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JAN 25, 2018 @ 12:43 AM

5,359



EDITOR'S PICK

# Technologically Supercharged Ports Are Defining The New Silk Road

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Commercial and residential property sits on the city skyline in front of the Almaty Television Tower in Almaty, Kazakhstan, on Friday, June 26, 2015. (Andrey Rudakov/Bloomberg)

## Khorgos Gateway

On the eastern side of Kazakhstan you will find another port that is breaking new technological ground. Khorgos Gateway is located in the proverbial middle of nowhere, and this is perhaps its biggest selling point: it sits right in the center of the booming of China and Europe, as well as emerging markets in Central Asia, Pakistan, India, and the Middle East -- and it is linking in with all of the above.

Just a few years ago you would have been hard-pressed to even call Khorgos a place. It could better have been described by the word “expanse” — as in, an undulating expanse of sand dunes rippling off to the base of snowcapped mountains in the distance. There was nothing out there. Fast forward three or four years, and Khorgos Gateway is one of the most technologically advanced dry ports in the world.

This port, which receives trains making the [trans-Eurasian journey between China and Europe](#) likewise aims to become a new crossroads of Eurasia, and it has decked itself out with the technology to make it a potentiality.

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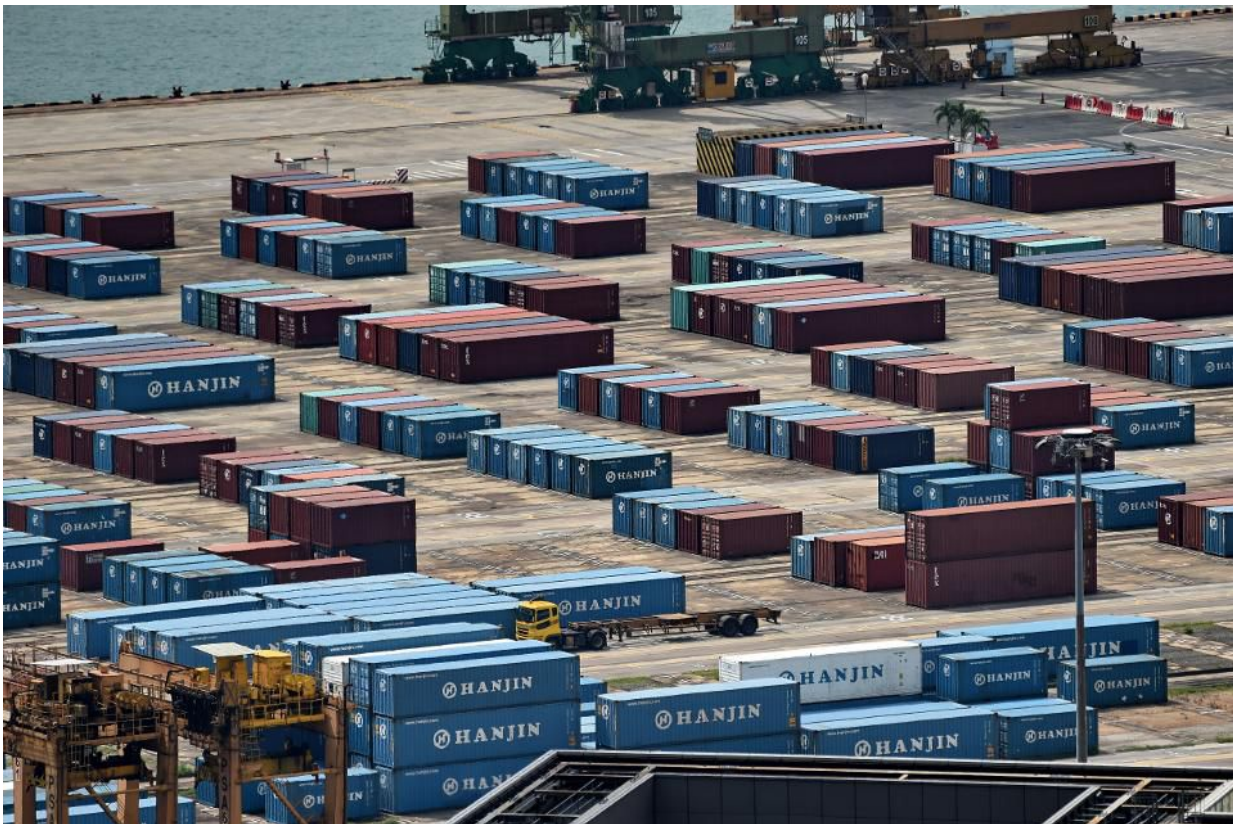
“Basically, we took people from the tractor and we put them on the most high-tech machines in the world,” Karl Gheysen, Khorgos Gateway’s first CEO, told me. “From day number one, our focus in Khorgos was to create the most modern and efficient dry port possible. By implementing the best available software currently on the market, we manage to meet the ever-increasing transshipment volumes and to create clear communication and data-platforms with all stakeholders ... The combination of world-class hardware with the most advanced terminal operating software allows us to achieve high productivity and efficiency.”

The dry port flung out in the middle of the Eurasian steppes is using the NAVIS N4 terminal operating system — which is used by some of the most advanced seaports in the world. With this technology, Khorgos Gateway can process an entire train in 47 minutes, which is faster than more established dry ports in Europe.

In addition to this, the port developed its own traffic management system, which is a fully automated, multi-lingual RFID-based solution to organize and streamline the flows of trucks and trailers within the port.

## **The Port of Singapore**

The Port of Singapore has long been one of the most technologically advanced ports in the world — a title they intend to keep long into the future. [Joining forces with the National University of Singapore](#) at the end of last year, the Port of Singapore is pushing port technology a few steps further with their Next Generation Port in Tuas.



Stacks of containers line up along the port in Singapore April 24, 2017. (ROSLAN RAHMAN/AFP/Getty Images)

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This port is slated to become the single largest port in the world. Combining the existing terminals of Pasir Panjang, Tanjong Pagar, Keppel, and Brani, it plans to process 65 million TEU per year. When it goes into operation in 2021, the new port will feature innovative planning systems, automated cranes, and driverless vehicles, which have been in testing in the “Living Lab” in Pasir Panjang terminal for many years. This is something that I was able to observe during a visit in 2015. The most striking thing about the place? No people, anywhere.

### **Conclusion**

The creation of what has been dubbed the New Silk Road has sparked a new impetus for transit-oriented innovation from China to Europe. With trillions of dollars of financing in the wings and long-term commitments from an array of governments, this initiative has created a reason to dream up and deploy new technologies. While some, like hyperloops and magnetically levitating “flying trains” traversing Eurasia remain pipe dreams, others are being implemented as we speak.

The hallmark of the New Silk Road is that starkly under-developed parts of the world are attempting to up their economic positions by linking in with more established markets via enhanced transport routes and economic corridors, but rather than climbing up the technological ladder rung by rung, many are jumping out ahead and going straight to some of the most advanced technological systems from the start.

*I'm the author of [Ghost Cities of China](#). Traveling since '99. Currently on the New Silk Road. Read my other articles on Forbes [here](#).*