

The connection to sustainability

As Europe's largest seaport, and with the ambition to be recognised as the most sustainable in the world, the Port of Rotterdam needs to exploit every means available to strengthen its leading position. Digital connectivity is foremost among those means.

"We know that being connected can give us a competitive edge in many areas if we do it right," says press officer Tie Schellekens of the Port of Rotterdam, citing this as the prime motivation for the recent restructuring of the entire port organisation around connectivity.

Port director for containers Joyce Bliek has distributed executive responsibilities so that she can focus her full attention on the issue, and she has built up a team with its primary goal to take maximum advantage of the new digital dimension in logistics.

"There are many opportunities, but we are still in the early stages," Schellekens says. "For example, some years back, together with the port of Amsterdam, we established PortBase." Via the Port Community System, PortBase currently offers over 40 different services to approximately 3,200 customers in all sectors of Dutch ports. "This has proven to be a very useful system, but it has even more potential."

Before the port can fully realise the benefits of the communication

system, all users must feel confident that their information is secure. That requires anti-hacking measures, data segregation, and a score of other sophisticated solutions. "If we want to reap all the benefits, the system must be accessible and dependable for everyone," Schellekens underscores. "For cargo owners, shippers, and for the port."

The physical connection

Rotterdam has another, less universal issue related to sustainability and connectivity: that of European inland transportation routes, and their interface with the port. "It really comes down to strengthening the value chain," Tie Schellekens says.

"For us the focus on connectivity also means being connected with the origins and destinations of the goods that are shipped to and from Rotterdam. That means organising the waterways and railways better in order to enhance flow through the port."

But digital technology can also be a helper here. "Automation will help us speed operations up, but we need

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Port of Rotterdam offices



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technological support to put efficiency measures into place. We literally travel the world looking for the innovations and start-ups that can help stimulate our business,” Schellekens reports.

In response to one of their more interesting findings, The Port of Rotterdam is sponsoring a new 3D printing initiative. “3D printing is a very interesting technology for many young engineers. They see possibilities that later generations don’t see, and we want them to work here, with us, to find ways to make 3D printing more useful, not just for the port, but for the whole value chain,” Schellekens says.

In order to attract the brightest talent, the port will invest in a new, bigger metal printer far beyond the financial reach of young companies. The machine will have its home in the Innovation Dock at RDM Rotterdam, located in a renovated ship’s wharf. The goal is to provide port-related companies with a collective location to pursue the development of knowledge in the area of metal printing, 3D scanning, 3D design and certification.

The human connection

At RDM Rotterdam, the port also supports the region’s technical schools, to try and stimulate students to choose maritime technical education. “We need updated skills and knowledge to achieve our long-term goals,” Schellekens says, “but we also need the enthusiasm and energy of the next generation if we are going to stay ahead of the competition.”

In addition, the Port of Rotterdam finances five professors on different subjects relating to port activities. “They use the port in their studies, and we share their results with the entire industry,” Schellekens says, illustrating yet another aspect of connectivity between players. “From our point of view, this is essentially an industry support initiative,” he explains. “We do it to help all the players become more efficient, that makes us all more sustainable.”

In Schellekens’ view, sustainability is vital to a port’s existence, and connectivity is the path to sustainability. “If we supply the right information to the

right people, it can help improve efficiency, and improved efficiency means a more sustainable port.”

For example, if a cargo carrier knows where cargo is waiting to be picked up, they can avoid transporting empty containers. But for that to happen, they have to know everything about inland terminals and port activities. “For everyone to get access to this information, they have to be a part of the shipping community, and they have to be interconnected,” Schellekens emphasises. “That requires flexible, open, and secure systems.”

In this and many other aspects, the Port of Rotterdam acts as a catalyst in stimulating efficiency and sustainability throughout the value chain. “We have seen that when we don’t take these initiatives, nobody else does either. Connecting things and people is not just about technology. It still takes good cooperation to achieve true connectivity.”