



BRUFO2050

How does the Brussels food system operate?

Research report Q1

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Glossary

Adaptability: The capacity of actors within a system to influence its resilience—essentially, in a socio-ecological context, to manage and adjust the system in response to change (Walker et al., 2004b)

Barrier: A specific factor within a system that hinders the adoption of innovative practices or strategies. When barriers outweigh the drivers of change, the existing production system becomes reinforced and self-perpetuating, creating a lock-in situation (Weituschat et al., 2022).

Exploratory scenarios: “Multiple plausible futures described in words, numbers and/or images” (van Notten et al., 2003). This systems science method embraces uncertainty and complexity instead of predicting a single future, recognising the inherent unpredictability of decision-making contexts (Borjeson et al., 2005; Riera et al., 2025; van der Sluijs, 2005).

Food loss: The uneaten portion of the edible part of raw materials and food products. These products are not necessarily discarded—they can be redirected to food donation, processing, or other recovery pathways. Examples include production surpluses or unsold products donated to food aid (D’Hoker, 2017).

Food system: “The entire range of actors and their interlinked value-adding activities involved in the production, aggregation, processing, distribution, consumption and disposal of food products originating from agriculture, forestry or fisheries, together with the broader economic, societal and natural environments in which they are embedded” (FAO, 2014).

Food supply chain: A managed process combining knowledge and skills from diverse fields—including electronics, biology, economics, psychology and logistics—to ensure food reaches consumers efficiently and safely (Bourlakis & Weightman, 2003).

Food waste: The portion of food losses that is discarded or used for non-food purposes, including secondary flows of food raw materials. Products become food waste for reasons such as expiry, poor storage, or leftovers (D’Hoker, 2017).

Lever: A factor or mechanism that can be strategically activated to influence a system, overcome an existing lock-in, and enable a transition toward a more desirable state (Courtois et al., 2024).

Lock-in: A situation in which policies, technologies, cognitive frames, infrastructures and social systems co-evolve until they become stable and self-reinforcing (Courtois et al., 2024). Lock-ins arise when feedback loops between these factors constrain actors and systems to a particular pathway, limiting transitions to superior alternatives (adapted from Truong et al., 2022).

Multi-stakeholder scenarios: Exploratory scenarios that incorporate multiple legitimate perspectives, allowing diverse actors to jointly address complex challenges such as food security and sustainability (Reilly & Willenbockel, 2010).

Resilience: The capacity of a system to absorb disturbance, reorganize, and continue functioning while retaining its essential structure, identity and feedbacks (Walker et al., 2004b).

Resilience of the food system: The ability of a food system to absorb shocks, reorganise, and adapt while maintaining its essential functions. The concept expands on sustainability by

explicitly integrating risks of rupture, shocks, and dependencies between the food system and other systems.¹

Transition: A process rooted in socio-technical innovation theory, describing how niche-level activities scale up into broader socio-technical regimes, leading to long-term systemic change (Geels & Schot, 2007; Kemp et al., 2007; Rotmans, 2005). Transitions involve co-evolution across societal dimensions. The multi-level perspective distinguishes niches, socio-technical regimes and landscapes (external context). Shifts in landscape or regime conditions can allow niche innovations to flourish and form new regimes.

Transformation: A fundamental change in the structure, functions and relationships within a social-ecological system (Vervoort et al., 2016). Transformations involve emergent patterns across social, institutional, cultural, technological, ecological and political dimensions. They are inherently political, often involving contested goals and redistributions of power or resources (Patterson & Paterson, 2024).

Transformability: “The capacity to create a fundamentally new system when ecological, economic or social conditions make the existing system untenable” (Walker et al., 2004a; Vervoort et al., 2016).

Sustainable development: “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations, 1987, p. 37).

Sustainable consumption: “The use of goods and services that meet basic needs and improve quality of life, while minimising the use of natural resources, toxic materials and emissions over the life cycle, so as not to compromise future generations' needs” (Ofstad et al., 1994).

Sustainable food system: A food system that delivers food security and nutrition for all without compromising the economic, social and environmental foundations needed for future generations (FAO, 2014). This implies:

- economic sustainability – profitability throughout the system;
- social sustainability – broad societal benefits and equity;
- environmental sustainability – neutral or positive impacts on natural ecosystems.

¹ Greniers d’abondance, Projet de résilience alimentaire : <https://resiliencealimentaire.org/methodologie/>

1 Introduction

BRUFO2050 is a forward-looking research project that explores the question: **"Which scenarios for which supply: How can we move toward a resilient and sustainable food supply for the Brussels-Capital Region (BCR) by 2050?"**

The project aims to develop exploratory scenarios describing possible future food supply systems for the Brussels Capital Region (BCR) and to identify pathways toward a more sustainable and resilient system. Funded by the Innoviris Prospective Research Program (2023), BRUFO2050 seeks to overcome current socio-technical lock-ins and foster transformative governance through participatory foresight. This approach begins by considering the city's unique context to better map the supply system, the "missing link" between consumption (in Brussels) and production (outside Brussels).

We focus explicitly on wholesale, transport, processing, and retail up to the HoReCa sector, while maintaining a holistic view of the entire food system. The project emphasizes inclusivity by engaging all actors and addresses three main objectives, translated into five research questions, as illustrated in the project's framework (Figure 1).

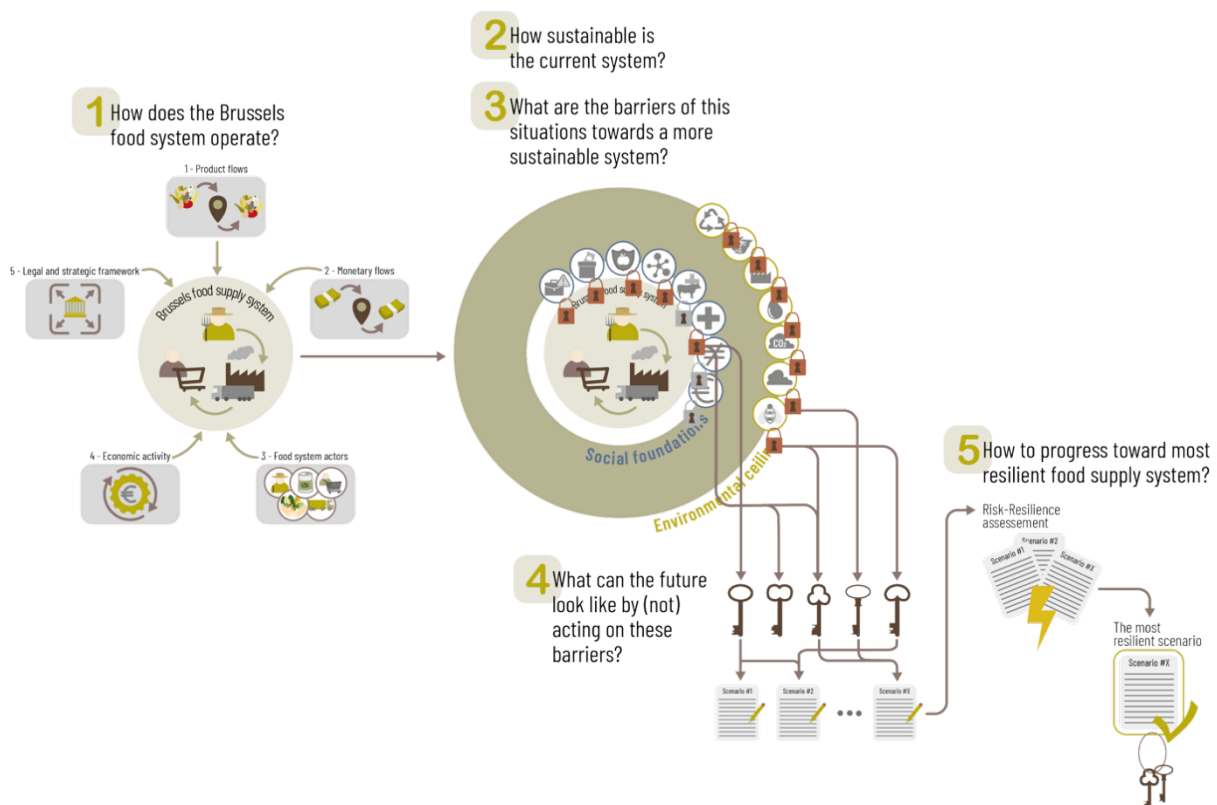


Figure 1: Framework of the BRUFO2050 project.

Each question will be explored through dedicated reports using diverse methodologies and stakeholder engagement.

2 How does the Brussels food system operate?

This report aims to provide a comprehensive answer to the question: “How does the Brussels food system currently operate?”. Establishing this baseline is a critical first step for the project to construct a holistic view of this system. The report begins by documenting consumption patterns in Brussels, highlighting the distinct characteristics of the Brussels diet. Building on this, it employs a five-step methodological approach.

First, it quantifies the physical product flows and associated monetary flows to capture the region's metabolic reality. Next, it maps the landscape of actors operating across the value chain. It then assesses economic activities within the BCR to evaluate their contribution to the regional economy and concludes by outlining the multi-level legal and strategic frameworks that govern the system's operation.

The FAO (2014) defines a food system as “the entire range of actors and their interlinked value-adding activities involved in the production, aggregation, processing, distribution, consumption and disposal of food products that originate from agriculture, forestry or fisheries, and parts of the broader economic, societal and natural environments in which they are embedded.”

The geographical and analytical scope of this study is strategically defined to capture the unique position of the Brussels Capital Region (BCR) as both a major consumption centre and an economic hub. The system's boundaries are delineated as follows:

- **Consuming territory:** The primary focus is on the BCR, encompassing the food demand of its resident population as well as the significant daily influx of commuters and tourists.
- **Producing territory:** The analysis prioritizes Belgium (Flanders and Wallonia) as the primary production zone, reflecting the national origin of most products sold in Belgian food retails (Ecores, 2023; EcoRes et al., 2015; RDC Environnement, 2014). For some products, the scope extends to European and international scales.
- **Economic territory:** The BCR is examined as a territory where various value chain activities, including wholesale, processing, transport, retail and hospitality are concentrated.

3 Consumption in the Brussels -Capital Region

The Brussels-Capital Region (BCR) is a highly complex, multicultural metropolis. Understanding the consumer base requires accounting for the resident population as well as the high amount of non-permanent residents.

3.1 A diverse and young working population

Brussels is the Belgian region with the youngest population, with an average age of 37.9 years (Hermia & Tennstedt, 2024). The population is exceptionally diverse: in 2024, the region counted 1,249,597 inhabitants, representing more than 180 nationalities, and 37.2% of residents are foreign nationals, a proportion that is three times higher than in Flanders or Wallonia (BISA, 2023; Hermia & Tennstedt, 2024; Statbel, 2023a). The largest foreign nationality group in Brussels today is French citizens, followed by Romanian and Italian nationals. Non-European communities also play a big role, including the long-established Moroccan communities (7.3%), and more recently Ukrainians (2.8%) and Syrians (2.2%) (BISA, 2023). Furthermore, approximately 40% of the Belgian residents in Brussels have a foreign background (Statbel, 2025a).

The working-age population (18–64 years) accounts for 65.2% of the total, shaping the region's demographic structure (Hermia & Tennstedt, 2024). The population is highly mobile: every weekday, approximately 86,700 inhabitants leave the region and 35,000 students and 399,800 workers commute into it, increasing the daily population by more than 21% (Glorie & Albea, 2025; Statbel, 2022a). In addition, the region hosts around 7 million overnight stays annually from tourists and business travellers (BISA, 2023).

3.2 Socio-economic inequalities

Single-person households constitute the majority of household types (47.1% of all households) (Hermia & Tennstedt, 2024). Despite a high level of education - with 54% of men and 59% of women aged 25–54 having completed higher education - Brussels faces significant socio-economic challenges (Statbel, 2025b).

The regional median income is lower than the Belgian one: €1,727/month for BCR versus €2,276/month for Belgium. The risk of poverty is high: 26.3% of BCR population is “at risk of poverty” (AROP – monetary poverty) and 37.3% is “at risk of poverty or social exclusion” (Berns, 2024; Vivalis Brussels, 2023). Over the last two years, the number of homeless persons has increased by 25%, reaching 9,777 persons in 2024, including 1,991 women and 1,678 minors under 18. This represents a drastic increase compared to the 2022 enumeration, which identified 7,134 persons, including 977 minors (BISA, 2024; Bruss’help.brussels & Vivalis.brussels, 2024).

Moreover, 27% of the population holds BIM status (beneficiary for increased intervention), indicating a heightened need for social and medical assistance (BISA, 2023). These inequalities directly impact food security: nearly 20% of Brussels residents struggle to afford a healthy and balanced diet (Sciensano, 2024a).

The BCR is characterized by an important socio-economic divide, illustrated by income disparities between the southeastern municipalities and the other quadrants of the region (Figure 2). In terms of administrative equalised disposable income per person, Saint-Josse-

ten-Noode records the lowest median at below €20,862/year, while Woluwe-Saint-Pierre records the highest at over €34,305/year (Statbel, 2025c).

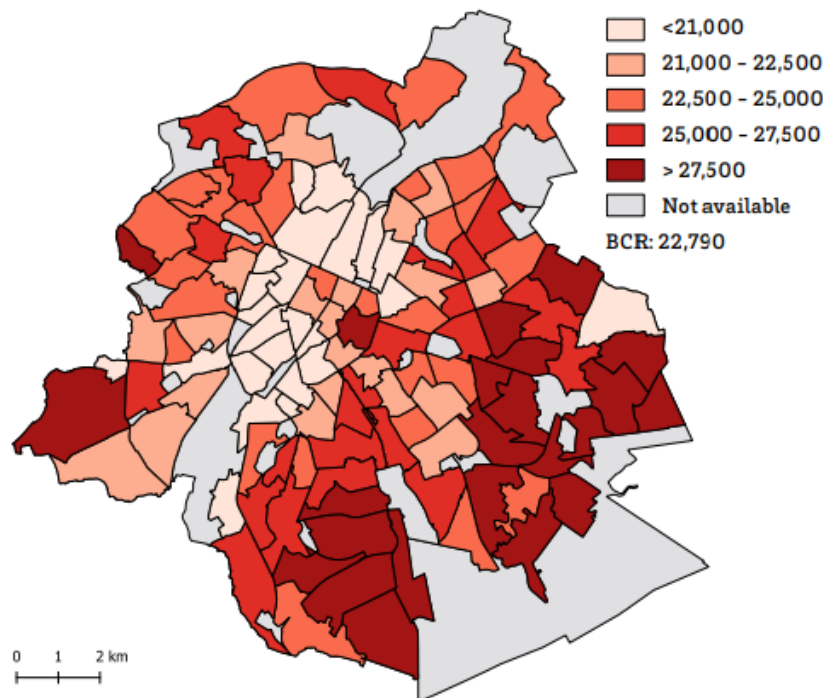


Figure 2: Median taxable income of tax returns by district in 2022 (in euros). Source: BISA (2025)

3.2.1 Food aid

An increasing number of persons - 90,000 representing 7% of BCR population - relied in 2024 on food aid circuits (FDSS, 2026). This marks an increase of around 30% compared to the period preceding the successive crises of recent years. These circuits heavily rely on an unorganised supply of food losses² from supermarkets and an organized distribution of European food packages through the European Social Fund Plus.³ This dependence on supermarkets' choices makes these supplies and circuits fragile and uncertain. Uncertainty has grown recently with the arrival of economic actors (e.g., Too Good To Go and Happy Hours Market) whose business models are built on the valorisation of food losses at low prices, placing them in direct competition with the food aid offer while still contributing positively to the reduction of food waste.

The food aid offer takes three main forms in the region (De Vreese, 2025):

- **Social grocery shops**, selling products at low prices (these products do not come from supermarket food waste).
- **Social restaurants**, offering warm meals at lunchtime at a reduced price.
- **Food parcels**, composed of a combination of supermarket food losses, a European package, and purchased products. These parcels are distributed for free.

² Food loss is not the same as food waste. The precise definitions are provided in the glossary.

³ ESF+ includes the former FEAD programme, which supported EU countries in providing food and basic material assistance to the most deprived. In Belgium, it finances food assistance and specific material support for children in need.

As documented by Oldroyd et al. (2022), the quality of the food offered in these packages is often low, leading beneficiaries to shift from a situation of food scarcity to one of abundance of low-quality products, with an increased risk of overweight and associated health problems.

3.2.2 Dietary consumer behaviour and spending

This section provides an overview of the food consumption habits of BCR residents, based on recent studies and household budget surveys. It highlights clear patterns in product preferences, consumption volumes and spending, showing both regional specificities and growing shifts toward more plant-based and organic products.

Brussels average diet

According to Sciensano's recent food consumption surveys (Bel et al., 2023; De Ridder et al., 2015; Vermeiren et al., 2025), dietary patterns in the BCR differ from the Belgian average. As shown in Table 1, the Brussels Average Diet aligns more closely with the 2025 Belgian Dietary Guidelines (BDG) than the national average diet. The BDG aim to promote a culturally appropriate diet that supports healthy eating and nutritional goals.

The BCR diet is characterised by higher intakes of wholegrain cereals, vegetables, fruits and legumes compared with the Belgian average, with 70% of residents reporting daily vegetable consumption (Bel et al., 2022; Drieskens, 2018; Vermeiren et al., 2025). Brussels residents most often choose artichokes, cucumbers and green beans, while preferences differ across regions: peppers, leeks and mushrooms are most popular in Flanders, and endives, tomatoes and zucchinis in Wallonia (VLAM, 2022). For fruits, bananas and apples are the top choices both in Brussels and nationwide (VLAM, 2022).

Meat consumption remains common but is slightly lower than the national average. While total meat and processed red meat intake are below Belgian levels, unprocessed red meat consumption is somewhat higher, and both exceed recommended thresholds (Bel et al., 2022; Vermeiren et al., 2025). Charcuterie is less popular in the BCR, while lamb and mutton are eaten more frequently than in other regions (Stevens, 2022). Brussels also has the highest share of non-meat eaters in Belgium (21%) and shows increasing openness to plant-based proteins (Stevens, 2022). Legumes are gaining importance, with 51% of residents consuming them weekly - especially younger people, French-speaking residents and individuals of foreign origin (AQRate, 2023). The use of plant-based milk alternatives is also rising (Observatoire de la Consommation, 2023). Together, these preferences influence the types and quantities of food required in the region.

Despite these positive shifts, adherence to dietary guidelines remains low: fewer than one in four adults in the BCR meet recommendations for whole grains, fruits, vegetables, nuts and seeds, dairy, and unprocessed red meat (Vermeiren et al., 2025). Compliance is generally higher among women and individuals with higher education levels, though differences by age groups are inconsistent.

Table 1: Contrast between the average Brussels diet, the average Belgian diet, and the Belgian Dietary Guidelines. Calculations based on Sciensano data from the 2022-2023 food consumption survey (Bel et al., 2023; De Ridder et al., 2015; Vermeiren et al., 2025).

	Brussels average diet (g/cap/day)	Belgian average diet (g/cap/day)	Belgian dietary guidelines (g/cap/day)
Plant-based products			
Cereals (bread, pasta) ^{1;2}	175	175	-
Of which wholegrain cereals	65	19	125
Vegetables	188	160	300
Fruits	167	123	250
Potatoes	93	62	60
Legumes	33	10	90
Saturated oils (e.g., margarine, oil-palm based products) ¹	7	7	0
Unsaturated oils (vegetal oils) ¹	6	6	15
Nuts and seeds	8	4	25
Sugar, candy, jams ^{1;2}	15	15	-
Animal products			
Milk and dairy products ³	193	154	375
Butter	4	4	0
Non-processed red meat	63	44	43
Processed red meat	12	27	4
Poultry ¹	24	24	14
Eggs (non-processed) ^{1;4}	13	13	60
Fish	49	19	29

Notes:

¹ The Belgian average values from the 2022-2023 food consumption survey were applied where Brussels-specific values were not available.

² The BDG only provides recommendations for wholegrain cereals. Similarly, the superior health council advises keeping added sugar intake as low as possible. For this reason, no recommended valued are provided for these categories, and the corresponding cells are intentionally left blank

³ Milk and dairy products include cheese but exclude plant-based alternatives (both in the Brussels average diet and in the Belgian dietary guidelines). The BDG recommend a daily intake of 250 g of milk and dairy products, also expressed as 250–500 ml per day. An average value of 375 is considered here.

⁴ For eggs, only non-processed eggs are considered here. Considering eggs included in processed products, we estimate the consumption level at about 52 g/cap/day. The superior health council recommends limiting the consumption of eggs to no more than one a day.

3.2.3 Organic consumption

Brussels leads organic consumption in Belgium, with 68% of residents regularly buying organic products, spending on average €147 per capita per year, compared with €90 in Flanders and €141 in Wallonia (VLAM, 2024). In 2024, organic sales in the BCR reached €166 million – representing around 13% of the national turnover. The strongest yearly growth was recorded in organic meat, followed by bread, fruits, eggs and vegetables (VLAM, 2024).

3.2.4 Spending pattern

A detailed statistical overview of average household expenditures in the BCR between 1978 and 2024 (Statbel, 2010; 2024) highlights several trends (Table 2). Although absolute spending on food has increased sharply, its share in total household consumption spending has fallen by 23%. Housing is now the largest expenditure category (34.6%)⁴, followed by food products (13%) and transport (9%). Spending on restaurants and Horeca accounts for 7.5% of the BCR household budget.

At the product level, the largest increases in absolute spending were observed for bread and cereals, fruits and vegetables, all of which expanded their share of the food budget. In contrast, the shares devoted to meat and oils and fats declined. Because the table presents nominal values, these changes partly reflect inflation, but they also reveal a substantial redistribution of food budgets over the past four decades.

Table 2: Longitudinal analysis of average annual household expenditures on food categories and shifts in proportional shares, 1978-2024. Calculations based on Statbel data (2010; 2024).

	1978 (€)	2000 (€)	2010 (€)	2024 (€)	Evolution 2024/1978 (€)	Evolution 2024/1978 (%)
Total consumption	12,493	27,916	31,751	41,533	+29,040	
Total food products	2,057	3,018	3,793	5,271	+3,214	-23%
Share in total consumption	(16%)	(11%)	(12%)	(13%)		
Food category						
Bread and cereals	298	491	628	1,090	+792	+43%
Share in food products	(14%)	(16%)	(17%)	(21%)		
Vegetables	211	389	299	759	+548	+40%
Share in food products	(10%)	(13%)	(8%)	(14%)		
Fruits	137	210	304	495	+358	+41%
Share in food products	(7%)	(7%)	(8%)	(9%)		
Milk, cheese, eggs	251	429	775	790	+539	+23%
Share in food products	(12%)	(14%)	(20%)	(15%)		
Meat	746	719	755	972	+226	-49%
Share in food products	(36%)	(24%)	(20%)	(18%)		
Oils and fats	97	77	79	133	+36	-46%
Share in food products	(5%)	(3%)	(2%)	(3%)		

⁴ The housing cost represents a different share in the other regions. The share for BCR is 34.6% while it is 29.9% in Flanders and 30.5% in Wallonia.

Using Statbel (2022b) data to compare Brussels' average food budget shares with the national average shows only small deviations:

- Meat products: - 0.4%
- Vegetables: + 0.3%
- Milk, cheese, and eggs: + 0.2%
- Bread and cereals: + 0.1%

A complementary breakdown of annual household budgets by wealth quartile (Statbel, 2024) in Table 3 shows a marked income gradient: total consumption rises by nearly 150% from the poorest to the richest quartile. Absolute food spending also doubles, from €3,776 in Q1 to €7,855 in Q4.

Despite these income disparities, the relative shares allocated to each food category remain remarkably stable across quartiles, suggesting similar food priorities regardless of income. However, inequality becomes more visible in non-essential spending, particularly out-of-home consumption. In 2024, households spent an average of €2,622 per year on food and beverage services. Spending on restaurants by Q4 households is 156% higher than in Q1, and spending on canteens is even larger: €403 in Q4 versus €4 in Q1. This may indicate greater use of workplace or institutional canteens among higher-income groups – for example, internal European Commission canteens⁵ can cost around €200 per person per month, and when combined with school canteen expenses, this can amount to substantial annual totals.

⁵ A catered commission: Brussels' culinary experiment:

<https://u4unity.eu/en/social/canteens-and-cafeterias/>

Table 3: Comparison of absolute yearly households' expenditures in BCR and proportional budget allocation between poorest (Q1) and richest (Q4) household wealth quartiles. Calculations based on Statbel (2024) data.

Food category	Q1: Poorest quartile (Absolute €)	Q1: Poorest quartile (Share of food budget)	Q4: Richest quartile (Absolute €)	Q4: Richest quartile (Share of food budget)	Absolute disparity Q4 vs Q1 (%)
Total consumption	25,379		63,154		+149%
Total food products	3,776		7,855		+108%
Bread and cereals	832	22%	1,678	21%	+102%
Meat	614	16%	1,434	18%	+133%
Fish and seafood	202	5%	461	6%	+129%
Milk, dairy and eggs	556	15%	1,189	15%	+114%
Oils and fats	122	3%	143	2%	+18%
Fruits	322	9%	803	10%	+150%
Vegetables	570	15%	1,119	14%	+96%
Sugar, jam, honey, chocolate and sweets	245	6%	544	7%	+122%
Other food products	313	8%	482	6%	+54%
Food services					
Bars and restaurants	1,503		3,839		+156%
Canteens	4		403		+9,975%

3.2.4.1 Shopping and cooking behaviours

Supermarkets remain the dominant food retail channel for Brussels consumers. According to Hub.Brussels (2019), 95 % of respondents rely on supermarkets for their main food purchases. Despite this dominance, proximity plays a key role in consumer behaviour: large supermarkets are preferred for major shopping trips, while everyday or smaller purchases are typically made close to home. Two-thirds of residents shop within a 10- to 15-minute walking distance (AQrate, 2023).

Home cooking remains widespread. According to AQrate (2023), 66% of Brussels residents prepare Belgian or French cuisine several times a week, while one-third consume foreign cuisine daily. Many residents with foreign roots regularly prepare traditional dishes inspired by North African (23%), Asian (19%), African (15%), and South American (9%) culinary traditions.

3.2.4.2 Delivery and eating out behaviours

Takeout and precooked meals are increasingly popular in the region. 8.1% of BCR residents order delivered food at least once a week, and 43% do so at least once a month (GFS, 2025). Sciensano (2024b) confirms that this trend is more pronounced in Brussels than in Flanders or Wallonia. Dining out is also common: 14.5% of residents eat at table-service restaurants at least once a week, and 41.4% dine out one to three times per month (Sciensano, 2024b). Non-European and plant-based options are more popular in Brussels than in the other regions.

The BCR hosts a total of 1,657 public and private canteens (Sonecom, 2020). Two-thirds are located in daycares and schools (Table 4). The “other canteens” category consists mainly of facilities in care centres, accommodation and reception structures (day care centres, shelters for the homeless, youth care homes, etc.), and, to a lesser extent, in European, federal, regional institutions and companies.

Table 4: Number of canteens and type of infrastructure hosting them in BCR in 2020. Source: Sonecom (2020)

Type of infrastructure	Number
Day care	536
Schools	528
Other canteens	404
Resident home	156
Hospital	30
Prison	3
Total	1,657

Workplace canteens also influence food habits. 31% of workers have access to a canteen, representing 57% of active workers⁶ (Table de Terroir & Observatoire de la consommation, 2023). Among those with access, 49% - or 28% of active workers - regularly eat lunch there. In schools, packed lunches remain the norm: fewer than half of children eating at the school canteen (42% in preschools and primary schools; 36% in secondary schools) (Table de Terroir & Observatoire de la consommation, 2023).

⁶ Among the full panel, 54% of respondents reported being active. Data applies to Brussels and Wallonia.

3.3 Conclusion

The Brussels-Capital Region hosts a highly diverse population in terms of age, nationalities, educational levels and socio-economic situations. At the same time, the region faces a rising share of people living in poverty and a growing demand for food aid.

The average BCR diet - documented by Sciensano - differs from that of other regions, with higher intakes of wholegrain cereals, legumes, fruits and vegetables, and lower consumption of meat. These characteristics bring it somewhat closer to the Belgian Dietary Guidelines, although overall adherence remains low.

Brussels residents consume a wide range of cuisines and primarily cook and eat at home. However, they also eat out or order delivery more frequently than residents in other Belgian regions. Access to restaurants and canteens is notably more common among higher-income households, highlighting persistent inequalities in out-of-home food consumption. Understanding who eats what, and how, forms the basis for the next section, which quantifies the physical flows of food products required to meet this demand.

4 Flow of products

4.1 Scope and methodology

This chapter analyses the Brussels food system through the lens of product volumes, examining the flows of goods entering and leaving the region. Like most metropolitan areas, the BCR has very limited agricultural production and can therefore be described as an “eating territory” that depends heavily on external “feeding territories” (Riera et al., 2020). The region produces only around 0.3% of its requirements for fruits, vegetables, potatoes, eggs, and dairy products (Riera et al., 2020). Surrounded by an agricultural belt in Flanders and Wallonia and functioning as a major European logistics hub, the BCR sources most of its food from neighbouring regions and from countries such as France, Germany, and the Netherlands (Hub.Brussels, 2024).

A detailed picture of the precise routes that Belgian products take to reach their final destination – and the share of imported foods ending up in retail and HoReCa – does not exist due to limited data availability. As a result, only estimates such as those provided in this report can be produced.

Fevia, the national federation of the Belgian food industry, reports that 61% of national agricultural production is processed through the food industry, ultimately supplying 71% of HoReCa and 61% of retail offer (Fevia, 2025). Comeos, representing the Belgian retail sector, documents that a large share of fresh products sold in supermarkets are of Belgian origin (Table 5) (Comeos, 2024). Together, these figures indicate that a substantial portion of fresh food consumed in the BCR is domestically produced, although imports continue to play a significant role – particularly for processed products, for which detailed import shares are less well documented.

In this chapter, we provide an estimate of product origins and flows by drawing on multiple data sources. Using the consumption data presented in the previous chapter, total annual food demand for Brussels is calculated - including commuters and tourists. When compared to local production, this allows to evaluate the extent to which domestic agriculture can fully or partially meet regional needs. The methodology is based primarily on data collected by regional administrations combined with own calculations (Riera et al., 2020; 2024).

4.2 Results

4.2.1 Supermarkets' offer

One way to estimate the final food offer required by a region is to analyse the products available across supermarkets, specialized retailers, the hospitality sector, and markets. However, detailed data on the volumes distributed through these channels remains scarce.

The 2023 Comeos annual survey, a study designed to assess the share of Belgian-origin products sold in major retail, confirms the strong preference of Belgian supermarkets for sourcing from local producers (Comeos, 2023). Table 5 provides an overview of the proportion of Belgian-origin fresh products in both conventional and organic retail channels.

Table 5: Share of Belgian-origin products in major Belgian supermarkets. Source: Comeos (2023).

Product category	Conventional (% Belgian origin)	Organic (% Belgian origin)
Pork	97.4%	85.1%
Milk	96.3%	81.8%
Poultry	95.7%	84.3%
Beef	92.3%	85.4%
Pears	87.0%	72.0%
Eggs	85.2%	80.2%
Apples	73.9%	69.9%
Vegetables	58.8%	55.5%
Potatoes	51.0%	51.0%
Flour	29.0%	21.0%

The figures for fresh meat and dairy reveal exceptionally high sourcing rates of Belgian origin, with conventional pork and milk exceeding 96%. This reflects the stability of their supply chains and the strong specialisation of Belgian agriculture: Belgium's self-sufficiency reaches 214% for pork, 216% for poultry, and 132% for beef (Statbel, 2023b).

Potatoes merit particular attention. Although Belgium produces very large quantities, their share in the retail circuit is relatively limited. As early as 2014, Wallonia produced 16 times the volume needed for regional self-sufficiency (Antier et al., 2019a), and production has continued to increase. However, the volume of potatoes intended for direct consumption has declined in favour of storage potatoes purchased by international processors, eventually exported and integrated into global value chains for processed foods (Antier et al., 2019a)

In contrast to meat and dairy, Belgian sourcing percentages for fruits (apples, pears) and vegetables are lower. This results from the natural variability of agricultural production. Seasonal patterns, climate conditions and annual harvest outcomes directly affect availability. Droughts, reduced yields or climatic shocks may necessitate higher levels of imports to satisfy consumer demand (Comeos, 2023). Moreover, many of the most consumed fruits – such as bananas and oranges – are not produced domestically. As a result, when considering current preferences, only 48% of national fruit demand could potentially be covered by national production, through fruit types that can be produced in Belgium (e.g. apples, pear, strawberries...) (Riera et al., 2020).

A comparison of conventional and organic products shows a consistent pattern: the share of Belgian-origin products is lower in almost every organic category. This indicates that the domestic organic supply chain faces greater limitations in meeting retail demand than conventional agriculture (Comeos, 2023).

Flour stands out for having the lowest local sourcing rate among all categories, both in conventional (29%) and organic (21%) segments. Comeos (2023) links this to "market access issues", suggesting structural obstacles that limit Belgian flour producers' presence in large-scale retail. These likely relate to strict standardisation requirements and highly competitive

pricing of imported flour. In parallel, over 50% of national cereals are produced for animal feed rather than for human food (Antier et al., 2020; Riera et al., 2019).

4.2.2 Annual consumption of food products

To estimate the volumes needed to satisfy the food demand in the BCR, the Brussels dietary profile described before was used as a baseline.

To translate food products into broader “food categories,” a conversion table assigns individual food products (e.g., bread, pasta) to their corresponding agricultural product category (Table 19 in Annex 1). Additionally, applying conversion factors between cooked and raw products (e.g., for pasta) produces adjusted intake values in g/cap/day (Table 21 in Annex 1). These values, multiplied by the resident population and 365 days, make it possible to estimate the annual net demand⁷, i.e. the volumes of food actually consumed.

As shown in Table 6, these steps yield an estimated net demand for food products of 439 kt/year for the resident population (1,249,597 people in 2024). Accounting for commuters increases the estimated demand to 557 kt/year for a total population of 1,585,672. Commuters thus represent around 20% of food consumption in Brussels.

Table 6: Estimated annual consumption of food products in 2024 by BCR residents and commuters.

Product category	Annual consumption of food products (kt/year)		
	Residents	Commuters	Residents + Commuters
Plant-based products	291	78	369
Cereals	61	16	78
Vegetables	86	23	109
Fruits	80	21	101
Potatoes	42	11	54
Legumes	12	3	16
Oils (vegetal)	3	1	3
Sugar	7	2	9
Animal-based products	148	40	188
Meat	57	15	73
Dairy	84	23	107
Eggs	6	2	8
Total	439	118	557
% residents + commuters	79%	21%	100%

4.2.3 Consumption of organic products

As a next step, the consumption of organic products were estimated. While the consumed volumes of organic products is not measured directly, the monetary market share of organic

⁷ Net volume demand refers to the final quantity of food that is actually consumed. Gross volume demand reflects the total amount of food that must be produced to meet this net demand, taking into account processing steps, conversion rates and food losses along the supply chain.

products can be used as a proxy (Antier et al., 2019b). A correcting factor of 130% is applied to account for higher average organic prices⁸.

Using the organic money market shares documented for Wallonia as a reference allows an approximation for the BCR. As noted earlier, the highest organic market shares are found in eggs (around 20%), followed by meat substitutes (19%) and fruits and vegetables (around 10%) (APAQ-W, 2024; VLAM, 2024). Overall, the consumption of organic products represents around 6% of total food consumption (Table 7).

Table 7: Estimated annual consumption of total and organic food products by BCR residents in 2024.

Product category	BCR annual consumption of food products	Market share of organic food products	BCR annual consumption of organic food products
	(kt/year)	(%)	(kt/year)
Plant-based products			
Cereals	61	10%	4.7
Vegetables	86	11%	7.3
Fruits	80	10%	6.1
Legumes	12	Unknown	Unknown
Oils	3	Unknown	Unknown
Potatoes	42	6%	2.0
Sugar	7	Unknown	Unknown
Animal based products			
Meat	57	8%	3.5
Dairy	84	4%	2.6
Eggs	6	20%	0.9
TOTAL	439	6%	27

- Notes:
- The annual demand values result from calculations based on Bel et al. (2022) and Vermeiren et al. (2025), using the methodology developed in Riera et al. (2024). Organic market share percentages come from ApaQ-W (2024) and VLAM (2024).
 - The conversion from annual demand to organic demand is calculated as follows:
 - $Volume\ of\ organic\ consumption = Total\ volume\ consumed \times Organic\ market\ share\ (in\ euros) / 1.3.$

4.2.4 Demand for agricultural products

To estimate the gross demand, conversion rates were applied to move from consumed to produced quantities. These rates account for food losses and processing requirements along the supply chain (Table 22 in Annex 1). A detailed breakdown of all steps and final volumes per food category is provided in Annex 1.

For the resident population, this results in a gross demand 825 kt of agricultural products in 2024. Incorporating the additional demand generated by commuters increases this volume

⁸ This price difference usually varies by product category and by point of sale. Using a single correction factor is therefore a simplification, based on consumers’ willingness to pay for organic products as documented in Antier et al. (2019b).

1,047 kt. Thus, the necessary volumes of agricultural products represent nearly the double of the final net consumption. This is particularly the case for animal products, where food and processing losses along the chain (from live animals to final consumption) are more important (Table 8).

Table 8: Comparison of net annual consumption of food products by BCR residents in 2024 with the corresponding gross annual demand for agricultural products.

Product category	Net annual consumption of food products by BCR residents (kt/year)	Corresponding gross annual demand for agricultural products (kt/year)
Plant-based categories	291	427
Cereals	61	90
Vegetables	86	114
Fruits	80	103
Legumes	12	9
Oils	3	10
Potatoes	42	54
Sugar	7	48
Animal based categories	148	397
Meat	57	114
Dairy	84	277
Eggs	6	6
TOTAL	439	825

4.2.5 Imports beyond Belgium

The BCR imports and exports a wide range of food-related products, as documented by the National Bank of Belgium (NBB). Table 9 consolidates the net annual demand previously calculated and the corresponding imported quantities. Because product classifications differ across databases, both the SYTRA (left column) and the NBB categories (right column) are presented to facilitate interpretation.

While the figures must be compared with caution (consumption volumes on one hand vs. imported volumes on the other), import data confirms that Brussels acts as a channel for products destined for other markets. Except for meat and vegetables, most imported volumes exceed the city's net consumption needs. Cereals (257 kt/year) and fruits/nuts (164 kt/year) constitute the largest import flows. These patterns reflect functional roles within the Belgian and Benelux food system: cereals are channelled towards Belgian agro-industry (bread, beer), while fruits enter via the European Centre for Fruits and Vegetables (CEFL) serving the Benelux market.

In contrast, imports of meat, vegetables and dairy are relatively low in NBB data. This reflects the fact that these products largely enter the BCR via domestic supply chains from Flanders and Wallonia rather than through international ports of entry.

Table 9: Comparison of net annual demand for the Brussels diet and annual imported volumes. Calculations based on NBB (2025).

Product category (BRUFO)	Net consumption (kt/year)	Imported volumes (kt/year)	Product category (NBB)
Plant-based products			
Cereals	61	257	Cereals (10)
		13	Products of milling industries (11)
Fruits	80	164	Edible fruits and nuts (8)
Vegetables*	86	45*	Edible vegetables and certain roots and tubers (7)
Potatoes*	42	45*	Edible vegetables and certain roots and tubers (7)
Legumes*	12	45*	Edible vegetables and certain roots and tubers (7)
Oils	3	8.2	Oil and fats (vegetal and animal) (15)
Sugar	7	6.1	Sugars and sugar confectionery (17)
Animal-based products			
Meat	57	8.8	Meat and edible meat offal (2)
Dairy**	84	51**	Dairy produce; birds' eggs (4)
Eggs**	6	51**	Dairy produce; birds' eggs (4)

Notes:

* In our calculations, vegetables, potatoes and legumes are separate categories. In NBB imports, these fall under the single category "Edible vegetables and certain roots and tubers," totalling 45 kt/year.

** Dairy and eggs are grouped together in the NBB category "Dairy produce; birds' eggs," which also includes honey and turtle eggs. The resulting 51 kt/year therefore represents an overestimate for dairy and eggs alone.

4.3 Conclusion

This chapter provides several insights into Brussels' food system:

- A specific Brussels dietary profile was defined, enabling calculations of total volumes of food and agricultural products required to meet local consumption.
- Using organic market share as a proxy made it possible to estimate the volumes required to meet Brussels' demand for organic products, representing around 6% of total consumption.
- Import data confirms that the BCR functions as an important node for channelling products to national and European markets, with imported volumes often exceeding local demand.
- The data also suggests and confirms that certain products – particularly dairy, meat, and vegetables – primarily reach Brussels via national supply chains from Flanders and Wallonia.

Together, these findings underscore Brussels' strong dependence on external supply territories, whether national or international, and the importance of considering product origins and value chain structures when analysing food system resilience and sustainability. The monetary value of these flows is examined in the following section.

5 Flows of money

5.1 Scope and methodology

This chapter analyses the Brussels food system in terms of the monetary value associated with food product flows. The assessment is based on the balance of import and export values for different product categories, using data from the National Bank of Belgium (NBB). Following the methodology of the 2014 RDC study (RDC Environnement, 2014), comparable NBB data were requested for the year 2024.

The analysis considers the value of goods entering and leaving the region and relies exclusively on data reported under the NBB's national concepts, meaning that import from Flanders and Wallonia are not included.

5.2 Results

The total import value of food products amounts to €1,310 billion in 2024. Table 10 provides a detailed overview of global imports across various food categories, with a specific focus on the share originating from Europe. The results show that Europe plays a central role in Brussels' food trade: imports from European countries account for €1,253 million, or 96% of the total import value.

In 2024, imports of food industry products (including beverages and tobacco) amounted to 923 million euros, representing a 10% increase compared with 2023 and accounting for 5% of all regional imports (Hub-Brussels, 2024). These figures include both primary food categories and processed goods.

The largest monetary flows concern edible fruits and nuts (€252 million), cereal preparations (€189 million), and cacao preparations (€170 million), together representing the majority of European imports. Furthermore, categories such as dairy, meat, and processed meat and fish products are sourced almost exclusively from Europe, underscoring both the region's strong dependency on European supply chains and Europe's dominant role in these specific sectors.

However, the 95% European share of Brussels' food imports, as recorded by the NBB, reflects the country of dispatch rather than the country of agricultural production. This distinction is consequential when interpreting the geographical dependencies of the Brussels food system. Belgian trade statistics reported by the NBB under the national concept record the country from which goods were last dispatched to Belgium, not the country where they were originally produced or cultivated. As a result, a substantial proportion of what appears in Belgian trade statistics as imports from the Netherlands, France or Germany may in reality originate from outside Europe, having entered the EU through large port and transit hubs before being redistributed across the market.

This pattern is particularly evident for fruits and vegetables. According to Eurostat (2024), the two Member States Spain (33.2%) and the Netherlands (28.0%) together account for over 60% of all intra-EU fruit and vegetable exports by value. While Spain is a major producer in its own right, the Netherlands functions primarily as a redistribution hub, as it supplies 38.0% of the EU's intra-EU tomato exports and over half of the trade in products such as dates, figs, pineapples and avocados, despite producing little of these commodities domestically (Eurostat, 2024).

For meat products, the European share is more representative of actual production geography. The EU has a large livestock population, largely held within only a few countries like Spain, France, Germany and Italy (Eurostat, 2025). The 100% European-origin rates reported for meat and dairy import are therefore consistent with EU production geography, and in this case the "country of dispatch" and "country of production" largely coincide.

In addition, the import statistics of the National Bank of Belgium (NBB) are calculated according to the so-called "national concept", whereby only transactions involving Belgian residents are recorded. Foreign companies that are registered for VAT purposes in Belgium but do not have an actual establishment in the country are therefore systematically excluded from these trade figures, even when they physically supply food to traders or hospitality businesses in Brussels.

Due to these methodological nuances, the official trade statistics are likely to underestimate the true geographical diversity of food flows into Brussels.

Table 10: Share and origin of food product imports in the BCR in 2024 (in millions of euros). Calculations based on NBB (2025) data.

Product category	Imports (World) (€ million)	Imports (Europe) (€ million)	% Europe /World
Edible fruits and nuts	252	236	94%
Preparation of cereals	189	186	99%
Preparation of cacao	170	165	97%
Miscellaneous processed products	165	160	97%
Fish, crustaceans, mollusks, and other	97	96	99%
Edible vegetables	77	68	89%
Dairy products, eggs	66	66	100%
Cereals	62	61	98%
Processed meats and fish	58	58	100%
Meat (fresh, frozen and processed)	57	57	100%
Processed vegetables, fruits and nuts	57	49	86%
Sugar and sugar confectionery	21	21	99%
Oils and Fats (vegetal and animal)	15	14	92%
Oil seeds and oleaginous fruits	14	6	45%
Products of milling industries	10	10	98%
Total	1,310	1,253	96%

An overview of the monetary values of food imports and exports by product category allows for the calculation of the commercial trade balance (Table 11). The results show a substantial overall import surplus, with total imports exceeding exports by €776 million. This reflects the region's dependence on external suppliers and its function as a transit hub for food products destined for Belgian, Benelux and European markets.

Edible fruits and nuts, along with several categories of processed foods, generate the largest trade deficits, confirming patterns observed earlier. Only products of the milling industry exhibit a positive trade balance, with exports exceeding imports. Yet, for other grain products (cereals and cereal preparations) imports exceed exports, showing an important activity in the grain and milling sector (with cereal preparations showing both high import and export values).

Table 11: Commercial balance for food products in 2024 (millions of euros). Calculations based on NBB (2025) data.

Product category	Import (€ million)	Export (€ million)	Commercial balance (Export - Import) (€ million)
Edible fruits and nuts	252	60	- (192)
Miscellaneous processed products	165	40	- (125)
Fish, crustaceans, mollusks, and other	97	13	- (83)
Edible vegetables	77	14	- (63)
Cereals	62	2	- (60)
Dairy products, eggs	66	11	- (55)
Processing of cereals	189	134	- (55)
Processed meats and fish	58	13	- (45)
Processed vegetables, fruits and nuts	57	14	- (43)
Meat (fresh, frozen and processed)	57	22	- (35)
Processing of cacao	170	160	- (10)
Sugar and sugar confectionery	20,7	20	- (0,7)
Oils and Fats (vegetal and animal)	15	8	- (7)
Oil seeds and oleaginous fruits	14	14	- (1)
Products of milling industries	10	29	18
Total	1,310	554	- (776)

5.3 Conclusion

The analysis of monetary food flows reveals a substantial import surplus of €776 million in the Brussels-Capital Region. This imbalance illustrates both the region's dependence on external suppliers and its important function as a transit platform for international products within Belgian, Benelux and European markets.

Edible fruits and nuts represent the largest trade deficit, while only milling industry products show a positive commercial balance. While other grain products are mainly imported, the

balances suggest important activities within the grain and milling sectors. 96% of food imports originate, according to NBB data, from Europe, mainly from France, Germany, and the Netherlands, highlighting the dominant role of neighbouring countries in Brussels' food system.

However, our findings suggest that the structural dependency of Brussels on European supply chains is real for animal products and temperate staple foods, but might be more complex for certain fruit and vegetable products, where recorded European import shares might mask an underlying dependency on non-European production zones.

The next section maps the actors who operate within and around these chains.

6 Actor mapping

6.1 Scope and methodology

This chapter maps the organisations that participate in, and are influenced by, the BCR food system. Given the high complexity of urban food supply, the analysis applies a robust methodology that combines three complementary approaches, offering a multi-dimensional view of the actors shaping the BCR food system:

- **Brussels-specific consumption approach**

This approach focuses on consumer-facing sectors and examines consumption patterns through three personas, “commuting professional”, “neighbourhood resident”, and “conscious parent”, in order to understand how different demographic groups interact with the retail and hospitality landscape.

- **Value-chain approach**

This perspective provides a structural overview of the food system by mapping actors across the key stages of the chain - from production to consumption, including processing, logistics, wholesale, retail, and HoReCa - clarifying roles, functions and interdependencies.

- **Representative approach**

This method categorises actors according to their relevance for a participatory foresight process, ensuring that future scenarios incorporate both everyday practices and longer-term institutional dynamics. It applies four logics of representation:

- **Logic 1 – Conventional actors:** those who operate, maintain and reproduce the current, established system.
- **Logic 2 – Actors of change:** social innovators, alternative entrepreneurs and other groups that challenge the status quo.
- **Logic 3 – Institutional actors:** public authorities, agencies and federations with the capacity to implement systemic change.
- **Logic 4 – Analysts:** researchers, analysts and consultants who produce data, analyses and strategic insights to understand and support socio-technical transitions.

The results section brings together insights from all three approaches to offer a concise yet comprehensive overview of active actors in the BCR food system.

6.2 Results

The food system of the BCR is primarily structured around consumption rather than production (RDC Environnement, 2014). As mentioned above, with a self-sufficiency rate of 0.3% for key staples, the region depends almost entirely on external production zones to feed its population (Riera et al., 2020). This dependency is reflected in the composition of the urban food economy: actors in the final stages of the value chain dominate.

In terms of the number of actors, the HoReCa sector accounts for 50% of all food-related stakeholders, followed by the retail sector with 22%. The remaining actors, including wholesale, processing, and logistics, together make up the rest of the food system. Although these actors represent a smaller share in numerical terms, they play a structurally pivotal role as key intermediaries connecting external production territories with BCR consumers.

The flow of goods into the region can be understood through a value-chain approach distinguishing three main supply circuits, which define how food enters and is distributed within the BCR (Perspective.brussels & Citydev.brussels, 2024; RDC Environnement, 2014).

6.2.1 The supply circuits

6.2.1.1 Integrated actors network

This circuit consists of large, vertically integrated supermarket and HoReCa chains that manage their own sourcing and distribution systems. Key examples include Colruyt and Delhaize, which operate centralized purchasing and distribution centres located outside the BCR (e.g. Colruyt in Halle and Ollignies, Delhaize in Asse, Ninove, Puurs and Vorst).

This network plays a dominant role in the food system: 95% of BCR residents’ purchases take place in supermarkets (Hub.Bruxelles, 2019). Goods typically flow directly from producers and processors to the companies’ central distribution centres, from where they are redistributed to retail stores and restaurant chains (Figure 3).

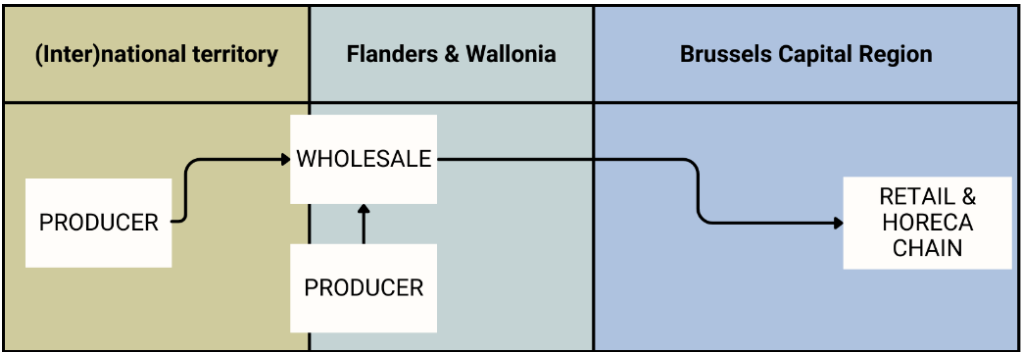


Figure 3 : Scheme of integrated actors network supply circuit. Adaptations of Perspective.Brussels & Citydev.Brussels (2024) data.

6.2.1.2 Independent actors network

This circuit involves a diverse group of small retailers, independent traders, market vendors, and HoReCa operators. These actors rely heavily on central wholesale hubs for sourcing (Perspective.brussels & Citydev.brussels, 2024; RDC Environnement, 2014). Wholesalers procure goods from both local and international producers and supply them to independent businesses – often via major hubs such as Mabru wholesale market (Figure 4).

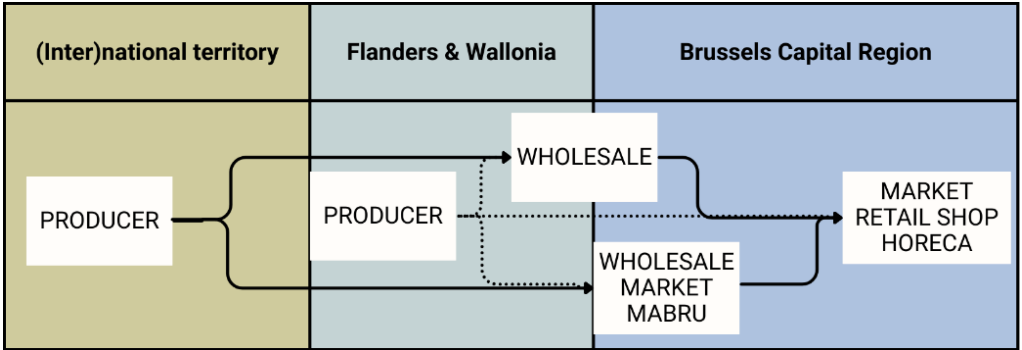


Figure 4 : Scheme of independent actors network supply circuit. Adaptations of Perspective.Brussels & Citydev.Brussels (2024) data.

6.2.1.3 Short supply chains

Short food supply chains aim to minimize the number of intermediaries between producers and consumers, typically allowing no more than one intermediary (Enthoven et al., 2023). Importantly, a “short” chain refers to the number of intermediaries, not the geographic distance between producer and consumer (Enthoven et al., 2023).

These chains operate through farmers' markets, specialised shops and online platforms (Perspective.brussels & Citydev.brussels, 2024; RDC Environnement, 2014) (Figure 5).

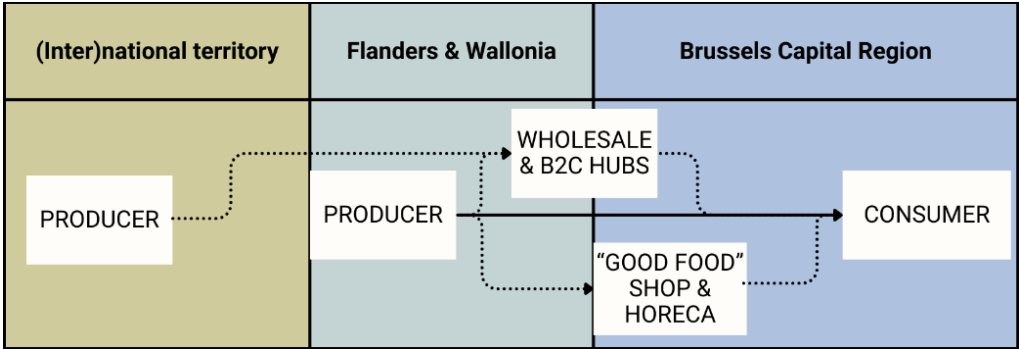


Figure 5 : Scheme of short supply chain circuit. Adaptations of Perspective.Brussels & Citydev.Brussels (2024) data.

6.3 Key operational sectors

For a region almost entirely dependent on external food sources, the logistics and wholesale sectors function as the system's critical key points, linking the global and national production network to Brussels’ consumption.

6.3.1 Production

The production sector in the BCR is small but heterogeneous.

In 2022, conventional agriculture consisted of 35 enterprises receiving CAP subsidies and managing a total of 230 hectares (FEDEAU, 2023; Leefmilieu Brussel, 2024). This figure includes farms or farmers that are officially registered or referenced in the Brussels-Capital Region, even though their physical farming activities are (partly or entirely) located in Flanders or Wallonia. These farms are primarily Logic 1 (Conventional actors), focusing on livestock, grasslands and cereal cropping for national or international markets (FEDEAU, 2023).

Alongside these, a professional urban agriculture segment has developed, producing food primarily for local communities and emphasising sustainability, social inclusion and diversification. These initiatives align with Logic 2 (Actors of change). The sector has grown: from 32 projects in 2018 to 55 organisations implementing 50 projects in 2024, with cultivated land expanding from 20 to 31 hectares (FEDEAU, 2024). Activities include horticulture, mushroom production, and aquaponics. Urban farmers are represented by FEDEAU and receive support under the Good Food Strategy through Brussels Economy & Employment (Logic 3 – Institutional actors).

6.3.2 Logistics

After production, food products are purchased in bulk and stored in distribution centres. Transport between these centres and procurement points may involve refrigerated trucks, trains, ships, or air cargo. Once received at distribution centres, goods are redistributed in

smaller quantities to shops, restaurants, and other end-users. Logistics thus form the operational backbone that enables external production territories to supply the BCR efficiently.

The BCR logistics network is dominated by road transport, which accounts for 90% of all goods movement. Everyday, approximately 16,000 trucks and 26,000 vans circulate in the region (across all sectors, not only food), generating a high vulnerability to traffic congestion, fuel price shocks, and carbon-reduction regulations (BE.Brussels, 2021; Brussel Mobiliteit, 2019).

The canal area functions as the region's primary logistics hub, linking Brussels to national and international trade routes. Despite this, alternative transport modes such as waterways and rail remain underused, representing only 6% of the total transport volume for food products (Brussel Mobiliteit, 2019).

Sustainable last-mile delivery initiatives are emerging in the region. Actors such as Urbike are pioneering bicycle-based urban distribution services, reducing congestion and emissions (Logic 2 – Actors of change). At the same time, Logic 3 actors, such as Logistics in Wallonia, support the professionalisation and increased efficiency of supply chains connecting Walloon producers to Brussels and other markets.

6.3.3 Wholesale

Transitioning from transport to distribution, the wholesale sector serves as the central link connecting producers with thousands of retailers and food service providers across the BCR. Wholesale activity is concentrated in two main hubs:

- **Mabru Wholesale Market⁹**

Mabru is Belgium's largest wholesale market and a cornerstone of the independent food economy. Established in 1992 as a non-profit organisation by the City of Brussels, Mabru is responsible for managing the activities of the Brussels Early Morning Market. It brings together a network of wholesalers who source their products from one or more auctions and redistribute them through the wholesale market to independent retailers, food service professionals, market vendors, and other wholesalers supplying local shops (Van Hecke, 1979). Spanning 40,000 m² and hosting 55 permanent businesses, Mabru facilitates the trade of 8,000-10,000 tons of food per week, supplying fruit, vegetables, meat and seafood (Brussel Mobiliteit, 2019; Van Vloten, 2018).

- **European Center for Fruit and Vegetables (CEFL)**

A specialised import centre focused on bulk trading of fruits and vegetables, supplying 63 wholesalers and market vendors for both regional and national markets.

Alongside these mainstream platforms, a growing number of innovative niche actors (Logic 2) are reshaping the wholesale landscape. These include short-chain distribution networks such as Terroirist, and cooperatives like Linked.Farm, which connect local producers with professional buyers.

6.3.4 Processing

The food processing sector is the largest industrial sector in Brussels, though predominantly composed of small-scale enterprises - 85% employ fewer than 10 workers

⁹ <https://www.mabru.be/nl/>

(Perspective.brussels & Citydev.brussels, 2024). Major international companies such as Leonidas (chocolate) and Sebahat (Turkish delight) (Logic 1) coexist with niche innovators, such as Maison Dandoy (pastry) (Logic 2).

Circular models are gaining ground, including Fermentthings, which ferments leftover foods, and enVie, which transforms surplus vegetables into soups.

Public agencies such as Brussels Environment, Citydev, and Hub.Brussels provide strategic support and funding to such sustainable ventures (Logic 3). Sector federations such as Fevia represent industry interests, while federal agencies such as AFSCA/FAVV ensure food safety standards. Certification bodies like Certisys (organic certification) and Ecovadis (sustainability ratings) also play key roles.

Halal certification remains decentralised and unstandardised in Belgium, which some industry actors identify as a barrier to product verification and the integration of halal products within broader sustainable food strategies.

6.3.5 Retail

The retail landscape combines independent shops and large chains, with supermarkets dominating: about 95% of food purchases in the region occur in supermarkets. The BCR hosts 404 supermarkets and 1,365 minimarkets, of which 77.2% belong to major chains or franchises (LocatUs¹⁰).

Mainstream retail is led by Carrefour Belgium, Delhaize, and the Colruyt Group, complemented by discount chains such as Aldi and Lidl, and a dynamic organic market spearheaded by Färm, Sequoia, and The Barn (Logic 1). This dominant offer is supplemented by independent ethnic shops, specialised stores (e.g., bakers, butchers) and 59 weekly market places (Atrium Brussels, 2017).

Innovative retail models (Logic 2) include cooperative supermarkets such as BEES Coop, short-chain retailers, supported by networks like Linked.Farm, and socially-oriented alternatives like Up! Lokal. Many of these initiatives rely on public support funds (Logic 3), including the Scale Up Fund.

6.3.6 HoReCa & Collective Catering

The HoReCa sector is the largest food-related sector in the region, with approximately 6,700 establishments (restaurants, takeaways, bars) (Statbel, 2025d). It encompasses a wide diversity of formats:

- chains serving commuters and tourists (e.g., O' Tacos, Exki),
- delivery services (e.g., Deliveroo),
- multicultural eateries serving residents,
- and high-end (sustainable) restaurants such as Entropie and Humus x Hortense.

Sourcing practices are multi-channel, relying on Mabru, specialised wholesalers (e.g., Sligro), supermarkets and niche suppliers depending on product specificity and quality demands.

HoReCa is also a site for social and sustainable innovation. Examples include:

¹⁰ LocatUs: records all shops and supermakets in Benelux: <https://locatus.com>

- Atelier Groot Eiland, which combines food service with job training
- Cassonade, using pay-what-you-can models to foster inclusion
- 137 restaurants awarded the Good Food label for their commitment to local, organic, and seasonal ingredients (e.g., Patatak, Pois Chiche)¹¹.

Major canteen providers include Sodexo and Cuisines Bruxelloises (schools and hospitals). TCO Service plays an important role in supplying canteens with fresh, seasonal, and often 100% organic products sourced largely through short chains. Approximately 20 canteens currently hold a Good Food canteen label¹².

Logic 3 actors include training institutions (e.g., CVO Brussels), and HoReCa federations. Logic 4 actors include consultancies such as Mingle Food and Coduco, which advise businesses and government agencies on sustainable sourcing, waste reduction and operational transitions.

6.3.7 Social & environmental objectives

Several actors focus on addressing the food system's social and environmental challenges. Social entrepreneurs work to promote socio-economic inclusion, facilitate the integration of sustainable food both small and conventional retail, and strengthen food aid systems. Environmental initiatives focus on reducing food loss, managing food waste, and developing a circular economy.

In food aid, long-standing organisations include major EU-supported programmes and the Red Cross (Logic 1). Coordinating structures such as Fédération des Services Sociaux (FdSS) and the LOCO network strengthen collaboration among social food services (Logic 3). Philanthropic funds, such as the Foundation 4 Wings also help accelerate the transition to a more sustainable and inclusive food system.

Grassroots initiatives (Logic 2), such as the Hearth Project and solidarity fridges, provide direct community support. The Collectif de réflexion et d'action sur une Sécurité Sociale de l'Alimentation advocates for expanding Belgium's social security system to include a dedicated food security branch. In this context, the BruxSSA pilot project - implemented by As Bean with support of Brussels Environment and ULB - tested a monthly food allowance combined with democratic governance. Results showed that this system empowered students to access sustainable food, although persistent financial insecurity remained a structural barrier.

On the environmental side, Net.Brussel leads regional waste management efforts. Complementary initiatives valorise surplus food, such as Too Good to Go and Happy Hour Market, which allow consumers to purchase unsold products at reduced prices. The DREAM project (Distribution and Recovery of Surplus Food at Mabru), led by Public Welfare Center (CPAS) of the City of Brussels and Mabru, redistributes unsold produce to food aid organisations. Circular actors supported through BeCircular funds include projects that transform food losses into meals (e.g., Ferme du Chaudron) or develop food waste valorisation activities (e.g., Recyclo).

¹¹ <https://goodfood.brussels>

¹² <https://goodfood.brussels>

6.4 Conclusion

The Brussels food system is characterised by the coexistence of well-established conventional structures and emerging sustainable alternatives. The latter often depend on public and private funding to operate within the dominant socio-technical and socio-economic context.

The diversity of actors – ranging from multinational chains to micro-producers, grassroots movements, and public institutions – creates both significant challenges and substantial opportunities. Ensuring meaningful collaboration between mainstream actors, niche innovators, and institutional mediators will be essential to drive a transition toward a resilient, just and sustainable food future for the Brussels-Capital Region. The following section examines the economic footprint of these actors within the region.

7 Economic activities

7.1 Scope and methodology

While the previous chapter examined the type of actors active in the BCR food system, this section outlines the methodological framework used to define and quantify the economic footprint of the BCR food system. Given the complexities of tracing food-related economic flows across multiple sectors in an urban environment, this analysis provides an estimate of the economic significance of each sector based on the following core indicators:

- Contribution to the regional economy (total turnover).
- Business landscape (number and size of active companies).
- Employment (employees and self-employed workers).

Data were compiled from several institutional sources, summarised in Table 12.

Table 12: Overview of data sources for economic activities analysis. Source: (NBB, 2025; Statbel, 2025d)

Institution	Data provided	Scale of information
National Bank of Belgium	Employees, Self-employed, Turnover	NACEBEL 2 digits
Statbel – Statistics Belgium	Employees, Self-employed	NACEBEL 2 digits
Statbel – Statistics Belgium	# Enterprises subject to VAT	NACEBEL 5 digits

A key challenge of this analysis lies in integrating datasets that employ different institutional coding systems. In addition, the use of broad 2-digit NACEBEL codes for major sectors – such as transport, wholesale, and retail – creates an important limitation, since these codes include both food and non-food activities. As a result, aggregated figures for these categories overestimate employment and turnover related specifically to food.

Conversely, 5-digit NACEBEL codes provide a much more accurate classification of companies active in the food sector, and wherever available, results from both coding levels are presented. These differences in classification explain the discrepancies (sometimes small, sometimes substantial) between the numbers of enterprises reported across data sources.

At the same time, this analysis underestimates the total food economy, as it does not include relevant supporting sectors such as marketing, advertising, research, consultancy and specific administrative services directly linked to the food system.

7.2 Results

This section presents a quantitative analysis of the major food-related economic sectors in the BCR.

7.2.1 Production

In a dense urban environment such as the BCR, primary production is limited in scale. According to Statbel (2025d), 219 VAT-registered enterprises fall under Sector A.02 (Crop and animal production, hunting and related service activities) in 2024 (Table 13). However, many of these companies are likely registered in Brussels while operating in other regions.

Table 13: Companies active in the BCR in Sector A.01 (Crop and animal production, hunting and related service activities). Calculations based on VAT-registered companies (Statbel, 2025c).

Category	# companies
A.01 Crop and animal production, hunting and related service activities	219
A.01.1 Growing of non-perennial crops	67
A.01.2 Growing of perennial crops	19
A.01.3 Plant propagation	8
A.01.4 Animal production	55
A.01.5 Mixed farming	25
A.01.6 Support activities to agriculture and post-harvest crop activities	45
A.01.7 Hunting, trapping and related service activities	0

Employment figures reinforce the modest scale of this sector: the NBB recorded 142 people in 2022, a 54% increase compared to 2019, followed by a drop to 98 workers in 2023 (NBB, 2025). Economic output shows similar volatility: gross value added fell from €9.6 million in 2019 to -€4 million in 2022 (NBB, 2025).

These dynamics confirm the limited economic weight of primary production – a characteristic typical of metropolitan regions – but highlight its potential for educational, social and environmental functions, such as reconnecting citizens with food production.

7.2.2 Wholesale and warehouses

Available data on wholesale and transport are not food-specific, representing broader sectoral activity. As a result, the employment and turnover figures below overestimate the food-specific contribution of these sectors. Nonetheless, these sectors are structurally critical to the food system.

- The wholesale sector (NACEBEL 46) employed 19,760 people in 2023 and generated €3,489.7 million GVA in 2022 (NBB, 2025).
- Warehousing and support activities (NACEBEL 52) employed 12,002 people in 2023 and generated €2,393.6 million GVA in 2022.

The scale of the sector is illustrated by the following numbers of VAT-registered enterprises in 2024 (Statbel, 2025d):

- Wholesale of food, beverages, and tobacco: 771 enterprises
- Wholesale of agricultural raw materials: 42 enterprises

- Warehousing and storage: 40 enterprises

The availability of 5-digit NACEBEL codes provides a detailed view of food wholesale activities (Table 14).

Table 14: Companies active in the BCR in Sector G46.3 (Wholesale of food, beverages and tobacco). Calculation based on VAT-registered companies (Statbel, 2025c).

Category	# companies
G46.3 Wholesale of food, beverages and tobacco	771
G46.31 Wholesale of fruit and vegetables	103
G46.32 Wholesale of meat and meat products	46
G46.33 Wholesale of dairy products, eggs and edible oils and fats	26
G46.34 Wholesale of beverages	228
G46.35 Wholesale of tobacco products	12
G46.36 Wholesale of sugar and chocolate and sugar confectionery	36
G46.37 Wholesale of coffee, tea, cocoa and spices	46
G46.38 Wholesale of other food, including fish, crustaceans and mollusks	177
G46.39 non-specialized wholesale of food, beverages and tobacco	97

7.2.3 Transport

The road freight sector counts 1,433 companies, not all specialising in food transport. This exceeds the number of food manufacturing companies nearly three-to-one, underscoring the city's core economic function as a logistical hub.

Road transport dominates with 90% of goods movement, while waterways handles 204,525 tons of agricultural products and 49,117 tons of food products in 2023 (BE.Brussels, 2021; Port.Brussels, 2024). After entering the region, many products move on to processing and manufacturing sectors.

7.2.4 Processing and manufacturing

The agri-food industry – the sector responsible for transforming and packaging food products – remains one of the most resilient manufacturing sectors in the BCR. While overall manufacturing employment has fallen 60% since 1995, the food industry has maintained stable activity, accounting for 27% of all manufacturing employment and 17% of its total added value in 2022 (Perspective.brussels & Citydev.brussels, 2024).

In 2022, the sector's production sites specifically employed 2,513 full-time equivalents (FTE), a figure that has remained relatively stable compared to the sharper declines in other industrial branches (Perspective.brussels & Citydev.brussels, 2024). This resilience is driven by a growth of 28% in small establishments (fewer than 10 employees) since 2009, contrasting with the disappearance of very large industrial sites.

Employment trends remain stable, though a distinction exists between total sector registration and actual production-site activity, as shown in Table 15. Despite the internal importance, the sector's 4,686 total employees represent approximately 1% of the total registered employment in the Brussels Region (NBB, 2025).

Table 15: Registered employment in food manufacturing (NACE 10-11) in Brussels, 2019-2022. Source: (NBB, 2025).

	2019	2020	2021	2022	2023
Total (All registered employment)	713,538	704,368	710,945	721,856	727,732
Manufacture of food products, beverages and tobacco products (10-11)	4,749	4,423	4,506	4,628	4,486

A breakdown of active enterprises reveals a distinct area of specialization within the industry (Table 16).

Table 16: Companies active in the BCR in Sector C10 (Manufacture of food products). Calculation based on VAT-registered companies (Statbel, 2025c).

Category	# companies
C10 Manufacture of food products	556
C10.1 Processing and preserving of meat and production of meat products	31
C10.2 Processing and preserving of fish, crustaceans and molluscs	4
C10.3 Processing and preserving of fruit and vegetables	29
C10.4 Manufacture of vegetable and animal oils and fats	1
C10.5 Manufacture of dairy products	33
C10.6 Manufacture of grain mill products, starches and starch products	5
C10.7 Manufacture of bakery and farinaceous products	338
C10.8 Manufacture of other food products	115

These data show that the manufacture of bakery and farinaceous products dominates the sector in terms of the number of enterprises (Statbel, 2025d). This strong presence aligns with the large cereal import volumes identified in the previous chapter. Other notable subsectors include meat and dairy processing, as well as processing and preserving of fruit and vegetables.

This concentrated specialisation in bread and pastries contrasts with the very limited activity in other manufacturing activities, such as oils and fats. Overall, this demonstrates that the BCR's food manufacturing profile is highly specialized rather than diversified. These manufactured goods ultimately flow into the city's retail ecosystem.

7.2.5 Retail

The food retail sector in the BCR is structurally divided between non-specialised retailers (primarily supermarkets) and specialised food shops. Note that the broad NACE 47 code covers all retail, not only food; the figures below therefore overestimate the food-specific employment and value added. Retail (NACE 47) is a major economic pillar: in 2023 it employed 31,894 people, and in 2022 generated €2,116.9 million in gross value added (NBB, 2025).

In 2024, the region counted 1,936 facilities non-specialised retail outlets (Statbel, 2025d). A striking characteristic is that over 75% of these facilities are small-format shops (<100 m²), revealing a fragmented and localised retail landscape.

Specialised food retail consists of 852 enterprises (Table 17), complemented by 232 market stalls active in the sale of food, beverages and tobacco products (NACE 47.81) (Statbel, 2025d).

This configuration points to a vibrant and diverse retail environment, balancing convenience-driven neighbourhood stores with specialized outlets that cater to specific dietary, cultural or quality demands. The high number of market stalls highlights the enduring cultural and economic importance of public markets. This retail structure operates in parallel with an even larger food service (HoReCa) sector.

Table 17: Companies active in the BCR in Sector G47.2 (Retail sale of food, beverages and tobacco). Calculation based on VAT-registered companies (Statbel, 2025c).

Category	# companies
G47.2 Retail sale of food, beverages and tobacco	852
G47.21 Retail sale of fruits and vegetables in specialised stores	48
G47.22 Retail sale of meat and meat products in specialised stores	258
G47.23 Retail sale of fish, crustaceans and molluscs in specialised stores	57
G47.24 Retail sale of bread, cakes, flour confectionery and sugar confectionery in specialised stores	268
G47.29 Other retail sale of food in specialised stores	221

7.2.6 Horeca

The HoReCa sector is one of the largest economic and employment hubs in the BCR. Statbel (2025c) records over 6,700 enterprises in 2024 (Table 18), making it the most extensive sector in the Brussels food economy by number of businesses.

Table 18: Companies active in the BCR in Sector I56 (Food and beverage service activities). Calculation based on VAT-registered companies (Statbel, 2025c).

Category	# companies
I56 Food and beverage service activities	6,768
I56.1 Restaurant and mobile food services activities	4,733
I56.2 Event catering and other food services activities	543
I56.3 Beverage serving activities	1,492

The BCR accounts for 21% of all HoReCa employees in Belgium, reflecting its national prominence as a hub for European institutions, business activities, tourism and hospitality (Statbel, 2020).

7.3 Conclusion

The economic structure of the Brussels food system is characterised by minimal local primary production, a highly specialised agri-food industry, dominated by bakery processing, and a

substantial employment footprint in consumer-facing sectors, particularly retail and HoReCa, which together form the backbone of Brussels' food economy.

When data from manufacturing and specialised retail are considered together, a structural pattern emerges: the cereal and meat value chains form the most significant end-to-end segments in the Brussels food economy, both dominant in number of enterprises and workforce size.

Overall, Brussels' food economy reflects the city's position as a consumption-driven, service-oriented urban centre that relies heavily on external production territories but supports a dense, diversified network of retail and food service activities within the region.

8 Legal and strategic frameworks

8.1 Scope and methodology

To understand the governance of the BCR food system, it is essential to first define the analytical scope and the methodology used to map its governing structures. This section outlines the approach taken to deconstruct the complex legal and strategic environment in which food policy is formulated and implemented.

The analysis maps the multi-level governance structure of the region, encompassing five distinct tiers: the European Union, the federal state, the Brussels-Capital Region, the communities, and the municipalities. The methodology focuses on identifying and examining the key policy and strategic frameworks guiding the region's transition towards a sustainable food system, such as the regional Shifting Economy Strategy and the sector-specific *Good Food Strategy*.

8.2 Results

This section presents the core findings of the analysis, divided into two key parts. The first part examines the intricate division of legal competencies across the different levels of government that influence the Brussels food system. The second part provides an evaluation of the primary strategic policy frameworks currently in place, from the European to the community level.

When unpacking the Brussels food system's governance, drawing attention to its multi-level structure is an essential first step. As shown in Figure 6, competent public authorities are distributed across five¹³ levels: EU, federal, regional, community and municipality. Unlike the Flemish and Walloon Regions, there are no provinces in the BCR. Provincial competences are therefore divided between the community commissions and the regional government.

Within the Belgian context, it should be emphasized that federal, regional, and community authorities generally do not superimpose each other but operate alongside one another within their respective areas of competence (i.e., principles of autonomy, subsidiarity and exclusivity). Municipalities, on the other hand, are superimposed: they do not have exclusive powers to adopt laws or ordinances, but they can issue regulations that are necessary at the municipal level and could levy additional taxes, provided these do not conflict with higher legal norms.

The next section discusses more in detail who holds which competence.

¹³ International treaties are not covered here.

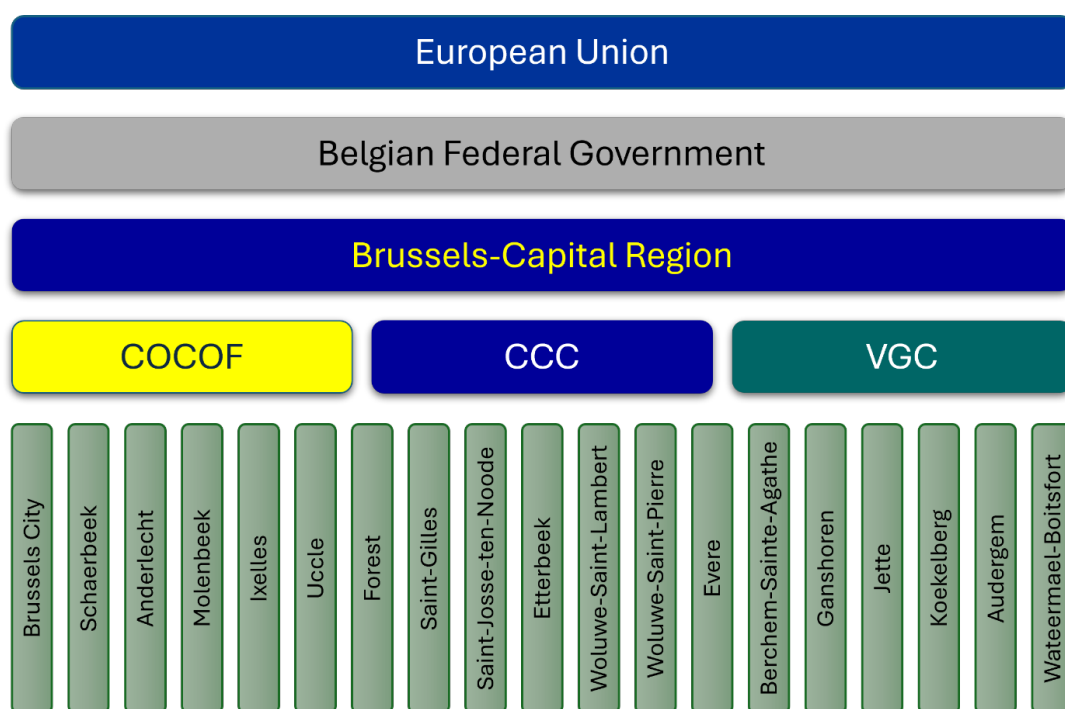


Figure 6: Overview of the five-level governance structure of the Brussels region: EU, federal, regional, communities and municipalities.

8.2.1 Division of competence

While an exhaustive list of all EU competences relevant for sustainable food systems in Brussels is far beyond the scope of this section, we mention here the role of the Common Agricultural Policy at EU level, and the role the EU holds in protecting internal market competitiveness and harmonization, as well as in consumer protection and labelling.

At the federal level in Belgium, several material competences are relevant to promoting a sustainable food system in Brussels region. These include product standardization, food labelling (together with Europe), fiscal policy, consumer protection and important elements of labour law and social security. In addition, the federal government also has residual powers, i.e. those that have not been assigned to a federal state.

The BCR, like the Walloon and Flemish regions, holds competences on land-related matters. Relevant regional powers for this project include spatial planning, the environment, agriculture, food promotion, the economy (support and advice to businesses, pricing policy) and scientific research under its own powers.

The person-related competences in the bilingual BCR are managed by three Community Commissions: the Common Community Commission (CCC), the French Community Commission (COCOF), and the Flemish Community Commission (VGC). The COCOF has obtained a certain degree of autonomy from the French Community through the transfer of powers, particularly in the field of curative healthcare, while the VGC functions as a decentralized service of the Flemish Community and therefore does not possess regulatory competences. The CCC is responsible for bilingual health and social welfare matters (bi-personal) matters and serves as a consultation body to ensure policy coherence, and it holds the main competence for disease prevention. These structural differences in competences and autonomy among the commissions reflect fundamentally different visions on how their powers should be exercised within the region.

The municipalities of the BCR do not have legislative powers in food policy, but they do have a range of spatial, regulatory and fiscal instruments at their disposal with which they can influence the local food environment. Within their urban planning powers, they can use Special Destination Plans and municipal urban planning regulations to determine which functions are permitted or restricted in certain zones. For example, they can reserve zones for local shops, markets or collective vegetable garden projects, or attach conditions to permits for food-related businesses. Municipalities are also responsible for issuing urban development permits for small-scale projects, which allows them to indirectly influence the presence and distribution of, for example, fast food outlets versus short chain initiatives. In addition, municipalities can use municipal regulations and fiscal levers (such as fees, concessions and local taxes) to structure and stimulate economic activities in public spaces, for example by giving priority to local producers at markets or by attaching conditions to concessions for catering establishments.

Within their remit for local facilities, they can integrate healthy and sustainable food into municipal schools, social restaurants and Public Centre for Social Welfare (PCSW) services, for example through sustainable procurement policies or by joining regional programs such as Good Food Brussels. However, municipal policy-making powers cannot selectively ban forms of trade on health grounds, unless this is substantiated by spatial or regulatory criteria that are generally applicable. Their role is therefore primarily in spatial planning, regulatory framework and local implementation of supra-local policy objectives.

8.2.2 Strategic policy frameworks

8.2.2.1 EU level

Today, at the European level, the main strategic framework currently in place is the Vision for Agriculture & Food. This strategy is sector-specific, focusing primarily on agriculture with a strong emphasis on resilience and food security. Whereas until recently the Farm to Fork Strategy, as part of the European Green Deal, adopted a food systems approach and integrated strong sustainability objectives, both this strategy and its sustainability focus have now effectively been set aside.

8.2.2.2 Federal level

At the federal level, the most recent updates to the Federal Food and Health Plan date back to 2016. A new plan has been expected since 2020 but has not yet been adopted. As a result, there is currently no up-to-date strategic framework directly linked to food policy. However, several related federal strategies do include elements of sustainable food. The Superior Health Council has edited Food-based dietary guidelines in 2025. This report includes dietary recommendation that should help preventing chronic diseases and multiple information documenting the relation between health and diet. The Federal Plan for Sustainable Development sets out the ambition to guide citizens toward healthy and sustainable dietary patterns, including through institutional catering and public procurement. The National Biodiversity Strategy 2025–2030 aims to support citizens in making biodiversity-friendly choices. In addition, the Federal Long-Term Vision for Sustainable Development includes multiple objectives related to sustainable food, such as ensuring access to safe and healthy food for all.

8.2.2.3 Brussels-Capital Region

The government of the BCR applies an overarching strategic framework in which sustainability transitions are bundled across different sectors: Shifting Economy. Its overarching strategic

objectives are to foster sustainable and inclusive economic development in the BCR by creating new economic opportunities and quality employment, preserving natural and human capital, ensuring a fair distribution of economic gains, and promoting participatory and democratic business governance. At the same time, it seeks to address the vital functions and material needs of the region through the development of a local economy that remains open to the world.

As sector strategy focused on sustainable food systems, the Good Food 2 Strategy (2022-2030) is of central interest. The five key action points in this strategy focus on (1) strengthening agro-ecological production in Brussels and its suburbs, (2) developing sustainable food chains to supply Brussels, (3) ensuring the distribution of a commercially sustainable food supply in restaurants and shops, (4) ensuring the availability of sustainable food for citizens and schools, and (5) reducing food loss and waste. The most notable developments under this strategy are the Good Food Criteria and the labels that restaurants and canteens can obtain by complying with them. All possible forms of support, such as logistics, finance, communication, education, research and technology are offered to sustainable alternatives through this strategy. For a more in-depth analysis of this and other strategies of the region, we refer to De Bauw et al. (2025).

The Regional Innovation Plan (2021–2027) also mentions “healthy food for all” as a societal challenge and includes food and urban agriculture in three “strategic innovation domains” (SID): “Climate: climate-resilient buildings and infrastructure”; “Efficient and sustainable urban flows for inclusive management of public space”, and “Optimal use of resources”.

The Good Move strategy, the regional mobility plan for 2020-2030, sets out the main policy lines in the field of mobility, including the optimization of logistics and supply chains to limit the nuisance associated with this type of transport.

Brussels institutions, namely COCOF, the VGC, and the CCC, promote public health through coordinated planning and implementation. COCOF operates under a five-year decree requiring a strategic health promotion plan focused on integrating health into all policy domains and strengthening citizen participation and healthy living environments. The VGC, by contrast, embeds health promotion within its broader multi-year plan, mainly through the Logo Brussels service, which supports intermediaries. Finally, the CCC aims for coordination and coherence through the Integrated Welfare and Health Plan (GWGP), which brings together the programs of both the CCC and COCOF.

8.3 Conclusion

The governance of the BCR food system is shaped by a complex, multi-level institutional landscape, with responsibilities distributed across five distinct levels of authority. The regional *Good Food 2 Strategy* stands out as the primary and most comprehensive driver of sustainable food policy, operating under the broader *Shifting Economy* framework. However, this analysis reveals significant strategic gaps at both the federal level, due to an outdated national food plan, and at the EU level, following a shift away from a holistic food systems approach. These findings, combined with coordination challenges at the community level and the limited legislative authority of municipalities, underscore the pressing need for enhanced coordination across all levels of government and further research to bridge the identified policy vacuums.

Annex 1- From Consumption to Gross Demand

Introduction

This annex presents the methodological steps required to convert daily food consumption volumes into annual gross demand for foodstuffs. The calculations are based on the Brussels diet as documented in the Food Consumption Survey conducted by Sciensano (Bel et al., 2023; Vermeiren et al., 2025).

Conversion rates

Because food is measured differently at the point of consumption (cooked, ready-to-eat quantities) than at the point of production or trade (raw agricultural volumes), a series of conversion steps is required. For example, a portion of cooked pasta represents a much smaller weight of raw wheat, while a kilogram of beef at the table corresponds to several kilograms of live animal weight after accounting for processing and transport losses. These conversions are necessary to translate what Brussels residents actually eat into the volumes of agricultural products that must be produced or imported to meet that demand. To move from consumption data to production-level demand, three main steps are needed:

1. Establishing the equivalence between food products and agricultural products
2. Converting cooked weights to raw weights
3. Converting raw net demand into gross demand (accounting for food losses and processing factors)

From food products to agricultural products

Table 19: Conversion table from food products to agricultural products.

Food products	Assigned agricultural categories
Plant-based products	
Bread, cereals and breakfast crackers	Cereals
Potatoes	Potatoes
Tubers	Potatoes
Pasta, rice, quinoa, couscous and boulgour	Cereals
Vegetables	Vegetables
Fruits	Fruits
Plant-based meat substitutes	Legumes
Nuts and seeds	Legumes
Vegetable oils (olive, sunflower, etc.)	Oils
Legumes	Legumes
Sugar	Sugar
Animal-based products	
Meat and processed meat	Meat
Fish and shellfish	Fish
Eggs	Eggs
Milk and dairy products	Dairy
Dairy Plant-based alternatives	Legumes

Butter	Dairy
Cheese	Dairy

From cooked to raw products

Some products are consumed in a cooked form, but production and trade volumes are measured in raw form. A first conversion is therefore required. This step relies on two inputs: the state of the product (cooked or raw) for each dietary item (Table 20), the corresponding cooked-to-raw conversion factor (Table 21).

Table 20: Brussels diet details, including product state and assigned product and food categories.

Product name	Specific product category	Main food category	Product state	Amount (g/cap/day)	Amount raw (g/cap/day)
Bread, cereals and breakfast crackers	Bread	Cereals		110	110
Potatoes	Potatoes	Potatoes	cooked	93	93
Tubers	Potatoes	Potatoes	cooked	2	2
Pasta, rice, quinoa, couscous and bulgur	Pasta	Cereals	cooked	65	24
Vegetables	Vegetables	Vegetables		188	188
Fruits	Fruits	Fruits		167	167
Milk and dairy products	Milk	Dairy		152	152
Dairy Plant-based alternatives	Plant-based milk substitutes	Legumes		12	12
Cheese	Cheese	Dairy		29	29
Meat and processed meat	Meat	Meat	cooked	99	141
Fish and shellfish	Fish	Fish	cooked	49	55
Eggs	Eggs	Eggs		13	13
Plant-based meat substitutes	Plant-based meat substitutes	Legumes		4	4
Nuts and seeds	Nuts	Legumes		8	8
Butter	Butter	Dairy		4	4
Vegetable oils (olive, sunflower, etc.)	Unsaturated oils	Oils		6	6
Pulses	Legumes	Legumes	cooked	27	11
Sugar, candies and jams	Sugar	Sugar		15	15

Table 21: Raw-to-cooked conversion ratios.

Main food category	Product category	Raw-to-cooked ratio
Cereals	Bread	NA
Cereals	Pasta	2.7
Cereals	Wheat	3
Fruits	Banana	NA
Fruits	Apple	NA
Fruits	Orange	NA
Fruits	Mandarin	NA
Fruits	Grape	NA
Fruits	Pear	NA
Fruits	Melon	NA
Fruits	Kiwi	NA
Fruits	Strawberry	NA
Fruits	Lemon	NA
Fruits	Other fruits	NA
Fruits	Nuts	1
Vegetables	Tomatoes - fresh	1
Vegetables	Carrots - fresh	1
Vegetables	Onions - fresh	1
Vegetables	Witloof - fresh	1
Vegetables	Lettuce - fresh	1
Vegetables	Peppers - fresh	1
Vegetables	Leek - fresh	1
Vegetables	Courgettes - fresh	1
Vegetables	Cauliflower - fresh	1
Vegetables	Mushrooms - fresh	1
Vegetables	Cucumbers - fresh	1
Vegetables	Others - fresh	1
Vegetables	Peas - processed	1
Vegetables	Beans - processed	1
Vegetables	Carrots - processed	1
Legumes	Legumes	2.5
Legumes	Plant-based meat substitutes	1
Legumes	Plant-based milk substitutes	NA
Oils	Unsaturated oils	NA
Potatoes	Potatoes	1
Sugar	Sugar	NA
Meat	Beef/veal	0.7
Meat	Pork	0.7
Meat	Poultry	0.7
Dairy	Milk	NA
Dairy	Butter	NA

Dairy	Cheese	NA
Dairy	Saturated oils	NA
Eggs	Eggs	1
Fish	Fish	0.9
Meat	Lamb/ovine/caprine	0.7

Notes:

NA = Not applicable (product is consumed raw or no conversion required).

A ratio <1 (e.g., 0.7 for meat) indicates weight reduction during cooking (water loss).

From raw net demand to gross demand for food categories

Once daily consumption volumes are converted into raw product quantities, annual demand for the BCR residential population can be calculated (net annual consumption in Table 8).

The next step is to convert net demand into gross demand (gross annual demand in Table 8), which represents the amount that must be produced or imported to cover consumption plus:

- losses during processing,
- losses during distribution,
- losses during preparation,
- non-edible parts,
- manufacturing inefficiencies.

The conversion rates used to calculate gross demand are consolidated in Riera et al. (2024) and presented in Table 22.

Applying these conversion rates to the net raw demand makes it possible to estimate the gross production volumes required to meet Brussels' consumption needs. As shown in Table 8, the resulting gross demand is approximately double the net demand.

When the additional consumption of commuters is included, the total gross demand is estimated to lie between 825 kt and 1,047 kt per year across all product categories (Table 23).

Table 22: Conversion rates between production and consumption. Source: Riera et al. (2024).

Main food categories	Product categories	PROD → CONS	CONS → PROD
Cereals	Bread	0.75	1.33
Cereals	Pasta	0.48	2.08
Cereals	Wheat	0.72	1.39
Fruits	Banana	0.70	1.43
Fruits	Apple	0.84	1.19
Fruits	Orange	0.77	1.30
Fruits	Mandarin	0.77	1.30
Fruits	Grape	0.77	1.30
Fruits	Pear	0.77	1.29
Fruits	Melon	0.88	1.13
Fruits	Kiwi	0.77	1.30
Fruits	Strawberry	0.75	1.33
Fruits	Lemon	0.77	1.30
Fruits	Other fruits	0.77	1.30

Fruits	Nuts	0.77	1.30
Vegetables	Tomatoes - fresh	0.84	1.19
Vegetables	Carrots - fresh	0.84	1.18
Vegetables	Onions - fresh	0.66	1.52
Vegetables	Witloof - fresh	0.71	1.42
Vegetables	Lettuce - fresh	0.43	2.33
Vegetables	Peppers - fresh	0.78	1.29
Vegetables	Leek - fresh	0.77	1.29
Vegetables	Courgettes - fresh	0.78	1.29
Vegetables	Cauliflower - fresh	0.67	1.49
Vegetables	Mushrooms - fresh	0.78	1.29
Vegetables	Cucumbers - fresh	0.78	1.29
Vegetables	Others - fresh	0.78	1.29
Vegetables	Peas - processed	0.89	1.12
Vegetables	Beans - processed	0.90	1.09
Vegetables	Carrots - processed	0.84	1.21
Legumes	Legumes	0.83	1.17
Legumes	Plant-based meat substitutes	0.83	1.24
Legumes	Plant-based milk substitutes	4.82	0.21
Oils	Unsaturated oils	0.29	3.47
Potatoes	Potatoes	0.68	1.28
Sugar	Sugar	0.15	6.83
Meat	Beef/veal	0.49	2.06
Meat	Pork	0.57	1.77
Meat	Poultry	0.41	2.42
Dairy	Milk	0.88	1.14
Dairy	Butter	0.04	23.49
Dairy	Cheese	0.09	11.75
Dairy	Saturated oils	0.04	23.49
Eggs	Eggs	0.92	1.06

Table 23: *Estimated annual gross demand of agricultural products in 2024 by BCR residents and commuters.*

Product category	Annual gross demand of agricultural products (kt/year) Residents only	Annual gross demand of agricultural products (kt/year) Residents + commuters
Plant-based products		
Cereals	90	114
Vegetables	114	144
Fruits	103	131
Potatoes	54	69
Legumes	9	12
Oils (vegetal)	10	12
Sugar	48	60
Animal-based products		
Meat	114	144
Dairy	277	352
Eggs	6	8
Total	825	1,047

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