

RESPONDING TO THE CHALLENGES

OF THE COVID-19 VACCINE
SUPPLY CHAIN



BUREAU
VERITAS



OPTEL



A GLOBAL EFFORT

With COVID-19 vaccine delivery ramping up globally, governments are confronting a great challenge in terms of tracking vaccine shipments in real time, and sharing reliable data with the public. Information and vital doses must reach their intended destinations in order to bolster the public's trust.

With governments under scrutiny, consistent messaging is key. *"The more people we get vaccinated, the greater protection we have not only for the individual but for society in general,"* said Dr. Anthony Fauci, Director of the U.S. National Institute of Allergy and Infectious Diseases. *"And that's the reason why we're putting such a big push on trying to get people to be convinced to get vaccinated."*²

In January 2021, the EU reaffirmed its commitment to vaccinate 70% of adults by the summer months.³ To hit these targets, a viable track-and-trace solution should be put in place that can ensure vaccine viability along the entire supply chain.



THANKS TO groundbreaking work by the global healthcare ecosystem, the fastest vaccine rollout in history is underway. Production sites are making COVID-19 vaccines at record speeds, while governments are buying them in never-before-seen quantities. As of March 2021, the EU has ordered nearly 2.6 billion vaccine doses.¹ Transport companies are carrying millions of doses a day, and healthcare providers are working overtime to administer vaccines to everyone who wants them.

However, while the delivery of doses around the globe will be greatly increased in coming weeks, there must be a concurrent ramp-up in terms of supply chain control and monitoring. Governments face a great imperative to ensure that doses are kept at proper temperatures and arrive on time, at the right location. This requires optimal vaccine traceability and process transparency, which will in turn engender a higher feeling of trust among the public.

CONTENTS

PAGE 3
A global effort

PAGE 4
Identifying gaps in the supply chain and finding solutions

PAGE 6
How to ensure a seamless COVID-19 vaccine supply chain

PAGE 7
V-Trace: a ready-to-use solution for vaccine campaign management and monitoring



2.6 BILLION
doses ordered
by the EU⁴



773.55 MILLION
vaccine doses
administered
worldwide⁵

¹ https://ec.europa.eu/commission/presscorner/detail/en/fs_20_2244

² <https://www.cbsnews.com/video/dr-fauci-on-new-vaccine-timeline-latest-virus-surge/#x>

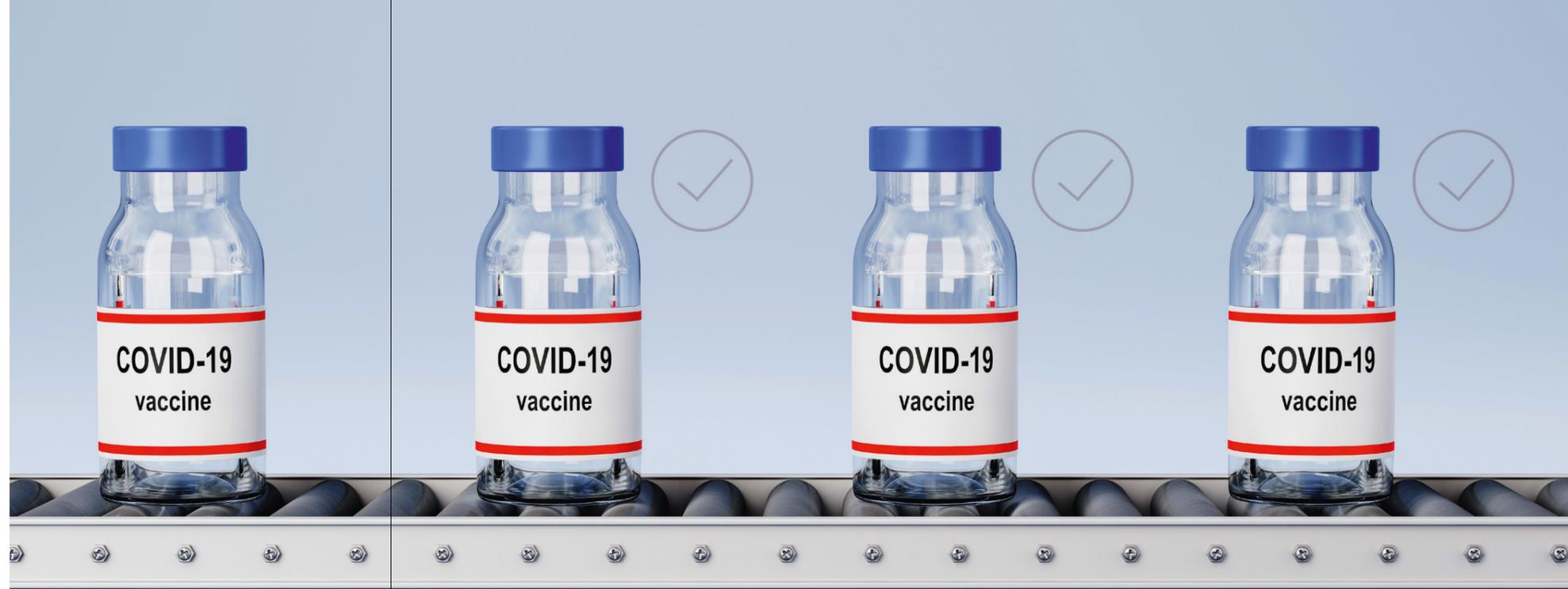
³ <https://www.dw.com/en/eu-still-aims-to-vaccinate-70-of-adults-by-late-summer/a-56400538>

⁴ https://ec.europa.eu/commission/presscorner/detail/en/fs_20_2244

⁵ <https://ourworldindata.org/covid-vaccinations>. Data as of April 10, 2021.

IDENTIFYING GAPS IN THE SUPPLY CHAIN AND FINDING SOLUTIONS

In order to run a safe and efficient vaccine rollout, governments and regulatory bodies have four key areas of need.



1 / VISIBILITY

Right now, the goal is to guarantee visibility regarding how many vaccines are available in a given location, as well as precisely when they can be administered. Vaccine appointments need to be accurate and seamless so as to reassure the public that when they make an appointment, they will obtain the needed dose at the appointed time and place.

A digital track-and-trace platform operating across the entire supply chain could provide real-time updates about the location and destination of vaccine shipments. Authorities are working hard to locate any misplaced vaccines and reroute them to the right locations as fast as possible. But misallocations could be addressed more quickly through alerts on inventories, indicating when they are full and when governments need to place new orders. Such a system would enable everyone to communicate the most accurate and up-to-date vaccine rollout figures possible.

Enable everyone to communicate the most accurate and up-to-date vaccine rollout figures possible.



93.71 MILLION
DOSES administered
across the EU¹

2 / REASSURANCE

The public's confidence in experts and authorities has begun to rebound over the course of the vaccine rollout. As more and more people are protected, it becomes all the more vital to reach out to those who might have doubts about receiving their own vaccine.

Experts from the health and science communities around the world are working hard to share positive messages and address common misconceptions, and they need concrete evidence to back up their statements. To build more support and combat any remaining skepticism, everyone, from public health taskforce leaders to family doctors, must be armed with data and up-to-date information.

To monitor batch preparation and collect data, trusted third-party inspectors should be granted access to production sites. Reinforcing their findings with pictures and documentation checks, they would upload and share this data in real time through the use of a centralized digital database. In this way, the safety and efficacy of COVID-19 vaccines would be verified, and in turn would reassure the public.

¹ <https://ourworldindata.org/covid-vaccinations>. Data as of April 10, 2021.

3 / STOCKS AND INVENTORIES

Pharmaceutical companies are producing vaccines as quickly as they can, but miscommunications can lead to errors regarding actual numbers being produced. Governments need to be sure of how many vaccine doses they have on any given day, and where they can administer shots.

From a municipal, to a state or a national level, shortages impact everyone in the affected areas. On the contrary, when countries have a steady and reliable stream of vaccines coming in, they can in turn provide a vaccine for everyone who wants one, within the appropriate time-frame to ensure maximum efficiency. The more people who are fully vaccinated, the better for everyone's safety. Ensuring an efficient rollout should be the priority of governments and healthcare providers around the world.

To avoid shortages, better management of stocks and inventories is needed. Real-time data enables governments and vaccination sites to allot the correct number of appointments, and avoid cancellations and miscommunications. This results in increased public confidence in the system.

Ensuring an efficient rollout should be the priority of governments and healthcare providers.



REAL-TIME
VACCINE DATA
increases public
confidence

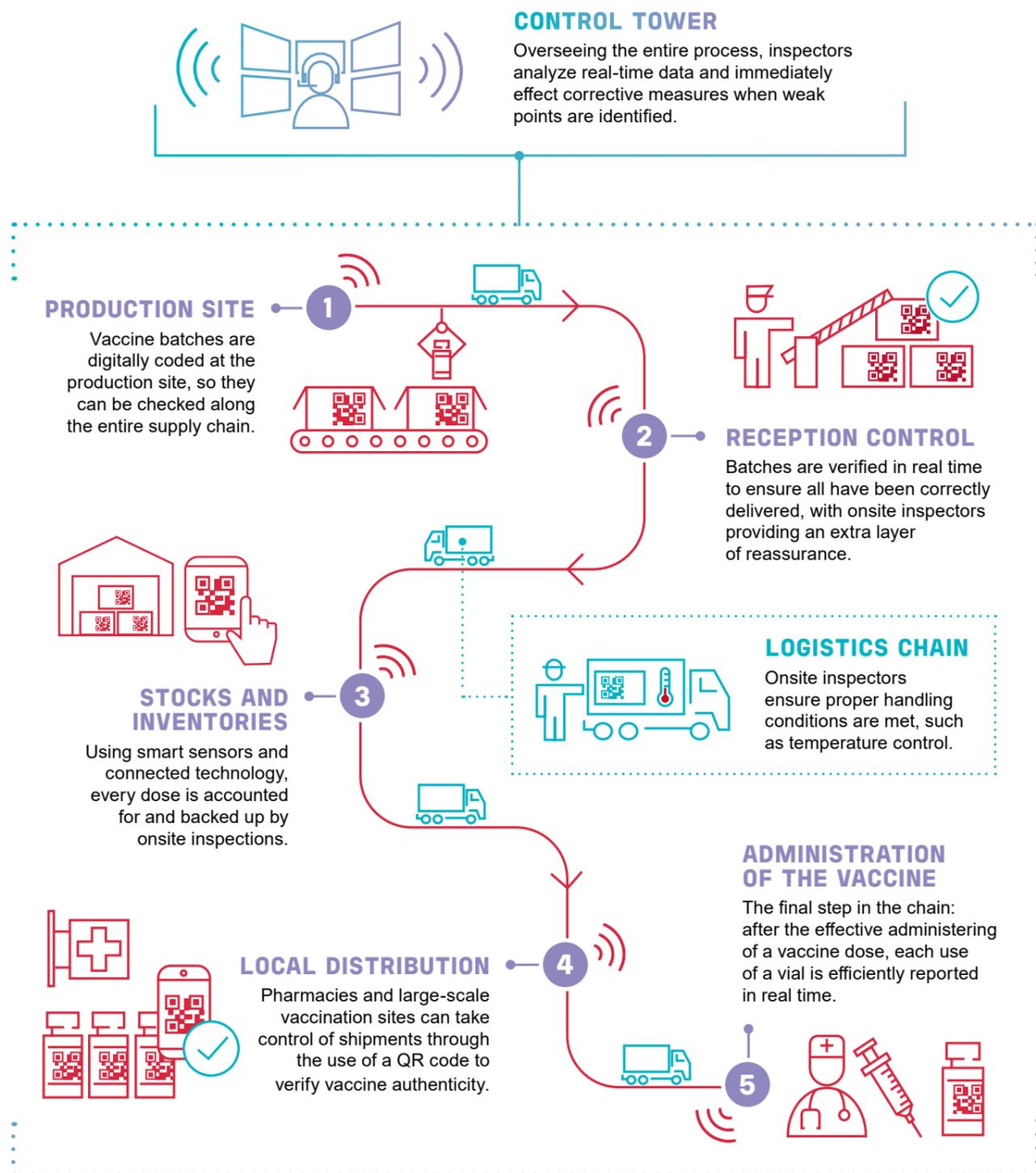
4 / COMBATING COUNTERFEITS

As rollouts continue, incidents of counterfeit vaccines are unfortunately popping up. In March 2021, Interpol shared information about arrests in China and South Africa, at a factory and a warehouse where thousands of fake vaccine doses were being made and stored. According to Jürgen Stock, Interpol Secretary-General, "This is only the tip of the iceberg when it comes to COVID-19 vaccine-related crime."²

Fake vaccines pose a clear public health threat, and must be prevented from reaching consumers. Everyone, from transport workers to doctors and nurses, should be able to verify the doses they are handling are real and effective. This requires a centralized system that records when and where a specific vaccine dose is administered, and allows for instantaneous authentication.

² <https://time.com/5943581/interpol-face-covid-vaccine/>

HOW TO ENSURE A SEAMLESS COVID-19 VACCINE SUPPLY CHAIN



V-TRACE: A READY-TO-USE SOLUTION FOR VACCINE CAMPAIGN MANAGEMENT AND MONITORING

A successful vaccine rollout requires centralized oversight to track the location, availability and authenticity of billions of doses of vaccines. Bureau Veritas, a Business to Business to Society company, and OPTEL, a leading global provider of traceability systems, have partnered to create V-Trace, a digital track-and-trace platform. It addresses the vital needs of governments, health officials and the wider public.



COVERING THE VACCINE SUPPLY CHAIN

The V-Trace digital platform, created by OPTEL, tracks doses from before they leave manufacturing facilities, along the entire supply chain, to the instant they are administered. OPTEL is the only company offering true end-to-end traceability, providing actionable, granular data at every step of the supply chain. Governments can use this data to give the public up-to-date information regarding vaccine availability.

V-Trace is reinforced along the logistics chain by onsite Bureau Veritas inspectors. They check central storage locations and local distribution channels, ensuring inventory accuracy, thus preventing shortages and misreporting. They can even provide monitoring and control at vaccination centers. Verification and monitoring are thus built in at every step, reassuring the public.

Through the V-Trace app, healthcare providers can obtain instantaneous authentication that they are administering a real, vetted vaccine. This confirmation ensures that no one will receive a counterfeit vaccine. Bureau Veritas manages, processes and analyzes data in a state-of-the-art, customizable digital Control Tower. It offers government clients corrective action plans whenever and wherever needed.

V-TRACE AT THE HEART OF THE SOLUTION

The V-Trace platform provides greater visibility, thus boosting public confidence and the overall success of vaccination campaigns. Ensuring traceability, V-Trace enables governments to better anticipate and manage their supplies. Through one coherent system, governments can provide visibility, reassurance, and better maintenance of inventories. This solution also prevents the sale of counterfeit vaccines, ensuring a safer and more trustworthy rollout around the world.





SHAPING A WORLD OF TRUST

Bureau Veritas is a Business to Business to Society company, contributing to transforming the world we live in. A world leader in testing, inspection and certification, we help clients across all industries address challenges in quality, health & safety, environmental protection and social responsibility.

bureauveritas.com

.....

OPTEL is a leading global provider of traceability systems whose goal is to use its innovative technologies to build a better world through the Intelligent Supply Chain®. With more than 30 years of expertise and experience in the pharmaceutical supply chain, OPTEL is working with the world leading brands and tracking 15B items per year.

optelgroup.com

Contact: vtrace@bureauveritas.com



**BUREAU
VERITAS**

Shaping a World of Trust

