

Integrating agriculture in the design of the Dutch city of Almere

The case of Agromere

Jan-Eelco Jansma & Andries Visser

Wageningen UR, Applied Plant Research Lelystad



Jan Eelco Jansma

- Applied Plant Research, Wageningen University & Research, Lelystad
- Research group Urban – Rural relationships
- My research
 - Designing New Farming Systems
 - Stakeholder Management
- **Urban Agriculture**



View on The Netherlands



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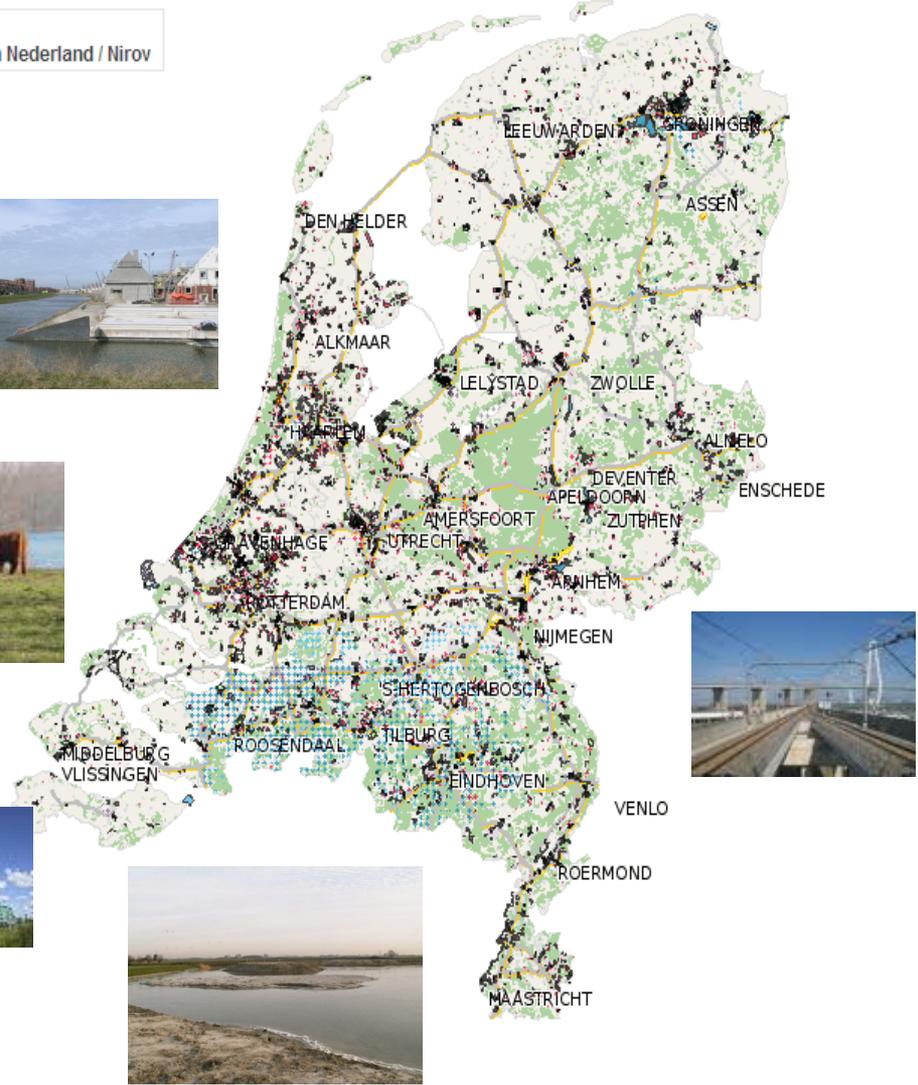
About our city live



About our rural area



(cc) BY
De Nieuwe Kaart van Nederland / Nirov



About our food



App. 3.000 km from farm to fork



App. 33% GHG emissions for food



App. 25% global energy use for food



App. 20-30% of our food wasted



Food Miles

How well travelled is your dinner?



About our farmers.....

How the farmers gradually are disappearing from
the Dutch country side, not their produce



HP DE TIJD



Hoe
de boer
uit Nederland
verdwijnt



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About our agriculture



In short.....

- NL is highly urbanised
- Cities lack of (green) space, livability, social structure
- Cities food print
 - Waste
 - Energy
 - Water
 - Food
- Farming has no connection to its neighbourhood
 - No relation with consumers
 - No influence on product price
 - Part of a (long) food chain
- Farming could bring more than food
 - Green space
 - Services like care, education
 - Waste processing, energy supply

The challenge

Could we re-integrate farming in cities and thus contribute to a sustainable and livable city (and farming)?

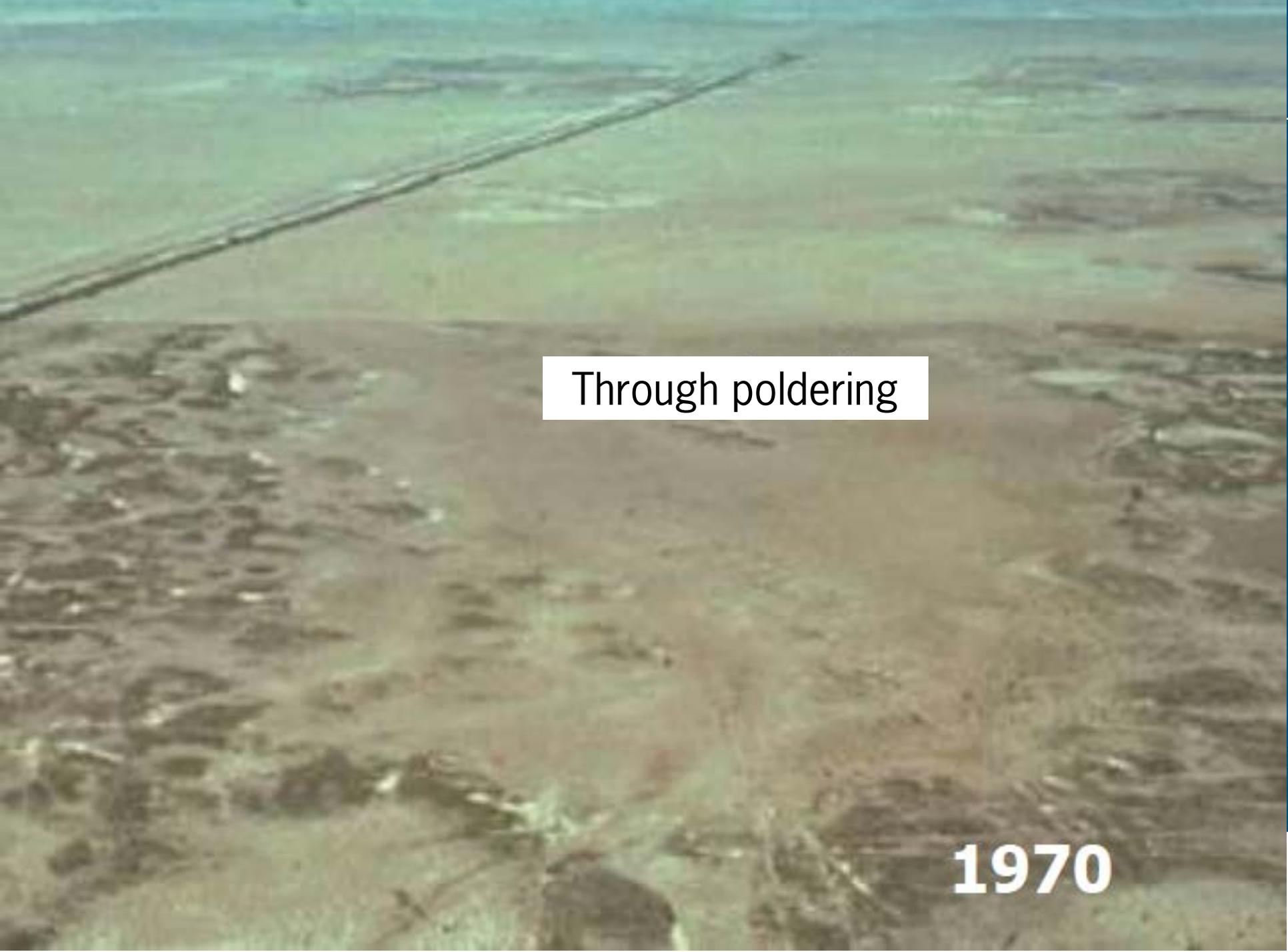
» (...2006...)



An aerial photograph showing a coastal area. The land is covered in green vegetation and some rocky patches. A large body of water is visible on the right side. A white rectangular box is overlaid on the image, containing the text "From water".

From water

1961

An aerial photograph of a polder landscape. A long, straight, dark line, likely a dike or canal, runs diagonally from the upper left towards the center of the frame. The surrounding land is a mix of brown and green, indicating a flat, low-lying area. The overall scene is a wide, open expanse of land.

Through poldering

1970



Towards the city of
tomorrow

2008



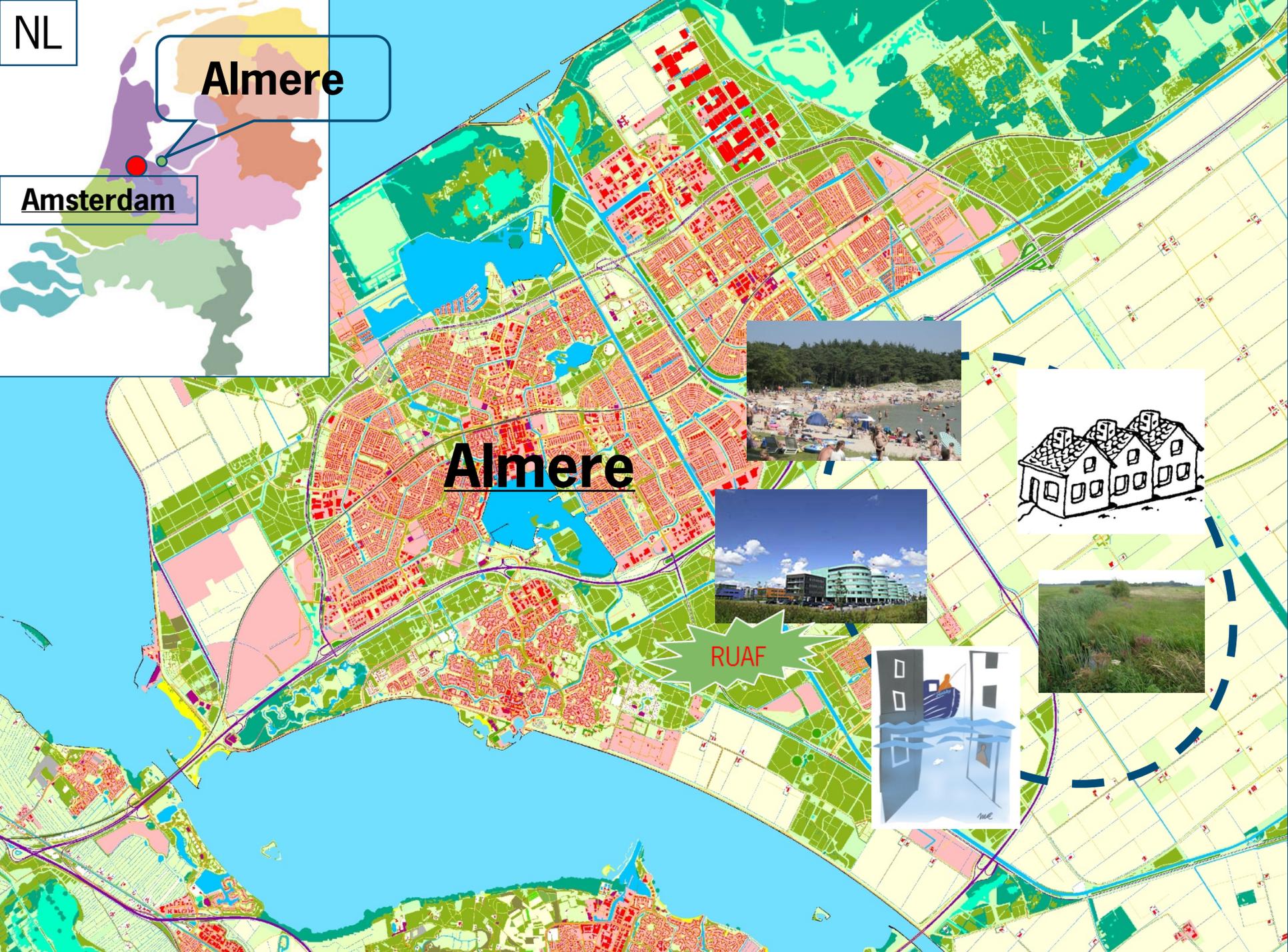
Greetings from Almere!



NL

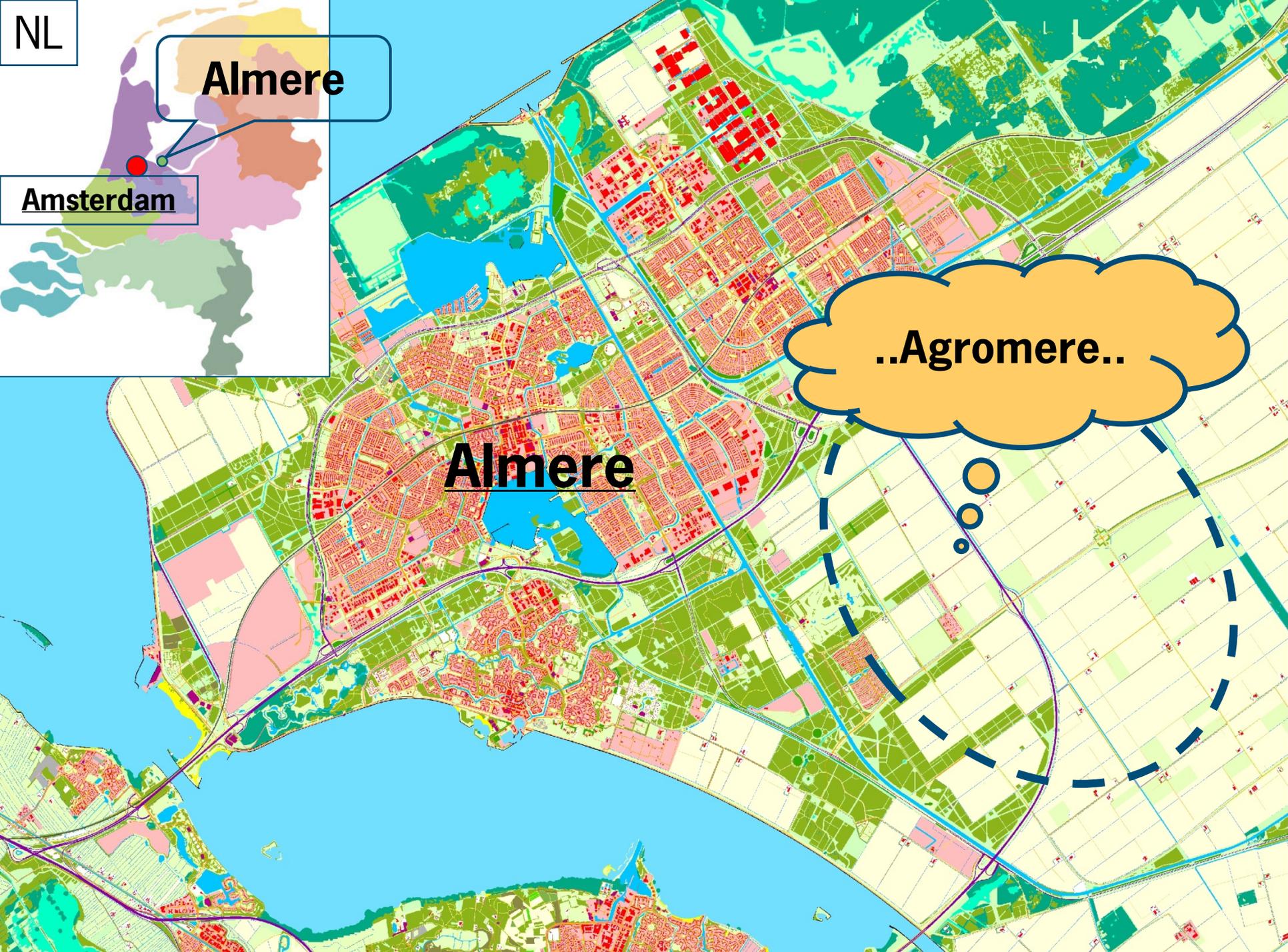
Almere

Amsterdam



RUAF





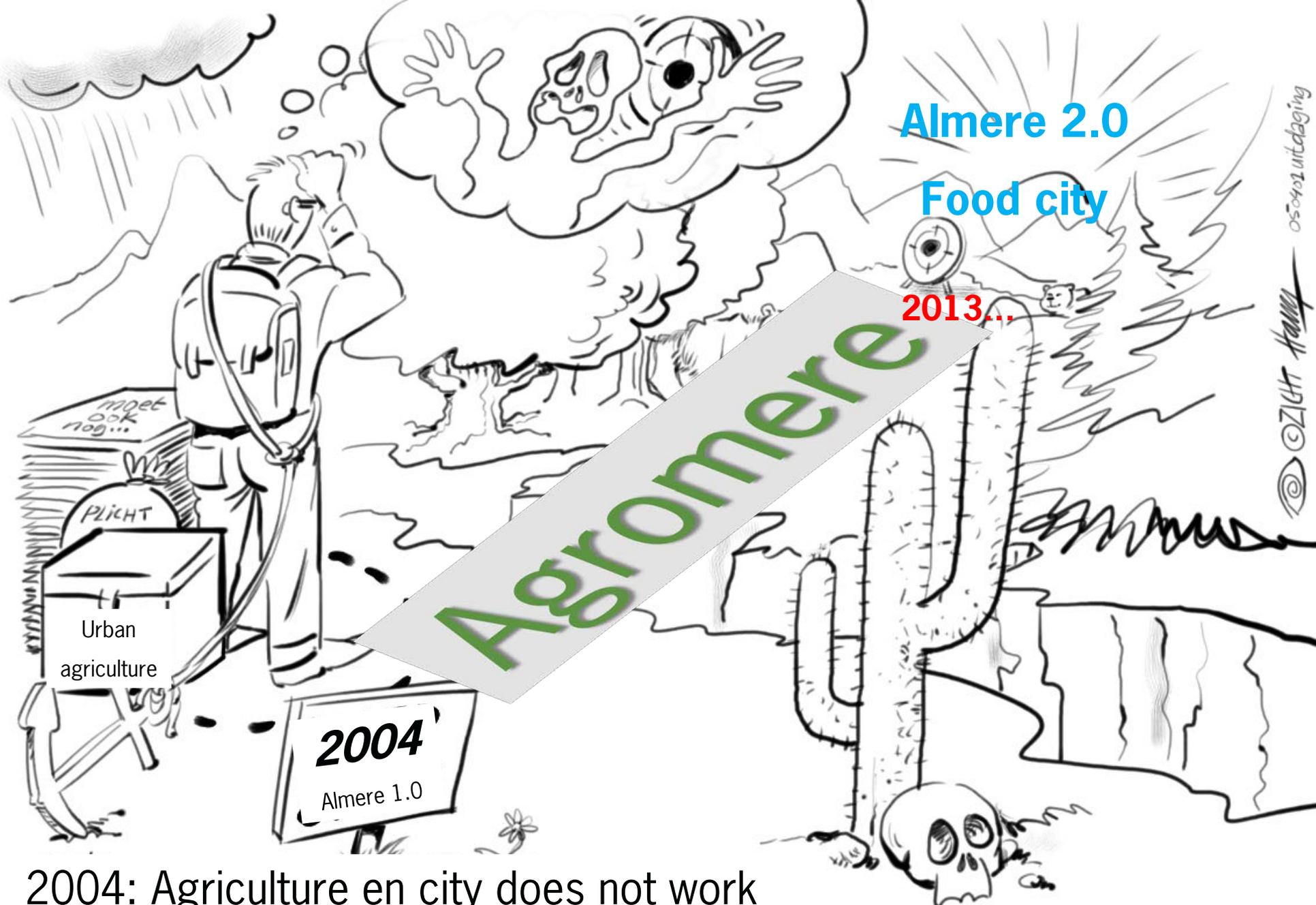
NL

Almere

Amsterdam

Almere

..Agromere..



Almere 2.0

Food city

2013...

Agromere

2004

Almere 1.0

Urban agriculture

Plicht

moet ook nog...

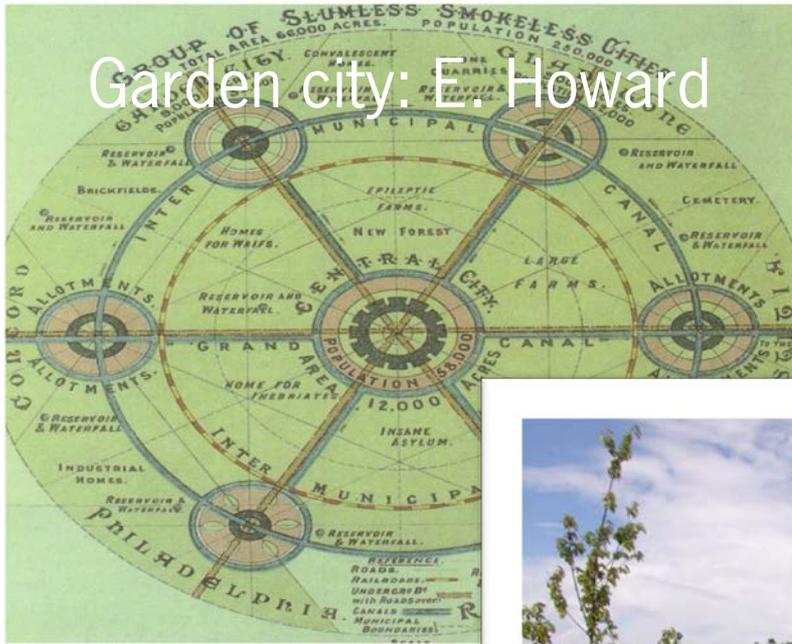
2004: Agriculture en city does not work in Almere

05-04-01 uitdaging

©ZICHT HANNA

Three starting points in Almere

Garden city: E. Howard



2006: Alderman

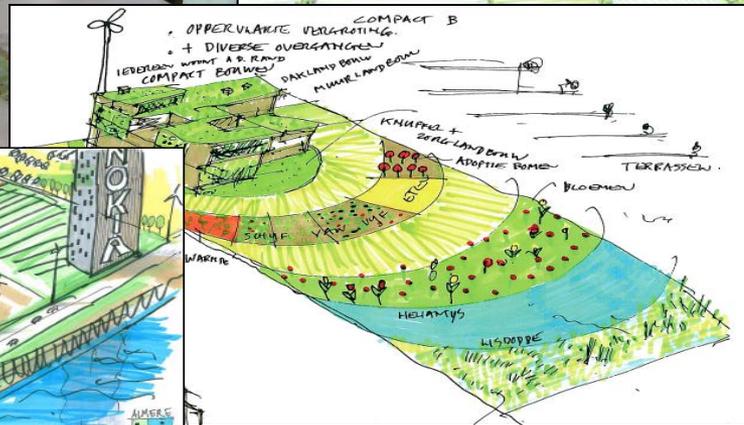
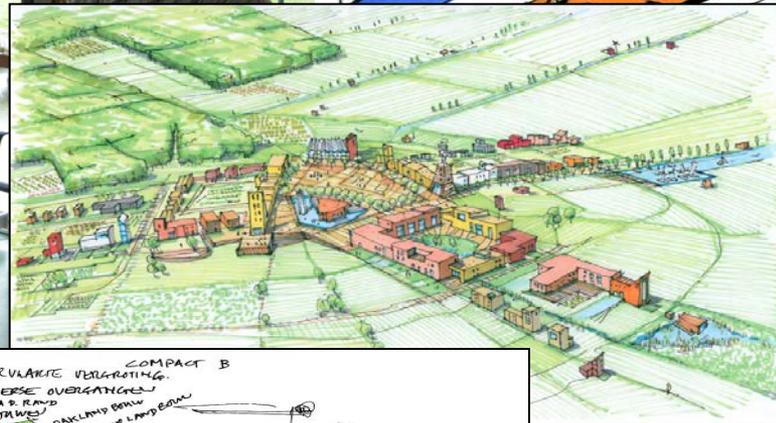
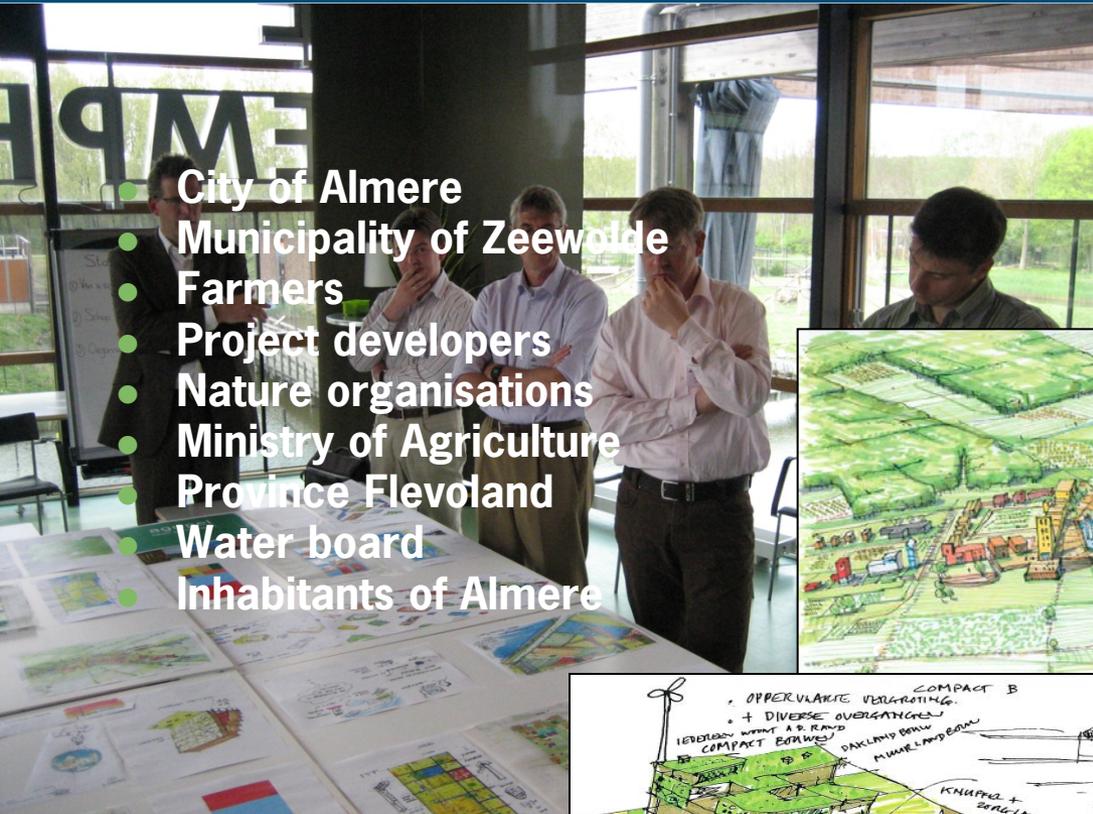


Urban farm of Almere



Stakeholder & design process

- City of Almere
- Municipality of Zeewolde
- Farmers
- Project developers
- Nature organisations
- Ministry of Agriculture
- Province Flevoland
- Water board
- Inhabitants of Almere



Principles for design

- Closing nutrient cycles within the area
- Local food production when possible
- Self sustaining in energy
- Urban agriculture provides (besides food) the basic services
 - Elementary school/ kindergarten
 - Daycare
 - Green management of the district
 - Cultural meeting places
 - Restaurant/ recreation facilities etc.

URBAN FARMING ENERGY RE-USE OF GREEN WASTE MANAGEMENT OF PUBLIC GREEN
SPACES AGROLOGISTICS LIVEABILITY NEW ENTREPRENEURSHIP CULTURAL INTEGRATION OF
MIGRANTS NEW ORGANISATIONAL MODELS CARE HEALTH SOCIAL COHESION **FOOD**
STRATEGY ACTIVE CITIZENSHIP SPATIAL QUALITY



The design of virtual Agromere (2008)



- 5.000 inhabitants
- Ca. 250 ha
- 2.300 houses: 70 ha
- 180 ha urban farming
 - 88 ha animal husbandry
 - 25 ha fruits and vegetables
 - 62 ha arable farming
 - 5 ha horticulture

Almere 2.0: Draft Strategic Vision (2009)

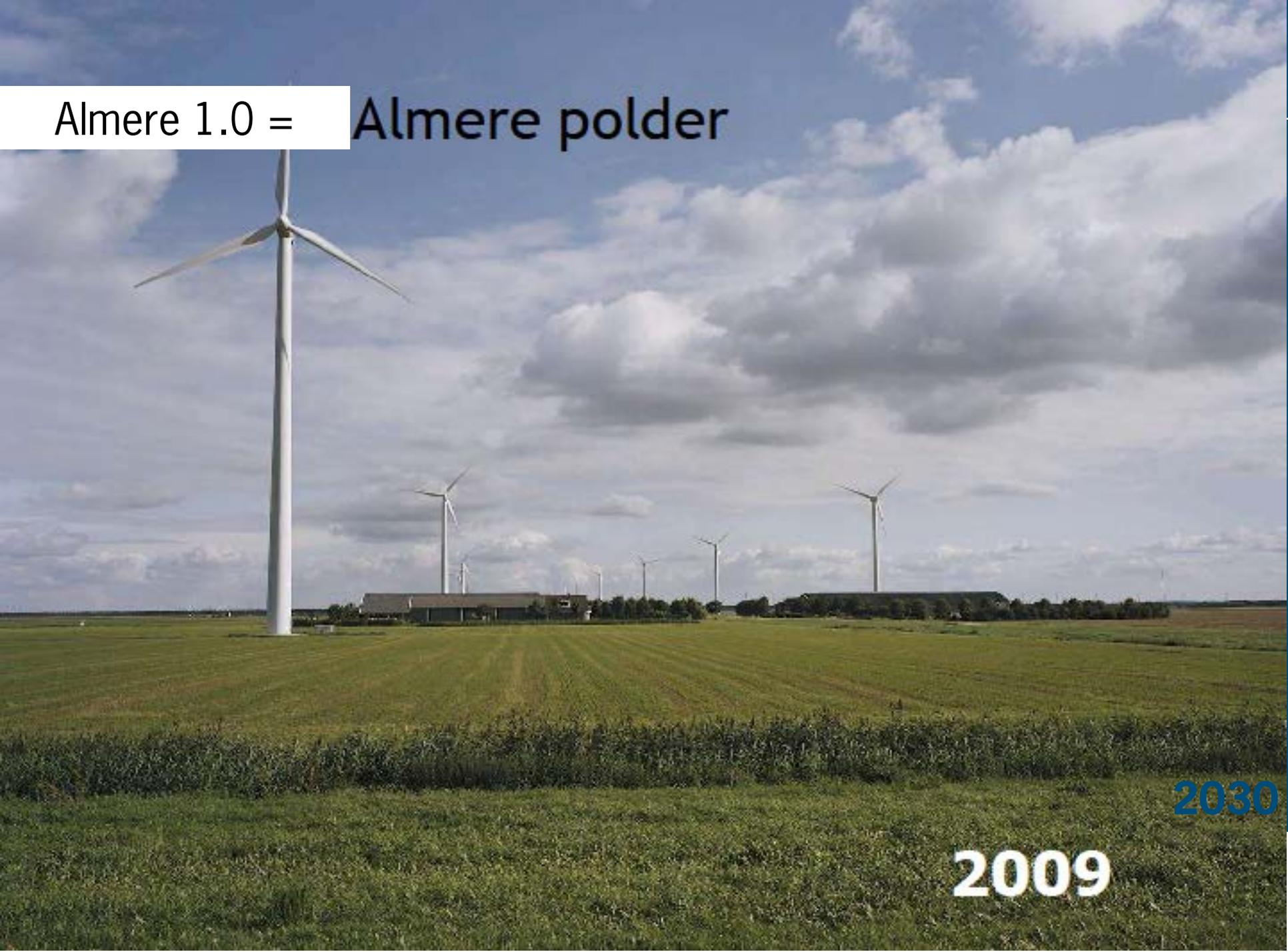
**Almere could grow
from 190,000 to
350,000 inhabitants.
What will the
'Schaalsprong'
mean for the city
and the Amsterdam
Metropolitan Area**

Summary, Draft Strategic Vision Almere 2.0

**Almere 2.0
is an ecologically, socially
and economically sustainable
city, which will contribute to
the development of
the Northern Randstad
and the Amsterdam
Metropolitan Area**



Almere 1.0 = Almere polder



2009

2030

Almere 2.0 = Almere Oosterwold



Almere 2.0 = Almere Oosterwold

New Connections between:

- Urban en rural life
- Food production and consumption
- Energy production and consumption
- Waste and fertilizers



2030

Gemeente Almere

Is it possible to produce in Agromere
20% of daily food basket of future Almere
with 350.000 inhabitants?



Almere

Agromere

And so then what is the Climate impact?

Reduction & impact of 20% local production

Reduction:

- 16 million km (mostly local transport)
- Energy use of 11.000 households
- GHG emission of 2.000 Dutch inhabitants



On 6.000-8.000 ha land:

- 60-80% fruits & vegetables
- 80% bread & eggs
- 30-50% milk & cheese
- 0-4% meat

Impact:

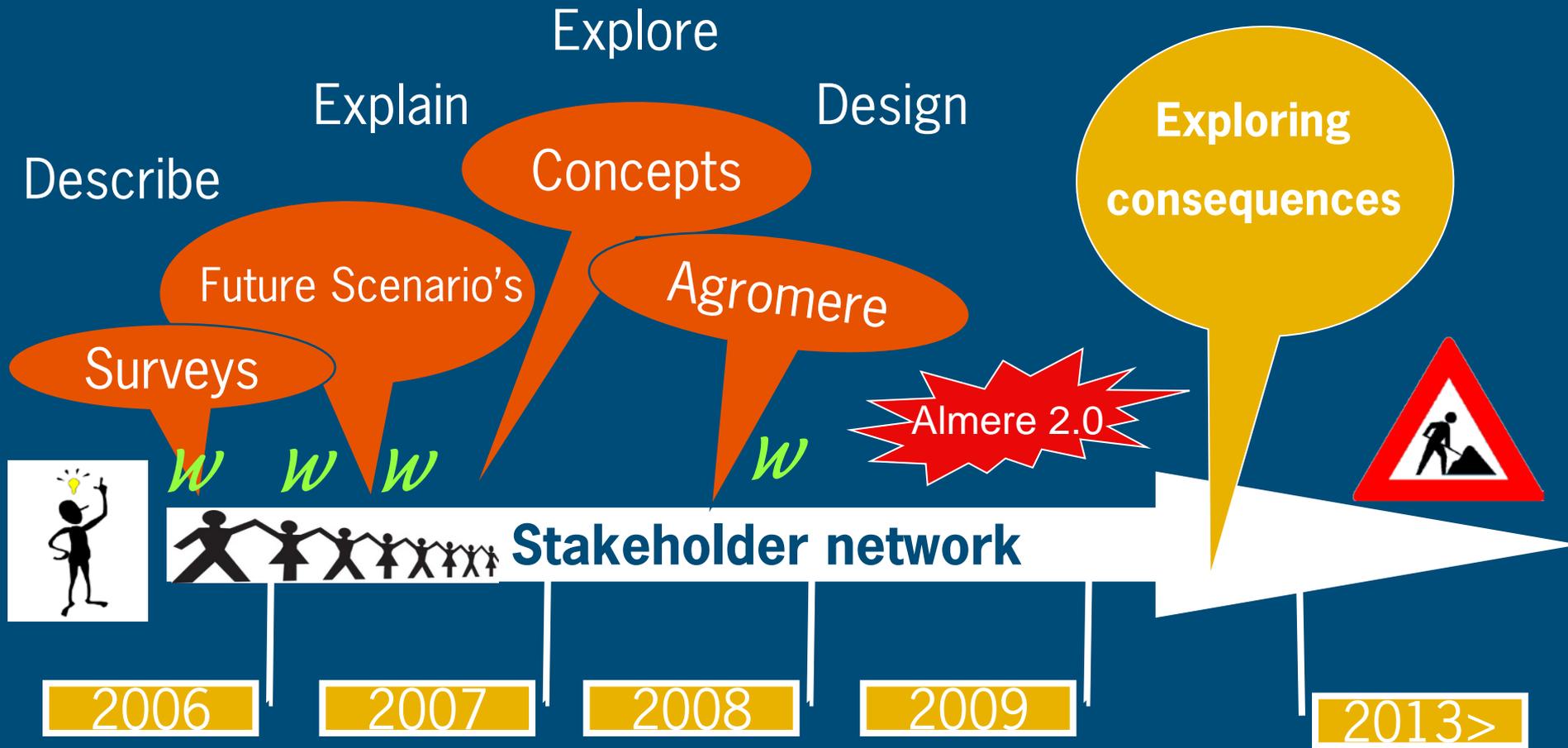
- Local distribution/retail
- Consumption pattern
 - Meat
 - Off season
 - Exotic and processed food



Greetings from Almere!



Where are we in the process?...



Future.....

43

3

Almere Stad
Almere Buiten
Almere Hout

↑ 5 ↑ 5 ↑

Agromere

3 ↑ 43

Lelystad

↑ 3

Almere Hout

↑ 5 ↑ 5 ↑

↑ 5 ↑ 43

↑ 3

↑ 50

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WWW.AGROMERE.WUR.NL (UK & NL)

WWW.OS-ALMERE.NL (NL)

