



# When Racehorses Fly First Class

Emirates SkyCargo is counting on new technologies.

Text Jörg Hoffmann Photos Emirates

At the Emirates SkyCentral cargo terminal in Dubai, United Arab Emirates, the temperature has just reached 99 degrees Fahrenheit. The Boeing 777 unloading at one of the 46 ramps is part of a 14-plane freighter fleet operated by the Emirates company, which is headquartered here. Over recent years the firm has substantially increased its activities in Dubai's Logistics District. At \$3.4 billion, cargo accounted for 14 percent of Emirates' total revenue in 2017. Emirates SkyCargo is also the world's largest international cargo airline in terms of freight ton kilometers flown. According to Henrik Ambak, who heads Emirates' worldwide cargo operations, the division stands on four pillars: "our network reach, our capacity, our quality, and our vertical orientation with special services for sensitive items like pharmaceuticals."

But Dubai is not the only place to see major expansion in the cargo sector. The world economy is growing, and global goods transport is reaching ever higher record levels. According to the International Air Transport Association (IATA), worldwide air cargo volume rose by 9 percent in 2017, and in Europe by 11.8 percent. A study by the International Transport Forum in Paris predicts that transport volume and mobility will continue to expand rapidly in the years to come. It estimates that the worldwide volume of cargo could triple or more by 2050. The job now is to prepare for this. Alexandre de Juniac, General Director of the IATA, therefore called upon air cargo operators riding high "on a stronger worldwide economy" to use this dynamic to "move more quickly in doing urgently needed modernization work on processes."

"Digitalization already gives cargo companies the chance to become up to 50 percent more efficient," says Joachim Kirsch, Senior Partner at Porsche Consulting. For example, digital control systems can automate the flow of goods, optimize vehicle routes via continuously updated traffic data, and enable cargo containers to communicate with each other so their contents arrive at the right place at exactly the right time. But cargo director Ambak sees an urgent need to address one obstacle in particular. "The hurdle is not the technology, but national and international regulations. Many customs offices, for example, are still stuck in the analog age. In a lot of places it's utterly impossible to get clearances without at least 10 paper documents complete with stamps and signatures."

Kirsch remains optimistic. "Regulations will be adapted to real conditions and the needs of industry," he says. "We're seeing that in other areas—with driverless cars, for instance. For cargo companies, right now it's a matter of laying the groundwork for transformation and developing digital agendas throughout the entire transport chain. When the framework conditions are there and the right minds for digitalization are on board, everything will move very quickly. Companies that keep up will be able to position themselves well."

Ambak sees fundamental changes for air cargo on the horizon. Cargo drones are not just conceivable but already technically feasible. "Essentially, these are autonomous vehicles that can fly. These types of drones already have an established place in the military and can transport large objects," he notes. But air traffic controllers simply do not yet have the capabilities to monitor self-flying objects. Automated developments are proceeding faster on the ground. "Loading processes are still largely manual, but we're working on making them more efficient with the help of robots. It's a straightforward task for the standardized containers themselves. Our challenges have to do with the considerable variations in size, weight, and shape of the contents that go into them." When it comes to data, air cargo is ahead of transport by ship or rail, because standards for data exchange among airlines, dispatch companies, and carriers have already been in place for decades.

But the digital transformation underway in industry worldwide is also causing some uncertainty in the cargo sector. Technologies like robotics and 3-D printing are changing the world of production.

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The air cargo sector enjoyed a record year in 2017. Leading the field, Emirates carried 2.6 million metric tons (up 2 percent) and increased its sales by 17 percent. The company has recently introduced special offers for perishable products and pharmaceuticals.

Lufthansa Cargo AG's transport business showed the highest increase in sales. It reported a rise of 21 percent to around \$2.9 billion and a profit of around \$278 million. In 2018 the airline with the crane logo plans to invest above all in ground infrastructure and digitalization. In future years it expects to be digitally networked with all members of the transport chain, from booking to delivery.

Cathay Pacific holds the top position on the market in East Asia. This Hong Kong-based airline benefited most strongly from the rise in Chinese exports. Its sales rose by about one-fifth in 2017, to the equivalent of around \$2.6 billion.

The Luxembourg-based Cargolux company reached new heights in 2017. At the end of last year it reported a 4 percent share of the world market and a net profit of more than \$115 million. Its success is due in large part to strong China-related business at its site in Zhengzhou.

Korean Air's cargo business also showed strong growth in 2017, with sales up by 13 percent to \$2.5 billion.

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**Henrik Ambak**, a native of Denmark, heads Emirates SkyCargo's operations at its hub in Dubai and more than 150 other sites worldwide.

They will also have long-term effects on the global flow of goods. "We've already had to respond to shifts like this in the past," says Ambak. "We used to transport goods at a four-to-one ratio from Europe to Asia, but now Asia—and China in particular—is importing nearly as much as it exports."

Emirates is carefully observing where the new transport routes are arising. One example Ambak mentions is the New Silk Road. Under the motto "One Belt, One Road," China wants to invest around \$1 trillion in expanding trade routes between Asia and Europe. Plans call for power stations, pipelines, and industrial and logistics centers to be located along these routes. It is not yet clear what effects such projects will have on the cargo sector. "We work in a very volatile market," says Ambak. "Nobody predicted our current heights, and nobody can say with any certainty how things will

look in the future." This makes it difficult for airlines to assess matters such as whether to invest \$180 million to \$200 million for each new cargo plane.

But Ambak is sure that there will always be a need for air cargo services. The speed speaks for itself. "It takes 15 days to ship goods from Shanghai to Frankfurt by rail, but no more than two by air." Air transport is especially suited for goods that have to reach their destinations quickly, such as pharmaceuticals, flowers, and fresh produce. That also applies to products of high monetary value, like smartphones, gold, or—more often than one might think—top-notch racehorses. As Ambak notes, not without pride: "While air cargo accounts for only 0.8 percent of all goods transported by volume, these goods are worth 33 percent of the total value of worldwide cargo."