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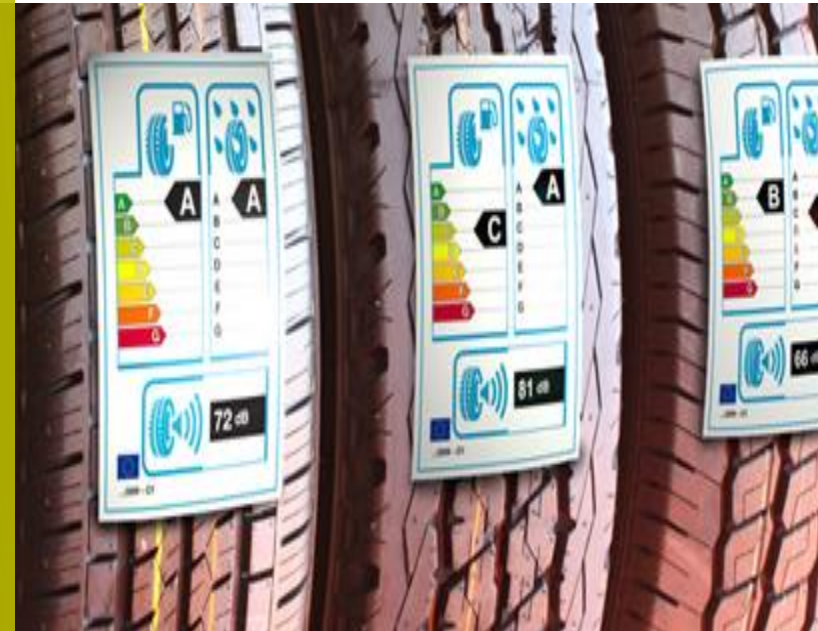
Prepared for:
132nd Motor Vehicles Working Group meeting
agenda item 5, Brussels, 5 July 2016

Transmitted by the expert from the Netherlands

Statistics of tyre label values in relation to the limit values in EC/661/2009

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Erik de Graaff

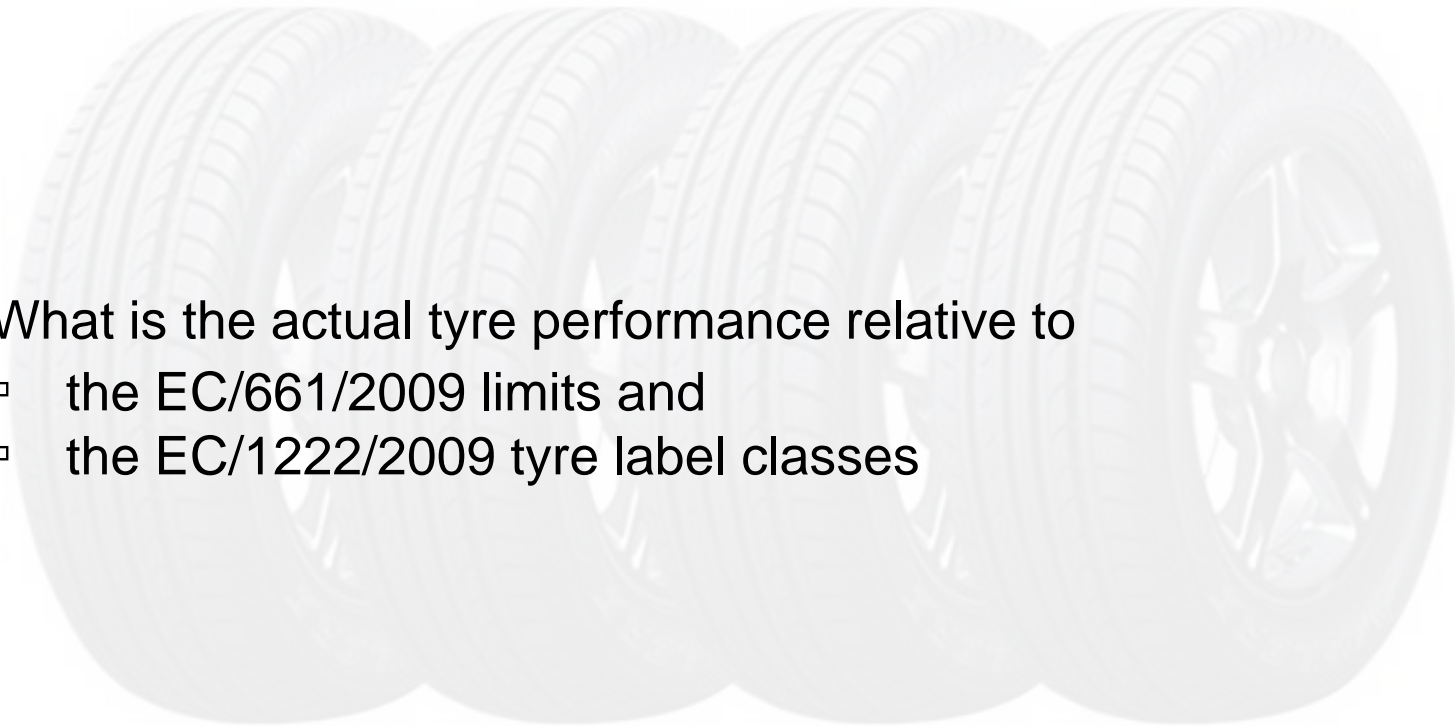
Client: Netherlands Ministry of
Infrastructure and Environment





Question of the ministry

- What is the actual tyre performance relative to
 - the EC/661/2009 limits and
 - the EC/1222/2009 tyre label classes



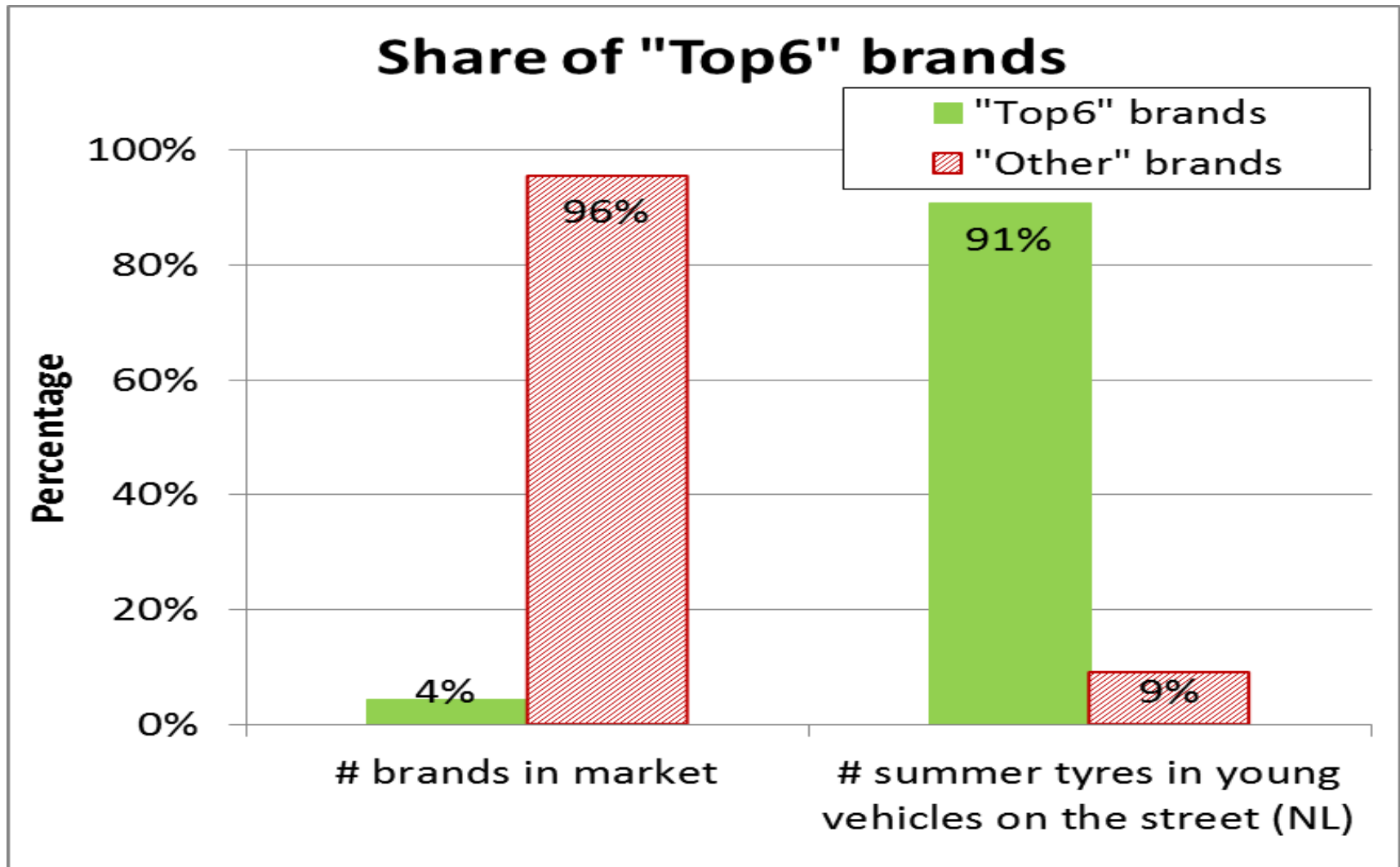


Workplan

- Collect statistical analysis of tyre label data
- Data source: VACO database (Netherlands tyre branch organisation)
- C1, C2 and C3 tyres; summer, winter and special
- subset of top 7 brands and top 7 sizes
 - Pro:
 - Representing 90% of the tyres sold in the Netherlands
 - Good correlation with performance in the street
 - Good correlation with OEM tyres and premium tyre branches
 - Stable data set for multi year evaluation
 - Con:
 - B and C brands are not very well represented
 - * This was thought acceptable as the current tyre limits apply earlier for “OEM” tyres compared to “all” tyres



Note: Representativity of a top 7





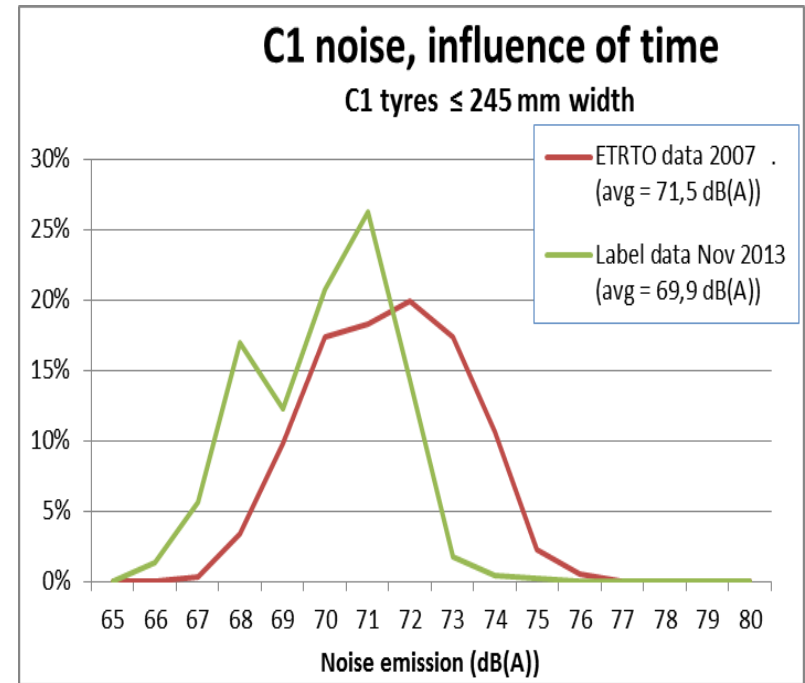
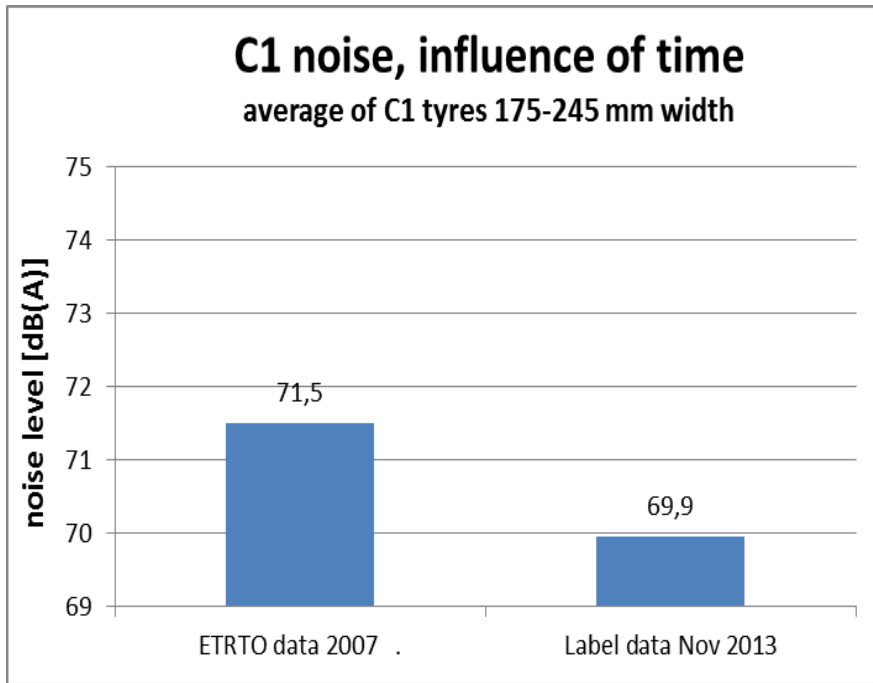
Results

- Trends
 - 2007-2013 (Noise only)
 - 2013-2016 (RR, WG and Noise)

- Statistics 2016

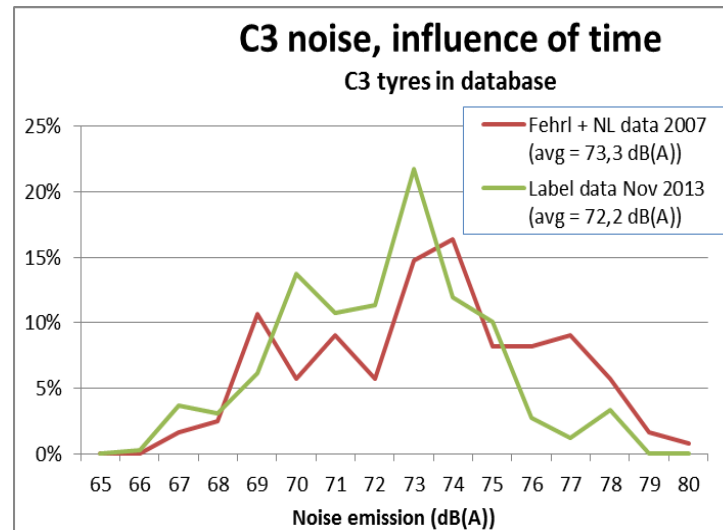
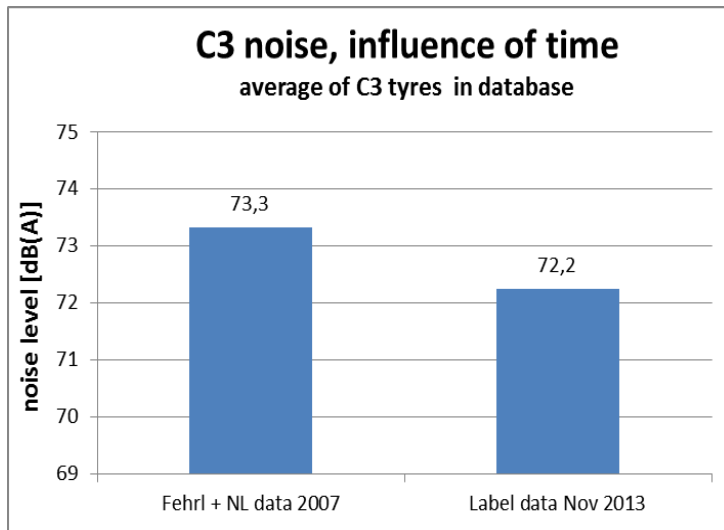
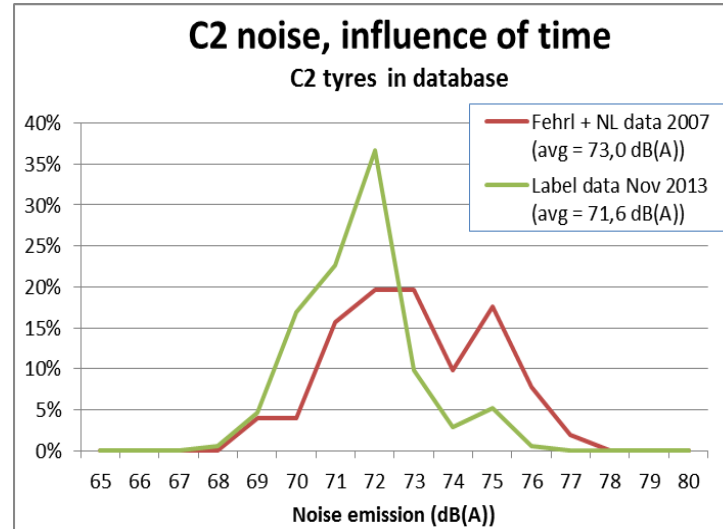
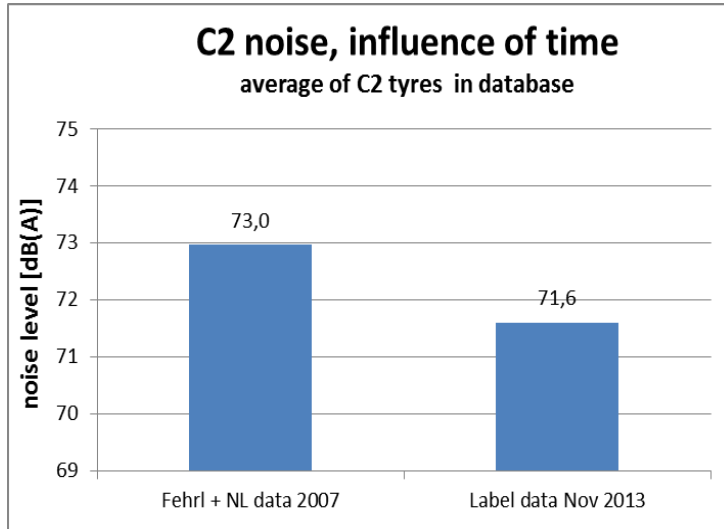


Noise of C1 tyres: 2007 vs. 2013



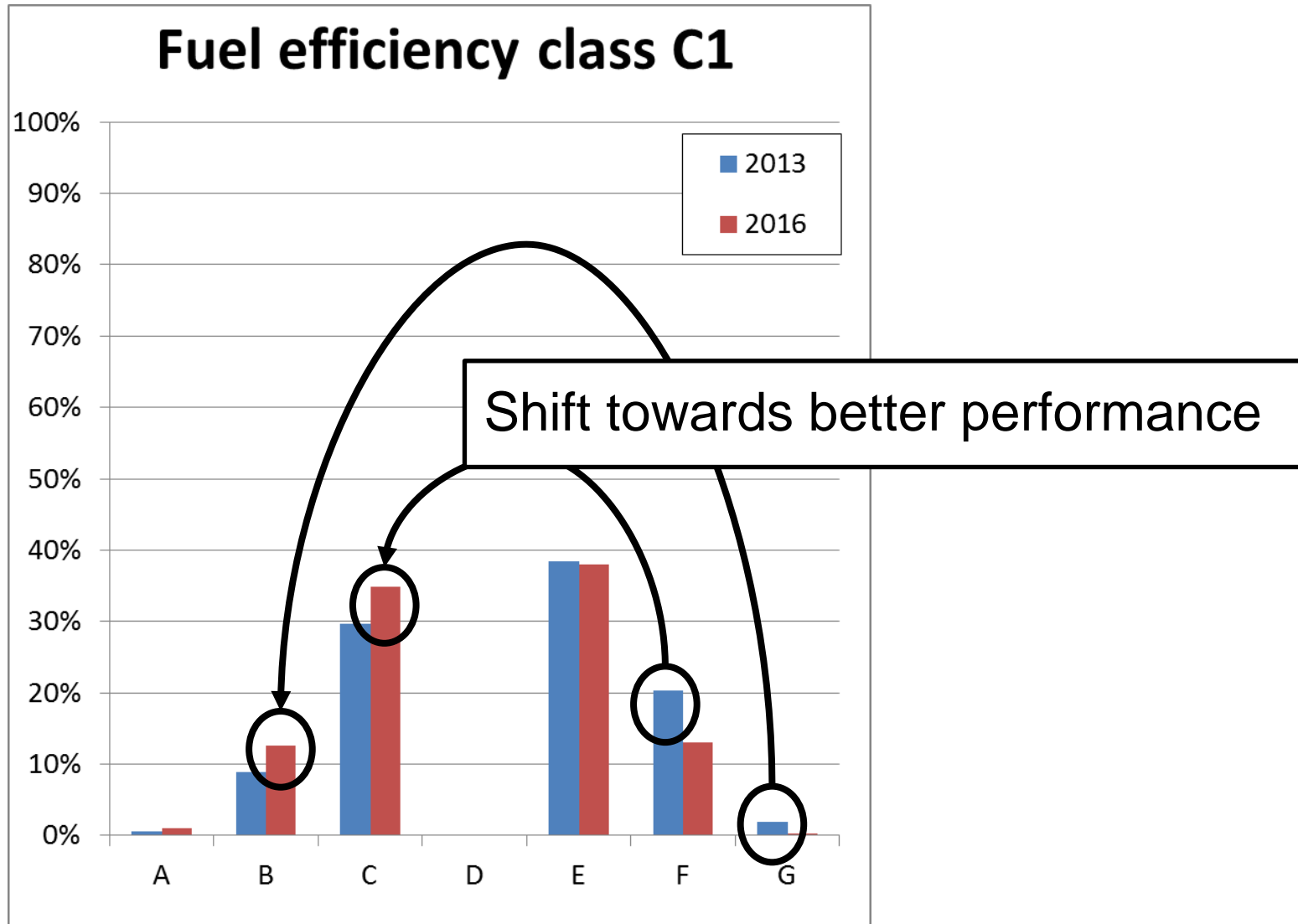


Noise of C2 and C3 tyres: 2007 vs. 2013



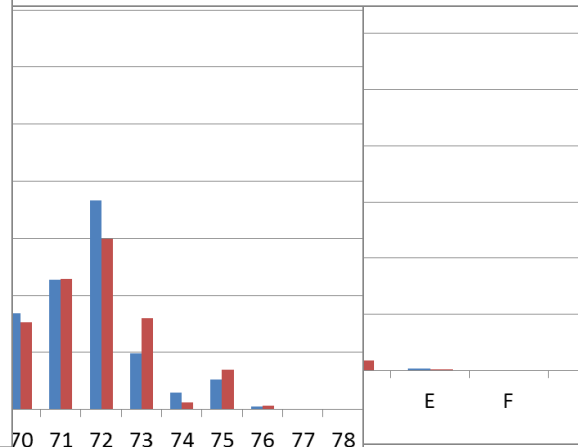
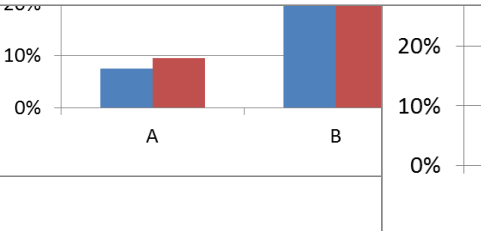
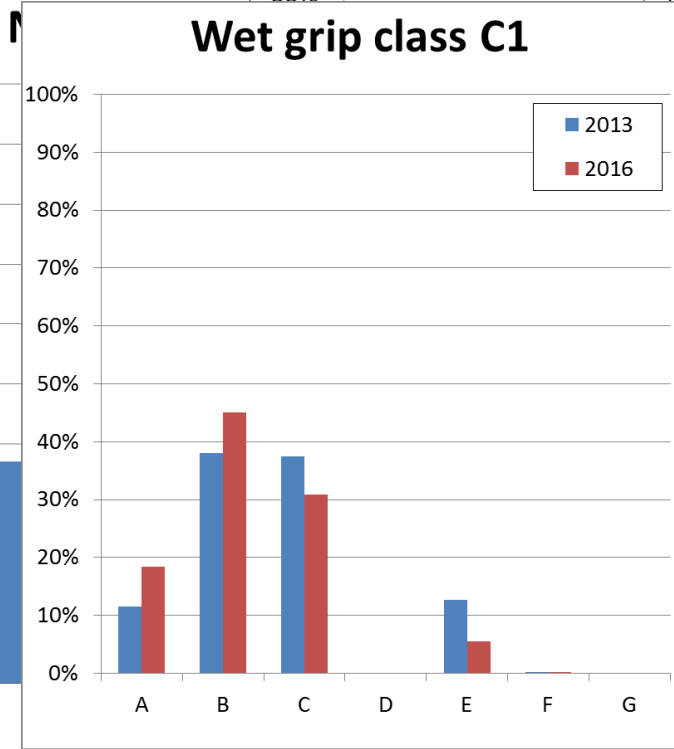
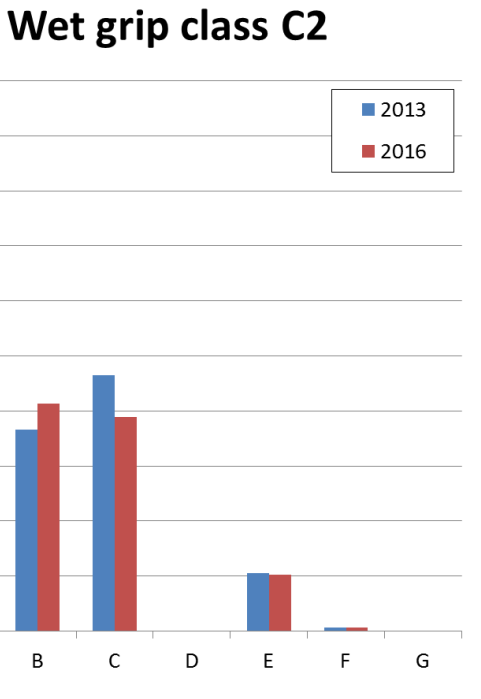
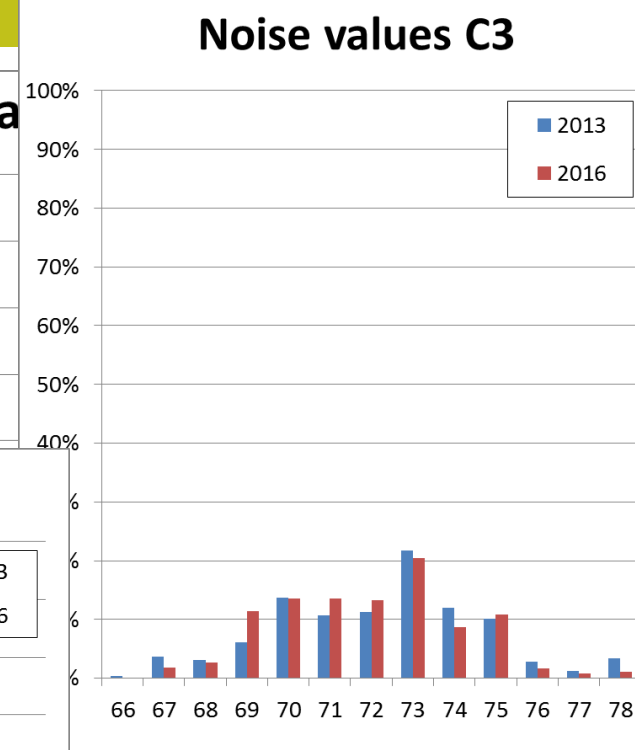
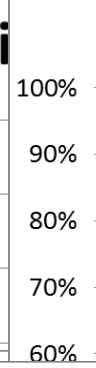
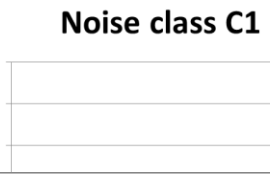
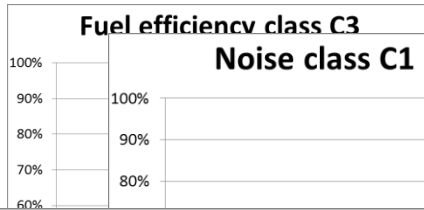


Trends 2013-2016





Trends 2013-2016





Trends 2013-2016

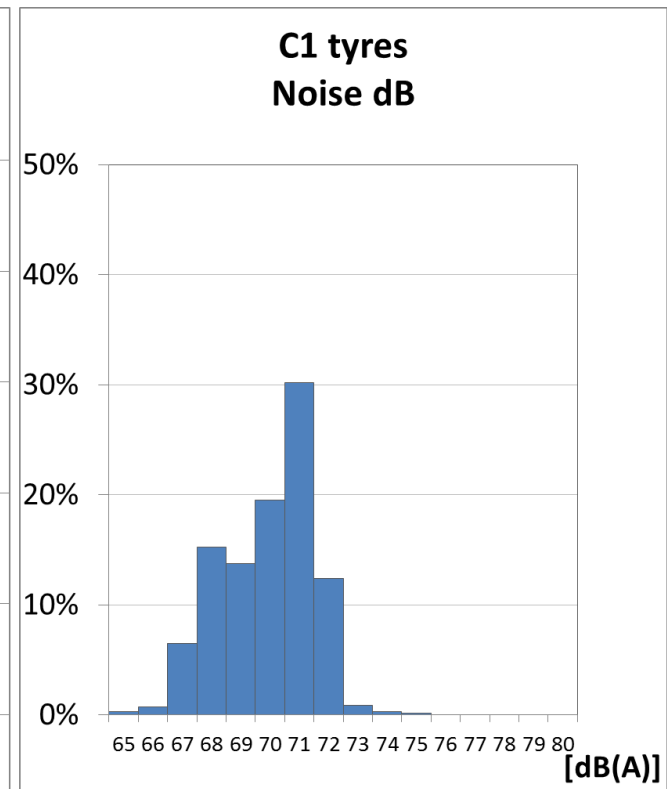
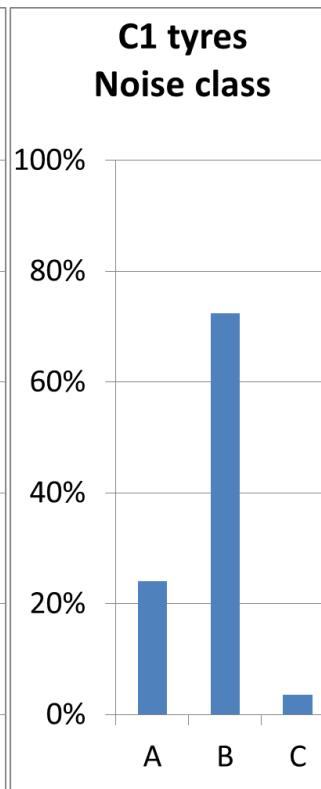
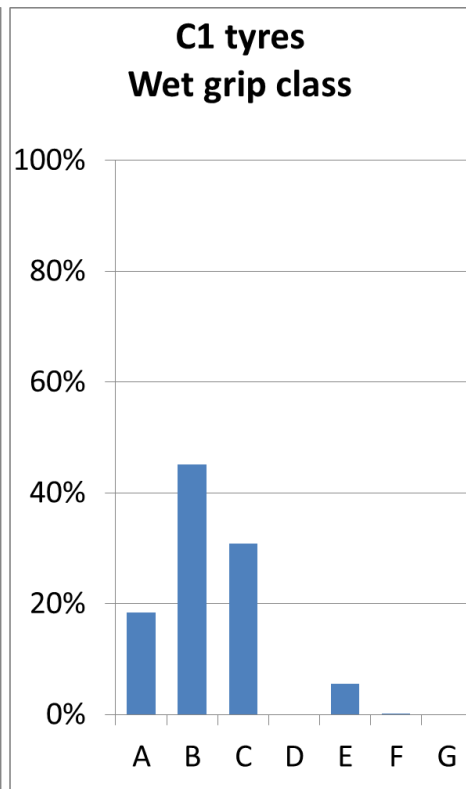
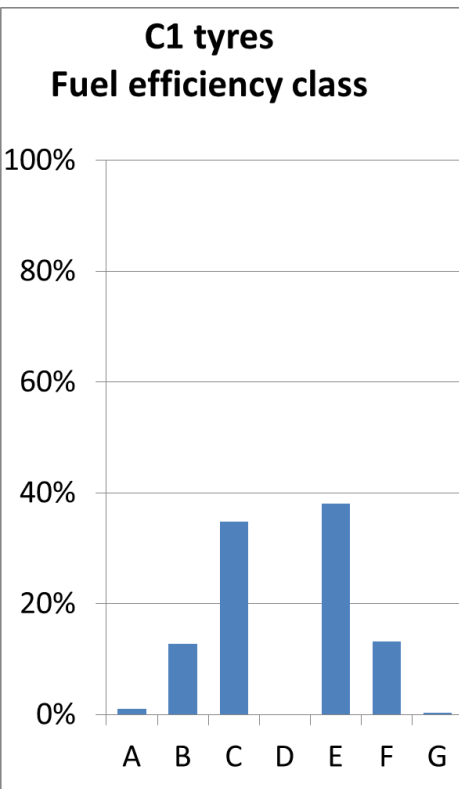
		2013	2016	
		avg	avg	delta
C1	RR	4,4	4,0	0,3
	WG	2,6	2,3	0,4
	Noise	1,9	1,8	0,1
	dB	69,9	69,7	0,2
C2	RR	4,3	4,1	0,2
	WG	2,7	2,6	0,1
	Noise	2,0	1,9	0,1
	dB	71,6	71,2	0,4
C3	RR	3,7	3,6	0,2
	WG	2,5	2,5	0,1
	Noise	1,8	1,6	0,1
	dB	72,2	71,9	0,3

Consistent trend for better performance in all aspects/classes



2016 Statistics C1 tyres

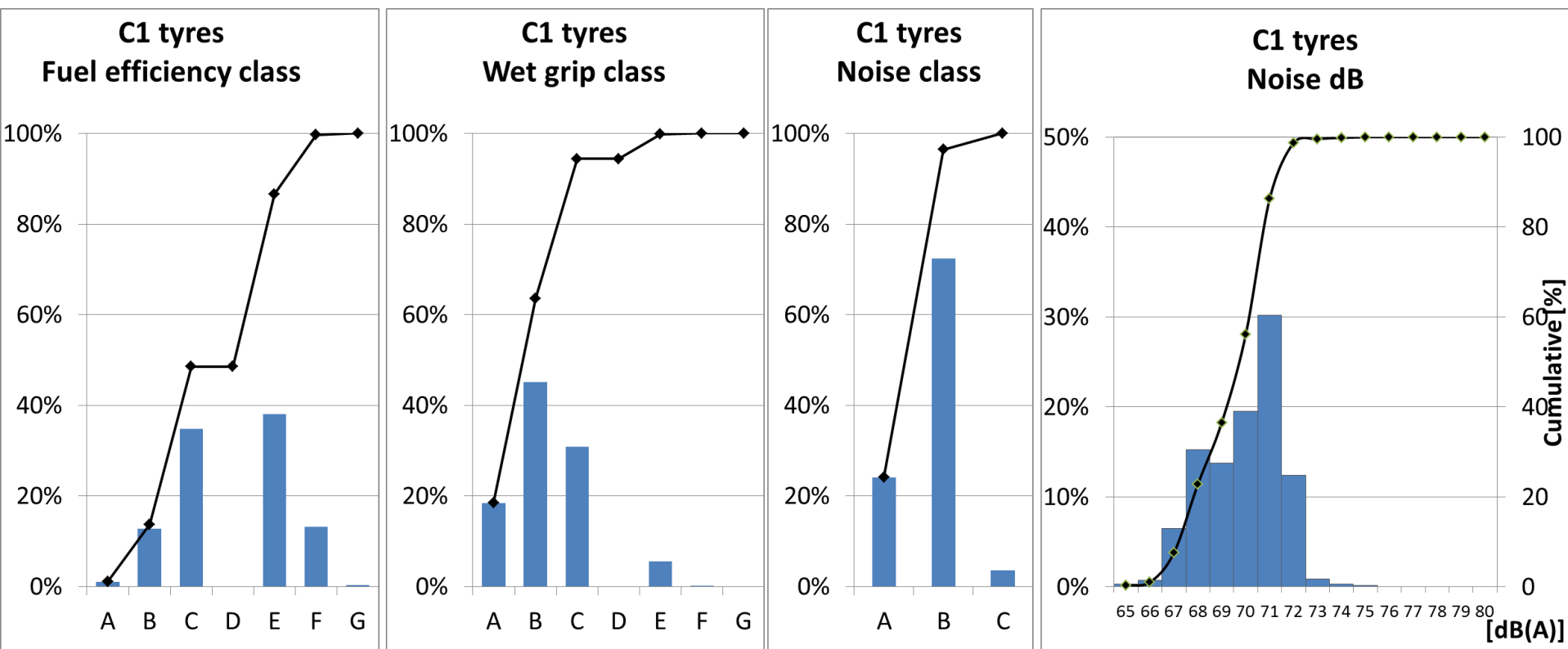
- Blue bars: percentage per label class





2016 Statistics C1 tyres

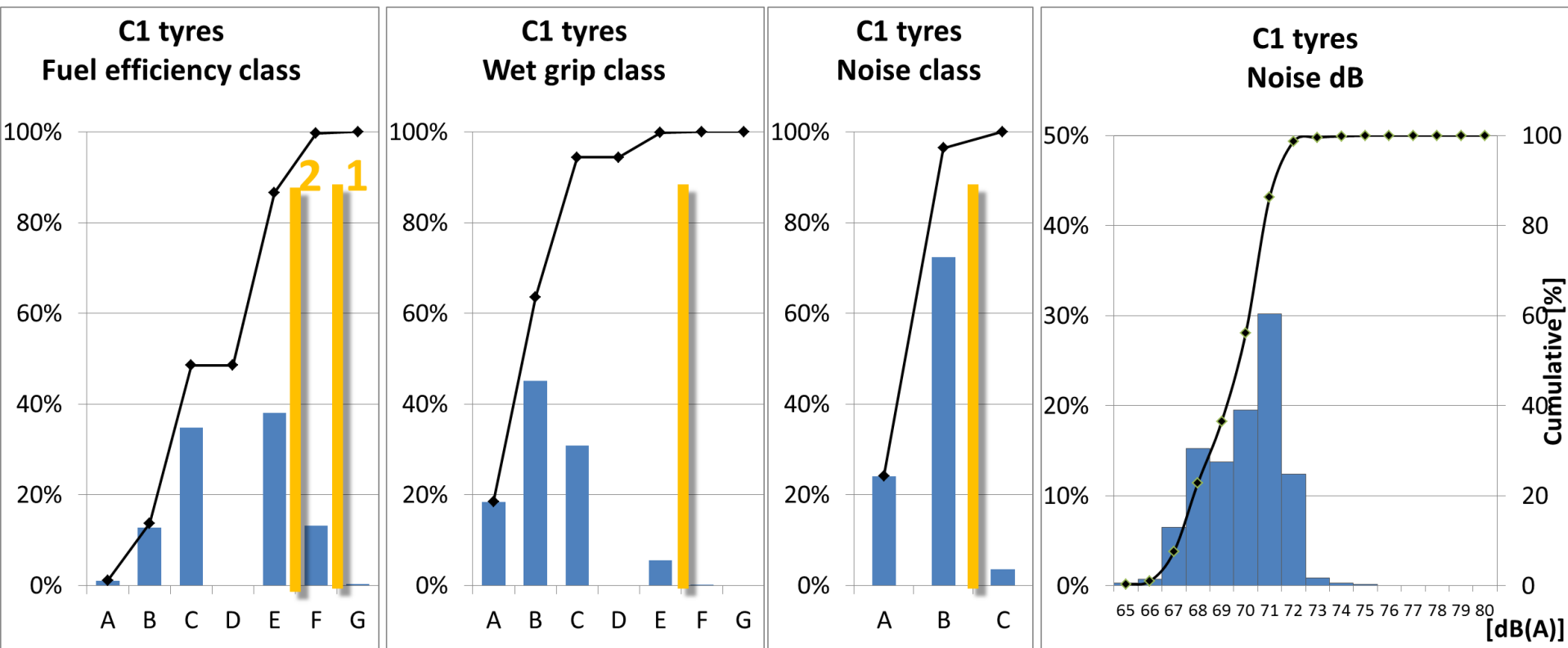
- Blue bars: percentage per label class
- Black lines: cumulative percentage





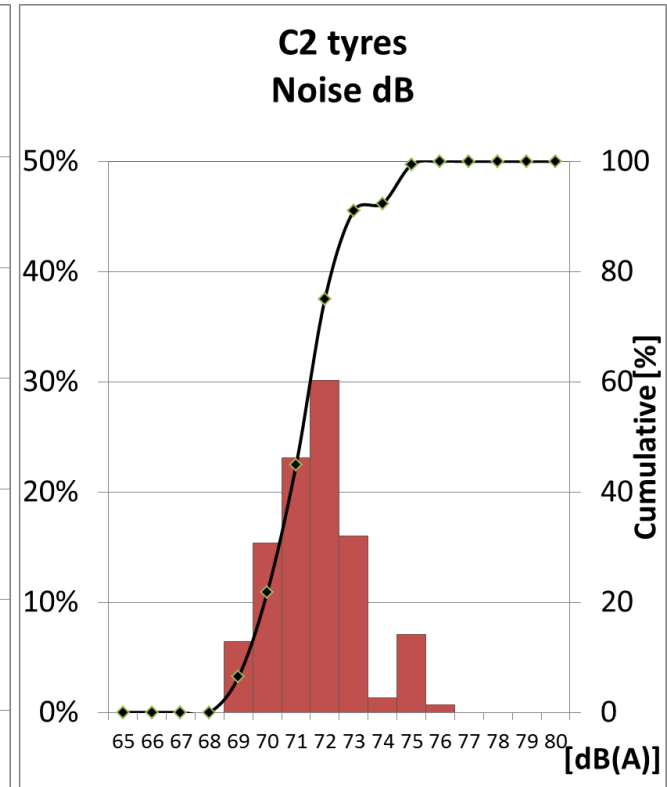
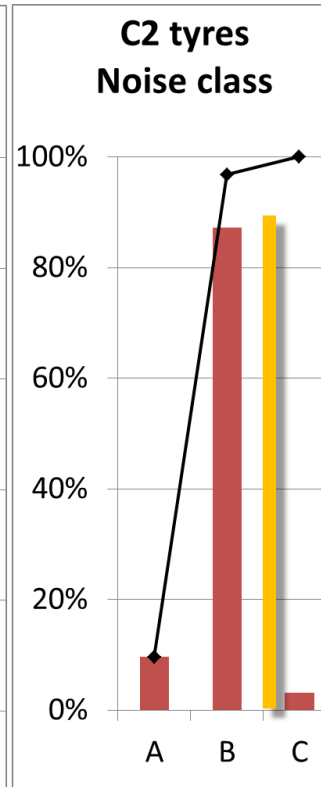
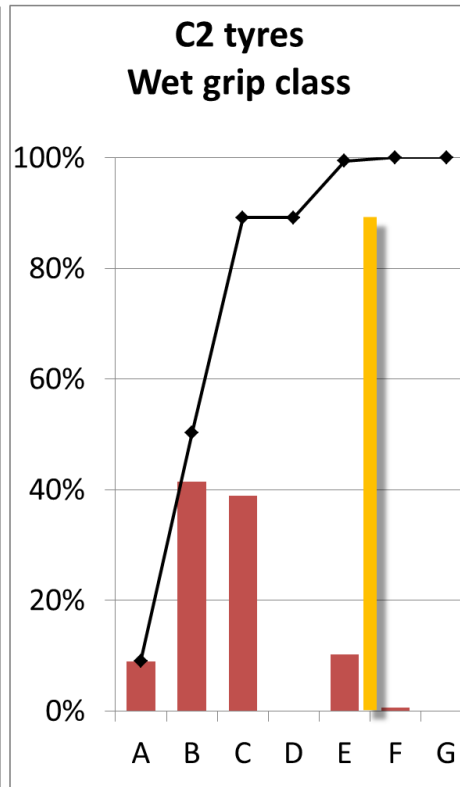
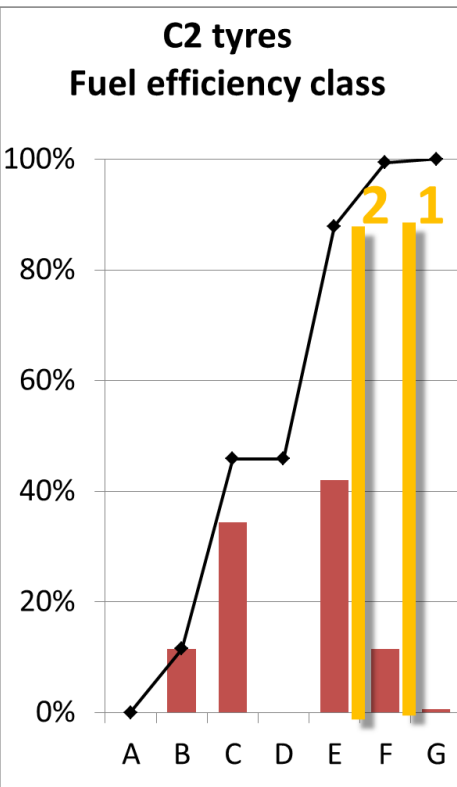
2016 Statistics C1 tyres

- Blue bars: percentage per label class
- Black lines: cumulative percentage
- Orange lines limit value EC/661/2009 (phase 1 and 2)



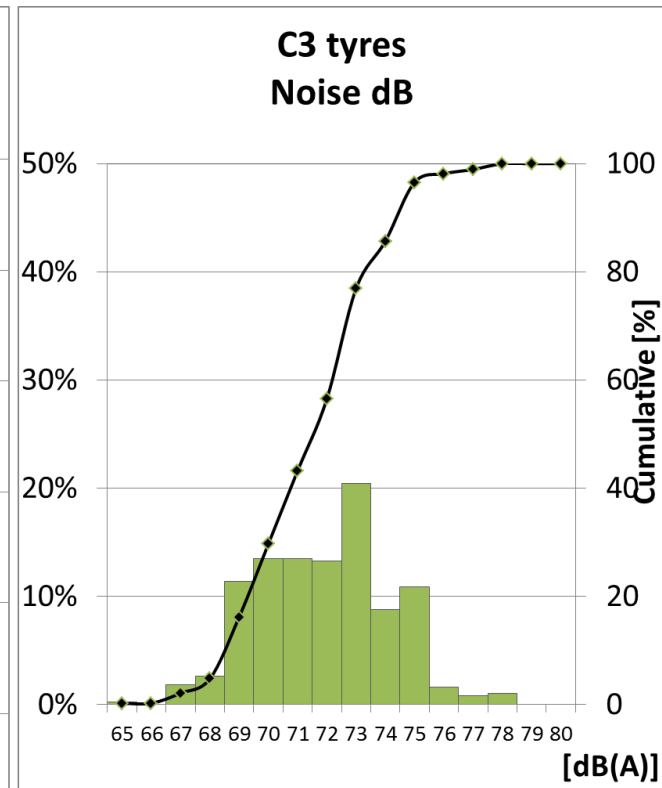
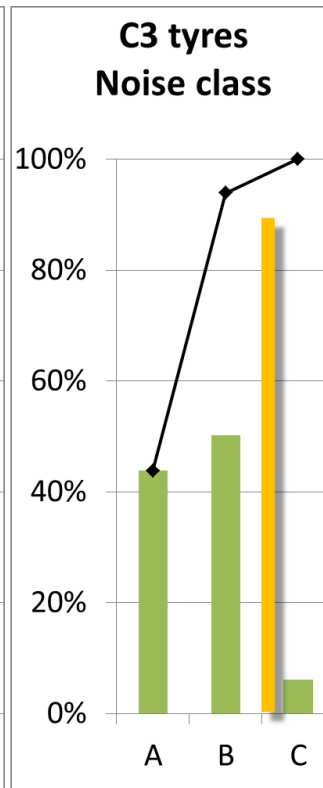
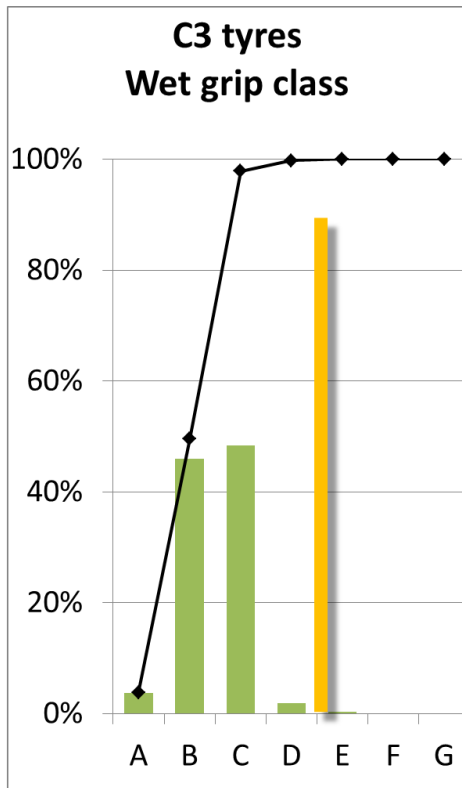
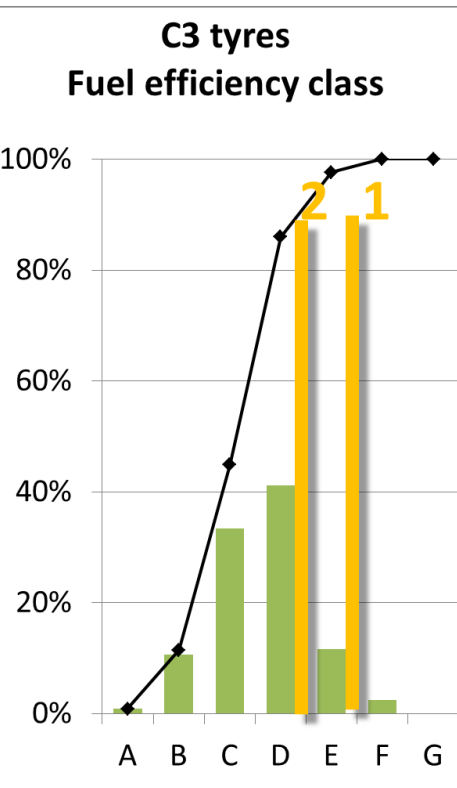


2016 Statistics C2 tyres





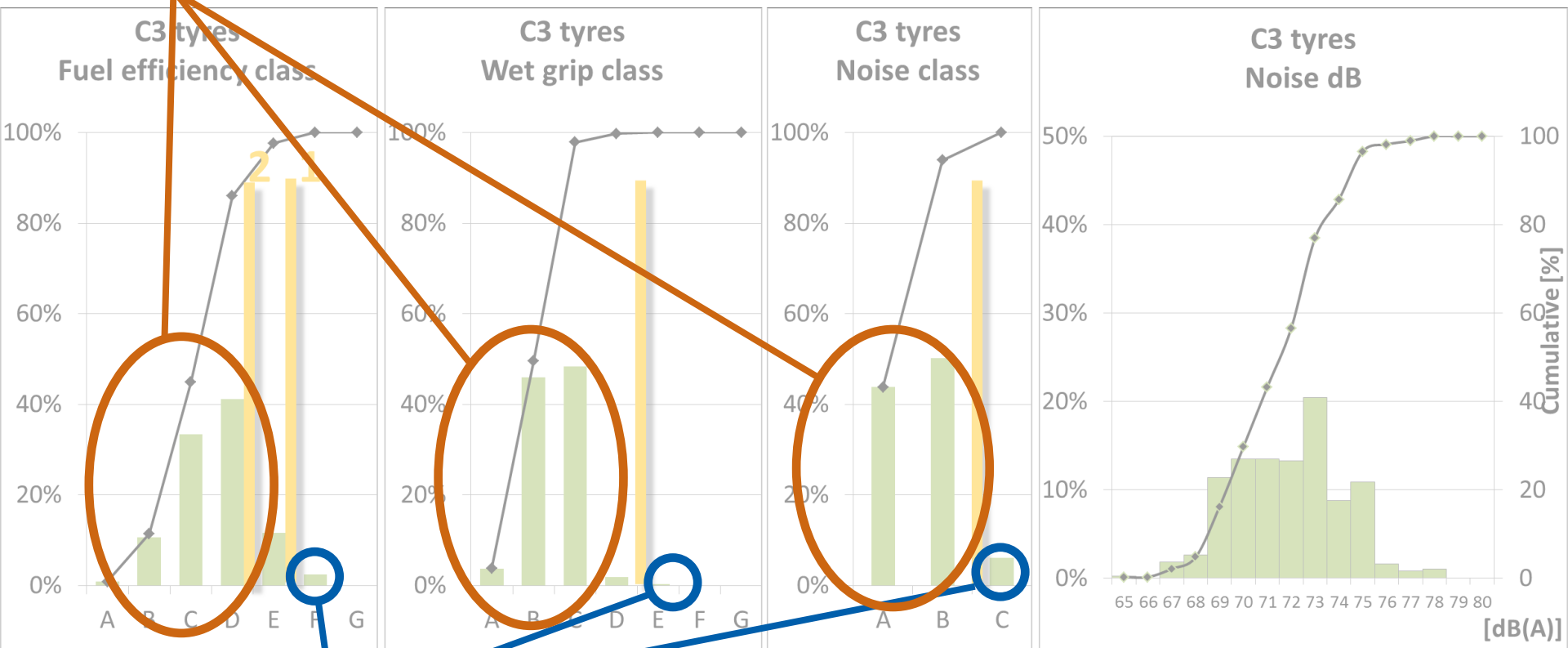
2016 Statistics C3 tyres





2016 Statistics C3 tyres

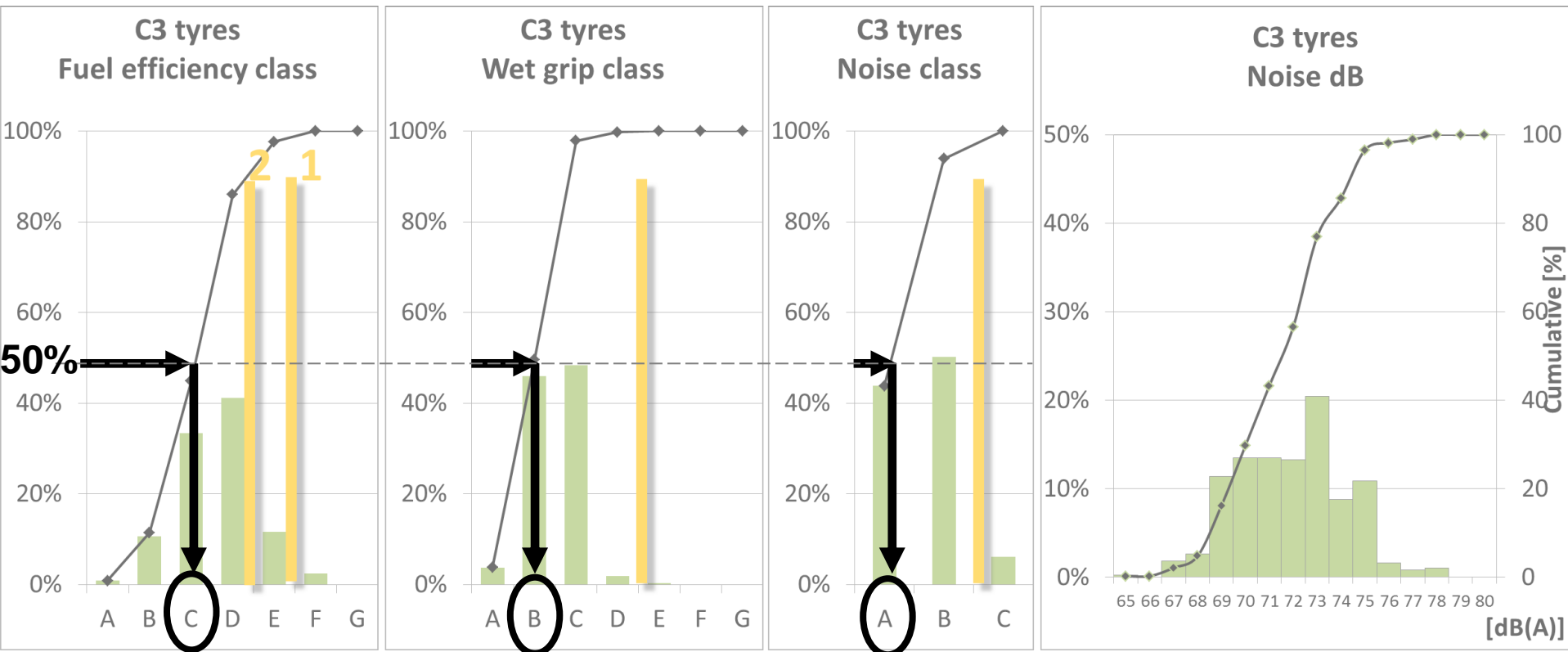
Significant number of tyres perform (much) better than the limits



A small percentage of tyres does not meet the 2012 limits



2016 Statistics C3 tyres



50 percentile complies with "CBA" label



Summary of observations

- (consistent) trend for better performance in all aspects/classes
- Only a small percentage of the tyres (1-5%) does not yet meet the 2012 limits (Note: these can be legally sold for some time)
- Significant number of tyres perform (much) better than the limits
- The 50 percentile of these tyres complies roughly with
 - Label C for Rolling Resistance
 - Label B for Wet Grip
 - Label A for Noise



Discussion and conclusions

Thank you for your attention!

