

# Workshops as a tool in setting a circular economic model for actors in the selected Baltic areas

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## **Abstract**

Several regional municipalities in the Baltic region have prioritised food and sustainability in their long-term strategies. However, limited local experience and resources are challenging in furthering circular food systems and food waste management. This is also evident in Tartu, Latgale, and Vilnius areas, where cross-sector cooperation has been slow. This study based on four workshops aimed to support the green transition toward circularity in these areas. The workshops generated ideas for a public procurement framework focusing on development of a dynamic procurement system for the Baltic countries. The stakeholder input from the questionnaire confirmed and verified the framework, which will be described in detail in the article on setting a circular economic model. This study shows that workshops are effective in developing a framework through collaboration. It should be noted that this type of collaboration requires skilled facilitation.

The workshops were organised with support of Circular FoodShift' project partners: Association of Municipalities of Tartu County, Green Liberty, Latvian Rural Advisory and Training Centre and Sustainable Gastro. The authors wish to thank all the project partners for connecting us to the local stakeholders, stakeholders for sharing their experiences and Interreg Baltic Sea Region for funding and cooperation during the project.

**Keywords:** workshop, collaboration, stakeholders, end-users, green transition, circular economy

### Tiivistelmä

Useat Baltian alueen kunnat ovat asettaneet ruoan ja kestävyyden etusijalle pitkän aikavälin strategioissaan. Kuitenkin vähäinen kokemus ja resurssien puute on haastavaa kiertotalousjärjestelmien ja ruokahävikin hallinnassa. Tämä on havaittavissa myös Tarton, Latgalen ja Vilnan alueilla, joissa poikkisektorinen yhteistyö on edennyt hitaasti. Tämän tutkimuksen neljä työpajaa tuki kiertotaloutta näillä alueilla. Työpajoissa tuotettiin ideoita viitekehykseen, jonka yksi osa-alue keskittyi julkisiin hankintoihin ja dynaamisen hankintajärjestelmän kehittäminen Baltian maissa. Sidosryhmille suunnatun kyselyn avulla vahvistettiin viitekehyksen soveltuvuus. Viitekehys tullaan selittämään perinpohjaisesti toisessa vertaisarvioidussa artikkelissa hankkeesta. Tämä tutkimus osoittaa, että työpajat ovat vaikuttava menetelmä viitekehyksen kehittämiseen yhteistyöhön perustuen. Tämänkaltaisen yhteistyön onnistunut toteuttaminen edellyttää asiantuntevaa fasilitointia.

## 1 Introduction

The circular economy (CE) represents a framework in which materials are recycled for as long as possible (European Parliament, 2023). The CE supports economic growth, employment, competitiveness, and innovation. The European Union aims to create a circular and climate-neutral economy by 2050.

This project sought to study and identify the opportunities and obstacles related to the green transition and the CE (Kannan et al., 2022, p. 2-10) based on regional food system in Vilnius, Latgale and Tartu. This article builds upon previous studies about the current CE state of the local food system in the Baltic countries. Small-scale farmers, food producers, entrepreneurs, restaurants, and municipal food services were included.

#### 2 Literature review

#### 2.1 Sustainable Procurement in Food Transition in Short Food Supply Chains

Short Food Supply Chains (SFSC) give producers the opportunity to sell their products directly to the end-user, thus receiving higher final selling price (European Parliament, 2016, p. 5). Supply chains, which are up to 300 km long, affect the climate positively. SFSC is an important source of income for producers, allowing them to improve and develop their farms. Buyers also benefit from SFSC, as they receive seasonal and fresh products that are easily traceable. SFSC connects producers and buyers, creating a better relationship of trust between these groups. Additionally, LFSs promote collaboration and create jobs in the food production chain. In local food chains, products are often produced sustainably, e.g., using fewer chemicals. Since local food is seasonal and fresh, it can be stored and packaged in smaller spaces, saving energy. Furthermore, short transportation distances help in minimizing environmental impacts (Wakeland et al., 2012, pp. 224-226).

The restaurant owners' opinion is that adopting CE principles requires systematic changes (Renfors & Wendt, 2024, p. 6). A menu based on LFS raw materials, which are provided by local, small producers, who share the same values and are committed to common environmental goals, is one step in a circular system. Ingredients are collected daily to maintain their freshness. The supply chain includes only few, if any, intermediaries, and the operational model is based on a farm-to-table or farm-to-fork strategy. Restaurant owners mention that implementing a supply of ingredients

according to the model is more challenging. This approach also requires close cooperation with producers, which helps to minimize packaging waste, when the products are transported in reusable containers. If a product is not available without packages, the packaging material must be compostable (Raźniewska, 2022, p. 3748).

#### 2.2 Food Waste

The transition to CE and reducing food waste are strategic objectives in global and EU policy planning (Dekšne et al., 2023, p. 34; Iagăru et al., 2023, p. 3109; Lemaire & Limbourg, 2019, p. 1221-1222). The European Commission (EC) has published a recommendation for reducing consumer food waste in schools (European Commission, 2023). Educating young children and adolescents about food waste is crucial for raising awareness of the importance of preventing and reducing food as waste. Food waste in catering services has become a major sustainability issue. School catering businesses can also play a significant role in addressing this challenge (Dhir et al., 2020, p. 5). Therefore, hospitality businesses, including school canteens, must adopt responsible practices and increase sustainable practices to reduce food waste (Camilleri, 2021, p. 9).

#### 2.3 Collaboration

The exchange of information strengthens the understanding of organic farmers about development in new production techniques, which are significant in sustainable organic farming. Knowledge exchange is particularly beneficial in the early stages of the supply chain, but its importance is often overlooked by members higher up in the supply chain (Bloise, 2019, p. 784). According to the study by Pacciarotti & Torregiani (2018, p. 1731), communication and logistics hinder the procurement of local food in most cases. Effective communication among local actors within the supply chain facilitates collaboration (Gruia & Gaceu, 2023, p. 23-24).

According to Melnikova et al. (2023, p. 131-134) collaboration with local farmers was found to promote nutrition, support healthier eating habits, and increase the understanding of agricultural and food systems in school communities. By ordering food directly from farmers, the food system can be strengthened in a sustainable and cost-effective way. In addition to ordering local products, the collaboration can be deepened by involving school students in the food chain. This can spark interest and understanding about the origin of food, agriculture, and related professions. The collaboration between schools and farmers can be implemented on a short- or long-term basis. Through collaboration and political advocacy, they can advance the CE by collaborating with various stakeholders and influencing policies to create a favourable environment for the broader adoption of CE principles (Becque et al., 2016, p. 14-15).

## 2.4 Training

The European Forum on Food Losses and Waste (FLW), established in 2016, aims to support all actors in preventing food loss, sharing best practices and evaluating progress made over time (European Commission, n.d.). School canteens play an important role in building a more sustainable food system (Perignon et al., 2023, p. 77; Sehnem et al., 2023, p. 20). Perignon et al (2023, p. 90) stated that staff and students can build a more sustainable food system by educating and advocating for sustainable practices, as well as reducing food waste, and collaborating on environmentally friendly policies and programs. Increasing awareness of sustainable diets and food waste of pupils may have enhanced their motivation to understand and participate in responsible practices in school cafeterias (European Parliament, 2017; Perignon et al., 2023, p. 93; Sehnem et al., 2023, p. 20).

# 3 Methodology

The overall process of the development of the CE process in which workshops is a crucial part is visualised in Figure 1. The method used in this article was based on ideation workshops.

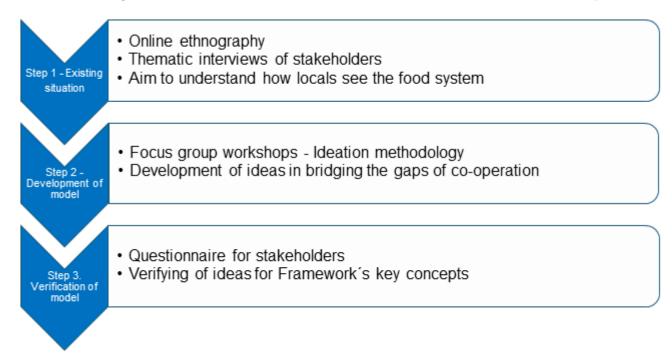


Figure 1. Steps in creating a circular economy (CE) model "Setting the table for a Circular FoodShift" for actors in the selected Baltic areas (Latomäki, 2025).

From spring 2024 to spring 2025, four workshops were organized for the local stakeholders. The first workshop was organised in Lithuania in Ukmergė in spring 2024, second and third workshops were organised online in fall 2024 and early winter 2025. The fourth workshop was organised in May 2025 in Latvia in Daugavpils. All four workshops had different topics (Table 1) and different methodology was used in the development process. Participants came from various project regions. Most of the participants were working in municipalities or regional authorities. Few participants were working in the private sector, and few were international representatives outside the Baltic countries (Estonia, Latvia, and Lithuania).

Table 1. Workshops organised during the project including methods used and number of participants in the workshops.

Workshop	Title	Method / Platform	Number of participants
1	What is needed for Circular FoodShift to happen in Baltic Countries?	Lotus Blossom / face-to-face (F2F) meeting in Ukmergė (Lithuania)	24 + 3 mentors
2	Dynamic food procurement	Online / Teams-meeting with Google slides	21 + 6 mentors
3	Dynamic food procurement in small municipalities	Online / Teams-meeting with Google slides	15 + 5 mentors
4	Building a common dynamic food procurement system for the Baltic Sea Region	Process Mapping / face-to-face (F2F) meeting in Daugavpils (Latvia)	59 + 4 mentors

The key question in the first workshop was to seek answer to following question: "What is needed for Circular FoodShift to Happen in Baltic Countries?". The Lotus Blossom method was used in this workshop. This method can be used to break down complex ideas into manageable parts. Thereafter

related ideas were uncovered to obtain solutions for the original issues (University of Oxford, n.d). The second and third workshops were held online. Online workshops need to be carefully planned beforehand. In this study, workshops followed general guidelines of Gomez de Lima et al. (2023, p. 92). In the second workshop there were three topics with three questions in each topic. In the third workshop there were three themes with two questions in each theme. The content of the second and third workshops was created using Google slides. Both workshops were designed to seek answers on how a common dynamic procurement system could be introduced in the Baltic countries. The fourth workshop was held in face-to-face (F2F) as part of a seminar in Daugavpils, Latvia. The aim of this workshop was to test and collect feedback of the developed process on implementing dynamic procurement system locally. The participants were divided into smaller groups based on language. Two of the groups were using Latvian language and two groups were working in English. Division by language was done because of time constraints and to collect as much information as possible. The method in this workshop was adapted process mapping (University of Oxford, n.d). The local implementation procedure for a dynamic procurement system was presented to the participants in the format Plan-Do-Check-Act. The content of the four workshops has been evaluated and used to develop as well as verify the public procurement section of the framework i.e., mainly for the local adaptation of the dynamic procurement system (DPS).

#### 4 Results

#### 4.1 Results of the first workshop

The main question of the first workshop, which was held in spring 2024, was to brainstorm answers to the question: "What is needed for Circular FoodShift to happen in Baltic countries?" At this workshop Lotus Blossom method was used. The results were delivered on Post-it notes, which were photographed to compile the answers after the session. The participants of the workshop were mainly working in the public sector as procurement specialists or as public food specialists. Therefore, many of the results focused on public food services rather than on privately owned food service operators. As a result of the workshop, small groups provided ideas for further development. Challenges which were identified at the beginning of the workshop were:

- small producers are decreasing, big start-ups are increasing,
- what public sector offers to small farmers,
- catalogs contain small amounts of agricultural products,
- which services procurement units can offer to small farmers/producers to participate in tenders.
- now price is the basis for purchase,
- how to involve small farmers and
- how to increase cooperation between operators.

The first group had an idea of a simulation game for agricultural and procurement students about the public procurement process. Similar games exist in business education where the games simulate business operations (Peterková et al., 2022). The second idea of the first group was an open farm day for public procurers and public food experts to increase the awareness of local production and enhance communication between different participants.

The second group suggested that farmers and producers should feel more secure in the public procurement process. For them, this meant that there should be more help and consultation about the public procurement process to small farmers and producers. The possibility of prepayment or a promise from municipalities that they will buy the produce. An additional idea suggested a website on which all the materials would be introduced with possibility to buy products shown.

The third group suggested that procurement legislation should be changed in favour of local, organic producers from short supply chains. Furthermore, they suggested that there should be support for producers, including help with filling out procurement forms.

The fourth group suggested an e-catalogue for chief procurement officers as a solution. These e-catalogues should contain all relevant information needed in sustainable public procurement.

In the first workshop, it was deemed to be the most important issue for local municipalities is dealing with the dynamic public procurement process. Therefore, it was decided that the rest of the workshops should focus on the dynamic public procurement process.

#### 4.2 Results of the second workshop

The second workshop was held online on 9<sup>th</sup> of October 2024, it focused on the DPS. Firstly, this workshop addressed the question: What kind of long-term policies need to be developed to create meaningful change to sustainable and dynamic procurement systems? Thereafter, the workshop sought answers to the questions: "How to involve farmers in a dynamic procurement system?" and "How to get a dynamic procurement system implemented in different regions?"

When answering the first question, the participants highlighted that changes in sustainable and dynamic procurement systems are needed. The long-term policies should focus on leveraging successful models from countries like Estonia and Finland with advanced systems. This should include clear national policies, standardized documents, and support for local and organic food procurement. Increased utilization and adoption of procurement tools and technologies by municipalities, along with clear guidance and financial support from local governments, are essential. Addressing variability in procurement scope and local management can enhance the effectiveness. This could include dedicated procurement managers and creating local sub-groups. Additionally, comprehensive overviews and tailored guidance based on comparative studies of different countries can help in developing the best practices for dynamic procurement systems.

To enhance procurement skills and knowledge, workshops should be organized. In these workshops language barriers should be addressed through case studies and learning materials translated into local languages. Collaboration with other procurement specialists and ministry representatives in related projects is essential, along with initiatives like sister- school systems on mutual interest e.g. languages, environment and travels (Bivona, 2017). In the longer term the focus could be on other mutual interests like differences in various procurement systems. Multimedia learning tools, e.g., short videos and expert interviews with subtitles, can facilitate understanding despite budget constraints. Sharing best practices through storytelling sessions are crucial in the implementation (Cleverley-Thompson, 2018, p. 132). Inclusive input gathering from both low-level and higher-level officials ensures comprehensive understanding and minimizes misunderstandings. Cooperation to unify policies across countries, considering different legislations and cultures, is necessary. National governments should be open to legislative changes, with regular monitoring and feedback to ensure effective implementation (Moser, 1999, p. 1-4; Zhang et al., 2023, p. 2501). Lithuania and Estonia are examples of countries working on improving legislation and controlling the footprint calculation of organic products.

For the second theme it was noted that, to aid small farmers and producers in engaging with dynamic procurement systems. Their IT skills and implement outreach programs must be improved to inform them about procurement requirements and opportunities. It was stated that communication limitations must be reduced. This can be done by allocating time and budget for procurement specialists to engage with suppliers. Organizing workshops to educate farmers on procurement systems and fostering social motivation through different platforms can encourage

high-quality food provision. Local supply chain solutions, such as a Swedish model on hiring transport contracts, can support local procurement. Strategies should include promoting the utilisation of IT tools, mapping local farmers, and establishing pilot programs. Outreach projects and leveraging expertise from different organisations can enhance communication and collaboration. Encouraging local autonomy while maintaining central oversight ensures procurement needs can thus be met effectively.

For the third theme, participants addressed the collaboration between municipalities and regions, focusing on local procurement and dynamic procurement systems. They highlighted the importance of initiating discussions between municipalities and farmers to establish cooperation and shared goals. EU-level collaboration is emphasized to address common problems, with suggestions for changes to the EU Act of procurement. Connections between Tartu County and ministries were mentioned as a model for the future. The participants also suggested implementation of local procurement projects, which enhance local procurement and foster economic ties. It suggests involving regional authorities in collaboration, especially in areas with regional branding motivation. Direct engagement with education was recommended to raise awareness and support for local farmers. Furthermore, the participants discussed reassessing the role of regional offices, creating networking opportunities, organising interaction events and educational webinars, as well as promoting dynamic procurement systems. Various stakeholders represented ministries, municipalities, food wholesalers, farmers, schools and others from the education sector. In the stakeholder group, EU level project workers, citizens, parents, IT service providers, NGO representatives as well as culinary staff were identified as key players in driving the dynamic procurement systems towards local food initiatives.

#### 4.3 Results of the third workshop

The third workshop was held online  $12^{th}$  of March 2025. This workshop addressed local municipalities' challenges with the dynamic procurement system. Firstly, the activity in the workshop focused on identifying and attracting producers.

It was stated that information availability and support are crucial in attracting producers. Small municipalities should create a database of suppliers within a 10-20 km radius. They should contact these suppliers to inform what the municipalities want to buy in the coming years. Equally important is to identify suppliers that can deliver also in small quantities. Logistic providers having contracts with municipalities can help in supplying schools.

In the identification of farmers municipality personnel should be involved in gathering information from actors in the whole county. Furthermore, the municipality personnel should invite the actors to network actively. Today, databases provided by the ministry of agriculture and at local levels are used to form connections between producers in Estonia. A problematic aspect is that many people do not know these databases. There is much talk but few solutions. In the solutions more detailed information must be included. Furthermore, databases must be updated with information on which products they provide.

In Latgale, one municipality makes a tender every two years for the same products. All schools have one menu, which makes it difficult for small producers to join, because large quantities are needed. Other municipalities procure once a year, which makes it easier for small producers. In this case, smaller quantities are needed, because the menus are based on different dishes for only 6-8 weeks. Expanding menus help in promoting culturing of different raw materials.

In Estonia, personal communication creates attractiveness. The use of thresholds, cutting up procurement, and direct procurement are effective ways to deal with small producers. However, a

system based on dynamic procurement is risky for farmers, because the farmers are not certain that the municipality will buy their products. The security for the farmers is provided through procurement assurance of municipalities. Furthermore, documentation and administrative parts must be simple. The Estonian webpage is complicated. This webpage is more attractive for big procurers. The small farmers are on their own.

The second theme of the third workshop addressed the procuring criteria for public procurement. It was stated that the key themes are green procurement, traceability, and carbon footprint. The carbon footprint measurement must be clear and carefully described. The transportation issues must be acknowledged. In Estonia, criteria like 300 km location requirement for school fruits and vegetables might be included in the program. It is to be noted that challenges will remain, e.g., buying local apples in December. Organic and quality standards, farm visits, and discussions on various ideas are essential. Labels like "produced in Estonia or Baltic region" should be introduced.

In this workshop, the menu development in public kitchens was also addressed. The importance of adapting the menu planning in schools to seasonal availability and local produce was highlighted by the participants.

In the menu development, the activities in the kitchen operations should be synchronised and thereafter the responsible for the menus should communicate the plans to the farmers well in advance to ensure cooperation. This approach requires both synchronization and adaptation to local farmers' offerings. Flexibility in menu choices allowing kitchens to introduce new products to children is crucial. The focus should be on locally available produce throughout the year. Partnerships with startup companies should be created to enable both production and preservation of products, e.g., tomato juice for use in the winter seasons. The priority should be on children's preferences, neither budget nor producers' interests. The children need to understand the concept of local food and its connection to food security. Thus, food education and cooperation with teachers are vital. Signs in buffets indicating local products or personal connections can be effective nudges for children.

It was also stated by the participants that proper training and networking for school chefs are needed to reduce food waste and to improve the quality of the school meals. The planning process of seasonal and dynamic menus should be integrated into the action plan for school meals. Here, industrial symbiosis and community involvement are essential. Cooperation and flexibility are key steps in ensuring the synchronization of kitchens and their procurement processes. The participants suggested that seasonal and dynamic menu planning should be a collaborative effort involving farmers, procurement units, and school kitchens. The public chefs must be involved in this process.

## 4.4 Results of the fourth and final workshop

In the fourth and final workshop, it was suggested that a model for implementing the dynamic procurement system should be created for the project region. Here, the presented model was created using a Plan, Do, Check, Act model (Table 3). The main critique towards the model was that there will not be enough resources available for doing the work locally. The other question dealt with the farmers' possible interest in selling directly to municipalities if they do not see the financial benefit in the model developed. The parents should also be trained to understand that seasonal menus and use of local produce is more sustainable for the local community than using imported foodstuffs. When the participants were asked whether the model can be completed in a five-year timeframe, participants held it possible, but they stated that resources will be needed, i.e., someone who has to have time to elaborate the model.

The participants also pointed out that there already are schools and municipalities which collect

data about the use of local produce. Dissemination of these good practices would be beneficial for all the procurement specialists. Moreover, there should be training for procurement specialists in general. This type of training is not available currently. For public kitchens, training was also seen important as the kitchen staff is used to working the old way. If the public kitchens have been procured as a service, the participants were the opinion that there are multiple challenges in the presented model. However, the issues in the service procurement process can be solved by adding resources into the system.

Table 3. Suggested model for implementing Dynamic Procurement System (DPS)

Phase	Step	Public kitchens	Local level procurement experts	National procurement offices
Plan	1	Identify ingredients in the menu that can be changed to local.	Identify local producers and ingredients available in the region	Identify and develop criteria which can be used to benefit the sustainable food supply chain
	2	Cooperate with local farmers and the local procurement office to adjust menu development process to support local production	Contact producers and collect information about interested producers into a database	Create an electronic manual for local procurement experts based on the criteria developed
Do	3	Develop items for the menus, which use local ingredients	Develop the local DPS	Identify local procurement offices for piloting DPS
	4	Place new products on the menu and test with customers; collect data of food acceptance	Test the new DPS with one product category and collect experiences	Collect and analyse data from the pilots
Check	5	Educate the kitchen staff the correct use of new ingredients and menu items	Analyse the results of the testing phase, make amendments.	Create Key Performance Indicators (KPIs) for local procurement offices
	6	Cooperate with local producers to create new products which fit into school kitchen	Collect data and information for KPIs	Collect and analyse data from the local procurement offices and make it available for the end-users
Act	7	Develop the menu items further based on data collected from the customers	Analyse KPIs and develop DPS further to accommodate local needs. Implement DPS to other product categories.	Share good practices with other municipalities and support training of procurement experts
	8	Add redeveloped and new products on the menu, educate staff, customer tests, collect food acceptance data	Share the information with local stakeholders and raise public interest to obtain new producers into the system	Develop policy changes at both EU- and national levels to accommodate local needs.

## 5 Conclusion and discussion

Although the workshops and the framework represent different approaches, they share the common goal on promoting the green transition toward a more sustainable food system in the Baltic countries. The participants in the workshops discussed above mentioned tasks and deepened the understanding of the development and implementation of the DPS in the region. The four workshops in the Circular FoodShift project formed a complementary entirety deepening the understanding of the implementation and developing a DPS for the Baltic region. The first workshop was crucial for the entire Circular FoodShift project, as it helped identify the main challenge of the research focus, which was about the public procurement process. This implementation guided the execution of the

upcoming workshops.

The second workshop deepened the understanding of the requirements for implementing a DPS in the Baltic region. Discussions emphasized long-term policy, farmer engagement, and regional cooperation. The third workshop highlighted the challenges faced by local municipalities, such as reaching producers, defining procurement criteria, and developing menus. These two workshops showed that successful implementation of the system requires multi-level cooperation, clear communication, training, political commitment, and sufficient resources.

In the fourth and final workshop, a regional model for implementing the DPS was developed based on the PDCA approach (Patel & Deshpande, 2017, p. 197). A developed model was seen to be feasible within a five-year timeframe, but its success requires adequate resources and dedicated coordination. In summary, the workshops showed that the region already possesses expertise and good practices to build on. Developing the DPS model is a realistic but demanding process that requires resources, training, cooperation, and political will. Also, Ferreira & Silva (2022, p. 47-50) study highlighted that the process requires extensive preparatory work.

Workshops are effective in development work, as they enable active interaction and ideation among participants. However, it is important that the mentors can simplify complex concepts into clear and accessible terms to ensure comprehension by all participants. The facilitator's approach can significantly influence the outcome of a workshop, as also noted in the study by Papamichail et al. (2007, p. 625). Since workshop participants come from diverse roles and organizations, it is essential that the topics and purpose of the workshop are clearly communicated to all participants.

Good practices of food system actors can also be expanded to other areas. Solutions highlighted in the study can be utilized by other actors as well. This study has identified development ideas that can be applied in different operational environments. However, expansion requires consideration of the specific characteristics of the operational environment to ensure that the practices are truly effective and appropriate. By adapting these practices, the implementation of sustainability and the circular economy across the food system can be reinforced, while also supporting collaboration among various actors. Objectives such as effective communication, enhanced cooperation, and the reduction of food waste are applicable and promotable across diverse operational contexts. This point was also highlighted by Becque et al. (2016, pp. 14-15) and Motiva, (2024, p. 12).

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