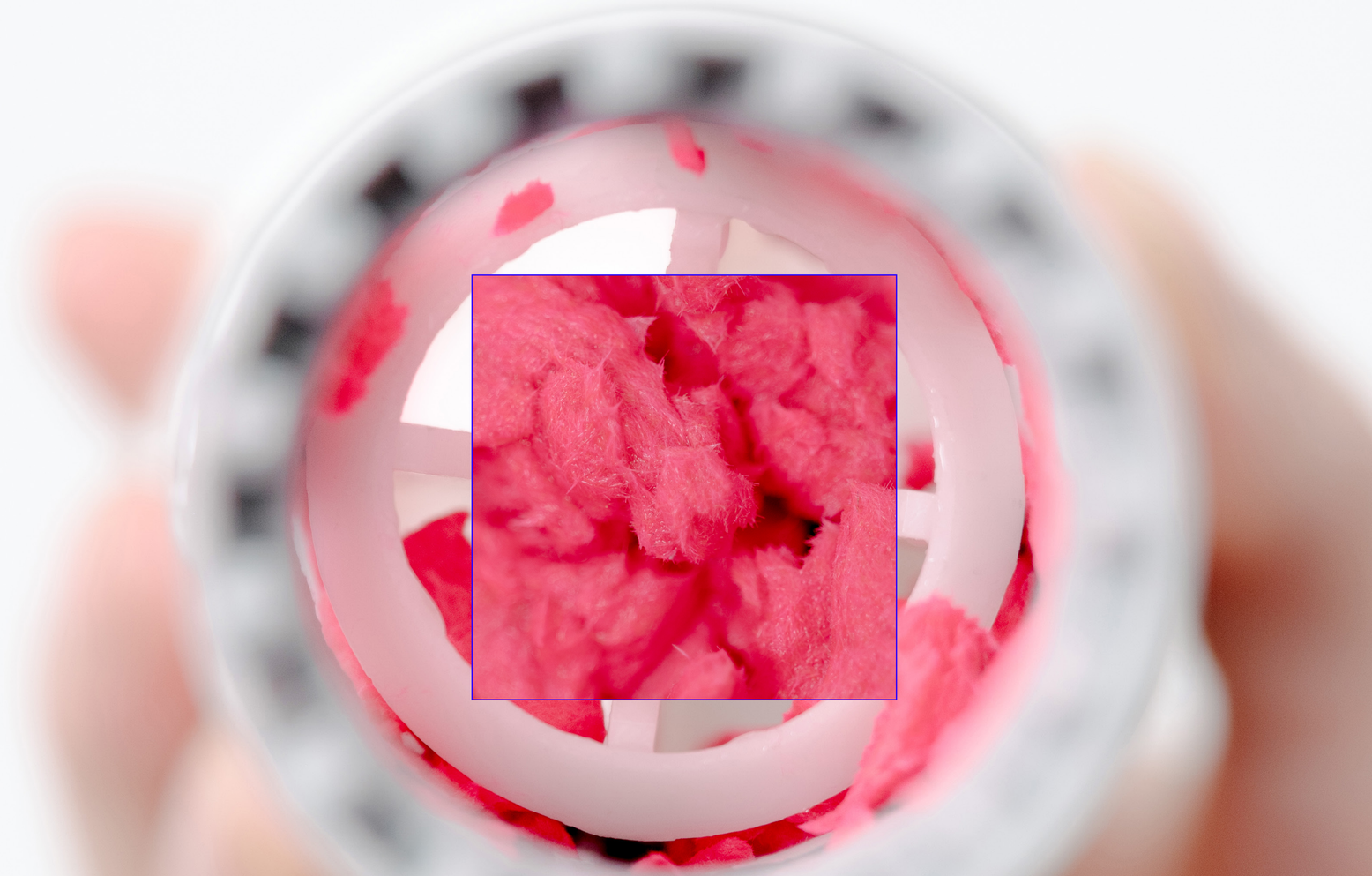


XEROS TECHNOLOGIES

XEROS TECHNOLOGY

DATE:
20-04-23

DESCRIPTION:
INVESTOR MEET XEROS

VERSION:
#01

GARMENT:	# WASHES:	LOAD WEIGHT:	XORB MASS:
WOOL JUMPER	6	2.5KG	4KG

WHAT WE DO

We license sustainable proprietary technology solutions for the laundry and apparel industries.

These deliver energy, water and pollution reductions in the production and care phase of clothing manufacture and consumer use, revolutionising how we make and care for our clothes.

Our textile technologies have been developed as part of our ongoing mission to innovate new solutions to reduce waste wherever possible.

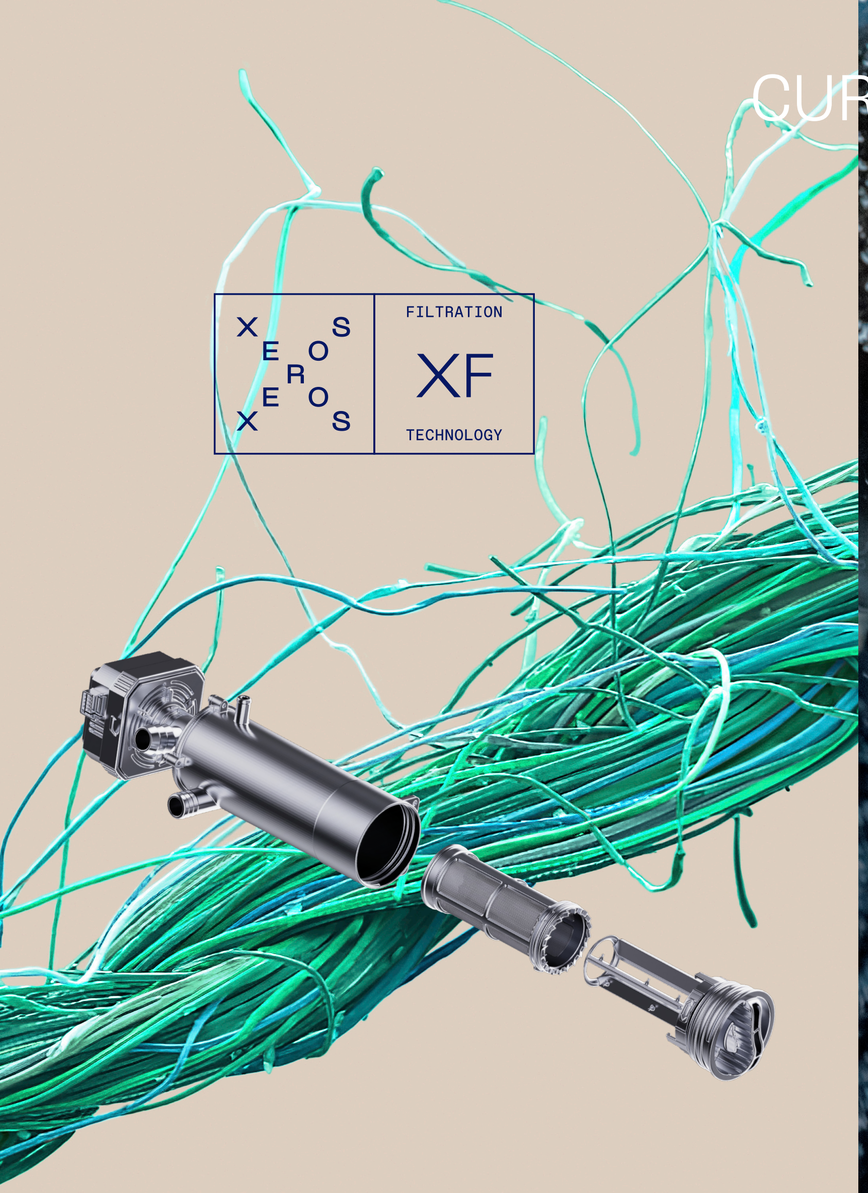
CURRENT TECHNOLOGY PLATFORMS

XEROS

FILTRATION

XF

TECHNOLOGY



XEROS

FINISH

XFN

TECHNOLOGY

XEROS

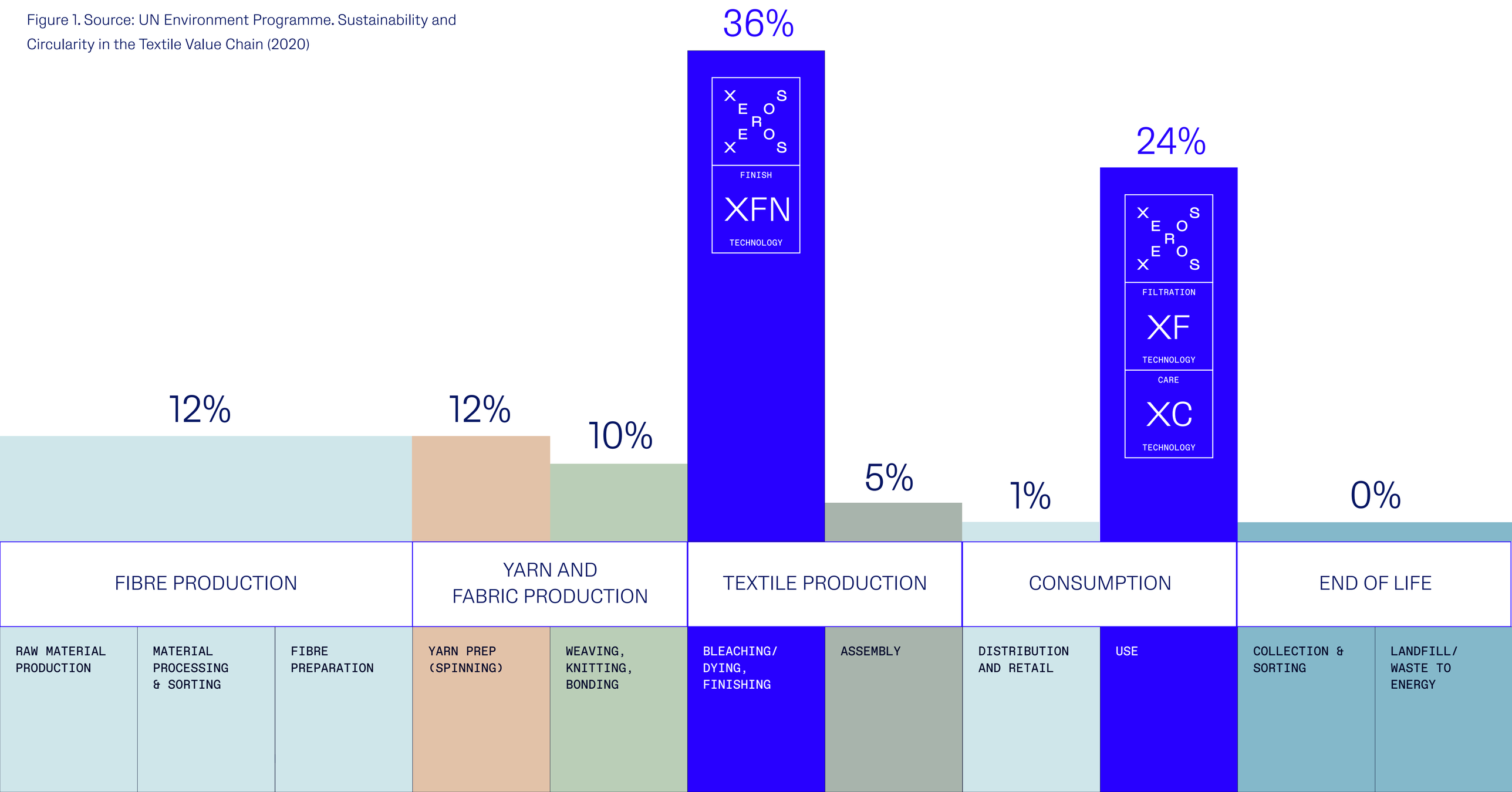
CARE

XC

TECHNOLOGY

Climate impact across the global apparel value chain

Figure 1. Source: UN Environment Programme. Sustainability and Circularity in the Textile Value Chain (2020)



HIGHLIGHTS

01.

FILTRATION

Post-period end, licensing agreements were signed in March 2023 with two major European component manufacturers.

Global legislative agenda moving forward positively, with France mandating in-machine filtration from 2025.

02.

FINISH

In 2023, brand endorsed trials began for a major European retailer with a Xeros enabled machine installed at a manufacturing partner for their denim production.

In 2022, first revenues from Qualus using Xeros leather processing technology were received

03.

CARE

In December 2022 Xeros launched its commercial/consumer cross-over machines in India.

In December 2022 trials began with Indian Railways on a 90kg platform machine.

04.

NEW CEO

Neil Austin joined the Company as Chief Executive Officer in August 2022.

INVESTMENT CASE

01.

PROPRIETARY TECHNOLOGY

Compelling commercial advantages in the form of reduced water consumption (50%) power (50%) and chemistry (50%+) offering substantial savings.

38 patent families created to enable the licensing of intellectual property to global partners.

02.

LICENSING MODEL

High-margin licensing business model.

Key licence agreements to date include IFB and Ramsons with more in the pipeline.

Hanning, 10-year licence agreement for XFilter technology. Two further major European component manufacturers signed 2023.

03.

GLOBAL MARKET SOLUTION

Environmental drivers Xeros technology can save more than 50% of water used in apparel washing process.

Growing awareness of microfibre pollution. Legislation in France comes into force in 2025. Similar legislative considerations currently in the UK, EU and California.

Water stress problems in the countries where garments are processed.

04.

FINANCIALS

September 2022 fundraise c. £6m

Cash burn £0.5m per month in 2022.

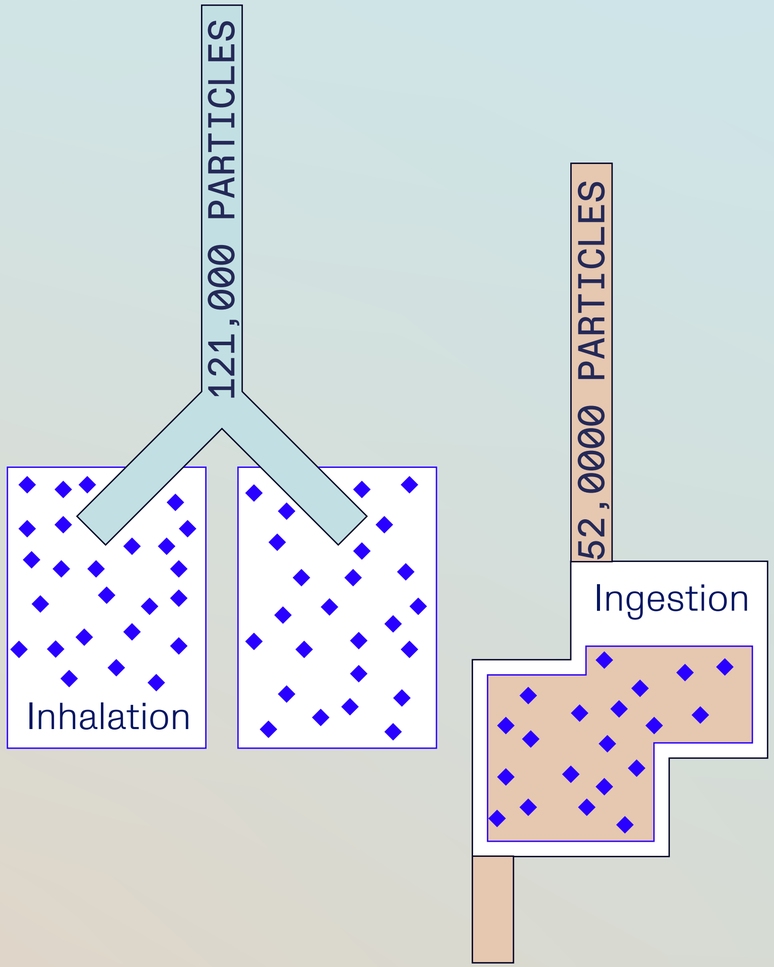
Expecting to breakeven in 2024 with current portfolio of licensing agreements.

XF
FILTRATION

MICROPLASTIC FILTRATION TECHNOLOGY

01.

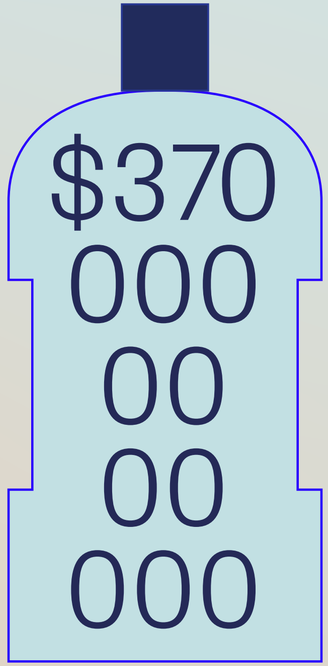
HUMAN IMPACT



Microplastic exposure
for a single person every year[1].

02.

BUSINESS IMPACT

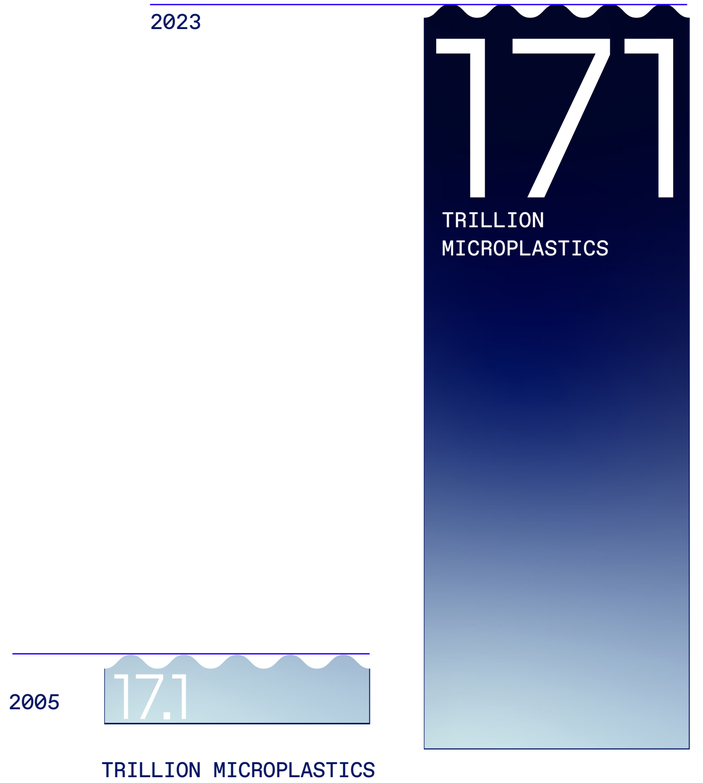


($3.7 TRILLION)

The minimum cost that the plastic produced in 2019 will incur over its lifetime is estimated at US$3.7 trillion (+/-US$1 trillion), with more than 90% of that cost not included in the market price of plastics[2]

03.

PLANET IMPACT



It is reported that microplastic pollution has increased 10-fold since 2005, with over 171 trillion microplastic particles now floating in our oceans.
Scientists predict this figure will increase a further 2.6-fold from 2016–2040[3].

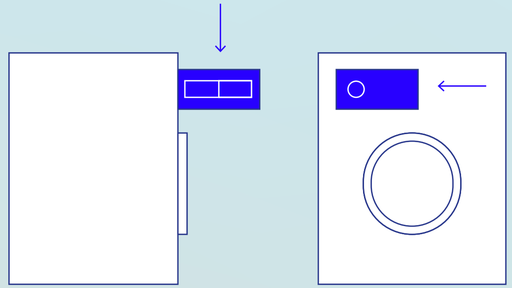
01.

VISUAL 3D RENDER

DOMESTIC XF[1]

02.

WHAT IT IS



Our filtration technology, XFilter, can be integrated into a washing machine for the home, or built at a large scale for industry.

03.

WHAT IT DOES

99%

Able to capture over 99% of microplastics.

THE OPPORTUNITY TODAY

01.

DRIVING CHANGE THROUGH PARTNERSHIPS

Working in partnership with NGO's, experts, industry and scientists Xeros are keeping the microplastic topic firmly on the political and media agenda.

02.

PRESS

'Move quickly and make small changes: how to reduce the impact of your polyester clothes' – Guardian

'Companies race to stem flood of microplastic fibres into the oceans' – Guardian

'The Company Behind the Fight Against Microplastics' – WWD

'Microplastics: Laundry filters 'dramatically' reduce fibres' – Science Focus

THE OPPORTUNITY TOMORROW

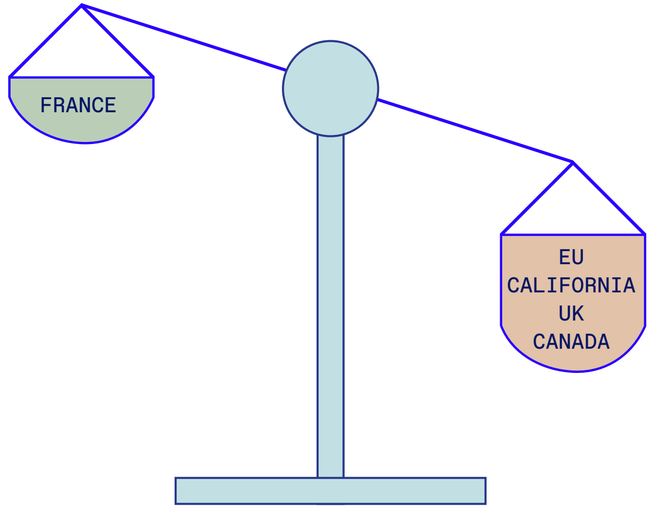
01.

FUTURE GROWTH

An estimated 1.3 million factories around the world are involved in garment supply chains[4], of which approximately half are involved in the garment-making stage of the supply chain with a potential requirement for filtration.

02.

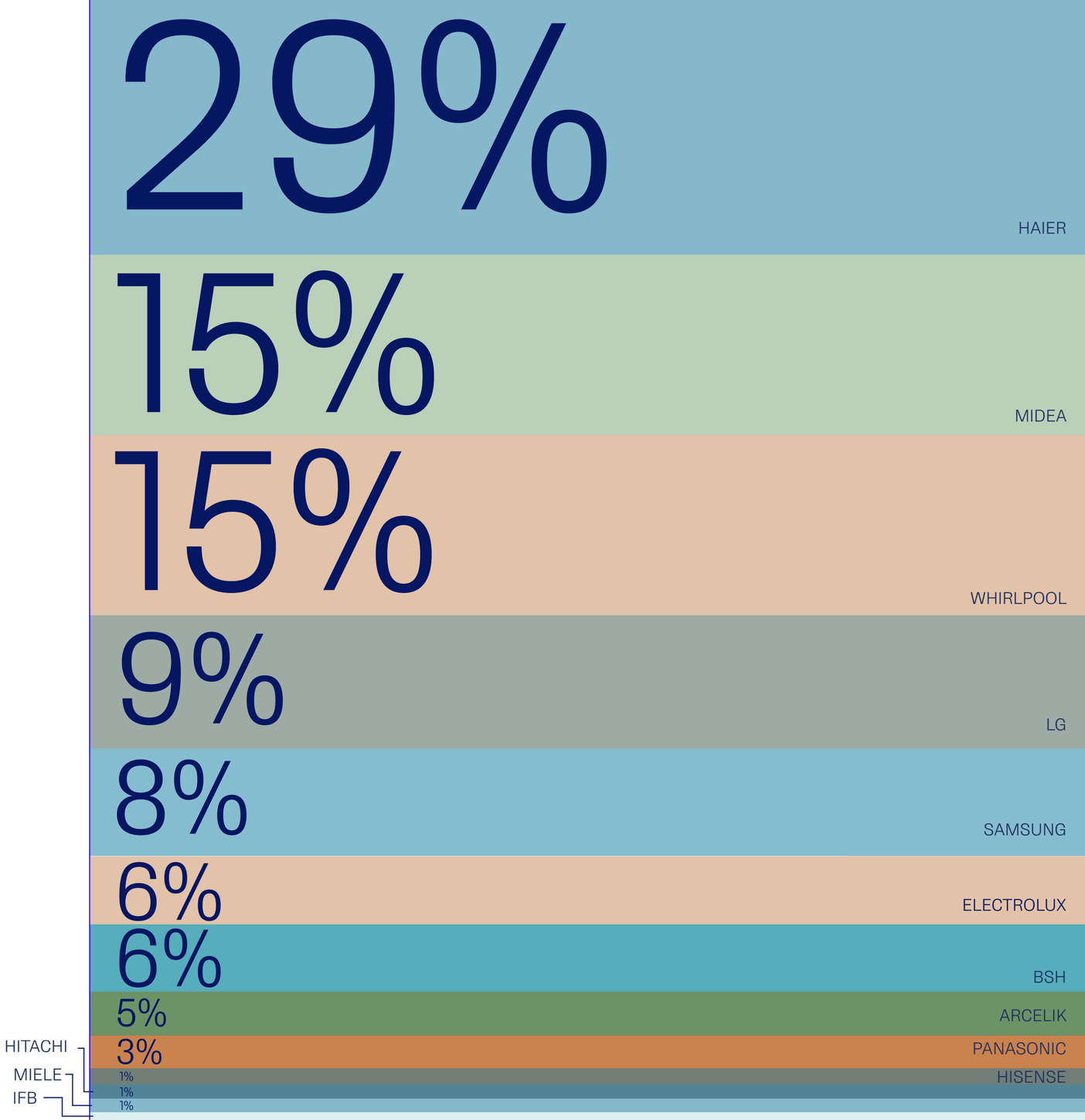
LEGISLATION



WASHING MACHINE FILTRATION IS ON THE POLITICAL AGENDA

In order to deal with unintended microplastic pollution governments are facing growing pressure to mandate for solutions. France has led the way with washing machine filtration a legal requirement in new machines from January 2025. Similar laws are now being considered in the EU, California, the UK, and Canada.

WE HAVE ACCESS TO 99M UNITS[5] OF WASHING MACHINES PER YEAR VIA THREE OF THE MAJOR COMPONENT MANUFACTURERS




XFN
FINISH
FABRIC FINISHING TECHNOLOGY

01.

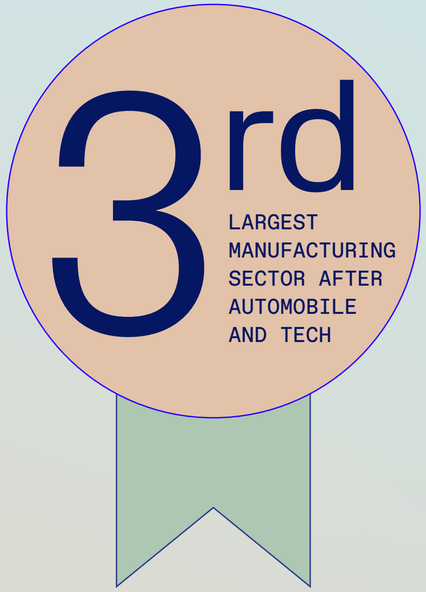
HUMAN IMPACT

Substances used at all stages of the production process often remain in textiles, both intentionally and unintentionally. This raises concerns due to the adverse effects they can have on people and the environment. Reported impacts range from allergic reactions, to respiratory diseases and increased instances of cancer in humans[6].

02.

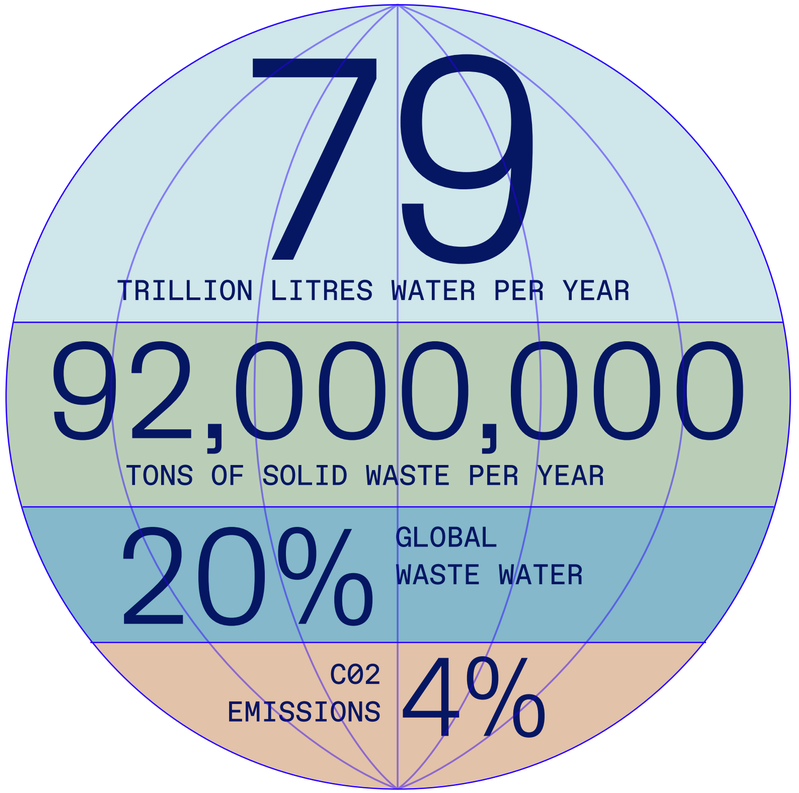
BUSINESS IMPACT

The fashion industry is valued at around USD 2.4 billion globally and directly employees 75 million people throughout its value chain. It is the world's third-largest manufacturing sector[7] after the automobile and technology industries. 2 billion pairs of jeans are made every year.[8]



03.

PLANET IMPACT



The fashion industry as a whole is reported to be responsible for consuming 79 trillion litres of water per year, producing over 92 million tons of solid waste per year, and contributing up to an estimated 20% of global wastewater[9] and 4% of CO2 emissions[10].

01.

VISUAL 3D RENDER

02.

WHAT IT IS

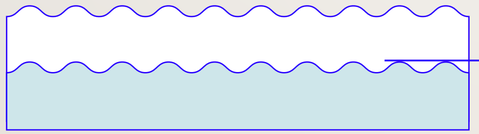
1 PAIR OF JEANS IS

10 YEARS OF DRINKING WATER PER PERSON

Chemicals used in the process escape with wastewater polluting our planet. Today, jeans are still made using pumice stones, which constantly need replacing and create chemically contaminated sludge.

03.

WHAT IT DOES



Our XFN[1] technology uses patented reusable XOrbs to replace pumice, and reduces water and chemistry use by up to 50%.

THE OPPORTUNITY TODAY

01.

DENIM STRATEGY AND LEATHER BUSINESS EVIDENCE

In 2021-2022 Xeros focused on providing proof of concept in a live production environment working with a number of manufacturers.

Current work is now focused on partnerships with a number of major retailers to provide them with personalised results in order to endorse and specify Xeros XFN technology into their supply chain.

In 2019 Xeros licensed its leather finishing technology to Qualus, together with the first contract at a tannery in Mexico. The technology is now live and Qualus are processing leather in Mexico, Brazil, India and Vietnam.

02.

PRESS

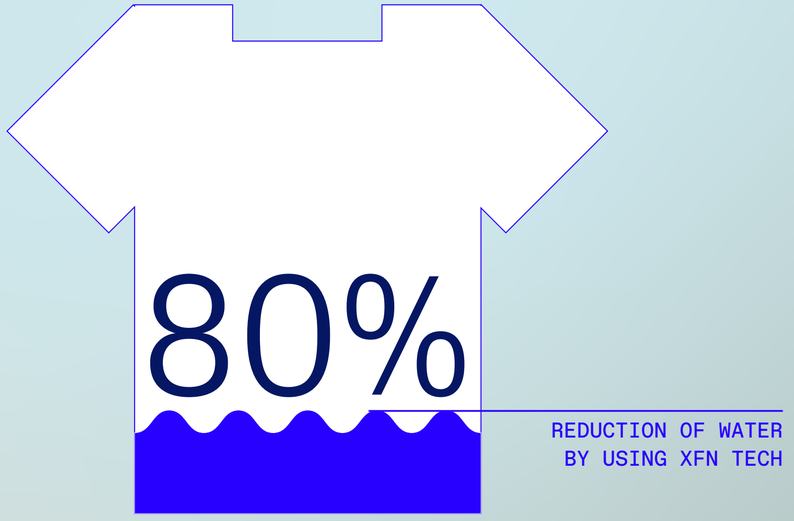
‘ABA group adopts Xeros denim finishing technology’
– Fibre 2 Fashion

‘No-Stone Future - XOrbs distribute enzymes and chemicals evenly to achieve a consistent and reproducible finish’
– Inside Denim

THE OPPORTUNITY TOMORROW

01.

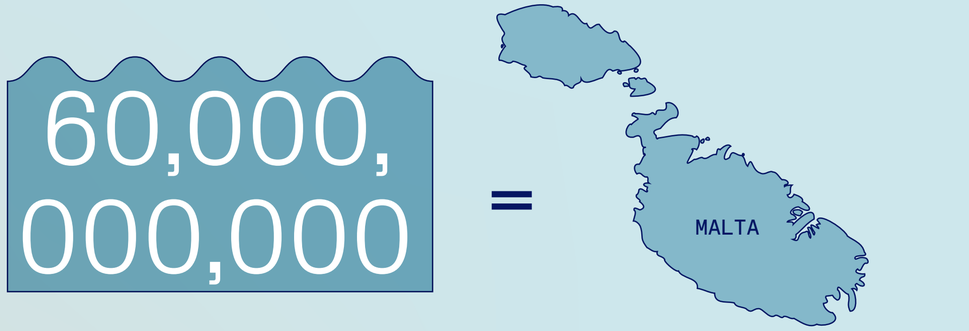
FUTURE PARTNERSHIP BENEFITS



Nearly all garments are washed at the end of the manufacturing process where Xeros technology can cut water consumption by up to 80%. Over 100 billion items of clothing are produced each year.[11]

02.

XEROS POTENTIAL SAVINGS



LITRES OF WATER SAVED BY USING XFN PER ANNUM

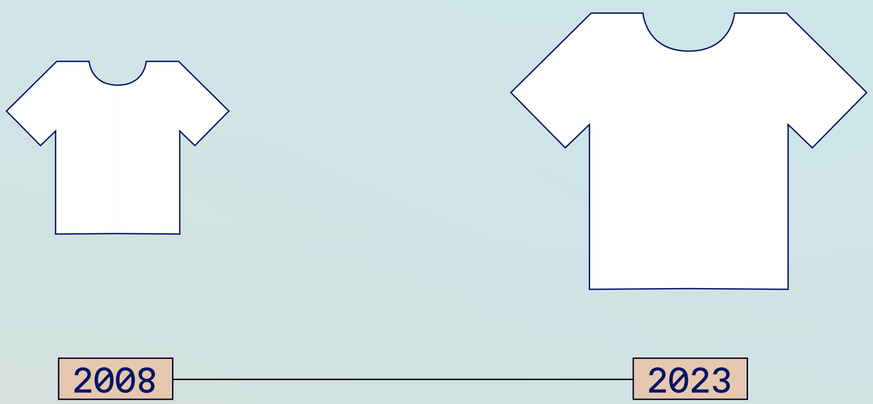
ENTIRE WATER CONSUMPTION OF MALTA

XOrbs can save 50 litres of water for every pair of jeans made, or 60,000,000,000 litres in the jeans manufacturing industry per annum alone. This is equivalent to the entire water consumption of Malta.


XFC
CARE
FABRIC CARE TECHNOLOGY

01.

HUMAN IMPACT



We are buying 60% more clothing than 15 years ago.[12]

02.

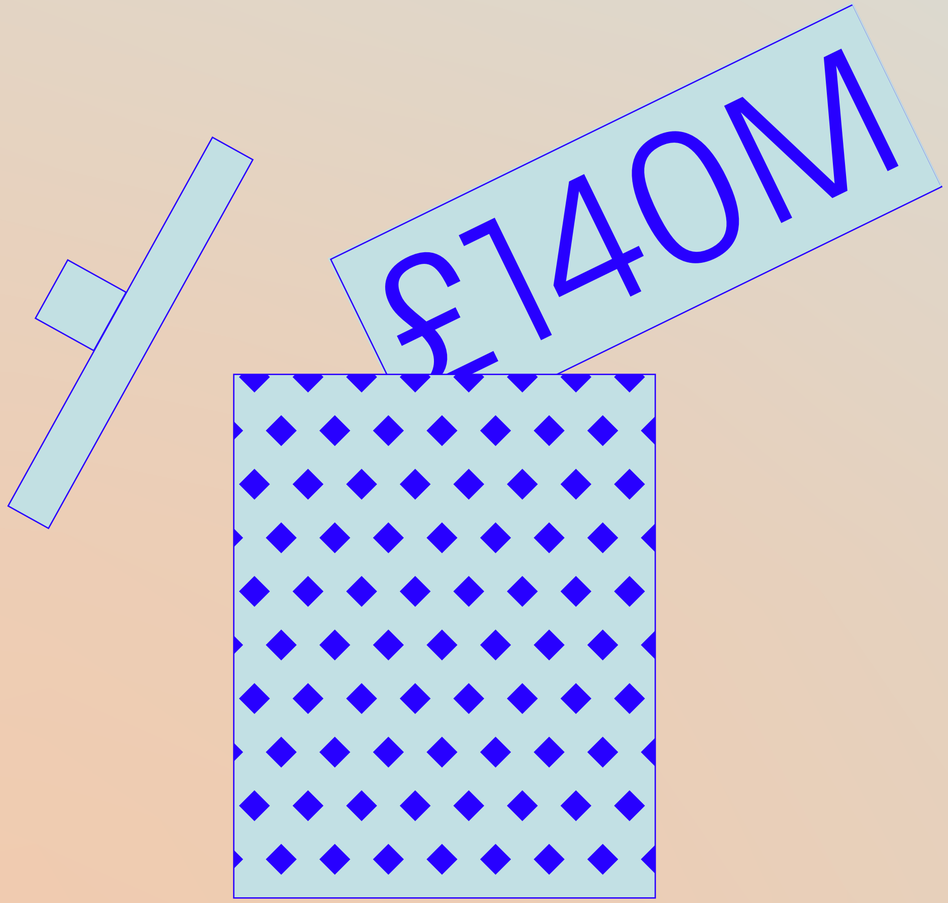
PLANET IMPACT

73% IN LANDFILL

73% of waste clothing is directly landfilled or incinerated.[13]

03.

BUSINESS IMPACT



The estimated cost to the UK economy of land-filling clothing and household textiles each year is approximately £82 million.[14] Around 350,000 tonnes of clothes, with an estimated value of £140 million, go to landfill every year in the UK.[15]

01.

WHAT IT IS

Our Care technology uses XOrbs, reusable polymer spheres, to wash and care for clothes. It's scalable from domestic washes to heavy industrial use, and it's designed to save 10s of millions of litres of water everyday.

02.

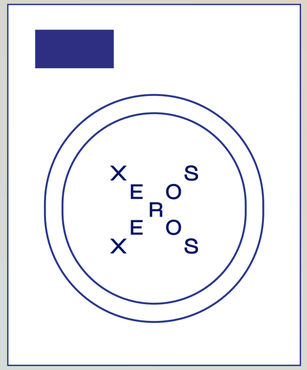
WHAT IT DOES

THE OPPORTUNITY TODAY

01.

COMMERCIAL + DOMESTIC PARTNERSHIPS

25KG WASHING MACHINE



14 CYCLES A DAY

SAVES

£10,000

2,000,000

Xeros Care technology has been proven in the commercial laundry sector evidenced by Georges, a commercial laundry in France, with 18 Xeros enabled machines across 8 laundry sites caring for the 55,000 uniforms they process for SNCF and Airfrance.

In India, Xeros Care technology is now available for use by consumers in homes following the launch of the 11kg semi-professional machine.

02.

PRESS

‘Xeros bead washing machine system set to save water and energy in the home’
– Guardian

‘The system cleans 25kg of clothes – about 100 shirts – using its bead technology, which cuts down on water and electricity as well as claiming a better standard of cleaning.’
– Guardian

‘The system uses a whopping 80 per cent less water than the most economical conventional washers’
– Science Focus

THE OPPORTUNITY TOMORROW

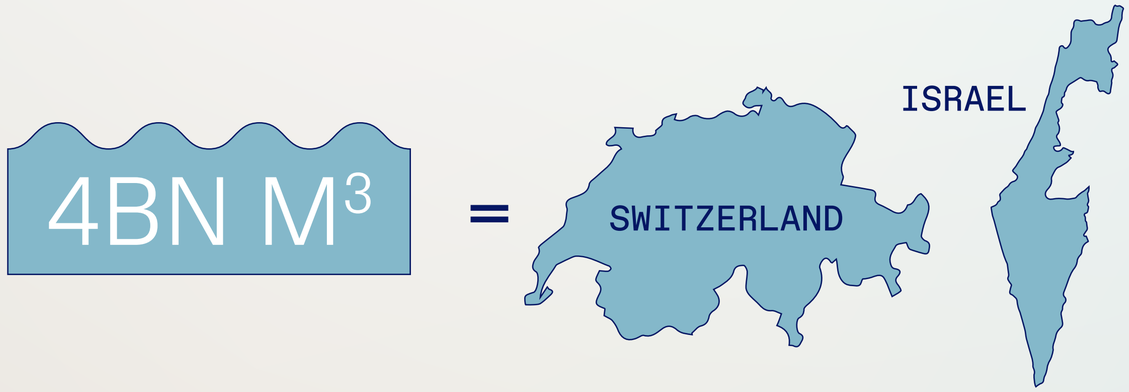
01.

TECHNOLOGY VALIDATION

Xeros' launch partner for domestic laundry, IFB, is based in India – the world's largest user of water ranking 13th in the world in terms of baseline water stress. Almost all of the country suffers from "high" or "extremely high" levels of water stress.

02.

FUTURE PROCESSES



If all domestic washing machines were Xeros-equipped, we estimate that global water savings could reach 4bn m3 per year, or the total annual water usage of Switzerland and Israel combined.

KEY FINANCIAL INFORMATION & SHARE REGISTER

FINANCIAL SUMMARY

Revenue of £0.2m (2021: £0.5m).

Adjusted EBITDA loss of £7.4m (2021: loss £6.3m).

Administrative expenses of £7.5m (2021: £7.2m).

Net cash outflow from operations increased by 19.7% to £7.0m (2021: £5.8m). Cash at 31 March 2023 £4.5m.

Cash burn expected to be below £450k per month in 2023.

Month on month EBITDA profitability and cash break-even expected in 2024.

FY23 and FY24 guidance cut with revenue expected to be lower than previously forecast.

Key changes through Q1 2023:
Continued delay in domestic care launch (9 Kg machine).
Signing of 2 further XFilter licences providing better clarity into scope and timing of license partner programmes.

PROFIT AND LOSS

PROFIT AND LOSS	2022
Revenue	164
Cost of sales	(80)
Gross profit	84
Administrative expenses	(7,518)
Adjusted ABITDA	(7,368)
Share based payment expense	79
Depreciation of tangible fixed assets	(145)
Operating loss	7,434
Net finance income	(14)
Loss before taxation	(7,448)
Other comprehensive expense	515
Total comprehensive expense	(6,933)
Loss per share (p)	(14.29)

CASHFLOW STATEMENT

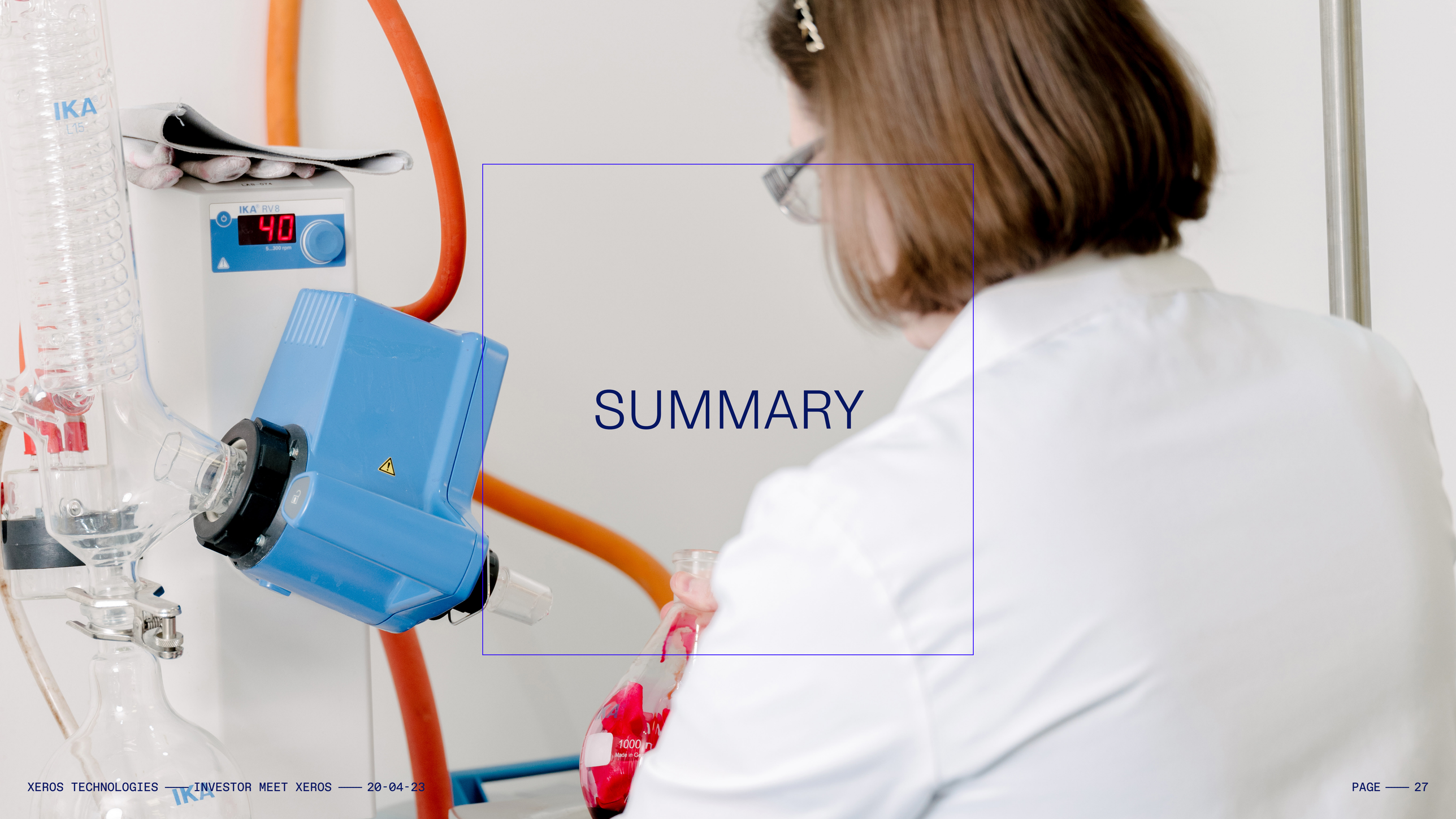
CASHFLOW AND FINANCING	2022
Loss before tax	(7,448)
Adjustment for non-cash items	
Depreciation of tangible fixed assets	145
Share based payment	(79)
Increase in inventories	(56)
Decrease in trade and other receivables	(15)
Decrease in trade and other payables	(46)
Finance income	(16)
Finance expense	30
Cash used in operations	(7,485)
Tax receipts	515
Net cash outflow from operations	(6,970)

CASHFLOW STATEMENT

CASH FLOW + FINANCING	2022
INVESTING ACTIVITIES	
Finance income	15
Finance expense	(30)
Purchase of property, plant + equipment	(63)
Cash place on/(removed from) deposit	5,319
Net Cash inflow/(outflow) from investing activities	5,241
FINANCING ACTIVITIES	
Proceeds from issue of share capital, net of costs	5821
Payment of lease liabilities	(113)
Net cash inflow from investing activities	5,708
Increase/(decrease) in cash and cash equivalents	3,979
Cash and cash equivalents at start of year	2483
Effect of exchange rate fluctuation on cash held	3
Cash and cash equivalents at end of year	6,465

SHARE REGISTER

FUND	% VOTING RIGHTS	NUMBER OF SHARES
Entrepreneurs fund LP	23.7%	35,767,534
Cannacord Genuity Wealth Management	14.3%	21,598,119
Dowgate Capital	10.03%	15,846,250
Lombard Odier Investment Managers	8.5%	12,893,266
Spreadex	6.0%	10,093,834
Hargreaves Lansdown	5.2%	6,834,668
W H Salomon Esq	4.3%	6,548,631
Richard Griffiths	3.2%	5,009,137



SUMMARY

01. Market leading technology built by experts in their field

02. Lean, highly profitable business model

03. Commercial agreements in place

04. Global market growth driven by environmental initiatives and new legislation

05. Significant IP, in 38 patent families

TO THE POWER OF CHANGE

SOURCES

1. United Nations Environment Programme (UNEP). From pollution to solution - a global assessment of marine litter and plastic pollution (2021).

2. A report for WWF by Dalberg. Plastics: The cost to society, the environment and the economy (2021).

3. Erikson, M. et al. A growing plastic smog, now estimated to be over 170 trillion plastic particles afloat in the world's oceans– Urgent solutions required. Plos One. (2023).

4. Common Objective. Global Garment Manufacturing: Turning Fabric into Fashion (2018).

5. Euromonitor data

6. Ellen MacArthur Foundation. A new textiles economy: redesigning fashion's future (2017).

7. The World Bank. How much do our wardrobes cost to the environment (2019).

8. Ellen MacArthur Foundation. How redesigning jeans could change the way we think about the fashion industry (2021).

9. Fashion on climate: How the fashion industry can urgently act to reduce its greenhouse-gas emissions, McKinsey 2020.

10. Niinimaki et al. UN Climate Change (2020).

11. McKinsey & Company. Style that's sustainable: A new fast-fashion formula (2016).

12. McKinsey & Company. Style that's sustainable: A new fast-fashion formula (2016).

13. Ellen MacArthur Foundation. A new textiles economy: redesigning fashion's future (2017).

14. Ellen MacArthur Foundation. A new textiles economy: Redesigning fashion's future (2017).

15. WRAP. Valuing our clothes: the evidence base (2012).