



# KOdeCO net zero project

EU Innovation Fund Info Day conference

25th of January 2024  
Ljubljana, Slovenia



Co-funded by the  
European Union



## 1. Holcim Hrvatska

Then & now

Decarbonizing Koromačno cement plant

Why CO<sub>2</sub> in cement production

## 2. KOdeCO net zero

Project scope

The first major Croatian project for the EU Innovation Fund

## 3. Experiences in applying for the EU Innovation Fund

Project organization

Challenges and key factors in preparation

# 1. Holcim Hrvatska

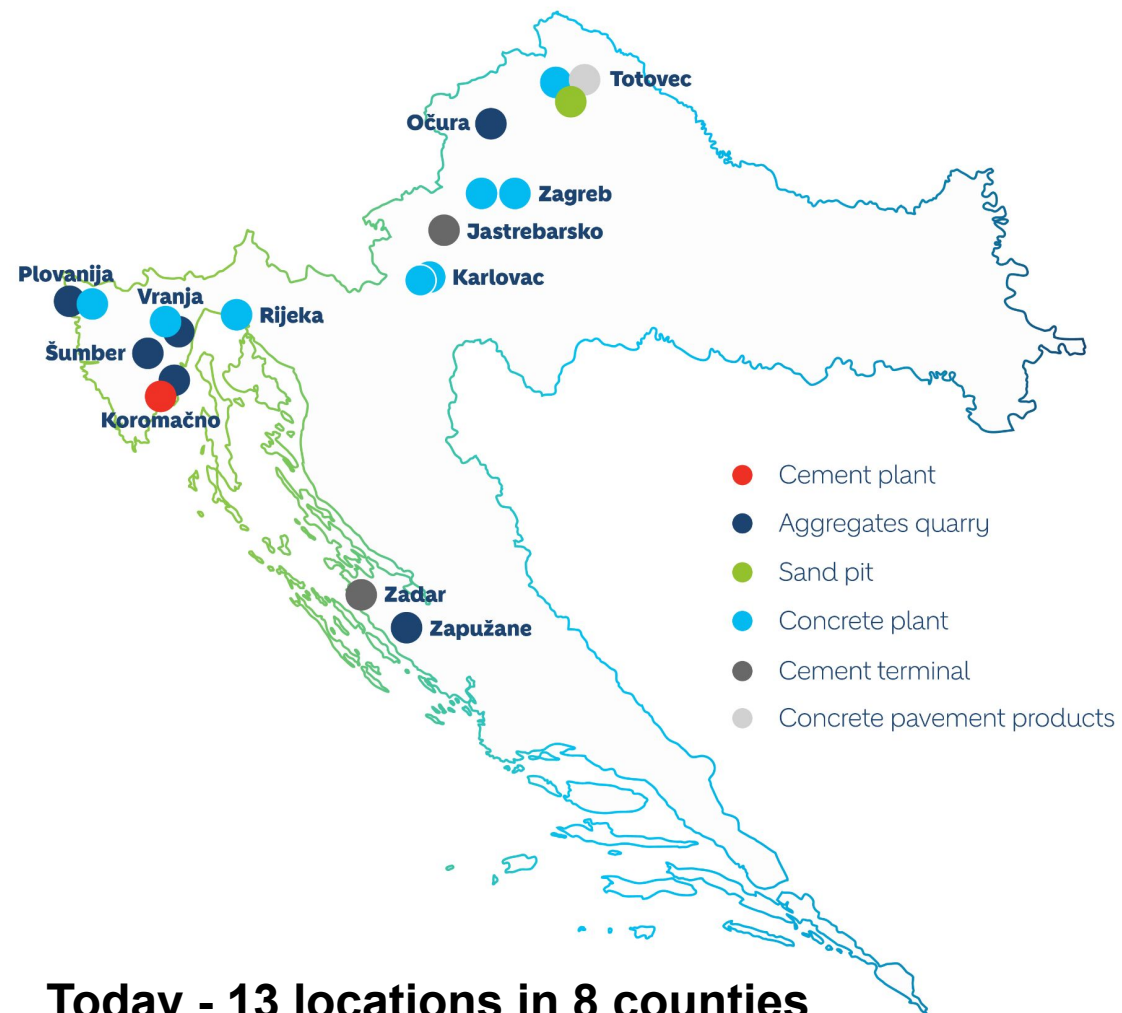
## Then & now



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1926 - Start of cement production in Koromačno



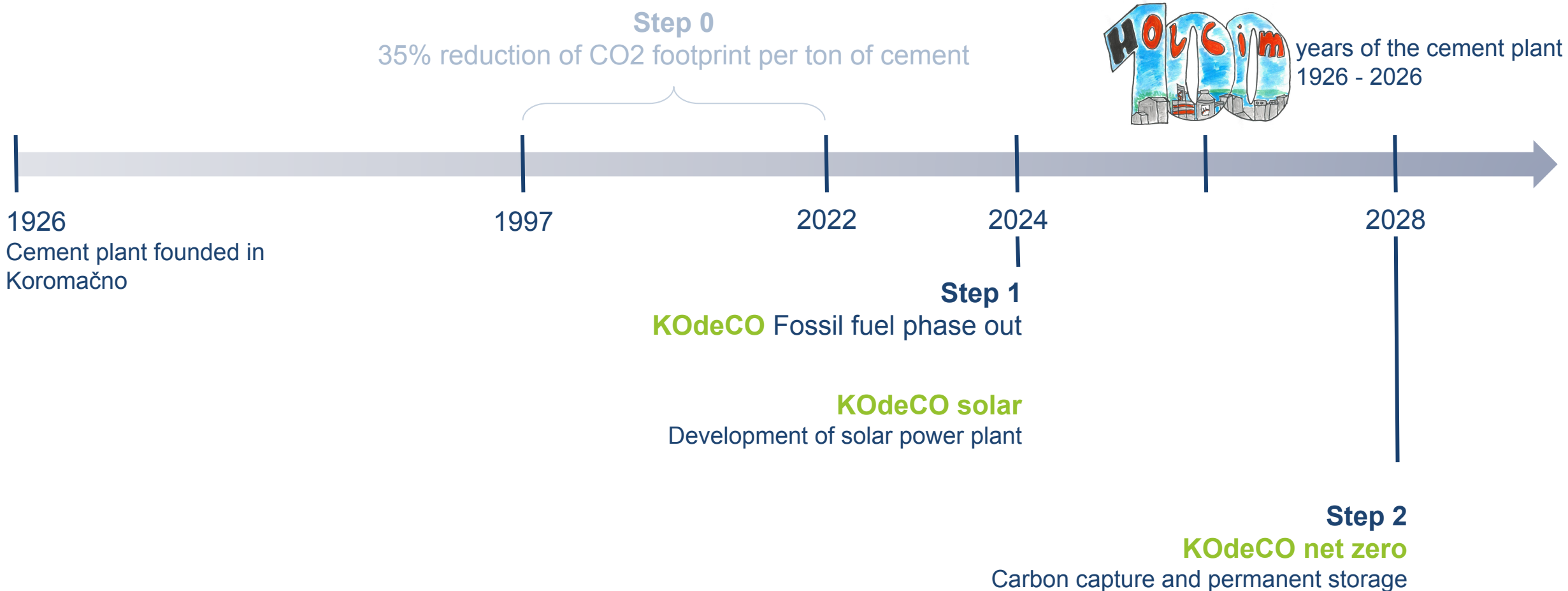
Today - 13 locations in 8 counties

# 1. Holcim Hrvatska

## Decarbonizing Koromačno cement plant



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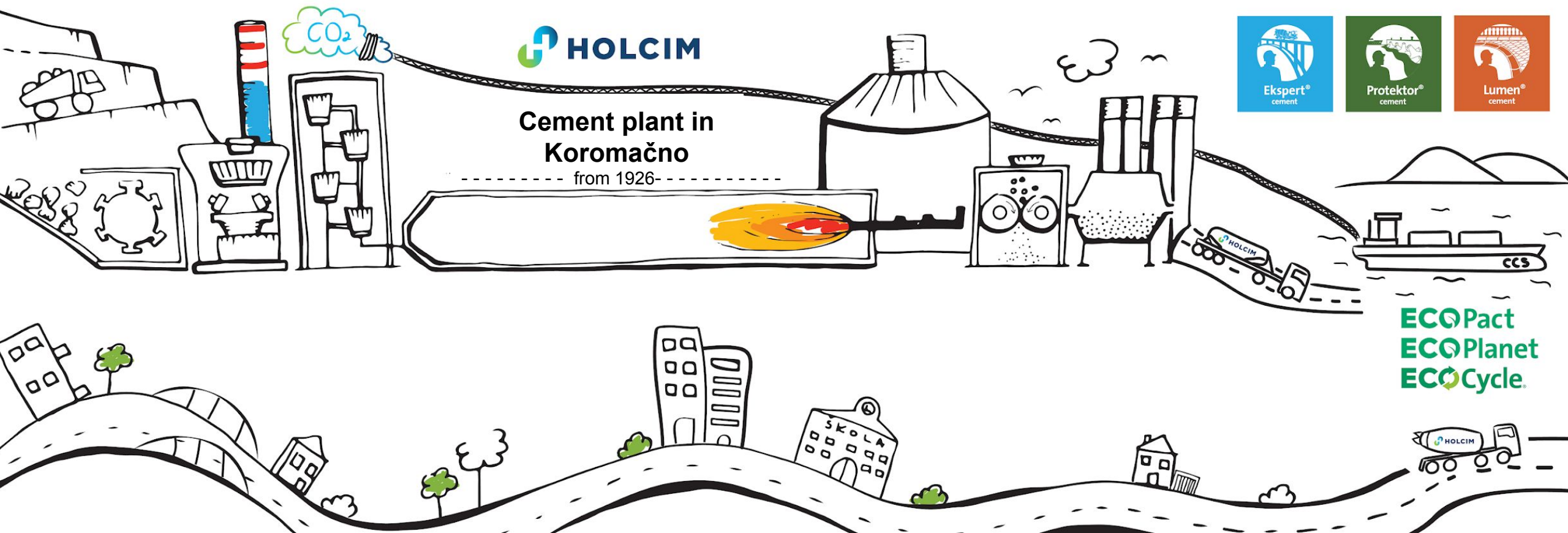


# 1. Holcim Hrvatska

## Why CO<sub>2</sub> in cement production?



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**60%** stone limestone  $\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$

**40%** fuel for a temperature of 1.450 °C

# 2. KOdeCO net zero = KOromačno DEcarbonization eCOlogy

## Project scope



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Funded by the European Union  
Emissions Trading System  
Innovation Fund

+

Just Transition Fund in Istria Region

**ENERGY SUPPLY:**  
90% Renewable Energy

**ZERO FRESH WATER:**  
fresh water is becoming a scarce resource – we will use desalinated sea water

Carbon capture and storage of 367 kt CO<sub>2</sub>/ year from 2028



20% electricity consumption compared to the 1st generation technology

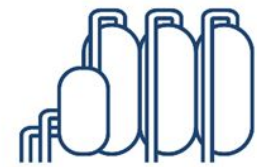
Water savings: through circular process design water will be reused in the cooling process.



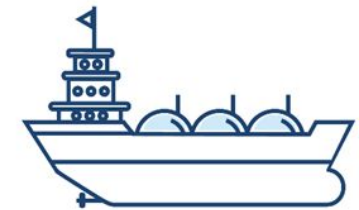
**Koromačno cement plant**



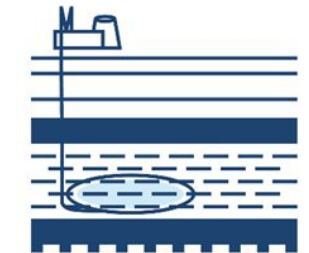
**Carbon Capture & Liquefaction**



**Wastewater treatment**



**Marine Transportation**



**CO<sub>2</sub> Permanent Storage**

### Time Schedule



## 2. KODECO net zero

# The first major Croatian project for the EU Innovation Fund



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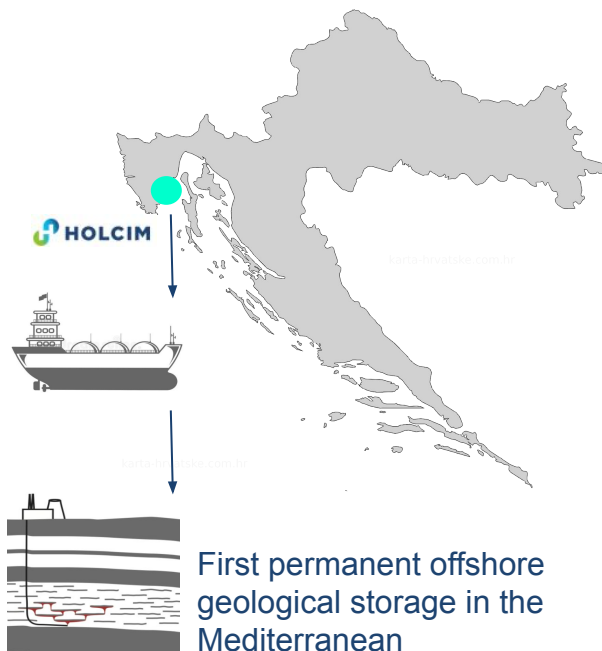
**Location:** Koromačno, Croatia

**Actual / projected captured CO<sub>2</sub>:** 367,000 t CO<sub>2</sub>/year

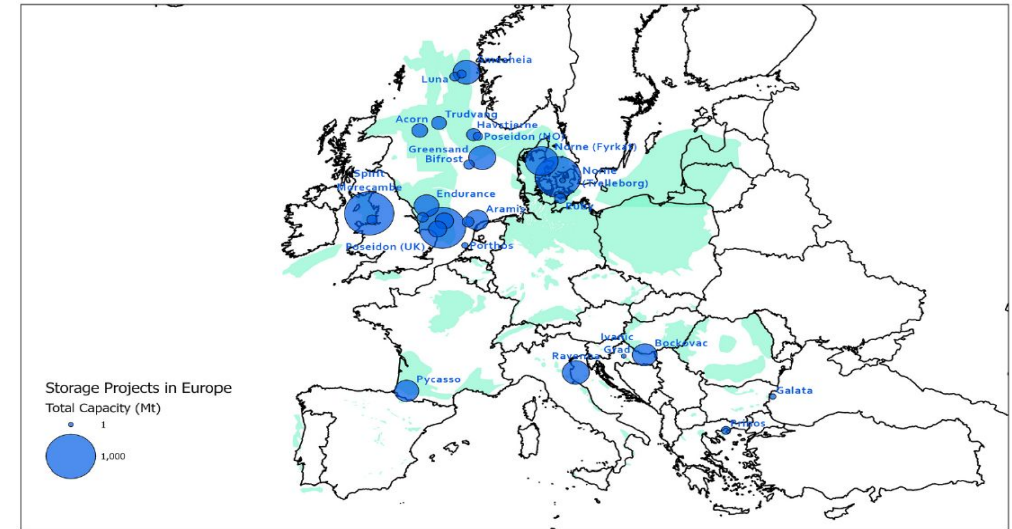
**Technology:** CO<sub>2</sub> capture adsorption technology

**CO<sub>2</sub> Usage/storage model:** Offshore sink

**Estimated CAPEX (rough estimate):** 237 mio EUR



Carbon storage projects in the EU:



Source: Clean Air Taskforce, CCS Forum, 28.11.2023

In the KODECO net zero project category:

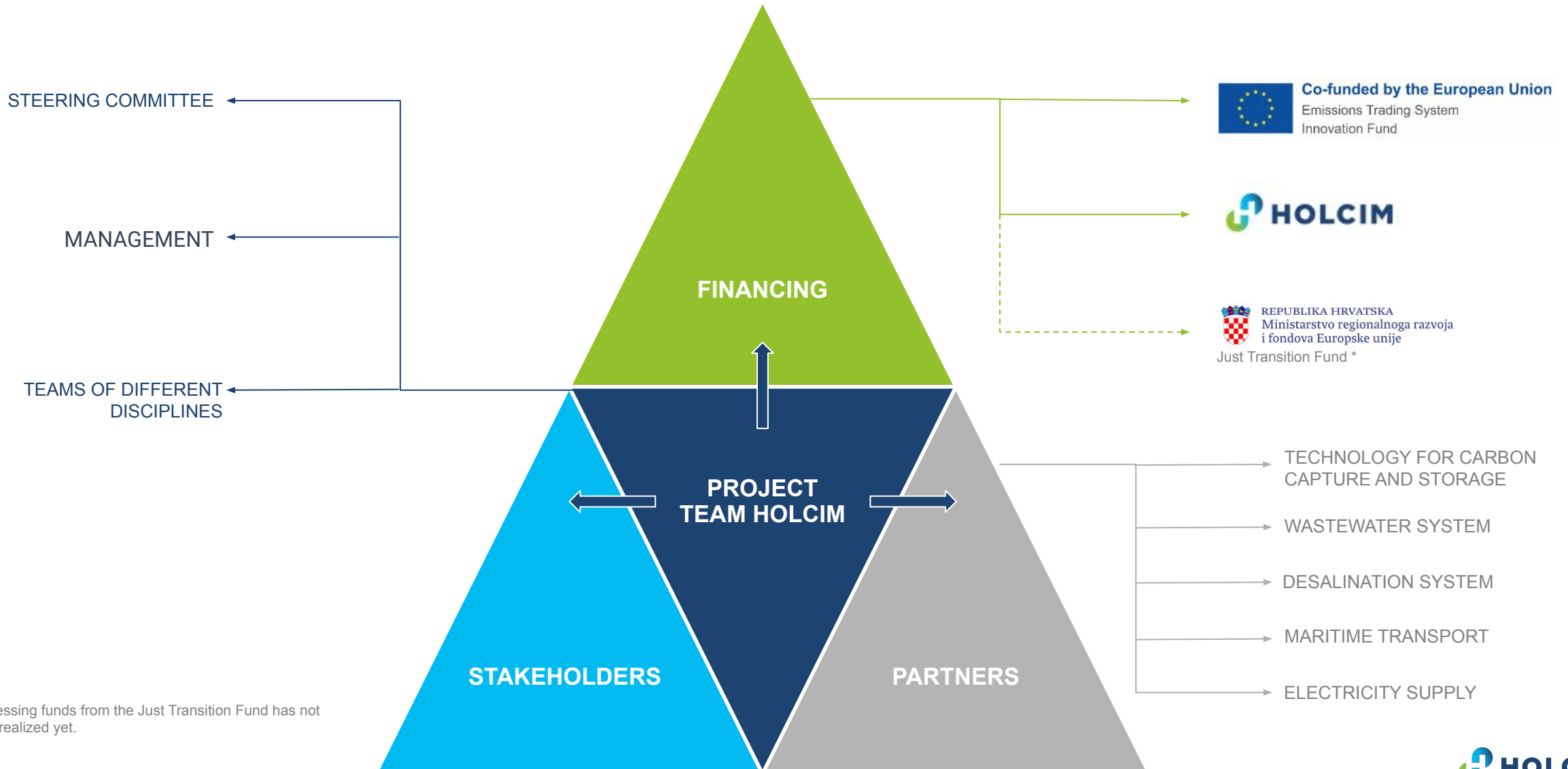
- ✓ Sweden
- ✓ Germany (2 projects)
- ✓ Netherlands / Portugal
- ✓ Greece (2 projects)
- ✓ Belgium
- ✓ Croatia

# 3. Experiences in applying for the EU Innovation Fund

## Project organization



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\* Accessing funds from the Just Transition Fund has not been realized yet.



# 3. Experiences in applying for the EU Innovation Fund

## Challenges and key factors in preparation



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### Challenges

- Demanding administrative procedure - a detailed understanding of the requirements is essential
- Extensive content - ensuring an adequate number of experts for writing (the application was prepared from November to mid-March, involving around 20 employees + external consultants, with 10 employees dedicating almost 100% of their time in January, February and March).
- Preparation of specific documentation (greenhouse gas calculations, financial model, etc.).

### Key factors in preparation

- Start on time
- Clearly define project innovation and project value
- Strong business model
- Demonstrate market potential
- Team with relevant experience (both consultants and internal team)
- Stakeholder engagement
- Transparency and consistency in documentation



**HOLCIM**