building South African textiles’ innovation pipeline

an art and social development project

SACO conference, 24 & 25 May 2017

Case study of human capital in developing the textile industry

Winnie Sze
SocialFabricSA@gmail.com
Context - state of SA’s textile industry

Trade and Export Values (1992 - 2013)

Change in employment (2004 – 2014)

source: DTI, 2013

source: FPM seta, 2015
## Context, cont’d - SA Textile industry SWOT analysis

<table>
<thead>
<tr>
<th>Strengths:</th>
<th>Weaknesses:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Well-established with proven longevity</td>
<td>- Insufficient application of World Class Manufacturing standards</td>
</tr>
<tr>
<td>- Development capabilities (industrial/technical niches, wool &amp; mohair, advanced finishes)</td>
<td>- Low levels of capital spent and aging equipment employed</td>
</tr>
<tr>
<td>- Design capabilities in comparison to Asian competitors</td>
<td>- Limited independent fashion</td>
</tr>
<tr>
<td>- Geographical clustering of firms</td>
<td>- Accessibility to and high cost of local raw materials</td>
</tr>
<tr>
<td>- Proximity to EU/US market vs. Asian competitors</td>
<td>- Lack of cooperation between clothing and textiles firms at a sectoral level</td>
</tr>
<tr>
<td>- English language proficiency and dominant Western culture</td>
<td>- Distance and lead times</td>
</tr>
<tr>
<td></td>
<td>- Capacity in clothing industry to supply required volumes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities:</th>
<th>Threats:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Man-made fibres, woollen targeting, niche African designs, growing of organic cotton etc.</td>
<td>- Technical support infrastructure collapses as industry contracts (e.g. CSIR, SETA, TEIs)</td>
</tr>
<tr>
<td>- Preferential trade agreements</td>
<td>- Domestic raw material base contracts as textiles and clothing sectors unable to provide sufficient volumes</td>
</tr>
</tbody>
</table>

source: Morris & Read, 2008, pp. 37-38, highlights mine
The value-added production process

Limited support in SA

Some support through DTI funding & clusters

Materials

Concept ideas

Artefacts

Research & Development

Production & Efficiency

Products
Social Fabric objective

• Stabilise and re-build SA’s textile industry (re-create sustainable meaningful jobs)
• Achieve through building a domestic design-led innovation pipeline?
  • Drawing on SA materials and SA creativity?
• Direct government funding towards design research & development (not just business equipment upgrades).
Presentation flow

1. Overview of Social Fabric project & research question
2. Focus on 1 of the iterations
3. Answering the research question
4. Conclusions on human capital
1. Overview of Social Fabric project

- Funded by DOEN Foundation
- From March 2015 to December 2016
- Focus on 4 SA textiles
- Team of 2 curators, part-time; assistant for each iteration; advisory board
- 4+ companies, 4 artists, 100+ designers, 4 universities, 2 governmental agencies
The Social Fabric process

One SA textile       One key company         One artist in research residence
                   Workshop for 25 designers with One tertiary institution

<table>
<thead>
<tr>
<th>textile “iteration”</th>
<th>company(ies)</th>
<th>artist</th>
<th>tertiary institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>felt</td>
<td>Krafthaus</td>
<td>Paul Edmunds</td>
<td>CPUT, textiles &amp; fashion</td>
</tr>
<tr>
<td>mohair</td>
<td>SAMIL SA</td>
<td>Liza Grobler</td>
<td>NMMU, fashion</td>
</tr>
<tr>
<td>socks</td>
<td>FALKE SA</td>
<td>Pierre Fouche</td>
<td>Stellenbosch, graphics</td>
</tr>
<tr>
<td>off-cuts</td>
<td>Gelvenor, Rotex, Kaytech, Chic Shoes</td>
<td>Igshaan Adams</td>
<td>UCT, architecture</td>
</tr>
</tbody>
</table>
The research question

- Creatives create differently.
- Can artists’ creative impulse, a curiosity to “see and understand” what might be, with a “desire to start everything afresh”
- Catalyse the manufacturing process?
- (Re)introduce designers to the manufacturer’s textile?
2. Focus on socks/FALKE iteration
Artist Pierre Fouché
“Portrait of Guy Nardi”, 2000–2012, bobbin lace in polyester floss, 57 x 40 cm
Brett posing for an imaginary portrait of Raymond Buys”, 2015, bobbin lace & macramé in polyester braid, 200 x 140 cm
HIGH TECH APPEARANCE

BITMAPS

EARLY FORM OF DIGITAL IMAGERY

NOSTALGIA

(BUT: design coded to the knitting machine on what appears to be quite antiquated software)
THE PORTRAIT MINIATURE

- Jewellery worn on the body
- Mementoes of loved ones
- Family portraits
- Fathers and children

- Introducing suitors over long distances
- 16th and 17th c. English and French tradition
- 18th c. rest of Europe
Research output 1 – pattern for a sock
Research output 1, cont’d
Using 2 different weaves, gives 2 different views
The design was not made, because...

- Machinist said it was “impossible”
- More likely, it was bad timing - end of year kept factory busy ahead of closing for Christmas
- And questionable institutional appetite for design vs production – whilst they had 1-2 machines that was supposed to be dedicated to prototyping, in fact they had been put to production use
Nike’s winter 2016 shoe
Pierre Fouché’s portrait made from FALKE threads

Pierre Fouché used FALKE thread to make a private commission - thicker thread than lace thread, multi-coloured
## “Journeys” workshop – 11 June 2016, Stellenbosch University

<table>
<thead>
<tr>
<th>Name (first last)</th>
<th>Creative Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Zeenat Khan</td>
<td>interiors, architecture and other</td>
</tr>
<tr>
<td>2 Zimasa Macamba</td>
<td>Fashion, interiors, jewelry and other.</td>
</tr>
<tr>
<td>3 Nicoletta Michaletos</td>
<td>architect &amp; art</td>
</tr>
<tr>
<td>4 Ian Grose</td>
<td>art</td>
</tr>
<tr>
<td>5 Rupert Jordi</td>
<td>architecture</td>
</tr>
<tr>
<td>6 Susan Gerber</td>
<td>I am a master’s student as Stellenbosch University.</td>
</tr>
<tr>
<td>7 Heath Nash</td>
<td>all</td>
</tr>
<tr>
<td>8 Maxine Aufrichtig</td>
<td>Visual Communication Design</td>
</tr>
<tr>
<td>9 Alison Stewart</td>
<td>fashion, accessories &amp; textiles</td>
</tr>
<tr>
<td>10 Frances van Hasselt</td>
<td>fashion / design</td>
</tr>
<tr>
<td>11 Mieke van der Merwe</td>
<td>illustration / drawing</td>
</tr>
<tr>
<td>12 Gwendolene van der Merwe</td>
<td>illustration</td>
</tr>
<tr>
<td>13 Gwendolyn Meyer</td>
<td>photography, design thinking, methods of engagement</td>
</tr>
<tr>
<td>14 Lilah Byrne</td>
<td>woven textiles -&gt; homeware</td>
</tr>
<tr>
<td>15 Colin Strydom</td>
<td>drawing and painting (fine arts)</td>
</tr>
<tr>
<td>17 Jessica Bosworth Smith</td>
<td>illustration &amp; sculpture</td>
</tr>
<tr>
<td>18 Nikita Morgan</td>
<td>FALKE designer</td>
</tr>
<tr>
<td>19 Koos La Cock</td>
<td>FALKE designer</td>
</tr>
<tr>
<td>20 Chantal Louw</td>
<td>Retail, project management, curation and fashion design</td>
</tr>
<tr>
<td>21 Julian Raxworthy</td>
<td>landscape architecture</td>
</tr>
<tr>
<td>22 Marthie Kaden</td>
<td>lecturer</td>
</tr>
<tr>
<td>23 Francesco Mazzarella</td>
<td>Service Design for Sustainable Fashion</td>
</tr>
<tr>
<td>24 Cherylle Cowley</td>
<td>you’ve got to love design</td>
</tr>
<tr>
<td>25 Adine Gericke</td>
<td>material science</td>
</tr>
<tr>
<td>26 Bridget Henderson</td>
<td>textile design with wool and mohair ...</td>
</tr>
<tr>
<td>27 Zimkhitha Melody Kana</td>
<td>fashion designer and vintage wear seller</td>
</tr>
<tr>
<td>28 Sibabalwe Ndlwana</td>
<td>textile design, weaving and dyeing</td>
</tr>
<tr>
<td>29 Lorin Strieman</td>
<td>Textile Designer, Jewellery Design, Fine Art and Ceramics</td>
</tr>
<tr>
<td>30 Christel Liebenberg</td>
<td>FALKE’s PR</td>
</tr>
<tr>
<td>31 Megan Jansen</td>
<td>FALKE’s PR</td>
</tr>
<tr>
<td>32 Micah Chisholm</td>
<td>Textile creative.</td>
</tr>
<tr>
<td>33 Hillary Stock</td>
<td>soft furnishings</td>
</tr>
</tbody>
</table>
PHASE FOUR
JOURNEY CONCEPTS

NAME FOR YOUR NEW IDEA / CONCEPT

The Wrap Sock
The Survival Sock

BIG BENEFITS / WHAT DIFFERENTIATES THIS PRODUCT FROM OTHERS ON THE MARKET?

You can make socks thicker/thinner or shorter or taller depending on environment.

WHO WOULD BUY / USE THIS PRODUCT? WHAT CONSUMER NEED OR MOTIVATION DOES IT FULFIL?

All people!

HOW DOES IT WORK? TELL US MORE / DRAW A PICTURE...

- Roll of sock.
- Foot
  - Wraps around foot.
  - It is biodegradable!
+ (You can even wrap your baby.)
+ (You can even eat it even
+ You can make a scarf even
PHASE FOUR
JOURNEY CONCEPTS

NAME FOR YOUR NEW IDEA / CONCEPT
INNER SOCK
CLIMATE (MOOD SOCK)

CONCEPT DERIVES FROM THE MOOD RING
- CHANGES COLOUR TO MATCH YOUR MOOD OR FEELING
- IT REFLECTS YOUR INNER ENVIRONMENT'S MOOD / FEELING

WHAT IS THE BIG BENEFIT? WHAT DIFFERENTIATES THIS PRODUCT FROM OTHERS ON THE MARKET?
you have a personal and physical effect on
what colour your sock will be on the inside or outside

WHO WOULD BUY / USE THIS PRODUCT? WHAT CONSUMER NEED OR MOTIVATION DOES IT FULFIL?
people who love magical products

To feel empowered
CREATIVE better

HOW DOES IT WORK? TELL US MORE / DRAW A PICTURE...

Rolled down

- express your mood to world

App - comment feedback
PHASE FOUR

JOURNEY CONCEPTS

NAME FOR YOUR NEW IDEA / CONCEPT

ecologically conscious Fabric

BIG BENEFITS / WHAT DIFFERENTIATES THIS PRODUCT FROM OTHERS ON THE MARKET?

- it sheds fibres in winter
- it picks up fibres winter (like cat fur)

WHO WOULD BUY / USE THIS PRODUCT? WHAT CONSUMER NEED OR MOTIVATION DOES IT FULFIL?

- it transforms according to temperature + seasons so that you buy less, but buy smart

HOW DOES IT WORK? TELL US MORE / DRAW A PICTURE...

smart fabric

↓

transformative

↓

adjustable

↓

ecologically conscious

(poem)

too many socks, roaming around the earth, with nowhere to go but overpopulated feet. stamping the ecology into oblivion.

What is taking us to do about it?
• InStyle magazine Top 22 trends for Spring 2017: “Good girl socks gone bad”
• GQ magazine 10 style trends worth trying in 2017: “Calf-high socks with shorts”
Feedback Q1

<table>
<thead>
<tr>
<th></th>
<th>my primary interest in attending the SF workshop was (please tick all that apply)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>to (re)learn about the material of the workshop</td>
</tr>
<tr>
<td>1a</td>
<td>59%</td>
</tr>
<tr>
<td>1b</td>
<td>to be stimulated generally</td>
</tr>
<tr>
<td>1c</td>
<td>76%</td>
</tr>
<tr>
<td>1d</td>
<td>to engage and network with other participants</td>
</tr>
<tr>
<td></td>
<td>71%</td>
</tr>
<tr>
<td>1d</td>
<td>other</td>
</tr>
</tbody>
</table>

|   | other                                                                       |
|   | 76%                                                                          |
Q2

which area(s) of the workshop did you find most useful

interaction

speaking to people -> connecting with other creatives

all! It was a great day. Not for one moment did I think what I heard was not useful

all of it

creative process; personal journey; networking

morning (focus was ideation)

compare & contrast, journey material, playing less so but still fun

the story telling part; connecting with people, sharing and connecting experience

task: similarities & differences; expressing sock experience

the ppts in the beginning of the workshop

the 2 on 2 experience

1st part - compare objects and contrast & then design

actually the compare/contrast aspect was cool, though I was cynical about it. The sock making was fun

I really enjoyed the comparison brainstorm (similarities, differences, & improvements). I found being thrown into a room full of stuff and being asked to "make" something very challenging but once I got the idea it became really fun

The thought experiment of comparing socks to other objects. It was a really interesting exercise and brought about some interesting, innovative ideas. I will definitely use this exercise again.

the playing with materials and interviewing one another

the making part was best (I missed almost everything else)
**Q3**

**which area(s) of the workshop did you think could be improved**

I liked it all even the walks between the spaces. Perhaps including wording on active listening - give an e.g.

Perhaps more time to play with material

presentations - seemed like there was a hidden agenda

last task: expression vs idea generation. I would suggest to create a more constructive exercise. A broad interpretation can be tricky to define, a defined interpretation makes it easier to communicate concept form after experience

the afternoon session about textiles was a fun experimentation, but it did not really lead to a concept. And it was difficult to fill the concept form. Maybe, that's you can do by yourself

making part - needed more a show-and-tell time (sharing our findings)

the last part was a bit drawn out

bit too socky. But sponsors are important focus more on the social also fabric is a rich word that could have been explored
do you believe anything in particular gained from this workshop experience will be particularly helpful?

socks vs spectacles! Rules of engagement!

I enjoyed it thoroughly and found it very interesting - especially the creative process stuff

To belief (sic) in the creative process again - being reinforced again

yes, spontaneous collaboration with other like-minded people

conducting workshops, exchange of ideas

yes, I think how to solve problems and deal with people

network for industry of textiles

the networking and connecting with people, the playing, igniting creativity, openness

I hope the company will implement new ideas, though an r&d department, with no constraints

the advice I got given and materials I was exposed to

to open up to new idea

yes, the knowledge of methods explained before lunch

made me think about the thinking/workshopping thing, ones I will be running soon

I will definitely use the comparison brainstorm again in the future. It's a great way to spark/collaborate/come up with ideas with other people

networking, connecting with like-minded people

develop my courage
If a design development agency was available to you, please rank the following services in order from most useful to least useful (1 is most useful, 5 is least useful)

<table>
<thead>
<tr>
<th>Service</th>
<th>Average Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>7a  business advice (bookkeeping, invoicing, etc)</td>
<td>3.58</td>
</tr>
<tr>
<td>7b  marketing advice (helping to get to market, publicity, etc)</td>
<td>3.67</td>
</tr>
<tr>
<td>7c  design development advice (how to source materials, how to prototype and develop)</td>
<td>2.75</td>
</tr>
<tr>
<td>7d  networking opportunities (talks, workshops, etc)</td>
<td>2.50</td>
</tr>
<tr>
<td>7e  other – “incubation”, “residencies”, “grow export. There is too many local creatives here, but not enough market”</td>
<td></td>
</tr>
</tbody>
</table>
3. Answering the research questions

- Creatives create differently.
- Can artists’ creative impulse, a curiosity to “see and understand” what might be, with a “desire to start everything afresh”
- Catalyse the manufacturing process?
- Inspire designers to use the manufacturer’s textile?
Host manufacturers

- **Project impact on host manufacturers**

<table>
<thead>
<tr>
<th>textile “iteration”</th>
<th>company(ies)</th>
<th>short-term, direct impact</th>
<th>longer-term impact?</th>
</tr>
</thead>
<tbody>
<tr>
<td>felt</td>
<td>Krafthaus</td>
<td>positive</td>
<td>positive</td>
</tr>
<tr>
<td>mohair</td>
<td>SAMIL SA</td>
<td>negligible</td>
<td>?</td>
</tr>
<tr>
<td>socks</td>
<td>FALKE SA</td>
<td>negligible</td>
<td>negligible</td>
</tr>
</tbody>
</table>
Possible reasons for negligible impact on most hosts?

- Cox (2005) report on factors that hindered innovation capabilities:
  - lack of belief in the value of, or confidence in, the outcome;
  - not knowing where to turn for specialized help;
  - limited ambition or appetite for risk;
  - too many other pressures on the business;
  - cost,
  - lack of in-house design or creative skills;
  - lack of customer demand;
  - manufacturing or development issues;
  - regulatory issues / government bureaucracy;
  - and design not being considered as important.

- In cases of FALKE, SAMIL & other companies who turned the project down:
  - Risk-aversion of successful companies
  - Time and capital constraint of successful companies
Reason why positive impact on Krafthaus?
Changing mindsets: “Not a mistake, just something else”

Owner/designer of Krafthaus Stephanie Bentum and Artist Paul Edmunds discussing their collaboration during the felt iteration.
Artist Paul Edmunds’ “mistake” leads to a different type of felt
Which Krafthaus developed into a commercial product “koffieklip”
Longer timeframe & resources needed?
Kaytech’s geo-textile fibre cannot be knotted
Yet artist Liza Grobler successfully uses it to crochet an artwork
Dear XXX... Our project has ended and I'm writing final communiques in hopes that what we share will prove useful to those who supported our project. I'm writing about the "shiny, white, rope" that you use to make your products. I don't recall who at Kaytech told me that it was not possible to knot the rope. Be that as it may, I thought you might be interested to know that it can be readily crochet, as demonstrated by the work pictured here. ...At the least, we hope it gives you artistic pleasure; we also hope this info might be of use to you technically in your product development; both of which are the aims of the Social Fabric project.

Thanx Winnie & Helen, Some people just have talent, and then there are the scientists and engineers among us – we lack that creative bit I am afraid... Well done and thanx for the update.

? But can something be done to try to develop Liza’s discovery into something commercialisable?
Impact on workshop participants? Example from mohair workshop participants, concepts from an architect & a fashion student

**MOHAIR CONCEPTS**

**GROUP MEMBERS:**
- John Angell
- Amy Le

**NAME FOR YOUR NEW IDEA / CONCEPT**

**KEEP YOUR HAIR IN THE CLOUDS.**

**BIG BENEFITS / WHAT DIFFERENTIATES THIS PRODUCT?**

The project is really centered around a concept rather than an actual product, that as an architect explores the potential of mohair as a space defining element. During the workshop, two core ideas emerged:

1. **Mohair as a Cladding System**
   - Mohair as a linear/feathered element

2. **Mohair as a Weathering Element**
   - These ideas were explored in the making of an umbrella.

While the umbrella exhibits a starting point for potential product idea, it is the idea of mohair at a larger scale and the potential textural development of the exploded ideas that would interest me further.

**MOHAIR CONCEPTS**

**GROUP MEMBERS:**
- Amy Le

**NAME FOR YOUR NEW IDEA / CONCEPT**

Not sure about a name. Maybe 'touch-quick'.

Guides the blind people to move easily in their homes. Soothing to some autistic people.

**BIG BENEFITS / WHAT DIFFERENTIATES THIS PRODUCT?**

From my knowledge, there are no companies just creating this product.

It caters to a great need throughout the world.

**WHO WOULD BUY / USE THIS PRODUCT?**

Sell: Interior decorators/mohair manufacturers/architects

Buy: Blind/autistic/special needs.

**HOW DOES IT WORK? TELL US MORE / DRAW A PICTURE...**

- Ground floor: frames, carcasses along walls, different floor textures & on ceilings.
- Each texture indicates a different room.
- Textures also help some autistic people to have a room where when a fit occurs the person can go to stabilize him/herself.

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*A SOCIAL FABRIC WORKSHOP FACILITATED BY www.SYINNOVATION.co.za*
4. Conclusions

- Economic capital: in rand, 175,975
- Human capital: in numbers
  - 7 companies engaged (3 directly)
  - 4 tertiary institutions
  - 2 governmental agencies
  - 4 artists
  - 100+ workshop participants
  - 4 outcome books & 4 video artists
  - 1 government case study
  - 1 website
  - 1 Google Arts & Culture project
  - 1 exhibition
  - 2 curators + 4 part-time assistants
Human capital – some lessons learnt

• Creativity is not 1 skill, thus a creative economy is a creative ecology
  • Investing in only 1 set of creative skills is counter-productive
  • Instead invest in the creative value-add chain – develop skills of conceptualisers, designers, makers through to producers & marketers

• Leverage the investment by encouraging collaboration
  • But diversity of skills & opinions also mean diversity of ways of working & objectives, let alone differences in personalities, which means collaboration can hinder as well inspire innovation
  • Collaborative platforms need to help develop people skills, as much creativity and technical skills

• Allow a project space to grow
  • Rather than a large budget and a set of high targets, which presupposes know or sets out all the answers
  • Instead start with a small budget and allow the project team to learn (particularly important in new areas of research & development)
What would I do differently/next time?

- Increase the scale: 1 textile, X artists-in-residence at X companies
- Capture the knowledge in a “Materials Library”
References

- CCDI (2012), “Design, driving competitive advantage in the Western Cape”
- Christensen, C.M. (1997) "The Innovator's Dilemma: The Revolutionary Book that Will Change the Way You Do Business" (Collins Business Essentials)
- Gabrielsen, G., Kristensen, T., & Lind H (draft version 20 June 2014) Measuring Design Value, used with the kind permission of Kristensen, University of Copenhagen
Find out more...

- www.SocialFabricSA.org.za
  - Output books for all 4 iterations
  - “How to” book
  - Video interviews with the 4 participating artists (also on youtube)

- SocialFabricSA@gmail.com
  - Case study written for WCEDP (please email for copy)

- Google Arts & Culture – fashion – launching 8 Jun