



In control: WinAir helps operators deal with changing OEM maintenance requirements.

Super Stock Highway

IT and MROs have been working together in a partnership that has allowed both to flourish. With the impact of COVID-19, technology for MRO companies has proven critical to ensuring their survival. Michael Doran investigates how effective this has been.

The world of MRO IT is not standing still, so to keep up, LARA has reached out to industry leaders to build a picture of how MRO systems are being designed to be user-friendly, keep operators compliant, facilitate mobility, detect defects, and track parts.

Headquartered in Vevey, Switzerland, Rusada develops software for airworthiness, MRO and flight operations used by more than 100 customers with support from locations in Europe, the USA, the Middle East, Asia, and Australia. Feedback from customer forums asked for a web-based system using mobile devices, which drove the development of the latest version of its ENVISION package.

“The three things that stand out are the web solution, the user-friendly configuration and how easy it is to implement,” says Rusada’s Saidhar Pathigari, Sales Director for the Middle East and APAC. “Small »»»





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airlines and start-ups don't have big IT teams, so we manage everything on the cloud."

ENVISION has 10 modules, and operators can select just the ones they need and then add others as their needs change, making it an attractive system for LCCs and regional operators. "From the start, we work with our customer to understand the businesses to define the solution, and we do not ask them to use the system as is," Pathigari tells *LARA*. "We modify or configure the system as per their need, and that's how it always works."

The Rusada implementation team are purposely from airline and MRO backgrounds, so they understand the operation and how things look from the customers' side, which Pathigari believes is

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Saidhar Pathigari, Sales Director for the Middle East and APAC, Rusada

a great advantage when systems are being implemented. "They know the challenges the customers face daily, all the jargon, and this is a big strength for Rusada."

Designing a solution and implementing it in COVID times is particularly challenging, but Rusada has carried on regardless, using video meetings and project management software. In one case, it sold, signed, and implemented a solution without any face-to-face interactions. Pathigari says it's this willingness to find a way that helps Rusada stand out.

MANAGING COMPLIANCE

MRO software is mainly focused on efficiency, and while WinAir's systems do lift efficiency, their main aim is to help



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operators remain compliant and follow the correct practices. Managing Director Kyle Vergeer tells *LARA* the full gamut of maintenance activities are going to be scrutinised to meet regulations, and WinAir gives customers the tools to help them manage that.

“Our core goal is to help people ensure compliance relative to their maintenance activities, whether it’s making sure parts are from approved vendors, mechanics are licensed and up-to-date, or the tools they use are calibrated,” he says.

Part of WinAir’s solution is to combine all the various publications, directives and manuals into the maintenance programme, with a revision management tool built into

“When you do need to operate in those conditions, you have to have some robust tools that can do the maths for you and keep you flying.”

Kyle Vergeer, Managing Director, WinAir

the system. Vergeer believes WinAir excels when dealing with more complex aircraft where the maintenance needs change depending on how and where the aircraft is being operated.

“A lot of manufacturers seem to increasingly complicate their maintenance programme so that if you are not always flying in environments that are corrosive or high winds or things like that, you can have a lesser penalty on your maintenance,” he explains. “But when you do need to operate in those conditions, you have to have some robust tools that can do the maths for you and keep you flying.”

Managing components can also be challenging because they live a separate life to the airframe and are often swapped, >>>

“Yesterday’s home runs don’t win today’s games

Babe Ruth; 724 home runs in 22 seasons

Who would have thought that complex CAMO and MRO schedules, procedures and tasks could have become even more so? Increasing digital transformation should have taken care of all that, surely?

The problem is that established ways of working pre-COVID have been ruptured by the same restrictions that have beset all areas of the economy, all industries, and all operational approaches.

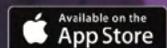
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particularly in larger fleets. WinAir has a robust way of tracking components from the cradle to the grave that, Vergeer says, “shows people the whole life of that component”.

WinAir has been extraordinarily successful in the regional sector, with users including Air Inuit, Trans Maldivian, Air Niugini, Windward Islands Airways, Alliance Airlines and Zimex Aviation in Switzerland.

POWER AT YOUR FINGERTIPS

When asked what sets Ultramain MRO software apart, John Stone, Vice-President of Product Management, tells *LARA* it’s the system’s flexibility that allows users to configure it around their way of operating, rather than changing their business to suit a rigidly defined package.

Ultramain offers a full suite of MRO programs, and two modules that stand out are the Electronic Logbook (ELB) and Mobile Mechanic (MM). From cockpit or cabin, any maintenance issues can be recorded into the ELB and pushed straight into the MRO system, lifting efficiencies and reducing aircraft turn times.



“From a cost perspective, you’re significantly reducing the number of parts that you are going through and the labour cost from fixing recurring defects.”

Greg Heine, Chief Strategy and Marketing Officer, ATP

“If you know the details of what’s coming to the gate before the aircraft gets there, then you’re able to respond much faster and make your plan for resolving the issues before the aircraft is unloaded,” explains Stone. “The eCabin function allows cabin crew to input defects which are particularly useful when issues arise with seat defects or unserviceable galley equipment.”

With the defects recorded in the ELB, Mobile Mechanic allows the technical personnel to receive their job assignments, access electronic task cards, create non-routine cards, order parts, and sign-off the work electronically on their mobile devices.

“All of your ground and maintenance organisation have visibility of the maintenance status, and when completed, everything works backwards to clear all the tasks and send that information to the ELB and gain the certificate of release.

“Paperless is a result, not the mission, and you want the mechanics on-wing being productive with mobile devices using simple software,” Stone concludes. “The only way you can do that is if you go paperless.”



Intelligent hands-free IT

By Adam Frost, Product Manager OASES, Commsoft

COVID-19 has presented some enormous challenges for the industry in all aspects of a typical working day. As Adam Frost, Project Manager for Commsoft, explains: “We have a ‘work from where you’re most productive’ policy, so we were well-positioned for working from home during the lockdowns. However, we find development teams are most creative when they’re co-located, so it has been frustrating that we haven’t been able to do that during most of the past year. The national furlough schemes have meant that users have had reduced availability to

collaborate, and face-to-face meetings have been, for the most part, impossible to prevent spreading the virus.

“We have moved our systems to the cloud, which is easier to access outside the office and removes the need to maintain our infrastructure physically.”

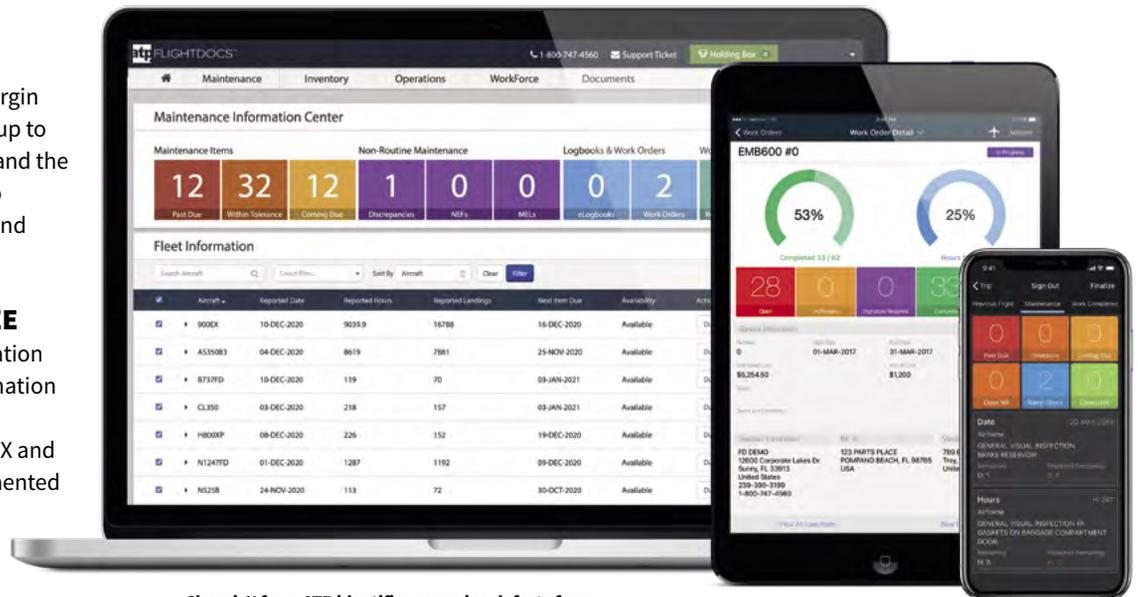
But the new way of working has not meant that technology development is at a standstill: “This year, we have restructured our development teams to focus on the continuous deployment of OASES Mobile and our new OASES Cloud product. OASES Cloud will sit alongside the existing Desktop and Mobile products and exploit

“Our smallest operator is Virgin Galactic going all the way up to Emirates and Cathay Pacific, and the ideal operators are those who understand going paperless and mobile drives efficiencies.”

ATP'S POWER OF THREE

ATP, a leading provider of aviation software solutions and information services, has three software solutions, Flightdocs, ChronicX and SpotLight. These are supplemented with the ATP Aviation Hub, a cloud-based library of more than 1,700 technical and regulatory publications.

Flightdocs is a maintenance and inventory management solution that covers the whole process from recording and reporting the defect through to execution and sign-off, says Greg Heine, Chief Strategy and Marketing Officer. “A lot of products tend to be record-keeping systems but with Flightdocs, it's all done within the system.”



ChronicX from ATP identifies recurring defects from multiple aircraft in the fleet. Photo: ATP

ChronicX highlights recurring or chronic defects using algorithms to identify when the same issue is affecting multiple aircraft across a fleet, irrespective of how those defects are being coded in the system. Heine estimates the ChronicX platform is used on around 6,500 aircraft.

“It helps airlines detect recurring defects much faster, and so we’ve been able to significantly decrease downtime, cancellations and delays for airlines with this product,” he says. “From a cost perspective, you’re significantly reducing the number of parts that you are going **»»»**”

its inherent mobility and superior user experience.

“Our ethos has always been to work in partnership with our customers, to support their business needs and to facilitate their success. As the next step in our relationship, we launched our Ideas Portal, which has revolutionised how we elicit feedback from our users. Any user can post their idea for an improvement and view other users’ ideas. They can discuss their own pain points in the comments and vote on ideas that would benefit them. For us, the benefits are that we can understand what is widely in demand, and we get a well-rounded description of the requirement from various perspectives. This enables us to deliver features that are widely applicable and appreciated.

“We are committed to the Agile development methodology where the key to success is collaboration with users throughout the development lifecycle. This allows us to deliver value to users quickly and to build on that value incrementally under their guidance.

“Our new cloud platform, on-trend for many good reasons, will allow our customers to benefit from incremental updates as soon as they are available and remove risk associated with deploying complex updates and the concomitant disruption across their processes.”

Like many within the IT sector, Commssoft has adapted its outlook for 2021, with a shift in priorities, to a more physical ‘hands-off’ approach: “On our roadmap for later in 2021,

we’ll be turning our attention to digital hangar maintenance. I think standards for data transfer will be hugely beneficial for airlines and lessors who have seen a great deal of aircraft changes in their fleets recently, and this can be expected to continue as demand for travel picks up after the COVID-19 pandemic and new opportunities present themselves.

“The work being done in the industry using blockchain for digital certificates also has great potential to reduce our reliance on paper along with the inherent time lag it causes. There would be no need to handle, scan, nor store these certificates. Links to the certificates could be included in the data transfer from the supplier, available immediately and across the organisation.” ■

through and the labour cost from fixing recurring defects.”

SpotLight is a troubleshooting and diagnostic platform, which Heine says “delivers the expertise of an experienced technician into the hands of a novice technician and allows them to get to that first-time fix quicker, cutting the time it takes to get to a resolution”.

“What’s unique about this is we can capture feedback as the technician is working through the fix and what the solution for the issue actually was,” he explains. “Then we’re taking that information and feeding it back into the system so that we can better guide them in future troubleshooting, so there’s machine learning happening as well.”

ENTRACK LENDS SUPPORT

A critical and complex part of MRO is keeping track of where all the parts are, what stage they are in, and when will they



“It records which parts are there, what work order they belong to, where they are going, and so it’s a part level as well as an activity level tracking that we do.”

Hem Pandey, Business Head of Digital MRO, TrackIT Solutions

be ready for reassembly, but a new solution from digital transformation specialists TrackIT Solutions is changing all that.

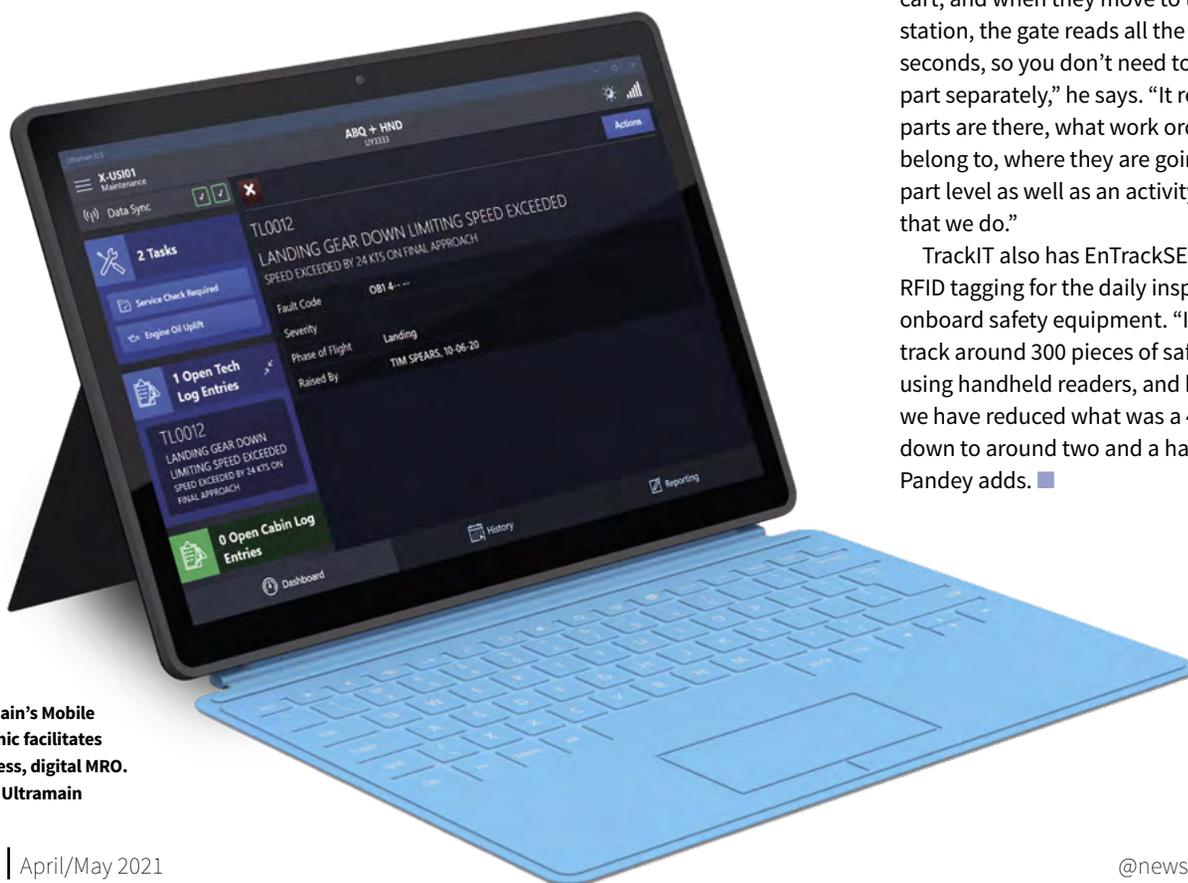
In essence, EnTrack MRO uses RFID tags to automatically track, in real time, each part through the repair process, both internally and at external vendors, to bring total visibility to the status of the overall repair being performed.

TrackIT’s Business Head of Digital MRO, Hem Pandey, explains that EnTrack MRO is not an engineering and maintenance solution but works in conjunction with those systems to enhance informed decision making.

Using engines as an example, Pandey tells LARA that when an engine is disassembled, all the component parts are RFID tagged and each time they move from one station to another, they pass through an electronic gate that records, among other things, when the part is moved, what was done and how long it spent in that process.

“There could be 200 different parts in a cart, and when they move to the next station, the gate reads all the tags in a few seconds, so you don’t need to scan each part separately,” he says. “It records which parts are there, what work order they belong to, where they are going, and so it’s a part level as well as an activity level tracking that we do.”

TrackIT also has EnTrackSET, which uses RFID tagging for the daily inspections of onboard safety equipment. “In an A320, we track around 300 pieces of safety equipment using handheld readers, and by doing that, we have reduced what was a 40-minute task down to around two and a half minutes,” Pandey adds. ■



Ultramain’s Mobile Mechanic facilitates paperless, digital MRO.
Photo: Ultramain

