Belgium Business Seminar UPDATE

The BELGIUM - LUXEMBOURG
Chamber of Commerce in Hong Kong

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MEDICONED
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Agenda

1. Facts, Figures, Orders, Production

   (source: 2nd White Paper Pharma.Aero / TIACA)

1. The Role of Belgium in the Global distribution
2. First updates 2021 in vaccine production by the front runners
3. First expected trends on the 2022 production plans by the second wave of companies producing vaccines
4. Conclusions & lessons learned until now

AstraZeneca

FACT SHEET

AstraZeneca plc. is a British-Swedish multinational pharmaceutical and biopharmaceutical company headquartered in Cambridge, England. COVID-19 vaccine is developed in collaboration with Oxford University.

Medical specs

2 doses
Intramuscular

Vaccine shelf life:
- 6 months at +2°C to +8°C
- 24 hours at +15°C to +25°C

Name: **AZD1222**

Manufacturing info

Production started end of 2020

Manufacturing sites:
- Australia
- Brazil
- China
- India
- Korea
- Thailand
- UK

Production capacity of 2 billion doses for 2021
Plans to expand to 3 billion

Development status

Phase: Approved

Approval status: 11 Countries Approved in Argentina, Brazil, Dominican Republic, El Salvador, India, Iraq, Mexico, Mongolia, Morocco, Pakistan, United Kingdom

Clinical trials locations:
- Brazil
- India
- Japan
- Russia
- South Africa
- UK
- USA

Transport requirements

Transport temperature
+15°C to +25°C

Likely to be a passive box on +15°C (standard process)

Confirmed vaccine doses procured by country

ARGENTINA	22M	EL SALVADOR	2M	NEW ZEELAND	7.6M	UK	100M
AUSTRALIA	53.8M	INDIA	11M	PALESTINA	Unknown	USA	500M
BANGLADESH	30M	INDONESIA	Unknown	PERU	14M	VIETNAM	30M
BRAZIL	102M	ISRAEL	Unknown	PHILIPPINES	2.6M		
CANADA	20M	JAPAN	120M	SOUTH AFRICA	1.5M	AFRICAN UNION	100M
CHILE	14.4M	MALAYSIA	6.4M	SOUTH KOREA	20M	COVAX	170M
COLOMBIA	10M	MEXICO	77.4M	TAIWAN	10M	EU	400M
EGYPT	30M	MOROCCO	Unknown	THAILAND	26M	LATIN AMERICA	150M

Source: Sunoya project, Duke Global Health Innovation Center (2020). Launch and Scale Speedometer. Duke University, Reuters, CNN

Pfizer BIONTECH

FACT SHEET

Pfizer is a multinational pharmaceutical corporation headquartered in New York, USA, partnering with BioNTech, a biotechnology company headquartered in Mainz, Germany that develops and manufactures active immunotherapies for patient-specific approaches to disease treatment.

Medical specs

2 doses
Intramuscular

Vaccine shelf life:
- 6-7 months at -70°C
- 5-6 days at +2°C to +8°C
- 5-7 hours at +15°C to +25°C

Name: **BNT162b2**

Manufacturing info

Production started end 2020

Manufacturing sites:
- Belgium
- USA
- Germany

Production capacity 50 million doses in 2020 and up to 2 billion doses in 2021

Development status

Phase: Approved

Approval status: 54 Countries
→ *full list page 37*

Clinical trials locations:
- Australia
- Ecuador
- EU
- Japan
- New Zealand
- UK
- USA
- Germany
- China
- Argentina

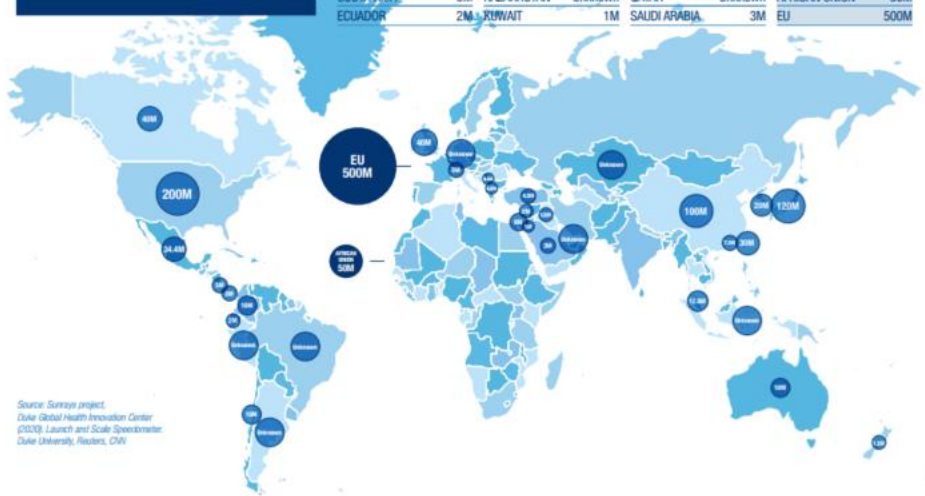
Transport requirements

Transport temperature
+15°C to +25°C

Likely to be a passive box on +15°C (standard process)

Confirmed vaccine doses procured by country

ARGENTINA	Unknown	GERMANY	Unknown	LEBANON	2M	SERBIA	0.5M
AUSTRALIA	10M	HONG KONG	7.5M	MALAYSIA	12.8M	SOUTH KOREA	20M
BRAZIL	Unknown	INDONESIA	Unknown	MEXICO	34.4M	SWITZERLAND	3M
CANADA	40M	IRAQ	1.5M	NEW ZEELAND	1.5M	TAIWAN	30M
CHILE	10M	ISRAEL	8M	NORTH MACEDONIE	0.8M	TURKEY	4.5M
CHINA	100M	JAPAN	120M	PANAMA	3M	UK	40M
COLOMBIA	10M	JORDAN	1M	PERU	Unknown		
COSTA RICA	3M	KAZAKHSTAN	Unknown	QATAR	Unknown	AFRICAN UNION	50M
ECUADOR	2M	KUWAIT	1M	SAUDI ARABIA	3M	EU	500M



Source: Sunoya project, Duke Global Health Innovation Center (2020). Launch and Scale Speedometer. Duke University, Reuters, CNN

NOVAVAX

Creating Tomorrow's Vaccines Today

FACT SHEET

Novavax, Inc. is a vaccine development company headquartered in Gaithersburg, Maryland, USA.

Medical specs

2 doses
Intramuscular

Vaccine storage:
- Refrigerated (+2°C to +8°C)

Name: **NVX-CoV2373**

Manufacturing info

Production could start in 2021

Manufacturing sites:
- Czech Republic
- India
- USA

Production capacity 2 billion doses per year as of 2021

Development status

Phase 3

Approval status: not yet approved for widespread use

Clinical trials locations:
- Australia
- Mexico
- South Africa
- Puerto Rico
- UK
- USA

Transport requirements

Transport temperature
+15°C to +25°C

Likely to be a passive box on +15°C (standard process)

Confirmed vaccine doses procured by country

AUSTRALIA	51M	MEXICO	Unknown	USA	110M
CANADA	76M	NEW ZEELAND	10.7M		
INDIA	Unknown	PHILIPPINES	30M	EU	Unknown
INDONESIA	50M	UK	60M		

Source: Sunsiya project, Duke Global Health Innovation Center (2020). Launch and Scale Speedometer. Duke University, Reuters, CNN

gsk SANOFI

FACT SHEET

GlaxoSmithKline (GSK) is a British multinational pharmaceutical company headquartered in Brendford, UK, partnering with Sanofi, a French multinational pharmaceutical company headquartered in Paris, France.

Medical specs

2 doses
Intramuscular

Vaccine shelf life:
- 2 years at -20°C
- 3 months at +2°C to +8°C
- 24 hours at +15°C to +25°C

Name: **Recombinant Protein**

Manufacturing info

Production postponed to Q3 2021

Manufacturing sites:
- EU
- USA

Production capacity of 90 million doses at the start of 2021, up to 360 million doses later in 2021

Development status

Phase 3

Approval status: not yet approved for widespread use

Clinical trials locations:
- Canada
- USA

Transport requirements

Transport temperature
+15°C to +25°C

Likely to be a passive box on +15°C (standard process)

Confirmed vaccine doses procured by country

CANADA	72M	COVAX	200M
UK	60M	EU	300M
USA	100M		

Source: Sunsiya project, Duke Global Health Innovation Center (2020). Launch and Scale Speedometer. Duke University, Reuters, CNN

moderna

FACT SHEET

Moderna is a biotechnology company focused on vaccine technologies based on messenger RNA and is headquartered in Cambridge, Massachusetts, USA.

Medical specs

2 doses
Intramuscular

Vaccine shelf life:
- 6 months at -20°C
- 30 days at +2°C to +8°C
- 12 hours at +15°C to +25°C

Name: **mRNA-1273**

Manufacturing info

Production has started

Manufacturing sites:
- Switzerland
- USA

Production capacity of 500 million to 1 billion doses/year

Development status

Phase: Approved

Approval status: 37 Countries
→ *full list page 37*

Clinical trials locations:
- Canada
- Switzerland
- USA

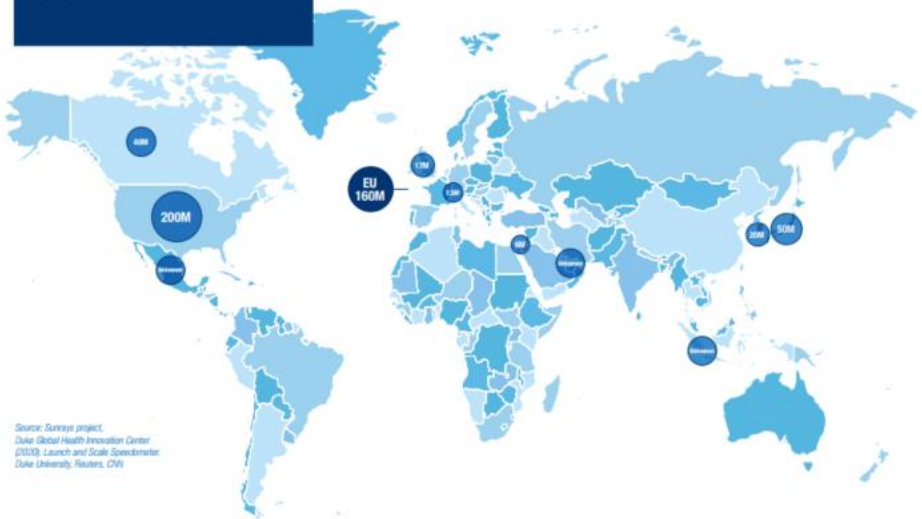
Transport requirements

Transport temperature
+2°C to +8°C

Passive box
(standard process)

Confirmed vaccine doses procured by country

CANADA	40M	MEXICO	Unknown	SOUTH KOREA	20M	USA	200M
ISRAEL	6M	QATAR	Unknown	SWITZERLAND	7.5M		
JAPAN	50M	SINGAPORE	Unknown	UK	17M	EU	160M



Source: Sunrays project, Duke Global Health Innovation Center (2020). Launch and Scale Speedometer. Duke University, Reuters, CNN

sinovac

FACT SHEET

Sinovac Biotech Ltd. is a biopharmaceutical company headquartered in Beijing, China which focuses on research, development, manufacture and commercialization of vaccines.

Medical specs

2 doses
Intramuscular

Vaccine storage:
- Refrigerated (+2C° to +8C°)

Name: **CoronaVac**

Manufacturing info

Production has started

Manufacturing sites:
- China
- Egypt (under negotiation)
- Indonesia

Production capacity 300 million doses per year

Development status

Phase: Approved

Approval status: 5 Countries Approved in Brazil, Chile, China, Indonesia, Turkey

Clinical trials locations:
- Brazil
- China
- Indonesia

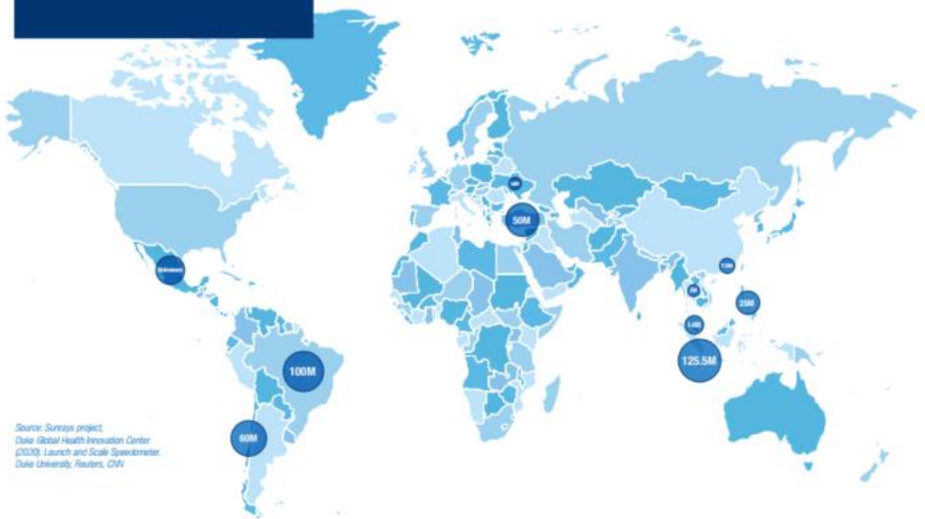
Transport requirements

Transport temperature
+15°C to +25°C

Likely to be a passive box on +15°C (standard process)

Confirmed vaccine doses procured by country

BRAZIL	100M	INDONESIA	125.5M	PHILIPPINES	25M	UKRAINE	1.8M
CHILE	60M	MALAYSIA	14M	THAILAND	2M		
HONG KONG	7.5M	MEXICO	UNKNOWN	TURKEY	50M		



Source: Sunrays project, Duke Global Health Innovation Center (2020). Launch and Scale Speedometer. Duke University, Reuters, CNN

Johnson & Johnson

FACT SHEET

Johnson & Johnson is a multinational corporation developing medical devices, pharmaceutical and consumer packaged goods, headquartered in New Jersey, USA.

Medical specs

1 dose
Intramuscular

Vaccine storage:
- Refrigeration (+2°C to +8°C)

Name: **Ad26.COV2.S**

Manufacturing info

Production could start end Q1 2021

Manufacturing sites (potential):
- Netherlands
- USA

Production capacity of 1 billion doses/year as of 2021

Development status

Phase 3

Approval status: not yet approved for widespread use

Clinical trials locations:
- Belgium
- Brazil
- Chile
- Colombia
- France
- Germany
- Mexico
- Netherlands
- Peru
- Philippines
- South Africa
- UK
- Ukraine
- USA

Transport requirements

Transport temperature +15°C to +25°C

Likely to be a passive box on +15°C (standard process)

Confirmed vaccine doses procured by country

CANADA	38M	MEXICO	Unknown	UK	30M	AFRICAN UNION	120M
CHILE	4M	NEW ZEELAND	2M	USA	100M	COVAX	500M
COLOMBIA	9M	SOUTH KOREA	6M			EU	200M

Source: Sunnya project, Duke Global Health Innovation Center (2020). Launch and Scale Speedometer. Duke University; Reuters, CNN

THE GAMALEYA NATIONAL CENTER OF EPIDEMIOLOGY AND MICROBIOLOGY

FACT SHEET

The Gamalyea Research Institute of Epidemiology and Microbiology is a medical research company headquartered in Moscow, Russia.

Medical specs

2 doses
Intramuscular

Vaccine storage:
- Complete +2C° to +8C°
- Frozen (-18C°)

Name: **Sputnik V**

Manufacturing info

Production started end of 2020

Manufacturing sites:
- India
- Russia

Production capacity 500 million doses per year

Development status

Phase: Approved

Approval status: 13 Countries Approved in Algeria, Argentina, Belarus, Bolivia, Guinea, Hungary, Paraguay, Republic of Serbia, Russia, Turkmenistan, United Arab Emirates, Venezuela, West Bank

Clinical trials locations:
- Belarus
- India
- Venezuela
- Azerbaijan
- Russia
- UAE

Transport requirements

Transport temperature +2°C to +8°C

Likely to be a passive box (standard process)

Confirmed vaccine doses procured by country

ALGERIA	Unknown	EGYPT	25M	MEXICO	32M	SERBIA	2M
ARGENTINA	25M	INDIA	100M	NEPAL	25M	UZBEKISTAN	35M
BOLIVIA	2.6M	KAZAKHSTAN	2M	PALESTINA	Unknown	VENEZUELA	10M
BRAZIL	50M	MALAYSIA	Unknown	SAUDI ARABIA	Unknown	VIETNAM	50M

Source: Sunnya project, Duke Global Health Innovation Center (2020). Launch and Scale Speedometer. Duke University; Reuters, CNN

CanSinoBIO

FACT SHEET

CanSino Biologics Inc. is a manufacturer of biological vaccine products headquartered in Tianjin, China.

Medical specs

1 dose
Intramuscular

Vaccine storage:
- Refrigeration (+2°C to +8°C)

Name: **Ad5-nCoV**

Manufacturing info

Production has started beginning 2021

Manufacturing sites:
- China

Production capacity of 100-200 million doses as of 2021

Development status

Phase: Approved

Approval status: 1 Country
China

Clinical trials locations:
- Argentina
- Chile
- China
- Mexico
- Pakistan
- Russia

Transport requirements

Transport temperature
+2°C to +8°C

Likely to be a passive box.

Confirmed vaccine doses procured by country

INDONESIA	15M
MALAYSIA	Unknown
MEXICO	Unknown

Source: Sunsiya project, Duke Global Health Innovation Center (2020). Launch and Scale Speedometer. Duke University, Reuters, CNN

BHARAT BIOTECH

FACT SHEET

Bharat Biotech International Limited is an Indian biotechnology company headquartered in Hyderabad.

Medical specs

2 doses
Intramuscular

Vaccine storage:
- Refrigerated (+2C° to +8C°)

Vaccine shelf life:
- 6 months at +2°C to +8°C

Name: **Covaxin**

Manufacturing info

Production has started beginning of 2021

Manufacturing sites:
- India
- Brazil

Production capacity of 100-200 million doses as of 2021

Development status

Phase: Approved

Approval status: 1 Country
India

Clinical trials locations:
- India

Transport requirements

Transport temperature
+2°C to +8°C

Likely to be a passive box (standard process)

Confirmed vaccine doses procured by country

BRAZIL	12M
INDIA	10M

Source: Sunsiya project, Duke Global Health Innovation Center (2020). Launch and Scale Speedometer. Duke University, Reuters, CNN

SERUM INSTITUTE OF INDIA
Cyrus Poonawalla Group

FACT SHEET

Serum Institute of India is an Indian biotechnology and pharmaceuticals company.
It is located in the city of Pune, India

Medical specs

2 doses
Intramuscular

Vaccine storage:
- Refrigeration (+2°C to +8°C)

Vaccine shelf life:
- 6 months at +2°C to +8°C

Name: **Covishield**

Manufacturing info

Production has started beginning of 2021

Manufacturing sites:
- India

Production capacity of 100-200 million doses as of 2021

Development status

Phase: Approved

Approval status: 1 Country India

Clinical trials locations:
- India

Transport requirements

Transport temperature +2°C to +8°C

Likely to be a passive box (standard process)

Confirmed vaccine doses procured by country

INDIA	11M
COVAX	200M

Source: Sunsys project, Duke Global Health Innovation Center (2020). Launch and Scale Speedometer. Duke University, Reuters, CNN

SINOPHARM

Sinopharm Group Co., Ltd. is a Chinese pharmaceutical company
Headquarters Sinopharm Plaza, Shanghai, China

FACT SHEET

Medical specs

2 doses
Intramuscular

Vaccine storage:
- Refrigerated (+2C° to +8C°)

Vaccine shelf life:
- 6 months at +2°C to +8°C

Name: **BBIBP-CorV**

Manufacturing info

Production has started beginning of 2021

Manufacturing sites:
- China

Production capacity of 1 Billion doses as of 2021

Development status

Phase: Approved

Approval status: 8 Countrys Approved in Bahrain, China, Egypt, Iraq, Jordan, Pakistan, Seychelles, United Arab Emirates

Clinical trials locations:
- Bahrain
- Egypt
- Jordan
- UAE
- Argentina
- Peru
- China

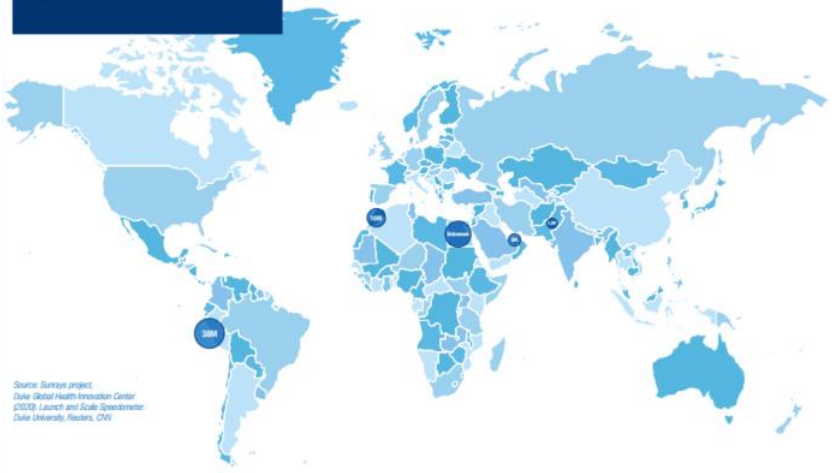
Transport requirements

Transport temperature +2°C to +8°C

Likely to be a passive box (standard process)

Confirmed vaccine doses procured by country

EGYPT	Unknown	PAKISTAN	1.2M	UNITED ARAB EMIRATES	3M
MOROCCO	10M	PERU	38M		



Source: Sunsys project, Duke Global Health Innovation Center (2020). Launch and Scale Speedometer. Duke University, Reuters, CNN

SINOPHARM

Sinopharm Group Co., Ltd. is a Chinese pharmaceutical company
Headquarters Sinopharm Plaza, Shanghai, China

FACT SHEET

Medical specs

2 doses
Intramuscular

Vaccine storage:
- Refrigerated (+2C° to +8C°)

Vaccine shelf life:
- 6 months at +2°C to +8°C

Name: **Inactivated**

Manufacturing info

Production has started beginning of 2021

Manufacturing sites:
- China

Production capacity of 1 Billion doses as of 2021

Development status

Phase: Approved

Approval status: 3 Countrys China, United Arab Emirates, Serbia

Clinical trials locations:
- China
- Peru
- UAE
- Morocco

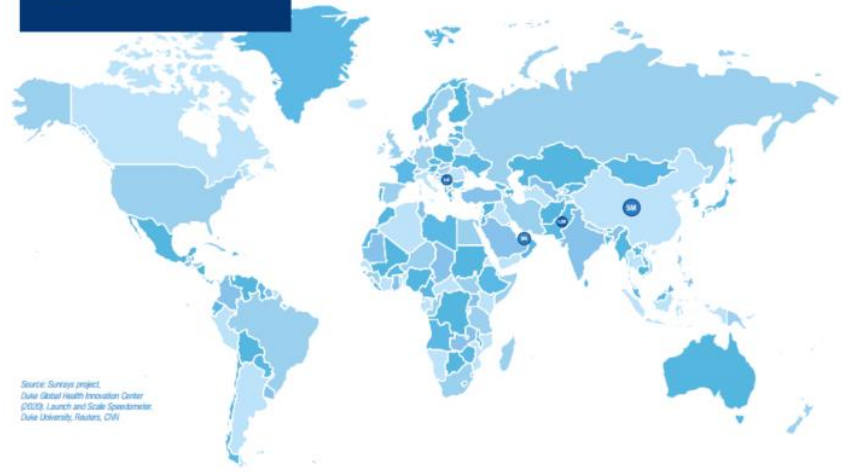
Transport requirements

Transport temperature +2°C to +8°C

Likely to be a passive box (standard process)

Confirmed vaccine doses procured by country

CHINA	5M	UNITED ARAB EMIRATES	3M
PAKISTAN	1.2M		
SERBIA	1M		



Source: Sunsys project, Duke Global Health Innovation Center (2020). Launch and Scale Speedometer. Duke University, Reuters, CNN

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Logistics have never been so important since WOII

Speed

- Timely and accurate bookings to support effective planning
- Guaranted transit time
- Minimise unexpected delays
- Priority service

Security

- Co-ordinated approach and programs to prevent illicit trades, counterfeit, cyberattacks and theft
- Secured airport facilities and in-country transportation

Reliability

- Strong readiness across the supply chain
- Guaranteed delivery times
- Minimise temperature excursions and deviations
- Safe transportation and handling of the shipments

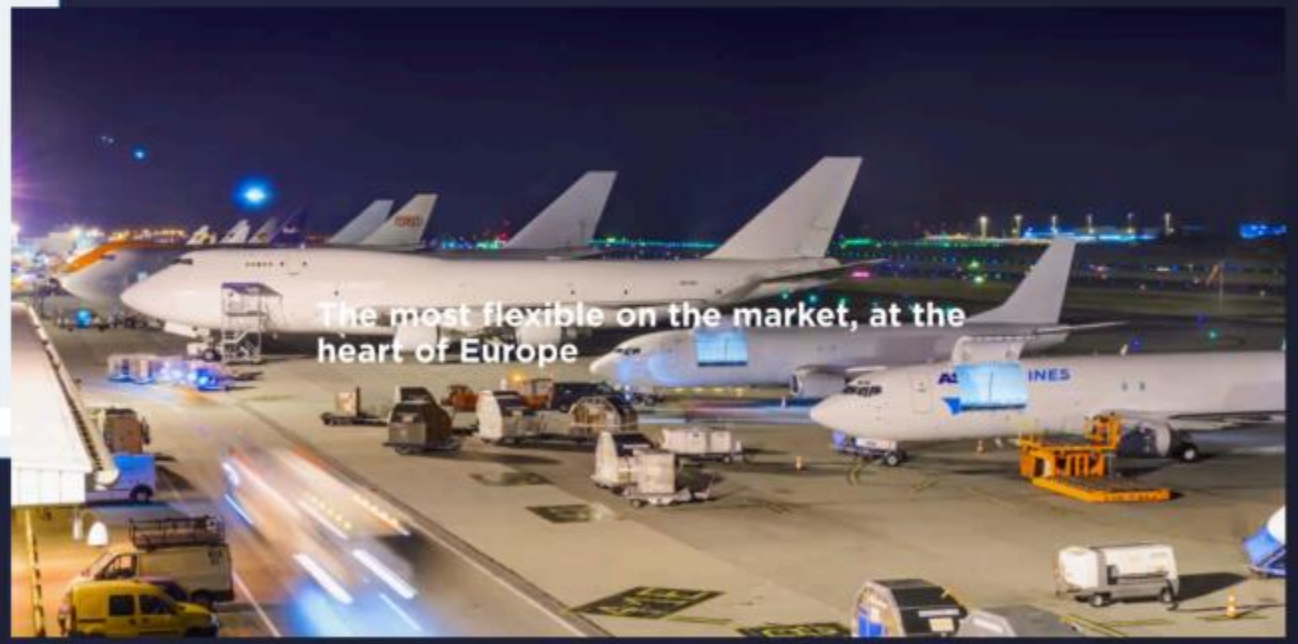
Transparency

- Real-time (or near-real time) tracking, monitoring and information sharing on shipment (location, status, temperature) and alerts in case of deviation in time to react and correct
- Information on existing airfreight capacity and lead times per trade-lane
- Reliable information on cool chain capabilities and capacity of logistics providers including each cargo facilities at origin, transit and destination points

Belgium: perfectly situated, production in the immediate region and two major airports that complement each other: where experience, vision and capacity merge to one

Project Goals

"BRUcure Taskforce aims to offer a robust logical pharmagatway at Brussels airport, for both import and export COVID-19 Vaccines. This in collaboration with the pharmaceutical shippers and the local BRUcargo community"



COVID-19 vaccines will need to be disbursed in nearly 200 countries and territories around the globe and into the arms of nearly 8 billion people.

Air cargo will play a critical role in ensuring these life-saving products can be moved in a fast, secured, reliable, transparent and compliant fashion supporting national and international objectives to achieve global immunity.

As outlined in this white paper, collaborative and coordinated solutions will provide the optimized approach to achieving the required logistical success. Pharma.Aero and TIACA, through project Sunrays, urge all logistics partners to implement quality solutions based on the recommended practices contained within this document, as well as industry guidelines, regulatory obligations and manufacturer stipulations.

Where not already implemented, local air cargo communities are recommended to be established to ensure the highest degree of logistical awareness and preparation can be assured.

In order to protect ONE, we must protect ALL.

PHARMA AERO TIACA

Project Sunrays

Readying Air Cargo Communities for COVID-19 Vaccine Air Transportation and Handling: Recommended Practices

FEBRUARY 2021

www.pharma.aero

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2021: what to expect:
Belgium represents a significant production and logistical role

8,9
Billion Vaccines will be available

6,5
Billion produced in EU and US

1,2
Billion in the backyard of Belgium

7
Billion vaccines produced by 4 Pharmaceuticals giants

2021

I Highly Mediatized

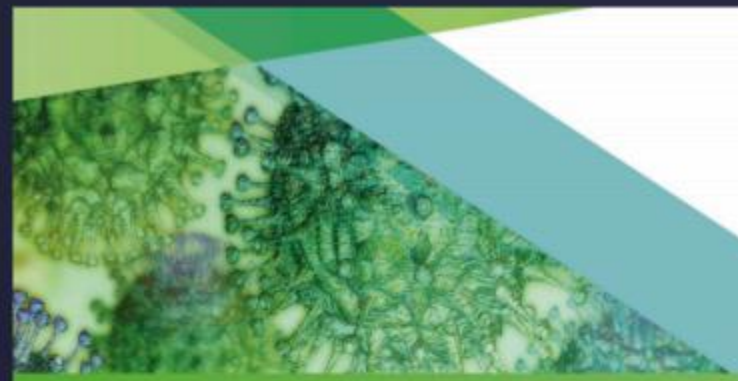
- High Value : estimated market value globally 2021: 220 billion euro
- Low tonnage in logistics: 1% of the global airfreight tonnage

II Local-regional serve the demand

- Little mutual trade
- US centrally managed
- EU on country level managed
- Global production control sits for 85 % in North America and Europe
- Integrators are seen as most trustful logistical partners at the moment

III Administration

- National vaccination Campaigns
- Vaccine ordering
- Regional / national task forces
- Local physical distribution of vaccines in strict temperature conditions
- Exact location of vaccination (large health care affiliated clinices / centers -> final customer)



TECHNICAL REPORT

COVID-19 vaccination and prioritisation strategies in the EU/EEA

22 December 2020

Key facts

- Prioritisation of COVID-19 vaccination should take into account several dimensions and needs to be contextualised.
- The choice of optimal vaccination strategy depends on the objective, e.g. reducing mortality, saving life years or reducing pressure on the healthcare system.
- The optimal prioritisation also depends on the characteristics of the vaccine, in particular its efficacy against infection and therefore onward transmission.
- If a vaccine does not protect against transmission, the most effective and efficient approach is to prioritise the vaccination of those groups at highest risk of severe disease and death.
- Substantial reductions in mortality and pressure on the healthcare system could be achieved by the direct protection of high-risk groups, even if viral transmission is ongoing within the population.
- Vaccination of healthcare workers is beneficial since it improves the resilience of the healthcare system. The benefit would be heightened if the vaccine were effective against infection, and therefore transmission, since it would offer indirect protection to patients, residents of long-term care facilities and other high-risk individuals.
- Although vaccinating adults aged 18-59 years is not the most effective or efficient strategy when vaccine supply is limited, consideration should be given to specific groups or settings that may have a disproportionate risk of exposure.
- Given the many unknowns in relation to COVID-19 vaccines' characteristics, deployment, supply, and uptake, and to future appearance of vaccine escape variants, non-pharmaceutical interventions should continue to be applied, as recommended by public health authorities, in the initial months following the introduction of COVID-19 vaccination.
- Vaccination strategies will need to be adaptable over time to unfolding events taking into account the emerging evidence.

I

Higher admission of elderly infected people paralyzes ICU's

II

Health Care Professionals get infected, which chronically undermine available care

III

Younger people are more resistant and can overcome the infection at home after 10 to 21 days

Frontrunner vaccine challenges: the last mile stays a headache, but it makes sense in the way the order of vaccination is done

Late-night freezer failure in Seattle sends hundreds scrambling to get a fast-expiring COVID-19 vaccine

After a freezer filled with Covid-19 vaccines broke, a California hospital scrambled to administer more than 800 doses in about 2 hours

By Stella Chan and Christina Maxouris, CNN

Updated 1355 GMT (2155 HKT) January 6, 2021

Geert Meyfroidt

UZ Leuven van start met vaccinaties zorgpersoneel: "Geen dag te vroeg"

Dirk Vlaeyen

Vandaag hebben de eerste zorgverleners in UZ Leuven een coronavaccin gekregen. Zondagavond bevestigde de Vlaamse overheid dat ziekenhuizen konden starten met de eerste fase van vaccinaties bij het zorgpersoneel. Dankzij het voorbereidende werk van de afgelopen weken kan het ziekenhuis onmiddellijk van start gaan en 1.407 vaccinaties toedienen in de loop van deze week.

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A lot to learn

Limited data

Dr Soumya Swaminathan, WHO

We have some vaccines, like measles, which you don't need to change at all. You make the vaccine, it works pretty much all the time. But you also have vaccines like against the influenza virus, where you have to change the structure of the vaccine every year, based on the circulating strains and WHO coordinates this global network that actually identifies which strain should be used every year.
For SARS-CoV-2 **we're still learning**, we're still observing and **our knowledge is evolving**. But at this point in time, most scientists believe that the vaccines that are currently in development and a couple that have been approved should provide protection against this variant and other variants because these vaccines elicit a fairly broad immune response, a host of antibodies and cell-mediated immune responses.
And so a couple of changes or mutations in **the virus should not make these vaccines ineffective**. But right now there are studies going on in labs around the world to actually confirm that. And in the small possibility that perhaps these are less effective against one or both of these variants, nowadays the way vaccines are developed, it will be possible actually to also change the composition of the antigens and the vaccines quite quickly.

Research needed

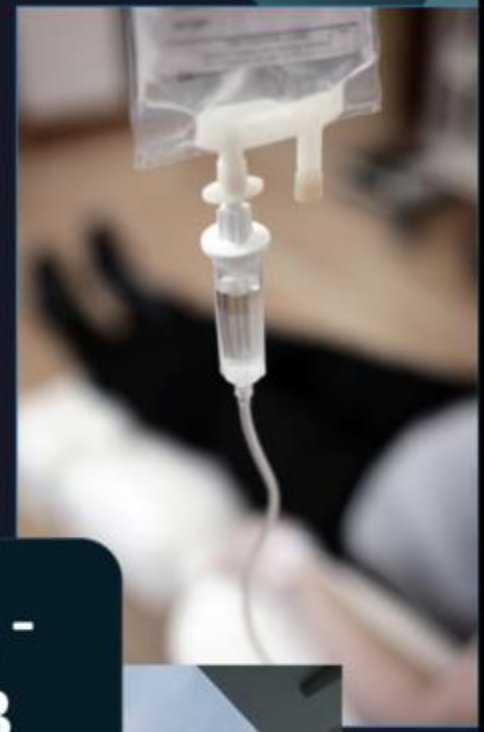
Too early

I More vaccines approved and available

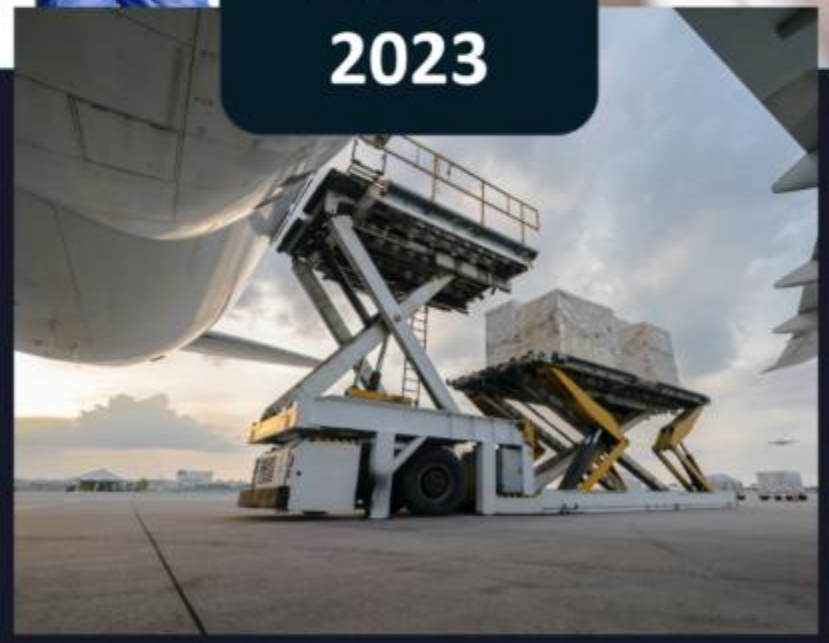
II More production facilities rise as know-how will be more availabe

III Countries will start shopping, vaccines will become a comodity

IV Estimated anual global volume 300k tons / market value estim 480 billion €



2022 - 2023



Agenda

1. Facts, Figures, Orders, Production
2. The Role of Belgium in the Global distribution
3. First updates 2021 in vaccine production by the front runners
4. First expected trends on the 2022 production plans by the second wave of companies producing vaccines
5. Conclusions & lessons learned until now

Unprecedent challenges can only be solved by sharing knowledge, sharing experiences and learn from our mistakes

I. Private and public sector need to work together

II. Be inclusive and set-up a structure

III. Global collaboration is equally important

IV. Plan ahead – Act as one community – Keep an eye on security – Map your infrastructure – Set achievable goals - Control media

TAKE HOME MESSAGE: the Big Bang theory was born in Belgium … we can overcome this one as well

The 5th Solvay International Conference on Electrons and Photons, 1927 Brussels, where Einstein meets the Belgian professor George Lemaître in the Leopold park , and makes him think completely review his vision on the birth of the universe, the Big Bang Theory was a fact.