

PAPER TECHNOLOGY INTERNATIONAL

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

**EcoPulping: A low carbon & economical process to
transform wheat straw / agri-residues into paper pulp**
Florence Miremadi-Nafici (Nafici)

PAPERmatters 2018!

The Presentations

Florence Miremadi-Nafici

NAFICI Environmental Research (NER)



Engineering Graduate of French Engineering school (EPF Ecole d'Ingénieurs - former Ecole Polytechnique Feminine, Paris), Florence began her career in the power transmission industry. With a desire to pursue environmentally-conscious projects, in 2009, she joined Shahriar Nafici, to take forward his latest innovative process to transform agricultural residues into paper pulp in an environmentally friendly way. Shahriar already had over 18 years' experience of successfully developing different straw-to-pulp processes, and together, they developed the EcoPulping business in West Sussex, UK, now called NAFICI Environmental Research. With private and governmental funding from the EU, UK and China, they unveiled a pilot plant and filed a patent in 2013 and have since developed a larger, semi-commercial plant in China, producing pulp onsite for a paper mill. The first fully scaled up industrial plants are now being planned for construction in 2019/20, in the UK and China.

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Problem: environment & costs



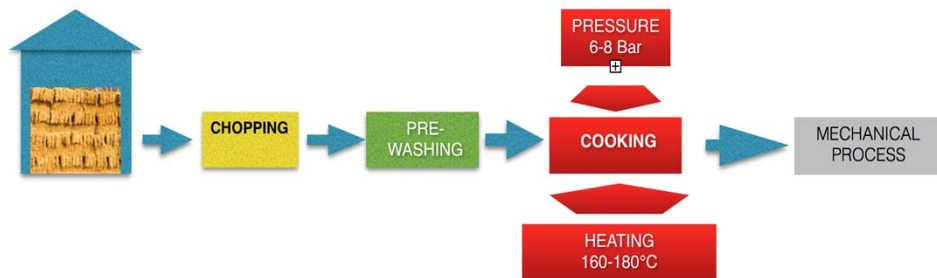
- No solution for effluent for small-scale production

- transport/storage or process too expensive for large-scale production

Solution : ECOPULPING Process



Traditional processes



Solution : ECOPULPING Process

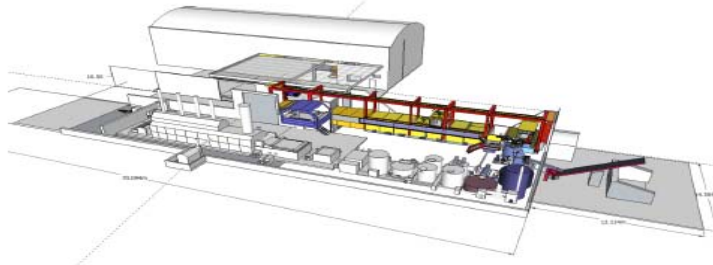


Small or large scale with economic and technical problems resolved

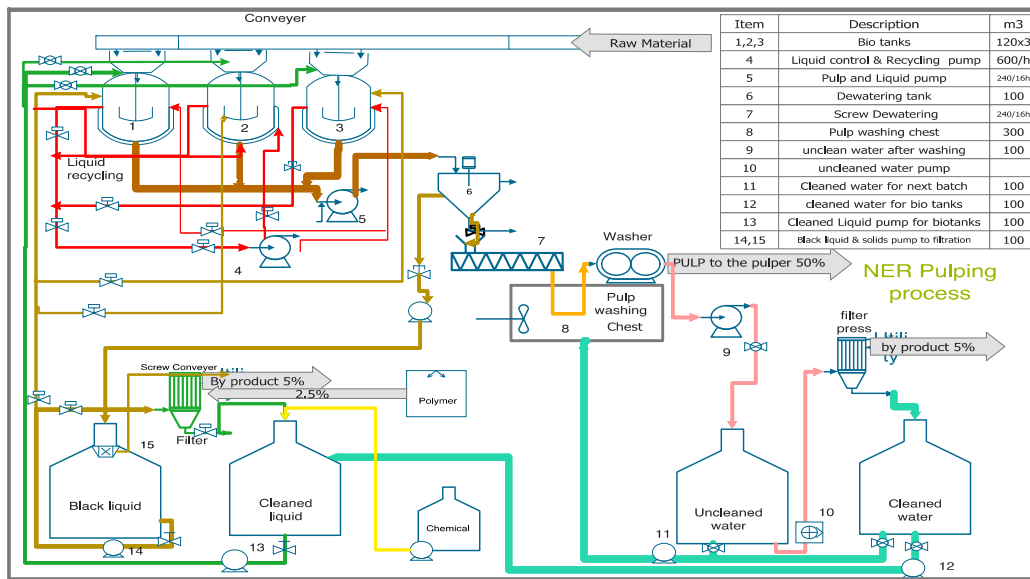
Reduced capital & operational costs

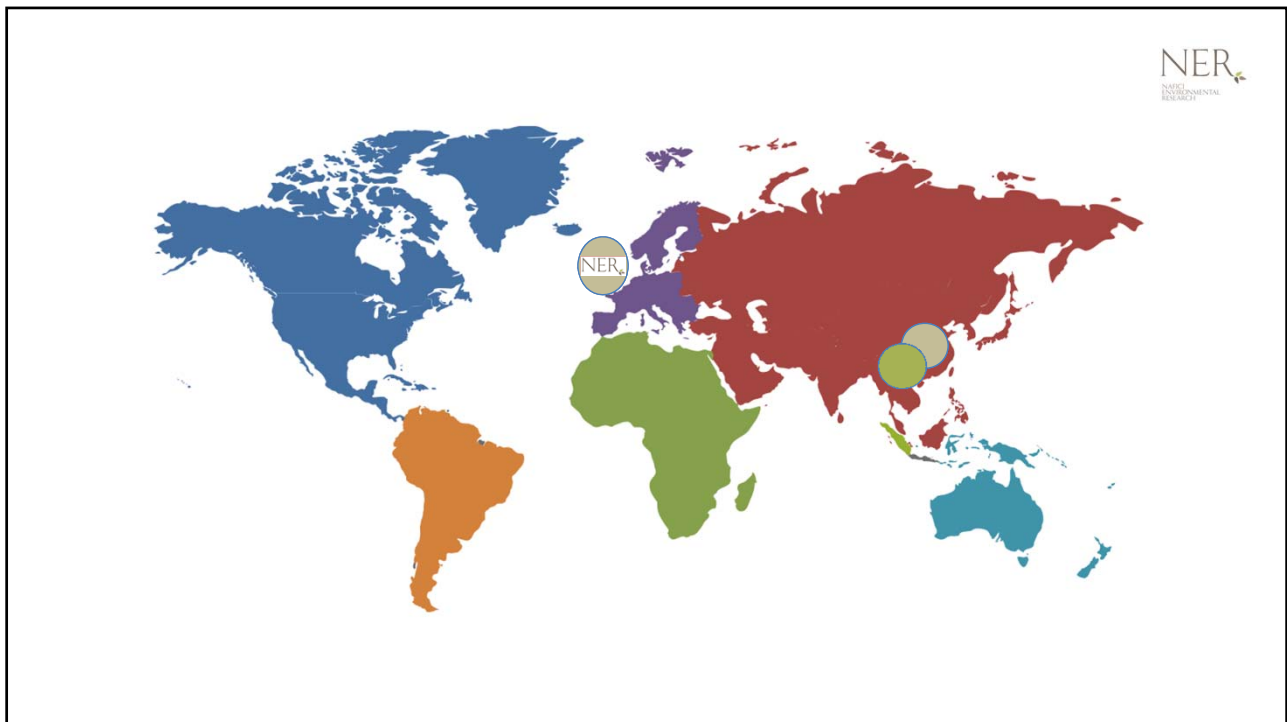
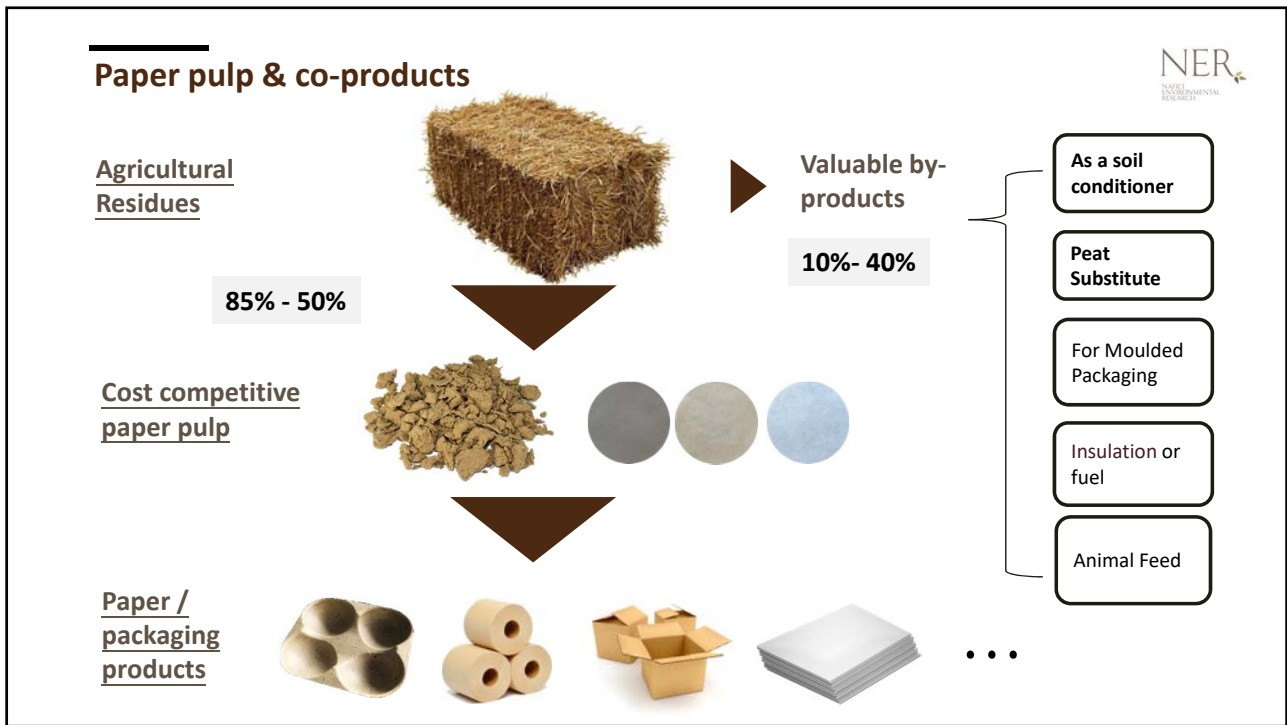


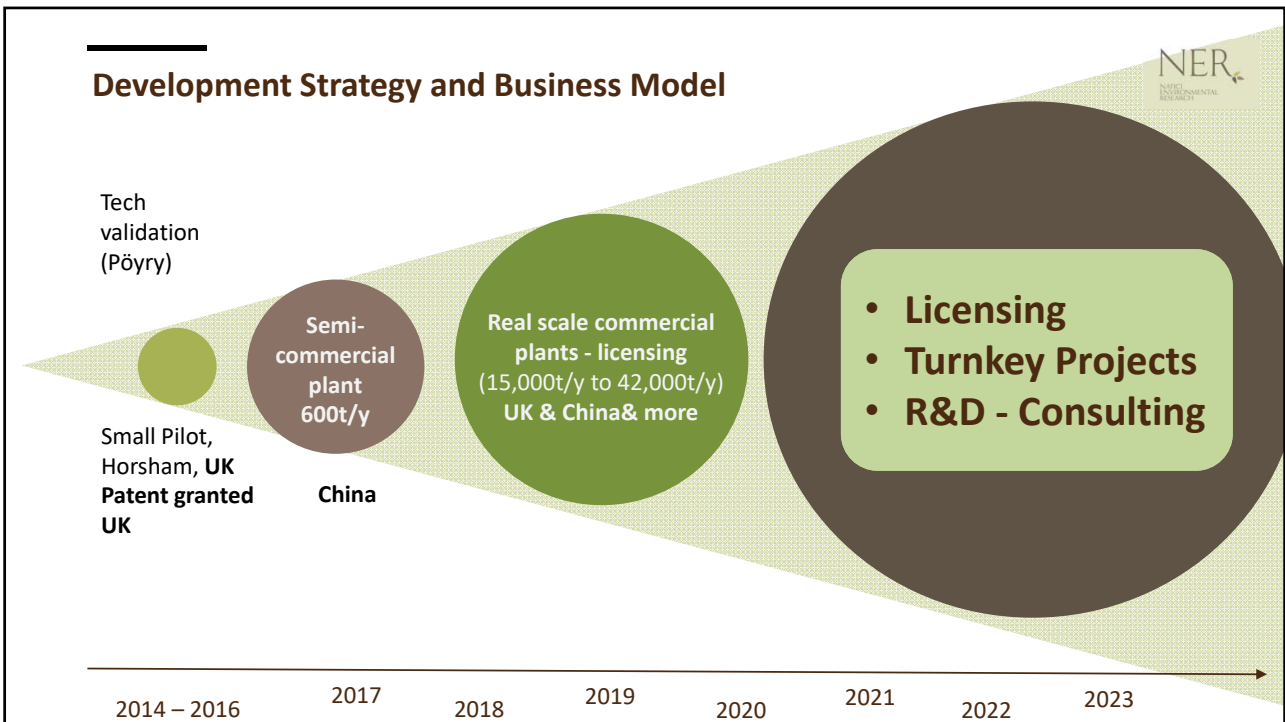
1. Biomechanical process
2. Low heat, no pressure or steam : 62% less energy than traditional processes
3. Closed loop system & no waste: process near the farms
4. Straw with high or low moisture content : cheaper straw and outside storage possible
5. Simple equipment
6. Valuable by-products



Closed loop system









Team

						
Shahriar Nafici Co-founder, CTO, Inventor Biotechnologist & Industrial Designer (Cranfield University and Tehran University)	Florence Miremedi Co-founder, Director, Engineer, from former Ecole Polytechnique Feminine	Alan Edmonds MBA DMM PgCE FInstLM Non Executive Director and advisor	Geoff Rampton Non executive Director Due diligence	Hugh Lawrence, CAD Horsham Design	Mr Qinghua Liu Director, Sales manager, China	Haisu Zhao Development Manager, China

Project developers/ partners / engineering / consultant / Research & test centres

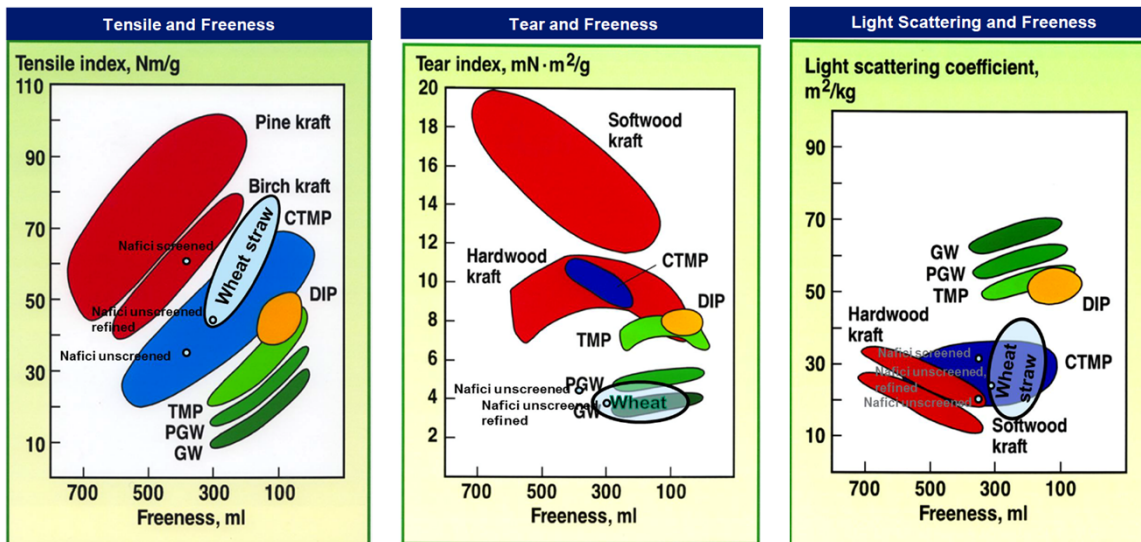
				
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Pulp tested on a 400t/d paper machine

Wheat straw Pulp specifications



Other agricultural residues tested



Wheat, Oat, Barley straw



Date tree leaves



Miscanthus

Reed

Corn stover

Rice straw

Grants and Awards



NER
NAFICI
ENVIRONMENTAL
RESEARCH

Thank you

QUESTIONS?

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