

Air-freight forwarders move forward into a digital future

Digital challengers can't replace every step in the value chain, at least for now. But they will nonetheless transform it over time.

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The past year was an extremely good one for air freight.¹ That's partly the result of capacity discipline and consolidation in container shipping. But the sector can attribute most of its current prosperity to the restocking of business inventories after a period of unexpectedly strong global economic growth and consumption. Our analysis suggests that air-freight volumes will continue to increase, by an average of about 3 percent a year, at least until 2025 and most likely until 2030. Many industries would be happy with that sort of future. And air-freight forwarders—companies that help shippers cope with the complexities and annoyances of moving their goods by air—will participate fully in it.

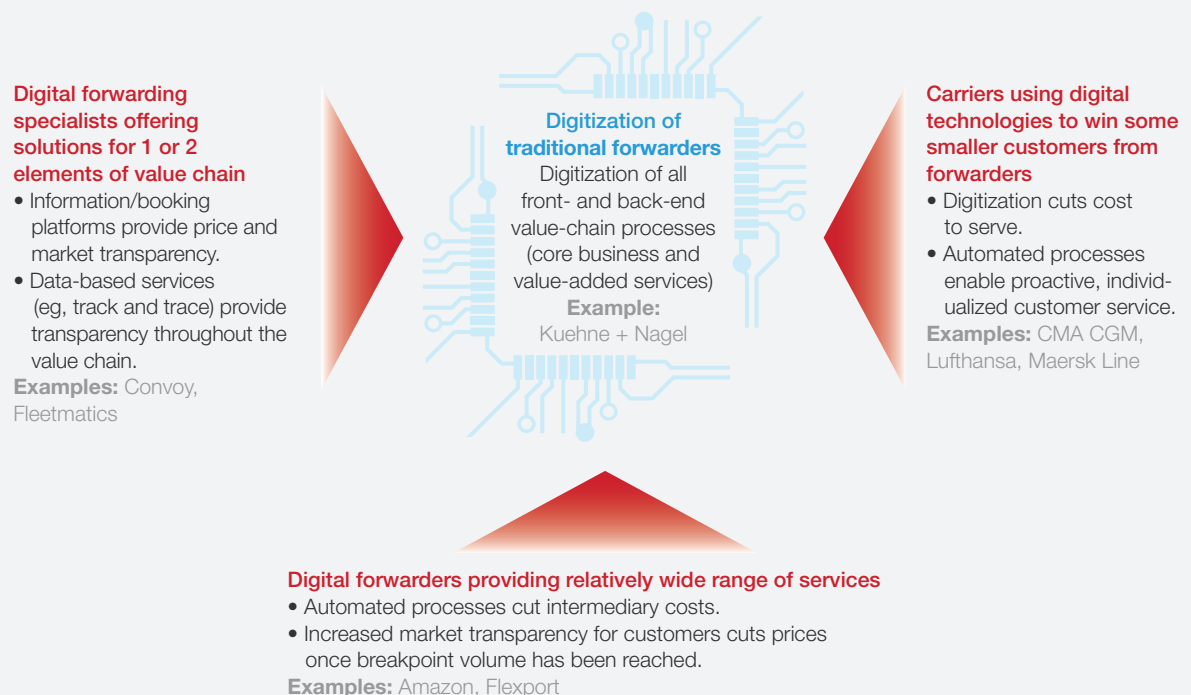
Yet not all is well for air-freight forwarders and cargo airlines. Faster growth in belly capacities and modernized freighter fleets will subject general cargo to price pressures of up to 3 percent a year—in other words, revenues may be almost flat despite

higher transport volumes. An even bigger question hanging over the business today is digitization. New technologies, such as advanced analytics and machine learning, can help companies automate some of their back-end and customer-facing processes and raise levels of utilization. But these technologies will also disrupt air-freight forwarding profoundly over time.

The specter of digitization

Traditional air-freight forwarders face increasing pressure to digitize from three sources: (1) digital forwarding specialists offering solutions for one or two elements of the value chain, (2) digital forwarders providing a range of transport services almost as wide as traditional forwarders do and a better customer experience at relatively low cost, and (3) carriers building and improving their digital channels to serve customers, especially smaller ones, directly (Exhibit 1).

Exhibit 1 Traditional air-freight forwarders face increased pressure from three directions to digitize.



Although digitization will change both supply and demand, the course of technological progress is harder to predict now than it was in past disruptions. Several future scenarios are conceivable, depending on the adoption rates of the technologies that influence the pace and extent of automation and collaboration, the substitution of flows from one form of transport to another, and the ability of 3-D printing to displace significant volumes of air-freight cargo flows.

Here we present one plausible scenario for 2030. In this future, air-freight forwarders will automate their operations significantly, digitizing much of their business model. They will collaborate extensively with adjacent value-chain partners—for instance, providers of intermodal services. 3-D printing won't have a major effect on air-freight cargo. The role of intermediaries will contract, and consolidation will threaten many smaller forwarders that struggle to digitize. The more comprehensive digital forwarders will act as catalysts for the new technologies, but, increasingly, successful companies will be specialists, offering advanced data-based solutions. All surviving forwarders will be more digitized by 2025 than they are today, and by 2030 they will be very digitized indeed. The better they leverage these technologies to reduce their internal costs and improve the customer experience, the better their chances of keeping or extending their share of the profits.

How much of the incumbents' current profit pool will be redistributed by automation and technology in general? In our plausible scenario, it shrinks by 20 to 30 percent. One to 3 percent of today's profit pool will be captured by vertical digital specialists focusing primarily on increased market transparency for products, services, and rates, as well as on value-added services. The carriers' share will probably rise by 10 to 15 percent, but those gains will go to companies that use new online channels to serve smaller customers directly and to promote

collaboration along the value chain; other carriers will face increasing commoditization pressures. And since digital technologies will cut the air-forwarding industry's costs and rates, 10 to 15 percent of today's profit pool will end up in the pockets of customers—that is, shippers.

The behavior of those customers will change significantly and so, in the long run, will their expectations about the customer experience. Many larger shippers have long used electronic data interchanges (EDIs) to book their orders. Smaller and midsize shippers are now moving to online channels: search volumes for Google queries related to freight forwarding and air cargo have increased by 16 and 7 percent a year, respectively, since 2014.² For non-EDI customers, however, fully digital booking is mostly not yet possible. A few companies have succeeded in making it easy and are therefore capturing most of these sales. But among a majority of providers and carriers, telephones and email are still the dominant channels, just as they were decades ago.

When customers do use online channels to find forwarders and to book and manage their shipments, they face many breakpoints: for example, only 60 percent of carriers and forwarders offer online registration. The share providing online quotes is even lower; it's mostly impossible at carriers and forwarders alike. Managing shipments in transit hasn't changed a lot either, but digital invoicing is a bit more advanced. These breakpoints explain why so many start-ups (and some investors) see huge potential in disrupting the freight-forwarding business. Many have already taken important steps along the path to digitization. Yet the level of disruption is considerably lower here than it was with air-passenger and travel bookings even 20 years ago, for the freight-forwarding industry deals not with "self-loading intelligent cargo"—human passengers—but with complex B2B processes that involve many handovers and participants.

Digitization challenges six sources of value

Today, no digital forwarder provides the full breadth of traditional forwarding services. Many start-ups have successfully digitized one or more parts of the value chain, such as quotations or invoicing, but none of them covers it in full. That probably wouldn't be possible, except, perhaps, for simple shipments, since the full range of services requires physical assets, such as cross-docks for inland transport.

Let's look at the possibilities in greater detail. Traditional air-freight forwarders have six sources of value (Exhibit 2):

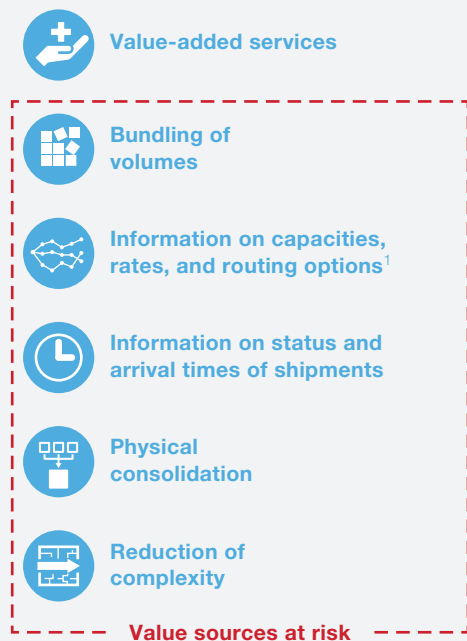
1. Their biggest generator of profits is value-added services—for example, customs clearance, warehousing, and packaging—that extend

beyond the scope of pure transportation. Although new vertical specialists such as Fleetmatics have targeted these highly lucrative services, only a few can be digitized: for instance, cargo insurance, so-called control-tower solutions for all a given shipper's cargo in transit, and notifications. Most value-added services (including customs clearance, labeling and packaging, and managing inland connections) will require physical interactions, at least for the next ten to 15 years.

2. The bundling of volumes lets forwarders appear as a single large customer rather than many smaller ones and creates stronger purchasing power through economies of scale. It therefore

Exhibit 2 Digitization will put almost all of the traditional air-freight forwarders' sources of value at risk.

Value sources for customers



Activities of new digital players

Demand for better data will help digital platforms bundle volumes for simple and some complex products.

By partnering with carriers, digital platforms provide this data more quickly and at lower cost.

Over time, digitized vertical specialists will improve their track-and-trace offerings.

High-quality data will help digital players improve the matching of demand and capacity.

Digitization eliminates complexity only in part—for example, booking engines combine some stages for end-to-end product.

Example

Freightos, 4flow

Xeneta

Port of Antwerp

Amazon

CMA CGM

¹ Value source applies only to forwarders.

cuts prices and, in some cases, improves the quality of service. Digital platforms too can bundle volumes, and they will capture this advantage over time by cutting prices for simple products, such as direct port-to-port full-truckload shipments. The demand for higher-quality data will also help digital platforms bundle volumes for some complex products (including the procurement of long-term capacity), as Cargomatic or Load-Me do now. At present, however, complex products—for instance, less-than-truckload and door-to-door offerings—still require manual intervention and are therefore less subject to digitization.

3. Traditional freight forwarders offer customers information on rates, available capacities, and routing options. Whether they will manage to offer real-time rates despite freight-all-kind pricing remains to be seen. Yet by partnering with carriers, digital platforms such as Freightos or Xeneta (in ocean-freight shipping) also provide this kind of information—more quickly and at lower cost, since less human labor is involved.
4. Traditional companies provide information on the status of shipments and predict when they will arrive. Over time, vertical digitized specialists will improve their track-and-trace offerings by capturing and processing better real-time data on shipments and analyzing this information more accurately. Meanwhile, the introduction of blockchain technology may lower dependence on publicly available information, such as satellite data.

Already, for example, the Port of Antwerp has joined with the data-sharing platform BRUcloud, the open-data platform NxtPort, and Air Cargo Belgium to bring all the region's transport players together in a data cloud for multimodal solutions. Steven Polmans, the head of Air Cargo Belgium and Brussels Airport Cargo, points out that "some of the applications we are making are

dealing with problems that are exactly the same in the port, such as truck waiting times, and the airport." The benefits of a single application would be the same for both modes of transport.³

5. Physical consolidation increases the utilization of assets and therefore cuts rates. Can digitization do better? In part. The availability of high-quality data improves the matching of demand and capacity, taking into account weight and volume restrictions. Nonetheless, physical consolidation still requires physical capabilities. Several vertical specialists have evolved to help carriers optimize the repositioning of their empty equipment, however. Avantida, for example, provides an online platform for inland equipment flows to check whether empty containers can be reused for export customers.
6. The air-freight forwarders' most prominent source of value is reducing the level of complexity for customers—one contact person manages all services along the transport chain, globally, from door to door. Digitization can eliminate this complexity only in part: for example, booking engines like CargoBase combine some individual stages (such as airport-to-airport air carriage and onward "hinterland" road haulage) into an end-to-end product for customers.

What about communicating information on errors and resolving them? McKinsey's large-scale surveys of shippers show that these two basics are still among their top five needs. To deal with errors in a way that's reassuring to customers, companies must have infrastructure and relationships with airports, carriers, handling agents, and ports across the world. All this is hard to digitize. So is the work of a knowledgeable and caring staff—among the top ten needs. The top five also include competitive prices, loss- and damage-free delivery, and reliable transit times. Tech-enabled requirements, such as more

visible shipments, faster quotations, and simpler onboarding and interactions with forwarders, scored lower on the survey.

How the competitive dynamics may shift

Don't overestimate the attractions of the new digital business models. Digitization has its limits, at least for now. Many traditional companies are much larger than digital ones⁴ and therefore have significantly lower procurement costs and consolidate shipments more easily. Air-freight transport chains will continue to be dazzlingly complex, so shippers want trusted, experienced, and reliable partners to manage the problems, and the disruptors don't yet have that kind of credibility. And as we have seen, the irreducibly physical aspects of the business require physical assets, and nothing except inertia prevents the traditional companies, which have them, from digitizing themselves: Damco, for example, set up a digital subsidiary, Twill Logistics, that uses its infrastructure.

Nonetheless, the competitive dynamics may very well shift in a way that favors the digital contenders. For starters, they can attract more business, and therefore neutralize the traditional firms' size advantage,⁵ by investing in physical assets; Flexport, for example, has started investing in cross-docks to provide better end-to-end services, including inland services. Digital technologies will enable the disruptors to go on cutting their cost to serve and improving the customer experience, especially for smaller shippers. Over time, some digital forwarders will compete more and more aggressively—and more successfully as well.

In any case, though our survey suggests that digitized solutions and services aren't the most important ones right now, the expectations of customers will change as more millennials and digital natives become supply-chain managers and the service offerings of disruptors such as Flexport,⁶ Kontainers, and Twill Logistics mature. In fact, such companies say that their business has already

been growing strongly during the past few years, especially with smaller shippers. In the long run, traditional forwarders must therefore address these evolving expectations.

Digital forwarders aren't the only threat to traditional ones. Alibaba and Amazon can bundle huge volumes for both their captive business and the business they manage for third-party merchants. It's not clear how these giants will use their power, but in the future the forwarders' consolidation and scale advantages will probably be less relevant for e-commerce. Integrators such as DHL Express use air-freight capacity that's not required by their normal parcel loads to offer end-to-end services for heavy cargo, but for them this is still a side activity.

The cargo airlines, as we noted earlier, are exploiting digitization to move closer to shippers and avoid using forwarders as intermediaries for parts of the business.⁷ Today, bookings straight from shippers to air carriers probably account for less than 10 percent of all air-freight business by revenues,⁸ but that proportion could grow. None of these carriers has attempted to do what Maersk has done in container shipping: expanding into a fully loaded, end-to-end container-logistics provider. Industry observers stress that the carriers can't offer an end-to-end service, and don't want to. Yet the websites of many leading companies (such as Cargolux, Delta Cargo, and Lufthansa Cargo) have web features for online quotes or bookings, so they are targeting some of the forwarders' smaller customers directly. The carriers have also expanded their service offerings beyond airport-to-airport bookings by moving, for example, into cross-border e-commerce, although that will happen through partnerships.

Intercontinental B2C cross-border shipments are a new opportunity with a variety of options, such as airport-to-airport and door-to-door services. By 2025, total intercontinental B2C air-freight demand will increase by more than \$10 billion. But here too the forwarders face competition from other industries:

for example, integrators and postal services cooperating with third-party logistics companies, as well as asset-light e-fulfilment providers (including Newgistics, acquired by Pitney Bowes in 2015), which assume the role of virtual consolidator.



The pressure on traditional forwarders will surely increase as digitization continues its long march through the world economy. They must now consider their strategic choices carefully. First, embracing digital technology in customer-facing and back-end processes is a no-regrets move for them. Second, they must place strategic bets on building or buying marketplaces or partnering with emerging digital platforms. But they should also emphasize the things they themselves excel at—offerings based on people and expertise, which are hard to turn into commodities. If these companies succeed in all this, they will continue to play a major role in the forwarding game. If they don't, they may well face a future of constant and accelerating decline. ■

¹ This article is based in part on Ludwig Hausmann's presentation at the International Air Cargo Association's Executive Summit 2017, which met this past October in Miami, Florida.

² *A new perspective on digitalization-driven value creation in travel and logistics*, a Google-McKinsey-Kühne Logistics University collaboration, forthcoming.

³ Alex Lennane, "Hi-tech solutions bring some joined-up thinking to air and sea," *Loadstar*, September 15, 2017, theloadstar.co.uk.

⁴ In ocean freight, for example, Flexport's current volume accounts for roughly 1 percent of Kuehne + Nagel's annual volume.

⁵ Of course, not all traditional forwarders are big. But the small ones will probably vanish in the coming world of digital freight.

⁶ Flexport's strength is ocean freight, but it gets about 15 percent of its revenues from air freight. The number of its small and midsize customers has increased 15 times year on year. Ludwig Hausmann, "The rise of the digital forwarder," *TIACA Times*, Fall 2017, tiaca.org.

⁷ So are ground-handling agents and other players.

⁸ Ludwig Hausmann, "The rise of the digital forwarder," *TIACA Times*, Fall 2017, tiaca.org.

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