Joint venture to accelerate European tire recycling plant rollout

Enviro and Antin Infrastructure Partners to establish the world's first large-scale recycling group in Europe, supported by Michelin

The joint venture targets a 1,000,000 ton annual end-of-life tire recycling capacity by 2030 – around 30% of European supply

Offering a European supply of valuable resources, supporting strategic autonomy

Creating the world's first large-scale tire recycling group

30 March 2023





# **Disclaimer**

#### IMPORTANT INFORMATION

You must read the following information before continuing. The following applies to this document, the oral presentation of the information in this document by Scandinavian Enviro Systems AB (publ) (the "Company") and any other information that you receive from the Company's representatives and advisors in connection with the presentation or at any following question-and-answer sessions (collectively, the "Information"). By accessing the Information, you agree to be bound by the following terms and conditions.

The Information has been prepared by the Company to be used solely for a company presentation and solely for persons whom have been invited to and participate in the information meetings which the Company holds for potential investors (each such person, a "Recipient") with the purpose of allowing the Recipients to form an opinion of the Company. The Information is provided solely for this purpose, and is intended solely for those who the Company has provided the Information to. The Information may not be used or relied upon by any other person than the Recipients or for any other purpose. The Information is confidential and may not in any manner, without the prior written consent of the Company, be disclosed or made available to any other person than the Recipients. Persons receiving this presentation without being a Recipient must immediately return the presentation to the Company. The Information is not directed to, or intended for distribution to or use by, any person or entity that is a citizen or resident of a state, country or other jurisdiction where such distribution or use would be contrary to law or regulation or which would require the Company or its advisors to adopt any measures. The Information is not for distribution or use in Australia, Canada, Hong Kong, Japan, New Zealand, South Africa, the United States or in any other jurisdiction in which a potential future offer to acquire the Company's shares would be prohibited.

The Information does not constitute or form part of, and should not be construed as, any offer, invitation, solicitation or recommendation to purchase, sell or subscribe for any securities in any jurisdiction and the Information does not constitute, and should not be considered as, a prospectus within the meaning of Regulation (EU) 2017/1129 of the European Parliament and of the Council of 14 June 2017 (the "Prospectus Regulation") and do not constitute an offer to acquire securities in the Company. The Information is intended to present background information on the Company, its business and the industry in which it operates and is not intended to provide complete disclosure. The Information should be independently evaluated and any person considering an interest in the Company is advised to obtain independent advice as to the legal, tax, accounting, financial, credit and other related considerations prior to proceeding with any interest. Prospective investors should not treat the Information as an advice relating to legal, taxation or investment matters.

The Information contains forward-looking statements. All statements other than statements of historical fact included in the Information are forward-looking statements. Forward-looking statements give the Company's expectations and projections relating to its plans, objectives, operations, results and financial condition per the date of this presentation. These statements may include wording such as "believe", "estimate", "estimate", "plan", "will", "likely", or "can have", and other words and terms of similar meaning or the negative thereof. Such forward-looking statements involve known and unknown risks, uncertainties and other important factors beyond the Company's control that could cause the Company's actual results, performance or achievements to be materially different from the expected results, performance or achievements expressed or implied by such forward-looking statements. Such forward-looking statements are based on numerous assumptions regarding the Company's present and future business strategies and the environment in which it will operate in the future.

Certain information contained herein has been obtained from published sources prepared by other parties that the Company has deemed to be relevant and trustworthy. No representations or warranty or undertaking, expressed or implied, is made as to, and no reliance should be placed on, the fairness, accuracy, completeness or correctness of the Information. The Information has not been independently verified and will not be updated, even if the conditions which this Information is based upon are changed in such a manner that the Information is no longer accurate or complete or if the information proves to be incomplete in any other way. The forward-looking statements, applies only as of the date of this presentation and is not intended to give any assurances as to future results of the Company. Market data used in the Information not attributed to a specific source are estimates of the Company and have not been independently verified.

The Information as well as any other information provided by or on behalf of the Company in connection herewith shall be governed by Swedish law. The courts of Sweden, with the District Court of Stockholm as the first instance, shall have exclusive jurisdiction to settle any conflict or dispute arising out of or in connection with this Presentation or related matters.



# **Setting the stage**

Michelin and Bridgestone believe the demand for recovered carbon black (rCB) to reach 1 million tons by 2030



#### **BRIDGESTONE**



# Michelin, Bridgestone see potential for rCB demand to reach 1m tonnes by 2030

28 Nov 2022

But existing rCB specs do not allow for total substitution of virgin carbon black

Berlin - Bridgestone and Michelin believe demand for recovered carbon black (rBC) could reach 1 million tonnes by 2030 - if recycling technologies continue to develop over the coming years.



Share: 🤟 🛐 🥅 🐷

Existing capacity to produce rCB that meets tire makers' specifications was small compared to the total carbon black market, they said a joint presentation at the Smithers Recovered Carbon Black Conference, held 16-17 Nov in Berlin.

The two tire majors, which have been pushing for a global alliance to promote the use of rCB since last year, added that existing rCB specifications do not allow for "total substitution" of all grades of virgin carbon black.

## Tire manufacturers with 100% sustainable materials as stated goal













# Creating the world's first large-scale tire recycling group

## The world leader in tire recycling technology...

# **Enviro**



20+ year track record of pyrolysis innovation and engineering



One Sweden-based plant (Åsensbruk) with commercial deliveries to Volvo Car Corporation (via Anva) since 2016



World-leading pyrolysis platform and modular production process



Enviro's recovered carbon black and tire pyrolysis oil have been tested and verified by industry majors



Extensive IP portfolio



Leading sustainable tire manufacturer Michelin has been a principal shareholder and partner since 2020

### ...is forming a large-scale joint venture

- Establish the first large-scale tire recycling platform with plants across Europe to produce sustainable raw materials including recovered carbon black and oils to be re-used in the tire- and petrochemical industries
- Significant contribution to solving waste handling challenges from growing volumes of end-of-life tires, while also increasing Europe's strategic autonomy of valuable raw materials currently facing growing supply constraints
- The JV targets an annual capacity of 1 million tons of end-of-life tires ("ELT") by 2030 corresponding to ~30% of tires disposed
  in Europe each year
- · Long and secure multi-year supply agreements for both recycled carbon black and recycled oil
- High margins, predictable revenues, proven technology and strong macro trends make the JV an ideal infrastructure investment
- Clear environmental benefits:
  - Carbon emissions can be reduced by >90% compared to use of virgin carbon black
  - Pyrolysis oil can replace fossil fuels and fossil oils in non-fuel sectors
- Creates significant value to parent companies and customers
  - Highly attractive financial returns with limited equity capital requirements due to leverage potential
  - Meeting the commitments from the world's largest tire manufacturers to make the tire industry sustainable and circular

## Selection of customers proving validity of technology











Source: Company information

The deal

The partners Rackground The technology The market The rollout Mistructure Finance

# A Joint Venture with significant value creation potential













Complementing resources and capabilities



Contribute to European strategic autonomy



Becoming a European major in tire recycling



Highly profitable business model



Detailed plan for European rollout in place



Long and secure multi-year supply agreements



Technology required already developed



Becoming a key supplier in industrial sustainability



# Ideal partners for European expansion



EUR 31bn AUM as of 31 Dec 2022

5 Currently managed funds

190+
Professionals

- Multinational pure-play private equity firm with focus on European and North American infrastructure
- Antin will invest in and support the JV through its NextGen platform: infrastructure of tomorrow, proven but not yet widely adopted – the "infrastructure of tomorrow"
- Extensive track record of identifying, developing and scaling infrastructure, creating value for stakeholders while delivering superior risk adjusted returns to investors
- · Investment themes underpinned by long-term megatrends
- · Emphasis on resilient business models and robust downside protection
- · Antin has chosen Enviro as its partner following a thorough technical due diligence
- The JV is aligned with strategic focus areas and corresponding sector expertise









**123**Production sites

125,000 Employees globally 100% Sustainable materials by 2050

- Largest tire manufacturer in the world, established partner and principal shareholder of Enviro
- Leading market position and a long history developing the industry through innovation management
- In October 2022, Michelin unveiled the world's first road tire cars which contains 45% renewable materials, including rCB from Enviro – with identical performance levels to common tires
- Michelin's participation is a significant step in its ambition to achieve a circular and more sustainable tire production
- Targets 40% sustainable materials in produced tires by 2030, 100% by 2050

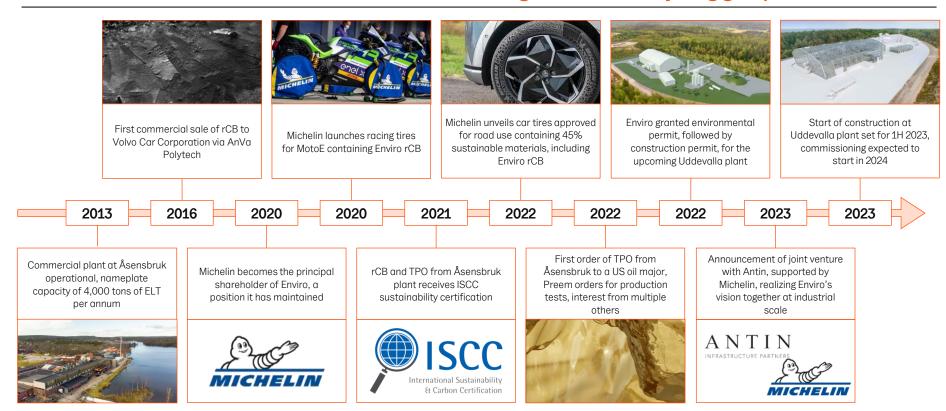


Michelin is firmly committed to leading the transition to a circular economy



Source: Company information

# Enviro's foundational milestones to create the first large-scale tire recycling group in the world





# **Key investment highlights**



Technology proven in commercial application at plant since 2016 with world-leading technology and modular production process



Massive market potential with around 3.5 million tons of end-of-life tires annually in Europe alone, and with strong underlying growth



European rollout of recycling plants with capacity for 1 million tons of ELTs through fully financed joint venture with infrastructure private equity firm Antin



Long term multi-year supply agreements secured with Michelin and in advanced stage of negotiations with key industry players for TPO and carbon black



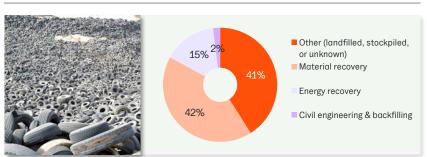
Contributing to European strategic autonomy of key raw materials within industry and energy

High margin business model turning waste to high value material – significant financial upside and capital limited equity capital requirements from potential leverage



# Large environmental issue set to be countered by Enviro's technology

# Overview of global ELT recovery<sup>1</sup>



## **Environmental problems from ELT's**

Nature cannot fully decompose tires, and thus consume considerable space when landfilled or stockpiled. Furthermore, the process releases toxins and microplastics

olic

Energy recovery through combustion and burning tires at landfills releases harmful chemicals such as benzene, toluene, and polycyclic aromatic hydrocarbons, harming aquatic wildlife and plants

#### Enviro has the solution

#### Uses identified - an example

Using rCB from Enviro, Michelin has produced road-approved car tires with 45% sustainable materials (53% for racing tires)



# Sustainable development goals

Enviro's technology is actively contributing towards 9 SDGs



Estimated annual output by 2030 from the JV's plants in Europe

~6 TWh

energy content of produced TPO

~670,000-ton

reduction in  ${\rm CO_2}$  emissions annually

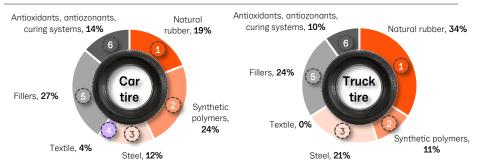
~93%

Iower CO<sub>2</sub> emissions compared to vCB

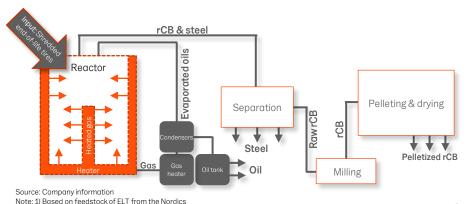


# Pyrolysis – from ELTs to recovered raw materials

## Tire composition



# Simple overview of the pyrolysis process



# Outputs from the pyrolysis process<sup>1</sup>

Product	Commentary
Tire pyrolysis oil (50%)	The polymers coupled with vulcanization chemicals and the largest proportion of the textiles are transformed into oil, where natural rubber is the main component that builds up the bio content in the oil
Recovered carbon black (30%) 5 6	Fillers (mainly carbon black and silica) along with some of the vulcanization chemicals (zinc and sulfur) builds up the recovered carbon black
Steel (15%) 3	Steel is separated from the raw rCB and compacted into transportable bales
Gas (5%)	Origin from polymers and vulcanization chemicals



# Sophisticated pyrolysis technology with history of capacity increases

## Successful historical stepwise scaling of reactor size indicating limited technical risk in final scale-up



The reactors at Uddevalla will be 24m³ (annual capacity of ~ 6,900 tons of ELT), the smallest relative reactor size increase to date 5 modular lines with reactors equaling a total annual capacity of 34,500 tons

## Batch technology ensures customer-tailored output quality

- Enviro's proprietary batch technology allows production of rCB and TPO of desired quality, yielding a truly wide range of use cases
- By running batches, inputs (i.e., qualities of ELTs used) can be matched to customer preferences
- Excellent controllability of the pyrolysis process through the use of batches, allowing for optimal output quality
- Due to the batch process, quality of rCB and TPO matches that of fossil alternatives

# Select advantages of technology yielding high-quality rCB and TPO

Pressurized closed system prevents formation of explosive atmosphere

Fixed bed minimizes the amount of dust in condensers and final oil product

Reduced carbon dust in gas and oil

Low levels of amorphous carbon due to batch process and even hot gas distribution over reactor bed

Electrified heating results in low CO<sub>2</sub> footprint of rCB and TPO



# Validated technology and position

## Michelin as owner and partner





- · Michelin has been Enviro's principal owner since 2020
- Michelin launched racing tires for MotoE with Enviro inside 2020
- Michelin has successfully produced road approved tires with 45% sustainable materials (and 54% for racing tires), including rCB from Enviro
- Michelin is represented on Enviro's board of directors

### Certified sustainable solution





- ISCC is a global sustainability certification system for industrial sites and processes
- Enviro's rCB from Åsensbruk was the first recovered carbon black to receive ISCC-Plus certification
- · Compliant with ISCC EU + RED II for refined oil
- Compliant with ISCC PLUS for circular and bio-circular pyrolysis oil and carbon black

## Proven commercial viability



- Commercial deliveries from Asensbruk since 2016
- Capacity for 4,000 tons of ELTs p.a., verifying viability of production at scale
- Åsensbruk has delivered rCB and TPO to industry majors such as Trelleborg, Preem, Michelin and a US oil major
- High-quality rCB and TPO capable of partially or completely replacing virgin alternatives

## Proven technology to produce high-quality outputs



Batch-based production allows for a highly controlled process and output quality, ensuring the consistency required for industrial applications



High purity and consistent characteristics of rCB makes it useable as substitute for virgin carbon black



Performance and consistency of Enviro's TPO makes it viable for more demanding applications, e.g., fuels – a crucial competitive advantage



Renewable TPO (~50% of TPO) compliant with EU RED II directive, allowing fuel producers to substitute common oil in wide range of end products



Source: Company information

- 11 -

# End-of-life tire (ELT) market overview

#### Introduction to the ELT market



The ELT market encompasses the handling of disposed tires. Method varies greatly between regions and existing infrastructure – from energy recovery and refurbishing to landfills



Tires consist of materials that are not degradable by nature and create immense waste problems if not recovered. Tires also contain valuable materials, or components thereof, such as carbon black, pyrolysis oil and steel



**95% of European ELT volumes are collected** and used for energy or material recovery (~50% cement kilns), partly recycled (granulation accounts ~38%) or used as mix with other material or landfill

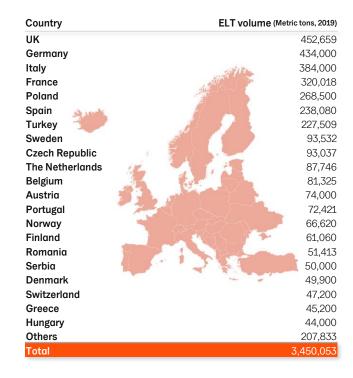


Through the process of recycling tires, valuable components such as **carbon black**, **pyrolysis oil** and **steel** can be recovered



Industry players have called for access to sustainable raw materials, supporting **demand for a more sustainable solution** to better capture the resources from End-of-life tires

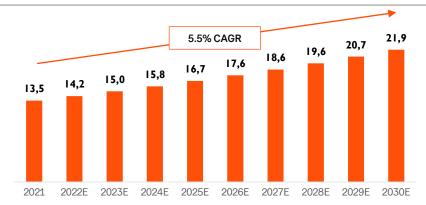
## Considerable European ELT volumes





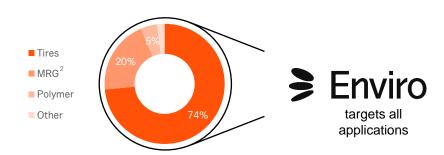
# The carbon black market offers an attractive position for Enviro

### Global market for carbon black, USDbn



- Carbon black is a globally traded commodity with a wide range of applications including tires, plastics, coatings and more
- Carbon black is produced through incomplete combustion of coal, petroleum or other carbons
- · Prices tend to correlate with global oil prices, though with lower volatility
- Global carbon black prices have increased US core inflation significantly and consistently since the year 2000
- Highly consolidated market, with the 10 largest producers representing ~70% of the global market share

## Global carbon black demand by application<sup>1</sup>



#### Carbon black market drivers



New applications and technologies leading to increasing number of uses in industries such as tires, rubbers, plastics, inks and coatings, batteries, construction, metallurgy etc.



Growing vehicles production and sales numbers globally is a major market driver. Beyond tires, the material is also used in sealing systems, anti-vibration parts and other rubber-based components



As emission regulations become stricter, carbon black improves performance and durability for rubber and plastic products, supporting demand for carbon black in general and rCB in particular



# Tire pyrolysis oil as a valid complement replacement and replacement to fossil alternatives

## Introduction to Enviro's recycled oil

- Tire pyrolysis oil ("TPO") is the largest output by volume from Enviro's pyrolysis technology
- Enviro's TPO is of high quality and has been successfully tested by Enviro's customers within the petrochemical industry
- Enviro TPO can be refined together with other raw materials for production of biofuels in established processes, creating an attractive opportunity for petrochemical customers
- Just like fossil oil, TPO can be used to produce a number of materials beyond fuels

# Considerable interest from industry players

#### Commercial<sup>1</sup>



Undisclosed **US oil major** 

## Production testing



Multiple internationals within refining and chemicals

## Proven and potential applications and end uses



Base chemicals for plastic feedstock



Base chemicals for industrial applications



Base oils for industrial applications, such as lubrication and process oils



Renewable content for vehicles fuel, both commercial and consumer



Feedstock for virgin Carbon Black production

# Recycled oil - key features

Valuable petrochemicals with high bio content and eligible for renewable fuel certifications and sustainability premia



TPO can be used as a biofuel aligned with the EU Renewable Energy Directive, lowering  ${\rm CO_2}$  emissions with no considerable land use required



The oil recovered contains about 50 percent bio-origin, making it increasingly interesting to the refinery and chemical market



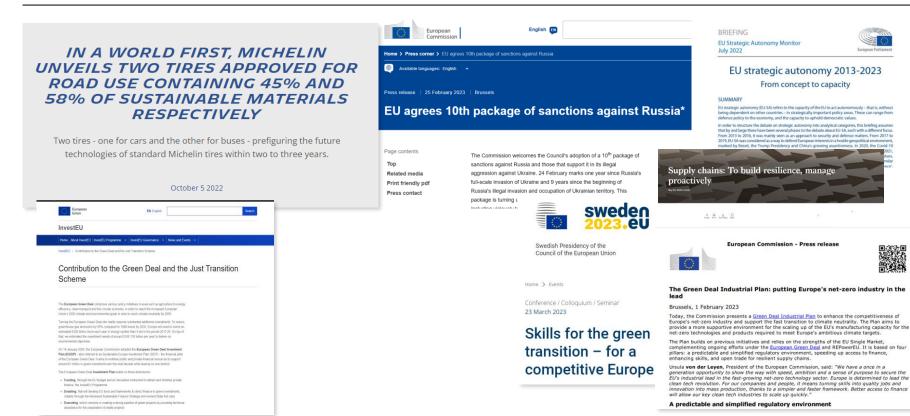
Limited market competition due to substantial entry hurdles, such as R&D investments, patents and the cost of industrialization



The underlying demand for material circularity and reduced environmental impact drive the long-term demand for TPO



# Structural focus on access to sustainable value and supply chains





# High-level overview of rollout steps









Administrative preparations finalized/being finalized

Launch of JV and related processes

Construction of Uddevalla plant

Process fine tuning and production

Full scale rollout

- JV management team appointed in May 2022
- Detailed rollout plan and site selection
- Technical due diligence
- Financial planning

- JV and related entities established
- Transfer of Uddevalla project, including rights and obligations to JV
- Finalization of offtake agreements
- Construction start

- Initial capacity of 34,500 tons of ELTs p.a.
- Securing new sites for coming plants
- Feedstock contracts for coming plants

- Launch of full-scale production in Uddevalla
- Testing and fine-tuning of production processes
- First deliveries of offtakes, ambition to limit ramp-up time once construction is finished
- Following successful commissioning – acceleration of full-scale European rollout

- European rollout leveraging lessons learnt in Uddevalla
- Rapid expansion to be facilitated by modularity of plants with minimal differences between plants
- Capacity for 1 million tons of ELTs p.a. by 2030



# Attractive offtake contracts to ensure stable revenue base in the JV

# **Take-or-pay** Stable and predictable

- Take-or-pay contracts obligate customers to either buy the agreed-on volumes or pay
- · Common in the energy sector, allow for sharing of risk of investment
- Quality seal for Enviro's rCB and TPO

# **Fully bankable** Financial flexibility

- Predictability of revenues and take-or-pay provisions to allow the JV to obtain debt financing at favorable terms, to finance the rollout
- Reduces equity capital requirements for Enviro and its partners

# **Long contracts**Secure partnerships

- Contracts span several years, which adds to predictability and bankability
- Customers are large industrial players that value secure supply of input goods and materials

## Large volumes Industrial scale

- The JV's customers require large volumes of high-quality input materials, volumes to motivate large-scale production
- Contracts for significant volumes, corresponding to output volumes of several plants, have already been claimed through agreements and negotiations



Multiyear supply agreement for first plants for rCB and TPO



Ongoing and advanced negotiations with other industry majors



Majority of supply agreements from first plants of the European rollout already claimed



# The Uddevalla plant will be the steppingstone for European plant rollout



# Uddevalla, Sweden Location

## 2024/2025

Uddevalla plant fully operational

#### By road from Uddevalla

- Gothenburg: 84km, 1h
- Oslo: 220km, 2h 40min
- CPH: 400km, 4h 30min
- Stockholm: 430km, 5h

#### By sea from Uddevalla

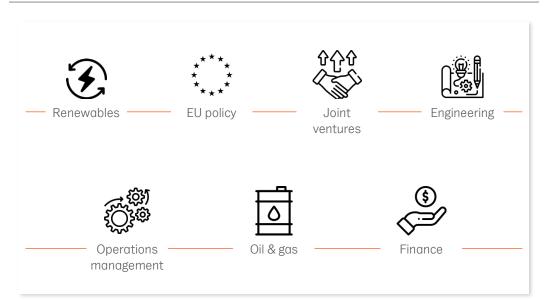
- Lubeck: 317NM, ~ 21h
- Hamburg: 363NM, ~ 24h
- Rotterdam: 517NM, ~ 34h
- Turku: 673NM, ~ 45h

- Enviro's previously planned plant in Uddevalla will be owned by the JV and will be the first plant to be constructed and commissioned
- Detailed construction plan completed in 2022 and all permits and plans in place to start construction – modular design to be replicated at other plants
- Technology and processes to be used at Uddevalla have already been tried and tested at the Åsensbruk plant
- When the production process has been optimized, the Uddevalla plant will be used as a blueprint for the continued European rollout
- Planned initial capacity of 34,500 tons p.a., with space for twice as many reactors meaning that capacity can be doubled within the same facility
- Strategically positioned with access to Nordic feedstock and industry clusters by road, as well as port access to the rest of the world
- Construction will commence during 1H 2023 and is expected to be fully operational in 2025



# Handpicked JV management team with invaluable experience to execute the rollout

## Overview of collective experience to benefit the JV



## Selected previous experiences



Highly experienced top management with relevant background within energy and developing large scale operations to be led by CEO Stefano Medaddu



# Rapid commercialization through fully financed joint venture with Antin and supported by Michelin

#### The JV in brief

- Enviro has formed a joint venture with Antin Infrastructure Partners, which will utilize Enviro's pyrolysis technology in a series of recycling plants across Europe
  - Michelin plans to join the JV as a partner, as future plants are built
- Construction of the first plant in Uddevalla, Sweden, is planned to start in 1H 2023 and is expected to fully operational by 2025. The aim is to reach a total capacity of 1m tons of ELTs annually by 2030
- The JV partners have agreed on the financing of the expansion plan. Enviro's ownership in the JV will ultimately correspond to approximately 30%, while the initial investments will be financed by Antin
- The JV combines Enviro's unique patented technology and experience in recycling carbon black and pyrolysis oil from ELTs, with Antin's expertise in developing and scaling infrastructure platforms and Michelin's world-leading brand position in sustainable tires
- Enviro will, beyond its ownership stake, receive asset fees related to every plant's profits and cost coverage for services provided until then
- In line with Antin's other investments, the JV exhibits infrastructure characteristics.
   Long-term contracts with major customers centered around pre-determined prices and quantities will generate stable and predictable revenues and attractive debt financing terms
  - Michelin has already signed supply agreement agreements for rCB and TPO

Key resources, know-how and reputation among founding partners





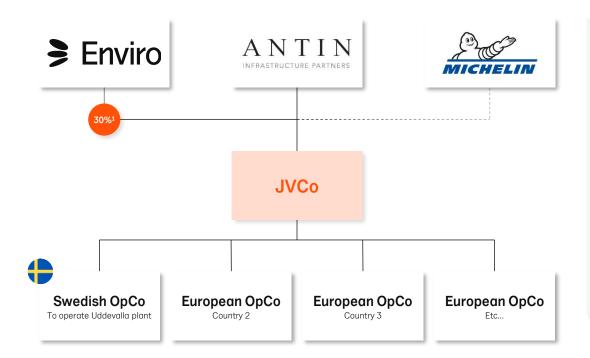


- Will bring Enviro's technology and know-how to market at scale from day one
- Output already claimed for several plants ahead through multi-year supply agreements and advanced discussions
- The process has been successfully tried and tested at Enviro's existing commercial plant in Åsensbruk, Sweden
- Contributing to solving the issue of handling ELTs as well as increasing tire industry self-sufficiency in strategic raw materials
- Already conducted preparatory work to enable rapid launch and rollout
- Highly experienced JV group management team



# Operationally independent JV with key support from owners and partners

# Simplified corporate structure

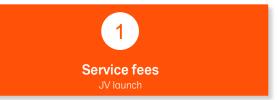


## Commentary

- Enviro to remain technology owner and responsible for R&D as well as marketing and sales. Enviro will also provide certain services to the JV
- Antin to provide capital and important guidance to JV management, based on its extensive experience in developing and scaling businesses
- Michelin will purchase rCB and TPO while also aiming to join the JV as an owner
- JV operations include:
  - Securing new sites throughout Europe
  - Plant construction
  - Secure feedstock
- JV plant operation has received exclusivity throughout Europe
- Enviro will be represented on the JV's board of directors from launch

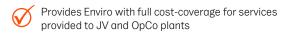


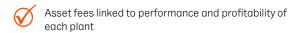
# **Substantial financial upside for Enviro**

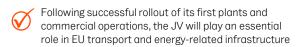










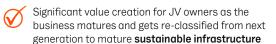


Generated in development, construction and operating of each plant as well as other advisory services

- Payable as individual plants hit certain performance and profitability thresholds, progressively increasing with capacity and profitability
- Highly cash generative business with strong return on equity due to favorable leverage on infrastructure

Reduce Enviro's cost burden until plants get successfully commissioned

Provides Enviro with a stable and predictable, long-term earnings base



## Full upside participation with limited downside risk



Q&A

Joint venture to accelerate European tire recycling plant rollout

Enviro and Antin Infrastructure Partners to establish the world's first large-scale recycling group in Europe, supported by Michelin

The joint venture targets a 1,000,000 ton annual end-of-life tire recycling capacity by 2030 – around 1/3 of European supply

Offering a European supply of valuable resources, supporting strategic autonomy

Creating the world's first large-scale tire recycling group 30 March 2023



