

From sourcing to market :

***The European Tyre Recycling
Industry***



ETRA

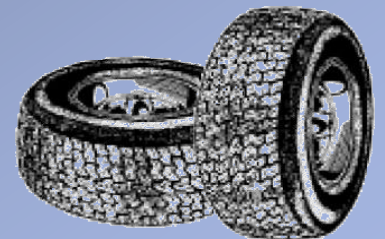
Post-consumer tyres



In 2010, \pm 3,300,000 tonnes of post-consumer tyres were permanently removed from cars, utility vehicles and trucks in the 27 EU States and Norway - and defined as waste.

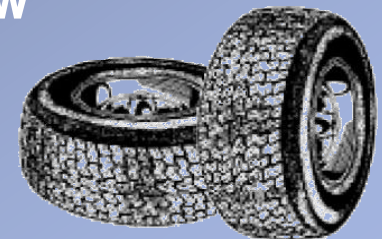
Estimates are that an additional \pm 60,000 to 70,000 tonnes of tyres are permanently removed each year from agricultural and other off-road vehicles - **but not defined as waste**

Another \pm 30% may be available from non-EU producers



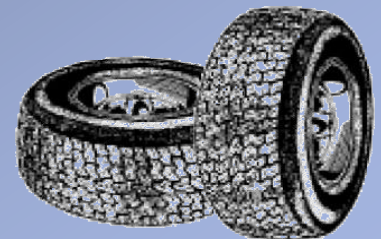
Tyres are 100% recyclable

- Rubber/elastomer compounds including carbon black and silica are materially recycled to produce raw materials for more than 500 different applications and products - in 50 different markets
- Metals from both the bead wires (trucks) and the plies, are cleaned and treated for use in replacement of virgin materials in a variety of high value added applications
- Textiles from casings can be used directly as a reinforcement for concrete, or used in other innovative products and applications
- And today, whole tyres are used to produce innovative new materials such as silicon carbide.








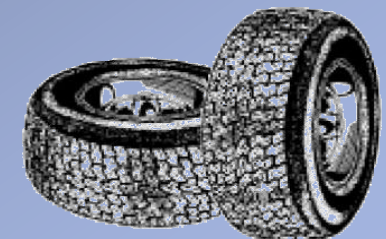
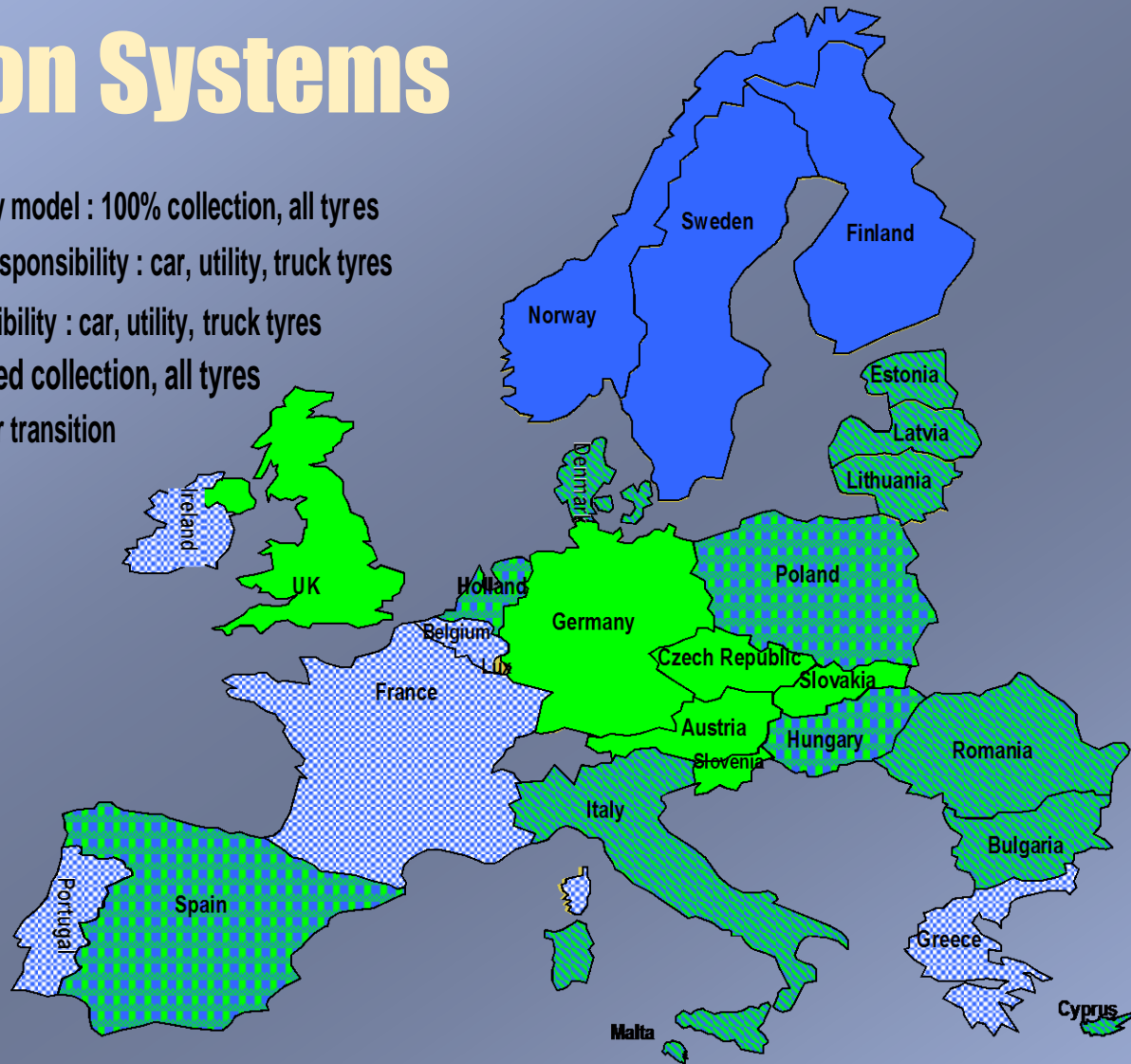
Tyre Management

- There are currently five different adaptations of producer responsibility operating in the EU today
- While the majority are operated by tyre producers, others have been created by importers or other organisations
- Some Member States depend on more than one system to ensure the collection of post-consumer tyres
- In several States, whether with one or two systems is in charge, less than 100% of post-consumer tyres are collected



Collection Systems

-  Producer responsibility model : 100% collection, all tyres
-  Negotiated Producer responsibility : car, utility, truck tyres
-  Dual Producer responsibility : car, utility, truck tyres
-  Free market : Unlimited collection, all tyres
-  Adapted Free-market or transition

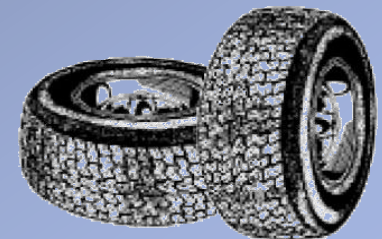


About ETRA

What is ETRA

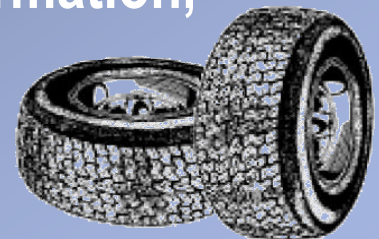
What does ETRA do with and for its members

ETRA's accomplishments



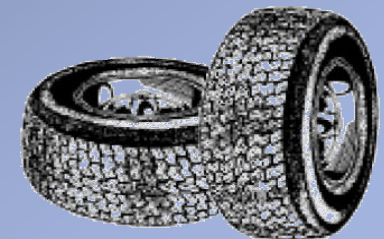
ETRA : The European Tyre Recycling Association

- Founded in 1994 by 19 recycling professionals in 5 EU States
ETRA now has ± 250 members in 43 countries, including more than 100 in the EU States, and a growing number in the CEE
- ETRA's *mission* is to foster the recognition of tyre recycling as an environmentally sound and commercially sustainable European industry that produces an array of materials, products and applications which are effectively used in substitution of virgin resources.
- ETRA is a networking tool for members – to collect information, identify and resolve industry issues.



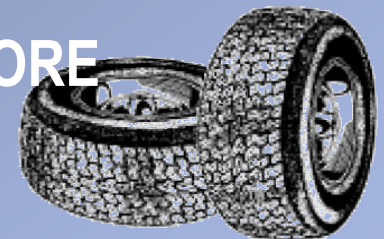
ETRA Activities

- ETRA works with its Board, members, governments and NGOs to initiate opportunities and options in support of tyre recycling
- Through networking and exchanges, partnerships are formed to pursue research, funded projects and other activities to support :
 - ❖ Sustainable materials, products, applications ;
 - ❖ Market opportunities ;
 - ❖ Required industry documentation, testing, among many others
- ETRA works with its members to create a context for sustainable markets



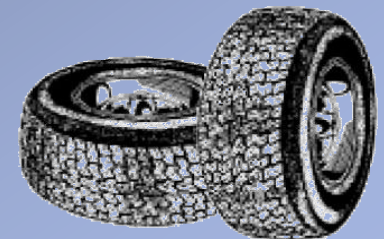
Historic Accomplishments : ETRA

- contributed to the preparation of the Basel Convention “Guidelines for the identification and management of used tyres’ (1997 – 1999)
- assisted in the European ‘Recycling Forum’ (1999)
- was the first recycling industry to prepare a CWA under the CEN Workshop Agreement programme (1999 – 2005)
- was a member of the European Recycling Coalition (from 2005)
- made two presentations to EU Parliament in support of specifics re the Revised Framework on Waste (2007, 2008)
- Pre-registered under REACH AND MUCH MUCH MORE



Tyre Recycling Activities

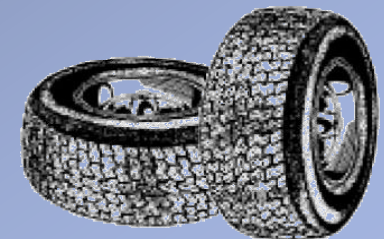
Means of valorisation
Material outputs
Market sectors



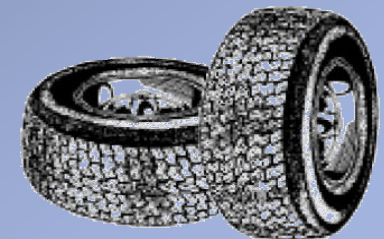
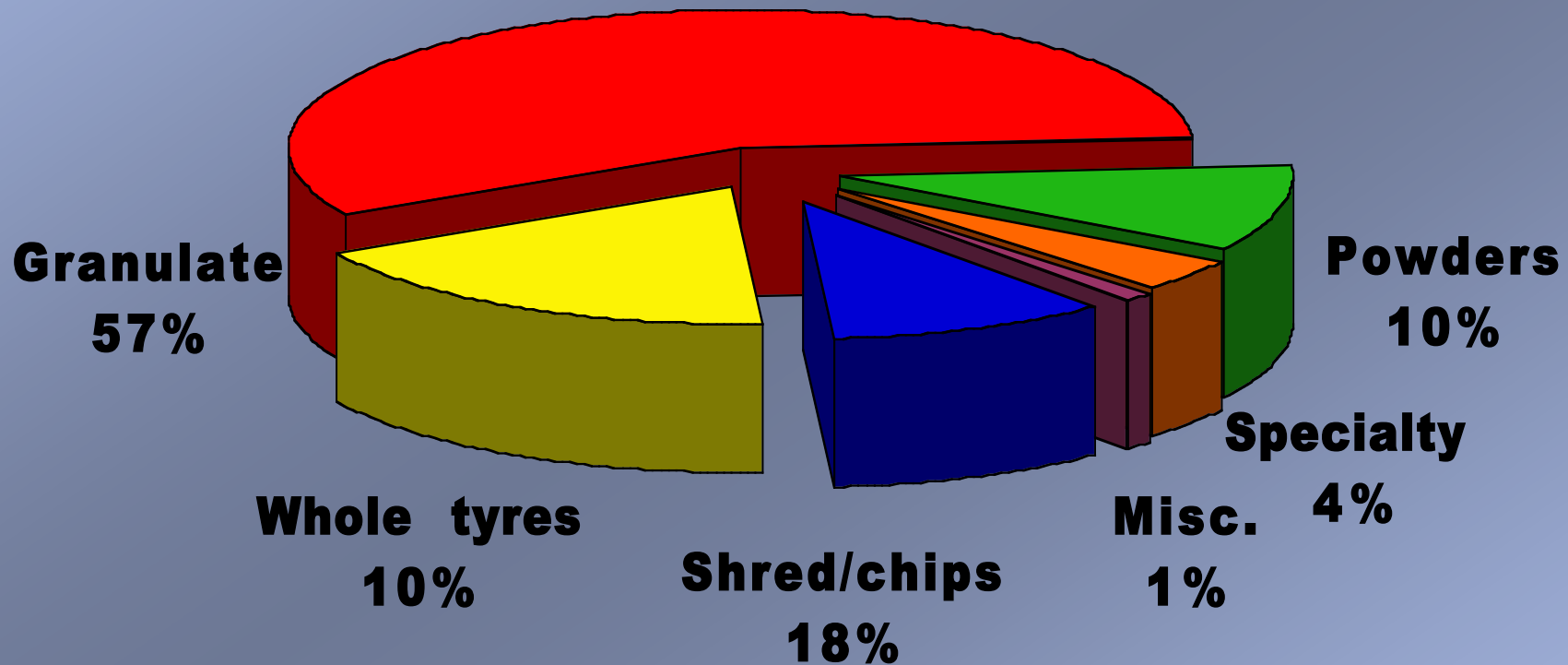
Means of tyre valorisation

- ❖ Re-use and or export
- ❖ Retreading
- ❖ Material recycling including :
 - Civil engineering and construction applications
 - Sport surfaces
 - Surface transport applications
 - Environmental rehabilitation projects
 - Consumer and industrial products
 - Innovative new materials and products
- ❖ Energy recovery for :
 - Co-incineration
 - Cement kilns

Each form of valorisation requires a consistent flow of input

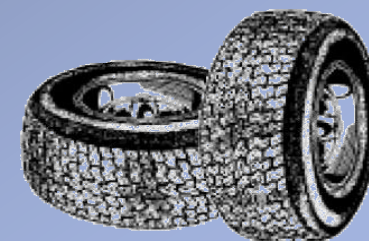


Recycled tyre materials

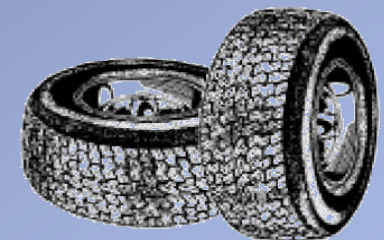
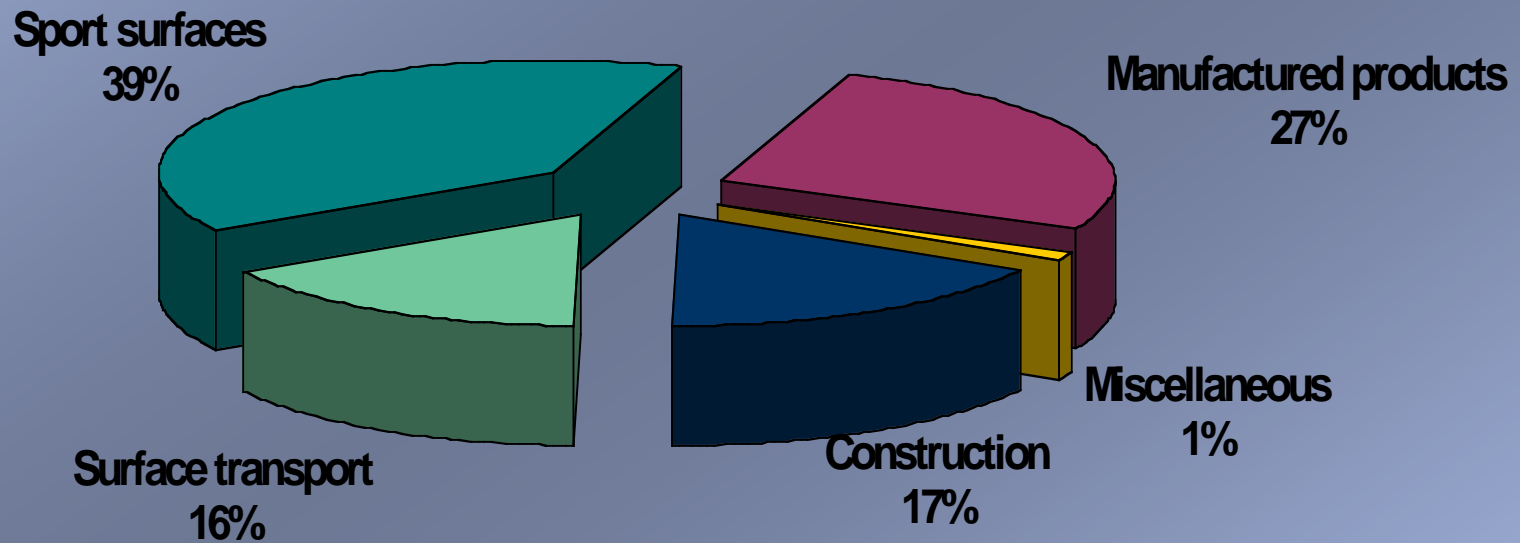


The actual quantities

| Material | tonnes | Primary application |
|---------------------|---------------|-----------------------------|
| Granulate | 685 000 | Sport surfaces/transport |
| Shred/chips | 210 000 | Construction/transport |
| Powders | 110 000 | Transport/products |
| Whole tyres | 110 000 | Rehabilitation/construction |
| Specialty materials | 49 000 | Products |
| Miscellaneous | 10 000 | Research, testing |



Principal market sectors



**Thank you for
Your attention**

