

# va-Q-tec AG

## IR Company Presentation



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# Key Investment Highlights

**1** **Leading technological innovator**  
First class thermal insulation technology platform



**2** **Significant growth opportunity in multiple end markets**  
Disruptive product portfolio opening numerous potential applications



**3** **Control of the critical steps of the value chain**  
Selective vertical integration to secure technology and cost advantage



**4** **Market leading healthcare logistics services**  
Superior service offering for the high growth healthcare market



**5** **Strong financial track record**  
Dynamic growth trajectory and sustained profitability



**6** **Experienced management team with clear strategic vision**  
Significant scientific and operational experience



# Our Vision



va-Q-tec as the world's leading supplier of thermal high-performance insulation and packaging solutions



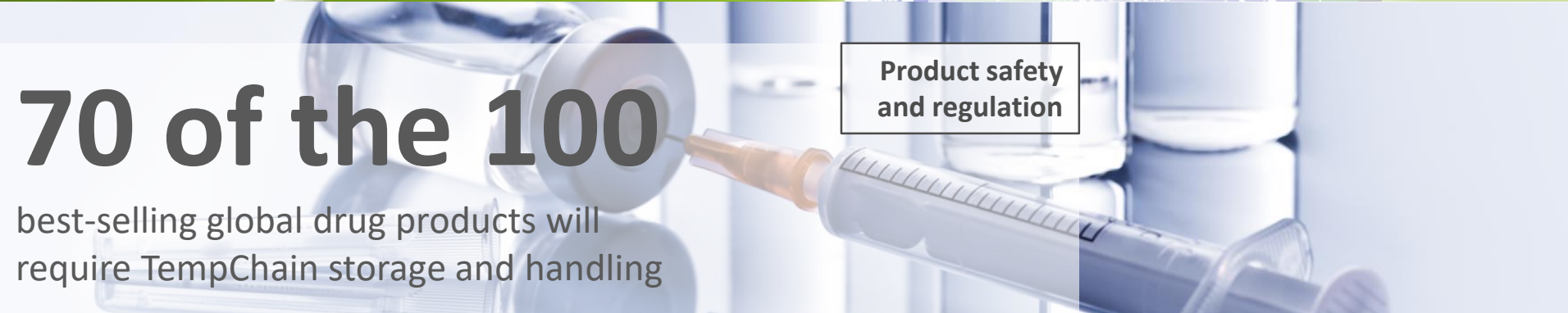
# Key drivers defining our context



Thermal energy efficiency

**c.60%**

of primary energy consumption in Germany is used for thermal purposes



**70 of the 100**

best-selling global drug products will require TempChain storage and handling

Product safety and regulation



Globalization of supply chains

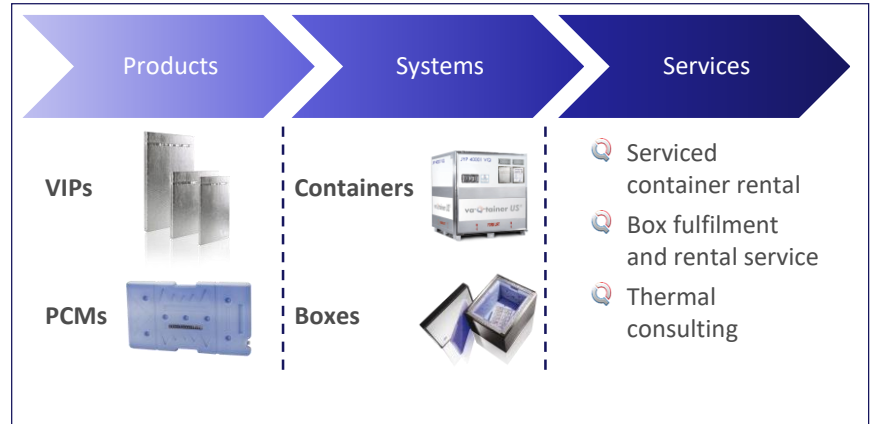
**Increasing globalization and outsourcing of clinical research and manufacturing creates huge requirements for efficient pharma cold chain packaging**



## We are a technology company at heart...

- Founded in 2001, we are a pioneer and **technology leader** in advanced thermal insulation products, systems and services
- In-house development and production of **Vacuum Insulation Panels (VIPs) and thermal energy storage components/ Phase Change Materials (PCMs)**
- Leading advanced **passive thermal packaging systems**
- Successful **forward integration into healthcare cold chain solutions/ services** with own managed box and container fleets
- Preferred partner for the **most demanding blue-chip customers**

## ...with highly differentiated products and services...



## ...in attractive markets driven by strong trends...

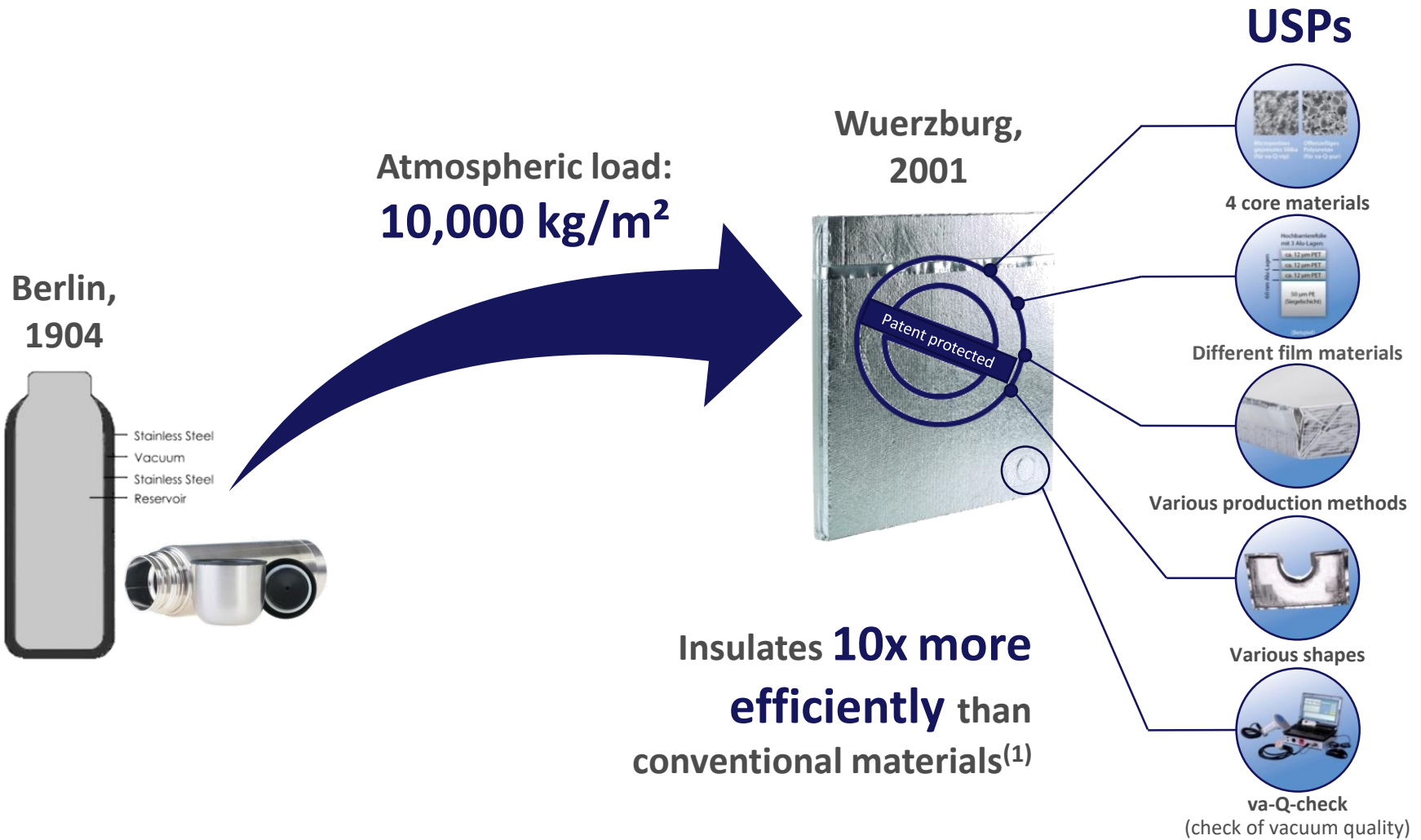
<p>Thermal energy efficiency</p>	<p>Globalization of supply chains</p>	<p>Product safety and regulation</p>
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## ...and holding a leading position



<p>&gt;50 Awards in the last five years</p>	<p>№ 1 VIP producer in the Western World<sup>(1)</sup></p>	<p>&gt;5,000,000 shipments made deviation free</p>	<p>&gt;180 Patents protecting our technology</p>
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### Selected bluechip partners/ customers



**We have taken the mastery of best physical insulation to the next level**

Notes: (1) Compared to insulation materials like mineral wool or aged PU foam in a range from 5x-15x

# Cutting edge VIP/PCM technology portfolio is the basis for our first class thermal packaging systems

Products

## Vacuum Insulation Panels (VIPs)

Ambient (<100°C)



10x more efficient insulation or 10x less space<sup>(1)</sup>



## Phase Change Materials (PCMs)

Standard Ranges  
(-25°C to 25°C)

Speciality Ranges  
(<-60°C to -30°C & 30°C to 40°C)



10x more efficient energy storage<sup>(2)</sup>



## Advanced passive packaging solutions

Single use boxes

Multi use boxes



Multi use pallet-size for air and land transportation



Keeping the temperature constant for 4...10 days in non-controlled ambient

Systems

Notes: (1) Compared to insulation materials like mineral wool or aged PU foam in a range from 5x-15x (2) PCMs store energy 10x more efficiently at a given temperature compared to thermal energy storage with pure liquid water  
Sources: (1, 2) BINE Informationsmanagement



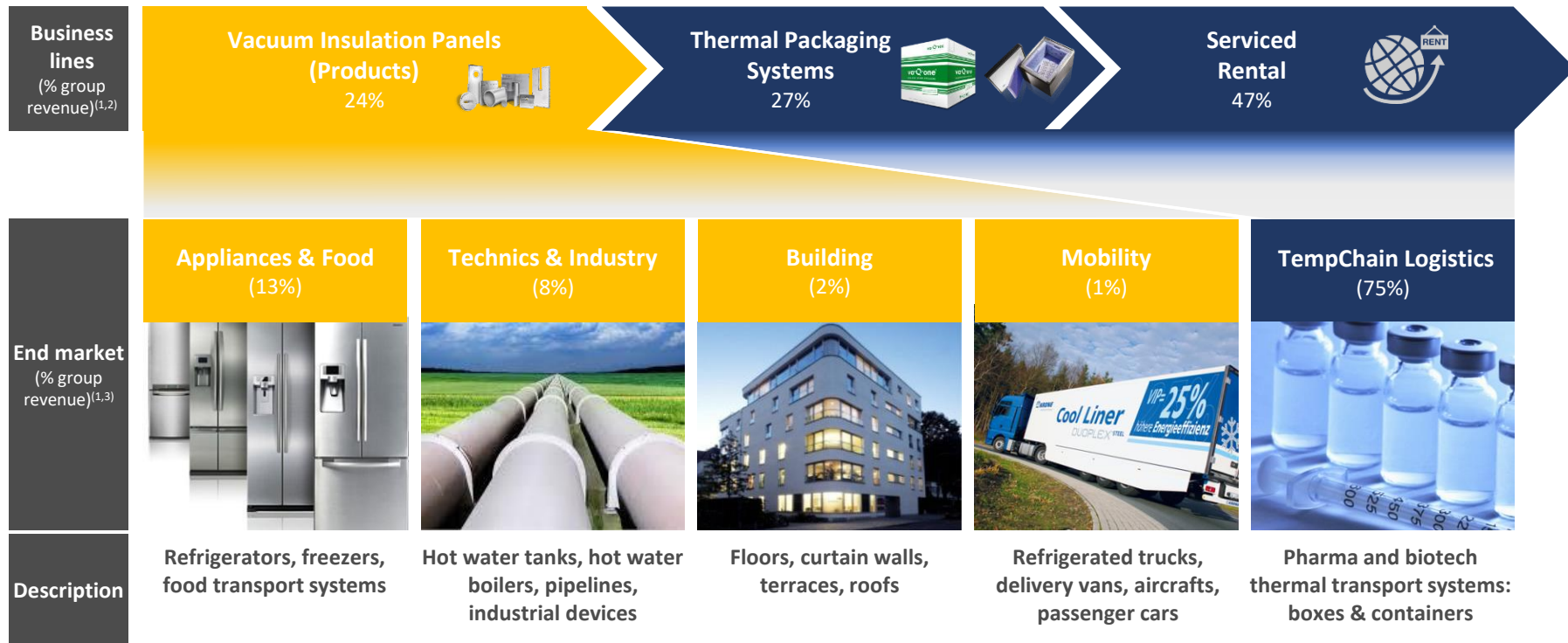
# Conventional Thermal Packaging vs. VIP-insulated



# Our markets: whenever space restrictions exist, excellent thermal insulation is required




## Thermal Energy Efficiency

## Temp Chain: Temperature Controlled Supply Chain



Note: (1) 2020 consolidated IFRS financials (2) Other revenues primarily comprise state funded research & development projects (FY 2020: c. 1%) which can partially be allocated to va-Q-tec's key end markets (3) Excluding revenues from R&D projects

# The three pillars of our business

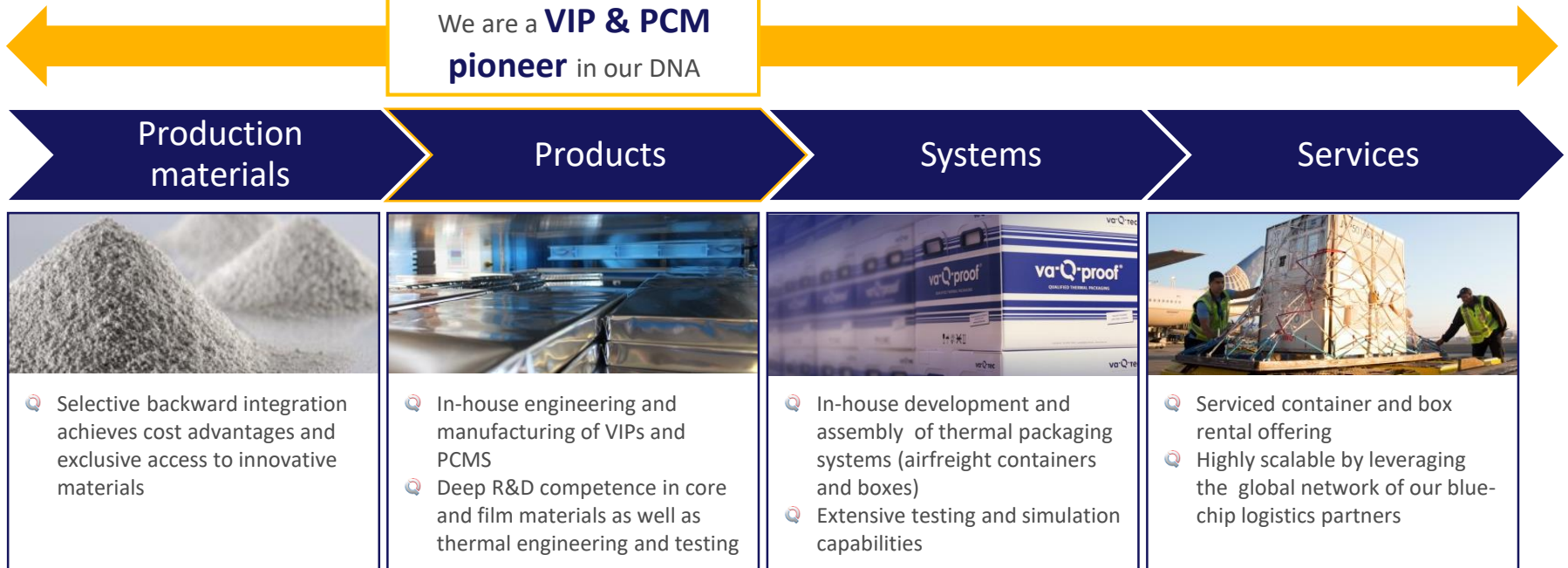
Business Line	Activities
 <p><b>PRODUCTS</b> Vacuum Insulation Panels</p>	<ul style="list-style-type: none"><li>• Development, manufacturing and sales of <b>Vacuum Insulation Panels (VIPs)</b></li><li>• They insulate <b>10x more efficiently than conventional foams / fibers</b></li></ul>
 <p><b>SYSTEMS</b> Thermal Packaging Systems</p>	<ul style="list-style-type: none"><li>• Development, manufacturing and sales of <b>passive thermal packaging systems</b> (containers and boxes) through optimally integrating VIPs and PCMs</li><li>• They can maintain constant temperatures, depending on type, up to 200 hours without external energy input</li></ul>
 <p><b>SERVICES</b> Serviced Rental</p>	<ul style="list-style-type: none"><li>• Serviced <b>container rental</b> business</li><li>• Serviced <b>box rental</b> business</li></ul>

# Selective coverage of critical parts of the value chain

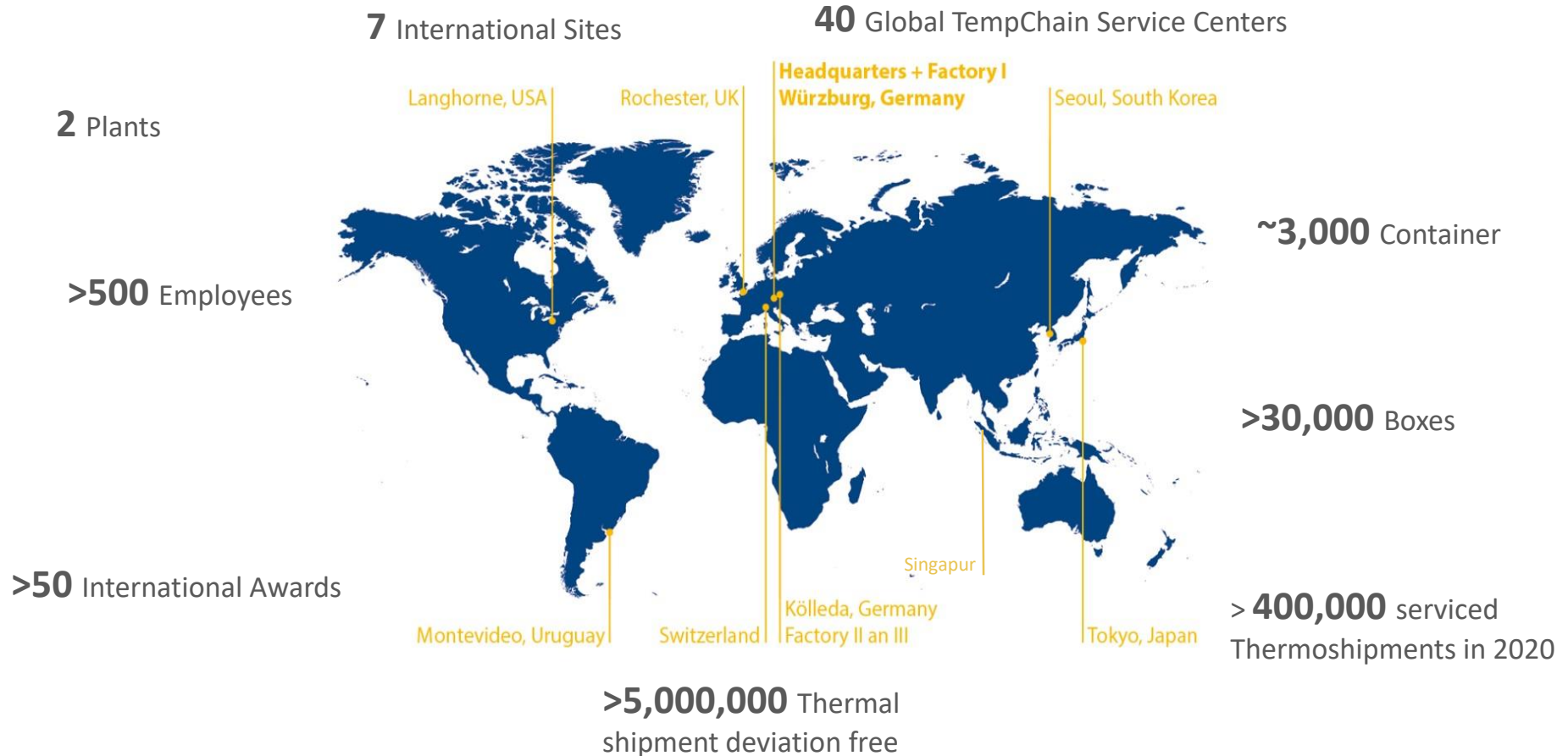
Technology and cost leadership through **selected backward integration**

Proven ability to capitalize on our technology platform through **profitable forward integration**

We are a **VIP & PCM pioneer** in our DNA



**Profitability** + **Barriers to entry** + **Quality** + **Recurring revenues** + **Differentiation** + **Customer loyalty**



# va-Q-tec's healthcare logistics service offering

## Container rental



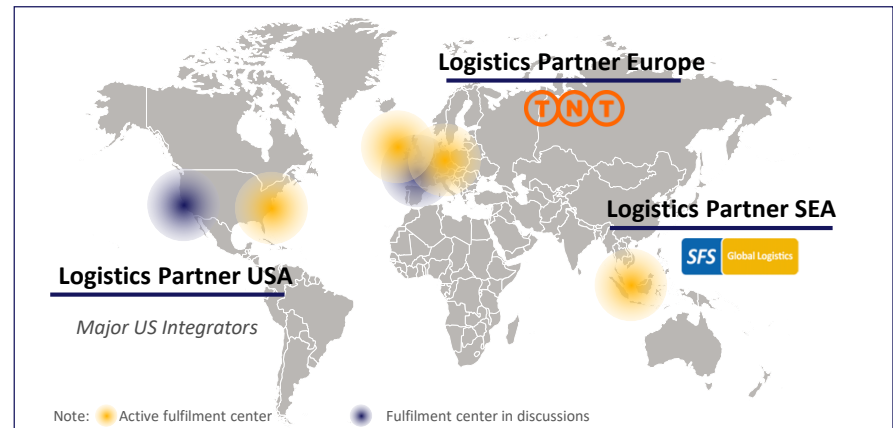
### Global container rental: all temperatures in one technology

- Launched in 2011
- Only fleet for sub zero transports
- 1<sup>st</sup> passive, reusable fleet in the market combining price advantage with superior performance
- Global transportation of bulk goods
- 30 network stations and >500 drop points via airline partnerships



## Box rental

### Fulfillment centers and logistics partners



### Continental box rental

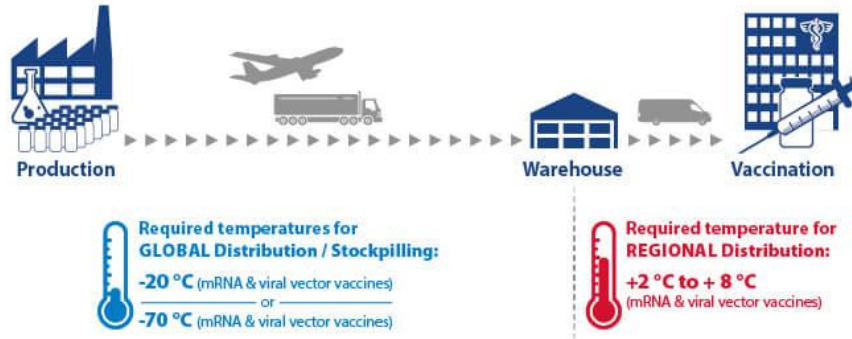
- Kicked off in 2016, pioneering box rental services for pharma and biotech customers
- Continental / Regional distribution
- Clinical trials logistics for Clinical Research Organisations
- Cooperation with most major players
- Last-mile shipments from wholesalers to pharmacies
- Massive growth potential in next years
- C. 10 hubs globally



# From production to vaccination – VQT involved in all major steps of global distribution campaign

## From production to vaccination –

Covid-19 vaccines must be transported at specific temperatures



va-Q-tec Sources: TIACA | PHARMA.AERO | Respective companies

Moderna CoVid-19 vaccine arrives at US bases in Japan



## Comments

- Reliable, safe handling using special thermo-boxes and containers for the delivery of raw materials for the production of vaccines is already necessary during their manufacture
- International shipment of large quantities of finished vaccines often at sub-zero temperatures between -20°C and -70°C
- Information on storage between 2°C and 8°C often refers only to the "last mile", where the vaccine must be stored for a maximum of a few days
- Strong ties with all major vaccine manufacturers
- Exclusive contract with one major vaccine player

## Chosen partner of industry leaders because we deliver on our promises

# ASML

*“First passive packaging solution for semicon industry”*



 **SWISS**  
WorldCargo



**Lufthansa Cargo**

*“va-Q-tainer containers are the cost-efficient and low-risk TempChain alternative”*



Partnerships with leading industry companies underscoring technical expertise and reliability of VQT



## va-Q-tec and Uponor: Energy-efficient and form-flexible pipe insulation

**uponor**



- Ecoflex VIP reduces heat losses in local and district heating networks by up to 60% save space massively
- A new level of energy efficiency local and district heating networks.

## va-Q-tec and Hutchinson: A Game Changer for VIPs in mobility applications

**HUTCHINSON**



- Energy efficiency of modern mobility solutions can be massively increased by using VQT's VIPs
- Optimized thermal management of e.g. passenger cabins and batteries leads to significant increase in range of modern e-vehicles

# Experienced management team with clear strategic vision



**Dr. Joachim Kuhn**

Chief Executive Officer  
Founder

- Born on 2nd May 1964, German citizen
- Diploma in Physics, University of Würzburg
- PhD in Physics of Thermal Insulation, University of Würzburg
- 1995 – 2000: General Management of Bavarian Centre for Applied Energy Research (ZAE Bayern), Würzburg
- Since 2001: CEO and founder of va-Q-tec AG, Würzburg
- Member of various national and international committees



**Stefan Döhmen**

Chief Financial Officer

- Born on 24th February 1964, German citizen
- Diploma in Business Administration, Westfälische Wilhelms-Universität Münster
- 1991 – 2000: Mannesmann-Konzern
- 2001 – 2005: Brooks Automation Group, Controller Europe
- 2006 – 2016: Analytik Jena AG, Chief Financial Officer
- Since 2016: CFO of va-Q-tec AG

Thank you for  
your attention!

 **Lufthansa Cargo**

JYP50294VQ

**va-Q-tainer**

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## TICKER

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