

**The UN Secretary-General's Advisory Board on Zero Waste**

## Textiles-as-a-service: Leasing Coveralls for Kids in Norwegian Kindergartens



### Zero waste good practice

Collaboration between Liis.com, kindergartens (private and public), municipalities and textiles-as-a-service provider; Elis Norway, funded by the Norwegian Retailers' Environment Fund

Oslo, Norway

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Source: Liis.com

# About

## Synopsis

Lease coveralls for the size and time needed, as opposed to buying new ones every new size/season for growing kids.

## Connection Zero Waste

270,000 Norwegian kids are in kindergarten. They attend outdoor activities every day and need coveralls suited for all seasons. The standard practice is to purchase new or used coveralls every time a child grows and needs a bigger size. The coveralls are owned by the company “Liis.com” and leased to consumers. Liis.com has a strong incentive to design and manufacture lasting coveralls that last as long as possible, and can easily be repaired in the areas where children commonly get holes (knees, elbows etc.).

It is zero waste due to increasing the lifespan of the coveralls, leasing for the limited time needed for use as opposed to purchasing a new one, and the company has an incentive to create coveralls that can be maintained and repaired, rather than merely replaced. Introducing textiles-as-a-service for kids in the kindergarten when they are 1 year old and onwards, hopefully leads to a more sustainable mindset from the start. The goal is that the next generation will develop a user-habit rather than consumer-habit.

Regarding the textiles used, since these are owned by the company, it also decides how to reuse and recycle the materials after the end of life as coveralls.

## Contribution to Sustainable Development Goals

This initiative has been specifically designed to address “ensure sustainable consumption and production patterns” from the overconsumption of coveralls as a result of poor-quality products, and few incentives to ensure the longevity of products. Particularly target 12.5 and 12.8 teaching children from a young age that they can lease, rather than purchasing new clothes. This could have ripple effects on their parents’ consumption habits in general.

Several stakeholders are part of the value chain, from designer, producer, distribution, municipalities, ensuring partnerships for sustainable developments.

Implementation  
period

**2023 - now**

Country

**Norway**

Location

**Oslo**

**Stakeholders and Partners:** Collaboration between Liis.com, kindergartens (private and public), municipalities and textiles-as-a-service provider; Elis Norway, funded by the Norwegian Retailers’ Environment Fund.

# Background, Challenges and Objectives

93,8 % of Norwegian children attend a kindergarten (SSB, 2024). In kindergartens in Norway, it is common for the children to spend a few hours of the day outside, every day, no matter the weather. It's estimated that with Norway's 270.000 kids in kindergarten, parents buy approximately 600.000 - 1.000.000 coveralls during a year. This includes new, second-hand and inherited coveralls. The introduction of a leasing-model for coveralls, has the potential to reduce the yearly volume by approximately 75% if fully implemented.

Coveralls come in several price ranges e.g. different qualities, and the best (and most expensive) coveralls last for up to three years before they become waste. Before that, a child typically outgrows a coverall from one winter to the next between the ages of 1-6. Offering a service of leasing coveralls provides the producer with the incentive to make them last as long as possible, and to make them both repairable and easier to repair. Several municipalities wish to make 'coveralls-as-a-service' available to all children in their kindergartens, to ensure everybody has equal access to participate in outdoor activities, particularly if parents are not used to Norway's shifting weather conditions, or they are in a financially challenging situation. As a result, poorer quality coveralls are phased out, extending the lifespan of each coverall in use.



In Norway, 93.8% of children attend kindergarten, where outdoor activities are a daily routine regardless of weather.

Source: Liis.com

# Actions and Implementation

In our actions and implementation chapter, we methodically outline the steps taken to set up the textiles-as-a-service concept:

Establish cooperation with 5 to 10 municipalities/private actors who will use the coveralls (01.07.2024 - 01.12.2024): The initial step involves forming partnerships with municipalities and private entities interested in participating in the coverall leasing program. This collaboration is crucial for ensuring a broad and effective implementation of the service.

Delivery of coveralls to the first participating kindergartens (01.08.2024 - 01.11.2024): Once partnerships are established, the next phase is to deliver coveralls to the kindergartens that are part of the initial rollout. This step ensures that the children can start using the coveralls as soon as possible.

Development of technology to monitor each coverall subscription in use (01.08.2024 - 01.10.2024): Concurrently with the delivery, technology will be developed to track the usage and condition of each coverall. This monitoring system is essential for managing subscriptions and ensuring the coveralls are maintained properly.

Delivery of coveralls to all actors involved in the first phase of the project (01.04.2025 - 01.10.2025): After the initial delivery, the program will expand to include all participating municipalities and private actors. This broader distribution aims to cover a larger number of kindergartens and children.

Analysis and interviews with participating municipalities/actors (01.09.2025 - 01.11.2025): To assess the effectiveness of the program, detailed analysis and interviews will be conducted with the involved parties. This feedback is vital for understanding the impact and identifying areas for improvement.

Evaluation of the first phase of the project (01.10.2025 - 31.12.2025): The final step involves a comprehensive evaluation of the first phase. This includes reviewing the data collected, analyzing the feedback, and determining the overall success of the program. The insights gained will guide future phases and enhancements.



# Outcomes and Impact

A typical outdoor coverall weighs between 0.8 and 1.5 kg. Since the coveralls are made of polyester and nylon, Liis.com has an average weight of 1.2 kg per coverall. With the current consumption pattern, we estimate that approximately 720 – 1,200 tons of plastic are used annually in the production of new coveralls. In a leasing model with a corresponding reduction in the need for new production, plastic consumption would decrease to 180 – 300 tons per year. Estimated annual plastic savings: 540 – 900 tons. This corresponds to 27 – 45 million plastic bottles per year. When municipalities make coverall subscription available for all children attending in their kindergartens, this contributes to a more equal access to outdoors recreation regardless of a family's financial situation. Coveralls for kids in kindergartens is a product more or less every citizen in a Norwegian society can relate to in some way. Showcasing for the citizens that it is possible to make small adjustments, shifting from ownership to 'usership' for this specific product, it shows that a green transition actually is possible, and with a positive outcome for the families and kids.

540-900 tonnes

estimated annual plastics savings.

1.2kg

a typical overall weighs on average.

Equal Access

Coverall subscriptions ensure equal access to outdoor recreation for all children, regardless of their family's financial situation.gt

# Replicability and Scaleability

Textiles as a service is both scalable and replicable. Within the B2B-segment, textiles-as-a-service is a well-known and proven business model.

This initiative with coveralls can provide useful insight into a Nordic context (Norwegians consume 25 per cent more than the average EU citizen (Science Norway, 2022). 1,3 million children are attending kindergarten in Scandinavia, and the initiative is therefore directly scalable to neighbouring countries. There are also other Western colder countries that would like to be more outside throughout the year, so the initiative and its lessons could be replicable elsewhere (e.g. Canada).

This specific case shows that the design phase is crucial to design and manufacture products to fit into a circular value chain, with focus on lasting products, easy maintenance and repair, and that maintaining ownership of the products is crucial to decide when and what's done with the materials after the end of its lifecycle as a coverall.

# Inclusion and Innovation

This initiative is based on providing textiles-as-a-service locally where people drop off and pick up their children every day. Municipalities are the most important local partner to realise this project in practice. The innovation is combining the local availability of textiles-as-a-service involving a professional logistical backend supplier.

The subscriptions for coveralls are being funded by a third party, so it's free of charge for the families. This leads to a high attendance from the families taking part of this service. Norwegian research (Barratt-Due Solum et. al, 2024) recently concluded that if families are being presented with the possibility to rent or lease equipment for outdoor activities, this leads to both social and health benefits for the families.

They've discovered that families that have tried this form of 'product usership vs ownership', are much more likely to try other 'products-as-a-service' -models in the future. In relation to the coveralls, this is an important discovery since when the users already subscribe to coveralls, they are likely to lease other products on Liis.com or similar providers in the future.

# Accountability and Sustainability

The risks are considered low concerning the mentioned factors. The potentially greatest risk in the model is that some individuals may steal the coveralls, causing them to exit the circular model we have developed. However, historically, this has not been a problem, and we assess this risk as acceptable.

The first versions of the coveralls we developed did not have sufficient quality, which posed an environmental risk as they could not be used for long enough. The new coveralls in use now have been well tested, are durable, and are easy to repair, significantly reducing the risk of becoming waste prematurely.

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## Financial Data

The Norwegian Retailers' Environment Fund has contributed roughly 107,000 USD to the project. Unfortunately, we cannot share further details from the budget as we have a confidentiality clause for all applications and projects funded by the Norwegian Retailers' Environment Fund. This is roughly 50 % of the costs in this defined project.

Further information and breakdown of costs can be provided from the nominee upon request.



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