



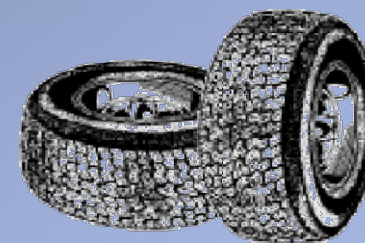
# **Tyre Recycling and Circular Cycling**

Dott. Ettore Musacchi, President



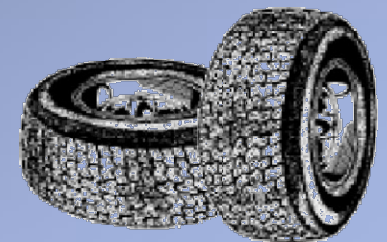


## About ETRA : Who we are

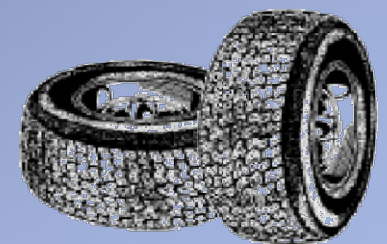


# The European Tyre Recycling Association

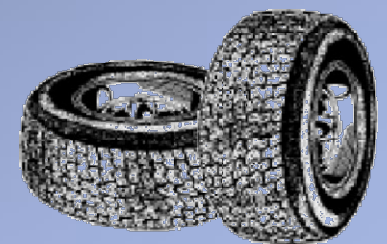
- ETRA, the European Association, was founded in 1994
- ETRA is an independent, member-driven organisation devoted exclusively to the material recycling of tyres
- Its mission is to develop tyre recycling as an environmentally sound and commercially sustainable European industry
- Its key objective is to develop and advance policies supporting the industry leading to the creation of new markets or expansion of existing ones



# About Tyre Recycling



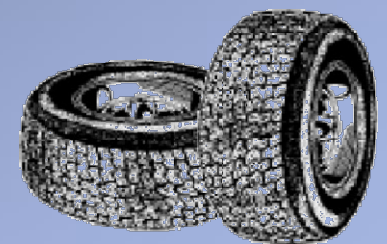
# EOL Tyres



# EOL Tyres

**4.200.000 Tonnes of EOL Tyres**

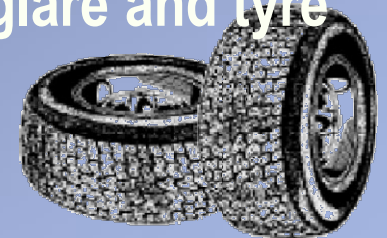
are produced every year in the EU, Norway,  
Switzerland and United Kingdom





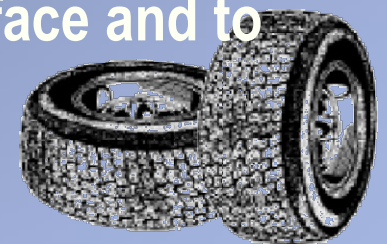
# Characteristics of RTMs

- RTMs are soft, tough, flexible and elastic
- RTMs have excellent insulation characteristics - reducing the impacts of vibration and sound, and under certain circumstances, current as well
- RTMs are moisture resistant as well porous, allowing water to drain freely
- RTMs retain the characteristics of a tyre on the road !
- Used on road surfaces, RTMs can reduce vehicle skid, glare and tyre spray



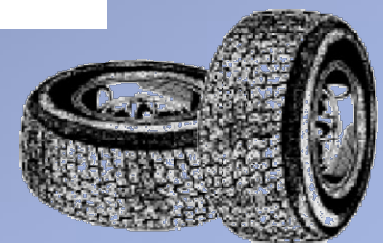
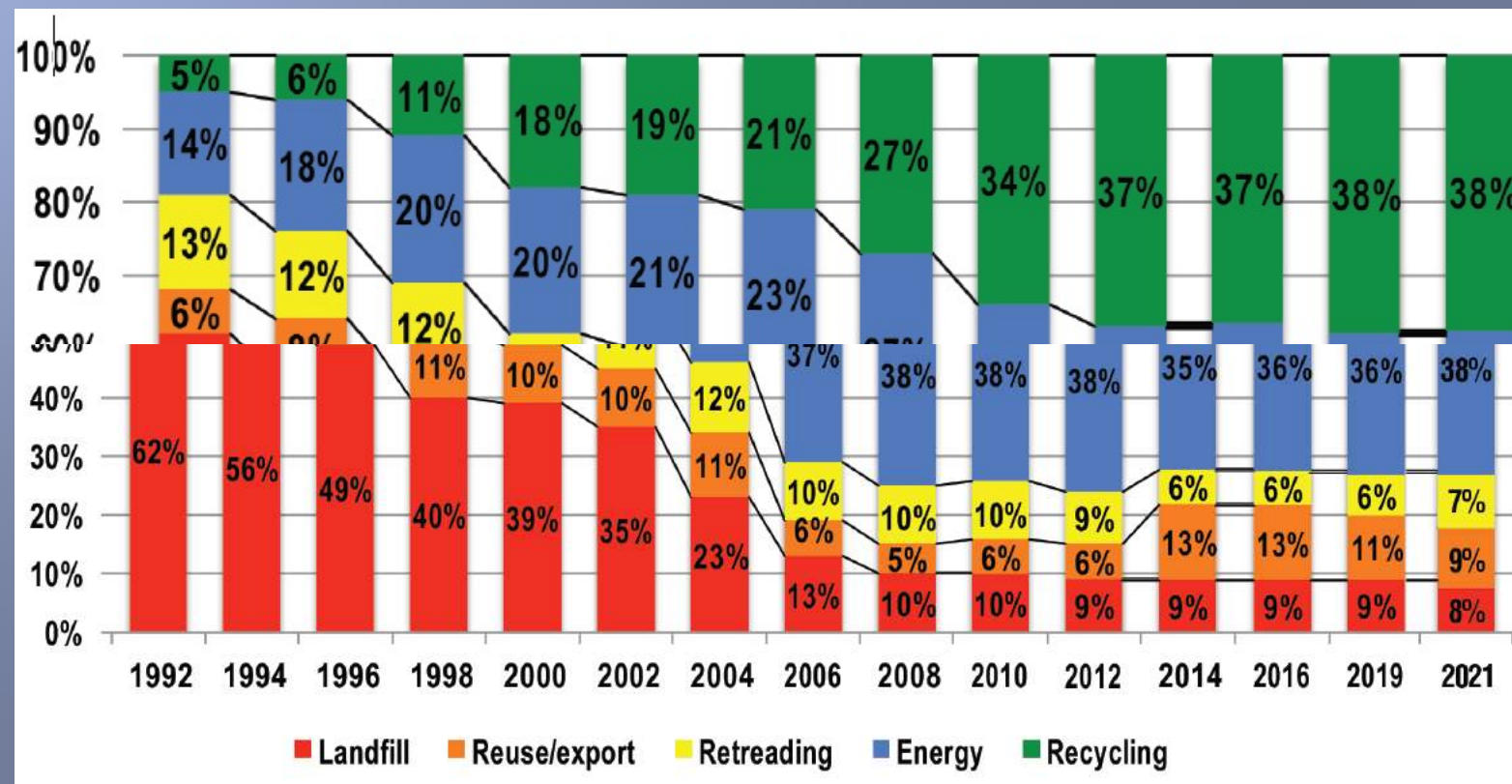
# Characteristics (cont)

- Anti-static
- Non-toxic
- Waterproof and anti-slip
- Resistant to Ultra violet rays
- Perform well even at climatic extremes (cold / heat)
- Highly resistant to both abrasion and impact
- Absorb and deflect pressure – reducing injury to the surface and to the falling object



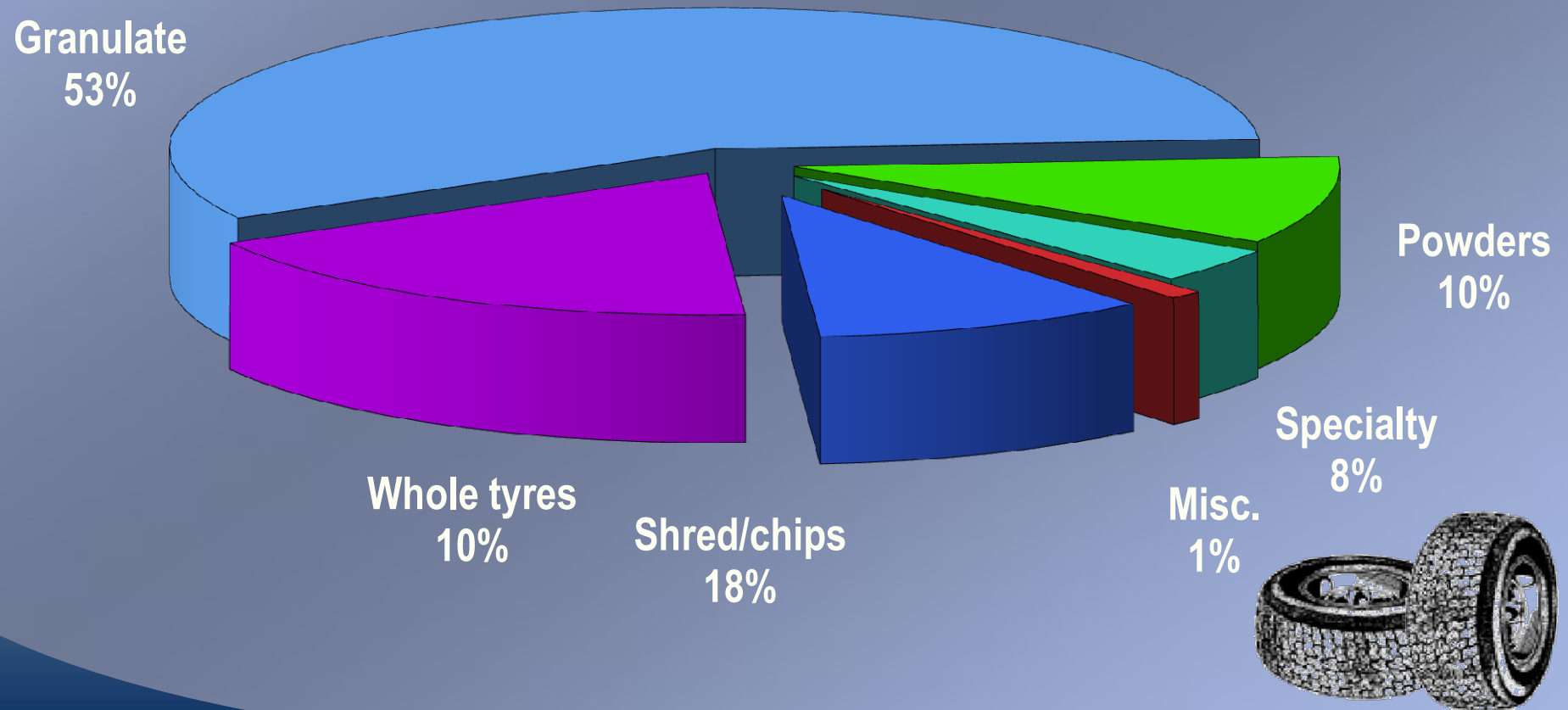


# Valorisation Routes 1992 - 2021



# Recycled tyre rubber materials

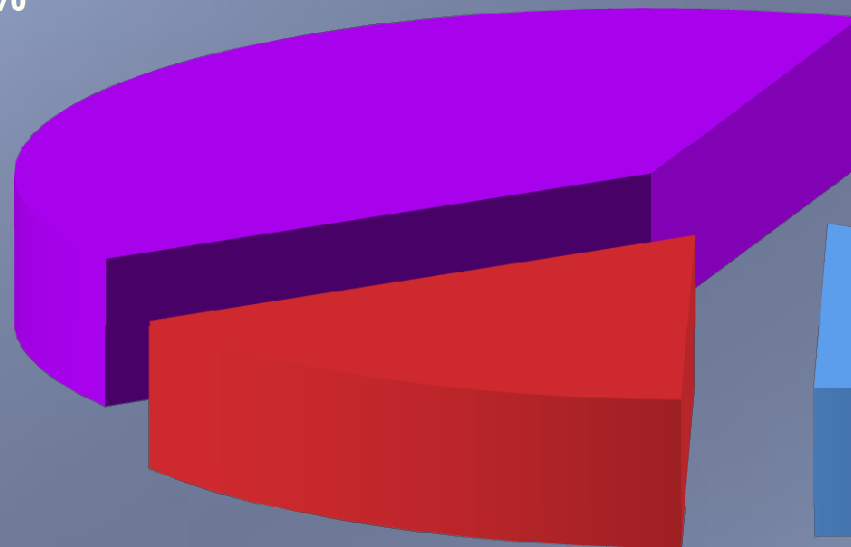
±1,500,000 tonnes of tyres were processed for material outputs



# Principal market sectors

Sport surfaces  
and infrastructure  
37%

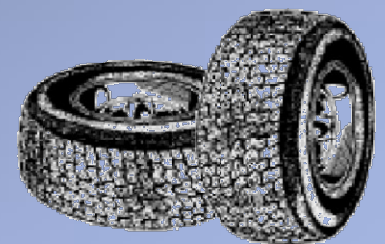
Manufactured  
products  
27%



Surface transport  
17%

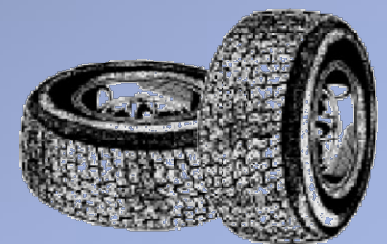
Construction  
18%

Miscellaneous 1%



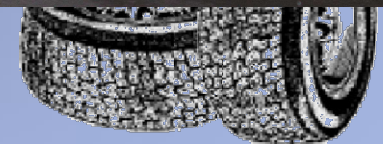
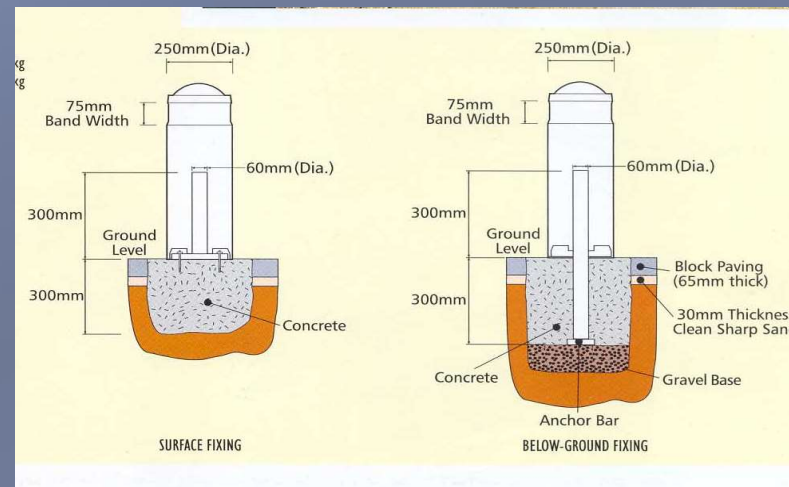
# **The use of RTMs**

**- Bicycle Lanes, Safer Roads**



## Urban Equipment

**Turin, Via San Massimo**  
The City tested the positioning of recycled rubber buffer as speed bollards and to safeguard the walkway.







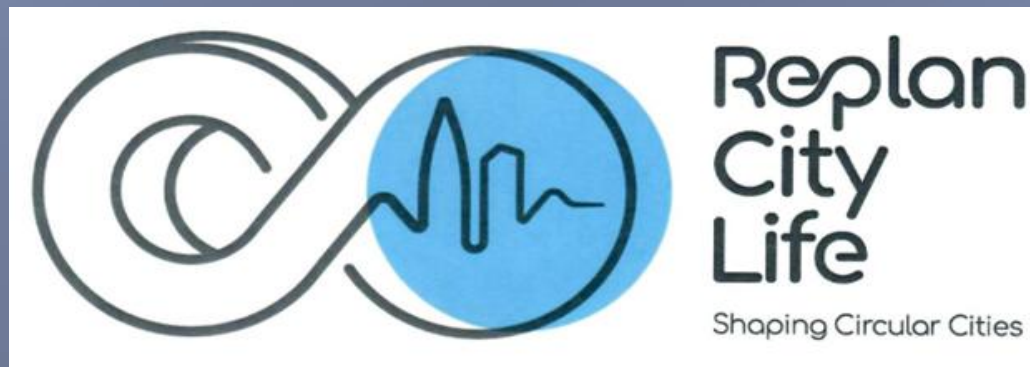






# RE-PLAN CITY LIFE

The Project for Circular Cities



**LIFE20 GIE FR 282 - RE-PLAN CITY LIFE**  
**RElevant Audience Plan Leading to Awareness Network for  
Circular Economy Use of Recycled Tyre materials in city LIFE**

**PROJECT LOCATION: FR-IT-ES-GR-PL**

**BUDGET INFO:**

**Total amount: 2.641.170**

**EC Co-funding: 1.430.090**

**DURATION: 42 Months**

**Start: 01 Jan 22 - End: 30 Jun 25**

**PROJECT'S IMPLEMENTORS:**

**Coordinating Beneficiary:** ETRA, European Tyre Recycling Association (FR)

**Associated Beneficiary(ies):** Fondazione Ecosistemi (IT), ITeC (ES), IETU (PL), Metropolitan City of Turin (IT), Ferrocarrils de la Generalitat de Catalunya (ES), Region of Crete (GR), IASLIM (SI), COMSA (ES), KERIDIS (GR), Politecnico of Turin (IT), University of Turin (IT), Waste Management Recycling Cluster (PL)

**4 (IT) – 3 (ES) – 2 (GR) – 1 (FR) – 2 (PL) 1 (SI)**



*Ettore Musacchi Project Leader*

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## OBJECTIVES

1. **Raise awareness among Technicians of P.A., stakeholders, policymakers on the use of Recycled Tyre Materials (RTMs) in building, infrastructures and urban areas.**
2. **Promote Circular Economy principles for RTMs in the Urban Environment.**
3. **Develop and Promote GPP guidelines in to companies and public administrations.**
4. **Expand the visibility of RTMs works through a web application.**

**Which will be achieved through the following Activities**

1. **Set up Working Groups and Strategic Action Definitions**
2. **Preparation of a Circular Economy RTMs Plan**
3. **GPP Guidelines and Implementation models for the Procurement procedure**
4. **Creation of a web application**
5. **Dissemination to promote the solutions and to stimulate interest and cooperation**
6. **Training workshops**



*Ettore Musacchi Project Leader*

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## EXPECTED IMPACTS



Activity	Description	End project
Awareness result	Target Audience	8.000
Training result	Technicians reaching adequate knowledge	1.200
Circular Economy RTMs Plan	Number of P.A. by whom will be adopted	300
GPP Guideline	Number of P.A. by whom will be adopted	200



*Ettore Musacchi Project Leader*

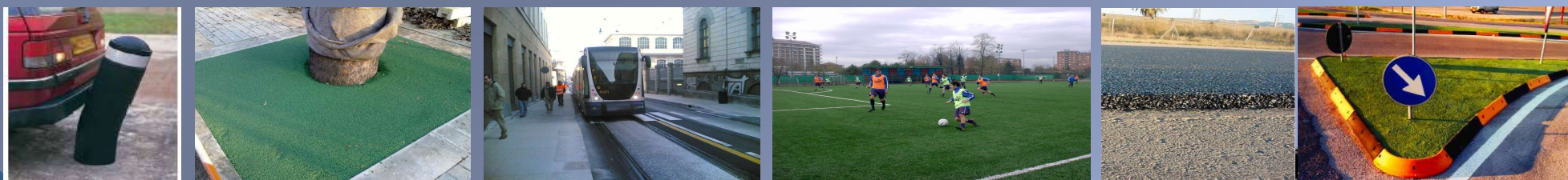
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## POLICY IMPLICATIONS

**RTMs (Recycled Tyre Materials) produce new materials: rubber, steel fibres and textile fibres, that are used in many different products and applications, in Cities, from roads and urban furniture to sport surfaces, from building materials to infrastructure – and many others.**

**Thus, a crucial element of this project will be to define simple and effective guidelines based upon these available experiences, within the context of an implementation strategy.**

**(Examples of RTMs products and applications)**



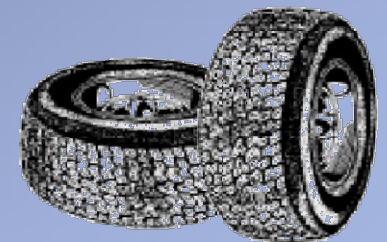
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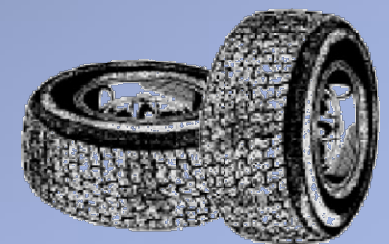


# New Project idea

- The Project idea is mainly focused in developing an E-bike Charging Stations Pilot done by concrete structure. The concrete include recycled steel fibers, recycled aggregates, and low impact cement.
- The Station, thanks to the re-use of batteries from EOL vehicles, will be off-grid. The batteries will be placed in the base of the structure. The Station will be equipped with all the electrical devices needed for a more efficient use. In addition to the charging station, some further products, such as recycled rubber bollards and lane curbs / dividers, safer rubberised asphalt, etc. will be integrated in the nearby Cycling Lanes.
- The project will include also the developments of few smart efficient improvements (phone App, digital sensors, etc.) to make Cycling Mobility more efficient and integrated with public transports. All these elements will contribute to boost sustainable mobility in different urban and touristic contexts.



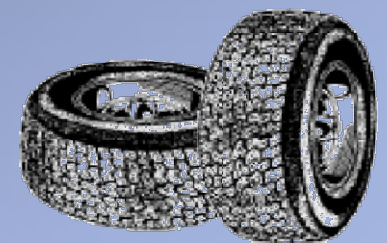
# Visualising the concept



# Call elements

This aspects will be well satisfied by the proejct:

- reduced GHG emissions, and where relevant increased carbon removals, in product value chains
- valorisation of local resources in cities, regions or their groupings
- business opportunities and jobs in the circular economy at urban and/or regional scale.
- knowledge transfer between the cities, regions or their groupings
- Among "key product value chains" there are **"Vehicles"** which include **Recycled Tyre Materials and Batteries**, but there are also **"construction and buildings"**

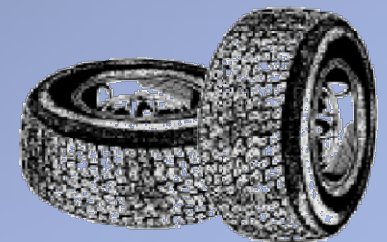


# Next event

## The 28<sup>th</sup> ETRA Conference on Tyre Recycling

Wednesday through Friday 29 – 31 March 2023

Le Louise Hotel  
Brussels





# Questions & comments

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