ITA Airways adopts AI for more agile dispatch workflows

Integrated data streams and AI-driven analytics enhance dispatch efficiency and decision-making, explains **Andrea Pergola**, Technical Flight Dispatcher & Flight Dispatcher Instructor at ITA Airways

Fragmented data sources are a headache for dispatchers but, as this case study shows, an integrated approach with a streamlined, single source of information using The Weather Company's Maverick Dispatch™ platform provides a time-saving solution.

SMALL START — BIG AMBITION

ITA Airways was keen to tackle daily operations challenges with smart technology from the beginning. The airline started in October 2021, soon after the Covid-19 pandemic with 55 aircraft and today we have a fleet of over 100, flying to more than 60 destinations, with our two main centers at Rome's Leonardo da Vinci-Fiumicino Airport (FCO) and Milan Linate Airport (LIN) as you can see in figure 1.

About ITA Airways Operations

We provide flight watching & tracking for all flights: **requiring integrated tools at global scale**

Italy

Rome Fiumicino; Milan Linate/Malpensa; Venice; Turin; Naples; Palermo; Catania; Florence; Bologna; Genoa; Bari; Brindisi; Trieste; Lamezia Terme; Reggio Calabria; Alghero

Europe & Mediterranean

London, Paris (CDG/ORY), Amsterdam, Frankfurt, Munich, Zurich, Geneva, Madrid, Barcelona, Athens, Malta, Nice, Tunis, Cairo, Tel Aviv, Dubai, Riyadh, Jeddah

Intercontinental

North America (New York, Boston, Miami, Los Angeles, San Francisco, Washington), South America (Buenos Aires, Sao Paulo, Rio de Janeiro), Africa (Accra, Dakar), Asia (Tokyo, Bangkok, New Delhi, Malé, Mauritius)

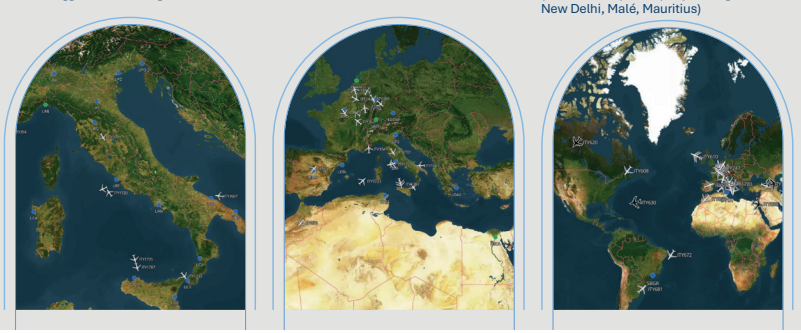


FIGURE 1

We cover most Italian cities, as well as many European capitals, along with some Mediterranean and Middle Eastern destinations. Our intercontinental operation covers a big chunk of the world, except Australia and the Pacific Ocean.

FRAGMENTED DATA

Our flight watching and flight tracking relied on multiple tools receiving information from all around the globe. The daily challenge was running different applications, each with its own window open on screen at the same time. Our dispatchers faced alert overload and the unconnected systems hindered situational awareness and slowed decision-making, meaning they might miss important information, which could lead to possible errors (figure 2).

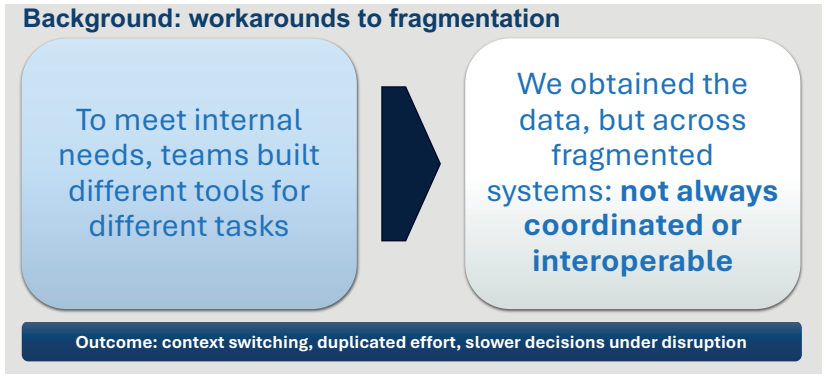


FIGURE 2

> Our dispatchers faced alert overload and the unconnected systems hindered situational awareness and slowed decision-making...

ALL-IN-ONE SIMPLIFICATION

We wanted to integrate everything into a single application — all in one place to make life easier for dispatchers (figure 3). This would enable them to use their time better and make the right decisions at the right moment, instead of having to hunt for data across a mass of different sources.

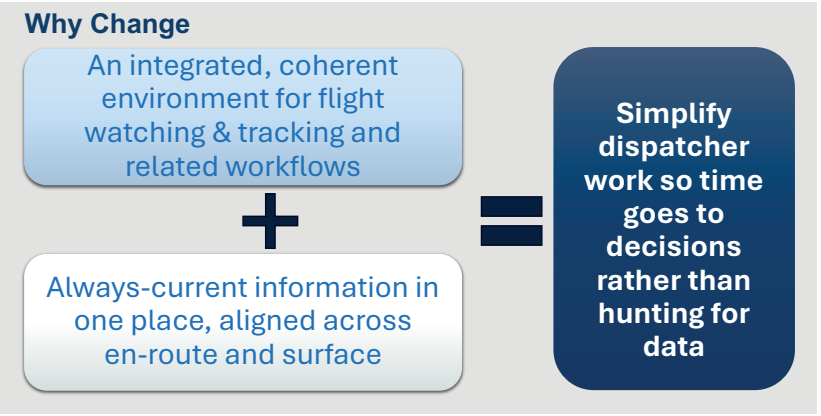


FIGURE 3

BESPOKE SOLUTION

The solution for us was close to hand as we already had a well-established partnership with The Weather Company (figure 4). However, Fusion is a legacy tool, and like all good legacy tools, it has its limitations, especially when you need speed, integration with other systems, and the right level of customization for your specific operations. After all, not all airlines are the same in terms of their data needs and the information they want displayed on a single screen.

Following a presentation by The Weather Company of its Maverick Dispatch™ platform, we recognized that this was the next-generation tool we needed. It also gave us the opportunity to stay with The Weather Company, which has always provided us with high-quality weather forecast and observation data.

> That meant investing time and people to work together on a bespoke application that provided a single source for what we needed in our daily operations.

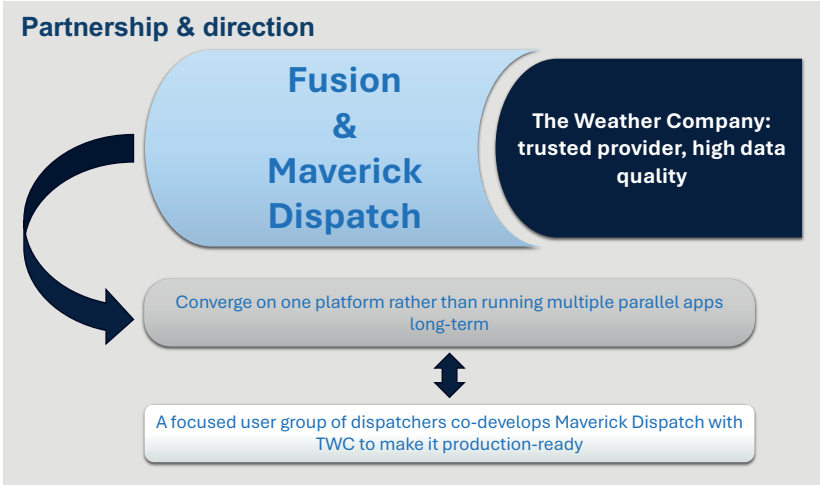


FIGURE 4

However, we realized that Maverick Dispatch™ was not ready yet for our requirements, so we would need to work with The Weather Company to make it production-ready for us. That meant investing time and people to work together on a bespoke application that provided a single source for what we needed in our daily operations. The transition is progressing well, as you can see from the following selection of Maverick Dispatch™ capabilities.

SURFACE MOVEMENT

The live-tracking Surface Movement screen allows dispatchers to simply scroll through and zoom into an airport, where they receive color-coded information that they can easily glance through. For example, for runway configurations, we can see clearly the runway being used for arrivals in blue and the one being used for departures in red, and aircraft positions show whether there is any congestion in the departure areas configurations (figure 5).

FIGURE 5

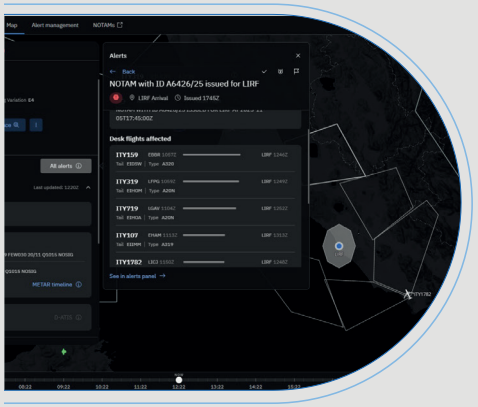
We can check what has occurred in the last few hours, about taxi times, and what is predicted to happen in the next few hours. This is a huge advance because we want a quick overview, especially to find alternate routes for flights. When checking a destination to understand what's going on there, we don't have to look at data on individual flights. We can quickly gauge airport demand by comparing actual arrival rates against capacity and identifying in which direction it's trending.

ON THE ALERT

While alerts were already good in The Weather Company's Fusion system, they are even better with Maverick Dispatch™. They help to reduce the cognitive load for dispatchers and enable faster responses to operational disruptions. We sort alerts by object, such as an airport, like our main hub at Rome airport, which is shown in figure 6.

Alerts at LIRF

Focused, contextual alerts surface what matters now, per-flight impact supports faster prioritisation under time pressure



Feature highlights:

- Severity filters & per-flight impact badges
- One-click drill-down from alert to map/flight pane
- Noise-suppression policies for low-value alerts
- Grouping flights per alert/ event to increase situational awareness

FIGURE 6

We can check all the flights that have an alert related to the object to see how many might be affected by the possible issue, enabling us to better understand the scale of a potential disruption.

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SMART NOTAMS

Another huge benefit of the new system is AI-driven Smart NOTAM (NOTice to AirMen) summaries, which help dispatchers to filter critical information rapidly. Sometimes, when you look at an airport, you see multiple NOTAMs, so you have to quickly check whether or not the airport is usable or not. Contained within the stacks of NOTAM pages is critical information that you don't want to miss or waste time digging around to find (see figure 7).

AI summaries rank runway/taxiway impacts to speed triage, operational grouping reduces scan time

Feature highlights:

- Impact ranking by proximity/time
- Direct link to source NOTAM text
- Context to route/ procedure/stand

FIGURE 7

The AI functionality categorizes NOTAMs by importance, such as closures and conditions on the approach and on the runway. We quickly obtain an overview of what is going on at an airport and whether we can use it. We can check several airports very quickly, then, once the dispatcher has decided which airport to use, they carry out a deep dive into the NOTAMs for that location. This is a great advantage for us because previously you had to hope that the airport you thought was the best one to use didn't contain any surprises on the last NOTAM you read — such as it being closed.

TERMINAL VIEW

We find the terminal view to be a tremendous support with its terminal airspace convective risk (TrACR) feature, which shows the arrival and departure corridors at an airport (figure 8). This is helpful because the convective situation can affect departures and arrivals. Before, the dispatcher had to estimate how the forecast might change and which corridors it might affect. For example, at Rome airport, arrivals and departures are northbound, southbound, eastbound and westbound, so the situation can be complex.

Unified workspace from area context to apron surface, supports stand/gate coordination and turnarounds

Feature highlights:

TrACR forecasts convective potential in arrival and departure corridors in 30-minute intervals up to seven hours ahead. TrACR's foundation is the Future Radar forecast product, which blends advected radar, an AI nowcast model, and GRAF model data

FIGURE 8

The TrACR feature allows us to receive alerts for a specific corridor and for convective potentials in 30-minute intervals and for several hours ahead. The system automatically gives alerts only on those flights that are affected, so dispatchers can act quickly and reroute or replan flights, if required.

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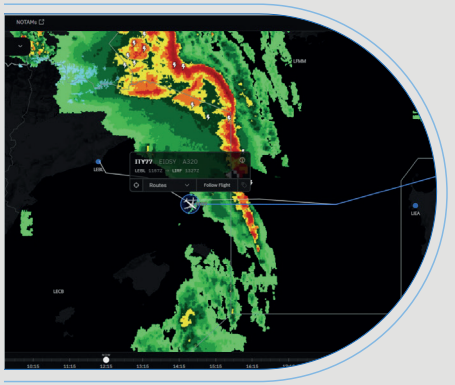
WEATHER AVOIDANCE

Continuing on the weather theme, Maverick Dispatch™ provides weather avoidance routes in a similar way to Fusion (figure 9).

High-quality TWC weather supports proactive re-routing, improved safety margins and resilience



Feature highlights:

- Convective cells / echo tops Turbulence & icing layers
- Route-corridor impact shading Familiar
- UI to clearly understand hazards
- Intuitive re-routing possibilities

FIGURE 9

We have always received very good quality data from The Weather Company, helping us to quickly understand where we have to reroute flights to safer areas.

> ... we are co-designing our new dispatch workflow and the policies relating to it, so we can be sure that what we receive at the end is what we really need for our operations...

HANDLING CHANGE

Currently, we are working closely with The Weather Company, going through iterative design stages of our bespoke Maverick Dispatch™. We set up a focus group of dispatchers to liaise with The Weather Company, who take on board our feedback with each design and will continue to do so until it is ready to use. Of course, this requires some effort on our part but, on the other hand, we are co-designing our new dispatch workflow and the policies relating to it, so we can be sure that what we receive at the end is what we really need for our operations (figure 10).

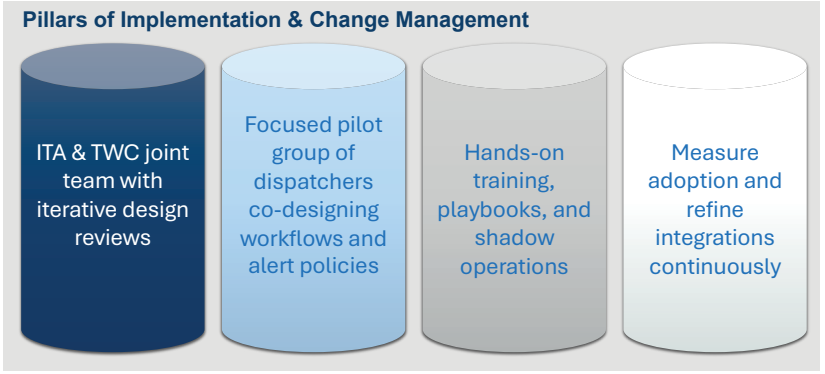


FIGURE 10

At this stage, our dispatchers are working with the old system and the new system in parallel, checking if what they are seeing is helping and saving them time — which it is. We have observed a reduction in the time people need to understand a situation and assess all the issues, so they can respond faster.

GROWING ENTHUSIASM

Our staff who are directly involved in the project are enthusiastic about the new software and our approach (figure 11). We have strong engagement with dispatchers who are gaining better situational awareness across all flight phases, from the ground to in-flight and then back to the ground.

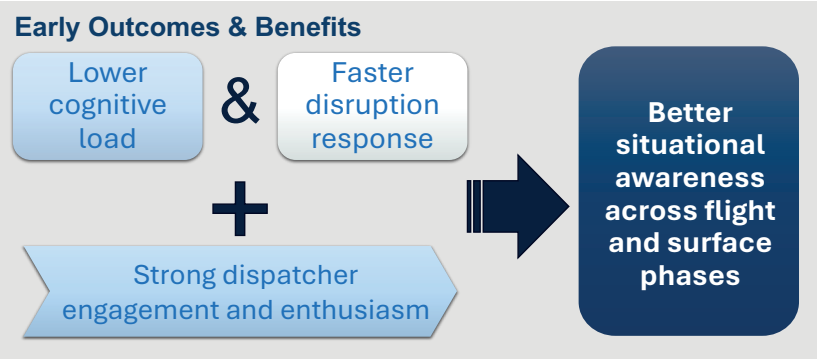


FIGURE 11

NEXT STEPS

Our plan is to retire Fusion along with all the other apps that provide data to operations when we implement Maverick Dispatch™ (figure 12). This single, trusted source of information for dispatchers is due to go live during the first half of 2026.

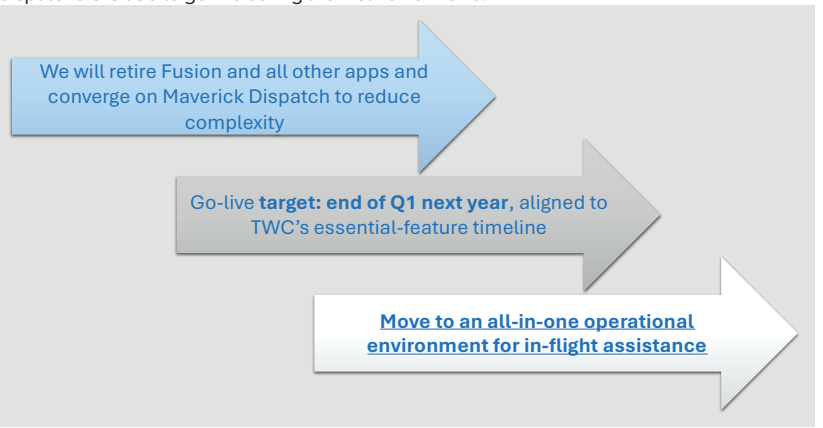


FIGURE 12

ANDREA PERGOLA

Andrea Pergola is a Technical Flight Dispatcher & Flight Dispatcher Instructor at ITA Airways and has more than 20 years of experience in flight operations and supporting systems. He specializes in designing and managing mission critical platforms and processes for navigation data, flight planning and operational decision support. He played a key role in launching ITA Airways, establishing the software environment and processes that support navigation and flight planning activities.

ITA AIRWAYS

ITA Airways started in October 2021, as the successor to flag-carrier Alitalia, and is co-owned by Italy's Ministry of Economy and Finance and Deutsche Lufthansa AG. The airline began with 55 aircraft and today has a fleet of over 100, flying to more than 60 destinations. As well as most Italian cities and European capitals, ITA Airways has an extensive intercontinental operation.

THE WEATHER COMPANY

The Weather Company, formerly WSI, specializes in providing advanced weather solutions to the aviation industry, addressing the critical challenges faced by dispatchers, pilots, and operations. Its aviation portfolio is designed to enhance operational decision-making, helping airlines keep flights safe, efficient, and profitable. The Weather Company's Maverick Dispatch™ brings AI-integrated weather insights directly into aviation dispatch workflows, helping teams with safer decision-making from ground to air.

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