



WHITE PAPER

# **IMPACT OF COVID-19 ON THE AIRFREIGHT LIFE SCIENCE AND MEDTECH INDUSTRY**

**An executive summary on the short-term consequences  
and the new normal**

**AUGUST 2020**

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# 1. Introduction

COVID-19 has caused much disruption to the world. Since the start of the pandemic in early 2020, many lives and businesses have been affected with governments over the world forced to impose travel bans, lockdowns and quarantine in a bid to curb the spread of the virus. Air travel has also been impacted in an unprecedented scale – international air travel has almost come to a halt and global supply chains severely disrupted.

Amidst these uncertainties, Pharma.Aero, in collaboration with STAT Trade Times, organised a series of three webinars over the period from May to June 2020, with the aim of bringing the respective stakeholders across the pharma supply chain industry to understand the challenges they face and how the industry can support each other to tide through this challenging period while emerging stronger from the pandemic. The series of webinars engaged supply chain leaders of global pharmaceutical companies, as well as key stakeholders across the air cargo industry.

Each webinar featured rapid fire presentations, in which opinion leaders set the stage for discussion and shared their perspectives. This was followed by a moderated round-table discussion, in which industry experts weighed in their views on the topics raised and had an open discussion with the presenters and participants.



The three webinars were moderated by **Frank Van Gelder**, Secretary General, **Pharma.Aero**.



## 2. Webinar 1: Current impact of Covid-19 on air logistics for life sciences and med-tech industries

The first of the three-part webinar series touched on the knock-on impacts of COVID-19 on the air cargo supply chain for life sciences and MedTech industries. With significant cargo capacity gap and the urgent nature of pharma shipments, pharma shippers shared their strategies to overcome the initial capacity shortfall and to instil greater resiliency into their supply chain networks.

### 2.1 The Perspectives: a word by the opinion leaders



**Eddy Weygaerts**, Senior Manager Logistic Delivery and External Supplies, **Pfizer** and Director in the Board of Directors of **Pharma.Aero**, cited the need for pharma companies to ensure the continuity of their product

supply worldwide amidst the uncertainties. In the current dynamic business climate, traditional supply chain approaches might no longer be relevant. Instead, pharma shippers will need to adopt a more pragmatic and direct solution with airlines to ensure timely and effective distribution of their products.



**Steven Polmans**, Director Cargo and Logistics, **Brussels Airport Company** and Chairman of **The International Air Cargo Association (TIACA)**, highlighted the vulnerabilities within the airfreight industry during the initial phase of the pandemic. The pandemic has accentuated the weaknesses of the industry. Community collaboration and flexibility across the supply chain would be key to identify and overcome these gaps and meet the supply chain demands in the new normal. Steven highlighted the criticality to keep air cargo moving and that the air cargo industry needs to keep this focus high on its agenda.



**Jeroen Janssens**, Senior Manager Vaccine Distribution and Cold Chain, **GSK Vaccines**, shared that in mitigating the impact of capacity shortfall and supply chain disruptions, pharmaceutical shippers like

themselves were considering to work with new airline partners in order to plug the capacity gaps. In their bid to instil greater certainty within their distribution network, GSK Vaccines has also aligned its processes with their airline partners and targeted specific key cargo lanes to ensure strictly that minimum requirements were fulfilled during the pandemic. The major pharma manufacturer has also adopted the use of advanced high-performance passive solutions during this period. Moving ahead, Janssens shared that setting up new regional distribution centres could be one of the risk mitigation measures which GSK Vaccines may adopt to ensure supply chain integrity within their network.



**Mathijs Luts**, Global Supply Chain Director, **Abbott**, highlighted the issue of product quality on the backdrop of high demand for medical supplies. Luts expressed his frustration towards

PPE manufacturers which compromised its product quality to gain easy profit during such times. More so than ever, standardisation and harmonization, with control over quality and traceability of the products, are critical during this pandemic.

### 2.2 The Debate: a word by the industry experts



**Bruno Guella**, Treasurer of **Pharma.Aero** and Managing Director of **Montevideo Free Airport**, opined that the challenges pharma shippers face today would bring forth new and out-of-the-box solutions. Flexibility

is the key to success. Faced with the massive supply chain disruptions, pharma shippers would need to







quickly re-establish a new and interim supply chain network by navigating around the challenges brought about by the pandemic, yet maintaining the quality standards of their products.



**Andy Faes**, Regional Manager Healthcare Vertical Europe, **Expeditors**, reiterated Lut's concerns on product quality in this highly dynamic climate. The life science and MedTech community should continue to put

strong emphasis on ensuring supply chain and air logistics quality.



**John O'Grady**, Manager Authorizations & Standards, Operations & Delivery, **Etihaad Cargo**, touched on the security threats in shipping high demand products such as PPE materials and COVID-19 test kits. The

supply chain would need to devise strategies to prevent theft and pilferage risks of these high-demand products during this period. One of the risk mitigation solutions raised would be transparent data-sharing, as well as deeper collaboration amongst authorities, supply chain stakeholders, partners and its own employees.

Watch this first webinar here:



### 3. Webinar 2: The day after: how collaboration can prepare us for the impact after Covid-19 in the short and medium term

The second part of the webinar series addressed how life science and MedTech companies and air cargo industry can come together to overcome the supply chain challenges identified in the first webinar and uphold global supply chain standards post-COVID.

#### 3.1 The Perspectives: a word by the opinion leaders



**Ruud van der Geer**, Assistant Director, Global Delivery, Strategy Team, **MSD** and Strategic Member of **Pharma.Aero**, kick-started the session by recognising the need for digitalisation in the pharma supply

chain - to create end-to-end visibility, detectability and control over pharma shipments – especially in the business environment today. MSD shared the reaped benefits of its digitalisation journey with the establishment of its cloud-based digital logistics platform, which consolidates data from multiple sources to provide end-to-end tracking and analysis, information on temperature and potential cargo tampering, pre-emptive alerts and predictive analysis. The digital solution has provided MSD with much-needed agility during the course of the pandemic, such as performing swift lane risk assessments, to decisively and quickly divert shipments headed to outbreak areas, and relocate critical products to where they were needed – often within a very short time frame. This has allowed MSD to capture greater opportunities and provide them better control of its distribution channels during these extraordinary challenging times.



**Rita O'Sullivan**, Head of Global Transportation at **Zoetis**, opined that availability and continuity of quality information is key to managing the pharma businesses, even prior to the pandemic. Given the highly complex nature of

pharma supply chains, there would not be a one size-fits-all solution. The current unprecedented environment has forced many stakeholders in the supply chain to think differently and focus on the basics. Inadequate air freight capacity leading to skyrocketed airfreight rates overnight, have also forced pharma companies to consider other modes of transport. With economic impact brought about by the pandemic, many stakeholders in the industry have shifted their focus on survival and staying in business which may lead to a pause in new initiatives and developments. Rita opined that the return to normalcy may not be as straightforward. The re-opening of economies will lead to different industries compete for the limited capacity available on aircraft. Given this situation, airlines might adopt a policy “go where the money is” in assigning cargo spaces. Notwithstanding this, there is a continued need to enhance supply chain integrity, improve end-to-end supply chain visibility coupled with seamless handshakes amongst the players in the air cargo supply chain to ensure the timely and effective distribution of pharma shipments.



**Andrea Gruber**, Head Special Cargo, **IATA**, put forth some interesting facts and figures.

According to Andrea, more than 30,000 aircraft took to the skies with pharmaceuticals making up for up to 1.9% of all cargo volumes flown by air and contributing to 2.6% of the total airline cargo revenue at the end of 2019. Four months later, in April 2020, 18,000 aircraft were grounded after travel restrictions were imposed and the industry projected overall revenue reduction in excess of \$314 billion for the year with 4.5 million flights cancelled until the end of June. These numbers illustrate the extent of the current



crisis on the air cargo industry. However, the capacity shortage is likely to be temporary as passenger services and cargo belly capacity is projected to return gradually. IATA estimated that the overall cargo volume could decline by between 14 to 31% in 2020.

Right now, air freight is critical in the global fight against COVID-19. The aviation and the pharmaceutical industry have been working collaboratively for many years in enhancing quality and standards. Programmes like CEIV, which started in 2014 and has about 300 certified companies so far, provide a strong foundation for companies to move critical pharma during the pandemic. IATA, in cooperation with the various stakeholders, has also developed guidelines on how to safely transport cargo in the passenger cargo-only flights in the current situation.

Enhanced patient safety and quality of care can only be achieved by interconnected logistic networks, improved supply chain digitalization and end-to-end visibility, as well as transparency of existing capacity and facilities for the distribution of pharma products. Andreas also highlighted that the crisis has sped up innovation, citing example of global customs authorities moving fast towards digital implementations of their respective processes to minimise paper handling for safety during the COVID-19 pandemic.

### 3.2 The Debate: a word by the industry experts



**Nathan de Valck**, Chairman, **Pharma.Aero** and Head of Product and Network Development, **Brussels Airport Company**, was impressed with the level of agility demonstrated by shippers in pivoting their supply chain strategy during the pandemic. Nathan raised the question of shippers' expectations from the air cargo industry to support their digitalisation pursuits. Nathan noted that many airport communities have embarked on initiatives for data-sharing at a local level while, at a global level, initiatives to establish a robust data infrastructure to connect these data sources are underway. However, he viewed that a key challenge would be to identify like-minded partners to collaborate with to enhance the respective supply chains.



**Nina Heinz**, Global Head of Network and Quality, **DHL**, expressed her perspectives that change is the only constant in this current environment. She was also impressed by how shippers reacted to the challenges posed by the pandemic and turned them into opportunities to initiate deeper collaboration with their partners. With deeper collaboration, she opined that a risk-based approach to managing supply chains would become increasingly prevalent in the industry, resulting in greater efficiency across the supply chain while ensuring its integrity.



**Christine Richard**, Senior Director of Marketing and Pricing, **Amerijet**, cited that the future is unpredictable and full of challenges. Innovative mindset and solutioning would be required to overcome these unexpected challenges. An example for such an approach includes developing fast-track data sharing with high quality information from multiple sources for reliable lane assessment through a risk-based methodology.

Watch this second webinar here:



## 4. Webinar 3: The future: Will life sciences air freight supply chain be completely different?

The third and last of the series examined the long-term scenarios and strategies which the Life Science and MedTech industry, as well as the air cargo industry, would be expected to adopt in instilling greater resiliency within the supply chain post pandemic.

### 4.1 The Perspectives: a word by the opinion leaders



In his opinion, **Wouter Dewulf**, Academic Director C-MAT at the **University of Antwerp**, forecasted that the healthcare and life sciences sector will gain strategic importance over the medium to long-term period,

however, it will come along with increased government intervention. Some major structural industry changes and shifts could include:

- i) shorter supply chains, especially for sensitive and critical products;
- ii) increased alliances;
- iii) commoditization; and
- iv) strategic stock building.

Dewulf expected more vertical alliances and collaborations within the industry. Economies of scale, scope and density will drive alliances and mergers and acquisitions (M&As). As M&A efforts are projected to continue over the next couple of years, the supply chain industry for life sciences will likely result in an oligopoly with few big players remaining. He opined that Asia Pacific would be the hub for production as well as consumption, in the next two decades, as the region's GDP is forecasted to double and the life science volumes to triple in the same period. Increased investment in R&D by governments is likely, but this could lead to the politicizing of the life sciences sector.



**Marc Schmid**, Head CHHub and Logistics Expert at **Novartis**, shared the success of the company in mitigating the impact of COVID-19 on its employees, customers and suppliers. Schmid attributed the success to critical

factors such as visibility, agility, resilience, and risk mitigation, which enabled them to continuously deliver quality products to their customers amidst the challenging environment. Various risk mitigation actions were undertaken which included stock building in countries and transportation alternatives such as air-sea options. Going ahead, the company continues to evaluate longer term measures such as option of local manufacturing versus global supply chain, given the company's views that shorter supply chains could make the difference in the new normal. From a transportation's point of view, Novartis would further explore the possibility of hub concepts for last mile distribution. Alternative shipping solutions such as sea freight, rail or a combination into multimodal services would also be under consideration given the air cargo capacity constraints. In addition, Schmid shared the need for greater transparency along the supply chain to push Novartis' push for automation and digitalization across its supply chain network. While digitalization has yielded initial results, he opined that connecting all of the dots across the entire supply chain would be a major challenge which requires deeper collaboration.



**Kathleen Buckley**, Director Inter-Regional Transport, Excellence Consumer/Pharm at **Johnson & Johnson**, reiterated that flexibility is the key for sustainable and successful operations. Buckley cited that despite the array of

business continuity plans (BCP) in place to handle different contingencies, there was none to cater for a global pandemic BCP for their transportation system, especially with the entire air freight system close to shutdown for a couple of weeks. COVID-19 has proven that it would not be possible for these BCPs to cater to all scenarios and that this is an aspect which needs to be further reviewed. In her view, digitalization





would need to be high on the agenda to provide such flexibility moving ahead. She added that digitalization has always been part of Johnson & Johnson's strategy and this has further accelerated during the current pandemic.

## 4.2 The Debate: a word by the industry experts



**Jaisey Yip**, Vice Chairman, **Pharma.Aero** and Head of Cargo and Logistics Development at **Changi Airport**, noted the importance of agility and emphasized that agility can only come about if there is real-time

supply chain visibility and transparency. Even prior to establishing supply chain visibility, quality and reliability first have to be embedded across the supply chain. Different actors in the pharma supply chain would need to closely collaborate, harmonize standards as well as to jointly establish quality standards in order to instill stronger agility within the supply chain network.



Adding on the discussion, **Paul Delbar**, Solution Architect at **Nallian**, noted that there is still a lack of visibility and predictability across the supply chain which has resulted in additional coordination efforts to overcome bottlenecks.

Delbar further noted that when a disruptive event occurs, companies tend to revert to risk reducing

strategies, such as building stocks locally and solidifying existing partnerships to instill predictability and stability. However, he raised the potential risk in repeating the same errors that on remaining status quo in terms of partnerships, and thus killing the innovation.



**Alex Leung**, Cargo Product Manager at **Cathay Pacific Airways**, asserted that the current situation has prompted the company to think outside the box and reiterated the need to be agile to adapt quickly to the

dynamic business climate in the foreseeable future. He opined that tripartite partnerships between airlines, forwarders and shippers become very crucial in the current situation.

Watch this third webinar here:





## 5. Conclusion

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The Life Science and MedTech is a critical industry in saving lives, especially so in the current environment. COVID-19 has exposed the industry to unprecedented supply chain risks and challenges. Despite physical distancing being the norm in the current pandemic, the pharma supply chain and the air cargo industry should be holding hands and working closer more so than ever, to ensure that life-saving medical supplies are safely and reliably transported from manufacturing plants to patients. Supply chain collaboration comes in different forms – from supporting the community’s digitization initiatives through data-sharing to harmonization of standard and expectations. Collaboration should not be limited to bilateral relationships but should also extend to the global community to raise the standards of global pharma distribution network which has been Pharma. Aero’s mandate.

Developing agility and resilience in the life science supply chain can create a stronger sector for all partners involved. The demand for life science products is expected to grow in the next two decades and would represent a long-term opportunity for the Life Science and MedTech and air cargo industry. In order to capture and maximise the opportunity, the entire network – right from manufacturing to the global distribution will need to come together and work collaboratively to ensure that the sector remains strong and agile, providing quality products to patients in a timely manner.

In these uncertain and unprecedented times, the air cargo industry is facing more risks than ever before. Winners within the airfreight industry, who survive this crisis, will be the ones who take the lead in thinking out of the box to improve their service offerings to their customers. The key success factors to ride out the crisis would be community collaboration, flexibility, transparency and harmonization of standards.



## 6. Pharma.Aero

### 6.1 Mission and vision



#### WHO ARE WE?

Pharma.aero is a **global cross-industry association** aligning members from airport communities, pharmaceutical shippers and other air cargo stakeholders to collaborate and enhance end to end air transportation of pharmaceuticals.



#### GOALS

- Develop strategic partnership with pharma shippers
- Promote air cargo as a reliable transport mode for pharmaceuticals
- Co-create supply chain solutions for the pharma industry
- Develop thought leadership in pharma air freight business



#### STRATEGY

- Foster strong collaboration
- Stimulate cross-industry networking
- Consult the pharma shippers
- Develop an unbroken cold chain
- Connect CEIV airport communities
- Create content & share excellence
- Develop Best Practices
- Focus on fora and projects

#### OUR VISION

Achieve excellence in **reliable end-to-end** air transportation for **pharma shippers**.

#### OUR MISSION

**Foster collaboration** between CEIV certified airport communities that are dedicated in developing and leading the handling of pharmaceuticals.

**WE CONNECT PHARMA**

# PHARMA WE CONNECT PHARMA AERO



## ACCOMPLISHMENTS

- Pharma.Aero has been endorsed by pharma shippers.
- With the aim of better assisting the industry in improving the quality of services for pharmaceutical handling and transport in the air cargo industry worldwide, Pharma.Aero signed an MoU with IATA and TIACA.
- Sharing of knowledge and expertise between members
- Events together with the pharma shippers
- Organised events with involvement of pharma shippers

### Completed Projects:

- Validation of the IATA CEIV Pharma Checklist
- Airside Transport Survey
- Pharma Supply Chain Data-Sharing Platform



## WHAT'S IN FOR YOU?

### STRATEGIC AIRPORT MEMBERS

- Cooperating with pharma shippers
- Board meeting voting rights
- Coordinating role in a region of the global network
- Championing projects
- Speaking slots at international conferences
- Contribution to internal newsletters
- Industry networking

### STRATEGIC PHARMA SHIPPERS

- Direct impact on the strategic priorities of Pharma.Aero
- Better understanding of the capabilities and challenges of air cargo
- Direct collaboration with stakeholders with impact on the air cargo supply chain
- Regaining trust in the air cargo industry
- Continuous improvement on your local supply chain
  - Reduction of costs packaging solution
  - Visibility and transparency on your shipments

### FULL MEMBERS

- Cooperating with pharma shippers
- Board meeting participation
- Active project participation
- Industry networking
- Speaking slots at international conferences
- Contribution to internal newsletters

### ASSOCIATE PARTNERS

- Industry networking
- Advertisement possibilities in e-journal
- Membership discount and speaking slots at international conferences
- Receiving internal newsletters with project updates



## CONTACT

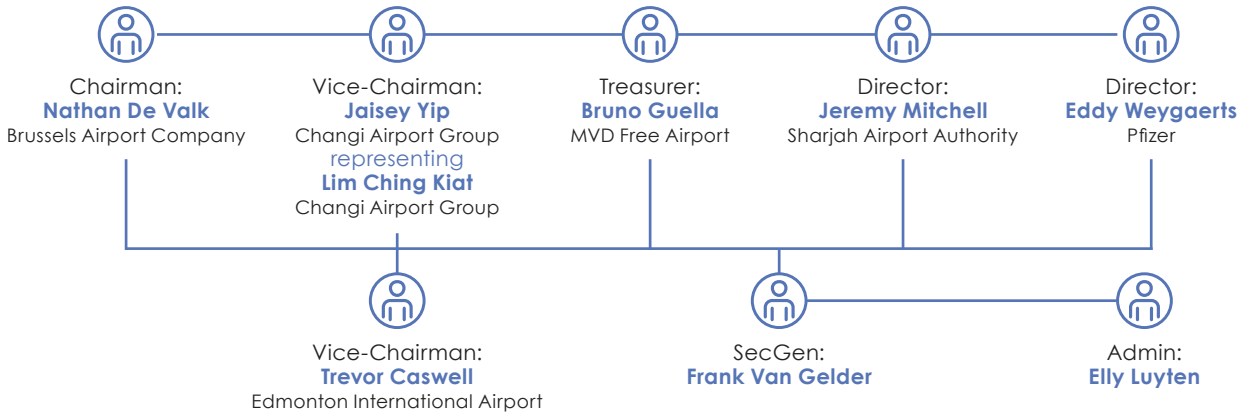
administration@pharma.aero  
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## 6.2 Company structure



## 6.3 Current Members

### 6.3.1 Strategic members

#### strategic airports



#### strategic pharma shippers



### 6.3.2 Full Members

#### airports



#### freight forwarders



#### ground handlers



#### airlines



### 6.3.3 Associate Partners



## 7. Contribution of the sponsors

### 7.1 Envirotainer

#### Increased demand for RAP e2 when air cargo space plummets

The pandemic caused by the virus COVID-19 has led to a severe shortage of available air freight capacity. Many airlines have cancelled almost all international passenger flights, which has led to a decrease of air cargo space by 90%. Logistics departments at pharmaceutical companies are now racing to find new solutions for shipping their products. As companies try to maximize load volume efficiency, Envirotainer has noticed a significant increased demand for the large RAP e2 container.

“We see a strong increase in demand for all units since the COVID-19 pandemic started, especially for our RAP e2. Pharma companies want to get as much products on each plane as possible and for that the RAP e2 is unmatched,” says Cihan Likogullari, Global Key Account Manager at Envirotainer.

#### Maximizing payload efficiency

When comparing the active RAP e2 with smaller and less advanced passive units, it becomes clear that large ULDs are more cost efficient in the current market situation. The amount of insulation material in passive boxes reduces the payload volume per total volume. For small pallet shippers, insulation, cooling material and the box itself can make up a large part of the total volume, with only 25% payload efficiency. Another obvious advantage of RAP e2 is the active temperature control, which makes it a safer option for transporting sensitive pharmaceuticals.



#### COVID-19 has changed the cost structure of pharma air freight

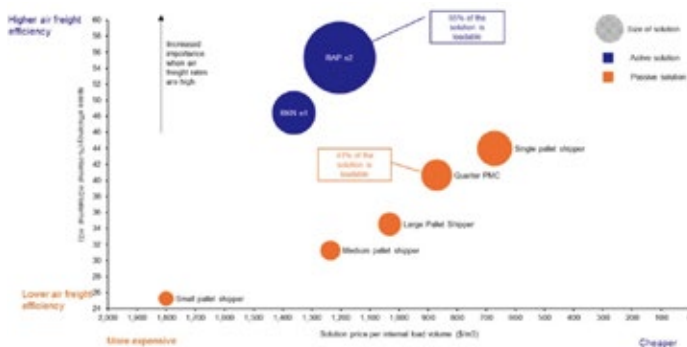
With a significant increase of air freight costs in the wake of the COVID-19 pandemic, the whole cost structure changes. As a result, many pharmaceutical companies risk using suboptimal freight solutions since different costs are evaluated separately from each other or are even on different budgets in different departments. It is important to get a complete picture of all costs, since there is an inverse proportion between the payload cost efficiency of the packaging solution and the air freight costs.

#### Example: Choosing the optimal air freight solution

One of Envirotainer’s clients needed to ship a large volume of life-saving pharmaceuticals. Their only option in the current situation was to charter an airplane. The cost for charter was well over 1 million USD. They understood the value of optimizing the cargo space and reached out to Envirotainer to get help to evaluate different options. Small passive shippers were quickly ruled out since the insulation takes up most of the space. Envirotainer’s RAP e2 would load more than twice as much product in the cargo belly compared to the passive units. Instead, the choice was between large active units such as RAP e2, designed to fit 5 EU pallets, and large passive units, with space for 2 EU pallets. The choice was obvious. The large RAP e2 had a much higher load efficiency on the airplane.

“In Q1 & Q2 of 2020 air freight prices skyrocket and supply is scarce. We are proud to be part of the solution to secure that patients receive their medicine in time and in good condition,” comments Karen Harbour, Strategic Account Manager at Envirotainer.

Envirotainer is the world leader in air-transportation solutions for temperature-sensitive pharmaceuticals. We believe that our largest contribution to a sustainable world is helping our customers enable global access to life-saving pharmaceuticals, through patient-safe, reliable and efficient cold chain solutions. Please contact us for help or visit [www.envirotainer.com](http://www.envirotainer.com).



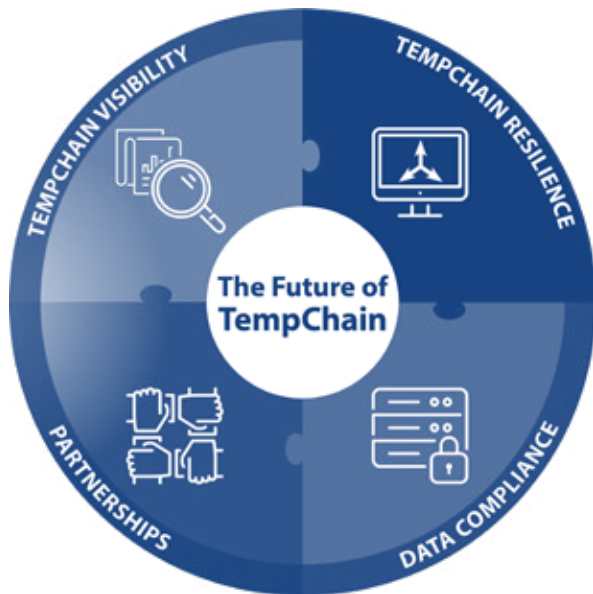
Larger units such as RAP e2 have a significantly higher load volume efficiency compared to smaller passive solutions.



## 7.2 va-Q-tec

### Executive Webinar PharmaAero

#### TempChain 4.0 – Digital solutions for future challenges in pharmaceutical supply chains



Christopher J. Storch, Global Head of Sales of the **va-Q-tec Group**, spoke about the impact of Covid-19 in global pharmaceutical supply chains, the resulting challenges and va-Q-tec's digital solutions.

Despite the limited flight operations during the corona crisis and the resulting significant reduction in cargo capacity on most lanes, va-Q-tec's transport solutions are currently involved in more than 50% of the worldwide temperature-controlled transport of Corona test kits - in addition to the logistics of other pharmaceutical products and drugs. The advantages of the innovative passive thermal containers and boxes payed off. Even in the event of unforeseeable delays, the solutions were able to keep valuable products at the required temperature - without the use of the hazardous material like dry ice.

The efficient **Summary** handling of these logistics processes in such challenging times are only possible through the intelligent integration of digital tools and innovations. In order to optimally manage these shipments and to enable clients to process their orders quickly and efficiently, va-Q-tec offers a comprehensive software solution: The *TempChain Service Software*. The unique optional service solution *va-Q-nection* combines the advantages of The TempChain Service Software, a smart va-Q-proof box, a Bluetooth data logger and the va-Q-nection App. This ensures 100% data transparency and quality assurance through digitalization. *BlockChain* technology protects all data against falsification and misuse. Through strong *partnerships*, even the most challenging logistics requirements can be practiced reliably and securely.

The seamless interactions of all these points leads to a strong resilience of the TempChain and thus to pharmaceutical supply chains that can be adjusted in a flexible and agile manner - the indispensable premise to reliable worldwide pharmaceutical supply chains.

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