



**EUROPEAN
TYRE & RUBBER
manufacturers'
association**

European Conference on ELT recycling and valorization

Sevilla, May 6th and 7th, 2009

End of Life Tyres management in Europe

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on behalf of Mrs F. Cinaralp, Secretary General



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ETRMA: European Rubber Manufacturers Association
(ETRMA – successor to BLIC (created in 1959))

European tyre and rubber industry Voice towards the European institutions and international bodies

2 major sectors: Tyres & technical rubber products

Membership :

12 Tyre Corporate members

8 National Associations in B, F, D, It, Sp, UK, NL, Fi,

Represents > 4000 companies, employing 360 000 persons

Turnover over 50 b€ (EU27)

Offices in Brussels – www.etrma.org

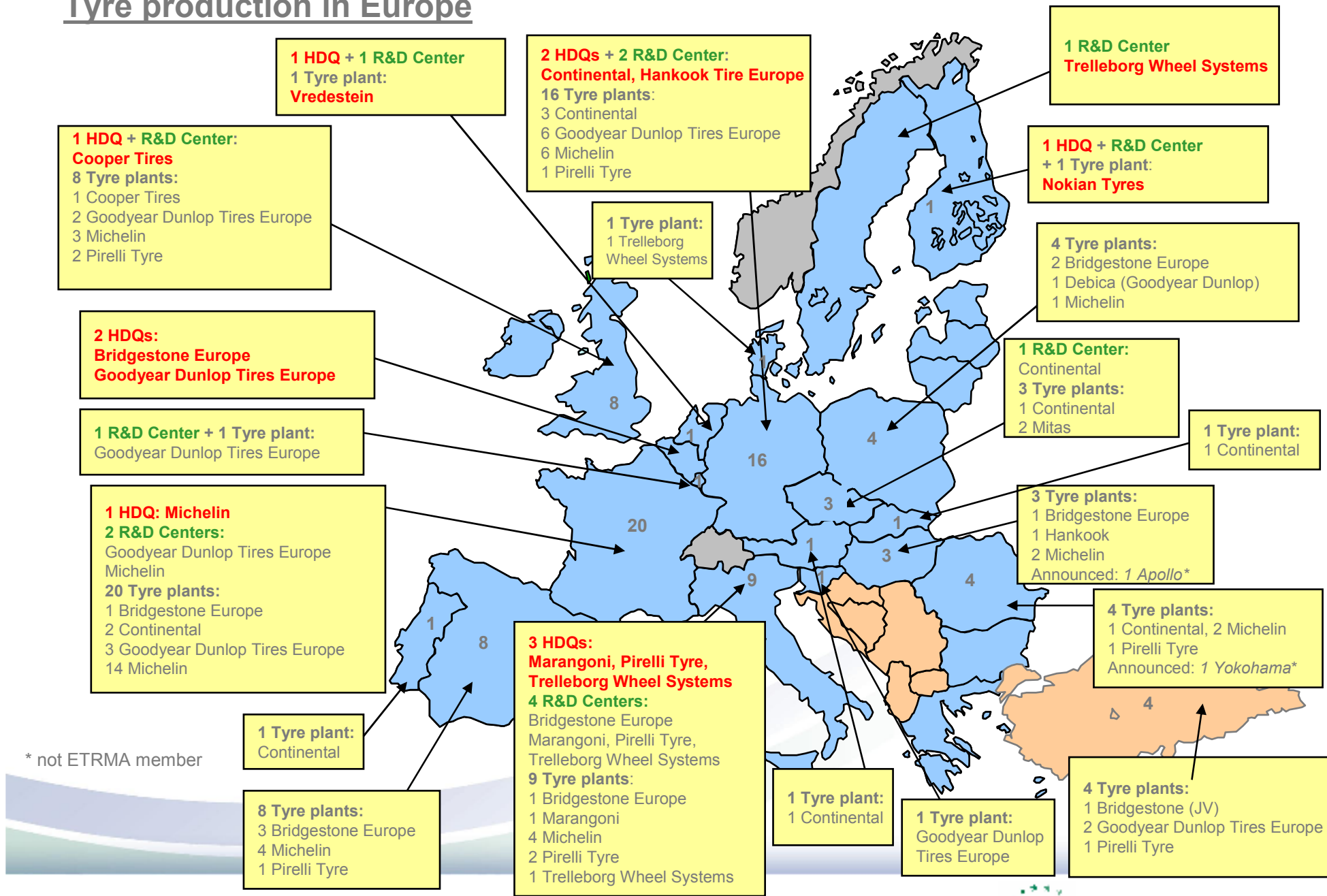


ETRMA: the tyre sector

- 12 tyre corporate members
- Turnover: over € 34 billion
- Tyre market ~300 million tyres (2nd biggest market in the world)
- Over 90 producing plants
- R&D: up to 4 % of annual turnover



Tyre production in Europe



* not ETRMA member

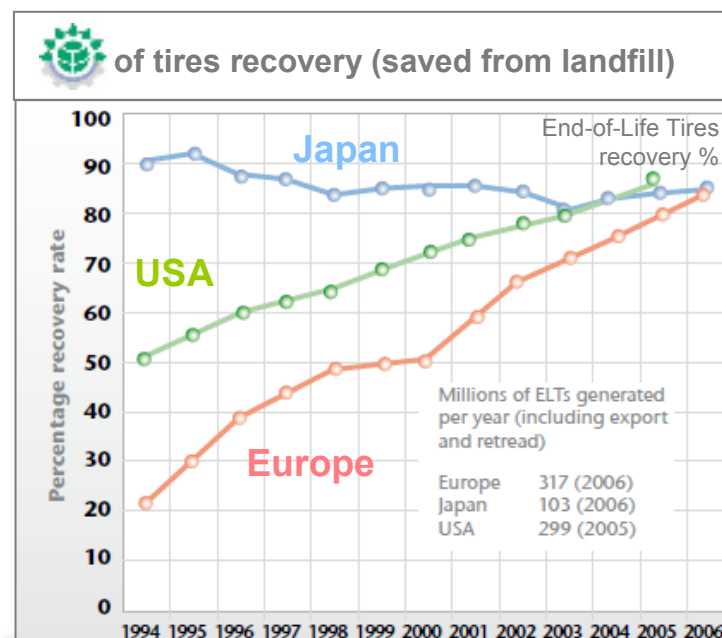


The international framework

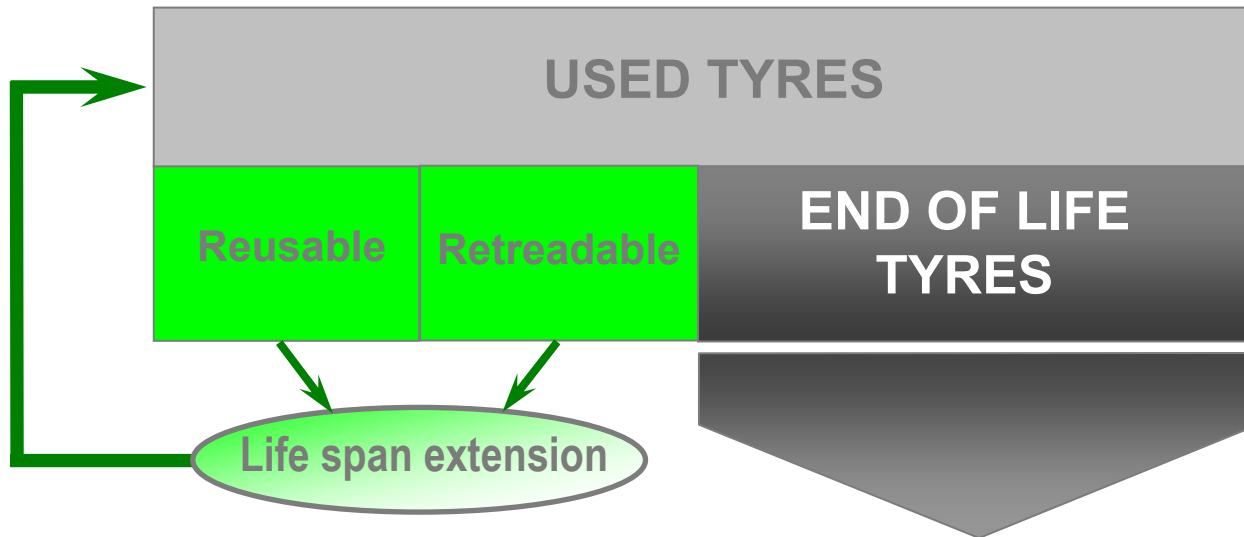
Over 1 billion of *End of Life tires* are generated each year worldwide.

The World Business Council for Sustainable Development **has assessed** the trend of “recovery percentage” out of total generated end of life tires **worldwide**.

Tire recovery in Europe was poor in the past and improved a lot in the **recent** years thanks to the **European tire industry commitment**.



Basic definitions



ELT Derived applications	
Landfill	Material Recycling
	Energy Recovery
	<div style="background-color: #00FF00; padding: 5px;"> Whole tyres, Shredded, Chips, Powders Steelcord recycling Carbon for EA steel furnaces Materials from Pyrolysis </div> <div style="background-color: #FFA500; padding: 5px;"> Thermal valorization Cement Kilns TDF </div>

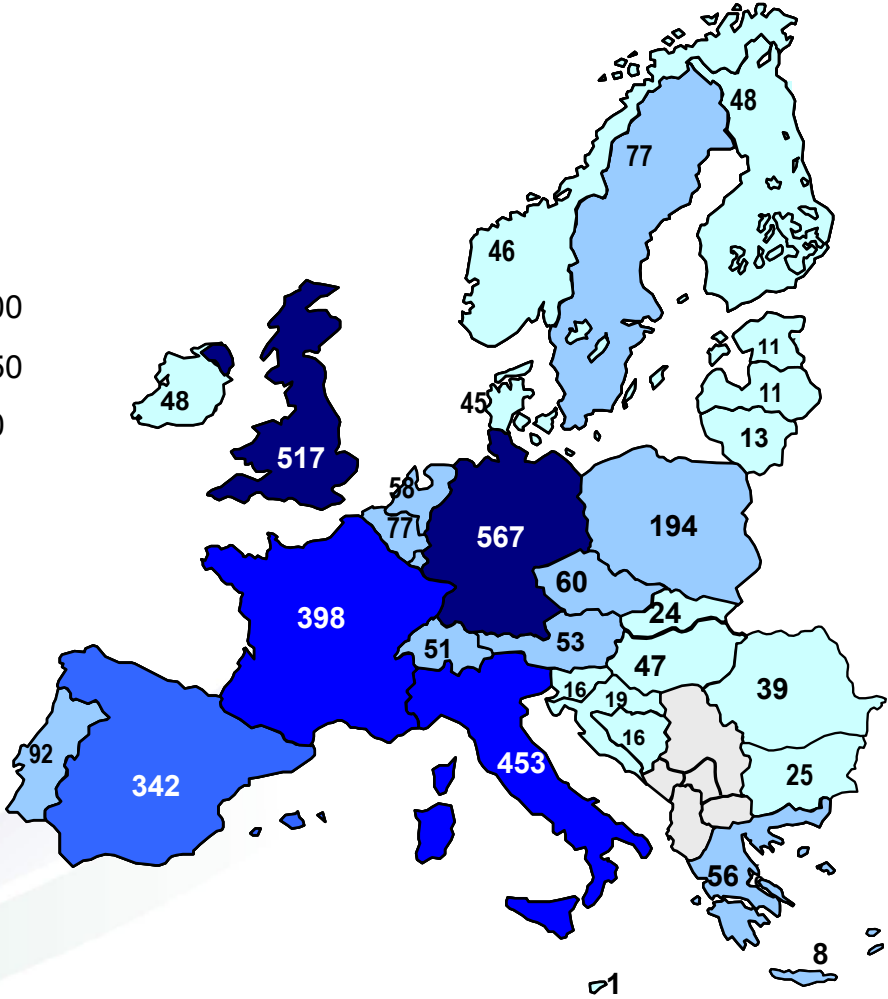
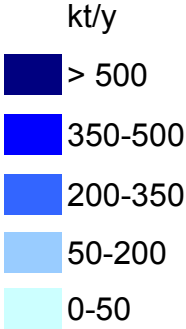


ELT arisings in Europe

Total (2007): 3396 ktons



estimation 2007



Regulatory Framework at EU and International level

International

OECD Waste Lists

A: Hazardous

B: Non hazardous

Basel Convention

22.3.1989 and Technical Guidelines

European

Waste Directive

2006/12/EC (75/442/EEC),

→ ELT: a non-hazardous waste

European Waste List

2000/532/EC and amendments

Regulation (EC) No 1013/2006 on shipments of waste replacing Regulation No 259/93

1013/2006/EC (1.7.2007, Basel Convention transposition)

Landfill Directive

1999/31/EC (26.4.1999)

→ Ban of ELT landfill

Directive on incineration of waste

2000/76/EC (4.12.2000)

Directive on End of Life Vehicles

2000/53/EC (18.9.2000)



European Regulatory Framework: focus on basic principle

Directive 1999/31/EC:

- As of July 2007, ELT cannot be disposed to landfill
- Excluded (land filling still allowed): bicycle tyres and tyres having a diameter >1.4m

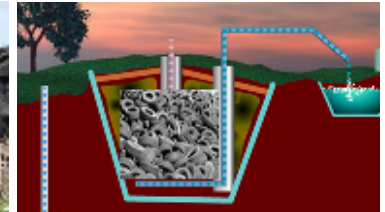
(Eastern Europe countries: might have different landfill ban application date)

Uncontrolled landfill



Never allowed

Controlled landfill



Not allowed anymore

9

On this basis, each EU country developed its own ELT management model

The 3 models for ELT management in Europe

Tax system

- The producer/importers is subject to a government tax
- The government is responsible for the ELT management and is appointing and financing operators (collectors, recyclers)

Free market system

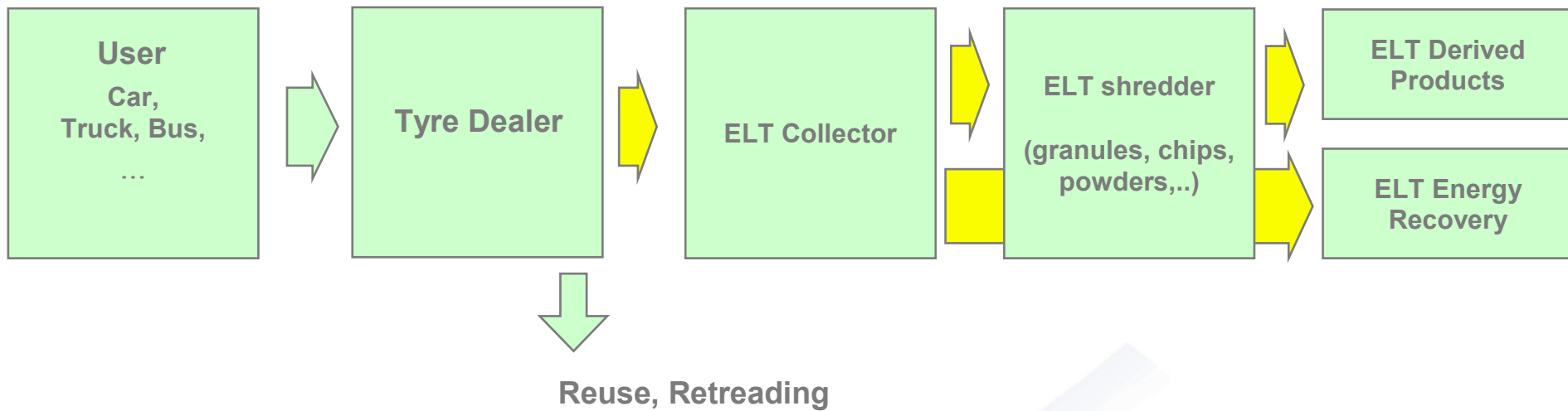
- Each operator in the chain is responsible for fulfilling waste legislation obligations
- All operators are operating in the ELT management chain on the basis of market prices

Producer Responsibility

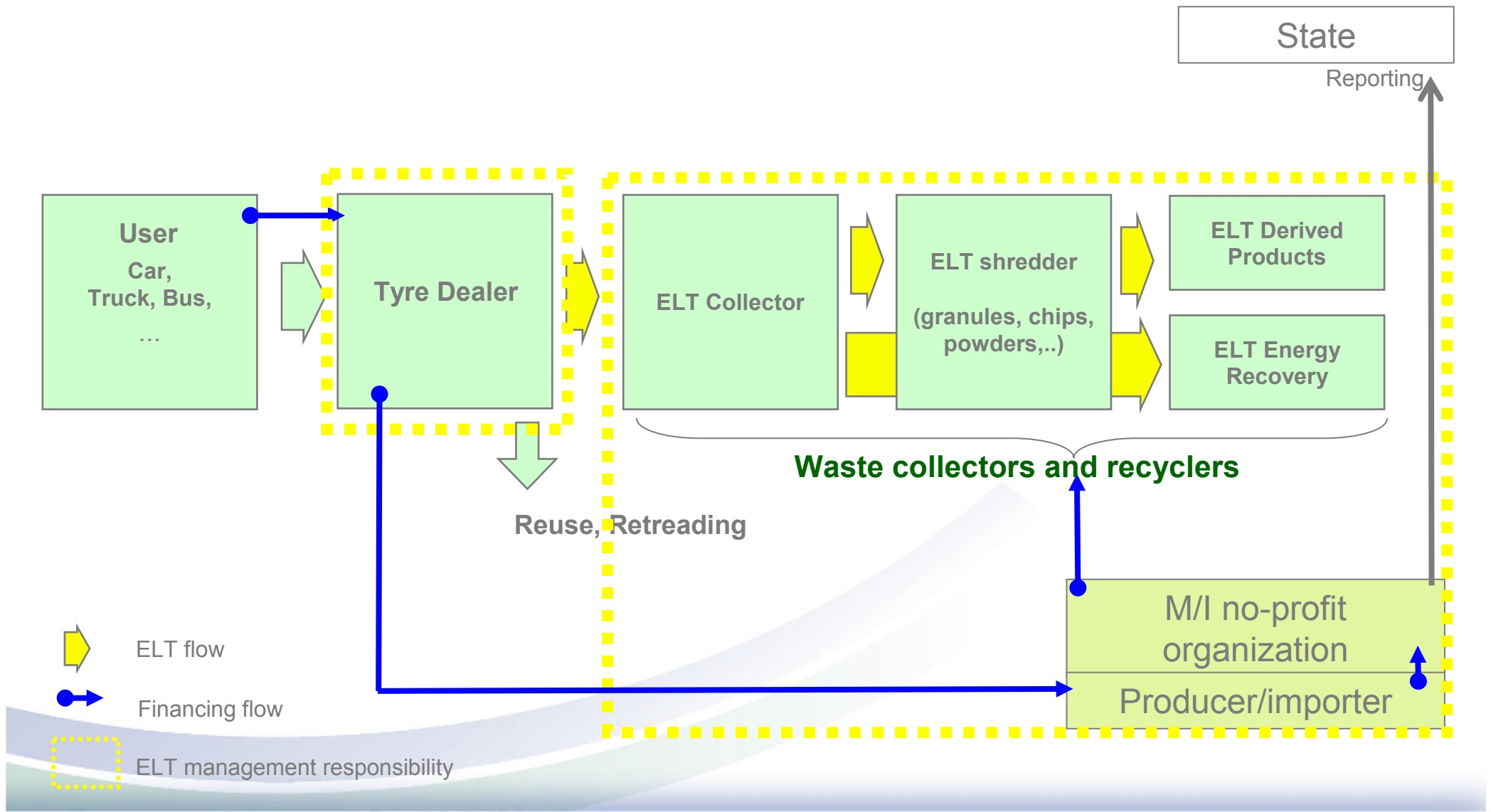
- Producers/importers, apply a “contribution” on the sold product, and are responsible for the ELT management by appointing ELT collectors/recyclers while reporting to the government. The activity is generally carried out through a no-profit Producers/importers fund or organization.



Simplified flow of ELT



Producer Responsibility system



The European Tyre Producers Strategy

The European tyre industry objectives are:

- *To promote existing environmentally friendly & economically sound and sustainable recycling & recovery solutions, using the benefits of the tyre properties*
- ***Not to discriminate between recycling processes and recovery options.***
- *To promote R&D programs to develop new and more efficient recycling & recovery channels*
- ***Play a primary role in achieving the EU “0 landfill” objective***
- ***Contribute to eliminate historical stockpiles***

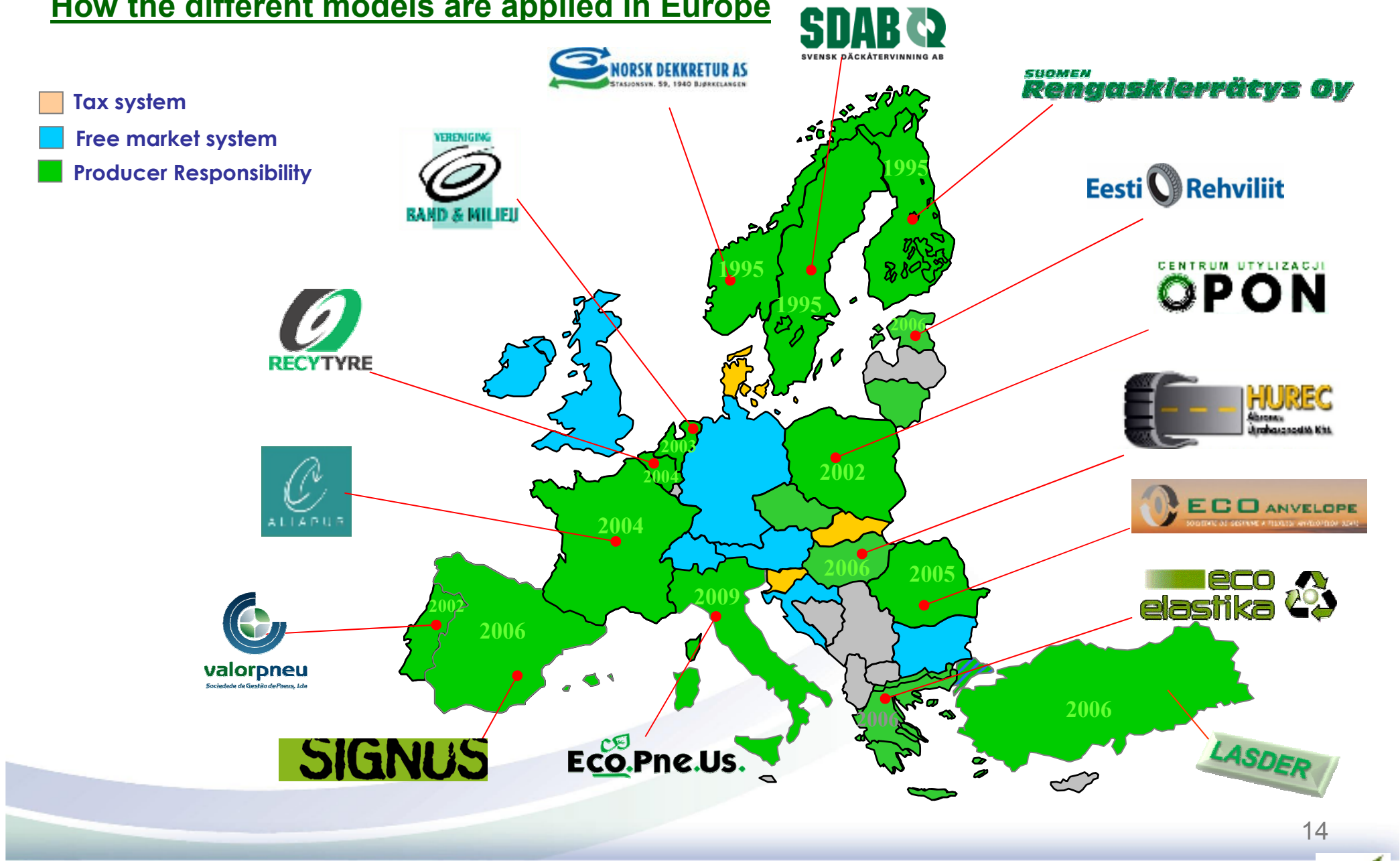
Conditions of success:

- ❖ *Legal framework setting PR at national level will allow Producers/Importers to directly act to achieving the above objectives by creating an ELT management not- for-profit company - managing collection and recovery with a dedicated financing scheme (separate line on invoice as feasible)*
- ❖ *Transparent communication with local authorities ; 100% traceability within the ELT value chain*



How the different models are applied in Europe

- Tax system
- Free market system
- Producer Responsibility



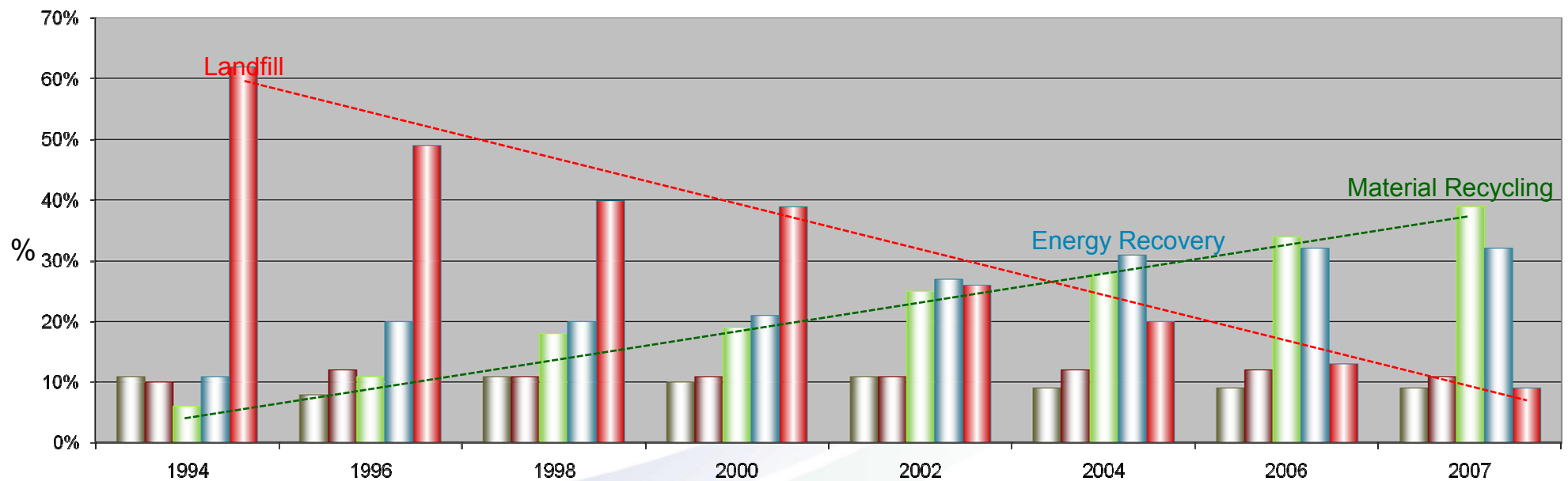
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The results: ELT recovery trend in Europe: Used Tyres and End of Life Tyres

		1994	1996	1998	2000	2002	2004	2006	2007
USED TYRES ELT	Reuse-export	11%	8%	11%	10%	11%	9%	9%	9%
	Retreading	10%	12%	11%	11%	11%	12%	12%	11%
	Material Recycling	6%	11%	18%	19%	25%	28%	34%	39%
	Energy Recovery	11%	20%	20%	21%	27%	31%	32%	32%
	Landfill	62%	49%	40%	39%	26%	20%	13%	9%

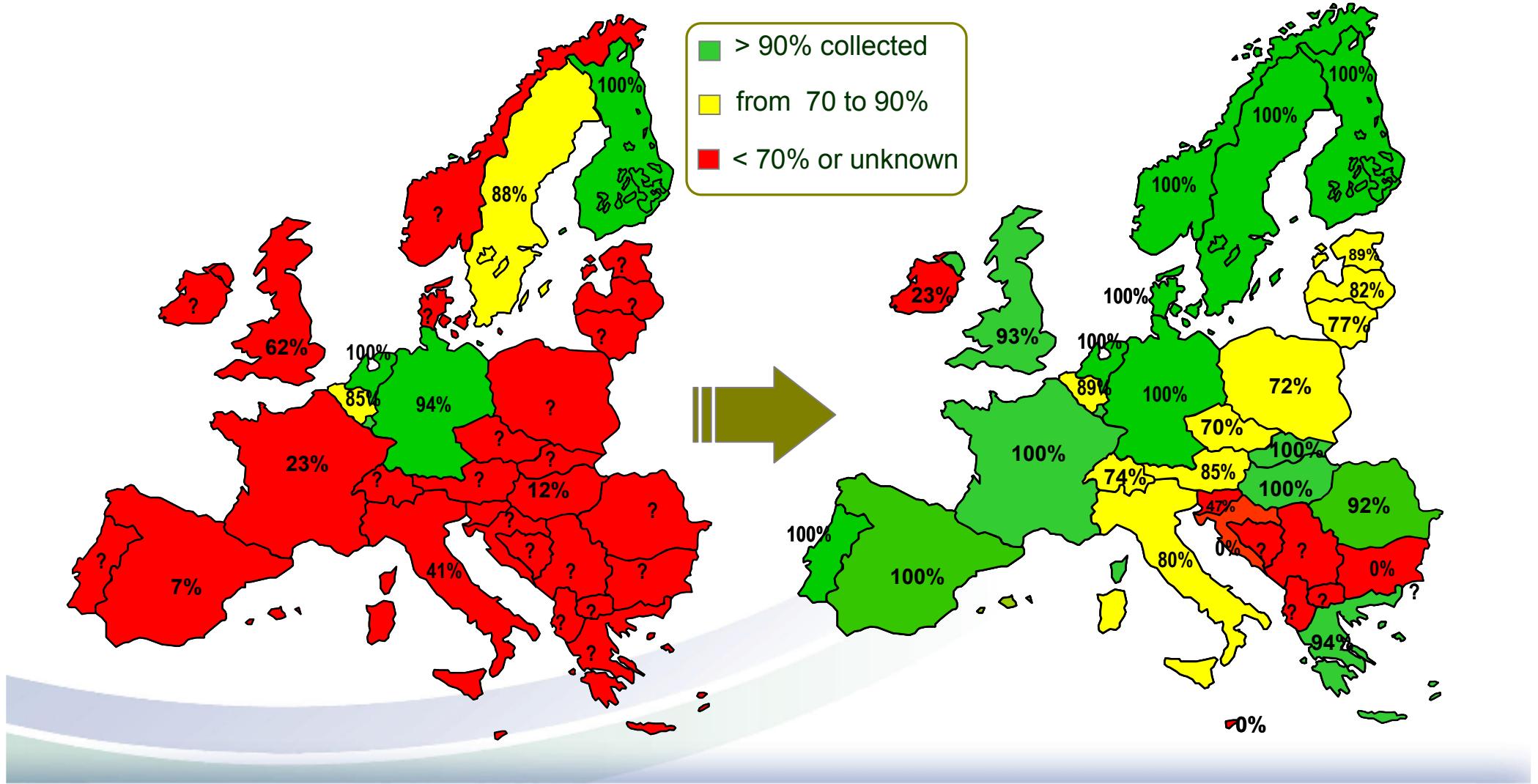
# of ELT Management Org.	1	3	4	4	7	11	13	15



The results: ELT recovery trend in Europe: End of Life Tyres





% recovery in 1999

% recovery in 2007



ELT Management routes: macro analysis

- Energy recovery and Material recycling routes have the same magnitude.
- Significant resources are destined to R&D of new ELT recycling/recovery technologies in countries where Producer Responsibility is applied

	kton in 2007	Application	Examples	% (approx.)	
MATERIAL RECYCLING	1315	Civil Engineering	Foundation for roads and railways; Embankment stabilizers; Draining material, Erosion barriers;	25	
		Product Applications	Flooring (playgrounds, sports fields) and Paving blocks, Roofing materials, Wheels for caddies	75	
ENERGY	1098	Power plants, co-incineration with other waste		25	
		Cement kilns		75	

The European Tyre Producers challenges for the coming years

- **Contribute to further improve the ELT recovery rate** to achieve “Zero Landfill” target, especially in Eastern Europe
- While keeping existing ELT management companies responsibilities, create a European structure to continuously **promote the cooperation for the development of new ELT environment-friendly applications** in different countries, with the final objective of minimizing the disposal cost (eco-fee)
- **Continue accurate reporting** to authorities and stakeholders to promptly identify any risk or action required



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