

The Unmanned Aircraft Systems (UAS) industry is developing rapidly. With this growth it faces a number of challenges that will define the industry; including customer service, repair and maintenance turnround times, operating costs, and regulations.

Current OEMs, operators, vendors, and service providers are trying to address these challenges to stay ahead of competitors, as well as create technological advances to win and retain customers. As with many other emerging industries, opportunities are fleeting, and many of the companies currently in the commercial UAS industry will not be around in the next few years. The organizations that can address the challenges of the industry and find a competitive advantage now are the ones most likely to succeed.

# Save Time and Money Without Shipping

In today's UAS industry, the common practice for aircraft maintenance and repair is to have the operator ship the unit back to the OEM. This solution developed this way for a few reasons. First, it was the easiest model for



OEMs to quickly implement as sales increased. Second, this approach allowed the OEMS to iterate their designs as they saw units return for service. Finally, there was

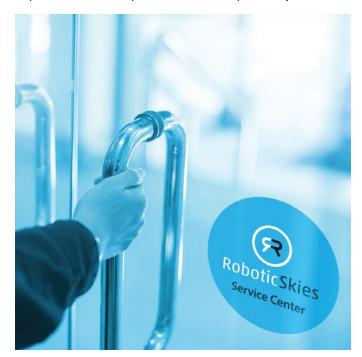
not another viable solution to ensure quality repairs and maintenance for OEMs to provide their customers.

For operators, shipping their aircraft to the manufacturer is expensive, with uncertain timelines for return to service. Horror stories about the challenges associated with shipping units are numerous, ranging from getting caught in customs for months, to returned units coming out of their shipping cases with new damage incurred in transit. Most importantly for operators, as they wait for their aircraft to be returned, they lose productivity and risk losing business to competitors.

Building a successful business around UAS operations hinges on having the aircraft flying as frequently as possible, and not being stuck in a shipping container in transit or waiting to be serviced at the factory. Simply put, any aircraft sitting on the ground does not generate revenue for operators.

#### Use a Local Maintenance Partner

OEMs are starting to realize shipping units back to the factory for service is not a scalable solution, as it diverts scarce technical resources away from their R&D and production line functions. Additionally, OEMs are understanding their current maintenance solution results in long turnaround times and challenges with shipping, negatively impacting the overall customer experience of their products. Most importantly to the



OEM, they are missing opportunities for follow-on sales because their customer service is not meeting the market's expectations.

Using a maintenance partner near UAS operations results in benefits to both the OEM and operator. With access to a trained and OEM-approved local maintenance and repair partner, operators can get faster and better customer support, and OEMs can focus on production and sales knowing that maintenance and repairs are being taken care of at the local level.



# Work with Aviation-Experienced and Trained Service Professionals

Having a local distributor maintain and repair UAS can eliminate certain challenges associated with shipping a unit to a remote facility for servicing, but introduces new challenges related to the consistency of the work performed. Distributors are trained salespeople focused on selling commercial UAS; they are not trained technicians. Under this model, there can be a wide range in the quality of the maintenance services provided, and it is impossible to accurately predict the outcomes. This inconsistency in maintenance can negatively impact the OEMs' customer service experience, and reduce the likelihood for additional sales.

To alleviate some of the challenges associated with

a distributor maintaining commercial UAS, OEMs are increasingly choosing to work with a professional maintenance provider. While there will undoubtedly be variances in the quality of work, the range of outcomes will be much fewer, and can be further mitigated by partnering with certified aviation repair centers. These repair centers are focused on providing maintenance and repair services to the existing aviation industry, and have the experience and knowledge from manned aircraft service that can be applied to unmanned aircraft. With OEM-and-airframe-specific training layered on top of the existing foundation of manned aviation expertise, the technicians at these repair centers can quickly get up to speed on commercial UAS and provide a more reliable solution than distributors who perform maintenance as a follow-on service.

## Be Prepared for Regulations

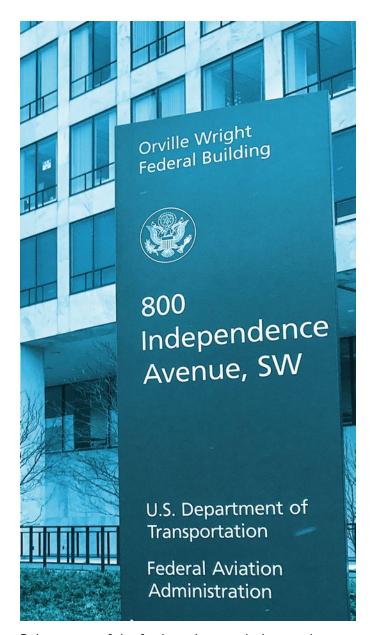
As commercial UAS and missions both continue to evolve and become more complex, it is becoming clear regulators are migrating towards the existing regulatory framework of manned aviation.

#### Aircraft

Type certification of aircraft is the norm for the aviation industry around the world, and regulators will likely require type certification of UAS as they become larger and fly more complex mission profiles. An on-going maintenance program is currently required for type certified aircraft to maintain their airworthiness certificate and operate in the national airspace, and is an aspect of type certification that will likely be required for UAS as well.

### **Operations**

Civil aviation authorities around the world have regulations in place to govern commercial operations in the manned aviation industry, and these require robust and detailed maintenance programs. As these authorities begin to regulate unmanned operations, all indications point towards regulations closely mirroring those of the manned aviation industry, including maintenance requirements.



Being aware of the forthcoming regulations and preparing for a regulated operating environment is crucial for UAS operators' and OEMs' long-term success. By working with repair stations certified by their local civil aviation authority and currently providing maintenance solutions to the manned aircraft industry, OEMs and operators can better prepare for coming regulations. Utilizing their knowledge and experience of operating in a regulated environment, companies can be ready to meet all emerging regulations for the UAS industry. As new requirements for certified aircraft are rolled out, leveraging manned aviation experience allows commercial UAS OEMs and operators to quickly design and deploy the programs needed to meet any regulations.



# Utilize a Turnkey Maintenance Service Program

While there are clear benefits of establishing a local maintenance solution with an experienced and focused maintenance provider, there are a number of challenges to successfully implement such a solution. Using an established UAS maintenance partner with a turnkey solution can not only make implementing a maintenance program easier but also give companies the benefit of a local maintenance solution without the investment required to successfully manage a program internally.

Operational benefits of using a turnkey UAS maintenance service program include:

#### **Screened Technicians and Service Centers**

Technicians and Service Centers are identified and screened for the appropriate skill set to be able to perform the required UAS maintenance services.

### **Engaged Technicians**

Once the appropriate technicians and Service Centers have been screened, they are contractually engaged to ensure their availability to perform the services when required and in a way that is priced appropriately.

#### **Trained Service Center Technicians**

In order for the technicians to be prepared to maintain UAS, they must receive OEM-specific training above and beyond their baseline capabilities. As part of the turnkey program every Service Center must participate in initial and recurrent training programs.

#### **Access to Parts**

A key piece in a successful local maintenance program is getting access to OEM-approved parts without lengthy delays and without creating an unnecessary financial burden on the service centers. The right program requires a delicate balance between having the parts available and carrying too much inventory.

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### **On-Going Service Centers Management**

The program conducts continuous oversight and quality control reviews of technicians and Service Centers to ensure they are performing as desired and quality of work is maintained.

By outsourcing maintenance and repair services to a professional and local maintenance provider with a turnkey solution, OEMs and operators are able to focus on what they are good at while delivering a higher level of customer service.

# Where Can You Find a Turnkey Solution Today?

Robotic Skies is the only network of local service centers assembled to provide maintenance and repair services to the commercial UAS industry, providing all the benefits of local maintenance in a turnkey solution to OEMs and operators. The company has built a global network of more than 170 qualified Service Centers across 40 countries, with each Service Center already certified by its local civil aviation authority to perform maintenance and repair services to the general aviation industry. By leveraging the existing general

aviation maintenance infrastructure and regulatory experience, Robotic Skies is the only maintenance partner prepared to meet whatever requirements the regulators establish. As part of its turnkey solution, Robotic Skies also handles the training of technicians, access to OEM-approved parts, on-going management of the technicians and workflow, and can help design and implement maintenance programs for customers lacking this expertise.

By partnering with Robotic Skies and utilizing its turnkey local UAS maintenance program, OEMs can focus their efforts on their core competencies to drive value to their organizations. They can focus on research and development of new models, and selling and producing new units instead of dedicating resources to maintenance and repair of existing units. Most importantly, together with Robotic Skies, OEMs can deliver a superior customer service experience to their customers and enjoy repeat sales.

For operators, working with Robotic Skies will drive operational efficiencies in their businesses, therefore increasing returns on their UAS programs. Through Robotic Skies local support, commercial UAS operators will have increased availability as they are not waiting for aircraft to be shipped around



the world to be repaired, and will have decreased uncertainty around timelines to return their aircraft to service. All of this leads to increased revenues and profitability for the operator.

Whether you are a commercial UAS OEM or operator, by partnering with Robotic Skies and accessing its global support network, you get all the benefits of local, aviation-grade maintenance for commercial UAS without any of the headaches, and you will better position yourself to be one of the survivors in the UAS industry.

To learn more about how the Robotic Skies program and how a partnership can benefit your organization, visit roboticskies.com





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