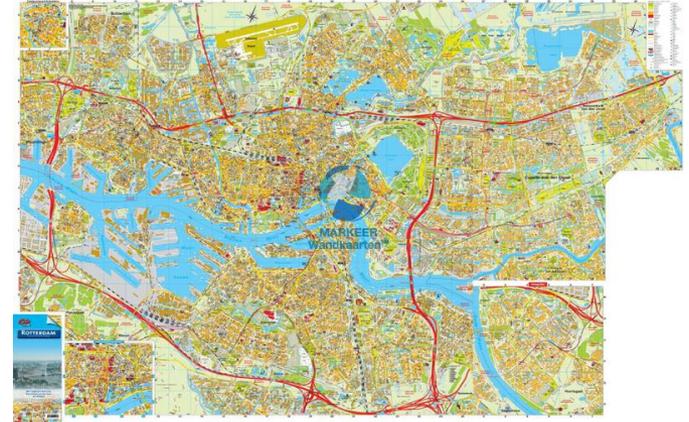


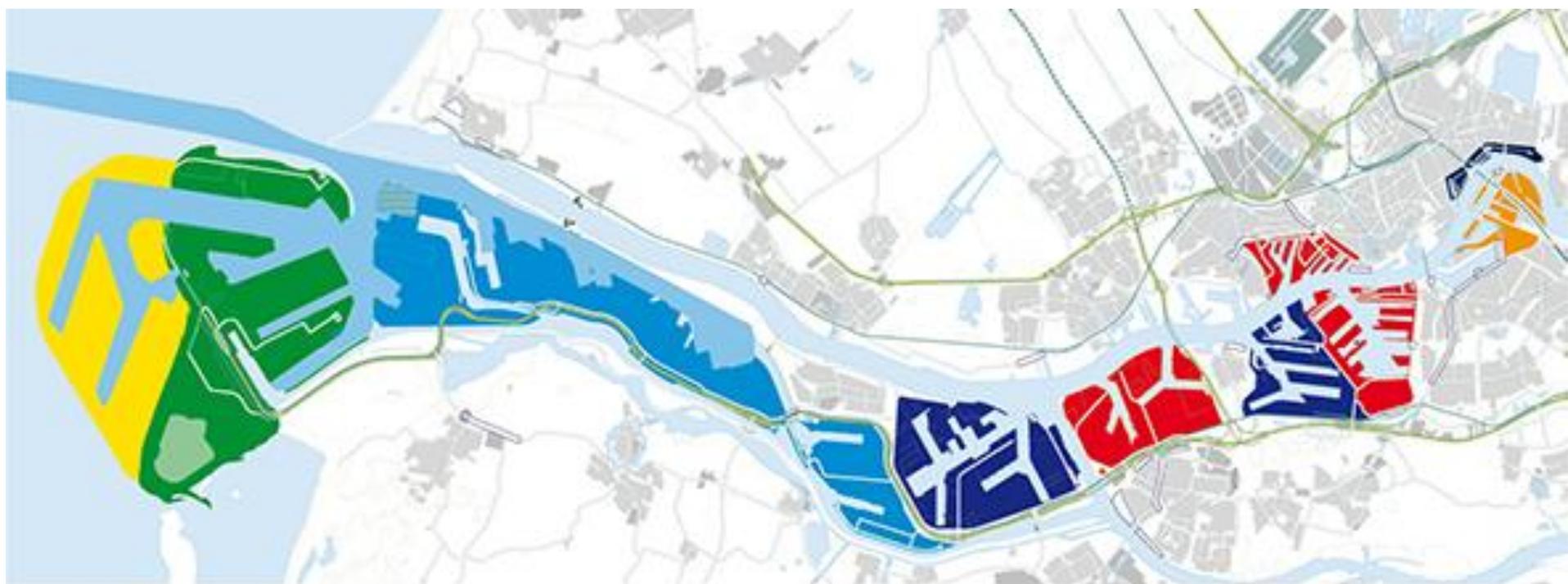
# Europe Container Terminal and its context

# Why visit ECT

- Brownfield
- High grade of (interrelated) digital technologies
- Complex network
- High performance
- Focus: maintenance & operations

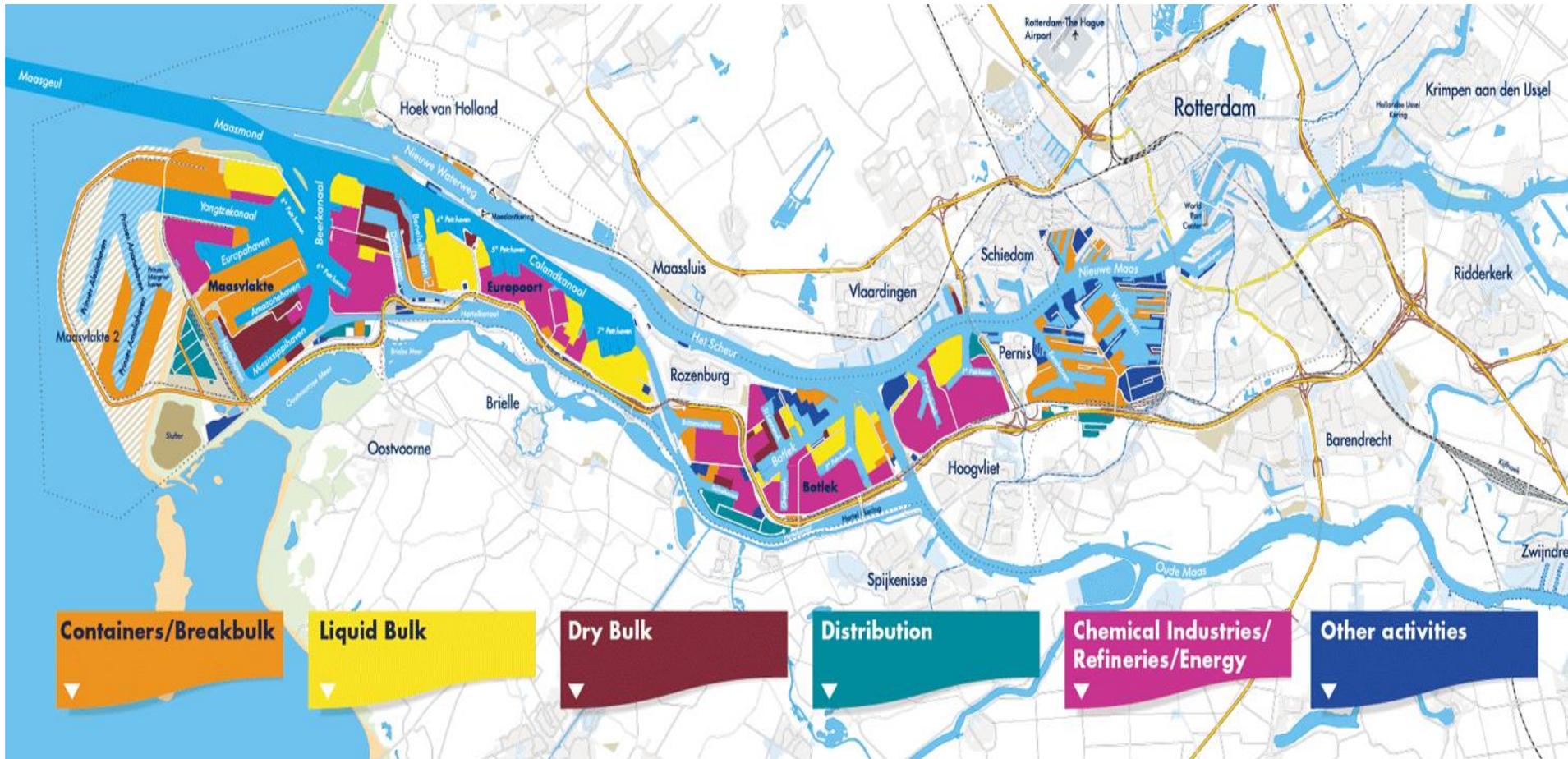
# Rotterdam , port development





	1400 – 1800	Oude havens		1960 – 1970	Europoort
	1800 – 1900	Oude handelsterreinen		1970 – heden	Maasvlakte
	1920 – 1940	1e en 2e Petroleumhaven Merwehaven, Waalhaven		2008+	Maasvlakte 2
	1946 – 1960	Botlek, Eemhaven			

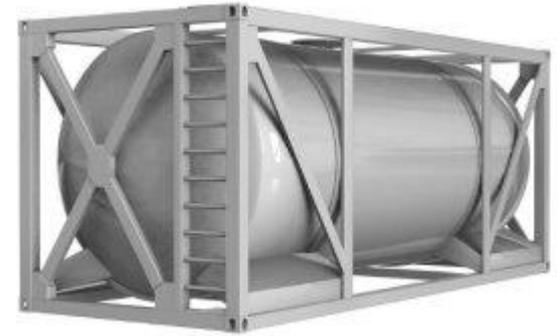
# THE PORT OF ROTTERDAM



# Port development: entails:

- Harbour infrastructure
- Ship development
- Harbour related industries (chemical)
- Storage and transport modalities
- National and lokal policies; regulation
- Communication and digitalization
- Labourmarket
- Etc.
- **And: organization development .....**

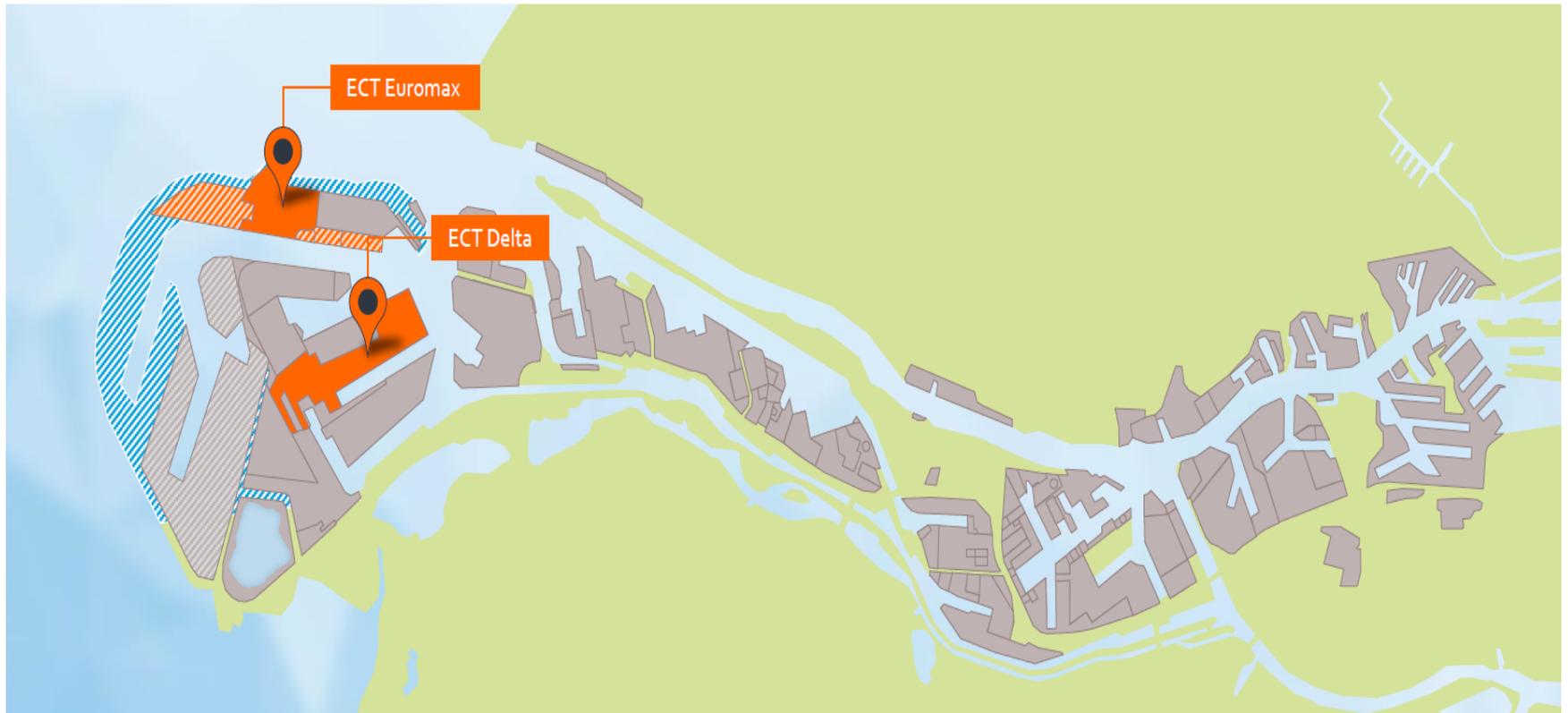
# Containers, differences



- Standardisation:
- connections ; dimensions
- TEU (Twenty foot Equivalent Unit)
- Transport, locking
- World wide transport
- The greatest innovation of the 20th century ?



# Ect in the port of rotterdam



# Short history ECT

- Development of containers, Sealand
- Containerships, terminals
- 1966 -2015: ECT, Eemhaven
- 1985 :Delta-terminal
- 2008 : Euromaxterminal
- Owner: Hutchinson (1999)

# INLAND TERMINALS



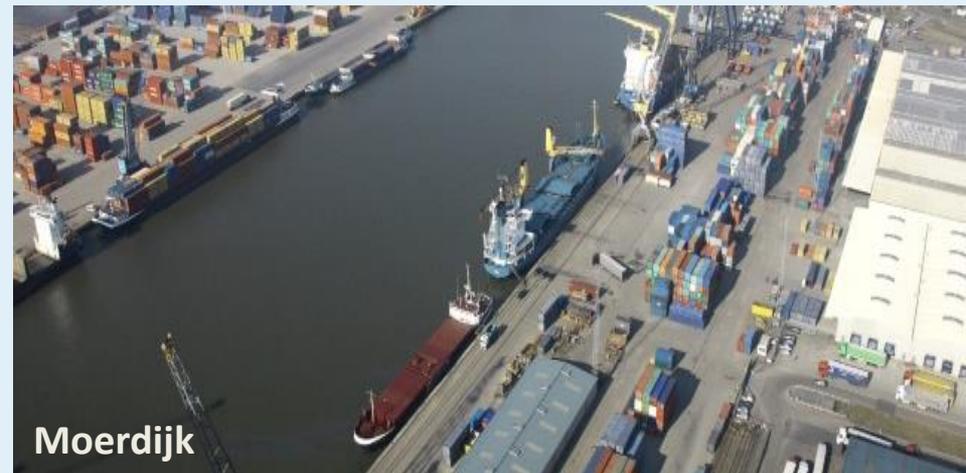
Duisburg



Venlo



Willebroek



Moerdijk

# KEYFIGURES ECT DELTA

- Total area: 252 ha
- Quay length: 4 km
- Quay Cranes: 38



# KEYFIGURES ECT EUROMAX

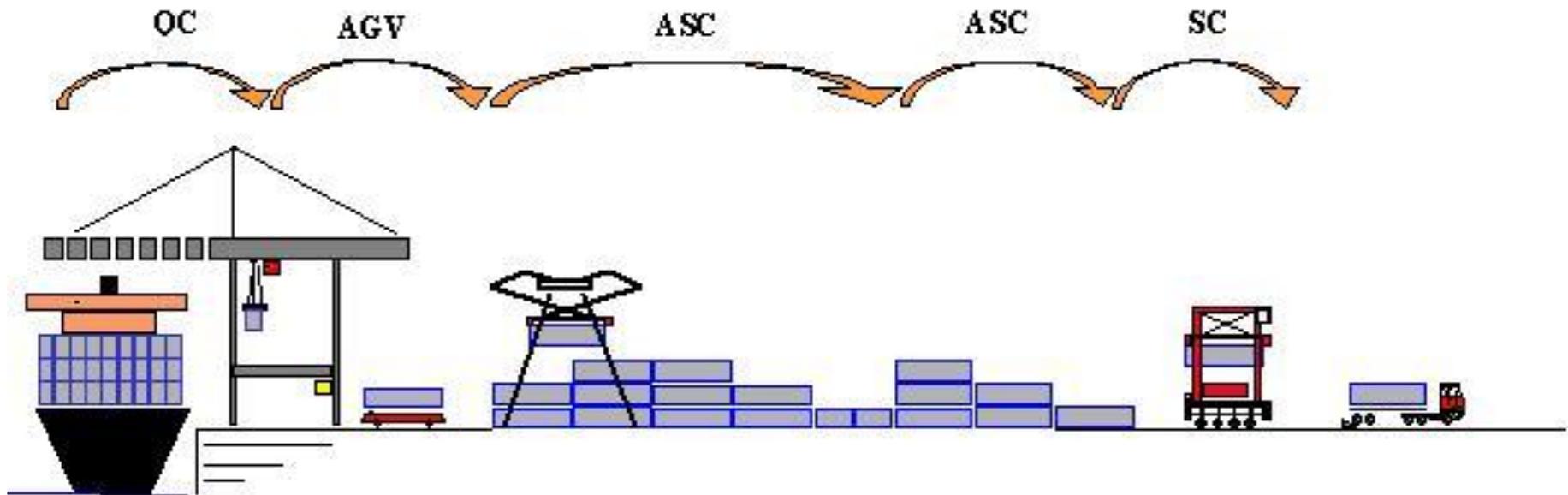
- Total area: 84 ha
- Quay length: 1.5 km
- Quay Cranes: 16



# Overall process ECT



# Internal process



- AGV Automated Guided Vehicle



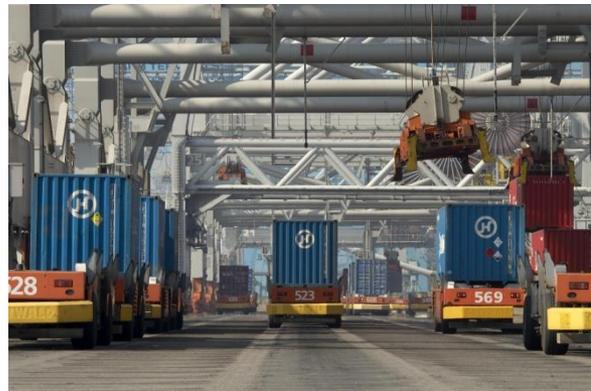
- Automated Stacking Cranes



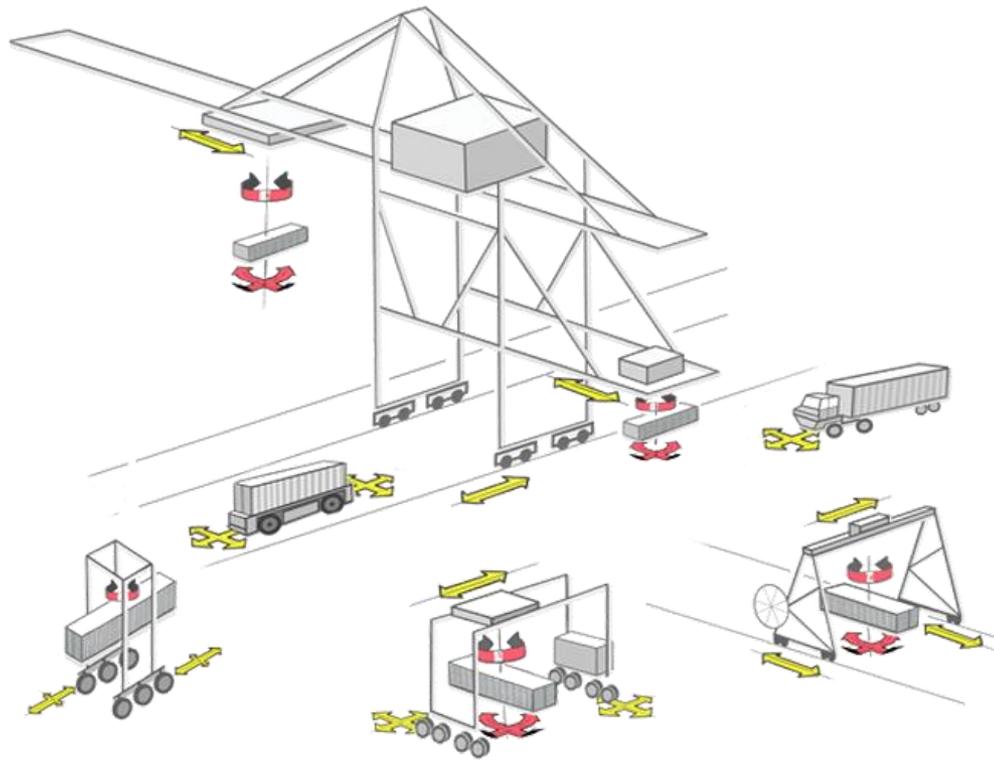
- Cranes, semi-automated



# Elements of the internal proces



# positioning



# The people, their organization



# For tomorrow

Problems

Dilemmas

Possibilities

Limitations