



UNIVERSITY OF
GLOUCESTERSHIRE

This is a peer-reviewed, post-print (final draft post-refereeing) version of the following published document, ©American Society of Agronomy and Crop Science Society of America. and is licensed under Creative Commons: Attribution-Noncommercial-No Derivative Works 4.0 license:

Koopmans, Marlinde E, Mettepenningen, Evy, Kunda, Ilona, Keech, Daniel ORCID: 0000-0003-4112-9030 and Tisenkopfs, Talis (2017) Creating synergies around food in cities. Urban Agriculture and Regional Food Systems, 2. pp. 1-9. doi:10.2134/urbanag2016.06.0003

Official URL: <https://dl.sciencesocieties.org/publications/ua/pdfs/2/1/urbanag2016.06.0003>

DOI: <http://dx.doi.org/10.2134/urbanag2016.06.0003>

EPrint URI: <http://eprints.glos.ac.uk/id/eprint/4121>

Disclaimer

The University of Gloucestershire has obtained warranties from all depositors as to their title in the material deposited and as to their right to deposit such material.

The University of Gloucestershire makes no representation or warranties of commercial utility, title, or fitness for a particular purpose or any other warranty, express or implied in respect of any material deposited.

The University of Gloucestershire makes no representation that the use of the materials will not infringe any patent, copyright, trademark or other property or proprietary rights.

The University of Gloucestershire accepts no liability for any infringement of intellectual property rights in any material deposited but will remove such material from public view pending investigation in the event of an allegation of any such infringement.

PLEASE SCROLL DOWN FOR TEXT.

Paper accepted for publication in Urban Agriculture and Regional Food Systems on 20th October 2016 (Manuscript ID UA-2016-06-0003-OA.R1)

Creating synergies around food in cities

*Marlinde Koopmans, Evy Mettepenningen, Ilona Kunda, Daniel Keech
and Talis Tisenkopfs*

Abstract

This paper focusses on the phenomenon of multifunctional urban food initiatives (MUFIs) and how, using food as a vehicle, they provide integrative solutions for a number of social, environmental and economic problems in European cities. Through an in-depth investigation of three MUFIs in the UK, Latvia and Belgium, the paper aims to increase understanding on how different activities are combined within MUFIs, leading to the creation and strengthening of synergies: both internal, between the different activities performed within MUFIs, and external synergies between the MUFI and the (peri-) urban environment in which it operates. The three cases illustrate that the dense and complex urban environment in which they are situated provides possibilities to create a wide, diverse network around food, leading to a high potential for synergies to occur. In this way, MUFIs can respond to specific urban needs, which are not addressed by the state, and therefore have an important signalling function. For the MUFIs themselves, although being multifunctional increases opportunities, it is also a challenge to find the right balance between the different functions and not to lose sight of the economic side of the business. Local governments can support MUFIs by providing space for them, room to experiment, adapting regulations to get MUFIs out of the “grey zones” of legislation, and by starting to strategically think about food in their city region.

Core ideas

- Multifunctional urban food initiatives (MUFIs) offer benefits in cities
- By combining activities, actors and life-worlds MUFIs create internal and external synergies
- Social and environmental services are only partly provided by the state
- Multifunctionality poses challenges linked to the management of MUFIs
- Local governments can support MUFIs through recognition and targeted assistance

1. Introduction

While in 1950 30% of the world's population lived in cities, the latest figures by the United Nations predict an increase in the urban population to 66% by 2050. In Europe about 73% of the population is currently living in urban areas, with urbanization processes causing significant challenges in terms of sustainable development (United Nations, 2014). While some cities are economically thriving, others face major economic difficulties leading to reduced public services and even outward migration. Despite differences between European cities, the majority have to deal with social challenges related to ageing, household fragmentation, individualization and increasing income disparities. This in turn has deepened problems of social polarization and segregation, aggravating conditions in poor neighbourhoods in terms of education, employment, housing and basic services. Additionally, the majority of European cities experience congestion, poor air quality, noise pollution and

urban heat island effects. Processes of urban sprawl, finally, have put pressure on (peri-)urban ecosystems causing biodiversity losses, and cause water management problems (water scarcity as well as flooding) (Coutard et al., 2014; European Commission, 2011).

The challenges outlined above are usually approached in isolation, rather than as a connected set of issues associated with urban life. Examples of this are evident in land use conflicts, where different parties may disagree on the prioritisation of commercial, environmental or social interests (Reed and Keech, 2016). This piecemeal approach to city development is particularly striking in relation to urban and peri-urban food production systems, which are often characterized by a scarcity of productive land, a predominance of small and medium-sized enterprises (SME) food businesses, and a cosmopolitan and dynamic population which depends on a reliable, affordable and safe food supply. In this paper we argue that the opposite of a piece-meal approach is needed. Specifically, we suggest that through the facilitation of MUFIs, many different functions can be combined, and that powerful synergies can be created so that each activity can perform better, and the city as a whole benefits.

There is a growing body of literature dealing with the potential of urban food initiatives to alleviate contemporary cities' problems, which, according to Van Veenhuizen (2006), can be situated at the following three dimensions of

sustainability: the economic dimension, resulting in a “productive” city; the social dimension, resulting in an “inclusive” city; and the environmental dimension, resulting in a “healthy ecological city”. Potential economic effects of urban food initiatives are the creation of jobs, stimulating innovation and the possibility to reduce food expenditures (Ackerman et al., 2014; Curry et al., 2016). In terms of social effects, urban food initiatives can improve access to fresh and healthy food (Freeman et al, 2012). Health benefits can, however, also originate from the recreational aspect and physical activity associated with food production (McClintock, 2014). Additionally, many initiatives depend on or originate from community involvement, enhancing a common social and cultural identity and enriching local communities and their social capital (Ackerman et al., 2014; Robinson-O’Brien et al., 2009; Wakefield et al., 2007). Finally, the potential ecological effects of urban food initiatives can involve reducing urban heat island effects; mitigating stormwater impacts; lowering energy use by reducing the need for food transport; reducing urban waste streams through composting of urban organic waste; amenity provision; and promoting shifts in environmental consciousness (Ackerman et al., 2014; Hackworth, 2007; Travaline and Hunold, 2010; van Veenhuizen, 2006). This list of potential beneficial effects is not exhaustive, but clearly shows that there is more to food than nutritional value. In her paper on the Toronto Food Policy Council, Blay-

Palmer (2009, p. 414) discusses how food can frame “multilayered challenges” in a city and provides an integrative foundation to address social, environmental and economic problems, helping to create a just (referring to Fainstein (2006)) and sustainable city. This is a suggestion more recently echoed in relation to Malmö and Bristol by Moragues-Faus and Morgan (2015).

Through an in-depth investigation of three multifunctional urban food initiatives; the Community Farm (CF) in Bristol (UK), RoomeR in Ghent (Belgium) and Kalnciema Quarter (KQ) in Riga (Latvia), this paper aims to increase understanding about the nature of multifunctionality in cities, including its associated benefits and challenges. In this paper we argue that combining different activities and functions within food initiatives leads to the creation and strengthening of synergies that have “*an impact that is greater than the sum of the effects produced by the same activities taking place in isolation from each other*” (Knickel and Renting, 2000, p. 518). In particular, internal synergies between the different activities performed within MUFIs are explored, as well as external synergies between the MUFIs and the (peri-)urban environment in which they operate. These synergies can be an important factor for making MUFIs more sustainable, and at the same time offer integrative solutions for a number of social, environmental and economic challenges to the cities in which they are located.

The next section of the paper discusses the phenomenon of MUFIs and the different aspects of synergies related to them. After a brief description of the methodology, the paper's fourth section then applies this analytical framework to the three MUFIs in the UK, Latvia and Belgium. Finally, the paper concludes with a summary of the main findings and some recommendations for policies on urban food initiatives.

2. Synergies through Multifunctional Food Initiatives

MUFIs can be defined as initiatives that incorporate a wide range of social, economic, environmental and cultural functions simultaneously within food-related activities such as food producing, retailing or sharing activities in the city (Curry et al., 2016). Multifunctionality related to food is a topic that was discussed initially in relation to rural development but also proved its relevance for peri-urban and urban agriculture (Zasada, 2011; Lovell, 2010). It stresses the joint production of commodities and other goods and services such as landscape, biodiversity, climate change mitigation, cultural heritage, regional identity and health (Lobley and Winter, 2009; Van Huylenbroeck et al., 2007).

The multifunctionality of agriculture is also one of the main rationales behind government subsidies for the sector within the European Union (Potter, 2006; Swinbank, 1999). Multifunctional agriculture, however, also incorporates

what is termed the consciously “broadening” and “deepening” of agricultural activities by the farmer, respectively, by taking up on-farm activities next to commodity production (such as tourism and nature and landscape management) and by extending farm activities along the value chain (such as on-farm processing or sales) (van der Ploeg et al., 2002; Van Huylenbroeck et al., 2007). It was especially in this context that the concept of synergies through food production was introduced: combining, for example, short food chains and quality production with agro-tourism and nature and landscape management, results in “*effects that are quantitatively and qualitatively more far reaching than the effects of similar entities when they operate alone*” (Brunori and Rossi, 2000, p. 410).

In the literature around multifunctional agriculture and rural development, synergies are described as taking place at different levels: at the level of the farm business, or at a higher, even regional level between different goods and services produced, different societal and economic sectors, social carriers or movements (Marsden et al., 2002; van der Ploeg et al., 2000). Knickel and Renting (2000) describe how rural entrepreneurs in the Rhön region of Germany were able to create new sources of income through linking tourism and recreation with high-quality, local products and an environment of high natural value. Brunori and Rossi (2000) also illustrate the synergies that can be created by actively

constructing linkages between different rural actors through the example of a wine route in Tuscany, connecting wine farms with agro-tourism enterprises, producers of regional products and restaurants. In their description, they distinguish two different types of synergies: complementarity, referring to a combination of skills or activities that complement each other, and hybridization, referring to a combination of activities that are culturally very different (Brunori and Rossi, 2000).

For these synergies around food production at the level of a rural area to thrive, and new markets to be created from them, a high quality rural network is vital (Brunori and Rossi, 2000; Clark, 2005; Knickel and Renting, 2000; Marsden et al., 2002). Marsden et al. (2002, p. 812) refer in this regard to the “new associationalism”, as the need for farmers to develop new associations with a wide set of external actors and institutions to unlock economies of scope (as opposed to the widespread economies of scale logic) and economies of synergy. They specifically link this to the rural development paradigm, as an alternative to the agro-industrial and postproductivist dynamics, through which agriculture can escape scale and price rationalities and play a central contribution to sustainability in rural areas. Achieving this, however, requires new labour patterns, new knowledge and skills, and –above all– new social networks and relationships with a diverse set of actors. Clark (2005) specifies the need to

network with regulatory actors, institutional agencies, business partners, consumers, but also to incorporate natural phenomena and processes to fully unlock the potential for economies of scope. He also stresses that the new social networks that are formed in this process can recast power relations and contribute to sustainable changes in the countryside. The potential for synergies to occur is shown to increase with the complexity and the level of dynamism in the network: the more complex the network and the longer and more that joint actions are repeated, the more “positive feedback” synergies will have through better communication and trust, and because better regulations are created to support the synergies (Brunori and Rossi, 2000, p. 419; Knickel and Renting, 2000). According to Marsden et al. (2002, p. 816), next to networking skills, other factors that increase the potential for realizing economies of scope and synergy are entrepreneurship, the location in which the business is set (ie. how easily markets can be accessed), access to financial means or possibilities to convert former farm assets, and “room for manoeuvre” in the existing policy framework.

This paper aims to contrast the synergies that can be created through food related activities in a rural setting to those that can be created in an urban setting. According to Blay-Palmer (2009, p. 409), multifunctionality is about “layering value” and this takes place differently in urban and rural environments. Because

in urban areas land is scarce and expensive, there is a higher need to layer value, but at the same time there are also more opportunities to do so. For the case of Toronto, Blay-Palmer (2009) describes the layering of human, social and natural capital (Emery and Flora, 2006) as such: “[...] *urban agriculture projects in disadvantaged Toronto communities provide youth education opportunities that build self-esteem, produce safer, less-violent communities and create beautiful spaces that enhance tourism.*” This simple example shows that also in an urban setting, multifunctional food initiatives can give a voice to disadvantaged communities (Clark, 2005). In Toronto, and an increasing number of cities worldwide, there is a technical layering with built assets as well, in the sense that heat from buildings is used for rooftop greenhouse production (Blay-Palmer, 2009; Sanye-Mengual et al., 2013; Specht et al., 2014), or that city brownfields are increasingly used for urban food production (Mogk et al., 2010; Mok et al., 2014). While we realize that these are only a few examples of a multitude of possible “layering” options, they do suggest that the dense and complex urban environment provides many possibilities to create a wide, diverse and dynamic network around food and a high potential for synergies to occur that can be very different from those occurring in a rural environment.

MUFIs can be depicted conceptually as a web of interrelated activities that enforce one another. This web is embedded in a complex and dynamic network

of relations giving, for example, access to material and human resources. The effects of “layering” activities go beyond the specific territory of each activity and provide multiple benefits stemming from the same set of resources/participants. They produce synergies that can occur internally by combining different activities at the level of the organization, and externally by developing functions and activities that respond to needs and demands from the city.

Based on these insights from literature, in the remainder of this paper we will sketch the development of three different MUFIs, specifically focusing on the following aspects:

- How are these MUFIs combining different activities, or “layering value” within their business?
- Does this create synergies at the level of the city and the business itself?
- Which process did they follow in trying to be more multifunctional, and, more specifically, what is the role of networking and “new associationalism”?
- What are the specific success factors and conditions to achieve synergies in an urban environment and what are the bottlenecks?

The following section describes the data on which the analysis in this paper is based and the data collection process.

3. Methodology

The data used to answer the research questions specified in the previous section were collected as part of the research project SUPURBFOOD (the EU's 7th Framework Programme). Three of the MUFIs that participated in SUPURBFOOD between September 2013 and September 2015 inform this paper and were involved in a cyclical, iterative and participatory process in which both researchers and MUFIs together developed shared interpretations and recommendations. The three MUFIs that were selected - the Community Farm (CF), RoomeR and Kalnciema Quarter (KQ) - represent enterprises which purposefully pursue multi-functional objectives by orienting their activities to be embedded in different dimensions of their city's culture, society, economy and environment. They were each chosen because together they cover the main three parts of the agro-food chain: food production (in the case of CF), processing of urban foraged natural products (RoomeR), and the selling, distributing and marketing of urban and rural produce (KQ). Another axis of comparability is the institutional and political environment in which each MUFI operates. In Bristol civic food organizations are very active and developed a food

policy council in 2011 aiming to: “*Influence and advocate for national, regional and local policies that support development of healthy, sustainable, resilient food systems*” (Bristol Food Policy Council, 2014). In Ghent, it was the city administration itself that launched a food policy strategy in 2014 in the form of the campaign “Gent en Garde”, promoted as the “*battle for a sustainable food system*”. They aim to “*achieve victories*” throughout the local food chain: from production to processing and distribution to consumption and waste management (City of Ghent, 2015). In Riga, finally, there is no form of governmental organization to support an advance towards a more sustainable food system. A description of the three MUFIs will now be given, followed by a brief account of the data collection and research process.

Short description of the SMEs

The **Community Farm** (CF) near Bristol is, essentially, a community supported agriculture initiative (CSA) which occupies 22 acres (9 ha) of agricultural land, although only about a quarter of this area is cultivated. Much of the CF’s commercial income comes from a vegetable box scheme.

The idea behind the CF arose when an existing box scheme enterprise expanded and moved to the CF’s current location. In 2011 the CF was initiated when almost 500 people responded to a community share issue which raised

around £186,000 (or around €253,000 at time of writing). The CF then took on production and marketing of seasonal fruits and vegetables via retail delivery and wholesaling. Today the CF employs 4 full-time and 15 part-time staff and delivers organic vegetables throughout the Bath and Bristol area. With almost 500 weekly box sales and an average customer spend of almost £16 (€22) a week (The Community Farm, 2013), the CF is one of the larger of a (much smaller) second tier of veg-box schemes in England. Additionally, the CF organizes a variety of activities such as school visits, corporate team-building days and horticultural training apprenticeships. Turnover in 2013 was around £700,000 (€970,000), although the operation made a significant net loss at that time of almost £57,000 (€79,000).

RoomeR is a small enterprise that produces an alcoholic beverage based on the flowers of the elder tree (*Sambucus nigra*). The production of this aperitif started in the attic of the owners' grandmother in 1989, but slowly developed into a well-established local business producing around 50,000 liters per year in a small factory in the city centre of Ghent. The business supplied first local restaurants, cafés and festivals and is now expanding to supply supermarkets, including some outside of the city.

RoomeR consciously made the decision not to produce elderflowers on a farm plot but rather to gather the majority of the flowers from trees located in

different green areas in and around the city of Ghent. Each year, the company collects around 1200 kg of elderflowers.

The enterprise has a strong social commitment exemplified by a policy to employ people who suffer from social exclusion and continuously aims to improve its environmental performance by recycling water, reducing packaging and using bicycle transport.

The **Kalnciema Quarter** (KQ) in Riga, Latvia, is an ensemble of buildings representing 18th/19th century wooden architecture. Since 2011 it has been the location for a weekly farmers' market, and offers alongside about 20 non-food activities per month ranging from local history and creative activities to pop-up sports and upcycling workshops.

KQ has become a popular public space, well known for its advocacy of sustainable lifestyle values. Due to its popularity and established base of customers (about 100,000 visitors per year), KQ can combine its profit making, social, and innovation-promotion goals.

Data collection and research process

As suggested, the research is based on a cyclical, iterative and participatory process in which the three research teams and the three MUFIs together developed shared interpretations and recommendations. The process started with

the joint establishment of a Dynamic Learning Agenda (DLA), a list of challenges and actions to which the research should respond. The DLA is a method to register essential learning trajectories within innovative projects (Van Mierlo et al., 2010). The DLA was frequently reviewed throughout the project to ensure that the research continued to focus on the most relevant shared questions. A second step was that each research team developed a thick description of the MUFIs with which they cooperated in the form of a number of reports, interviews, maps, visualisations of relationships and pictures. Thick description is an ethnographic term referring to a detailed account of field experiences in which researchers make explicit patterns of cultural and social relationships and put them in context (Holloway, 1997). This contrasts with thin description, which is a superficial account.

The thick descriptions were further elaborated by means of additional desk research, participant observation, and interviews within MUFIs and related actors. Research teams conducted regular (roughly quarterly) semi-structured interviews with business owners, staff and board members of the MUFIs. These covered broad topics such as the organization and management of the business and the opportunities and challenges of multifunctionality. For the case of the CF, because of the important role volunteers play in food production, research was extended via a focus group and short one-to-one interviews with the

volunteers. At KQ the research was extended with participant observation. This entailed attending a sample of events over time, focussing on types and range of participants, the ideas promoted by the activities, the nature of exchanges between participants.

During the research process, the MUFIs were regularly asked to validate emerging findings, indicating that much of the interpretation of the results was co-created, making this a highly participatory research approach. The next section presents the results of the research process.

4. Synergies through Multifunctional Food Initiatives in an urban environment

The following discussions of the three MUFIs show how each combines food-related and other activities within their business, thereby “layering value” and creating synergies at the level of the business itself (internal) and the city region in which they operate (external). All three accounts reveal that observable synergies within the MUFIs resulted from their attempts to become more multifunctional, and pay specific attention to the role of networking.

|The Community Farm

The idea of CF was born out of a discussion between the owner of the established horticultural enterprise, the landowner and members of a local Transition group in Bristol. Their objective was to offer locally-produced food to city residents who would also be involved in aspects of production and enterprise management. In other words, the CF was initiated with the objective to “layer value” on top of the core activity of producing and supplying vegetables locally.

Internal synergies (relating to the enterprise) include the incorporation of the environmental benefit of being located on land occupied by an organic dairy farmer – a CF co-operative member - who can supply manure for the CF’s horticultural activities. A second environmental synergy is embodied in the landscape in which the CF fits. Perceptions of the landscape are major motivating factors for volunteers and a reason to come regularly:

“...it’s so beautiful...” .

“...it’s open air and exercise...”

Regular, seasonal volunteer workers are integral to the CF’s business model, and to its vision for a more sustainable, convivial food system. Volunteers, although unpaid, are free to take surplus vegetables home, which, several suggest, encourages them to eat well, try different recipes, and appreciate food qualities

because they have helped grow it. The social nature of community farming (“we’ll all get together at lunch...”) provides further synergies between the satisfaction of the workforce and the success of the strategy of using volunteers. Several volunteers clearly see their contribution as being a social and educational experience, while staff appreciate the conviviality of the way the CF works:

“Certainly there is a lot of talk about food and seasonal vegetables all the time.”

“We’ve all got our strong sides and weak sides and we’re really quite a big team ... we have to keep going together, ... you’re so bloody loyal to the whole thing... we’re all a bit hooked in to vegetables”.

“Our volunteers are great and I love sharing this farm with people who come and give their time... It’s a lovely thing to do for me and them. There’s a lot to be had from this...”

External synergies are evident in the integration of workers from the Bristol Drug and Alcohol project (BDA). Collaboration between the CF, the BDA and the local health authority has resulted in the development of formal apprenticeships for BDA clients, some of whom have subsequently secured jobs in other horticultural enterprises. In this respect, the CF also fulfils some of the objectives associated with therapeutic or care farming (Hine, Peacock, and Pretty, 2008).

While the apprenticeship arrangement has benefits for the farm through labour cost savings, positive social and economic effects emerge in relation to wider public interest:

“...the Bristol Drugs Project thing has increased profitability significantly at the farm. [Staff member] said they were the best workers he’s ever had... there’s no question that the success of the growing side this year was in large part due to them.”

The operational finance for the CF comes from a blend of sources, of which retail sales from the delivery of veg-boxes represent the most significant commercial income. However, non-trading income from the CF’s work with the local health authority is a vital way for the CF to meet its aim of connecting local people to the food they eat.

Finally, because of the commercial perspectives and networks retained within the CF by its initiators, the CF has a well-developed local presence, selling at local farmers’ markets and participating in both Bristol’s and Bath’s food festivals.

|RoomeR

Before they started the business, the two owners were socially committed through their jobs as a teacher and social worker, reflected in their vision for the

company. Their aim is to redefine the traditional role of an entrepreneur in society, extending the traditional profit oriented mind-set:

“We want to develop a business where the economy supports society but not the other way around. To develop a place where you work to learn and live instead of where you live to work. I think that we do what we can to have a broader interpretation of the concepts growth and profit than only financial profits.”

RoomeR takes sustainability as a foundation for running the business, although the owners do not foreground these ideals in promotion campaigns: *“To try hard in silence, might be the best example of sustainable behaviour for future generations”*. Instead sustainability objectives are integrated in several business decisions. Foraging flowers from existing trees in the city creates external synergies as production becomes integrated in other landscape activities (such as parkland management) and no extra land, which is scarce in the densely populated region of Flanders, needs to be occupied.

Collecting the flowers from trees scattered across the Ghent city region in the limited timeframe of the blossom season (May-July) presents a considerable challenge. Consequently, RoomeR cooperates with local people, often artists, younger or retired people who don't have fixed working hours and can combine picking with other activities.

In relation to an environmental commitment, RoomeR decided to collect used bottles and crates and recycle them. Although this significantly reduces packaging and therefore contributes to the sustainability of the product, it is also a logistical challenge and a very labour intensive activity. To limit environmental impact in the city centre of Ghent, the RoomeR product is distributed by a local bicycle delivery company whose riders also collect the empty bottles. Recycling, however, would not have been possible without the cooperation with the local sheltered workshop Ryhove, which tries to provide meaningful employment for people who cannot be employed in the regular labour circuit (due to a variety of problems ranging from former substance abuse to mental illness). Ryhove participants clean the recycled bottles and run the bottling of the aperitif. Due to the current capacity of the RoomeR company, bottling takes place once a month. Although machines are available for this task, RoomeR chooses to cooperate with Ryhove for manual bottling. This approach not only creates employment for disadvantaged people, it is also more economical because it fits with RoomeR's fragmented bottling schedule. Such synergies increase the sustainability of RoomeR, both economically and socially, and make cooperation with Ryhove valuable.

It has been suggested above that one of the central principles of RoomeR is to consciously employ people from the region and cooperate with different local

partners. In addition to the examples described, RoomeR cooperates with Ghent University and local schools to provide internships. Moreover, RoomeR staff also share experiences about, for example, entrepreneurship and environmentally sustainable production during guided tours in the factory with different groups of people (e.g. school pupils, pensioners). One of the owners argues: *“Because you follow your mission about participation, you develop a relationship with the consumer that goes beyond “I am a customer”. You create a natural community and are locally embedded”*.

All the efforts to engage and cooperate with local people and companies not only creates a loyal “natural community” of RoomeR customers, it also stimulates the local economy, a sense of community and adds to a local identity.

Finally, being multifunctional has also resulted in RoomeR being awarded an interest free loan from “Network Flanders” (now active under the name FairFin vzw), an NGO supporting sustainable businesses by facilitating crowdfunding and then tripling the amount collected with an interest free loan.

|Kalnciema Quarter

In 2001, two young entrepreneur brothers owning a small renovation business began to purchase and restore wooden buildings in an area that had been identified for redevelopment.

The first building renovated was rented by a new textile design business and shop. However this business venture did not flourish, as the area had a limited amount of passing custom. After a number of other experiments with events to attract more people, finally the idea to use the whole quarter as a venue for a farmers' market proved to be most successful. KQ evolved into a place with a farmers' and craft market integrated with a range of other cultural and leisure activities in one historical building quarter.

By seeking and adding complementary activities to the main business platform of the farmers' market e.g. the organisation of educational events and seminars, contemporary art exhibitions, cinema evenings, open-air concerts of popular and alternative musical bands, KQ succeeds not only in bringing new functions to this particular urban space, but also creates a unique combination of multifunctionality that links food, heritage, culture and leisure.

The diversity of activities cannot be developed and managed solely by the owners of the buildings. Therefore, several activities, especially creative industry related activities, are outsourced to other small companies or creative project teams. For example, the annual "Art Hunt" organized in conjunction with the Academy of Art and selling works of both students and established artists, is supplemented by regular exhibitions initiated by individual artists. Traditional seasonal festivals are organized in conjunction with Latvian cultural

associations. Offering such diversity of activities is important to make sure that the square is alive all week and increases the turnover of the farmers' market and local shops.

Moreover, the flexibility of the management of KQ towards the development of new activities by different groups also promotes self-organisation. Stakeholders and consumers are co-creators of these activities and benefits, and their involvement generates new kinds of activities. Following the involvement of Riga in the SUPURBFOOD project, KQ managers intensified collaboration with researchers and as a result developed a new online platform called Markethopper.eu. This is intended as a virtual meeting place linking markets internationally and popularises farmers' and crafts markets.

It has been argued that producer and artisan markets can become places of exclusive consumption predominantly geared towards affluent citizens (Hinrichs, 2003). For KQ management an important objective is to offer a broad enough diversity of events to balance commercial returns with opportunities to attract a range of local and non-local visitors including young people, families, tourists and pensioners. Space is also provided for rural groups (notably small farmers, innovative producers, small-scale food processors, craftspeople) to find new marketing channels and ways to communicate with consumers. In other words, KQ's specific model of multifunctionality is key to create wider, often

unexpected links between various social groups and segments of the population: producers and consumers, farmers and city dwellers, people interested in food and those interested in the cultural offer of the Quarter.

This in turn contributes to community building and generates a number of sustainability benefits or external synergies such as access to local food, rising food and nutrition awareness among consumers, farmers' innovation and building social ties across communities.

|Creating synergies

The analysis of the three MUFIs reveals that through the combination of food with other activities that may be culturally very different such as care and cultural activities (cf. the “hybridization” concept of Brunori and Rossi (2000)), synergies at the level of the MUFI and the city itself can be created. The CF in Bristol, combines the organic production and sales of vegetables with a volunteering operation, education and care in the framework of a drug and alcohol rehabilitation programme. These extra activities allow the CF to better cope with peaks in the demand for field labour and save on labour costs. At the same time, however, there are clear societal benefits in the form of social reintegration of people, education linked to healthy and nutritious food, and social and health benefits for the group of volunteers who enjoy working

together in the open air. RoomeR combines the production of an alcoholic aperitif made with elderflowers foraged by locals partly on public land, with an environmental mission focusing on recycling and landscape care, and a social mission cooperating with a sheltered workshop for bottling while also offering internships to local schools, businesses and other organisations. This way of working allows them to save on costs associated with buying land, machinery and consultancy, while the local anchoring generates a loyal community of customers. Being multifunctional has also given RoomeR access to an interest-free loan. In addition to the environmental benefits linked to RoomeR's methods, value is added to an otherwise neglected product, provides meaningful employment for people who cannot find a place in the regular labour circuit, and adds to community building. Finally, KQ combines a local food and crafts market with culture and leisure activities. Here the concept of internal synergies is very clear as the Quarter, although it is visually very attractive, only started to flourish once the food market was established and attracted visitors to the area. The cultural, educational and lifestyle events generated further interest among a wider variety of visitors. In terms of external synergies, KQ contributes to community building by bringing together a diverse group of local people and provides an opportunity for local farmers and craftspeople to innovate and market-test new ideas and products.

5. Discussion and conclusions

This paper focusses on the phenomenon of multifunctional urban food initiatives (MUFIs) and how, using food as a vehicle, they can provide integrative solutions for a number of social, environmental and economic problems in contemporary cities in developed countries. Through an in-depth investigation of three MUFIs in the UK, Latvia and Belgium, the paper aims to increase understanding of how different activities are combined within MUFIs, leading to the creation and strengthening of synergies: first between the different activities performed within MUFIs (internal synergies), and second the external synergies between the MUFI and the (peri-)urban environment in which each operates.

The three cases demonstrate that being located in a dense and complex city environment creates specific opportunities to be multifunctional, “layer value” and create synergies (Blay-Palmer, 2009). It is the dense human capital present in city regions, namely citizens who often have specific needs such as connecting more with nature (Beatly, 2011), that allowed the CF and RoomeR to organise labour during periods of peak labour need. It allowed the CF to attract almost 500 investors who shared the CF vision for its financial establishment. The large number- and diversity of organizations and businesses located in Ghent offered useful cooperation possibilities for RoomeR. This allowed them first to save on

technical and marketing costs through the various cooperations with local schools and universities. Second, this enables the distribution of products through bike transport, thereby increasing sustainability, and the development of a link to tourism through the certification of the regional product. Finally, the dense cultural capital present in Riga allows KQ to create, at a relatively low cost, a varied cultural programme to complement the food market. This portfolio of events attracts considerable numbers of visitors sharing the KQ team's values of local-ness and authenticity on which their operation is based.

The important role of networking in the creation of synergies around food is evident in the cases. All have built a complex and dynamic network with a wide range of actors: other local businesses, social organisations, consumers, schools, cultural organisations, individual artists or other local people, etc. While there is considerable openness to self-organisation of customers (KQ), ultimately the responsibility for economic viability rests with the MUFI.

The dense city environment has indeed created more opportunities for MUFIs to link to a variety of actors, yet managing this extensive network demands a lot of time, effort and skills as it requires managers to speak different "languages" and be engaged with a variety of regulations in different fields (e.g. food safety, environmental regulations, standards and best practice for volunteers, spatial planning, etc.). As a result of not fitting into one specific

regulatory category, the MUFIs are constantly involved in a learning process, which, with limited staff, can be very time consuming.

Managing multifunctionality thus requires good entrepreneurial skills (Marsden et al., 2002), because different activities are interlinked and often compete for attention, funds and time. The complex decision-making that MUFIs are faced with is well illustrated by the following quotation from a manager of the CF:

“The most important thing for the Community Farm of all though, is to be multifunctional. It is most keen to achieve all of the objectives set and one shouldn’t necessarily take priority over another. But, there has to be a sustainable business that brings enough money in to make the whole thing work properly. At the moment there is a dependence on grant funding for a lot of the social remit work, but there is an aspiration to be able to fund this (cross subsidy) out of other commercial activity. [...] The Community Farm is critically aware that in the end it must “balance the books”.

Finally, the cases described in this paper add to the growing evidence that MUFIs can be valuable in dense city environments as, with food as the central foundation, they fulfil different functions simultaneously on one plot of land. At the same time, MUFIs tend to signal specific urban needs and function as arenas of social and political experimentation and innovation. We therefore agree with

authors including Lovell (2010) that municipal governments should support MUFIs so that the multifunctional benefits are maximized.

State support in the cases studied in this paper, however, is mostly limited to “soft” measures such as one-off subsidies, provision of advice or support in networking. However, in order to make a meaningful change, “hard” measures are needed such as structural changes in spatial planning or other regulations, to get MUFIs out of the “grey zones” of legislation, for example to allow urban foraging or gardening on brown field sites and live/work spaces to be developed in the city.

City councils can also organize their activities to help create niches within which MUFIs can develop, for example through public food procurement contracts, market spaces or street food options for small and start-up enterprises, providing council-controlled space for growing food, or working with developers to identify suitable brownfield sites for short-term growing. Many of these options will provide MUFIs with opportunities to develop business models with local financial backing. Such transitions, however, sometimes involves tensions.

Recently, Bristol City Council issued plans for the construction of a (low carbon) bus service terminus on land that is currently used for food production. Public protests and land occupation followed. By contrast in Ghent, discussions

are taking place linked to how the city government could adjust land use policies in order to support sustainable local food production. Key challenges are linked to integrating the conventional agricultural sector, active in the peri-urban area, in such new ambitions.

Finally, despite the recent increase in interest from the municipality to support urban food developments, in Riga, KQ is still regarded as a pioneering company in the realm of sustainable urban food provisioning and struggles to find long-term support from the local state. In other words, urban food production remains in a municipal “grey zone” because it is not incorporated into the strategic thinking of city planning or in policy makers’ conceptions of the functions of the city. Incorporating this strategic thinking about food is therefore an important and urgent challenge for cities. Therefore, further research is needed to understand how to optimize and balance internal and external synergies in order to support both the sustainability of MUFIs and the benefits they create in cities.

References

Ackerman, K., M. Conard, P. Culligan, R. Plunz, M.P. Sutto and L. Whittinghill. 2014. Sustainable food systems for future cities: The potential of Urban Agriculture. *Economic and Social Review* 45(2):189-206.

- Beatly, T. 2011. *Biophilic cities. integrating nature into urban design and planning*. Island Press, Washington.
- Blay-Palmer, A. 2009. The Canadian Pioneer: The Genesis of Urban Food Policy in Toronto. *International Planning Studies* 14(4):401-416.
- Bristol Food Policy Council. 2014. About. Bristol good food. Bristol food policy council. <http://bristolfoodpolicycouncil.org/about/> (accessed 11 December 2014).
- Brunori, G., and A. Rossi. 2000. Synergy and coherence through collective action: Some insights from wine routes in Tuscany. *Sociologia Ruralis* 40(4):409.
- City of Ghent. 2015. Gent en garde. Stad Gent. <https://gentengarde.stad.gent/> (accessed 24 September 2015).
- Clark, J. R. A. 2005. The 'New Associationalism' in agriculture: agro-food diversification and multifunctional production logics. *Journal of Economic Geography* 5(4): 475-498.
- Coutard, O., G. Finnveden, S. Kabisch, R. Kitchin, R. Matos, P. Nijkamp, et al. 2014. Urban Megatrends: Towards A European Research Agenda. Scientific Advisory Board of the Joint Programming Initiative Urban Europe, Brussels. p. 28.
- Curry, N., M. Grivins, and E. Mettepenningen. 2016. Multifunctionality in urban food: More than outputs. (in press).
- DeLind, L., and A. Ferguson. 1999. Is this a women's movement?: The relationship of gender to Community Supported Agriculture in Michigan. *Human Organization*. 58: 190-200.
- Emery, M., and C. Flora. 2006. Spiraling-Up: Mapping Community Transformation with Community Capitals Framework. *COMMUNITY DEVELOPMENT: Journal of the Community Development Society*. 37(1):1-16.
- European Commission - Directorate General for Regional Policy. 2011. *Cities of tomorrow. Challenges, visions, ways forward*. European Commission, Brussels. p. 100.
- Fainstein, S. 2006. *Planning and the Just City. Searching for the just city*. New York. 29 April 2006. Graduate School of Architecture, Planning and Preservation, Columbia University.

- Freeman, C., K. J. M. Dickinson, S. Porter and Y. van Heezik. 2012. "My garden is an expression of me": Exploring householders' relationships with their gardens. *Journal of Environmental Psychology* 32:135-143.
- Goodman, D., E. DuPuis, and M. Goodman. 2011. *Alternative Food Networks: Knowledge, Practice, and Politics*. Routledge, Abingdon.
- Hackworth, J. 2007. *The neoliberal city: governance, ideology, and development in American urbanism*. Cornell University Press, Ithaca.
- Hine, R., J. Peacock, and J. Pretty. 2008. Care Farming in the UK: Contexts, benefits and Links with Therapeutic Communities. *International Journal of Therapeutic Communities* 29(3):245 -260.
- Hinrichs, C. 2003. The Practice and Politics of Food System Localization. *Journal of Rural Studies* 19(1): 33-45.
- Holloway, I. 1997. *Basic Concepts for Qualitative Research*. Blackwell Science, London.
- Keech, D., S. Alldred, and R. Snow. 2009. *Community Supported Agriculture: An analysis of seven community supported agriculture enterprises*. Soil Association, Bristol.
- Knickel, K., and H. Renting. 2000. Methodological and Conceptual Issues in the Study of Multifunctionality and Rural Development. *Sociologia Ruralis* 40:512-528.
- Lobley, M., and M. Winter. 2009. Introduction: knowing the land. In: M. Winter and M. Lobley, editors *What is land for? The food, fuel and climate change debate*. Earthscan, London. p. 1-20.
- Lovell, S. T. 2010. Multifunctional Urban Agriculture for Sustainable Land Use Planning in the United States. *Sustainability* 2(8):2499-2522.
- Marsden, T., J. Banks, and G. Bristow. 2002. The social management of rural nature: understanding agrarian-based rural development. *Environment and Planning A* 34(5):809-825.
- McClintock, N. 2014. Radical, reformist, and garden-variety neoliberal: coming to terms with urban agriculture's contradictions. *Local Environment. The International Journal of Justice and Sustainability* 19(2): 147-171.

- Mogk, J. E., S. Wiatkowski, and M.J. Weindorf. 2010. Promoting urban agriculture as an alternative land use for vacant properties in the city of Detroit: Benefits, problems and proposals for a regulatory framework for successful land use integration. *Wayne Law Review* 56:1521-1578.
- Mok, H. F., V.G. Williamson, J. R. Grove, K. Burry, S.F Barker, and A. J. Hamilton. 2014. Strawberry fields forever? Urban agriculture in developed countries: a review. *Agronomy for Sustainable Development* 34(1): 21-43.
- Moragues-Faus, A., and K. Morgan. 2015. Reframing the foodscape: the emergent world of urban food policy. *Environment and Planning A* 47(7):1558-1573.
- Potter, C. 2006. Competing narratives for the future of European agriculture: the agrienvironmental consequences of neoliberalization in the context of the Doha Round. *Geographical Journal* 172(3): 190-196.
- Province of East-Flanders. 2015. Tasty East-Flemish. Authentic East-Flemish regional products with a story. (In Dutch.). <http://lekkeroostvlaams.be/over-lekker-oost-vlaams/>. (accessed 15 Sept. 2015).
- Reed, M., and D. Keech. 2016. Gardening cyberspace - hybrid spaces and social media in the creation of food citizenship in the Bristol city-region, UK. *Landscape Research* (in review).
- Robinson-O'Brien, R., M. Story, and S. Heim. 2009. Impact of garden-based youth nutrition intervention programs: a review. *Journal of the American Dietetic Association* 109(2):273-280.
- Saltmarsh, N., J. Meldrum, and N. Longhurst. 2011. The impact of Community Supported Agriculture. *Soil Association, Bristol*.
- Sanye-Mengual, E., I. Ceron-Palma, J. Oliver-Sola, J. Montero. I., and J. Rieradevall. 2013. Environmental analysis of the logistics of agricultural products from roof top greenhouses in Mediterranean urban areas. *Journal of the Science of Food and Agriculture* 93(1):100-109.
- Specht, K., R. Siebert, I. Hartmann, U.B. Freisinger, M. Sawicka, A. Werner, et al. 2014. Urban agriculture of the future: an overview of sustainability aspects of food production in and on buildings. *Agriculture and Human Values* 31(1): 33-51.
- Swinbank, A. 1999. EU Agriculture, Agenda 2000 and the WTO. *The World Economy* 22(1): 41-54.
- The Community Farm. 2013. The Community Farm Annual Report 2012-13. The Community Farm, Bristol.

- The Community Farm. 2014. Website of the Community Farm, Bristol. <http://www.thecommunityfarm.co.uk/> (accessed 26 March, 2014).
- The Community Farm. 2015. Buy a share in The Community Farm. Join our growing community. <http://www.thecommunityfarm.co.uk/wp-content/uploads/2015/04/tcf-shareoffer-2013-book-FINAL1.pdf> (accessed 13 July 2015).
- Travaline, K., and C. Hunold, C. 2010. Urban agriculture and ecological citizenship in Philadelphia. *Local Environment* 15(6): 581-590.
- United Nations - Department of Economic and Social Affairs - Population Division. 2014. World Urbanization Prospects: The 2014 Revision, Highlights (ST/ESA/SER.A/352).
- Van der Ploeg, J. D., H. Renting, G. Brunori, K. Knickel, J. Mannion, T. Marsden, et al. 2000. Rural development: From practices and policies towards theory. *Sociologia Ruralis* 40(4):391.
- Van der Ploeg, J. D., D. Roep, H. Renting, J. Banks, A. Alonso Mielgo, M. Gorman, et al. 2002. The socio-economic impact of rural development processes within Europe. J. D. van der Ploeg, A. Long and J. Banks. Editors. *Living Countrysides. Rural Development processes in Europe: The State of the Art*. Elsevier, Doetinchem. p. 180-191.
- Van Huylenbroeck, G., V. Vandermeulen, E. Mettepenningen, and A. Verspecht. 2007. Multifunctionality of Agriculture: A Review of Definitions, Evidence and Instruments. *Living Reviews in Landscape Research* 1(3).
- Van Mierlo, B., B. Regeer, M. van Amstel, M. Arkesteijn, V. Beekman, J. Bunders, et al. 2010. *Reflexive Monitoring in Action. A guide for monitoring system innovation*. Wageningen University, The Netherlands.
- van Veenhuizen, R. Editor. 2006. *Cities Farming for the Future. Urban Agriculture for Green and Productive Cities*. The Philippines RUAF Foundation, IDRC and IIRR.
- Wakefield, S., F. Yeudall, C. Taron, J. Reynolds, and A. Skinner. 2007. Growing urban health: community gardening in South-East Toronto. *Health Promotion International* 22(2): 92-101.
- Zasada, I. 2011. Multifunctional peri-urban agriculture—A review of societal demands and the provision of goods and services by farming. *Land Use Policy* 28(4): 639–648.