HELIOS
an egis company

ON»AIR!

BIO SAFETY ASSESSMENT

Wherever people gather

ATM RESILIENCE

A framework

BEYOND AIRPORT RESET

To self-managed recovery

Helios Newsletter - Issue 2, 2020

an egis company

LEADING EDGE

Acknowledge, adjust, adapt

It feels like the world has changed since I sat down to write the last issue's editorial introduction for OnAir! Back in February, we were still expecting (hoping) to attend World ATM Congress in Madrid; Italy had just announced a regional lockdown; China was into its second week of localised lockdowns. We held our breath, put our heads down and focussed our minds on problem solving.

Five months on, we are emerging, blinking, from a tunnel. The recovery has started, but aviation is still reeling from the impacts that will continue for months and years to come. Exceptional circumstances demand acknowledgement of the situation, adjusted plans and adapted processes.

With that in mind, this edition of ON AIR! features three new and specific services born out of the COVID-19 crisis, designed to help you adjust and adapt:

- Bio Safety Assessment for Airports & Control Rooms
- Airport Recovery Management Action Plan (ARMAP)
- Business Continuity Management for long term Resilience

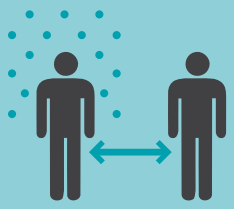
As we go to press, we celebrate the successful conclusion of our "What about the new possible?" webinar series, three events attended by hundreds of people, supported by ACI, IATA, CANSO and ICAO and framed around an initial survey. If you were unable to attend, please see visit our website for links to the video webcasts. Headline statistics from the survey are in the infographic below are available on our website now.

With best wishes

Claire Davies, CEO

COVID IMPACTS & OPPORTUNITIES

Ahead of the first Egis webinar we conducted an industry wide survey to assess the impacts and opportunities arising from the COVID-19 crisis. The findings will be shared shortly, but this infographic picks out some headline figures.



2023

the year when recovery to pre-pandemic levels is expected

8 out of 10 reduction in revenues expect >30%

Data suppliers=

= top collaboration partner outside the aviation industry

Top 3 risks

to recovery:

(1) state-level imposed travel restrictions
(2) public perception & trust
(3) threat of a second-wave of the pandemic

Top 3 opportunities

to emerge from the crisis:

(1) more focus on improving service scalability & resilience
(2) better collaboration within the aviation industry
(3) faster uptake of technology

BIO SAFETY ASSESSMENT

Wherever people gather

Just as airports and ANSPs prioritise safety and cybersecurity in their planning and delivery, they will now need to prioritise biological safety too, to address diseases such as COVID-19. While guidance material from relevant bodies suggests a variety of solutions, the specific measures depend on the local physical environment and the operations—i.e., human behaviours—that occur in it. No one-size-fits-all solution exists, and health measures require an assessment of local gaps to ensure adequate infection control. Specific attention needs to be paid to the analysis of local behaviours as these influence the blocking or facilitation of infection routes. Whether you are responsible for a control room or an airport, a Biological Safety Assessment will give you a systematic and rational basis for decision-making and target funding where it will be most effective.

Observational analysis

The first step is to define the operational facilities and the people involved: who do you need to protect? Then identify the operational areas and activities to assess. In an airport, this will likely involve passenger flow, from arrival at the airport, check in, security check, passport control, to visiting toilets, waiting/walking to the terminal and boarding. For an ANSP, the assessment will look at the arrival of an air traffic controller at the control centre, walking to and entering the control room, handover, operations, rest and maintenance, etc.

For each phase, it is important to understand and assess factors such as the physical environment, including equipment and layouts, entry/exit points, type and location of high touch surfaces, ventilation system and air movements, and specific human activities.

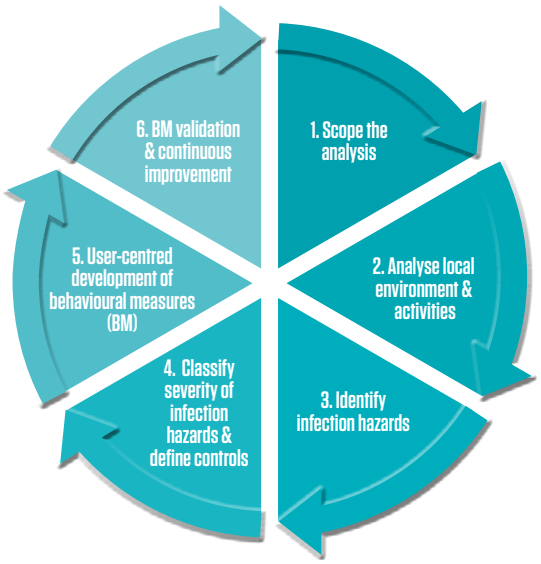
To that analysis add an assessment of current infection control measures, including cleaning, use of personal protective equipment and behavioural measures such as combinations of signage, procedures and communications to promote healthy behaviours.

Note that this is not a theoretical exercise. It is a systematic, observational exercise aiming at mapping all critical interactions between humans, pieces of equipment and the environment. In turn, this enables us to identify infection hazards that can activate specific infection routes, such as infection from indoor air, from loss of social distancing or a contaminated surface, and the associated causes. We then classify the hazards in terms of severity and define recommended controls. The focus here is on a feasible and balanced hierarchy of controls that can effectively mitigate infection routes.

User-centred development of behavioural measures

This hierarchy or combination of controls is one of the key benefits of the work so far. It helps avoid focussing overly on expensive technology, while failing to pay attention to behavioural measures, such as procedures and training, or ignoring how passengers/staff respond to signage or the working environment.

We know that poor procedure design often translates into lack of compliance and increased potential for human error, two conditions that will compromise the best safeguards and lead to unnecessary biological risk exposure. That's why it's important to engage people early in the development of behavioural measures and involve local operational experts alongside human behaviour experts. Based on sound human factors principles, this approach increases user acceptance and improves implementation.



Author: Simone Rozzi
simone.ROZZI@egis.fr

ATM RESILIENCE

A framework...

Resilience and its relationship with business continuity relies upon integrating other risk-based management system approaches. Richard Derrett-Smith and Gary Lloyd explain some of the issues and propose a more effective approach to planning for resilience in ATM.

In March 2020, when air traffic levels in Europe fell by more than 80% in the space of just two weeks, ANSPs were largely unprepared for the business shock. A huge and sustained cut in income, combined with high costs left providers in a precarious financial and operational position.

The situation highlighted the importance of building greater resilience against a range of events - from threats such as global pandemics, extreme weather or cyber-attack, to system failure or industrial action. This is backed up by our own surveys, which identified service scalability as one of the top priorities and greatest challenges for ATM by both ANSP respondents (44%) and the live audience poll (28%) during our recent joint webinar with CANSO: The new possible: Building a better future for ATM.

Business Continuity Management can improve resilience

To build resilience we must first understand risk and how best to address it. The (principal) objectives of Risk Management (as discussed in ISO 31000) are to identify and assess risk, to determine appropriate risk treatments based on the best available information. Problems arise however, when 'best available information' is poor quality or absent, as often happens with complex and fast developing threats. This is where Business Continuity Management (BCM) steps up, looking at how to respond when disruption hits (people, premises, resources, supplies). It focuses on the importance of maintaining a level of service continuity even in a degraded mode.

When we consider 'resilience' we are focussing on preparation rather than response - resilience planning and management starts before disruption hits. The industry is progressively recognising the value of a BCM approach aligned with a performance-based system view. This is through a proactive, broader and more structured approach in which clear pillars of resilience management are established, similar to safety management.

A way forward for ANSPs

The maturity of BCM systems varies widely between ANSPs, and in general, lags far behind safety management. This leaves many ANSPs lacking the tools to respond efficiently when disaster strikes, and importantly, to recover fast. By linking familiar and well-understood safety management principles within a BCM framework, including an enterprise architecture where available, organisations are better able to identify the elements (e.g. cyber, safety, ISMS etc.) to integrate within a robust resilience management plan.

The approach should be broken into three phases. The first 'survey' phase explores business continuity objectives, existing assets, networks, processes and people. This phase can use existing data such as enterprise architecture information to increase efficiency. The second 'evaluate' phase identifies threats, weaknesses and maps the findings of the first phase against standards and best practice. The final 'resolve' phase identifies vulnerabilities, priorities for action and supports the ANSP in finding appropriate solutions. This approach is tried and tested, resulting in ANSPs that are more resilient to disruption and faster to recover. To find out more, contact Richard Derrett-Smith and Gary Lloyd.

Author: Richard Derrett-Smith
richard.derrett-smith@askhelios.com

BEYOND AIRPORT 'RESET'

To self-managed recovery

Olivier Baric says that airports can better equip themselves for uncertainty by extending their capability to capture real-time data on the whole enterprise, and by embedding regular scenario planning into their strategy development. ARMAP can help them do this.

The post-COVID period comes with lots of challenges and uncertainties for everyone in aviation, especially around traffic recovery. Among the many unanswered questions: what will the pace of recovery be, what health restrictions will remain in place and how do we prepare for future waves or new varieties of pandemic? We joined forces with respected airport competency developers ASI to develop Airport Recovery Management Action Plan (ARMAP), a structured way to help airports answer these questions and look ahead with greater confidence and flexibility.

Many airports have now successfully 'reset' post-COVID; they are back up and running, albeit at significantly lower volumes. The challenge for them now is to re-plan, re-focus and resource for a variety of possible futures. This is where ARMAP can help. It combines tailored scenario planning with guidance on how to extend data gathering from operational KPIs to cover real time customer service, retail sales and other statistics vital to the enterprise, but outside of normal flight operations-focused data points. Delivered both online and offline, it delivers high value, hands-on support quickly and efficiently – typically in under four weeks, leaving the airport's own recovery taskforce with tools and processes they can continue to use.

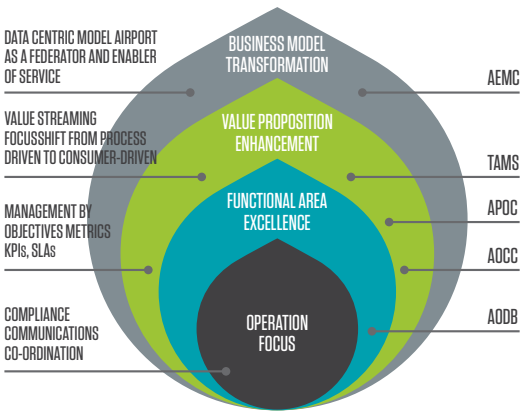
Scenario planning with ARMAP

Under the ARMAP process, local airport conditions are plotted against four pre-defined scenarios for recovery. Then a workshop is organized to present the tailored airport scenarios to external experts (who might be former airport CEOs, or local stakeholders for example). The scenarios are adjusted to take account of the feedback gathered during the workshop, and the airport recovery taskforce then proceed to develop action plans for each scenario, with support from the ARMAP team.

There is a tendency in scenario planning to conduct a single exercise and then 'park' the learning points in a corner to gather dust. However, to build effective strategy in the face of uncertainty, airports need to explore scenarios and assumptions on a more regular basis so they can spot issues earlier and adjust plans accordingly. The ARMAP process leaves the airport recovery taskforce with tools and techniques to review those scenarios easily going forwards.

An enterprise view of performance

Another key element to the ARMAP support is the formation (or shaping) of the Airport Enterprise Management Centre (AEMC). This can be physical or virtual – a room or a digital dashboard. It involves all stakeholders, not only the airport management team, and captures the available information as well as the data needed to monitor the recovery action plan. Where gaps are identified, the ARMAP team proposes a way forward.



H[K LE LW#4 1#5 ur j uhvvlr q#ur p #R s hudwr qv#F r r uglqdwr q#w #wkh#DHP F

Image credit: AEMC Guidelines published by ASI

The goal is to provide relevant Key Performance Indicators (KPI) in an easy to understand way and automatic alerts on issues relevant to any of the users. It includes management processes, enabling goals to be set and monitored, standards to be implemented, strategies to be interpreted and KPIs to be monitored.

ARMAP gives stakeholders visibility and input to the strategic planning process and equips the airport management team with practical tools for moving beyond 'reset' to manage their own recovery.

Author: Oliver Baric
olivier.baric@egis.fr

HOT »AIR

‘New normal’ what about the new possible?

Since the pandemic struck, our teams have been busy sharing thoughts and ideas for customers and colleagues to help the industry we love to move forwards. You can find links to the content all in one place on our website, and the summary results of our industry wide survey and webinar write ups. The first webinar ‘**New normal’ what about the new possible?** was led by a top-notch panel from ICAO, IATA, ACI and CANSO and chaired by our own Claire Davies and Al Corner. Our thanks to everyone who supported and attended the event. It was thought-provoking and ‘pragmatically positive’ in tone. It is still available to view online on our website. The subsequent webinars devoted to airport and ANS recovery were also well attended and a great success.

Highlands and Islands Airports selects Helios

We’re delighted to have been chosen as preferred framework supplier on three different lots for air traffic management, air traffic engineering and airport operations with Highlands and Islands Airports Limited (HIAL), which is the owner and operator of 11 airports across Scotland and a certified Air Navigation Service Provider. Helios will advise HIAL on a range of safety and cybersecurity issues, including for their ambitious new remote tower project.

Support to European Bank for Reconstruction and Development (EBRD)

The challenges of protecting frontline staff from infection and the need to continue operations to provide essential services for cargo, repatriation, humanitarian and emergency flights has resulted in a very difficult position for ANSPs and many of them are seeking liquidity loans. EBRD has asked Helios to assess risks for ANSPs seeking a liquidity loan, as well as to reassess risks for a number of existing loans. This involves developing traffic scenarios to arrive at an understanding of the likely return of traffic and associated revenue. Key inputs to this include reports and forecasts from leading aviation stakeholders. Our advice also includes an overview of how ANSPs might recover the lost revenue over the next few years and what support programmes might be available to them.

AMAALA airport

Egis is working on the design and development of The Mirage, a greenfield airport to serve a new ultra-luxury resort located along Saudi Arabia’s northwest coast by the Red Sea in collaboration with UK-based architectural and design firm Foster + Partners. The airport is due for completion in 2023. Egis has been involved since the very early stages, helping AMAALA to define the requirements of this unique project. We continue to work on project management and construction management, and operational readiness and transfer services for the project. AMAALA airport is a prime example of Egis’ ability to work on a greenfield project from strategy through to implementation, bringing innovative ideas by re-imagining the very idea of an airport, and providing technical expertise and reliable guidance to customers at every stage of a project.

ON »LINE

Did you know?...

Helios experts write regular blogs. These are short and topical, covering industry news, insights and conference reviews. **Here’s a selection of our latest:**

- COVID-19 & aviation: Is it time to ‘invest’ or ‘divest? (Juraj Jirku)
- COVID-19 & aviation: managing the return of noise (Nick Boud)
- COVID 19 & aviation: exploring cost base elasticity for ANSPs (Maja Marciniak)
- COVID-19 & aviation: a step-change towards scalability and resilience (Isabel Franke-Chaudet)
- COVID-19 & aviation: protecting our people (Sarah Lay)
- COVID-19 & aviation: the re-start (Nick McFarlane)

Go to **www.askhelios.com/blog** to read them and follow us on LinkedIn, Twitter and Facebook to get notifications.

OFF »AIR

The new handshake

In some future time, when social distancing is fully lifted, a married couple made up of two pilots, Sebastian and Anne, head over to an airport bar to celebrate their newfound freedom. They find four other pilot couples there who had the same idea. Eager for social contact, every person in the five couples enthusiastically taps elbows (the new handshake) with each person they haven’t yet met. Many of the people had actually known each other prior, so when Anne asks everyone how many elbows they each tapped, she remarkably gets nine different answers!

The question: How many elbows did Sebastian tap?

The answer will be published in the next edition of ON AIR. Please send your solutions to **onair@askhelios.com**. All entries must be received by 30 September 2020. The first correct answer drawn at random after this date will win a pair of Helios wireless headphones. **Good luck!**

And the winner is...

The answer to the puzzle “The seat solution?” is: **you have a 50% chance of sitting in your assigned seat.** For the full answer, head to our website.

Congratulations to **Peter Douglas** of **Northern Lighthouse Board** who sent the correct answer and came first in the draw.

Helios is an aviation consultancy, delivering management consultancy, strategy, investment and technical advice across the globe. Combining analytical rigour, strategic context and creativity, we bring independence and insight to every opportunity we address.
Our parent company, Egis, is an international group headquartered in Europe, with over 14,000 employees and a turnover of $1bn.

an egis company

Please send change-of-address notifications to onair@askhelios.com; by post to Helios, 29 Hercules Way, Aerospace Boulevard, AeroPark, Farnborough, Hampshire, GU14 6UU, UK; or call us on +44 1252 451 651.
This newsletter has been written for the interest of our clients and colleagues.
We believe the facts are correct at the time of printing, but cannot be held responsible for any errors or omissions.

www.askhelios.com