
Creating a path toward
sustainable plastics
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Why We Exist
Consumers asking for sustainable products
One in three consumers choose brands based on sustainability - 2017 Unilever study
Everyone wants lightweight
Hemp biocomposites combine stiffness with low density enabling lightweight parts
Brands want greener practical solutions, today
We can help! More bio-content, recyclable, ready for standard moulding equipment
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Resource Scarcity

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A growing population
”3 Billion new consumers by 2030.”
- McKinsey Consulting, Global Trends 2017
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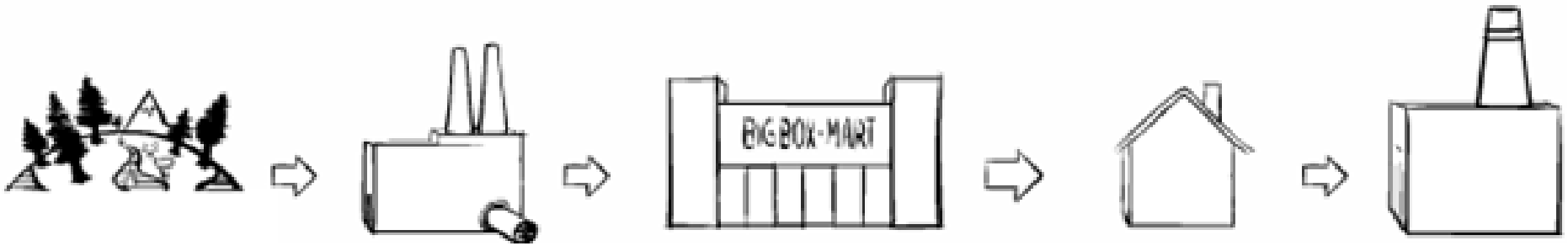
The linear economic model



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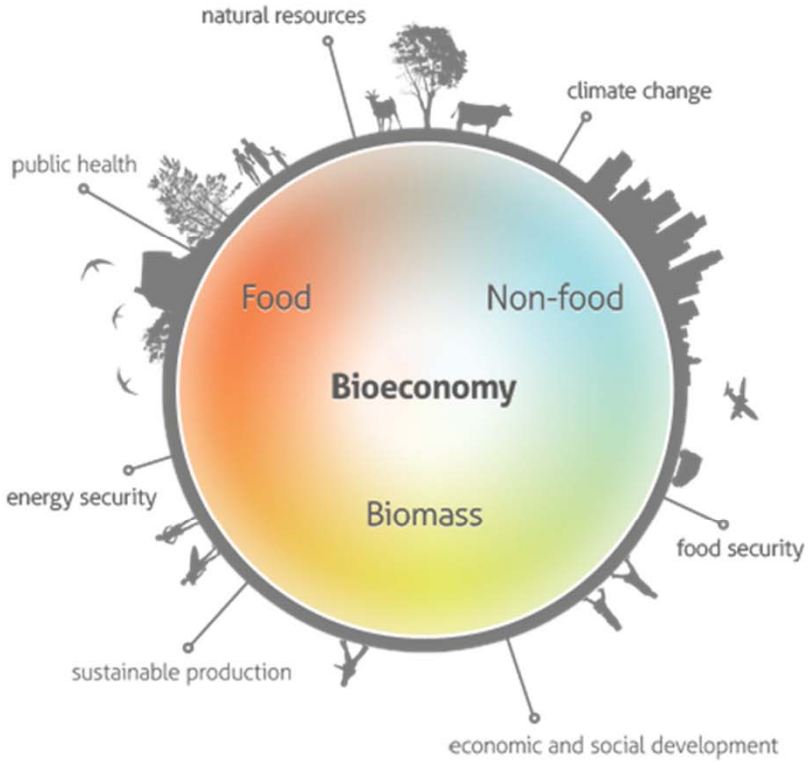
The circular bioeconomy

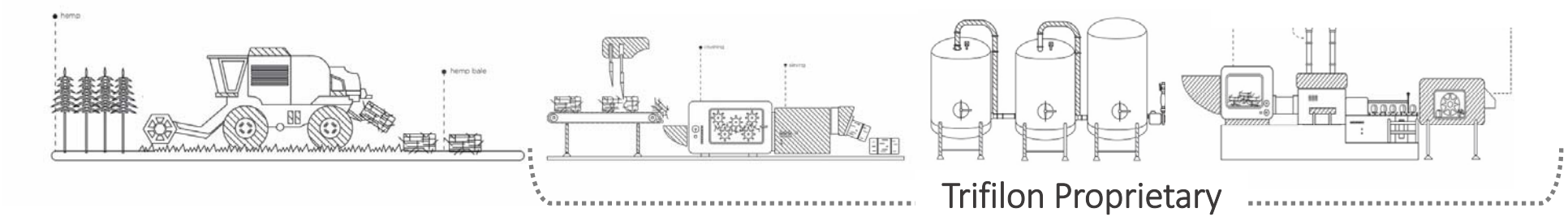


How We Do It

We supply lightweight biocomposites for injection molding.

We call it BioLite™

We source our hemp fibers from European farmers → Fibers then undergo mechanical cleaning, chemical purification and optimization process → Finally we mix the fibers with polymers & additives



Trifilon Proprietary Processing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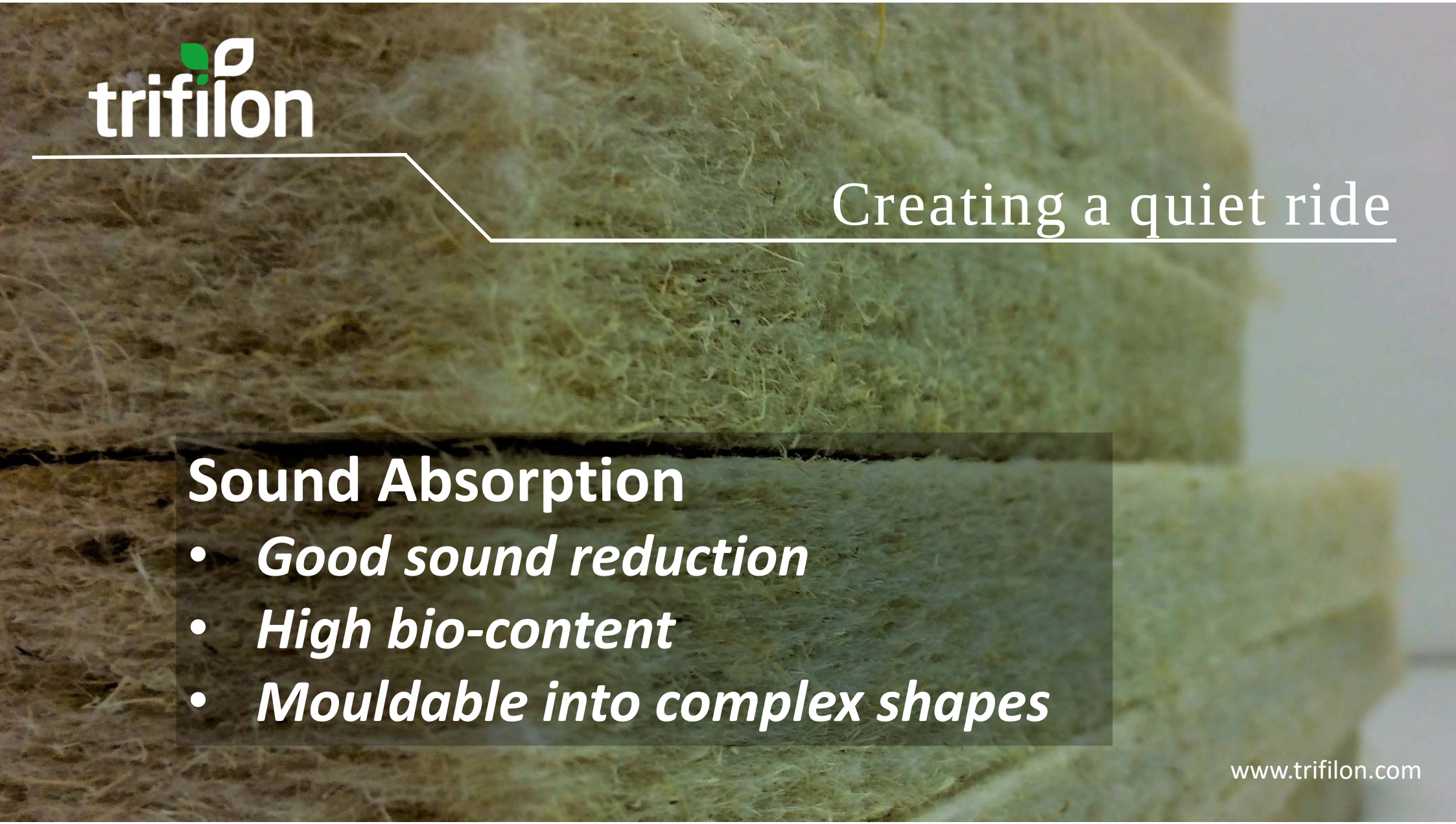
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Creating a quiet ride
Sound Absorption
• Good sound reduction
• High bio-content
• Mouldable into complex shapes
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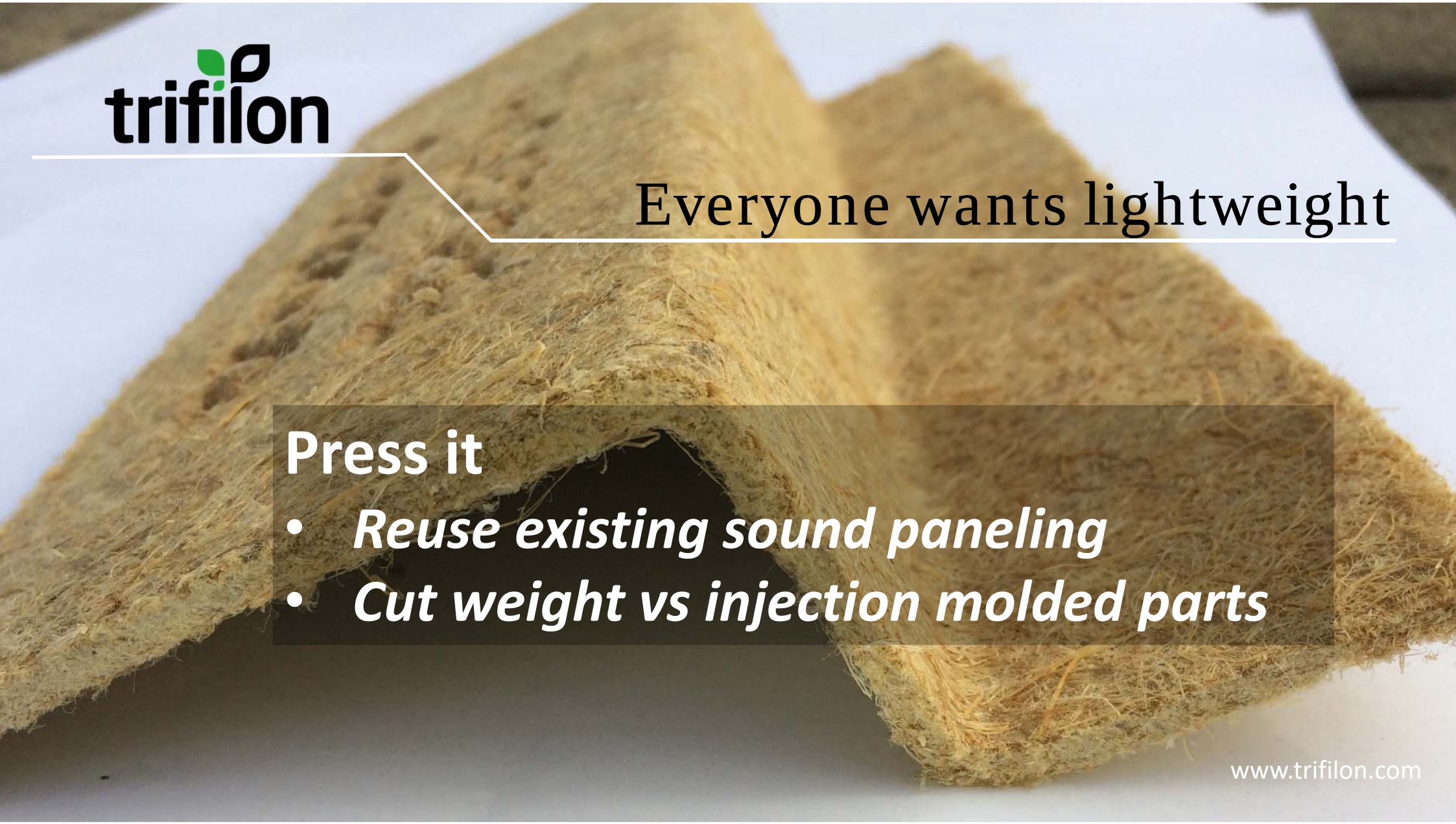
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Everyone wants lightweight
Press it
• Reuse existing sound paneling
• Cut weight vs injection molded parts
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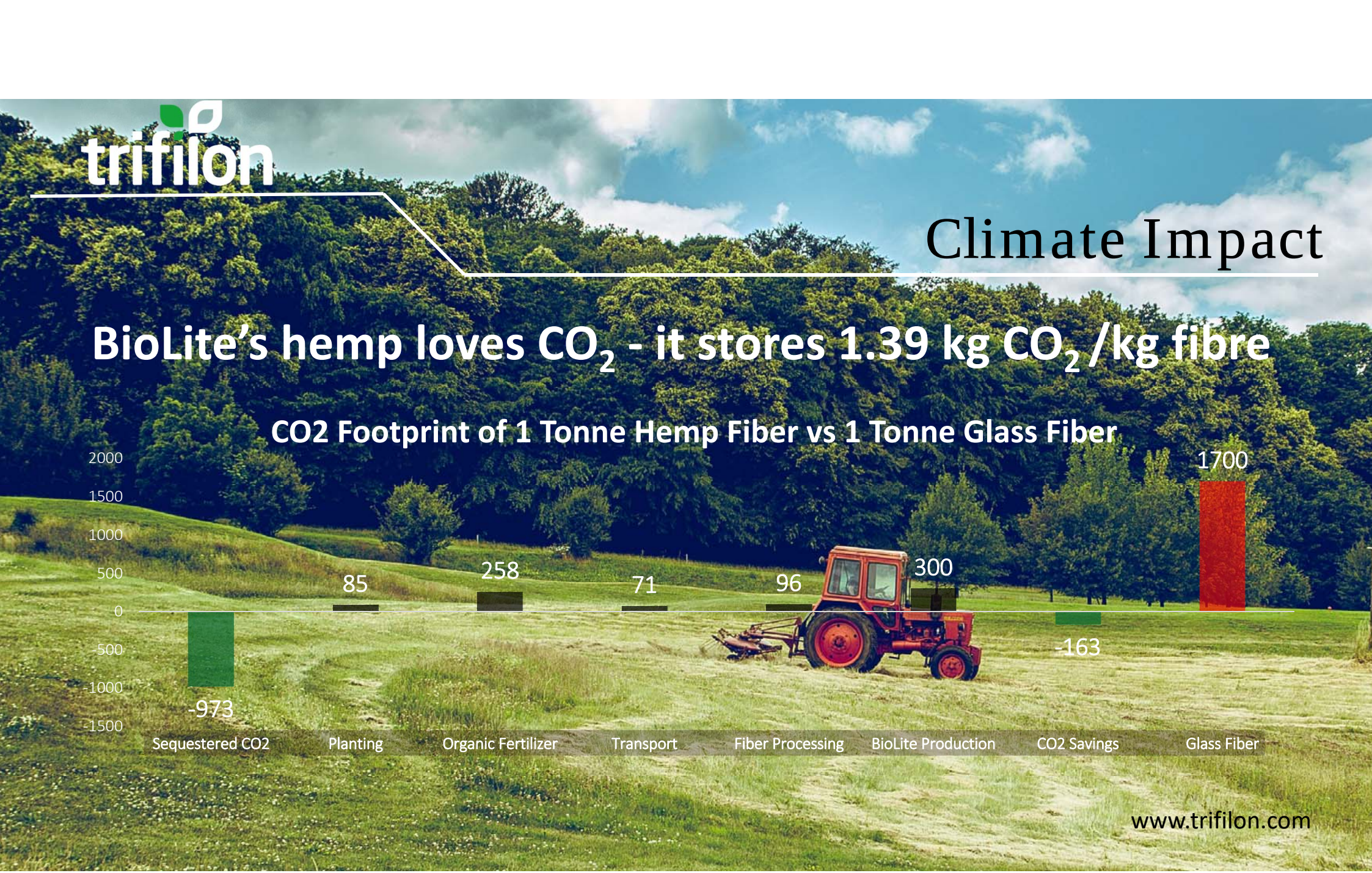
Climate Impact

BioLite's hemp loves CO_2 - it stores 1.39 kg CO_2 /kg fibre



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Bioplastics vs Biocomposites

BioLite doesn’t compete with food

Unlike most bioplastic feedstocks, our hemp is a rotational crop that enhances agricultural production and does not compete with food production

Consumers can see the fibers

We make it easier for designers, product developers and brands to show the sustainability of their plastic products

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Proprietary Technology

Trifilon's hemp fibers = Superior Biocomposites

- Low moisture absorption
- High thermal stability
- Improved mechanical properties
- Low odor and VOC emission
- Enhanced dimensional stability

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Scandinavian Biocomposites

BioLite™ AP21

Key Features

- Suitable for applications requiring good stiffness as well as impact properties
- Good flow properties
- Low density enables lightweight components

Physical Properties

	METHOD	VALUES	UNITS
Density	ISO 1183	1,001	g/cc
Melt Flow Rate (190°C / 2,16kg)	ISO 1133	11,7	g/10 min
Tensile Modulus	ISO 527-2	1550	MPa
Tensile Stress at Yield	ISO 527-2	24	MPa
Tensile Strain at Yield	ISO 527-2	13	%
Heat Deflection Temperature A	ISO 75-2/A	44	°C
Heat Deflection Temperature B	ISO 75-2/B	94	°C
Charpy Impact Strength Notched (-20 °C)	ISO 179/1eU	4,1	kJ/m²
Charpy Impact Strength Notched (20 °C)	ISO 179/1eU	13,0	kJ/m²

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Scandinavian Biocomposites

BioLite™ AP23

Key Features

- Relatively high specific strength
- Good dimensional stability
- Very low abrasion
- Fast cycle time and good flow properties

Physical Properties

	METHOD	VALUES	UNITS
Density	ISO 1183	1,101	g/cc
Melt Flow Rate (190°C / 2,16kg)	ISO 1133	5,4	g/10 min
Tensile Modulus	ISO 527-2	3014	MPa
Tensile Stress at Yield	ISO 527-2	39	MPa
Tensile Strain at Yield	ISO 527-2	5	%
Heat Deflection Temperature A	ISO 75-2/A	57	°C
Heat Deflection Temperature B	ISO 75-2/B	100	°C
Charpy Impact Strength Notched (-20 °C)	ISO 179/1eU	2,6	kJ/m²
Charpy Impact Strength Notched (20 °C)	ISO 179/1eU	9	kJ/m²


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A raw material shift
EU Commission Estimate
• 2,5 Billion tons C02 reduction per year by 2030
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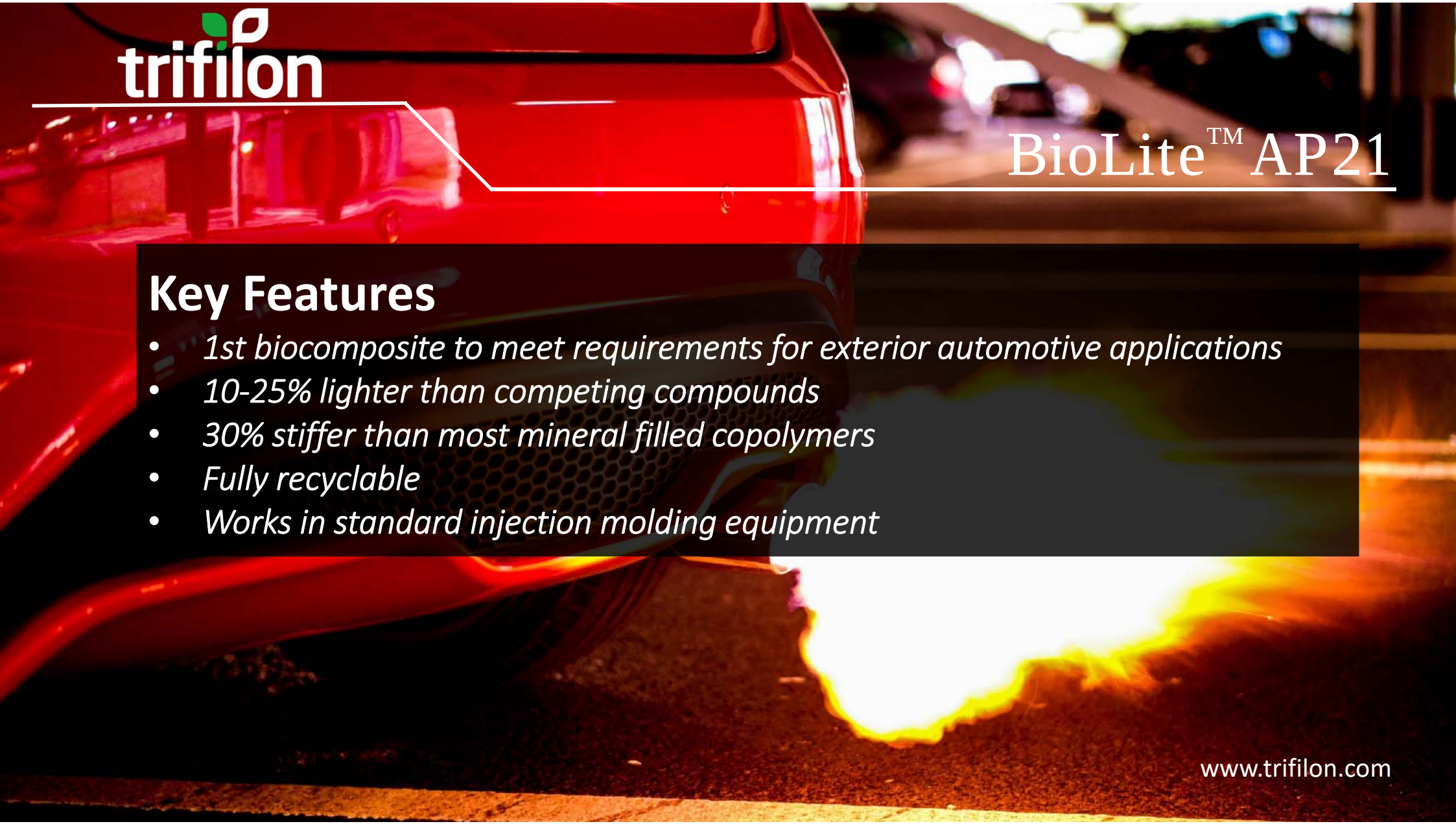
An EPIC Customer Case

EPIC PhantomBio is born

Göteborg based EPIC Travel Gear knew that its eco-minded customers wanted something different. Working closely with EPIC, Trifilon quickly developed and tested a new high impact biocomposite specifically designed for the tough demands of today's travel gear.

The bar is raised and new records set

The PhantomBio received the most pre-orders EPIC had ever experienced. Customer demand has meant a 12x increase on EPIC's original sales estimates.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BioLite™ AP21
Key Features
• 1st biocomposite to meet requirements for exterior automotive applications
• 10-25% lighter than competing compounds
• 30% stiffer than most mineral filled copolymers
• Fully recyclable
• Works in standard injection molding equipment
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It’s all about economy

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Local Capacity

Based in Nyköping, the heart of Sörmland

Located just 1 hour south of Stockholm, our Nyköping factory is close to major road, train and airport transportation

Growing capacity

As of Feb 2018, we have 400 Tonnes / year capacity
Aim to grow to +4.000 Tonnes / year capacity by end of 2018
Targeting 20.000 Tonnes / year capacity by 2022

Thank you! Questions?

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