

Airline Operational Excellence Survey

Focus Area Operations Planning,
Steering and Performance
Management *(Initial Results)*

By Martin Sedláček and Anna Sauer
Lufthansa Consulting

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Initial results of the Airline Operational Excellence Survey

Focus Area Operations Planning, Steering and Performance Management

While the airlines are currently entering one of the most difficult winters of their modern history, they continuously ask themselves: how to re-invent to secure a place in the so called “new normal”? The operations, among other areas, will have to change significantly. To inspire the stakeholders and decision makers, Lufthansa Consulting is releasing initial results of its Operational Excellence Survey. The survey was carried out shortly before Covid-19 hit the world and its results might offer valuable insights into how to do things differently, when starting arguably from scratch. There is a great potential in digitalization, however this comes at cost and funding might not be immediately available. Yet the upcoming quiet winter period is a great opportunity to review and make sure that the basics are done right and that, once ready, the organization is prepared for a new era of airline operations.

Lufthansa Consulting GmbH
Frankfurt Airport Center | Hugo-Eckener-Ring | 60546 Frankfurt/Main
E-mail: Mail@LHConsulting.com

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In late 2019/early 2020, Lufthansa Consulting conducted a unique survey, focusing on the area of Operational Excellence (Figure 1) within the airline **Operations Planning, Steering and Performance Management**. More than 50 airlines of different sizes, business models and from all regions of the world participated. Unfortunately, just as the results were ready for publishing in March 2020, the Covid-19 crisis hit the world. Although everyone hoped that the crisis would be over fast and the traffic would start recovering latest by the beginning of the school year in September, the reality – at least in international markets – took away any signs of cautious optimism and most of the airlines world-wide are bracing for one of the most difficult winters of their modern history.

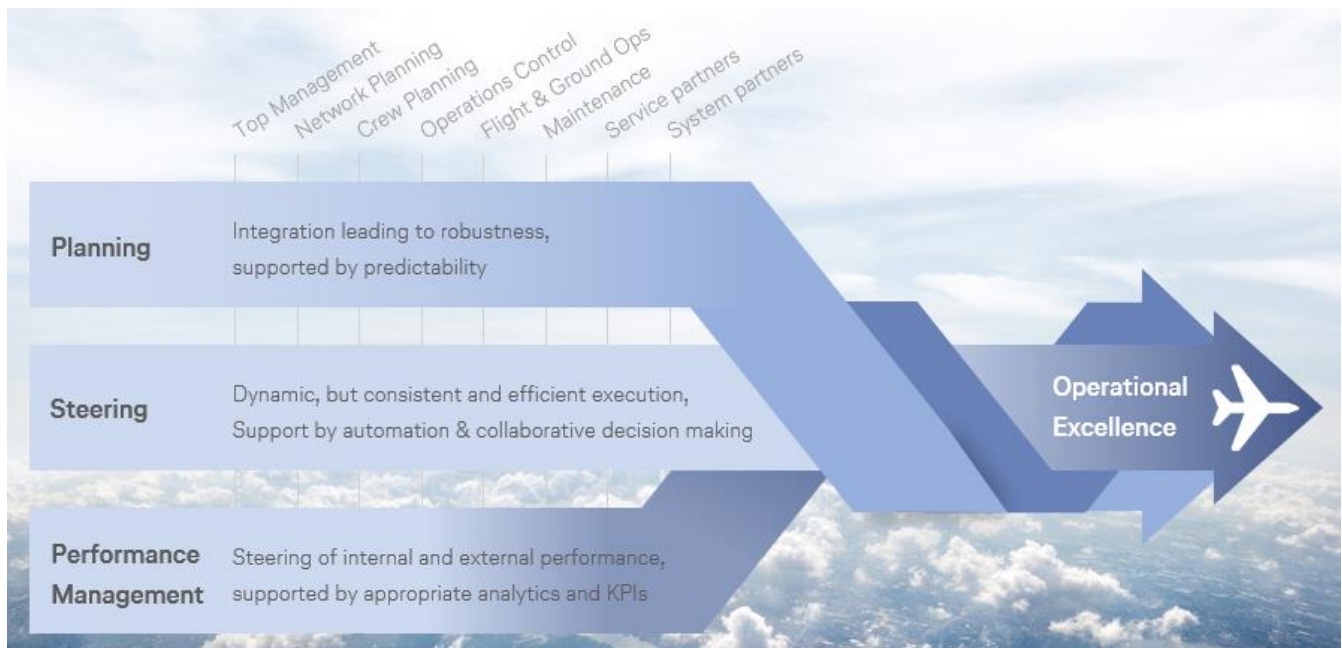


Figure 1 - Operational Excellence as defined by Lufthansa Consulting

The motivation for the study in 2019 was obvious – capacity shortages (aircraft, crews, airspace, airports) leading to increasing disruptions, this translating into growing costs and coupled with negative publicity. This, together with stiff competition, required increasing efficiency and as everyone, we were also asking why the technologies do not have higher impact on the operations.

We are aware that the topic is not of utmost priority for the majority of airlines yet. Still we believe that **understanding the results and acting upon them when rebuilding for the “new normal” is important** and therefore we are sharing the main outcomes in this article, with a comprehensive study to follow.

Key results

The key results, as can be seen in the Figure 2 were not necessarily a surprise. On the contrary – they **confirm long-term pain points related to the data, processes and human factors**, whose background will be explained in the subsequent paragraphs. Even though the results were analyzed per region/size/type of the airline, no major differentiators were found. This only highlights the urgency of the topic as **the situation is basically identical in most of the airlines** and there has been only a limited progress across the industry so far.

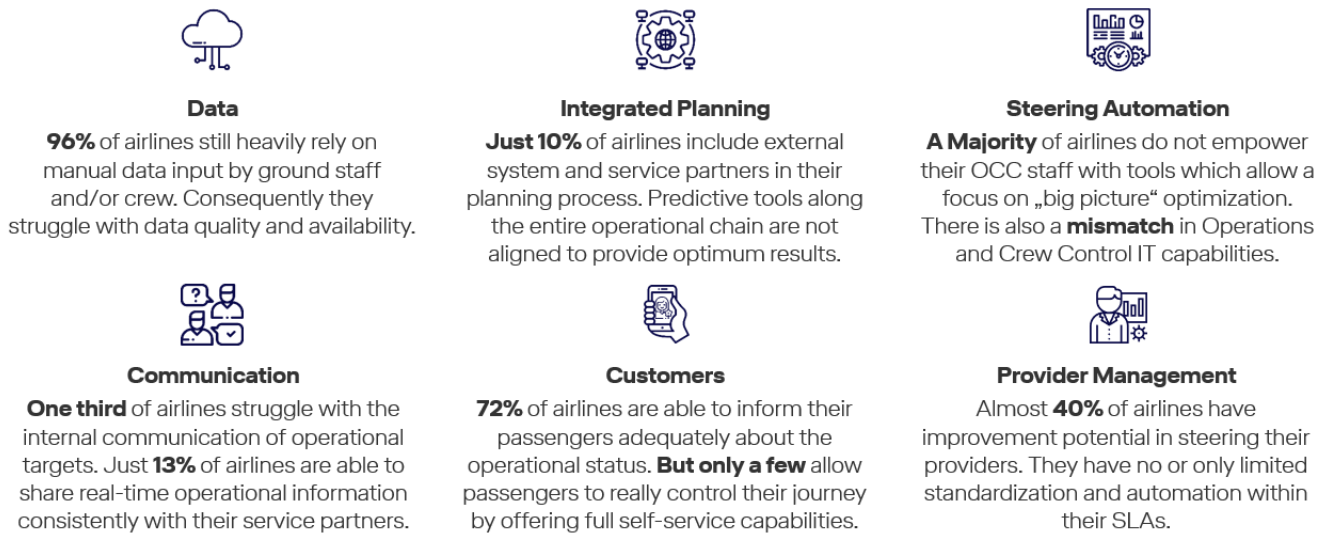


Figure 2 - Main findings of the Lufthansa Consulting's Operational Excellence study

But before we dig deeper, let's look into **what the airlines said about their pre-pandemic operational performance**. Whereas only one in ten airlines were absolutely satisfied with their own operational performance, one third of participants were on the other side of the spectrum – not satisfied, even after consideration of external circumstances. Interestingly, this roughly equals to the number of airlines which did not have any operations improvement program in place. Yet a conclusion that such programs bring good operational performance could not be proven by the data – highlighting the key questions of how are such programs executed and who is involved in them.

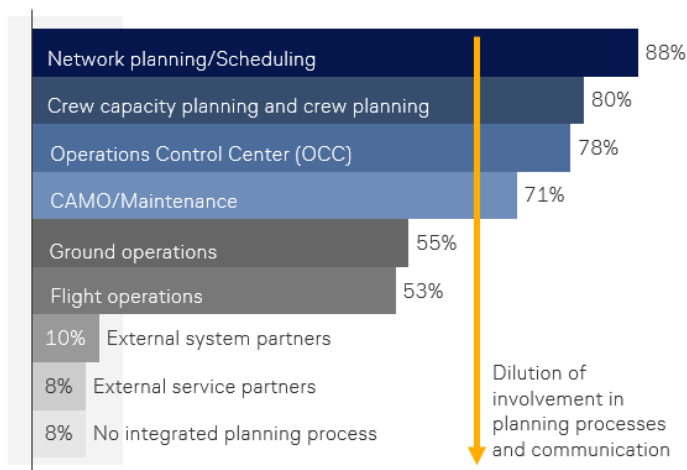
The latter is particularly important as there are still too many airlines, which see **operations as a silo** and within above improvement programs rarely include commercial or customer-interaction related departments (while claiming the customer satisfaction is one of the top targets, as outlined in the next paragraph). Airlines should also consider that some **40% of pressure on their operations were generated by internal root causes**, such as tight schedules, crew and aircraft shortages, flaws in communication, complex processes or fleet diversity.

A natural question is, **how the airlines define their operational performance targets**, as well as targets of potential operations improvement programs. With the former, goal number one is an attempt to balance the OTP (On-time-performance) with cost. Almost three quarters of airlines aim for high customer satisfaction, whereas only every third airline considers the competitive landscape – the topic which might be therefore a bit overrated in minds of some companies. Importantly, although setting the targets is considered as feasible, their communication and acceptance across the organization are not perceived as satisfactory.

The improvement programs then target the robustness, although the cost and again customer satisfaction play a significant role. However, when **defining robustness**, it is important to question what it actually is. For the majority of the airlines it seems to be simply adding (costly) buffers – aircraft, standby crews, block and flight times, instead of using data analytics in the optimization of the usage of the current resources.

Operations planning

As an old saying states, “good planning is half the battle”. The airlines put a lot of effort to this area and most of them include Scheduling/Network Planning, Crew Planning, Maintenance and Operations Control (OCC, sometimes also abbreviated as SOC, NCC or NOC.). But the Figure 3 shows that **the further from the “core”, the lower involvement in the integrated planning** – for example Ground Operations, having a direct influence on execution of turn-arounds, is involved in planning only in half of the airlines. Once it comes to external service (providers) and system partners (airports, air navigation service providers), this figure falls shockingly under 10%, raising a question – **how can a smooth delivery be ensured in a process, where the external parties with a significant influence rarely get involved?**



Therefore, a strong recommendation is to **reset the process in an end-to-end solution**, which will allow involved parties to plan (and predict) with the same overarching premises and to share the results and use them to the benefit of all stakeholders. Eventually there is a common goal – optimized and undisrupted delivery of the service – flight.

Figure 3 - involvement in the integrated planning process (multiple choice question)

Operations steering

After the planning comes the actual production – the OCC, where people, processes and IT solutions come together and quick decisions based on information (available at the given moment) are made. This significantly influences the passengers, crews and importantly the business results. Figure 4 offers some insights.

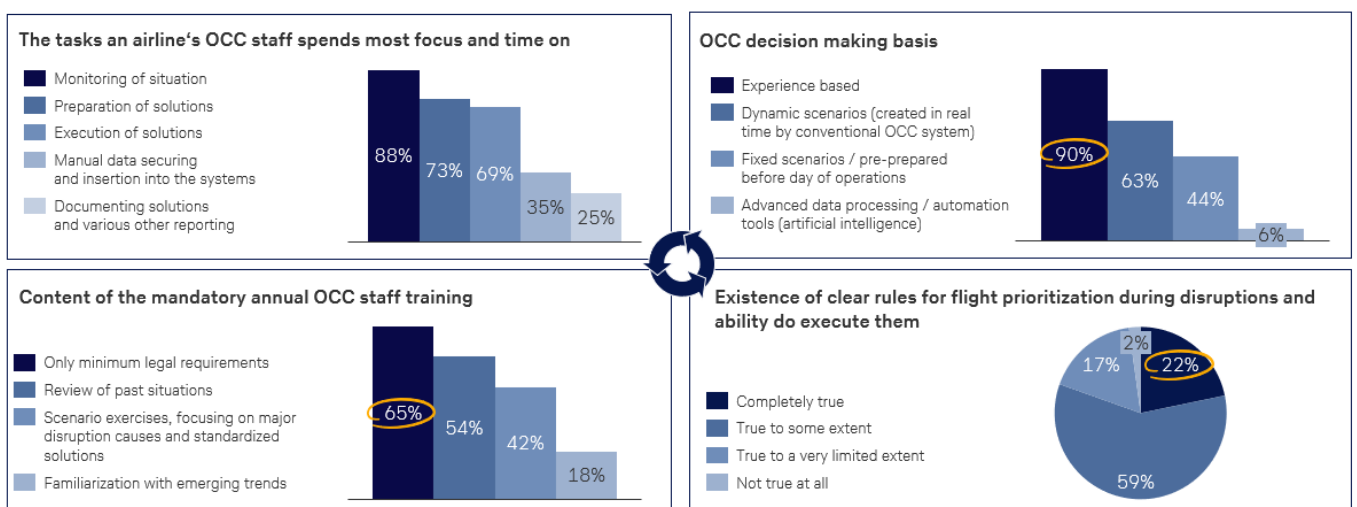


Figure 4 - Empowerment of the OCC staff in the disruption management (first three questions were a multiple choice; hence the sum of answers does not equal 100%)

The data shows a crucial thing – **the human has and always will have an irreplaceable position at the OCC.** This is not wrong as long as there is an appropriate support by intelligent IT solutions, which will bring only relevant issues to the attention of the Operations Controller. But what needs to be done to get there?

Our recommendation is to start with **clarification of disruption management rules.** From the process perspective this is necessary to enable the automation/management by exception and move static decision making, limited by a “manual” capacity of the Operations Controller, to **a dynamic process based on continuous re-evaluation of changing parameters.** Furthermore, to achieve this, it is an **imperative to redefine the profiles of the OCC staff, as well as new training and performance management approach.**

Practically it means **expanding the training (and selection in case of new candidates) for data handling capabilities** – understanding what and in principle why are systems doing/recommending something and making sure that people work in tandem with the IT solutions – not against each other. This might require expansion of the back offices as the learning capabilities of the systems will always be dependent on the input and corrective action of humans.

Consequently, **a post-operations evaluation of situations,** based on the data analytics should be a firm part of the continuous improvement process – not in a blaming way, but to be able to explain to OCC staff which decisions were good, which not and particularly why – something which is unfortunately very rare at the moment.

As 40% of airlines stated, the **human factor is certainly a challenge** for them. But it would not be fair to claim that there are no other challenges. If we look into **results evaluating IT solutions,** we find that some processes – particularly flight planning are already highly automated. The drawback is that **not all solutions are automated on an equal level** – for example the operations/movement control solutions show higher level automation than crew control solutions, even lower is perceived the automation e.g. in maintenance.

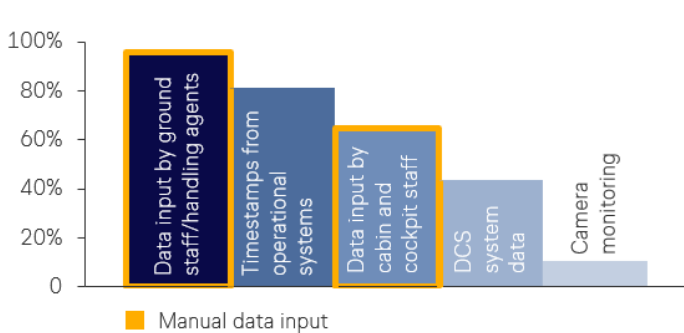
The closer **the (disruption management) process is to the passenger, the higher unfortunately is the reliance on manual processing.** The same is valid for the OCC communication which deteriorates significantly when reaching airline external entities, including passengers (whose satisfaction, as we found earlier, is one of the top targets of the airlines, but a capability to provide them with information or even with self-service disruption management tools is considerably weak). Similarly, the **airline satisfaction with outsourced passenger irregularity management solutions is lowest of the all outsourced services.**

For the IT solutions’ providers, it is crucial to mention that **only 4 out of 10 airlines consider their IT solutions as state-of-the-art.** The remaining claim that it is outdated already or there is a strong fear that it will be outdated soon. This, coupled with the topics mentioned above, results in a **20% failure rate when airlines decide to automate.** It goes without saying that this is a pivotal topic for the IT providers, who should put more efforts into building new solutions and to finally replace the historical patchwork in a pragmatic way.

Performance management

The already mentioned weaknesses of the IT solutions are not always caused by the providers. Another important reason is the **data**. As an input for decision making, as well as output for performance management.

Figure 5 may explain **where the problem starts – with the data collection**. While airlines are collecting vast amounts of data, they rarely define, what should be collected and how. This leads to a situation where any



available data, partially secured manually and partially by various systems, are collected without appropriate quality control, ending up in a huge black box where airline managers try to figure out how to read this data and if to trust it, especially on the inter-departmental level.

Figure 5 - Operational data collection (multiple choice question)

Logically this further translates into **questionable definition, (real-time) availability and quality of the KPIs**. How underestimated the topic is can be shown with two examples:

- **Reference models** – only two thirds of the airlines use the reference models for aircraft turnaround. This leads to the question: **along what parameters is the data collected and against what can it be realistically compared?**
- **KPIs in use** – having barely changed in decades. The most common ones, On-Time Performance and Technical Dispatch Reliability show if the flight departed as scheduled, but **hardly give insights into the process**, which led to the disruption. New KPIs, such as Customer Satisfaction were added, but their correlation to the actual operations is often unclear.

The only way to get out of this vicious circle and enhance automation capabilities, is to **redefine KPIs**.

Only by knowing what needs to be measured allows a proper definition of the data points for collection with highest possible quality (and again real-time availability). This should over the long-term improve ratios within figure 6 – and allow airlines to measure not only WHAT exactly happened, but also to establish HOW MUCH it actually cost.

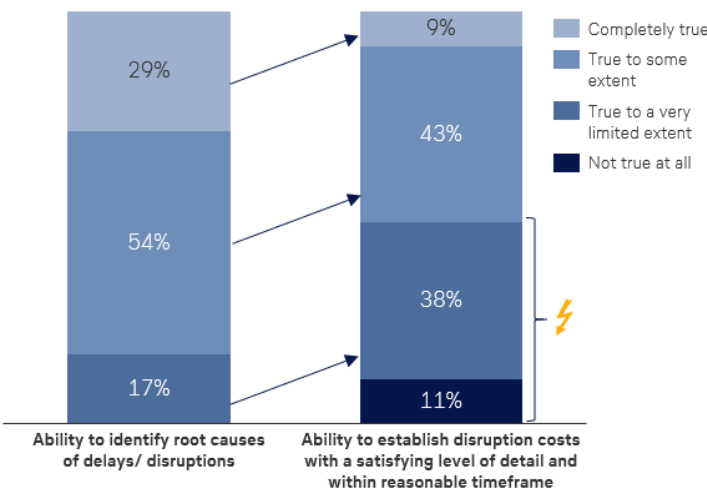


Figure 6 - Capability to establish disruption root causes and costs

Closing this gap will not only allow for systematically monitoring and **steering internal operational performance**, but it will also affect how the companies **steer the providers** – from the Service Level Agreement (SLA) definition, through collection and reconciliation of the data and a structured and consequential dialogue between the airlines and their service providers.

Conclusion

There are many topics to work on for the airlines who want the re-start into the “new normal”. The necessary effort, translated to the cost, as well as complexity, of course have to be considered. Figure 7 summarizes a key question “**Why haven’t we achieved more up to now?**” in three main pillars.

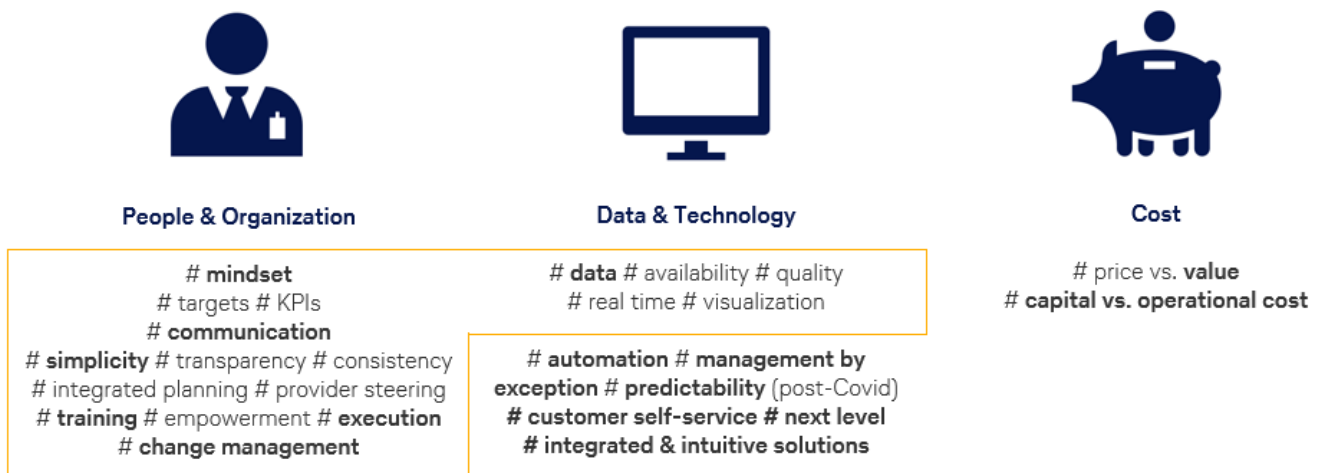


Figure 7 - Enablers of the Operational Excellence

The answer to this is arguably simple. **If we really want to change, we need to fix the mistakes/omissions of the past first.** Of course, the priorities now will be different. Still, this shouldn’t stop the airlines from picking up the low-hanging fruit, which in many cases doesn’t require significant (capital) investment.

Based on Lufthansa Consulting’s study and experience, there are two steps in such a move. The first focuses on “**getting the basics right**” and achieving initial transparency, while the second builds on this by **truly utilizing data and technology to digitalize operations** – as outlined in the Figure 8.

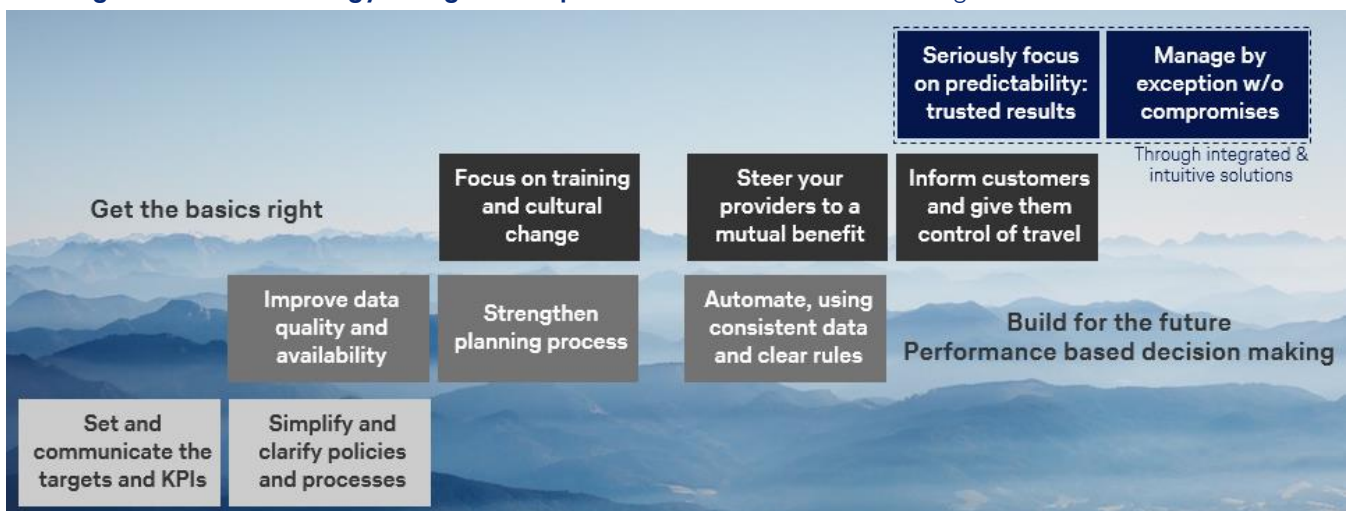


Figure 8 - Steps on the way to the Operational Excellence

Every airline is and will be different. Naturally, each has a different starting point as airlines seek to emerge from the crisis. However, **it is important to acknowledge that action is needed and that for some actions, the right time is now.**

If you want to learn more about the survey and challenge our results, as well as your current plans on the way to achieving Operational Excellence, please get in touch with the authors of the study: Martin.Sedlacek@LHConsulting.com or Anna.Sauer@LHConsulting.com.

Together, we can make it through to better days.

***Martin Sedláček** is an Associate Partner at Lufthansa Consulting, and leads the Solution Group Flight Operations and Safety Management.*

***Anna Sauer** is a Senior Consultant at Lufthansa Consulting, member of the Solution Group Infrastructure and Operations (Ground).*

Further insights from Lufthansa Consulting's aviation experts are available at <https://www.lhconsulting.com/insights/news/>



Lufthansa Consulting GmbH

Frankfurt Airport Center
Hugo-Eckener-Ring
60546 Frankfurt/Main

E-mail: Mail@LHConsulting.com

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