



Westland and the Greenport West-Holland: Capital of sustainable horticulture & local food production.

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Outline of the presentation

- Horticulture in the Netherlands
- Westland
- Global issues
- Greenports, a regional approach
- Knowledge development
- International approach

Facts and figures Dutch Horticulture

- 60% of the trade worldwide in flowers and plants
- 31,2 billion Euro production
- 27,6 billion Euro export
- 23,6 billion Euro added value
- 1,0 billion Euro R&D investments
- 246,000 jobs in the Horticulture
- 9,500 ha Greenhouse area

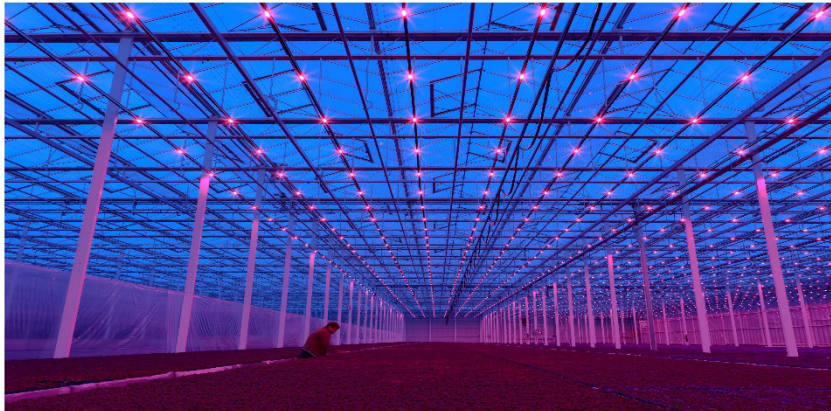
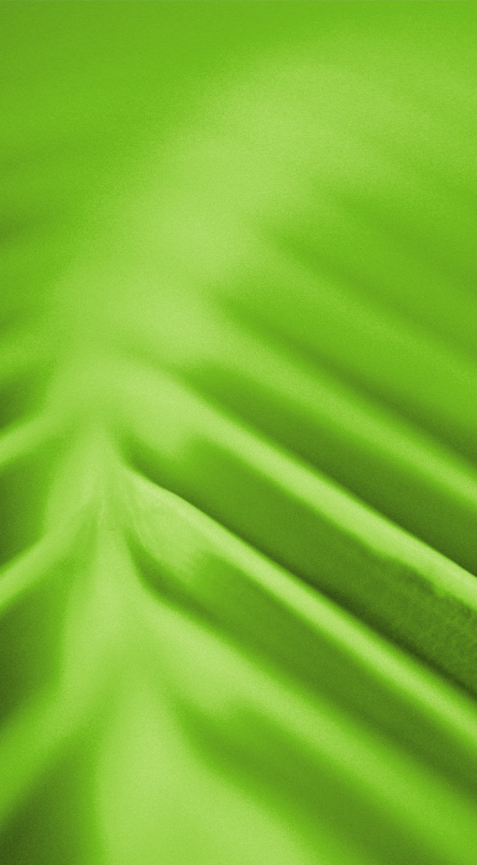
Municipality of Westland



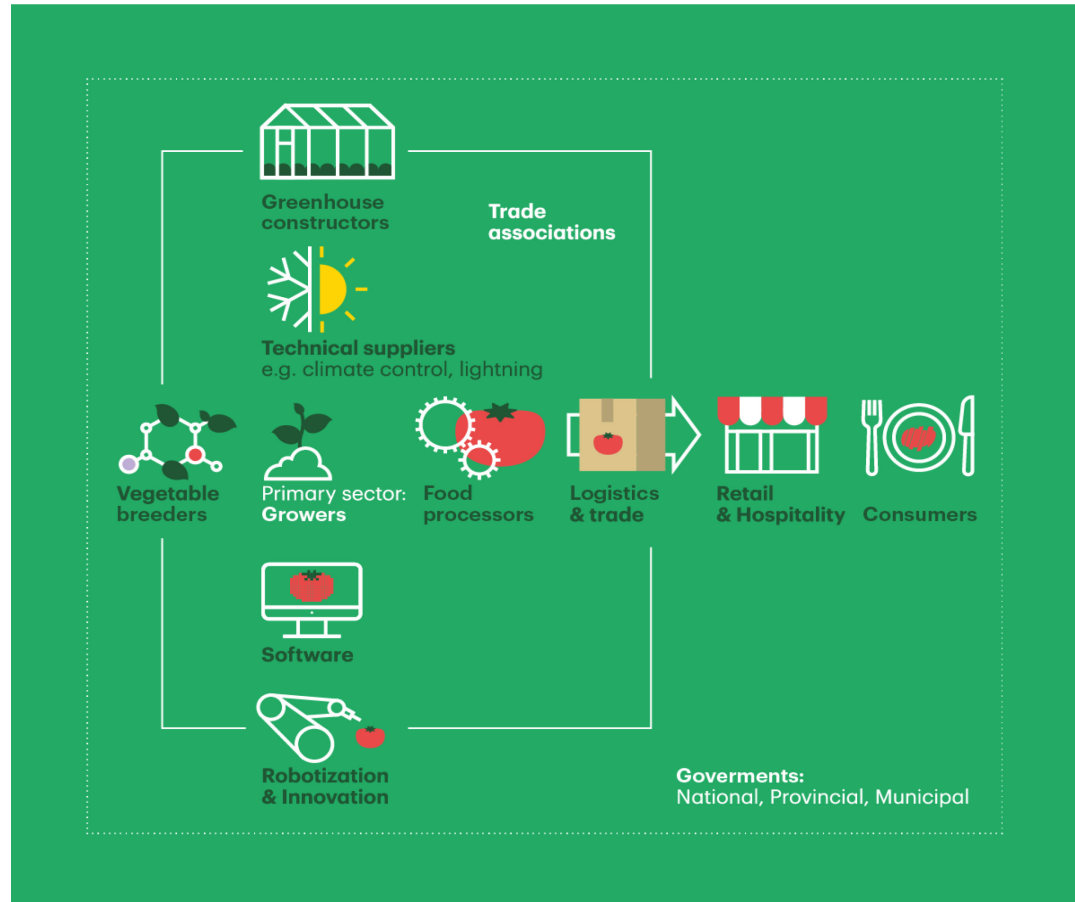
Municipality of Westland

- Largest greenhouse district in the world
- Population: 111,000
- Horticulture area in total 4,500 hectare of which 2,400 hectare greenhouse
- 710 growers
- 61,000 jobs
- Horticulture cluster of companies

Greenhouses: Area Westland



The horticulture chain



Global issues: Metropolitan horticulture and Agri Food

- Increasing world population (9 billion people in 2050)
- Worldwide more than 600 cities with more than 10 million inhabitants. Challenge: feeding the city



More people



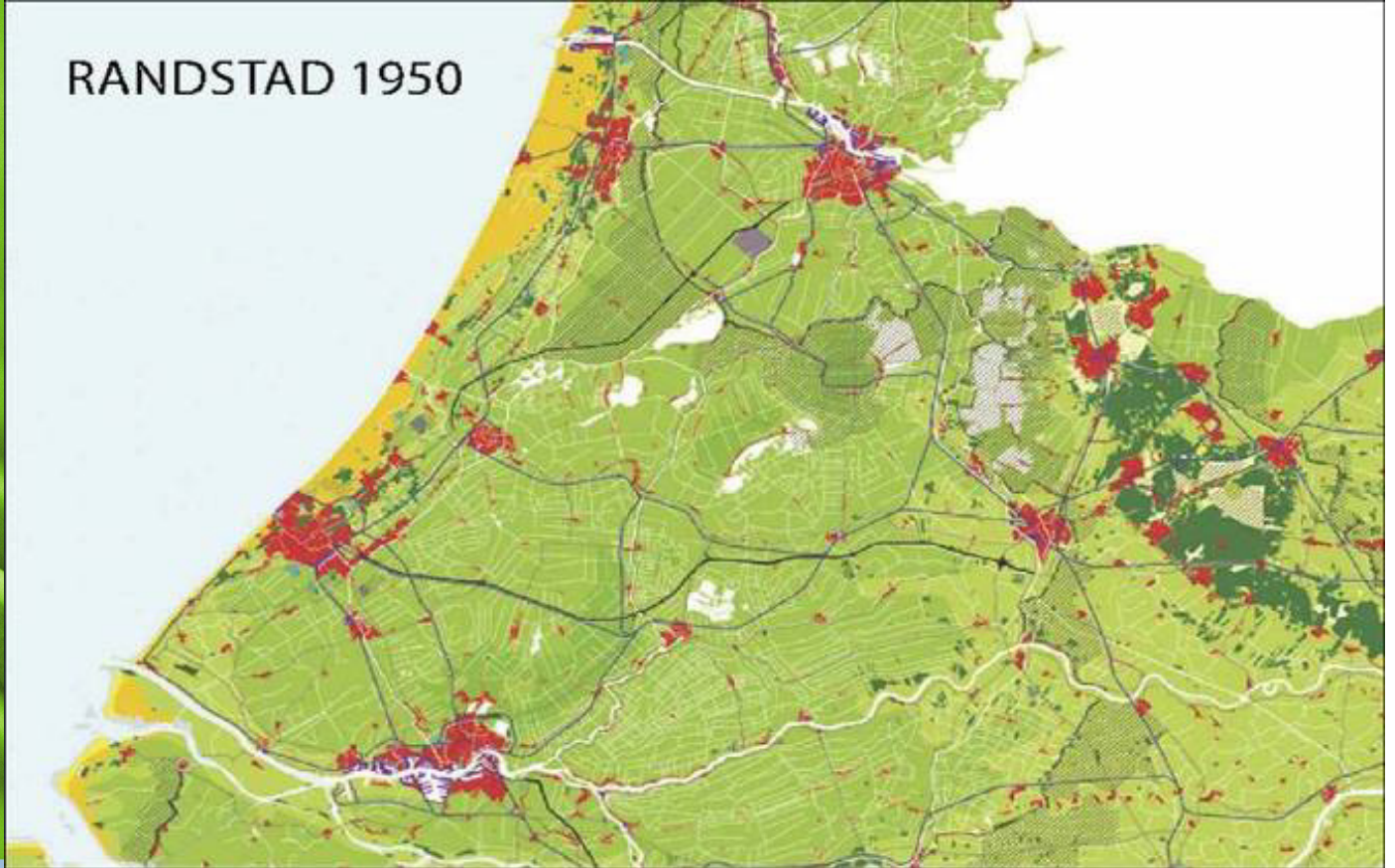
Better food



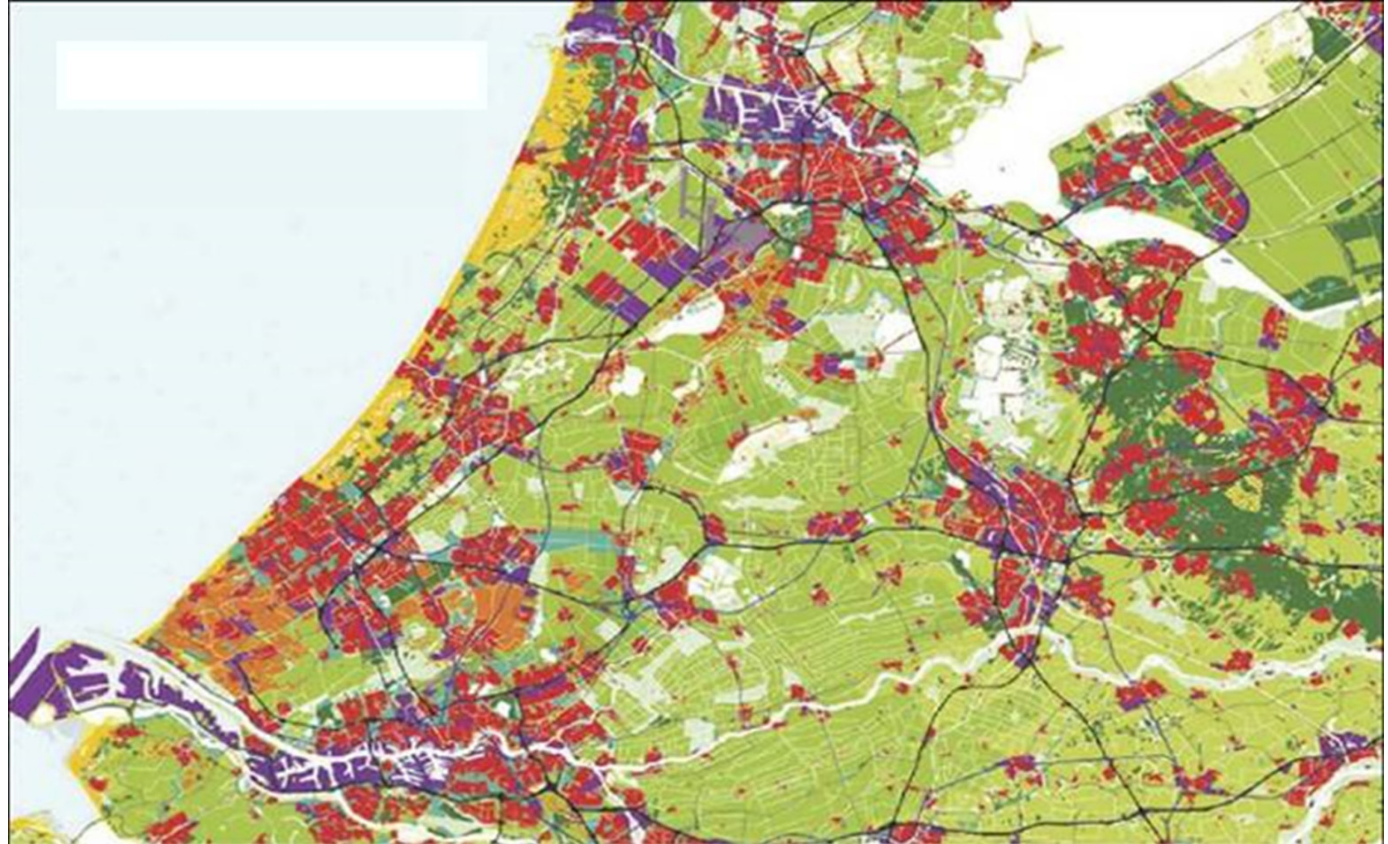
Less impact

70 years ago

RANDSTAD 1950



Today



Today



Greenports: Regional Horti clusters

What is a Greenport?

A large horticulture cluster of different companies, in the supply chain, in spatial terms and in a concentration of production, delivery, trade, distribution and processing, which are strongly interlinked.

According the Triple Helix approach

Vital elements:

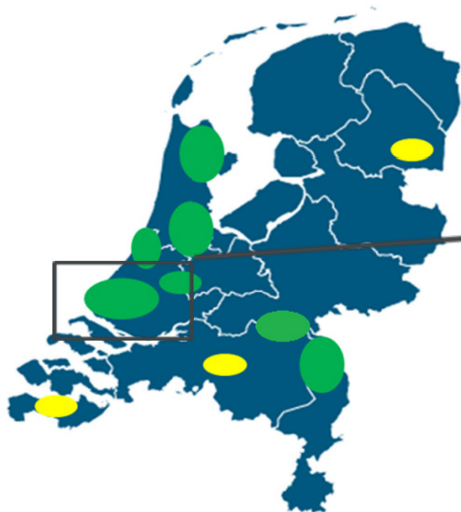
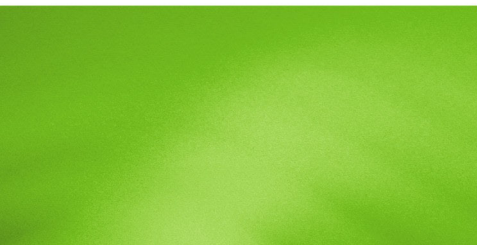
- Innovation
- Economic development
- Spatial planning
- Infrastructure and logistics
- International cooperation

7 Greenports (and some satellites)

of which Greenport West-Holland is the largest



Greenport West-Holland



The goal of Greenport West-Holland: Feeding & Greening Megacities



GREENPORT
West-Holland



Horticulture is a Dutch “top sector”

The agenda:

- More and better with less: innovative solutions for more and better production with less space, water, energy and minerals;
- Food safety and food security;
- Health and well-being: innovative solutions that provide healthy food and a healthy living and working environment;
- Cooperating value chain: innovative solutions that contribute to efficient and sustainable chains;



Crossovers with other top sectors

Crossovers

Horticulture & Propagation Material have many valuable crossovers with other main sectors

Water

- Sustainable and efficient use of water (reduce, re-use and recycle)
- Reduction of leaching to ground and surface water
- Drought and salt tolerance
- Urban indoor farming

Life Sciences

- Health
 - healthy food
 - production of medicines
- Technology
 - supporting technology
 - system biology
 - synthetic biology

- Healthy diet
 - better taste
 - less fat
- Improving health
 - reduction of obesity
 - anti oxidants

Agri-Food

- Healthy food
- Sustainability
- Biodiversity
- Phyto sanitary policy
- Soil management
- Vegetable proteins

Chemistry

Logistics

- Infrastructure
- Chain control and logistics optimization
 - ICT, track & trace, RFID
- Multi-modal networks
- Sustainable of transport and conditioning

High Tech materials & systems

- Steering, precision technics, assortment and sales
 - robotics, smart systems
- Controlled breeding
 - LED, Bio nanotechnology
- Logistics
 - RFID track & trace

Creative industry

- Sector image
- Architecture (importance of green in the public space)
- Aesthetic greenhouses
- Product design

Horticulture & Propagation Material

Energy

- Sustainable and decentralized energy production
 - flexibility in energy delivery by WKK
 - decentralized local energy systems
 - CO2 capture/distribution
 - sustainable heat production
 - sustainable electricity production

Bio-based economy

Materials for other sectors by breeding, facilitate optimal fractionation by breeding, use of bio-based materials

Energy efficiency in the greenhouse sector

Distribution of warmth in the region:



- Cogeneration
- Thermal storage



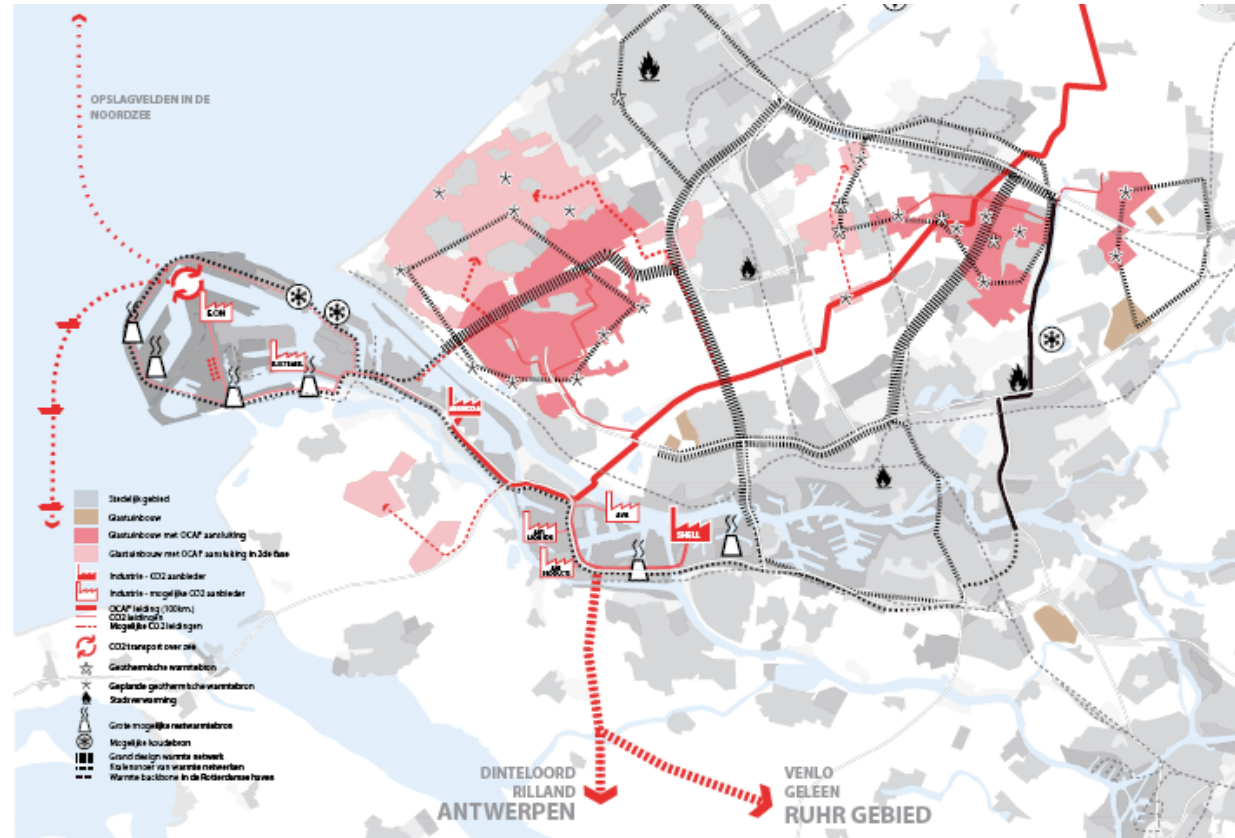
- Geothermal energy



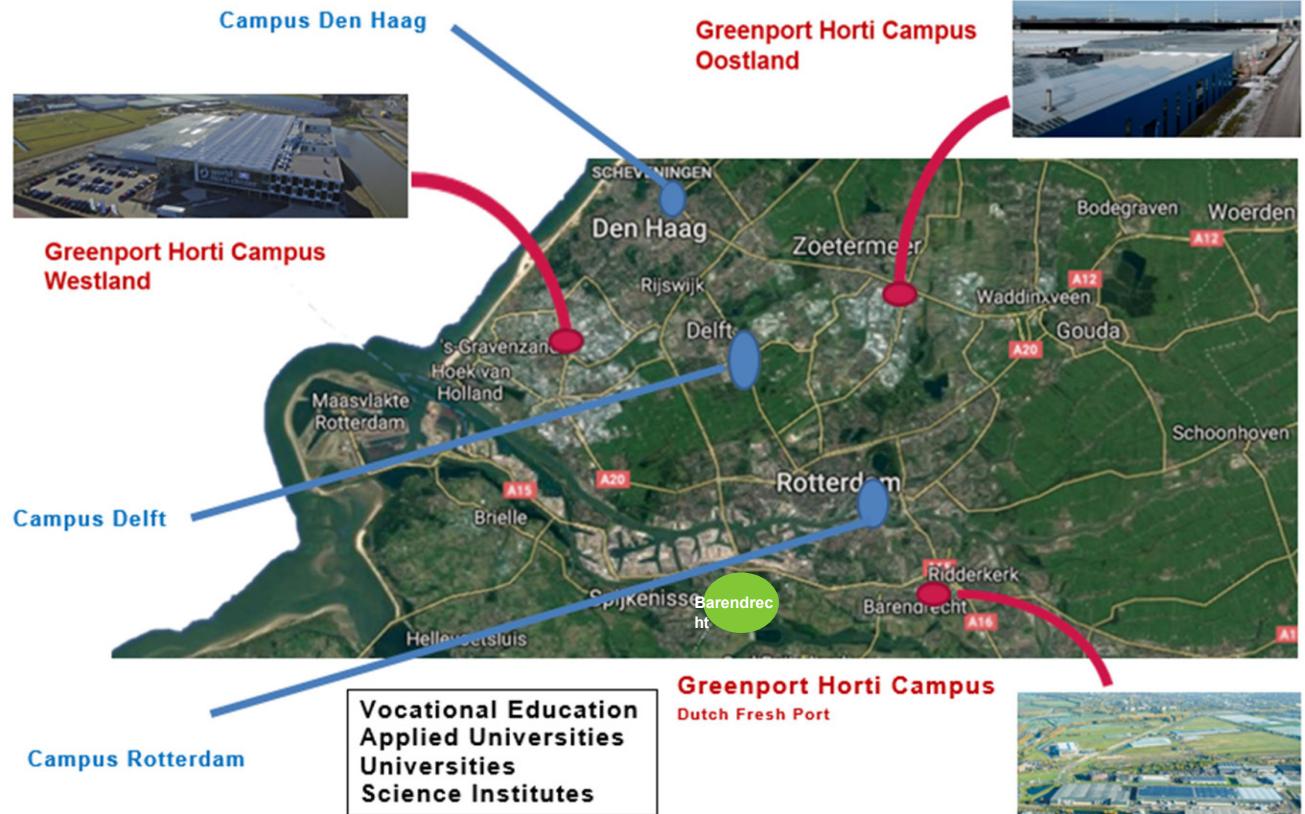
- Led light



CO₂ distribution to greenhouses (red line)



Knowledge development



Cooperation with Japan

- Horticultural friendship with Kochi since 2019
- Mutual visits
- 300 visitors from Kochi to Westland
- Exchange of knowledge and students
- Results
- Next steps in relation

International relations

- Japan
- China
- Kazakhstan
- European partners
- Many other countries and areas

International activities

As municipality of Westland we are a proud partner member of Dutch Greenhouse Delta (DGD).



Who we are

Dutch Greenhouse Delta (DGD) is a powerful international platform representing the strength of the Dutch Horticulture sector, and promoting Dutch horticulture worldwide in order to identify and accelerate opportunities. It's a foundation under which various partners join forces and enable common growth.

