Port of Mannheim

Greening strategy and actions
– Good practices –

The Port of Mannheim

Greening strategy and actions

German inland waterways

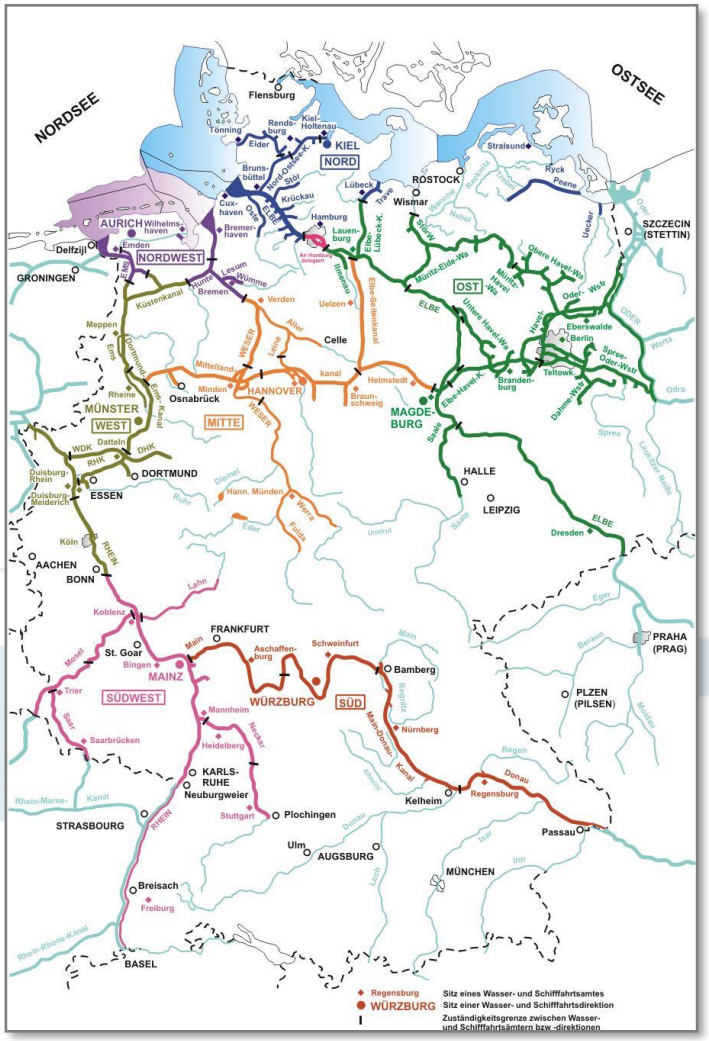
7.476 km

Freight volume:
41.507 Mio. t/km (6,9 %)*

For comparison:
streets: 229.500 km (intercity)
Freight volume:
480.700 Mio. t/km (72,5 %)*

rail: 38.400 km
Freight volume:
134.433. t/km (17,7 %)*

*does not include other modes of transport, such as pipelines; in 2023



Quelle: Deutscher Wasserstraßen- und Schifffahrtsverein Rhein-Main-Donau e.v. (DWSV)


TEN-V Kernkorridore
Ostsee – Adria
Nord-Ostsee
Mittelmeer
Orient / Östl. Mittelmeer
Skandinavien – Mittelmeer
Rhein – Alpen
Atlantik
Nordsee – Mittelmeer
Rhein – Donau

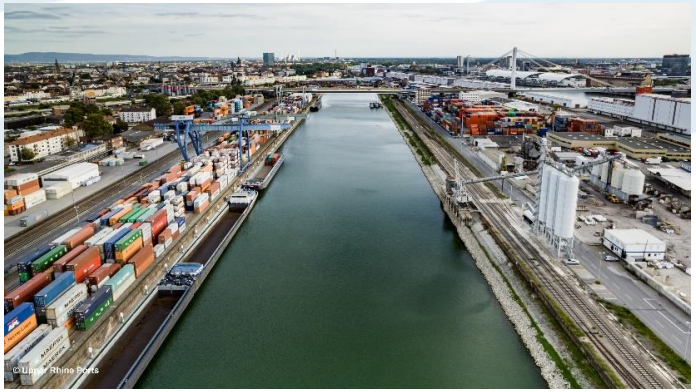
Port of Mannheim

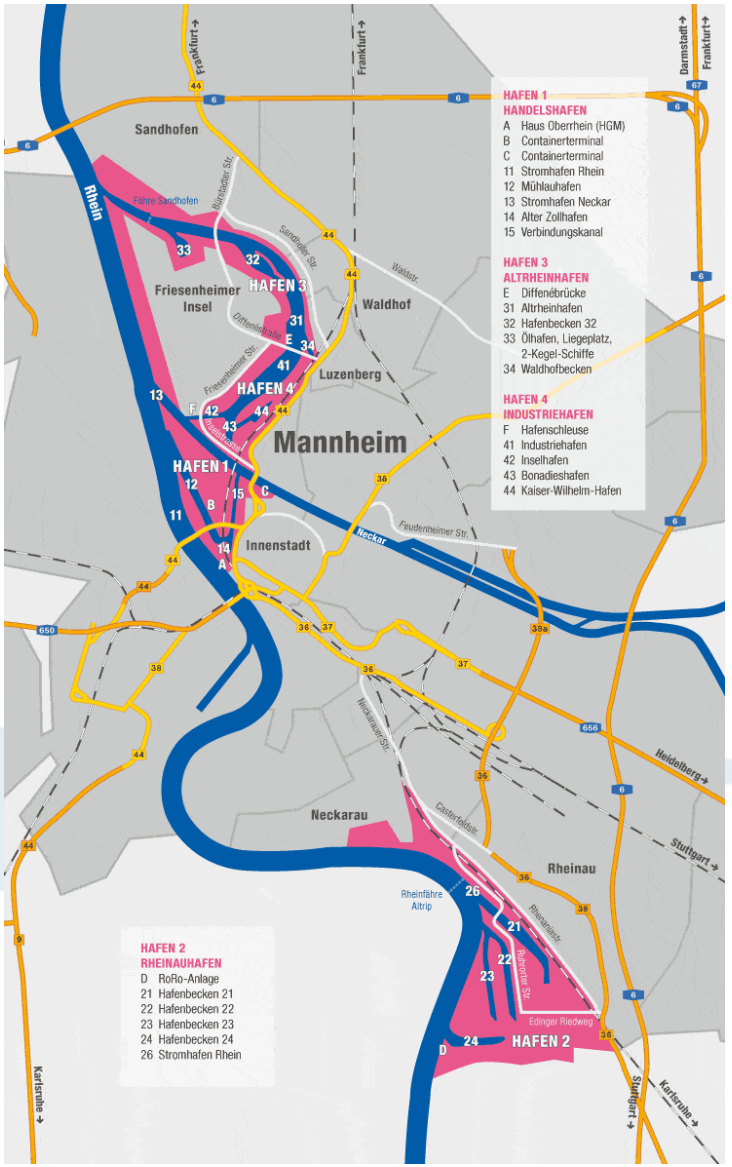
Foto: Upper Rhine Ports Mannheim

Mannheim, located in the center of the Rhine-Neckar Metropolitan Region: approx. 2.3 million residents

Port of Mannheim

- Total area of 1,131 hectares, divided into 4 port areas with 14 harbor basins and 3 river ports.
- Waterfront length: 54.5 km; 148 km of rail network; and 35.7 km of port roads
- Approx. 430 customers
- Waterborne cargo throughput in 2025:
  6.11 million tons






Handelshafen- Rheinkai
VIII

Traffic volume 2025

- Cargo handling 6.105.557 tons
- Vessel traffic 5.702 vessels
- Container throughput 73.715 TEU (20-foot containers)
- Rail cars 30.435
- Vehicles via RoRo 12.346

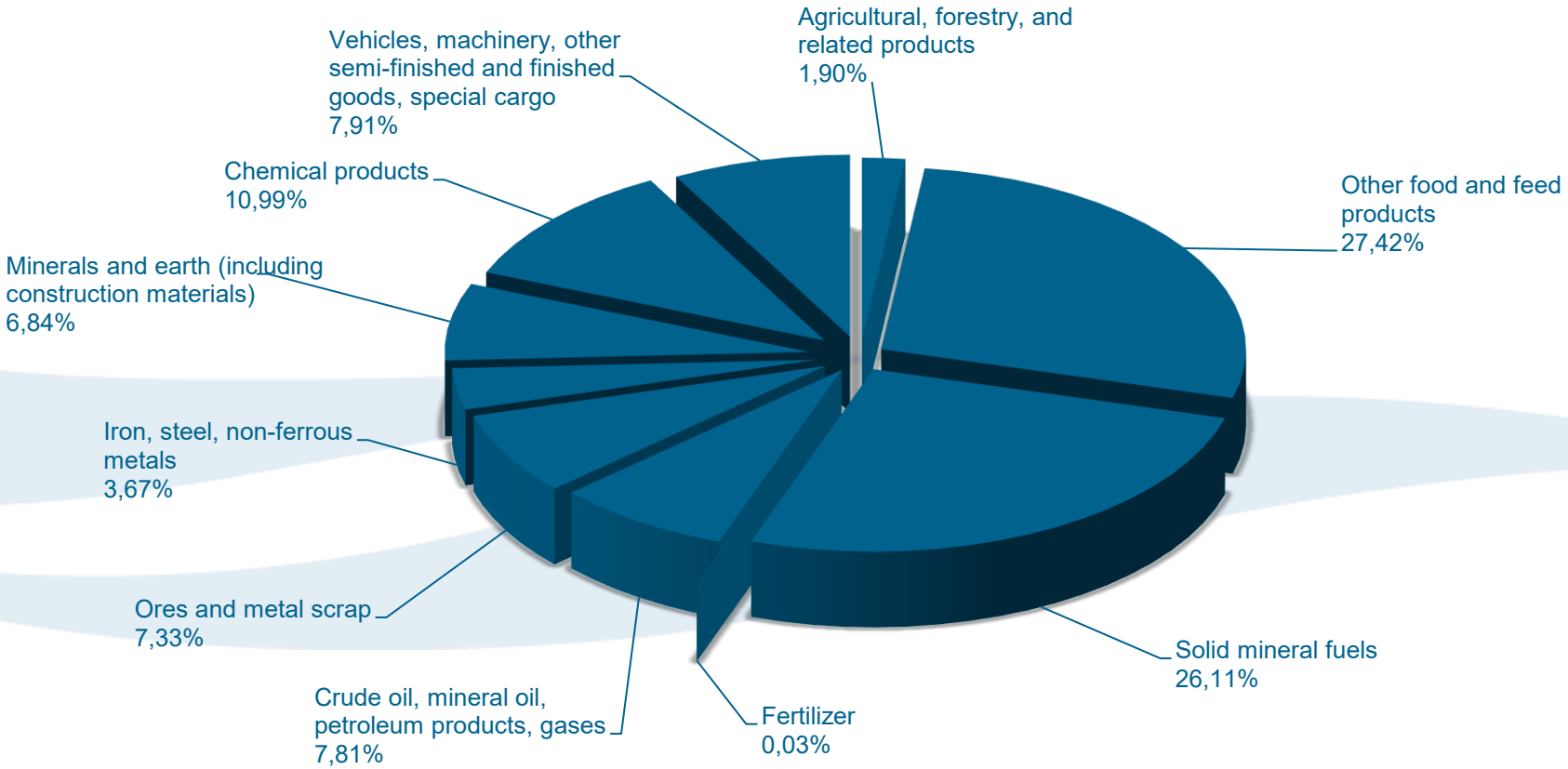
Handelshafen- Containerterminal

Foto: Upper Rhine Ports Mannheim


Rheinauhafen

Ship Cargo Handling in 2025 by Cargo Category

2025 total: 6.105.557 tons



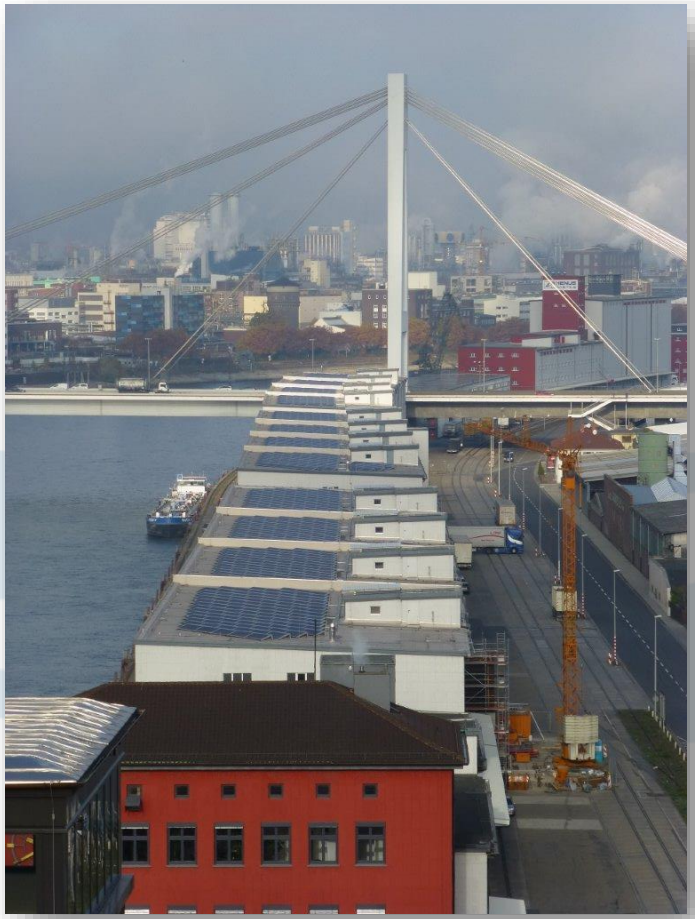
RoRo-Anlage

The Port of Mannheim

Greening strategy and actions

Energy Generation via Photovoltaics

Pioneer – first installations in 2007



6 Solar trackers in 2011

Energy Generation via Photovoltaics

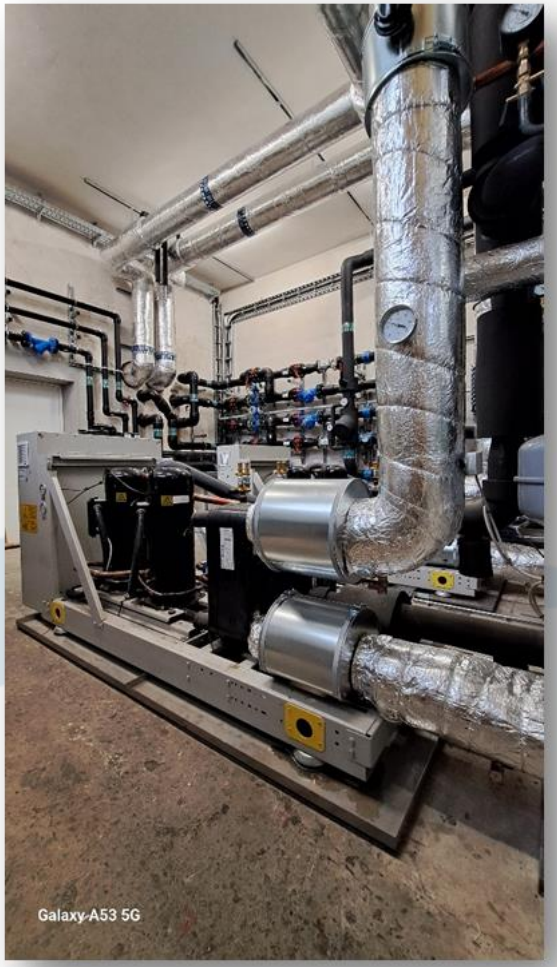
Further expansion of photovoltaic systems on our own buildings

Installation of a solar power system on the roof of a workshop building in 2025

Energy-efficient renovation of a historic building in 2023

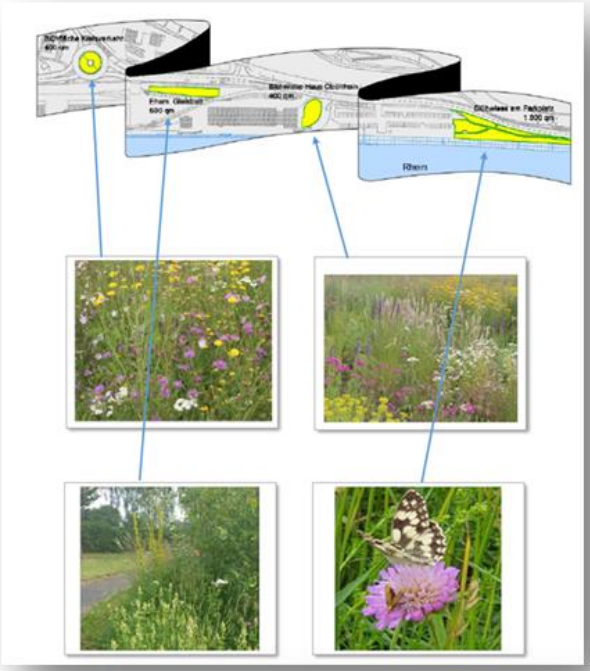
Energy-efficient renovation of existing buildings

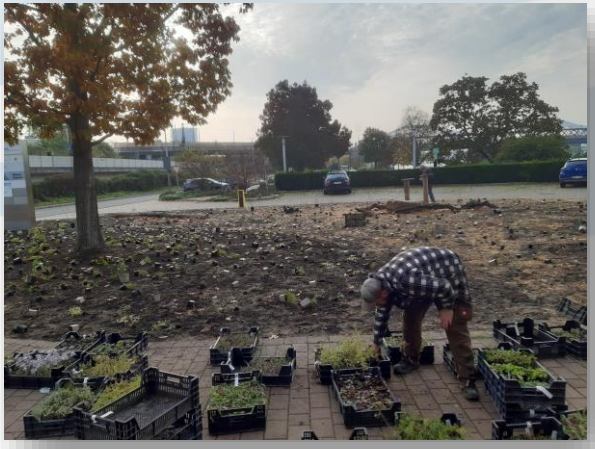
Here: A solar power system combined with a water-to-water heat pump (bank filtrate)



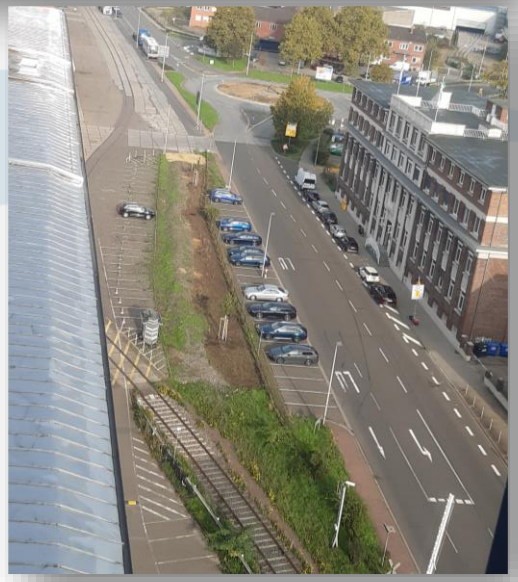
Projects that are easy to implement

Switching to energy-efficient LED lighting





Insect-friendly planting
of “brownfield” sites
to support biodiversity



Alternative fuels (1/2)

LNG

Diesel-electric-powered workboat

The port‘s own vessels are powered by alternative fuels (HVO100):
Manufacturer's claim: up to 90% reduction in CO2 emissions

actual savings per year approx.	9000 kg CO2
additional costs per year approx.	50.000 €
additional cost per liter (average in 2025)	20 Cents

Alternative fuels (2/2)

The port‘s own Locomotive and workshop vehicles are powered by alternative fuels (CARE Diesel = HVO100):
Manufacturer's claim: up to 90% reduction in CO2 emissions

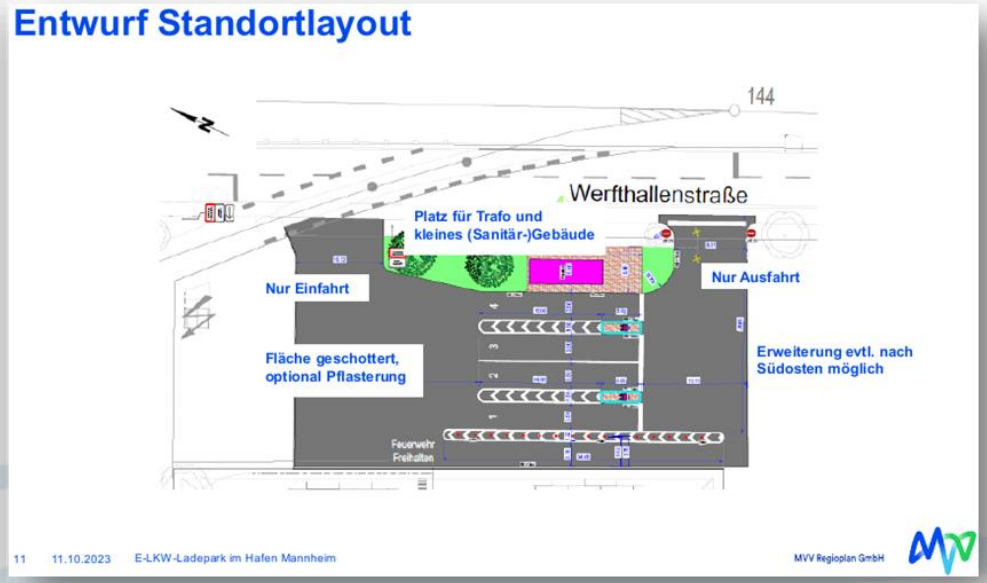
actual savings per year approx.	31.600 kg CO2
additional costs per year approx.	24.000 €
additional cost per liter (average in 2025)	20 Cents

Electric mobilty

Electric cargo bikes for short distances for workshop staff

Electric cars for port authorities

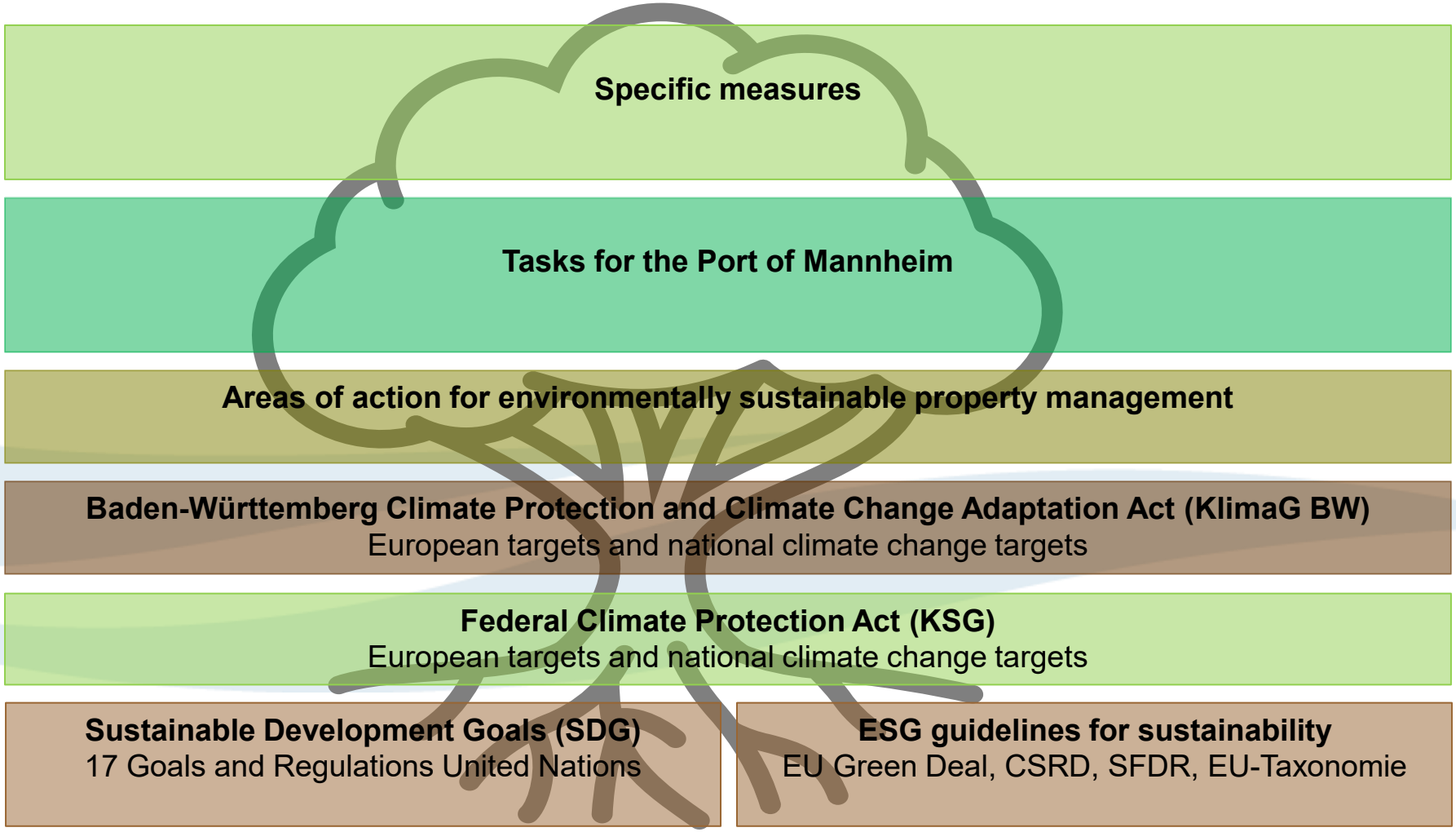
Electric mobilty - Infrastructure



2 superchargers & 10 regular chargers

Charging point for electric lorries:
1 x up to 1000 kW
3 x 400 kW

Environmentally sustainable property management



Environmentally sustainable property management

Result: Action matrix with possible measures depending on the type of property

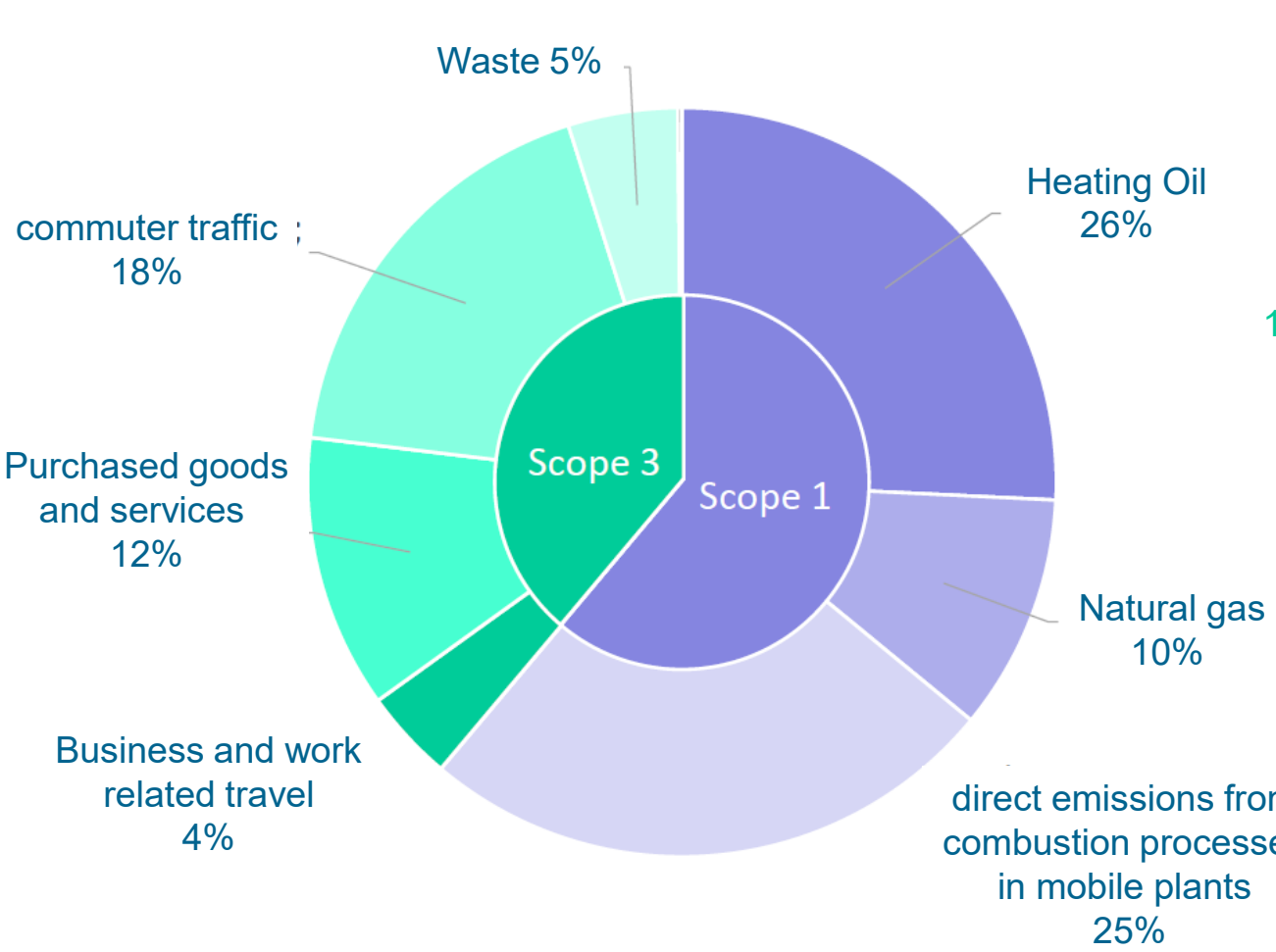
For example:

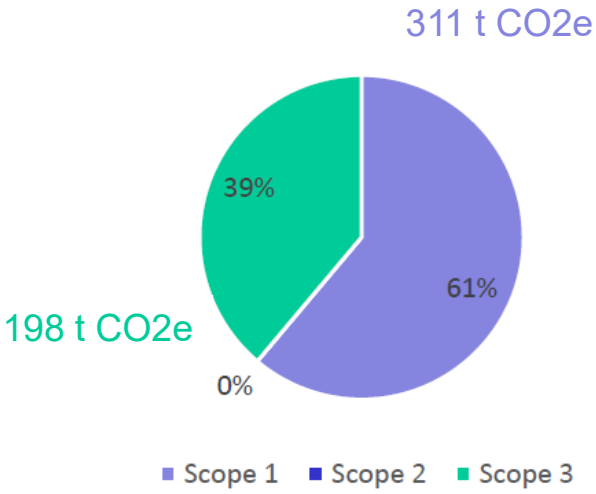
- Type of property: warehouse
- possible measures: Photovoltaics, green facades
- To note: hygiene (e.g. when storing food), structural integrity of the roof

Photo: https://www.sempergreen.com/de/

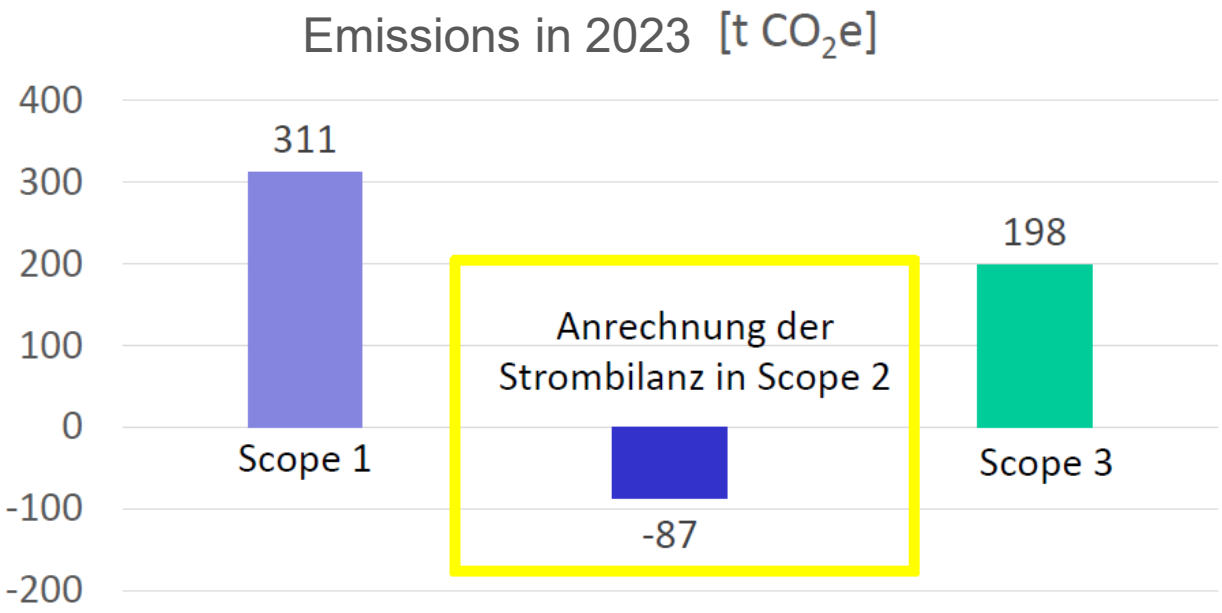
	Flächeneffizienz	Verantwortlichkeit	Photovoltaik	Verantwortlichkeit	Klimaneutrale Wärmeversorgung	Verantwortlichkeit	E-Mobilität	Verantwortlichkeit	Energiebeschaffung	Verantwortlichkeit	Klimaanpassung, Klimaresilienz	Verantwortlichkeit	Artenvielfalt	Verantwortlichkeit
Art der Liegenschaft														
Lagerhallen														
	optimiere Nuzung durch Zonierung	M	horizontalen und vertikalen Anlagen	V,M	Fernwärme	V,M	Ladestationen für E-Autos	V,M	Solar	M	Entsiegelungsflächen	V,M	Blühkübel	M
	optimierte Lager-und Regaleinrichungen	M			Energieeffizienz durch Sanierung und Modernisierung	V,M	elektrische Maschinen	M	Wind	M	Wärmeschutz, Wärmedämmung	V,M	entsiegelte Grünflächen	V,M
	Multifunktionale Flächen	M			Solarthermie	V,M	Automatisierungssysteme	M	Wasserkraft	M	Hitzeschutz	V,M	Nisthilfen und Insektenhotels	V,M
	Verbesserung von Logistikprozessen	M			Abwärmenutzung	V,M			Biomasse	M	Versickerungsflächen	V,M	blühende Rankgitter	V,M
	optimierte Flächennutzung im Planungsprozess	V									Drainagesysteme	V,M	Dach und Wandbegrünung	V,M
											Hochwasserschutz	V,M		
											Regenwasserrückhaltung bzw. -nutzung	V,M		

Corporate Carbon Footprint (1/2)





Corporate Carbon Footprint (2/2)



Total emissions:
509 t CO_2e

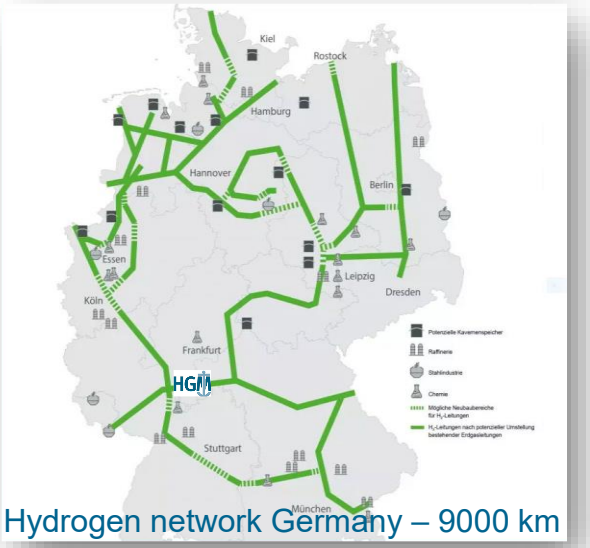
substracting
87 t CO_2e
Gives a balance of
422 t CO_2e

- Electricity for own consumption (100% covered by green electricity) is accounted for as 0 tonnes of CO2e
- Self-generated solar power is taken into account in the carbon footprint
  => The electricity balance results in a carbon budget of -87 tonnes of CO2e

Forward-looking projects

Hydrogen, Ammonia, Methanol

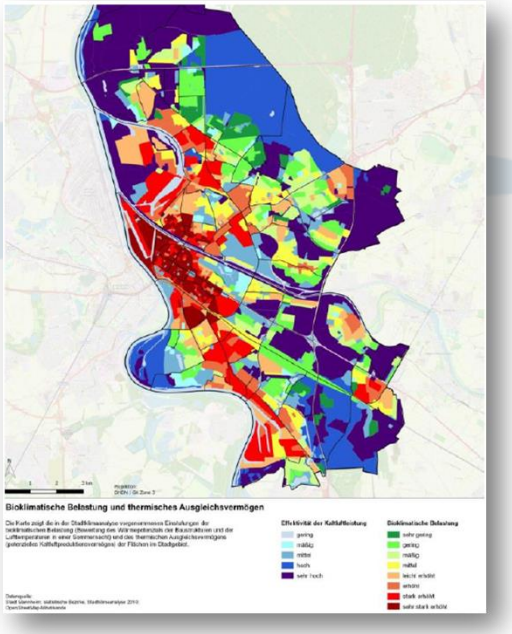
- Studies into the potential have already been carried out in recent years
- Possible expansion of the port into a hydrogen hub
- Transport along the Rhine-Alps corridor
- Collaboration with business partners on specific projects (confidential)



Hydrogen network Germany – 9000 km

„CRANE“ – **C**limate **r**esilience and **a**daptation for upper Rhi**ne** ports

- Total project cost: €1.4 million - 60% co-financing by INTERREG VI A Upper Rhine
- Duration: 07/2023 to 06/2026
- 7 ports and 2 research institutes
- Goals:
  - understanding of the key climate risks and risk cascades for inland ports
  - Methods and tools enabling inland ports to develop and implement climate change adaptation plans and adapt them to new risks
  - Methods enabling research partners to support other inland ports in Europe with climate resilience measures



Thank you!

Uwe Köhn
Hafendirektor
Staatliche Rhein-Neckar-Hafengesellschaft Mannheim mbH