

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

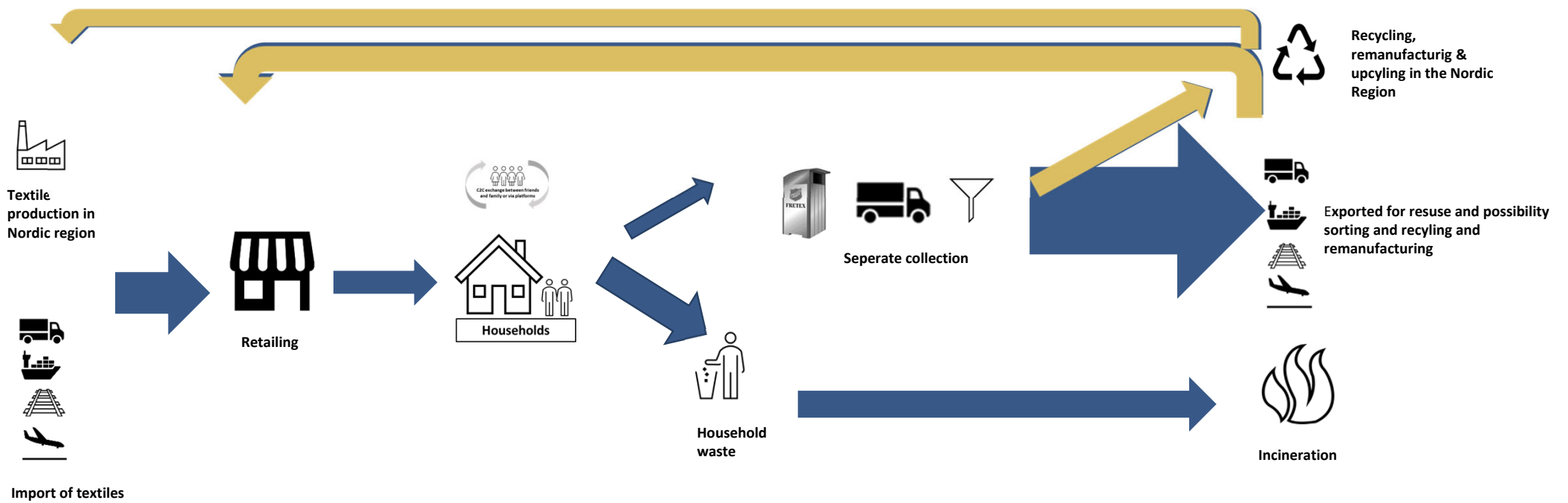
Project leader: Swedish National Road and Transport Research Institute (VTI)

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**

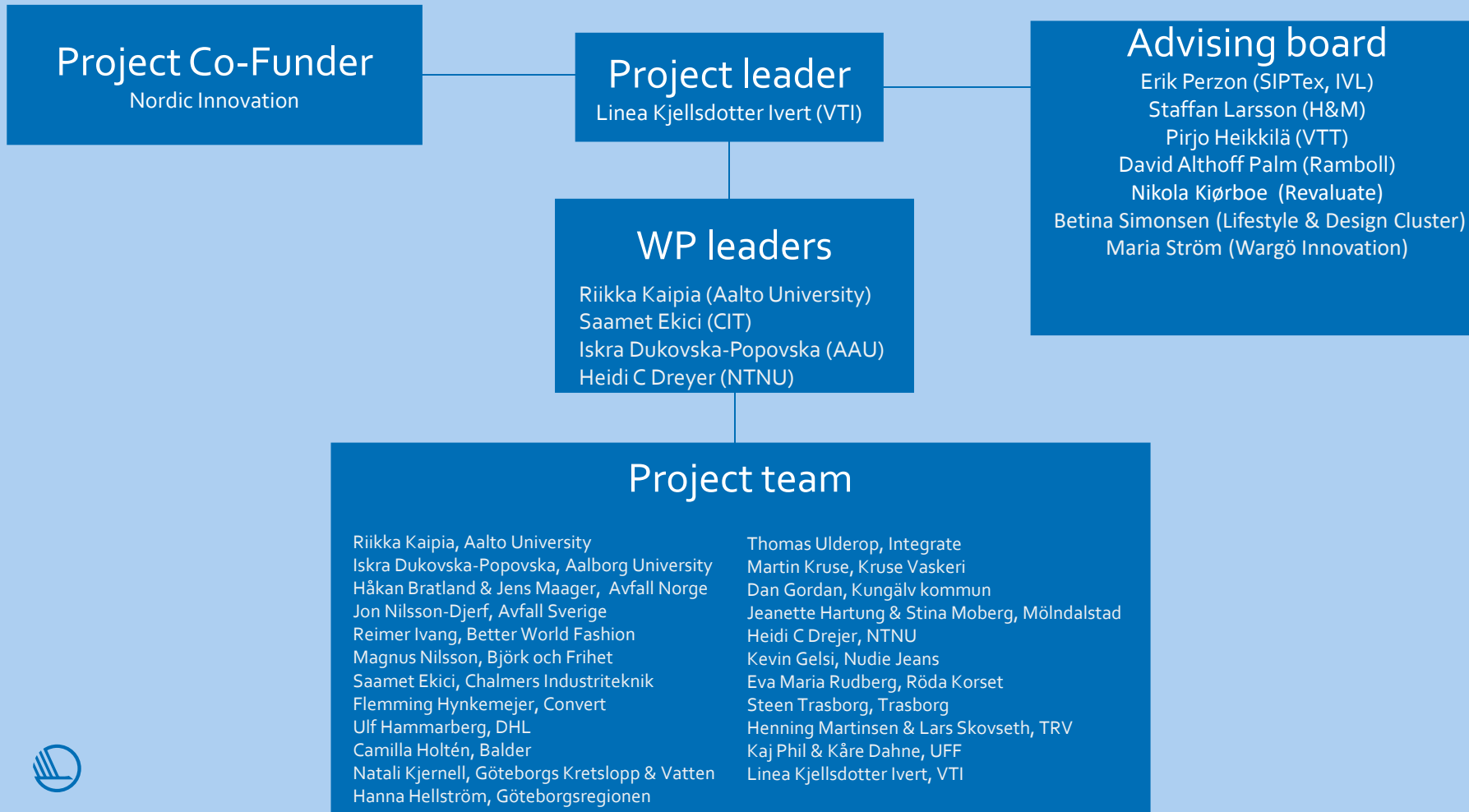


Project process

- 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



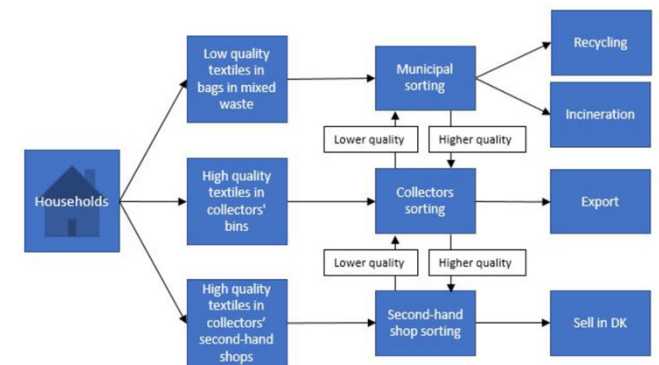
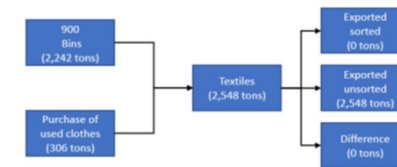
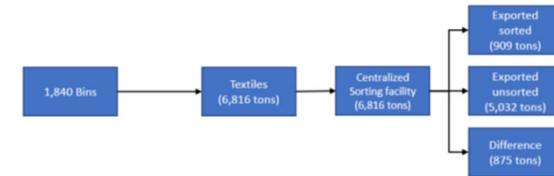
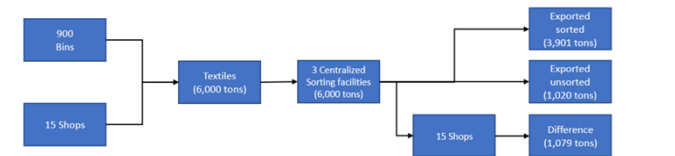
Project planning

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 pre-sorting 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 cannot 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!

Linea Kjellsdotter Ivert

+46 709430434

www.vti.se/satin

