

# PAPER TECHNOLOGY INTERNATIONAL

THE JOURNAL OF THE BIOFOREST PRODUCTS SECTOR



## PITA PAPER*matters!* 2018 Conference & Exhibition at Lancaster University

**Tensei: Smart fibre blending**

**Annabelle Flier (Tensei)**

# PAPERmatters 2018!

## The Presentations

**Annabelle Flier**

**Tensei**

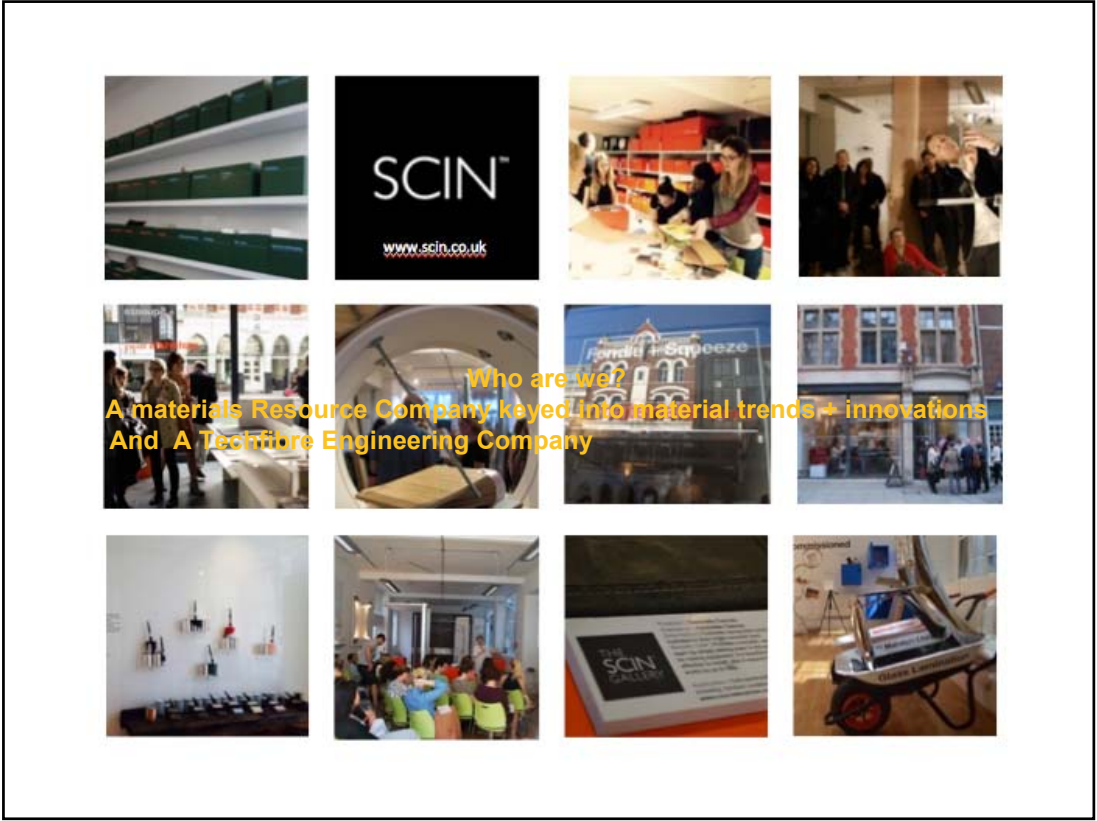


Annabelle Flier is a trained Architect and committed entrepreneur, ruthless doer and relentless creative with 3 different businesses. All of which are creative based and share a similar strength: the understanding and taking product to market. She is a natural challenger thanks in part to an inherent curiosity. Paper is her latest obsession and she is delighted to be amongst individuals that share that passion. One of her pet hates is the word Innovation...



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# And then, they went to market



# The Light bulb Moment

- It Began with a book....



# Our ambition:

- To create a new Brand Category for the Paper Industry using alternative fibres from agricultural and bio- industriale waste.
- **By**
- Developing pulp formulations from these fibres
- Creating a resource management system that delivers consistency- one of the key inhibitors for adoption.

An example of a Tensei Optifibre formulation for a customer that wanted us to exceed current strength.

Description	Customer pulp	Tensei Optifibre A - 20% wood fibre	Tensei Optifibre B - 0% wood fibre
Freeness, mL CSF	380	456	378
Bulk, cm <sup>3</sup> /g	1.75	1.77	1.76
Tear Index, mN*m <sup>2</sup> /g	7.25	13.99	11.75
Breaking length, km	3.47	6.14	6.29
Tensile Index, N m/g	33.99	60.18	61.67
Stretch, %	3.41	4.27	4.96
Burst Index, kPa*m <sup>2</sup> /g	1.91	4.00	4.10

THE PROOF



# Naming ideas for this new group of materials

Materials in the paper category with a 'green' positioning:

**Bio-composites**  
**Bio-fibre composites**  
**Bio waste composite papers**  
**Bio fibre substrates**  
**Bio-composite substrates**  
**Biostrates**  
**Organocomposites**  
**Agri-papers**  
**Eco paper**  
**Bio+ paper**

Materials in the paper category with superior performance capabilities:

**Mixed Fibre paper**  
**Blended fibre papers**  
**Poly-fibre paper**  
**Poly-blend papers**  
**Polyfibrous paper**  
**Optiblend papers**  
**Fibre-craft paper**  
**hybrid blends**  
**fibre blends**  
**opti-fibre paper**  
**Optibre papers**  
**Polibre papers**  
**Maxibre papers**  
**ultra papers**

Defined by what it isn't:

**Non-wood paper**  
**woodless paper**  
**Non-arbre paper**  
**Non-arbrous paper**

## What are the category insight start points now?

**Bio-wastes need to be given a platform of understanding - not to simply feel like leftovers we found lying around.**

There needs to be either

(a) real sense of performance and capability built in

or

(b) a value generated in using what was going to be wasted e.g. extra revenue for farmers

## OUR MOTIVATION:

### The perfect storm of 3 trends

Industry trend

+

Consumer trend

+

Consumer trend

*Resource constraints:*  
Forestry management globally will not be able to keep pace with increasing demand .

*According to The Global Pulp and Paper Association, there will be a shortfall of 250million managed forestry hectares.*

*Wood pulp costs started to rise in 2013 and continue to do so, with margins being squeezed a need to find an alternative is increasingly important*

*Paper Performance:*  
Ever increasing consumer needs especially in the packaging sector

*Trend of moving away from plastics and looking for alternatives*

*Diminishing big business environmental impact & sustainability transparency is increasingly required by both consumers and governments.*

*Companies and brands that champion innovations in this space, add value and drive loyalty*



CUSTOMER NEED

# Your ambition:

**‘I believe in Innovation, I do , I do’**

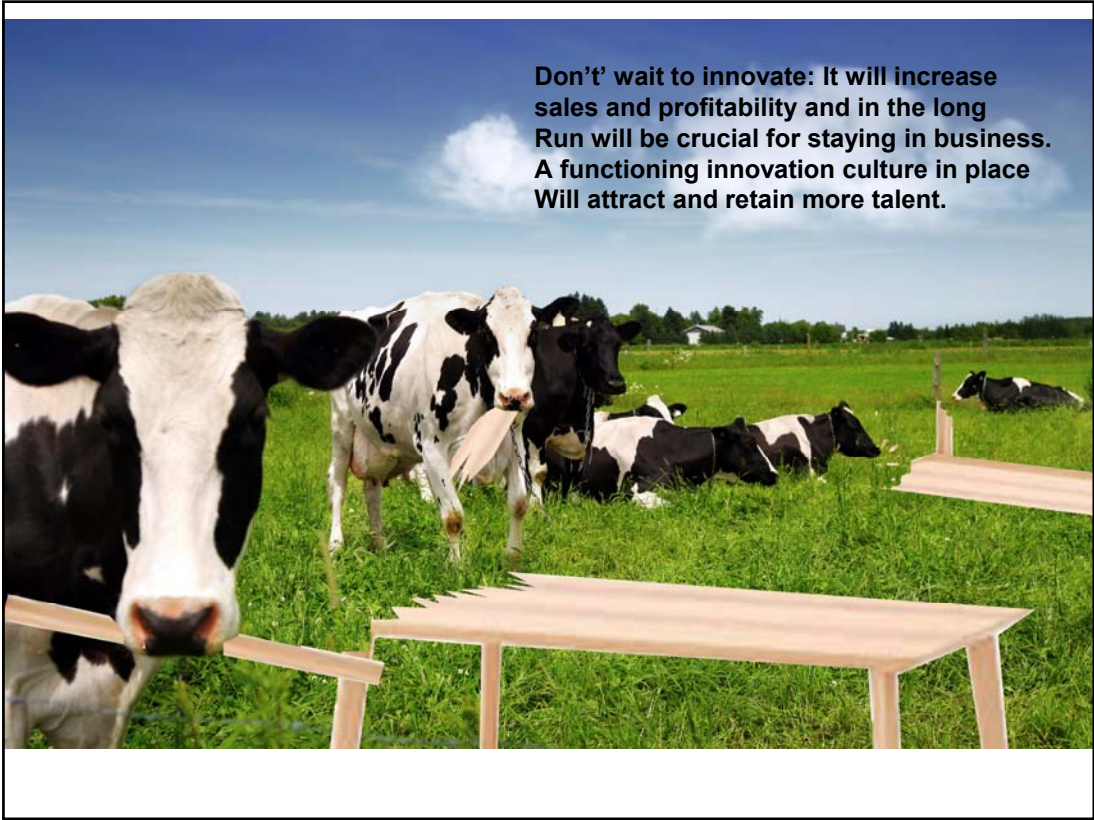
Company Priority: Innovation + product development is a the number 1 priority according,according to 56% of the respondents displacing pricing and margin management. (53%)

PARADOX: 90% of all companies think they innovate more strongly than their competitors.....hmmmm

Cost trends: no1 raw materials, 64% said it would go up as opposed to 9% saying it would go down. 2016 – 42% predicted up, 2015 – 29% said up

External Drivers: 57% believe that changing customers behaviours and requirements is the key external driver in the next 5 years

\* All stats thanks to Step Change Consulting Survey 19<sup>th</sup> Annual RISI European Conference , 4 year results comparison



# Re thinking

- 1. COURAGE:
- 2. DE-RISK
- 4 RE IMAGINE
- RE IGNITE





# Close to Home

What is our vision? To help to develop further opportunity for the UK paper Industry – possibly entering the lower volume , higher value market place. More specialised, less commoditised for the smaller mills. And to develop performance enhanced paper or a new material type, for the larger mills that can respond to their client needs.

Become the nation of challengers and experts embracing a paradigm shift .