



Riding the pharma wave

As carriers further their efforts to tap this high-yield sector, the landscape continues to evolve as a result of market developments, customer demands and regulatory changes, reports **Donald Urquhart**



Dehio: A number of cargo carriers have jumped on the pharma bandwagon

The high-yield pharmaceutical commodity now forms half of what is best described as the 'dynamic duo' which, alongside e-commerce, has turned into a steadily growing backbone for the air cargo sector, helping to keep it aloft over the last few years at times when traditional air cargo demand has been weak.

While figures on its growth vary widely, there is no disputing the lucrative nature of uplifting this valuable and highly sensitive commodity. The International Air Transport Association (IATA) says the global pharma market is expected to be worth US\$1.2 trillion by 2022, with around US\$12 billion currently spent worldwide on cold-chain biopharma logistics alone, forecast to rise to US\$16.7 billion by 2020.

With seemingly no end in sight for global pharmaceutical demand and, by extension, specialist cool-chain logistics, it's easy to see why companies are eager to get a piece of the pie. One need only look at the plethora of speciality cool-chain products being rolled out by air cargo companies and the rush to achieve recognised pharma certifications – the European Union's Good Distribution Practice (GDP) and the more recent IATA Center of Excellence for Independent Validators in Pharmaceutical Logistics (CEIV Pharma) certification being the two key routes.

The figures presented by some air carriers over the last couple of years also tell a tale of fantastical growth

that can seem out of sync with the sector overall. While WorldACD data indicates pharma volumes (chargeable weight) by air grew by 12.8% in 2016 over 2015, it is not unusual to see significantly higher growth numbers reported by carriers.

But there are a number of reasons for this. As Lufthansa Cargo's senior product manager for temperature-sensitive logistics, Chris Dehio, points out, the last few years have seen quite a number of cargo carriers entering the cold-chain market and jumping on the proverbial bandwagon. While these carriers have seen significant growth, their tonnage is still low compared to established players in this sector, he notes.

And Finnair Cargo's managing director Janne Tarvainen highlights a recent emergence of "sub-products under the Pharma envelope", which might also account for the large growth rates. Pharma is also rather concentrated on a few origin points – in Europe that means just four countries represent 57% of the total origin market – Tarvainen adds, and thus route openings may make a bit difference to the volumes of pharma carried.

But perhaps one of the most significant reasons for the discrepancies between sector growth and individual carrier growth figures is more mundane: different approaches to how these numbers are derived. As Fedor Novikov, deputy general director of pharma at AirBridgeCargo Airlines (ABC) notes: "Some operators used to carry a lot of pharma shipments as general cargo, but now with the rise of clients' requirements for transportation services, carriers won't accept pharma shipments as general cargo, but will accept them only using their specific 'pharma products' for temperature-sensitive goods."

Another reason could be differing approaches to identifying goods as pharmaceutical shipments: "The list of pharma-related commodities is huge: healthcare shipments, medical devices, chemical reagents, etc., and different companies and market intelligence agencies have different ways of allocating them to pharmaceutical

shipments," he notes.

Julian Sutch, manager for global cargo accounts at Emirates SkyCargo, says air cargo analysts may only track shipments identified as 'pharma' being moved by air, whereas "much of pharma still gets registered as general cargo". But he agrees that as pharma shippers and their forwarders have become more demanding in terms of quality assurance, there has been a huge shift from pharma being shipped as general cargo to temperature-controlled, with India seeing the largest shift.

Evolving pharma markets

Behind these changes is a tightening within the regulatory environment for pharma manufacturers and shippers, including from organisations like the World Health Organisation (WHO) and international and national regulatory authorities, for more reliable



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temperature control during transport, says Emirates' Sutch.

And although 'pharma' transport has always been a niche product requiring higher levels of care, until relatively recently there had not been any substantive benchmarks. "However, after the European Union's GDP implementation, the principles pharma manufacturers use in their production started influencing the transportation industry as well," says ABC's Novikov.

Clifford Kwok, Cathay Pacific's manager for cargo customer solutions and airline partnerships, says: "More regulations are being imposed on pharmaceutical shipment releases to the market as customers are more concerned about the quality of air transportation." This means customers have become more focused on airlines' quality management, which includes supplier management, with the expectation that airlines will deliver a consistent service throughout the logistics chain.

Adrian Goh, senior manager for key accounts and verticals at Singapore Airlines Cargo (SIA), makes a similar observation. "Increasingly, customers are become more exacting in their requirements for processes to ensure product integrity," he says. They are also seeking easier and timelier access to shipment data, such as real-time temperature readings throughout the transport process, he adds.

Customers are also increasingly aware of new guidelines and processes and often require the transporting carrier or supplier to sign service level agreements (SLAs) – usually derived from GDP guidelines – to manage compliance and service levels. There is also an increase globally in pharma compliance and capabilities of ground handlers, helping to facilitate the seamless transport of temperature-controlled pharmaceuticals.

The major pharma manufacturing destinations including India, Europe and the US, are all markets where SkyCargo's Sutch sees customers' requirements evolving. There has been a certain amount of consolidation in global product manufacturing and guidelines from international and national regulatory authorities have

driven this change, he says.

Much of the impetus for regulatory change emanates out of Europe and the US, where the introduction of new standards is traditionally implemented earlier than in other regions. As a result, most of the recent changes in customers' requirements are being felt in Asia, India, and Russia, says ABC's Novikov. The EU's GDP, for instance, has been adopted in Russia, and other pharma emerging countries are also on the way to changing their requirements. And India, previously raw-material export oriented, is now well on the way to entering the more technologically advanced pharma market, Novikov notes.

"As a result, the market in India is reviewing quality and risk management, and shippers are demanding more and more services with constant temperature control. For a long period of time, Asia has been a more import-oriented market; but lately, as more new production facilities are being established in the region, the demand for air freight export of pharma products is growing," he says.

Lufthansa's Dehio adds: "Generally, we see an increasing drive of the healthcare industry to close gaps in temperature-controlled cool chain logistics. This makes it more important

to have immediate and reliable access to information such as position, temperature and other transportation parameters." This has led to a "strong motivation" to shift from being corrective – using the data to prevent future disturbances – to being preventive, meaning using the data to prevent disturbances before they occur.

But Dehio says the pharmaceutical industry is not homogeneous,



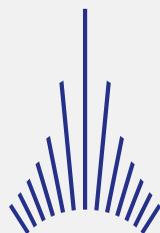
Novikov: Rising use of specific 'pharma products'



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and individual companies have particular needs that may vary considerably. This also depends on the type of medication and on local import and export requirements, for example.

“While one company may have a strong focus on immediate access to data, another may have a strong focus on maintaining the required temperature, and another yet will want to have detailed information on infrastructure and capabilities at origin and destination – and any mix of the above,” he says.

Other factors

But other changes within the pharma sector are at play. Many drugs are facing ‘patent cliffs’, driving the value of the drugs downward, observes Cathay’s Kwok. As a result, pharmaceutical companies are becoming more and more stringent in terms of logistics cost control and are sourcing cheaper logistics solutions and packaging in the market.

pharmaceuticals and specialised tailored drugs are now on the rise, although developing countries are also seeing demand grow as people’s awareness and ability to purchase medicine increase.

China is an interesting example. “We are very enthusiastic about the evolving demand for pharma, medicines, vaccines and other healthcare material to and from China,” says Jan Krems, president of United Cargo. For example, China recently approved a US drug manufacturer’s all-oral treatment for hepatitis C, the first therapy of its kind to be sold in China to treat a condition that afflicts nearly 10 million people in the country. Other Asian locations also seeing growth include Seoul, South Korea and Singapore, for both imports and exports, Krems notes.

On the production side, Lufthansa’s Dehio notes: “On a very general level, one might say that the markets where generic pharmaceuticals are produced (such as India and China) have stronger growth

Satisfying shippers

But such demanding markets, customers and regulatory needs are obviously not easily satisfied. “As shippers’ needs continue to evolve to match consumer standards, there will always be room for product improvement and capability enhancement,” says SIA’s Goh. This, in the Singapore carrier’s case, has led to a continuous honing of SIA’s capabilities to provide customers with benefits such as real-time tracking and access to temperature data of shipments.

This desire for visibility and transparency has been a key demand of shippers, confirms Finnair’s Tarvainen, although it is not one the air freight sector has traditionally excelled at. For those that get it right, the potential payoff is substantial. “We believe that the future of the historically very conservative air cargo industry will see disruption due to digitalisation and utilisation of data,” says Tarvainen.

But for now, this is still an area with problems including a major gap between expectations and reality over the issue of global temperature tracking. Although there are devices today which can be used to track location, temperature, shock, light, and so on, in most cases these devices cannot remain switched on during the complete duration of the flight because of possible interference with on-board systems. And a number of these devices also use lithium batteries, raising other issues, cautions SkyCargo’s Sutch.



At the same time, partially in response to the expiring patents, modern pharmaceuticals are also becoming increasingly sophisticated to treat specific medical conditions, increasing their sensitivity to temperature-related changes and requiring more specialised handling procedures, notes SkyCargo’s Sutch.

Global growth

Carriers report growth in almost all the trade lanes they serve, although some of the characteristics vary. On the consumption side of the pharma equation, developed countries continue to spend more on

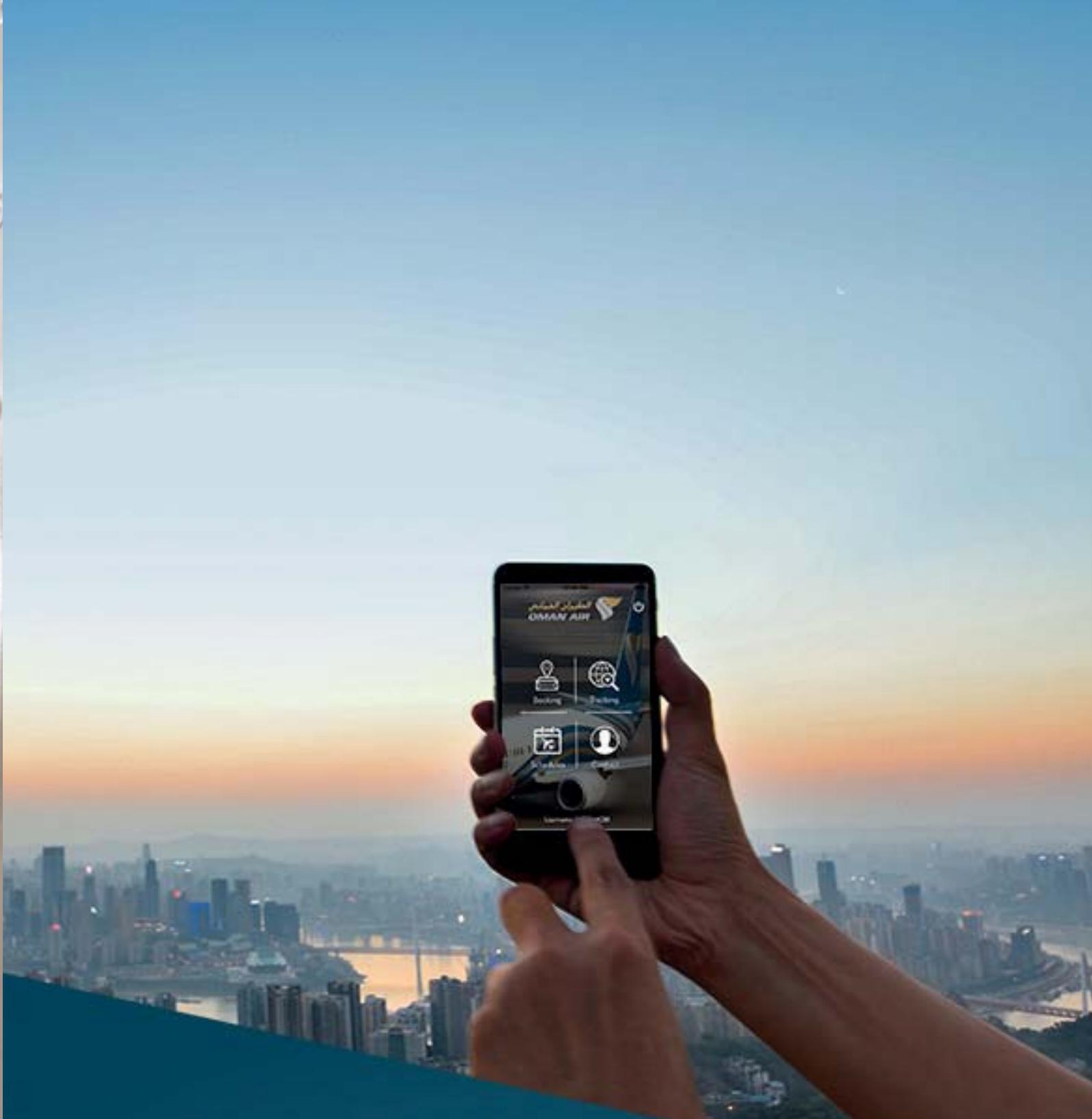
than countries that produce original pharmaceuticals. As patents run out and blockbuster medication becomes rarer, the pharmaceutical industry is developing in countries with low labour costs.”

He adds: “There is also a development towards personalized medication or precision-medication (particularly in oncology), but that area currently involves very small volumes and a high degree of monitoring. It remains to be seen if this is a trend that only involves ‘the last mile’ or if larger volumes will be produced in low-cost countries that would then require fast, secure and safe transportation.”

Gaps in the system

Another gap is the limited infrastructure in terms of both ramp protection and cool facilities offered by ground handlers at many airports. And customs inspections sometimes take place in areas that are not temperature controlled and where the air cargo carrier has limited control, he adds.

Indeed, temperature incursions are the bugbear of this sector, and while air carriers generally have a good solution for every type of requirement, whether these are used depends on the “balance between the level of protection and what it costs”, highlights Lufthansa’s Dehio. An active



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container will be able to maintain a climate within very tight limits, but the costs are high, whereas a cheap, foam insulated box will provide only rudimentary protection.

This dilemma is a big issue in the US air freight market at the moment, notes ABC's Novikov, where the industry has been focused on the development of active solutions for temperature-sensitive goods, using active cargo containers. But due to the generic drug volume increase and cost-reduction programmes started by the big pharma players, passive solutions are in greater demand in the US now.

The air freight industry is investing in the development of passive solutions to be able to handle increasing temperature-sensitive healthcare shipments and it is not only US companies facing this issue; the rest of the world is also still trying to achieve the required level of services for passive packed healthcare shipments, says Novikov. And again, this is where transparency and data become critical issues.

Ocean's threat

Meanwhile, another issue is the loss of air cargo's share of global pharma products to ocean freight. This is driven largely by cost, along with improved service levels on the ocean side. "With improvements in technology and packaging solutions, ocean freight

has become a more viable option for pharmaceutical companies which are seeking to lower their freight costs," says SIA's Goh.

If pharma shippers have suitable products and they are able to plan their production well, they are able to use sea freight even with the longer transit times compared to air freight, says Finnair's Tarvainen. This basically amounts to large-volume, low-value, long-shelf-life pharma products. But this modal shift to sea has also resulted from issues with temperature excursions in air cargo due to lack of compliance and processes, something that is being strenuously addressed across the industry.

There is also another factor that has precipitated the shift to either sea or land, according to SkyCargo's Sutch. This occurs when manufacturers look at the total time door-to-door and find they are able to clear their cargo quicker at the sea port or land border in certain countries.

But ocean freight is not always an ideal solution for the carriage of highly expensive drugs that require proper handling, cold-chain management, and a fast transit time, adds Cathay's Kwok. "Today's ocean containers are very robust; however, if a container malfunctions, the large volume of drugs contained within could all be affected, causing a total loss of the entire shipment."

Despite a rise in the carriage of pharma

products by ocean, there will always be a demand for shipments by air, Kwok says. For example, products such as seasonal vaccines or drugs needed in times of epidemics "will require air freight to deliver the drugs in the shortest possible time frame, in a proven and controlled manner".

SIA's Goh adds: "Shorter transportation time, including direct access to hinterland points, continues to be of paramount importance for time- and temperature-sensitive pharmaceutical shipments, and this remains the unique value proposition of moving pharmaceutical shipments by air."

ABC's Novikov says speed, safety and reliability remain the main and decisive factors for pharma shippers, in choosing air freight over sea freight. "Air freight is still essential for the pharma supply chain, which is becoming more and more complex when transporting high-value vaccines, blockbuster drugs, clinical trial shipments and products that are extremely time- and temperature-sensitive."

And United's Krems concludes: "Ocean and other transport modes have some advantages from a cost perspective. For the most part, however, our customers are looking to benefit from the greater speed, safety, security and control that air freight provides for their very sensitive commodities." ■■■