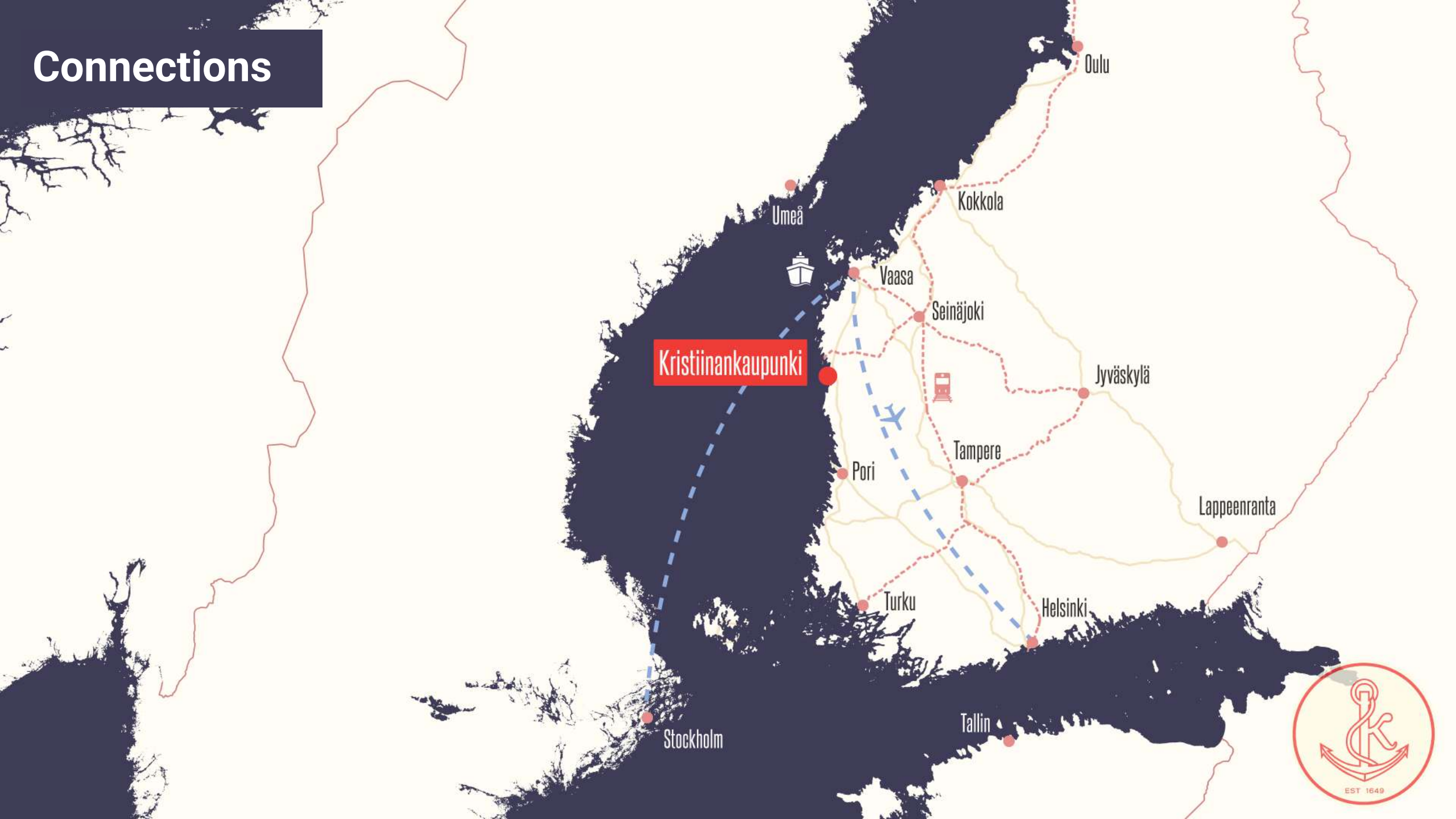
INDUSTRIAL AREAS IN KRISTINESTAD

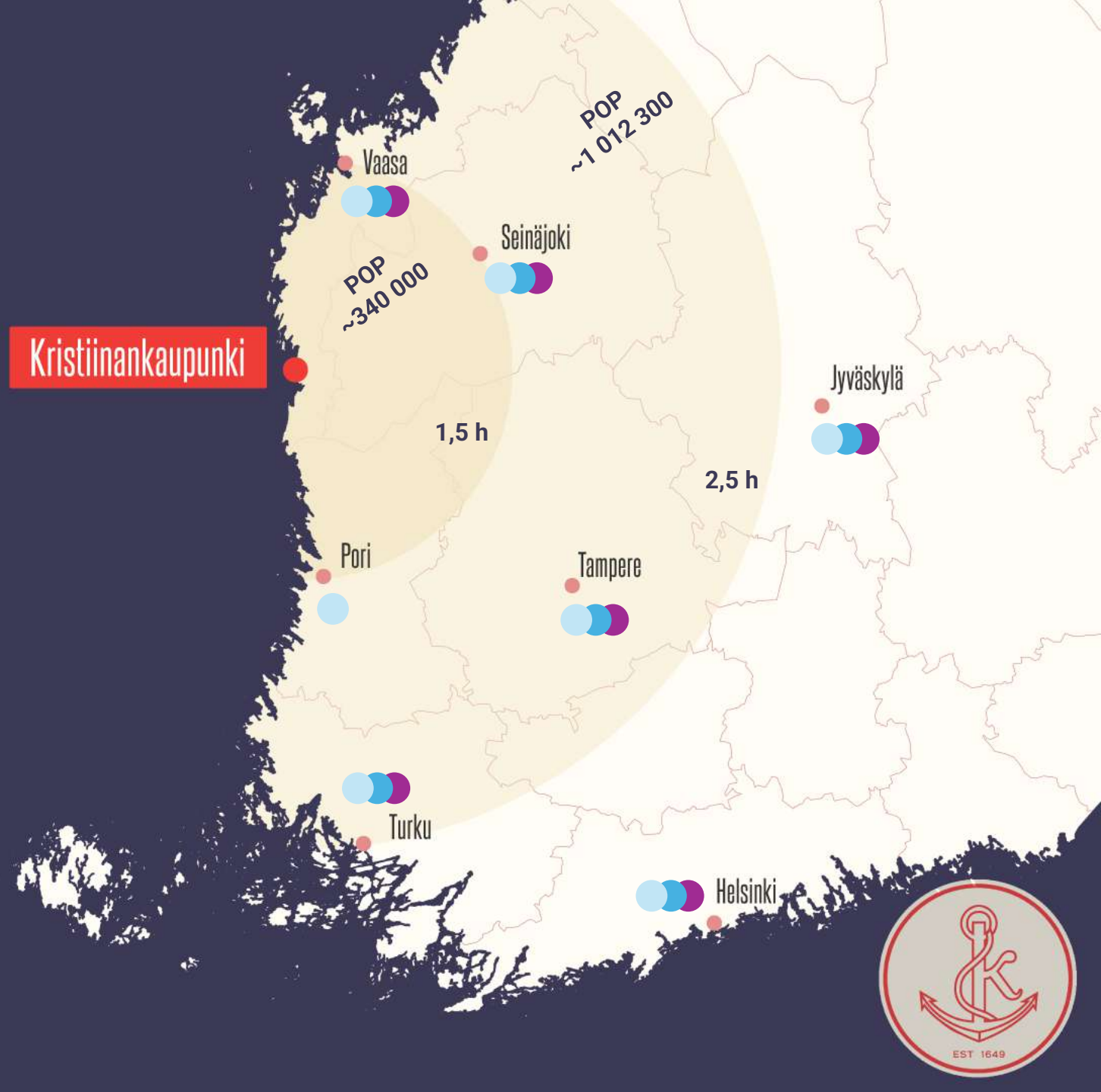
BUSINESS KRISTINESTAD

Connections



Population and education

- Founded 1649
- Approx 6400 inhabitants
- Bilingual; Swedish and Finnish
- Strong industries:
  - > **Agriculture** (potato, carrot, cattle)
  - > **Logistics**
  - > **Metal** (R&D, production)
  - > **Forestry** (cultivation, sawmill planning, development of forest machinery)
  - > **Wind energy**
  - > **Solar energy**



- **Vocational School**
- **University of Applied Sciences**
- **University or University Consortium**

Port of Karhusaari

- Located in Kristiinankaupunki, the Port of Karhusaari is a **privately owned** port with long traditions. It has served mainly the local power plants for almost 50 years. A small-scale commercial port operations has been a part of the activities along the main operations in fuel import. The port has also handled project shipments during the lifetime.
- At the moment the traffic is **almost 100% dry bulk**. There are several **initiatives to add liquid bulk traffic in near future**.
- The **maximum draught is 12 m** and the fairway is easy to access. For dry bulk the vessel maximum is estimated l=210 m and b=31 m. Icebreaking need varies a lot and mainly needed in in the Q1 of the year. There has also been ice-free winters in this port.
- Link to fairway card: Kristiinankaupunki+12+m.pdf (vayla.fi)

Green energy production in Kristinestad

Operational Windparks
Nr. of turbines
126
Capacity:
747 MW

Planned Windparks
Nr. of turbines
92
Projected capacity:
960 MW

Planned Solar Energy
Nr. of panels
580.000
Projected capacity:
327 MW

Fingrid Power Station
Status: **Operational**

Fingrid Power Station
Status: **Planned**

Fingrid Powerlines

Total Energy Production

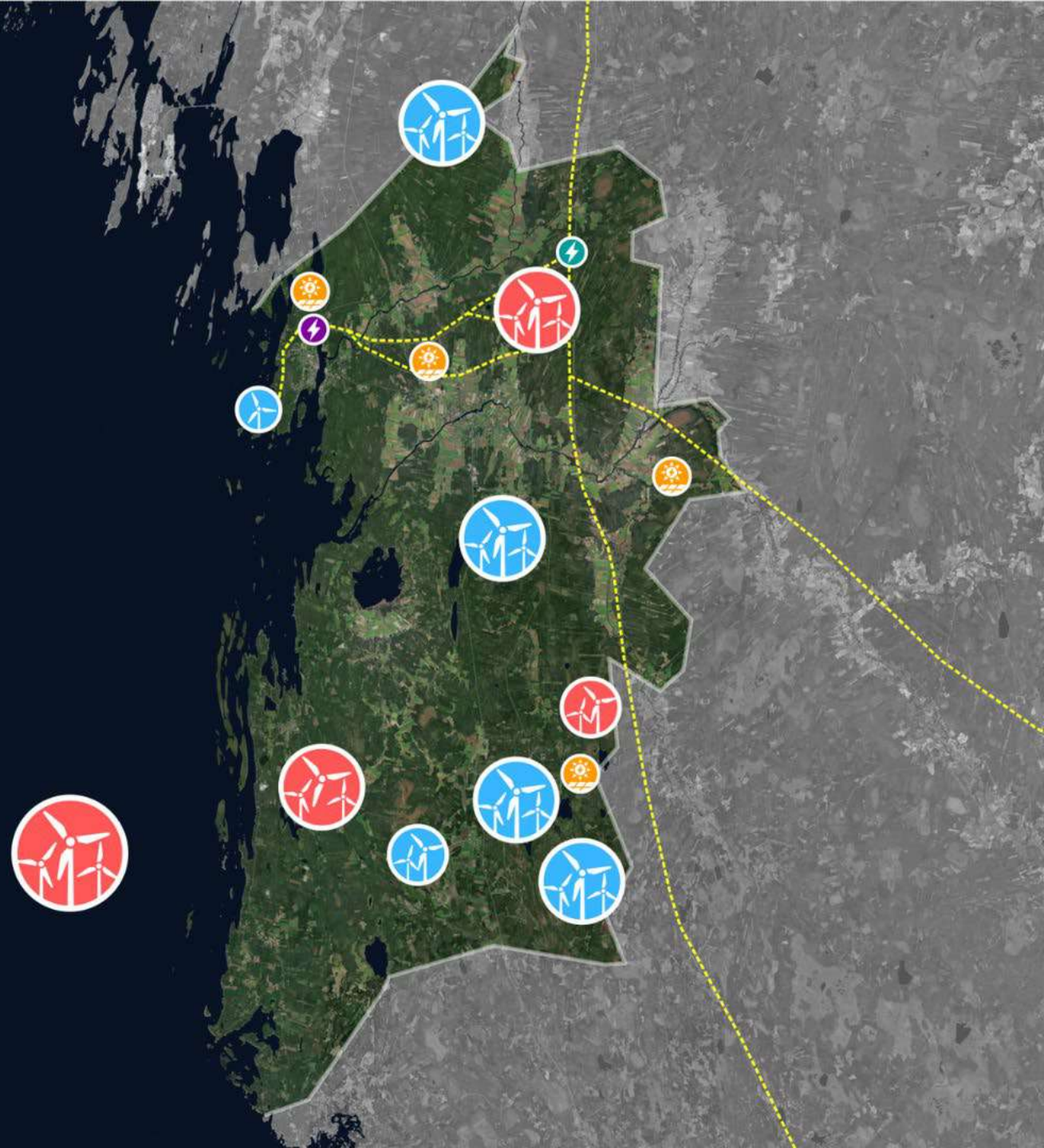
(Operational + planned)

Nr. of wind turbines **218**

Nr. of solar panels **580.000**

Total projected capacity:

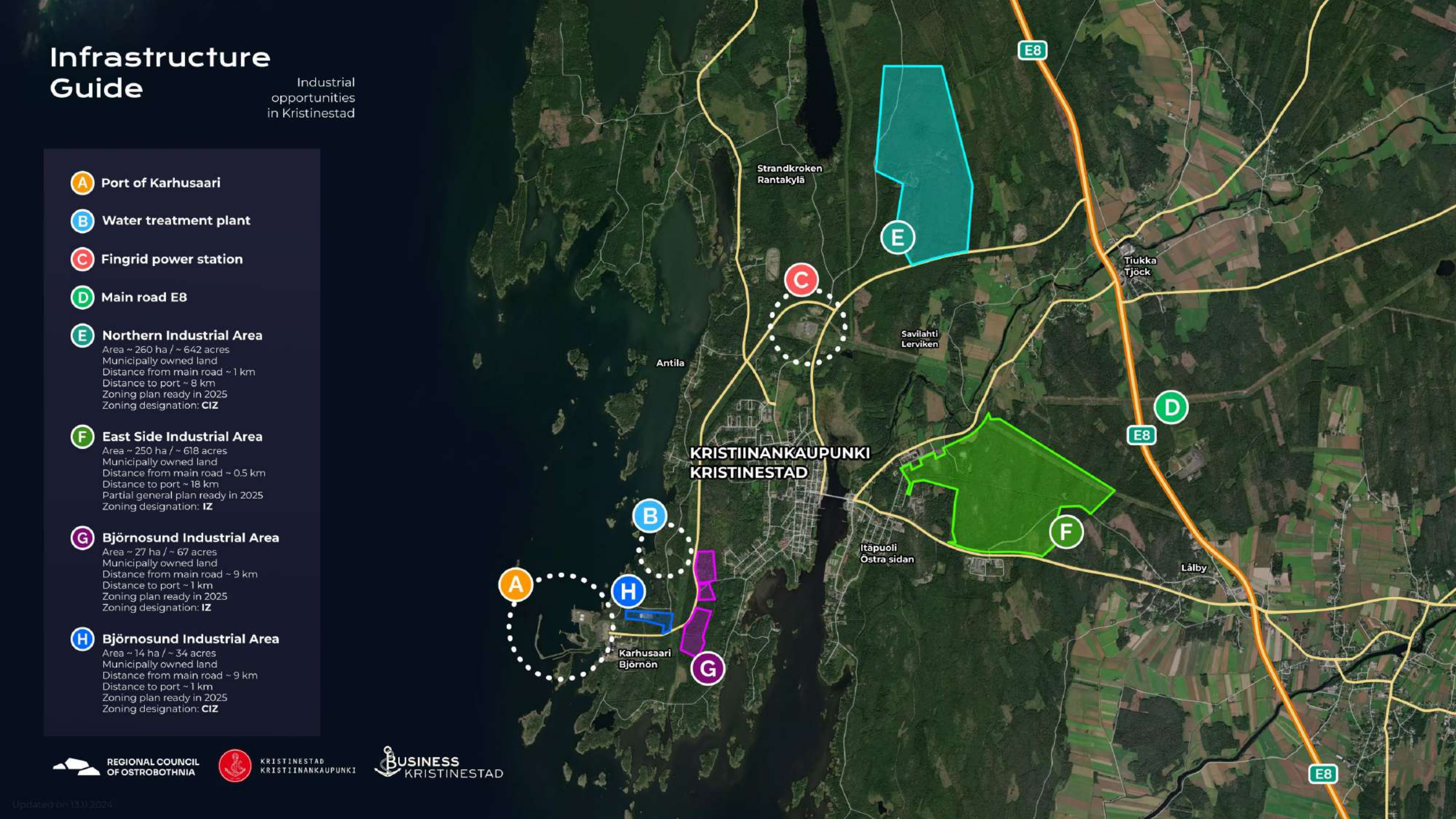
2.034 MW



BUSINESS KRISTINESTAD

Infrastructure Guide

Industrial opportunities in Kristinestad



- **A** Port of Karhusaari
- **B** Water treatment plant
- **C** Fingrid power station
- **D** Main road E8
- **E** Northern Industrial Area
  - Area ~ 260 ha / ~ 642 acres
  - Municipally owned land
  - Distance from main road ~ 1 km
  - Distance to port ~ 8 km
  - Zoning plan ready in 2025
  - Zoning designation: **CIZ**
- **F** East Side Industrial Area
  - Area ~ 250 ha / ~ 618 acres
  - Municipally owned land
  - Distance from main road ~ 0.5 km
  - Distance to port ~ 18 km
  - Partial general plan ready in 2025
  - Zoning designation: **IZ**
- **G** Björnosund Industrial Area
  - Area ~ 27 ha / ~ 67 acres
  - Municipally owned land
  - Distance from main road ~ 9 km
  - Distance to port ~ 1 km
  - Zoning plan ready in 2025
  - Zoning designation: **IZ**
- **H** Björnosund Industrial Area
  - Area ~ 14 ha / ~ 34 acres
  - Municipally owned land
  - Distance from main road ~ 9 km
  - Distance to port ~ 1 km
  - Zoning plan ready in 2025
  - Zoning designation: **CIZ**

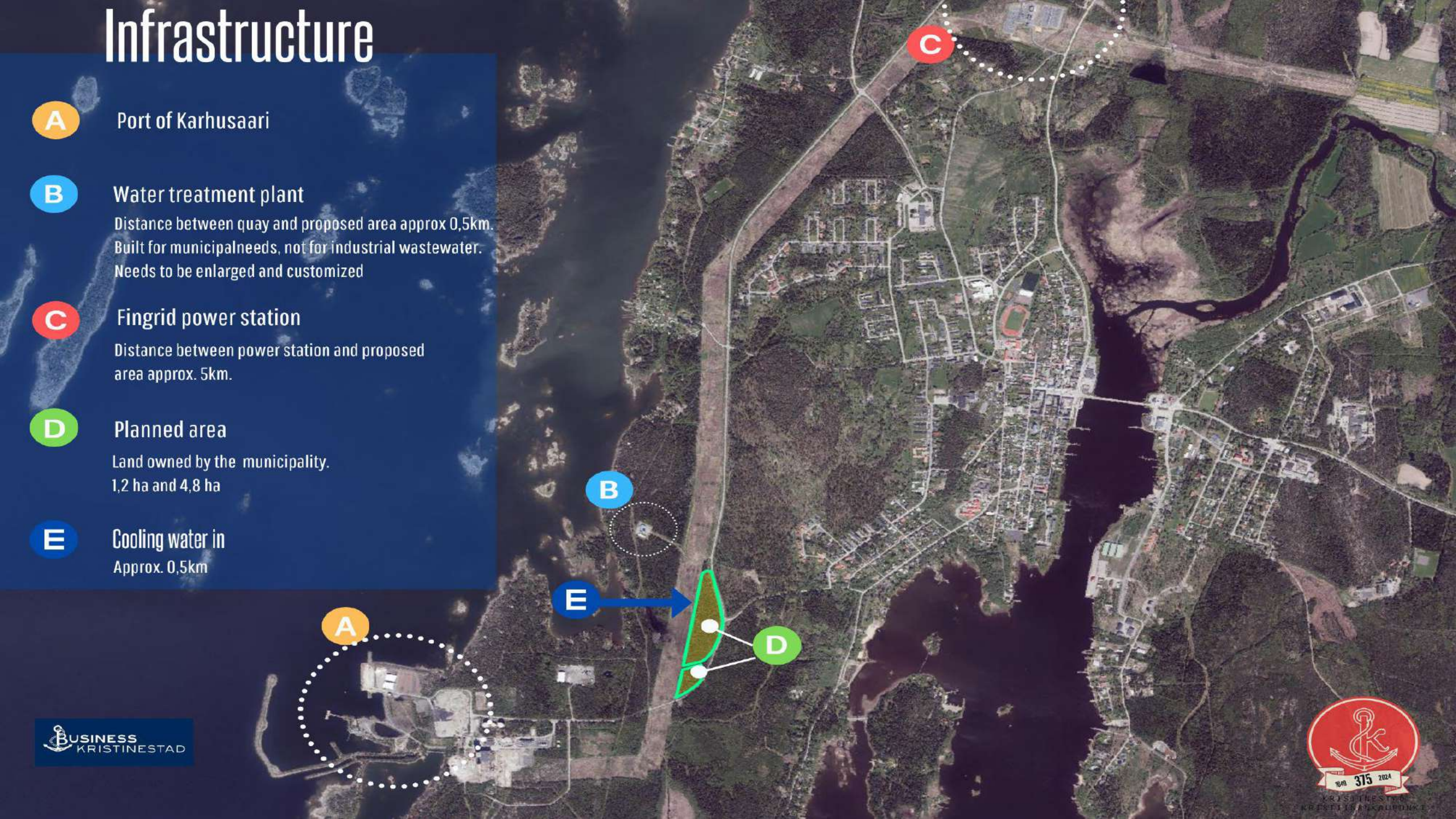
REGIONAL COUNCIL OF OSTROBOTHNIA

KRISTINESTAD KRISTIINANKAUPUNKI

BUSINESS KRISTINESTAD

Updated on 13.11.2024

Infrastructure



A Port of Karhusaari

B Water treatment plant

Distance between quay and proposed area approx 0,5km.
Built for municipalneeds, not for industrial wastewater.
Needs to be enlarged and customized

C Fingrid power station

Distance between power station and proposed area approx. 5km.

D Planned area

Land owned by the municipality.
1,2 ha and 4,8 ha

E Cooling water in

Approx. 0,5km

BUSINESS KRISTINESTAD

Infrastructure

A Port of Karhusaari

Distance between quay (A) and main road E8 is approx 10 km.

B Water treatment plant

Distance between quay and proposed area approx 4,0 km.
Built for municipalneeds, not for industrial wastewater.
Needs to be enlarged and customized

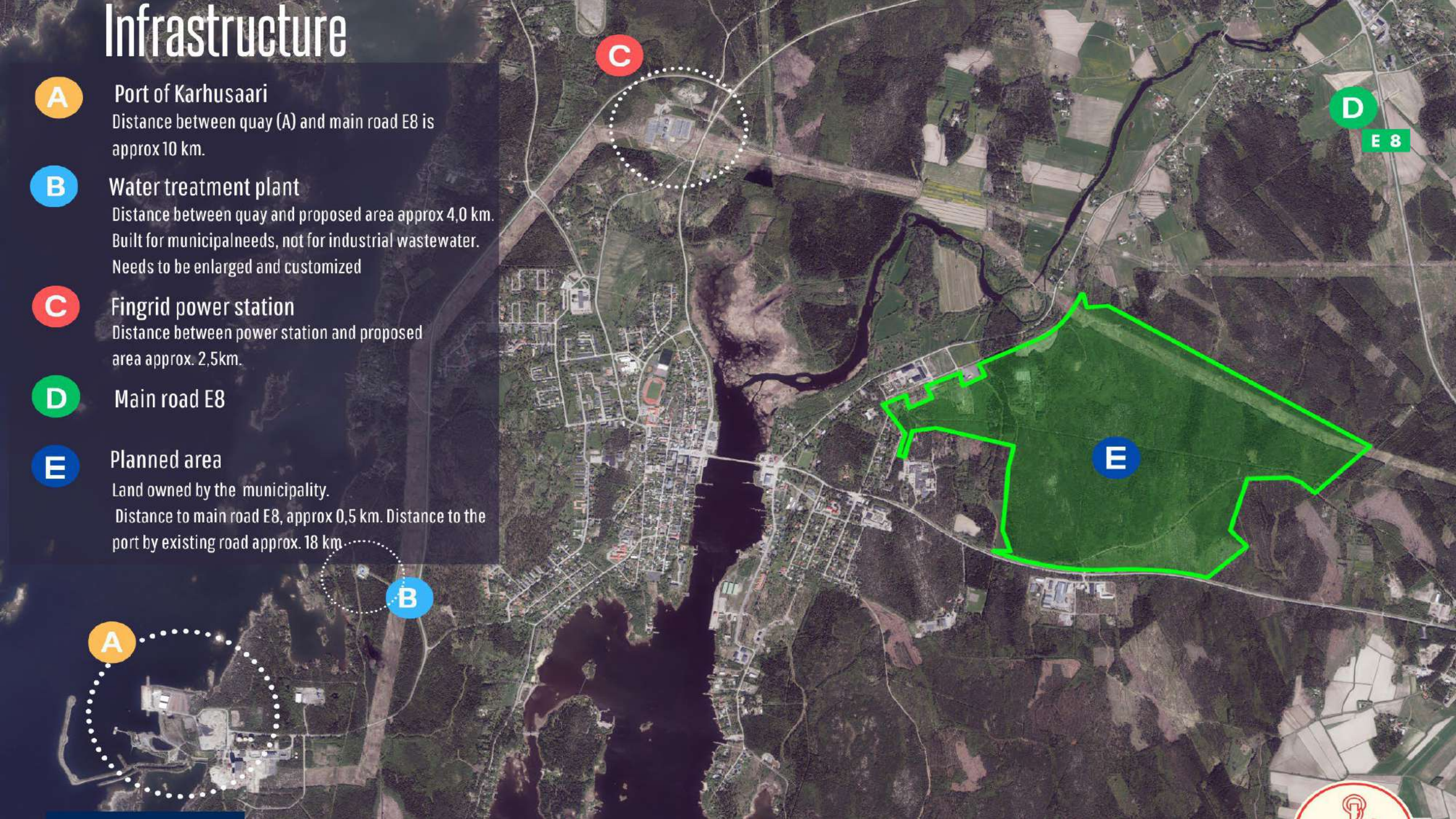
C Fingrid power station

Distance between power station and proposed area approx. 2,5km.

D Main road E8

E Planned area

Land owned by the municipality.
Distance to main road E8, approx 0,5 km. Distance to the port by existing road approx. 18 km



Infrastructure

A Port of Karhusaari
Distance between quay (A) and main road E8 is approx. 10 km. Distance between quay and land owned by municipality (E) approx. 8 km

B Water treatment plant
Distance between quay and proposed area approx. 5,5 km. Built for municipal needs, not for industrial wastewater. Needs to be enlarged and customized.

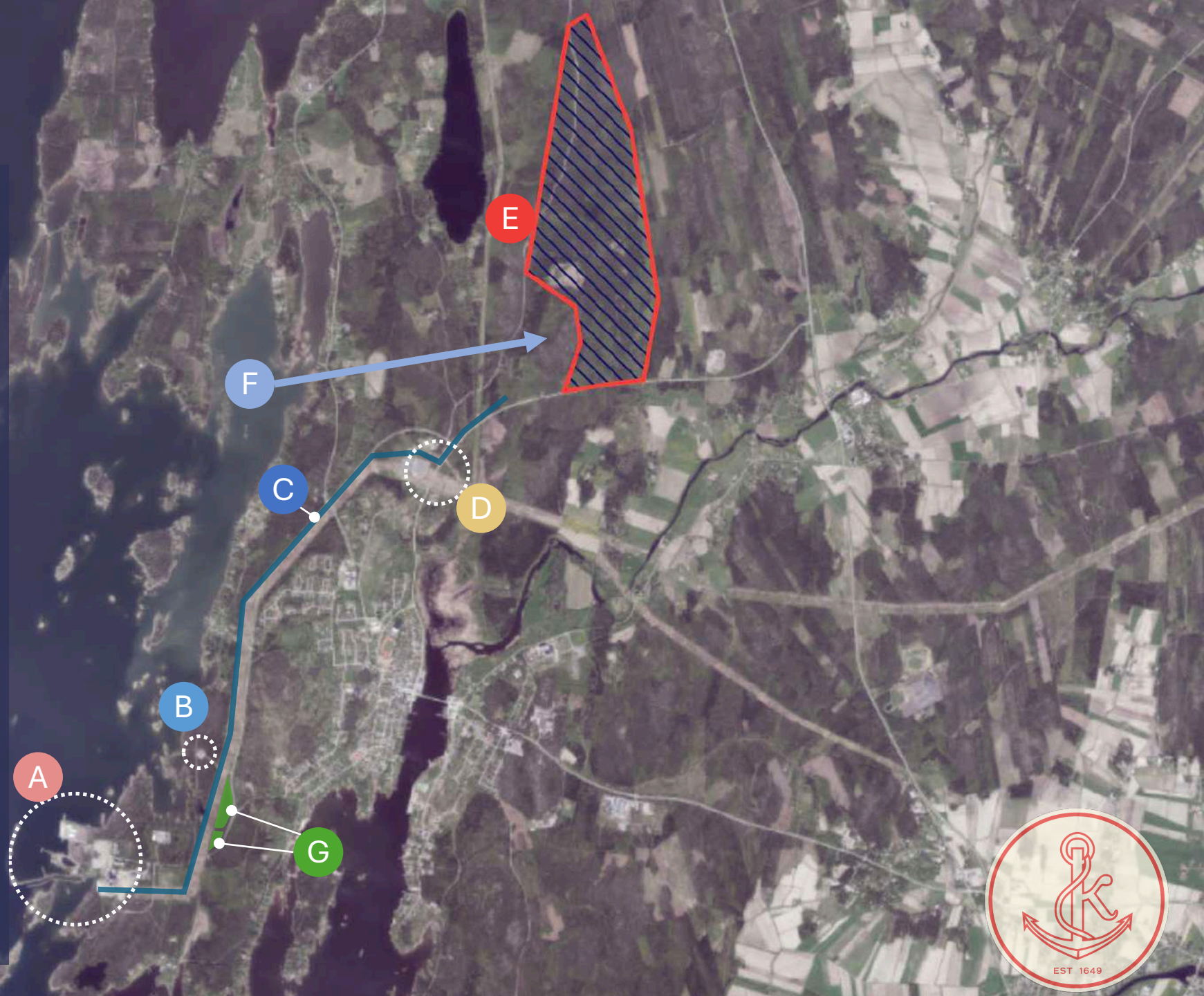
C Conveyor
Distance between harbour and proposed area for site is 8 km.

D Fingrid power station
Distance between power station and proposed area approx. 1,6 km.

E Planned area
Land owned by municipality, zoning planning under way. Detailed planning can be made accordingly.

F Cooling water in
2 km

G Other free industrial areas
1,2 ha and 4,8 ha



EST 1649

Port of Karhusaari

Land ownership – Port of Karhusaari

Other areas sold to various owners:

- Storage, garage (Pihlacon)
- Hydrogen/e-methane (Koppö Energy)
- Underground oil storage (Alfa Oil)

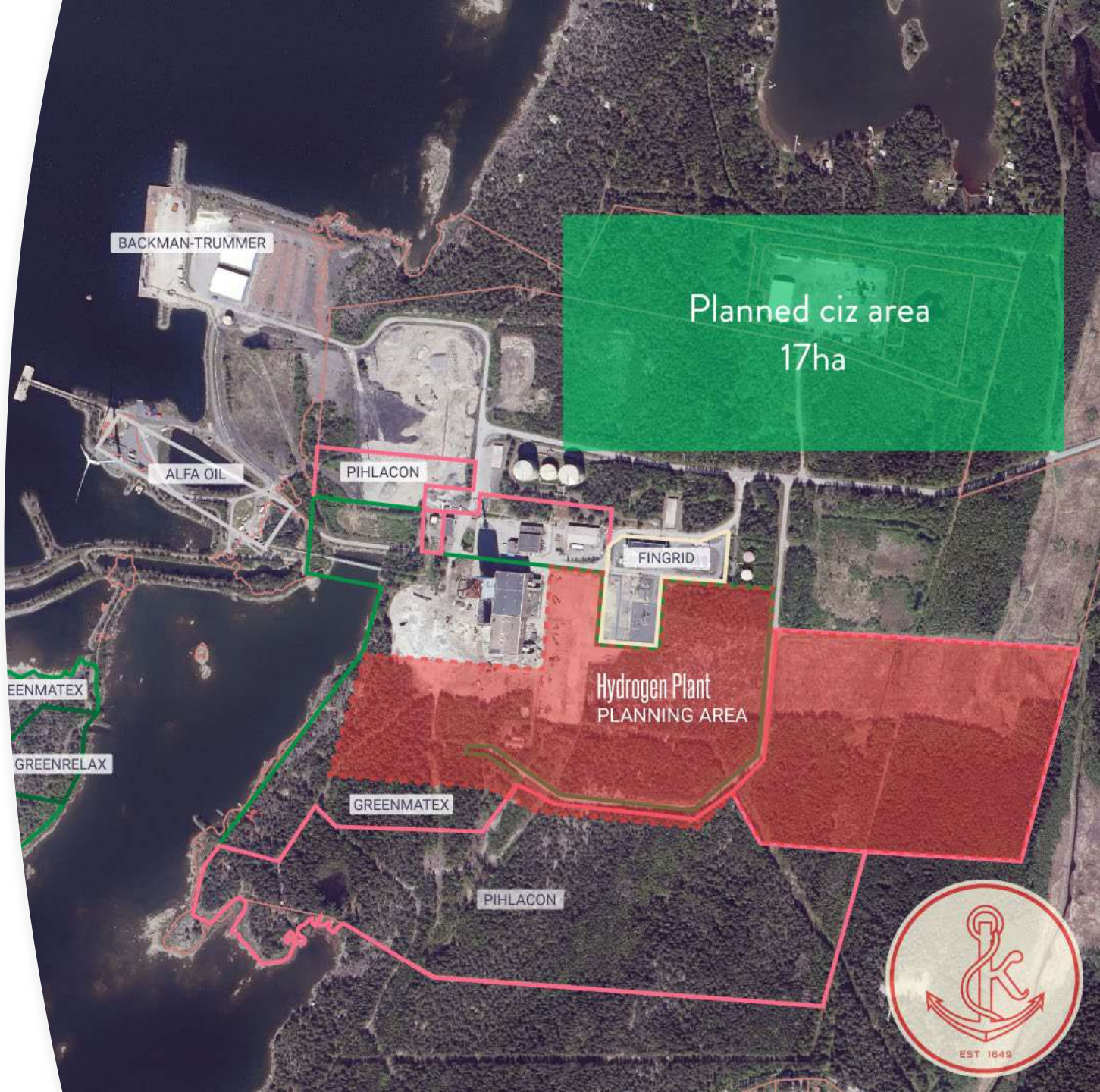
Main Port operator

Backman-Trummer

Port of Karhusaari

- **Land ownership – Port of Karhusaari**
- **Other areas sold to various owners:**
- Storage, garage (Pihlacon)
- Hydrogen/e-methanol (Koppö Energy)
- Underground oil storage (Alfa Oil)

- **Main Port operator**
- Blomberg Stevedoring



Port of Karhusaari – Concept Plan

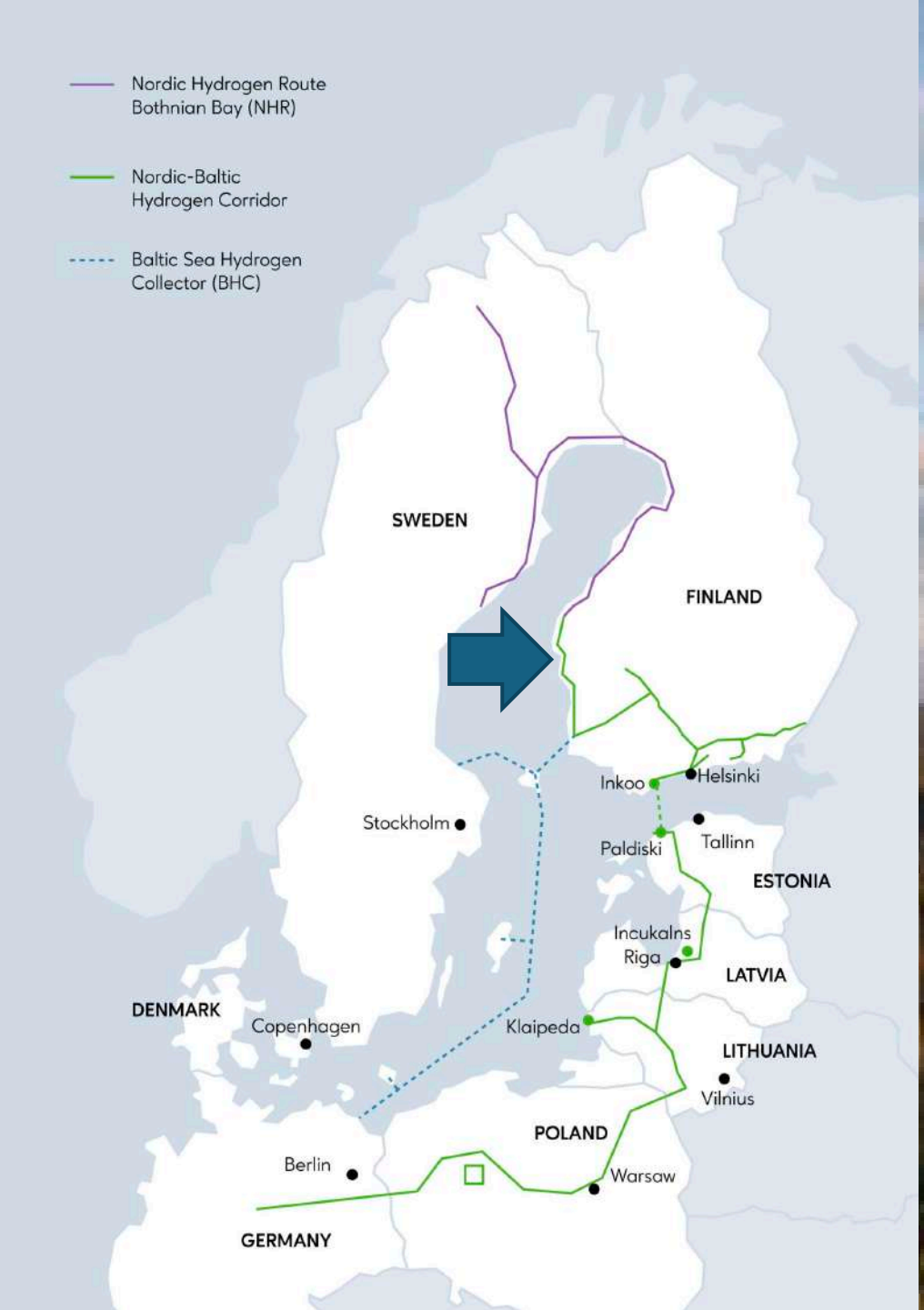
C **Conveyor**
Distance between harbour and proposed area for site is 8 km.

1 **The Port**
Concept of bulk handling expansion possibilities.

2 **Storage area**
Currently for timber. Approx. 1 ha.

3 **Storage area**
Approx. 1,7 ha free area for storage and warehouses.

Port of Karhusaari – Concept Plan


Nordic Hydrogen Route
Bothnian Bay (NHR)
Nordic-Baltic
Hydrogen Corridor
Baltic Sea Hydrogen
Collector (BHC)
SWEDEN
FINLAND
Inkoo
Helsinki
Stockholm
Tallinn
Paldiski
ESTONIA
Incukalns
Riga
LATVIA
DENMARK
Copenhagen
Klaipeda
LITHUANIA
Vilnius
POLAND
Berlin
Warsaw
GERMANY

Koppö Energy

- **Koppö Energy Ltd**., a Joint Venture between CPC Finland and Prime Capital, a German multi-billion energy and infrastructure fund, is planning **a 200 MW Electrolyzer plant with subsequent e-methanol production,** in Karhusaari using 460 MW wind power. The Koppö Energy plant is estimated to **use 200 kt CO_2 p.a. recovered from a waste-to-energy plant in Vaasa**
- **CPC Finland has built so far 335 MW of wind power** is currently operating for more than 200 MW of installed capacity. Since its foundation, CPC has built over 50 wind projects internationally for a total capacity exceeding 800MW.
- The t**otal investment volume is estimated 1.3 billion €**, including 200 MW e-methanol plant, new wind capacity and a Carbon Capture Unit. The commercial operation is estimated to start in **2028**
- Koppö Energy has been awarded a 27 M€ grant by Finnish Government in December 2023, and an additional 20 M€ grant has been awarded to the Carbon Capture Unit

Plug Power & GravitHy

- **Plug Power Inc.**, a Nasdaq-listed leading US provider of turnkey hydrogen solutions **plans to develop three green hydrogen production plants** in Finland, resulting in the production of **850 tons per day (TPD) of green hydrogen, or 2.2 gigawatts (GW) of electrolyzer capacity**, by the end of the decade with final investment decision (FID) by 2025/2026.
- The Kristinestad plant is one of **three announced projects** of PlugPower in Finland, having a total investment value of **6 BUSD.**
- Plug Power has announced plans to establish a **1GW electrolyzer plant in Kristinestad to generate green hydrogen for green iron production (2.0 mt/y of DRI/HBI** produced) exported from the port of Kristinestad. For the development of the DRI/HBI plant, Plug is partnering with **GravitHy,** an industrial company dedicated to decarbonizing the steel value chain and in which Plug Power was a founding partner alongside other large corporations (**EIT InnoEnergy, Engie, Forvia, IDEC, Primetals).**

Our cooperation with universities and research institutes