

# White Paper Innovative Food Sector Groningen

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## Introduction

Wide, waving fields of wheat, endless acres of potatoes, strong and stately farms, a lively trade and a powerful food industry: the character of Groningen is traditionally defined by our food. What we eat, where we work, what our environment looks like: for centuries, nutrition has played a decisive role in our lives and food has been the strength and the character of Groningen. Monumental buildings in the city and surrounding lands are a daily reminder of this.

### *Lost Strength*

Over the past few decades we seem to have lost much of the strength of food. At the start of the twenty-first century, it seems to be a negative factor at best. Although the productivity of agriculture in Groningen is large and the products are good and cheap, these qualities also have a downside that is becoming increasingly evident. On average, we have unhealthy diets and eat too much, we have not found enough alternatives for work in the agricultural sector, the countryside is emptying, and the diversity of the landscape is at risk of being lost due to upscaling of production.

### *Reversible*

Some of these developments are – although far advanced – not irreversible. An effective approach, fuelled by an integrated view on food and the economy, offers perspective on a new, positive contribution to nutrition and health, the economy, society and the landscape.

### *Connections for Responsibility*

This way, we see a clear connection between seemingly unrelated problems. When these connections become visible, a perspective emerges to address these problems coherently. Realising the influence on – and responsibility for – food once more in the broadest sense of the word can contribute to greater innovation, to the development of new products and processes, to social sustainability, new and different forms of employment and cohesion, to environmental sustainability, maintaining the quality of the landscape and biodiversity, to individual well-being, and other nutrition makes a positive contribution to health.

### *Related Developments*

The aim is to reverse several negative, related developments: the increasing dependence on the global food economy, limited or unilateral innovation in the food sector, the loss of regional employment, the growing pressure on the landscape and biodiversity, and the advancing, negative influence of harmful food to our health.

### *Integrated View*

Based on the most current scientific insights, this white paper comes to an integrated view and translates this into concrete policy proposals and innovative tools.

## Reframe Movement

The immediate cause for this white paper is the Interreg project Reframe. The municipality of Groningen is leading this project. The aim is to restore cohesion in the regional food economy and thereby increasing the innovative strength in the Netherlands, Belgium, Denmark, Germany and Sweden. The starting point is that regional food chains – from producer to consumer – can contribute to a sustainable economy and regional employment.

### *Innovation Through Cooperation*

Within the Reframe programme, we see that the desired cohesion and innovation strength are primarily created by developing and strengthening the regional chain cooperation. The aim is to realise this cooperation and to realise these chains. Reframe primarily focuses on the connection between regional products and consumers. Here we experience that shorter food chains call for different, often new forms of cooperation, for different connections and support and for specialisation. By exploring these forms, the number of opportunities for the city and province in the broad policy area of food are becoming more and more visible. This white paper describes these opportunities. Moreover, it is also becoming increasingly clear that exploiting these opportunities requires new policy instruments and an approach to nutrition and the economy that is as integrated as possible.

### *Small Initiatives Explore Opportunities*

Additionally, the Reframe programme offers better insight into the amount of existing larger and smaller initiatives in food innovation. In addition, discussions increasingly reveal the role often smaller initiatives play in exploring opportunities, realising innovations and enthusing consumers for other products and habits. At the same time, these discussions also show a growing need of companies to invest and the barriers they experience. The potential demand and the potential supply are large. However, there are still barriers between supply and demand. Creating a certain volume and strong networks are the key to removing these barriers. At the same time, existing and new investment tools can help companies respond better to the societal demand. Together, network, volume and investment tools yield social and economic return.

### *Social Need*

While parties in the region of Groningen are working on Reframe, the social need for other monitoring and a better insight into food increases as well. The recent egg crisis renews the visibility of the scale and the character of the food industry. Additionally, this crisis has also raised questions in the public debate about whether the current structure of these chains (including supervision) is the most logical and most responsible form.

## Food Connects

We can look at food from two perspectives. From the perspective of the individual and the influence of food on their health and well-being and, from a broader point of view, the role food plays in finding their place in society and the economy. We can also look at food from the broader perspective of the economy, society and the environment. Then we mainly see the role of food in innovation and employment, the role of food as an essential function within landscape and ecosystems and, lastly, as a cohesive element in society. In society, food does not only play an important role in meetings, at home and in the catering industry, but it also defines our identity in our food culture. This white paper explores both the perspective of the individual as well as that of the economy, society and the environment.

### The Individual's Perspective: Health

Of course, food is an essential fuel for the human body. But food is much more than that. It is a source of wellbeing, a building block for coexistence, and it can also be an ingredient for economic participation. In all these factors, food also influences our health.

#### *Quality of Life*

The quality and quantity of what we eat and drink determines how we feel, the chance of disease and the speed of recovery. Additionally, experience is an important part of how we perceive this quality. On the one hand, at the high end of the market, this leads to an ever-growing number of specialty shops, special eateries, restaurants and other food establishments, plus initiatives such as farmers' markets and specialised festivals. On the other hand, at the low end of the market, this leads to the perverse but seemingly inevitable incentive to sell as much unhealthy food as possible at the lowest possible price. Incidentally, healthy food is not necessarily more expensive. However, until now there are few successful examples to entice large groups to switch to healthier food.

#### *Challenge of the Price*

When zooming out, on the one hand we see the opportunities to initiate and strengthen a development with the aforementioned specialty food establishments and specialised retail that provides more, better, and in many cases regionally produced food. To make this development effective, the price will

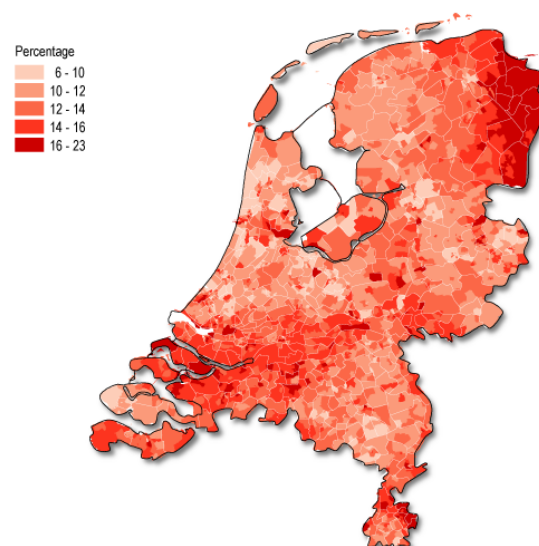


Figure 1 Obesity per district (source: <https://www.volksgezondheidenzorg.info/onderwerp/overgewicht/regionaal-internationaal/regionaal#!node-obesitas-wijk>)

eventually also have to drop. After all, on the other hand – especially at the low end of the market – price is a determining factor for what people buy and prepare themselves and for which food is offered in semi-public facilities. Incidentally, this does not only require lower prices for better food, but other knowledge and – within institutions – updated processes as well. And that, of course, requires guarantees that regionally produced food is actually better and healthier.

*Two Tracks*

When viewing the opportunities in the field of food from the perspective of the individual in this light, then the following two tracks become visible:

1. More focus on food within curative care and in prevention programmes. In addition, the attention for experience must grow as well. More and more research show that a focus on nutritional value is insufficient to achieve lifestyle changes and adherence to therapy. This insight can be the basis for the development of innovative products and programmes, which can have an economic significance in addition to a health effect. The urgency for this is high in the northern Netherlands as well.
2. Provisions in the social domain potentially offer a good, accessible opportunity to provide healthy food that is mostly regionally produced. However, exploiting this opportunity requires process innovation. Procurement of these regional products calls for adjustment of purchasing channels, for different product knowledge and often for different preparation processes as well.

**Economic and Social Perspective: Innovation and Employment**

Of course, the individual and social perspective come together in health. Illness, the absence of health, is first and foremost a negative individual experience, but the subsequent costs are also a social issue. Food is not only important for the health and well-being of the inhabitants of Groningen, but also for the province’s economy. In 2016, 2630 companies were active in agriculture, cattle farming and fishing. This is a sharp decline compared to several years earlier. In 2011, 3277 companies were active.<sup>1</sup> The number of companies active in the food industry is much lower. The total share of agriculture and industry (including non-food industry) is high in the province of Groningen, especially in comparison to the rest of the Netherlands.

**2.3.4 Bruto toegevoegde waarde basisprijzen, 2013\***

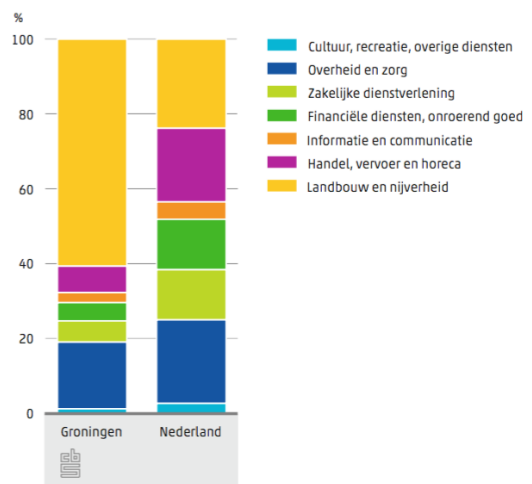


Figure 2 Source: CBS

<sup>1</sup>CBS

*Focus on Production*

Although the specific figures for Groningen are still lacking, the focus in the food chain seems to be on production and less on processing. Companies from Groningen seem to play a much smaller role in the currently defining links of the food chain, also when it comes to value creation.

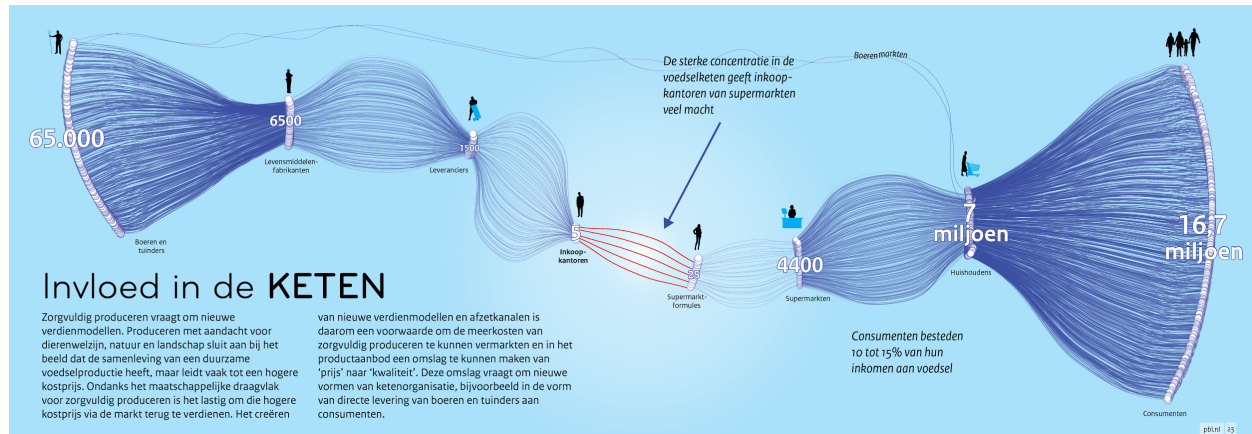


Figure 3 Source: Planbureau voor de Leefomgeving

**Wider Perspective**

If we zoom out and view the situation in Groningen from a wider, historical perspective, then we see that the food sector has been heavily industrialised in recent years. This industrialisation has contributed to the affordability, safety and availability of food. Whereas an average household used to spend 50% of their income on food, this has now been reduced to 10%. Simultaneously, there has also been an unprecedented concentration of power in food chains. Local grocers have grown into enormous multinational supermarket chains with hundreds of shops in the Netherlands alone, and the food processing industry is also dominated by a small number of major players.

*Little Influence*

The scale and sphere of influence of the farming industry is lagging far behind. In that light, it is not surprising that the major food processors and supermarkets are appropriating an increasingly large share of the added value that is created within food chains. This has led to enormous pressure on the prices for farmers.

### Industrialisation

The industrialisation of – and upscaling of production within – food chains is mainly driven by economic principles of cost reduction and profit maximisation. From a social perspective, however, farming traditionally played a greater role than merely an economic one. Inseparable from the landscape and social environment, farmers have always played a role in determining landscape and environment. Farming has been an important source of local employment for a long time.

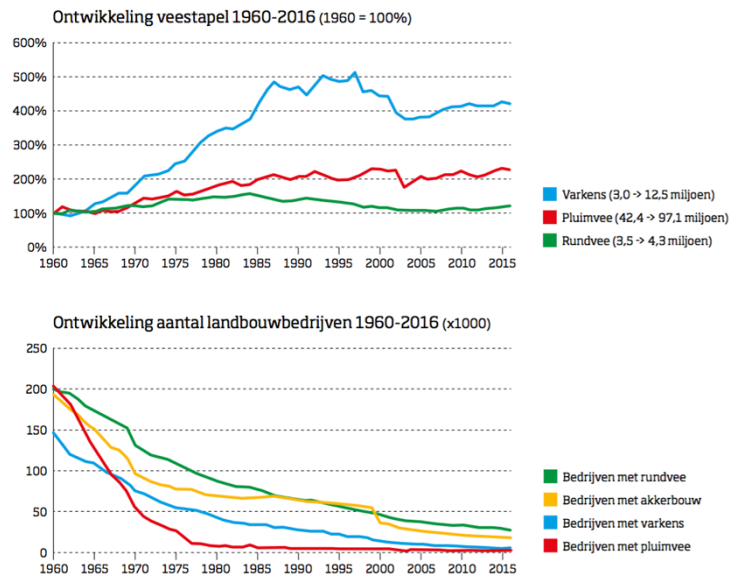


Figure 4 Development livestock and number of farms in the Netherlands (Source: Natuur & Milieu Nederland, Voedselvisie. Naar een gezond en duurzaam ecosysteem)

### Short-Term Tensions Between Environment and Production

The fact that farmers determine the landscape and the environment, does not mean their contribution is always positive. The demands of the environment and the market did not and still do not always correspond, especially not in the short term. On the one hand, farms are often responsible for pollution of air and water and for a decline in biodiversity. On the other hand, farms also play a significant role in nature conservation, in the appearance of the landscape, and they – also out of self-interest – counteract soil decay and deterioration. In the long term, the positive contribution to the environment, ecology and landscape will become increasingly important, also for the continuity of the farms themselves.

### Finding Space for Innovation

In the current power play, however, many farmers experience very little space to do more than keep their head above water. Their food products are traded on the global market and, partly due to powerful intermediary parties, still generate low returns. In turn, the intermediary parties are too far away from the region to be able to or feel the need to make an effective contribution. Of course, there are farmers who see other possibilities. In Groningen this has led to multifunctional combinations with care, tourism and education, and to new forms of production. However, the economic impact of this still seems limited. Additionally, many initiatives with a social and ecological character are highly dependent on subsidies. For actual change it is necessary to go beyond these subsidy-dependent projects and we must build economically viable solutions. Examples elsewhere in the Netherlands show that much more is possible than is currently happening in Groningen.

## New Solutions in the Chain

New solutions, innovation and return are possible if entrepreneurs in the region could occupy a more significant position in the food chain. Local entrepreneurs should be able to anticipate the exact needs of regional customers, be it catering, restaurant or consumer. Strengthening the interplay of regional demand and supply not only creates a stronger regional economy, but also generates more product innovations and sales variations. The most important innovation in this case is redesigning and restructuring the processes and chains, both between producer, processing, trade and consumer as well as within these parties themselves. The regional product capacity is ultimately much larger than the maximum regional demand. However, the innovation that results from the more direct relationship between regional supply and demand can also strengthen the position on the global market and make it more distinctive. As these entrepreneurs also depend on the region in which they operate, the strengthened economic position of these entrepreneurs will also lead to social and ecological value.

### *Different Optimum*

The basis for redesigning and restructuring the chain is that the current structure of the food chain is not the only optimum from an economic point of view. Another structure is conceivable and possible. However, that other structure does require a certain scale in the volume of products and processing. The price is related to this, both as a condition as well as a result. On the one hand, these prices have to be reasonable for producers, processors and regional vendors, and on the other hand, they have to be accessible to such a portion of consumers in the region that the necessary scale can also be achieved. Incidentally, product differentiation may also be necessary to create a decent volume.

### *Shared Responsibility*

In our vision, realising the new structure and working on a different optimum is the responsibility of all parties. However, without the stimulating and facilitating role of the local and regional governments, it does not seem possible to realise that transition in the short term. The role of local and regional authorities must focus on enabling change, making knowledge available, organising coalitions and facilitating the necessary investments. The insight that the efforts of local and regional governments are investments, of which not all investments will yield the same return, is essential. To realise the transition, it is also necessary to invest in small-scale initiatives that show much potential, but do not yet guarantee results. Subsidising products themselves will not contribute to the transition, but sparingly applied guarantees could. It goes without saying that governments and related (semi-)public institutions can also play an important role as a purchasing party to stimulate the transition.<sup>2</sup>

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<sup>2</sup> David Barling et al, *Revaluing Public Sector Food Procurement in Europe. An Action Plan for Sustainability*



### *Working Towards Access*

The social contribution of food can increase by working specifically on access to high-quality food, to meeting places and to special employment in food. Simultaneously, the potential of good food for the health and well-being of citizens can become even greater if tasty, healthy food is even more accessible and available for all layers of the population.

### *Contribution to Sustainability*

Finally, the contribution of different food to the sustainability ambition of Groningen can be increased if large and small consumers consume food from the region more consistently, food of which a (larger) part of the value creation has taken place in the region and which is transported efficiently.

Organising waste flows differently is a special task within these chains. Incidentally, sustainability gain in this area does not only concern limiting CO2 emissions. The impact of a different organisation of the chains on CO2 emissions is relatively limited. The effect on biodiversity is expected to be much larger and it is precisely this biodiversity that has major positive effect on the total environmental impact.

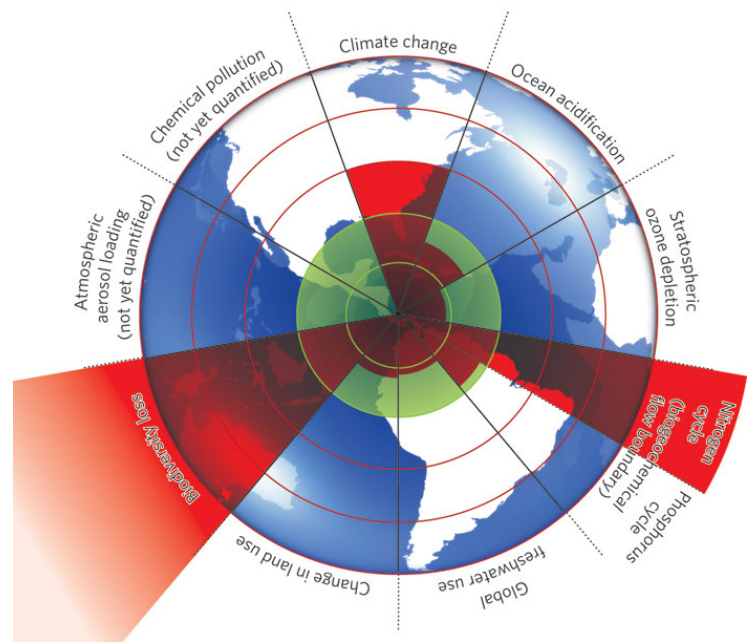


Figure 5 Correlation different environmental impact

### *Five Innovation Tracks*

If we look at the opportunities in the field of nutrition in this light, from the economical perspective, the following tracks become visible:

1. Process innovation: the different organisation of processes between companies and bringing the processes (back) to Groningen are important innovations. Concrete examples that are currently being explored – also stimulated by Reframe – are:
  - a. Foodhub system: the potential supply of regional products is currently experiencing difficulties in finding the potential demand for these products. Logistics and sales channels are essential challenges in this area. Inspired by a Reframe example in western Sweden, students of the University of Groningen, together with regional entrepreneurs, are designing and researching how to set up a Foodhub where supply and demand meet, and logistics will be taken care of. The Foodhub is a network in which regional products are transported (cost) efficiently to an urban market or wholesaler by using

existing logistics and facilities. As a distinctive part of the regular supply, they can also be delivered effectively to urban and regional customers.

- b. Processing in the region: only a part of the regional products can find its way to the regional demand without processing. Many products require a kind of processing (washing, peeling, cutting, repackaging, precooking). This seems to be possible on a larger scale in the region, with room for participation jobs. This perspective is currently being investigated further by the Municipality of Groningen, the Province of Groningen, University of Groningen and several entrepreneurs.
2. Product innovations: insight into regional demand also leads to relevant product innovations. Appealing examples are:
    - a. Marne Mosterd, who want to get their basic raw materials from the region again and who are therefore, together with farmers, investing in this.
    - b. Bax Bier, who want to get malt from the region and are currently investigating how to set up a malting plant with farmers.
    - c. Oncologists from the UMCG, who are searching for a special yoghurt preparation that cancer patients will enjoy, which will provide an answer to the specific sensitivity of those patients and will thus contribute to their recovery.
  3. Combined innovation of products and processes. An appealing example is:
    - a. The cooperating farms of the Graanrepubliek, which are working together on crop innovation and are innovating both the cultivation as well as the sales channels.
  4. Marketing:
    - a. To make the innovative products even more visible and attractive on the regional market, a joint marketing effort is desirable.
  5. Training and education:
    - a. Do we now have the right training and education tools to stimulate entrepreneurs in the food industry to optimally innovate and build regional food chains.

## Conceptual Framework

### Food Chain

By food chain we mean all links from producer to consumer. From the consumer's perspective – the end user who eats a meal – the chain is as follows. In many cases, consumers partially prepare the meal themselves with products they purchased from the supermarket in the area. In turn, that particular supermarket or other retailers are often part of a larger group and/or purchasing association. This group purchases its products centrally from a wholesaler or supplier or directly from large food manufacturers. In many cases, these parties are also responsible for part of the processing of the food, either directly or by organising this process. The ingredients for this are obtained – usually via intermediaries – from agricultural companies in agriculture and horticulture. These companies in agriculture and horticulture source their raw materials – such as seeds, fertilisers, young livestock, etc. – and equipment from other suppliers, which often operate on a global scale.

#### *Chain Supervision*

All steps of the food chain are subject to supervision, partly organised by the sector itself, partly by the national government. The structure of the chain and of the supervision are communicating vessels. In many respects, a different structure of the chain requires a different arrangement for supervision and vice versa. That means two things. Firstly, innovation in the chain is only possible if supervision and regulation possibilities are also investigated. Secondly, (disruptive) innovation is only possible if the public interests that safeguard government supervision are also considered and are (re)organised.

### What Is Short?

Short food chains strive to create more added value in areas where food is cultivated. This extra added value should lead to an enrichment of the community in the broadest sense of the word. These may be socio-economic goals, such as a more reasonable disposable income, more employment and better health, or socio-economic objectives, such as climate change mitigation and landscape conservation.<sup>3</sup>

#### *Differences Between Chains*

Not all food chains are equal. Firstly, there are big differences between the different types of food. One is more or less ready for consumption after cultivation, while the other can only end up on the consumer's plate via one or more process steps. Nor can every type of food be grown equally efficiently anywhere in the world. Additionally, different food chains have been set up for different end users. There are business-to-business food chains, but also business-to-consumer and consumer-to-consumer chains. Each of these chains can be shortened, but the changes and outcomes will vary greatly. Finally,

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<sup>3</sup> [F.Galli, G. Brunori \(eds.\) \(2013\) Short Food Supply Chains as drivers of sustainable development. Evidence Document. Document developed in the framework of the FP7 project FOODLINKS \(GA No. 265287\). Laboratorio di studi rurali Sismondi, ISBN 978-88-90896-01-9.](#)

short chains are therefore shorter than their global counterparts, but 'short' can indicate different kinds of distance: geographical distance, temporal distance, social distance and political distance.

*Regional Products Are a Small Part*

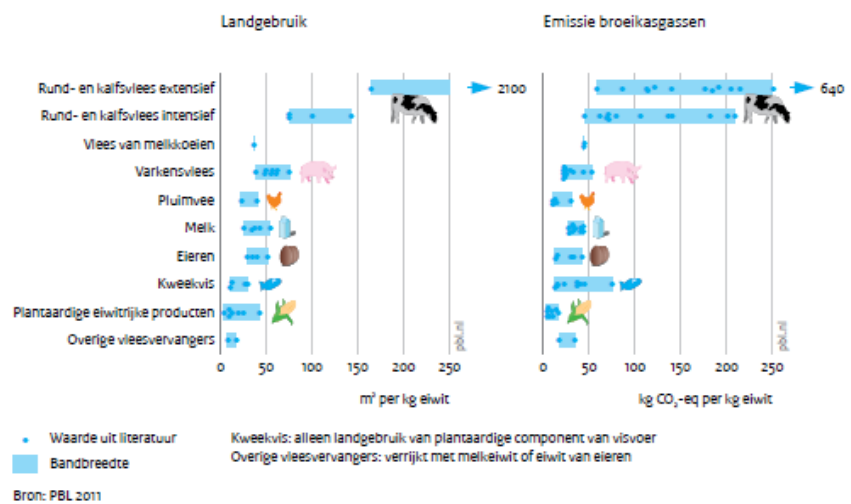
A short food chain is therefore not synonymous with regional products. Of course, the traditional regional products are an example of a short food chain, but relevant short chains produce much more than only regional products. The potential scale of short food chains, however, becomes much clearer from..... Precisely because the short food chain is such a broad and multi-interpretable concept, it is important to have a clear conceptual framework in discussions about short chains. What type of food is it? How is the current chain set up? In what way do we want to shorten that chain and why?

## Policy Statement

The economic contribution of food can grow by removing market failures, encouraging smart innovations, stimulating new forms of cooperation and increasing investment opportunities. Employment in food and related sectors can be improved on all levels by, on the one hand, strengthening and expanding the regional food economy and, on the other hand, by stimulating the development of new food and biobased products. Additionally, the cooperation with education and research institutions can offer special opportunities.

### Many Initiatives

The opportunity and challenges for food policies also become apparent from the large number of initiatives already undertaken by society and the regional business community, and from the many policy proposals that are directly and indirectly related to food. The challenge is to arrive at an integrated approach, in which initiatives and policies are connected and reinforce each other. This will not only lead to a profit for initiatives by citizens and entrepreneurs, but also to greater social benefits, particularly in the fields of economy, employment, social cohesion, health and sustainability.



### Five Innovation Tracks in Policies

This challenge requires multiple parallel tracks:

1. Inventory of existing policies regarding food, food processing and food-related biobased economy. Part of this inventory includes policy intentions, support and intervention tools, best practices and perceived issues.
2. Inventory of existing initiatives relating to food, food processing and biobased economy. Among others, this inventory uses existing structures such as Ketentafel Voedsel, Inkoop Platform Groningen, .... Analyses of best practices, difficulties and the (possible) effects of policies are also part of this inventory.
3. Analysis of change agents: which parties and structures are at the forefront of the transition and take others along. An essential role seems to be reserved here for starting entrepreneurs who are trying out new ideas.

4. This inventory leads to a shared agenda. The agenda describes dreams, goals, and ambitions. The agenda also includes tools, options and best practices. The agenda stimulates cooperation and focus.
5. Based on the first explorations, we see a possibility of reaching a Regional Food Deal for regionally produced and regionally processed food based on the food agenda. Several declarations of intent have already been signed in the past period, each time for a sub-aspect from the food chain and related policy fields. The multitude of the various agreements is currently standing in the way of an integrated approach. From the food agenda it becomes possible to come to a Regional Food Deal. The Regional Food Deal is a coalition of pioneers who work together to realise social benefits in terms of health gains, growing employment, better sustainability performance, greater contribution to health, preservation of landscapes and contribution to the economy.

## Summarised in a Concrete, Public Approach

1. Innovation tools within the chain:
  - a. Promoting a different structure of the chain by organising meetings, by organising the public demand and commissioning differently, and by making knowledge available.
  - b. Facilitating this innovation by developing new models and business cases with market parties.
  - c. Facilitating this innovation through investment loans and by offering temporary economic shelter.
2. Innovation within the social domain:
  - a. More emphasis on food within curative care and prevention programmes.
  - b. Innovation within facilities in the social domain, so they can provide a good, easily accessible opportunity to provide healthy food that is mostly regionally produced.
3. Social awareness:
  - a. Promoting greater involvement of citizens in nutrition.
  - b. Developing an integrated prevention agenda in which the potential of food is utilised. Developing new instruments, strategies, (social) business cases and products for this agenda.
4. Policy innovation:
  - a. Coordinating parallel policy intentions into an integrated policy strategy.
  - b. Organising new partnerships with economic and social parties, partly based on an inventory of existing initiatives and current change agents.
  - c. Formulating Groningen's shared food agenda for entrepreneurs, social organisations and governments.
  - d. Developing new investment tools, such as credits.

## Innovative Strength

The development of food and in particular of the agriculture and food industry is driven by innovation. Of course, inventions and new techniques are important, but they only have real effect when they are combined into new methods and processes throughout the chain. New products are only successful if the consumer recognises that these products are an answer to their question. Other processes are only successful when they lead to increased value creation and better returns in the chain. That is why the current challenge is to promote product innovation and to (co-)organise process innovation, so the potential of food is better utilised.

### *Risks Are Necessary for Innovation*

Innovation means taking (major) risks. Within food innovation, the matter is so complex that the yields are often elsewhere instead of with the person bearing the risk. An entrepreneur, a farmer, primarily has an interest in an economic advantage. The advantage for the environment, soil quality and employment often do not lie directly with them. A listed supermarket wants to sell and has no direct interest in a healthy population. To change this, on the one hand it is necessary that companies willing to take the risk are partially covered for this risk. Obviously, without reducing the risk completely. It is precisely the unknown, the risk that a project fails or leads to a different outcome, which leads to the highest (learning) revenues. On the other hand, it is also necessary to prevent free-rider behaviour, as well as preventing, for example, improper use of regional labels as much as possible.

## Examples of How Things Can Be Done Differently

### *Historical: Geert Reijnders in the Noordpolder*

In the period of the cattle plague in the early nineteenth century, Geert Reinders was the first person who dared to test the vaccination of cattle. Many people have benefited from his 'courage' in initiative. If he had not done that, what would have happened with the agricultural industry in Groningen?

### *Experiments: Hop Project by Landgoud*

Landgoud in northern Groningen has invested in an experiment with hop production at the Wadden dike. Currently, this is still an experiment of a single entrepreneur, but if it becomes a success, many entrepreneurs can share in the results and salty hops may become a commonplace. The challenge is that innovations often also benefit competitors and colleagues. The paradox is that, despite this broad revenue, the costs of this innovation often come down to one individual entrepreneur and that they only have limited opportunities to recoup these costs. This way, part of the innovative potential of the food sector remains underused. This can be overcome with a more broadly organised Research and Development Policy and appropriate government tools which stimulate this type of research and development.