Getting ready for take-off: Ramping up airport operations

After having come to an almost complete standstill, the aviation industry is now facing the challenge of ramping up operations again. Airports are already dealing with procedural and infrastructural redesign to comply with Covid-19 regulations. The next vital step is to move on towards mobilizing airport resources, preparing them for the new normal this crisis has shaped. Creativity and flexibility are key levers to success in staying ahead of the rising, yet volatile demand curve. The workforce requires precisely timed requalification and an overhauled planning module, given the drastically impacted parameters, while equipment plays the central role in making the passenger journey touchless, which is driving digitalization. Inevitable capacity reductions and checkpoint bottlenecks due to extended process times and distancing measures are predominantly challenging for space constrained airports. However, the search is on for creative solutions around the world to secure capacity and service levels, so that airports can leave the competition behind at the starting blocks.

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Getting ready to fly

As a result of the ongoing Covid-19 crisis, airports have lost the majority of their revenue streams. To successfully steer through this sea of challenges, an orderly operational shutdown, as well as a functioning crisis center to work on re-start plans, are urgently required. As the world is recovering from the lockdown impact, all commercial aviation stakeholders must immediately move towards "getting on their marks", in order to leave competition behind at the starting point.

Being ready to fly will minimize the impact of reduced or zero revenue streams. Furthermore, a poor start will waste any initiatives taken during the crisis. Aside from general health and hygiene improvements, airports are already dealing with the challenge to adapt operational procedures and terminal infrastructure to the industry's new normal.


Figure 1 **Getting ready to fly**
Source: Lufthansa Consulting

Man, machine, material, methods

While processes and infrastructure were already restructured during the shutdown, workforce and equipment had been benched. In the face of rising demand and a general ease of travel restrictions, all airport resources need to be re-activated and prepared for the changes made, in order to ensure that sufficient manpower and machinery are always meeting volatile demand levels during the ramp-up phase, enabling the respective airport to minimize the inevitable capacity restrictions and maintain steady service levels as prior to the crisis.

Pairing air traffic demand with right level of resources

The human workforce is building the fundamental base of every recovery plan. Given the unprecedented nature of this crisis, the predictability of future demand levels is highly volatile and the usage of historical data as a forecast base becomes partially invalid. In the absence of a globally united recovery plan, forecasts are interdependent on individual national restrictions and the upcoming change in general travel habits. Pairing the rising demand consistently with the right amount of resources, will become a critical challenge.
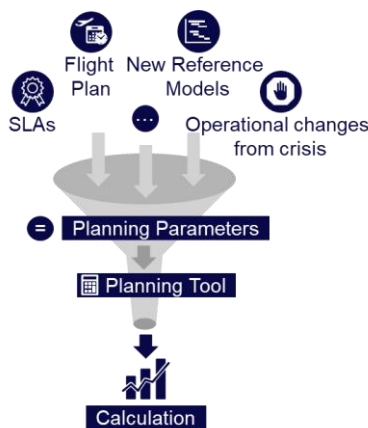
Thinned-out flight plans, increased process times building new reference models and new service level agreements in regards to health and safety regulations are requiring a complete overhaul of existing planning modules. Only if all changed parameters are evaluated correctly, the most efficient resource allocation can be executed, keeping a low cost-base at an optimized productivity level. Calculating the right amount of staff required for each possibility will put your airport in the driver seat and leave the competition behind.

Figure 2 **Efficient resource planning module**
Source: Lufthansa Consulting

Flexibility is the key to success

Ramp-up plans must consist of a resource base, covering all ongoing operations, plus a flexible part to ramp-up to the new levels required on short-notice, or to downscale in case of cancelled flights due to below threshold load-factors or recurring restrictions at certain destinations. Standby or reserve models, temporary pay-cuts, or alternative usage options for otherwise unutilized resources can be powerful tools. Despite a general surplus of airport staff throughout the next few years, the availability of experienced, trained and ready-to-hit-the-ground-running employees will become increasingly difficult to ensure, especially in areas with unique work skills. In order to counter this development, staff need to be maintained on-board, e.g. by using furlough, and/or being cross-qualified with complementing skills to further increase flexibility and to secure workforce availability in the long-run.

Starting requalification prior to operations resuming to stay ahead of the curve

Consistent requalification of staff is a long-term project which needs to start right now in order to avoid staff shortages in the growth period. Licenses and certificates for existing employees are often linked to expiration dates, demanding a requalification either within a certain time period or when the job is not executed within a certain number of days.
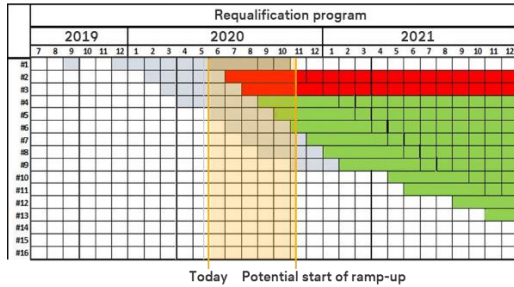

Trainers can become a scarce resource after the crisis, requiring a staggered training program approach to ensure that the right amount of staff with the required certifications are available at all times and for all scenarios during recovery. After the crisis is over, your workforce belongs on the floor and not in a classroom.

Figure 3 **Staggered requalification training program**
Source: Lufthansa Consulting

Training new procedures and technologies prior to implementation

Due to a variety of newly imposed rules and regulations, new procedural adaptations and potential technological innovations will need to be trained. Assuming that all manuals and theoretical bases for those processes have already been developed, they require immediate attention as part of the requalification program.

The crisis as a stepping stone to drive digitalization

Aside from an airport's workforce, having the right equipment in place for modified processes along the passenger journey, is key. All measures must aim to comply with local health requirements. However, airports should not miss out on the chance to upgrade their equipment in order to compensate for more challenging process times. To achieve this, driving digitalization will be the key lever to sustainable success, which simultaneously reduces the need for major infrastructural changes.

Check-in

The check-in process is especially impacted by social distancing rules, sometimes forcing the airport to close down every second check-in counter, severely constraining the capacity. In times of Covid-19, self-check-in-options are of utmost importance, as they minimize human interaction. As self-check-in already an integral part of the customer journey, scaling capacity becomes more flexible. Besides hygienic benefits, self-check-in kiosks operate more efficient in terms of manpower. A group of devices can be supervised by one floorwalker who supports passengers in case of issues.

Security

While check-in capacity reductions can be countered rather effectively with self-service options, the security checkpoint, without increasing staff levels to open more lanes, will remain and further intensify to be the major bottleneck of the passenger journey. General safety regulations make some form of human interaction an unavoidable necessity, requiring alternative methods to at least reduce hands-on checks or to enhance control of the queuing lanes. Behavioral security tunnels are still under

development, however, have already successfully been tested at LAX. Initial statistics show a reduction in flagged cases for a secondary screening through a security officer of up to 80%. While this technology is not yet matured to a live operational level, alternative crowd control measures have already been developed as a result of the past few months. Brazilian carrier Azul developed an individualized boarding system, providing slots to each passenger, clearing guiding them with projected, moving markings on the floor. This rather simple, but strongly impacting idea, can easily be cross-utilized at other passenger checkpoints, such as security.

Boarding

The current framework for the boarding requires the passenger's boarding pass either to be scanned by the gate agent or by the passengers themselves at a self-boarding device. Both options either require direct contact with airport staff or close proximity to other passengers at the self-boarding devices, again forcing the airport to lock devices to guarantee social distancing. Biometric check-in devices with facial recognition enable the passenger to board the aircraft in a seamless and touchless way, which is already widely utilized in the U.S., as a joint effort between airlines and airports, with JFK, Boston (both jetBlue), LAX (American Airlines), or Atlanta (Delta), just to name a few. Furthermore, process times can be reduced as scanning the boarding pass is going to be omitted, which will gain particular importance in the aftermath of Covid-19, reducing overall boarding time by up to 40%.

Figure 4 **Innovations to be emphasized on as a result from Covid-19 crisis alongside the customer journey**
Source: Lufthansa Consulting

Innovative ways to bypass capacity bottlenecks and maintain service levels

Airports will be urged to think about creative solutions to cope with the increasing traffic and hygienic requirements. It needs to be distinguished between permanent and temporary solutions, as the level of investment and implementation lead-time will play important roles in the decision-making process.

In case of capacity constraints at the check-in or security checkpoints, airports can temporarily allocate timeslots to all passengers individually to distribute the flow of people more evenly among the available facilities, creating fast lanes as an incentive for passengers to participate. This can only be realized in close cooperation with the airlines to ensure proper communication to the customer and again emphasizes the importance of airport stakeholder management and communication.

Further space constraints beyond the above-mentioned solution could be tackled by expanding the terminal facilities as a whole. Due to the potentially short lead-time of such capacity issues, temporary, prefabricated buildings are a cost efficient and quick response solution. Considering, however, the limited expansion opportunities of major legacy airports in densely populated areas around the world, airports will be forced to free up additional space for e.g. queueing, from either open areas (e.g. the check-in hall) or third-party operated retail areas.

Conclusion and future outlook

The customer journey around the product "flying", has severely been impacted by the Covid-19 crisis and will sustainably re-shape the industry into a new normal. In the short to medium term, all globally imposed rules and regulations around social distancing and touchless processing of passengers, will remain with all impacted stakeholders along the process chain.

Queuing spaces at checkpoints in the terminal will need to be enlarged and counter/terminal space will require additional investments or freed up space to counter the reduction in capacity due to the increased process times and distancing rules. Technology can be a key lever to succeed and emerge from this crisis stronger. In general, this crisis may function as a catalyst for digitalization, enforcing a touchless passenger journey through innovative technologies.

The workforce as a resource will play the central role, having to adjust to new procedural requirements and technological equipment. It will be the key challenge for airport management to ensure continuous availability of staff and skillsets, with the requalification process required to start right now. With this crisis, airports have the unique opportunity of slowly rising demand levels, continuously developing and adapting individual processes prior to hitting peak times. A key premise, to not only survive this crisis but also use it as a stepping stone, is that airports must utilize the downtime wisely.

In conclusion, it remains the question if all necessary efforts are working towards a permanent solution or are just a temporary support to cope with Covid-19 restrictions. Society has adjusted rather quickly to the new circumstances in face of the crisis. Whether these behavioral traits will make a lasting impression or fade away as life slowly goes back to normal, is a question to still be answered.

To learn more and discuss how your organization could benefit from Lufthansa Consulting's expertise on Crisis Recovery, please get in touch at APcrisis-solutions@LHConsulting.com. **Together, we can make it through to better days.**

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