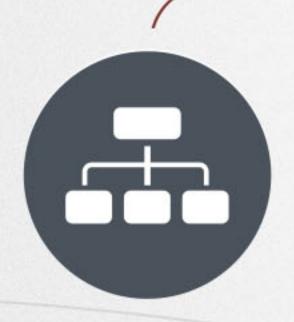


### Project of a grain and oil cluster









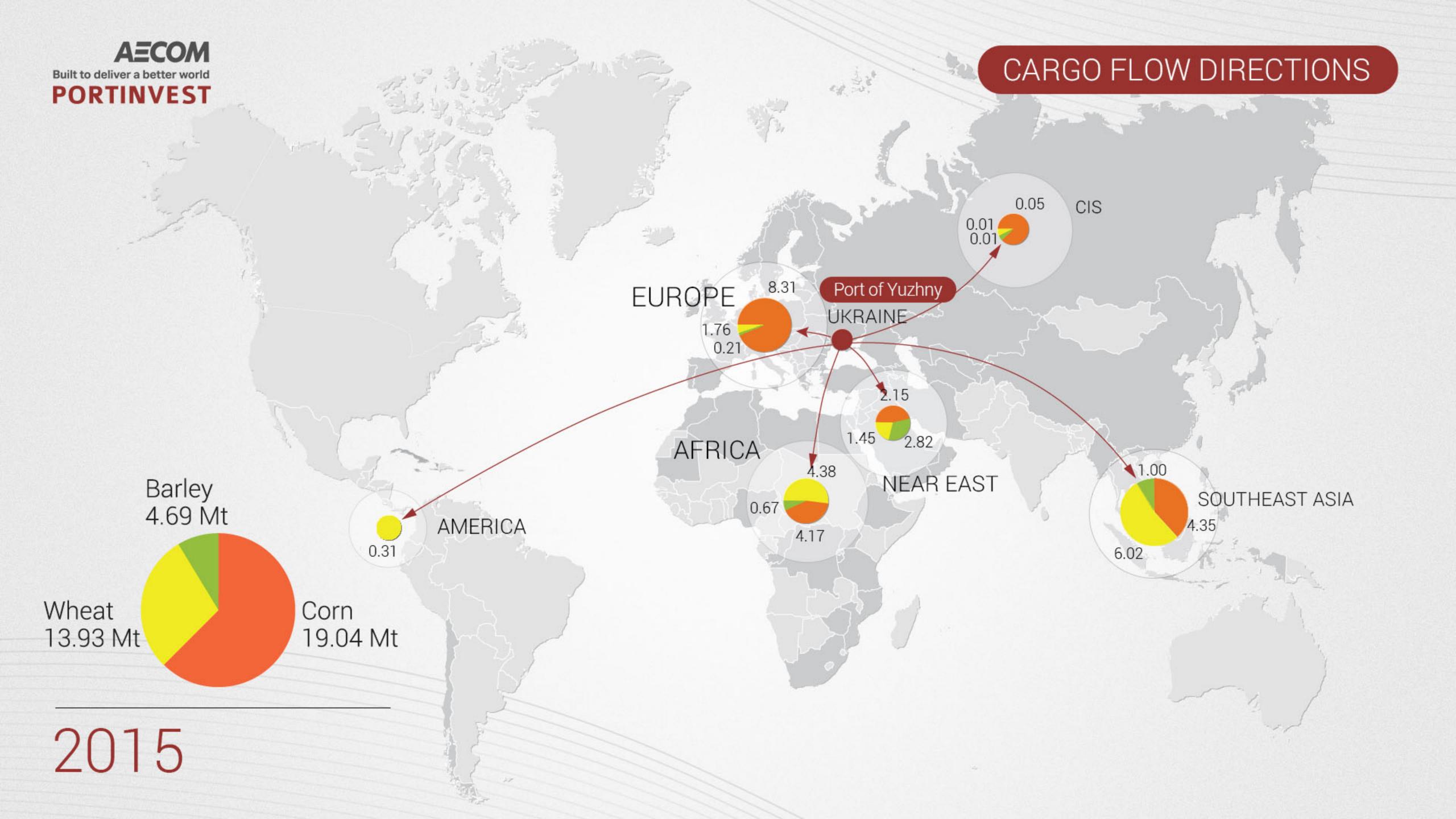
Strategic management of transport assets



Realization of investment projects



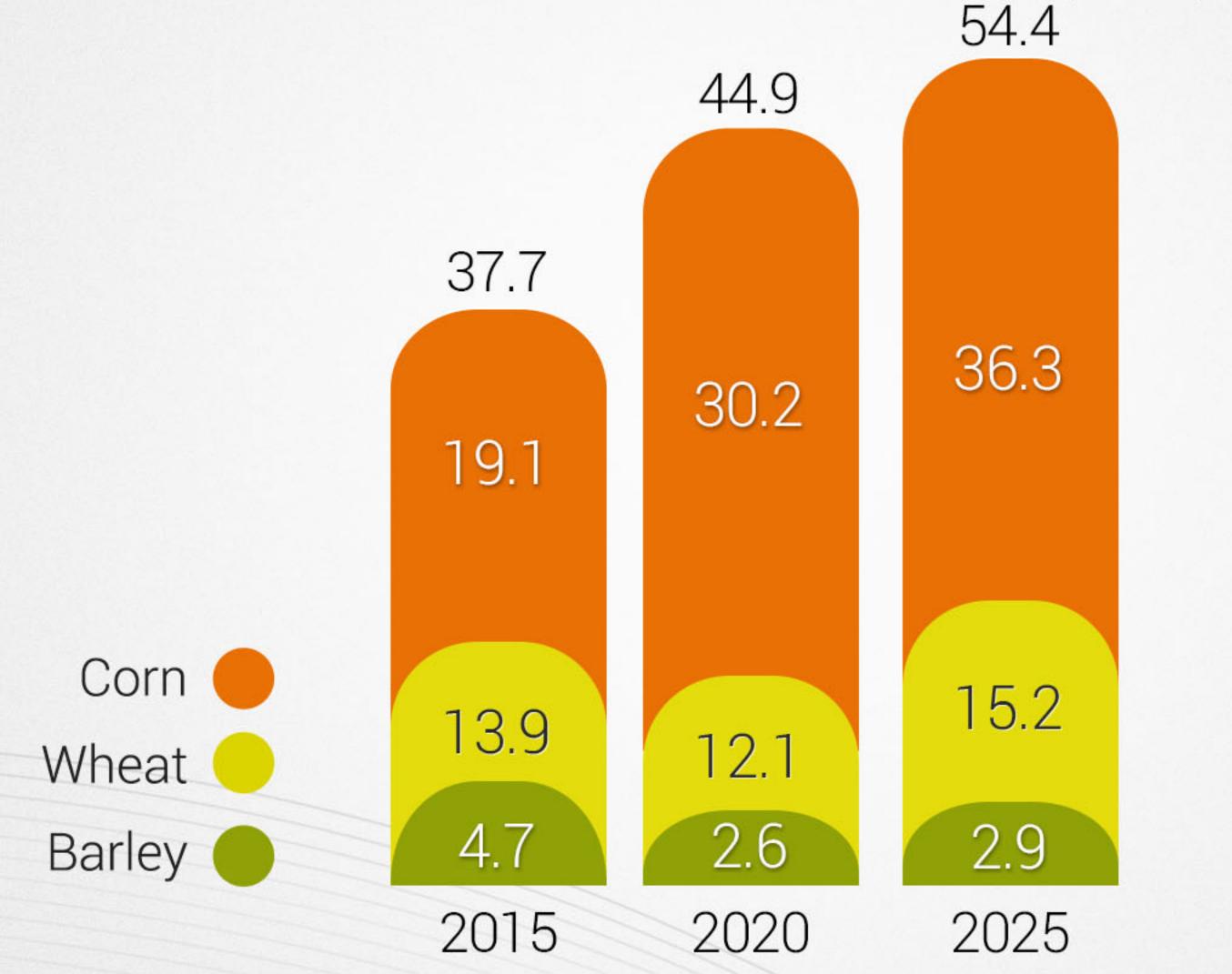
Range of transport services







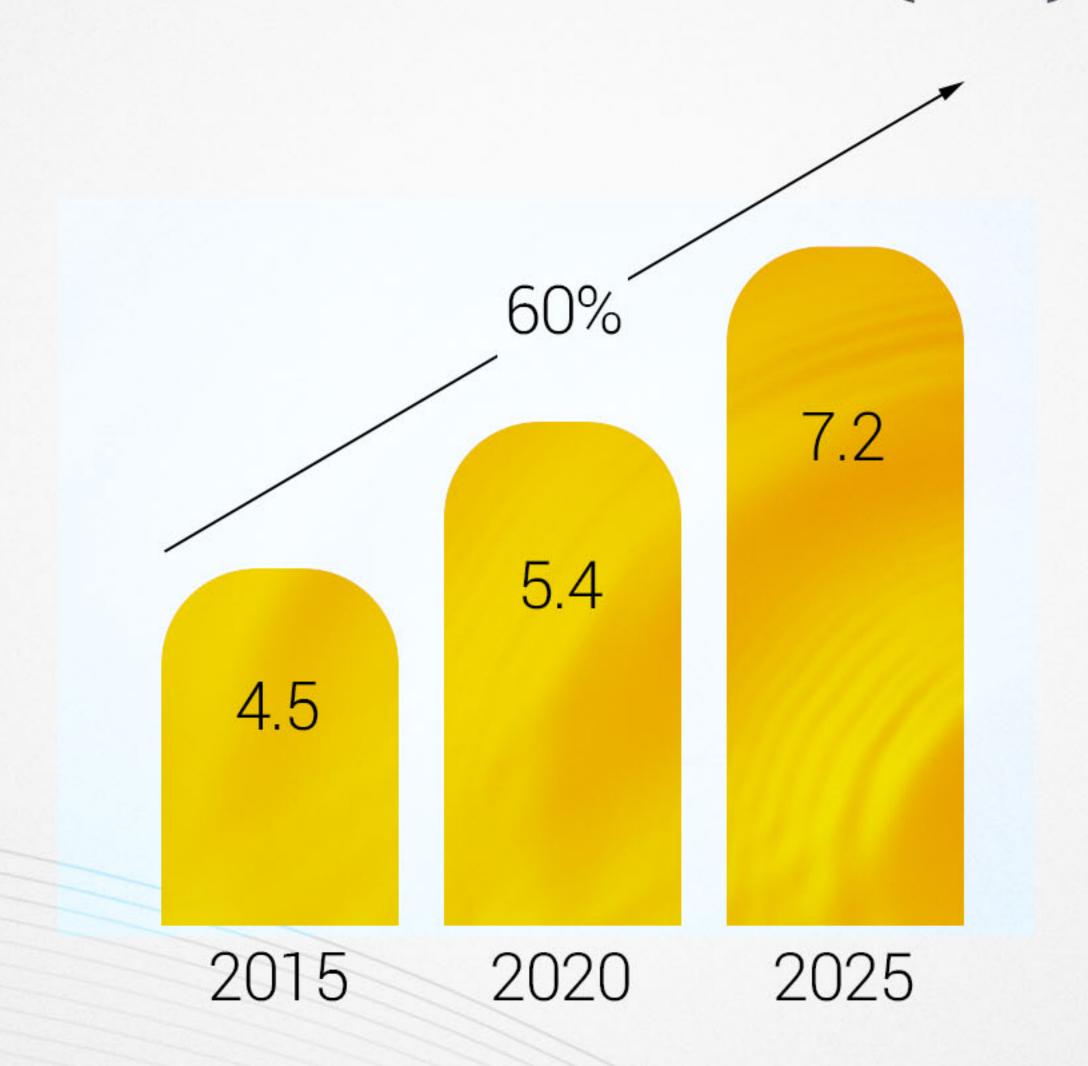
## Grain flow dynamics in Ukrainian Ports (Mt)







## Vegetable oil flow dynamics in Ukrainian Ports (Mt)

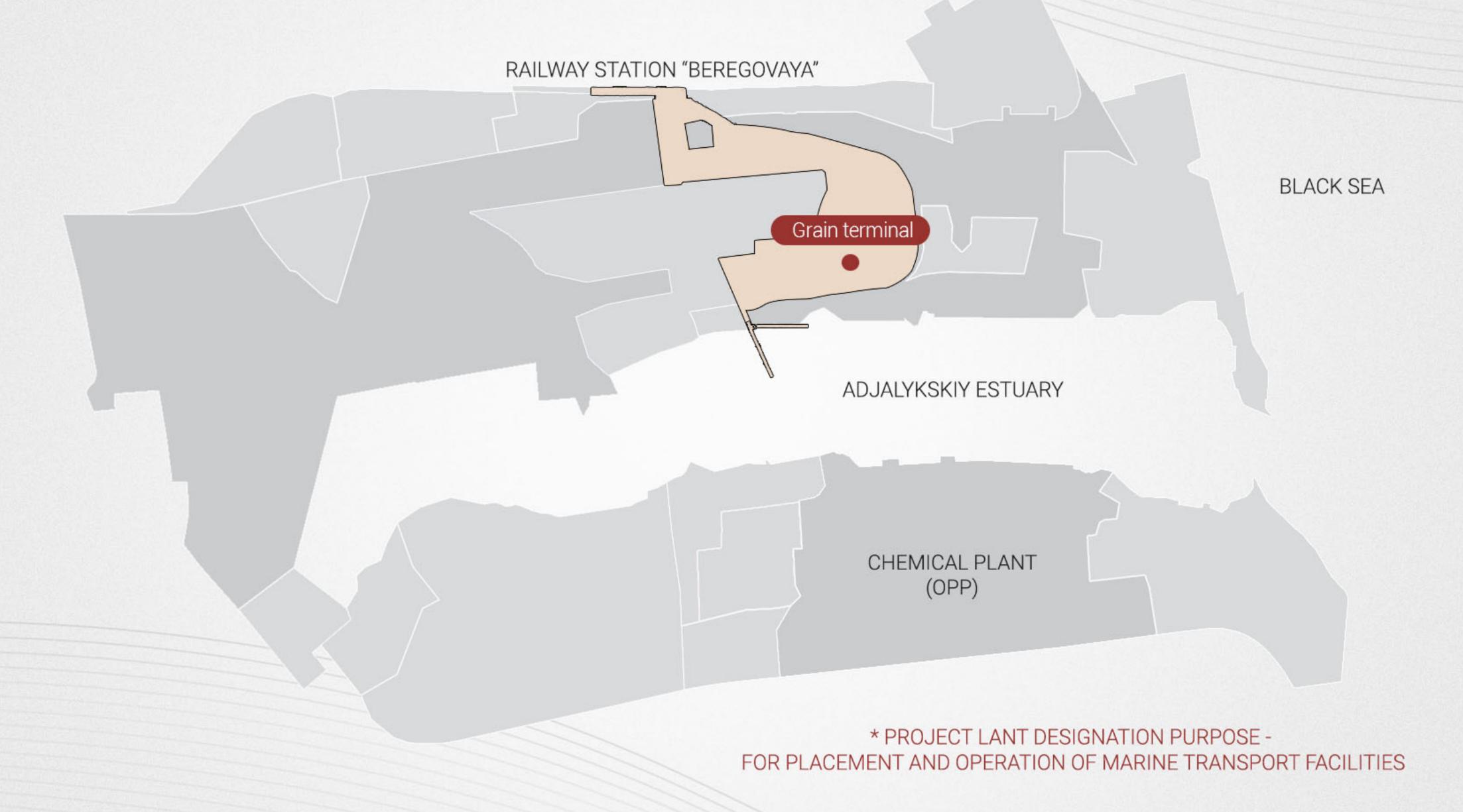




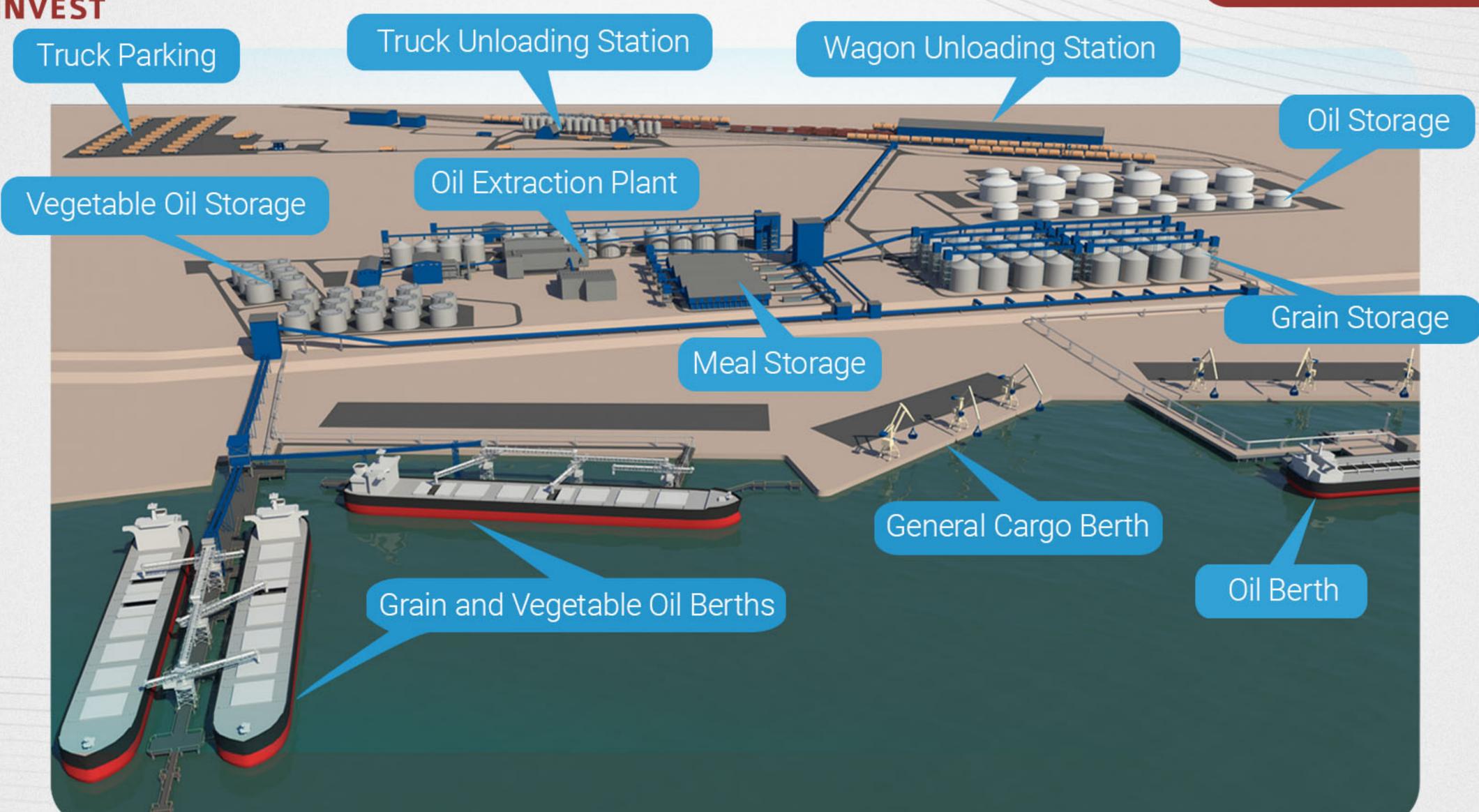




#### AREA OF THE PROJECT



#### GENERAL LAYOUT

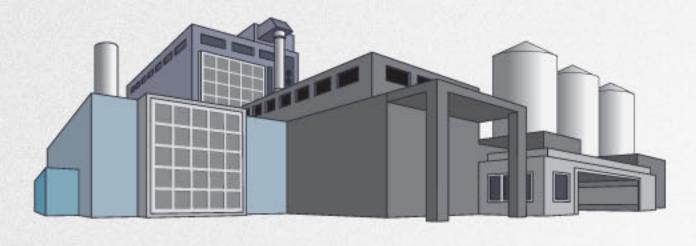




#### Truck Unloading Station

#### GRAIN TERMINAL

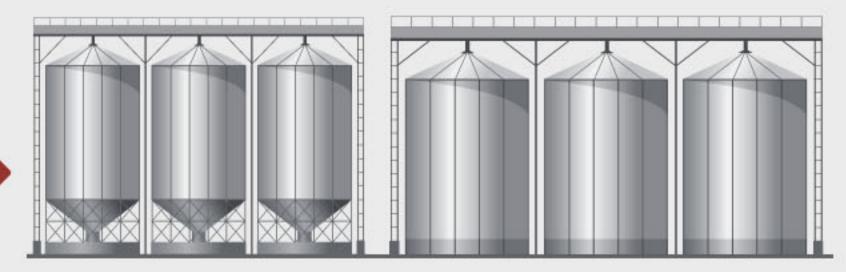
#### Oil Extraction Plant



680 tons/day

MEAL

Storage



Meal 80'000 tons

8x8 Trucks/hour

Grain 440'000 tons

**MEAL & GRAIN** 

Ship Loading

2x3'000 tons/hour

Wagon Unloading Station



520 Wagons/day

MEAL & GRAIN

9.0 Capacity Mt per/year

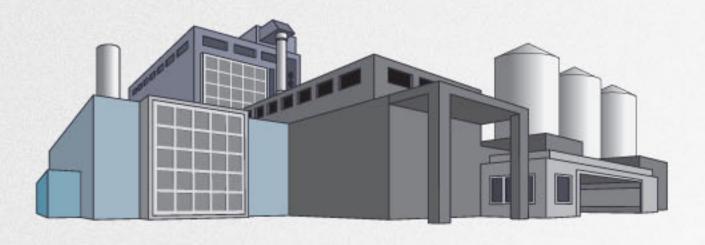
DWT 125'000



#### VEGETABLE OIL TERMINAL

Wagon Unloading Station

#### Oil Extraction Plant

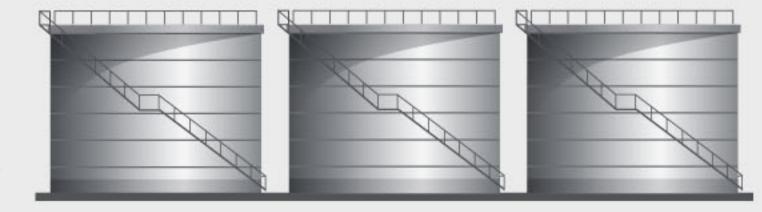


770 tons/day

Truck Unloading Station

480 m<sup>3</sup>/hour

Vegetable Oil Storage



Capacity 100'000 m<sup>3</sup>

1.2 Capacity
Mt per/year

Ship Loading

3000 m<sup>3</sup>/hour



DWT 50'000



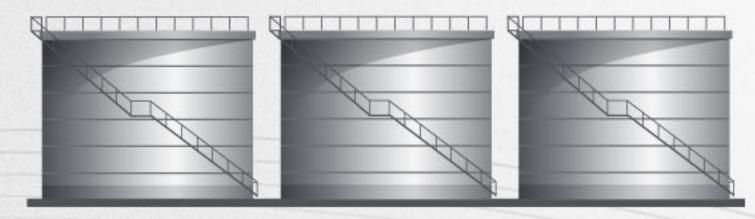
#### OIL EXTRACTION PLANT

#### Truck Unloading Station

SUNFLOWER SEEDS

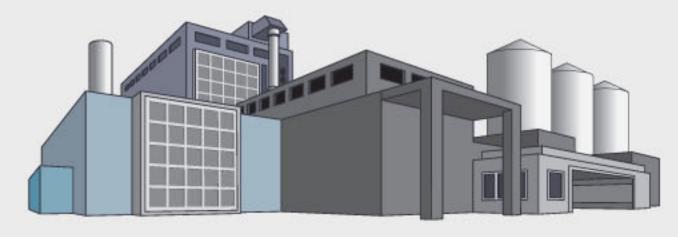


Vegetable Oil Storage



Capacity 60'000 m<sup>3</sup>

#### Oil Extraction Plant



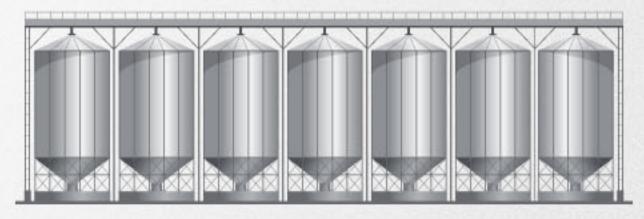
Oil 225 Kt per/year Meal 224 Kt per/year

#### Wagon Unloading Station

SUNFLOWER SEEDS



Meal Storage



Capacity 80'000 tons



#### CLUSTER TECHNICAL PARAMETERS

| 7.4     | Mt per year               |
|---------|---------------------------|
| 9.0     | Mt per year               |
| 1.2     | Mt per year               |
| 10      | mil. tons per year        |
| 3 x 370 | m                         |
| 3       | pcs.                      |
| 107.7   | ha                        |
|         | 1.2<br>10<br>3 x 370<br>3 |



#### CLUSTER FINANCE PARAMETERS

| 2 |   |
|---|---|
|   |   |
|   |   |
|   | i |

|                        | Private investments |         |
|------------------------|---------------------|---------|
| Grain terminal 1.Stage | 147.5               | mil. \$ |
| Grain terminal 2.Stage | 72.0                | mil. \$ |
| Vegetable oil terminal | 22.9                | mil. \$ |
| Oil extraction plant   | 124.0               | mil. \$ |
| Total                  | 366.4               | mil. \$ |



#### REQUIREMENTS TO MARITIME LOGISTICS

### SPECIALIZED PORT FACILITIES

Potential of grain freight flows requires launching of new specialized port facilities.

### DEEP-WATER PORTS

Distance to consumption markets of raw materials defines necessity to use Panamax vessels. Loading of Panamax vessels at berth up to full cargo capacity.

#### NEW TECHNOLOGIES

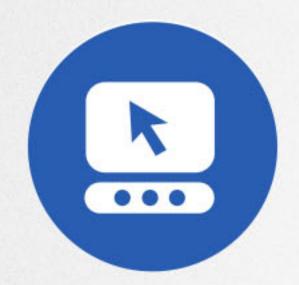
Reduction of logistics expenses requires increase in handling intensity and reduction of loading terms.

RELIABLE LOGISTICS

Ice-free port. Developed railway infrastructure of the port. Retention of freight volumes in winter. Additional services for freight. A high level of technical performance of equipment.



## Grain and oil cluster in the Port of Yuzhny



Advanced technologies



Transcontinental transport corridor



Complete services



Energy reliability



Removal of environmentally unfriendly and dusty cargos from cities





# Investing in logistics – discovering new opportunities!