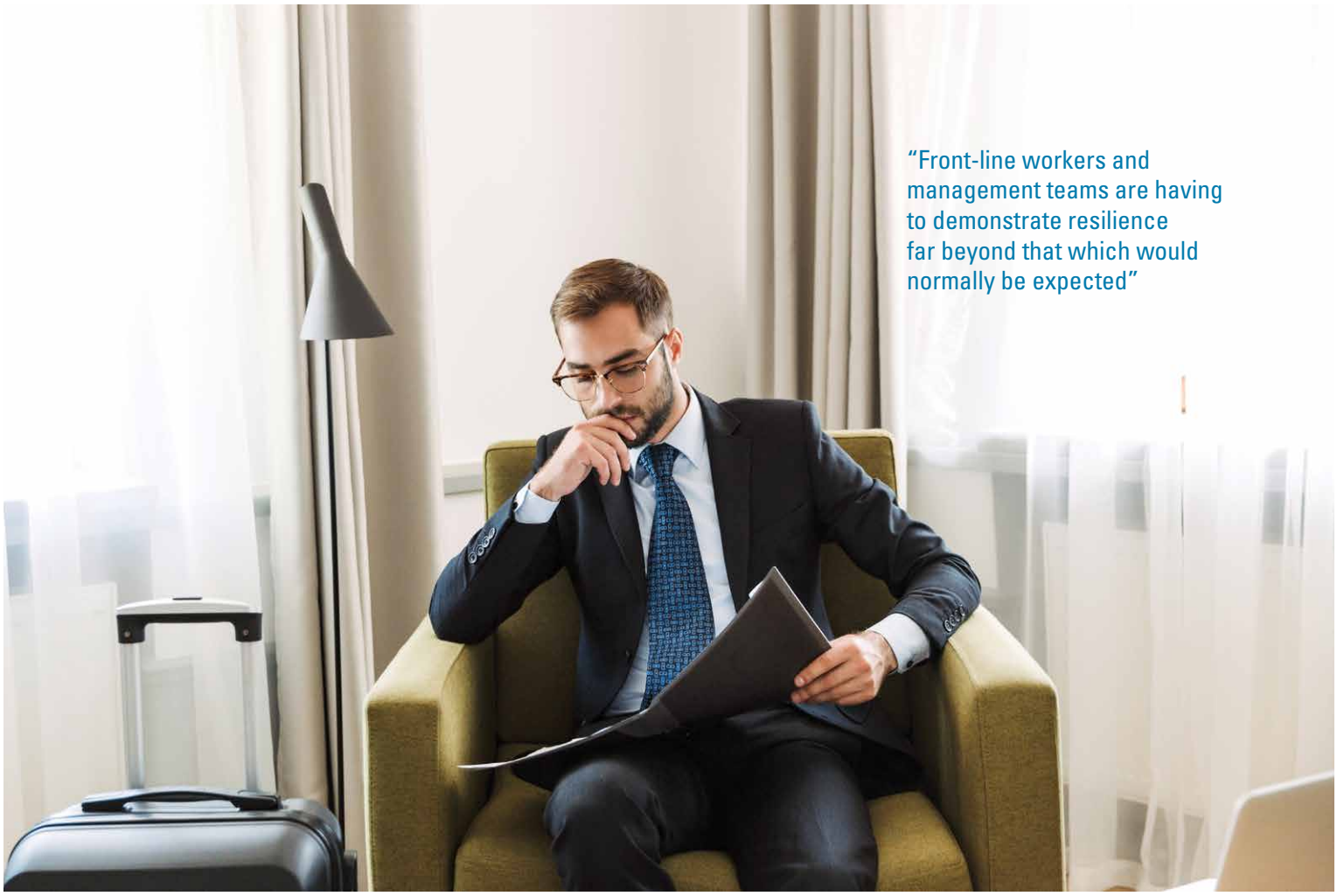

"Front-line workers and management teams are having to demonstrate resilience far beyond that which would normally be expected"

MARGINAL GAINS IN SAFETY, WELLBEING AND PERFORMANCE AT CATHAY

Radical changes to flight operations have prompted changes to crew rostering. **Pete McCarthy** explains how Cathay adapted communication with the crews in isolation around the world, with a focus on wellbeing and safety.

The theory of 'aggregated marginal gains' can be traced back to 2003, and the beginning of the British dominance of the sport of cycling, under the guidance of their Performance Director, Sir Dave Brailsford. The theory suggests that small consistent changes ('the 1% principle') will be compounded to produce much better performance over time. Radical or transformational changes can have the opposite effect and can throw your performance into disarray.

COVID-19 has certainly brought about radical and transformational change in the aviation industry. All of our safety-critical workers have seen their routines and normal operations disrupted. Operators and organisations need to create new processes, and communicate new directives on an almost daily basis just to keep up with the changes in regulation, law, public health advice and disruption to planning. In order to maintain the highest levels of performance and safety, front-line workers and management teams are having to demonstrate resilience far beyond that which would normally be expected.

One example of this is 'closed-loop operations'. In order to operate in a region with some of the strictest

quarantine restrictions for flight crew and cabin crew, we have had to make radical changes to the way crews are rostered. Crews in the closed loop will be rostered for 21–28 days of operating (remaining in isolation in hotels between sectors), then spend 14 days in quarantine at the end of that pattern. For some crewmembers this means up to six weeks of separation from family and friends, isolation and loneliness. For some it is an opportunity to fly, get things back to normal, and have some 'me time'. But wellbeing and safety performance are a key concern for all crewmembers. All crew are volunteers for this pattern, and a careful risk assessment is conducted ahead of the operation.

"We introduced the operational learning review (OLR), in order to gain real insight into 'normal work' at our airline"

From a safety management perspective, this radical change is a risk that needs to be managed carefully. We have taken an active approach to managing this risk by utilising the marginal gains approach, improving the operating environment for the crews one small bit at a time. How have we done this?

About 12 months ago, we introduced the operational learning review (OLR), in order to gain real insight into 'normal work' at our airline. The OLR is a method we use to engage with our front-line experts. It:

- is non-judgemental and curious
- has no jeopardy for the crewmember, and
- is designed to facilitate the sharing of the context around crewmember's decision and actions.

Due to closed-loop operations, we decided to use the OLR process to communicate with the crews in isolation around the world, with a focus on wellbeing and safety – we called this 'learning from the loop'. A call was put out to the crews, asking for volunteers to help us learn anything which could make the experience easier and safer for all of our crew. The engagement and feedback continue to be exceptional. Accountability and responsibility for managing and understanding the situation has become shared.

We combine the OLR data (de-identified and anonymous), with pulse survey data, and twice weekly video-meetings with all of the crew around the network. We are then able to make incremental changes on a weekly basis to make the situation better for all. Learning and subsequent action has included making dynamic changes to rostering and planning in a much shorter planning window than would normally be possible. This has ensured that minimum time is spent in hotel isolation around the network when the crews could and should be flying. The learning has also enabled us to liaise directly with the quarantine hotels, with up-to-date information from a well-informed viewpoint, in order for them to make positive changes based upon valid and reliable feedback from the crews.

Most importantly, through the data gathered, we have gained an understanding of how individuals are coping in real time, and how our marginal gains approach is helping with their resilience. We are gaining an accurate picture as to how wellbeing and wellness may be affecting safety performance. We have built a bridge and created a trusted link between our front-line operators and our safety management system (SMS). Combined with all of our other sources of data, we now have a much more accurate feel for the overall wellbeing in the system. This may at this early stage only be a 'wet finger in the air'. As with the weather, an anemometer may be required to get a true wind speed reading, but a wet finger in the air can indicate which way the wind is blowing and how strong it is!

Looking ahead and looking to the wider restart, we are now also able to share proven strategies with those outside of the loop – those looking to return to flying who may be anxious or uncertain due to their prolonged absence. We can use all of the knowledge we have gained to ensure we can get everyone back safely into the aviation mindset.

All areas have been involved in making these incremental changes: planning, rostering, flight operations and general administration (even the staff at the quarantine hotels). It has been a team effort and the result has been a measurable increase in perceived wellbeing and satisfaction in the loop. I am convinced that our focus on wellbeing, and better understanding of the importance of it, has made us safer and more operationally effective.

"We have gained an understanding of how individuals are coping in real time, and how our marginal gains approach is helping with their resilience"

Pete McCarthy is Head of Group Human Factors at Cathay Pacific Airways. He is also Visiting Fellow (Human Factors and Accident Investigation) at Cranfield University, and has acted as aircraft accident investigator in the British Army, Military Air Accident Investigation Branch, Farnborough, UK. He is undertaking a PhD in aviation safety and human factors at Cranfield University.