

# TRANSFORMING SERVICES IN THE TIME OF COVID

An APSC-ABAC PPD event

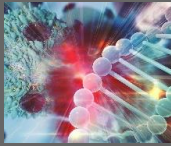
14 Oct 2021

DHL – Excellence. Simply delivered.



# COVID-19 pandemic has accelerated already ongoing transformation in Life Sciences & Healthcare

## ADVANCED TREATMENTS



## PATIENT CENTRICITY



## DIGITAL HEALTHCARE



## NEW ECO-SYSTEMS



New technologies such as mRNA or Cell & Gene Therapies enable advanced treatments

Value Based Care and Healthcare Consumerism put patient experience as success factor

Digitalization becomes key value driver for diagnostics, treatments and patient engagement

New players and more collaborative value creation connecting specialist providers



- Shift to BioPharma require intelligent cold chain storage and transport solutions



- Higher focus on patient centricity require new direct to X delivery models



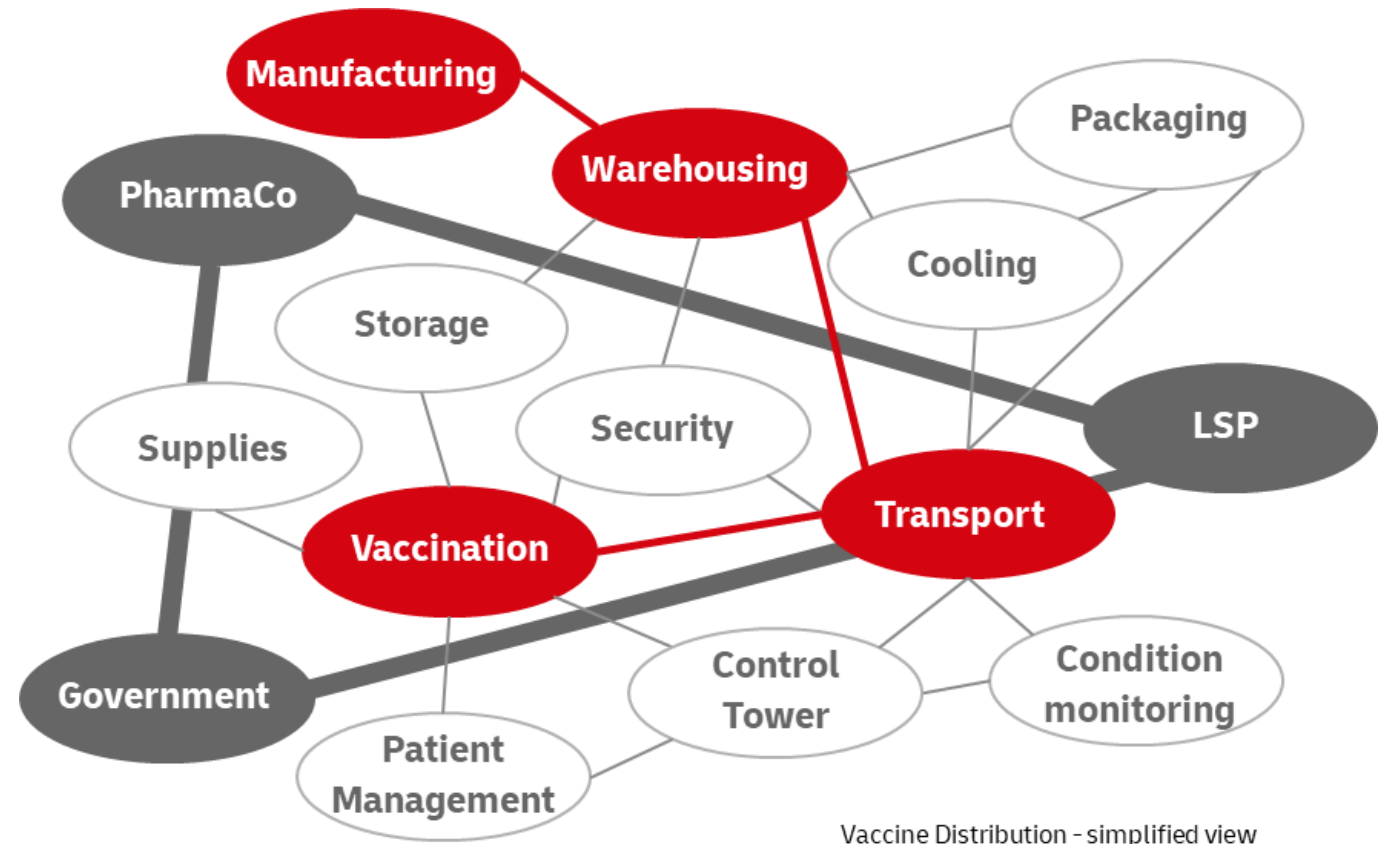
- Sensor and blockchain solutions to address supply chain visibility, security and compliance



- Need for effective orchestration of end to end supply chain to deliver healthcare

## New approaches needed to build a pandemic resilient supply chain

1. Developing and disseminating a clear and pre-defined **emergency response plan**
2. Building a **partnership network** of both public-private and public-public partnerships
3. Identifying and ensuring access to required **physical logistics infrastructure**
4. Establishing IT-enabled **Supply Chain transparency**
5. Creating **organizational structures** and allocating resources to institutionalize and coordinate the entire response management incl. plan, partners, infrastructure and IT

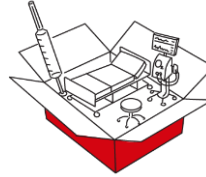


# Collaboration of strong partners creates a strong response to fight COVID-19

## DHL VACCINE LOGISTICS

### All related products

incl. vaccines, ancillaries,  
medical equipment  
transported across globe in  
sync



### End-to-end solutions

Transportation with extensive  
and guaranteed capacities across  
modes and certified cold-chain  
warehouses

**1 BN doses delivered**  
by DHL (09/2020 – 09/2021)



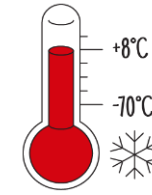
### All approved vaccines

DHL as trusted  
partner distributing  
all approved  
COVID-19 vaccines



### All continents

Delivery of vaccines  
and related products  
to 164 countries in  
all continents



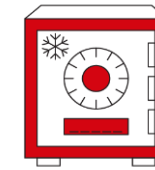
### Controlled temperature

for all regimes through own freezers,  
packaging and dry ice facilities incl.  
advanced sensors and temp loggers



### Real-time tracking

and full  
transparency of  
temperature  
adherence



### Highest security

E2E incl. TAPA-  
certified vans and  
security escorts

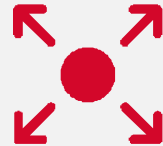
# Getting ready for the next race: 10 strategic actions governments and other stakeholders should consider pursuing now

## Prevention and early identification



- 1 Institutionalize active **partnerships** and **systems**
- 2 Double down on global **early-warning systems**
- 3 Create and follow through on integrated **epidemic-prevention agenda**
- 4 Invest in **targeted research** and development to improve diagnostics, therapeutics, and vaccines

## Containment and countermeasures



- 5 Implement **national containment** and **escalation plans**
- 6 Leverage **digital contact tracing** and monitoring app
- 7 Establish an **emergency stockpile** and associated “supplies and logistics” emergency system

## Medication rollout capacity



- 8 Maintain “**ever-warm**” **manufacturing capacity**
- 9 Define **blueprint research, production, and procurement plan** for diagnostics, therapeutics, and vaccines
- 10 Maintain and expand **rollout capabilities** for diagnostics, therapeutics, and vaccines

# DHL is well positioned to provide logistics services as partner for healthcare

## GLOBAL FORWARDING / FREIGHT

Transportation of Large Quantities of Temperature Controlled Freight



- 118** life sciences–certified air freight stations (IATA CEIV)
- 50+** certified reefer competence center for ocean freight

## SUPPLY CHAIN

Warehousing, Storage and Distribution of Vaccine Products



- 170+** GDP-qualified warehouses in 43 countries
- 250** pharmacists in warehouses; GMP capabilities
- 23+** clinical trials depots serving 80 countries

## EXPRESS

Distribution of Vaccine Lots Direct to Dosing Sites



- 150** Countries served via Medical Express
- 4** global Quality Control Centers for real time monitoring

## GDP COMPLIANCE - VISIBILITY - ANALYTICS

- ➔ Customer specific operational procedures & GDP compliant SOPs
- ➔ Global validated life sciences dedicated IT platform (LifeTrack)
- ➔ Trade lane risk assessment & data analytics
- ➔ Portfolio of sensors solution for condition monitoring
- ➔ Distribution management, predictive & real time visibility

## TEMPERATURE RANGES



- 15-25°C**
- 2-8°C**
- 20°C**
- 70°C**
- up to **-196 °C**

## EXPERTISE

**9.000+** dedicated Life Sciences & Healthcare Specialists