



## MAIN NEEDS TO ENSURE A SECURED LOGISTIC CHAIN FOR COVID-19 VACCINES



### STOCK CONTROLS

from spot checks to real time inventories



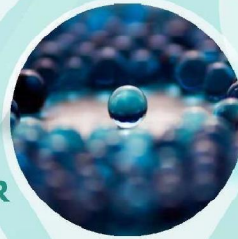
### COLD CHAIN ASSURANCE

complex cold chain conditions (until  $-70^{\circ}\text{C}$ ) with high risk of failures



### SINGLE CONTROL TOWER

single digital hub to control the entire logistic chain



### ONE TURNKEY SOLUTION

simplified process with one single point of contact



### DOCUMENTS' REVIEW

need to control legal procedures during the various changes of custody



### RISK REDUCTION

risk alerts to make the necessary corrective actions

# AN INTEGRATED SOLUTION DEVELOPED BY TWO GLOBAL LEADERS



GLOBAL LEADER IN  
PHARMA  
SUPPLY CHAIN TRACK &  
TRACE  
PLATFORMS AND

**TRACK & TRACE PLATFORM**



**BUREAU  
VERITAS**

GLOBAL LEADER IN SUPPLY  
CHAIN ASSURANCE AND  
COVID HYGIENE PROTOCOLS  
AUDITS

**SUPPLY CHAIN ASSURANCE**





**Track and trace COVID -19  
vaccines  
anytime and anywhere**

**&**

**Mitigate the risks  
along the logistic chain**





**Track and Trace platform**  
providing visibility along the supply chain

**Consolidation of comprehensive data**  
in a unique control tower

**Inspection services all along the logistic chain**  
to control inventories and ensure compliance  
of storage and transport conditions

**Project Management Assistance**  
to support you in the monitoring of the whole  
logistic chain



# VALUE PROPOSITION

## ASSURED TRACEABILITY FOR CORONAVIRUS VACCINE



### VISIBILITY

Control your vaccine orders  
all along the logistic chain in one single  
control tower,  
ensuring the traceability of all batches of  
vaccines



### TRACK & TRACE PLATFORM



### ASSURANCE

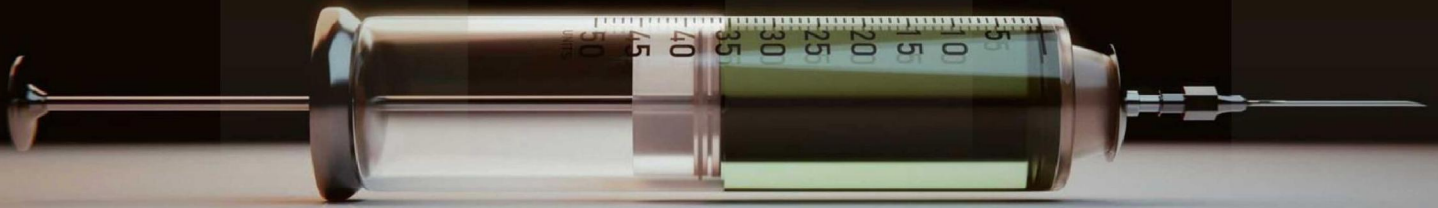
Get real information about  
conditions, status and compliance of  
your vaccines' batches on site.  
Be sure that your vaccines are well  
stored, transported and conserved



### SUPPLY CHAIN ASSURANCE



# ALONG THE WHOLE SUPPLY CHAIN



ON-SITE INSPECTION

TEMPERATURE

INVENTORY

DOCUMENTS

STOCK CONTROL

DATA COLLECTION

PHOTOS

PROJECT MGMT.



All information uploaded, managed, processed and analysed for decisions at Control Tower level

# ON-SITE INSPECTION

**Global presence with 190 years of experience in audits, inspection and certification**

- **Dedicated check-lists** for ordinary or special inspection
- **Photos** from the field
- **Documents** control / Upload
- **Scheduling** Control
- **Lot condition** monitoring
- **Packing** verification
- **Storage condition** at Ports & Airports



# ASSURED COLD CHAIN

Temperature verified and reported alongside the supply chain...

Central control to monitor results and trigger alerts for any deviation



  
v.trace.  
assured traceability

# STOCK CONTROL & INVENTORY

Storage condition verification

Stock control with traceable ins & outs

Inventory verification

Online consolidation and reports



# PROJECT MANAGEMENT ASSISTANCE

Data Analysis and Reporting

Alarms for critical deviations

Scheduling control

Monitoring of corrective actions



# HOW DOES IT WORK

## MAP THE LOGISTIC CHAIN

Ensure that the vaccine logistic chain is **well designed in the traceability platform**

## DEFINE THE INSPECTION POINTS AND THEIR SCOPE

Select the **assessment modules** and define **where in the logistic chain** those assessments should be performed

## COORDINATE WITH SUPPLY CHAIN STAKEHOLDERS

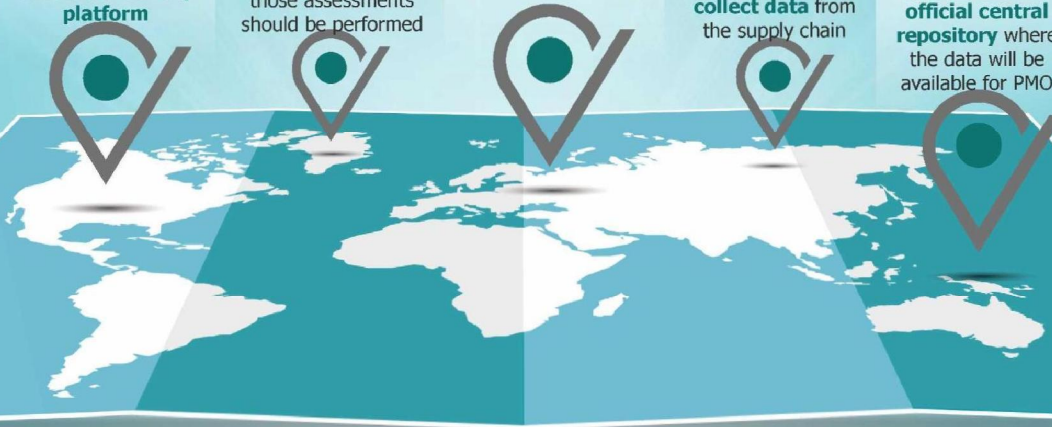
Communicate with **logistic operators** to ensure upload of **consistent data** in your IT Control Tower

## CONDUCT INSPECTIONS

Conduct **field inspections** with qualified inspectors to **verify status & conformity** and **collect data** from the supply chain

## MONITOR IN ONE SINGLE PLATFORM

All the results are **gathered in an official central repository** where the data will be available for PMO



# TRACK & TRACE DIGITAL PLATFORM



 **OPTEL**

# TRACK AND TRACE PLATFORM

Quick deployment of the MVP

Integrate existing database

Trace real-time data from SKU level to chain of custody

Intuitive dashboard and maps

Accessible from a computer or a smartphone



# TRACK & TRACE PLATFORM

**Stockpile inventory**

Province/Territory: [Dropdown] Vaccine type: [Dropdown] Per Commodity: [Dropdown] Per Manufacturer: [Dropdown] Per Province/Territory: [Dropdown]

Inventory Trend Warning Shipment Reception

AK3254897 AK574866 AK2222345 AK3478929 AK339290

January 18th, 2021  
Shipping: AK2222345  
Vaccine type: SARS-CoV-2  
Quantity: 2500

04/01 11/01 18/01 25/01 28/01

**Vaccine Supply/Demand Forecast**

| Province or Territory | Available Vaccines | Approximate vaccination per day | Forecast |
|-----------------------|--------------------|---------------------------------|----------|
| > Alberta             | 2314               | 254                             | 🟢        |
| > British Columbia    | 3544               | 364                             | 🟢        |
| > Manitoba            | 2806               | 258                             | 🟢        |
| > New Brunswick       | 1822               | 210                             | 🟢        |

**Commodity Inventory per Province/Territory**

| Province or Territory | SARS-CoV-2 |
|-----------------------|------------|
| > Alberta             | 95         |
| > British Columbia    | 145        |
| > Manitoba            | 115        |
| > New Brunswick       | 75         |

vtrace  
assure accessibility



# KEY ADDED VALUE

Data shared on the platform relies on field observations performed by independent experts

**RELIABLE**

Plug & Play solution combining the visibility offered by digital traceability with the certainty provided by field inspections

**TURNKEY SOLUTION**

**MODULAR**

- Logistic service provider connection
- Serialization at the granular level
- Product authentication
- Patient engagement



**v.trace.**  
assured traceability

Solution ready for millions of users & billions of doses to track & trace

**SCALABLE**

**FAST DEPLOYMENT**

Quick deployment of the Standard version. Customization of the solution also possible

# WHY IS V-TRACE A UNIQUE SOLUTION?

## KNOWLEDGE OF THE PHARMACEUTICAL INDUSTRY

20 years of experience in the pharmaceutical supply chain

## ALREADY ESTABLISHED IN THE MARKET

Experience with more than 80% of the top 30 pharmaceutical manufacturers

## PROVEN TRACK RECORD

Currently tracking 6bn+ items/year, connecting 300k suppliers with 15m+ consumers

## LEADERSHIP IN INSPECTION & CERTIFICATION

70+ accreditations / 145,000+ Certificates / Presence in 140+ countries

## RECOGNIZED EXPERIENCE WITH GOVERNMENTS

Large international inspection contracts with dozens of Governments around the world

## PLATFORM ALREADY IN PRODUCTION

Only requires to be configured and customization can be added on top



# COMMERCIAL REFERENCE



## CLIENT



## COUNTRY

Brazil

## SCOPE

End-to-end visibility platform

## DESCRIPTION

- Deploy traceability and serialization
- Centralized platform connected to plants, suppliers, retailers and consumers
- Result : improved supply chain efficiency and reliability

# COMMERCIAL REFERENCE



## CLIENT

**MCKESSON**

## COUNTRY

United Kingdom

## SCOPE

Distribution channel monitoring

## DESCRIPTION

- Deploy aggregation solution at case/pallet levels
- Connect to Government Healthcare database
- Result :
  - Real-time stock visibility combined with expiration dates
  - Traced more than 1M products per year in the UK

# COMMERCIAL REFERENCE



## CLIENT



## COUNTRY

Manufacturing plants in 9 countries

## SCOPE

Track-and-Trace Serialization

## DESCRIPTION

- Serialize at the SKU level and manage aggregation
- Ensure a transparent integration in the production flow when connecting to actual ERP
- Provide visibility on product movement data that improves operational efficiencies
- Result :
  - Serialized 900M products per year
  - Improved planning accuracy, manufacturing efficiency and productivity, inventory levels and service levels
  - Revealed potential quality trends and detected suspicious activities

# COMMERCIAL REFERENCE



## CLIENT

Ministry of Health

## COUNTRY

Libya

## SCOPE

verification of conformity of exported products and devices  
From worldwide manufacturers to Ministry of Health in Libya

## DESCRIPTION

- Conformity of commercial doc and compliance to LC requirements
- Physical inspection of all cargos from origin up to MoH premises (Tripoli)
- Verification of batch numbers and full compliance to MoH standard requirements
- Issuance of certificate of conformity for each shipment.

# COMMERCIAL REFERENCE



## CLIENT

Ministry of Trade & Industry

## COUNTRY

Iraq

## SCOPE

verification of conformity of all imported products  
From worldwide manufacturers/exporters to Iraq

## DESCRIPTION

- Conformity of commercial doc and compliance to Iraqi standards requirements
- Physical inspection of all cargos from any origin up to Iraqi borders
- Documentary Verification at destination before clearance of each cargo
- Issuance of certificate of conformity for each shipment

# COMMERCIAL REFERENCE



## CLIENT

Saudi Arabia Standards Organization

## COUNTRY

Saudi Arabia

## SCOPE

verification of conformity of all imported products  
From worldwide manufacturers/exporters to Saudi

## DESCRIPTION

- Conformity of commercial doc and compliance to Saudi standards requirements
- Physical inspection of all cargos from any origin.
- Verification of any conformity data and authenticity of original documents.
- Issuance of certificate of conformity for each shipment

# COMMERCIAL REFERENCE



## SERVICE

Verification of conformity (VOC)

## COUNTRY

Global

## SCOPE

verification of conformity of all imported products  
From worldwide manufacturers/exporters to destination

## FIGURES

- Over 90 programmes run since 1975
- 25 government contracts running today
- More than 130 000 conformity certificates issued yearly.





# ABOUT BUREAU VERITAS

# BUREAU VERITAS



A LEADER OF THE TEST, INSPECTION AND CERTIFICATION MARKET



**€5.1**  
billion

Revenue in 2019



More than  
**78,000**

employees



**400,000**

clients



More than  
**1,500**

offices  
& laboratories  
in 140 countries

# CAPACITY TO PERFORM ON-SITE INSPECTIONS EVERYWHERE

## BUREAU VERITAS' INTERNATIONAL FOOTPRINT





# ABOUT OPTEL



**OPTEL**



**A LEADING GLOBAL PROVIDER OF TRACEABILITY SYSTEMS**



Founded in

**1989**



More than

**15** years

of experience  
in digital traceability



More than

**28** years

of experience  
in the pharmaceutical  
supply chain



Experience with more than

**80%**

of the  
**top 30**  
pharmaceutical  
manufacturers

Tracking  
**15 billion +**  
items / year

Connecting  
**500,000**  
suppliers

Engaging with  
**15m +**  
consumers

# OPTEL'S PLATFORM TO CREATE A BETTER WORLD

## END-TO-END TRACEABILITY SOLUTIONS

Providing true visibility across the entire supply chain, from the extraction of raw materials to the consumer

## AN AWARDED COMPANY

On 16th Nov. 2020, the company won the "*Excellence in Digital Disruption*" award from the World Economic Forum

## EXPERIENCE WITH GOVERNMENTS

Platform already connected with Government healthcare database

## THE POWER OF OPTEL'S SERIALIZATION SYSTEM

OPTEL's advanced serialization system allows traceability at the granular level  
Proven software and hardware solution deployed over 4000 pharmaceutical packaging lines