

stba

Low Density City

- 1 Sprawl
- 2 Edge Cities
- 3 Die Zwischenstadt
- 4 New Urbanism

From Slum to Garden City



Garden City, Eb.Howard, 1902

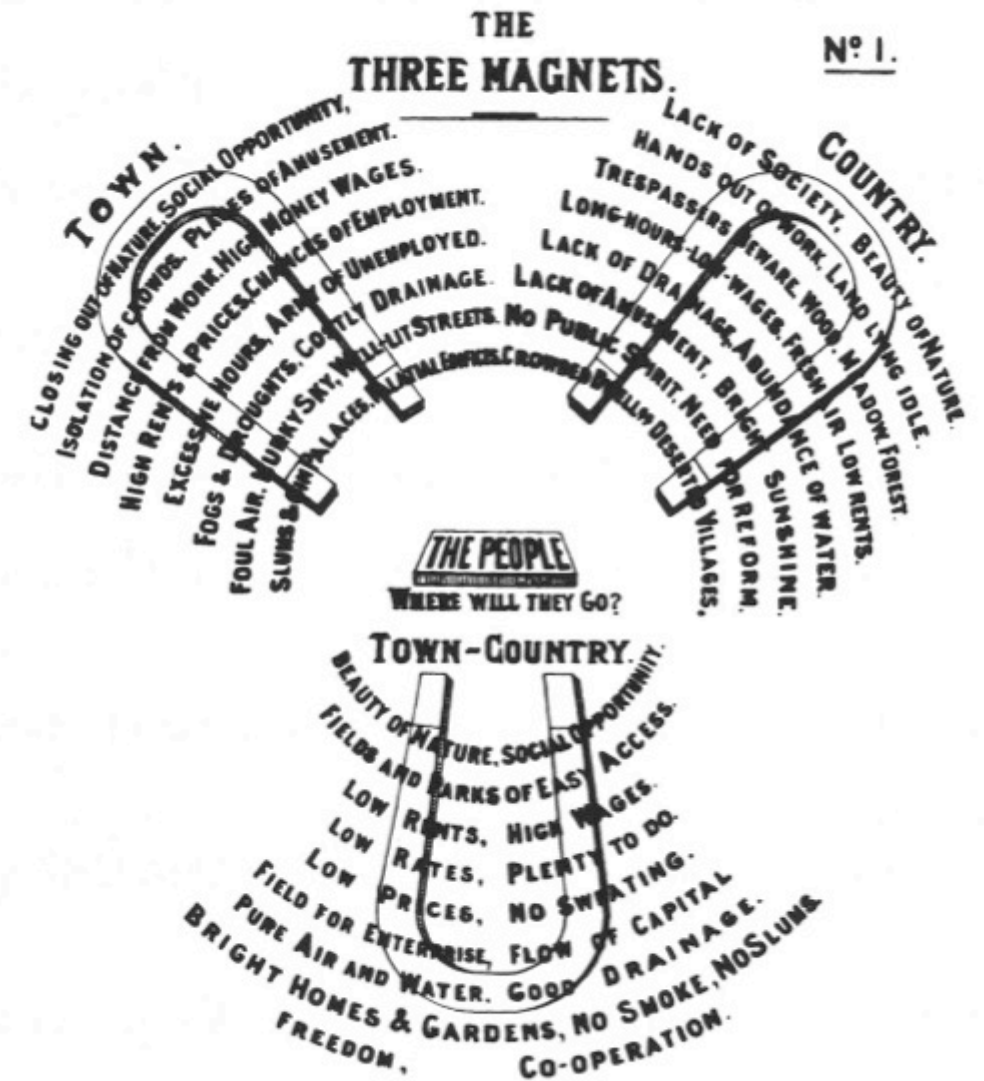
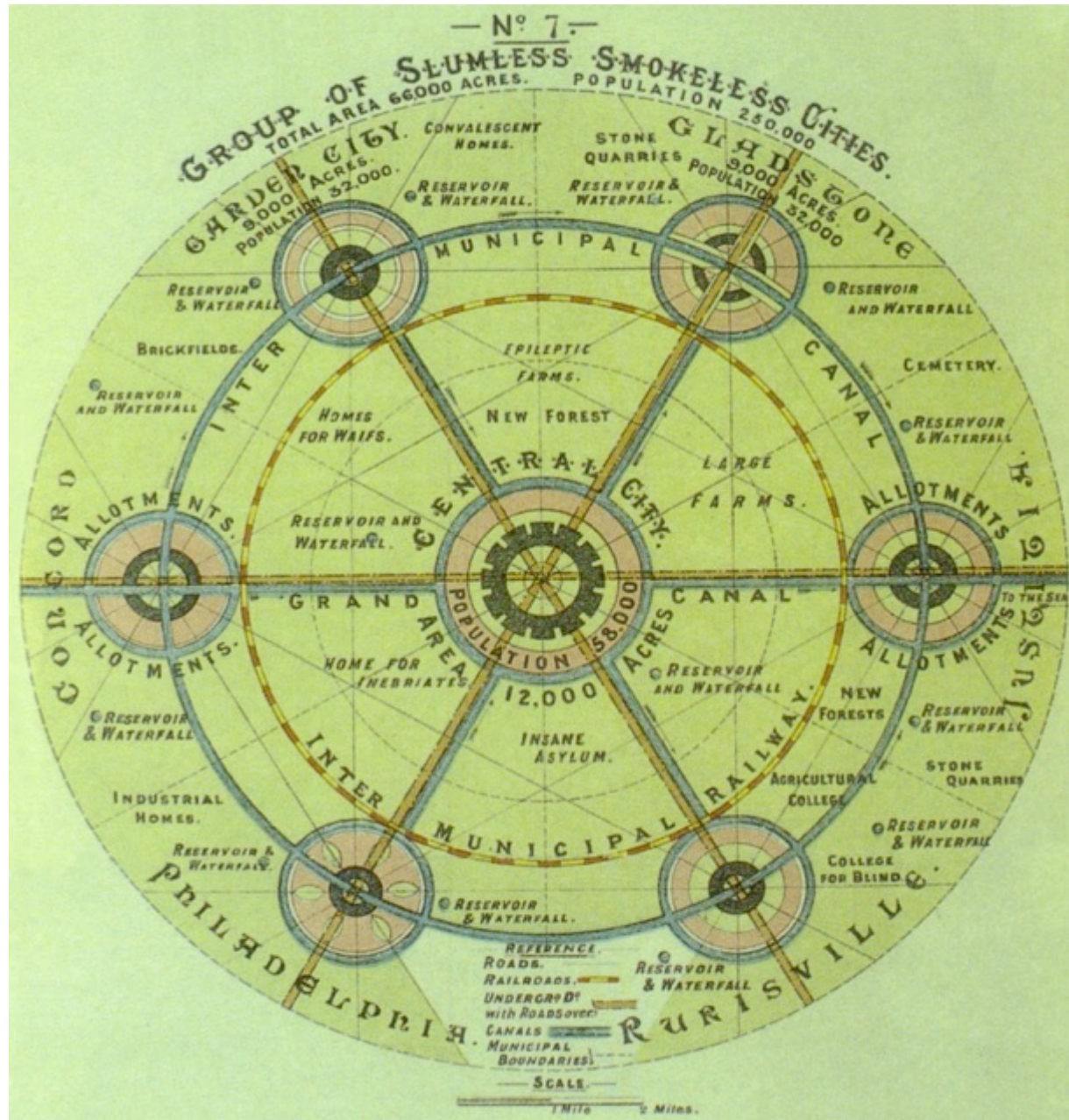
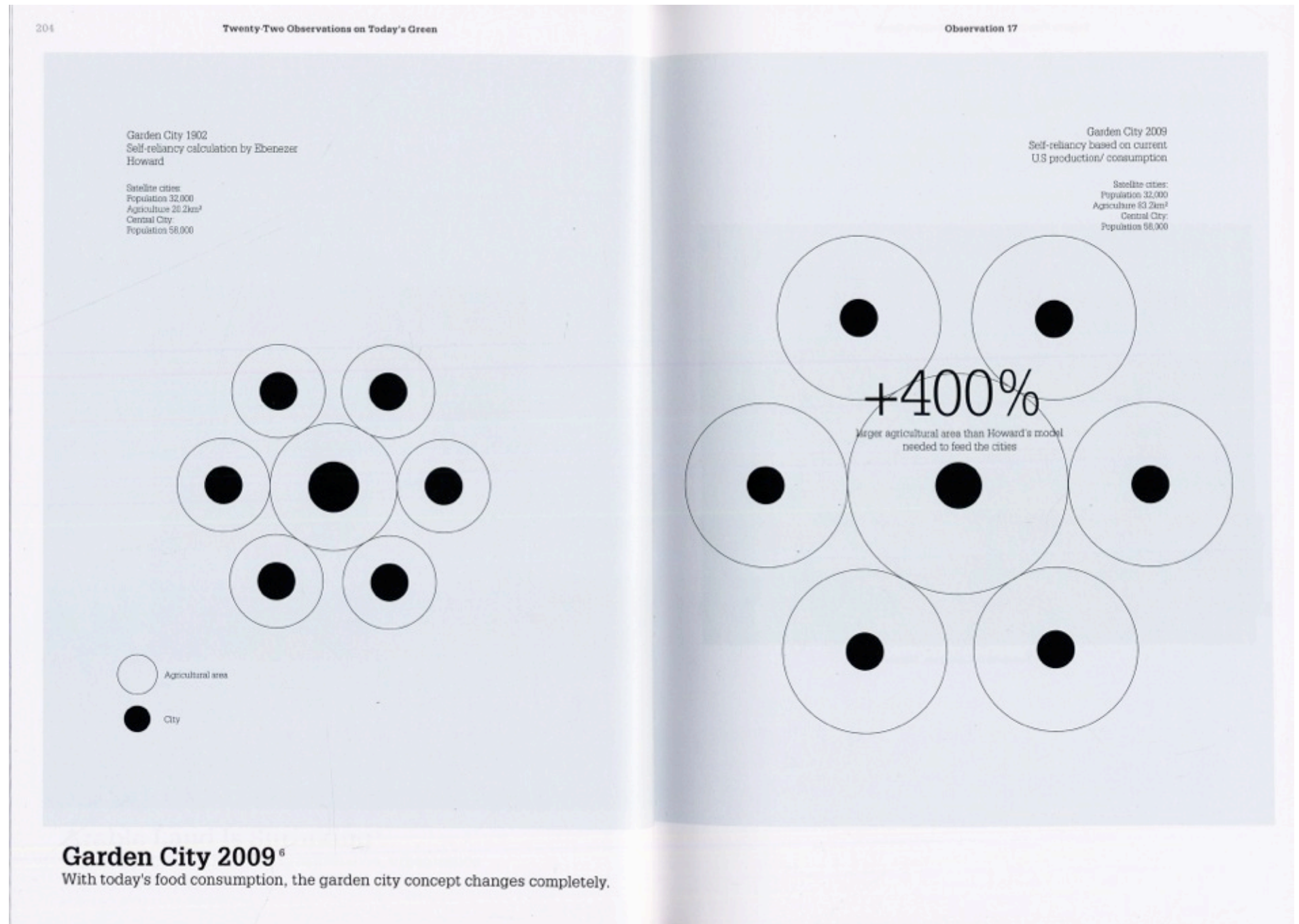
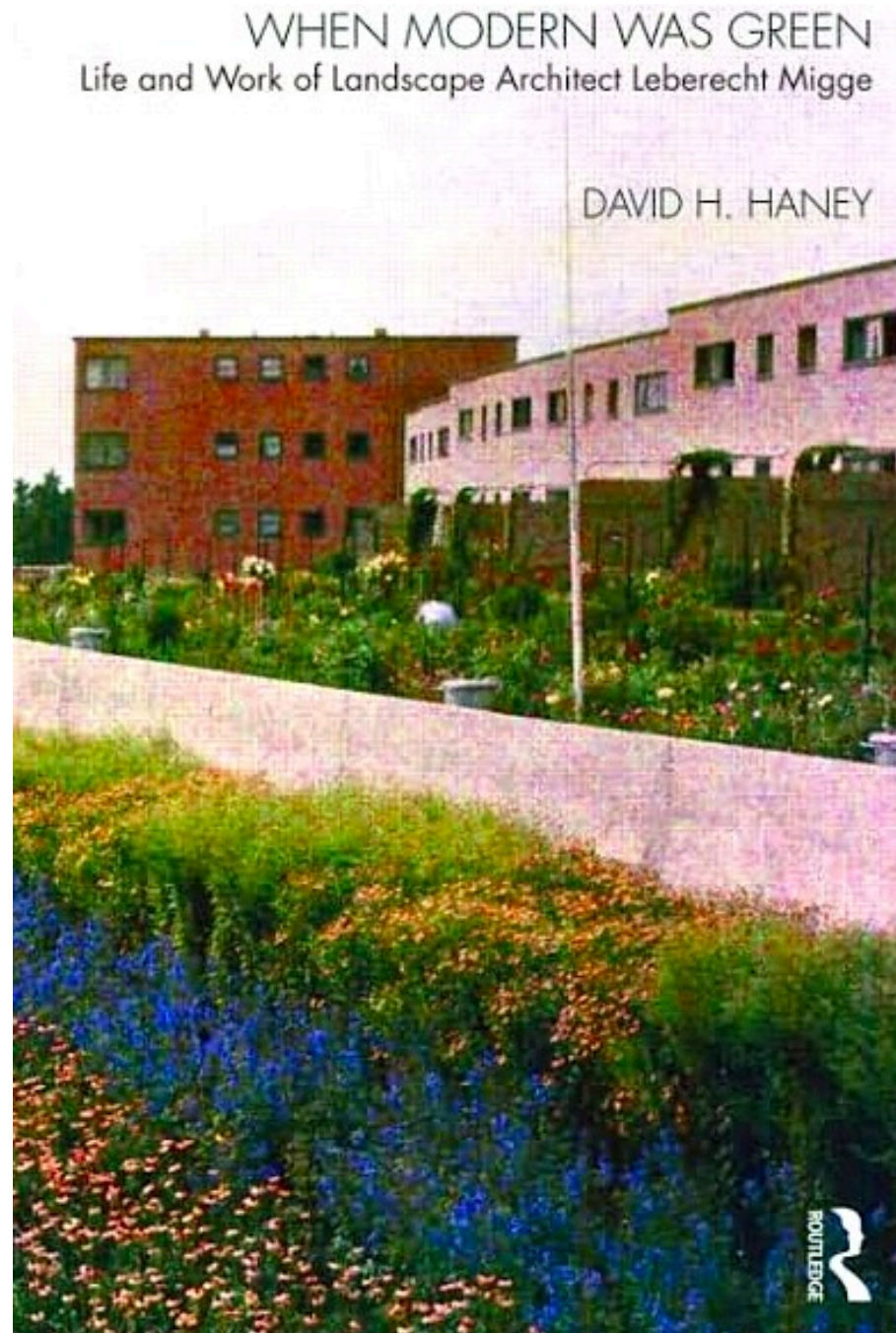


Fig. 1. Ebenezer Howard, *The Three Magnets. No. 1*, 1902, in *Garden Cities of To-morrow*.

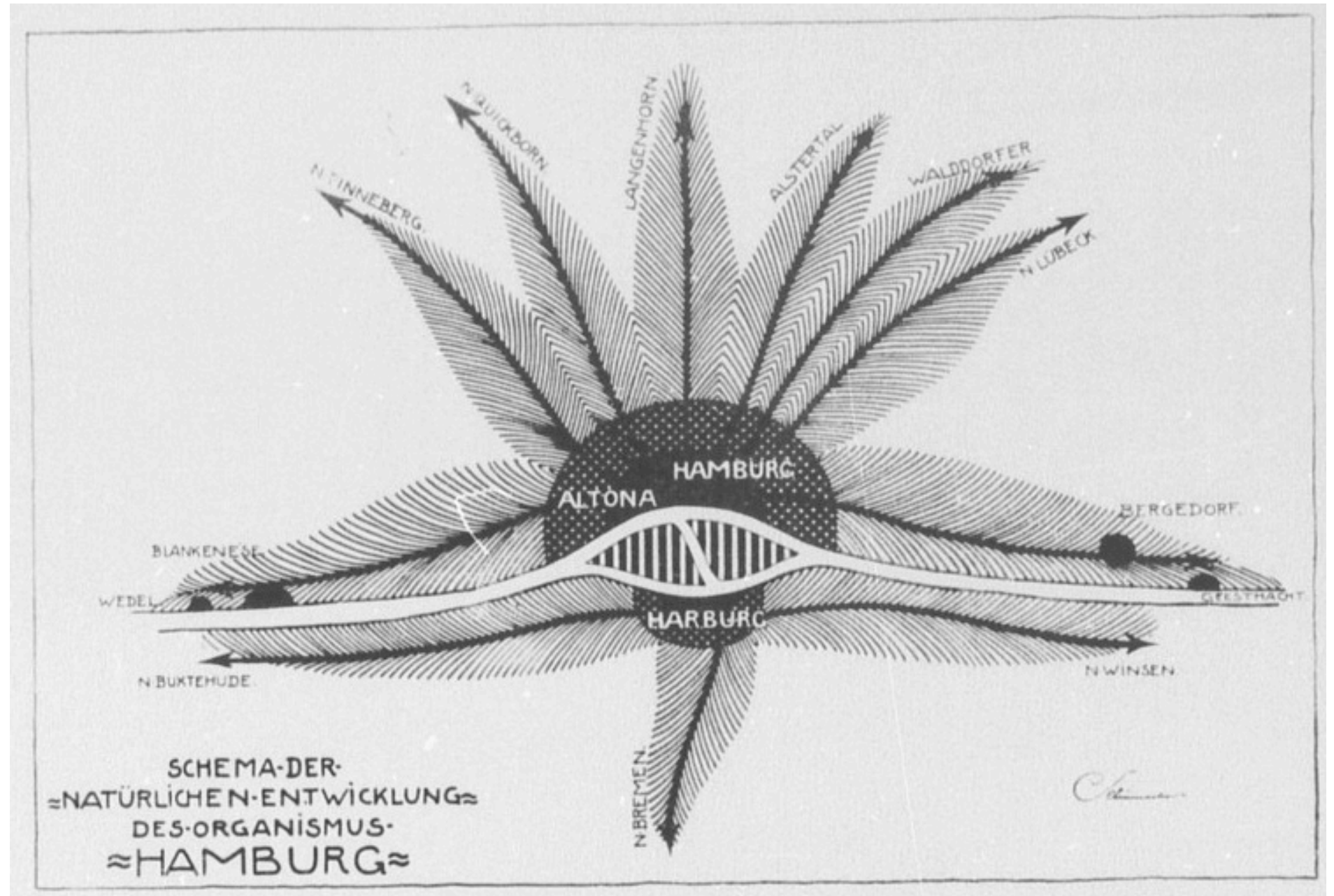
Garden City 1902 and 2009



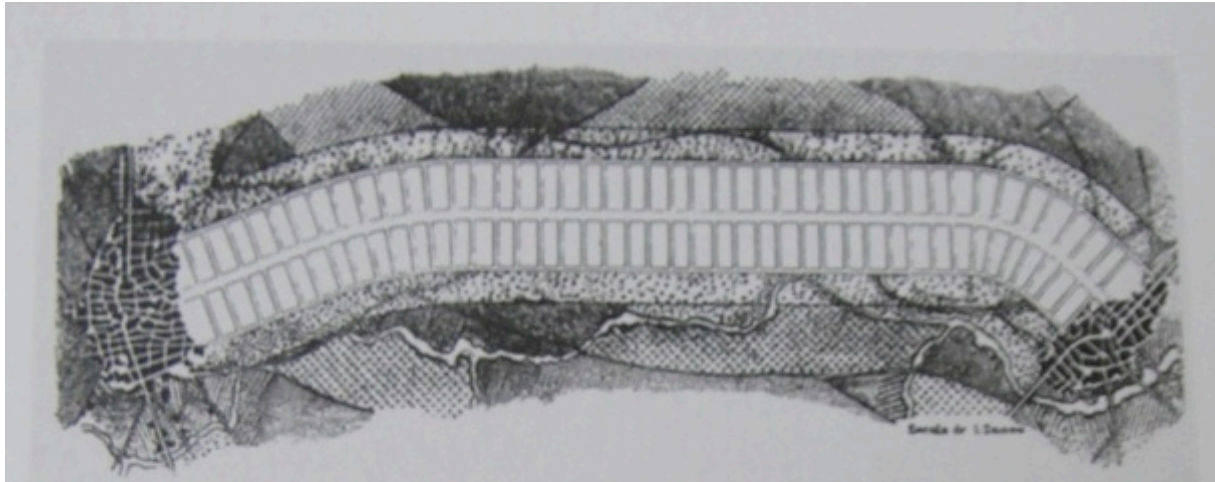
„Green Manifesto“ 1919, Leberecht Migge



„Federplan“ Hamburg 1920, Schumacher



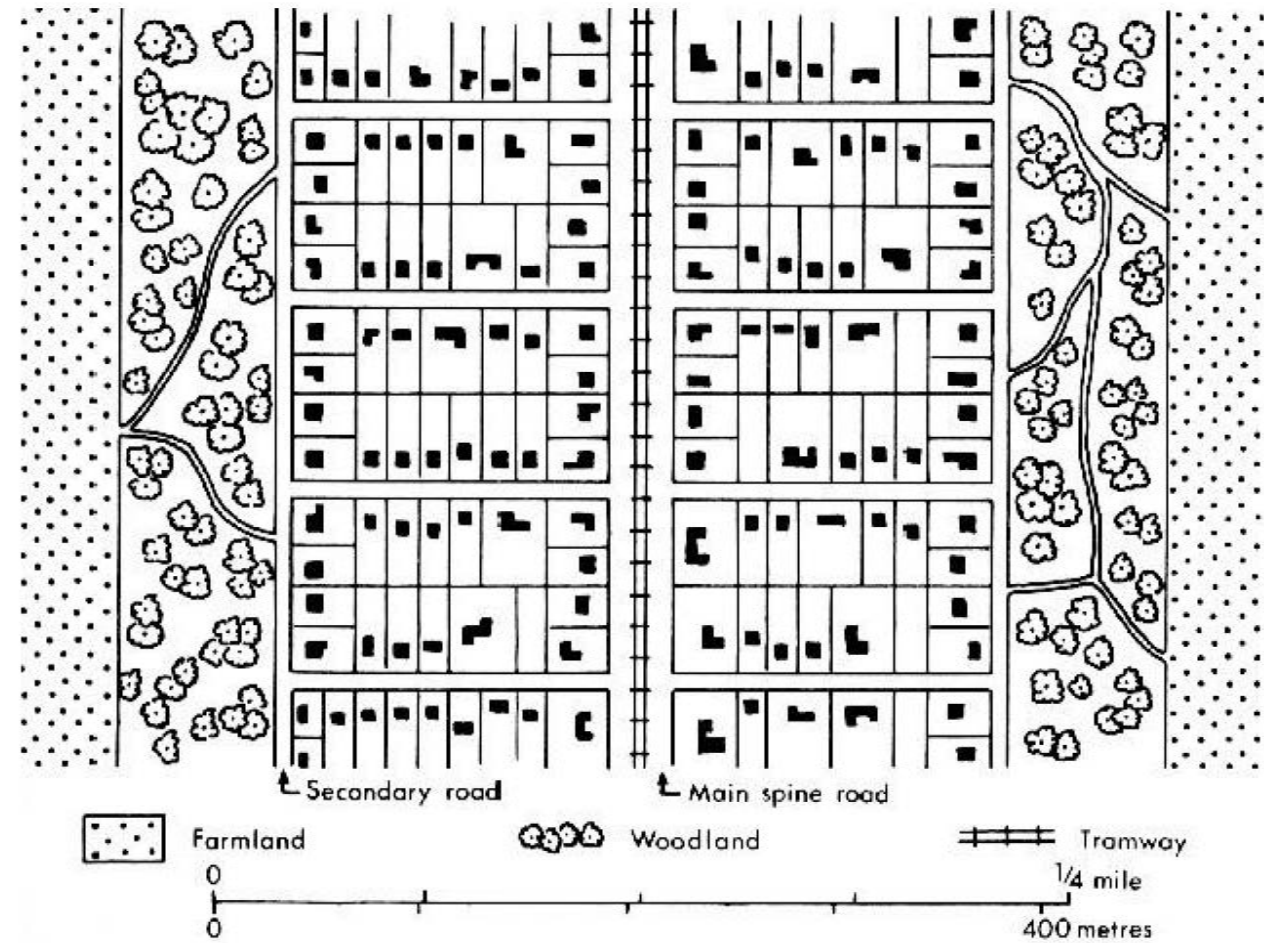
Ciudad Lineal, Soria y Mata, 1883



Arturo Soria y Mata, Planschema der Ciudad Lineal, 1902



Arturo Soria y Mata, Querschnitt der Hauptstraße der Ciudad Lineal, 1914



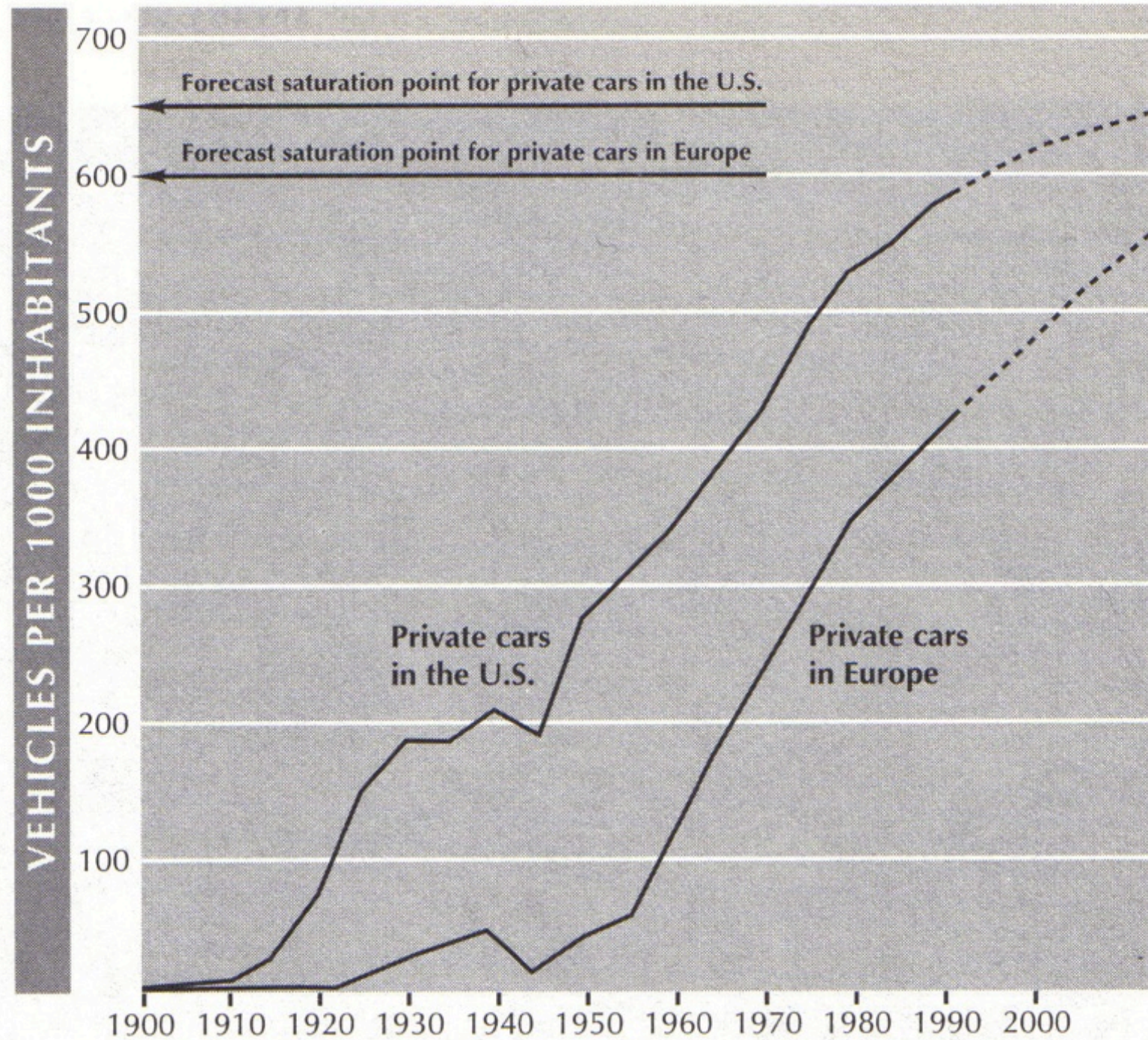
Greenplan Berlin, Albert Speer



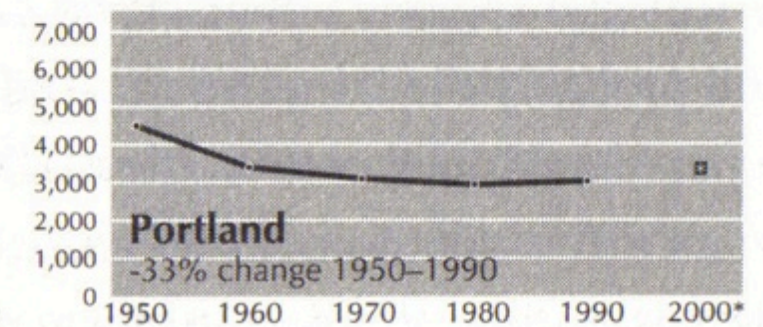
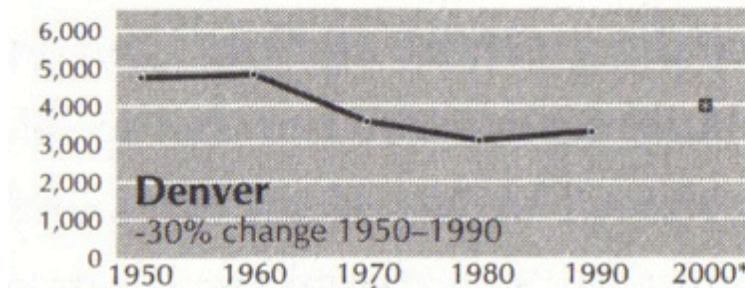
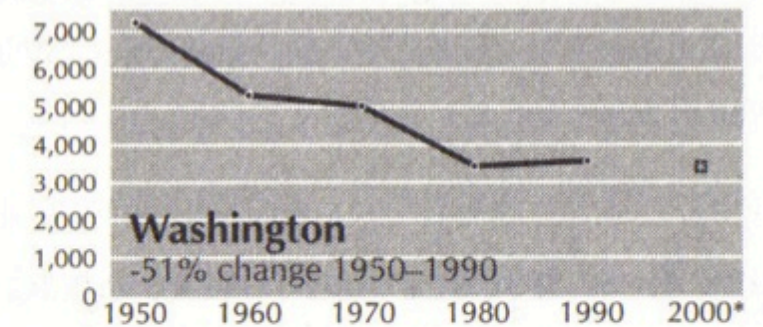
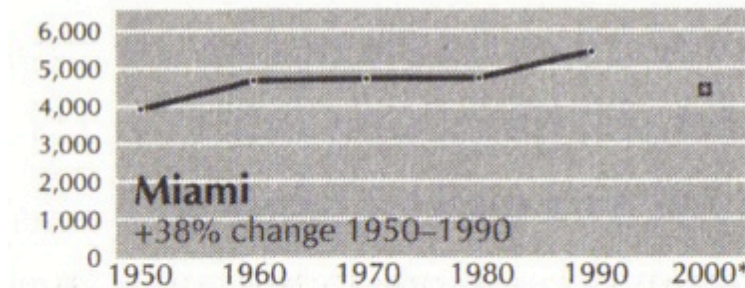
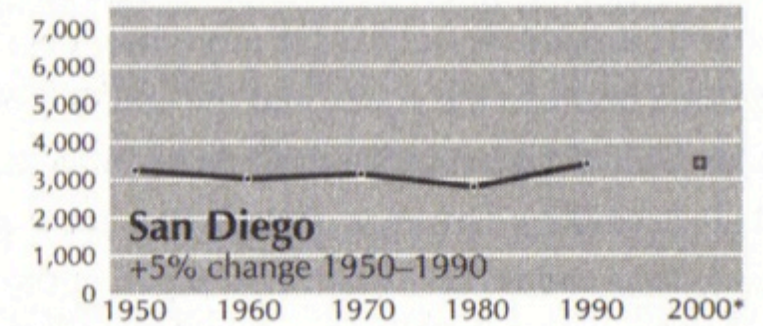
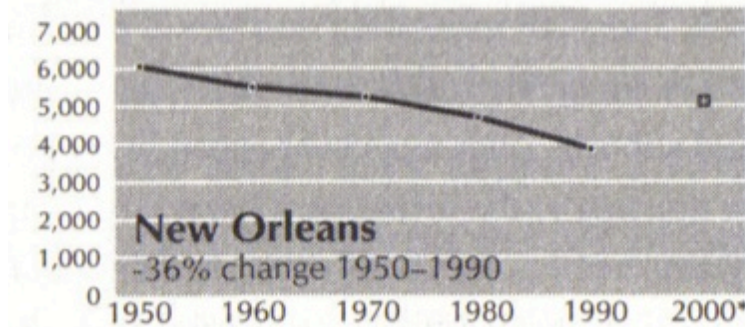
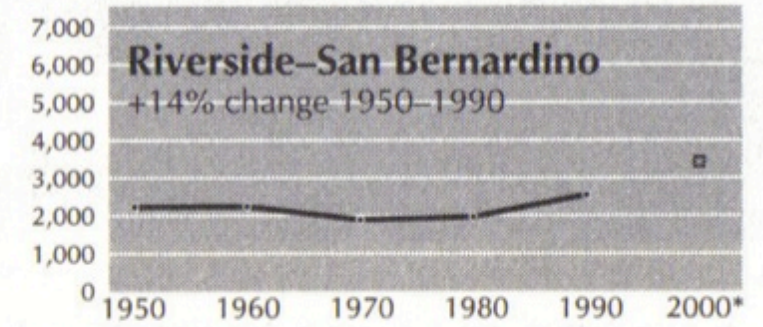
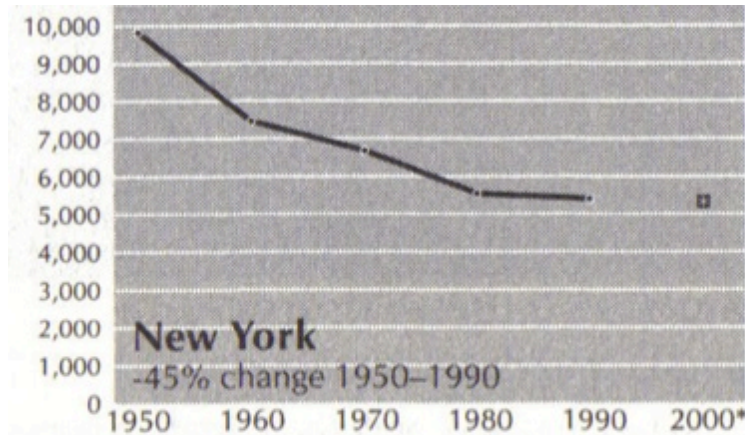
Sprawl

What is it?	A cultural concept used by reformers; Our culture's characteristic form of urbanism
Concept	“Homes for heroes”; Government support: mortgage insurance, highway building, low tax on fuel
Critique	social: segregation through “red-lining” economic: subsidize suburbs, abandon investment in cities ecological: overrun regional ecosystems, auto emissions
Theory	Melvin Webber: mobility + access JB Jackson: respect vernacular + popular lifestyles
Key projects	Private Automobile: agent of typological change Merchant Built Ranch House (Case Study Houses 1945-62) Northland Shopping Center, Detroit. Victor Gruen (1952-4) GM Technical Center, Detroit. Eero Saarinen (1948-1956) Connecticut General, Bloomfield. SOM + Isamu Noguchi (1954-7) Free University, Dahlem, Candilis Josic Woods + J Prouvé (1967)

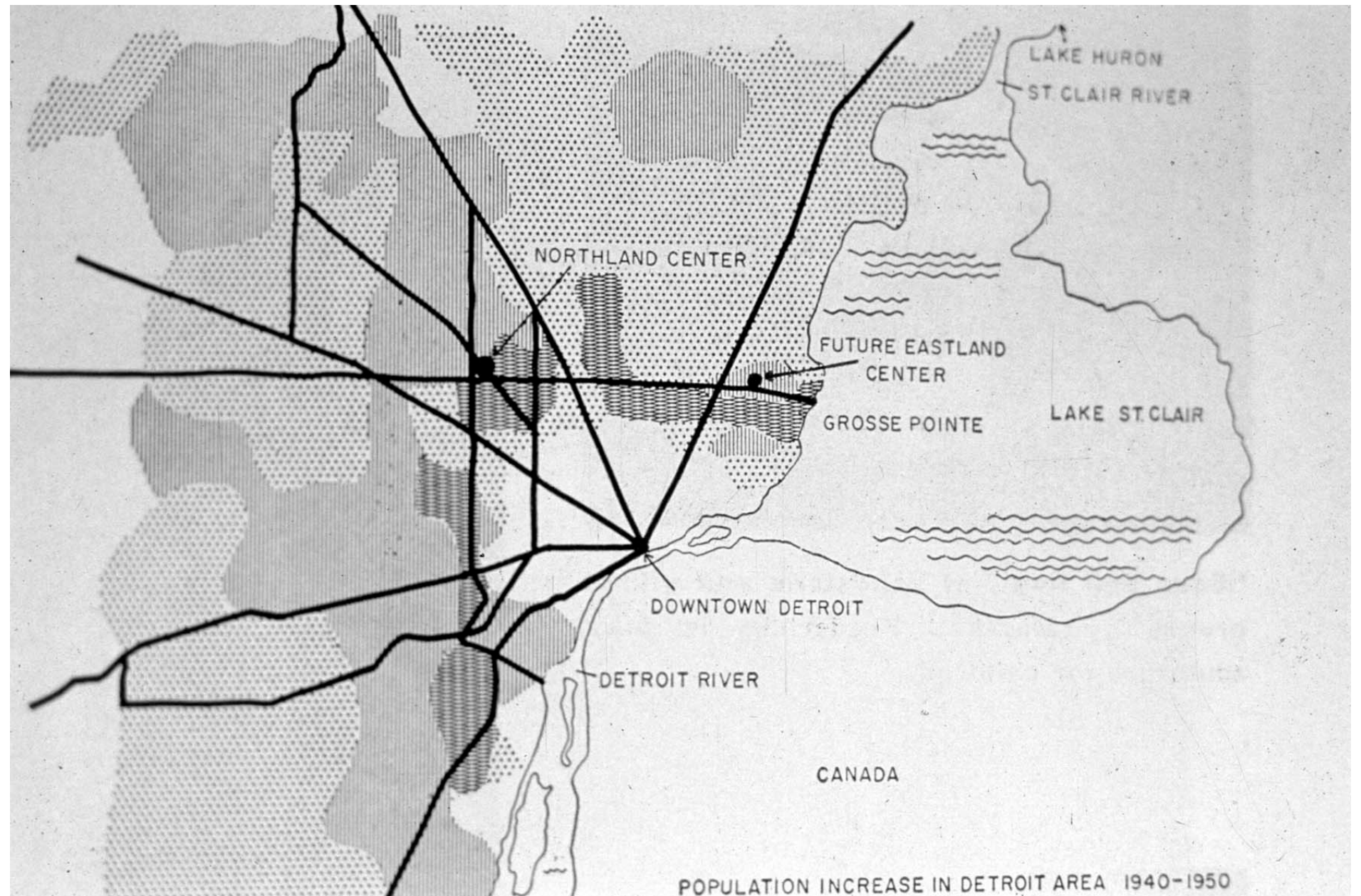
Private cars in the U.S. and Europe



American cities – density flattens out



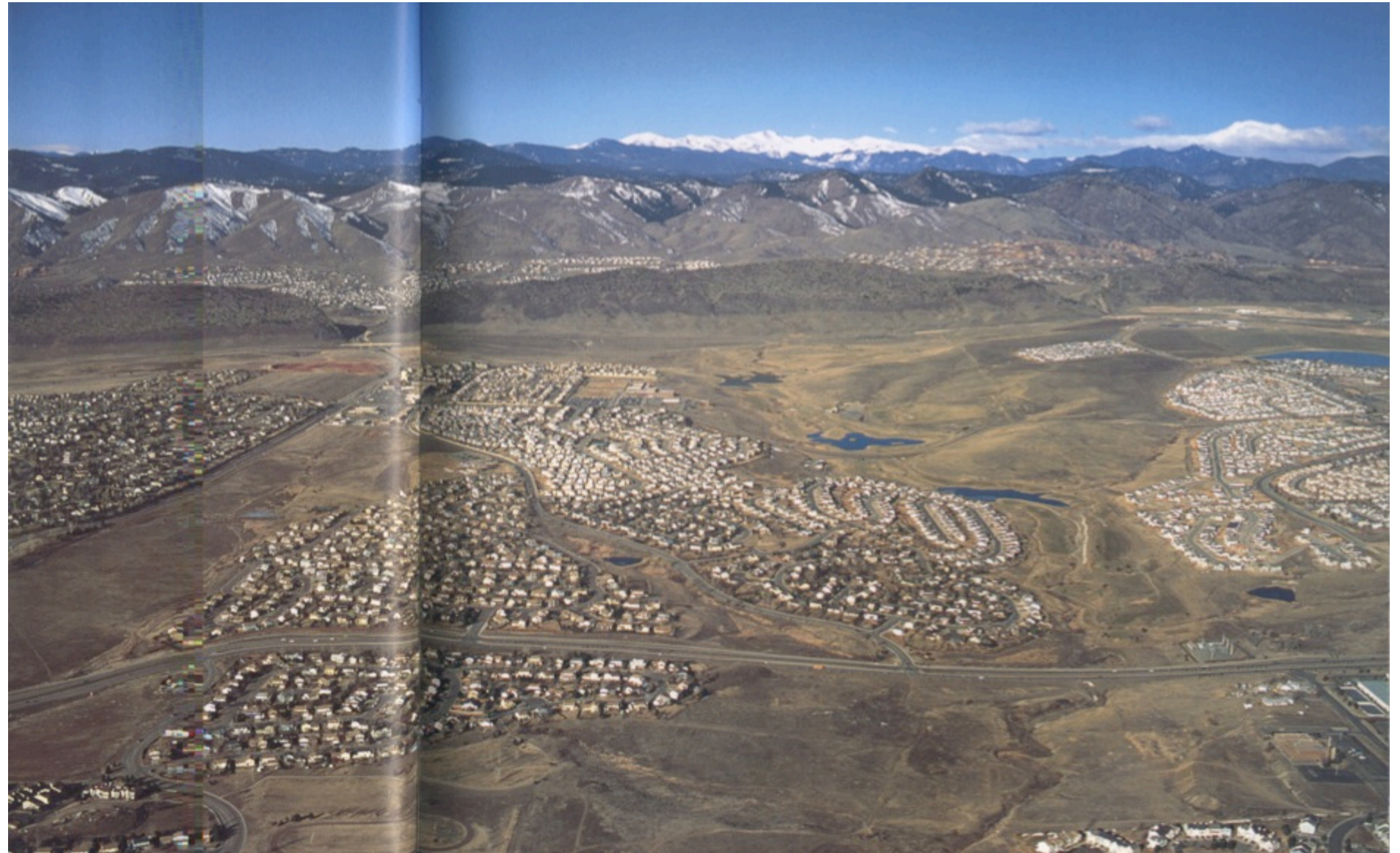
Shopping follows customers



Typologies: EKZ/RSC



Typologies: Leapfrog Subdivision



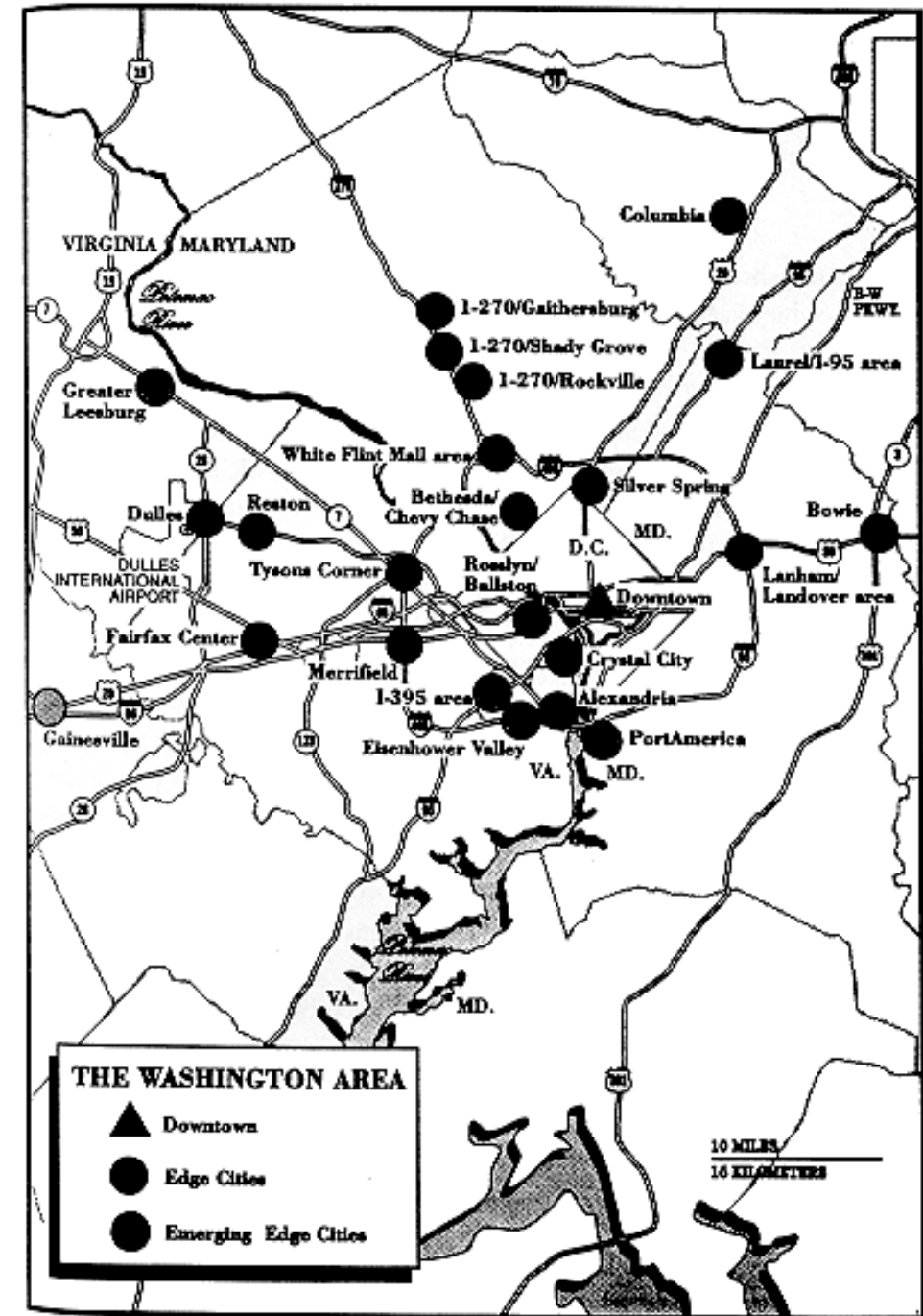
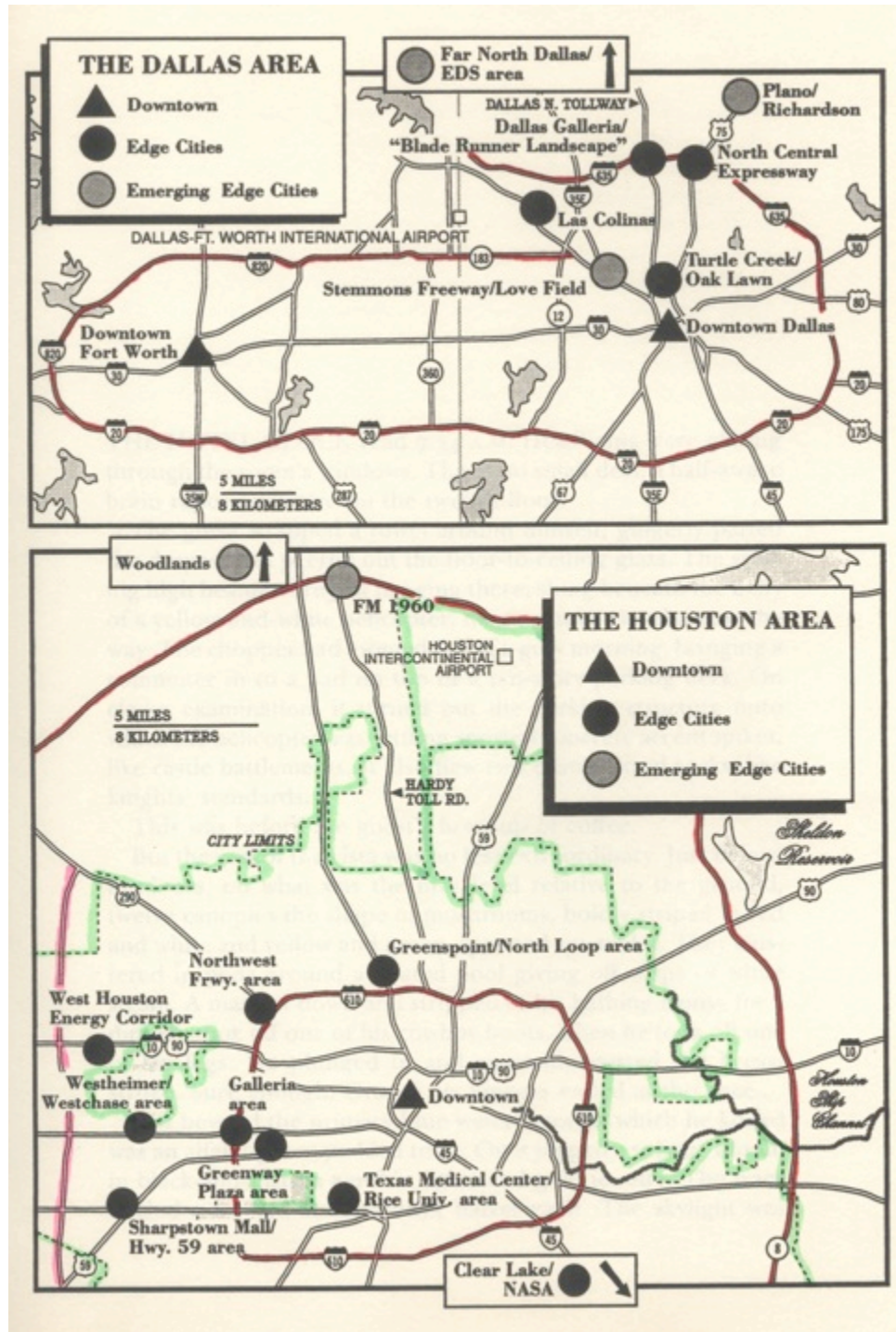
Typologies: Logistic



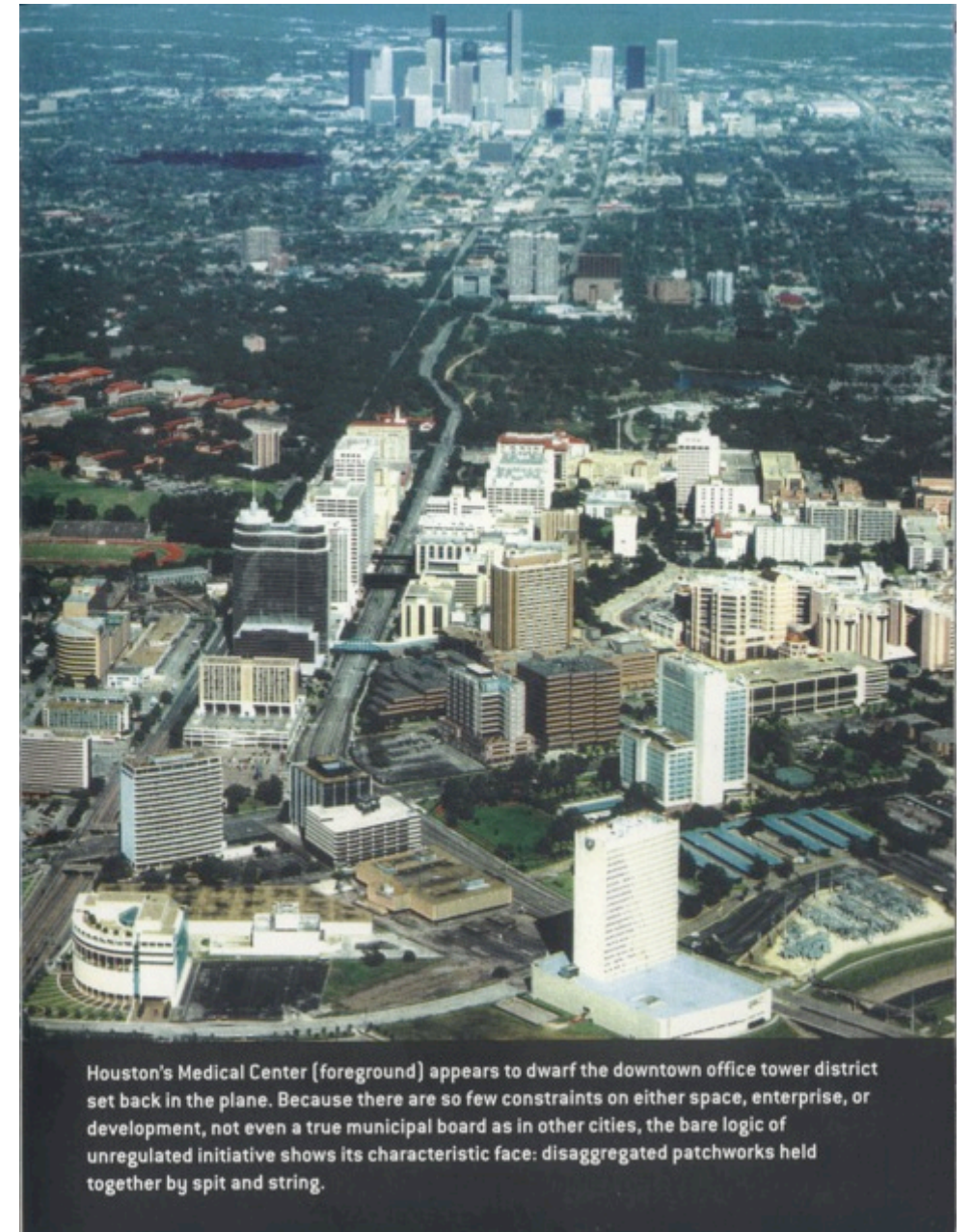
Edge Cities

Concept	a new settlement based on styles of life, patterns of work, free time exploiting regional infrastructure + cheap land
Definition	1) 500 km ² office space 2) 60 km ² retail space; 3) more jobs than bedrooms 4) perceived by the population as one place 5) no development 30 years ago
Thesis	how cities are being created worldwide
Key projects	Edge city examples: Houston-Medical Center, Galleria... Washington D.C.-Tyson's Corner

Edge Cities: exploiting regional infrastructure



Edge Cities: Texas Medical Center, Houston



Edge Cities: Tysons Corner, VA



Die Zwischenstadt

Concept: between- place and the world, space and time, city and the land.
it is a given and develop its hidden qualities.

Thesis: it is a given and develop its urban qualities

Precedents: Collage City (Rowe+Koetter): composition of fragments;
Learning from LV (VS-B): recognize function of everyday forms of architecture

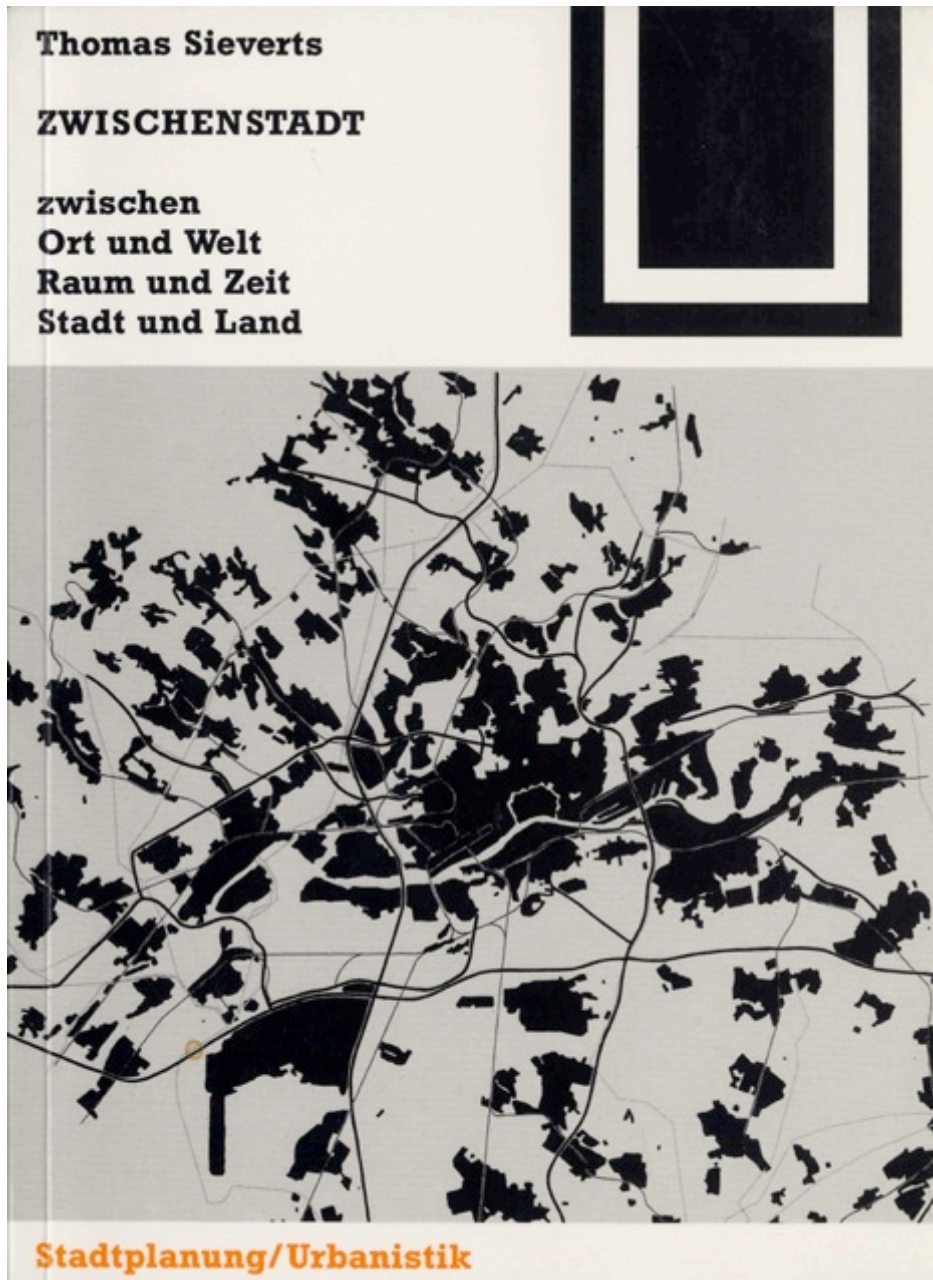
Theory: confirms the build-out of the city region
the dissolution of the compact European City
end of golden age of planning from above

Design elements:
edges
XXL structures
bands
temporary Centers

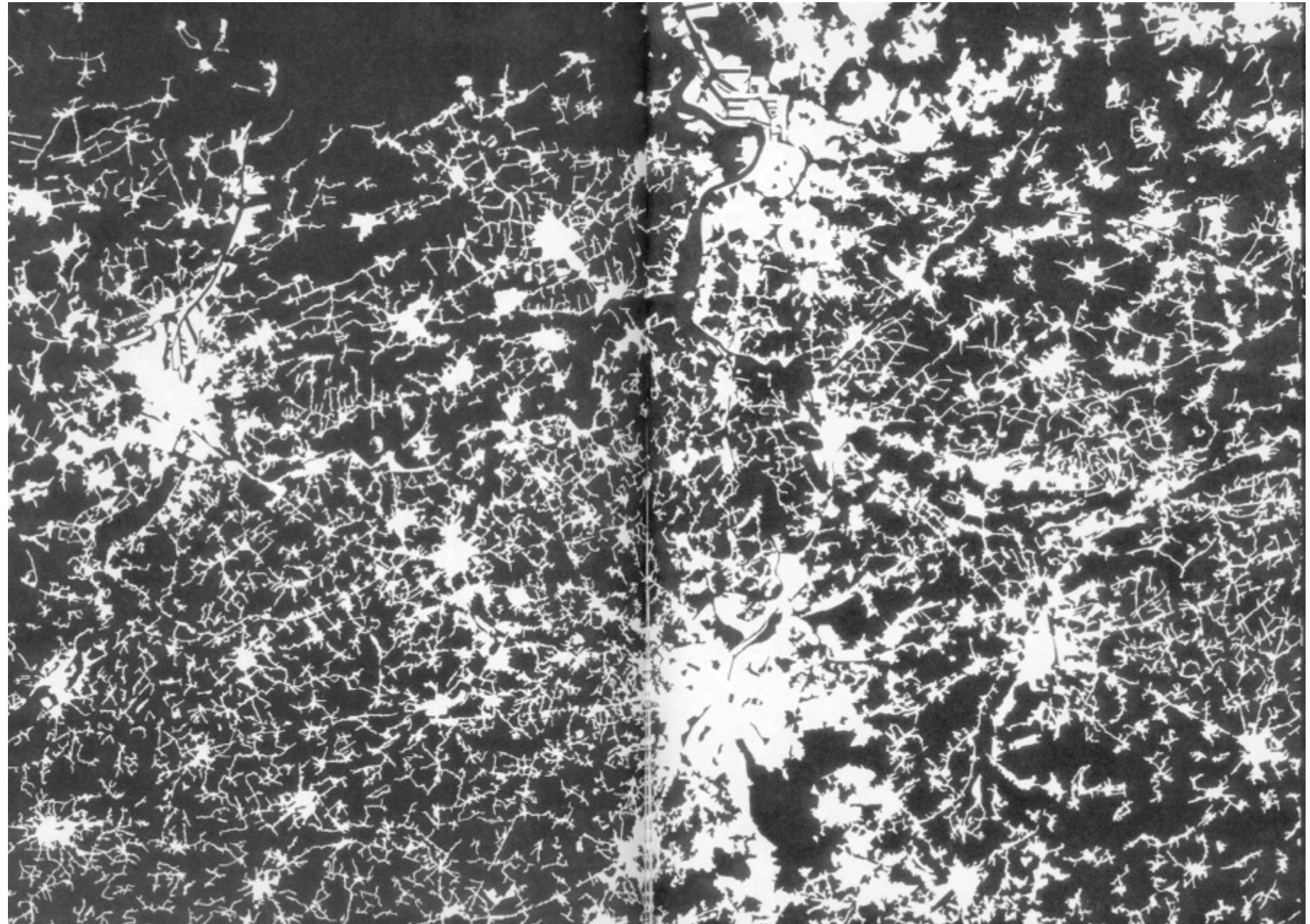
Spatial relationships:
patchwork urbanism
compressed space
new regional sub-centers
fragmented public realm

Positions:
new/old heimat
new urbanism
no design
new pragmatism

Die Zwischenstadt



The flemish diamond



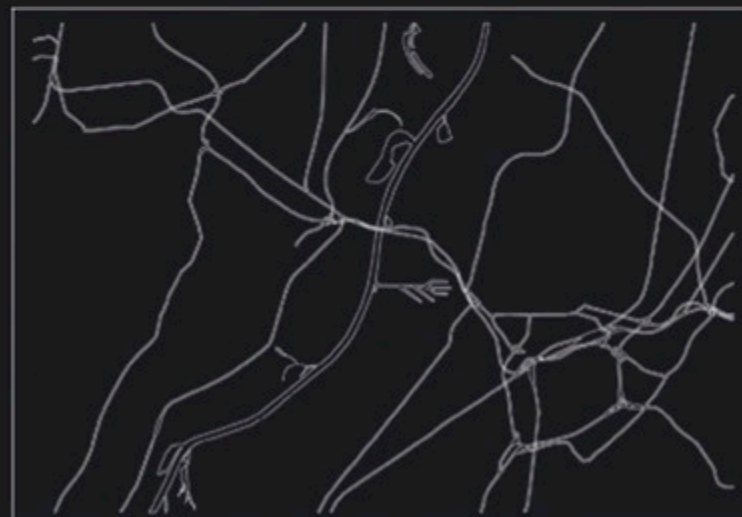
Ränder



Pamina

bezeichnen die Kontaktlinie von „Stadt“ und „Landschaft“. Die Zwischenstadt ist gekennzeichnet durch vielfältige Formen der Durchdringung. Erkennbar sind Ausstülpungen und Einstülpungen („Finger/Fjorde“), Einschlüsse und Inseln. Im Gegensatz zur kompakten Stadt hat der Rand der Zwischenstadt einen fraktalen Charakter: den einer gegen unendlich tendierenden „Küstenlinie“.

Bänder



Pamina

aupt-Infrastruktur- oder Bewegungslinien, welche den Raum in Längsrichtung verbinden und in Querrichtung trennen. Sie bezeichnen Straßen, Schienen, Fließgewässer, Hochspannungsleitungen. Die Anzahl von Kreuzungspunkten von 2 oder mehr Bändern bestimmt den Grad von Erschließung/ Vernetzung.

Clone



Monokulturelle Siedlungs- und Gewerbeflächen lassen eine gleichförmige Prärie mit minimaler Ortsspezifität entstehen. Sie besetzen mit immensem Flächenverbrauch als monofunktionale Patches die Freiräume zwischen den Infrastrukturlinien. Strukturell reichen sie von der einförmigen Großwohnsiedlung bis zum Einfamilienhausgebiet geringer Dichte.



Pamina

Temporäre Zentren



Flächen, die temporär für massenwirksame Veranstaltungen wie Festivals, Skatenights, Raves, Kirmes, Märkte, Volksfeste etc. genutzt werden. In dieser Zeit sind sie urbane Punkte höchster Intensität, ansonsten liegen sie im Dornrösschenschlaf. Manche dieser Flächen werden für Ereignisse vorgehalten, oftmals wird eine Fläche auch informell zu Ereignisraum umfunktioniert.



Pamina

Patchwork Urbanism



Patchwork Urbanismus

Zwischenstadt bildet ein räumlich disperses Patchwork aus in sich meist homogenen Strukturen. Die innere Gleichheit ist meist ebenso Folge wie Verursacher von Segregation. Ein übergreifender räumlicher Zusammenhang ist nicht erkennbar.



Pamina

Die Zwischenstadt: Lifestyle



NEUE HEIMAT 2
Electronic Music Made in Germany

Terranova, Sono, DJ Friction, Märtini Brös, Peaches, Smash TV, Heiko Laux, 2 Raumwohnung, Sascha Funke, Sven Väth, Zombie Nation, Lexy & K-Paul feat. Atomekk Dogg a.m.m.

2CD out 01.07.2002 www.ministryofsound.de

Tourdates: **12. Juni** | Köln | Club 672 || **14. Juni** | Stuttgart | M1 || **21. Juni** | Nürnberg | Kosmo || **20. Juli** | Dresden | Parkhotel || **27. Juli** | Kiel | Die Pumpe

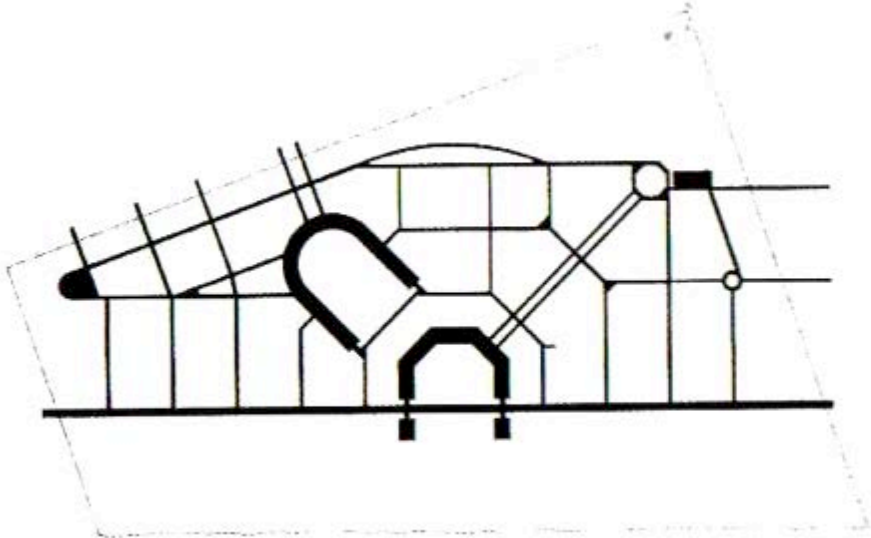
Temporary Public Spaces



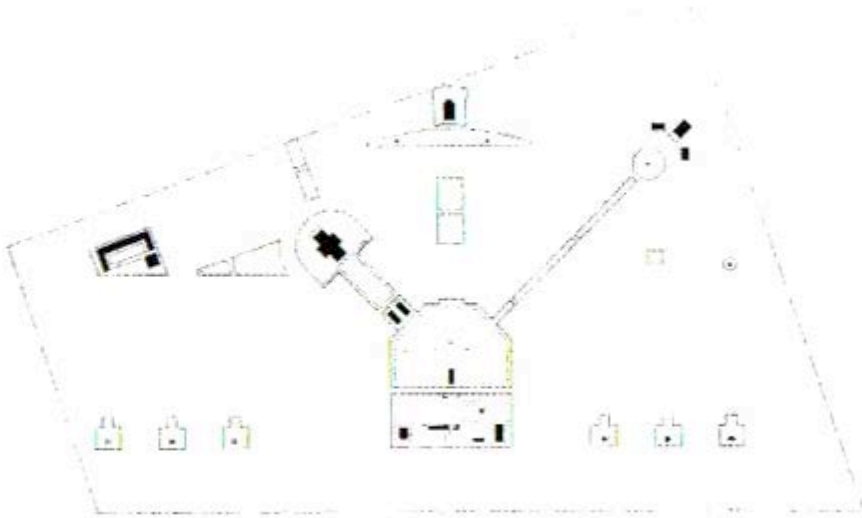
New Urbanism

- Concept:** promotes walkable neighborhoods
influenced by urban design standards that were prominent until the rise of the automobile in the mid-20th century
closely related to regionalism and the broader concept of smart growth.
- Thesis:** Money Making Machine
postmodern city planing
- Precedents:** F.L. Olmstead. Riverside, Chicago (1877)
D. Burnham, Chicago Plan (1909)
Neighborhood Unit, C. Parry (1929)
- Theories:** The American Vitruvius (1922), W. Hegemann, E. Peats
Duany and Plater-Zyberk, Miami
Charter of New Urbanism (CNU) 1992
- Key Projects:** Duany Plater-Zyberk, Seaside, FL (1982) 36HA;
Stern, Robertson ua. Celebration, FL (1995)
Peter Calthorpe, SF Hope IV
Program: West Lake Street, Chicago
Peter Calthorpe, Stapleton Airport Urban District, Denver

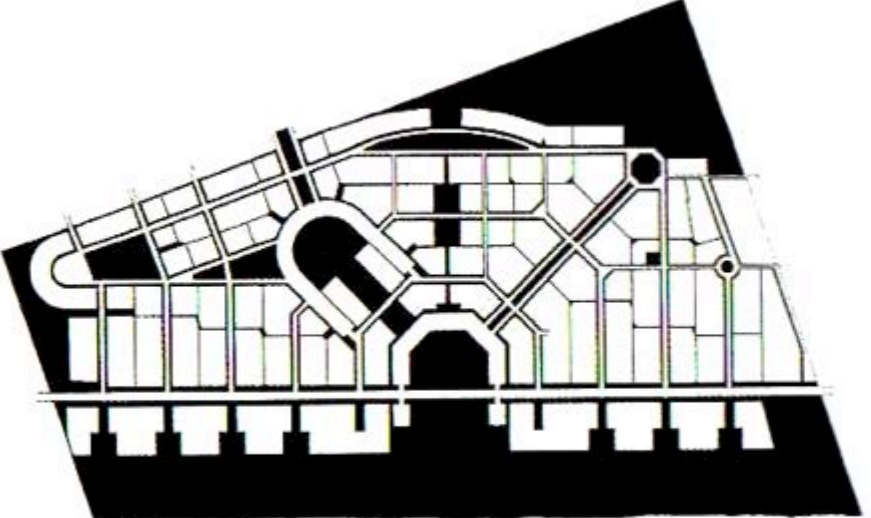
Seaside, Florida, 1992 (Duany Plater-Zyberk –DPZ)



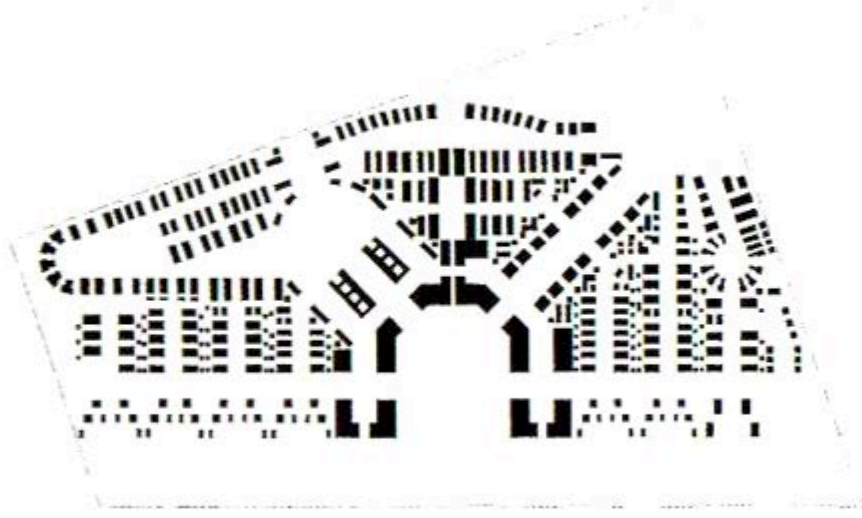
3.21a Vehicular System



3.21c Civic Buildings



3.21b Pedestrian System



3.21d Private Buildings

Seaside Florida



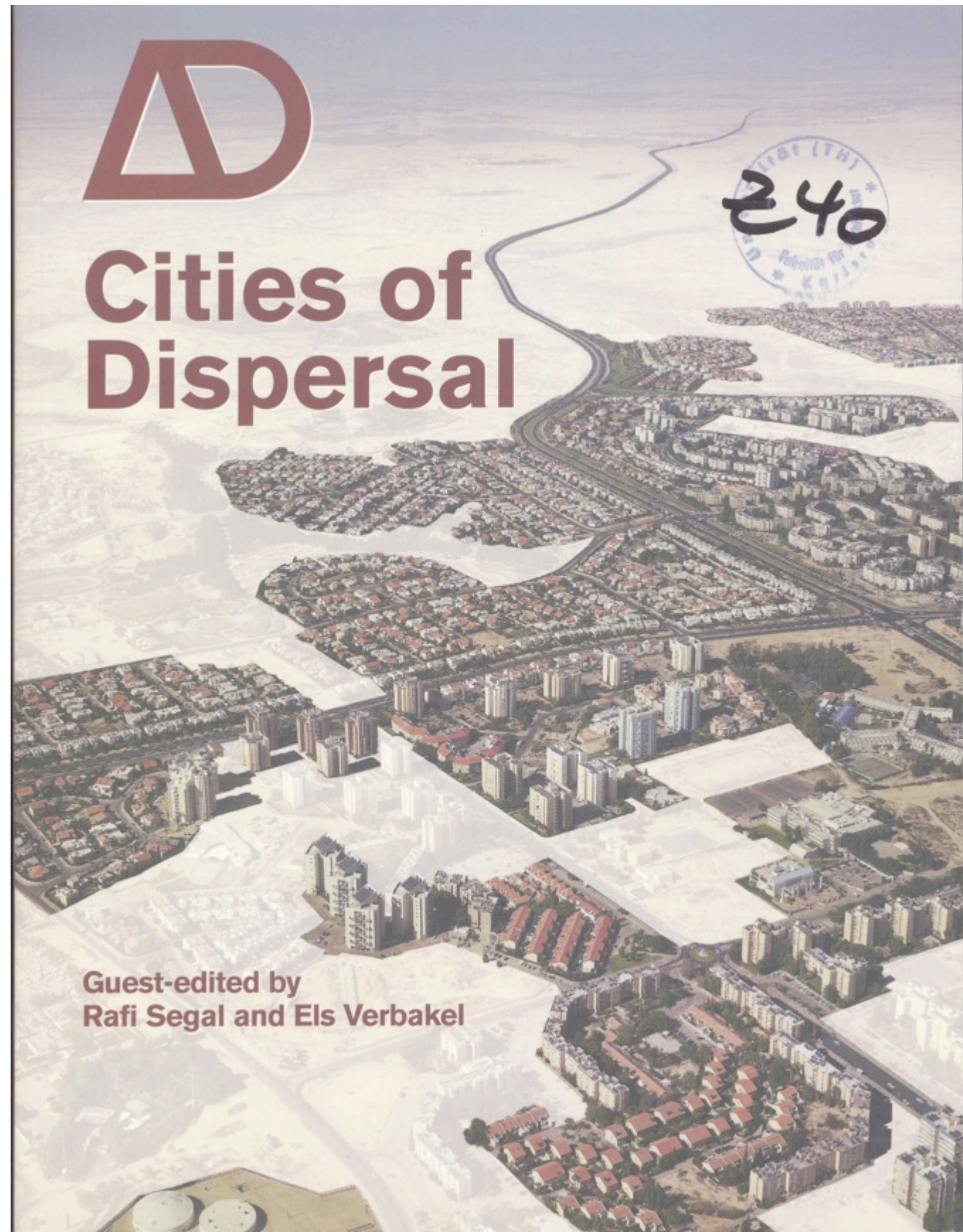
European New Urbanism



Low Density City

- Concept:** City: concentration, plurality, complexity
Low-density City: dispersion, segregation, standardization
- Critique:** conflict between center + periphery -
whole city-region as the framework
- Thesis:** replace sprawl, periphery, outer city with “Low Density Urbanism”
our culture’s characteristic form of city (urbanism)
urban complexity and order without traditional density
- Theory:** not centrality, but access
balancing mobility and access and sustainability goals.
mobility as link between NA sprawl + Eur Zwischenstadt
- Key projects:** Los Angeles, Orange County
Belgium, Switzerland (valleys), Holland (Randstadt)

Low Density City



Critique of spread out low density city

- low resilience in monofunctional urban pattern
- high emissions due to vehicle miles traveled
- heat islands resulting from road surfaces, parking, and roofscape
- predominant use of building materials with low albedo
- nature as symbolic and decorative only
- low social cohesion in a community of individuals

stba

GREEN

- 1 Science
- 2 Normative and green urban development
- 3 Design

Green

Goal

To reposition Landscape architecture from a decorative and spiritual work to a performative and social discipline.

City is part of nature

- reaffirms the city as a platform for biodiversity and multi-functionality;
- includes river corridors, greened infrastructure, and the future city's roofscape;
- seeks to cool the city, clean its air, and augment the food and fuel supply.

Tradition of gardening and wilderness as a function of urban life

How to make cities resilient to climate change risks?

Science

Performance of vegetation

I Chemics of plants, Effects

Carbon binding and storage

Production of organic matter, building material and energy

Oxygene release

II Physics of plants and trees

Plants reduce surface temperature through heat storage capacity

Plants reduce temperature through transpiration and release of humidity

Plants reduce acoustic pollution, capture dust particles, protect from wind and direct sun

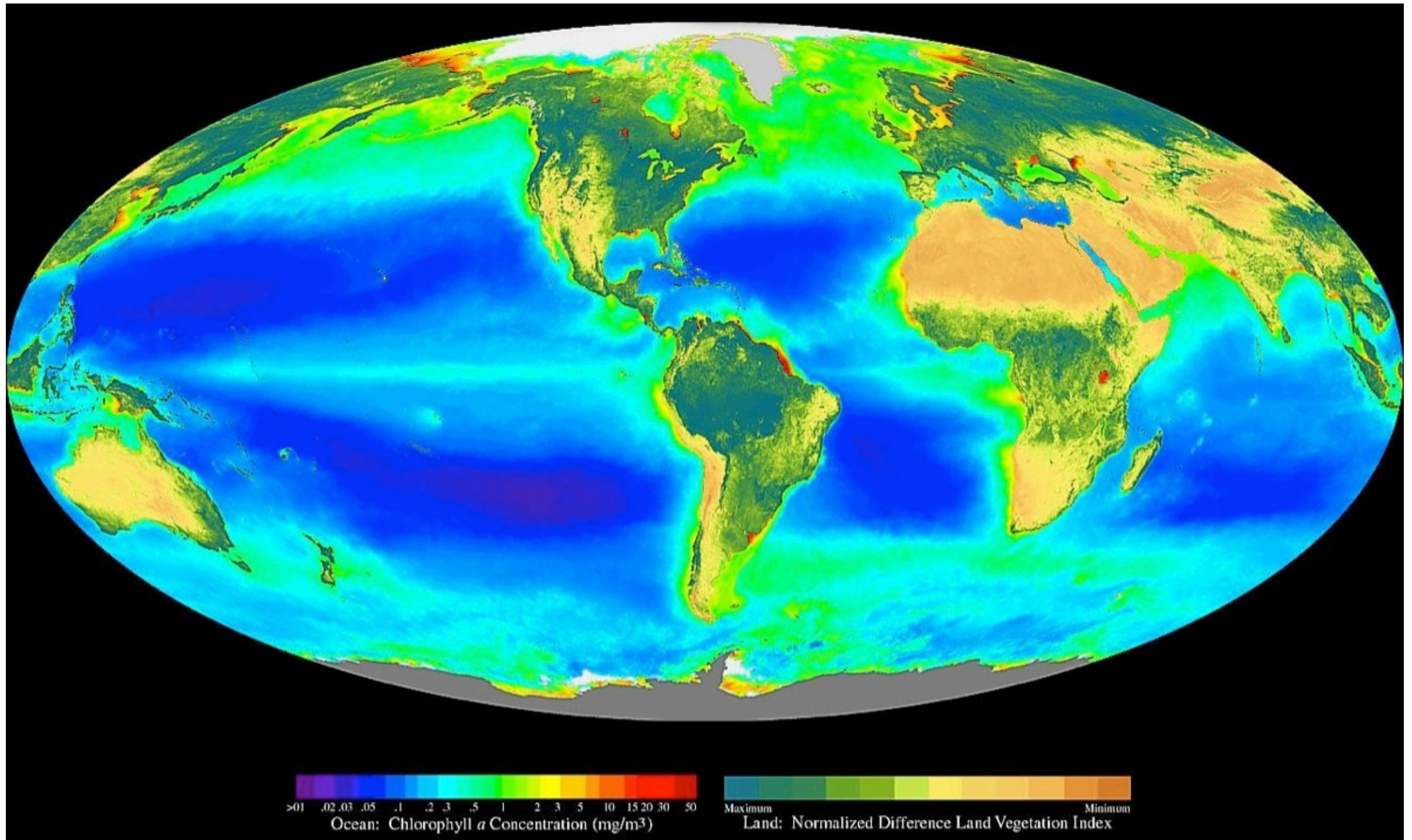
Food

Calculations on food

Food and transport

Harvest

Chemics of plants - Photosynthesis



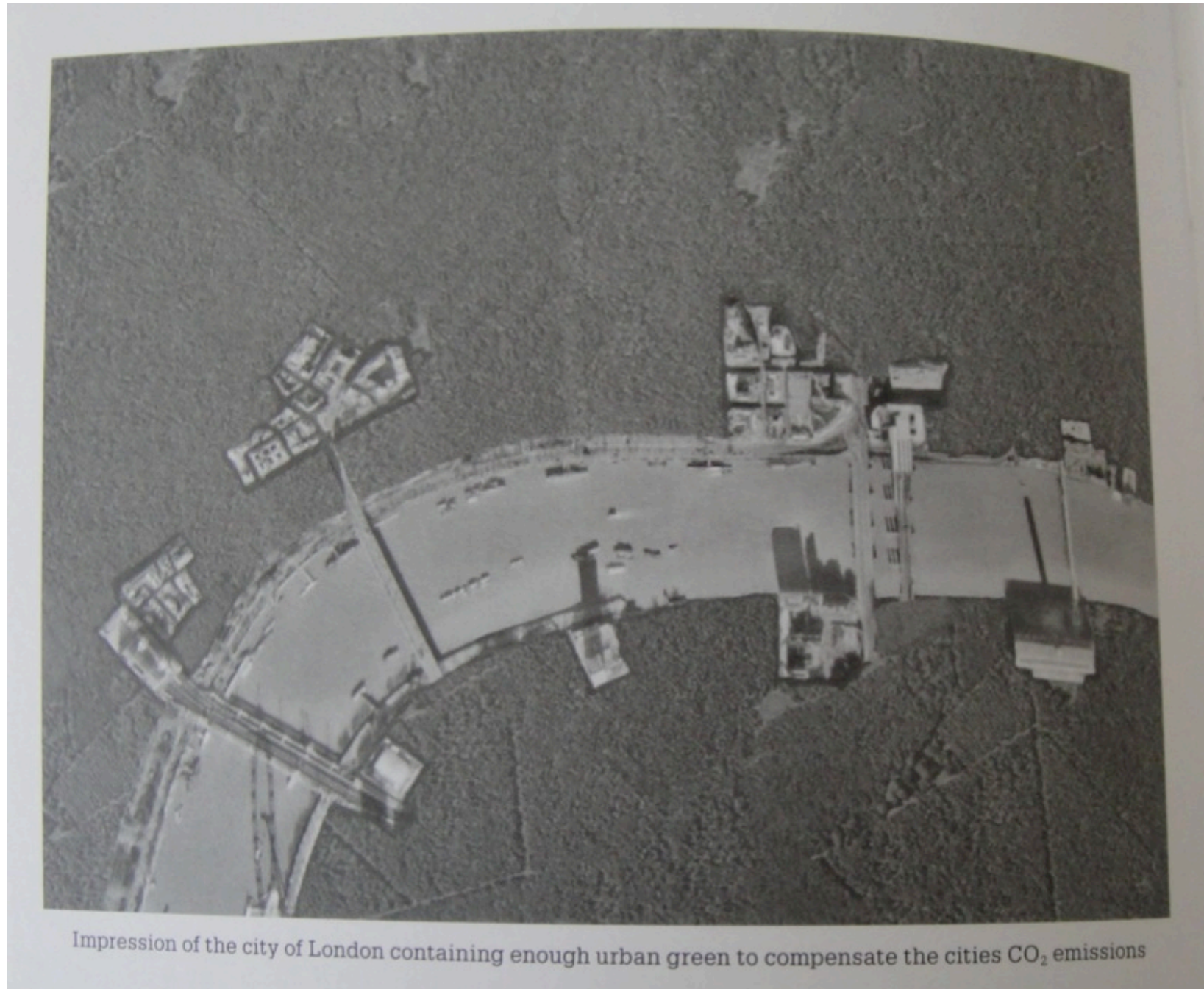
Carbon binding and storage: Co2 neutralization

Berlin-Stuttgart and back by airplane
320 kg CO₂ per Person

neutralization:
1ha x 12days



Carbon binding and storage: Co2 neutralization



Oxygene release- Julio Radesca, Personal Fresh Air desk

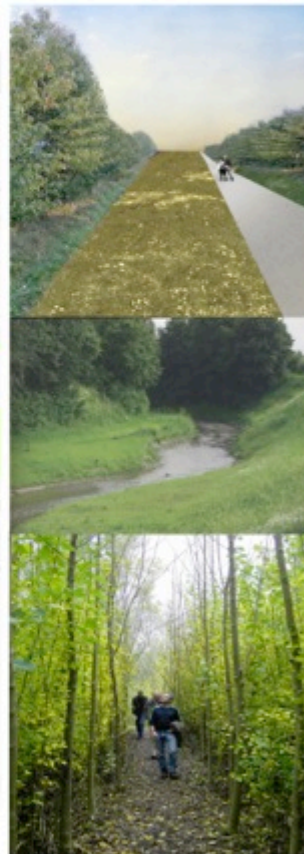


Production of organic matter, a renewable energy source

Biomassepark Hugo



► Entwurf Strukturkonzept



Production of organic matter- Biofuel Crops

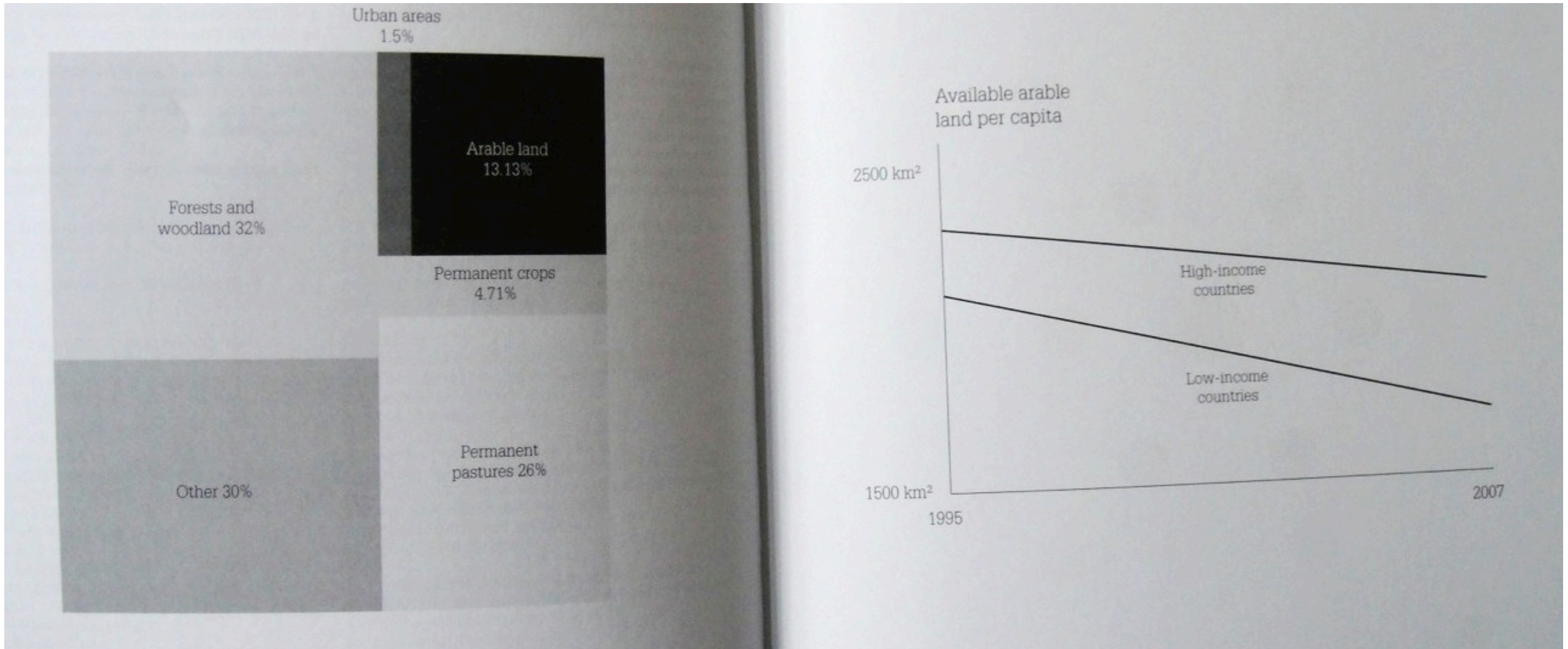


Artificially fertilized Biofuels – a contradiction



1 hectare fertilized agricultural area = 1,3 tons N₂O /year
=10.000 km by car

Shrinkage of Agrable Land– a contradiction



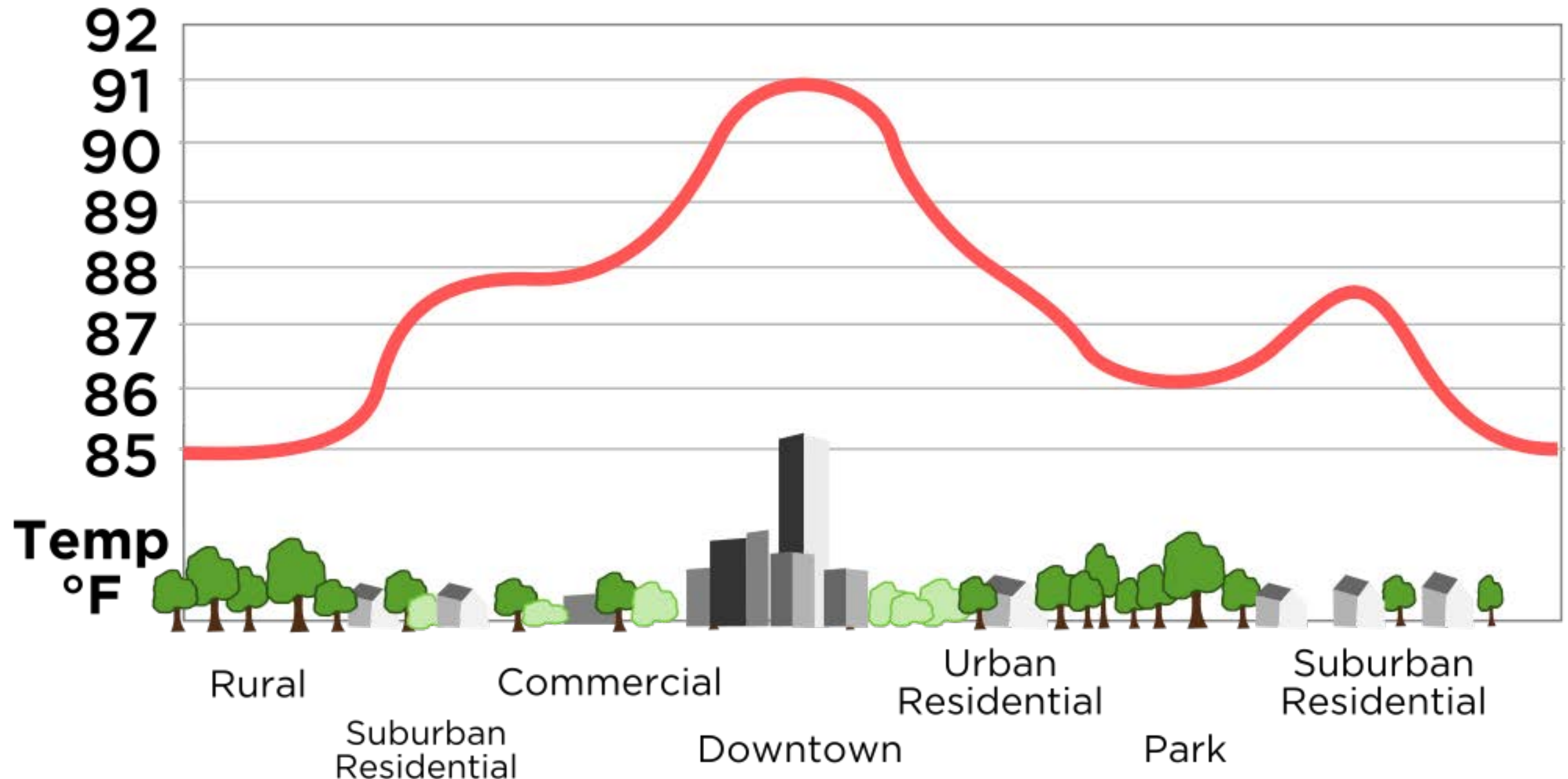
Physics of plants – Plants reduce surface temperature



On a typical day, the Chicago City Hall green roof measures almost 80°F (40°C) cooler than the neighboring conventional roof.

Physics of plants and trees – Plants mediate urban heat island

URBAN HEAT ISLAND PROFILE



Physics of plants and trees – Plants reduce acoustic pollution

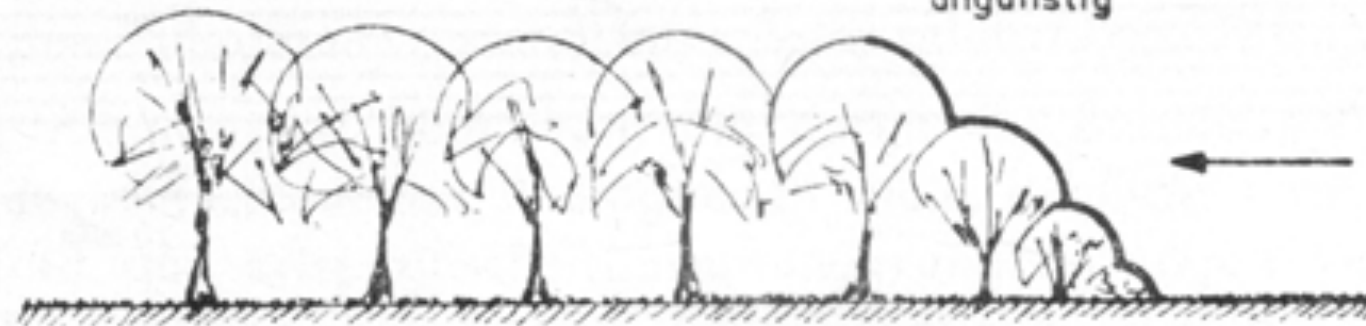
günstig: riegelförmige Anordnung von Laubbäumen



günstig: riegelförmige Anordnung von Laub- u. Nadelgehölz



ungünstig



Trees

Role of trees in a city

Biodiversity:	trees function as a biotope for birds, insects, moss, fungi...
Shadows:	strategic planting reduces cooling loads in buildings
Particle filter:	an urban tree can filter one tonne of dust particles in a year
Oxygen:	absorption of CO ₂ and emission of O ₂ improves air quality
Humidifying:	trees evaporate large amounts of water through their foliage
Evaporation:	water evaporation uses heat energy lowering local temperature
Retain water:	water gathered by the root system is evaporated through foliage
Reduce wind:	strategic placement of trees can reduce wind speeds in urban spaces
Reduce noise:	foliage buffers noise and transform some frequencies from high to low
Aesthetics:	trees may be used for form, color and to balance built mass

Source: Maas, W., Hackauf, U., Haikola, P. *Green Dream*, T?F-The Why Factory. Rotterdam, Nai, 2010. s.220-1

Food and transport

The Environmental Cost of Orange Juice

Tropicana has calculated the carbon footprint of its Pure Premium orange juice — that is, the amount of greenhouse gases produced in its manufacture and use.

Carbon footprint of Tropicana Pure Premium orange juice

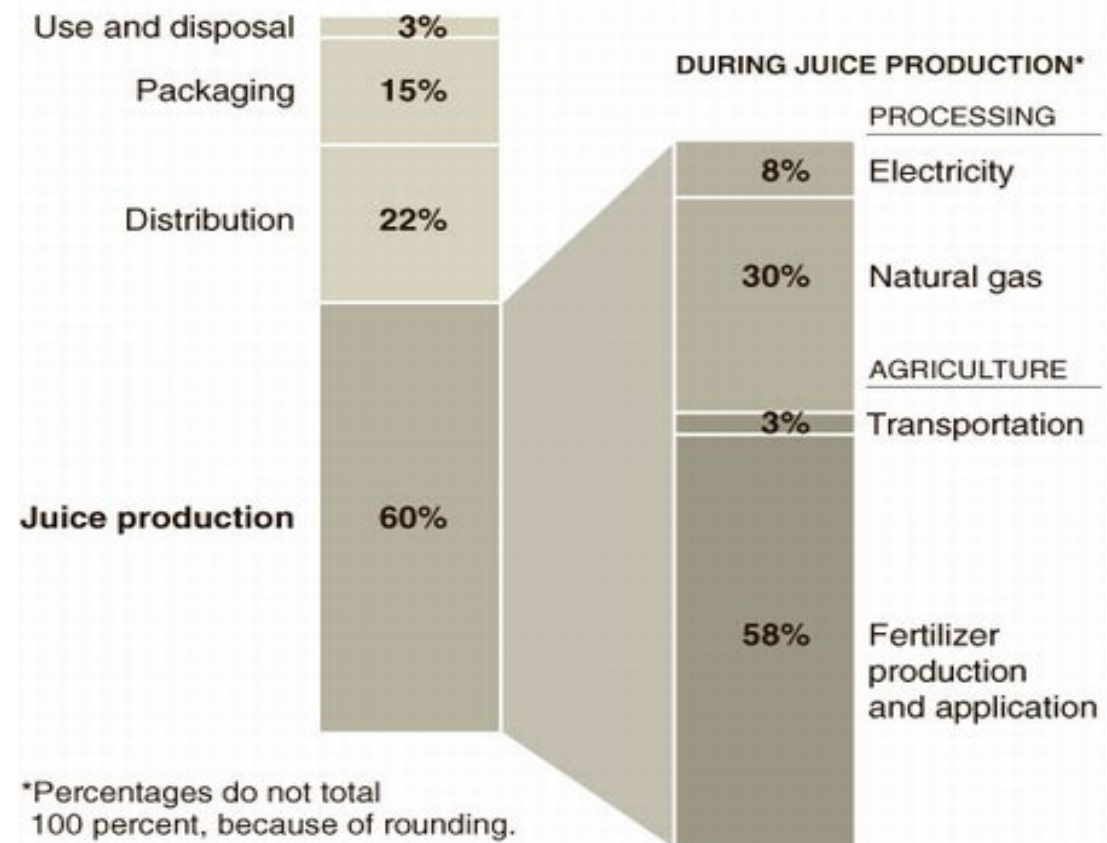
One half gallon Tropicana not-from-concentrate orange juice

=

3.75 pounds (1.7 kg) carbon dioxide equivalent

Sources of carbon dioxide emissions

THROUGHOUT PRODUCT LIFE CYCLE

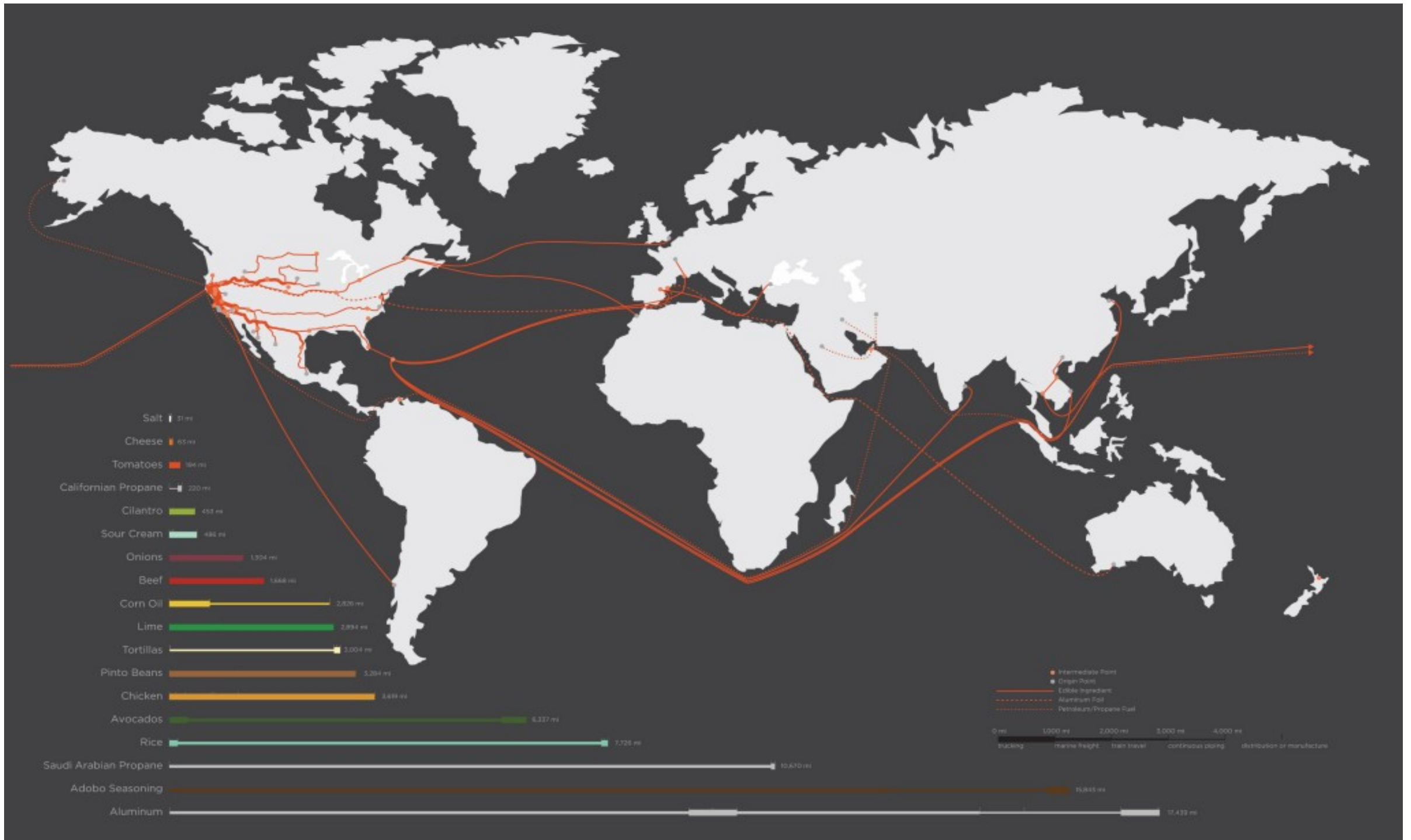


*Percentages do not total 100 percent, because of rounding.

Source: Tropicana

THE NEW YORK TIMES

Food miles, World Taco



Harvest



Normative and green urban development

Consequences and problems of normative urban development

- spreading city leaves poor industrial and residential communities behind
- shrinking cities abandon empty industrial and residential sites

Possibilities of green urban development

redefine relationship between city, new development and ecological region
urban parks and regional landscape as performative and social space

- open up sealed and impervious surface of city
- replenish and recharge surface and sub-surface
- gardening as a method of social cohesion

Design

Gardening

- Guerilla gardening
- Dessau Claims
- Urban voids Philadelphia

Cool City Region

- La Grande Paris
- Metrobosco Milano

Food in the City

- Turenscape: Uni Campus Shenyang
- GBHNPCB-Cas Teller Croquis

Sagrera linear park, Barcelona (west 8)

Guerilla Gardeners – Green as communication tool



Guerilla Gardeners – Green as communication tool



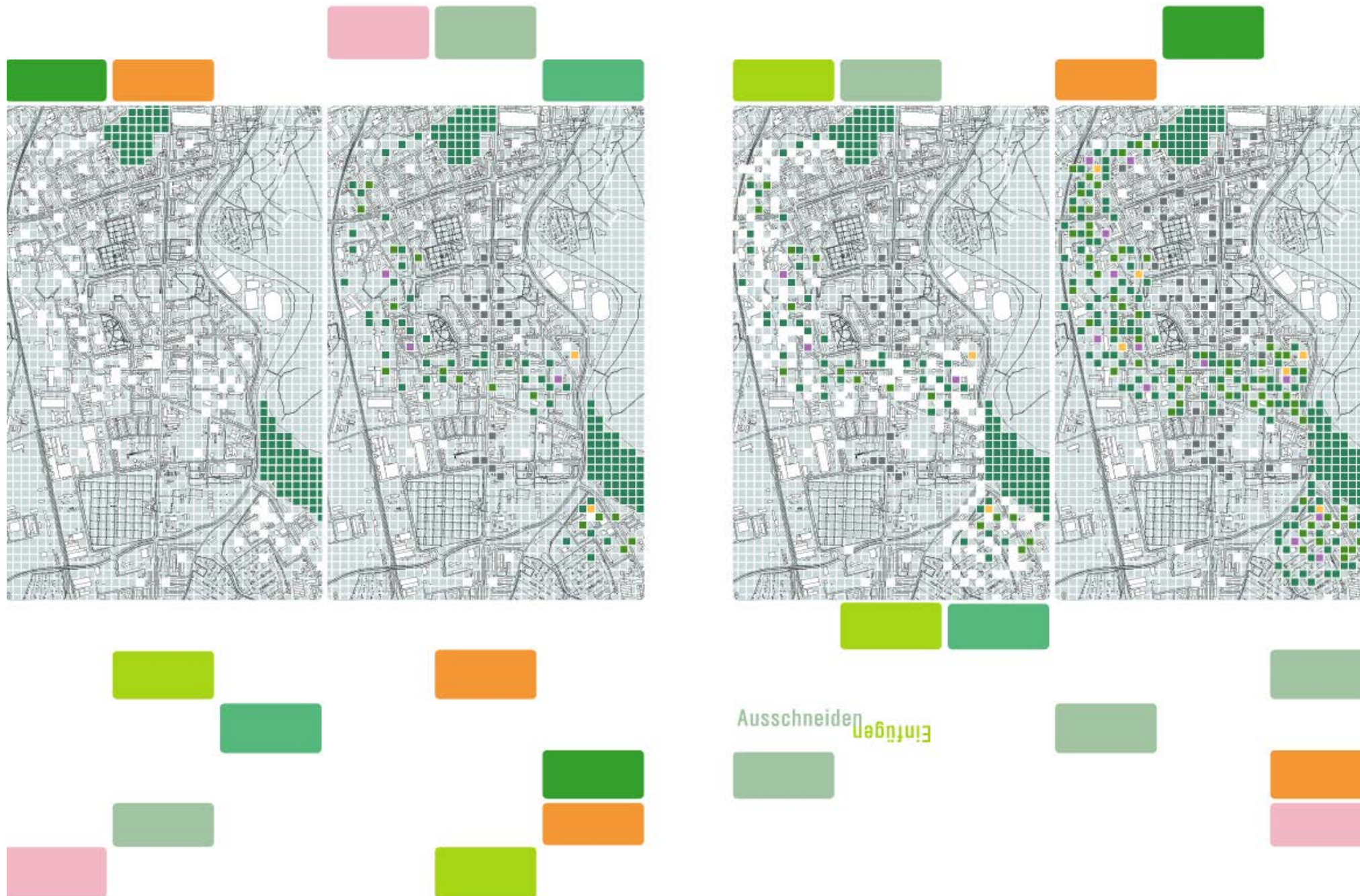
Guerilla Gardeners – Green as communication tool



Park(ing) Day – Green as communication tool



Dessau Claims – Green as revitalisation of shrinking sites



Dessau Claims – Green as revitalisation of shrinking sites



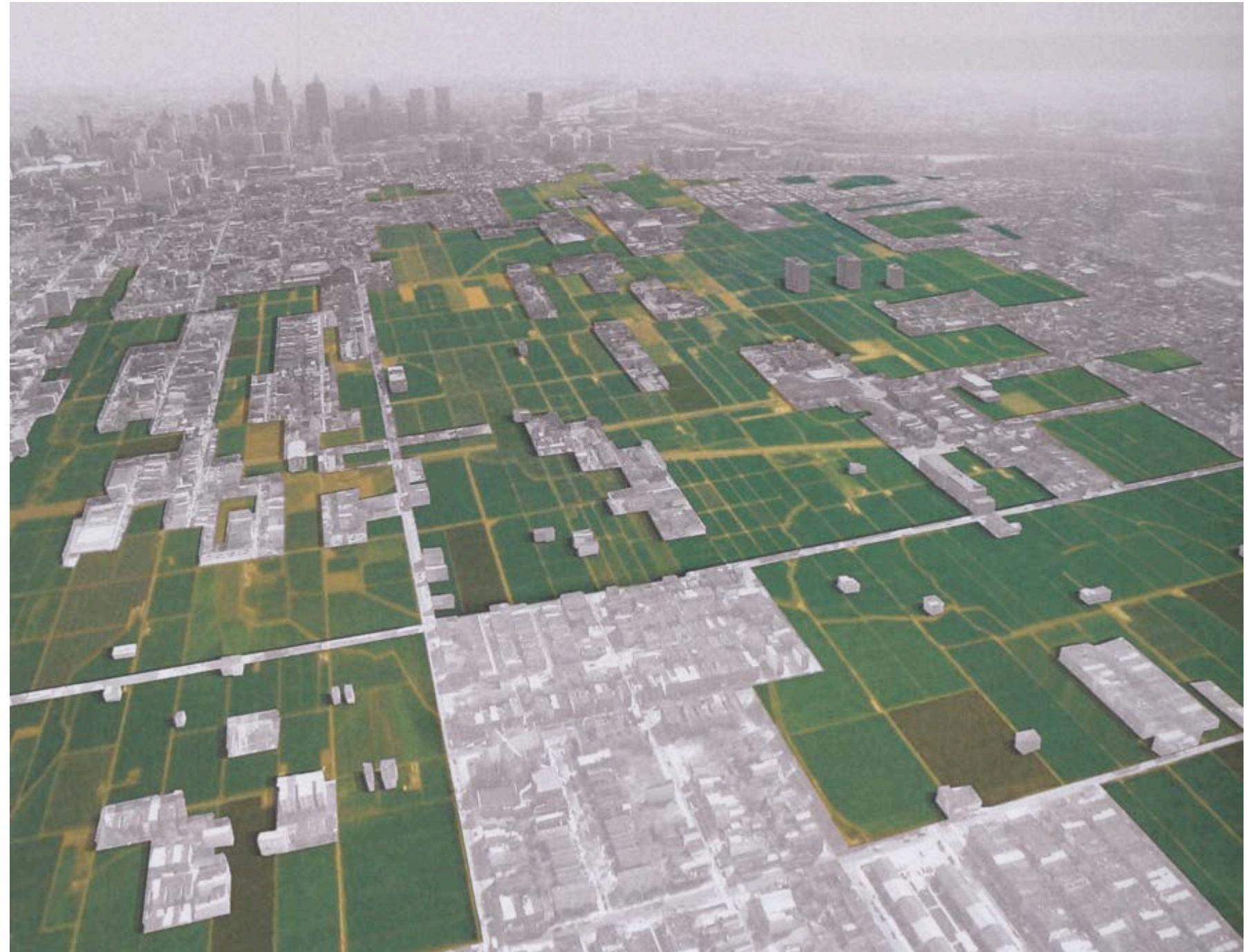
Dessau Claims – Green as revitalisation of shrinking sites



Dessau Claims – Green as revitalisation of shrinking sites



Urban Voids Philadelphia – Revitalisation of suburban voids



La Grande Paris, LIN – Green as development base



La Grande Paris, LIN – Green as development base



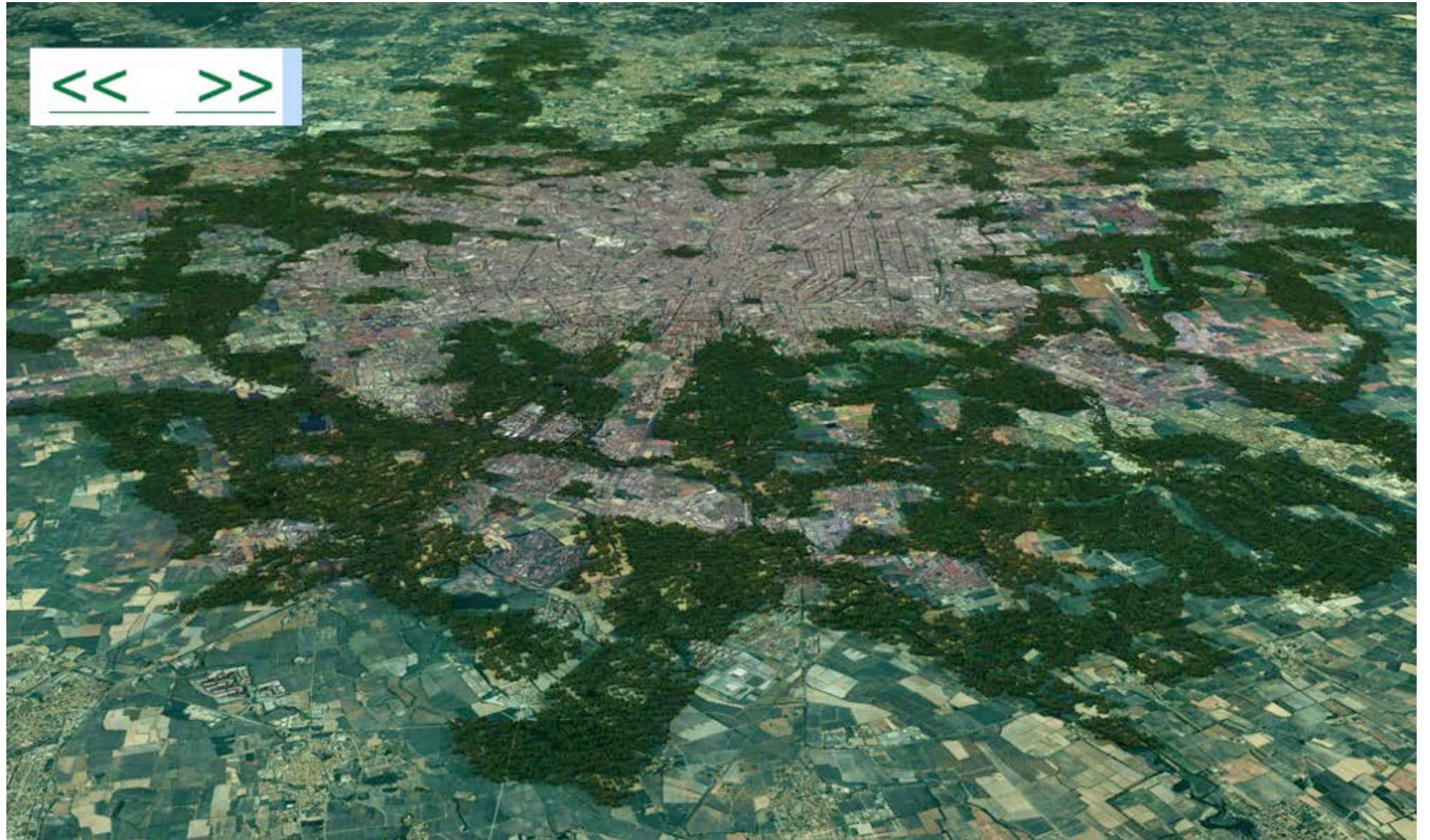
La Grande Paris, LIN – Green as development base



La Grande Paris, LIN – Green as development base



Metrobosco Milano, Boeri, Cool City



Metrobosco Milano, Boeri, Cool City



Afforestation



Agricultural forestation



Hedges and rows of rural trees



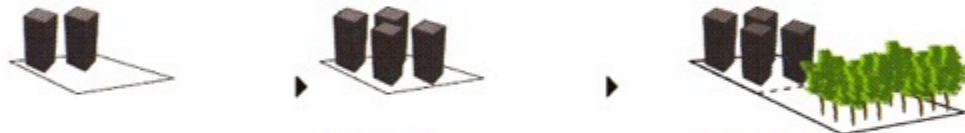
Agricultural renaturation



Urban renaturation



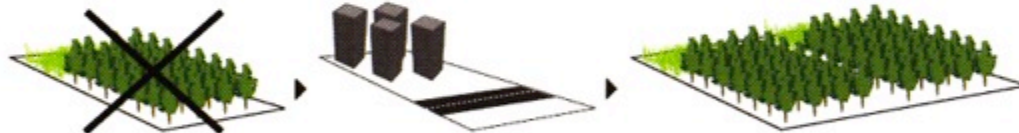
Compensation for new constructions



Compensation for new infrastructure



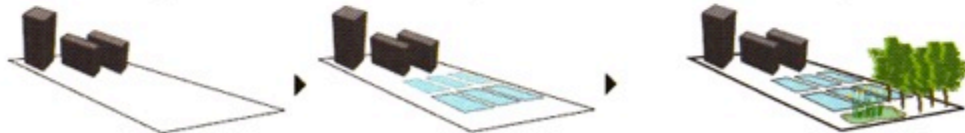
Forest compensation



Urban alignment



Urban water treatment plant



Temporary green



Agricultural water treatment plant




Comuni ed Enti pubblici
ATTUATORI




Società e imprese
ATTUATORI


Agricoltori, forestali, cavaatori
ATTUATORI




Associazioni e liberi cittadini
ATTUATORI




Scuole
ATTUATORI


Partnership Pubblico - Privata
ATTUATORI




Comuni ed Enti pubblici
GESTORI


Società e imprese
GESTORI

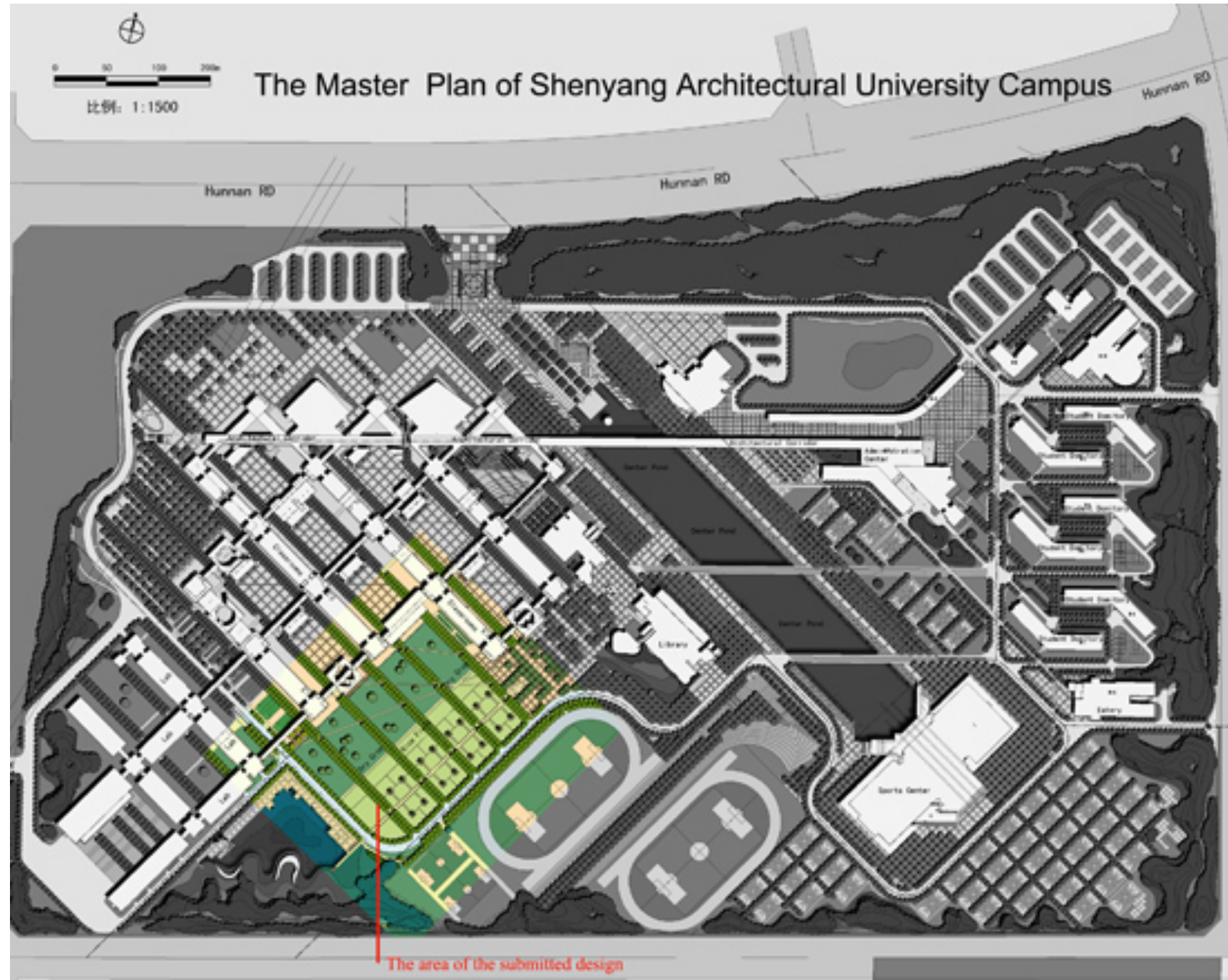



Agricoltori, forestali, cavaatori
GESTORI


Associazioni e liberi cittadini
GESTORI



Turenscape – Green als cultural moment



Turenscape – Green als cultural moment



Turenscape – Green als cultural moment



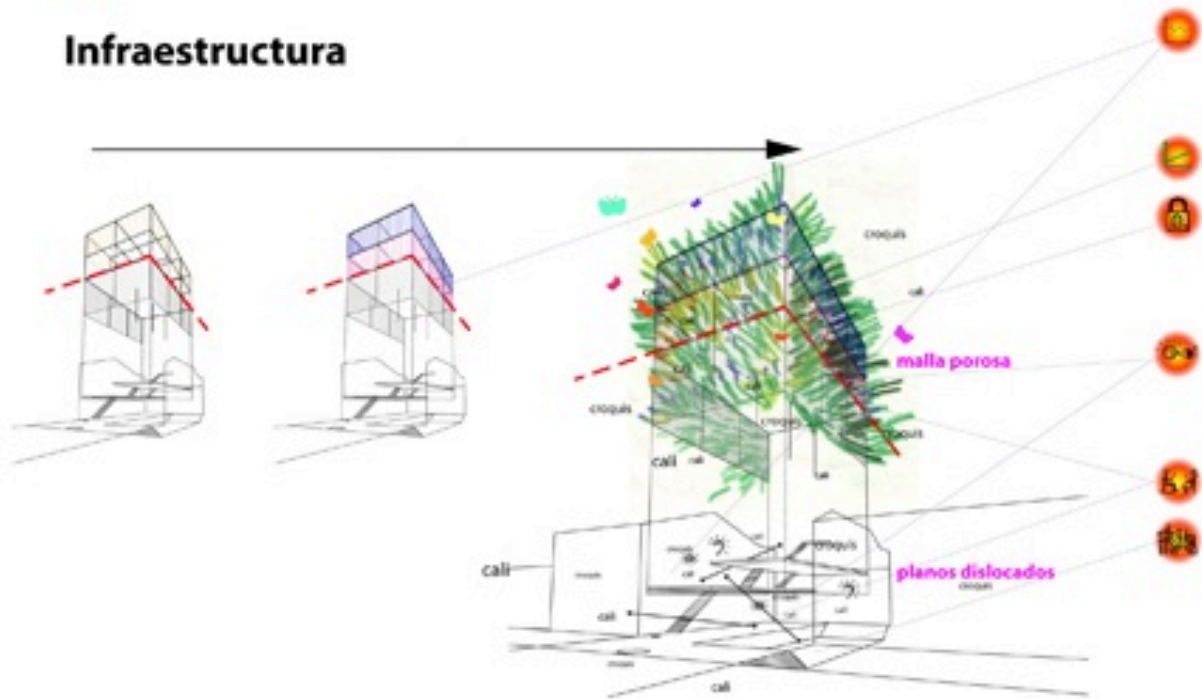
Turenscape – Green als cultural moment



Prototype for a Garden Building with Host and Nectar Plants for Cali's Butterflies, HUSOS Architects, Kolumbien

10/29

Infraestructura

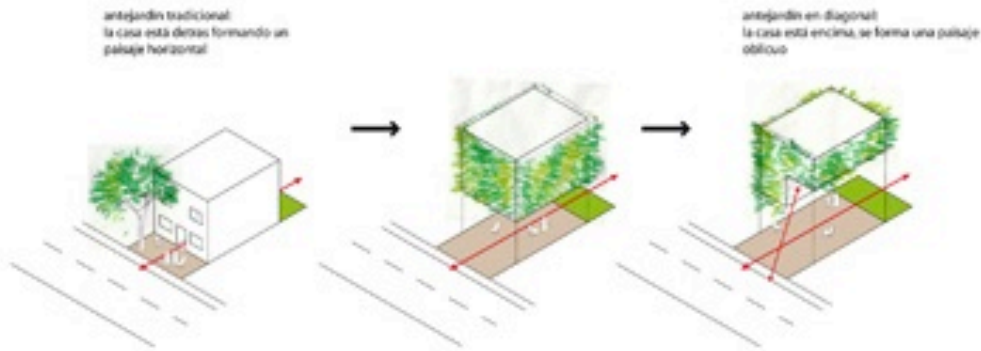


Entidad

y



Entidad interdisciplinaria e independiente que pretende promover iniciativas exitosas y proponer nuevos de investigación sobre Cali.



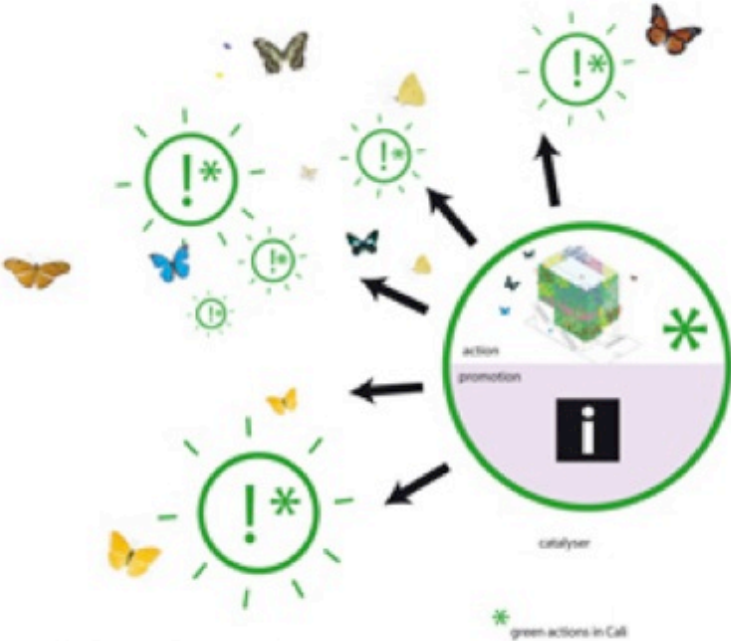
GBHNPCB



GBHNPCB



Catalyzing effect



The GBHNPCB acts as a catalyser of more green actions in the city. It works in collaboration with program "Gardens for the city" created by the local zoo.

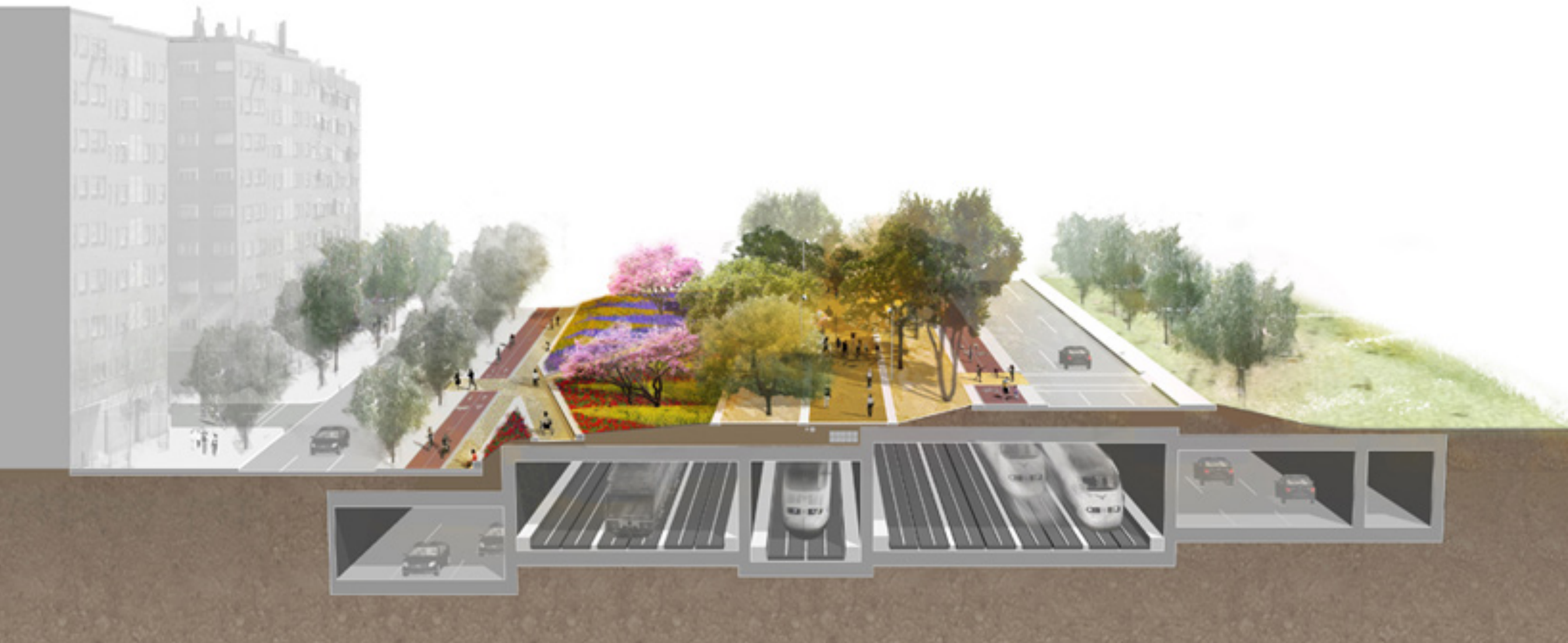
GBHNPCB



Sagrera Barcelona, west 8 – Green as infrastructure



Sagrera Barcelona, west 8 – Green as infrastructure



Sagrera Barcelona, west 8 – Green as infrastructure



Sagrera Barcelona, west 8 – Green as infrastructure





ReNew Town Round Table

Wednesday, 20 June, 10.00 – 16.00

Karlsruhe, Weberstraße 5



The ReNew Town Project

Central Europe's recent socialist past has left the more than 300 million people living there with a complex urban legacy. Some of them have experienced positive transformations of where they live. But many continue to be challenged by problems related to urban design, use of public spaces, economic decline, and social and cultural deprivation. The ReNewTown project aims to address some of these challenges by finding adequate and feasible solutions through the promotion of a cross-border knowledge exchange between the eight project partners from Germany, Poland, Slovenia, Czech Republic and Slovakia.

Urban Regeneration in East and West Germany

In the course of the knowledge exchange, the Institute for Technology Assessment and Systems Analysis (ITAS) has carried out an extensive good practice study to identify relevant examples of urban regeneration in East Germany. We have also conducted two in-depth studies of urban regeneration projects in particular cities in East and West Germany (the MiKa project in Karlsruhe and a state-run urban renewal project in Cottbus Neu-Schwelwitz).

We want to share our project results with you!

ITAS intends to discuss its project results with local, regional and national stakeholders in Germany to capture their responses to what has been done.

We'd like to invite you to our round table meeting to participate in the discussion and help us find answers to a key question:

What is the most relevant advice, deriving from the experience in East and West Germany, and can this be transferred effectively to the Central European cities?

For further information please have a look at www.renewtown.eu



You are very welcome to join our discussion. Because of limited space, registration is required. Please contact: Christina Götz, 072160828036, christina.goetz@kit.edu

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