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TIRE
Stewardship
New value from old tires
BC

LTR Update to TSBC
July 2022

Agenda

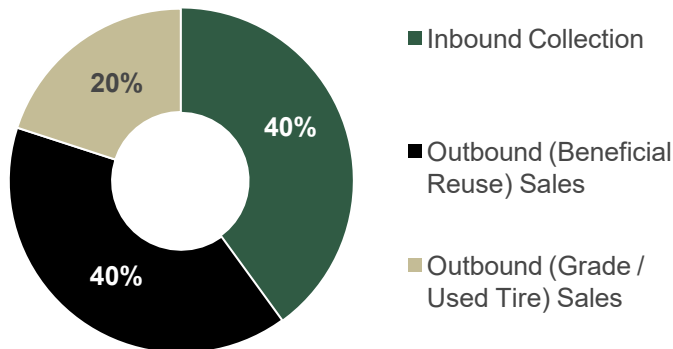
- Introduction to Liberty Tire Recycling – *Thomas Womble*
- Asphalt and SmartMIX™ – *Amy Brackin*
 - Canadian projects
 - US updates
- Sustainability and ESG – *Amy Brackin*
- Research and Development Updates – *Amy Brackin*
- Update on BC Operations – *Neil Bansal*

Liberty Tire At A Glance

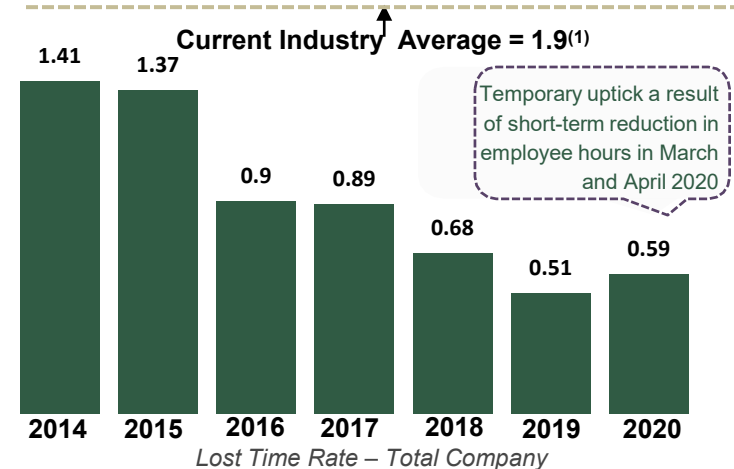
Leading national platform providing tire collection and processing services and supplying beneficially reusable products.



Balanced Business Model

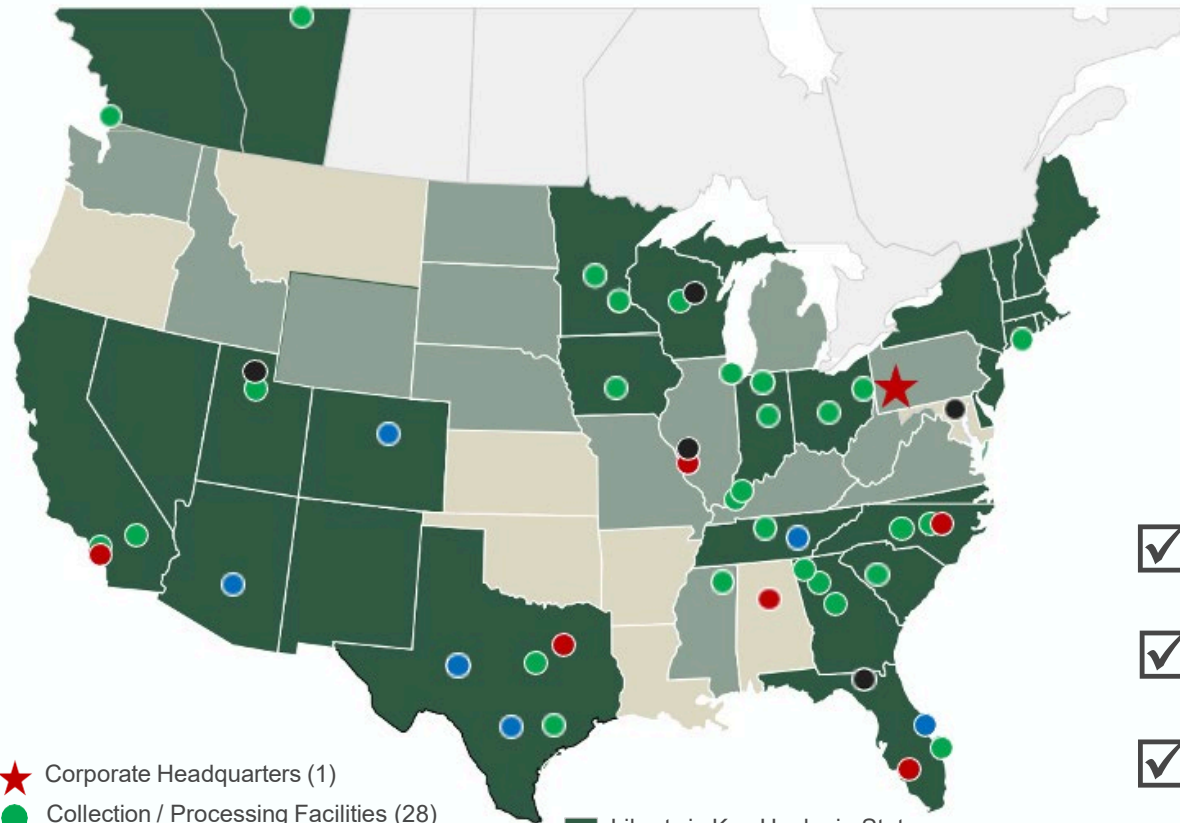


Safety is Liberty's #1 Priority



National Footprint

Industry Leading Network of Facilities



- ★ Corporate Headquarters (1)
- Collection / Processing Facilities (28)
- Collections Facilities / Transfer Stations (6)
- Mulch Painting & Bagging Facilities (5)
- Regional / Administrative Offices (6)

- Liberty is Key Hauler in State
- Liberty is Key Hauler in Part of State
- Liberty Contracts with Subhaulers

39,000+

Customer Collection Locations

43

Facilities Across North America

50

States / Provinces

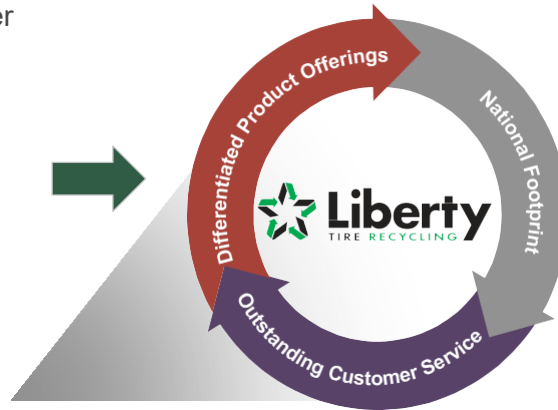
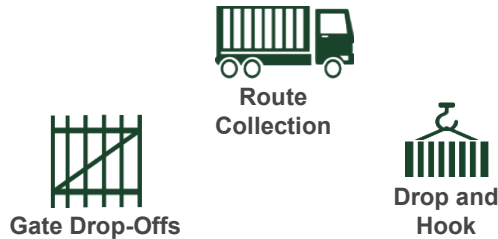
Liberty Operates In

- ✓ National and local presence across North America
- ✓ Large base of hauling and processing permits
- ✓ Access to prequalified network of third-party haulers
- ✓ Network and fleet in place to easily move tires and end products across markets

Beneficial Reuse

Inbound Collections

- One-stop tire collection service provider
- Coast-to-coast footprint
- ~200 million tires collected every year



Beneficial Reuse

- Sophisticated processing capabilities to convert rubber into diverse range of high-value end products

End Markets

Lawn & Garden
Recreational
Industrial
Energy
Infrastructure

Inbound

Beneficial Reuse

Mulch & Molded Goods



Cost-effective, durable substitute for wood landscaping mulch or playground surfacing

Crumb Rubber



Used in a variety of applications, such as rubber turf and industrial mats or track & field applications

Wire



Extracted steel is sold to steel mills

Tire-Derived Fuel



Substitute for coal and other fuels sold to cement kilns and pulp / paper mills

Tire-Derived Aggregate



Substitute for sand, rock, or gravel to line leachate or septic system drain fields

Disposal



Processing byproduct or used in areas with developing outbound markets



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SUSTAINABILITY

Consumers' growing and unyielding ESG values are a challenge and opportunity for the entire industry

64%

of consumers want
companies to implement
strategies to reduce waste

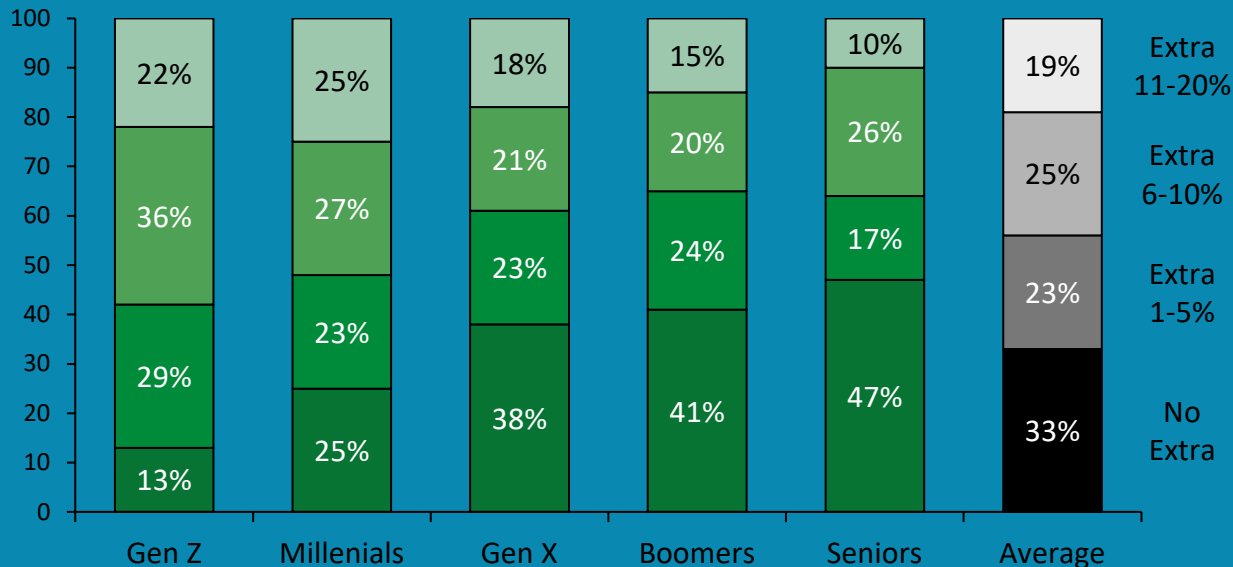
50%

of consumers want more
clarity on how to dispose or
recycle old products

46%

of consumers want more
clarity on the origins or
sourcing of products

U.S. consumer willingness to pay a premium for sustainable products



Liberty Tire recognizes the industry imperative to make quantum advances in managing ELT



Consumers' unyielding ESG expectations – led by Gen Z – have significant implications for the tire industry



New products and technology are emerging to dramatically reshape the management of tire rubber



Tire industry leaders are adopting aggressive ESG goals and backing those up with investments

Major tire manufacturers are declaring ambitious ESG goals...



MADE TO FEEL GOOD.

"We are on our way to an established goal of replacing all petroleum-derived oils in our tires by 2040."

– Richard J. Kramer, Chairman, CEO & President



"By 2050, Michelin tires will be 100% sustainable."

– 2021 Press Release



"With regard to the UN Sustainable Development Goals, we have identified 13 goals to contribute by 2030. Our goal is to reduce 50% of CO2 emissions by 2030 compared to 2011, and to become carbon neutral by 2050."

– Shuichi Ishibashi, Board Member, Global CEO



"From as early as 2022 we will make our global business for emission-free vehicles completely carbon-neutral. By 2040, we are aiming for zero carbon emissions at all our plants worldwide. Finally, by 2050 at the latest, we plan to be carbon-neutral along the entire value chain."

– Nikolai Setzer, CEO



"The company aims at achieving Carbon Neutrality by 2030, also at using 100% renewable electricity at group level by 2025."

– 2020 Sustainability Commitment

Large tire manufacturers have made investments in ESG solutions and recyclers, providing research and technology solutions



- Bridgestone invested in **low-temperature pyrolysis provider** in 2014
- Most **consistent rCB provider** for Bridgestone
- Partnership recycled more than **2 million tires** by end of 2020



- Goodyear's venture capital arm added AmpUp, a **leader in electric vehicle charging**, to its portfolio in 2021
- AmpUp will provide Goodyear with insights into electrification trends and **bring their solutions to Goodyear customers considering electrification**
- **Crucial to wide-scale adoption of EVs**

Sources: [Yahoo Finance](#), [Michelin](#), [Goodyear](#), [Bridgestone](#)



- Michelin acquired Lehigh Technologies in 2027 (company that **uses patented cryogenic technology to transform ELT** into materials for new tires)
- Acquisition will help Michelin foster the use of advanced rubber recycled materials



- Enviro has **proprietary processing technology** to extract rCB from pyrolysis
- Enviro and Michelin will deploy pyrolysis technology at a larger scale
- Michelin taking a **20% stake in Enviro**
- Goal is to **replace half of the virgin Carbon Black** in new tires today with rCB

Advances in technologies and applications will provide more sustainable and circular outlets for ELT

Pyrolysis



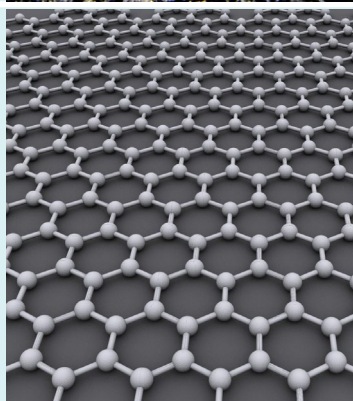
- **More than 50% of tire fully recycled** (carbon black, wire); no landfill disposal
- Price of carbon black almost doubled since 2016¹

Rubberized asphalt



- Superior **resilience** and **quieter roads**
- Size of the US rubberized asphalt market is 185k tons and expected to grow at 5% CAGR. Canadian market still very small.

Graphene



- **Advanced material** with myriad applications (e.g., semiconductors, batteries, rubber, concrete)
- Will dramatically drive demand for carbon black

ESG Initiatives at Liberty Tire

Providing solutions for a large challenge of the U.S. waste management ecosystem and continuing to drive premium value through customer's sustainability objectives



Material Topics

Focus Areas

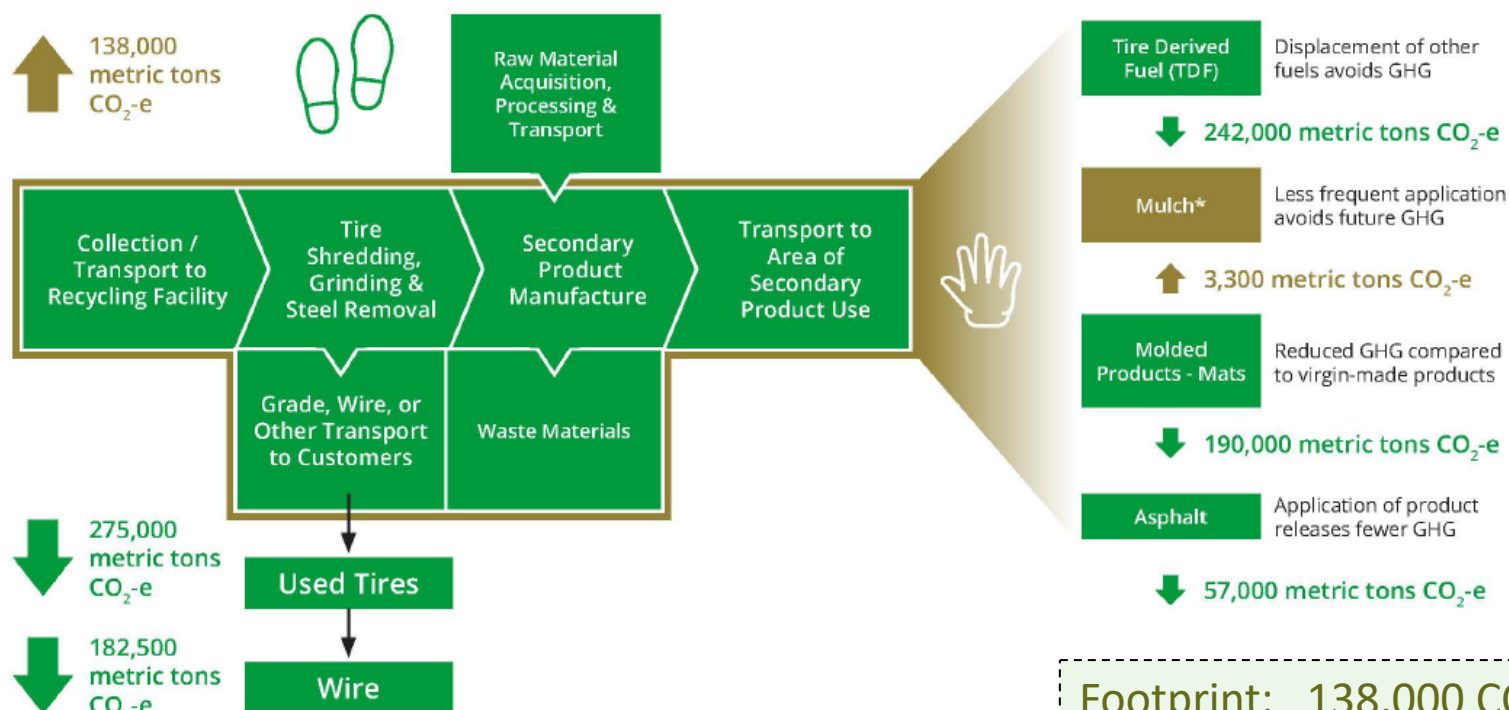
	ADVANCING SUSTAINABLE PRODUCTS	ACCELERATING ENVIRONMENTAL STEWARDSHIP	ENGAGING PEOPLE & COMMUNITIES	OPERATING RESPONSIBLY
	Product Quality & Safety	Climate Change <i>GHG Emissions, Air Quality</i>	Employee Health & Safety	Risk Management
	Product Innovation			Corporate Governance
	Market Acceptance & Product Awareness	Sustainable Operations <i>Energy, Water, Waste</i>	Diversity, Equity & Inclusion	Data Privacy & Security
	Supply Chain Management		Community Engagement	
	Product Stewardship		Recruitment, Training & Development	
	<ul style="list-style-type: none"> • Increase sustainable packaging usage • Manage supply chain ESG risks • Maximize beneficial reuse • Produce high quality products 	<ul style="list-style-type: none"> • Fuel and fleet efficiency • Reduce GHG emissions • Improve operational efficiency • Promote sustainable operations 	<ul style="list-style-type: none"> • Culture of health & safety as #1 priority • Healthy workforce • Increase community engagement • Diverse and inclusive culture • Improve talent development 	<ul style="list-style-type: none"> • Demonstrate ethical values • Risk analysis & mitigation



Our Footprint and Handprint Model



ACCELERATING ENVIRONMENTAL STEWARDSHIP



* Mulch - After year one, GHG emissions will be avoided due to the extended useful life of the product.

Footprint: 138,000 CO₂-e
Handprint: 943,200 CO₂-e

Launch of Liberty Tire Recycling's Inaugural ESG Report

April 2022



CELEBRATE EARTH DAY 2022

Liberty Tire Recycling is proud to share the release of our inaugural Environmental, Social and Governance (ESG) Report for the 2020-2021 calendar years. We are proud of the accomplishments of our dedicated team and continued improvements in our sustainability, safety, and service.

OUR MISSION

Liberty Tire is committed to supporting a more circular economy for long-term global health by finding new and better ways to recycle tires and manufacture our products.

DRIVING A GREENER TOMORROW

Our Four Pillars Of Sustainability



Liberty Tire Recycling @LibertyTireLLC · Apr 22

Liberty Tire's #EarthDay inaugural ESG Report is LIVE on our website. Watch a video introduction from CEO Thomas Womble below, and view the full report at: libertytire.com/wp-content/upl...



<https://www.environmentalsolutions.com/libertytire/>

We working to be your world-class sustainability partner

ESG Commitments

- **98%** disposal-free system
- Decrease in Liberty-specific carbon footprint by 25% by 2025
- 25% post-consumer recycled content in all packaging by 2025
- Reduce fuel consumption in our operations by 10% by 2025
- Increase energy productivity by 20% by 2025
- Annual goal of 0 lost time incidents for employees



2022-2023 Acceleration Initiatives

- Investment in tools to measure and report ESG performance data
- Higher wages
- Alternatives to fossil fuel vehicles
- Route optimization to improve efficiency, reduce fuel consumption and overall carbon footprint
- Energy efficiency in all facility operations
- Development of a Supplier Code of Conduct





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WHAT'S NEW?

Rubberized Asphalt in Canada

Undisclosed Locations

Selkirk Paving and Eurovia/BA Blacktop

- Two trials in Vancouver area in Spring/Summer 2021
 - Loading Dock areas with heavy truck traffic
- Coring in April 2022 showed excellent results.
- Expecting public announcement late summer.



Town of Nelson – Lakeside Park

Selkirk Paving

- Paving project planned for Summer, 2021
- Weather delays and activities pushed this until Summer/Fall, 2022 (waiting on dates)

Recent Highlights in the US

National Center for Asphalt Technology – Auburn University

Test Track: 1.7 miles

2020 – Participation in Laboratory Study

2021 – Chosen for paving on the test track based on excellent performance in lab

20+ state DOT sponsors receive progress reports twice annually. 17 states sponsoring projects. Partnered with MnROAD to monitor in northern climates.

These pavement sections will be continuously loaded with truck traffic for three years which will have the equivalent loading of 10 years on an actual highway.



Michigan's miles of recycled rubberized road stretch on

June 29, 2022

Rubber, meet road. Not in the usual sense of tires rolling on pavement, but in rubber from scrap tires becoming part of road surfaces around Michigan.

Recent paving projects backed by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) in Bay and Clare counties are expanding the use of rubber-modified asphalt.



Kirsten Clemens

EGLE Scrap Tire Coordinator
ClemensK@Michigan.gov
517-614-7431

"The growing consensus is that rubber-modified paving is a winner for local roads. In 2019, EGLE helped fund a Michigan Tech project in Dickinson County to see how an asphalt-rubber mix would hold up to extreme Upper Peninsula weather. A study two years later found the pavement resists rutting during hot weather and cracking in the cold."

News 19
@whnt

Lake Guntersville Park gets special new pavement



whnt.com
Lake Guntersville Park gets special new pavement
Officials with the Alabama Department of Conservation and Natural Resources and the Alabama Department of Environmental Management showed off newly...

Colorado National Speedway Demonstrates Liberty Tire Recycling's SmartMIX Asphalt Technology

Jun 27, 2022

"You've heard of where the rubber meets the road, this is where the rubber is the road," said Jim Nordhougen, Owner and Event Promoter of the track. "We tried to use recycled tire rubber in the past, but it was too expensive and difficult to coordinate with the extra liquid tanks and specialized equipment. This time around the process was much easier and less expensive."

Supporting Local Innovation – Atlantis Holdings

THE ISSUE

Climate change has presented many challenges to our planet including the rapid deterioration of our vital infrastructure. Atlantis' mission is to help bridge the gap between now and future global carbon reduction targets by helping to maintain these critical infrastructures including buildings, pavements, bridges and other structures through the broad utilization of our highly adaptable products.

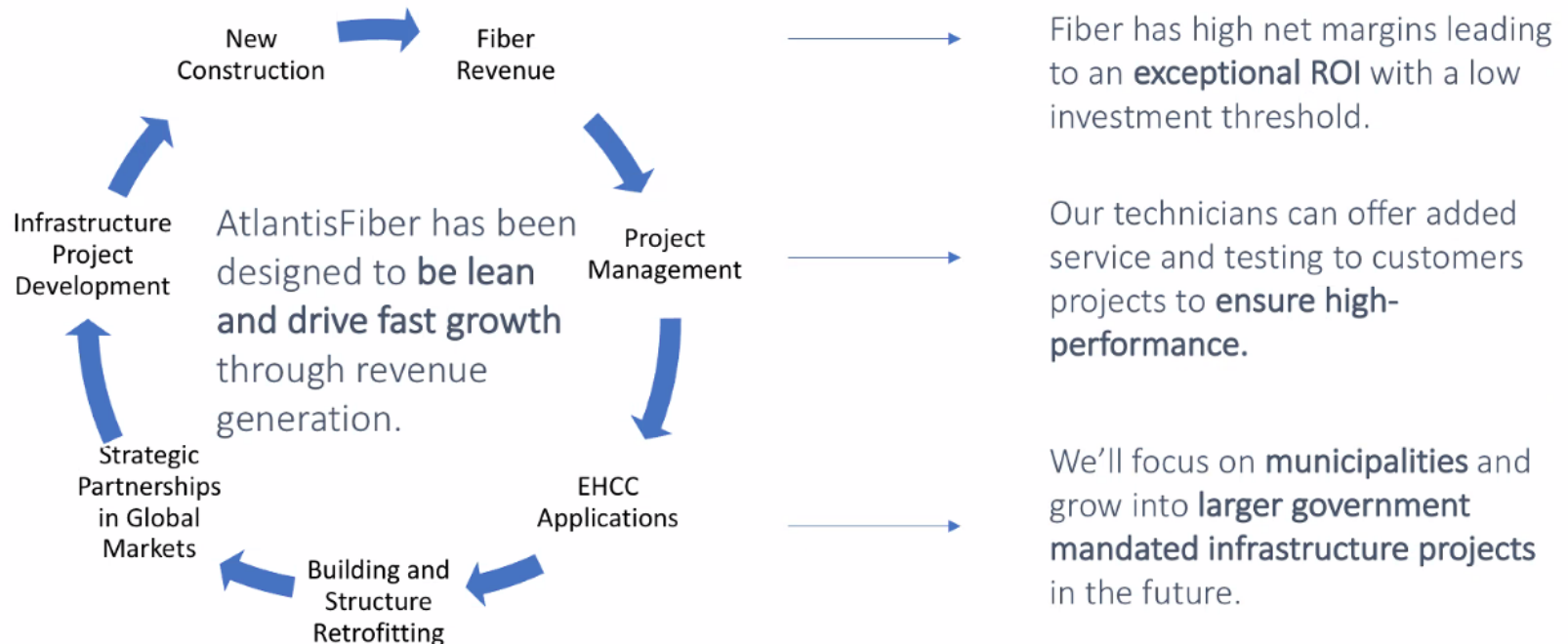


OUR MAGIC SOLUTION

We use a combination of underutilized, industrial by-products to create a versatile blend that renders cementitious repair composites extremely ductile (akin to steel) as well as being highly durable and virtually completely crack-free - even under extremes of stress-loads exceeding a +9.0 magnitude seismic event. By varying the blend ratio, we are able to offer many versatile applications.

AtlantisFiber™ Our Business Model

High-margin products serving volume-based industries globally will allow for rapid, non-cash intensive scalability.





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RESEARCH AND STUDIES

The Latest and Greatest

- PFAS
- 6PPD-Q
- Microplastics
- US Federal Research Study
- CalOEHHA



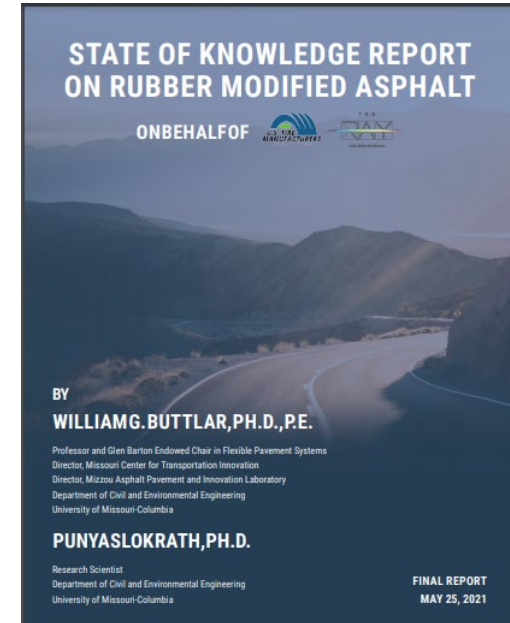
Science of The Total Environment

Volume 842, 10 October 2022, 156705



Characterization of synthetic turf rubber granule infill in Japan: Total content and migration of metals

“Because the amount of metals leached into the simulated biofluids was much lower than several standards on the amount of certain metals that have the potential to be extracted from the object if ingested, the risk related to the exposure to metals from synthetic turf rubber granule infill is considered low.”



RE: PFAS Testing Results for Recycled Car and Truck Tire Crumb Rubber

Dear Ms. Brackin:

EXECUTIVE SUMMARY

Samples of recycled car and truck tire crumb rubber from Liberty Tire Recycling were analyzed for per- and polyfluoroalkyl substances (PFAS). PFAS was not detected in either of the samples. This an expected result as there is no technical reason to add PFAS-containing compounds to either car or truck tires.

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UPDATES ON OUR BC OPERATIONS