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MANAGING THE UNEXPECTED

Our Editor-in-Chief Steve Shorrock has done it again. He has put together another issue with a very topical subject – Handling Surprises. The last two and a half years were full of surprises from the pandemic to war, from the oil and energy crisis to aviation coming back to 2019 levels faster than expected. And when we talk about surprises and unexpected events, we inevitably think of resilience. Others call it antifragility. Whatever it is, how do we learn from surprises and embed the lessons in our capability to cope with them?

With the unexpected becoming a larger chunk of everyday life, it isn't surprising that we find ourselves interested in resilience and coping. A few events have stood out in my safety career and I have looked to learn from these with my EUROCONTROL team: The Cerro Grande wildland fire, Hurricane Katrina, the Asian tsunami, the Enron scandal, the Columbia space shuttle disaster, 9/11, the London bombings, the Santiago de Compostela train disaster, COVID19. These have all tested the stability of many organisations. But most organisations experience frequent unexpected events on a much smaller scale. These dynamic and uncertain times raise the questions of how and why some individuals and hence their organisations are much more capable than others of maintaining safe operations in the face of drastic change, and return stronger to tackle future challenges.

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I am an avid reader of Nicholas Nassim Taleb's books about high impact low-probability events (*Black Swan*, *Antifragile*, *Fooled by Randomness*, *The Bed of Procrustes* and *Skin in the Game*). The black swan is a metaphor that describes an event that comes as a surprise, has a major effect, and is often inappropriately rationalised after the fact with the benefit of hindsight.

Let's rewind back to the 90s when I started in air traffic control. I had a couple of surprises that probably affected how I view surprises now. The first surprise of my career was on 17 June 1993. I had only a couple of years in OPS and witnessed an exponential increase of air traffic in Bucharest FIR. Events in a neighbouring country led commercial flights over the Romanian skies (following an unfamiliar axis). It was predicted that movements would continue to surge in the next years. We were not prepared in terms of our capabilities, human or technical.

Together with my colleague Razvan Bucuroiu, we were tasked to add 300 en route ATCOs in one year without jeopardising safety. What helped us was that we recognised that we did not know immediately how to do it. Bregman (2011) outlines three steps to

handling the unexpected: 1) Stop the boat; 2) Assess your actual options; 3) Sail. It turned out that this is exactly what we did. We paused and did not allow ourselves to be pushed into an immediate decision. We did not have time to waste wishing that the situation would be different. After an assessment with a diverse team, including our Director at the time, we assessed our options, made a decision, and stuck to it. We decided to recruit aerospace engineers that did not need an intro on how an aircraft fly, but they needed hands on exposure in the simulator and in the OPS room. Almost 30 years later those 300 ATCOs remain the pillars of ROMATSA and they approach their retirement.

Fast forward to early 1999 and I faced another surprise of a different nature. During the Kosovo war, for the first time, we were accommodating military and civil operations safely and allowing over 130 commercial movements every two hours in a reduced airspace (the rest of it was segregated for NATO military operations). Again, we were not prepared but with a highly educated workforce (ATCOs with Master degrees, even some PhDs) we were able to compensate with a capability to improvise. During one night, this capability backfired. The FDP was designed by us and was using a 'state of the art' (at that time) database allowing a maximum of nine points in Bucharest FIRs, out of which two were reserved for entry and exit from the FIR. I don't know

how, but we entered 10 points and we crashed it. We followed the same three-step process (mapped in the earlier surprise).

This time I was in the boat with Head of Software Development (Razvan Margauan). First, we knew somehow that we had to “stop the boat” and think. It was at the start of the night, so we had time. Without realising at the time, we followed the advice of Paul Petzoldt, the mountaineer and founder of the National Outdoor Leadership School: “*The first thing you should do in an emergency situation - once you know things safe - is stop and smoke a cigarette.*” (Of course, it doesn’t have to involve smoking, but stopping, removing yourself from the chaos, and reflecting.) We got up, took a walk, and went for smoking break to assess the situation.

Again, the second step is to “assess your actual options”, and this is what we did. We decided what we wanted to happen and considered the options. This had to fit the reality of what was happening, not what we wished was happening.

“Success in the past is not a guarantee of the future.”

Then we moved to the third step: “sail”. Based on the assessment, we made the decision to call a huge number of colleagues from home. We turned all the land lines red, and brought in as many people as we could to start writing paper strips and prepare for the next day. And we stuck to it. While some were trying to diagnose and restart the FDP, the rest started operations manually for the full next day. The point here is that even if the decision isn’t ideal, even if it’s not giving you everything you hoped for originally, accept that it’s the best under the circumstances to move forward. By midday the following day, the FDP restarted and we could sync all the data. We were back in business but still used the manually prepared strips all morning.

I am sure all of you have your own stories. My advice is to read *HindSight 34* and try to bring the knowledge of the great articles of this edition to your day-to-day activities. After the last page of this edition just ask yourself, in the words of Professor David Woods – is my organisation prepared to be surprised? Success in the past is not a guarantee of the future – navigating safely through COVID19 is not a proof that you will survive the next crisis...or surprise. As Intel’s former CEO Andy Grove said, “*Bad companies are destroyed by crisis, good companies survive them, great companies are improved by them.*”

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Reference

Bregman, P. (2011, July 06). Three steps to handling the unexpected. *Harvard Business Review*. <https://hbr.org/2011/07/three-steps-to-handling-the-un>

