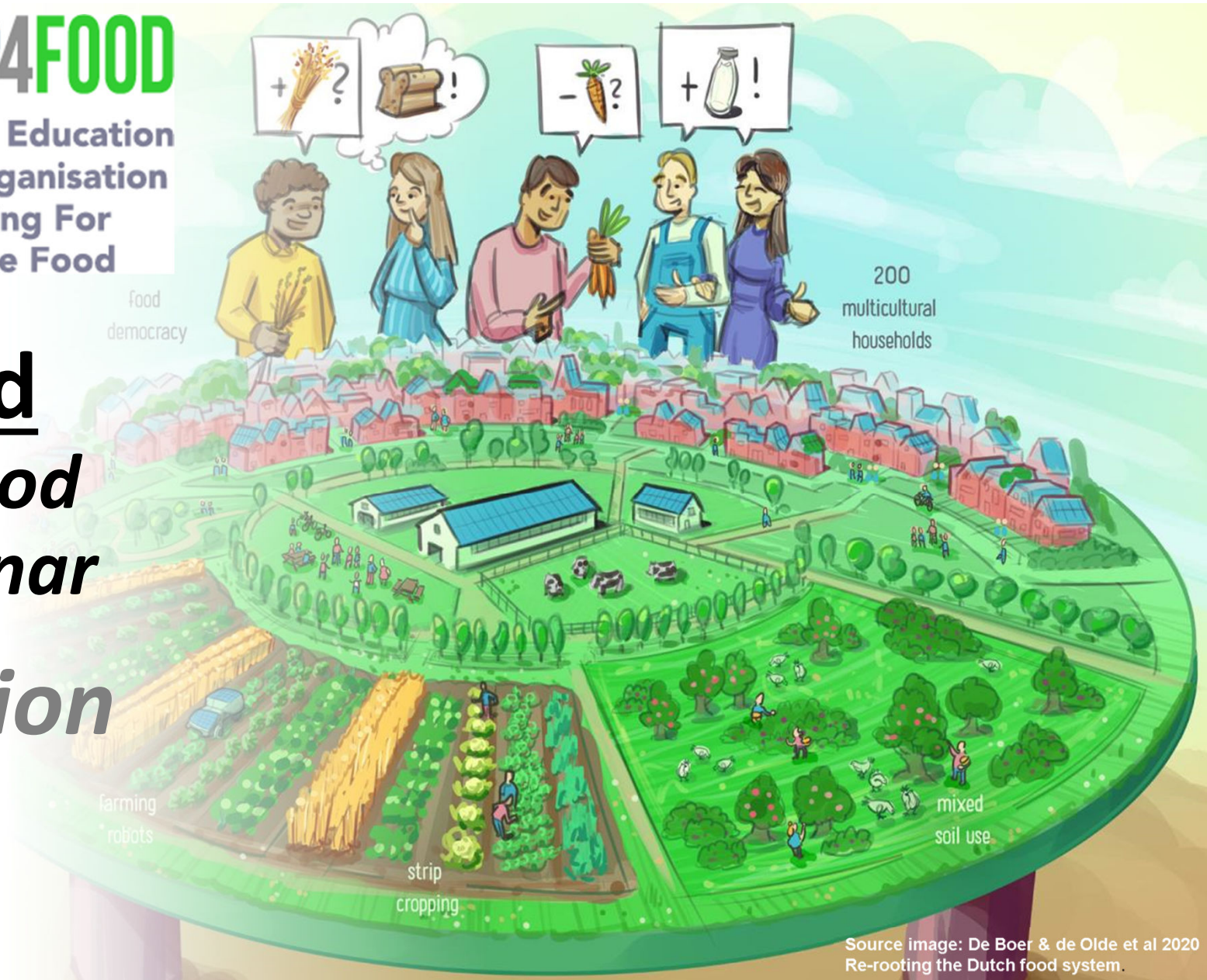




AESOP4FOOD

Action for Education
Spatial Organisation
and Planning For
Sustainable Food

AESOP4Food
***Sustainable Food
Planning Seminar***
Second session
PHASE II / 2023
March 23, 2023



Source image: De Boer & de Olde et al 2020
Re-rooting the Dutch food system.

AESOP4food Online Seminar 2023



COURSE SCHEDULE

March 2nd – June 1st, 2023

Thursday / 17:00 to 18:30 CET



LE:NOTRE Institute
Linking landscape education, research and innovative practice



UNIVERSIDAD
POLITÉCNICA
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Phase II. Mapping

- ***Spatial participatory food (systems) mapping.*** *Katrin Bohn, Bohn&Viljoen Architects, School of Architecture & Design, University of Brighton .*
- ***Mapping the Short Food Supply Chains,*** *Jorge Molero, Red de Municipios por la Agroecología*
- ***Combining Tools for Transformative Cartographies*** *Marian Simón UPM*

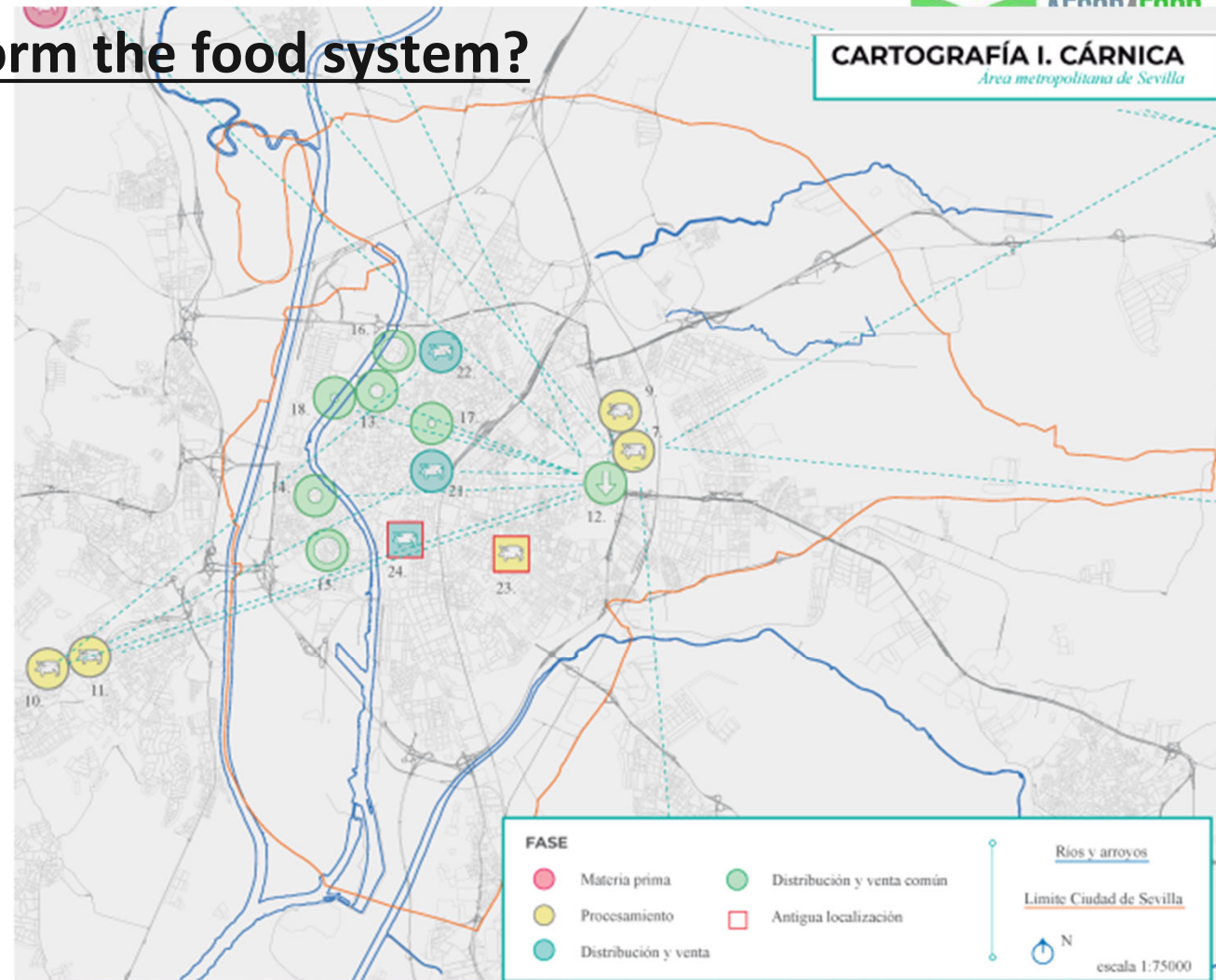
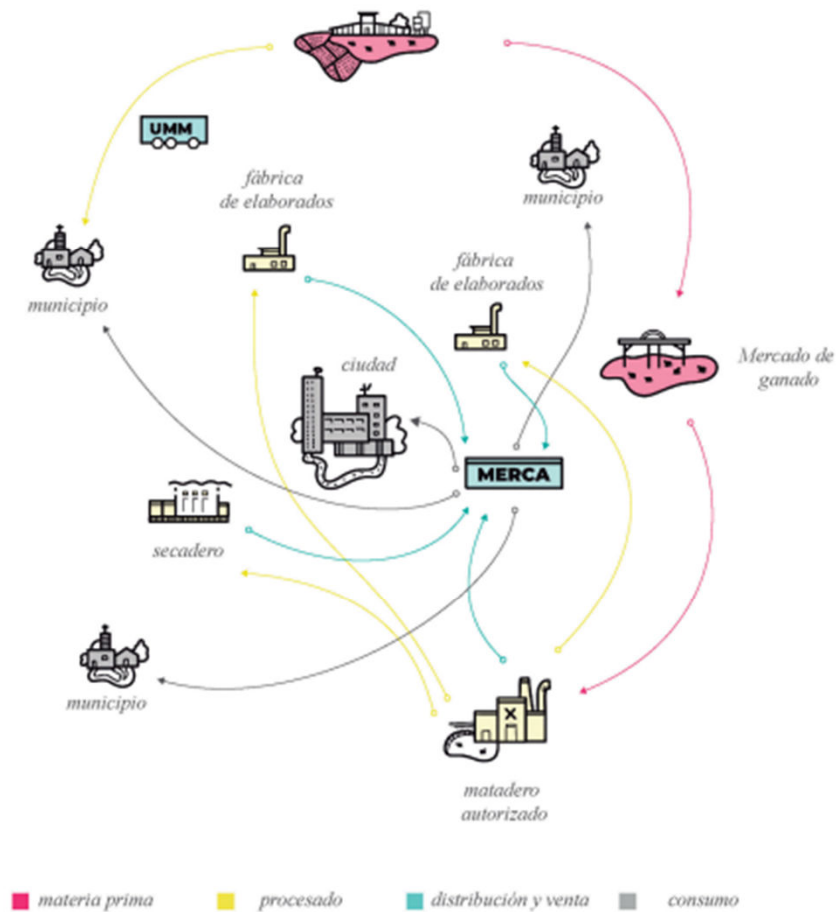
Agenda March 23

- ***Introduction to Phase II. Mapping.*** Marian Simón, UPM
- ***Spatial participatory food (systems) mapping.*** Katrin Bohn, Bohn&Viljoen Architects, School of Architecture & Design, University of Brighton .
- ***Q&A session on introductions and readings***
- ***Outlook on next session M***

Information is power

[Manuscript copy of 1367 manuscript chart of the Mediterranean, with the Black and Caspian Seas, and the coasts of northwest Africa and western Europe]. | Library of Congress (loc.gov)

How can maps serve to transform the food system?



Heterotopías alimentarias: arquitectura de la alimentación en Sevilla - Archivo Digital UPM

Figure 4: Food systems main stakeholders



Source: Collaborative Framework for Food Systems Transformation

Who has the power
to change the food
system?

Who can be
mobilized?



INTEGRATING FOOD INTO URBAN PLANNING

EDITED BY
YVES CABANNES &
CECILIA MAROCCHINO

UCLPRESS

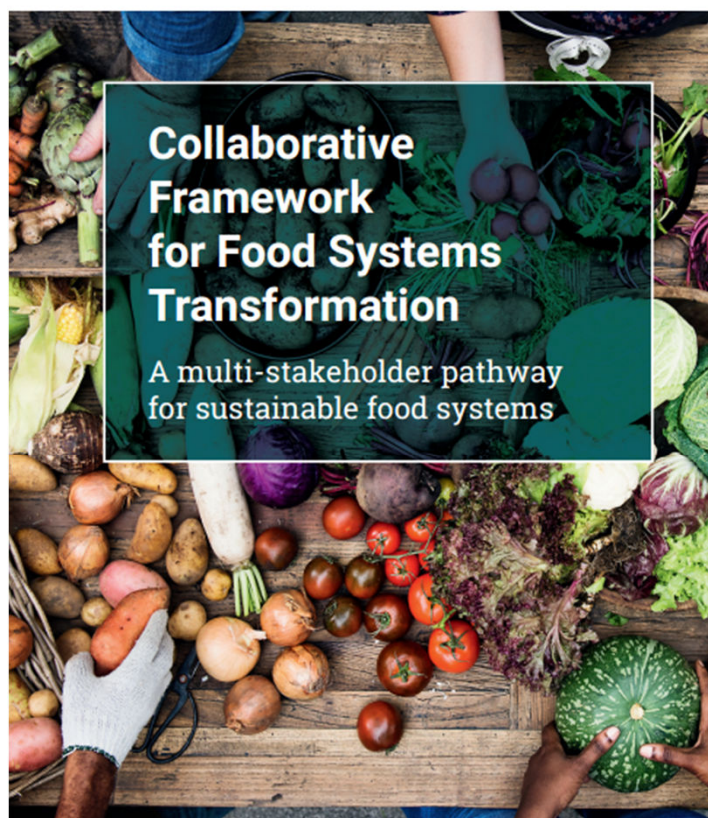


Food and Agriculture
Organization of the
United Nations



One planet
eat with care

Sustainable
Food Systems



Collaborative Framework for Food Systems Transformation

A multi-stakeholder pathway
for sustainable food systems

Food Security
<https://doi.org/10.1007/s12571-021-01142-2>

ORIGINAL PAPER



Mapping the production-consumption gap of an urban food system: an empirical case study of food security and resilience

Paul D. Jensen¹ · Caroline Orfila¹

Received: 11 August 2020 / Accepted: 10 January 2021
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Abstract

Urban food systems are complex and increasingly recognised as not being sustainable, equitable or resilient. Though globalisation and lengthening of agrifood supply chains has brought many benefits, such as year-long availability of fresh produce and modernisation opportunities for some developing regions, they have increased reliance on food imports and reduced the food and nutrition resilience of many cities. This premise has been widely witnessed following recent financial, climatic and pandemic driven disruptions to food supplies. A greater understanding is thus needed of the lived reality of a modern city's ability to sustainably and equitably feed itself in a crisis situation or otherwise. In a changing world, such knowledge is valuable on a variety of strategic planning levels. Employing publicly available data, the scale of food security and resilience, and options for their improvement, are holistically assessed through a case study spatial analysis of the urban food system of the city of Leeds in the United Kingdom. The case study found that the Leeds city region is home to a significant and diverse food production and provision system, but it is not food secure in terms of providing sufficient energy or macronutrients, or functioning in an equitable manner for all of its residents. Options for improving the performance of the system, including urban farming and industrial symbiosis, were found to be nuanced and would only be effective alongside a range of complementary interventions as well as high levels of investment, multi-sector cooperation and strong governance. Though food system evolution and development are grounded in local context, the methods, general findings and circular economy focussed recommendations emanating from the case study, are widely applicable.

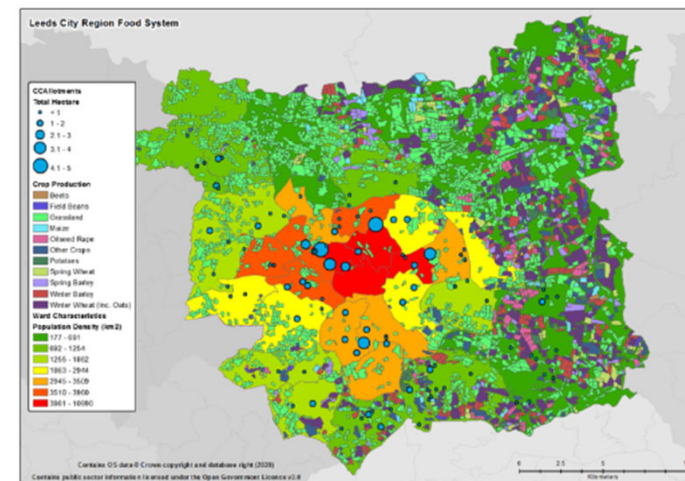


Fig. 5 Agricultural Land Use and Type in Leeds City Metropolitan Area

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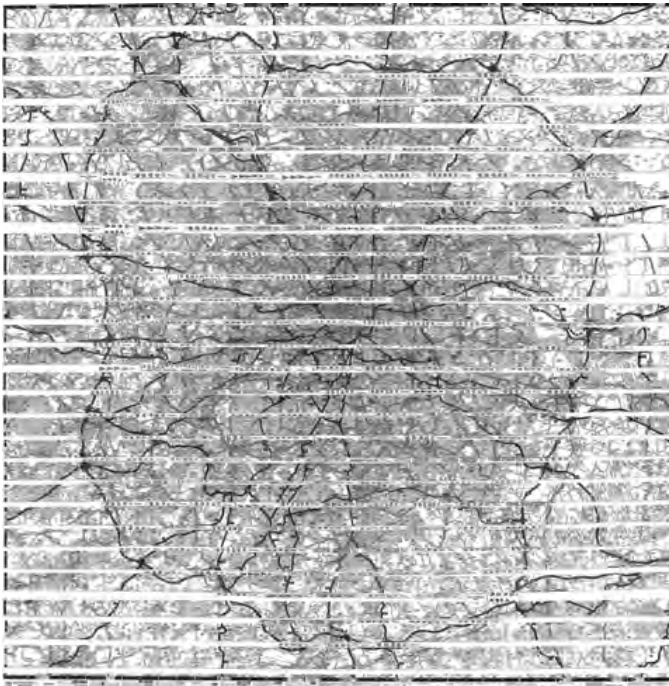
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Spatial and participatory urban food mapping



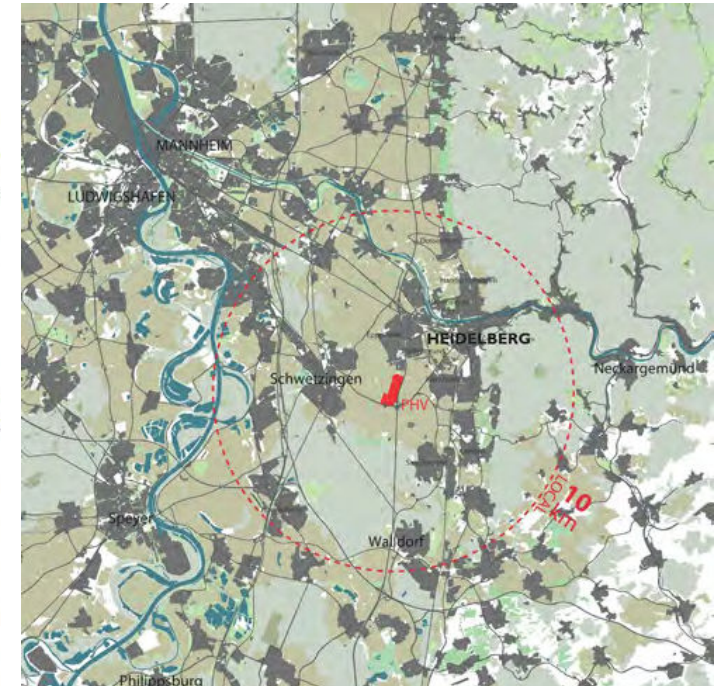
1998

Making the case for urban agriculture,
co-creating international discourse



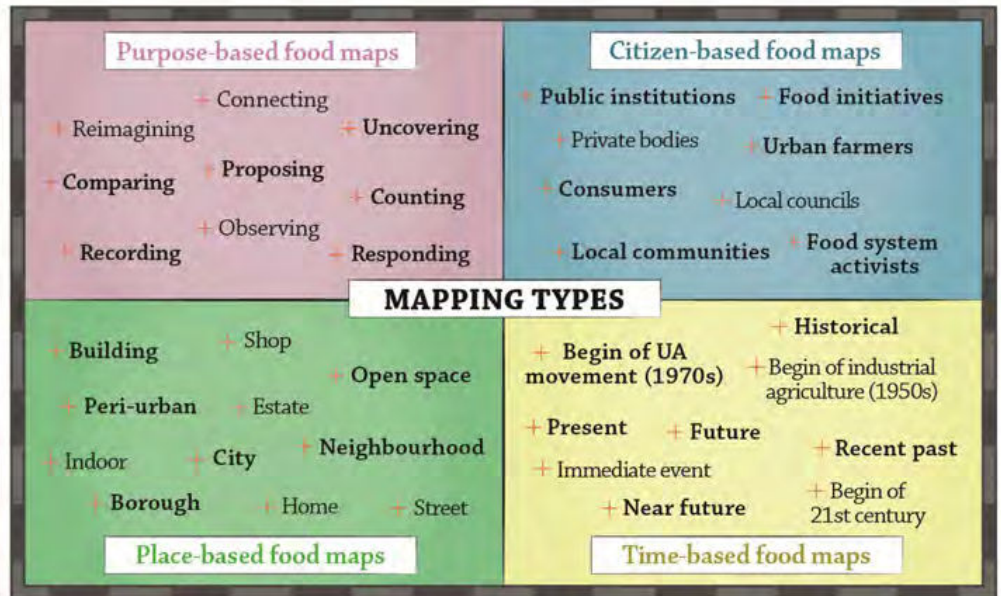
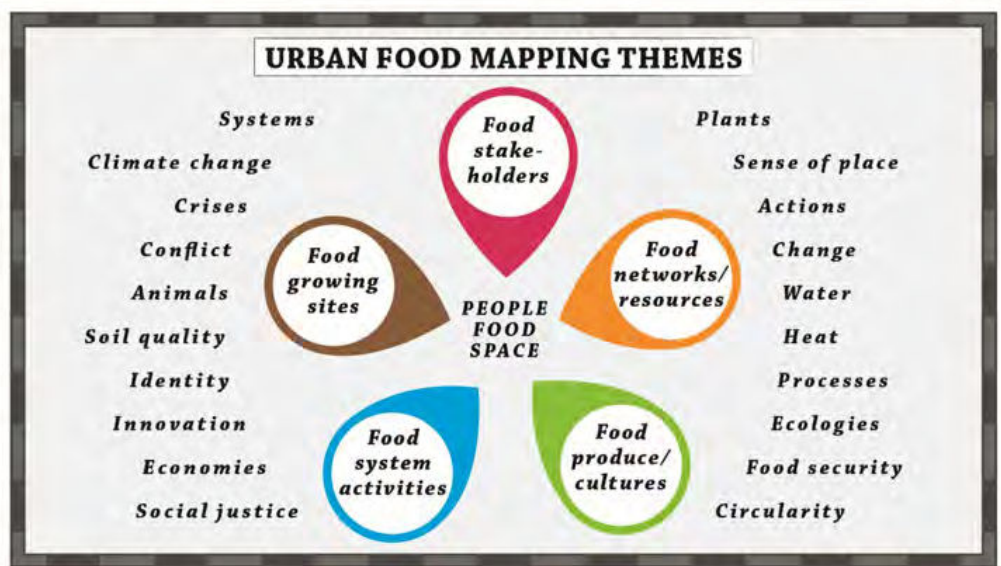
2007

Triggering urban agriculture projects
for and with community groups



2016

Responding to municipal demands for
urban agriculture / food systems projects



Continuous Productive Urban Landscape [CPUL]

[C] connects open space :
parcels of inner-urban open land,
inner-urban land to a new
infrastructure,
inner-urban land to the rural land

[P] uses open space :
through placing Urban Agriculture
environmentally,
economically and
socially productive

[U] happens 'inside' :
the greenbelt stays green,
greenfield sites stay green,
brownfield sites become green

[L] is landscape :
with spatial and visual qualities
of the rural and the urban



Action **VIS**

Visualising Consequences

The **qualities and aims** of urban agriculture and productive urban landscapes, such as CPULs, **need visualising** to convince decision makers and raise public awareness.

An inventory is necessary **for each location**, especially of spatial, resource, stakeholder and managerial capacities in order to best respond to local opportunities.

Action **IUC**

Inventory of Urban Capacity

Action **U+D**

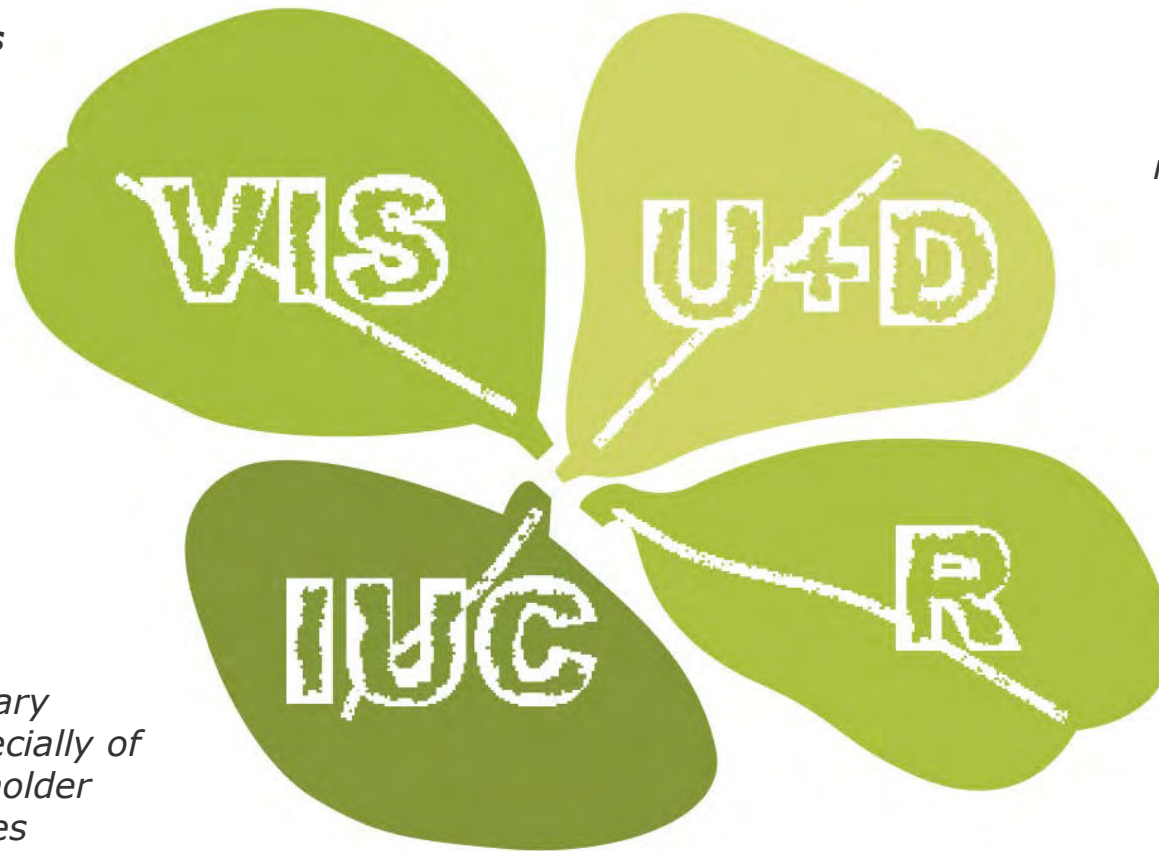
Bottom-Up + Top-Down

Infrastructural, as well as individual food-productive projects need **parallel top-down and bottom-up** initiatives and integrative design and planning.

Constant research, development and consolidation of productive urban landscape projects and concepts is needed **to respond to changing circumstances**.

Action **R**

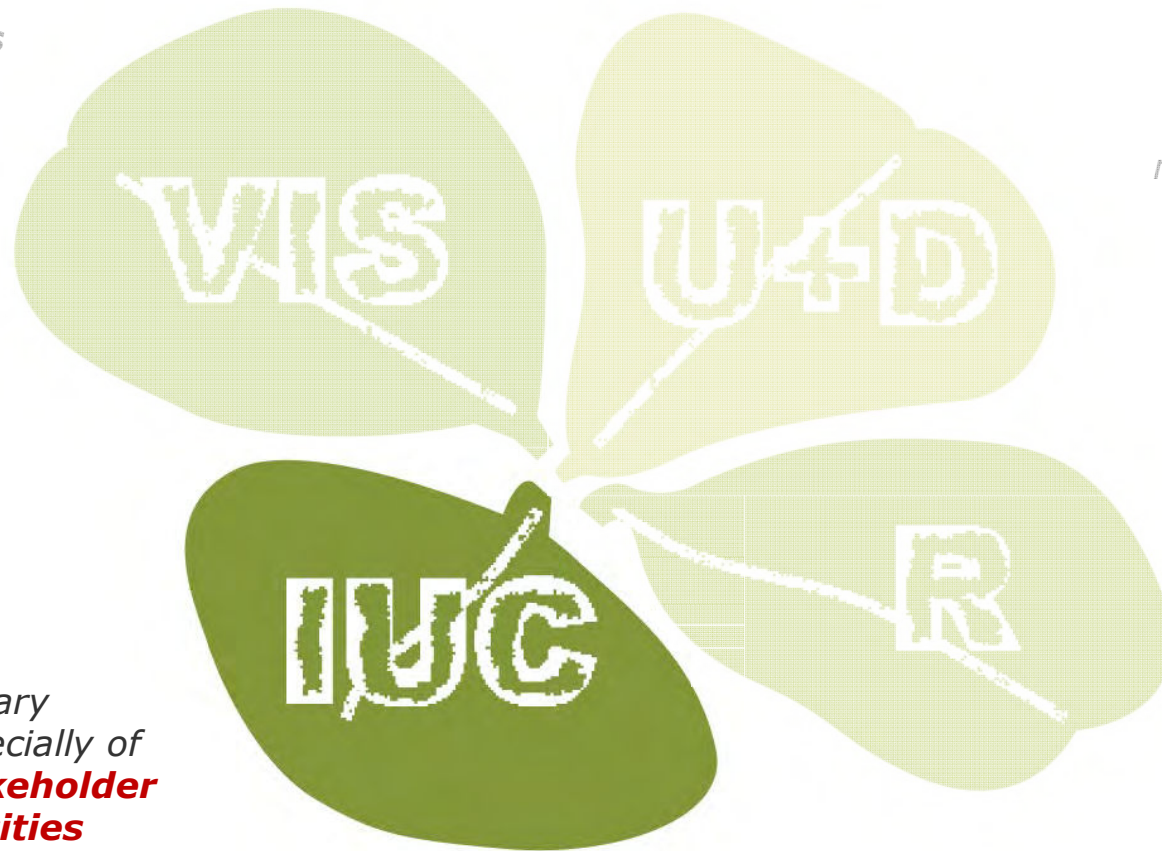
Researching for Change



MAPPING OPPORTUNITIES AS PART OF THE INVENTORY OF URBAN CAPACITY

The **qualities and aims** of urban agriculture and productive urban landscapes, such as CPULs, **need visualising** to convince decision makers and raise public awareness.

An inventory is necessary **for each location**, especially of **spatial, resource, stakeholder and managerial capacities** in order to best respond to local opportunities.



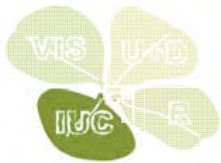
Infrastructural, as well as individual food-productive projects need **parallel top-down and bottom-up** initiatives and integrative design and planning.

Constant research, development and consolidation of productive urban landscape projects and concepts is needed **to respond to changing circumstances**.

Action **IUC**
Inventory of Urban Capacity

Action **R**
Researching for Change

MAPPING OPPORTUNITIES AS PART OF THE *INVENTORY OF URBAN CAPACITY*



Action IUC = Inventory of Urban Capacity

An inventory is necessary for each location, especially of spatial, resource, stakeholder and managerial capacities in order to best respond to local opportunities.

At the beginning of the relatively short history of the urban agriculture movement in the Global North, (planning) emphasis was given to identifying (i.e. location, state of use, availability/ownership) and mapping (i.e. area, sun direction, soil quality, pollution, water, exposure to wind, adjacency to markets and compost) open urban space. In recent years, it has become clear that stakeholder and managerial/maintenance capacity around a site and in a food growing project are as important. Moreover, available resources need to be recorded and systematically integrated into the planning and execution of productive urban landscape projects.

Within this action, it is important to address the following strategies, steps or tools necessary for a successful implementation of any urban agriculture project:

1. Map **physical sites**

taking into account that suitability for urban agriculture includes issues such as land, orientation (sun), soil, air, boundaries, access, supply (water) and ownership in order to build a catalogue of spatial opportunities.

2. Identify potential goals and **stakeholders**

for the project's different development stages from start-up to establishment to longer-term prominence, in order to ascertain and/or grow sufficient local capacity to maintain the project.

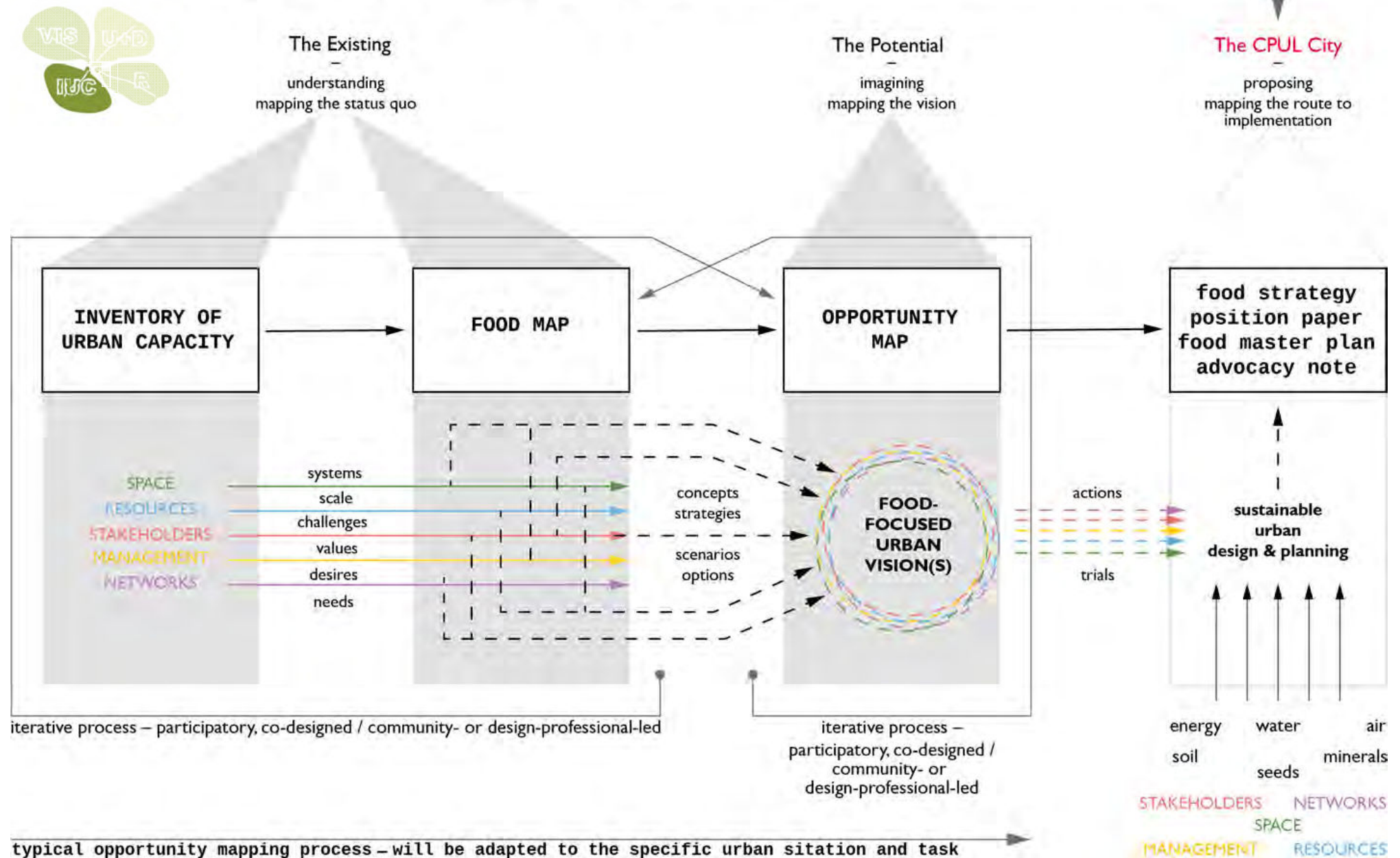
3. Aim for **no-waste systems** –

grow, eat, compost, grow... – as one aspect of maximising the *Ecological Intensification* on open urban space.

4. Identify local **resources** and **managerial capacities**

as a basis for new economic models, environmentally friendly production and fair trade for urban farmers.

The CPUL Opportunity Mapping Method

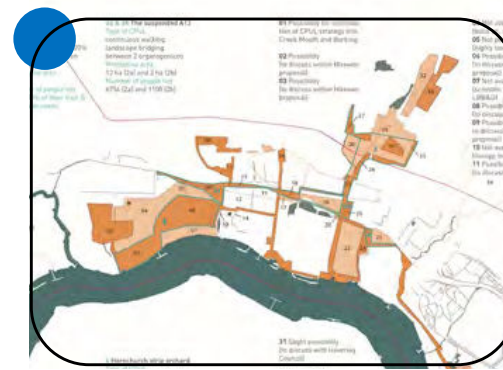


EXAMPLES OF FOOD & OPPORTUNITY MAPS FOR URBAN DESIGN PROJECTS



**Urbane Agrikultur
in Köln-Ehrenfeld,
Germany**

scale: neighbourhood
mapping method: participatory



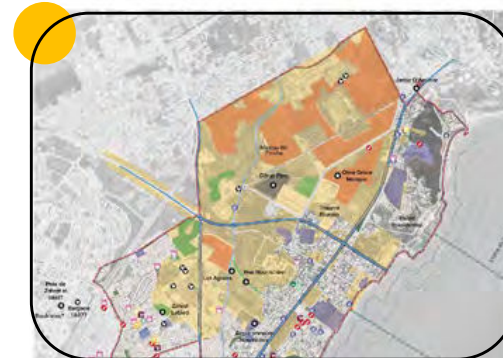
**London
Thames Gateway,
Great Britain**

scale: suburban / metropolitan
mapping method: design-professional-led



**The Urban Farming
Project
Middlesbrough,
Great Britain**

scale: city
*mapping method: participatory
as well as design-professional-led*



**Carthage –
Ville Comestible,
Tunisia**

scale: city
*mapping method: participatory
as well as design-professional-led*

Urban Agriculture in the Ehrenfeld neighbourhood of Cologne, Germany

scale:

neighbourhood

stakeholders:

arts-based project initiators,
local residents, food producers/
processors/ distributors,
urban agriculture /CPUL experts

aim:

to work with residents on the
participatory regeneration of
an urban neighbourhood

mapping method:

participatory design
process in four stages



Urban Agriculture in the Ehrenfeld neighbourhood of Cologne, Germany

scale:

neighbourhood

stakeholders:

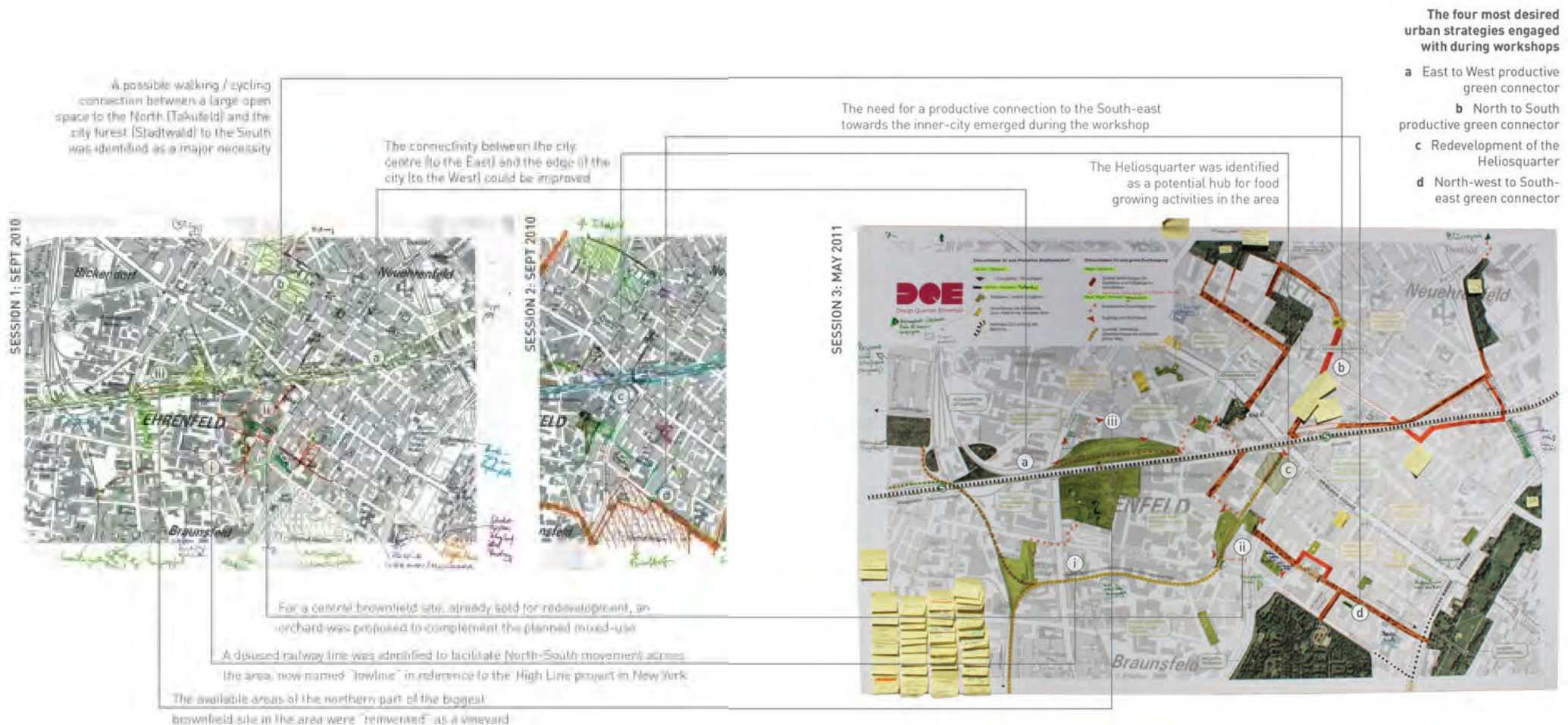
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Urban Agriculture in the Ehrenfeld neighbourhood of Cologne, Germany

stakeholders:

scale:

neighbourhood

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- local residents, food producers/processors/ distributors,
- urban agriculture /CPUL experts

aim:

to work with residents on the participatory regeneration of an urban neighbourhood

mapping method:

participatory design process in four stages



01 An urban design concept

Full access by

use the ground more effectively in economic terms,
use the land with more precision and to farm sites
more districts
new landscape

• Efforts to control alcohol consumption with contrasting success

Method:

When imagining how Middlesbrough may develop the CPUL concept in the future, it is important to realize that it does not require everyone to grow their own food. It rather proposes that commercially viable market gardens would form part of the city's network of open urban spaces. In this way, the city would significantly reduce its ecological footprint while at the same time enhancing its urban environment. CPUL provides more experience with less consumption.

scale:
city

arts-based project initiators,
local residents, local council,
urban agriculture /CPUL experts

to engage the public in improving qualities of the city's urban spaces and its urban life

mapping method:
**participatory as well as
design-professional-led**

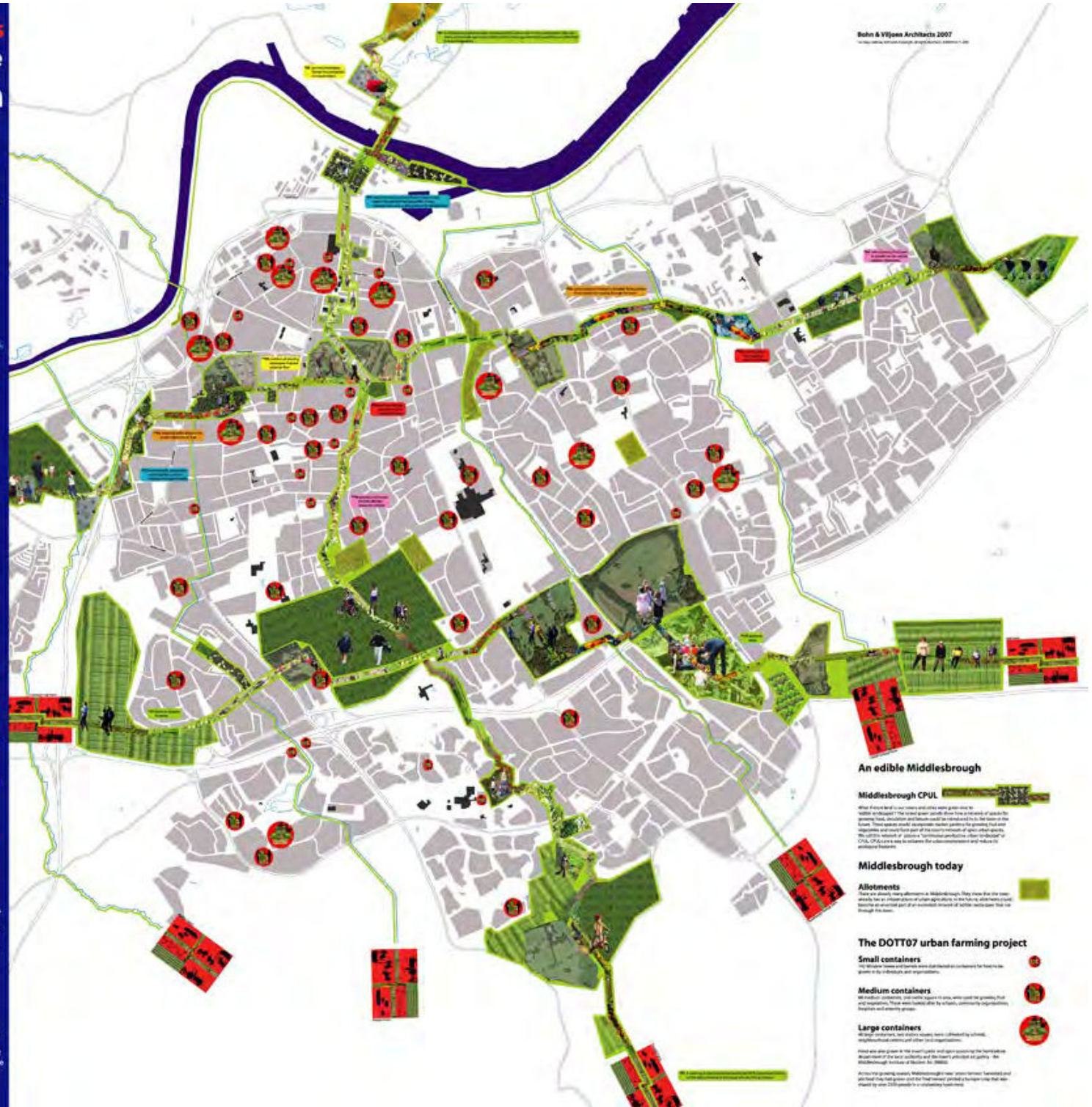


image: *The Urban Farming Project Middlesbrough* – Bohn&Viljoen – 2007

The Urban Farming Project Middlesbrough, Great Britain

scale:

city

stakeholders:

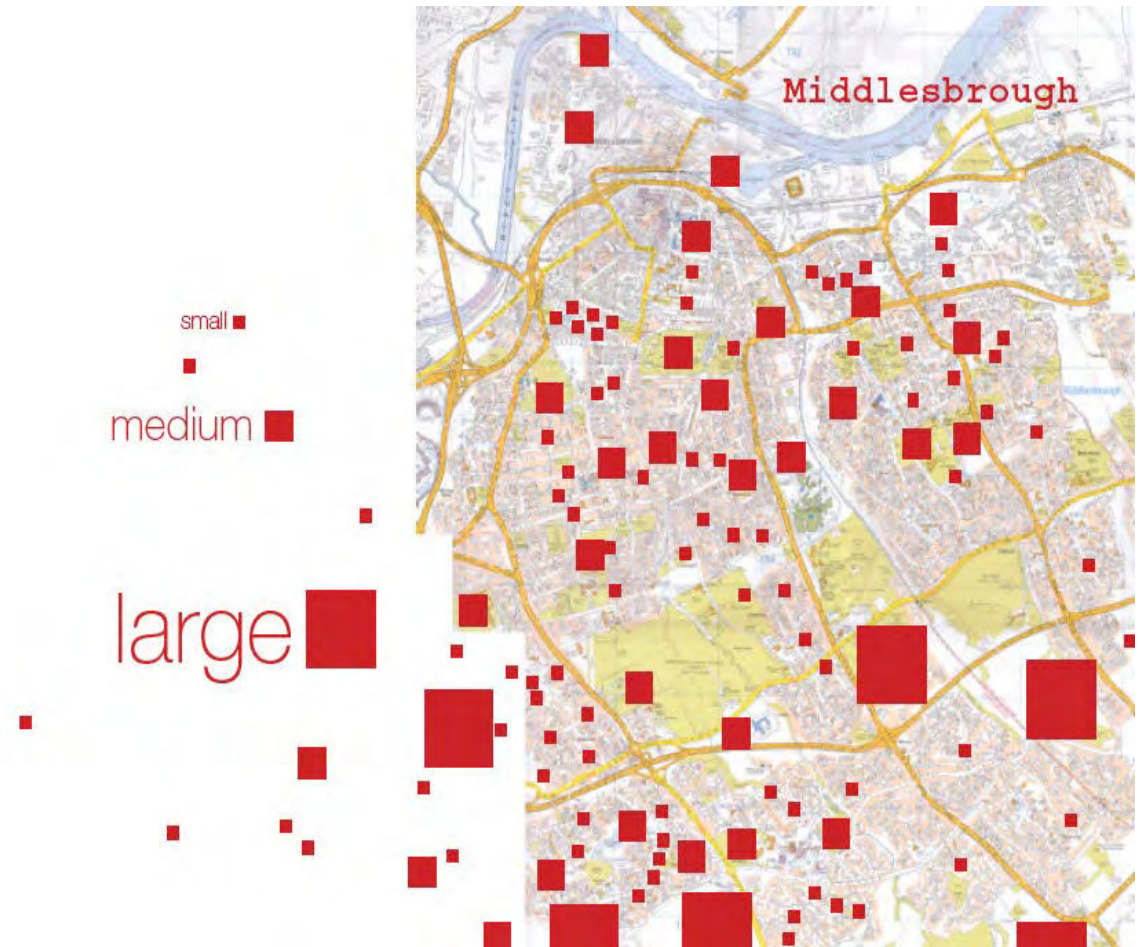
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local residents, local council,
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to engage the public in improving
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design-professional-led**



The Urban Farming Project Middlesbrough, Great Britain

scale:

city

stakeholders:

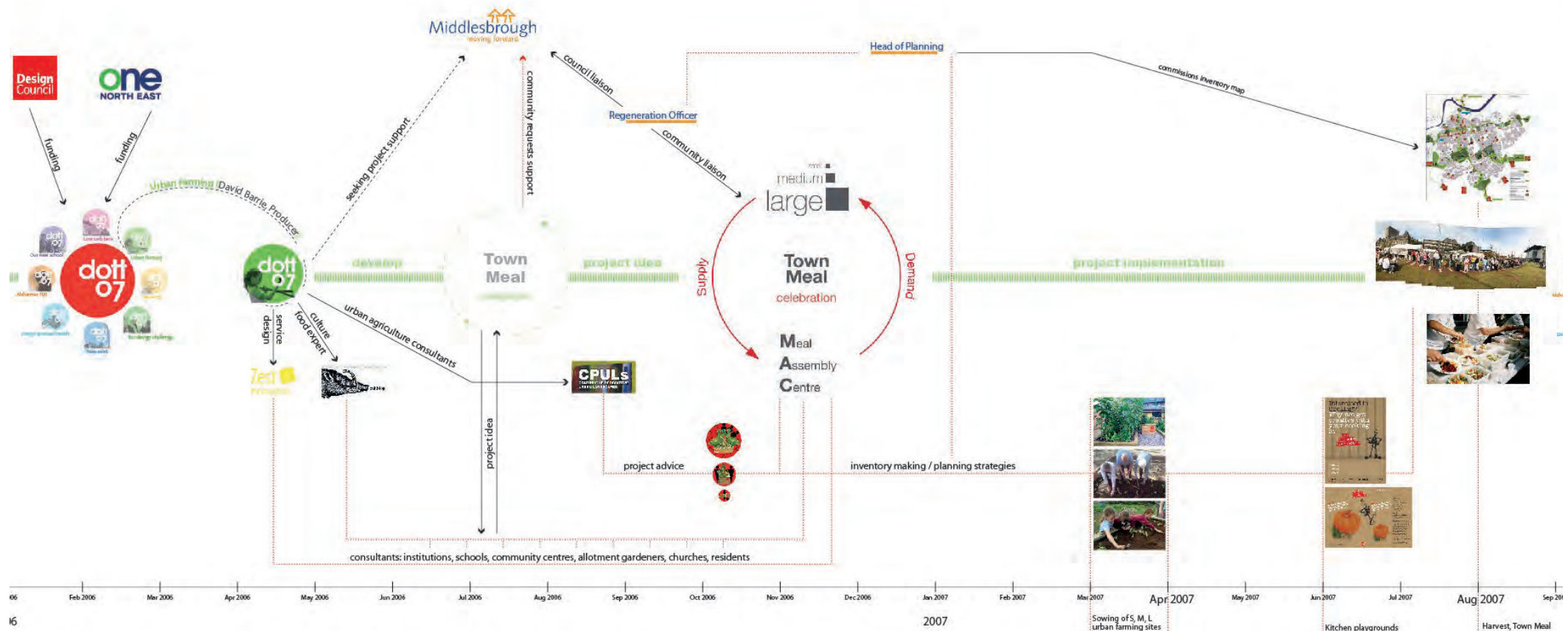
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aim:

to engage the public in improving
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mapping method:

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Carthage – Ville Comestible, Tunisia

scale:
city

stakeholders:

local research institute (initiator),
local council, residents, urban
agriculture/CPUL experts

aim:

to locate and systematise urban food system activities and spaces in the city, existing and potential

mapping method:
**participatory as well as
design-professional-led**



SOCIETAL CHALLENGES

Carthage is a city with a rich and multi-layered history. The challenges listed below have been identified by the city team, a group of local citizens representing the local council, local research organisations and interested members of the public.

01. Réduire l'impact des stress anthropiques et leur inhibition des dynamiques de développement
(Produire les notes de reconnaissance et leur traduction de l'anglais) (page 10)
02. Stimuler les économies locales et régionales
(Réviser la loi et les règlements nationaux)
03. Réorienter le Chômage des Jeunes
(Stimuler l'auto-emploi) (SOG 8)
04. Stimuler l'éducation, la sensibilisation et le changement de comportement
(Établir un dialogue, soutenir et renforcer les ONG) (SOG 4, 5)
05. Assurer la durabilité de la pêche, équilibrer en ce qui concerne la pêche dans une éthique écologique (protéger)
(Établir la durabilité de? fisheries, aller à l'appui de? fishing et un archipel qui protège) (SOG 7, 14)
06. Renforcer la cohésion sociale
(Stimuler le social network) (SOG 10)
07. Renforcer les institutions
(Renforcer le leadership) (SOG 13)
08. Faire en sorte que les traditions politiques soient représentatives et amener du changement de l'attitude vers une ville durable
(Renforcer les public institutions, être représentative et amener le change de l'attitude vers la participation) (SOG 15, 11)
09. Accroître l'efficacité administrative dans le Grand Turin et au-delà
(Renforcer l'auto-gouvernement, aller à l'appui de? Grand Turin and beyond)
10. Lutter contre la dégradation du littoral
(Établir une stratégie nationale) (SOG 14)

[illegible]

Loss of gas to space exploration
 NASA's *Columbia* is a victim of an ill-fated mission. The shuttle's 28th mission, STS-51-L, ended in disaster last week as the shuttle was launched on a mission to test new equipment and to launch a satellite. The shuttle was launched on a mission to test new equipment and to launch a satellite.

Power plant goes wacky & high voltage
 Carthage has reportedly ended its long history of being a "ghost town" after a power plant went wacky and high voltage. The power plant went wacky and high voltage.

Industrial revolution suggests the future of the world
 The industrial revolution suggests the future of the world. The industrial revolution suggests the future of the world.

Local news on the rise
 Local news on the rise. Local news on the rise.

Historic/hydrological restrictions prevent use of many sites

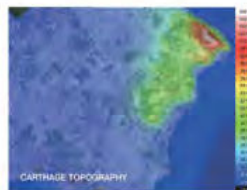
With an open industry, some California farmers put under the ground with new levers built in the 1950s and 1960s to allow them to open permission to allowing ground water to be used in the golden state. But the industry is not open. Farmers need to be ready and well served. SRI is collaborating with the US Federal Highway Administration and the transport, the ITSM Process

New water supply water management systems

There is a lot of money to be made in the form of energy related water and energy services. The technology is not water intensive and doesn't use as much as it is intended to be used. It is a lot of water. The water is not consumed in a technique with a lot of water. The ground is not used of grey water for TCO and is being

Unused space around public buildings
 All public institutions and other stakeholders in Perth need to take more responsibility for ensuring availability within the city. The Folkestone City team has already identified spaces around central buildings and places which are unused and could be made available for various activities to support BCPS.

No general waste management or recycling
 No household recycling services are in place within Perthshire, apart from a small number of collection points. Carriage providers, all waste goes to landfill elsewhere. Waste streams are not currently being captured as potential resource sources. An ongoing recycling system that waste is being considered, the emissions from which may have an impact on local air quality.



Tunisia's climate is Mediterranean in the north, with mild rainy winters and hot, dry summers with no rain. Inland (away from the coast) is hotter, dry and plain towards the south. The south is semi-arid and merges into the Sahara Desert. There are a number of salt lakes, *Chotts* (Shotts), in an east-west line. At the northern edge of the Sahara across the central region of Tunisia.

As a low-lying coastal city, climate change will have an impact on Garmage, as potential temperatures are set to rise. This could mean the city looks quite different in 2050.



Carthage – Ville Comestible, Tunisia

scale:

city

stakeholders:

local research institute (initiator),
local council, residents, urban
agriculture/CPUL experts

aim:

to locate and systematise urban
food system activities and spaces
in the city, existing and potential

mapping method:

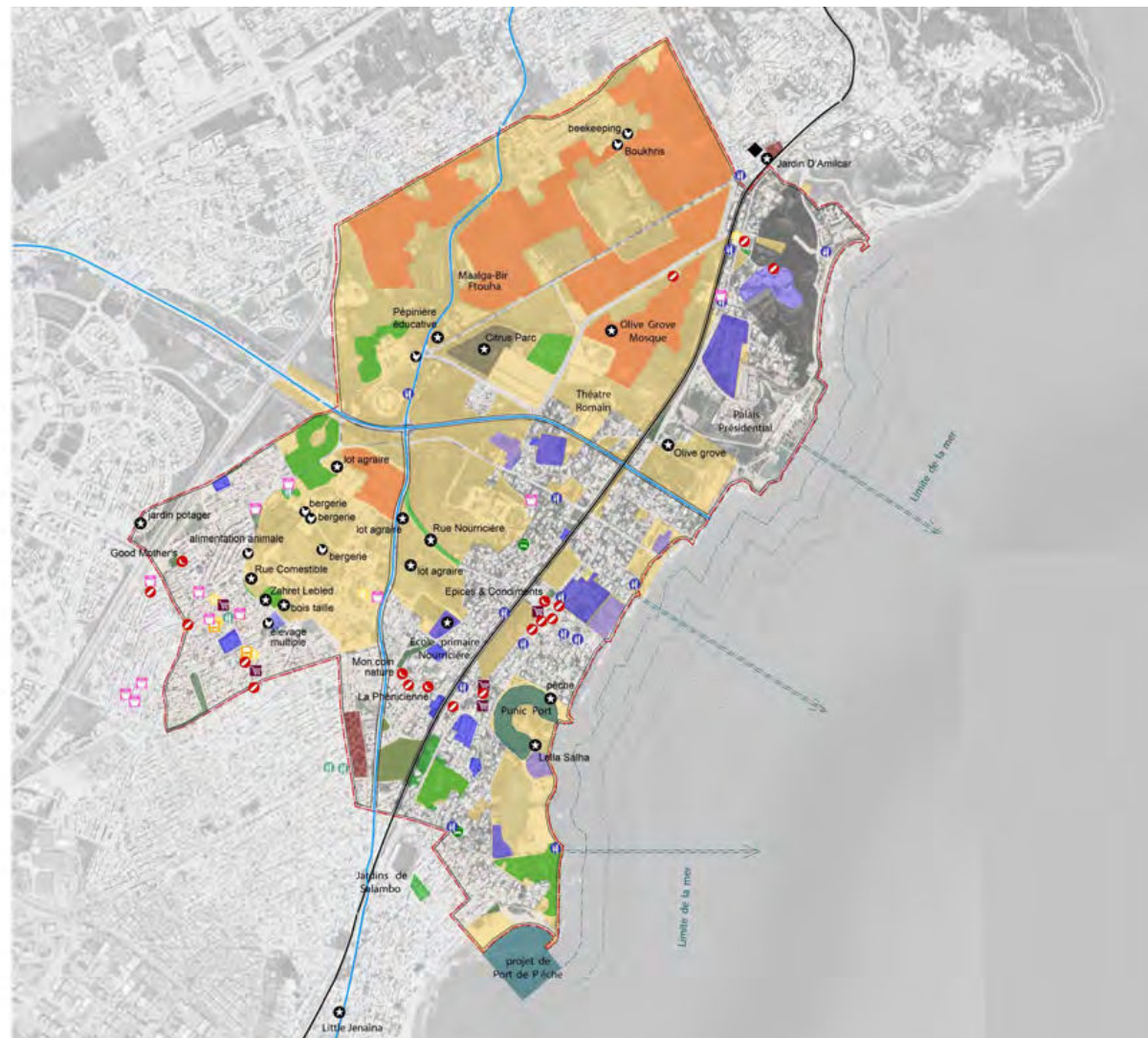
**participatory as well as
design-professional-led**

CLASSIFICATION DES ESPACES OUVERTS [open space classification]

- Espaces ouverts publics de la qualité paysage
[public open space of landscape quality]
- Espaces ouverts publics éducatifs et institutionnels
[public educational and institutional open spaces]
- Espaces ouverts archéologiques (publics et privés)
[archaeological open spaces (public and private)]
- L'agriculture urbaine dans les zones archéologiques
[urban agriculture in archaeological areas]
- Espaces ouverts privés
[private open spaces]
- Espaces ouverts privés commerciaux
[private commercial open spaces]
- Zones côtières
[coastal areas]
- Routes importantes et ligne ferroviaire (TGM)
[important roads and train line (TGM)]
- Limite de Carthage
[boundary of Carthage]
- Zones socio-géographiques
[socio-geographical zones]
- Projet existant de la production alimentaire
[existing food growing project]
- Projet existant de l'élevage du bétail
[existing livestock breeding project]

CLASSIFICATION DES ACTIVITÉS DE SYSTÈME ALIMENTAIRE [classification of existing food system activities]

- Production alimentaire [food production]
-> voir les espaces de production alimentaire ci-dessus
[see food production spaces above]
- Traitement des aliments [food processing]
Sur le site de production [on the production site]
 - Entreprises de traitement [processing businesses]
 - Boulangerie [bakery]
- Vente au détail de produits alimentaires [food retail]
 - Épicerie [grocery store]
 - Marché local [local market]
 - Supermarché [supermarket]
- Consommation alimentaire [food consumption]
 - Restauration rapide locale [local fast food]
 - Restauration rapide [fast food]
 - Restaurant gastronomique [gastronomic restaurant]
 - Hôtel [hotel]



Carthage – Ville Comestible, Tunisia

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mapping method:

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design-professional-led**

- #1 // Everything is a resource, especially waste and grey waters
- #2 // Local food production is a target to start with
- #3 // Food system activities have a financial value
- #4 // There is educational value in connecting food literacy to food sites
- #5 // Pressure related to Carthage's world heritage status can be a benefit
- #6 // Strong linkages between municipality and community are good
- #7 // Where map layers overlap, we can best work together
- #8 // Unused urban spaces offer employment opportunities that the countryside does not
- #9 // Carthage's compactness can be a benefit
- #10 // Spatial networks can enable social networks
- #11 // Whatever is done, there is always a historical framework
- #12 // Carthage doesn't lack creativity, the challenge is to push boundaries & regulations

#1 // Les vergers de Carthage



#1 // The orchards of Carthage

#2 // Un réseau de jardins historiques



#2 // A network of historic gardens

#3 // L'agriculture, pilier de l'économie de Carthage



#3 // Agriculture, pillar of Carthage's economy

#4 // La ville auto-suffisante



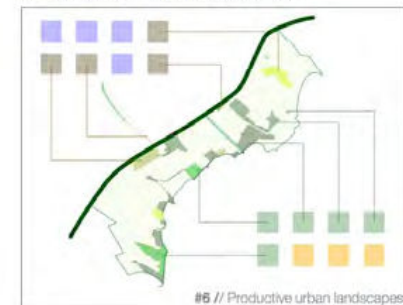
#4 // The self-sufficient city

#5 // Réseaux d'alphabétisation alimentaire



#5 // Food literacy networks

#6 // Paysages urbains productifs



#6 // Productive urban landscapes

#7 // Le monde te soutient



#7 // The world is supporting you

#8 // Côte fertile



#8 // Fertile Coast

#9 // Une nouvelle génération d'agriculteurs



#9 // A new generation of farmers



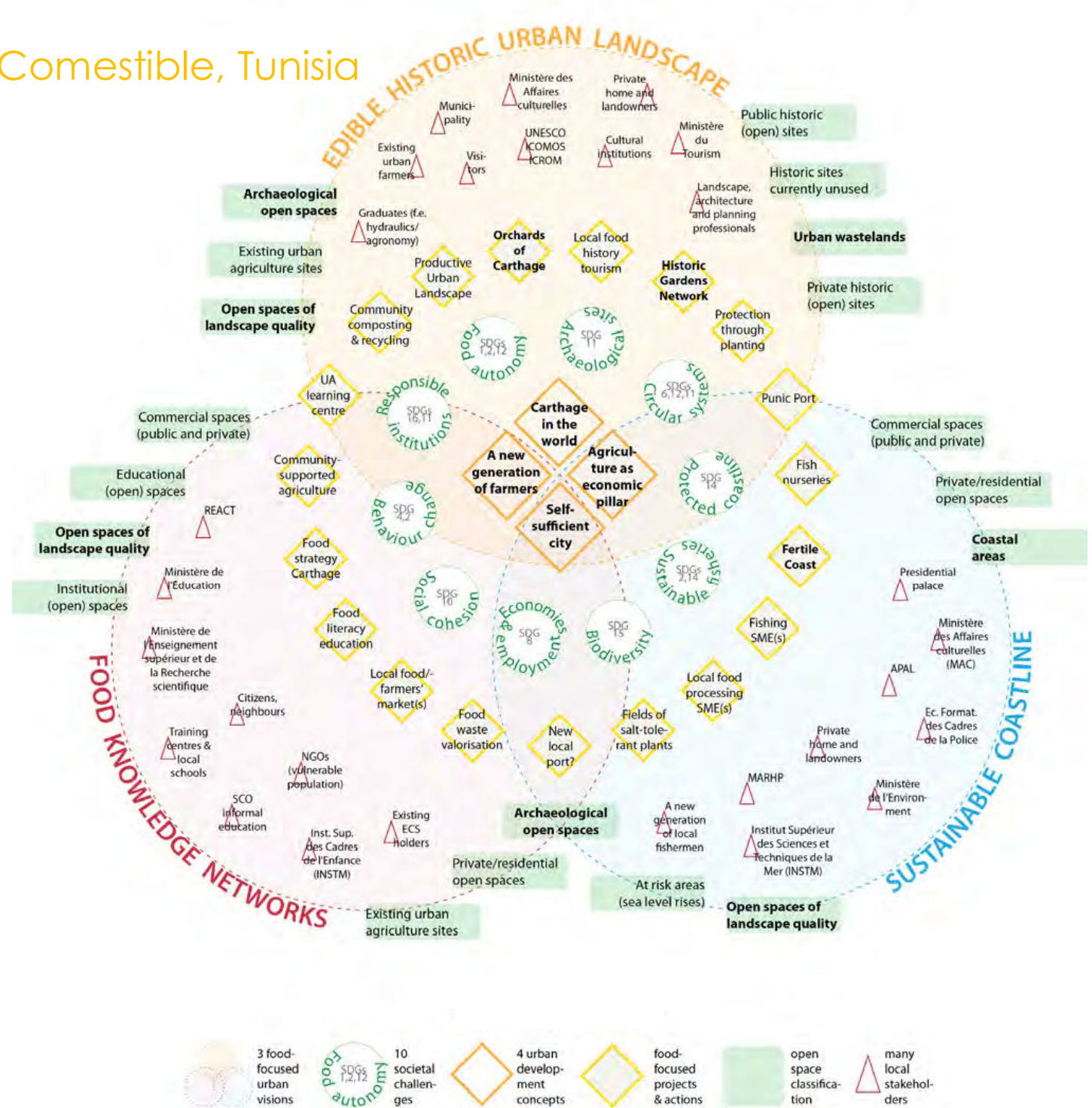
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design-professional-led**



London Thames Gateway, Great Britain

scale:

**suburban /
metropolitan**

stakeholders:

local council (initiator), local
planning department, urban
agriculture experts

aim:

to explore the potential of
integrating food-productive
spaces into London's Eastern
expansion area

mapping method:

design-professional-led



London Thames Gateway, Great Britain

scale:

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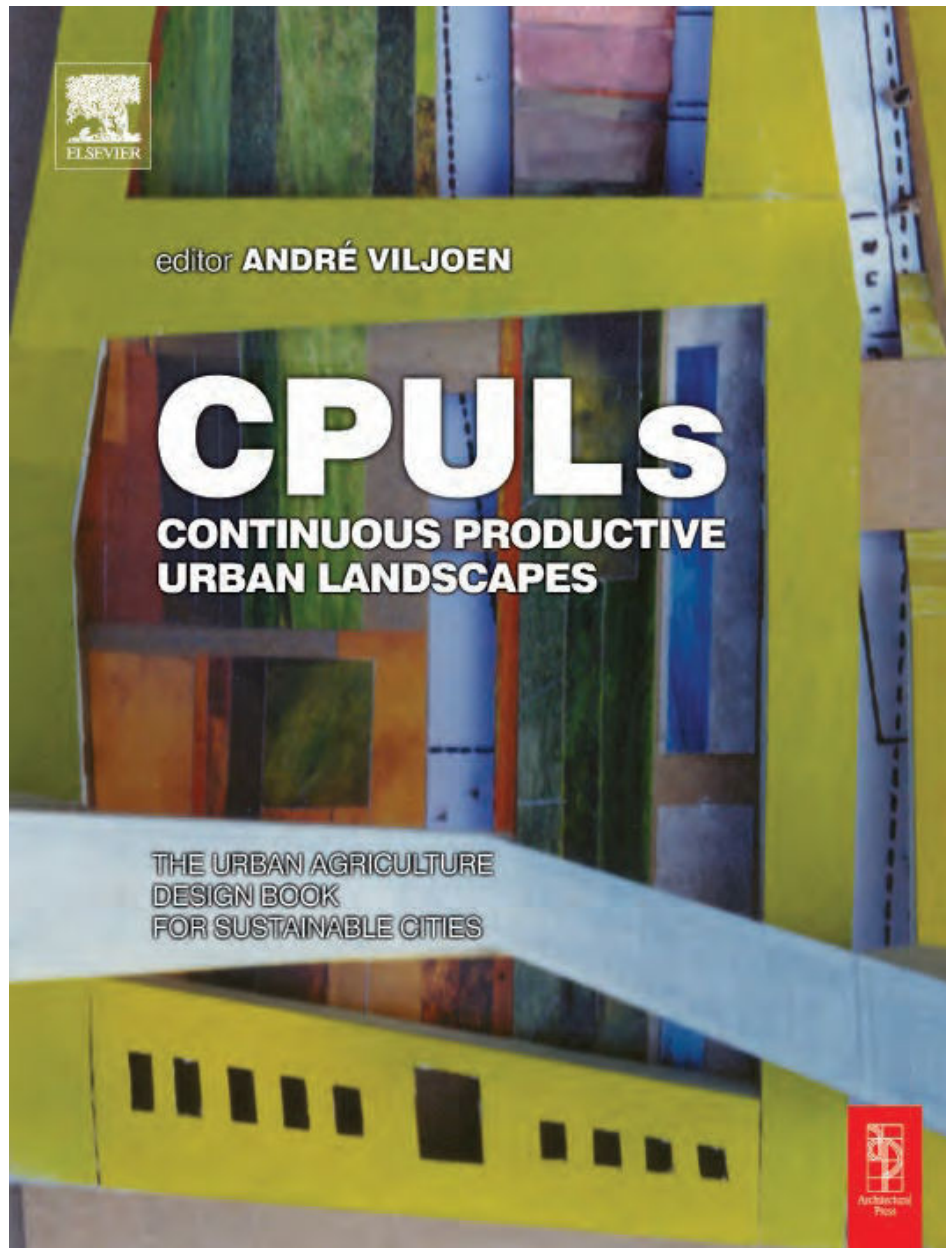
design-professional-led



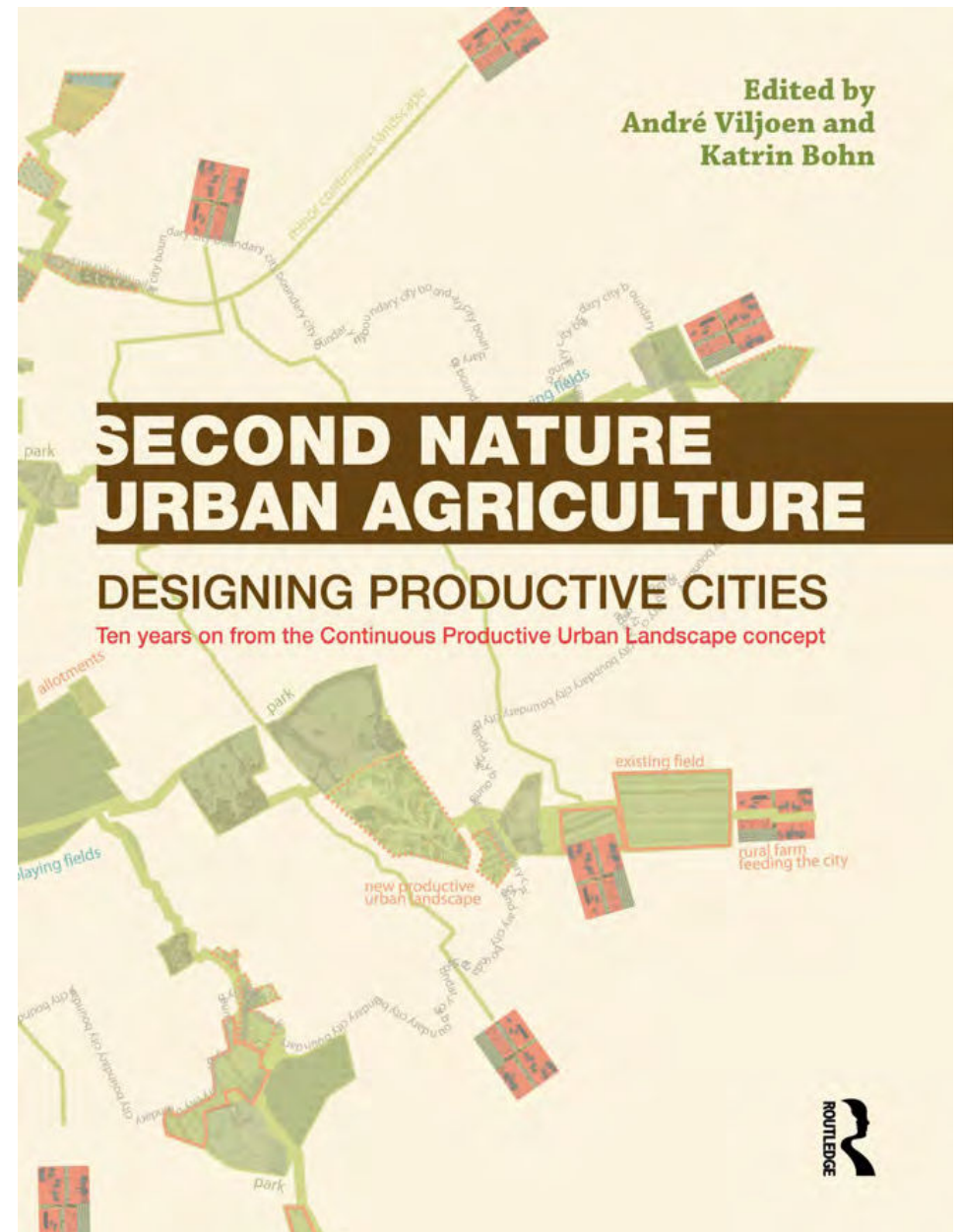
THANK YOU!

Katrin Bohn

katrin@bohnandviljoen.co.uk



images: *The CPUL book* – Bohn&Viljoen – 2005



The Second Nature book – Bohn&Viljoen – 2014