Chemelot

CO2 Reduction in the industry

29 January 2020
Loek Radix, Executive Director Chemelot
Chemelot

- 60 plants
- > 100 organizations
- 8000 employees
- > 80 nationalities
Chemelotsite

> 800 ha
  - ground
  - Rail Terminal Chemelot
  - 1 Dome permit
  - 1 In-land harbour
  - 2400 Street lights
  - 280 MW Gas consumption
  - 2 bln m3 Steam
  - 1000 tn/hr Water (demi)
  - 50 km Roads
  - 60 km Rail
  - 800 km Pipe lines

7 airports within 1 hour driving distance
European hotspot

One of the largest material- and chemical sites in Europe (8 km²)

Campus & industrial park

- Sharing infrastructure, costs and value chains
- Annual turnover 10 billion euro,
- Yearly production >5.5 million tons of product
- Average investment on site: € 250 million per year
- Central organisation permits and emergency response
- Sharing specialist expertise
- Joint agreements in the field of Safety
- Brightlands Chemelot Campus; 2500 employees
Production Chemelot 5,5 Mt per year

Legenda: AN: Ammoniumnitraat kunstmest; AS: Ammoniumsulfaatkunstmest; LDPE: Low Density Polyethylene; PP: Polypropylene; TX: Benzine component met voornamelijk toluen en xyleen. CO2: Koolstofdioxide; C2H4: etheen export; HDPE: High Density Polyethylene; CAN: Acrylonitril; EPDM: Etheen-Propeen-Dieen Monomeer-Rubber; MTBE: Methyl-tert-butylether (octaan verhogend benzine additief); LLDPE: Lineair Low Denisity Polyethylene.
History in successful transitions

- Staatsmijn Maurits: kolen 1926-1967
- DSM: 1902-heden
- Multi-user Industrial park Chemelot: 2002
- Combination Industrial park & Campus: 2011
Roadmap 2030

- Carbon Capture Storage
- N₂O reduction
- Electrification and Energy savings projects
Beyond 2030; Brightsite

1. Replacing naphta by biomass and recycled plastic
2. Hydrogen without fossil CO2 generation
3. Electrification of high temperature processes
4. Circular water
The 5 I’s

• **Instrumentation** CO2-levy, *innovation subsidies*, *bridging the ‘Valley of Death’*

• **Innovation** Sustainable Technology; feedstock and processes

• **Infrastructure** for energy carriers/CO2/H2

• **Involvement** of citizens/society

• **International** Level Playing Field/infrastructure
On the way to 2025!

Thank you!