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# No Big Fix: A Civic Approach to Sustainable Food Systems

## Sebastian Prost

Open Lab  
Newcastle University, UK  
Newcastle, UK  
s.prost2@ncl.ac.uk

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## Abstract

This position paper discusses how HCI can approach a systemic change for sustainable food systems. It argues that the role of technology is not to provide benign solutions to this complex problem, but to enable and support a process leading to such change. It outlines five distinct but connected potential ways to do this: Technology can help to *provide data* to spark discourse, *facilitate curiosity* to explore the conditions of food systems, *enable a rubbing of shoulders* among diverging interests, *scaffold action* for change, and foster a learning of *food literacy*. The paper argues for a civic understanding of food systems that aims at shifting emphasis from consumers and producers to 'food citizens'.

## Introduction

The environmental and health impact of our food system is significant. HCI research on sustainable food systems has often been concerned with improving individual or household consumption [8,10]. I argue that many examples tend to frame technology as solutions to a problem. Its definition however might not encompass the larger systemic and complex aspects of the issue [2]. I want to contrast these problem-solving, corrective approaches [10,12], such as food consumption, health, or food waste trackers with the concept of technology as an enabler and support of a

process towards system change [4]. Drawing on literature from the wider field of HCI for sustainability and civic technology, I see five potential impact areas, outlined below.

### **Provide Data**

Technology can provide useful data about the food system, but this should not be limited to quantitative and abstract data (such as the amount of food waste or energy needed to produce food), but tap into local and contextual knowledge on food production, distribution, and disposal in a local area or community (e.g. by a story-telling approach). Data can serve as a conversation starter, by being ambivalent and provocative [13]. As HCI researchers we need to reflect however how representations of data are used to legitimise action and influence policy making [11].

### **Facilitate Curiosity**

Technology can help to understand the historical and local conditions of food systems [6,3]. How did it evolve, who produces what, where, under which conditions? How do cultures of organic, regional, seasonal, and socially fair food look like? How equally is access to healthy and high quality food distributed? Where does food get wasted along the production and distribution chain? What price economics does food have? What alternative approaches exist (e.g. food coops, food banks, box schemes).

### **Rubbing of Shoulders**

Technology can also facilitate a discourse around food. It can be a medium or a provocation for an exchange of diverging opinions among citizens, governments, the industry, and non-profit organisations (NPOs) [7]. It can furthermore situate action by revealing issues to

the public or drawing in mainstream media attention around an issue [1].

### **Scaffold Action**

A rubbing of shoulders can enable the formation of a collective of people (with heterogeneous and diverging opinions) [6]. This collective might have its own “food identity” or a “food consciousness” regarding a local neighbourhood or an issue. Such a “food public” can use technology to organise communication and actions for different audiences [1]. Ultimately, this aims at motivating people to show up in person where needed to take actions (e.g. by organising alternative food systems, by advocating or protesting, or through their consumption choices) [5].

### **Food Literacy**

Finally, such a process is also a learning experience that builds up knowledge around growing and distributing food and its health, environmental, commercial, social, cultural, and political conditions. Technology as an enabler to this process can help to develop a practice and consciousness for food sovereignty, i.e. the right to control one’s own conditions of food production and distribution [9], overcoming the dichotomy between producers and consumers.

Such a civic understanding of the food system needs a system change that is fueled both by consumer and producer choices, and policy changes. This new self-image shifts emphasis from being a food consumer or producer to a ‘food citizen’.

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