

## From shortages to strength – what supply chain shortages tell us about risk management since the pandemic

*Andy Blackwell and John Wood of 3DAssurance discuss how proactive organisations are using Security Management Systems to tackle the supply chain and other risks that are too often underestimated.*

The airline Alitalia has been quoted as saying the most important thing is being able to predict and pre-plan future needs for maintenance slots and materials. Supply chain shortages are making this almost impossible for airlines and airports, the public face of aviation.

Advance warning of sudden shortages depends on collaboration and transparency across the aviation sector, but the pandemic revealed the complexity of the spider's web that is the supply chain. As a result, visibility of upcoming shortages is sometimes so poor that a pilot would refuse to fly. In any case, suppliers' ability to control their supply chain through contract terms is limited: they don't want refunds, they want the contracted service.

This has highlighted an issue the aviation industry has known for a long time, reliance on sub-contracted services is challenging, especially if there are sub-sub-sub-contractors.

However, the worst may be yet to come. Supply chain disruption hasn't hit the aviation sector as hard as other industries because aviation demand dropped perhaps the most of any industry in the pandemic, despite growth in cargo traffic, but there is now a shortage of semi-conductors and raw material costs are soaring.

Some companies are increasing their manufacturing and maintenance inventories and some airlines are using decommissioned aircraft as a source of serviceable spares. This recycling is a reminder of the sustainability challenge faced by aviation. It is one of the most polluting industries and one of the fastest growing sources of greenhouse gases. While the industry is reducing its carbon footprint through fuel efficiency initiatives, there is still much work to be done to improve sustainability such as recycling aircraft components and ancillary equipment.

It's more important than ever for an airline to be able to track its entire supply chain in order to show that they are making an impact on sustainability. Most of what an airline consumes is provided by its supply chain and airlines should include sustainability criteria when selecting suppliers and partners. However, aviation supply chains are vast and managing supply chain sustainability is still a significant challenge. There are hundreds of airlines and while only a few can claim to have verified the sustainability of their complete supply chain, the number is increasing.

So while the pandemic may have brought more focus on equipment sourcing, the supply chain is not only about equipment: almost every aviation business bemoans a shortage of skilled workers, perhaps most visible in airport security queues and airlines cutting flights. The pandemic was a double whammy for jobs. People were laid off on the assumption that they would return when demand picked up. However, many of those people found jobs outside the sector that have proved to be equally if not better paid, and more acceptable in terms of working conditions. The pandemic seems to have made people more aware of the importance of quality of life, and less willing to return to their previous work. The level of industrial unrest is evidence of the discontent in the sector.

Commentators have remarked on the poor state of readiness of many organisations when the pandemic hit. However, some organisations with good risk management arrangements fared better and those organisations are well placed to manage the risks caused by the supply chain disruption.

Stockpiling spares and dismantling decommissioned aircraft are simple examples, but much more is possible and desirable.

As Alitalia said, there really is a shortage of everything today. Creating a map of the dependencies, lead times and risks throughout the supply chain including supplier failure and contractual gaps, will help to improve transparency and give the organisations' business planners and risk managers better visibility of the likely future, and early warning signals hopefully in time to take remedial action. Although not technically part of the supply chain, staff dependencies, lead times and risks should be managed similarly.

### Lessons learnt

Why was the risk of shortages so badly served in the pandemic? What we saw was an almost obsessive focus on another one-dimensional risk management – the financial risk – with scant attention to other risks. A more proactive risk management approach would have been to encompass all dimensions of risk and surprisingly few businesses in any sector were that forward looking.

In aviation we saw great variation in terms of the robustness of risk management and how quickly organisations recognised the pandemic as a risk and managed their response to it. Their preparedness made them “Victims”, “Survivors” or “Thrivers”.

- Victims: Organisations that were ‘surprised’ by the pandemic, even though it was predictable, and the risk type had appeared in a prominent position on many national risk registers for several years. No prior resilience planning was undertaken to cover this type of event, and weak crisis management. These could be characterised as “vulnerable”.
- Survivors: Organisations that were aware of the risk of a pandemic but underestimated Covid-19's magnitude and the need for swift and robust action as the flurry of warning signals started to emerge. Limited resilience planning was undertaken for this type of event, but acceptable levels of crisis management generally. These could be characterised as “reactive”.
- Thrivers: Highly resilient organisations that proactively identified things that could go wrong, anticipated the pandemic, planned for it, rapidly identified the warning signals and, as a result, were swift and robust in managing the impacts to their businesses. Strong levels of crisis management are evident, and resilience is recognised as a strategic capability. These could be characterised as “proactive”.

Ryanair could be regarded as an example Thriver. It managed the pandemic more proactively than many airlines and as a result is now profiting immensely from the post pandemic recovery in aviation. In January 2023, it took a record number of bookings. We mention this example because Ryanair was one of the early adopters of risk-based security management systems (SeMS). We have found that companies with a mature SeMS were better prepared when the pandemic struck, probably because of their forward-looking threat and risk habits.

The focus of SeMS on threat and risk management as a way of life drives organisations to tackle the full range of risk dimensions; it stops organisations focusing only on the urgent and ignoring the important. An effective SeMS provides the staff leadership and direction, gives top management the business controls to get assurance of its security and ensures risks are fully understood and managed robustly. The good news is that building an effective SeMS is easier than it sounds, it is a proven framework and the approach we use for enterprise, safety and security risk management with our clients.

**3DAssurance – assured risk reduction**

*3DAssurance specialises in managing corporate risks, including resilience, security, quality, and safety. This expertise is frequently called upon for international bodies' seminars and conferences including the International Civil Aviation Organisation (ICAO) and the International Air Transport Association (IATA). 3DAssurance is an independent advisory company whose members are registered as independent consultants with the Association of Security Consultants.*