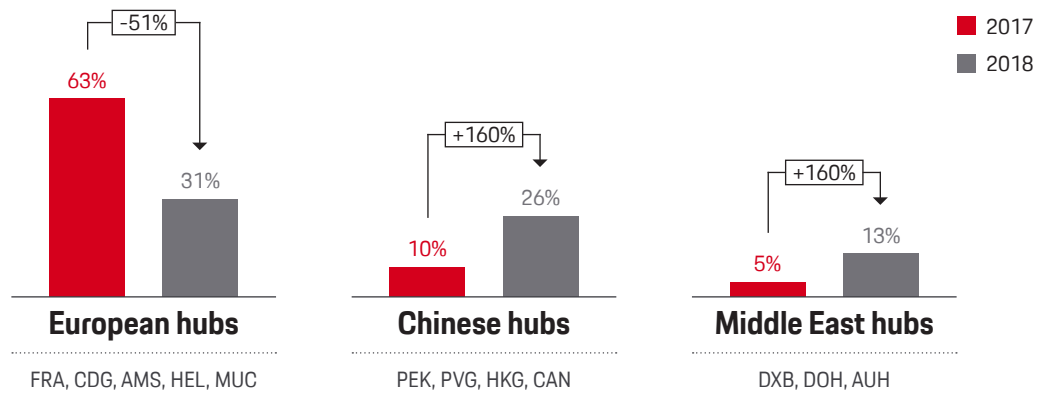
Figure 4. Market share of connecting passengers (Europe to China) in %[6]

Additionally, the launch and growth of low-cost carriers since the 1990s has changed the prevailing dynamics and structures in fundamental ways. Low cost carriers used to operate exclusively from secondary airports, however the strategic orientation towards major hubs has brought new competitors into the airport ecosystem. As a result, both hubs and point-to-point airports have been trying to attract low-cost carriers to promote growth.

The fact that competition leads not only to lower costs but also to special services for customers is clear from the example of the airport in Helsinki. With an array of attractive facilities including an aviation museum, a wellness salon, and free lounges, it continuously achieves high satisfaction rates, which in turn are reflected in its success. Its annual revenue has increased on average by around 10% since 2012[7]—well above the European average.

Few global top airports set the attractiveness benchmark

Some airports are already very attractive to their passengers and stakeholders. They show very stable operational performance in terms of reliability and punctuality, offer high quality standards throughout the passenger journey, and are positioned in visionary ways for the future. These SKY-TRAX 5-star airports[8] have some features in common. They often receive financial support from the state and are quick to implement infrastructure projects and introduce innovations. The airport ecosystem is managed by a single entity or is subordinated to an orchestrating unit that centrally sets vision and goals. This orchestrating role is often assumed by the state or by a state-controlled unit. In the State of Qatar, the airport in Doha is managed by the home carrier Qatar Airways. Qatar Airways in turn is a state airline and key to the development strategy of the State of Qatar.

Singapore's Changi Airport, the recipient of numerous awards, is run by the Changi Airport Group, which like its home carrier Singapore Airlines, is owned by the state.

In Europe, the playing field in airport ecosystems is considerably more heterogeneous. The former state-owned flag carriers are now generally privately owned companies, and the largest hubs are also privatized or expected to become so. The airport ecosystems here need to find ways to compensate for the competitive disadvantage of their heterogeneous stakeholder structures. Successful stakeholder collaboration is a crucial factor in closing the gap with the 5-star airports in Asia and the Middle East as well with other up-and-coming airports, and in remaining competitive on a global scale.

Focus on the customer

The above-mentioned challenges can only be met by taking a joint and collaborative approach. This is also confirmed by Dr. Michael Kerkloh, former President and CEO of Munich Airport, in an interview with Porsche Consulting:

> "The only way to master today's challenges is to have all stakeholders cooperate in the airport ecosystem. In addition, passengers will be expecting integrated services in the future, which makes partnerships all the more important."

All the ecosystem's stakeholders—from airport operators, airlines, and ground handlers to air traffic controllers (ATC)—have to be involved. Future-oriented approaches also include part-nerships with start-ups and mobility providers like ridesharing platforms. This approach is combined in the "Airport Attractiveness Model" and includes all stakeholders who work on the relevant action fields under common principles (see Fig. 5). In all their actions, the customer is the focus and the vision of the "hub of choice for passengers and airlines" is pursued.

The goal of this model is to make airports more attractive to passengers and thus also to airlines. Satisfying basic requirements like short waiting times and punctual departures and arrivals is only the first step in the process. To remain competitive, it is all the more important these days to meet more complex needs for seamless experiences, intermodality, and personalization. This will enable airports to remain relevant players on the mobility landscape
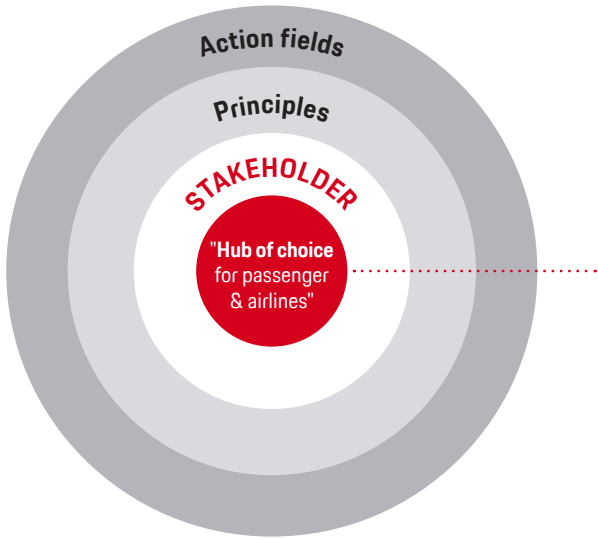
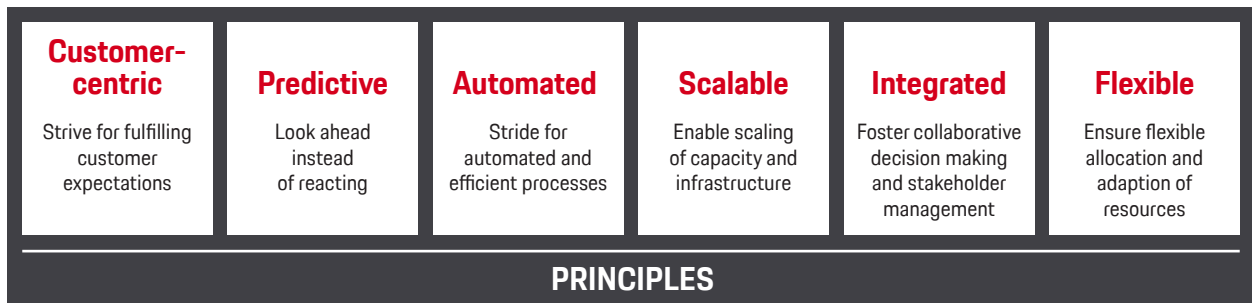| STAKEHOLDERS	
Airport operator	Service providers
Airlines	Other airports
Air Traffic Control	Government/authorities
Tenants	Start ups/think tanks
Mobility providers	Residents

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Figure 5. The Airport Attractiveness Model with the most relevant stakeholders

To take successful action, the stakeholders in the airport ecosystem have to base their strategic and operational collaboration on shared principles (see Fig. 6), such that there is a consistent focus on the customer. Depending on the perspective and time frame, the main customer in the flight business can be the passenger or the airline itself. The guiding paradigm for all action should always consist of fulfilling customer expectations—or of overfulfilling them at strategic touchpoints. Especially in the dynamic aviation industry, it is also very important not just to react but rather to think and act in advance. Automating processes is helpful for both increasing efficiency and improving customer experience. Biometric identification processes or overarching apps that allow check-ins with other airlines, for example, are promising approaches.

Scalable capacities is a crucial principle when it comes to accommodating increasing demand. This might consist of scaling processes and procedures when expanding a terminal or extending ground-handling capacities. Passenger expectations for seamless links between all forms of transportation across their door-to-door journeys are placing new demands on mobility providers with respect to integration. Capacities and resources that are adaptable in flexible ways can be used in conjunction with defined operational modes to address fluctuations in demand and/or disturbances.
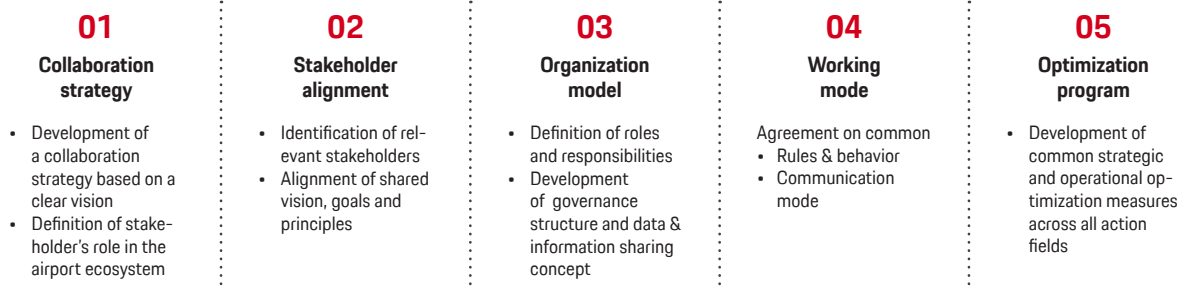

Customer-centric	Predictive	Automated	Scalable	Integrated	Flexible
Strive for fulfilling customer expectations	Look ahead instead of reacting	Stride for automated and efficient processes	Enable scaling of capacity and infrastructure	Foster collaborative decision making and stakeholder management	Ensure flexible allocation and adaption of resources

PRINCIPLES

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Figure 6. Principles of stakeholder collaboration

Five factors for successful collaboration

In the Airport Attractiveness Model, all stakeholders follow the shared principles and their actions always focus on the customer. But what makes their collaboration successful?

Porsche Consulting has identified five success factors for stakeholder collaboration (see Fig. 7).

01
Collaboration strategy
- Development of a collaboration strategy based on a clear vision
- Definition of stakeholder's role in the airport ecosystem

02
Stakeholder alignment
- Identification of relevant stakeholders
- Alignment of shared vision, goals and principles

03
Organization model
- Definition of roles and responsibilities
- Development of governance structure and data & information sharing concept

04
Working mode
Agreement on common
- Rules & behavior
- Communication mode

05
Optimization program
- Development of common strategic and operational optimization measures across all action fields

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Figure 7. Five factors for successful collaboration

//01 COLLABORATION STRATEGY

The starting point for successful collaboration in the airport ecosystem is the definition of a collaboration strategy at stakeholder level. A clear vision is the foundation for this. For example, Singapore's Changi Airport has defined for itself the vision "More than an airport." With respect to punctuality, this type of vision could be "The world's most punctual airport." This is also associated with the realization that long-term success can only be achieved in collaboration with all stakeholders. As part of the collaboration strategy, the airport operator also defines for himself which role he wants to play in the airport ecosystem. The definition of the role should allow for the airport operator to play an important part in the future mobility landscape and therefore point in the direction of a mobility and experience provider at an attractive transportation hub. Furthermore, the airport operator must also define at a high level which strategic partners he needs to pursue his vision.

//02 STAKEHOLDER ALIGNMENT

In a second step, the airport operator identifies all relevant stakeholders and assembles them into a stakeholder map (see. Fig 5). The stakeholders should then agree on a shared vision based on their collaboration strategy and define common goals. In this step, the common principles are also aligned. Principles embraced by everyone involved are what determine action in the ecosystem. Goals have to be realistic and measurable, and can be, for example, customer-oriented or conventional operational key indicators. Making decisions in alignment with all participants and with reference to predetermined goals and principles ensures that the stakeholders work together in agreed-upon ways to achieve overarching goals. When it comes to punctuality, shared target values are indispensable. This practice is already being used to some extent by airlines. For example, Delta Airlines calls itself "the on-time machine" and thereby places a clear focus on punctuality. Many airports have a rather qualitative vision. Doha Hamad, for example, states the following: "Our goal is simple. To provide you with a world-class airport experience." Some airports go a step further and have defined programs to increase punctuality to 85%. Quantified and agreed goals should be communicated system-wide to foster buy-in for every partner in the system. Doing so, every stakeholder will strive to attain its individual punctuality goal.

Alignment with the authorities has always been an important part of aviation, as e.g. security is always a matter of state affairs. In recent times, issues relating to environment and sustainability have received increased attention. Here, too, strategy and targets must be aligned with the authorities in order to meet overarching climate targets. Another example concerns the alignment between the airline and the airport operator. The focus here is mostly on passenger processes, which have a significant impact on passenger satisfaction and costs. If, for example, the airline and the airport operator agree on the design of the check-in processes, an optimal cost-benefit ratio can be found for both stakeholders. The airline benefits from increased passenger satisfaction and the airport operator is able to survive the global competition better due to lower costs.

//03 ORGANIZATION MODEL

Collaboration is reinforced by establishing an overarching management structure. A reporting mechanism with a specified decision making process and escalation levels should be defined. One key factor consists of assigning roles for the associated responsibilities based on individual competencies, while the airport operator assumes the orchestrating role. The home carrier can assume a key role in implementing customer-centric products and services, because it has the most customer data. The airport operator and ground handlers should put operational excellence into practice on the apron, because that is where their core competencies lie. Clear allocation of and access to resources are also of great importance for enabling smooth work processes for all stakeholders.

Also relevant is agreement on information management, especially regarding data access, exchange, and processing. The required IT interfaces including platform management need to be agreed upon. Establishing a performance management system with a uniform measurement logic and coordinated incentive structure will ensure that all stakeholders benefit from collaboration. Similarly, investment decisions can be made and implemented jointly. When all involved participate in these projects, both the associated costs and the resulting revenue can then be distributed across all stakeholders in the ecosystem.

Michael Eggenschwiler, CEO of Hamburg Airport, places special emphasis on the responsibilities of the operator's role:

> "Managing the many service providers at an airport is a major challenge. In its role as coordinator, the airport has to ensure viable interplay and uniform standards."

Based on the goals defined above, joint performance management as well as incentive structures need to be developed. They can replace conventional service-level agreements between airlines and ground handlers which are based solely on improving individual processes and not on optimizing the

overall system. It is also recommended to have an integrated planning and management system in which all relevant data such as flight schedules, occupancy rates, and baggage data are communicated to all process participants.

//04 WORKING MODE

A technical governance structure is not enough in itself to ensure good collaboration. A similar cultural understanding is also needed if, for instance, agile start-ups and companies with more traditional operations are to work together as efficiently as possible. The same codes of conduct, modes of work, and rules need to be followed in order to establish a joint modus operandi. This is the basic prerequisite for exchanging knowledge openly and finding solutions rapidly. Information must be made available to all stakeholders transparently, in order for them to make fact-based decisions and contribute to the collaboration. This also enables the predictive planning and control of airport processes. For example, processes such as check-in and security checks can be better adapted to the expected passenger volume if the airlines pass on the relevant data and the process owners are able to optimize their planning and control accordingly. Standardized recovery scenarios help in the case of disruptions (e.g. thunderstorms) to keep a "playbook" ready that all stakeholders can adhere to.

Working relations between low-cost airlines and airport operators are not infrequently marked by cultural differences. Whereas the airlines work with agile methods including rapid testing and implementation, the operators tend to take a classic approach with a strong conceptual emphasis. In the interest of successful stakeholder collaboration, all participants need to follow shared principles and ways of working. For example, Ryanair traditionally transports its passengers to and from the terminal by bus, since mid-2019 it has ac-cess to gate positions for some flights in Frankfurt. This can be viewed by both sides as an attempt to test new processes and implement them if successful. Another example of new forms of collaboration is the partnership between Uber and airports in order to optimize passenger drop-off and pick-up processes at terminals.[9]

//05 OPTIMIZATION PROGRAM

The shared action fields of the stakeholders are continuously improved with an optimization program. Strategic and operational optimization measures must be defined in order to ensure continuous improvement. This is followed by collaborative prioritization and implementation of projects along a road map. Also here implementation and management of the optimization program are carried out by one hand. Continuous optimization of the system will increase attractiveness for passengers as well as all stakeholders on a sustainable basis on the way towards the "hub of choice" vision generating competitive advantage. Information transparency and networked planning and control for better coordination ensure the best possible use of the system's capacities. Over the long term, all stakeholders need to make plans three to five years in advance with respect to flight movements and passenger numbers. Over the medium term, the flight schedule needs to be coordinated—a joint "readiness check" before each period is helpful in order to identify possible weaknesses in the system. Short-term measures focus on demand-oriented system utilization based on real-time data such as actual passenger and baggage numbers per flight. Here, all participants need to provide the required data proactively and thereby ensure transparency. Standardized operational modes and defined ways of dealing with delays are an additional form of leverage. "Quick turnaround" gates for late planes can help smooth out delays.

Conclusion and steps towards implementation

Successfully implemented collaboration models embraced by all stakeholders are a crucial factor on the way to achieving an attractive airport ecosystem. Current and future challenges regarding passenger requirements, operational stability and efficiency, and greater global competition can only be mastered jointly. The future will see not only competition between individual airports and airlines, but also considerably more passengers deciding which ecosystem best fits their mobility, experiential, and/or business needs.

At many airports, basic passenger requirements for punctuality and operational stability are currently not being met. In order to achieve a sustainable improvement, the existing capacities must be better utilized and necessary expansions implemented quickly. This can only succeed on the basis of close collabo-ration. Established global top airports like Changi in Singapore, Haneda in Tokyo, and Hamad in Doha are already showing impressively how to handle growth while simultaneously transforming an airport into a place with a high quality of experience. European airports need to close the gap quickly in order to succeed in global competition. Airports have to position themselves appropriately in value chains to avoid being downgraded to mere infrastructure providers.

The first step towards putting a collaboration model into practice consists of a maturity self-assessment by the airport operator along the five success factors (see Fig. 8). This determines the current degree of maturity of the airport collaboration model.
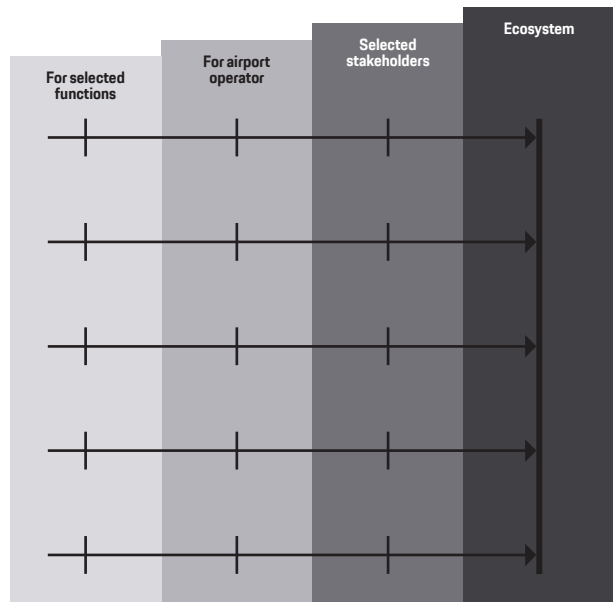
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Figure 8. Maturity self-assessment of airport collaboration model

If the respective success factors are not defined or only defined for selected internal functions, action is required to develop and expand them. After an airport operator-wide implementation, the alignment and roll-out should take place across the entire airport ecosystem. The goal is that every stakeholder adopts all success factors and thereby is aligned from a goal setting perspective with the overall airport system goal (e.g. 85% departure punctuality). Following the conception phase, it is essential for the collaboration model to be tested in pilot projects and successively refined. Of relevance here are projects to improve punctuality or to develop and introduce services that increase passenger satisfaction.

IN BRIEF

01 Airports must develop customer-centric business models that offer personalized solutions for passengers.

02 Structural changes in the mobility landscape have significant effects on all players in the travel segment.

03 The attractiveness of an airport is largely determined by the collaboration between the various stakeholders.

04 The players in the airport ecosystem must base their cooperation on shared principles, so that the customer is always the focus.

05 A seamless passenger journey can only be created by healthy stakeholder interaction.

06 The passengers of the future will choose the form of mobility that best meets their multifaceted needs.

Appendix

(1) https://www.passengerterminaltoday.com/features/boosting-non-aeronautical-revenues.html

(2) Internal Porsche Consulting survey of more than 400 frequent flyers

(3) https://a4e.eu/2018-worst-year-for-atc-delays-and-flight-cancellations-in-nearly-a-decade/

(4) https://www.iata.org/publications/store/Pages/20-year-passenger-forecast.aspx

(5) https://www.iata.org/whatwedo/ops-infra/airport-infrastructure/Pages/airport-capacity-map.aspx
    https://www.internationalairportreview.com/article/32311/top-20-largest-airports-world-passenger-number/

(6) http://www.airport-business.com/2019/03/no-small-hub-bub-global-hub-competition/

(7) https://www.finavia.fi/en/about-finavia/financial-information/annual-reports

(8) SKYTRAX is an internationally respected rating agency that has been conducting worldwide surveys on airline and airport quality since the 1990s, awarding 1-5 stars, with the 5-star airports meeting what it considers to be the highest standards of passenger comfort and efficiency.
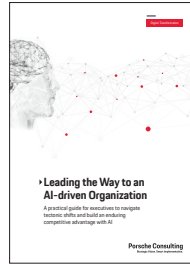
(9) https://www.adweek.com/brand-marketing/uber-airport-ads-rideshare-pushed-out/

Further reading

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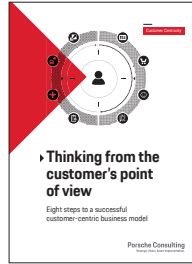
Customer Centricity

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Authors

Joachim
Kirsch
Senior Partner

Claus
Lintz
Partner

Matthias
Foitzik
Senior Manager

Johannes
Delion
Senior Consultant

Franz Clemens
Augustin
Senior Consultant

Contact
☐ +49 170 911 3467

Porsche Consulting

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