



## EWT/ Eco Web Town

Magazine of Sustainable Design

Edizione SCUT, Università Chieti-Pescara

Registrazione al tribunale di Pescara n° 9/2011 del 07/04/2011

ISSN: 2039-2656

### REGIONAL CITY

**Back to territory. Positions and forms of sustainability in Germany.**

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### **“Food and the City”. A sustainable foodshed for Hannover Region.**

**Maddalena Ferretti**

In recent years, we are witnessing a **greater consciousness on food related topics** and a **change in social habitudes**. It is a bottom-up process<sup>1</sup> that promotes a return to economies of small scale and new consumers' practices related to local production<sup>2</sup>. A **closer relationship between producers and consumers** is demanded. In terms of sustainability, this involves the whole food process: the product itself (the increasing request for bio-products as part an healthy lifestyle), the distribution (the growing concern for pollution caused by goods' transportation), the production (the urgent need to stop further soil consumption for extensive agricultural use).

The recent neologism *foodprint*<sup>3</sup> puts in evidence the **spatial impacts** of food. They are mainly linked to the extended modification of territory which has been put in act during the centuries to ensure the agricultural production.

Nevertheless, in the last decades, **food production** has become an invisible process for citizens<sup>4</sup>. This **progressive estrangement** has clearly to do with the globalized system of distribution but also with the structure itself of the modern city. It has to do with **territory**. A clear separation between the city and its agricultural fields has been pursued since the beginning of the modern urban development, not even considering some **utopian visions** of a more synergic and integrated environment that yet were imagined and proposed<sup>5</sup>. Today this fracture becomes a crucial aspect to be solved as it caused a progressive separation between production and consumption and ultimately a bigger dependency of cities on outlying territories for nourishment. That is why the idea of **integration between urban areas and productive landscapes** has been recently taken back in many different design experiences fostering a reduced *foodprint* for the planet<sup>6</sup>.

<sup>1</sup> Sara Horowitz calls it *quiet revolution*, one that prefers to abandon the system rather than to attack it. See: Horowitz S. (2011), "Occupy big business: the sharing economy's quiet revolution", in *The Atlantic*, DEC 6 2011 <http://www.theatlantic.com/business/archive/2011/12/occupy-big-business-the-sharing-economys-quiet-revolution/249582/>

<sup>2</sup> Actions such as the ones promoted by Guerrilla Gardening or exhibited at the last "La Biennale d'Architettura di Venezia" in the USA Pavilion are proofs of this change. See: '*Spontaneous Interventions*: Design Actions for the Common Good', Press release for the exhibition held at the United States Pavilion at the 13th International Architecture Exhibition 'La Biennale di Venezia'.

<sup>3</sup> De Rooden P. (2012), "Foodprint. Artistic reflections on practical issues", in Lauwaert M., De Rooden P., Van Westrenen F. (Stroom Den Haag) (eds.), *Food for the City. A future for the Metropolis*, Nai Publishers, Rotterdam, pp. 32-37.

<sup>4</sup> Steel C. (2009), *Hungry City: How Food Shapes Our Lives*, Random House UK.

<sup>5</sup> In a recent article Charles Waldheim refers in particular to three projects: "*Broadacre City*" by Frank Lloyd Wright (1934-35), "*New Regional Pattern*" by Ludwig Hilberseimer (1945- 49) and "*Agronica*" by Andrea Branzi (1993-94). According to Waldheim, these utopias are significant as they all reason on the interconnections and influences of agricultural production as a founding element of the future urban structure. They all propose a deep re-conceptualization of the city and a sort of "*dissolution of the urban figure into a productive landscape*". See: Waldheim C. (2010), "Notes Toward a History of Agrarian urbanism", in *Bracket 1: On Farming*, White M. and Prybylski M. (eds.), ACTAR, pp. 18-24.

<sup>6</sup> In MVRDV's *Pig City*, the huge *foodprint* required to satisfy the heating habits of The Netherlands in terms of pork meat (counting about 41 kg of pork meat per person/year) is substantially reduced by imagining several vertical pig farms spread in The Hague urban fabric. Integration and mix of different activities are also the basic concepts of *Park Supermarket* by Van Bergen Kolpa Architects, where a food production landscape between The Hague and Rotterdam is imagined for an area formerly destined to a protected park. These two projects were developed in the framework of the *Foodprint* program from 2009 to 2012. The program financed by Stroom Den Haag, released the publication: Lauwaert M., De Rooden P., Van Westrenen F. (Stroom Den Haag) (eds., 2012), *Food for the City. A future for the Metropolis*, Nai Publishers, Rotterdam.

Indeed, the **regional dimension**<sup>7</sup> of urban environments has acquired a renewed interest in relation to food sustainability. In contemporary regional planning, agriculture is a crucial element to preserve natural ecosystems, to create edges and boundaries to urban growth and to provide the urban system with fresh products in order to avoid food security problems. A **step back to the territory**<sup>8</sup> is thus needed to propose a **sustainable regional food strategy**. This would be not only an effort towards local food supply<sup>9</sup> but also an attempt to create stronger connections and economies between these two realities. Agriculture could ultimately support a series of other different activities, such as leisure and tourism, according to a **multi-functional idea of productive landscape**.

“Food and the city” is a **research project and a design studio class**<sup>10</sup>. Its aim is to understand this complex relationship and propose alternative strategies to make this coexistence more sustainable.

The theoretical premise of this work lies on two elements. The first one is the **preliminary collection of scientific data**: Lower Saxony is Germany’s **leading agricultural state**, home to a high-performing and innovative food industry<sup>11</sup>. Nevertheless this intensive production is mainly destined to exportation. The second one is a **vision: Hannover as a Rural Metropolis**. Considering the individual diet and calculating the equivalent agricultural land required for food supply per person/year around 0.20 to 0.28 ha<sup>12</sup>, Lower Saxony’s agricultural land could provide food for 12 to 14 million people. Referring to this calculation, “Food and the City” imagines to develop a local *foodshed*<sup>13</sup> for the Hannover Region, able to supply not only its territory but also Berlin, Hamburg and the Rhein/Ruhr region. The diagram shows the capacity (radius) of Hannover Regional *foodshed*.

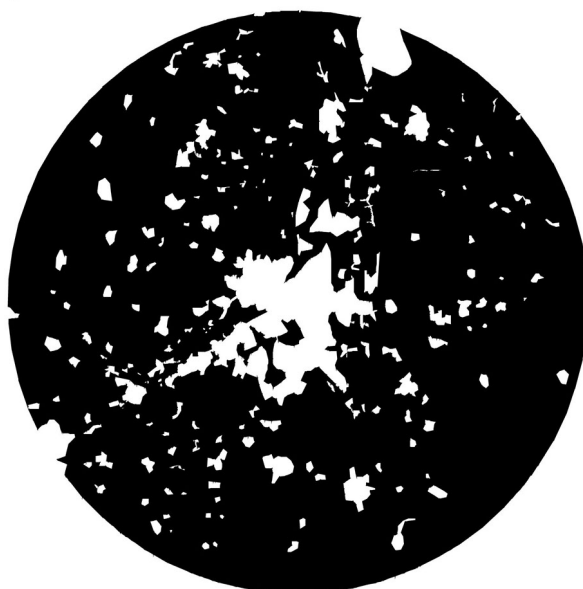


IMAGE 1  
Hannover Regional *foodshed* diagram “Food and the City”, 2012/13, Leibniz Universität Hannover.

*legend:*  
Radius 30 km  
Area 2,435 Mrd m<sup>2</sup>  
provides food for 1, 2 Mil inhabitants  
Land use of 2040 m<sup>2</sup>/person

<sup>7</sup> On the concept of *regional city* see: Calthorpe P., Fulton W. (2001), *The Regional City. Planning for the End of Sprawl*, Island Press, Washington, DC.

<sup>8</sup> Magnaghi A. (2000), *Il progetto locale. Verso la coscienza di un luogo*, Bollati Boringhieri, Torino.

<sup>9</sup> “To increase the regional food production has become...an essential topic in urban design’s discussions dealing with the goals of sustainability and energy saving”. See: ‘Agropolis München’. Introductory text for the competition entry ‘Agropolis München’, presented at the ‘Open scale’ competition, Munich, 2009

[http://www.agropolis-muenchen.de/index\\_en.html](http://www.agropolis-muenchen.de/index_en.html)

<sup>10</sup> The research was developed by the Chair of Regional Building and Urban Planning of the Leibniz Universität Hannover together with the 5<sup>th</sup> semester Bachelor students, during the last academic year (2012/13).

<sup>11</sup> According to the data collected by Lower Saxony’s Chamber of Agriculture, today more than 60% (2.9 Mil ha) of the total land area (4.8 Mil ha) is used for agricultural production. Important brands such as Bahlsen and Wiesenhof are produced in Lower Saxony. See Landwirtschaftskammer Niedersachsen (ed., 2011). *Agrarstatistisches Kompendium 2011 - Struktur und Entwicklung der niedersächsischen Landwirtschaft in Zahlen und Beiträgen*, Willers Druck, Oldenburg.

<sup>12</sup> See: Schröder J., Baldauf T., Deerenberg M., Otto F., Weigert K (2009), *Metro Food – A metropolitan vision of food autarchy based on rural-urban reconfiguration* in De Meulder B., Ryckewaert M., Shannon K. (eds., 2009) *Transcending the Discipline. Urbanism&Urbanization as receptors of multiple practices, discourses and realities*, Katholieke Universiteit Leuven, pp. 223–230.

<sup>13</sup> The term *Foodshed*, coined by W.P. Hedden in the book “*How great cities are fed*” (1929), refers to a geographic entity in which food is produced/transformed and distributed for a particular population.

The students' designs translated the main rural vision into real urban systems and were developed in three different focus areas:

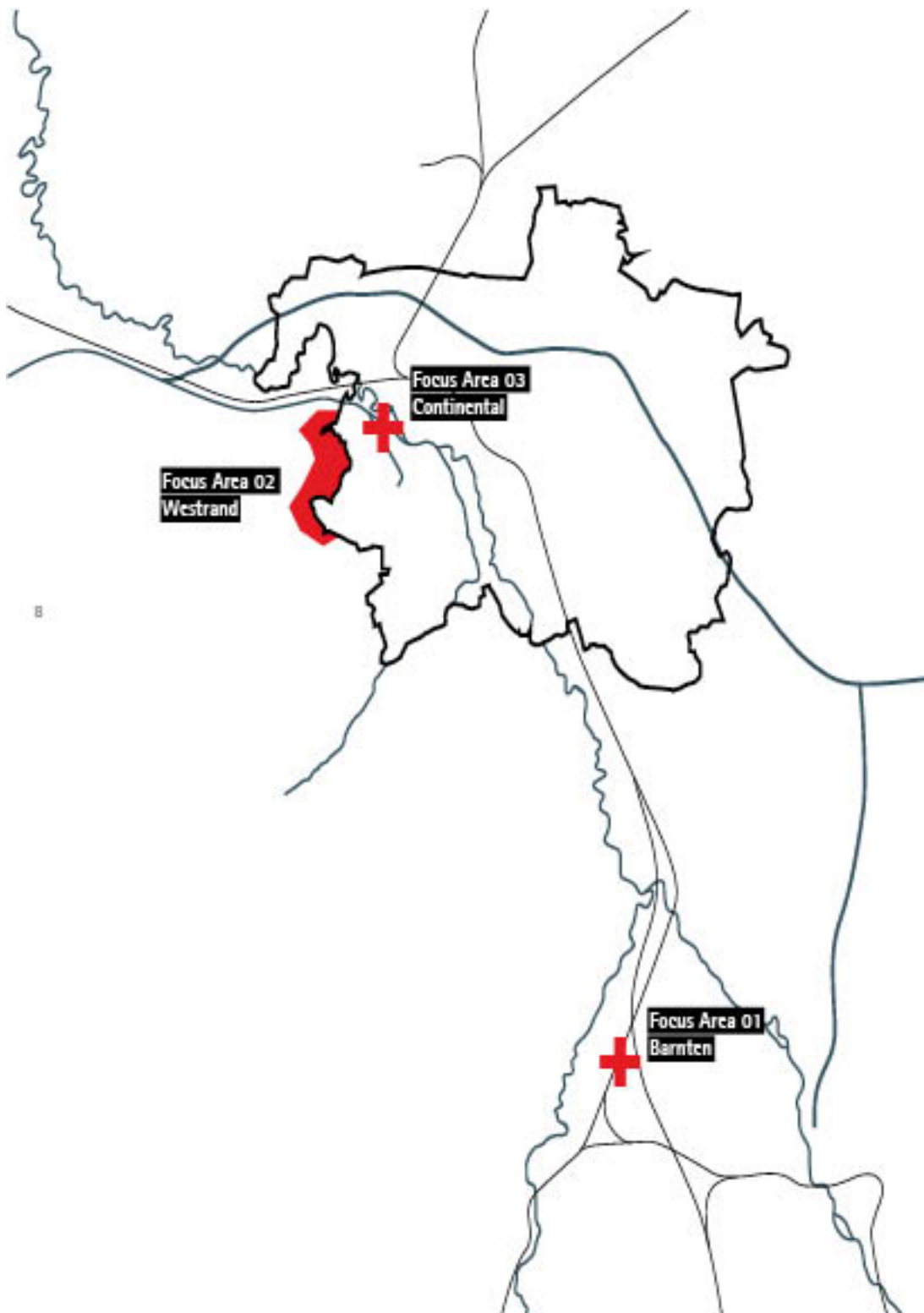


IMAGE 2

Focus areas. Urban design studio "Food and the City", 2012/13, with the Chair for Regional Building and Urban Planning, Leibniz Universität Hannover.

### Focus area 1- Food Lines - Barnten

The site is one of the former grain stocking areas along the railway line, owned by the *Raiffeisen* cooperative, at the time in charge of the collection of agricultural products and distribution within the city. The envisaged scenario was to create a new rural-urban catalyst mainly connected to the topic of food

**distribution.** The students were also asked to widen their vision to the entire urban system, by linking their project to the rest of the *food lines* system and to the region as a whole.

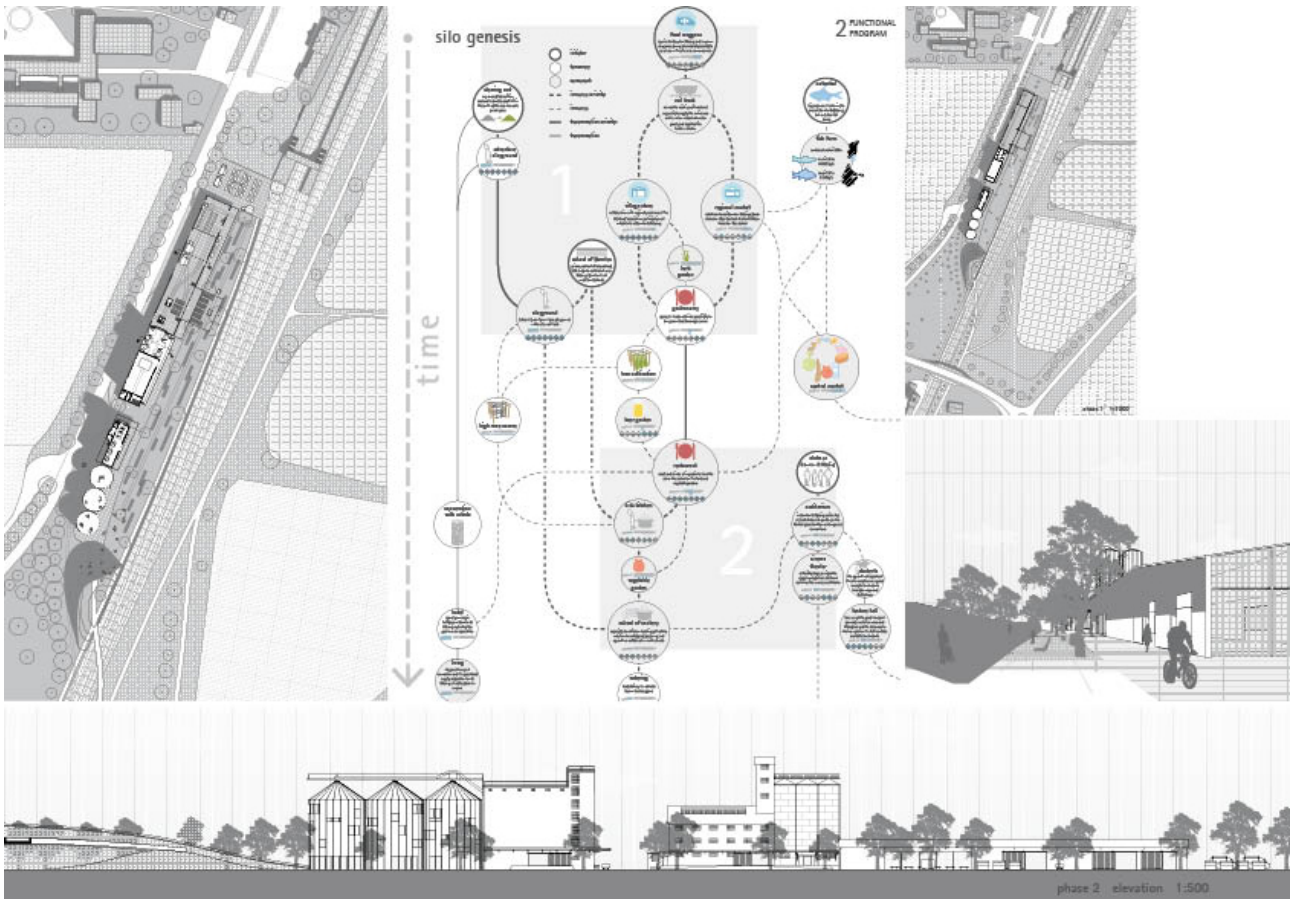


IMAGE 3

“Food retail. A silo genesis”, students: Giacalone C., Gerth T., 5<sup>th</sup> semester Urban design studio “Food and the City”, 2012/13, with the Chair for Regional Building and Urban Planning, Leibniz Universität Hannover.

**Focus area 2 - Food Osmotics - Westrand**

The site is the western border of Hannover, where the transition between urban settlement and countryside is a sharp limit that occurs abruptly. Several small bio-farms, generally run by families or cooperatives, are located in the nearby. The students’ main task was to focus on **production** and to rethink this border as a rural-urban interface of two realities, city and the countryside.



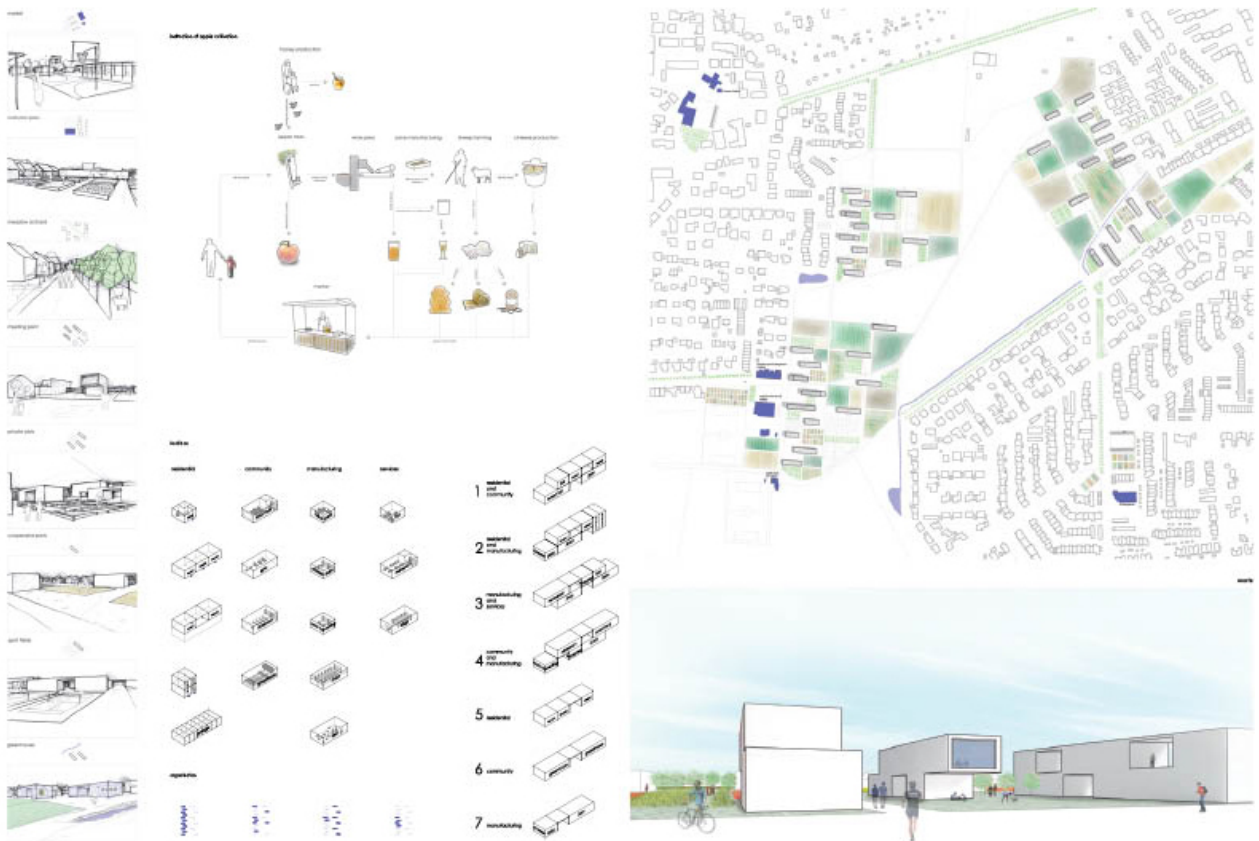


IMAGE 4

“Between the scapes. Interconnecting city and countryside”, students: Heine R., Kell J., 5<sup>th</sup> semester Urban design studio “Food and the City”, 2012/13, with the Chair for Regional Building and Urban Planning, Leibniz Universität Hannover.

### Focus area 3 – Food Streaming - Continental

The site is a former industrial area for rubber production, which stands almost like an island in the middle of the Ihme river. The task was to reactivate the area by strengthening its relationship with water and focusing on regional food **consumption and communication**. At the same time students were allowed to propose the environmental recycle of this brownfield, by using food production (urban agriculture).

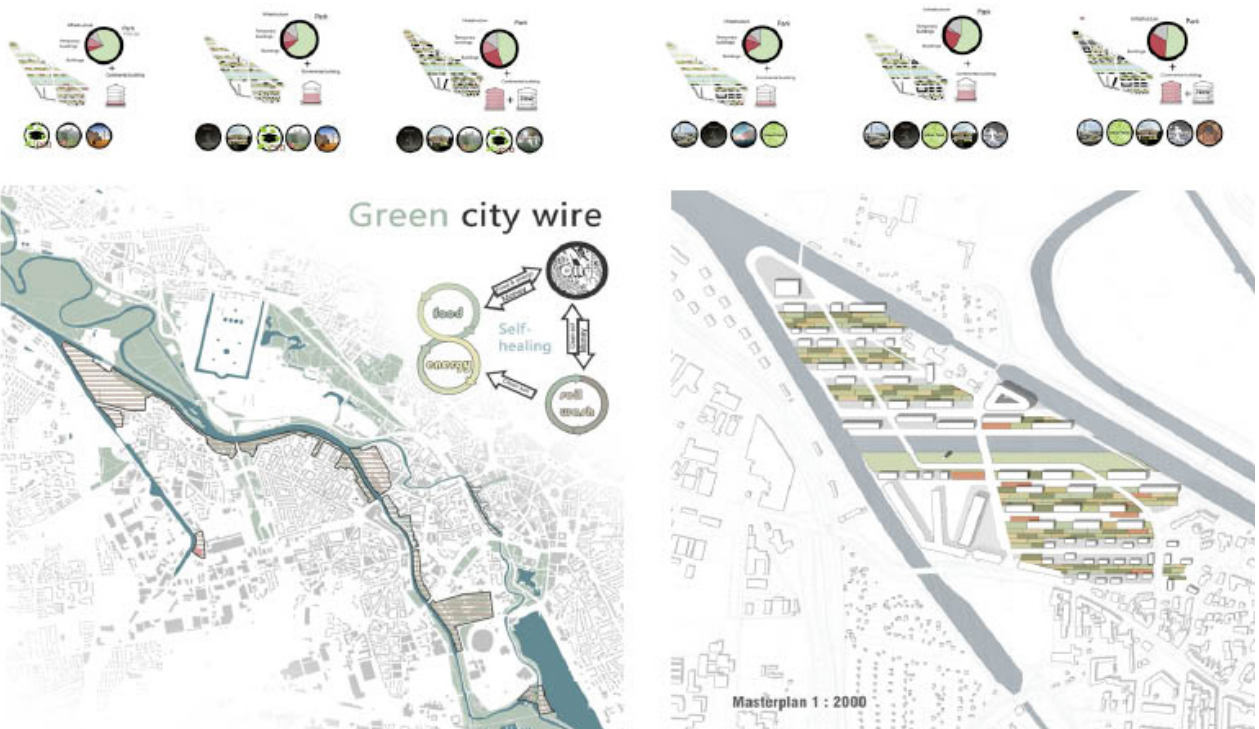


IMAGE 5

“Green city wire”, students: Grudzinski B., Manga R., 5<sup>th</sup> semester Urban design studio “Food and the City”, 2012/13, with the Chair for Regional Building and Urban Planning, Leibniz Universität Hannover.

Food, in all its aspects related to production, distribution and consumption, represents today an important challenge for the development of a new sustainable vision for our cities. The Hannover case study, developed with the design studio class, is currently undergoing as a research project and it is still far from conclusions. Nevertheless this exercise was a first attempt to envision a possible shift for the future of the city. It wanted to highlight the unexpressed potentials of Hannover's *foodshed* and the possibility to enlarge this capacity in order to **provide a more fair, sustainable and thus secure food supply**. The preliminary contextual conditions allowed such hypothesis and the design results were showing a first possible output of this approach in line with the methodology of *research by design*.

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