



Q-Pulse Offline Reporting: capturing safety data at point of origin

Finnair is Finland's largest airline and the flag carrier, having carried more than 8 million passengers in 2008. The airline is striving to continuously improve their safety & quality levels and have invested in Q-Pulse to help them do so.

Finnair wanted to streamline their existing, paper-based event reporting process by enabling employees to be able to record events at the point of origin by inputting data directly into the airline's Safety Management System (SMS). Using electronic forms stored on the aircraft laptop, flight and cabin crew will spend less time submitting reports, the safety department will spend less time administering reports whilst more accurate data regarding each event is captured.

In partnership with Gael, this was successfully achieved using Gael's web service API's to extend Q-Pulse's reach to the aircraft enabling the completion of reports whilst airborne and an immediate, automatic upload to Finnair's SMS on the next available access to their corporate network.

The Background

With its headquarters in Vantaa, Finnair is Finland's largest airline and the flag carrier, transporting passengers between Europe and Asia, via its main hub at Helsinki-Vantaa Airport. With 14 destinations within Finland, Finnair flies one of the world's densest domestic route networks in relation to population.

In 2008, the airline transported more than 8 million passengers on its domestic, European and intercontinental route networks, with 55 international destinations including Seoul, Delhi, Beijing, Tokyo and Bangkok, as well as all major European cities.

In always striving for continuous improvement in safety & quality, Finnair have invested in their Safety Management System (SMS) in an effort to realise improved operational efficiencies and financial benefits.

The Challenge

As Captain, Project Manager for Finnair, Mika Pyyhtiä understands the importance of accurate data capture from event and safety reports.

'For any safety reporting process there are three pre-requisites for data capture: it has to be available at source, confidential and directly integrated with the database.'



Prior to Q-Pulse installation, Finnair satisfied two out of the three specified criteria as event reports were not directly integrated with the SMS as data was captured using paper based forms which were subsequently submitted to the Safety department for input into the system at a later date.

'We engaged with Gael's product team to investigate a way in which we could use Q-Pulse to close the loop in safety reporting.'

The Solution

A safety culture to which all employees contribute is a constituent part of any SMS. Finnair's desire was to cultivate a culture in which barriers to reporting were broken down and event reports could be easily logged in the SMS.

However, the paper based process often meant that employees were unable to write reports until some hours after an event had taken place, understandably, making their recollections more difficult to articulate in a report.

'To encourage adoption of the SMS principles, we wanted a solution which would allow events to be logged as they happen – in some cases, whilst the aircraft is still airborne,' said Mika.

Furthermore, Finnair required that when the aircraft was on the ground, the reports can integrate directly with the SMS without any further need for human input.

'Our SMS must improve safety levels but it must do so efficiently – our paper-based system was labour intensive as handwritten reports needed to be submitted to safety staff who would then need to interpret the reports before input into our SMS.'

Following consultation with Finnair's safety department, Gael's technical development specialists were able to extend the system's capabilities using Gael's web service API's that would integrate structured electronic report forms with the SMS. These electronics forms were installed onto laptops carried on the flight deck and in the cabin.

Event reports can be logged quickly and immediately during the flight, upon arrival at the gate or during de-brief using the customised forms. Once within reach of the server via the internet, the report is automatically validated and securely emailed directly into Q-Pulse where actions can be tracked and monitored through to completion.

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Mika Pyyhtiä
Captain, Project Manager
Finnair

The Benefits

Before the project began, Finnair had identified that they wanted to streamline the reporting process. However, in addition to meeting this requirement, Finnair have also achieved a number of other benefits:

'From the point of view of the safety department, the most important benefit is the reduction in time spent administering our paper based process, freeing up resource that can be directed towards the analysis of safety data, identifying trends and improving the safety record of Finnair,' explains Mika.

'The customisable forms have created another positive for the safety department,' continues Mika. *'Because reports follow a linear structure that is validated before submission, it makes the job of aggregating and analysing data from multiple reports much more robust. The hand-written format for air and cabin crew occasionally led to ambiguity, which resulted in longer completion times for reports.'*

From a technology point of view, the project was implemented utilising Gael's web service APIs and Finnair's existing Microsoft InfoPath software, which accelerated the whole project.

Moving forward, the process will be rolled out throughout the airline, starting with flight crews and then cabin crews. *'Because the solution is scalable, we have the building blocks in place to capture every event across every department of the airline, from MRO to ground handling, improving safety standards company wide,'* says Mika.

With any project of this size and nature, there understandably will be obstacles to overcome. *'From working with the product team throughout our implementation, I know how proficient Gael are, and the team coped admirably with the challenges that we encountered during the project.'*

Q-Pulse is helping the Safety Department at Finnair replace paper-based processes with a system that provides a holistic view of the entire SMS. As a result of this project, Finnair can log events as they happen, which drastically reduces the time spent writing and administering reports, encourages a reporting culture throughout the organisation, and has closed the loop on the reporting cycle.

Mika concludes, *'It's always a positive experience whether I'm working with anyone from the implementation team or the help desk guys. For this project, we had very aggressive deadlines and it's fair to say that there were some tense moments. But Gael delivered and everyone can be proud of the final result - a faster, more robust and streamlined reporting process. Wonderful work!'*