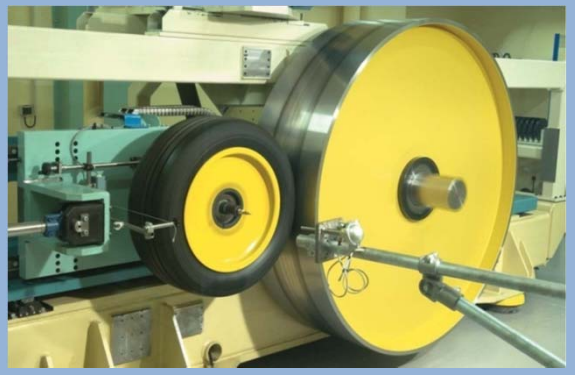
Informal document **GRB-57-25**
(57th GRB, 5-7 February 2013,
agenda item 6)

LONG WAY TO THE RR NORMS
GRRF (2003-2013) GRB

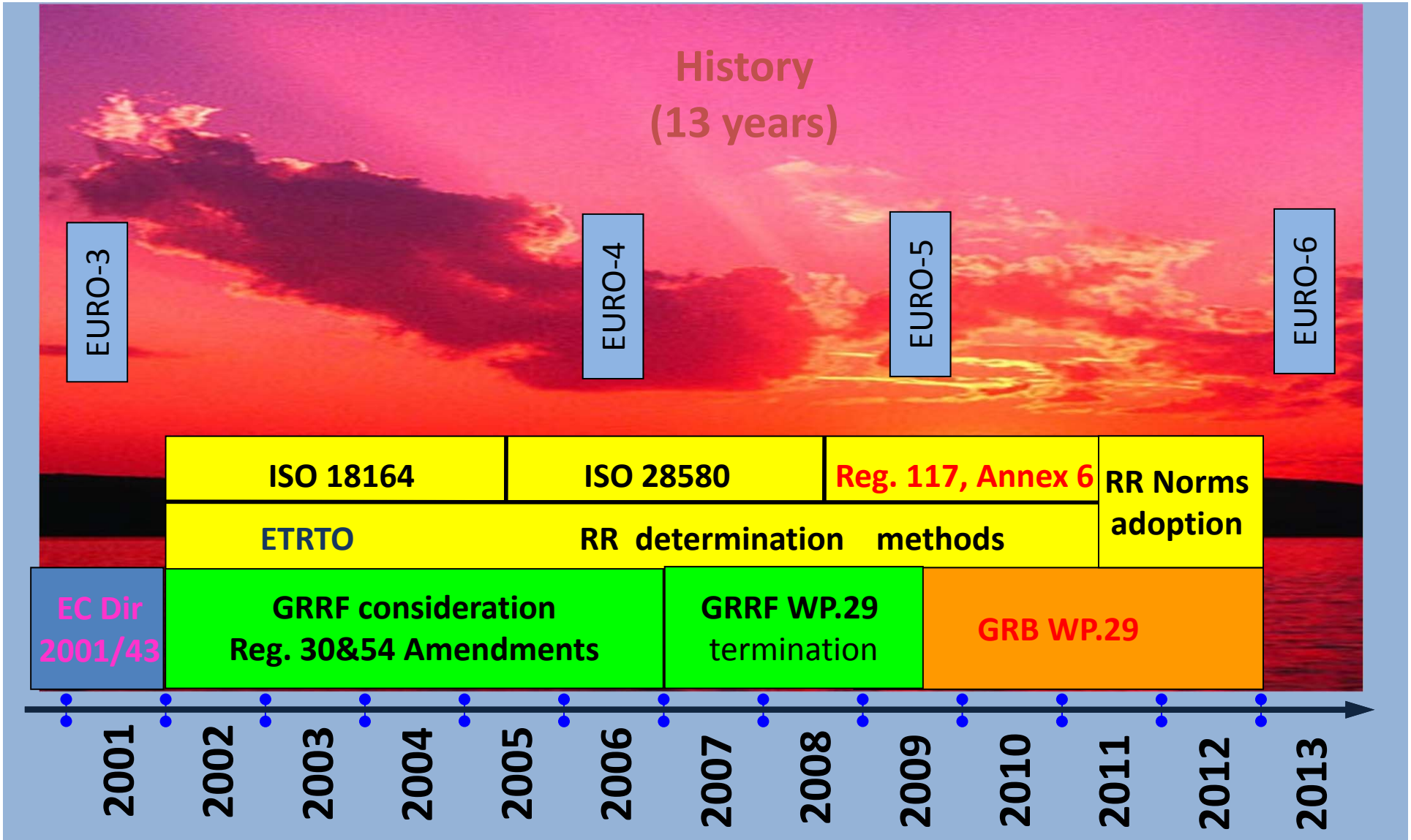




GRB, 57-th session

5-8 February, 2013

RF Experts

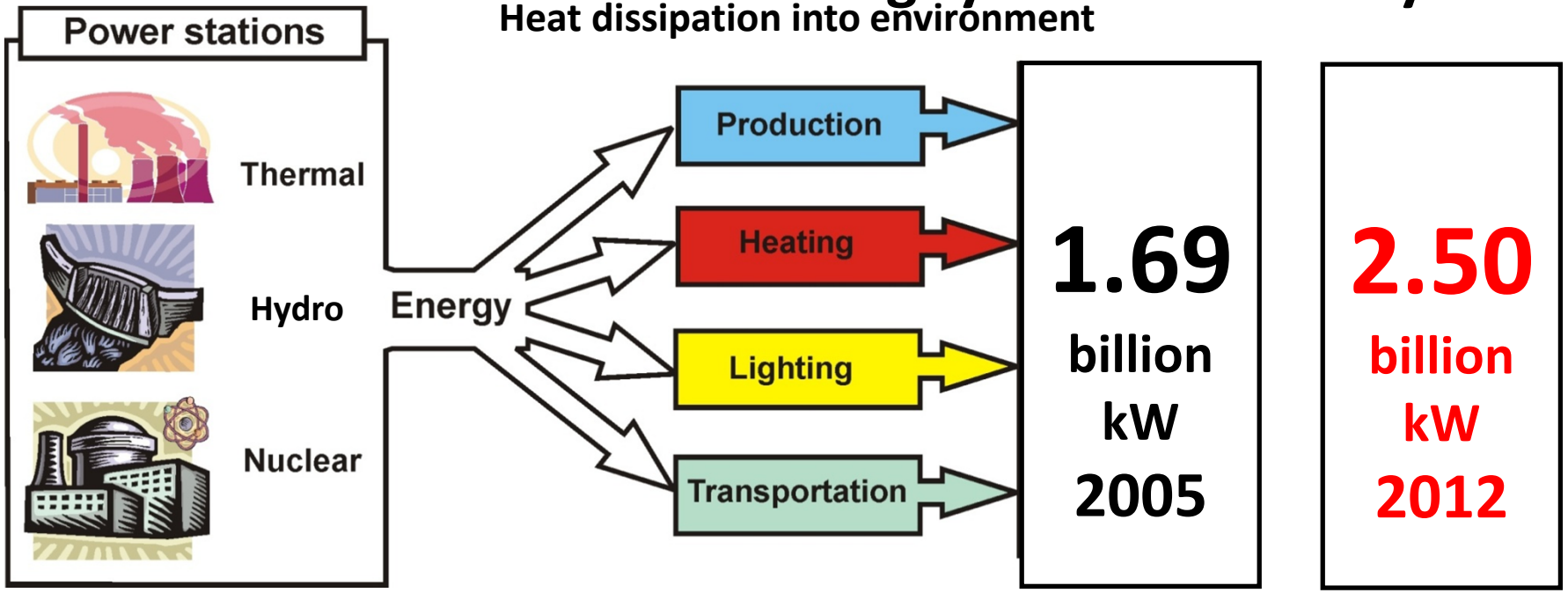


2005: 2.0 million tons of fuel is burnt every day to counteract tyre RR

2012:11.0

The heat effect of rolling tyres and industry

Heat dissipation into environment



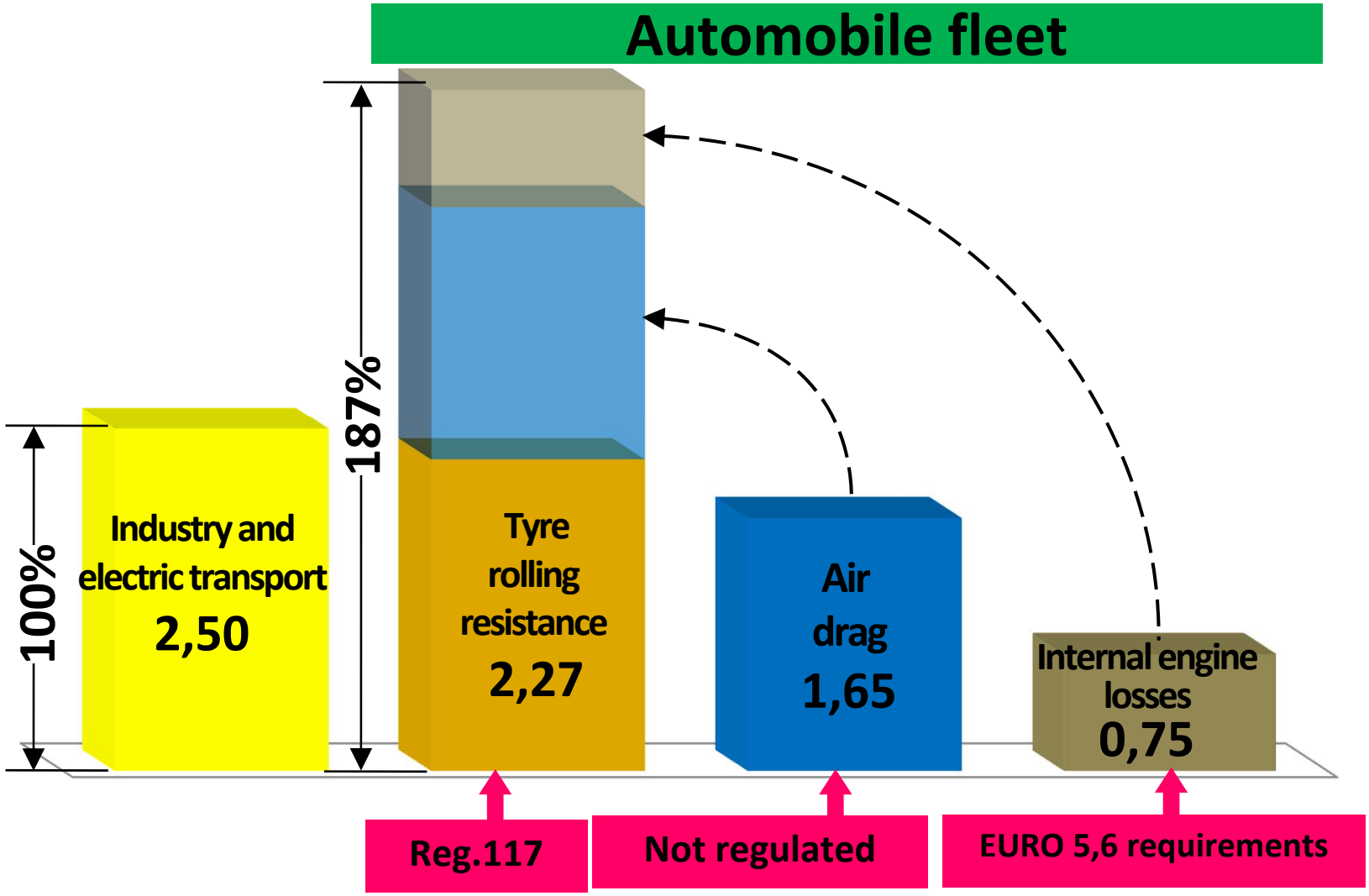
Tyre type	World fleet [billion]	R. R. power at 36 km/h [billion kW]
Cars c_r=0.009	2.5	0.68
Light trucks and buses c_r=0.007	0.9	0.32
Commercial vehicles c_r=0.005	0.5	0.63

1.63 billion kW 2005

2.27 billion kW 2012

GRRF, 2005 RF experts GRB-57,Feb.2013

Power of automobile fleet action on environment (billion kWt).



The main uniqueness of the situation in this field is unbalanced requirements to the automotive parts of power.

Checking of energy dissipation level:

World annual motor gasoline consumption (2012) *:*

Q=1932 million tones/year

Low calorific value: H=44000 kJ/kg

Then average power generated by gasoline automotive fleet:

$$N = \frac{1932 \cdot 10^9 \text{kg} \cdot 44 \cdot 10^6 \text{J/kg}}{365 \cdot 24 \cdot 3600 \text{s}} = 2.69 \cdot 10^9 \text{kW}$$

Average power generated by diesel automotive fleet:

$$N = \frac{1003 \cdot 10^9 \text{kg} \cdot 44.8 \cdot 10^6 \text{J/kg}}{365 \cdot 24 \cdot 3600 \text{s}} = 1.43 \cdot 10^9 \text{kW}$$

RR heat dissipation (55% of $_S$N=4.12·10^9 kW):

$$N_{RR} = 2{,}27 \cdot 10^9 \text{ kW}$$

- So an automotive tyre fleet is considerable socio-environmental world factor and GRB is one of the international operator in this field. In connection with very conservative features of RR norms adoption RF experts insert in 2006 and 2009 proposals to consider exchange of standardization way on consumer information strategy.

The end-user information process is de jure independent from standardization although both are naturally connected.

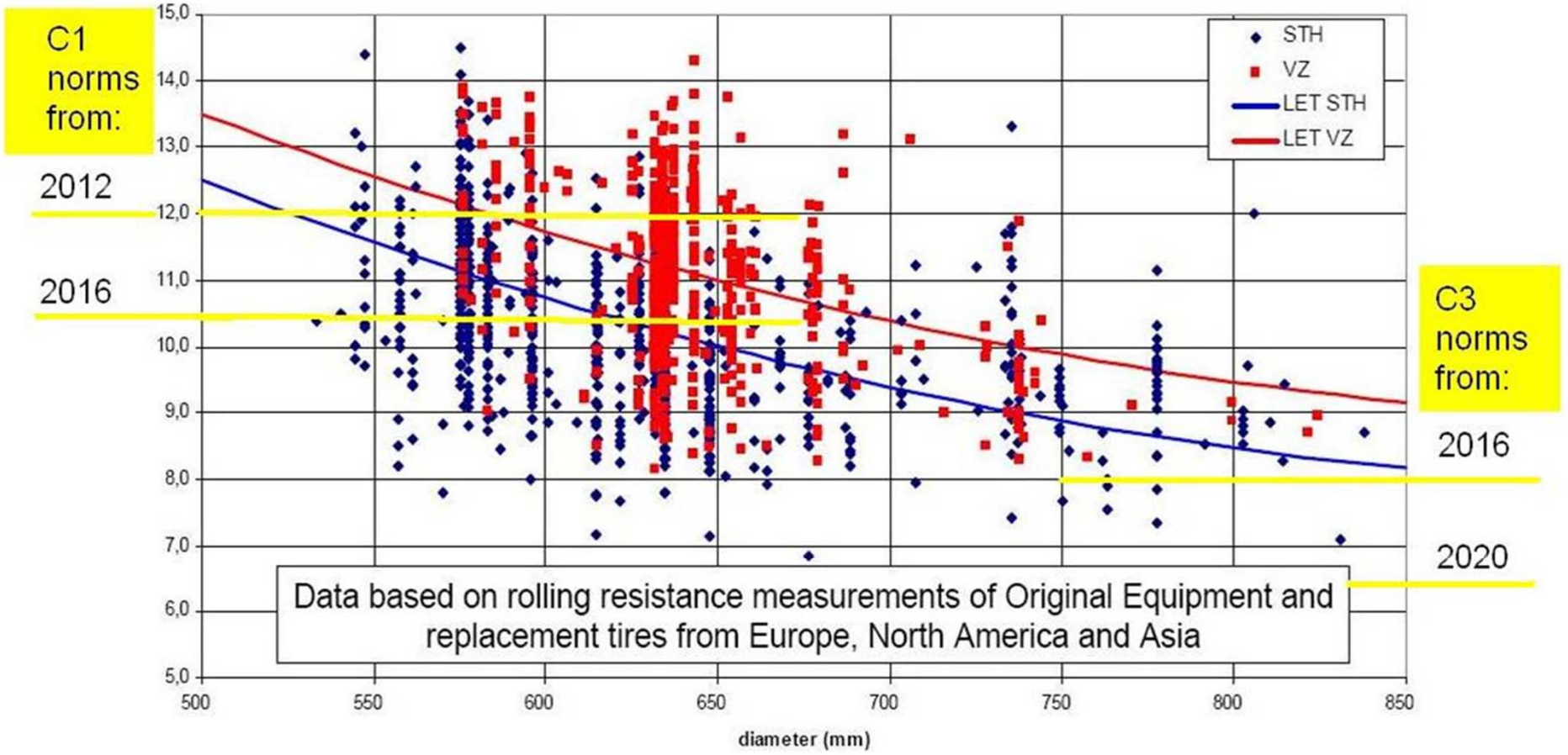
The UNITED NATIONS GUIDELINES FOR CONSUMER PROTECTION (09/29/2001,UNCTAD/DITC/CLP/Misc.21) declare that one the legitimate needs which the guidelines are intended to meet is **”access of consumers to adequate information to enable them to make informed choices according to individual wishes and needs”.**

Although the Information Strategy for tyre industry is rather soft it is more effective then regulation because it gives a competitive stimulus to improve tyre quality.

The end-user information strategy presented in the proposed Amendment may be put in action as soon as ISO 28580 is adopted, i.e. this year. It will be used during the period before EC RR norms adoption and then in parallel with them.

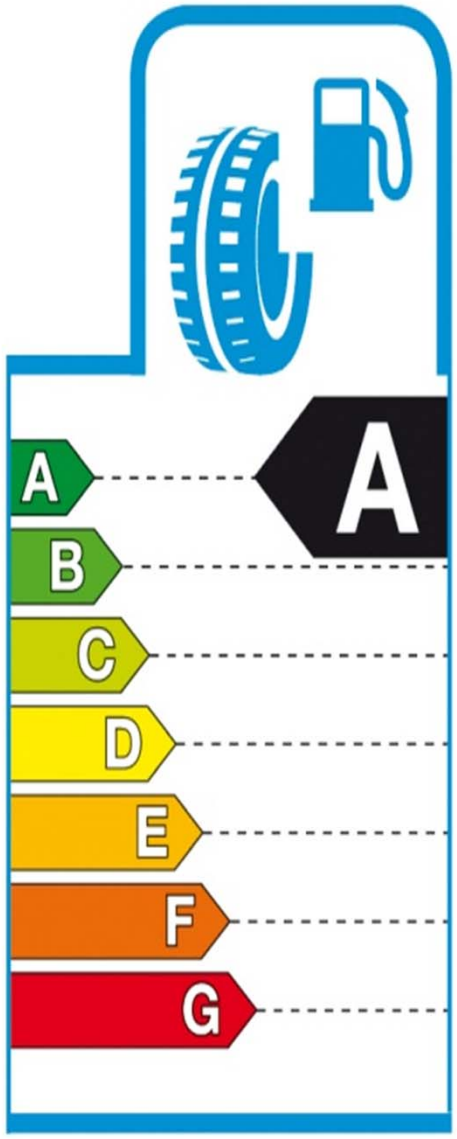
GRRF-60, 2006 GRB-49, 2009 RF experts GRB-57,Feb.2013

Tyre rolling resistance: points – market of year 2005
yellow lines norms of Regulations No.117, years 2012-2020



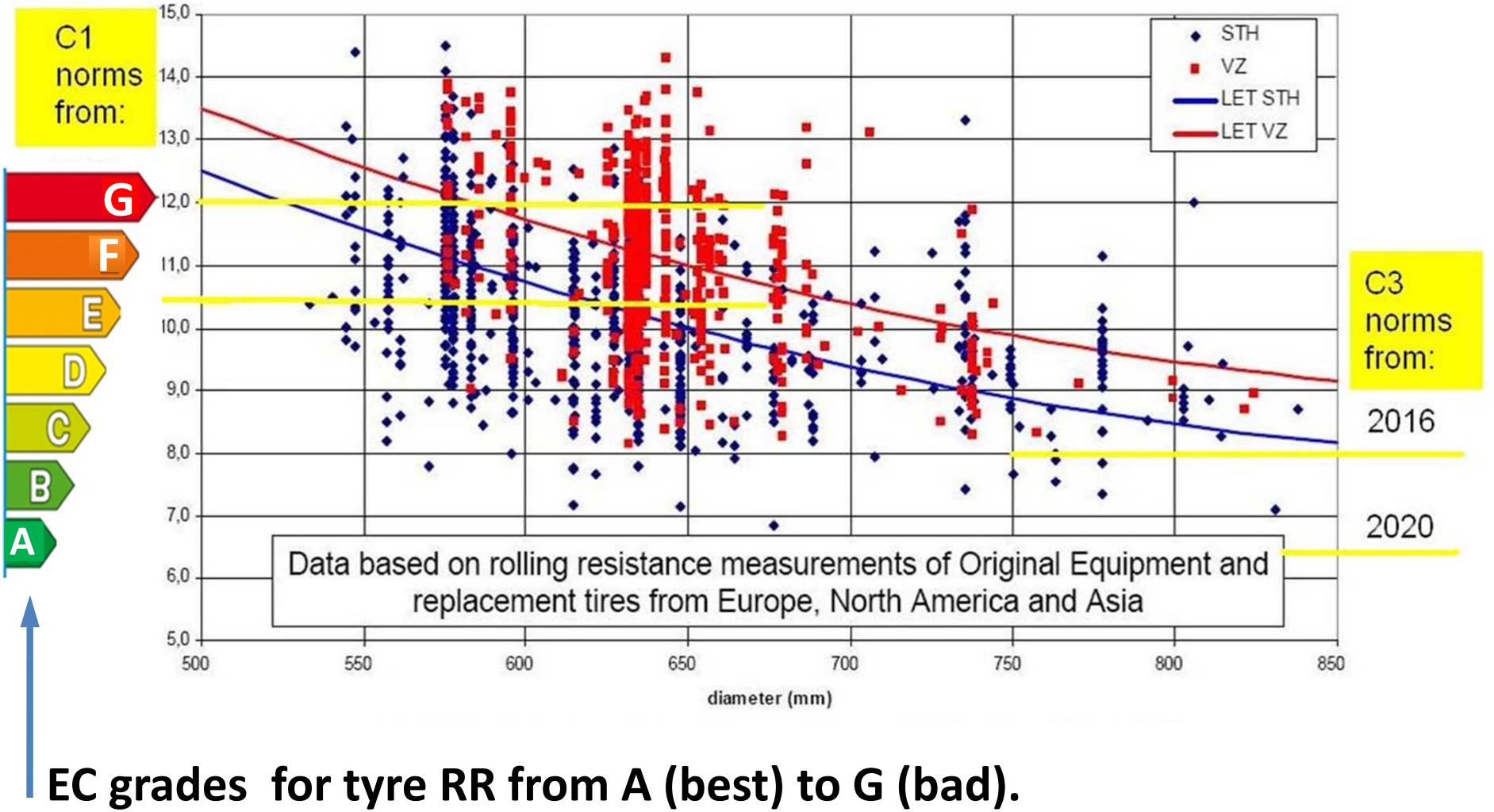
Statistic data from Dominique Aimon, Michelin - IEA, 2005

CONSUMER INFORMATION ABOUT TYRE ROLLING RESISTANCE. (from EC Regulation 1222/2009).



Class	RRC in N/kN					
	PC tyres		LT tyres		TB tyres	
	over	up to	over	up to	over	up to
A		6.5		5.5		4.0
B	6.5	7.7	5.6	6.7	4.0	5.0
C	7.7	9.0	6.7	8.0	5.0	6.0
D					6.0	7.0
E	9.0	10.5	8.0	9.2	7.0	8.0
F	10.5	12.0	9.2	10.5	8.0	
G	12.0		10.5			

Tyre rolling resistance: points – market of year 2005 yellow lines UN norms (Regulations No.117, years 2012-2020)



EC grades for tyre RR from A (best) to G (bad).

- **So PC tyre RR norm 2012 is lower than middle level of the tyre market 2005 and equal to the worst grade from EC Regulation. The norms equal to the middle market level 2005 are directed on year 2016 and latest.**
- **What is participants opinion about necessity to consider this situation in GRB-58 (September)?**

Thank you for your attention!