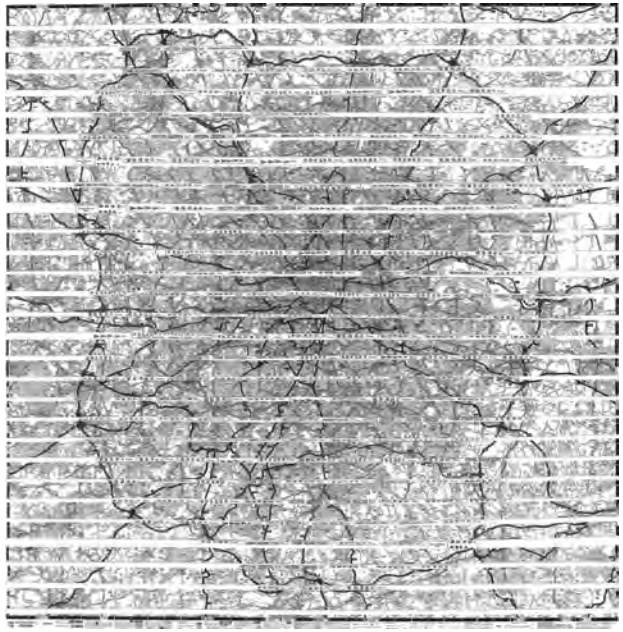
Spatial and participatory urban food mapping



1998
Making the case for urban agriculture, co-creating international discourse

2007
Triggering urban agriculture projects for and with community groups

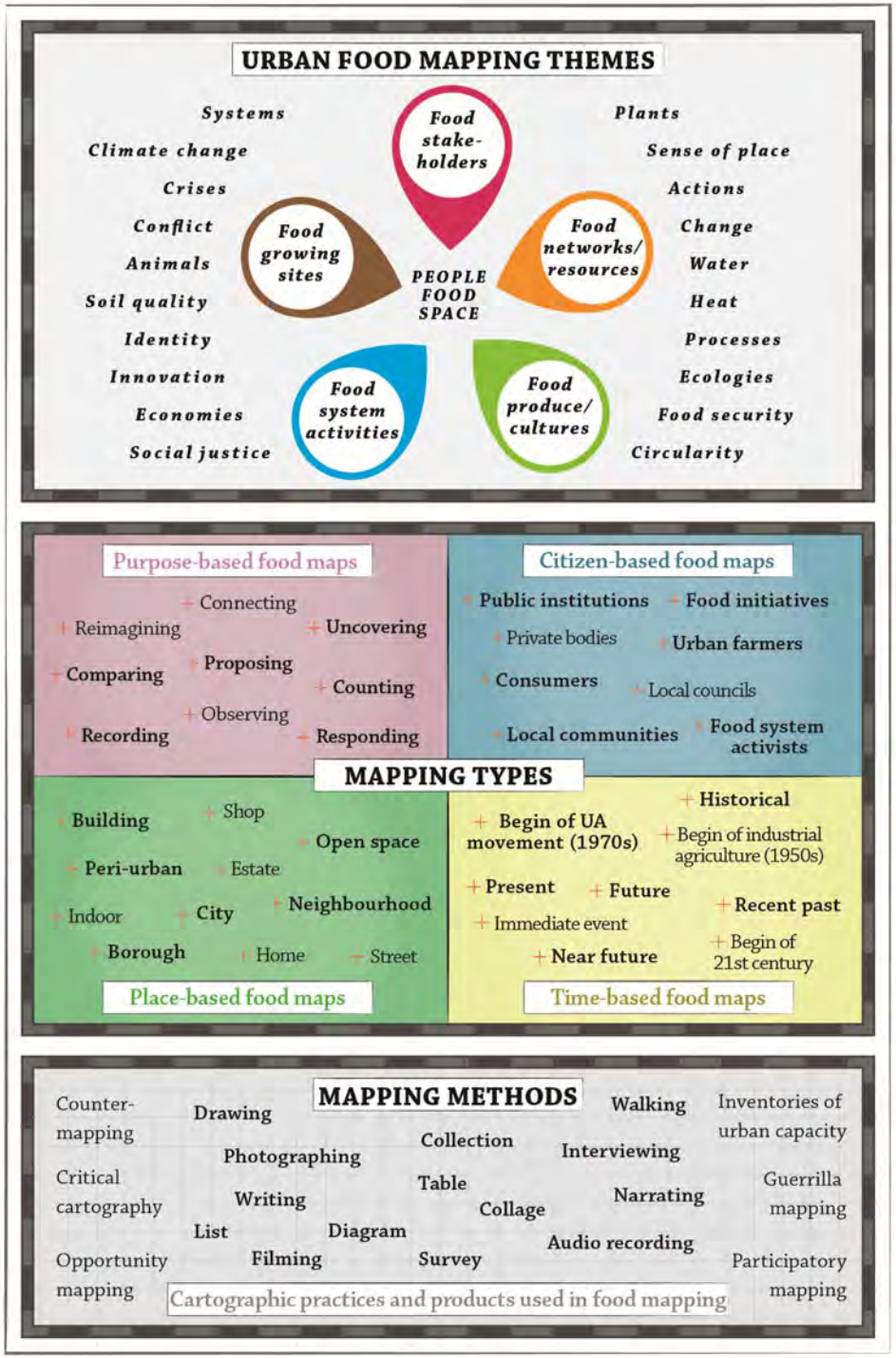
2016
Responding to municipal demands for urban agriculture / food systems projects

images: Bohn&Viljoen – 1998; 2007; 2016

Spatial and participatory urban food mapping

THEORY

Urban food mapping tackles a diverse range of food-focused data related to specific urban situations that makes visible issues about the feeding of cities or proposes solutions for their inclusive and sustainable development.



WHAT

WHY
WHERE
WHO
WHEN

HOW

image:
The Urban Food Mapping Matrix - 2020

PRACTICE

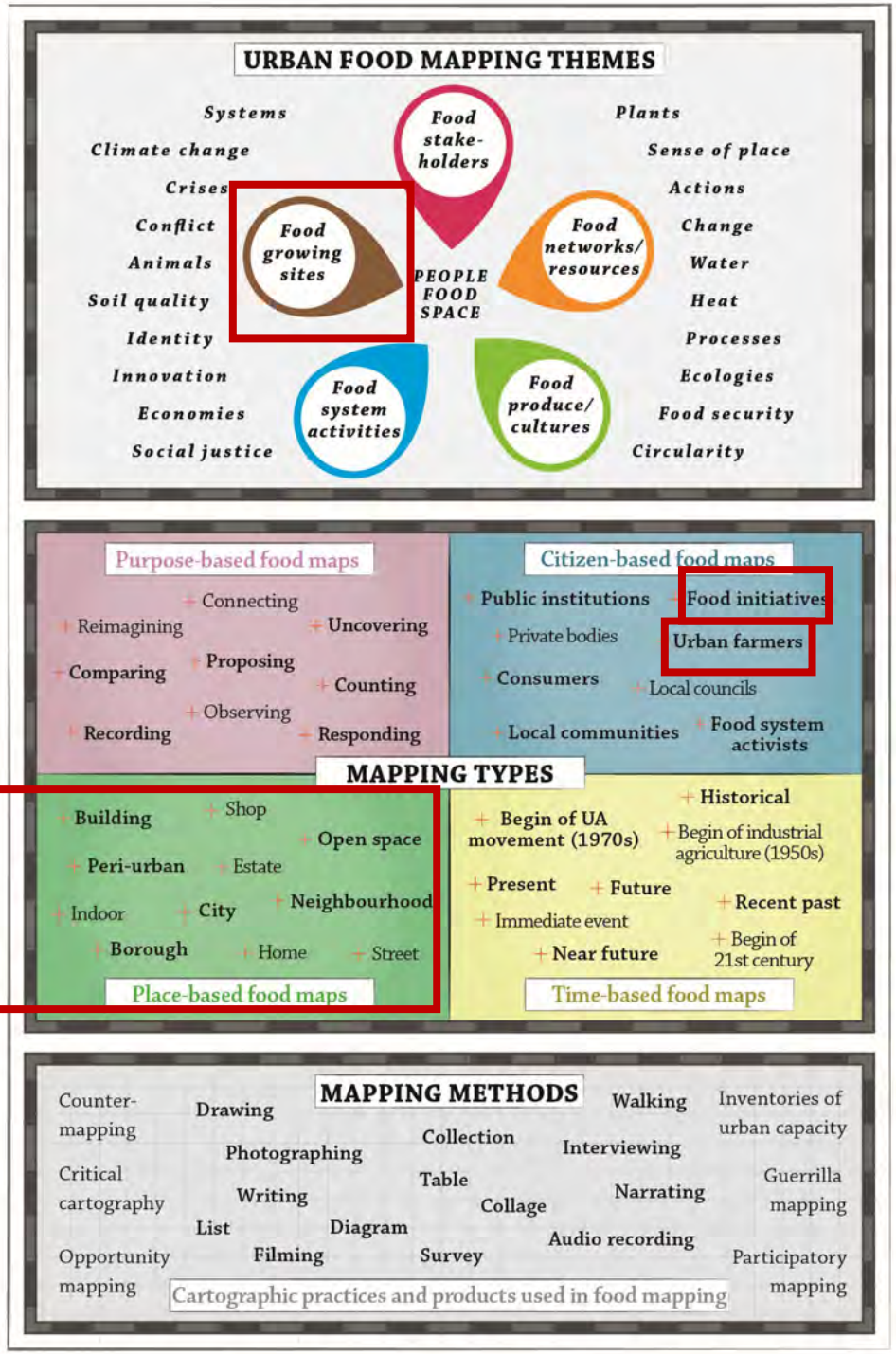


image:
The Urban Food Mapping Matrix - 2020

PRACTICE

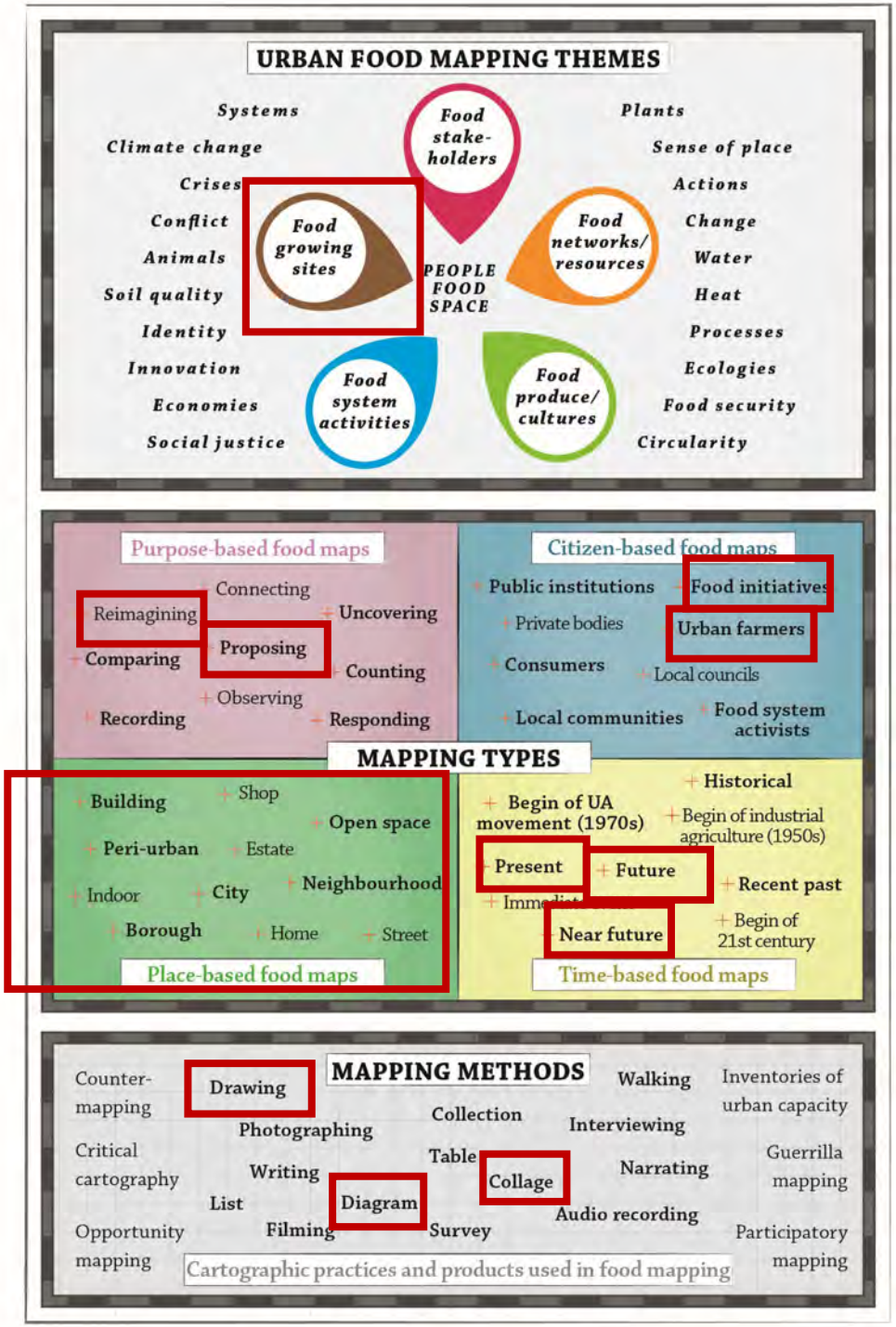


image:
The Urban Food Mapping Matrix - 2020

PRACTICE

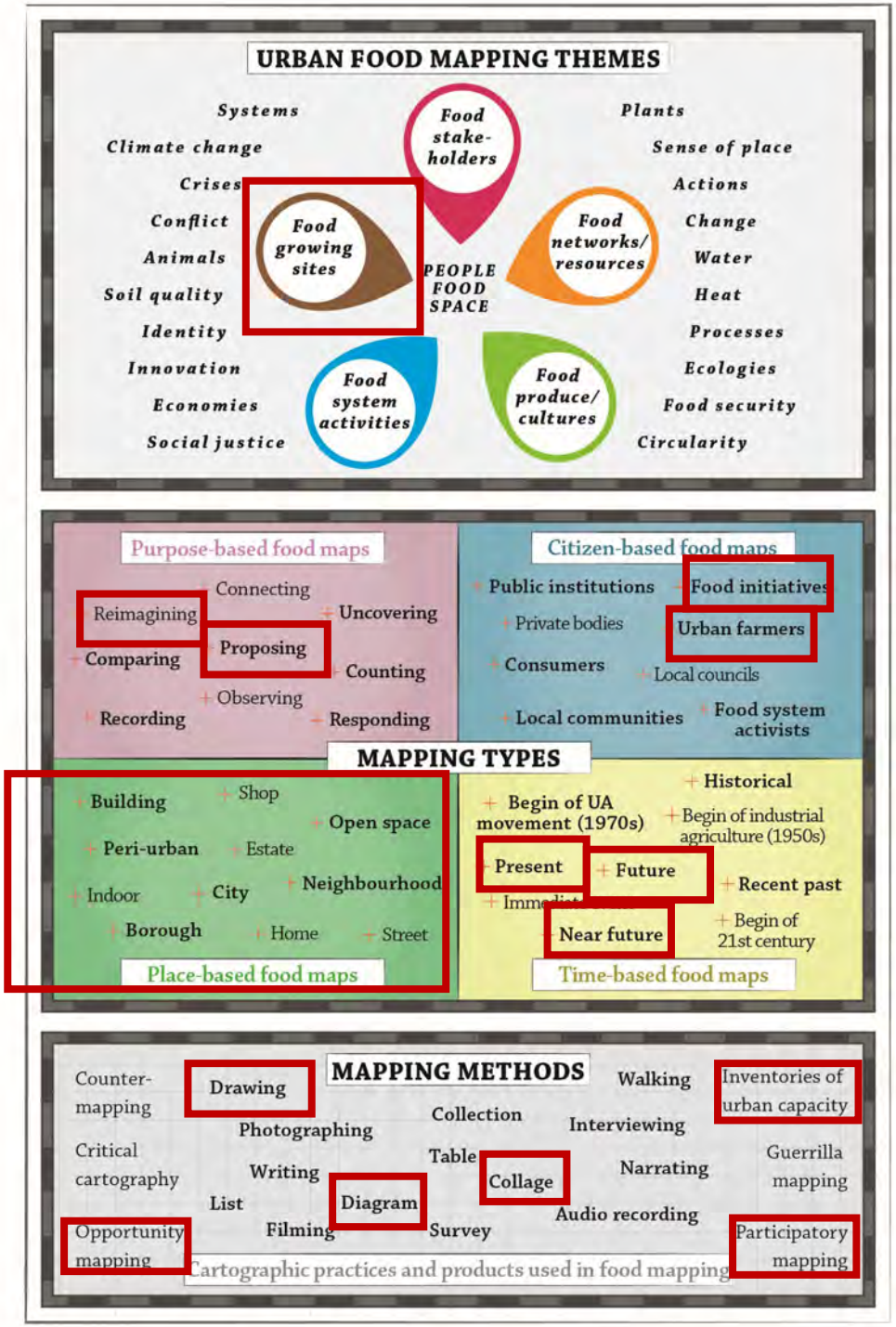


image:
The Urban Food Mapping Matrix - 2020

Katrin Bohn, Bohn&Viljoen Architects, 14th March 2024

Spatial and participatory urban food mapping

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

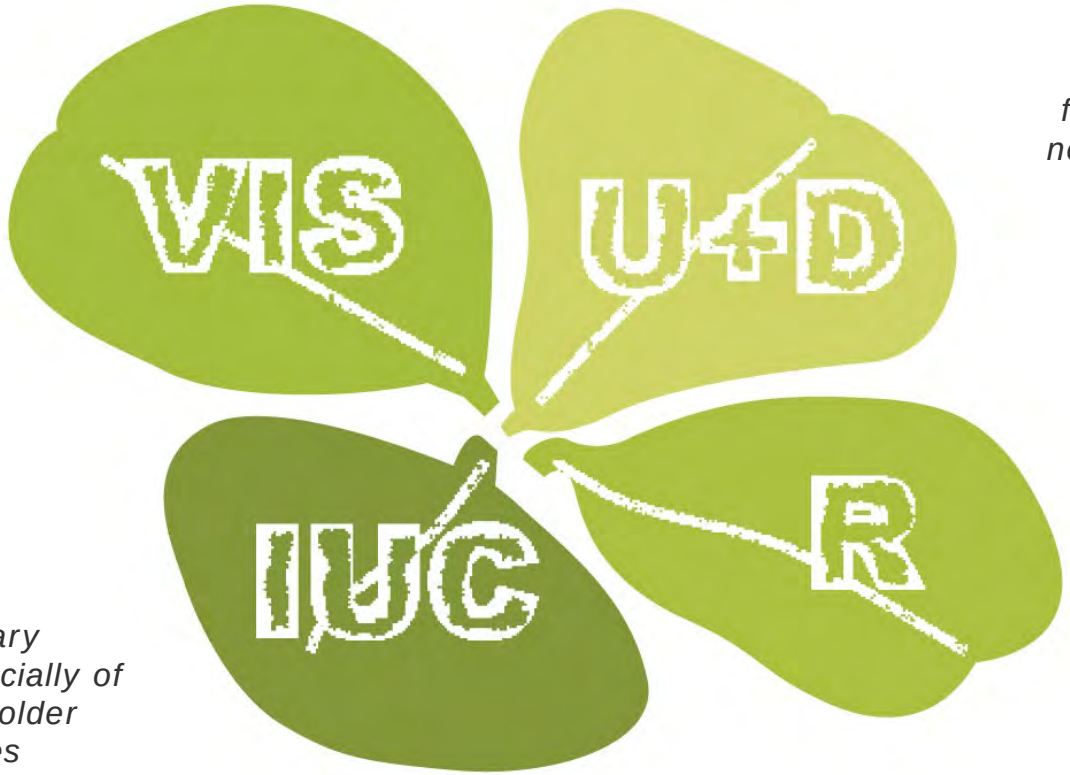
image: *The CPUL Concept* – Bohn&Viljoen – 2002

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.*

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.*



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.*

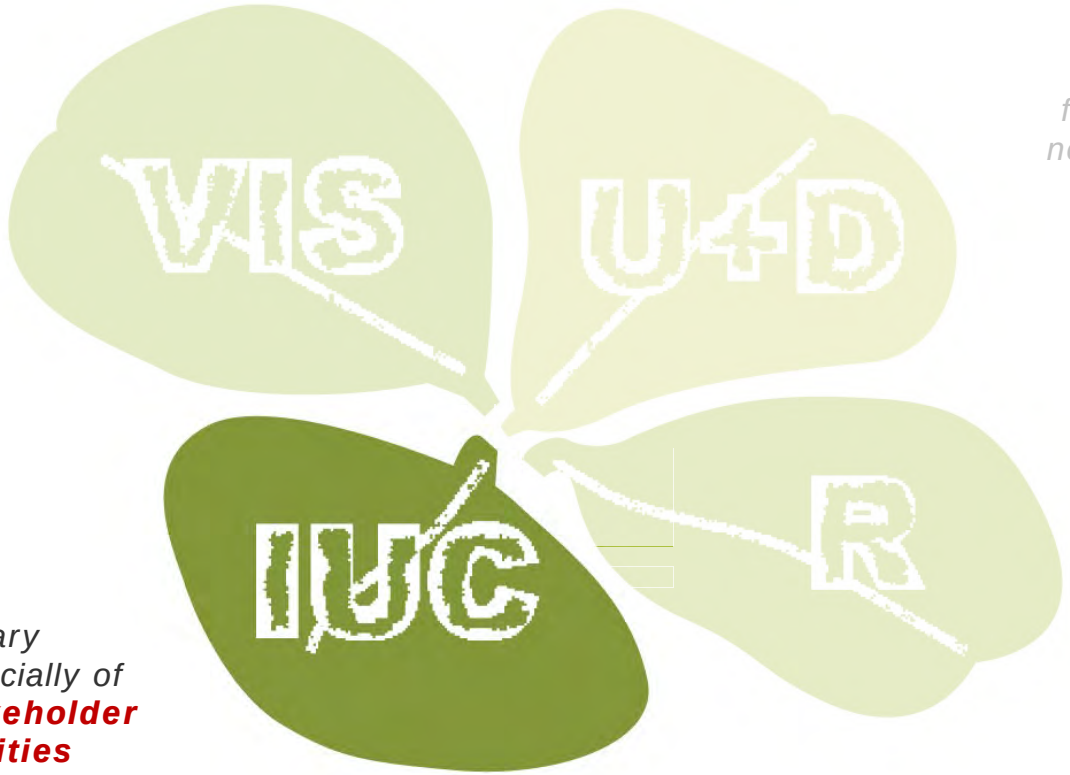
Action **R**
Researching for Change

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

image: *The CPUL City Clover* – Bohn&Viljoen – 2010

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.*



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

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

***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

image: *The CPUL City Clover* – Bohn&Viljoen – 2010

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.

image: *The CPUL City, Clover Action IUC = Inventory of Urban Capacity* – Bohn&Viljoen – 2010

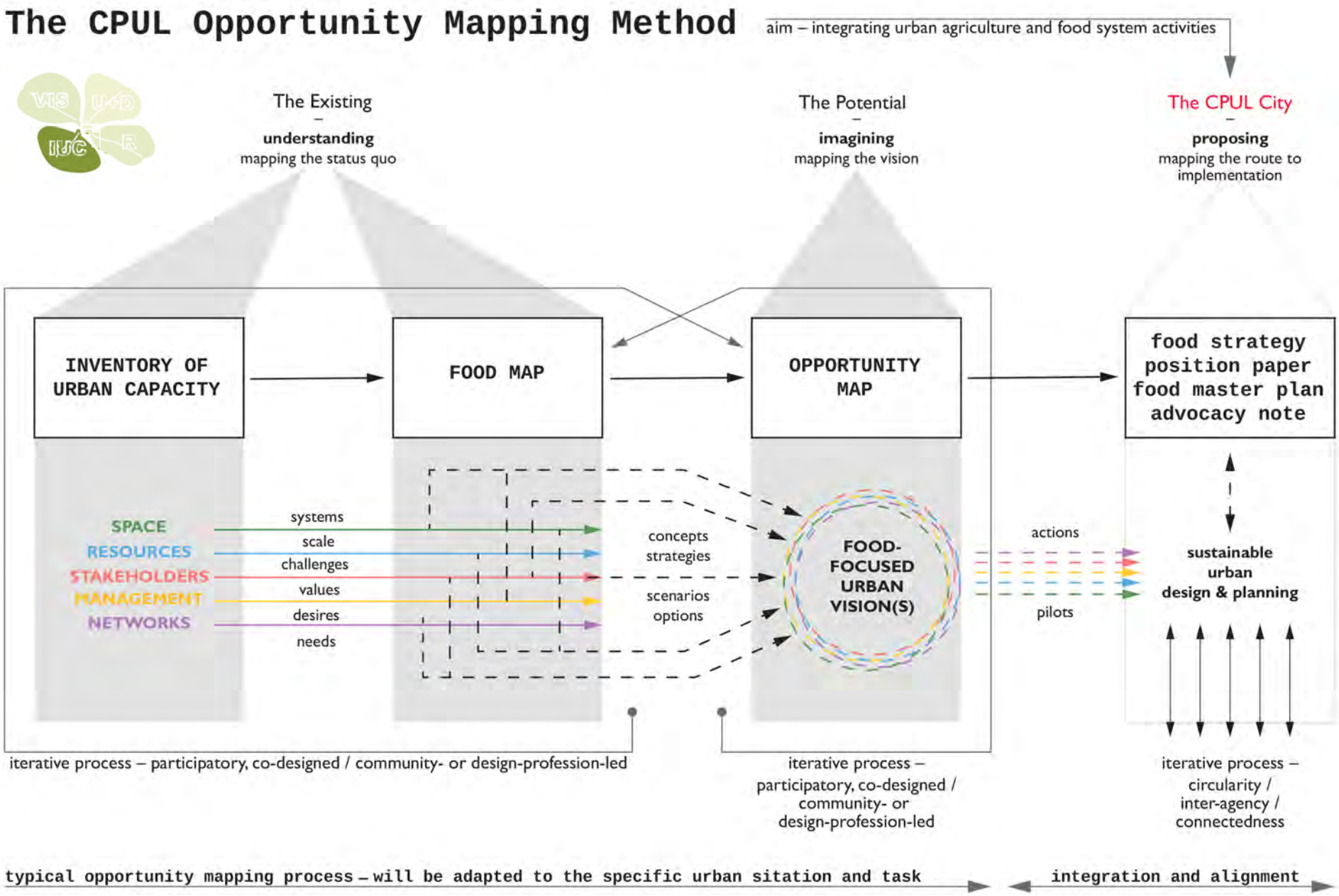


image: *The CPUL Opportunity Mapping Method* – Bohn&Viljoen – 2007-2022

EXAMPLES OF FOOD & OPPORTUNITY MAPPING FOR URBAN DESIGN PROJECTS

Urbane Agrikultur in Köln-Ehrenfeld, Germany

scale: **neighbourhood**
mapping method: **participatory**

London Thames Gateway, Great Britain

scale: **large-size city**
mapping method: **design-professional**-led

The Urban Farming Project Middlesbrough, Great Britain

scale: **medium-size city**
mapping method: **participatory**
+ design-professional-led

Carthage – Ville Comestible, Tunisia

scale: **small city**
mapping method: **participatory**
+ 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

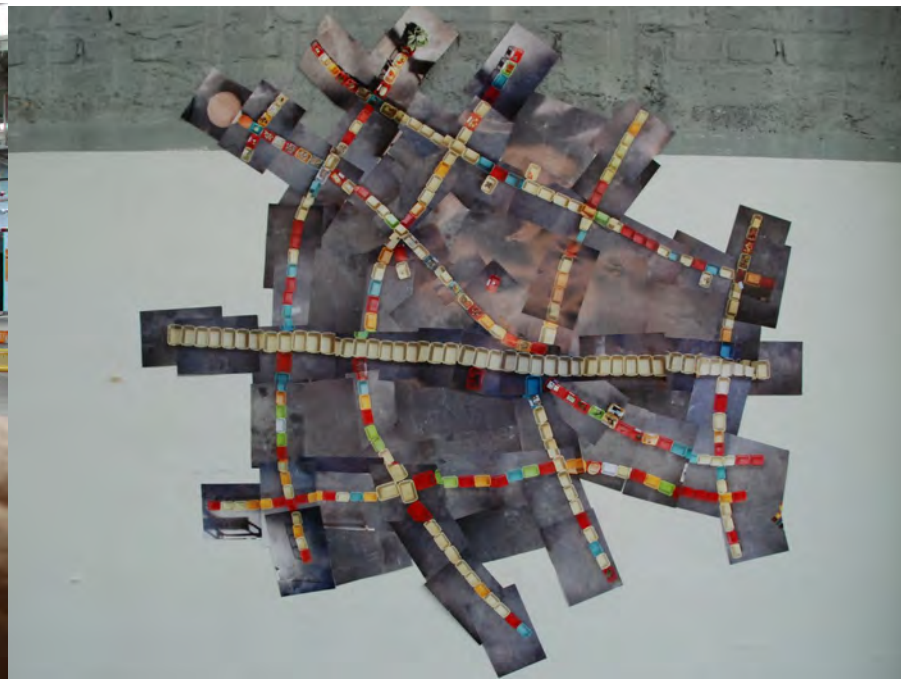


image: *Urbane Agrikultur in Köln-Ehrenfeld* – Bohn&Viljoen Architects, DQE urban regeneration project and Nishat Awan, FG Stadt & Ernährung TU Berlin – 2011

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

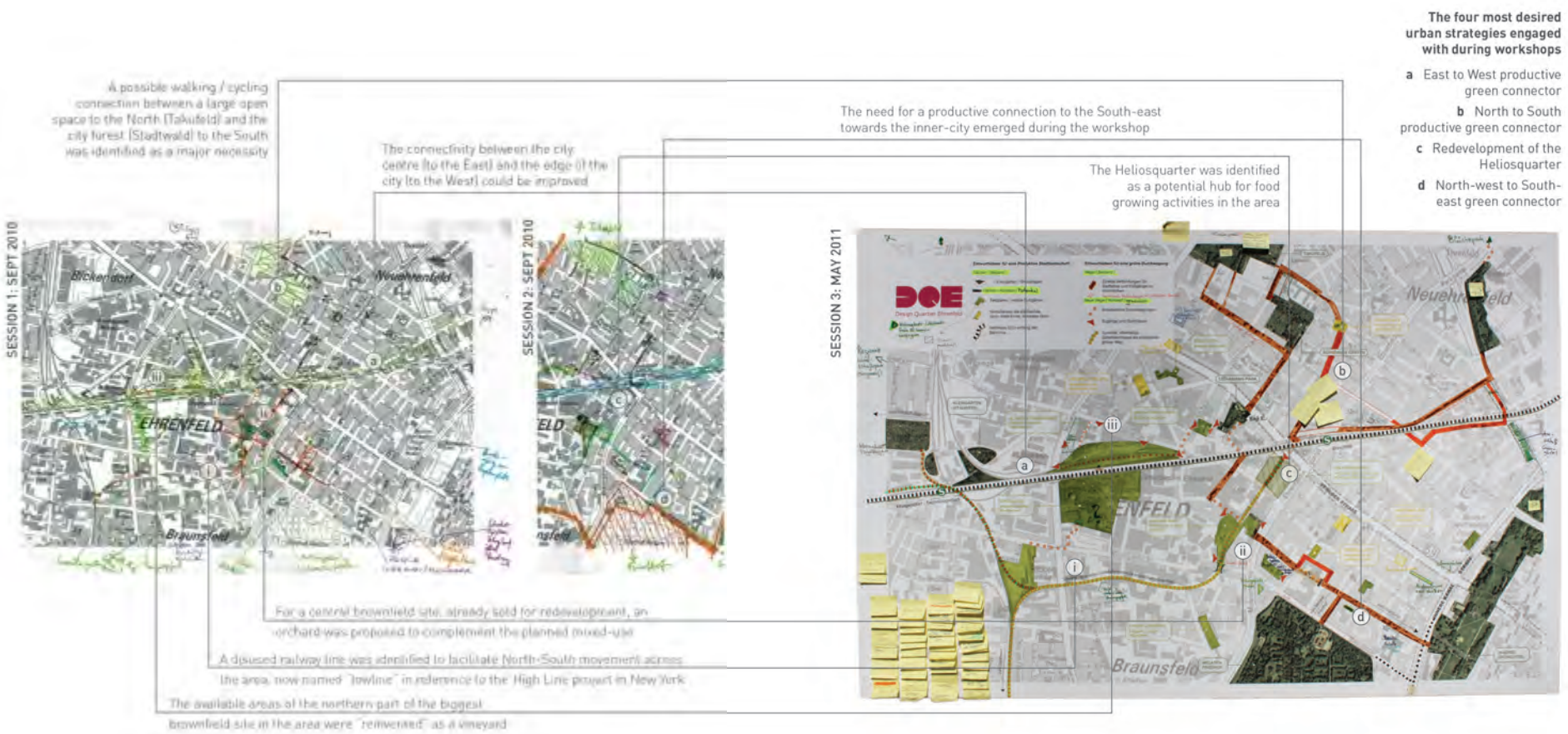


image: *Urbane Agrikultur in Köln-Ehrenfeld* – Bohn&Viljoen Architects, DQE urban regeneration project and Nishat Awan, FG Stadt & Ernährung TU Berlin – 2011

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

image: *Urbane Agrikultur in Köln-Ehrenfeld* – Bohn&Viljoen Architects, DQE urban regeneration project and Nishat Awan, FG Stadt & Ernährung TU Berlin – 2011

The Urban Farming Project Middlesbrough, Great Britain

scale:
medium-size city

stakeholders:
arts-based project initiators,
local residents and institutions,
local council,
urban agriculture / CPUL experts

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

mapping method:
participatory + design-professional-led

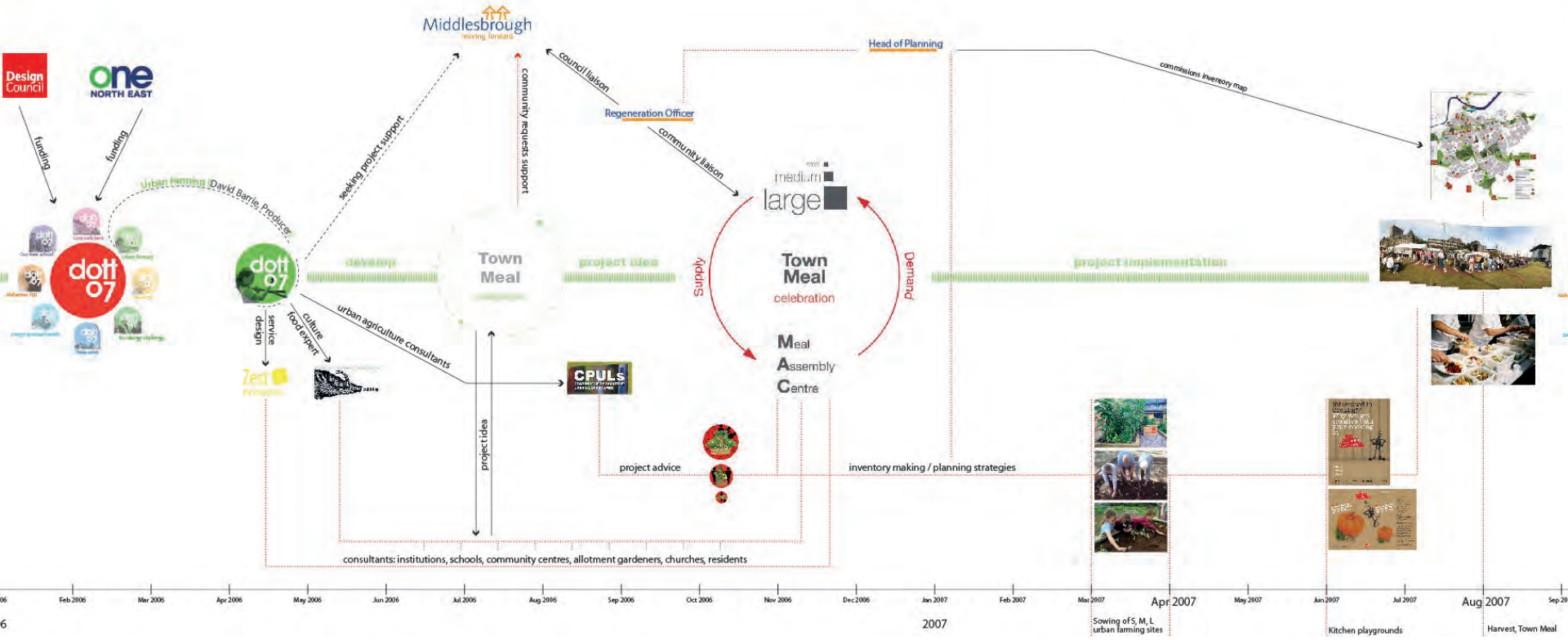


image: *The Urban Farming Project Middlesbrough* – FG Stadt&Ernährung TU Berlin – 2012

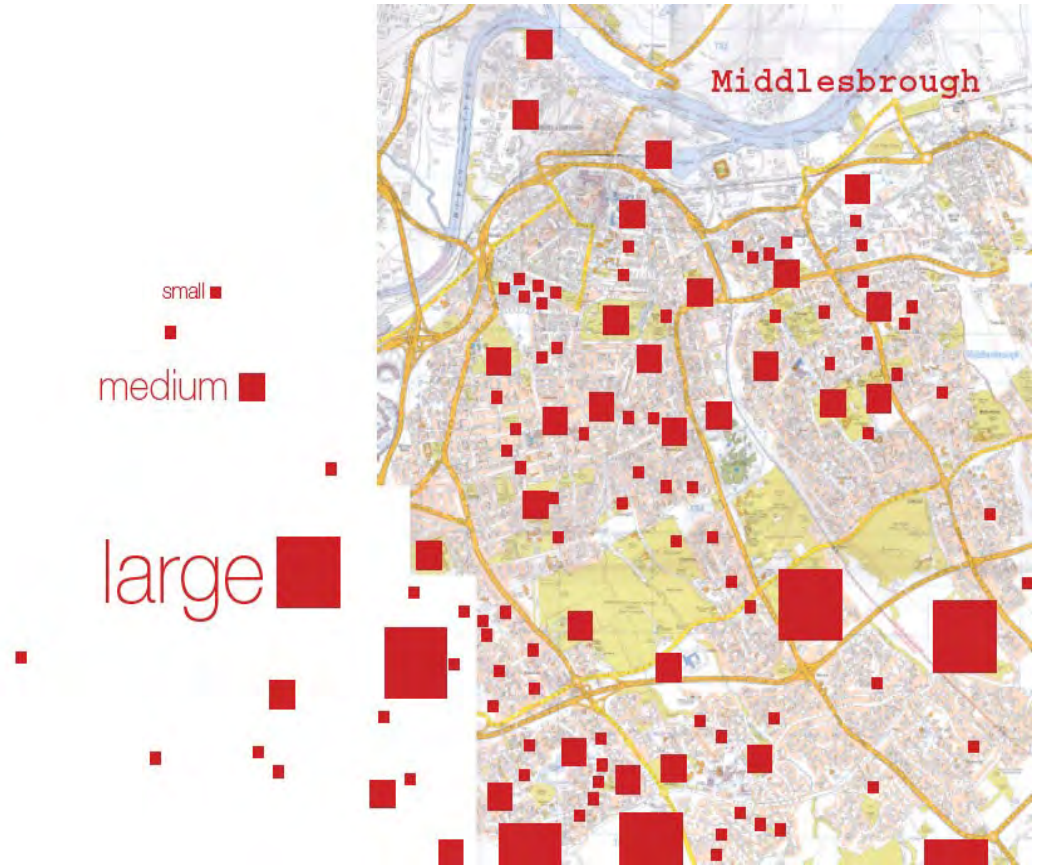
The Urban Farming Project Middlesbrough, Great Britain

scale:
medium-size city

stakeholders:
arts-based project initiators,
local residents and institutions,
local council,
urban agriculture / CPUL experts

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

mapping method:
participatory + design-professional-led



images: *The Urban Farming Project Middlesbrough* – Bohn&Viljoen (1), David Barrie, dott07 (1) – 2006

Bohn&Viljoen
case study

scale:
medium-size city

stakeholders:
arts-based project initiators,
local residents and institutions,
local council,
urban agriculture / CPUL experts

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

mapping method:
participatory +
design-professional-led

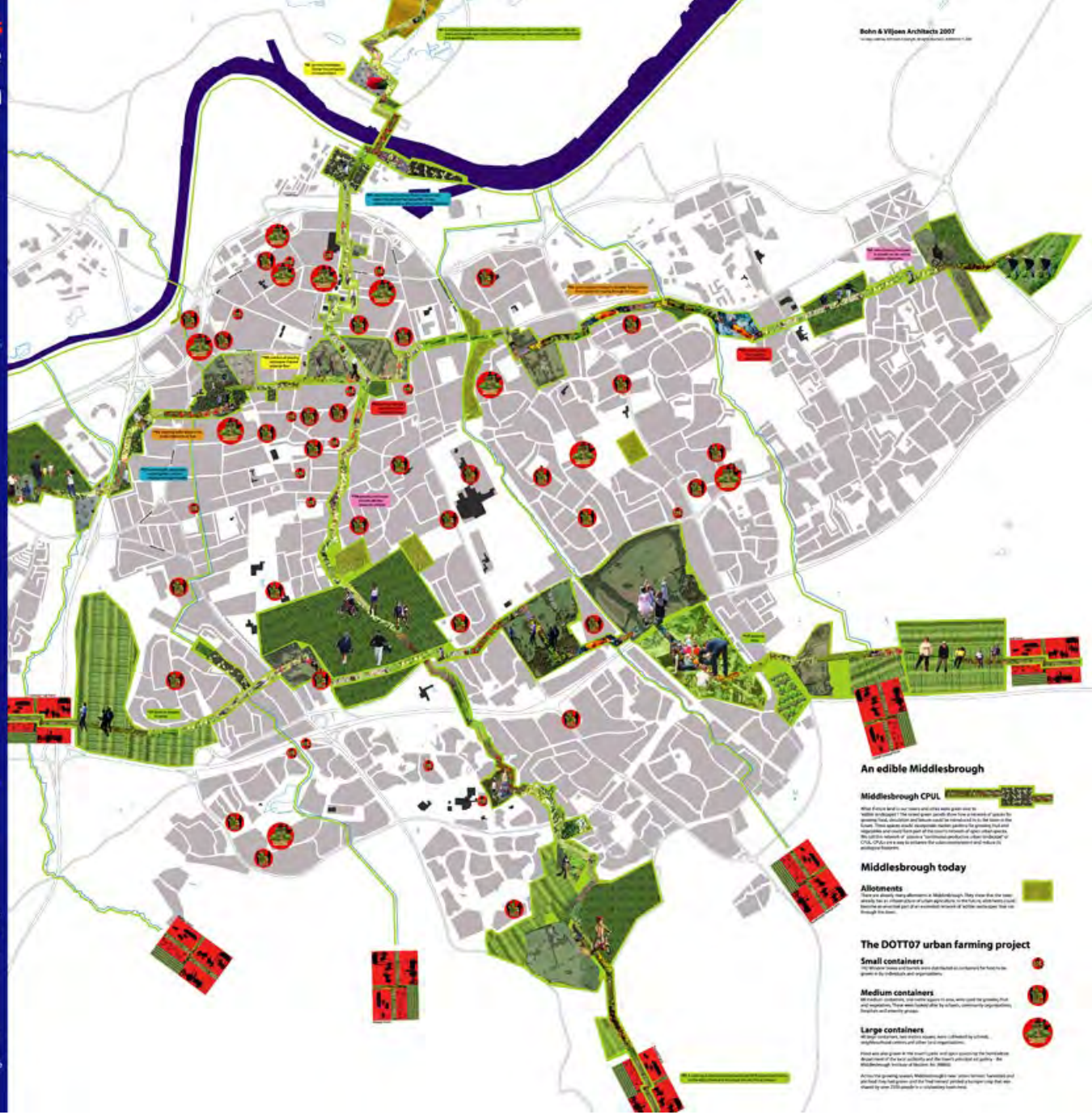


image: *The Urban Farming Project Middlesbrough* – Bohn&Viljoen – 2007

Carthage – Ville Comestible, Tunisia

scale:
small city

stakeholders:
local research institute initiator, **local council commitment**, local residents and institutions, urban agriculture / CPUL experts

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

mapping method:
participatory + design-professional-led

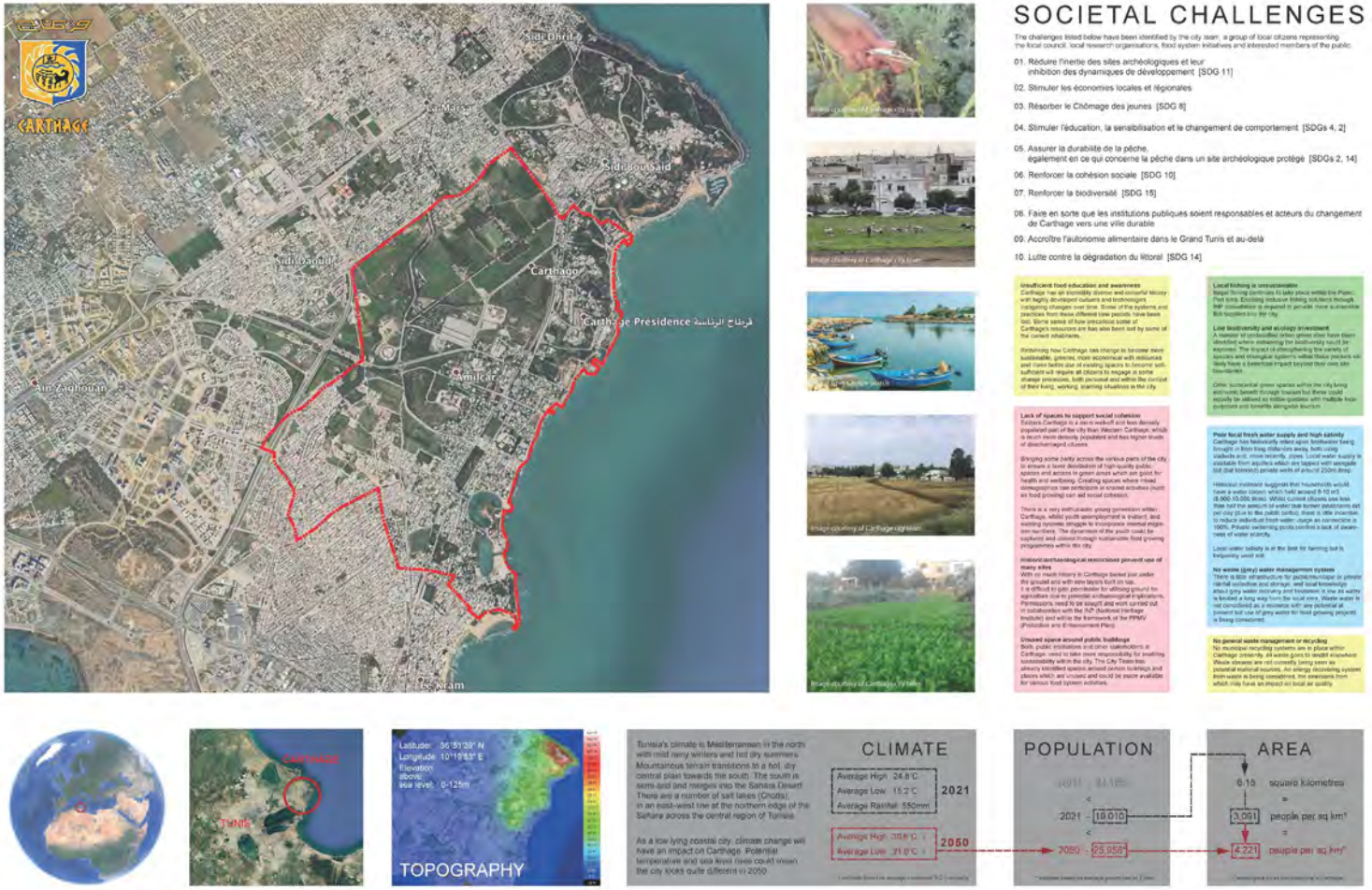


image: *Inventorising Carthage* –University of Brighton (Ian Bailey, Katrin Bohn) and City Team Carthage – 2021

Carthage – Ville Comestible, Tunisia

scale:
small city

stakeholders:
local research institute initiator, **local council commitment**, local residents and institutions, urban agriculture / CPUL experts

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

mapping method:
participatory + design-professional-led

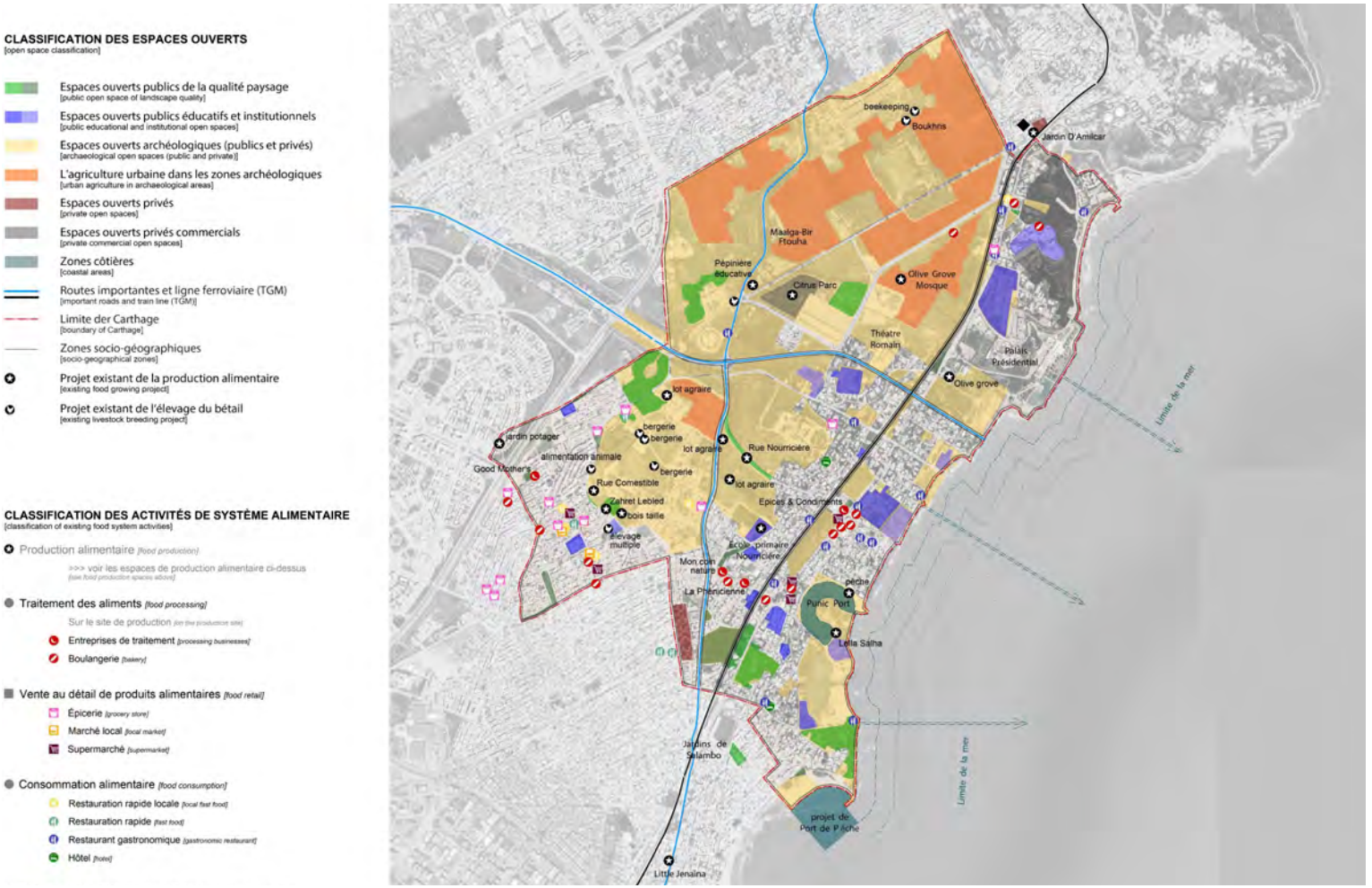


image: *Food Map Carthage* –University of Brighton (Ian Bailey, Katrin Bohn) and City Team Carthage – 2021

Carthage – Ville Comestible, Tunisia

scale:
small city

stakeholders:
local research institute initiator, **local council commitment**, local residents and institutions, urban agriculture/CPUL experts

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

mapping method:
participatory + 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-sufisante

#4 // The self-sufficient city

#5 // Réseaux d'alphabétisation alimentaire

#5 // Food literacy networks

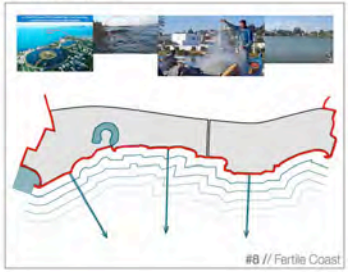
#6 // Paysages urbains productifs

#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

ASSOCIATION LA RECHERCHE EN ACTION

EdiCitNet

BOKU

University of Brighton

image: *Opportunities for Carthage* –University of Brighton (Ian Bailey, Katrin Bohn) and City Team Carthage – 2021

Carthage – Ville Comestible, Tunisia

scale:
small city

stakeholders:
local research institute initiator, **local council commitment**, local residents and institutions, urban agriculture/CPUL experts

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

mapping method:
participatory + design-professional-led

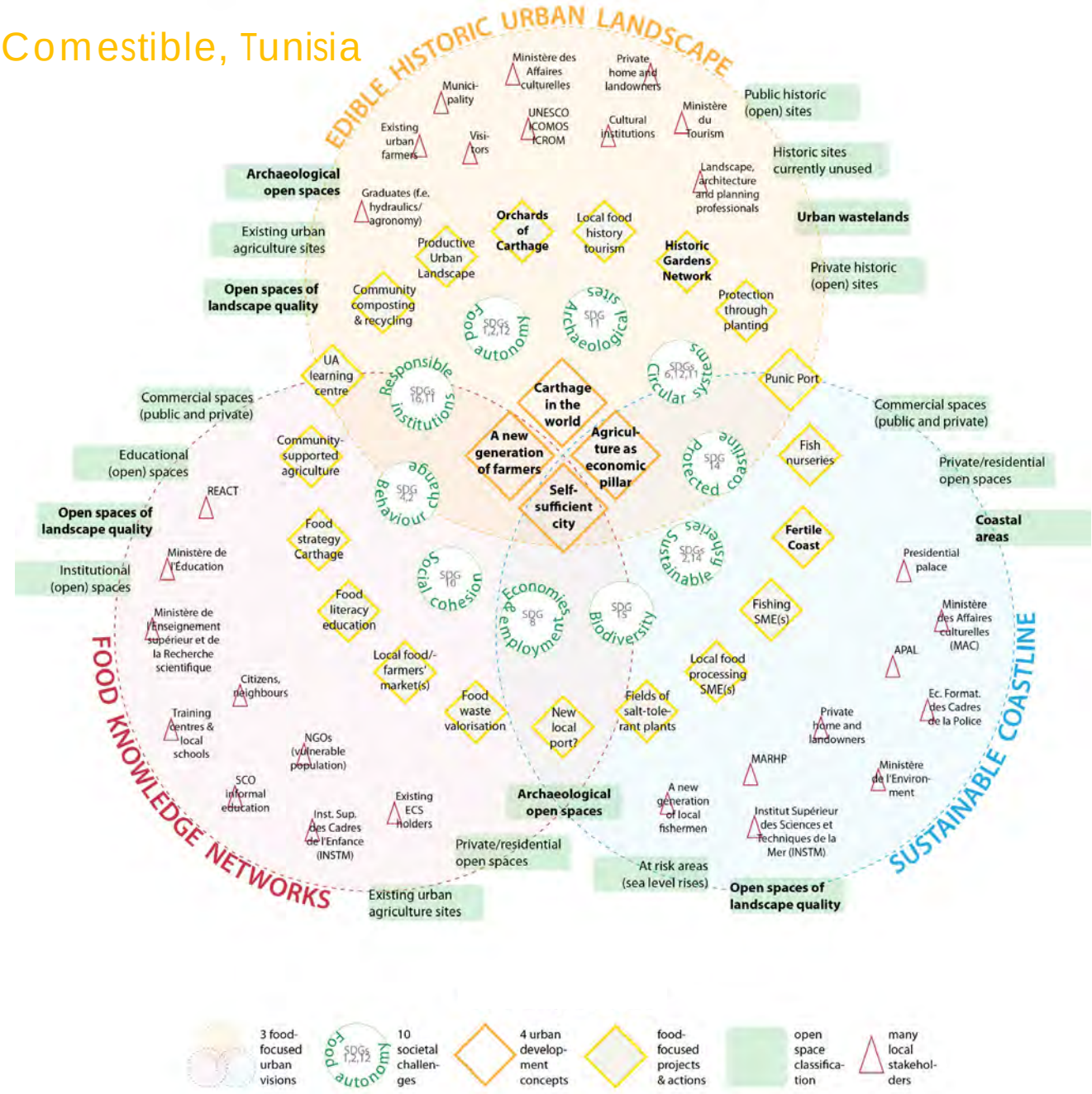
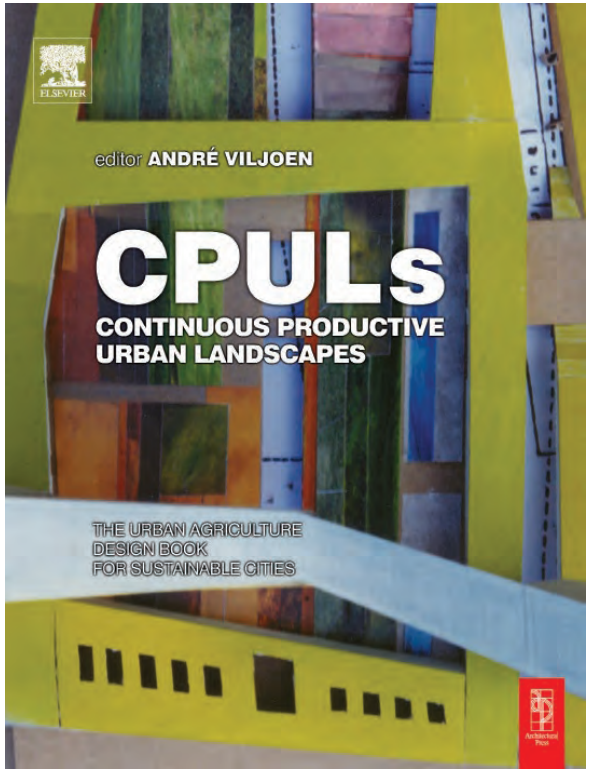
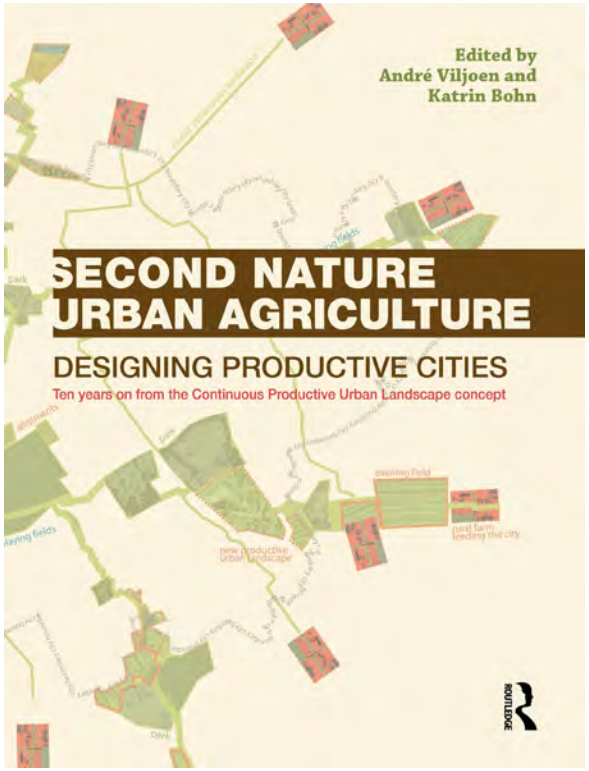


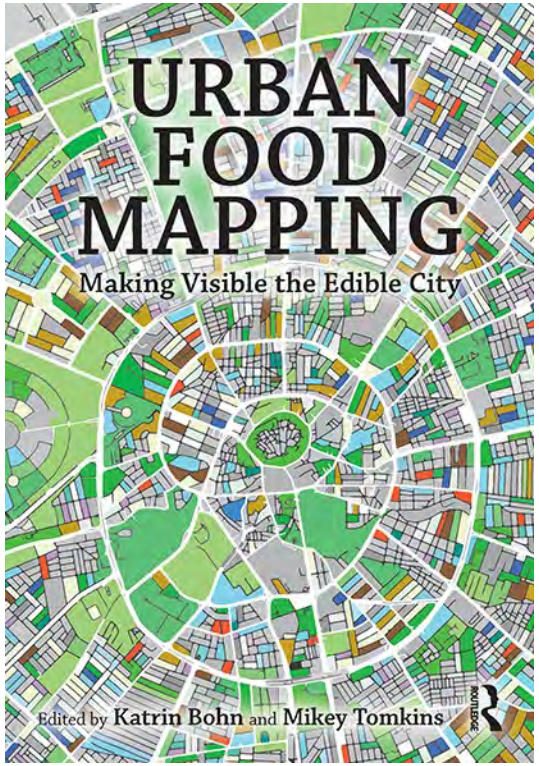
image: *An Opportunity Map (Diagram) for Carthage* – University of Brighton (Ian Bailey, Katrin Bohn) and City Team Carthage – 2022

THANK YOU!

Katrin Bohn
katrin@bohnandviljoen.co.uk







images: *The CPUL book* – Bohn&Viljoen – 2005 / *The Second Nature book* – Bohn&Viljoen – 2014 / *The Urban Food Mapping book* – Bohn and Tomkins – 2024