

# Norge som kunnskapsnasjon

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 **Elkem**  
A Bluestar Company

# The Elkem Group

## Four business areas targeting silicon-related industry applications



Products  
Silicon, Microsilica,  
specialty powders

Sales (2010)  
NOK 3.6 billion  
USD 590 million

Structure  
3 smelting plants



Products  
Ferrosilicon-based  
alloys

Sales (2010)  
NOK 2.7 billion  
USD 450 million

Structure  
5 smelting plants



Product  
Elkem Solar Silicon  
®

Capacity  
6,000 MT per year

Investment  
NOK 4.5 billion  
USD 750 million

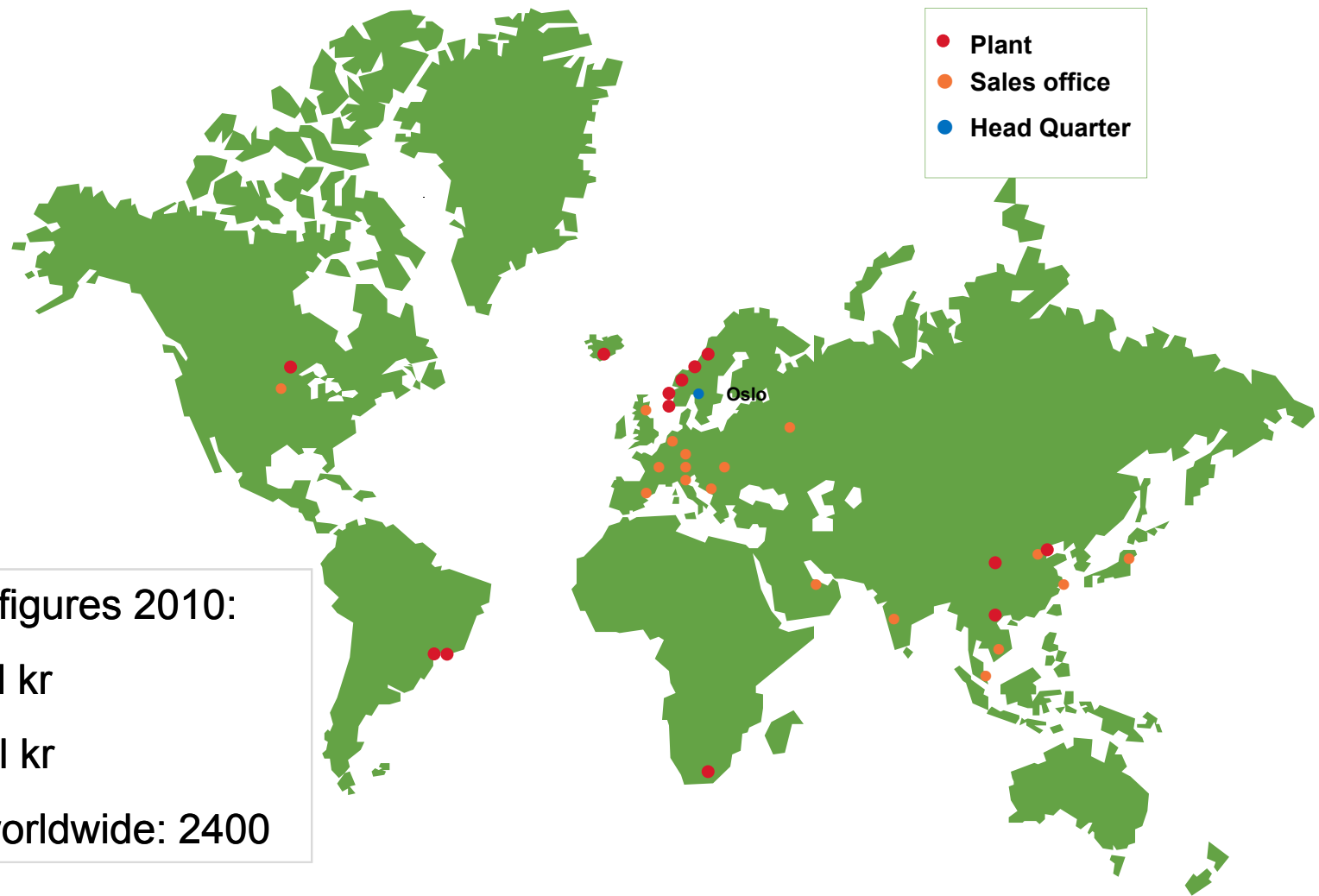


Products  
Electrode-grade  
carbon and graphite

Sales (2010)  
NOK 1.2 billion  
USD 190 million

Structure  
5 carbon plants

# Global presence



Elkem's main figures 2010:

- OR: 9253 mill kr
- EBIT: 515 mill kr
- Employees worldwide: 2400

# Elkem is now part of Bluestar

- Elkem acquired by China National Bluestar in April 2011
- Elkem's new owner is a China-based, international enterprise specialising in chemicals and materials
- Bluestar owned by Chem China (80%) and Blackstone (20%)
- Bluestar's annual sales exceed 7 billion USD, and the group employs about 30,000 people



# Elkem is now part of Bluestar

- Acquired by China National Bluestar for 2 BUSD from Orkla
- Bluestar owned by
  - Chem China (80%)
  - Blackstone (20%)
- Large conglomerate
  - 30,000 employees, 40 BRMB turnover (2010)
  - Diversified in specialty chemicals, petroleum products, animal nutrition etc
  - International presence through M&A
- Silicon integration and solar ambitions important part of rationale for acquisition
- Ambitious growth targets

# R&D activities in Elkem

## Personell

- Corporate R&D: Kristiansand: 91 people
- Division R&D: Trondheim, Kristiansand: 50 people

## Core competence

- High temperature processes and equipment
- Particle technology
- Chemical analysis and characterization

## Cooperation

- Norway: NTNU; Sintef, IFE, UiO, UiA, Teknova, HiT
- International: Germany, Denmark, Sweden, Japan, Australia, USA
- Industry organizations: Eyde, FFF, FME

Recent projects: solar, carbothermic



# Elkem Solar Silicon®

- New factory opened in Kristiansand in 2009
- New process to produce solar grade silicon
- Technological break-through within environmentally friendly production processes
- 25% of the energy consumption in traditional processes
  
- Elkem contributes to global climate solutions:
  - One year of production from Elkem Solar can give 750 GWh/yr of CO<sub>2</sub>-free power production for 20-30 years

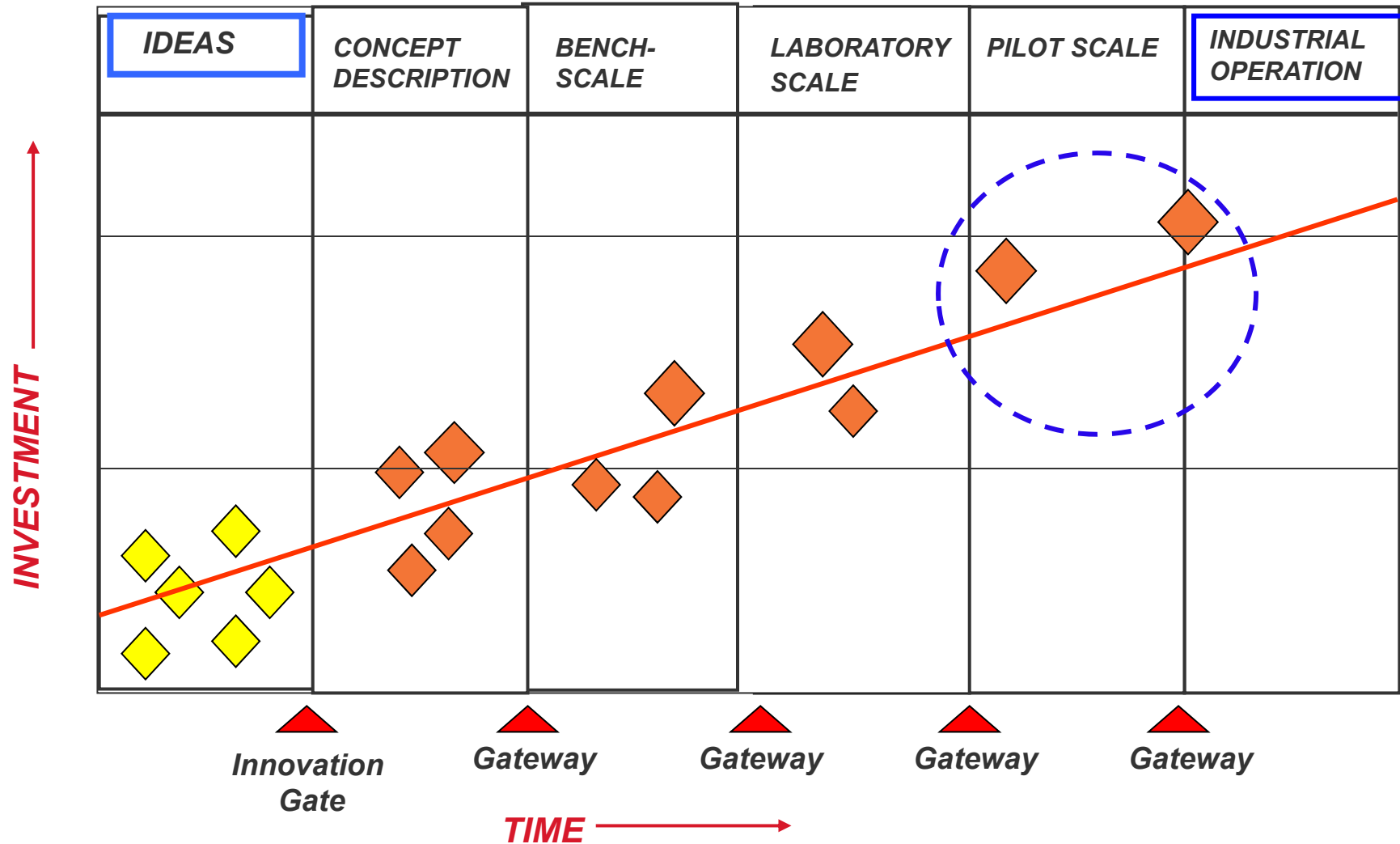


# Strong synergy between R&D and operational knowledge

- Elkem Solar was located at Fiskaa to keep close distance between production knowledge and research centre
- Strong synergies between competence at our plants in Norway and the research organisation
- To keep leading R&D environments like Elkem's in Norway, we need competitive framework conditions for our smelting plants



Industrialisation of new technology is very capital intensive and will often depend on state support



# Thank you!

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