

# AVIATION MAINTENANCE

Spring 2021



The World's Leading Aviation MRO Publication

# Widebody Engine Care

## RETURN TO SERVICE

THE COMPLICATED  
PROCESS OF STORING  
AND RETURNING  
AIRCRAFT TO SERVICE

## BIZJET CONNECTIVITY

THE INSATIABLE  
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**ONE ON ONE  
WITH EMPOWERMX CEO**  
DINAKARA NAGALLA SHARES WHAT  
HIS COMPANY HAS LEARNED IN THIS  
UNUSUAL YEAR



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Dinakara Nagalla

# Q&A with Dinakara Nagalla, Founder and CEO of EmpowerMX

## What has EmpowerMX learned during the pandemic?

Our customers are facing some daunting challenges. First, it's no secret that even prior to the pandemic it was getting increasingly challenging to find enough qualified aircraft maintenance technicians. The staffing reductions that ensued during the downturn gave MROs and airlines a bit of a breather, but the combination of early retirements and layoffs drove a good number of these people to find work in other verticals, or even leave aviation entirely. It is clear now once again that the increasing demand for services are highlighting the dearth of experienced labor necessary to support it. In response, there is an unprecedented level of focus on improving processes and driving efficiencies, and technologies and solutions such as ours can play a critical role in driving those efficiencies.

Next, as carriers began to park the older and less efficient aircraft, they are now being stripped for usable parts, leading to a glut in the market, and MROs have to deal with an entirely new dimension in parts procurement and the supply chain.

And finally, the pandemic has highlighted to many aviation centric companies not only the need for efficiency, but the need for agility, and I think that as they rebuild themselves, this need for increased agility is being kept top of mind.

## What challenged your company the most during this unusual time and how did you meet that challenge?

Initially, like many aviation businesses, our initial efforts were focused on supporting our customers and their unique responses to the pandemic, and figuring out how we can exit the crisis better and stronger, and more importantly making sure we have the solutions our customers will inevitably need. By far, the 2nd and 3rd quarters of 2020 was the most challenging period – but as many businesses did, we took advantage in the necessary shift in priorities, and focused all of our energy into product development and enhancement. This investment paid off, and by the end of 2020, we were well positioned to address the resurgence. We began actively reengaging with prospects around the world, and found a receptive audience for our existing solutions, as well as new offerings that are aligned with the market's increasing focus on digital MRO and initiatives like Electronic Task Cards.

## Have you been able to add customers during the pandemic?

We're humbled by the fact that our customers are the world's leading airlines and MROs, and we consider each of these organizations as a partner, not just a customer. Accordingly, when the pandemic brought the airline industry nearly to its knees, we focused the majority of our efforts towards helping our customers navigate through the crisis by understanding what they'll need from us when the recovery begins. As the business environment has started to improve, these customers have

not only started to ramp back to pre-pandemic levels (and in some cases above), but they've embraced our new solutions and continued to serve as excellent and loyal references for other prospects that are starting to emerge. As a result, we've had a very busy first half of 2021 supporting our existing customers increasing usage and newly developed solutions, along with new customers who are adopting our Digital MRO solutions. Today, I know of no other cloud native, mobility first, fully integrated yet modular suite that can help transform any traditional MRO business into a fully digital operation.

## How is EmpowerMX responding to its customers' changing needs?

We have always embraced the concept of "adaptive transformation" in our product design and development, where we build our solutions using a modular concept but with highly integrated components. Customers today find this approach incredibly useful, as they want to test new technologies rapidly and incrementally, without having to rip out and replace legacy systems. We don't expect customers to transform overnight, and as they adapt to new regulations, consumer expectations, and market conditions, they require new tools that evolve with their needs and are flexible enough to meet their demands and the demands of their business.

**What are your goals for the company?** Our primary goals are customer focused - to dramatically improve their ROI and bottom line by reducing maintenance costs by 15% to 25% and improving safety, operational, and compliance KPIs. Our vision is to create a next gen "Digital MRO" which doesn't merely take paper off the shop floor – rather, we want to bring the MRO, their customers and vendors together into a fully integrated, digitally connected service operation with an open data network to create transparency and visibility for all using blockchain and our unique predictive maintenance and forecasting technologies.

## What sets EmpowerMX's offerings apart from others in the market?

We have been in this industry for over two decades now. And were one of, if not the first-to-market with a cloud-based MRO software-as-a-service (SaaS) solution in 2013, while other providers were thinking about the how and why of doing so. EmpowerMX is truly the only cloud-based software platform on the market that can enable a digital MRO today. Our machine learning algorithms, built into the core of our product, powers and administers our digital task card generation, electronic signatures, task applicability and labor hour tracking. Our upcoming new predictive maintenance module integrated into all aspects of product usage is best of breed. We can bring an operator online within 60 days after commencing implementation, and our solution pays for itself within six months. EmpowerMX is truly an ROI driven offering, not just a nice to have.



## Give an example of a problem your product solved for a customer.

This is a great question, and when we pause to think about one single problem we solved, we think it is impacting MRO throughput and the resulting financial performance. And that isn't an isolated problem—it is a series of small successes that waterfall into this massive outcome called throughput, and that too, where quality and safety are non-negotiable. It is about creating a clean process flow from within the aircraft maintenance environment—starting with pre-induction and permeating through final delivery and data analytics support. Heavy maintenance visits typically create thousands of task cards, each with their own independent process needs—from material to labor and tooling just to name a few; Where EmpowerMX becomes the go-to solution is how easily our modules can support all these functions, and clients can choose modules on-the-go, without long upgrade projects.

## Please give examples of how EmpowerMX's products have helped save airlines, MROs or the military money.

We help save money even while one of our modules are being implemented. By way of the many small wins within the process, EmpowerMX has a history of achieving large gains, resulting in airlines and MROs saving time and money. One example is a large regional MRO based in the US. Before implementing EmpowerMX at this facility, the MRO was not profitable. By the time implementation was complete and the processes were standardized throughout the facility, the MRO had a consistent, realized profit margin increase of 10% a year. This was the result, primarily, of On-Time or Early deliveries. Prior to implementation, On-Time delivery based on contracts was consistently below 50%, and sometimes as low as 30%. By the end of the implementation, On-Time delivery was consistently above 95%. In 2017, the facility delivered 367 maintenance events. Only 2 of those maintenance events were late. Not only that, but they were also delivering early. Over 100 days a year were captured that year for additional throughput by early delivery days alone. When you can do more with what you already have, the results become apparent. In this example, there was over a 10% EBIT improvement as well as a substantial increase in revenue. The combination of increased revenue generation as well the major margin improvements lead to a dramatic increase in the bottom line.

## How does EmpowerMX help with data analytics/predictive maintenance?

EmpowerMX provides data analytics and predictive maintenance support through a couple of key methods.

Our product promotes standardization without hindering the end users, through task standards and templates. These tools ensure that data is standardized as users are incentivized to provide the right data, or conversely unable to provide incorrect data. This results in standardized inputs and outputs that makes the task of data analytics and predictive patterning much easier for an organization.

The second is data support. EmpowerMX helps with this process by making simple and customizable reports available to product users. By

providing access to almost any data point that an organization would need that is standardized through process incentives allows users to estimate maintenance visits more accurately to any relevant need such as: labor by skill, by task type, by billing code, materials demand probability, high risk tasks, task constraints, and more. When you know you have the labor, tooling, and materials required, you are already one step ahead of the competition.

## What insights can you share about protecting data and information with regards to cybersecurity/hacking, which is a growing concern in any business sector?

Cyber security and data protection is the number one issue for all of us and our customers using the EmpowerMX cloud. Any cloud organization should first adopt ISO 27001 on information security management along with ISO 27032 offering guidance on cyber security management. It's important to follow these standards at a minimum and or eventually certify to these standards to mitigate the risk. EmpowerMX not only stays compliant with these standards but also encrypt all our data, secure all our servers behind firewalls, separate our network infrastructure components under different VPN networks, enable dual factor authentication to access our cloud infrastructure, and deploy in-built AI tools for cloud security analysis and auto patching. This is where we are years ahead of other MRO software providers in the cloud.

## The supply chain is desperately outdated across the board in both the civilian and military sectors of aviation. Does EmpowerMX have products that can help improve the supply chain?

The pandemic exposed just how vulnerable airline and defense (A&D) supply chains are. Inefficiencies in the Supply Chain causes return to service delays, schedule disruptions, fines, and dissatisfaction with the aircraft operators. This is further exasperated by legacy systems that can't adapt and scale, bogging down the A&D Supply chain. While the aviation asset repair complexity is on a much different scale, the majority of the systems supporting the MRO industry are built for a traditional desktop model repurposed to work on tablets but are incapable of automating the process across a wide range of participants. EmpowerMX has several solutions exclusively available in the cloud to help solve this problem. For example, EMX Connect is an advanced system that is capable of wiring any legacy system to provide a seamless flow of data to automate the supply chain. This also fulfills the need for predictive analysis and always-aware systems that can minimize delays during the repair process. The EmpowerMX MRO suite—Connect, Shops, and Materials modules will bring airline MRO operators and suppliers closer than they have ever been before, digitizing the entire network of participants, and thus enabling the seamless exchange of data. [AVI](#)

*Dinakara Nagalla is the founder and CEO of EmpowerMX, the Frisco, Texas based Digital MRO Platform, offering a modular, cloud-based, mobile-first suite of applications for touch-free, data-enabled heavy maintenance, shop floor, and supply chain.*