

National Research Report

THE 'AS IS' SITUATION IN THE NETHERLANDS

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Stimulating gender-based innovative training methods to promote CLOTHING REcycling through Augmented Reality

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1. Introduction

1.1 Scope of the project

Research has depicted the linkage between environment-oriented activities and gender disparities. In fact, gender equality matters to environmental sustainability with women performing two thirds of global working hours and being more dependent on natural resources in comparison with men (Irish Aid, 2013). However, the agenda promoting the importance of gender equality for the ecosystem still remains unfinished despite all the initiatives taken towards the establishment of eco-friendly activities (UN women, 2014). Therefore, while there is still a high level of gender inequality, women act as half of the world's resource managers, making their role crucial towards safeguarding the environment (Global Environment Facility, 2018). With clothing upcycling being the new trend for green fashion, there has been no concrete initiative promoting women's active participation in upcycling practices, despite EU's endeavor towards environmental sustainability. Therefore, the need for VET trainers and textile professionals (manufacturers, designers, colorists, etc.) to engage in an open dialogue in order to support gender-based training towards buckling down environmental challenges through clothing upcycling activities constitutes a brand-new initiative in alignment with EU goals for resource efficiency (Europe 2020 Strategy).

1.2 Purpose of the document

This document aims to provide useful insights of the current needs with regards to the level of awareness among textile professionals about men and women's role and participation in environmental activities towards sustainable development of the industry.

The insights will derive from the thorough research conducted at national level, while the findings will be used in a comparison analysis scrutinizing the best practices applied in other European countries in order to identify the gap between the 'as-is' situation and the 'to-be' situation.

The research focuses on the training needs of textile experts for environmental consciousness in order to identify the main pillars of the training materials to be developed for the purpose of the 'ReClothing Training Guide'.

1.3 Project target groups

The target groups addressed and affected by this research are:

- Directly:
 - Textile professionals (manufacturers, designers, colorists, stylists, converters, etc.) interested in or already taking initiatives towards environmental sustainability
 - VET & Textile experts willing to actively participate in an open dialogue about green methods that establish the importance of gender equality for the ecosystem
 - HEI with Textile departments



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- Indirectly:
 - VET training organizations
 - Public bodies
 - NGOs or other organizations/authorities taking initiatives towards renewable resources and energy efficiency
 - AR developers or developers/organizations willing to embrace innovative digital solutions for sustainable training purposes and enhanced learning experiences
 - Policy makers

2. Methodology

In order to efficiently identify the current practices, each partner organization will opt for different case studies applied in the country as indicative examples of the state of the art.

The desk research focuses on the following pillars:

1. Eco-sustainable practices initiated or implemented by women
2. Green practices for safeguarding the environment
3. Initiatives for clothing upcycling awareness
4. Practices related to gender-based training
5. Existing dialogues for the role of gender in environmental sustainability
6. Technologies used as innovative sustainable practices

Therefore, the project consortium will cast about for any practices – or the lack of them – among the partner countries with a view to formulate a training solution tailored to the needs of the target group.

The findings of the current research document will be validated directly by the project target group so as to ensure their active involvement in the project activities throughout its implementation. To that end, partners (except ATERMON as an IT company and UNICERT as an accreditation body) will contact at least 25 participants demonstrating the results of this report and involving them in a needs verification survey.



3. National Practices

3.1 Eco-sustainable practices initiated or implemented by women

Name of the organization:	Loop.a life
Name of the action:	Circular and sustainable clothing & lifestyle
Year of implementation:	2013 and onwards
Objectives of the action:	Change the clothing and textile industry in a circular and truly sustainable way; minimize textile waste; contribute to a clean and green planet; produce locally.
Description of methodology:	The company recycles old/used clothes processes local residual flows with minimal CO2 emissions, since it also empowers the local manufacturing industry. It produces circular yarns and textile end products (clothing, accessories, and interior textiles).
Impact:	In direct contact with the consumer, Loop.a life increases its outreach, engages more stakeholders, and creates more impact. Furthermore, its founder, Ellen Mensink, has run various innovation labs and workshops focused on textile recycling, and aspires on further inspiring actions in the future.
Website:	https://loopalife.com
Skills required to implement such an action	<ul style="list-style-type: none"> ▪ Teamwork ▪ Self-motivation ▪ Negotiation ▪ Communication ▪ Creativity
Potential challenges	<ul style="list-style-type: none"> ▪ Lack of general awareness ▪ Difficulty in reaching out interested parties ▪ Lack of support by bigger stakeholders ▪ Lack of infrastructure

Name of the organization:	Fashion for Good
Name of the action:	Dutch platform for sustainable innovation within the fashion industry
Year of implementation:	On-going
Objectives of the action:	Connect brands, retailers, innovators, financiers and individuals in making the fashion industry more

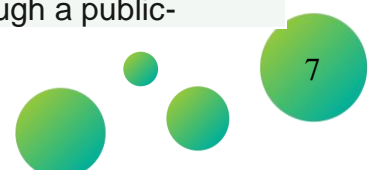


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	sustainable; share knowledge, ideas, and take action together.
Description of methodology:	The company connects innovations that exist in the fashion world to big brands and manufacturers, thus facilitating a sustainability transition. The platform’s museum raises consumer awareness of sustainable fashion, while the rest of its functions promotes collaborative efforts in scaling up and deploying sustainable innovative solutions.
Impact:	The platform works as a link between new innovations and technologies -albeit new materials, new business models, or anything else related to sustainable practices in the fashion industry. A specially developed programs connects innovative companies and start-ups with established fashion houses, with the scope to transmit knowledge and expertise and facilitate new investments.
Website:	https://fashionforgood.com
Skills required to implement such an action	<ul style="list-style-type: none"> ▪ Teamwork ▪ Self-motivation ▪ Negotiation ▪ Communication ▪ Creativity
Potential challenges	<ul style="list-style-type: none"> ▪ Lack of general awareness ▪ Difficulty in reaching out interested parties ▪ Lack of support by bigger stakeholders ▪ Lack of infrastructure

3.2 Green practices for safeguarding the environment

Name of the organization:	Amsterdam Smart City
Name of the action:	Innovation platform
Year of implementation:	On-going
Objectives of the action:	Ensure a smart, green, and healthy urban future via smart solutions and collaboration; provide an independent space where change makers can meet, interact, and start working together.
Description of methodology:	Amsterdam Smart City is an open and safe space for cooperation and innovation. As an innovation platform, it is the place where companies, knowledge institutions, governments and active residents can collaborate into creating a better future for cities. Through a public-





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	private partnership, complex issues can be dealt with, and innovative solutions can be put forth.
Impact:	Amsterdam Smart City raises awareness and ensures that innovations contribute to cleaner, greener and happier cities. With data and tech, the platform improves the quality of life and helps transmit knowledge to bring about change.
Website:	https://amsterdamsmartcity.com
Skills required to implement such an action	<ul style="list-style-type: none"> ▪ Teamwork ▪ Leadership ▪ Communication ▪ Creativity
Potential challenges	<ul style="list-style-type: none"> ▪ Lack of general awareness ▪ Difficulty in reaching out interested parties ▪ Lack of support by bigger stakeholders ▪ Lack of infrastructure

Name of the organization:	Government of the Netherlands
Name of the action:	Circular material use
Year of implementation:	On-going
Objectives of the action:	Ensure production processes use raw materials more efficiently; ensure used raw materials are renewable and widely available (e.g. biomass); make the Netherlands less dependent on fossil fuel resources; develop new production methods and design new products to ensure circular use.
Description of methodology:	The ‘Circular Dutch economy by 2050’ strategy promotes the collaboration between public authorities, knowledge institutions and environmental organisations, industry, trade unions, financial institutions, and other civil-society organisations, with the scope to find smarter and more efficient ways of using raw materials.
Impact:	By setting national goals, the Netherlands commits to meeting the 2030 Sustainable Development Goals and the Paris Agreement on climate. It has already ranked first worldwide for material reuse rate (EC, 2020).
Website:	https://www.government.nl/topics/circular-economy/circular-dutch-economy-by-2050
Skills required to implement such an action	<ul style="list-style-type: none"> ▪ Leadership ▪ Communication



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	<ul style="list-style-type: none"> ▪ Extroversion ▪ Collaboration/Networking
Potential challenges	<ul style="list-style-type: none"> ▪ Lack of general awareness ▪ Lack of infrastructure

3.3 Initiatives for clothing upcycling awareness

Name of the organization:	Milieu Centraal
Name of the action:	Sustainable clothing
Year of implementation:	1998-(On-going)
Objectives of the action:	Provide sustainable tips and advice to households for buying, using, and disposing of clothes; raise awareness; protect the environment/reduce the environmental impact of the clothing industry.
Description of methodology:	Milieu Centraal offers a practical guide with clever tips and easy-to-follow advice for a greener approach to every-day life. In its sustainable clothing section, it focuses on recycling and upcycling possibilities, offering reliable and practical solutions to any concerned citizen. The organization also podcasts ideas and knowledge, thus augmenting its outreach.
Impact:	Milieu Centraal gathers and shares information, tips and advice proposed by experts and reviewed by the research community. A scientific advisory board ensures the project's high quality. As a result, Milieu Centraal raises awareness of green practices and debunks myths on good or bad practices.
Website:	https://www.milieucentraal.nl/bewust-winkelen/kleding/
Skills required to implement such an action	<ul style="list-style-type: none"> ▪ Teamwork ▪ Communication ▪ Creativity ▪ Cultural competence
Potential challenges	<ul style="list-style-type: none"> ▪ Lack of general awareness ▪ Difficulty in reaching wider audiences



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Name of the organization:	Sympany, Spaarnerlanden, DenHaag, Reshare
Name of the action:	Clothing containers in Amsterdam, Haarlem, the Hague, and other cities respectively.
Year of implementation:	On-going
Objectives of the action:	Offer a practical solution in as many localities as possible; raise awareness; engage as many citizens as possible.
Description of methodology:	With presence all over the Netherlands, clothing containers aim at sensitizing people by offering them a practical solution to embrace clothing recycling and upcycling. Depending on their condition, gathered clothes and textiles are reused as seen fit (offered to charities, upcycled, recycled, etc.).
Impact:	This action has great visibility and it gently forces people to embrace it. AS a result, it helps reduce clothing industry waste and its impact on the environment, as well as increase civil engagement.
Website:	https://www.sympany.nl https://afvalwijzer.spaarnerlanden.nl https://bit.ly/30Zd7X3 https://www.reshare.nl/kledingdoneren
Skills required to implement such an action	<ul style="list-style-type: none"> ▪ Teamwork ▪ Communication ▪ Creativity
Potential challenges	<ul style="list-style-type: none"> ▪ Lack of general awareness ▪ Difficulty in reaching wider audiences ▪ Lack of infrastructure

3.4 Practices related to gender-based training

Name of the organization:	Van Hulley
Name of the action/training:	The Vanhulley trajectory (Het Vanhulley-traject)
Year of implementation:	2012-(On-going)
Objectives of the action/training:	Empower women to become financially and socially independent, especially women with a migration background; make a significant social and environmental impact.



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Description of methodology:	Van Hulley is a social enterprise that upcycles discarded materials (particularly textiles) into useful, original products. Its main mission, however, is to offer (vulnerable/unemployed/immigrant etc.) women a chance to be introduced into the labour market, by gaining skills and competences. The company runs a one-year program, during which women benefit from various activities: Job coaching, talent development program, progress monitoring, training and assistance (e.g. with the Dutch language), networking, etc. Within this framework, women learn, study, and again work experience in Van Hulley’s sewing workshop; they also benefit from a personal contact person and a counsellor.
Impact:	Van Hulley’s products are in line with the market, thereby reducing surplus of textile produced. More importantly, Van Hulley has a great social impact, as it strengthens the social position of women and increases their chances in the labour market.
Website:	https://www.vanhulley.com
Skills required to implement such an action/training	<ul style="list-style-type: none"> ▪ Teamwork ▪ Communication ▪ Leadership ▪ Cultural competences
Potential challenges	<ul style="list-style-type: none"> ▪ Lack of general awareness ▪ Difficulty in reaching out to interested parties ▪ Lack of support by bigger stakeholders

Name of the organization:	Code to Change
Name of the action/training:	Program Your Future
Year of implementation:	On-going
Objectives of the action/training:	Achieve gender equality (UN Sustainable Development Goal 5) and economic empowerment of women via digital inclusion; minimize the skill-gap in TECH, thereby minimizing the gender divide.
Description of methodology:	The organisation has designed and launched a training programme that imparts essential digital skills, thus empowering participants to pursue a career in the digital market. Participants get in touch with experienced technology professionals who provide them with mentorship and guidance. Through training, participants develop new capabilities; through personalised support,



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	<p>they develop skills that they were missing, as well as self-confidence. Apart from training, participants are also introduced to real-world opportunities of learning on the job, under the supervision of their mentors. Additional actions include workshops and events, long-lasting partnerships with people and organisations in multiple fields, etc.</p>
Impact:	<p>Participants develop skills and contacts that enable them to choose from different career tracks in the technology sector. The program facilitates diversity and creates equality in the workplace.</p> <p>The program also identifies and improves women leaders in the technology sector that are enthusiastic about teaching other women the necessary digital skills to be successful in the workplace and who wish to act as a catalyst for change.</p>
Website:	<p>http://codetochange.org</p>
Skills required to implement such an action/training	<ul style="list-style-type: none">▪ Teamwork and collaboration▪ Communication▪ Leadership▪ Cultural competences
Potential challenges	<ul style="list-style-type: none">▪ Lack of general awareness▪ Difficulty in reaching out to interested parties▪ Lack of support by bigger stakeholders▪ Difficulty in generating original and attractive actions



3.5 Existing dialogues for the role of gender in environmental sustainability

Name of the association/synergy:	Dutch Ministry of Economic Affairs and Climate + Trade association NLdigital
Year of implementation:	Taskforce for Diversity and Inclusion in the Digital Sector
Objectives of the action:	Increase diversity and inclusion in the digital sector; create equal opportunities for everyone; solve the talent shortage.
Description of methodology:	The Taskforce is a collaboration between the Dutch government, the business community, knowledge institutions and other stakeholders. It sets objectives and formulates concrete actions that lead to a more diverse and inclusive digital sector. The taskforce researches and monitors diversity and inclusion (D&I) in the digital sector. It has also created a D&I platform to share content, best practices, knowledge, and tips on D&I. Furthermore, it maintains a community of companies that are actively involved in D&I activities and projects.
Impact:	The Taskforce supports the Dutch government's ambition to increase the percentage of female IT professionals from 18% to 50% by 2030. It serves as a central, national initiative to combine and scale up efforts to that effect.
Website:	https://www.taskforcediversiteit.nl
Skills required to implement such an action	<ul style="list-style-type: none"> ▪ Teamwork and collaboration ▪ Communication ▪ Leadership ▪ Cultural competences
Potential challenges	<ul style="list-style-type: none"> ▪ Listed companies not meeting a quota ▪ Failing to close the gender pay gap

Name of the association/synergy:	Equals
Year of implementation:	On-going
Objectives of the action:	Equality and diversity in the workforce; support women in the growth and development of their careers.



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Description of methodology:	Equals is an Amsterdam-based organisation that celebrates equality and diversity in the workforce. It is committed to furthering career and entrepreneurship opportunities for women in tech and across a wide range of other industries. Its network organises initiatives, events and trainings to empower women and help them achieve their goals.
Impact:	The organisation strengthens the ecosystem of women in tech and entrepreneurship. It also creates more visibility for inspiring women. Furthermore, its education, as well as its career and funding opportunities for women in tech have already contributed to dismantling the status quo
Website:	https://www.equals.amsterdam
Skills required to implement such an action	<ul style="list-style-type: none"> ▪ Teamwork and collaboration ▪ Communication ▪ Leadership ▪ Cultural competences
Potential challenges	<ul style="list-style-type: none"> ▪ Lack of general awareness ▪ Difficulty in reaching out to interested parties ▪ Difficulty in generating new ideas

3.6 Technologies used as innovative sustainable practices

Name of the organization:	DNV-led consortium of leading players in the Dutch industry and academia
Name of the tool/technology:	PowerMatching City: Lighthouse project
Year of implementation:	2009-2015
Objectives of the tool:	Develop flexible smart grids to maintain affordable, reliable and sustainable electricity supply in the near future.
Description of methodology:	The consortium created a prototype that replicates a city (small-scale) to explore the technical feasibility of smart grids, and the smart-grid-based energy services that could add value for consumers, the energy industry, and communities. To that end, it created Europe's first smart grid trial, which comprised a living, breathing smart community of up to 40 households at Hoogkerk, NL.



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Impact:	The project produced valuable insight into consumer behaviour and use smart appliances, as well as into sustainability trends that can engage more consumers. It also highlighted the importance of so-called aggregators in unlocking the flexibility of smart grids.
Website:	https://www.dnv.com/cases/powermatching-city-lighthouse-project-79544
Skills required to use the tool:	<ul style="list-style-type: none"> ▪ Collaboration ▪ Communication ▪ Technical expertise
Potential challenges	<ul style="list-style-type: none"> ▪ Barriers between collective and individual goals ▪ Lack of general awareness ▪ Difficulty in ensuring expertise from a wide range of fields

Name of the organization:	Klimaatplein
Name of the tool/technology:	Klimaatplein: a platform for doing business in climate neutral way.
Year of implementation:	2013-(On-going)
Objectives of the tool:	Inform, inspire, and activate companies and institutions to reduce their CO2 footprint; share knowledge and provide interested parties with various online tools in their search for practical solutions.
Description of methodology:	The platform gathers data, knowledge and expertise regarding sustainable practices, and offers advice and tips accordingly. It also provides users with various online tools, such as a CO2 calculator Web App to help businesses reduce their CO2 emissions.
Impact:	Klimaatplein's actions and tools have already gained significant visibility and various awards. Considered as one of the most sustainable initiatives in the Netherlands, it raises awareness of climate-conscious entrepreneurship and actively contributes to a sustainable planet.
Website:	https://www.klimaatplein.com
Skills required to use the tool:	<ul style="list-style-type: none"> ▪ Adaptability ▪ Openness ▪ Creativity ▪ Leadership
Potential challenges	<ul style="list-style-type: none"> ▪ Lack of general awareness ▪ Difficulty in reaching out to interested parties



4. Conclusions

The Netherlands is home to a network of organisations and communities committed to promoting equality and diversity in the workplace. Multiple actions, events and initiatives are designed and launched with the scope to support female growth, inclusion, and entrepreneurship, with the Dutch Government leading the way towards improving the current situation (IAM, 2022). A healthy ecosystem of organisations and initiatives, as well as a multitude of events, training programmes, and workshops increase career opportunities for women and focus on augmenting female presence in the workforce. Moreover, multiple funding opportunities (especially within the tech industry) ensure that female entrepreneurs' needs are met (ibid.).

With policies targeting women's rights and gender equality, the Netherlands contributes to achieving the Sustainable Development Goals (and, in particular, SDG 5: focusing on gender equality and empowerment of women and girls), and already shows significant improvement results (MFA, 2021). Gender-based training is well implemented within the Dutch society, and many successful practices already show remarkable results (IAM, 2022). Based on all these facts, the country demonstrates a high level of awareness of the gender gap and is already working on bridging it.

Regarding ecological awareness, the country has already implemented actions and training programs to promote a sustainable future with greener practices (NFIA, 2022). The Dutch government offers incentives to stimulate innovation and circular economy, and multiple collaborative efforts help elevate the country's rankings in Europe (EC, 2020, Netherlands Enterprise Agency RVO, 2022). Furthermore, there is a growing number of Dutch organisations committed to such actions like upcycling (see, for example, Nicholls-Lee, 2020). In addition, there is ongoing research on improving existing frameworks (see, for example, Hekkert et al., 2021), thus ensuring that the country maximises its benefits from transitioning to green economy.



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