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INVESTOR PRESENTATION

DECEMBER 2017

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COMMERCIALISING **PLANT-FREE** CELLULOSE TECHNOLOGIES

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WHAT IS CELLULOSE?

Cellulose is the building block raw material found in items people use on a daily basis such as paper, clothing and hygiene products. Currently, cellulose is obtained from the following sources…

A **PLANT-BASED** RAW MATERIAL

COTTON
Cotton fiber is 90% Cellulose

WOOD
Wood contains 40–50% cellulose

BAMBOO

A MICROBIAL-BASED **PLANT-FREE** RAW MATERIAL

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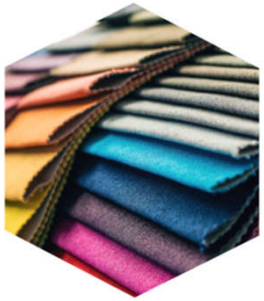
WHAT INDUSTRIES USE IT?

Cellulose is produced globally and is the main ingredient of textiles and apparel made from cotton and other plant fibers. It is also the main component of paper and has applications across multiple global industries.

We are initially focusing on Textiles

US$500b industry...



TEXTILES & APPAREL

HYGIENE

FOOD

HORTICULTURE

PAPER, PLASTICS & POLYMERS

MEDICAL

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TODAYS ISSUES

Cellulose fibres are currently derived from environmentally damaging cotton and wood sources, which then go into making textiles and apparel.

COTTON

8 months to grow

33 million tonnes annually

8,000L water to make 1 pair jeans

WOODPULP

18 years to grow

REGENERATED

40% of all industrial wood harvest

Toxic Process

PETROLEUM

180 million years to form

70b barrels PA to make synthetic fabrics

Toxic Process

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INDUSTRY SEEKING SUSTAINABLE FIBRES

Current fibre methods are **environmentally unsustainable**

Cotton is receiving more press about being the **world's dirtiest crop**

Headlines around the environmental impact are increasing

Brands, retailers and manufacturers are seeking sustainable alternative fibre resources from the current norm

Textile and apparel manufactures have had **limited alternative eco-friendly** options available to date…

Source: The institute for sustainable communication, world wildlife Fund, "ACB The True Cost" Documentary

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NANOLLOSE

A SUSTAINABLE ALTERNATIVE

Developing innovative **PLANT-FREE Cellulose** fibre technologies

Eco-friendly fermentation process to grow cellulose fibres

Potential to provide an alternative to cotton and wood fibres

Accelerating development to show Nanollose fibres can be used **in the same was as others** to make clothing and textiles

Recent global fibre breakthrough achieved

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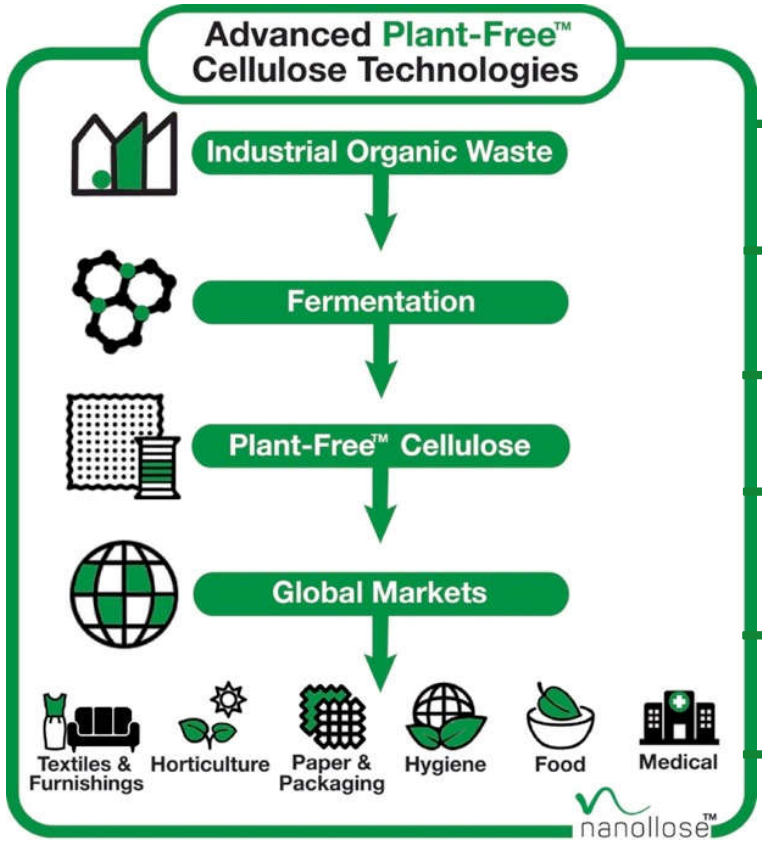
OUR PROCESS

Acetobactor xylinum, a non-hazardous bacteria, converts biomass waste products from the beer, wine and liquid food industries into **PLANT-FREE Cellulose** fibres

Environmentally sustainable alternative to plant-based natural fibres and petroleum based synthetic fibres

Technology is simple and **highly scalable**, allowing for fast scale-up and operation



NO PESTICIDES

LOW WATER CONSUMPTION

NO DEFORESTATION

NO KRAFT PULPING PROCESS

LOW ENVIRONMENTAL IMPACT

LOW ENGERY USE

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FASTER GROW CYCLE

NANOLLOSE FIBRES
18 Days

COTTON FIBRES
8 Months

TREE FIBRES
18 Years

OIL FIBRES
180 Million Years

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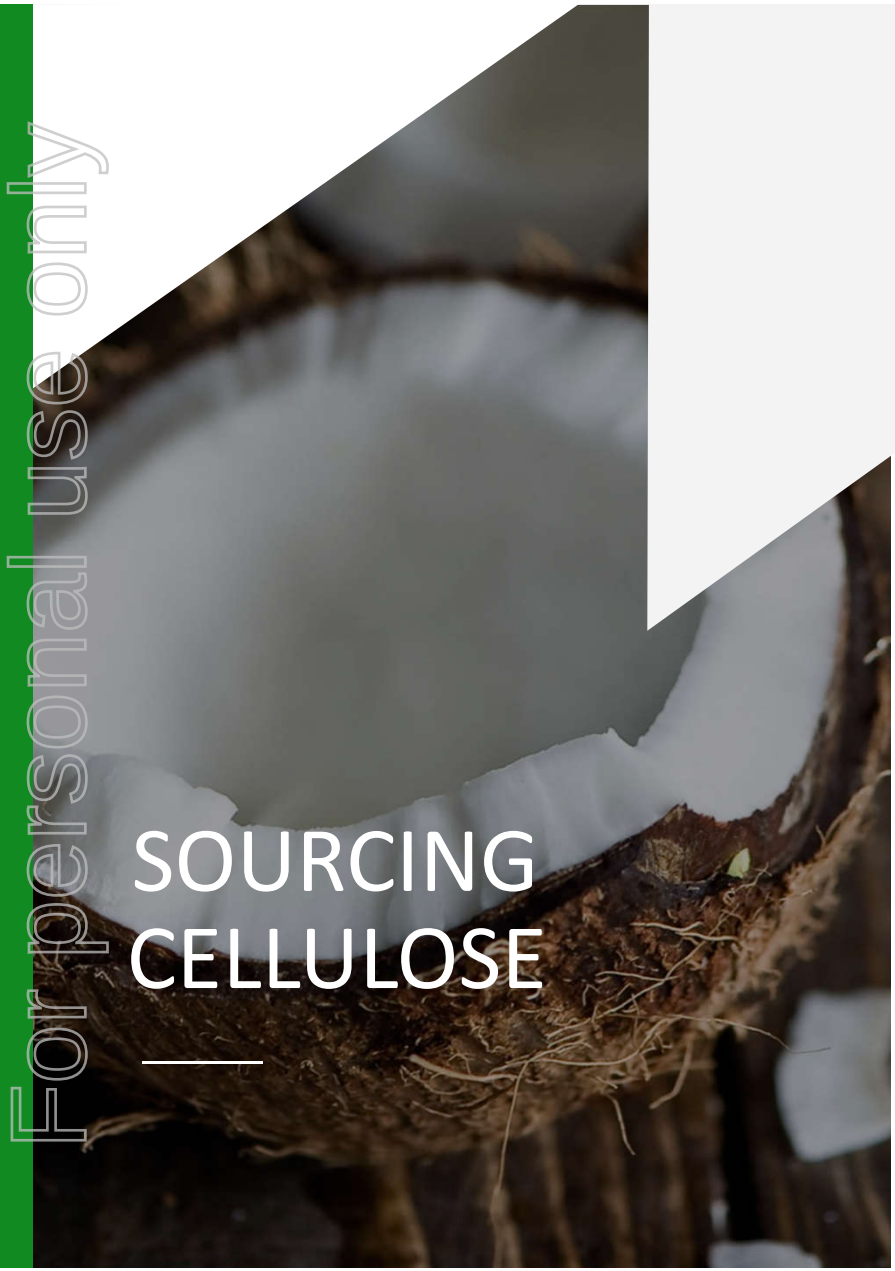

SOURCING CELLULOSE

COCONUT BY-PRODUCTS (IMMEDIATE SUPPLY)

Nanollose plans to tap into the established Coconut industry to secure pilot-scale supply of Plant-Free cellulose, which will then be processed into valuable fibres for industry. A variety of coconut by-products can be synthesized into microbial cellulose.

ACETOBACTER XYLINUM → COCONUT BY-PRODUCTS → PLANT-FREE CELLULOSE

+ Advanced discussions underway with suppliers

ORGANIC WASTE (LARGE SCALE)

Nanollose also intends to explore & develop other sources of liquid organic waste (beer, wine, sugar) as a feed stock for Acetobacter to create Plant-Free Cellulose.

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FIRST COMMERCIAL FIBRE OPPORTUNITY

Nanollose has developed a revolutionary **PLANT-FREE Cellulose Rayon Fibre**

Rayon is a well established fibre currently made from cellulose derived from trees

High growth market valued at US$10B in 2014, **growing to US$16.3B in 2019**

Rayon is used to make everything from home furnishings to clothing

Significant environmental concerns with current Rayon production

Source: Global Rayon Fibers Market 2015-2019 TechNavio Insights

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NANOLLOSE RAYON FIBRE

Nanollose's revolutionary Plant-Free viscose-rayon fibre with potential applications across global rayon markets

Significant global breakthrough for the multi-billion dollar textile and clothing industries

Nanollose believes there is **no other eco-friendly PLANT-FREE** Rayon fibre available to textile and clothing manufacturers

Nanollose is a **first mover** in offering a sustainable **PLANT-FREE** Rayon alternative

Validates the Nanollose technology can convert **PLANT-FREE** microbial cellulose into a valued commercial fibre product

Provisional patent application has been filed to protect intellectual property of breakthrough

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OUR SUSTAINABLE RAYON PROCESS

CURRENT RAYON FIBRE PROCESS

Trees are cut down, barked and chipped

Wood chips are treated with hazardous chemicals using energy and creating hazardous waste

Cellulose converted to rayon by viscose process

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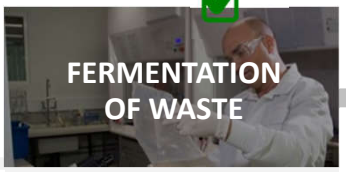
Achieved



Microbe converts organic waste into microbial cellulose

NO hazardous chemicals,

Low energy & Low waste.

Achieved

Achieved

Nanollose technology converts Plant-Free Cellulose into rayon

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PATHWAY TO MARKET

Commercial partners will take and accelerate the Nanollose technology to global markets

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PLANT-FREE™ RAYON FIBRE

ECO FRIENDLY

Revolutionary sustainable fibre alternative

ROYALTIES

LICENSING DEALS

TEXTILE OR APPAREL PARTNER

- Industry partners to **license Nanollose technology**
- No major retro-fitting of machinery and processing
- Simple process to **replace current fibres**
- Enormous sustainable PR opportunity for partners
- **Early stage discussions underway**

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FUTURE MARKETS

While textiles and apparel are the key focus, there is significant opportunity for our **PLANT-FREE Cellulose** to be an sustainable alternative to the current cellulose offerings from environmentally damaging sources.

MEDICAL PRODUCTS

Natural nano-structures makes it ideal for the regenerative tissue medical field (large surface area)

Non-pyrogenic (no cell rejection)

PERSONAL HYGIENE

Natural absorbent properties

Ideal for pads & nappies

100% biodegradable alternative

SEED GERMINATION

Soilless opportunities

High water retention capacity

PAPER, PLASTICS & POLYMERS

High strength

Natural adhesive bonding qualities

Global production of paper and cardboard is 406.5 million metric tonnes in 2014

FOOD

High in fibre, natural bulking agent

Gluten free

Low fat substitute

Increased acceptance & applications across the food industry

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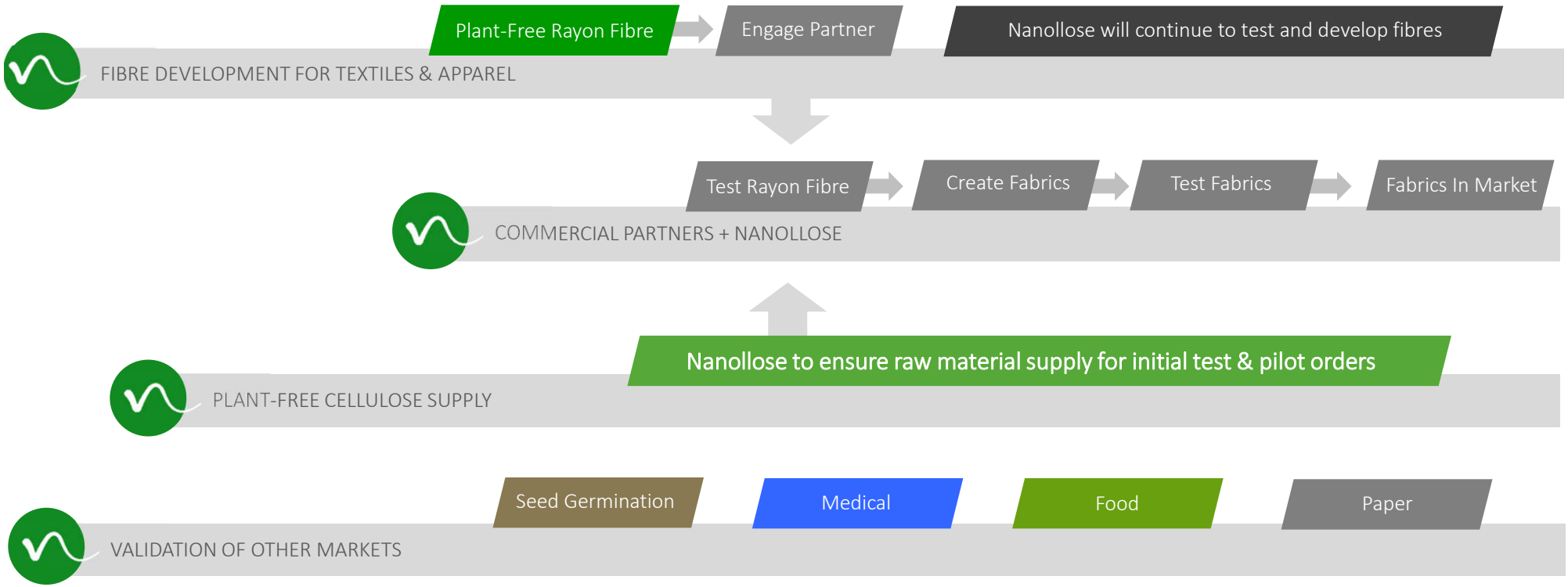
UPCOMING MILESTONES

Significant news flow expected over the next 8-12 months



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TEAM

DR WAYNE BEST
NON-EXEC CHAIRMAN

- 35 Years experience in organic chemistry & biotechnology sector
- 10 years at the Chemistry Centre (WA) and was responsible for the formation and running the Medical & Biological Chemistry section
- Founded Epichem Pty Ltd in 2003, a contract research company, where he is still the Managing Director

ALFIE GERMANO
MANAGING DIRECTOR

- 30 years in the global textile industry sector
- 24 years in the Hong Kong garment industry as a leader of a large scale global product development, sourcing and retail operations
- Held VP and Director positions at GAP Inc, VF Corporation, Liz Claiborne Inc, Fila Inc and Carter's Inc

GARY CASS
NON-EXEC DIRECTOR

- Made the world's first garment from the bacterial fermentation of wine in 2006
- 25 years of experience across a wide range of biological sciences
- Published in numerous international arts and science projects

TERRY WALSH
NON-EXEC DIRECTOR

WINTON WILLESEE
NON-EXEC DIRECTOR

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CAPITAL STRUCTURE

CAPITAL STRUCTURE	
Total Shares on Issue	**74.9m**
Cash raised at IPO (October 2017)	$5m
Market-cap ($0.20)	**14.9m**

Nanollose secured $5m through IPO and listed on ASX in October 2017

High % of company shares escrowed for 24 months – 40 million in total

Tight free float with Top 20 holding 65%

Upcoming entitlement offer rewarding any shareholders with 1 cent options on a 1 for 4 basis approximately 3 to 6 months after listing

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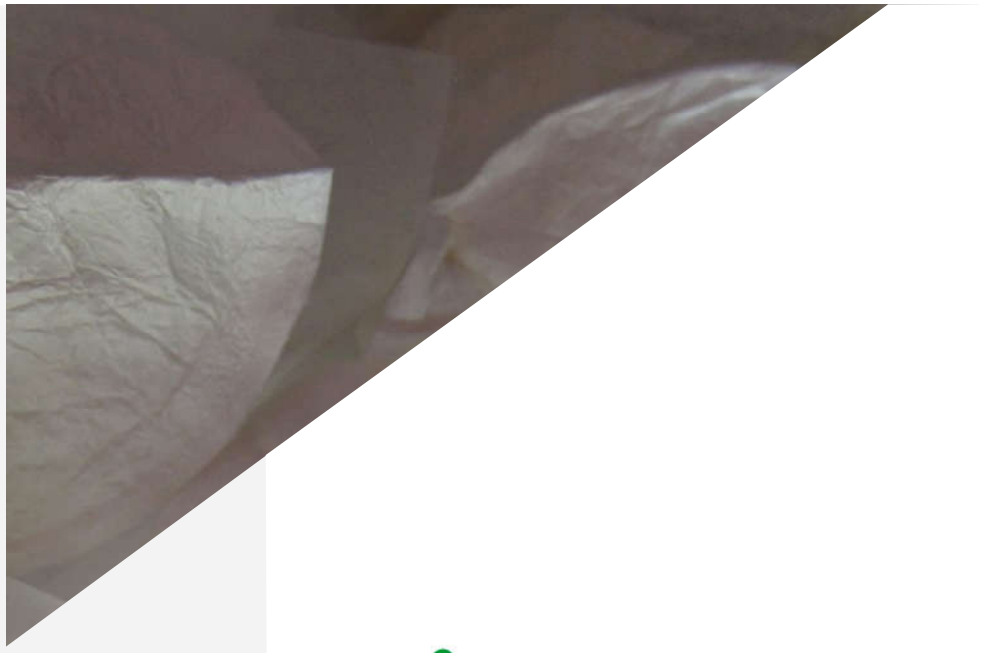

THANK YOU

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ALFIE GERMANO
MD - Nanollose Ltd
M: 0411244477
alfie.germano@nanollose.com

MICHAEL WILLS
Investor Engagement
M: 0468308208
michael@springsydney.com