annual report 2013
Something very special happens when a fashion designer collaborates with a material scientist. When they begin to understand each other’s language and leverage each other’s expertise, the outcome is quite powerful.

During 2013 the benefits of our cross-disciplinary program began to bear fruit, and the interaction between researchers across projects has led to more delicately defined research tasks. In addition, dialogues and outreach activities between the researchers, industry partners and other stakeholders have elevated and helped to frame some of the key sustainability challenges and research needs in the fashion industry. Interesting results are coming out but research takes time – not only to plan and perform the studies but also to publish the results in peer-reviewed academic journals. The time frame for publishing can range from a few months to three years!

That is why 2013 was such an exciting year. The fruits of our labor are apparent because many of the research projects will now continue publishing their results. As the first phase of Mistra Future Fashion ends in May 2015, we will also look ahead and prepare for phase two, which means four more years. This provides us an excellent opportunity to review and refine the current research tracks and reach out to the Swedish fashion textile industry and their suppliers, to discuss how the second phase can be organized to leverage the insights generated to date.

We look forward to continue our successful collaboration!
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The purpose of the Mistra Future Fashion Program is to deliver knowledge and solutions that the Swedish fashion industry and its stakeholders can use to significantly improve the fashion sector’s environmental performance and strengthen its global competitiveness.

The program is structured so that it leverages the expertise and networks of leading Swedish and international research institutes and universities.

Stakeholders engaged in the program include governmental agencies, voluntary organizations, and companies within the entire textile value chain: forestry, pulping, textile manufacturing, fashion retail and recycling.

To ensure that the program delivers insights and solutions beneficial to the fashion industry, representatives from business, government and civil society are also actively involved as advisors for each of the program’s eight research projects.

Ultimately, Mistra Future Fashion aims to create a dynamic and robust relationship between the research community and practitioners working in, or in close cooperation with, the Swedish fashion industry, thus ensuring that Sweden and its Nordic partners take the lead within sustainability research and practice related to the fashion industry. The program is a significant step towards the creation of a national platform for research within sustainable fashion.

Program Funding

The turnover for Mistra Future Fashion is expected to reach a minimum of SEK 110 million over an eight-year period (2011–2019). The primary funding organization is Mistra, the Swedish Foundation for Strategic Environmental Research, which supports the program with SEK 40 million during the first four years. Mistra will plausibly support the program with an additional SEK 40 million during phase two. Additionally, industrial partners co-finance phase one of the program with resources valued at over SEK 16 million.

Program is organized in eight research projects:

- p1. changing markets & business models: Towards sustainable innovation in the fashion industry
- p2. clarifying sustainable fashion
- p3. interconnected design thinking and processes for sustainable textiles and fashion
- p4. moving towards eco-efficient textile materials and processes
- p5. reuse, recycling and end of life issues
- p6. fashion for the public sector
- p7. sustainable consumption and consumer behavior
- p8. policy instruments

The program is organized in eight research projects:
“there is an alienation between the designers and the garment makers”

“Sustainability is not just about developing new fibers or chemicals – it also requires a change in personal mindset and values. In the fashion industry of today, the designers at companies and the garment makers in Bangladesh operate in very different worlds. The designers’ contribution to creating social change is often limited to making choices regarding fabrics, choosing suppliers that offer fair wages to workers, or supporting small, craft-based producer communities. Although this contribution is helpful, there is still alienation between the designers and the garment makers. I am using a theoretical structure based on social neuroscience and the left/right parts of the brain divide to explore this alienation between the workers and the designer, and the alienation between the sciences and design in a sustainability context. This alienation interests me and makes me think about how we can build up more empathy. Hence, my research in Mistra Future Fashion focuses on how textile and fashion designers can develop more emotional and social intelligence and how science and business can understand the value of design in creating a more sustainable fashion system.

When you look at textile designers in particular, they are very focused on the aesthetic and textile qualities of textiles and they understand intuitively what consumers need and want. The design process is a form of transformation of the materials they are working with and of themselves. But once the designer comes out of the design studio, away from simply designing materials for the fashion supply chain, and moves into local communities, or begins working with stakeholders in the fashion supply chain, she or he is required to meet human needs in a different way – beyond the cloth. This requires new skills and methods for designers, part of which is emotional and social intelligence. To start that work, I will be developing a handbook of guidelines to help textile and fashion designers to become more socially engaged.

In the handbook I will develop techniques to help designers work on their values and mindsets and provide ideas about how they can begin to become more socially engaged. I hope my research can contribute to a better textile industry by highlighting the value of a design approach to sustainability. I also hope that I can contribute to the training and development of designers who want to contribute more to society but who do not feel they have the skills or confidence to engage.”

“we can provide guidance to the fashion industry on how to reduce environmental impact”

“If we are to reduce the environmental impact of modern life, we must begin by fully understanding our technological systems. At present, the environmental debate is characterized by numerous general opinions, many of which are unfounded. I am passionate about sustainability and environmental issues and therefore I want to help provide a good scientific basis for issues raised in this debate.

In Mistra Future Fashion, I am part of the clarifying sustainable fashion project that focuses on sustainability assessment of fashion. My primary role is to contribute to Life Cycle Assessment (LCA) work, in which we assess the environmental impact of Swedish fashion consumption by studying five garments – a pair of jeans, a t-shirt, a dress, a jacket and a hospital uniform. We also assess the potential of different measures to reduce impact. This could take the form of switching to new types of fibers and new ways of designing or manufacturing garments, or changes in buying or washing behavior.

Today we know there is a need to reduce the environmental impact of our fashion consumption. There are many ideas on how to mitigate impact and several measures are being taken. Using LCAs, we are able to determine which ideas and measures make the most environmental sense, those that do not make sense and in which parts of the garment life cycle we need to come up with new, but as yet unknown, measures for achieving impact reduction. In this way, we can provide guidance to the fashion industry on how to reduce impact. LCAs of garments have of course been carried out before but our assessment will be based on more up-to-date data and will cover a wider set of relevant environmental impacts than is typically covered in LCAs and it will be particularly relevant in the Swedish context.

Working in Mistra Future Fashion is great fun as there are so many different people from very different fields collaborating in one common area – a completely different environment than the one I work in on a daily basis! Working with clothing and fashion is also interesting for me, as it is a consumer-friendly product that many people can relate to.”
"A lot of initiatives are currently emerging that are built up around the idea of shared economy and shared consumption. Sharing, swapping, lending and bartering however are not new practices – people have been doing it since ancient times. With new business models we now have the opportunity to move these practices out of their niche existence and make them the norm rather than the exception. With my research on new business models, I hope to be able to provide answers regarding the kind of business models that would minimize the amount of new clothes entering the fashion system and provide consumers with a diversity of means that would allow them to consume fashion in a more sustainable way.

One example is fashion libraries. Here the customer can borrow clothes for a period of time, instead of buying, which would reduce the input of virgin materials and the use of finite resources. These kinds of niche initiatives in the fashion field are growing, partly because of the internet, which has enabled online, sharing services. But these niche activities need to be scaled up and promoted even further. As it is now, it is mostly sustainable fashion pioneers – people concerned for the environment and fashion – that use these services. They make up far too small a proportion of the market to have any real impact. Although business and policy-makers are starting to show an interest in upscaling these initiatives, it would be going a long way to say that shared economy and shared consumption could become the norm.

I think that a great feature of Mistra Future Fashion is that the program brings together researchers from all relevant areas related to the fashion system and with relevant stakeholders. This has a very obvious benefit: the research deals with practice-based challenges and problems, which means that the findings can be implemented quickly. Major projects such as Mistra Future Fashion always need time to get rolling. I think that in the next couple of years we will see the first changes to emerge from research carried out in Mistra Future Fashion."
Two Mistra Future Fashion researchers, Tom Nilsson and Scott McIver, participated and led a seminar focusing on Extended Producer Responsibility (EPR) at the Almedalen week in July.

EPR is a policy option that seeks both to make sure that producers take responsibility for the post-consumer stage of the product’s lifecycle and incentivize change upstream in the design process. This entails bearing the costs for collecting clothes and sorting them for reuse or recycling. EPR for textiles has been operating in France since 2009 and has recently risen up the political agenda in Sweden and the Nordic region as a potential response to tackle the environmental effects of clothes and textiles.

The panel in Almedalen, consisting of different stakeholders in the area of environment/CSR directors and parliament members, discussed if EPR for clothes and textiles is the way forward for Sweden and what more needs to be known before a political judgment is made about the appropriateness of EPR for the industry.

Cotton fibers in textiles decrease in quality after many washes as the fiber weakens and brakes. This causes problems for textile reprocessing, as weak fibers are difficult to recycle into new strong cotton fibers.

During the third EPNOE conference in October 21-24 in Nice, France, Anna Palme presented a poster with the title “Ageing and hornification of cellulose in cotton textiles during long time use”. Her poster visualized the quality decrease of used cotton fibers and provided improved knowledge on fiber impacts from laundering. Textile industry representatives participating in the conference expressed great interest in Anna’s fundamental research, and emphasized the importance of collaborating with academia for future recycling solutions.

In May 2013, Copenhagen Business School (CBS), in collaboration with the research company GFK (Growth from Knowledge), led a global expert study on sustainable fashion. During the five-day event the online forum Sociolog.dx was established where 36 experts from business, academia and civil society shared ideas on issues like new materials, partnerships, consumption patterns and policy options.

The experts participating in the study established that the fashion industry of today is in a state of crisis when it comes to sustainability, but they also highlighted a number of innovative solutions for coping with the social and environmental challenges. In the paper “The Sociolog.dx experience: a global expert study on sustainable fashion”, Mistra Future Fashion researcher Esben Rahbek Gjerdrum Pedersen and Kirsti Reitan Andersen summarizes the conclusions from the study including important new insights about the barriers to and opportunities for sustainable fashion.

A selection of events during 2013:

April/May 2013, PLAZA Kvinner magazine, Sweden: Interview with Rebecca Earley about Mistra Future Fashion

June 2013, Form Magazine, Germany, Interview with Rebecca Earley about MISTRA Future Fashion

10 July 2013, Radio Sweden: “Vi måste se över hela vårt sätt att leva”. Discussion with Gregory Peters on radio P4 Uppland in relation to i.a. silver and fluorinated compounds from clothes that challenge the agricultural reuse of sewage sludge nutrients.


www.mistrafuturefashion.com/en/publications

media and other outreach

Interview with Rebecca Earley in PLAZA Kvinner magazine
project progress
In spring 2013, an online global expert study on sustainable fashion was conducted in collaboration with the research company GfK (Growth from Knowledge). During the five-day event, the online forum sociolog.dx was established and 36 experts from business, academia and the community shared ideas about sustainable fashion in relation to new materials, partnerships, consumption patterns and policy options. The experts participating in the study portrayed conventional fashion as being in a state of crisis in terms of sustainability but also highlighted a number of innovative solutions for coping with the social and environmental challenges facing the industry.

From June to November 2013, Kirsti R. Andersen conducted fieldwork within the framework of the Textiles Environment Design Project (TED) at University of the Arts London (UAL). Kirsti R. Andersen worked as a research assistant for TED, UAL, and evaluated TED’s TEN through workshops for H&M. Kirsti R. Andersen also lead Project 1 and Project 3 research in China, investigating cultural barriers to sustainability and exploring what design thinking could do in this context to support a change towards sustainability in the fashion industry. During the period February-September 2013, Frederik Larsen visited the Institute for the Study of Societal Issues at UC, Berkeley, to study how cultural, social and economic value is created in the secondhand industry. The overarching purpose of his study is to examine the relationships between things, use and values as they are played out in secondhand markets.

Workshop on sustainable fashion

As a follow-up to the MISTRA Future Fashion meeting in Malmö, an international researcher workshop on sustainable fashion was hosted on May 30, 2013. The workshop had more than 50 participants, made up of researchers and practitioners from all over the world. The overarching aim of the workshop was to take the first step towards establishing a permanent researcher network for sustainable fashion that could collaborate on fundraising activities, development of teaching materials, academic exchange etc.

By examining the life cycle of a number of common items of clothing from cradle to grave, the project shows the impact of choices made throughout the life of a garment. The aim is to provide a baseline to help answer questions about how changes in the design, the raw materials or how a garment is used and washed can reduce the environmental impact of the fashion industry. Building on the consensus within Mistra Future Fashion, five garment types have been prioritized for analysis – a pair of jeans, a t-shirt, a dress, a jacket and a hospital uniform. Effort has been made to ensure that analysis conducted using different software tools (such as GaBi and SimaPro) and at different sites will still be consistent, both in terms of the underlying background inventory data and the characterization methods that will be used in the study.

Global meeting on Life Cycle Management

On August 26-28, several of the project members participated in the global meeting on Life Cycle Management, hosted by Chalmers University of Technology and the Swedish Life Cycle Center in Gothenburg. At the conference, Mistra Future Fashion members provided a large proportion of the input on textiles and fashion, proving that there is still a great deal to be done in this area and demonstrating the value of programs such as Mistra Future Fashion.
interconnected design thinking and processes for sustainable textiles and fashion (p3)

During the year, Textiles Environment Design (TED) designed and facilitated a series of workshops using TED’s TEN cards to inspire designers at Swedish companies. At H&M, over 350 buying office staff attended TED’s training lectures, and 50 New Development designers attended the four-session workshop, which finished in October 2013. The impact of the TED’s TEN cards has also been explored in partnership with the Sustainable Fashion Academy by using the Higgs index to evaluate redesigned products from ten companies, the final result being a 3-21% improvement in the scores.

TED’s TEN in China

Field research in China was conducted along with research project 1. The aim was to understand more about how the TED’s TEN cards and the strategies need to be adopted for different audiences and contexts. To reach the audiences, the cards were translated into Chinese for the trip. The team attended the Planet Textiles Conference, conducted visual research in a secondhand market, and facilitated a hands-on workshop with garment factory workers.

Collaboration within the consortium

A new collaborative project together with Innventia and project 6 ‘Fashion for the public sector’ began this year, following synergies identified during the spring 2013 MiFuFa event. The work explores the potential for the Swedish paper industry to become a key player in future garment production for a ‘Paper Cloth’ collection of fast fashion prototypes. The two projects raised internal seed funding to test the potential for inclusion in consortium research at a later stage.

Another Swedish area of collaboration has been strengthened this year through the arrival of UAL researchers Kay Politowicz and Rebecca Earley as MISTRA Guest Professors at Konstfack the University College of Arts, Crafts and Design (Konstfack) in Stockholm. The researchers developed and delivered an elective class for art and design students. This generation are the designers of the future, and the TED researchers believe it is important to make them more aware of the environmental impact that their work may generate; inspiring and enabling them to innovate and work across disciplines. The class also enabled the researchers to reflect further on the TED’s TEN cards and strategies, acquiring insight into how the cards can be used with yet another user group.

Aims to find solutions for moving towards eco-efficient textile materials and processes (p4)

In order to collect and evaluate sustainable alternatives to cotton and synthetic fibers, several textile technology parameters of new, biobased fiber materials have been studied and compared with conventional cotton and standard viscose. The new biobased fibers from milk protein and wood showed significant potential with regard to dyeing, color fastness, staining performance, wet rubbing, resistance to pilling and abrasion tests. Although the materials studied so far have been knitted, textile performance in woven and blended materials will also be studied. A chemical evaluation of the materials will be performed as well as continuation of the search for new, sustainable candidate materials, including fibers from soybeans, coffee grounds and alginate from algae.

Mock-up tool: http://extra.ivf.se/mifufa

To increase awareness of the environmental impact of produced textiles, a mock-up tool has been built within the project. The work has been integrated with workshops with the Swedish textiles industry to define the contents of the sustainability tool, which is aimed at producers, designers and consumers.

Survey on the user phase of clothes

A preliminary report has been compiled on the potential of tracking the number of wear and washing cycles of clothes by attaching tags to the garments. This report will be followed by a consumer survey focusing on the user phase of clothes, in preparation for the next step when tags are more available for use in a study.
Develops methods for collecting, handling, up-cycling and upgrading recycled textiles, giving them a new life. The project has two main objectives: to perform chemical research in the area of recycling textile fibers and to develop efficient recycling routines in stores.

**Project Leader:** Hanna de la Motte, Chalmers University of Technology

**Researchers:**
- Anna Palme, Chalmers, PhD
- Bengt Hagström, Swerea IVF
- Zengwei Guo, Swerea IVF
- Erik Perzon, Swerea IVF
- Harald Brelid, Södra

Develops and designs sustainable, comfortable clothing solutions for the public health care sector in Sweden.

**Project Leader:** Annika Lindström, Innventia

**Researchers:**
- Siv Lindberg, Innventia
- Mikael Lindström, Innventia
- Cathrine Löfgren, Innventia
- Tatjana Karpenja, Innventia
- Jenny Althoff, the University College of Arts, Crafts & Design (Konstfack)

Develops and designs sustainable, comfortable clothing solutions for the public health care sector in Sweden.

**Project Leader:** Annika Lindström, Innventia

**Researchers:**
- Siv Lindberg, Innventia
- Mikael Lindström, Innventia
- Cathrine Löfgren, Innventia
- Tatjana Karpenja, Innventia
- Jenny Althoff, the University College of Arts, Crafts & Design (Konstfack)

Collaboration between the Swedish secondhand organization Myrorna and the German mechanical recycling plant SOEX has been increased through activities involving improved sorting models. It is evident that secondhand buyers in Germany and Sweden display different consumer behavior, which could be a benefit as garments discarded in one country could be of interest in another. International collaboration could thus extend garment life.

Following an overview of the collected and sorted used textiles, it was obvious that material blends are problematic to recycle into new textiles. The blends also aggravate the accuracy of the current manual sorting system, which is a challenge. Although manual sorting will most probably be replaced by some form of automatic sorting, the instruments and routines developed for tagging and analyzing clothes need to be more efficient.

**Challenges on a molecular level**

The studies show that post-consumer textiles, washed and worn, are not only visually damaged but appear to be reduced both in fiber and polymer length, i.e. on a molecular level. Within the project both post-consumer polyester and cotton have been investigated, and the fiber and polymer degradations for both textiles have been confirmed. However, when converting used cotton into new rayon textile fibers, the polymer degradation of cellulose could be an advantage for the regeneration process, an area that is currently being studied. However, in the recycling of polyester, degradation is undesirable and new chemical procedures need to be developed to generate new, strong polyester fibers. For that reason, the project is examining a process that cuts used polyester into its smallest units in order to re-build them as new, recycled polymers and fibers.

Project 6 has published a report on Swedish public procurement of textiles used in healthcare with a focus on industrial user requirements. Within the public sector in the Nordic countries the textiles used by organizations, such as hospitals, are often owned by laundry and textile service companies. The report presents practical examples of public procurement of garments for patients and personnel. In the usage phase, the best criteria for material choice when switching from one textile alternative to another were identified. The outcome of the study is hands-on experience of current user requirements – including but not limited to a hospital’s demand for environmentally certified, comfortable and more colorful textiles – as well as the limits of current textiles in fulfilling green public procurement criteria. A discussion on improvement potential is also included in the report, such as the need for alternatives to organic cotton and the acceptance of those alternatives.

The acceptance of viable alternative materials was investigated using a trans-disciplinary approach comprising experimental psychology and experience design. Textile samples were prepared for tactile studies of comfort aspects with the aid of user panels. Students at University College of Arts, Crafts and Design also worked with material exploration on the sensorial level as well as the constraints and possibilities of the material. These explorative tests revealed a variety of results regarding how individuals respond to different textiles, particularly the difference between stretchable and non-stretchable textiles, and the different levels of transparency-evoked thoughts, emotions and reflections.
Understanding the conscious consumer has been in focus this year – what motivates them and how do they differ from the less sustainable consumer? In December 2013, the project invited the media and industry to Mistra in Stockholm for the release of the report on fashion consumption habits of young Swedish consumers with regard to buying, using, maintaining and discarding. The findings compiled in the report will be used to develop tools that promote sustainable fashion consumption among young consumers. The aim of the report is to make results available to a wider audience as early as possible.

The feedback so far from the user side is that they consider the findings valuable. One of the take-home messages for the Scandinavian fashion company Filippa K was that although consumers are ready for change towards more sustainable consumption, the market also needs to change. Consumer behavior surveys will now be run among young consumers in the Nordic countries, where the standard of living is relatively high and where fast-fashion is established.

Annual meeting in Copenhagen

As organizers of the internal annual Mistra Future Fashion Program Meeting at CBS in Copenhagen in November 2013, the project also organized a workshop on ‘The five ways towards sustainable fashion consumption’. The five ways were based on the findings from the consumer survey report and resulted in different impact paths: lifestyle, knowledge and information, purchase, usage and maintenance, and recycling. Researchers from MiFuFa identified barriers in the corresponding categories. In the continuation, these five impact paths may be converted to reach and guide the consumer and help them improve their environmental impact on consumption.

In May 2013, the Mistra Future Fashion Annual Symposium was hosted by the project and Malmö University. The theme of the symposium was Extended Producer Responsibility (EPR), where the project also organized an in-depth workshop on the topic. EPR is a policy option that seeks to ensure producers take responsibility for the post-consumer stage of the product’s life cycle and to incentivize change upstream in the design process. This involves bearing the costs for collecting clothes and sorting them for reuse or recycling.

Research in France

The foundation of this activity is project research conducted in France, the first and only country in the world where EPR for textiles is currently implemented. Interviews that focused on the political process and the underlying objectives were conducted with representatives from the French Environmental Agency, Eco-TLC (a government-accredited French producer responsibility organization) and the French Ministry of the Environment and Ministry of Finance. EPR for textiles began in France in 2009 and has recently moved up the political agenda in Sweden and the Nordic region as a potential response to tackling the environmental effects of clothes and textiles.

Almedalen and cooperation

In line with these activities, the project also hosted a seminar on EPR in July at Almedalen, which is the largest political convention in Sweden. On the panel were the City of Malmö Environment Director, the head of CSR at the Salvation Army - Sweden’s largest collector of textiles – and two members of the Swedish Parliament. This has led to ongoing collaboration; the French case was cited in a motion put before the Swedish Parliament calling for EPR for textiles, and the project is now working directly with the City of Malmö Environment Department and the Salvation Army to implement new textile collection systems.

The project has also continued to participate in the Swedish Chemical Agency’s textile industry dialogue meetings and contribute as reference group members to the work being done by the Swedish Environmental Protection Agency on putting together a textile waste ‘road map’ for the Swedish Government.

Participation in these different settings offers a number of benefits. The project can (1) provide knowledge input for proposals to be presented to the Government (i.e. influence politics in the making) and (2) gather detailed, good-quality data about how policy processes operate in guiding the textile industry toward more sustainable practices (i.e. study politics in the making). These activities will continue as the project moves into a phase of writing-up and publishing findings and recommendations.
publications 2013


We are disruptive: New practices for the Textile/Fashion Designer in the Supply Chain, Clara Vuletich, peer reviewed paper for the Crafting the Future European Design Conference, Gothenburg, Sweden, 17th – 19th April 2013.

We Shape Our Tools: Then They Shape Us, Politowicz & Earley, peer reviewed paper for the Cumulus conference: Praxis and Poetics. Accepted for publication September 2013. Poster exhibited at the conference.


Report on survey results on fashion consumption and environmental & social issues among young Swedes. The report was published during the Press Breakfast organized by MISTRA in Stockholm December 12, 2013.

conference presentations 2013

Debates in Enterprise and Sustainability on May 15th can be viewed at: http://www.tfrc.org.uk/debates-in-enterprise-sustainability/ Earley

Sarah Netter presented at At BÆREDYGTIGE FORSTYRRELSER workshop in Kolding, organized by Design Skolen Kolding under the heading “What consumer research is telling us: Some insights from the MISTRA Future Fashion project” on January 22.

Clara Vuletich presented the paper “We are Disruptive” at the Crafting the Future European Design Conference, Gothenburg, 17th to 19th of April.

Hanna de la Motte presented findings on the Energy Conference in Borås, Sweden, on 7th of May.

Bahareh Zamani presented the findings “Assessing the social dimension of Extended Producer Responsibility, Sustainability & Producer’s Responsibility in Textiles” at the MISTRA Future Fashion Symposium, May 29, 2013, Malmö University.

Anna Palme and Harald Brelid participated at Chalmers Chemistry and Biological Engineering annual poster session in May, with the poster “Ageing effect on cotton cellulose in relation to recycling of textiles”.

Esben R.G. Pedersen and Wencke Gwozdz presented findings from the MISTRA Future Fashion Project at the Macromarketing Conference in Toronto on June 5.

Anna Palme presented “Ageing of cellulose – property changes during long time service of cotton textiles” at the ISWFPC conference in Vancouver in June.

Clara Vuletich presented “Social Textiles” at TFRC Wellbeing event, CSM, London, 8th of July.

Clara Vuletich presented TED and the work with MISTRA/ Konstfack, at the EFF’s (Ethical Fashion Forum) Source Fashion Summit 2013, London, 12th of July.


Anna Palme, Alexander Idström, Lars Nordstierna, Harald Brelid presented “Ageing and hornification of cellulose in cotton textiles during long time use” at the EPNOE conference in Nice, October.

Kay Politowicz presented “The Changing Face of Value” at the British Academy, October.

Wencke Gwozdz presented “Sustainable Fashion – A Paradox?” at the Sustainability Day: Sustainability turned inside out! At CBS, October 8.

Siv Lindberg presented the main findings “Work on how consumers perceive different material and how this perception may be tested” at the Avancell Conference 8-9th of October, Gothenburg, Sweden.

Sarah Netter made a presentation of sustainable fashion consumption, at oikos Copenhagen Style Swap event, at Copenhagen Business School, on October 24.

Tina Mueller presented at Form Design Center Malmö on November 27, under the heading “How can consumer behaviour be understood and transformed towards sustainable consumption?”. 
program organization

program board:
Two Board meetings were held during 2013

chair of the board:
Pernilla Walkenström, Swerea IVF / Adj. Prof. Swedish School of Textiles

board members:
Mona Blomdin Persson, Swedish Chemicals Agency
Mikael Blommé, Hennes & Mauritz AB
Ulf Carlson, Chemical and Biotechnical Engineering, Chalmers
Jonas Eder-Hansen, Danish Fashion Institute
Karin Emilsson, Säro
Nick Morley, Oakdene Hollins
Per-Erik Petersson, SP Technical Research Institute of Sweden
Adjunct member: Malin Lindgren, Mistra

research parties:
SP Technical Research Institute of Sweden (program host)
Chalmers University of Technology
Copenhagen Business School (CBS)
Innventia
Konstfack, University College of Arts, Crafts and Design
Malmö University
Stockholm School of Economics (SSE)
Swerea IVF
TED, The University of the Arts London

industry parties: (contributing both in-kind and financially to program activities)
Fabric Retail Global AB (now a part of H&M)
F.O.V. Fabrics AB
H&M
I:Collect
Kiram AB
Säro Skogsägarna
Textilia
TvNo Textilservice AB

organization and agency parties: (contributing in-kind to program activities)
Swedish Educational Protection Agency
Myrorna (Swedish Salvation Army 2nd hand)
Proteokostiftelsen
Swedish Chemicals Agency

communication and outreach party:
Sustainable Fashion Academy
## Financial Information

### Program Funding (kSEK)

<table>
<thead>
<tr>
<th>Source</th>
<th>2013</th>
<th>Since the start</th>
</tr>
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<tbody>
<tr>
<td>Mistra</td>
<td>12,318,110</td>
<td>25,565,343</td>
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<tr>
<td>Södra’s Research Foundation</td>
<td>300,000</td>
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<td>Vinnova</td>
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<td>University Funds</td>
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<td>RISE (Institutes)</td>
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<td>Direct contribution from industry</td>
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<td>In-Kind from Industry &amp; Organizations</td>
<td>3,862,398</td>
<td>9,142,979</td>
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<td><strong>TOTAL</strong></td>
<td>16,953,974</td>
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### Program Cost (kSEK)

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<th>Item</th>
<th>2013</th>
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<tbody>
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<td>Project 1</td>
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<td>Project 2</td>
<td>1,628,470</td>
<td>4,070,781</td>
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<tr>
<td>Project 3</td>
<td>2,209,331</td>
<td>4,851,611</td>
</tr>
<tr>
<td>Project 4</td>
<td>3,139,260</td>
<td>4,931,250</td>
</tr>
<tr>
<td>Project 5</td>
<td>2,019,754</td>
<td>4,640,176</td>
</tr>
<tr>
<td>Project 6</td>
<td>334,556</td>
<td>886,477</td>
</tr>
<tr>
<td>Project 7</td>
<td>1,540,849</td>
<td>3,567,926</td>
</tr>
<tr>
<td>Project 8</td>
<td>1,024,699</td>
<td>2,225,800</td>
</tr>
<tr>
<td>Program Management</td>
<td>1,526,866</td>
<td>3,719,110</td>
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<tr>
<td>SFA Communication</td>
<td>565,700</td>
<td>1,083,025</td>
</tr>
<tr>
<td>Strategic reserve fund (not spent)</td>
<td>-708,750</td>
<td>-13,684</td>
</tr>
<tr>
<td>In-Kind from Industry &amp; Organizations</td>
<td>3,862,398</td>
<td>9,142,979</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>18,359,626</td>
<td>42,612,323</td>
</tr>
</tbody>
</table>

* Contribution from H&M, TVHo Textilservice and the Swedish Chemicals Group
** A negative value means that the Strategic Fund budget has been overdrawn
SP Technical Research Institute of Sweden
Chalmers University of Technology
Copenhagen Business School
Innventia
Malmö University
Stockholm School of Economics
Swerea IVF
University College of Arts, Crafts and Design (Konstfack)
University of the Arts London
F.O.V. Fabrics AB
H&M Hennes & Mauritz AB
I:Collect AG
Kiram AB
Myrorna
Proteko
SOEX Group
Sustainable Fashion Academy
Swedish Environmental Protection Agency
Swedish Chemicals Agency
Södra skogsägarna
Textilia
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