

## Pilots-turned-entrepreneurs plan to soar via the cloud

**Focused on eliminating airline delays using cloud technology, the three grounded Aer Lingus pilots who founded Frequency are flying high.**

In recent weeks it emerged that three Aer Lingus pilots grounded during the Covid-19 lockdown [raised €528,000](#) to build a start-up called Frequency after a successful crowdfunding campaign.

They raised €278,000 for their start-up Frequency on Irish crowdfunding platform Spark Crowdfunding and also received €250,000 match funding from Enterprise Ireland.

“The annual cost of airline delays to the world’s economy is \$60bn,” says co-founder Kris Vansteenkiste. “The direct cost to airlines is \$25bn.

Vansteenkiste explained that airlines key operations personnel are physically dispersed across the entire route network. To coordinate all of this activity, airlines use a combination of eight separate outdated and inefficient systems to communicate in a safety critical environment.

“These overly-complicated communication systems rely on legacy, analog technology and are the cause of significant problems for our customers (airlines), most notably delays, disruption, safety risks and unnecessary cost.

“25pc of all airline flights are officially categorised as delayed. Airlines directly control 40pc of these delays and have 100pc control over how the operation reacts and responds to minimise the disruption,” Vansteenkiste explained.

He said that airlines have in the past made significant financial investment to improve communications.

However, the most recent communication system CPDLC (controller pilot data link communications) began development in 1999 to reduce delays caused by VHF (very high frequency) radio congestion between pilots and Air Traffic Control.

“The rest current suite of communication systems still suffer from inefficiencies due to limited capacity, line of sight requirement, poor reliability, poor sound quality, unsuitability for use in the air, expense. Frequency is the first time that all of the advantages of the 8 current systems have been combined into a singular simply unified communication system.

“We are operating within a niche market of a €824bn industry. The aircraft communication systems

equipment market is forecast to generate revenue of €11.1B by 2025, as compared to €6.7bn in 2016, escalating at a CAGR of 9.4pc during the forecast period from 2017 to 2025. We reduced the forecast by 20pc for Covid-19. Currently our serviceable available market (SAM) is €200m, based on a worldwide count of 25,000 aircraft,” Vansteenkiste said.

## **How Frequency works**

Frequency is a software solution that utilises the recently installed on-board Wi-Fi and 4G tablet devices within airlines, in a singular, simple and easy to use solution, combining the advantages of the eight existing systems, while discarding their inherent limitations.

“Frequency requires minimal capital expenditure, has no range issues, no line of sight issues, can run in parallel with existing systems before replacing them, has better sound quality, can use the optimum method of communication whether it is voice, text, file or photo at any time, on the ground, in the air and at the destination,” Vansteenkiste said. “This has not been possible until now.

“Airlines will have less congested channels, increased reliability, and increased efficiency and reduced costs for their communications, which directly results in improved operational efficiency, turnaround time and safety. Critically, digitising these channels will make it possible to automate communications, collect rich actionable data and predict events. This decreases staff workload, improves disruption management and operational efficiency.”

## **How Frequency was forged**

Frequency was founded by First Officer Justin Perry, Captain Darach O’Comhrai and Captain Kris Vansteenkiste.

“Combined we have over 40 years flying experience and this is backed up by engineering, law, business and technology qualifications,” said Vansteenkiste.

“Frequency is built on a foundation of domain expertise, combined with a very experienced

programming team. In addition, we have board of advisers, with expertise in aviation regulation, finance and business development.”

Vansteenkiste believes Ireland was the right place to start.

“Ireland is an excellent place for a start-up company. There are many supports available through Government initiatives and there is a deep well of other start-up founders at various stages, constantly offering mentoring and connecting you with opportunities.”

## **Lined up on the runway**

As previously reported Frequency is in the process of concluding a successful €528,000 seed round. “This will give us an 18-month runway and allow us to focus for at least the coming 12months on the customers and product development, to ensure product/market fit. With that in place, we believe Frequency will continue to be a very attractive investment opportunity and something we will pursue for a good outcome for our investors today.”

Their time in the skies and keeping passengers safe has been beneficial to their approach to founding a company.

“The contrast between the challenges a pilot faces vs the challenges faced by a founder of a start-up, has been fascinating and consistently lesson producing. There are many qualities helpful to both roles – good decision making, communication, time management, risk assessment and many more – but the environments are very different in other ways. As pilots we have a very clear vision of the tasks ahead of us, and although there are always deviations from this, we are always equipped with the knowledge, experience, supports and tools to overcome it.

“Founders of a start-up company face a different reality, at times it is hard even to predict what will happen in the next 15 minutes and when challenges inevitably arise, you often don’t have much support, knowledge or experience to fall back on. A key lesson for us has been to learn quickly and zero in on what is vital right now, so that we consistently make good decisions and progress. Mentoring from founders who have been through similar challenges has been key too.”

Vansteenkiste’s advice to fellow founders is to take the route less travelled. “If you are so inclined, we would encourage fellow founders to take a chance and begin the journey as a start-up. We recommend looking for a team of three co-founders, not only to share the workload, but also because of different and complimentary skillsets.

“It is a rollercoaster, so do expect to have disappointments on the way, but overall the small victories and progress are more than worth it. There is no way you will know everything and avoid mistakes so surround yourself with experienced mentors and advisors who have been through it all before and are happy to help guide you.”

The three pilots remain nimble by making astute use of cloud and mobile technologies.

“Project Planning is done through a combination of the Collaborative Whiteboard Platform Miro and the project and issue tracker Jira of Atlassian.

“For our code storage and the Wiki’s around our product we use a private GitHub setup. While for direct communications with the developers and designers we use a combination of Basecamp and Zoom video chats.

“For immediate urgent communications among the Frequency Team we rely heavily on Telegram, while for important documents among the core Frequency Team we have a Business Dropbox account setup,” Vansteenkiste added.

*Written by [John Kennedy](mailto:john.kennedy3@boi.com) (john.kennedy3@boi.com)*

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