

# Scenarios for the future of urban farming

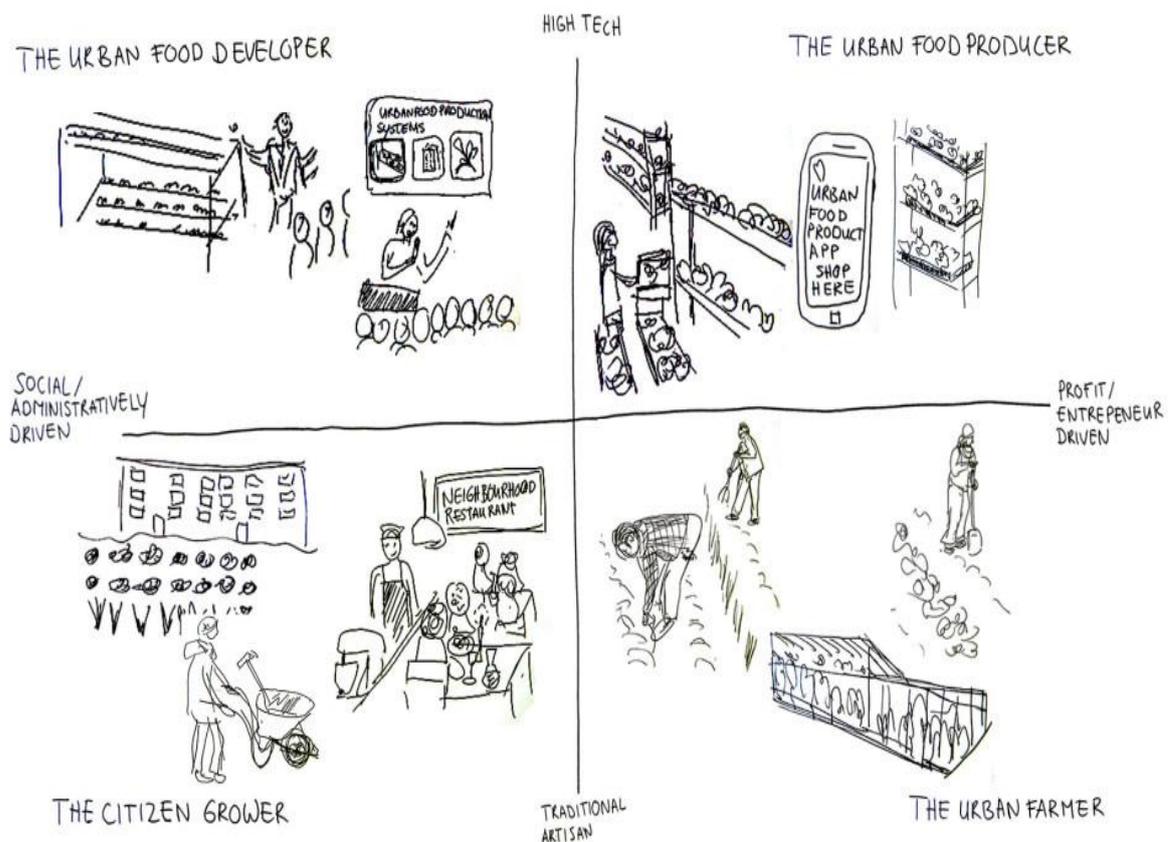
By Freija Van Duijne

Over many centuries, attempts have been made to get food production out of the cities. Produce comes from the land and is transported into the cities. In most western cities, abattoirs have disappeared. Markets are still there, but no longer have a central role in our shopping.

This image is starting to change again. Urban farming is emerging in all sorts of shapes. A few examples from the Netherlands: offices that use their roof for rooftop farming, volunteer gardens with a restaurant, like Hutspot Hotspot in Rotterdam, urban farm companies like Uit je eigen stad, high tech indoor growing systems like Simbi City, or Plantlab. Which types of urban farming would be around in 2020?

Scenarios for the future of urban farming may help us think about the directions for urban farming. Also it helps us think about ways to support different developments.

**Here are the basic scenarios that we came up with. They are still in a preliminary stage. And we welcome all suggestions for further elaboration. What do you think that might happen in these scenarios?**



Scenarios for urban farming. drawings by Freija van Duijne

## THE URBAN FOOD PRODUCER



### The Urban food producer

LED technology, sensor technology and all sorts of ICT applications are affordable to apply for indoors, layered crop production. This takes place in formerly empty buildings, for which no other use has been found. Various companies have demonstrated to be economically successful in producing fruits and vegetables. These are high end produce, for which a good price is being paid by restaurants and private consumers in the cities.

Businesses have started off with small production units. After the first successes, they could make further investments and grow their business. Suppliers, service providers and other businesses have settled next to each other to make use of each other (waste) streams, products and services.

Consumers are involved through social media. They have Apps to see which types of produce are available and shop directly. There are virtual supermarkets which offer the products of several urban food producers. Products can be delivered at home through a peer to peer deliverance service. But a network of drones for deliverance is coming up soon.



### The urban farmer

The dream of the urban farmer is to reconnect city people with making food. The urban farmer wants to share his knowledge and craftsmanship with the young and the old. Their business is a multifunctional farm with fruits, vegetables and animals. They have various revenues. People can subscribe to weekly food packages. There is a restaurant and catering. Crowd funding allows people to have a share in the company. In exchange for that they receive products and they are invited for events on the farm.

For their personnel, urban farmers rely on volunteers in addition to their regular employers. That makes up an interesting mix of people and cultures.

The urban farmer also has a function in maintaining the public greens near the farm. Thanks to their close connection to the people in the neighbourhood, the farmer knows their demands and wishes in relation to green areas in the city.

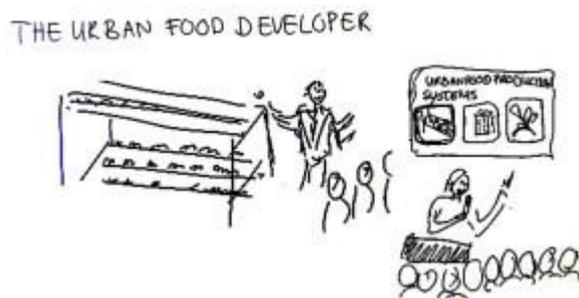


## The Citizen grower

Lots of people who live in cities share the wish to be active in food production. Kitchen gardens are popular among young and old. The barren grounds and rooftops look tempting to these gardeners. People start to ask the city government if they could use these parcels for growing food. Some cities have pro-actively responded to this demand and made maps of available parcels and rooftops.

People use the food that they grow to sell on neighbourhood markets. Near a garden complex there is often a restaurant, where meals are served made from fresh neighbourhood produce. The unemployed start off as waiters and other personnel in the restaurant, making it easier for them to find a paid job later on. Schools and children are involved. They are physically active and learn about healthy food.

City councils are happy with this movement and develop additional education programs to help people learn about the nature of food. They also facilitate the growers' movement in all sorts of ways, for instance by making it easier for businesses to donate or act as barter in a project. In this way the city, businesses and citizens connect through the growing of food.



## The urban food developer

With the latest technology the possibilities for urban food production systems have come closer, at least in theory. This could be a solution for food supply in the cities. This means a new use for empty

building, environmental benefits through lower energy use and small food miles. These new urban food production systems, and the knowledge to build them, could be important for mega cities in emerging economies. This is recognised in vision documents of regional and national governments.

Public-private initiatives aim at system solutions for high-tech large scale urban food production. Projects aim at knowledge development and deliverables such as new applications for the design of food production systems. One aspect of these projects concerns the dialogue with society about new food production technologies and food production facilities in downtown neighbourhoods.

Governments also use these projects for demonstration purposes. These type of food production systems are very innovative. Their development is an important contribution to the branding of the region or country an innovative agri&food producer with great export potential.

### **About Freija Van Duijne**

Futuring is my passion. I am fascinated about what the future might bring. Always looking around for leads about the future and open for new insights. I am futurist, trendwatcher and strategist at the Ministry of Economic Affairs in the Netherlands. My background is in Human factors psychology. I did my Masters at Leiden University and I did a PhD in Delft University at the faculty of Industrial design engineering. I have been involved in foresight studies since 2006. I am frequently asked as an expert for future studies in area of food, natural resources, health and governance. I am also a speaker and workshop facilitator on futures studies, trend presentations and the many topics that I blog about. My contributions to Futuristablog represent my own personal opinion and is never a statement of the Ministry of Economic Affairs.