CASE
Avoiding a nightmare

Michiel has not slept too much last night. Yesterday, Steven, the director of one of the container terminals has complained about what he called "inferior logistics" of the Port of Rotterdam. Michiel does not completely agree with Steven – logistics are not inferior at the Port! Nonetheless, it bothers him. Steven is one of the biggest clients of the Port of Rotterdam, and he has warned that customers start looking around for better services. Primarily in Antwerp and Hamburg. Steven says he will hold the Port authority responsible for the overall performance in the port and he threatens to claim compensation for any loss of business. Although it might be only a threat, Michiel is not completely sure, of course. Steven is Irish, a red-headed tough guy. In any case, an unhappy customer in the port and ships going to competing ports are two things to be very worried about. The talk they had on the phone yesterday is not one of Michiel's finest memories.

Background information

It is business as usual in the Port of Rotterdam: a barge tries to load containers from two different terminals. At the first terminal, the skipper has an hour delay because the containers are not yet there. At the second terminal, loading is efficient at first, but when the work is halfway the skipper has to wait for a deepsea vessel to be serviced first for half an hour. Meanwhile a truck, supposed to bring an export container to this deepsea vessel, was delayed due to traffic jams. The container will now have to wait two days for the next sailing to the USA.

The experience of this skipper and truck driver is an illustration of what can happen in container transport, when every day 20 deepsea vessels, 6000 trucks and 100 inland vessels come to the Port of Rotterdam to handle 22,000 containers (TEU) that are transported to and from the hinterland. Such experiences are very common. This leads to many inefficiencies in terms of congestion, money and time. Steven complained about 200 containers sitting on his terminal for at least two days. "Third time this week!", he says.

The container terminals in the Port of Rotterdam are among the world's best and most modern terminals. Everything is largely automated and highly sustainable. Even the world's biggest container vessel will be moored at the quay of a terminal within an hour with the help of nautical services (pilots, mooring and towage) The terminals have extremely high handling capacities. Trucks, trains or barges being far too late are big nuisances when the rest of the handling is so efficient. That's what is bothering Steven. That's what is bothering Michiel.

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Road transport is mainly used when distances to the final destination are not too far. Most trucks stay in the greater Rotterdam region, only about 10% crosses the Dutch border. Although Dutch traffic is sometimes congested, the big advantage is that trucks can deliver goods right at the front door of the client. When the final destination is farther away, inland barge shipping or rail is the preferred mode of transportation. This often has to be combined with road transport at the beginning or the end of the journey to reach the site.

The Port offers all kind of services. Storage (e.g. break bulk, dry bulk and liquid bulk) is one of them. Logistics service providers can organize e.g. inventory, (re-)packaging and repairing of goods. Services offered to the ship in a port include bunkering, ship maintenance and provisioning.

Deepsea vessels, barges, trucks, terminals and (maritime) services are all dependent on each other. Essentially, the port is a grand logistic operation. If the logistics are less optimal than in other ports, Rotterdam will eventually lose part of its clientele. Understandably, the Port of Rotterdam wants to be at the forefront of optimal logistics. Is there anything Rotterdam can learn from other ports?

The Port of Rotterdam has a test running with a client for deepsea vessels at the terminal and maritime services. For barges, a large scale planning tool is in development. However, the project is evolving slowly and it might be not enough to speed up the development towards an efficient digitalized port. The same is true for a nationwide initiative, a national logistics platform, it's a nice idea but it doesn't deliver the competitive advantage that is needed now. There is a strong need for more, fast developing, initiatives.

Michiel is aware of that. He has contacted CGI to help him. CGI is an information technology and business process services consultancy with its Dutch office in Rotterdam. He works together with Hans. Hans is a business consultant, a very bright guy. He specializes in organization of supply chains and transport operations. Information and data are key to solve the Port's logistic questions. To mention a few of nowadays techniques: Big data & analytics are instruments to not only understand what happened why, but also to forecast what will happen, or to grasp how one can make certain things happening. Internet-of-Things and the Physical Internet are rapidly developing towards a future with smart products and smart supply chain which organize itself. Demand steering instruments, like for example dynamic pricing techniques, are instruments to steer behavior of individuals or companies.

The Port of Rotterdam is very much aware that they companies like CGI to jointly deal with the challenges and seize the opportunities in port logistics today. However, CGI can only solve the Port's problems, if its issues are well understood. Michiel wonders whether he really understands all the issues thoroughly. It is very complex.