



Tunisia: Demonstrating innovative health supply chain solutions

Project Optimize and the Tunisian Ministry of Public Health are collaborating to explore new logistics and supply chain solutions that can optimize the vaccine supply chain.

This two-year collaboration aims to demonstrate the benefits of a supply chain that:

- Is more streamlined and integrated with those of other health products.
- Relies on solar energy to achieve zero net energy consumption for vaccine storage and transportation.
- Uses a computerized logistics management information system (LMIS) to track and trace vaccines.

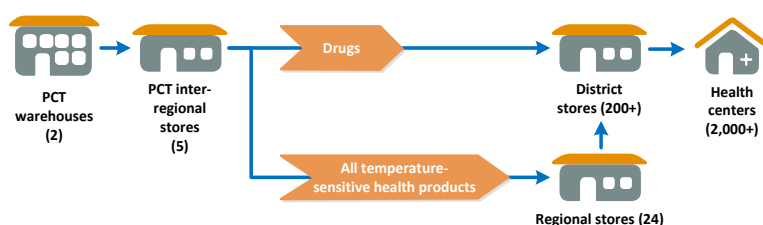
Anticipated benefits include efficiencies in storage, distribution, and stock management, as well as increased responsiveness in the supply chain to routine and emergency requests.

A streamlined and integrated supply chain

The supply chain is being streamlined by removing inefficient steps that vaccines go through before reaching their final destination. The vaccine supply chain is also being integrated with those of other health commodities, reducing the number of supply chains working in parallel to distribute health products to the same destination.

The national vaccine store is no longer being used to store vaccines. Instead, the Pharmacie Centrale de Tunisie (PCT) is taking responsibility for the procurement, storage, and distribution of vaccines and other temperature-sensitive health products from the national store to regional stores.

Further down the supply chain, regional and district stores are being consolidated. All health products (not just vaccines and temperature-sensitive products) are now stored and transported together from the regional level down to health center levels using more efficient delivery circuits.



A streamlined and integrated supply chain



An electric vehicle used to transport vaccines and other health commodities.

About Optimize

Optimize is a collaboration between the World Health Organization and PATH to identify ways in which supply chains can be optimized to meet the demands of an increasingly large and costly portfolio of vaccines.

We work directly with national governments and other institutions to identify problems in the supply chain and test innovative solutions.

Our goal is to help define an ideal vaccine supply chain that can be used to develop stronger, more adaptable, and more efficient logistics systems, extending the reach of lifesaving health technologies to people around the world.

Timeline

- 2010 to 2012

Partners

- [Republic of Tunisia Ministry of Public Health](#)
- [PATH](#)
- [World Health Organization](#)

Activities

- A streamlined and integrated supply chain
- A net-zero energy supply chain
- An information-driven supply chain

Pilot locations

- Kasserine and Sousse

A net-zero energy supply chain

The second objective of the collaboration is to demonstrate the benefits of an environmentally friendly vaccine supply chain at subnational levels. Rather than relying on nonrenewable energy, the system uses solar energy to achieve zero net energy consumption.



Solar panels installed on the roof of a subnational store



Charging an electric vehicle with electricity generated by solar power



An electric vehicle being used to transport vaccines and other health commodities

Solar panels have been installed on the roofs of subnational stores, and the energy consumption for the storage and transport of vaccines and other health commodities is being offset by the electricity produced. This “green” supply chain system—that will use electric vehicles to transport health commodities and workers for service delivery—uses only renewable energy. The energy balance, therefore, is zero—what is produced is consumed by cold chain storage and vaccine transportation.

An information-driven supply chain

The third objective is to demonstrate the benefits of a computerized LMIS that can track and trace vaccines in real time throughout the supply chain, mitigating the risk of overstocking, expiry, and vaccine wastage.

A major challenge in managing a supply chain is often the lack of centralized, timely, and accurate data for effective vaccine stock control and management. Without this, it is difficult to determine the necessary quantities of vaccines to order or how to manage their distribution. In the absence of reliable information, the supply chain operates on best-guess estimates. The ability to track and trace vaccines throughout an information-driven supply chain mitigates the risks of under or over stocking.



A Ministry of Health staff member using the paper-based stock-management system



A Ministry of Health staff member using the new LMIS to manage vaccine stock



District health workers using the LMIS to prepare dispatches to health centers

The existing paper-based system is being replaced by a computerized one that links national, regional, and district levels. This will enable the exchange of real-time data on key vaccine forecasting, stock management, and order status information, ensuring the timely delivery of vaccines.

July 2012 | Header photo: Richard Franco | All other photos: WHO