

How Airbus is navigating a digital transformation

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The commercial aircraft manufacturer is charting a course to software and services, focusing on creating new data-driven models to complement its hardware platforms.

Airbus is a global aerospace-and-defense corporation known for developing military and commercial aircraft. But, like many companies today, it is delving into digital. In this interview with McKinsey's Rik Kirkland, Dirk Hoke, the CEO of Airbus Defence and Space, talks about how expanding into data-driven services complements Airbus's existing hardware-platform services and what the growth opportunities are from fast-developing emerging technologies. An edited version of his remarks follows.

Interview transcript

A few months ago we started a company-wide digital-transformation program at Airbus, which we call Quantum. It looks at digital transformation on all levels. Within that, I'm responsible for digital transformation for the new business models—exactly, for creating new data-driven models for the whole group.

There are two sides. One is the digital transformation inside the backbone of our company. The second is going into the traditional business to try to see where digitization can improve either the processes or the business model or where it can create completely new business models.

We announced last year that we will step into the commercial-drone space. We will not only continue to develop military drones but we will also enter the commercial-drone space. From the beginning, we looked not only at the hardware platform but also the software platform—and the related new business model that comes along with that: looking at specific verticals and developing a data-driven service that we can provide to specific customers within these verticals.

This was probably the biggest cultural change when I came in. Because when I started to talk about platforms, my team thought that I was talking about hardware platforms. Because in our language, a platform is an aircraft.

In fact, what I was talking about was developing new data-driven digital services, and I was talking about software platforms. So it took us a while to converge on the language, but we made it. It is no surprise that inside Airbus we come from a hardware-oriented background. However, as are all the companies in the world, we are slowly changing into a software company. So there will be much bigger revenue shares coming from software services in the future.

When we looked at our growth strategy for the next five to ten years, we clearly said, “We want to create smarter products, we want to develop our standard services, and we want to develop new digital services.”

Asking new questions

What is important for our people to understand is, we are starting with a different question. In the past, we developed hardware. Then we developed a better, more modern, higher-performing version of it. And only then we started looking for customers.

In the future, we will start by asking the question, “What problem do we solve?,” looking for a software perspective, going into the hardware perspective, and adapting other products in the way that our customers need. There will be a shift in thinking toward our R&D. But it also creates a new, more agile thinking inside our teams. We are trying new things.

People get worried about digitization because there are a lot of people that don’t understand what this means for them. It took me a while to explain that our new strategy is not about creating new services—or new data-driven services—and giving up our traditional hardware platforms. These hardware platforms are generating the data that are uniquely used for all the data-driven services. Data-driven services are complementary businesses, and they are creating new jobs.

It doesn’t eliminate existing jobs. It took a while to convince our people that this transformation is something good for the future, because it enables us to create new revenue streams, which will empower us to put more money in R&D and develop even smarter products in the future.

Competing on data

Together with DigitalGlobe, we provide most of the satellite pictures of the world. We also have a lot of historical data, which is stored, and partially used once we know the location and time.

We’re looking at the fast-developing machine-learning and AI [artificial-intelligence] technologies. We’re also looking at the development plans of many companies going into cognitive analytics, which combined with quantum computing, will enable us to do analytics that we have not been able to do in the past.

We have a data-driven service already up and running: it's an application called Farmstar, for agriculture, where we serve farmers with data regarding fertilizer and watering of their fields. We give them exact overviews on how to improve the crop and the harvest in their area.

This is a stand-alone service. There are still farmers that are not connected to the Internet. They still get paper versions of our analytics, and it works fine. But most customers are digital, connect to the platform, download the information, and use it for harvesting their fields.

The good thing is that we're not only providing the products that can generate the data but we're also providing the ones that can handle the transfer of the data. For example, we have our own business for secure communication, for encryption. We have developed and put into service—recently in November—what we call the space data highway: a technology based on laser, in order to transfer data to satellite at a much higher speed than the traditional technologies, which not only enables satellite-to-satellite communication but also earth-to-ground communication.

Think of Africa, where you see the leapfrog to telecommunication, and a lot of the business today is handled through smartphones. But coverage is a topic, especially Internet services and data services.

Insulation and putting towers everywhere is an expensive investment. But imagine hundreds of thousands of our HAPS [High Altitude Pseudo-Satellite] systems over Africa, over a specific country, deploying these kinds of services at a high quality. ▣

Rik Kirkland is the senior managing editor of McKinsey Publishing and is based in McKinsey's New York office. **Dirk Hoke** is the CEO of Airbus Defence and Space and is based in Munich; previously, he was the CEO of the Large Drives business unit at Siemens.