

# Canadian North took control of its device fleet

**Gail Campbell**, Senior Manager Maintenance Information Systems with Canadian North tells us how the airline uses a shared device model that ensures all devices are always up-to-date and compliant



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In this case study we going to look at the challenges and inefficiencies that can stem from using outdated paper-based systems as well as difficulties in managing complex workflows in a remote operational environment. We'll also look at how a shared-device model has been crucial to mitigating common human errors, maintaining security and keeping cost of ownership low. I'll finally explain how automating content deployment for technical publications, maintenance documentation, applications and operating systems can eliminate bottlenecks and improve your bottom line. But, as this is a case study, we'll start with a brief introduction to the airline whose case it is, Canadian North.

## CANADIAN NORTH

Canadian North is wholly Inuit owned airline, which serves Canada's North with a mixed fleet of Boeing 737 and ATR aircraft, some of which are gravel and ice strip equipped for landing in remote locations. Because the airline serves many remote communities, it is a mixed passenger and freight carrier with some aircraft that are combination (combi) types, capable of multiple passenger/cargo configurations.

We face several challenges; some are common to the whole aviation sector, and some are unique to our particular operations at Canadian North. Common to the sector are time-sensitive and ever-changing content on productivity tools, and maintaining synchronicity of device fleets in multiple locations. A good example is that working from the same and latest documentation is a requirement of Transport Canada, so maintaining synchronicity of technical publications/content is crucial. Particular challenges faced by Canadian North include poor connectivity in some of our northern outposts, which causes a risk of non-compliance and out-of-date apps. There is also the road to a paperless environment, which is a challenge in itself, and, of course, regardless of the



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location, we need to guarantee that updates are done and that we have synchronicity of devices. As well as the day-to-day factors such as flight time, maintenance turnaround time and efficiency of maintenance personnel, there is also the total cost of ownership (TCO) of the device inventory to be considered and the challenge of securing physical access by maintenance & engineering staff to all devices.

### THE JOURNEY TO MOBILITY AND ELECTRONIC RECORDS

Before mobility, Canadian North was 100 percent paper-based. People would manually key entries into desktop computers. Then, they would get transcribed, and sometimes, entries would be duplicated in the process. We realized there was a problem when not everyone had the means for maintenance technicians to record their work, i.e., access to an iPad. With eMRO from TRAX, see more

below, Canadian North was able to transition to e-mobility. Now, with e-mobility, maintenance technician contractors can complete their entries.

In 2013, we implemented TRAX. Then, in 2023, we moved from TRAX legacy to eMRO. The reason for telling you about that is because, when we moved from TRAX legacy to eMRO, we wanted everything to go digital. As I've already mentioned, we were, at the time, very paper-orientated. When we created the business plan for eMRO, we made a mistake. We forgot that we do our HMV (Heavy Maintenance Visits) and our own MRO work with regular line maintenance. Many contractors come to work with us when we get an increased number of aircraft for HMV and LMV, and we have two locations where we do this. Our thinking was moving towards an electronic solution. Still, we forgot that our contractors would also need the eMobility app to work on eMRO. So, at the very last minute, we realized we could not get iPads for all contractors who came

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in part-time. Still, we didn't want to buy an iPad for each of them. We buy iPads for all our employees, who get to keep them but we didn't want the contractors to take our iPads home because of the associated security issues. However, with such a large number of devices needed in the business, the next challenge we faced was how to keep track of them and ensure that they were all fully up-to-date with the latest documentation and regulatory compliance.

### SHARED DEVICE MANAGEMENT AND UPDATING

To deal with this challenge, at the very last minute, we reached out to M3, having heard about their solution. Before going live with eMRO, we wanted to know how to implement the iPad for contractors but not have those devices taken off the premises. M3 came in and showed us their solution, a Kiosk that can be portable or at a fixed location. We decided to put fixed Kiosks in our main HMV bases in Ottawa and Edmonton, and M3 came into Canadian North to set up the Kiosks. It has been plain sailing since we implemented them.

Because Canadian North is, as the name suggests, an airline that serves northern bases and destinations, we face many challenges of paperwork coming in from the northern communities. In wintertime, flights get cancelled; sometimes, even when we get the paperwork, we can't read it. It's always been a challenge, so going mobile and paperless across the business was our biggest goal at the time of writing. M3 has helped us implement the latest Kiosks at our



centers. I'm now looking to push that out to all of our remote stations like Yellow Knife and others for the employees, as opposed to us having to buy every new employee a new iPad and then keep up with it because they lose their life after some three years. When the paperwork and agreement had been completed, M3 came in, set up the Kiosks, and put an employee on-site to set up the entire system.

Now, the contractor comes in, and they get a badge for the location where they'll be working. Then, when working, they swipe their badge at the Kiosk, which automatically opens, and the iPad is there for them with whatever we have put on the Kiosk for the MDM part of it. So, if we choose that we don't want the contractor to see something, that item won't be loaded on the Kiosk. We started with a pilot plan because it has proven to me that we should keep the MDM (Mobile Device Management) right on the Kiosk and make any changes to it. Currently, we're using Meraki MDM from Cisco with our employee iPads. The challenge of doing it with Meraki is that if I push out a change to all the iPads, but

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a user is on a three-week rotation, when they get back, they would not get that updated information. They must go into the iPad and get the load because the iPad was turned off. It has helped us by going to M3 because, as they check in and take an iPad out of the Kiosk, it is preloaded with the latest documents, applications, and everything. Potentially, with the ones we're doing manually, they only get the load right away if they're at work at the time so they may be using outdated information. It's a similar problem as it was with the paperwork; if they don't read that there's an update to a particular manual, they'll be using outdated information, which is unacceptable. With the M3 solution, the dashboard is straightforward to use: log in to the app, update it, and push the updated items out to the Kiosk; if/when the iPad is plugged into the Kiosk, it gets updated automatically. Suppose a user checks out the iPad once they plug it into the Kiosk. In that case, the entire system is totally wiped, and everything you want is reloaded. There is just one MDM that pushes everything out, whereas previously, with the old system, it had been dependent on access to the iPad to upload updates with the risk that users could still have been using outdated information.

### BENEFITS OF A SHARED DEVICE SOLUTION

Using a shared device solution offers the airline a number of benefits. It keeps the cost-of-ownership low and saves admin/configuration time for end users with iPads that are always ready to use. It also allows partners (contractors) access to iPads, decreasing the duplication of entries. The M3 Kiosks also solve a number of inefficiencies with one solution. Digitized workflows and paperless operations

eliminate error-prone paperwork: M3 Solutions replaced manual data entry and handwritten records with digital forms and checklists, significantly reducing the potential for transcription errors. Streamlined workflows mean that contractors have access to maintenance information and tech pubs on their iPads directly on the wing. With centralized data, all maintenance records are stored securely in a single digital platform, reducing the risk of data loss or damage.

In figure 1 you can see what the Kiosk looks like.

This is all part of Canadian North's transition to going electronic with eMRO, and with the iPads, we're going to look at other applications. I'm just giving you the scenario within eMRO, but we also use Comply365 and a lot of different applications. We will not just use these Kiosks for eMRO; we'll be using them for all employees for other applications and might potentially use them in the flight Ops context and set up Kiosks for that. What the Kiosk will do is save us money by moving from buying an individual



Figure 1

Solving multiple inefficiencies with One Solution

iPad for each employee to having everybody share a fleet of iPads. It's so simple for employees to get an iPad; they walk in to work, check out an iPad loaded with the material they need for their job (whatever their profile is set up to use, that information will be on the device) and, when they've finished, check it back in. End users can focus on their job responsibilities instead of spending time maintaining their devices, and we have complete asset management across the organization. Spare devices are not required for equipment failure, low battery, updates not maintained, or forgotten/lost devices.

In each site at Ottawa and Edmonton, there is a Kiosk with 20 slots and another one with ten slots, giving us 30 slots for iPads in each of those two bases. We started with M3 because of the HMV and the contractor usage, making sure that they have the capability to do their electronic sign-off.

We also have eLearning on our iPads to ensure that our employees have the training they need and we give each of our contractors a communication email during their shift. How it's set-up is that, when they sign on to the iPad, it will prompt them to put in their specific user details. They can then sign on to their company email just by logging in. All of that is pre-set on their iPads for them to use every day.

## SUMMARY AND CONCLUSION

Using the shared device model not only delivers cost savings for the company but also ensures that all necessary information is uploaded and up-to-date. At the time of writing, there were a couple of people that had to go into Meraki; whenever an employee left or an employee started or a contractor, they had to go into Meraki, de-activate one profile, add a new profile, set up the iPad, meet with the person to hand over the iPad and make sure that they were all set-up. Now, with the Kiosk centers, we give new employees or contractors their activation code and swipe card. They can then go to the Kiosk and swipe their card or use a PIN code. It takes away a lot of the administration side of things.

Before this project, we used to have the Gen 7, 8 and 9 iPads. We recently found that the gigabyte capacity we bought was less than expected. So, we changed all of our Gen 7 to 9 devices for Gen 10 iPads, which are what we gave

to employees, and we're up to 64 gigabytes on those so that they could use them with all the downloads. Using the Kiosk, it wipes the information every night so the Gen 7-9 devices now work OK because everything is wiped; so, if they've taken pictures to upload into task control or somewhere, that all gets wiped out, and it's like a brand-new iPad when the next person comes in to sign it in in the morning.

That has been our experience in Canadian North, where the M3 device management solution has simplified the running and use of our iPad fleet and paved the way for future mobile and digital developments.

### GAIL CAMPBELL



Gail has been with Canadian North for 30 years starting in the accounting department and then Technical Operation Center where she held the role of Manager of Technical Records and Trax Administration. She was recently promoted to Senior Manager Maintenance Information Systems. As well as working with internal departments, Gail has also played a key role in training, setting up internal processes and getting Trax/eMRO to work for Canadian North.

### CANADIAN NORTH



Canadian North is a 100% Inuit-owned airline that connects people and delivers essential goods throughout Canada's North – safely, reliably, and always with friendly and caring customer service. The airline services 25 communities within the Northwest Territories, Nunavik and Nunavut, as well as Ottawa, Montreal, and Edmonton — with a versatile fleet of Boeing 737, ATR 42 and ATR 72 aircraft. Canadian North is also the premier charter services provider for large resource sector clients requiring dependable, efficient, and economical fly-in/fly-out air service and it operates flights across North America and beyond for sports teams, cruise lines, tour operators and many others. Canadian North is wholly-owned by Makivik Corporation and Inuvialuit Development Corporation.

### M3 SOLUTIONS



M3 Solutions is the company and innovator behind the M3 Platform, a comprehensive hardware and software solution for portable device and content management. The solution allows administrators to fully control the managing, distributing, charging, and monitoring of an organization's portable device inventory and enables easy remote and unattended content distribution including OS, App & Content deployments, across all devices in the network, anywhere around the world, within minutes.

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