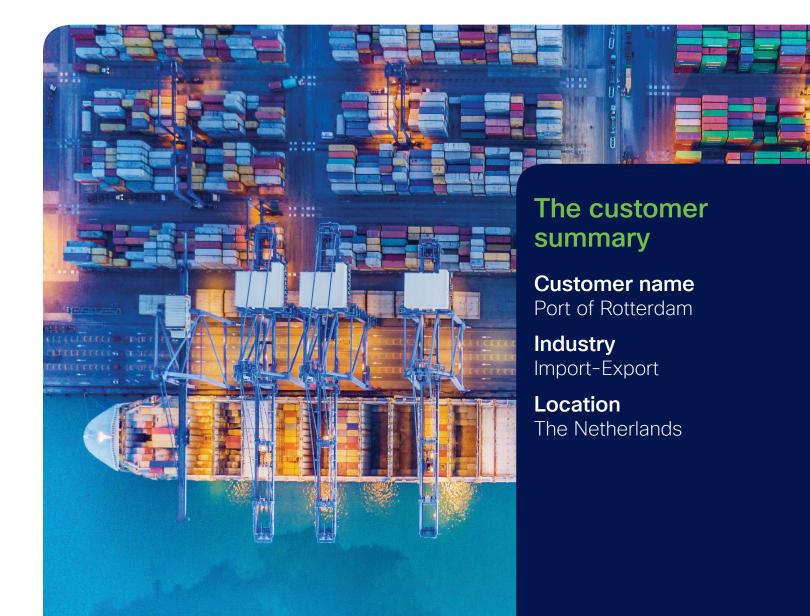**Port of Rotterdam**

Port of Rotterdam Embraces IoT Revolution with Long-Term Planning and Innovative Technologies

Rotterdam's smart port lays the groundwork for the future.

The customer summary

Customer name
Port of Rotterdam

Industry
Import-Export

Location
The Netherlands

Port of Rotterdam is a model for all IoT ports

With a fixed amount of space and a growing need to increase capacity, the Port of Rotterdam needed to embrace efficiency to prepare for the future. Cisco linked its router technology with existing precision sensor infrastructure to feed the Cisco Kinetic network, creating the architecture the port needed to drive efficiency. With changing tides, large vessels, and limited space, precision networking is key for a crowded port like Rotterdam; there is little room for error. With this IoT architecture in place, Rotterdam laid the groundwork for accommodating future innovations like advanced robotics and autonomous ships. Solutions Cisco developed for Rotterdam are now present in ports across the globe.

Connecting Existing Sensors

Sensors that track the constantly changing conditions of the port are now connected to Cisco's kinetic network.

Security

Because Cisco's routers are pre-programmed, the network is secure.

A Solution for the Future

Implemented IoT solutions create space for future innovations and growth demands.

How can the Port of Rotterdam grow when physical space is limited?

Facing a future requiring greater capacity for more and more cargo, Rotterdam grappled with how to meet these expansion needs when the port itself is a finite space. And with more ships entering and exiting the port over time, air pollution is also a major concern. Efficiency is the answer to both problems, but how to drive that efficiency was the question, especially in an environment where tide levels can change in 30-minute increments, determining whether or not a large vessel runs aground. Rotterdam has precision sensor infrastructure providing good data. These sensors exist throughout the environment, but they can't directly connect to a smart IoT network. This is where Cisco threw Rotterdam a life boat.

Cisco's Pre-Programmed Routers Create Greater Security

It might seem like a paradox to install pre-programmed routers for increased security, as it implies a surrendering of control. But Cisco's Kinetic network rejects any routers that aren't pre-programmed for the system; it's impossible to connect any other devices. With so many routers scattered throughout the field, this gives the port authorities a tremendous peace of mind. And it also saves time. Operators at the port don't have to worry about patch upgrades or other system maintenance tasks. Cisco takes care of all of that, leaving the port operators free to focus on running the port as smoothly as possible.

Rotterdam's Smart Port Lays the Groundwork For the Future

With so many innovations on the horizon in vessel shipping and cargo technology, Rotterdam now has the architecture to handle new opportunities as they arise. Autonomous vessels are coming down the pike, and as maritime transport evolves, Rotterdam will be ready.

Rotterdam employs Cisco's IoT solutions to maximize efficiency and scalability.

- Existing sensor infrastructure is now online through the architecture of Cisco's Kinetic Network.

- Pre-programmed Cisco routers secure the network.

- Rotterdam's smart port is now equipped to accommodate increases in cargo as well as future innovations in maritime transport, including autonomous ships.

CXX-XXXXXX-00 XX/XX