The logistics infrastructures of 'short food circuits'

Case study of logistics facilities and infrastructures in the supply chains of 'short food circuits' in the Paris region

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For the past twenty years, 'short food circuits' (also known as Farm to Table services) have been on the rise in developed economies. What is specific about these circuits is the reduction in commercial intermediaries, with one intermediary as a maximum. This specificity makes the logistical organization of these channels more complex than that of a large-scale food distribution systems with many intermediaries, and an accumulated experience of optimization, consolidation and increased automation of the supply chain.

This research aims at investigating a subject that is still poorly documented, that of the logistics infrastructures used by short food circuits. Carried out as an exploratory survey, this research aims at producing knowledge on the supply chains of several initiatives of short food circuits, in order to identify the facilities and infrastructures used as well as the needs of stakeholders. The research also aims at proposing one or several infrastructures better adapted to 'short food circuits.'

The specific research questions are the following: what are the logistics organizations of short food circuit initiatives? What are the infrastructures used and what are the needs to make them better? Is it possible to identify one or more logistics infrastructures better adapted to 'short food circuits?'

The methodology used for this research has been mostly qualitative. The aim is to identify the ecosystem of the short food circuits' supply chains in the Paris region (Ile-de-France). To do so, bibliographic and web research, as well as interviews with stakeholder led to establishing a (non-comprehensive) list of actors offering logistics solutions for short food circuits, as well as public actors concerned by the issue. Twelve semi-structured interviews were conducted. Data processing focused on collecting information about logistics facilities, i.e. their size, function, location and place in the supply chain. Additional research was made on the Sirene database of establishments and on Google Earth, to estimate the size of facilities and to analyse their location. The production of logistics organisation diagrams was preferred to cartographic maps for a better visualisation of the different types of infrastructure.

The main results are:

- the identification of **a diversity of actors** in the ecosystem of the logistics of short food circuits. In a sector that has been developing rapidly in France over the last twenty years, accelerated by the important dissemination of information and communication technologies as well as e-commerce in distribution and sales methods, there are many players and, above all, their role has been rapidly changing. In addition to commercial intermediaries, there are forwarding agents, sales agents and activities that mix several so-called classic roles in the supply chain.

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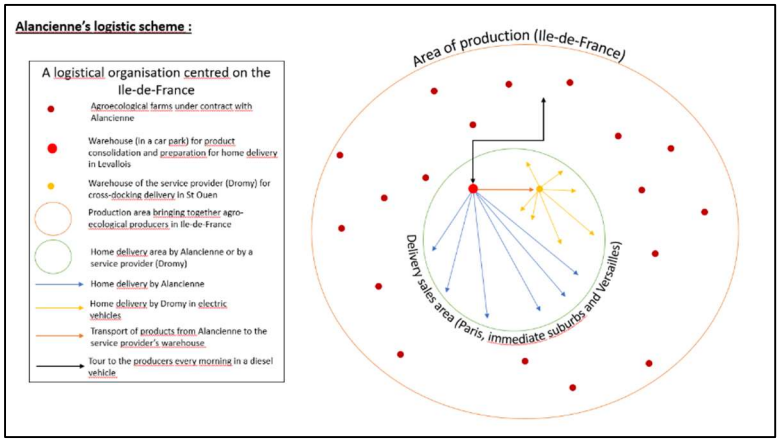
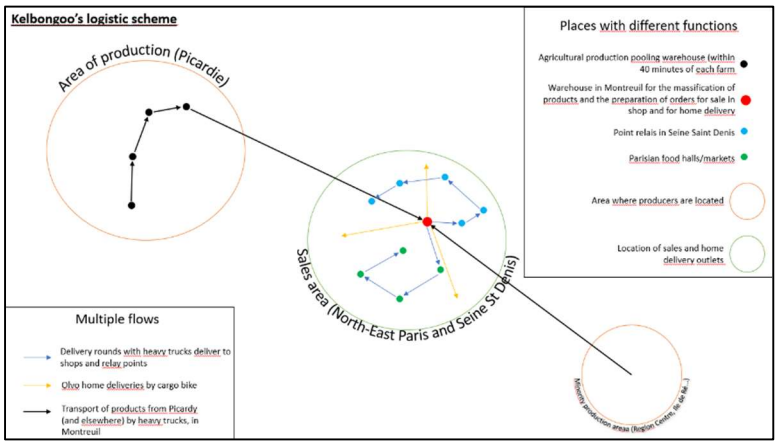
- Secondly, there is **a diversity of logistics infrastructures** used by the logistics chains of short food circuits, ranging from the so-called classic logistics warehouse, in a business park, located on the outskirts, to much more **innovative forms of infrastructures**. Supply chain actors will tend to **adapt to an infrastructure that is not initially logistics**, such as a car park in a co-working building.
- Finally, the study of three supply chains reveals **two logistics organizational schemes for short circuits**.



The first scheme consists of superimposing the production area and the sales area. In this case, the logistics infrastructures can be shared. One infrastructure will serve to consolidate flows, prepare orders, break and reorganize loads and organize rounds. This organization, in addition to allowing infrastructure savings and reduced territorial coverage, transforms the short circuit (in a functional sense) into a local short circuit (in the spatial sense).



The second scheme is a clear separation between production and sales areas. This organization implies a greater need for infrastructure networking than in the first scheme. In this case, the company must develop logistics infrastructures in the production area, which are mainly used to consolidate flows, and in the sales area with infrastructures for preparing orders and dividing flows to deliver to the various distribution points.

In all cases, short food distribution models will need to change scale in the future.