welcome back!

New York Textiles Summit:
Innovations in Textiles Manufacturing, Waste Reduction, and Reuse
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markets

2017 new york textiles summit

October 31, 2017
today’s moderator:

scott cynamon

president

cyntex co.

scottrags@optonline.net
please welcome today’s speakers:

**eric stubin**
principal + ceo; board member
2ReWear; SMART

e.stubin@tranclo.com

**dan green**
co-founder
recycleTHAT
dan@recyclethat.com
questions?
thank you!

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principal + ceo; board member  
2ReWear; SMART  
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Recycle. Save.

2ReWear™

New York State Association for Reduction, Reuse & Recycling, Inc.

The Association of Wiping Materials, Used Clothing and Fiber Industries

St. Vinnie’s
St. Vincent de Paul Society of Nassau County, Inc.

Bay State Textiles

I:CO
RECYCLE. REDEEM. RENEW.
ICO-SPRIT.COM

Product Stewardship Institute
Sustainable Solutions to Protect Our Environment

Textile Recovery
#ReClotheNY

New York Product Stewardship Council

the circular economy + innovative recycling technologies

2017 new york textiles summit

October 31, 2017
Please welcome today’s speakers:

Tasha Lewis
Assistant Professor
Cornell University, Dept. of Fiber Science + Apparel Design

tll28@cornell.edu

Stacy Flynn
CEO + Co-Founder
Evrnu

stacy@evrnu.com

Jennifer Gilbert
Chief Marketing Officer
I:CO

jennifer@ico-spirit.com
please welcome our first speaker:

**tasha lewis**

assistant professor

cornell university, dept. of fiber science + apparel design

[Email: tll28@cornell.edu]
Tasha L. Lewis, Ph.D.
Assistant Professor
Department of Fiber Science & Apparel Design
Post-production waste
WE'D LIKE OUR CLOTHES BACK NOW THANKS VERY MUCH.
Post-Consumer Textile Waste as a Raw Material Substitute

Our objectives include:

• Support SMEs with additional revenue streams
• Provide diverse end-use product potential from used clothing
• Development of accessible technology that can be customized by client/retailer
Green Eileen
Clothing
Inventory for
Creative Re-Use
# Fiber Content

<table>
<thead>
<tr>
<th>Item</th>
<th>Items</th>
<th>Percentage of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synthetic Blend</td>
<td>58</td>
<td>29%</td>
</tr>
<tr>
<td>Linen</td>
<td>47</td>
<td>24%</td>
</tr>
<tr>
<td>Silk</td>
<td>32</td>
<td>16%</td>
</tr>
<tr>
<td>Wool</td>
<td>22</td>
<td>11%</td>
</tr>
<tr>
<td>Cotton</td>
<td>20</td>
<td>10%</td>
</tr>
<tr>
<td>Natural Blend</td>
<td>17</td>
<td>9%</td>
</tr>
<tr>
<td>Rayon/Viscose</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>98</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
**Fiberizer Fall 2016**

- **100% Merino Wool**
- **70% Viscose, 24% Nylon, 6% Spandex**
- **100% Organic Cotton**

Cornell University
College of Human Ecology
Fiber Science & Apparel Design

**Woven Green Eileen Textile Scraps**
**In Fiberizer**
**Woven Fabric**
**Fiberized Materials**
Visit with graduate students to the Flsher Found Makerspace in Irvington, NY
Examining used clothing inventory with Diana Purcell (Eileen Fisher) and Schuyler Duffy (Cornell grad student)
We recently featured the output of our research at an on-campus exhibit focused on recycling textiles. This was our first full-scale pass at new products and processes that can be supported with the Fiberizer. This will help us target specific sectors for adoption of the equipment and/or the fiberized material.
Newly built Fiberizer v.2

The U.S. Manufacturing Innovation Fund (Walmart Foundation) supported the construction of this new machine and we have also identified an opportunity to manufacture additional Fiberizers for other clients. This is under consideration for startup potential.
End-Product Potential

Kelsie Doty

Fashion products
End-Product Potential

Kelsie Doty
End-Product Potential

Home goods from sustainable composites
Fiberized material used for hydroponics

Eco-friendly hydroponic substrate

End-Product Potential
The customer will indicate here when they would like to begin and end submitting their clothes into the machine. Each item of clothing will be accounted for and displayed on this screen.

When an item of clothing enters the vending machine through this slot, motion detectors inside the machine will sense it and initiate a video of clothing being fiberized. This will create the artificial reality that the customer is fiberizing their clothes on site and therefore create the feeling that they have a greater role in the recycling process.

After the customer has finished putting in all of their clothes, the rest of the recycling process after fiberization including thread production and garment creation will appear on the screen.

When idle, the screen will show a video on Walmart’s environmental mission and how the customer part.

With every 5 items of clothing submitted, customers can have their choice of one recyclable shopping bag. These non-woven, re-usable bags are made out of the short fibers that Martex Fibers cannot use for their high-quality recycled thread in Nobo clothes. Rather than have Martex Fibers sell these fibers to other companies for filters and industrial use, Walmart will be able to recollect it, and ultimately replace their plastic shopping bags.

The Martex Fibers collector will be able to collect the garments by opening up the front of the vending machine.
Summary

• We are continuing our research throughout the fall and will have more data regarding the output capacity of the fiberizer.
• Expected to support apparel and textile recycling businesses or organizations.
• We are also exploring manufacturing feasibility of the equipment itself as part of impact.
thank you!

tasha lewis

assistant professor
cornell university, dept. of
fiber science + apparel design

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please welcome our second speaker:

stacy flynn

ceo + co-founder

evrnu

stacy@evrnu.com
thank you!

stacy flynn

ceo + co-founder
evrnu

stacy@evrnu.com
please welcome our third speaker:

Jennifer Gilbert
Chief Marketing Officer
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2017 NEW YORK TEXTILES SUMMIT
ADVANCING A CIRCULAR ECONOMY

OCTOBER 31, 2017

RECYCLE. REDEEM. RENEW.®
ICO-SPIRIT.COM
GLOBAL CLOTHING CONSUMPTION
will jump by 63% from 62 million tons today to 102 million in 2030, equal to more than 500 billion t-shirts¹

20%
Average of what is globally collected for reuse or recycling²

80 BILLION PIECES
Clothing produced worldwide every year³

3 out of 4 garments
end up in landfills or are incinerated⁴

2000 - 2014
Clothing production has doubled⁶

It takes over 700 GALLONS of water to make a t-shirt...that's 140 water cooler jugs!⁷

54 MILLION TONNES
Moving global collection rates to 60% would reduce waste by about 54 million tons each year. The industry would save appx. $4.8 billion per year (costs for landfill)⁸

ENVIRONMENTAL IMPACT
of recycled cotton is 80% less than virgin cotton fiber⁹

As much as 95% of clothes and shoes thrown away could have been reused or recycled⁵

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The US is expected to spend $3.1 billion on Halloween costumes worn for one night
#FASHIONREVOLUTION
I:CO, short for I:Collect, is a global solutions provider and innovator for collection, reuse and recycling of used apparel and footwear.

Our Mission:
To Enable a Circular Economy for the Fashion Industry

Pre-loved clothing and shoes would circulate in closed product and material cycles and be used continuously in the manufacturing of new products.
I:CO FACTS

More than 40 Partners
Global logistics network

Worldwide
Innovative In-Store Take-Back Program

Collection in more than 60 countries

International solutions provider for collection, certified sorting, reuse and recycling of used clothes and shoes

Founded in 2009

Headquarters in Germany, offices in US, UK, Japan and China
AMONG OUR PARTNERS

adidas  Reebok  OVS  ADLER

CALZEDONIA  

RENO  paris  H&M  intimissimi

Levi's  

KappAhl  M&S  Columbia  & OTHER STORIES  TALLY WEIJL

KENNETH COLE  FOREVER 21  Westfield  

ROYAL ROBBINS®
OUR PROCESS

VARIABLE INDUSTRIES

TEXTILE INDUSTRY

POINT OF SALE

SORTING

REUSE

PREPARATION FOR RECYCLING

CLOSED LOOP RECYCLING

OPEN LOOP RECYCLING
CORE COMPETENCIES

- COLLECTION
- SORTING
- CIRCULARITY

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COLLECTION

PRODUCT RESPONSIBILITY

EVERYWHERE PRODUCTS ARE SOLD, THEY SHOULD BE TAKEN BACK AT THEIR END OF LIFE.
SORTING

FOR CIRCULARITY

PROFESSIONAL SORTING IS THE BASIS TO SUSTAINABLY PROCESSING USED CLOTHING AND SHOES.

REUSE

RECYCLE
CIRCULAR SUPPLY CHAIN

MATERIAL REUTILIZATION

RECYCLING OF VALUABLE RESOURCES BY DESIGNING NEW CIRCULAR SUPPLY CHAINS

OPEN LOOP
CLOSED LOOP
Partner collaboration. Denim collection contains 20% recycled cotton from post-consumer waste.
GLOBAL FASHION AGENDA
A CALL TO ACTION FOR A CIRCULAR FASHION SYSTEM

PULSE OF THE FASHION INDUSTRY

Global Change Award
AN INNOVATION CHALLENGE BY H&M FOUNDATION

Fashion +
Powered by Cradle to Cradle Certified™

TextileExchange
Creating Material Change

GCU
THE FAIR FASHION CENTER
COLLABORATION IS IMPERATIVE

Collection

Material recognition + sorting

Further development of mechanical and chemical recycling technologies

Scaling and industrial implementation

DEGREE OF REALIZATION OF A CIRCULAR ECONOMY IN THE TEXTILES & FASHION INDUSTRIES

DEGREE OF COLLABORATION
THANK YOU

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thank you!

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please welcome our fourth speaker:

scott cassel

CEO + founder
product stewardship institute

scott@productstewardship.us
epr for textiles in france

only epr law for textiles in the world
2006 (law) – 2009 (program)

scope: all clothing, linen, footwear

100% manufacturer responsibility
collection, processing, education, R&D
mechanics implemented through EcoTLC, a producer responsibility organization (PRO) that represents 93% of brands.

Incentives for use of recycled fibers in new clothing:

- 50% discount – products w/15%+ pc content
- 25% discount – products w/30%+production waste
results

2019 goal: 50% collection
(95% reused/recycled)

21% collection (2009)
35% collection (2016)

91% of collected textiles are sold second-hand or recycled
questions?
thank you!

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stacy flynn
ceo + co-founder
evrnu

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jennifer gilbert
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closing panel

textile reuse and recycling: next steps

2017 new york textiles summit

october 31, 2017
panel agenda

1. moderator takeaways (10 minutes)
2. panelists’ response (10 minutes)
3. audience discussion + Q&A (30 minutes)
4. panelists wrap up (10 minutes)
please welcome our previous moderators:

tricia carey
director business development
lensing fibers

eric stubin
principal + ceo; board member
2ReWear; SMART

scott cynamon
president
cyntex co.

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Tasha Lewis
assistant professor
Cornell University, dept. of
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session 1 take-aways
sustainable mfg/design

1. perspective of waste at all stages, including pattern making
2. reaching the consumer is complex. we all have a role to play in educating the consumer.
3. fast fashion vs. slow fashion
4. brands working towards solutions – from mass retailers to emerging designers.
session 2 take-aways collection

1. Reuse is primary, high value way to divert waste from disposal
2. Diverse stakeholder base w/experience and scale RE: donation
3. Need shared vision to keep textiles from disposal
4. Retailers can be convenient way for consumers to return used textiles
session 3 take-aways
markets

1. While prices and markets fluctuate, used clothing market remains constant
2. Global markets exist for processing and sale of second hand textiles similar to other industries
3. 95% of reclaimed textiles are mostly reused but also recycled
4. Value of second hand textiles is much higher than other commodities
session 4 take-aways

circular economy/
innovative recycling
panel facilitators:

**Scott Cassel**
CEO + founder
product stewardship institute
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**Kate McCardle**
Community outreach specialist
New York State Pollution Prevention Institute
kwmp2i@rit.edu

**Dan Lilkas-Rain**
Recycling coordinator
Town of Bethlehem, NY
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**Andrew Radin**
Recycling Director
Onondaga County Resource Recovery Agency, NY
aradin@ocrra.org
audience questions + discussion
questions

1. What are your key take-aways from the Summit? What did you learn today?

2. What are main obstacles and challenges to increasing the recovery of post-consumer textiles? What scalable solutions do you see?
questions

3. What motivates you to increase textile recovery? What actionable steps will you take after this Summit?

4. Would you be willing to continue this conversation after the Summit? What is the best forum for discussion?
thank you!

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please take our survey!

www.bit.ly/Summit-Eval
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