Talking Tech with Foodies

ICT Needs of Community Food Initiatives

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OPEN FOOD NETWORK CANADA

FLEdGE Food: Locally Embedded, Globally Engaged

Executive Summary

This document summarizes discussions held with sustainable food system initiatives in Ontario between 2015-2016. This pre-consultation, held at 8 different conferences and networking events is the first step in elaborating a set of research questions that can be used to map out an action research agenda at the intersection of new media, ICT and food studies.

Discussants talked about their dreams for, and fears about, how the 'digital revolution' (with a focus on software) might be shaping sustainable food systems. They identified three key ways in which ICT might drive the movement for good food forward. First, internet technologies, especially peer-to-peer based social media, are already helping sustainable food initiatives to share and mobilize knowledge and build new skills. Second, participants discussed how emerging ICT (in particular e-commerce and logistics platforms) can help them to increase economic efficiencies, deepen existing markets and reach new markets. Finally, the discussants identified that emerging technologies can help food innovators to make connections with each other, with new groups of consumers and with new suppliers to 'join up' the many and the small food initiatives around the world to achieve greater impacts.

A food justice ethic permeated many of the discussants comments. This fast-paced technological revolution can be divisive for the sustainable food movement where firms and farms are beginning from different positions from which to adapt. Some discussants felt that the proliferation of powerful technologies was already exacerbating existing inequalities and food injustice. Discussants made it clear that future research needs to give explicit consideration to differentiated communities in the food movement and foster equity and inclusion for diverse ages and genders, racially diverse food communities and indigenous food communities. Without an equity focus, there is a risk of ICT becoming a tool for reinforcing existing inequities and power structures, rather than tools for reform and empowerment.

These findings will be used by Open Food Network Canada, a national not for profit that is working to support ICT adoption among sustainable food enterprises and networks, to build a national collaboration and develop a roadmap (strategy) for digital transformation in Canada's movement for sustainable food.

Background

All over the world, community groups, farmers, action researchers, social enterprises and others are innovating viable solutions to food system challenges (cf Goodman et al., 2012). In Ontario, diverse community food innovators are working to reconfigure social, environmental and economic structures through new food distribution approaches such as Community Supported Agriculture (CSA) farms (Ballamingie & Walker, 2013; Dixon, 2011; Feagan & Henderson, 2009), food hubs (Blay-Palmer *et al.*, 2013) and buying clubs (Little *et al.*, 2010). Research to describe and quantify the number of these innovations is just beginning. Scholars at the Laurier Centre for Sustainable Food Systems, for example, identified 350 such grassroots initiatives in Ontario alone and detailed their varying scales and complexities (Mount *et al.*, 2013; Stroink & Nelson, 2013). In parallel research funded by the Ontario Ministry of Agriculture and Food, Ontario researchers documented 144 CSAs and 747 diverse ecological farm-based initiatives and pegged their collective sales of organic food at $341 million annually (Schumilas, 2012).

Recent research (https://www.fledgeresarch.ca) at the Laurier Centre for Sustainable Food Systems explores how these initiatives can 'scale up' (i.e. get larger by involving more producers, reaching more consumers and selling more sustainably produced food) and/or 'scale out' by proliferating small initiatives through replication (Blay-Palmer *et al.*, 2015). It has proved challenging to achieve these greater scales and impacts without these initiatives 'trading off' their foundational values and becoming 'co-opted' by the food regime they seek to challenge (Goodman *et al.*, 2012; Guthman, 2004; Levkoe, 2014; Mount, 2012). Recently, research with over 120 grassroots food initiatives in Ontario has suggested a wide range of technologies and institutions, such as community food processing capacity, transportation and distribution infrastructure, increased public procurement, and enabling regulations, as mechanisms that can assist in uniting disparate initiatives (Blay-Palmer *et al.* 2013). Within this research, scholars have raised questions about the potential role of ICT in enabling this 'scaling up and out' of grassroots initiatives by empowering users through democratization of knowledge (Castells *et al.*, 2012).

ICT has reached a point where it has enormous *potential* to enable food system transformation through building diverse economies (e.g. use of peer-to-peer, crowdsourcing, and reputational systems), build and strengthen networks, raise visibility of initiatives, facilitate creation and sharing of multiple kinds of information, and organize communities around common concerns in order to influence public opinion and shape policy (*cf.* Calderaro & Kavada, 2013). Despite this potential, community food initiators are under-utilizing digital technologies and relying on them only for 'one-to-many' types of communications (newsletters, blogs, websites) (Brunori *et al.*, 2013; Jesperson *et al.*, 2013; Kurnia *et al.*, 2015). A significant skill gap exists, and community food innovators have recognized use of ICT as one of their top three challenges (Fisher *et al.*, 2013).

Learning Engagement Approach

The ongoing economic and institutional transformations in food systems and sustainable food organizations associated with ICT have yet to be elaborated. What must be done to enable food enterprises to take advantage of opportunities and avoid being 'left behind' in these global changes? What approaches to ICT strategy and policy development are most likely to be successful and most appropriate for Canada's movements for sustainable food systems?

This learning engagement or 'pre-consultation' was undertaken as part of a postdoctoral fellowship, affiliated with the Laurier Centre for Sustainable Food Systems, focused on various aspects of the 'food + tech' landscape in Canada.

Pre-Consultation Goals

The purpose of this learning engagement was to:
1. identify action research issues to lay the foundation for a new inter-sectoral, inter-disciplinary research program that brings food studies, new media studies and Information Communication Technologies (ICT) into closer conversation,
2. identify research partners (practitioners and academics) for future action research proposal development, and
3. provide preliminary guidance to Open Food Network Canada, a newly formed Canadian not-for-profit organization, to help them develop a framework and action plan to support ICT use in food system transformation.

Methods

From January 2015 to March 2016, we spoke with 143 producers, community food initiatives (e.g. food hubs, buying clubs, food co-operatives), technology firms (e.g. local food start-ups, developers), consumers and academics/researchers in Ontario. These discussions occurred primarily at conferences where local sustainable food supporters were gathered. Table 1 shows the numbers and categories of discussants at each venue.

In this initial exploratory phase in our research, we engaged in unstructured discussions with these stakeholders in order to learn what participants were thinking with regard to ICT, and what kinds of opportunities and challenges they experienced. We opened our discussion simply with the question, "What are your thoughts and experiences with software as it relates to your work/the sustainable food movement?"

Table 1: Discussants and Venues

Venue	Producers	Community Food Initiatives	Food + Tech Firms	Consumers	Academics & Researchers	Responses by Venue
Guelph Organic Conf (2016)	13	3		3		19
Bring Food Home (Nov 2015)	3	7		1	3	14
EFAO conference (2015)	32	1				33
Food Secure Canada (2016)	0	0	1	4	4	9
Guelph Organic Conf (2017)	21	4	3	7	1	36
LOFC Assembly (2017)	0	8	0	0	2	10
Social Economy Workshop 2017)	0	4	0	0	2	6
Other networking	6	4	3	0	3	16
Responses by Category	75	31	7	15	15	143

Dominant Themes

Our discussions with participants clustered into two broad areas: (1) the benefits and challenges of ICT for the sustainable food movement, and (2) the specific roles that ICT could play to help 'move the movement'. These are summarized below.

1. Potential benefits and challenges of ICT

Not surprisingly, discussants saw different benefits to ICT depending on whether they were primarily profit-maximizing farms/firms or focused on social or ecological goals, and taking diverse economic approaches (co-operatives, not-for-profits, gleaners, etc.). We found that the movement's market-driven players, and the stakeholders engaged primarily around ecological and social goals, see different potential in the new technological tools proliferating around us. Specifically:

- Profit maximizing firms/farms are looking toward logistic tools and e-commerce solutions to help them scale up and reach new markets.

- Organizations focusing on social and ecological goals want to know how new software tools can help them connect together, proliferate and have greater social impacts.

- Small scale producers and food initiatives are worried about being excluded and marginalized because they either can't afford or don't have the skills to use emerging 'solutions'. They struggle to, "just keep up" with the technological wave.

- Another group of small scaled initiatives believe they can ignore the proliferation of ICT because it seems to be "part of the system to be changed", and embracing it would be tantamount to 'co-optation'.

- Some discussants, in particular people from indigenous and racially diverse food communities, are concerned that emerging tech tools do not accommodate diverse cultural identities and values. These stakeholders are concerned that ICT could exacerbate existing food system inequalities, rather than provide opportunities.

- Consumers and researchers agreed that these new technologies could help consumers and producers 're-connect' around food and its production. They reflected on how the role of the food consumer is changing and they are becoming increasingly connected and informed. These discussants note how consumers are making increased use of the internet to become familiar with and experiment with new products, and learn about producers and food distribution methods. Increasingly, informed consumers are acting on their new found knowledge and experiences and trying to influences businesses. These new patterns suggest that successful firms and farms need to engage in value creation alongside consumers in co-creation processes enabled by ICT.

2. Fundamental Roles of ICT for the Food Movement

Notwithstanding this diversity of ICT issues across sustainable food initiatives, responses clustered into three different areas for which ICT supports could help sustainable food movements:

- ***Help with information exchange and skill building***

Most discussants immediately pointed to an example of how they have used the internet to solve a knowledge or skill gap. Further, many of the responses suggest that sustainable food stakeholders enjoy the process of sharing information on a variety of social media platforms. Most of these comments referenced peer-to-peer activities, in particular Facebook pages, favourite blog sites, and U-Tube videos. Interestingly, few discussants referred to academic or government platforms designed for information exchange. In conclusion, it seems that the ubiquity of the internet and digital information flows offers opportunities for accelerated learning and knowledge mobilization across grassroots innovations and further research is needed to elaborate details.

- ***Help increase economic efficiencies, deepen existing markets and reach new markets***

Only a few of the discussants (primarily food hubs) were using ICT (e-commerce and logistics platform) in their business. These stakeholders were convinced that ICT could help them become more efficient, deepen their existing markets and reach new markets. They had a sense that there were future possibilities that they were not yet familiar with. Further, the discussants not currently using ICT for e-commerce (many of the small scale producers fall into this category) wanted to move in this direction but were not sure how to get started. Many felt that they did not have skills or time to do this, and indeed many of them asked us if we'd be able to help them with this. It was clear that e-commerce users and non-users alike believe that this technology has the potential to shape their processes and food transactions in positive ways. In particular they mention the potential to facilitate trade at both local and global scales.

- ***Help with 'joining up' across the value chain and with consumers***

All the discussants identified that ICT can help food innovators to make connections with each other, with new groups of consumers and with new suppliers. For many of the respondents there was an empowerment ethic to this idea. Smaller scale or community based initiatives, said that 'joining up' was the key to competing with larger firms/farms while maintaining their smaller size. These smaller scale initiatives spoke extensively about their challenges linking with other growers or sellers in different communities. Most are using some form of mapping (e.g. Buy Local Buy Fresh or Ontario Fresh) to find partners along the value chain already. They find this technology useful, but not sufficient. As one producer said, "It helps, but then I still need to spend hours on the phone to figure out prices, quantities, delivery dates…". Discussants understood that emerging technologies could enable network or value chain formation more efficiently. At the same time, many noted that engaging with technology in this way is also a 'high risk' activity given their limited access to financial and human capital, noting, "I could waste a lot of time and money on something that might not do anything more than what I have now."

Discussants also noted that this ICT-enabled 'joining up' equally applies to the producer-consumer relationship. For example, several producers spoke about the potential to engage consumers in production decisions and volunteerism, in addition to enabling one-way information about products and production practices.

An Emerging Action Research Agenda

The ongoing ICT revolution, combined with the forces of globalization, provokes both hopes and fears among sustainable food system stakeholders. The people we talked with saw possibilities of economic efficiencies, knowledge mobilization and skill development, network formation and enhanced producer-consumer relationships. At the same time, the discussants feared being 'left behind' in this fast-paced innovation-

driven networked economy, and concerned that unless we could "put people first", these technologies could deepen the inequities and marginalization that already exists in food systems.

The task now is to engage with these diverse discussions to begin to shape an action research agenda that is broadly inclusive of the movement's diversity. The following preliminary themes are some initial 'fodder' for subsequent discussions:

Knowledge Mobilization and Skill Development

Our discussions suggest that using technology for knowledge and information sharing and skill building is a strong current practice among sustainable food system stakeholders, underpinned by a strong peer-to-peer ethic. Further research to better understand these choices and practices might ask:

What are the ways in which ICT is helping firms and farms at the grassroots of the sustainable food movement to join together for knowledge exchange and skill building? How can these mechanisms be strengthened?

How might academic and/or government-led knowledge mobilization practices engage with the peer-to-peer knowledge mobilization that seems most relevant at the grassroots of the food movement?

"Joining Up"

Our dominant food system has been shaped by industrial-age thinking that emphasized centralization, mass production, physical infrastructure and proprietary relationships. Today's new ICT-enabled world however, is driven by flat networked relations, co-creation processes, adaptive 'open' structures, decentralization and communities of practice. The firms and farms we spoke with in this exercise were intuitive about these broad changes, and identified the power of ICT to help them build different kinds of relationships and economics with each other, and with consumers. Small scale farms in particular, identified that emerging technologies and the ability to 'join up' shifts the focus away from scale of production. The 'Go big or go home' adage is changing to 'Stay small and get connected'. In ICT-enabled food systems small scale firms and farms can link their production and distribution together to meet larger institutional and/or international demand. Hopeful discussants wondered if emerging technologies will support a power shift away from single desk purchasing and supermarket dominance in supply chains. This suggests further action research questions:

How might emerging digital media and ICTs open up new possibilities for scaling up and linking together isolated grassroots food innovation in order to help transform food systems in more sustainable directions?

What new economic practices are manifest in these new 'joined up' food networks? How are these embedded in and/or in opposition to wider capitalist relations forged in the industrial era?

Changing Producer-consumer Engagement

Discussants felt that digital technologies could change the very nature of the producer-consumer relationship. Indeed, in academia, geographers have begun to look at ways in which 'cyberspaces' might be re-configuring the producer-consumer 're-connection' in food systems. (Boss & Owen, 2016). This nascent scholarship suggests that the producer-consumer re-connection might be enhanced when it occurs simultaneously in on-line and material spaces. Action research to explore the changing nature of ICT-enabled producer-consumer relations might ask:

How do cyberspaces like OFN offer architecture for participation and an additional space for food-related reconnections?

How is 'trust', the all important condition in alternative food systems, configured in food cyberspaces?

To what degree can technology help us build stronger connections between producers and consumers, and help us 'deliver' on the values and ethics we know consumers are looking for (such as healthier options, convenience, transparency, authenticity, and so on)?

Food Justice & Transformative Change

A food justice ethic permeated many of the discussants' comments. It will be important to undertake research that gives explicit consideration to differentiated communities in the food movement and fosters equity and inclusion for diverse ages and genders, racially diverse food communities and indigenous food communities. Discussants believe there is a risk of ICT becoming a tool for reinforcing existing inequities and power structures, rather than tools for reform and empowerment. Some preliminary research questions might be:

How can technology help us to level the playing field and improve livelihoods for the many small scale firms and farms at the base of the sustainable food movement?

Can we facilitate connections and interactions between digital technology firms innovating in the 'food + tech' space and the local sustainable food movement so that proprietary development understands and responds to the movement's values, goals and diversity?

To what degree does technology help these innovators take on transformative roles beyond the market?

How are grassroots sustainable food innovators using technology to move beyond the market and empowering the movement's policy advocacy and social change agenda? Can food-related internet and other collaborative technologies be understood as 'liberating'?

Next Steps

Our intention is to use these findings as a jumping off point to bring together diverse groups of researchers and practitioners into action research processes. Open Food Network Canada, a national not-for-profit that is working to support ICT adoption among sustainable food enterprises and networks, is seeking partners to help build a national collaboration and develop a roadmap (strategy) for digital transformation in Canada's movement for sustainable food, and your participation is welcome and needed.

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