

EMERGING MRO

Here is a look at some of the biggest changes expected in MRO in the next five years.

The MRO business is expected to generate about \$63 billion in 2016 and grow to \$75 billion in 2020.

But it's not just getting bigger — it's getting more sophisticated as well.

TRENDS & TECHNOLOGIES

DATA-DRIVEN MAINTENANCE

Aircraft like the 787 and A350 track hundreds of thousands of datapoints.

As the OEMs and operators get more sophisticated in using this data to track reliability trends, maintenance programs — and the MROs that support them — will change to anticipate an aircraft's needs, rather than react to it.

COMPOSITE REPAIR

Newer aircraft feature more composites, and both operators and MRO providers will need to prepare for them.

Of particular use will be tools that can be used in the field by technicians that are not composites experts to analyze damage.

DRONES

Extra sets of eyes in the form of camera-equipped unmanned aerial vehicles, or drones, that buzz around an airframe in minutes will be very useful for MRO providers.

Applications ranging from inspecting for lighting damage to double-checking an aircraft exterior prior to a lease return will benefit from the emerging drone market.

LONG-TERM MRO AGREEMENTS

Operators looking for cost-certainty are increasingly turning to long-term agreements for aircraft, engines, and components.

Both OEMs and independent MROs are offering tailored agreements, and as used serviceable material becomes more prevalent, operators will see even more cost-effective deals, particularly on the engine side.

TAILORED WORKSCOPES

Gone are the days when all overhauls are the same.

Instead, many operators are benefiting from customized worksopes that match their needs.

A full overhaul on 15-year-old engine may be too costly for an operator looking for just another three-five years of use.

MRO providers are responding with innovative packages to meet these types of customer needs.

3-D PRINTING OF SPARES

Airframe and engine OEMs are rolling out 3-D-printed parts on a regular basis.

In the MRO world, the ability to make out-of-production parts to help keep aircraft flying has great potential that is only now being tapped.

And there's more: Airbus produced many 3-D printed parts on the A350 and has printed some parts for the aftermarket too. In March 2014 made the first "printed" component — a small plastic crew seat panel.

Boeing has a patent for a service that allows authorized customers to print parts from drawings downloaded from a Boeing digital library.

