SATIN

Towards a sustainable circular system of textiles in the Nordic region



Project information

SATIN

Project period: 26/8 2020-26/7 2022

Total budget: 6 114 840 NOK, 50% is financed by Nordic Innovation

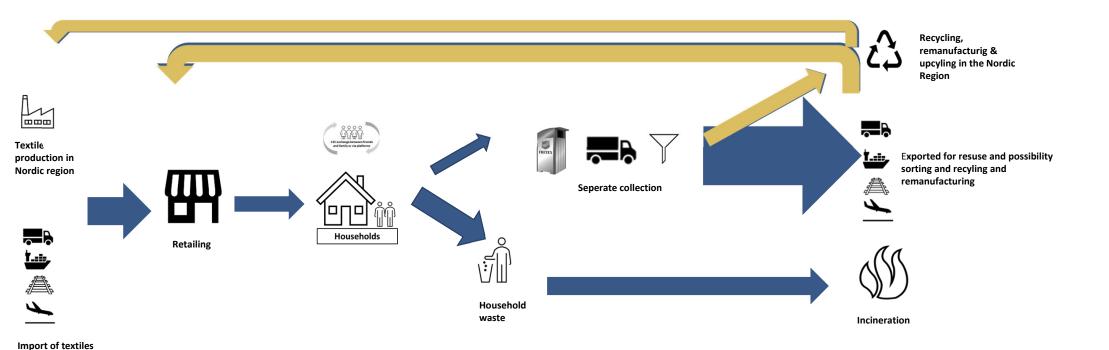
Project leader: Swedish National Road and Transport Research Institute (VTI)

Project partners:

- Research institute/University: VTI, CIT, Aalto University, Aalborg University, NTNU
- Municipality: Kungälv kommun, Mölndals stad, Göteborgsregionen
- Waste companies/associations: Kretslopp och Vatten, Trondheim Renholdsverk, VESAR, Trasborg, Avfall Norge, Avfall Sverige
- NGOs: Röda korset, Björkåfrihet, UFF
- Textile industry/services: Nudie Jeans, Kruse Vaskeri
- Upcycling/recycling actors: Better World Fashion; Convert
- Logistics service provider/consultancy: DHL, Integrate
- Real estate company: Fastighet AB Balder



Background





Purpose

"Develop and test solutions that can address the textile collection and sorting challenges by taking a Supply Chain Management (SCM) perspective"

- Develop **collection solutions** that achieve an increased collection rate of used textiles
- Develop circular network design solutions in the Nordic region in order to achieve economies of scale
- Investigate the market for recycled raw material and reused textile to identify business opportunities





Project process

- WP1 Evaluation of the circular system of textiles in the Nordics
 - Riikka Kaipia, Aalto University Finland
- WP2 Development of the Nordic circular solutions
 - Saamet Ekici, Chalmers Industriteknik Sweden
- WP3 Testing and evaluation of developed solutions
 - Iskra Dukovska-Popovska, Aalto University Denmark
- WP4 Ensuring the circularity of project results
 - Heidi C Dreyer, NTNU Norway
- WP5 Project management
 - Linea Kjellsdotter Ivert, VTI Sweden



Project organisation

Project Co-Funder

Nordic Innovation

Project leader

Linea Kjellsdotter Ivert (VTI)

WP leaders

Riikka Kaipia (Aalto University) Saamet Ekici (CIT) Iskra Dukovska-Popovska (AAU) Heidi C Dreyer (NTNU)

Advising board

Erik Perzon (SIPTex, IVL)
Staffan Larsson (H&M)
Pirjo Heikkilä (VTT)
David Althoff Palm (Ramboll)
Nikola Kiørboe (Revaluate)
Betina Simonsen (Lifestyle & Design Cluster)
Maria Ström (Wargö Innovation)

Project team

Riikka Kaipia, Aalto University
Iskra Dukovska-Popovska, Aalborg University
Håkan Bratland & Jens Maager, Avfall Norge
Jon Nilsson-Djerf, Avfall Sverige
Reimer Ivang, Better World Fashion
Magnus Nilsson, Björk och Frihet
Saamet Ekici, Chalmers Industriteknik
Flemming Hynkemejer, Convert
Ulf Hammarberg, DHL
Camilla Holtén, Balder
Natali Kjernell, Göteborgs Kretslopp & Vatten
Hanna Hellström, Göteborgsregionen

Thomas Ulderop, Integrate
Martin Kruse, Kruse Vaskeri
Dan Gordan, Kungälv kommun
Jeanette Hartung & Stina Moberg, Mölndalstad
Heidi C Drejer, NTNU
Kevin Gelsi, Nudie Jeans
Eva Maria Rudberg, Röda Korset
Steen Trasborg, Trasborg
Henning Martinsen & Lars Skovseth, TRV
Kaj Phil & Kåre Dahne, UFF
Linea Kjellsdotter Ivert, VTI



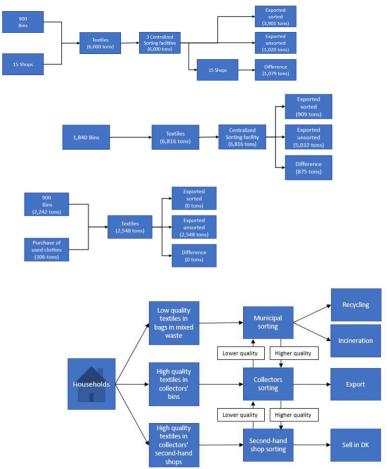
Project planning

Gantt-chart	2020				2021												2022						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
WP1: Evaluation of the circular system of today with increasing future volume																							
Mapping the current circular systems of textiles																							
Estimating the future volumes of used textiles																							
Evaluate the current circular system with increase volumes																							
Compile the results																							
Milestone: Project objective 1 and 2 fulfilled																							
WP2: Development of SCM solutions																							
Discussions, one to one/group																							
Interviews																							
Workshop (cross country participants)																							
Compiling results																							
Milestone: Project objective 3 fulfilled																							
WP3: Testing and evaluation of SCM solution																							
Pilot testing of solutions																							
Collecting data as input to simulation																							
Developing simulation																							
Milestone: Project objective 4 fulfilled																							
WP4: Ensuring the sustainability of project results																							
Analysing and processing input from WP1-WP3																							
Preparing workshops																							
Compile the results																							
Milestone: Action lists developed, key persons identified																							
WP5: Project management and dissemination																							
Overall project management and internal communication																							
Project meetings (involving the entire project group)																							
Dissemination: Regular updates in social networks																							
Dissemination: Write/Present papers and articles																							
Dissemination: Conferences and presentations																							



The most important results WP1

- Trade off between collection rates and transport efficiency
- Potential for collaboration when it comes to presorting and transports as well as knowledge sharing for collection methods
- Great challenges concerning the fraction that cannot be reused (but at least partly recycled)
- Many uncertainties and opinions where the separation between the fraction that can be reused and the fraction that can not be reused should take place and by whom
- Sorting is mainly manual and uncertainties exist related to the quality of textiles
- There is an urgent need to develop efficient
 purposes of the use for the collected textiles



The most important results WP2



Real estate collection



Collection at recycling center



Increased degree of filling rates during transport



Thank you!

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