

# AR4ReClothing Training Guide development

Module 5: Gender-equal digital  
competences for clothing upcycling

---

Deliverable: PR1/T1.4



**2023/02/10**

---

Organization name DIGICULT

Authored by: Your name

Project Number: 2021-1-EL01-KA220-VET-000034695



Co-funded by the  
Erasmus+ Programme  
of the European Union

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



## REVISION HISTORY

Version	Date	Author	Description	Action	Pages
1.0	30/08/2022	ATERMON	Creation	C	9
1.1	10/02/2023	DigiCULT	Insert	I	29

(\*) Action: C = Creation, I = Insert, U = Update, R = Replace, D = Delete

## REFERENCED DOCUMENTS

ID	Reference	Title
1	2021-1-EL01-KA220-VET-000034695	AR4REClothing Proposal
2	PR1/T1.3	Set Up AR4ReClothing Training Guide structure & Training methodology

## APPLICABLE DOCUMENTS

ID	Reference	Title
1		
2		





## **Contents**

1. Introduction.....	4
1.1 Learning Outcomes.....	4
1.2 Key words .....	4
1.3 Estimated seat time to complete the Module .....	4
2. Gender-equal digital competences for clothing upcycling .....	5
2.1 Topic 1: Theoretical Background.....	5
2.2 Topic 2: Digital competences for clothing upcycling .....	7
2.3 Topic 3: Case Studies/ Success Stories.....	20
<b>GENDER NET Plus.....</b>	<b>22</b>
3. Additional materials and resources.....	24
Four Ways Technology Is Improving the Fashion Industry.....	24
Digital technologies for timeless sustainable fashion.....	24
The Future of Fashion: From design to merchandising, how tech is reshaping the industry.....	24
Towards Circular Fashion: Design for Community-Based Clothing Reuse and Upcycling Services under a Social Innovation Perspective.....	25
4. Wrap-Up.....	25
5. References.....	26
6. Assessment.....	27
6.1. Introduction .....	27
6.2. Knowledge assessment .....	27
6.3. Skills assessment.....	29



# 1. Introduction

This module is about raising awareness of gender gaps in digital competences and promoting the equal use of technological advancements for the sake of the clothing upcycling industry. It is also about examining case studies and success stories that combine sustainable eco practices with gender equality.

## 1.1 Learning Outcomes

<b>Module X: Title</b>	The AR4RECLOTHING Expert is able to ...	
<i>KNOWLEDGE</i>	<i>SKILLS</i>	<i>COMPETENCES</i>
a. Identify gender barriers	a. Critical thinking	a. Problem solving
b. Develop action plan	b. Pragmatic thinking	b. Productive choices
c. Basic digital tools for clothing upcycling	c. Identify tools to meet own needs	c. Implement action plan

## 1.2 Key words

Gender-equal, digital competences, clothing, upcycling.

## 1.3 Estimated seat time to complete the Module

It is expected that this module [studying and implementation of practices] will take you around 20 hours to complete.



## 2. Gender-equal digital competences for clothing upcycling

### 2.1 Topic 1: Theoretical Background

Gender-equal digital competences refer to the ability of all citizens to **have access** to and **effectively use** digital technologies and skills regardless of their gender. This includes access to the necessary hardware, software, and infrastructure, as well as the knowledge and skills to use these technologies effectively.

Achieving gender equality in digital competences is important for several reasons. First, digital technologies are increasingly playing a role in all aspects of life, and access to these technologies is becoming increasingly important for social and economic empowerment. Second, having equal access to and skills in digital technologies can help to reduce gender disparities in the labour market, as well as in education and other areas.

Extensive research shows that **gender gaps** in digital access and competences are a real problem, as is the resulting lack of confidence in female subjects (EQUALS & UNESCO, 2019). Accordingly, closing the gender gap means adopting sustainable solutions that go beyond formal education and offer lifelong learning incentives and experiences (ibid. p.39). In this spirit, digital inclusion can be achieved through systematic approaches that identify barriers and work toward eliminating them, thus erasing the “**gender digital divide**” in Europe (Perifanou & Economides, 2020).

To achieve gender-equal digital competences, several steps can be taken, including:

1. **Providing equal access to technology:** Ensure that both men and women have access to the necessary technology and infrastructure, including computers, internet access, and training programs.





2. **Encouraging girls and women to pursue careers in technology/ Establishing incentives:** Promote and support initiatives that encourage girls and women to pursue careers in technology and digital fields. This can include mentorship programs, coding clubs, and other educational programs.
3. **Fostering a culture of gender equality:** Create a culture that promotes gender equality and encourages both men and women to participate and contribute equally to technology and digital fields.
4. **Providing training and education/ Providing engaging experiences:** Provide training and education programs that teach digital skills, including coding, data analysis, and cybersecurity, to both men and women.
5. **Addressing gender biases in technology:** Address and work to eliminate gender biases in technology and digital fields, such as unconscious biases and discrimination in the workplace.



IMAGE 1. INCLUDED

Source: [www.pixabay.com](http://www.pixabay.com)

Copyright: Free to use under the License of Pixabay. No attribution is required.

## **2.2 Topic 2: Digital competences for clothing upcycling**

Sustainable and circular practices and goals are at the epicenter of the European strategic responses to the global environmental concerns (European Commission, 2022). With a high impact on the environment and climate change, the clothing industry needs to implement urgent measures to eliminate some of its catastrophic consequences (ibid.). Digitalization and new technologies are part of the solution, if they are equally available and beneficial to everyone, regardless of gender.





## **Big data and analytics**

Big data and analytics can play a valuable role in the clothing upcycling industry by providing insights and helping to inform decision making in areas such as production, marketing, and customer behaviour (Power, 2014). Here are some ways big data and analytics can be used in the clothing upcycling industry:

1. **Customer behaviour analysis:** Big data and analytics can be used to analyse customer behaviour, such as purchase patterns, preferences, and opinions on upcycled clothing. This information can then be used to inform product development, marketing, and sales strategies.
2. **Inventory management:** Big data and analytics can be used to track inventory levels and help to optimize the supply chain, ensuring that upcycled clothing items are available when and where they are needed.
3. **Sustainability analysis:** Big data and analytics can be used to analyse the sustainability of upcycling practices, tracking the carbon footprint, water usage, and other environmental impact metrics associated with the production and distribution of upcycled clothing.
4. **Production optimization:** Big data and analytics can be used to optimize production processes, such as the selection of materials, the design of upcycled clothing items, and the identification of the most efficient production methods.
5. **Marketing optimization:** Big data and analytics can be used to optimize marketing strategies, such as targeting the most effective channels for reaching potential customers and tracking the effectiveness of marketing campaigns.

By using big data and analytics in these ways, clothing upcycling businesses can gain valuable insights that can help to **inform decision making, improve processes, and enhance their overall competitiveness in the market.**





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



IMAGE 2. ANALYTICS

Source: [www.pixabay.com](http://www.pixabay.com)

Copyright: Free to use under the License of Pixabay. No attribution is required.

### Augmented Reality (AR)

Augmented reality (AR) can be a useful tool for promoting and demonstrating the process of clothing upcycling. Here are some ways that AR can be used for this purpose:

1. **Virtual try-ons:** AR can be used to allow customers to virtually try on upcycled clothing items, giving them a better idea of how the item will look and fit on them. This can help to increase the customer's confidence in their purchase and reduce the number of returns.
2. **Demonstrating upcycling process:** AR can be used to demonstrate the process of upcycling, allowing customers to see how an old or worn item of clothing is transformed





into a new, stylish, and sustainable item. This can help to educate customers about the value of upcycling and encourage them to try it themselves.

3. **Virtual showroom:** AR can be used to create a virtual showroom of upcycled clothing items, allowing customers to view the items in a 360-degree, interactive experience. This can be especially useful for customers who are unable to physically visit a brick-and-mortar store.
4. **Interactive tutorials:** AR can be used to create interactive tutorials that demonstrate how to upcycle clothing items, providing customers with step-by-step instructions on how to transform old items into new and fashionable pieces.

By using AR in these ways, clothing upcycling businesses can **engage with customers** in a unique and interactive way, while promoting their products and the value of upcycling itself (Boardman et al., 2020).



It is important to note that AR technology can be complex and may require specialized skills and resources to implement effectively. It may also require investment in hardware and software, such as AR-enabled devices and AR development tools. Nevertheless, when used correctly, AR can be a valuable tool for promoting and demonstrating the benefits of clothing upcycling.

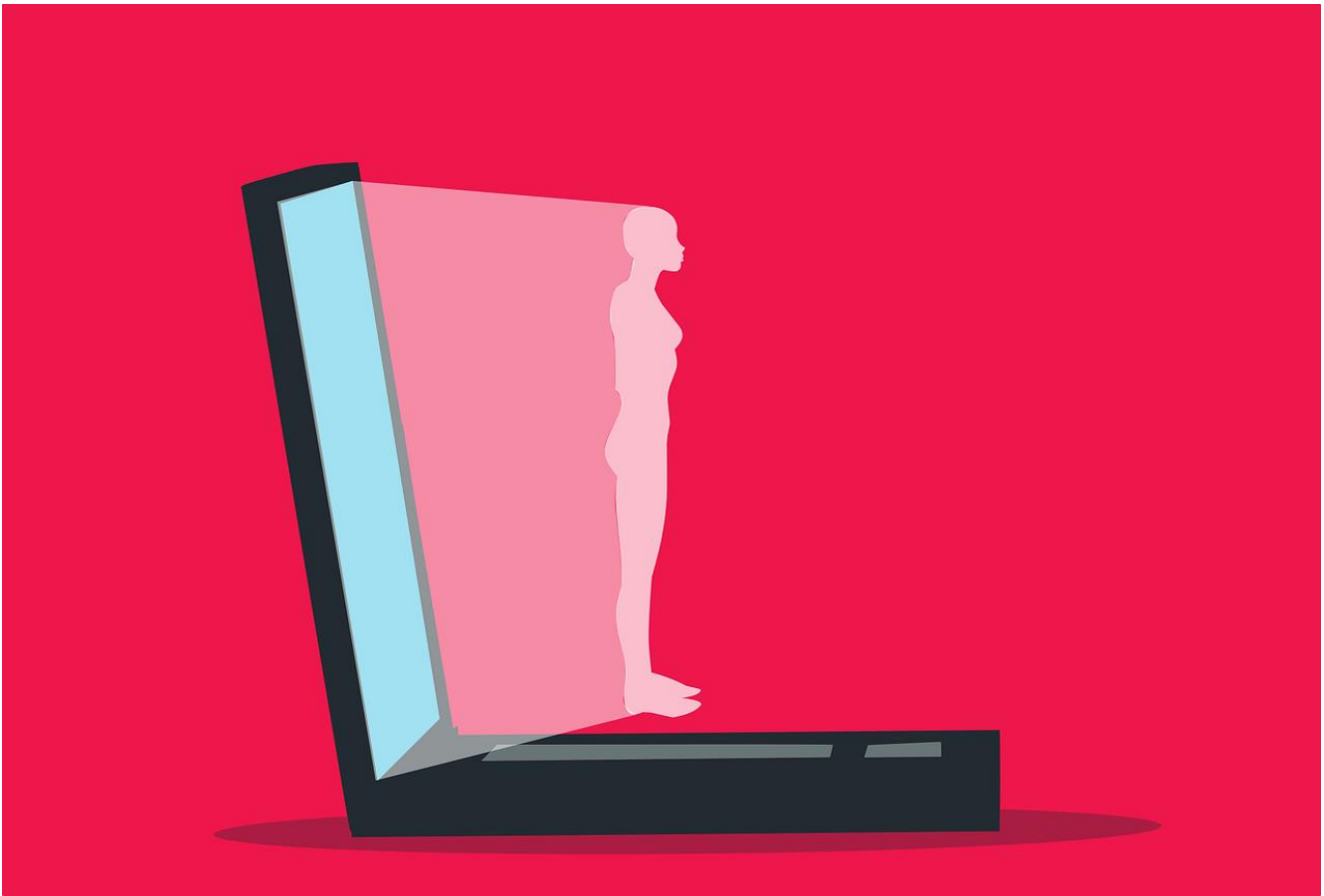


IMAGE 3. VIRTUAL ASSISTANT

Source: [www.pixabay.com](http://www.pixabay.com)

Copyright: Free to use under the License of Pixabay. No attribution is required.

### **Eco design and Editing tools**

**Eco design**, also known as sustainable design, is a design philosophy that emphasizes the use of environmentally friendly materials, processes, and practices in the design and production of clothing products (Knight & Jenkins, 2009). The goal of eco design is to minimize the negative impact of design and production on the environment and to create products that are sustainable and have a low environmental footprint.

Eco design considers the entire lifecycle of a product, from the sourcing of raw materials to the disposal or recycling of the product at the end of its life. This can include using renewable or



recycled materials, reducing energy use during production, and designing products that are easily repairable or recyclable.

Overall, eco design is a holistic approach to design that considers the impact of design and production on the environment and aims to create products that are sustainable, energy-efficient, and environmentally friendly.

**Editing tools** can play a valuable role in the clothing upcycling industry by allowing individuals and businesses to design and create new clothing items from existing materials. Here are some ways editing tools can be used in the clothing upcycling industry:

1. **Fabric editing:** Editing tools can be used to edit and manipulate fabric to create new clothing items. This can include cutting, sewing, and other fabric manipulation techniques.
2. **Pattern design:** Editing tools can be used to create patterns for upcycled clothing items. This can include digital pattern design software, as well as physical pattern making tools.
3. **Virtual fitting:** Editing tools can be used to create virtual fittings, allowing individuals to try on upcycled clothing items in a virtual environment before they are created.
4. **Image editing:** Editing tools can be used to edit images of upcycled clothing items, such as adjusting colours, adding text and graphics, and enhancing images for use in marketing and advertising materials.
5. **Animation and simulation:** Editing tools can be used to create animations and simulations that showcase the potential of upcycled clothing items, such as demonstrating how clothing items can be transformed from their original state into new and fashionable upcycled items.

By using editing tools in these ways, the clothing upcycling industry can benefit from improved design and production processes, enabling individuals and businesses to create new and fashionable clothing items from existing materials in an efficient and cost-effective manner.



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

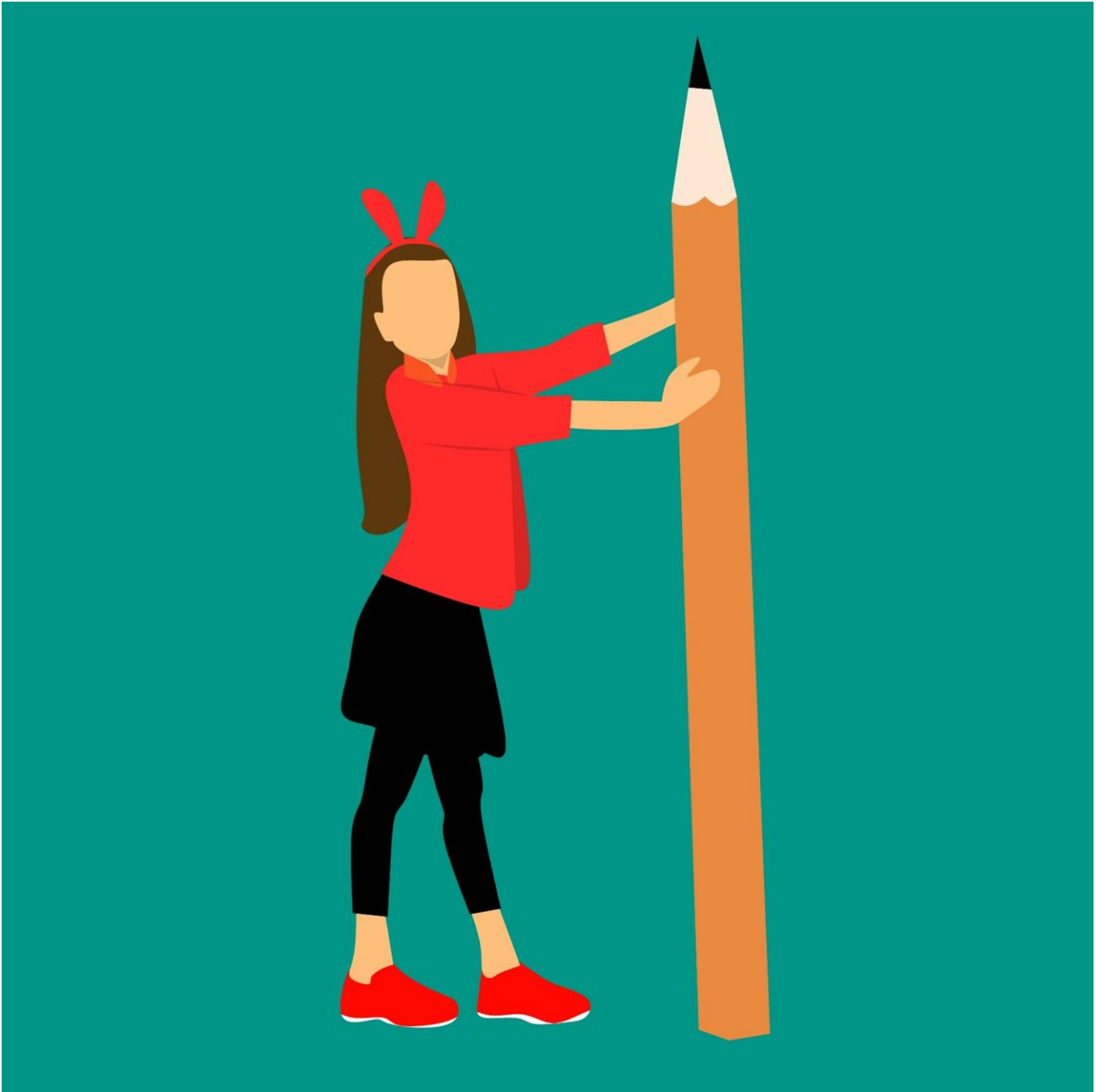


IMAGE 4. GIRL

Source: [www.pixabay.com](http://www.pixabay.com)

Copyright: Free to use under the License of Pixabay. No attribution is required.



## **Social media**

Appropriate use of social media can raise awareness of upcycling and the value of sustainable and circular practices. Here are some tips to help you effectively utilize social media in your entrepreneurial journey:

1. **Determine your target audience:** Understanding who your target audience is, will help you to determine which social media platforms are most relevant to your business. For example, if you are targeting a younger demographic, platforms like Instagram and TikTok might be a good fit, while if you are targeting a more professional audience, platforms like LinkedIn might be more appropriate.
2. **Develop a strong brand voice:** Your social media presence should reflect your brand and the values of your business. Develop a consistent voice and visual style that accurately represents your brand and helps to differentiate you from your competitors.
3. **Share valuable content:** Share content that is relevant, interesting, and valuable to your target audience. This could include blog posts, articles, videos, or images that showcase your products or services.
4. **Engage with your audience:** Social media is a two-way communication tool, so be sure to engage with your followers by responding to comments and messages, asking for feedback, and running polls or surveys. This will help you to build a strong community of loyal followers and supporters.
5. **Utilize paid advertising:** Paid advertising on social media platforms like Facebook and Instagram can help you to reach a wider audience and increase your visibility. Consider investing in targeted advertising campaigns to reach your desired audience more effectively.
6. **Network and collaborate:** Social media provides opportunities to network with other entrepreneurs and businesses in your industry. Connect with other female entrepreneurs, attend virtual events, and participate in online groups or forums to build relationships and expand your network.
7. **Measure and adjust:** Regularly monitor your social media metrics to determine what is working and what is not. Use this information to adjust your strategy and continually improve your social media presence.





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

By following these tips, entrepreneurs can effectively leverage social media to promote their businesses and reach their target audiences (Evans, 2011).



Remember to be consistent, creative, and always focus on providing value to your followers.

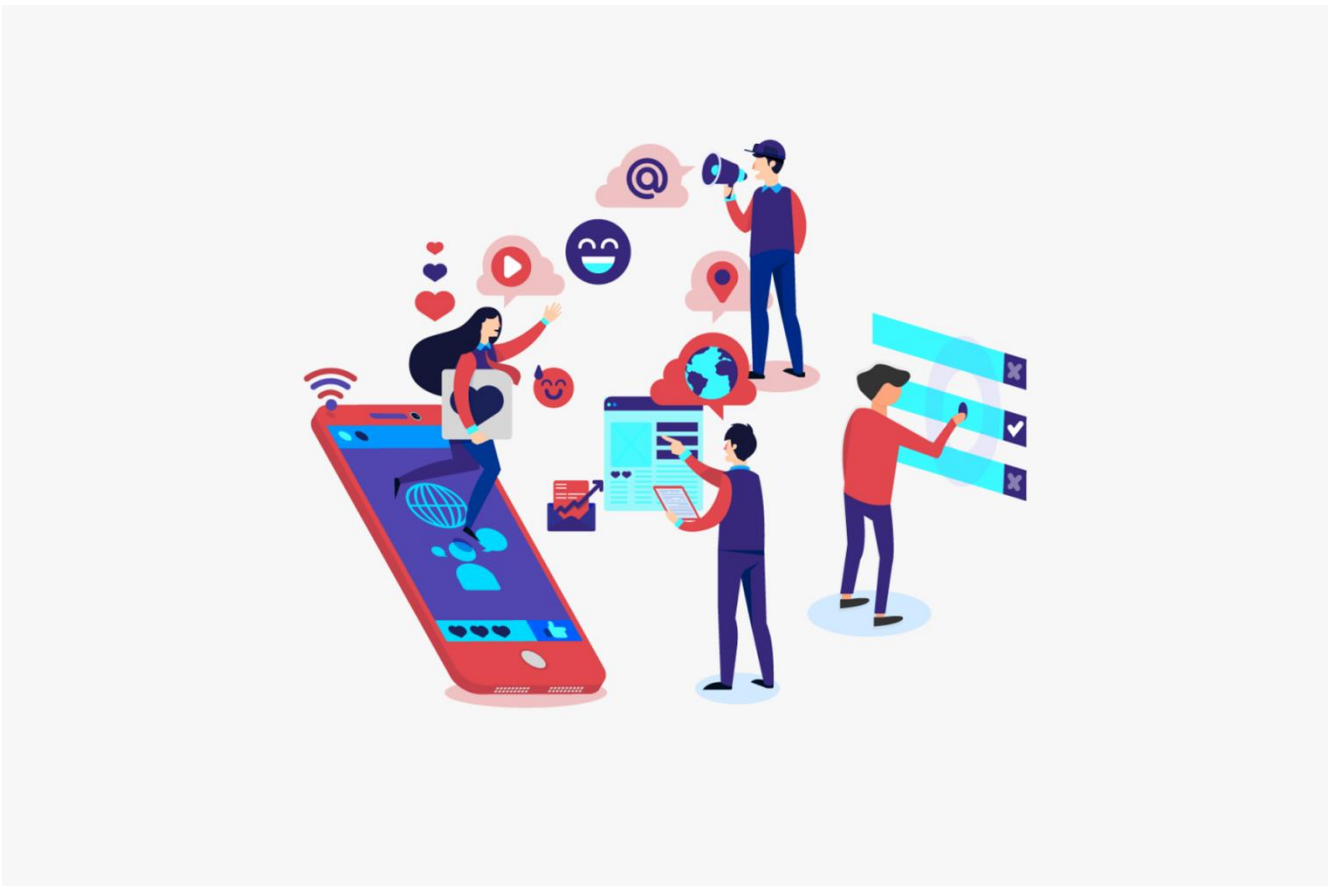


IMAGE 5. SOCIAL MEDIA

Source: [www.pixabay.com](http://www.pixabay.com)

Copyright: Free to use under the License of Pixabay. No attribution is required.





## Collaborative tools

Collaborative tools are increasingly *transforming work processes and practices* (Schubert & Williams, 2022). In the clothing upcycling industry -in particular, they can. Play a valuable role by enabling businesses and individuals to work together to create and promote sustainable and fashionable clothing items. Here are some ways collaborative tools can be used in the clothing upcycling industry:

1. **Community-driven upcycling:** Collaborative tools can be used to connect individuals and organizations who are interested in upcycling clothing items. This can include online communities and forums where people can share ideas, tips, and resources for upcycling clothing.
2. **Virtual workshops:** Collaborative tools can be used to host virtual workshops and events, where individuals and organizations can come together to learn about upcycling and work on upcycling projects together.
3. **Design collaboration:** Collaborative tools can be used to connect designers and other creative professionals who are interested in creating upcycled clothing items. This can include virtual design tools that allow designers to collaborate on designs, as well as platforms for sharing design ideas and getting feedback from other designers.
4. **Crowdfunding and fundraising:** Collaborative tools can be used to launch crowdfunding campaigns and other fundraising initiatives to support upcycling projects. This can include online platforms that allow people to contribute funds to support upcycling initiatives, as well as tools for promoting these initiatives and engaging with supporters.
5. **Supply chain collaboration:** Collaborative tools can be used to connect different parts of the supply chain, such as suppliers, manufacturers, and distributors, to work together to create and distribute upcycled clothing items.

By using collaborative tools in these ways, the clothing upcycling industry can benefit from increased collaboration, knowledge sharing, and support, helping to promote the creation and distribution of sustainable and fashionable clothing items.

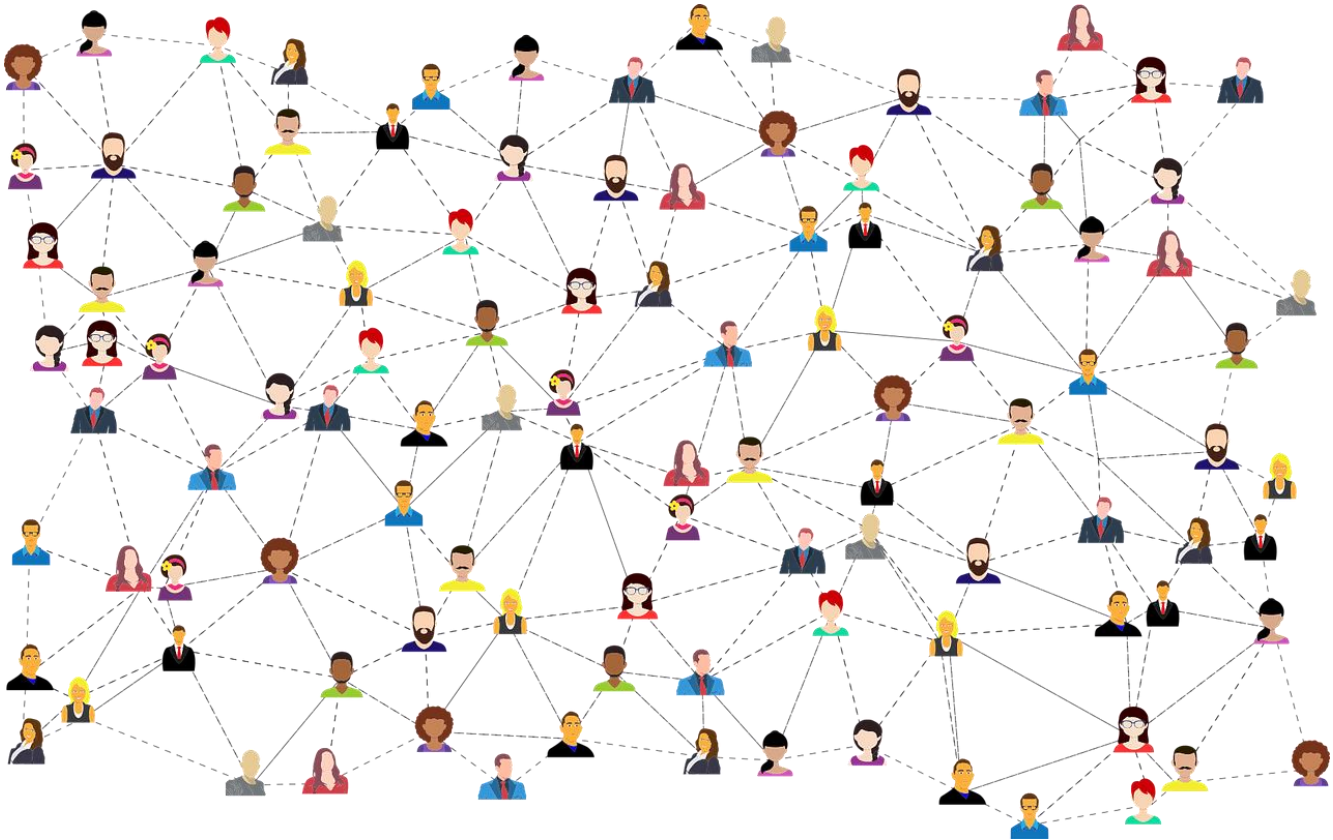


IMAGE 6. CONNECTIONS

Source: [www.pixabay.com](http://www.pixabay.com)

Copyright: Free to use under the License of Pixabay. No attribution is required.

## E-Commerce

E-commerce can be a powerful tool for individuals and businesses in the clothing upcycling industry to reach a wider audience, increase sales, and grow their business. Especially during the COVID-19 pandemic, e-commerce has established itself as an integral part of sustainable businesses, even with the **challenges** it creates in business strategies (Babenko et al., 2019).

Here are some ways e-commerce can be utilized in the clothing upcycling industry:

1. **Increased reach:** E-commerce allows entrepreneurs to reach a wider audience, regardless of their physical location. With e-commerce, entrepreneurs can sell their products and services to customers all over the world, expanding their customer base and increasing their potential for growth.



2. **Online store:** Setting up an online store on an e-commerce platform can allow individuals and businesses in the clothing upcycling industry to sell their products and services to customers all over the world. This can include upcycled clothing items, as well as workshops and classes on upcycling techniques.
3. **Reduced costs:** E-commerce can help to reduce costs associated with traditional brick-and-mortar retail businesses, such as rent, utilities, and staffing costs. This can help entrepreneurs to save money and allocate more resources to other areas of their business.
4. **Improved flexibility:** E-commerce provides entrepreneurs with greater flexibility, allowing them to work from anywhere, set their own hours, and manage their business on their own terms.
5. **Increased convenience:** E-commerce provides customers with greater convenience, allowing them to purchase products and services from the comfort of their own homes. This can help entrepreneurs to increase sales and improve customer satisfaction.
6. **Social media integration:** Utilizing social media in conjunction with e-commerce can help individuals and businesses in the clothing upcycling industry to reach a wider audience, increase brand awareness, and drive sales. This can include using social media to promote their online store, as well as using social media to connect with customers and build relationships.
7. **Marketing and advertising:** E-commerce platforms often include marketing and advertising tools, such as email marketing and targeted advertising, that can help individuals and businesses in the clothing upcycling industry to reach a wider audience and drive sales.
8. **Customer relationship management:** E-commerce platforms can also include customer relationship management tools, such as customer data management, order tracking, and customer feedback, that can help individuals and businesses in the clothing upcycling industry to improve customer satisfaction and grow their business.
9. **Data and analytics:** E-commerce platforms often include data and analytics tools that can help entrepreneurs to track sales, monitor customer behaviour, and make informed business decisions.



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

By utilizing e-commerce, individuals and businesses in the clothing upcycling industry can reach a wider audience, increase sales, and grow their business.



It is important for individuals and businesses in the clothing upcycling industry to carefully research and compare different e-commerce platforms to find the one that best meets their needs.



**IMAGE 7. E-COMMERCE**

Source: [www.pixabay.com](http://www.pixabay.com)

Copyright: Free to use under the License of Pixabay. No attribution is required.





**IMAGE 8. USED CLOTHING**

Source: [www.pixabay.com](http://www.pixabay.com)

Copyright: Free to use under the License of Pixabay. No attribution is required.

## **2.3 Topic 3: Case Studies/ Success Stories**

There are many examples of individuals and organizations working to promote gender equality and digital skills across a variety of industries and sectors.

For example, there are programs and initiatives aimed at empowering women and girls with digital skills, such as coding and computer programming, to help them succeed in the tech industry. There are also organizations that focus on providing access to technology and digital skills training to women and girls in developing countries, with the goal of increasing their economic opportunities and empowering them to shape their own futures.



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

Examples:

### **Equal4Europe**

<https://equal4europe.eu>

To raise awareness and foster collaborative innovation through inclusivity, this EU-funded project promotes gender equality in science and business fields. It has created a network to support its principles and act as an exchange platform. It has also developed free tools to increase citizens' participation.

### **Global Digital Women**

<https://global-digital-women.com/en/>

This company aims at female empowerment and organizes events and panels to “enable cross-industry international networking and promote the exchange between experts, professionals, and companies”. Through its “talent programs”, it also inspires women for digital career paths.

### **Hypatia**

<https://cordis.europa.eu/project/id/665566>

This project aims at implementing innovative activities to inspire inclusivity and gender-equality in STEM. The Hypatia hubs will “provide a sustainable basis for these activities to be carried out on the long term, with a focus on dissemination through networks and stakeholder engagement allowing the project impact to multiply”.



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

## **Democratic and Inclusive School Culture in Operation (DISCO)**

<https://pjp-eu.coe.int/en/web/charter-edc-hre-pilot-projects/home>

DISCO is a joint European programme that offers funding and cooperation incentives within the field of education for democratic citizenship and human rights education (EDC/HRE).

## **GENDER NET Plus**

<https://www.era-learn.eu/network-information/networks/gender-net-plus>

A transnational action plan to promote gender equality in research and innovation.

In the fashion and textile industries, there are initiatives aimed at promoting sustainability and reducing waste, including through upcycling and repurposing clothing. These initiatives may also help to promote gender equality by providing training and skills development opportunities for women in these industries.

While there may not be specific success stories for promoting gender-equal digital competences for clothing upcycling, the efforts to promote gender equality and digital skills in related industries and sectors demonstrate the potential for positive impact and the importance of continued efforts in this area.

Europe is home to many innovative and forward-thinking organizations and individuals who are promoting and practicing sustainable fashion and clothing upcycling, as well as gender-equal digital platforms and training.

Examples:

### 1. The Reformation

<https://www.thereformation.com>

Based in Los Angeles, but with a strong presence in Europe, The Reformation is a sustainable fashion brand that uses sustainable materials and practices, including upcycling, to create stylish and environmentally-friendly clothing.





The Reformation has clear ethical and socially responsible directives. In this framework, it also promotes gender-equal opportunities and training and actively inspires its suppliers to do the same.

<https://www.thereformation.com/sustainability/commitments-certifications.html>

## 2. Patagonia

<https://eu.patagonia.com/gb/en/home/>

Patagonia, the outdoor clothing and gear company, is known for its commitment to sustainability, and has implemented a number of programs and initiatives to reduce waste, including through its "Worn Wear" program <https://wornwear.patagonia.com>, which encourages customers to repair and recycle their clothing.

Patagonia has invested in a gender-neutral marketing strategy which focuses on telling *environmental and social stories* without gender differentiation (Stewart, 2016).

## 3. The Circular Fashion Community:

<https://circular.fashion/en/>

The Circular Fashion Community is a platform that connects consumers, businesses, and organizations in the fashion industry to promote and support circular fashion practices, including clothing upcycling. The platform provides resources, information, and support to help individuals and organizations in the fashion industry to adopt more sustainable practices.

## 4. The Swedish Fashion Council

<https://www.swedishfashioncouncil.se>

The Swedish Fashion Council is a non-profit organization that works to promote sustainable fashion in Sweden and beyond. The organization runs various initiatives and programs, including workshops and training sessions on sustainable fashion practices, including clothing upcycling.



### 3. Additional materials and resources

This section aims to make your life easier!

It provides a variety of resources to foster your understanding of the topics scrutinized in the previous section. Each of the resources serves as material for further reading and more practical implementation of the AR4Reclothing practices and ideas.

<b>Module 5: Gender-equal digital competences for clothing upcycling</b>			
<b>Type of resource</b>	<b>Title</b>	<b>Topic</b>	<b>Link</b>
Online article+Videos	Fashion, future, forward: digital skills for textiles industry training	Topic 1: Theoretical Background	<a href="https://learntechasia.com/fashion-future-textiles-industry-training/">https://learntechasia.com/fashion-future-textiles-industry-training/</a>
Online article	Four Ways Technology Is Improving the Fashion Industry	Topic 1: Theoretical Background	<a href="https://www.forbes.com/sites/forbescommunicationscouncil/2022/08/29/four-ways-technology-is-improving-the-fashion-industry/?sh=699f04501525">https://www.forbes.com/sites/forbescommunicationscouncil/2022/08/29/four-ways-technology-is-improving-the-fashion-industry/?sh=699f04501525</a>
Blog	Digital technologies for timeless sustainable fashion	Topic 2: Digital competences for clothing upcycling	<a href="https://www.undp.org/blog/digital-technologies-timeless-sustainable-fashion">https://www.undp.org/blog/digital-technologies-timeless-sustainable-fashion</a>
Online report	The Future of Fashion: From design to merchandising, how tech is reshaping the industry	Topic 2: Digital competences for clothing upcycling	<a href="https://www.cbinsights.com/research/report/fashion-tech-future-trends/">https://www.cbinsights.com/research/report/fashion-tech-future-trends/</a>
Online article	Using eco-design tools: An	Topic 2: Digital competences	<a href="https://hal.science/hal-01251846/document">https://hal.science/hal-01251846/document</a>





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

	overview of experts' practices	es for clothing upcycling	
Online article	Towards Circular Fashion: Design for Community-Based Clothing Reuse and Upcycling Services under a Social Innovation Perspective	Topic 3: Case studies/success stories	<a href="https://www.mdpi.com/2071-1050/15/1/262?type=check_update&amp;version=2">https://www.mdpi.com/2071-1050/15/1/262?type=check_update&amp;version=2</a>

## 4. Wrap-Up

The gender gap is still a fact in modern times. There are ways to identify barriers and develop an appropriate action plan. The clothing upcycling industry - in particular- can benefit from various digital tools that can be used in inclusive ways.



## 5. References

- A. Perifanou, M., & A. Economides, A. (2020). Gender Digital Divide in Europe. *International Journal of Business, Humanities and Technology*, 10(4). <https://doi.org/10.30845/ijbht.v10n4p2>
- Babenko, V., Kulczyk, Z., Perevosova, I., Syniavska, O., & Davydova, O. (2019). Factors of the development of international e-commerce under the conditions of globalization. *SHS Web of Conferences*, 65, 04016. <https://doi.org/10.1051/shsconf/20196504016>
- Boardman, R., Henninger, C. E., & Zhu, A. (2020). Augmented reality and virtual reality: New drivers for fashion retail? *Technology-Driven Sustainability*, 155–172. [https://doi.org/10.1007/978-3-030-15483-7\\_9](https://doi.org/10.1007/978-3-030-15483-7_9)
- EQUALS, & UNESCO. (2019, January 8). *I'd blush if I could: Closing gender divides in digital skills through education*. UNESCO. Retrieved January 10, 2023, from <https://en.unesco.org/Id-blush-if-I-could>
- European Commission . (2022). *Questions and Answers on EU Strategy for Sustainable and Circular Textiles*. European Commission . Retrieved January 10, 2023, from [https://ec.europa.eu/commission/presscorner/detail/en/QANDA\\_22\\_2015](https://ec.europa.eu/commission/presscorner/detail/en/QANDA_22_2015)
- Evans, D. (2011). *Social Media Marketing: The next generation of business engagement*. Wiley Technology Pub.
- Knight, P., & Jenkins, J. O. (2009). Adopting and applying eco-design techniques: A practitioners perspective. *Journal of Cleaner Production*, 17(5), 549–558. <https://doi.org/10.1016/j.jclepro.2008.10.002>
- Power, D. J. (2014). Using ‘big data’ for analytics and decision support. *Journal of Decision Systems*, 23(2), 222–228. <https://doi.org/10.1080/12460125.2014.888848>
- Schubert, P., & Williams, S. P. (2022). Enterprise collaboration platforms: An empirical study of technology support for collaborative work. *Procedia Computer Science*, 196, 305–313. <https://doi.org/10.1016/j.procs.2021.12.018>
- Stewart, S. L. (2016). *What brands can learn from Patagonia’s gender-neutral marketing*. Outside. Retrieved January 10, 2023, from <https://www.outsideonline.com/culture/opinion/what-brands-can-learn-patagonias-gender-neutral-marketing/>



## 6. Assessment

### 6.1. Introduction

The current quiz-like assessment aims at testing learners' levels of awareness regarding gender-equality and digital competences in the clothing upcycling industry. There are three types of questions: Multiple choice, true/false, and matching.

Estimated time to complete: **2 hours**

### 6.2. Knowledge assessment

Quiz-like assessment based on the main content. Please mark the correct answer with bold when required. Include 10 questions for your module. Increase gradually the level of difficulty.

Question 1 (multiple choice or true/false): Gender gaps in digital competences mean that some people are smarter than others.

[True] [**False**]

Question 2 (multiple choice or true/false): Inclusivity cannot be encouraged through education.

[True] [**False**]

Question 3 (multiple choice or true/false): Workplaces cannot provide digital training.

[True] [**False**]

Question 4 (multiple answers correct): Among others, big data can be used for:

[**production optimization**] [**marketing optimization**] [networking] [eco design]

Question 5 (multiple answers correct): By using AR, clothing upcycling businesses can:

[**engage with customers in a unique and interactive way**] [eradicate e-commerce] [avoid paid advertising] [**promote their products and the value of upcycling**]

Question 6 (multiple answers correct): Eco design minimizes the negative impact of design and production on the environment by such practices as:

[Inventory management] [Developing a strong brand voice] [**Virtual fitting**] [**Image editing**]

Question 7 (multiple answers correct): E-commerce can:

[optimise production] [help in managing inventory] [**reduce costs**] [**offer flexibility**]



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

Question 8 (matching): Match the terms with their definitions.

Term 1 Gender-equality in digital competences: Equal access to digital technologies and equal capability to effectively use digital technologies.

Term 2 Eco design: A design philosophy that emphasizes the use of environmentally friendly materials, processes, and practices in the design and production of clothing products

Term 3 Paid advertising: Targeted advertising campaigns to reach desired audiences more effectively.

Term 4 Community-driven upcycling: Connecting practices and tools that promote networking for clothing upcycling.

Term 5 Increased reach: Expanded customer base and potential for growth.

Question 9 (matching): Match the concepts with their explanations.

Concept 1 Big data and analytics: Large and complex data sets.

Concept 2 Analytics: Data analysis in search of patterns.

Concept 3 Augmented Reality: The integration of digital information with the user's environment in real time.

Concept 4 Collaboration tools: Digital tools that facilitate collaboration.

Concept 5 Supply chain collaboration: Collaborative tools and practices used to connect different parts of the supply chain.

Question 10 (matching): Match the problems with their solutions.

Problem 1 Unconscious biases and discrimination in the workplace: Provide training and education.

Problem 2 Gender gaps in digital competences: Provide equal access to technology, establish incentives for all.

Problem 3 A clothing upcycling business shows trouble in decision making: Use big data and analytics.

Problem 4 A clothing upcycling business wastes too much fabric for fittings: Use eco design.

Problem 5 A clothing upcycling business pays seeks to cut losses from returned items: Use virtual showrooms.



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

### **6.3. Skills assessment**

Your business hires people regardless of gender. However, male employees are more confident in using certain digital tools than their female counterparts. How do you bridge the gender gap?

Solutions: Provide training to give all your employees equal opportunities. Provide incentives for digital upskilling. Encourage inclusivity through engaging experiences.

**Thank you!**  
**AR4RECLTHING Team**

