

Status of the world car industry



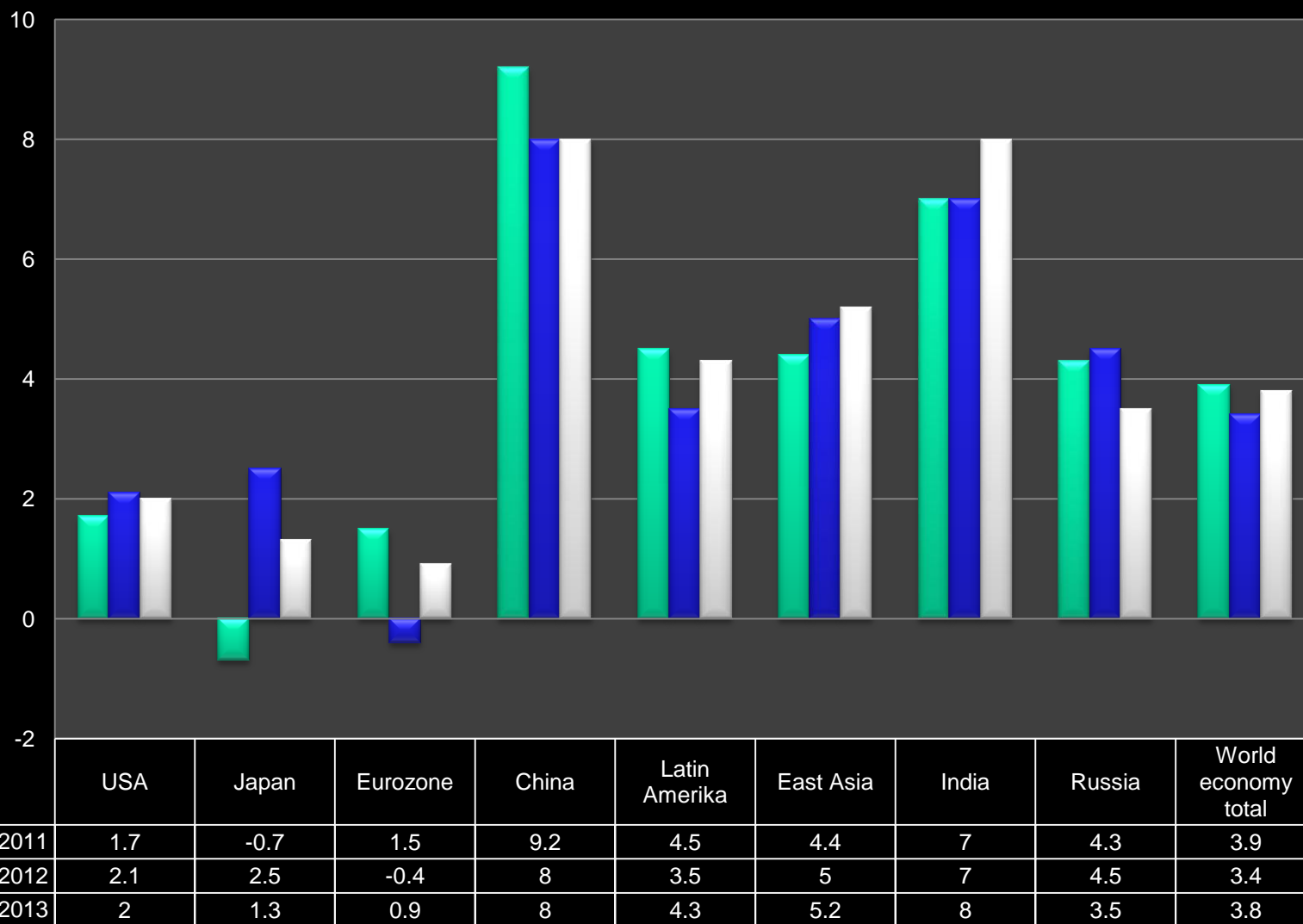
Automotive Working Group Meeting
St-Petersburg, Russia, 11-13 September 2012



- ➔ **Current situation of the car industry**
- ➔ **Mid- and longterm developments**



World economy forecast 2012 / 13



source:
DIW

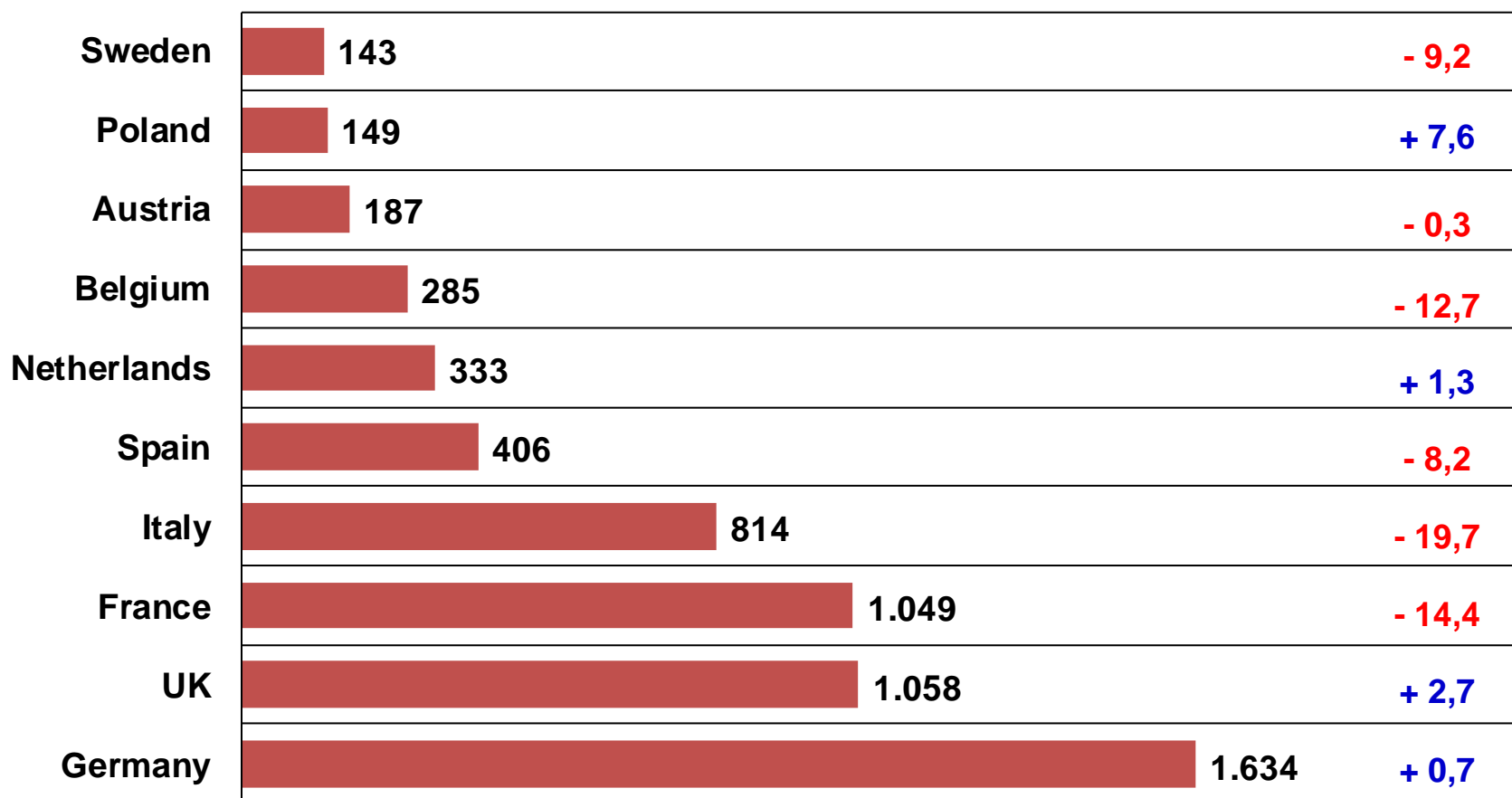


Car registrations europa jan – June 2012

numbers x1000

Total market: 6.896 - minus 6,3

+ / - % 'prev. year



source: ACEA



market development europe

jan – june 2012 to jan – june 2007

	2012		2007		registrations	market share
	share %	registrations	share %	registrations	2007 vs. 2012	2007 vs. 2012
Markt		6.896.348		8.516.006	-19,0%	
VW Group	24,1	1.660.168	19,5	1.663.769	-0,2%	4,6
VOLKSWAGEN	12,7	872.524	10,0	849.147	2,8%	2,7
AUDI	5,5	377.669	4,2	353.971	6,7%	1,3
SEAT	2,0	138.977	2,4	204.776	-32,1%	-0,4
SKODA	3,9	269.479	3,0	253.119	6,5%	0,9
PSA Group	12,0	827.163	13,2	1.127.594	-26,6%	-1,2
RENAULT Group	8,5	583.145	8,7	742.631	-21,5%	-0,2
OPEL/VAUXHALL	6,8	467.937	8,5	728.104	-35,7%	-1,7
FORD	7,7	532.819	8,3	705.535	-24,5%	-0,6
FIAT Group	6,6	456.191	8,2	696.254	-34,5%	-1,6
BMW Group	6,1	420.820	5,0	422.773	-0,5%	1,1
DAIMLER	5,1	349.312	4,9	418.984	-16,6%	0,2
TOYOTA Group	4,3	294.593	6,0	507.471	-41,9%	-1,7
NISSAN	3,5	238.604	1,8	157.270	51,7%	1,7
HYUNDAI	3,4	232.454	1,8	156.566	48,5%	1,6
KIA	2,5	173.232	1,5	130.933	32,3%	1,0

source: ACEA

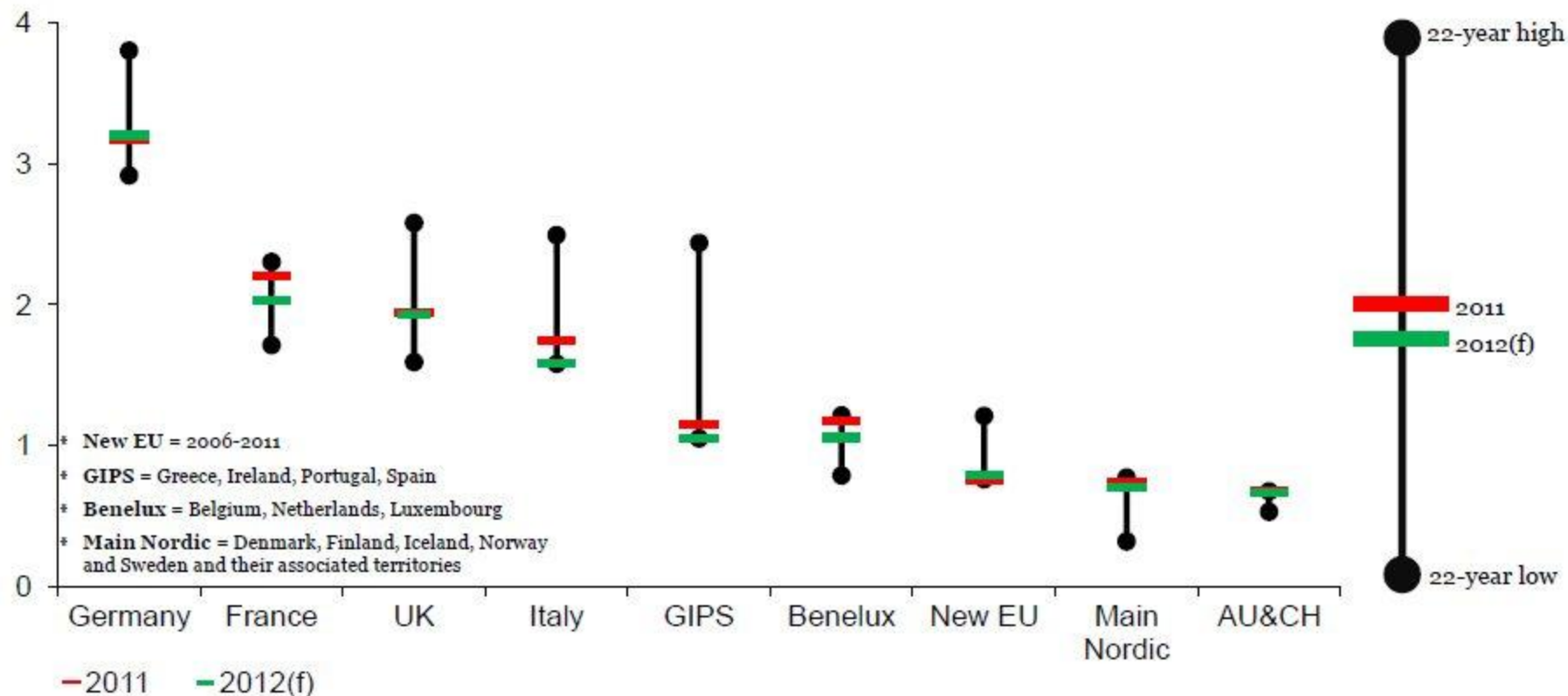


Europe: new car registration variance

1991 - 2012

Europe: Registration Variance*

1991 - 2012(f) Peak and trough (millions)



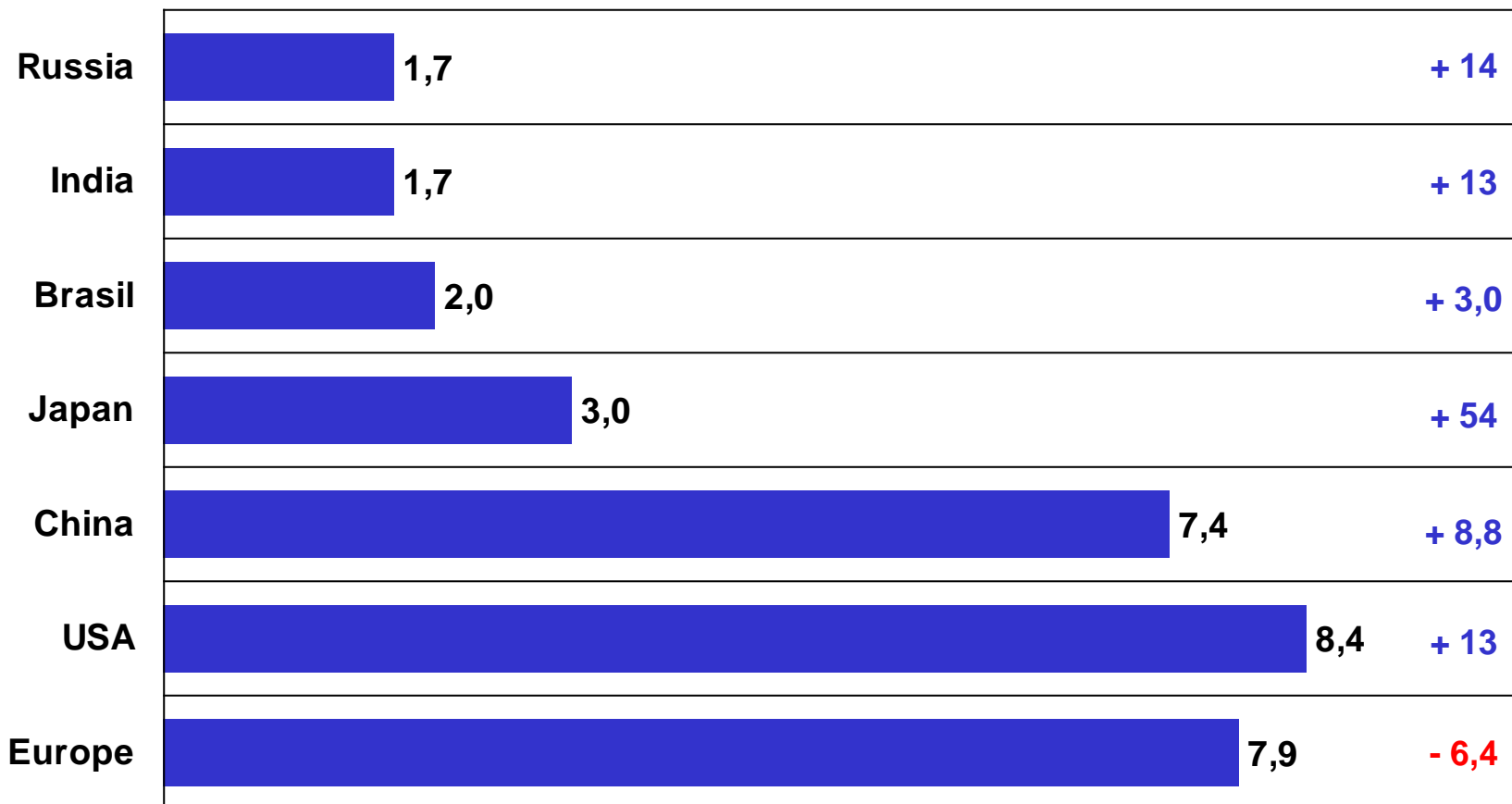
source: PWC



New car registrations world jan – july 2012

x1.000.000

+ / - % ´prev. year



source: VDA

market forecast 2012

x1.000.000



| Vorstand 02

	2007	2008	2009	2010	2011	2012 +/- in %
Europe (EU + EFTA)	16,0	14,7	14,5	13,8	13,6	-5
Germany	3,1	3,1	3,8	2,9	3,2	0
France	2,1	2,1	2,3	2,3	2,2	-12
UK	2,4	2,1	2,0	2,0	1,9	0
Italy	2,5	2,2	2,2	2,0	1,7	-12
Spain	1,6	1,2	1,0	1,0	0,8	-8
Russia*	2,5	2,9	1,5	1,9	2,6	14
North Amerika*	18,9	15,9	13,1	14,6	16,0	7
USA*	16,1	13,2	10,4	11,6	12,8	8
South Amerika	3,4	3,5	3,9	4,2	4,5	0
Asia Pacific	14,7	15,3	18,0	22,0	22,8	10
China	5,1	5,7	8,4	11,3	12,2	6
Japan	4,4	4,2	3,9	4,2	3,5	25
India	1,2	1,6	1,8	2,4	2,5	7
Rest	3,5	3,6	4,3	4,5	5,0	4
total	58,9	55,9	55,3	61,0	64,5	5

* inkl. Light Trucks

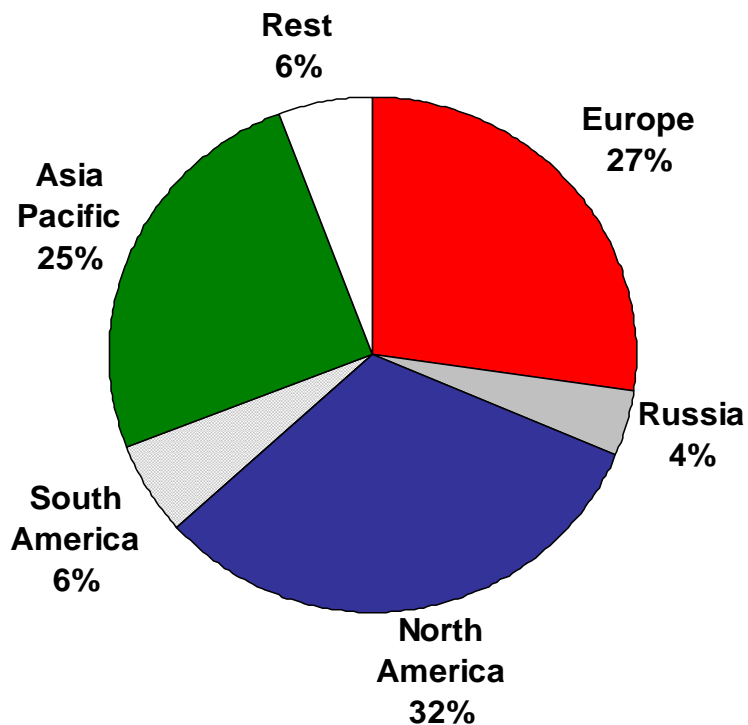
source: OEM's, VDA, KBA, IG Metall



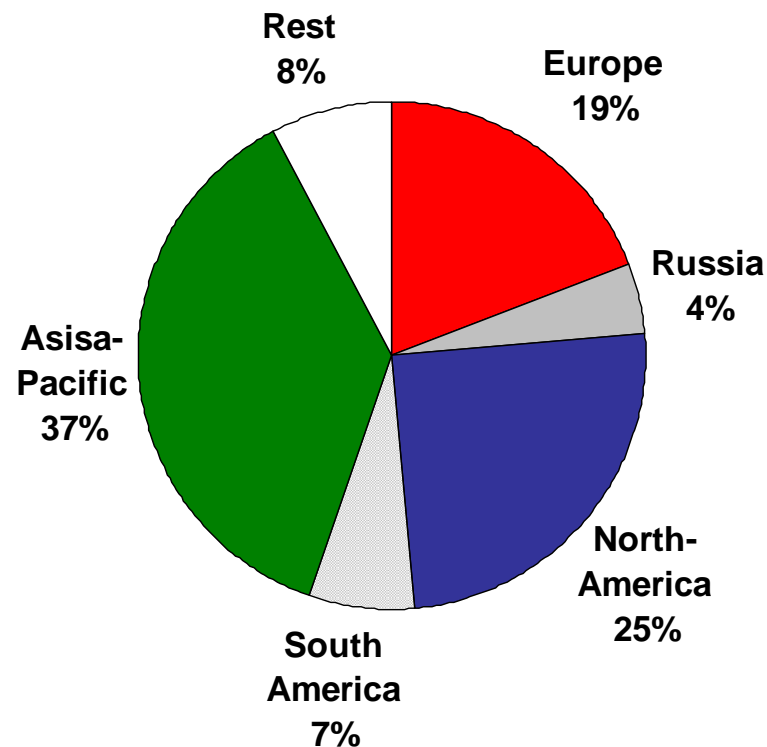
World car market

2007 vs. 2012

2007: 58,9 Mio. cars



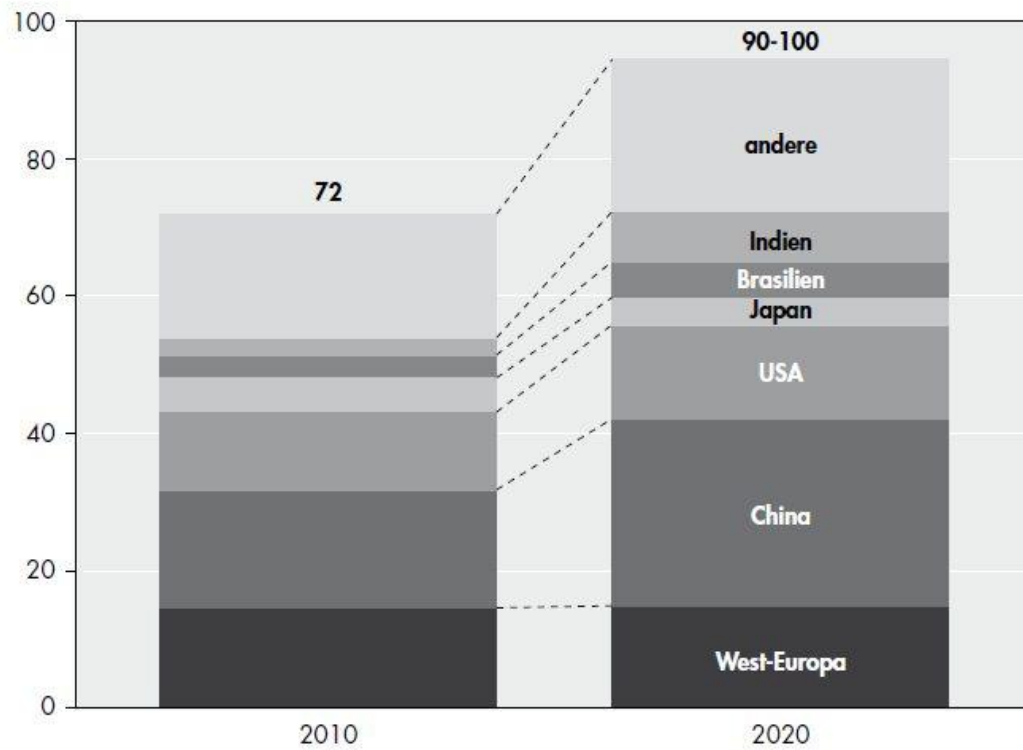
2012: 67,7 Mio. cars



source: OEM's, VDA, KBA, IG Metall

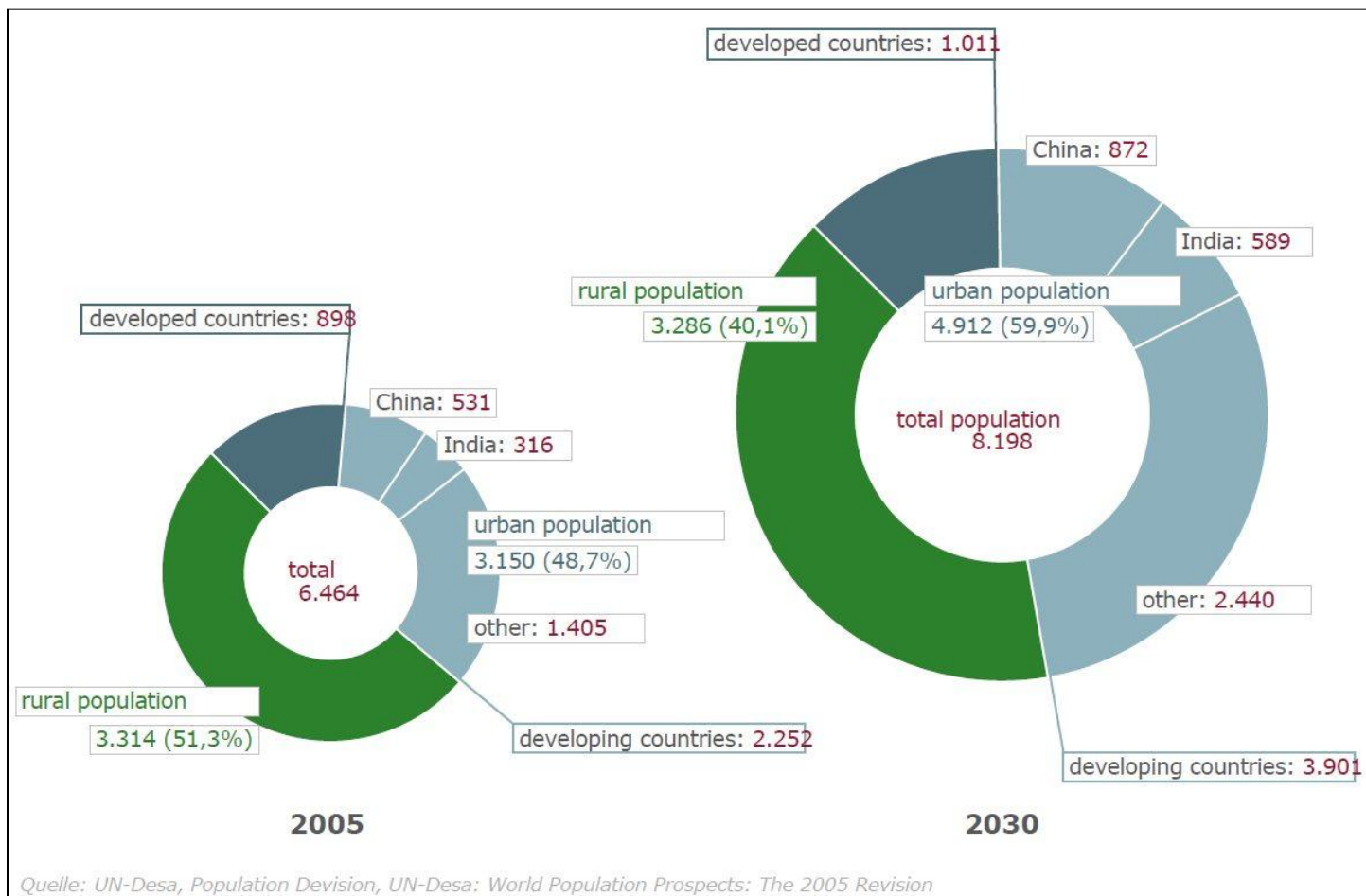
➔ Midterm growth of the world car market, mainly coming from „new markets“

Globaler Absatz (in Mio. Einheiten)

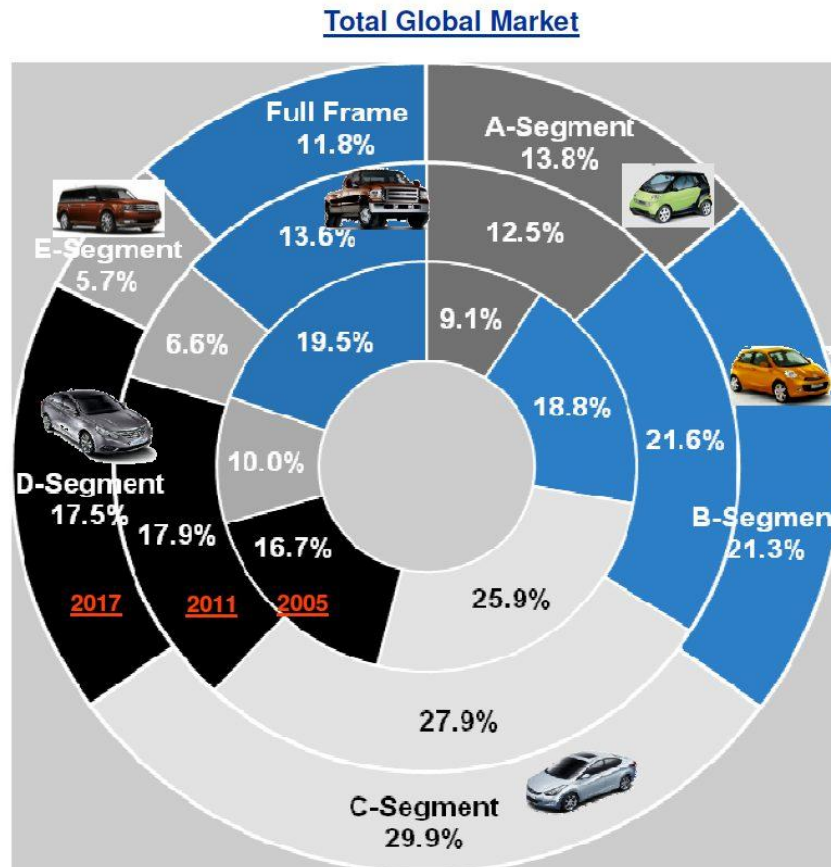


Quelle: J.D. Power, Bain-Analyse

➔ megacities / change of mobility concepts



➔ trend to smaller cars



- Fully 75% of all vehicle output by 2017 in Emerging Markets is C-segment or smaller.
- The D-segment has almost half the share in Emerging Markets versus Developed Markets.
- The globe is 'growing towards C segment – sizeable in China, Russia, Western Europe and North America
- Each global OEM has a slate of flexible B, C & D-segment platforms ranging from coupe through to MPV

Source: IHS

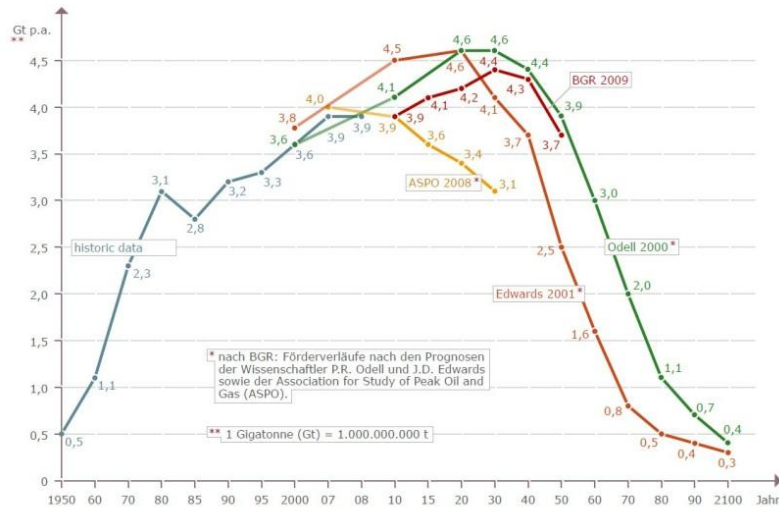
key drivers for longterm developments



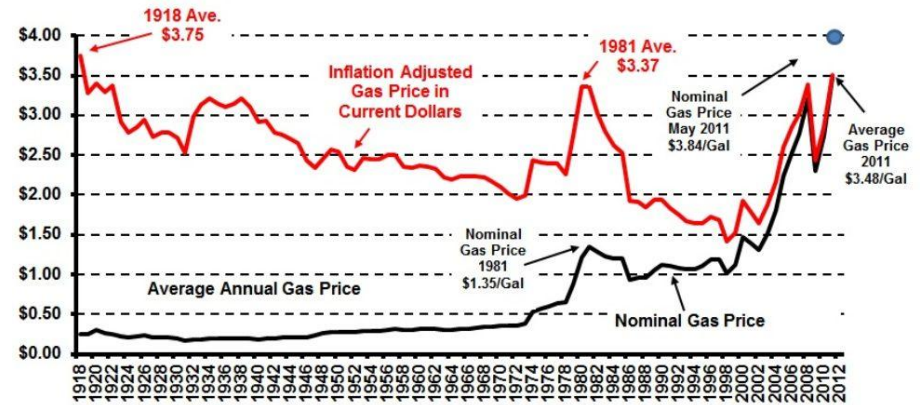
| Vorstand 02

availability and pricing of raw materials

Peak Oil



Annual Average Gasoline Prices
1918 - Current
Adjusted for January 2012 Inflation
© 2012 InflationData.com
Prepared By Timothy McMahon
Updated 2/27/12



Note: Prices are Average Annual prices **not** Peak Prices so peaks are smoothed out considerably

Source of Data: US Energy Information Administration
CPI-U Inflation index- www.bls.gov

key drivers for longterm developments

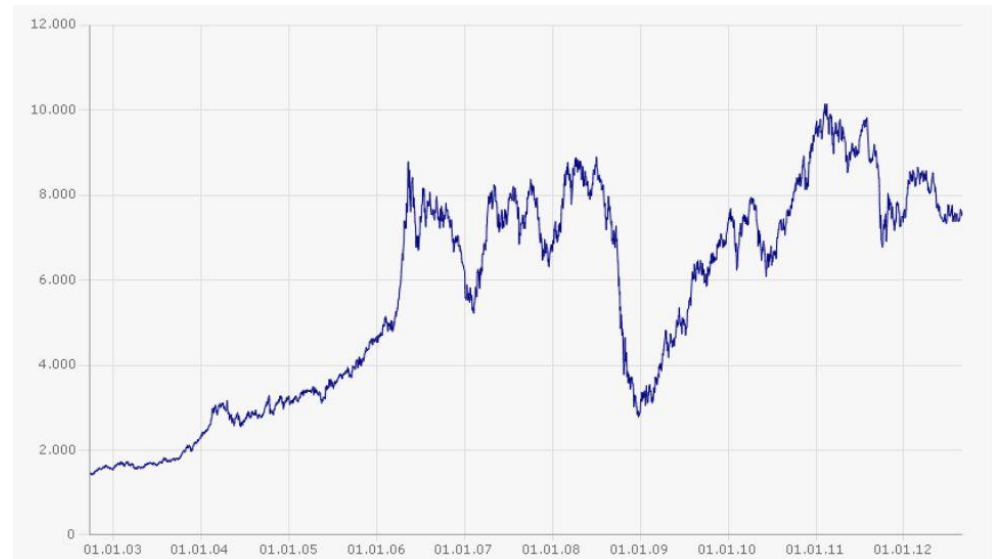


| Vorstand 02

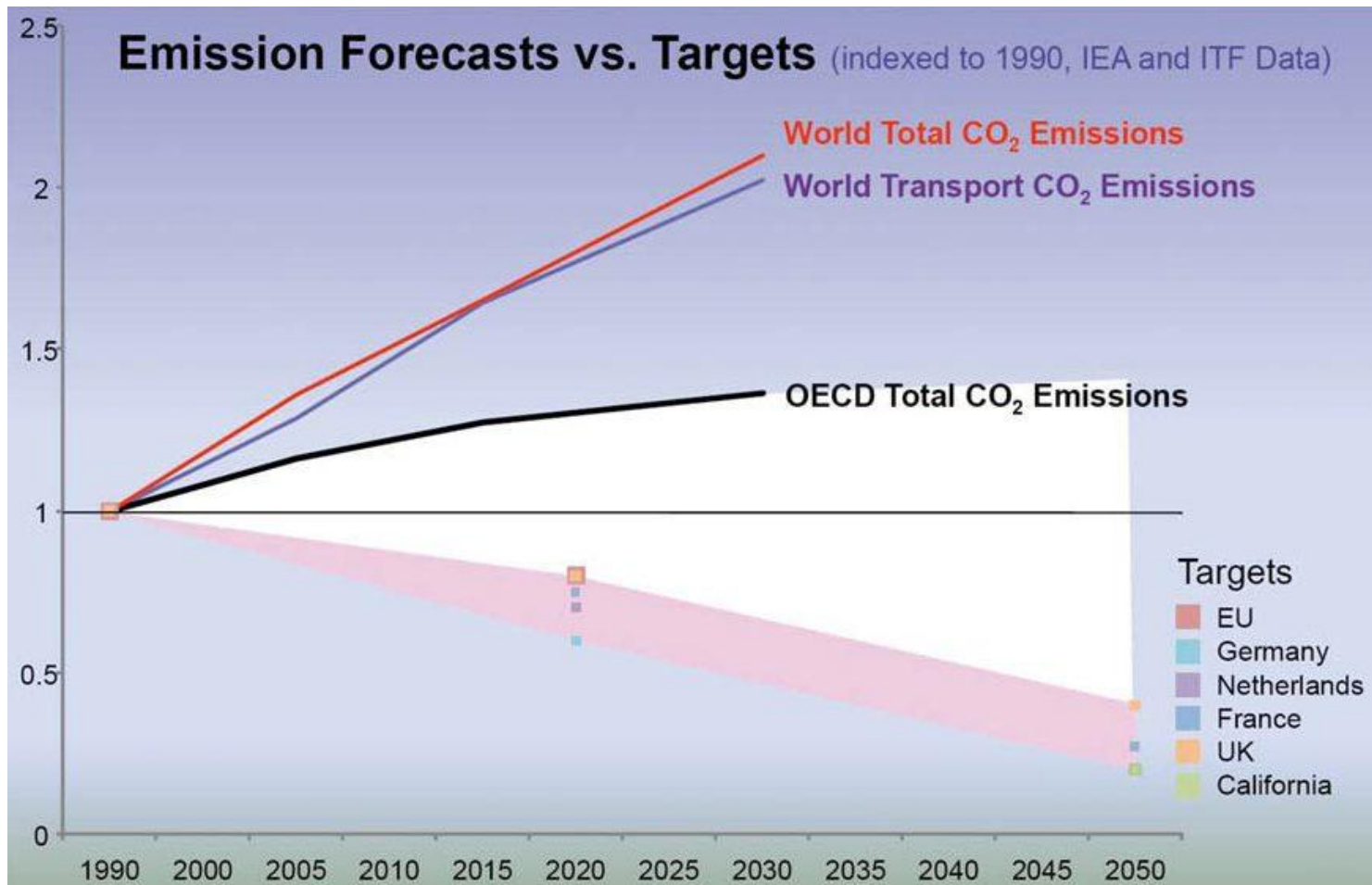
➔ availability and pricing of raw materials



development of copper price

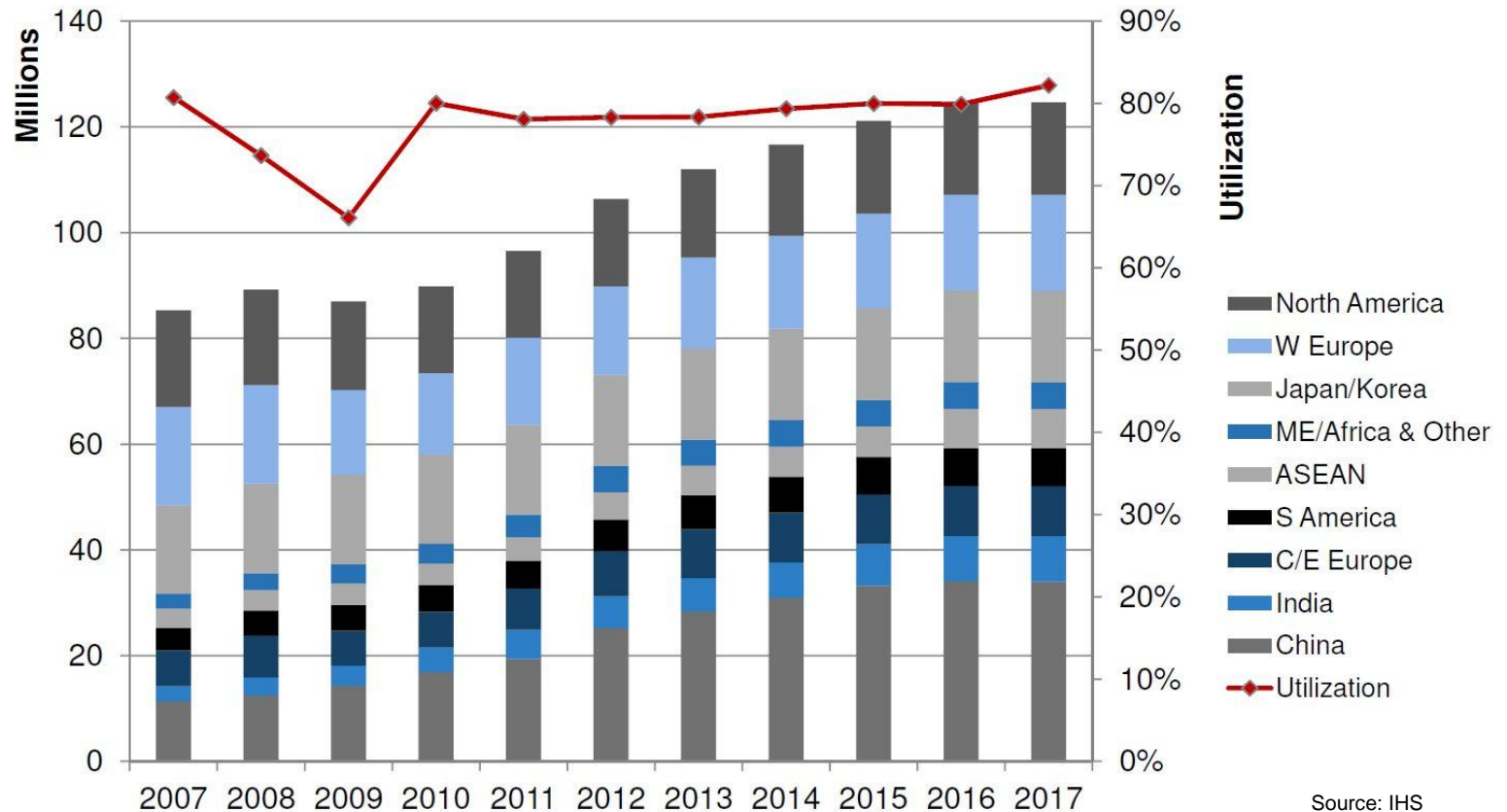


🔄 climate change



↻ under- / overcapacities in car production

- plant closures in western europa, new plants in developing markets



Source: IHS

➔ new powertrain technologies

- ➔ hybrid, e-mobility
 - ➔ currently high investments, market is cautious
- ➔ Hydrogen, fuelcell

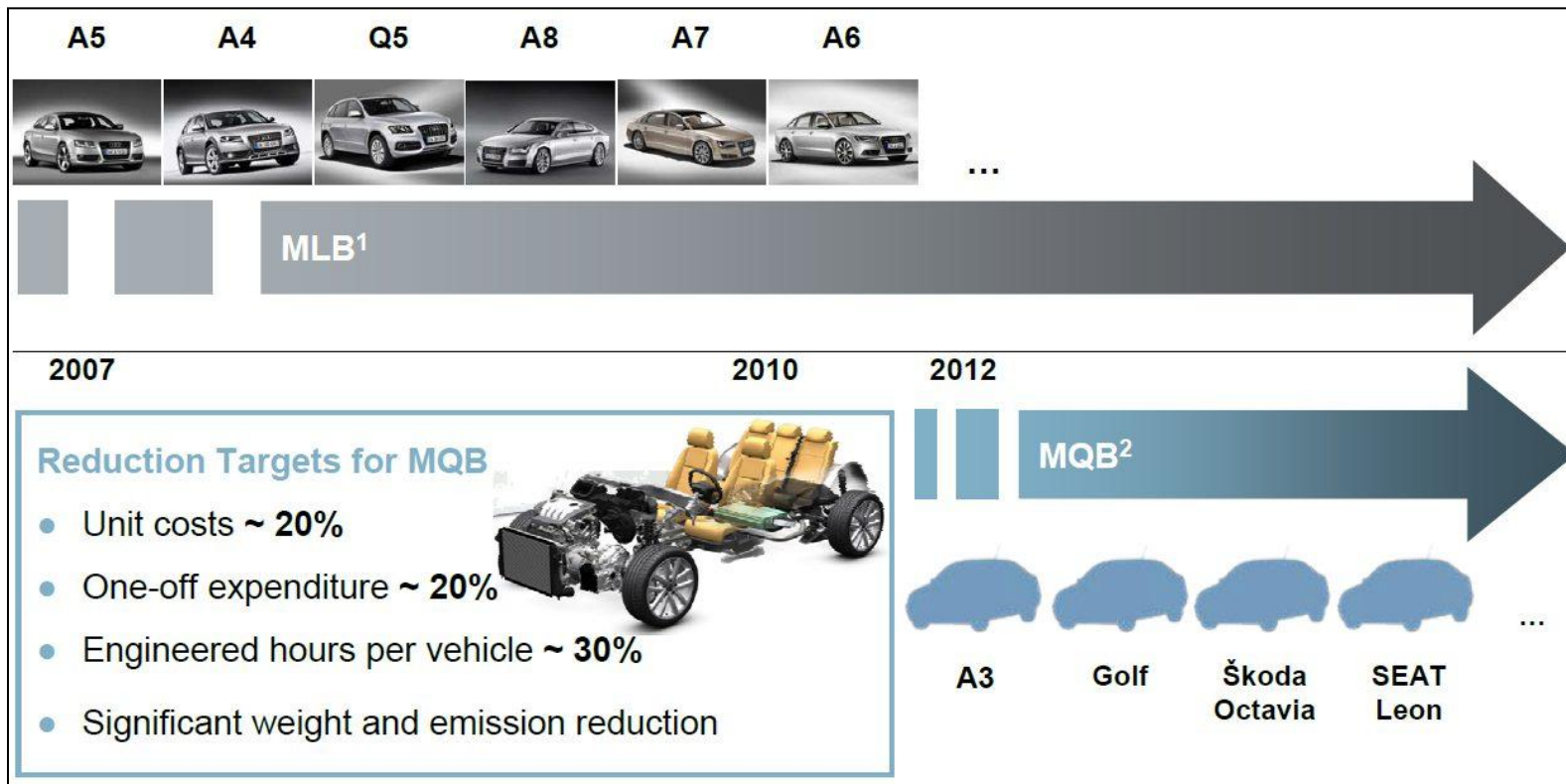
➔ lightweight design and materials

➔ further increase of electronics and information technology in cars

- Currently around 30% of total car value, estimated increase to 40% by 2015

➔ new generation of platform-strategies

- Example: „Modularer Querbaukasten VW“



Source: VW



conflicts in the supply-chain

permanent pressure on suppliers, difficult business attitudes

structural changes of the workforce

Less workers in production, more jobs in product development

Move of jobs to suppliers and industrial services

demographic change

changes affect both car buyers and car manufacturing

permanent pressure on cost reduction

ongoing pressure on permanent increase of productivity, min. 5% per year

pressure on working conditions (concessions ..., increase working hours, reduce pay)

outsourcing and/or relocation of production

precarious working conditions / agency work

Industry 3.0

Smart factory

further integration of manufacturing and information technology

internet of things



“Robotic technologies as digital instrumentation for older professionals (with 60 plus in the middle of their working-life) by portable sensors, actuators and embedded Computer in the clothing or Exoskeletons to increase their physical or cognitive performance and endurance“

Source: DFKI