



Supporting AMEA Covid-19 Vaccine Distribution

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Meeting the complex challenges

Shipping COVID-19 vaccines is critical work and FedEx is working closely with governments and our healthcare customers on vaccine distribution plans.

We are confident in our strong relationships with our healthcare distribution customers as we work through the preparation and prioritization of these deliveries.

Our dedicated AMEA Healthcare team supports the storage, customs brokerage and express transportation of vaccines and bioscience shipments here and around the world.



Delivering the COVID-19 vaccine across AMEA

Shipping COVID-19 vaccines is complex and critical work with many moving parts. To facilitate the efficient distribution of COVID-19 vaccines, FedEx has a dedicated AMEA Vaccine Response team and a Vaccine Control Tower (VCT) to monitor all vaccine shipments. This is a concentrated initiative to assure customer experience standards. Our network is well positioned to handle these shipments with a proven track record as we've been shipping flu vaccines every flu season for more than a decade. To support vaccine distribution, we have been working to:

Today

We have more than 90 cold chain facilities across the Americas, Asia, Australia and Europe. We're exploring solutions including temperature-controlled ocean containers and refrigerated trailers

Tomorrow

Innovations such as Sensaware ID for packaging tracking. Sensaware technology is complemented by the FedEx Surround platform, which leverages artificial intelligence and predictive tools to proactively monitor conditions surrounding the packages



Managing multiple moving parts

As of 10 May we have moved vaccine kits and medical equipments in AMEA weighing 246 Tons, which also include more than 2000 oxygen concentrators weighing 43541 kgs.

46 kilotons

of personal protective equipment

1.8 billion

face masks and surgical masks

8,475

humanitarian aid shipments

Within AMEA

246 Tons

of vaccine kits, medical equipment and supplies

2000+

oxygen concentrators moved to pandemic affected areas in India



A world map with a purple-to-orange gradient background. Numerous orange lines represent FedEx flight routes connecting various global hubs. Labeled cities include Anchorage, Indianapolis, Toronto, New York, London, Liège, Cologne, Paris, Guangzhou, and Shanghai.

Keeping the healthcare community connected

With the largest cargo fleet of airplanes, FedEx Express has the flexibility and customized solutions to help safely move temperature sensitive shipments around the world.

670+

cargo aircraft

5,000+

cutting-edge facilities

180,000+

vehicles on the road

500,000+

dedicated team members

FedEx. Delivering a better tomorrow, today

Every day, patients, families, doctors and hospitals depend on vaccines and healthcare services to improve and save lives. At FedEx, we understand the importance of what you do, and we're proud to play a part in the global efforts to distribute the Covid-19 vaccine.

FedEx has a long track record supporting the healthcare sector and has built robust capabilities in transporting critical healthcare shipments like pharmaceuticals as well as the seasonal flu vaccine. We have responded to pandemics before.

In 2009, for example, we supported H1N1 vaccine distribution, shipping 80 million doses to 90,000 destination sites. Throughout this pandemic, the logistics industry has been an essential service provider.

As an essential service, we're extremely proud of the extraordinary efforts of our team members to safely and reliably meet our customers' needs during these challenging times.



In healthcare, shipment integrity is everything

Decades of development and experience are behind the design and implementation of our advanced packaging, vehicles, containers, and facilities.



Maximum Coverage

Securely delivering to more destinations across AMEA and the globe. We'll connect you with major cities worldwide in 24 to 48 hours

- World's largest air fleet
- One of the fastest ground transportation networks

Care and Integrity

Minimizing risk of temperature excursions. We ensure your shipments travel safely and securely

- Contingency management
- Leading cold chain solutions
- Validated packaging solutions

Priority Services

Expedited reliable delivery across our extensive air and ground network

Urgent shipments to hospitals, national care institutions, pharmacies and distribution centers are supported by:

- FedEx's unrivaled transport network
- Specialist AMEA teams

Security

Advanced real-time monitoring, visibility and control deliver world-class protection. Know where your shipment is every step of the way:

- Dedicated, specially trained control tower team monitor shipments 24/7
- Worldwide compliant storage facilities network for transit and break-bulk operations

Your FedEx AMEA team is ready to help

FedEx has decades of experience moving vaccines and bioscience shipments around the world. We have been planning for COVID-19 vaccine shipping for several months and are already supporting vaccine distribution in the U.S., Puerto Rico and Canada.

Flexibility:

- Customize your pick-up and delivery schedules to a convenient time for you.
- Same day* or next day deliveries depending on postal codes that we serve.
- Choose from door-to-door, door-to-airport, on-demand air solutions for your shipments
- Dedicated 24x7 pick-up and delivery services

Speed:

- Rapid transit times
- Quick customs clearance services

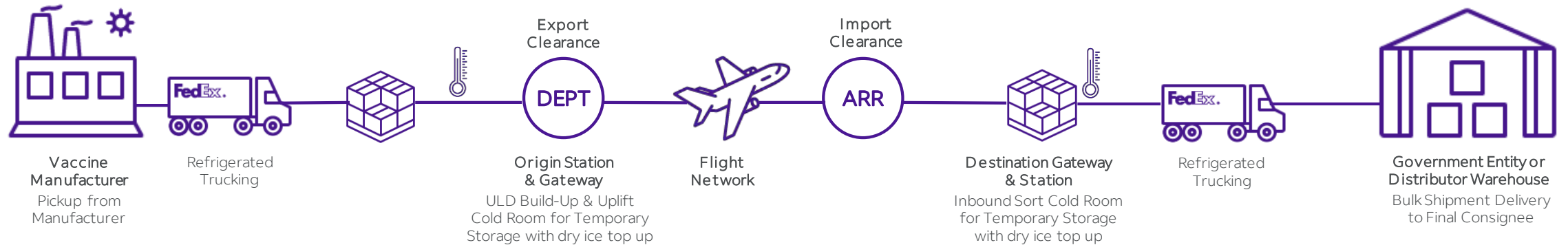
Control and Visibility:

- Proactive tracking services to efficiently monitor your shipment every step of its journey.

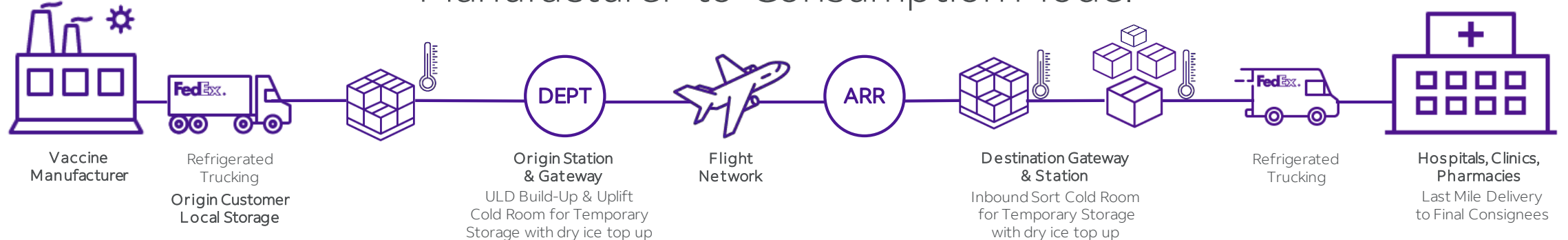


Supporting the vaccine supply chain's global flow

Manufacturer-to-Distributor Model



Manufacturer-to-Consumption Model





Special shipments. Special solutions

Get customized supply chain solutions and dedicated cross-functional support teams who will engineer the right solution for your shipment requirements.

- Unparalleled monitoring capabilities for greater end-to-end visibility of critical shipments
- Global network of operating companies to serve effectively any temperature-sensitive shipping need
- Follow customer-specific standard operating procedures (SOPs)
- Latest tracking technology
- Multiple layers of security
- Control tower
- In-transit handling
- Priority uplift on the flight
- Temperature recording (data logger)
- Cutting-edge temperature-controlled packaging solutions

FedEx Customized Freight

- Reposition containers globally to accommodate your products, at no cost to you
- Ensure dedicated 24/7 monitoring, 365 days a year via FedEx® temperature-control services
- Provide support through our Quality Teams who will manage your regulatory compliance requirements

FedEx Priority Alert

- **Attention and assurance:** global service analysts closely monitor the status of your package and freight shipments, notify you of any delays and execute recovery procedures
- **Priority placement:** priority boarding on our aircraft and, where available, priority clearance handling to ensure maximum time for clearance issue resolution

State-of-the-art cold-chain facilities and capabilities

Temperature control and real-time tracking are critical to ensure successful vaccine shipping.

- Sensor-based shipping solutions
- Ultra-low freezers capable of maintaining temperatures as low as -94° to -112°F
- FedEx® Deep Frozen Shipping Solution maintains products at or below -150°C for up to 10 days
- Cold shipping packaging keeps contents between 2°C to 8°C
- Temperature-controlled containers, cargo boxes and thermal blankets help safeguard sensitive shipments
- Charter flights and more



Active and Passive Containers



Active Containers

- Active containers can be plugged in to keep protecting your payload in the event of flight delays or other unforeseen circumstances. Other features include onboard temperature monitoring and data logging available for most models
- Thermostat-controlled air conditioning system with compressor cooling and electrical heating (“Dry ice-free”)
- Envirotainer e2/e1 containers ($\pm 0^{\circ}\text{C}$ to $+25^{\circ}\text{C}$), RKN/RAP
- Envirotainer t2 containers (-20°C to $+20^{\circ}\text{C}$) for IMP, high value API and critical medication launch for pharma customers and vaccine cold chain movements
- CSafe containers ($+4^{\circ}\text{C}$ to $+25^{\circ}\text{C}$)

Passive Containers

- Dry ice-based system with onboard temperature monitoring and data logging available for most models
- Va-Q-tainer (-80°C to $+25^{\circ}\text{C}$). Advanced passive alternative for temperature-controlled shipments of pharmaceutical and biotechnological goods. It is able to accommodate larger payload volumes. Dry ice-free for temperatures down to as low as -40°C

Passive temperature-controlled packaging



Passive Packaging Solutions

Maintain a temperature-controlled environment inside an insulated packaging using pre-conditioned coolant such as chilled or frozen gel packs, phase change materials and dry ice.

- Pre-qualified to hold a particular temperature for a certain amount of payload volume for a specified period of time: 24, 72 or 96 hours, and more.
- Single use and multi-use options
- Options range from a very small box to pallet size and even containers:

Cold Shipping Package (+2°C to +8°C) 'NanoCool'

- Cater to your smaller payload deliveries.
- Choose from various parcel sizes – small, medium and large.
- Standard duration unit (all three sizes) offers up to 96 hours of temperature control, depending on the external temperature

FedEx® Thermal Blanket Solution (15°C to 25°C)

- This end-to-end solution without having to buy the blankets nor undertake training to use them. Simply lease the blankets as you ship.
- Covers perishable cargo during transportation
- Stabilizes the cargo's temperature and shields it from weather fluctuation
- Provides priority uplift and monitoring during transit for bulk/ generic products

Sensor-based tracking



SenseAware

SenseAware is a first-of-its-kind monitoring capabilities with real-time awareness of a package's location from point of pick-up to delivery in the FedEx Express network.

- Offers access to essential data on demand from the application
- Sends alerts when a shipment approaches its temperature limit
- Generate a graph or report with temperature data from before pickup to after delivery to be shared with the recipient as proof of integrity
- Alerts in advance when a shipment is compromised and more



- 60°C to as low as -200°C (+140°F to -328°F)
- Preset a temperature range to trigger alerts



- See current location down to street level on Google maps



- Designate an area to receive alerts if your shipment or inventory crosses into or out of that area



Other features include humidity monitor and verification, pressure monitor and verification, shock monitor and alerts, light exposure verification and alerts, route alerts, and time-based location alerts.

To find out more about SenseAware please visit

Find out more



[Health Care Portal APAC](#)

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