Roland Berger
Strategy Consultants

How to sharpen the Russian Automotive Industry through 2017/2018

Speech at the Moscow International Automobile Salon

Moscow/Russia, August 29th, 2012

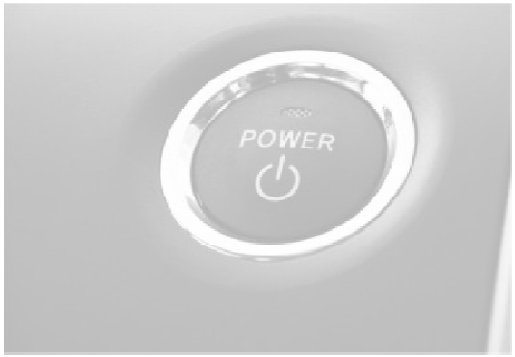
Roland Berger
Strategy Consultants

CONTENT

1. STATUS RUSSIAN AUTOMOTIVE INDUSTRY

Russian automotive market is set to become the largest market in Europe – but some critical key issues have to be solved

2. RE-SHAPING REQUIREMENTS & CHALLENGES



Modernization of the Russian automotive players & further localization of international OEMs and suppliers is key for success

3. STRATEGIC DIRECTIONS & IMPLICATIONS

Successful development of automotive industry will act as a lighthouse project for overall development of the Russian industry

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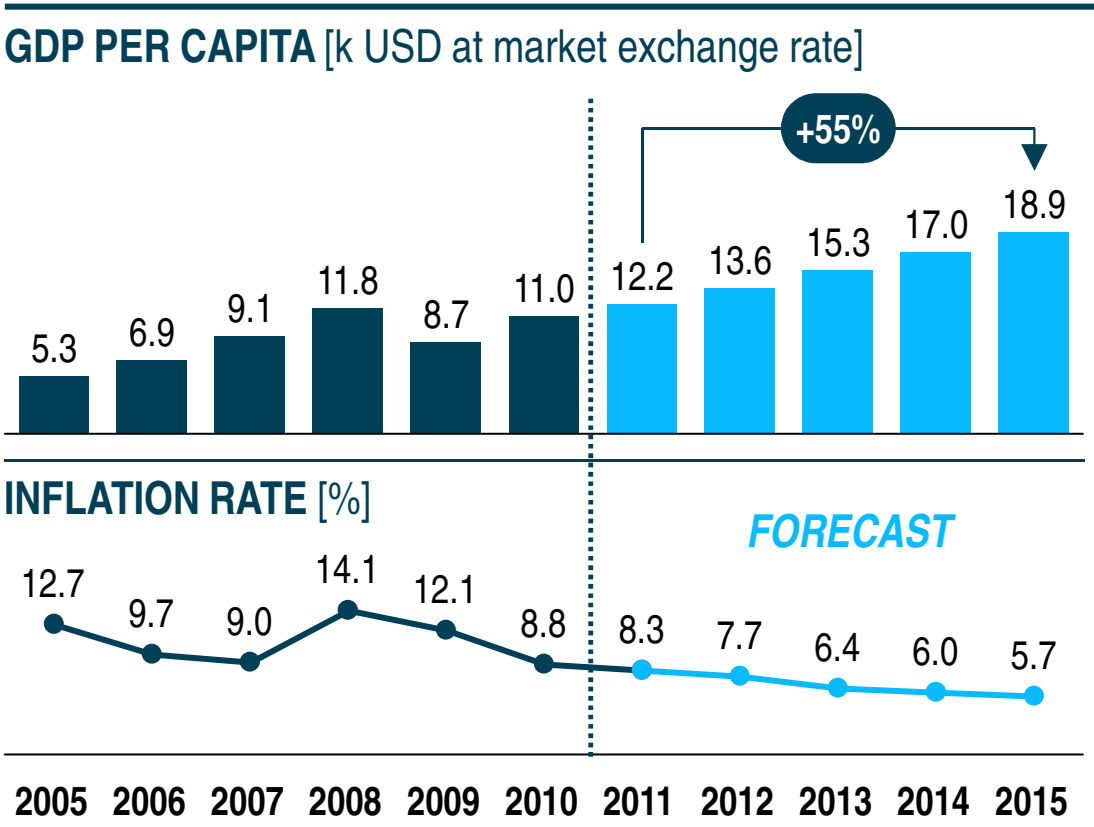
Key economic indicators of growing Russian economy show promising basis for development of a competitive automotive market

Key economic indicators of the Russian economy, 2005-2015



DESCRIPTION

> Forecast shows a **large economic growth potential** combined with **stabilizing market conditions**

> Significant **increase of GDP** per capita from 2011-2015 by about 55%

> **Reduction of inflation rate** of 2.6% points from 2011 until 2015

> Parliamentary election in Dec. 2011 & Presidential election in Mar. 2012 – hence, **the government has 6 years** time until next election

Source: EIU, Roland Berger Strategy Consultants

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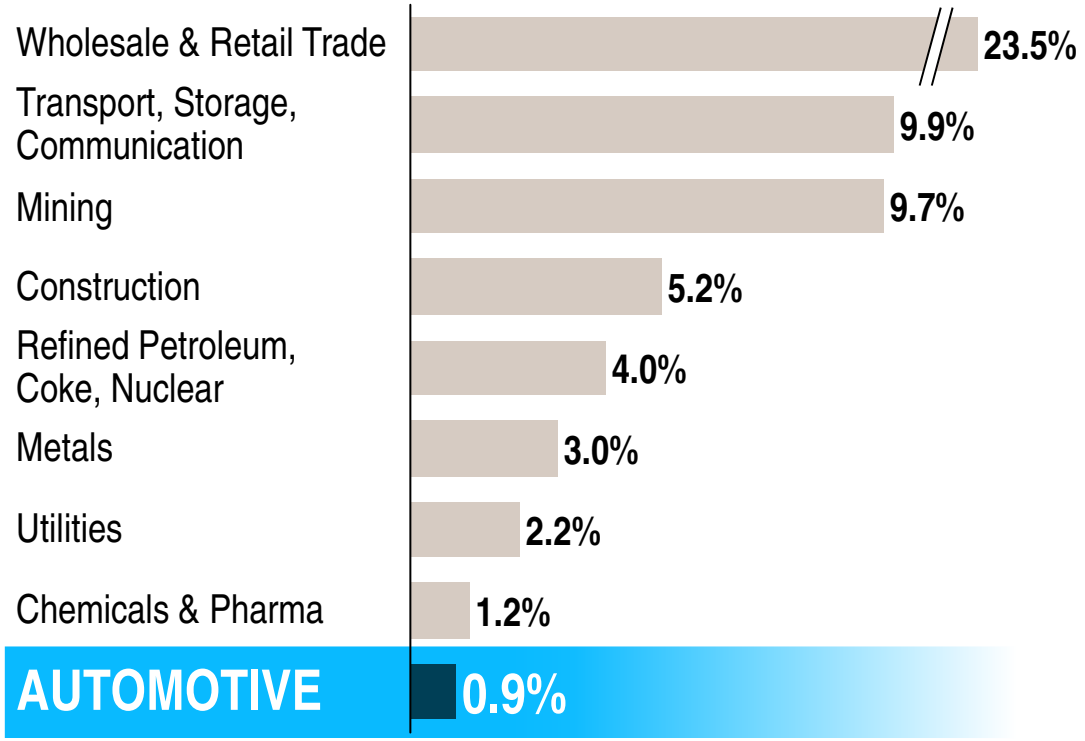
Automotive industry comprises to 0.9% of total GDP – Increase of local production of intl. players will increase GDP contribution

Value-added for selected industries in Russia [% of total Value-added Russia], 2011

TOTAL VALUE-ADDED RUSSIA: 627.369 EUR m[1)]



DESCRIPTION

- **Automotive industry**, as biggest industry in Europe, **only comprises to 0.9%** of total **value-added in Russia**
- However, **significant growth potential for automotive industry** forecasted – CAGR of 7.9% from 2011 to 2017
- **Increase of local production** of international OEMs and supplier will **further increase GDP contribution**

1) Inflation-adjusted ad constant exchange rate 2005

Source: IHS Global Insights, Roland Berger Strategy Consultants

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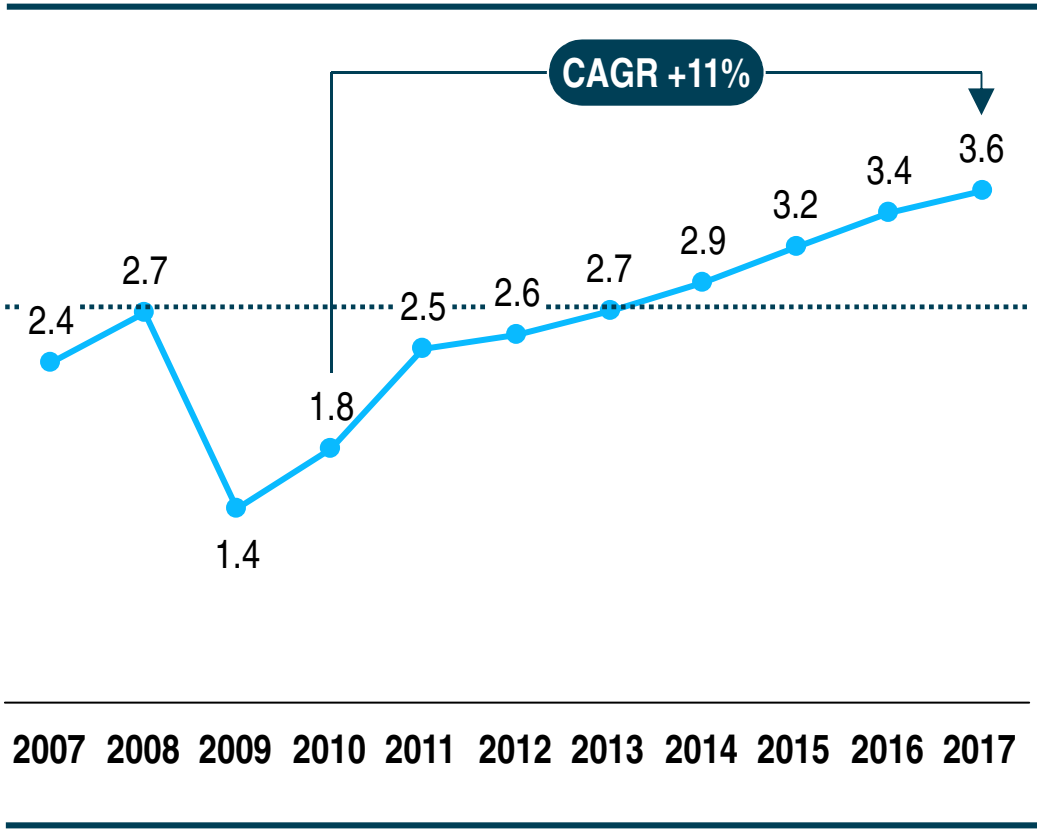
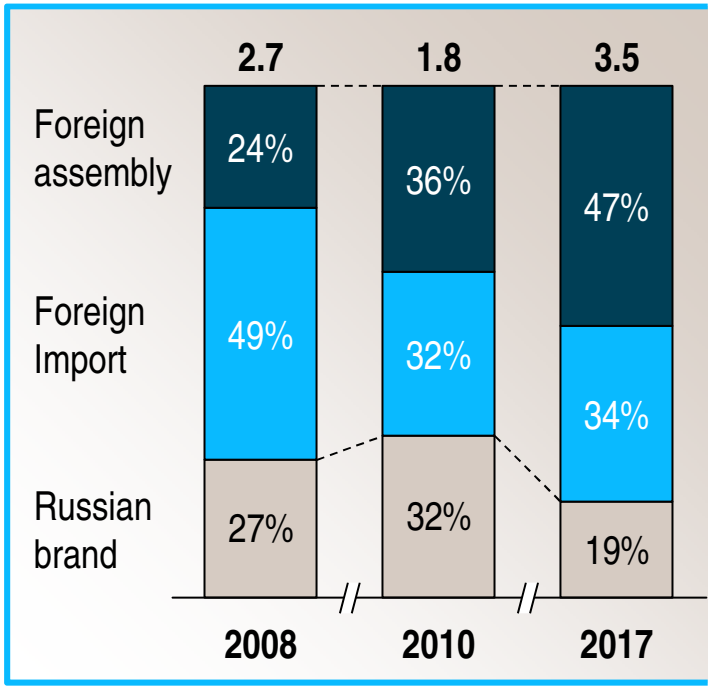
Following the economy, Russian car market took a dive in 2009, but is expected to rebound by 2013/14 – Foreign OEMs as major winners

Passenger car sales in Russia [m units]



PASSENGER CAR SALES SPLIT [%]



Source: LMC Automotive, Roland Berger Strategy Consultants

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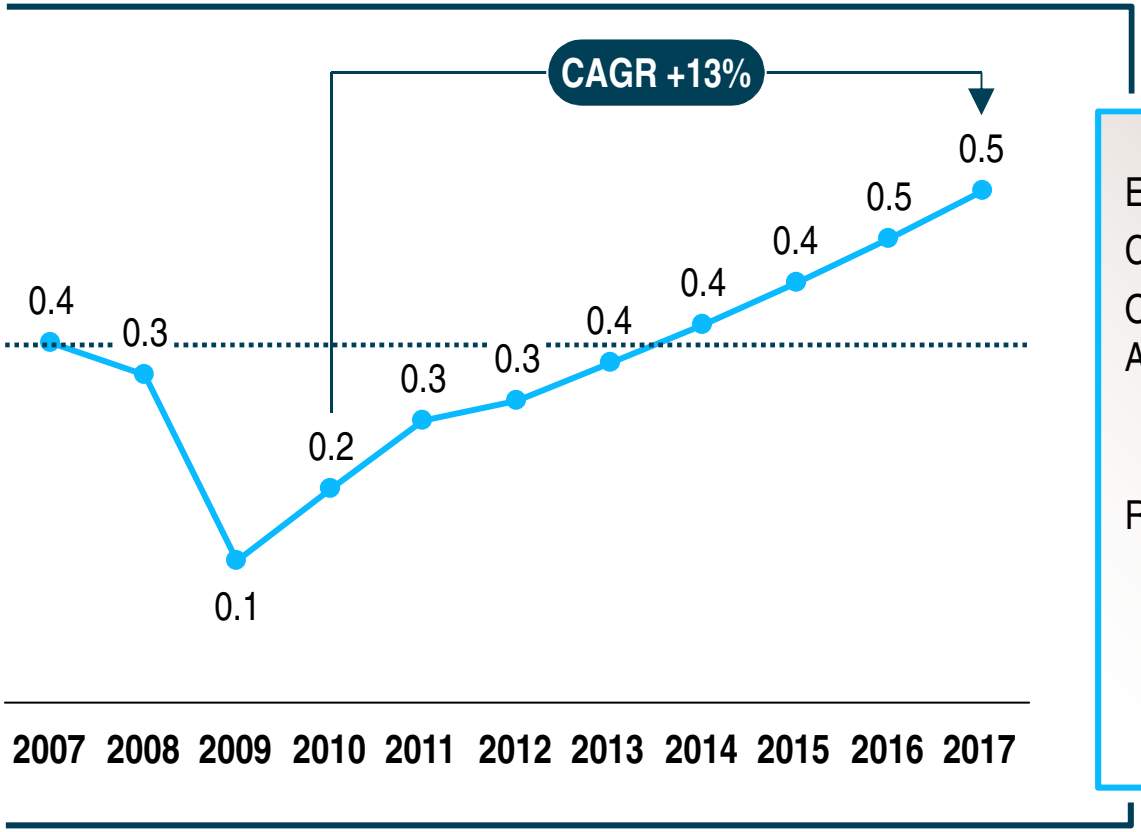
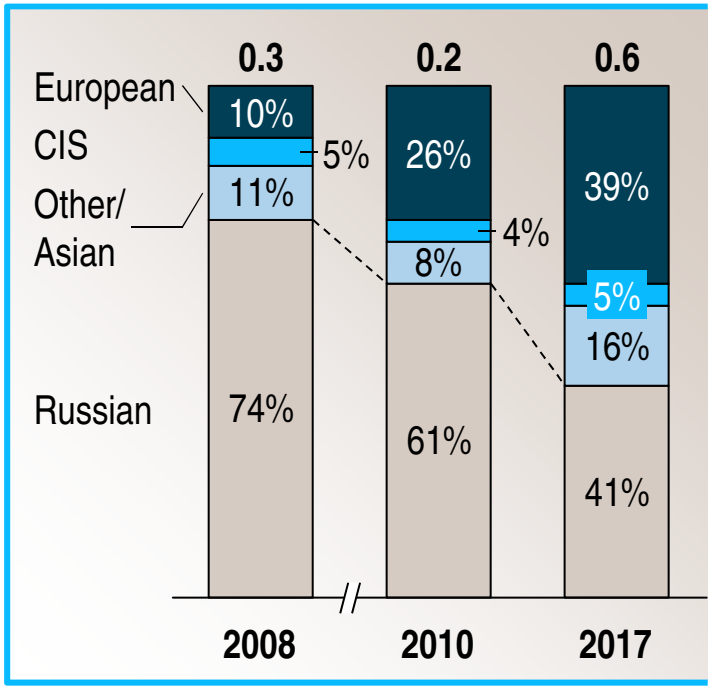
Commercial vehicle market is also expected to reach pre-crisis levels by around 2013/14 with European OEMs as major winners

Commercial vehicle[1)] sales in Russia [m units]



COMMERCIAL VEHICLE SALES SPLIT BY BRAND TYPE [%]



1) including light commercial vehicles

Source: LMC Automotive, Roland Berger Strategy Consultants

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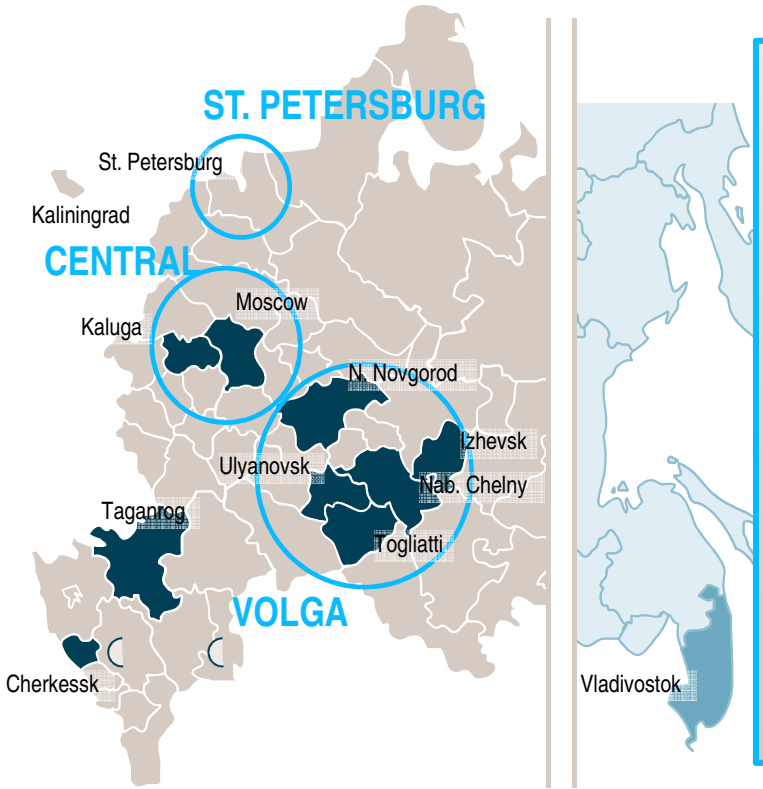
Automotive clusters with the highest potential production volume are St. Petersburg, Central and Volga regions

Geographical focus of Russian automotive industry



FACTS

- **Automotive clusters** with the highest potential production volume are St. Petersburg, Central and Volga regions
- **Most international OEMs** present with production facilities **in Russia**
- Only a **few number** of **international suppliers** present
- **Focus areas** are located in **areas with high education** level compared to other regions in Russia
- **Highest employment rate in focus areas**, e.g. Moscow with 98%, St. Petersburg with 97% and Volga region with 92%
- **Employment rate** in **other** Russian **regions** varies **between of 50% and 95%**
- Focus of educational programs in the area of universities – **underrepresentation of handcraft education**

Source: JD Power, Avtostat, Roland Berger Strategy Consultants

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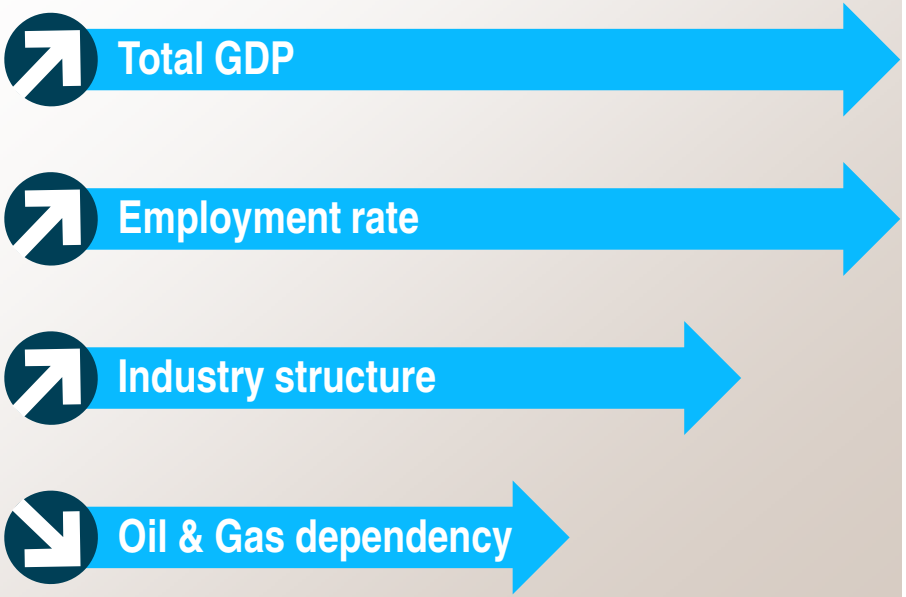
Higher localization of intl. OEMs and suppliers will lead to higher GDP growth and supports the development of a profound industry

Value-added depth & benefits

FACTS 2011

- **GDP contribution** of automotive industry accounts to **0.94%**
- Contribution equals an **absolute GDP** of **EUR 5.7 bn** in 2011
- Corresponds to **approx. 30% of local value-add** in 2011
- **Target** of **local value-add** for 2017 is **48%**
- Approx. **600,000 employees** in the Russian automotive industry – after crisis level

Influence of increasing local content:



Source: Rosstat, Roland Berger Strategy Consultants

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Seven critical issues have to be addressed to improve the Russian automotive industry until 2017/18

Critical issues for the Russian automotive industry

- **WTO entry** has significant **impact on** automotive industry **imports vs. localization** in Russia
- **Infrastructure, workforce** qualification and availability **not competitive** on international level
- In main automotive regions the **former cost advantages in labor & energy are marginal** today
- Very **limited regulations/ programs to support** domestic & international **supplier industry**
- **Low productivity and efficiency of domestic OEMs** due to fully integrated business models
- **Fragmented domestic OEMs** with **low production volumes** are not profitable and competitive
- Nearly **no export business** established **to provide enough production volume** for all players
- **Outdated quality standards** of domestic suppliers and **low value added components** localized
- **No automotive industry vision 2018** and **no responsible administrative department**

Source: Roland Berger Strategy Consultants

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Strategy Consultants

Six requirements need to be fulfilled to successfully achieve further localization of production in Russian automotive industry

Automotive localization requirements Russia

REQUIREMENTS

A Strong **production growth** case

B **Supporting regulations** for supplier industry

C **Competitive economic environment**

D **Modernization** of domestic players

E **Upgraded technology & quality**

F **High value components** prioritized

Source: Roland Berger Strategy Consultants

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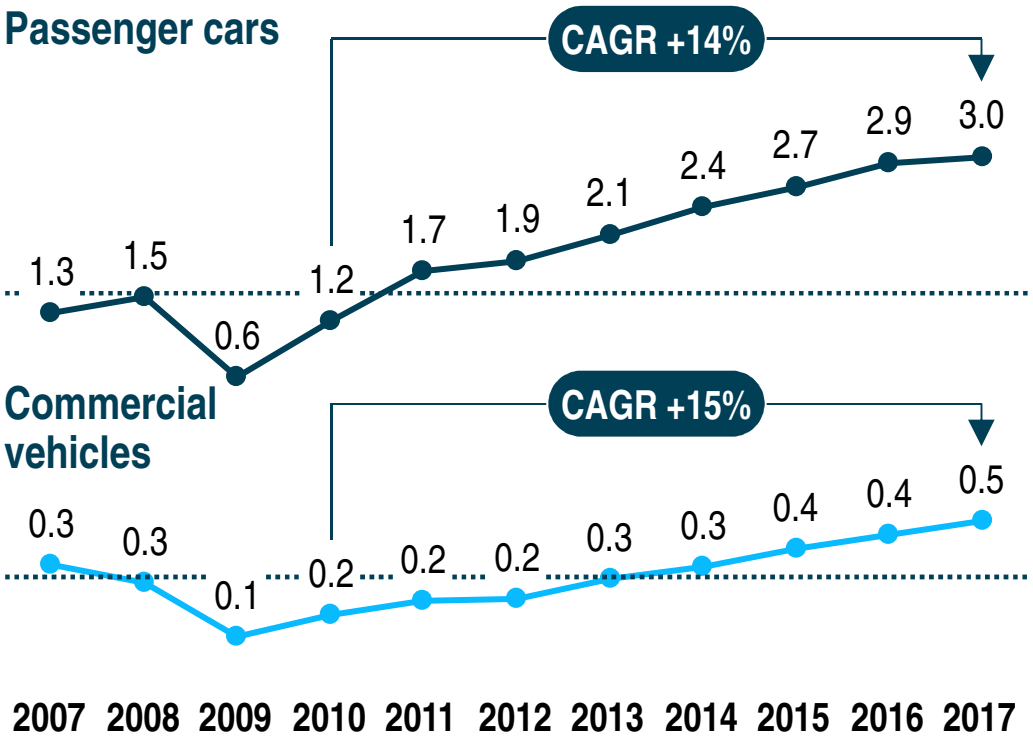
Production is expected to grow at 14% for passenger cars and 15% for Commercial vehicles – Counter impact of WTO entry?

A Vehicle production [m units]



DISCUSSION

- **Production** of passenger cars and commercial vehicles will **re-bound to pre-crisis conditions in 2012/13**
- **Total production** of passenger car and commercial vehicles of **3.5 m units** expected in **2017**
- After **entering WTO import duties** will **decrease** from 30% to 15%
- Decreasing import duties with **potential counter impact on local production**
- **Production per domestic OEM** still low compared to intl. OEMs – **Export crucial for healthy growth**

Source: JD Power, Roland Berger Strategy Consultants

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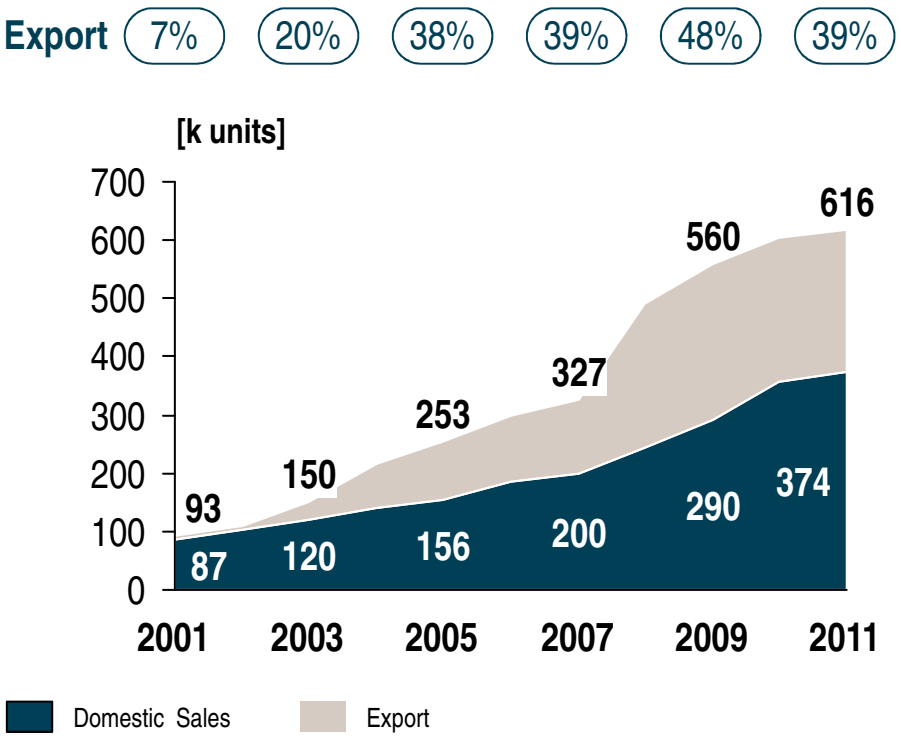
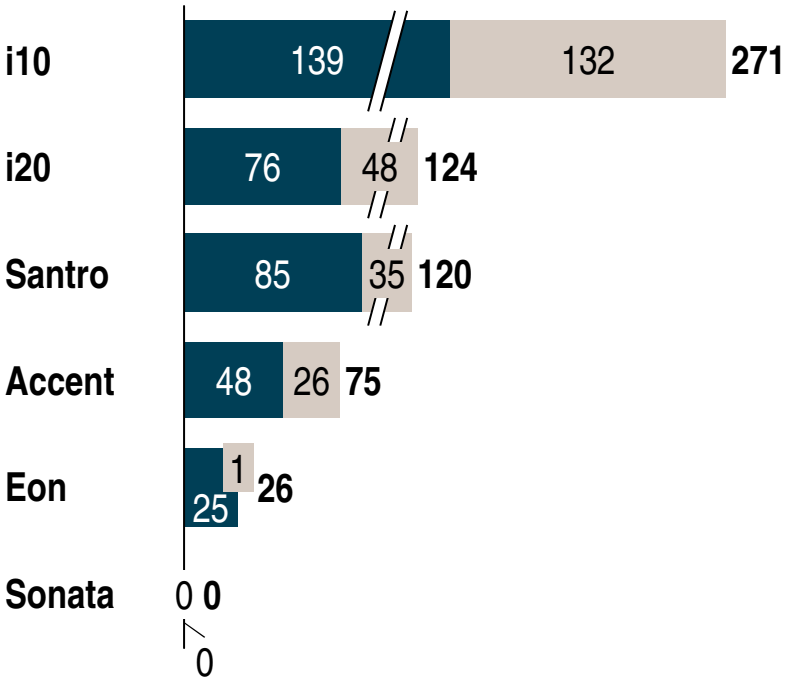
Success story for growth case of an Asian player due to increasing focus on export – Hyundai is using India as global hub for small cars

A Best practice example – Hyundai India

EXPORT SHARE – Volume, 2011 [k units, %]



DOMESTIC SALES & EXPORTS – 2011 [k units, %]



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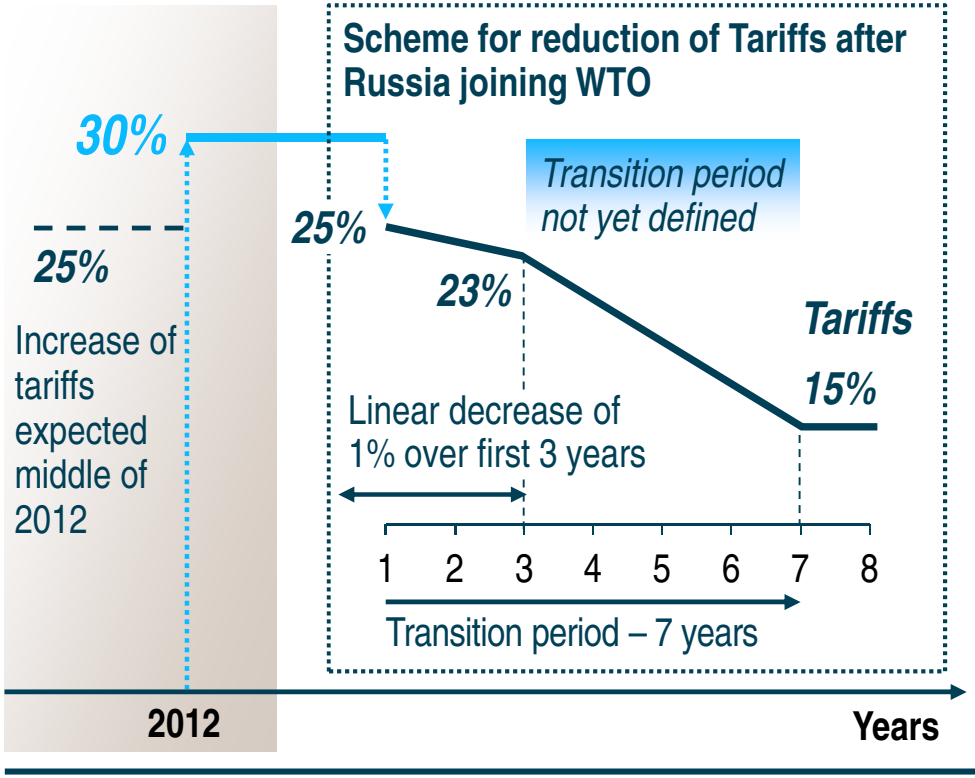
After joining WTO, tariffs will decrease from currently 30% to 15% resulting in a stronger stimulation of imports into Russia

A Improvement of market attractiveness: Impact on tariffs after Russia joining WTO



IMPACT

- **WTO entry increases attractiveness of Russian market** for intl. companies do to stable and internationally comparable tariffs
- **Decrease of tariffs** from currently 30% to 15% in the next 7 years **– Import duties** for **components** could be **reduced** from currently 1-2% to **0%**
- **Significant increase of imports** expected
- However, **reducing attractiveness** for international suppliers and OEMs **to increase** their **local content**
- **Transition period** from 3rd to 7th year **needs to be defined**

Source: Ministry of economic Development and Commerce, Roland Berger Strategy Consultants

Roland Berger Strategy Consultants

WTO entry strengthened China's domestic automotive industry – Increasing domestic production and exports within 5 years

A Impact of China's WTO entry on domestic automotive industry

DEVELOPMENT OF THE CHINESE AUTOMOTIVE INDUSTRY AFTER WTO ENTRY[1] FROM 2001 TO 2006

> **Production** & **sales** development	+ 200% ↗
> Development of **exports**[2]	+ 15% p.a. ↗
> Development of **imports**	+ 240% →
> **Share of imports** in total domestic sales	-3% points ↗
> **Cooperation** with international players	↗
> Development of **technical standards**	↗

1) WTO entry in Dec. 2001 2) Export in 2005 equaled USD 2.5 bn

Source: United Nations, Federation of Automobile Dealers Associations, Roland Berger Strategy Consultants

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After WTO entry tariffs for components might disappear – Hence, regulations required as counter measures to increase local content

B Comparison of regulations for intl. OEMs and suppliers

International OEMs

> Introduction of **Decree 166 favoring OEMs manufacturing cars in Russia** – Forcing **localization** of automotive **assembly** in Russia

> OEMs signing investment agreement under Decree 166 achieve **significant cost savings** on component imports of up to 1/3 of a car value

> **Significant reduction of tariffs** and import duties for components **after entering WTO**

International SUPPLIERS

> Currently, **only limited local content** contribution by international suppliers

> **After joining WTO**, **no tariffs for components** and hence **no stimulation** for international suppliers to **increase local content**

> **Sufficient regulations** for suppliers as counter measures **required**

> "Protected" **domestic OEMs** have to be **opened-up for intl. suppliers**

Source: Roland Berger Strategy Consultants

Roland Berger Strategy Consultants

Competitive advantage in energy costs and raw material access – Infrastructure improvement & skilled workforce availability required

C Competitive economic environment

Energy costs

Russia with very low energy cost due to local power production

Access to raw materials

High domestic raw material resources – Good material supply for production

Infrastructure/ logistic costs

Developed infrastructure only in metropolitan areas – High logistic costs

CATEGORIES

Labor costs

Low labor costs compared to international standards – Low productivities

Workforce availability/ qualification

Shortage of qualified work-forces in current auto- motive clusters

Automotive industry ● Very good ◑ Average ○ Problematic **Industry average** ● Very good ◑ Average ○ Problematic

Source: Roland Berger Strategy Consultants

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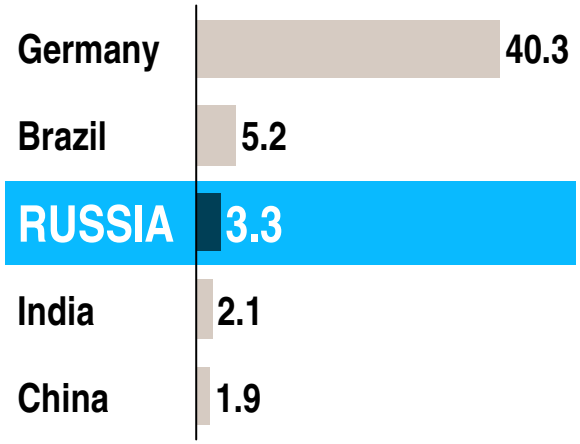
Russia lags in production costs behind other BRIC countries – Situation in automotive industry significantly more tense

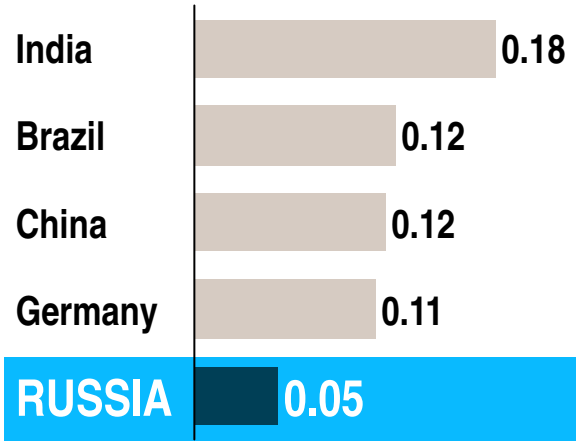
C Competitiveness of production locations

LABOR COSTS, 2009[1)]
[USD per hour]



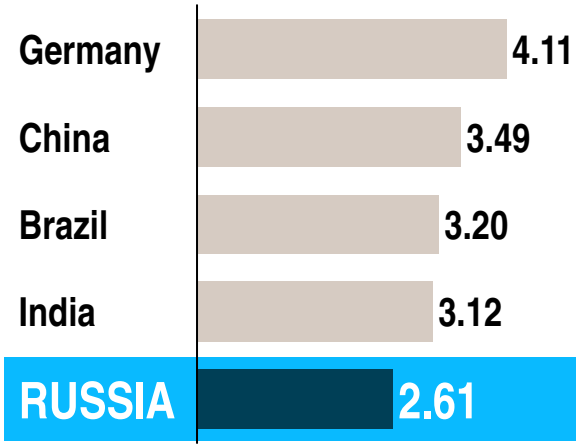
Relative low labor costs, however, low and even decreasing productivity

ENERGY COSTS, 2008
[USD per KWh.]



Low costs and low energy efficiency: Ranking no. 109 amongst 122 countries

LPI SCORE[2)]
[1= low, 5 = high]



High logistic costs and low effectiveness: Ranking no. 94 amongst 155 countries

1) Industry average

2) International Logistics Performance Index, determined by World Bank – based on evaluation of international logistic companies following 6 criteria (z.B. tariffs, infrastructure, logistic competence)

Source: World Bank, EIU, EIA, Roland Berger Strategy Consultants

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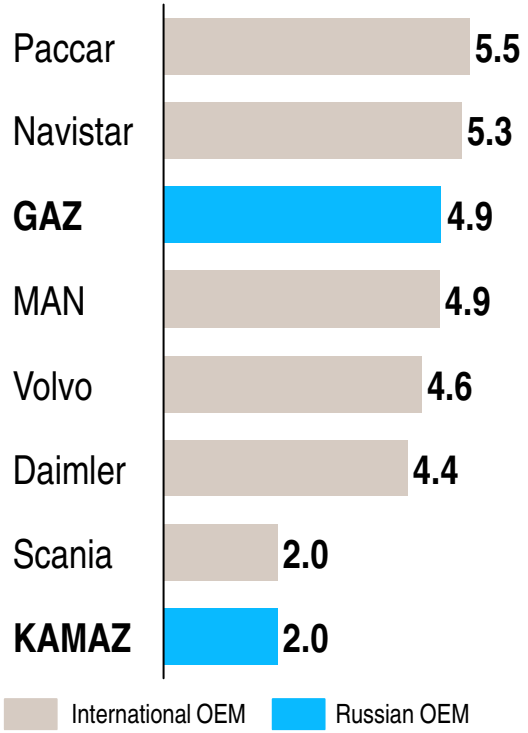
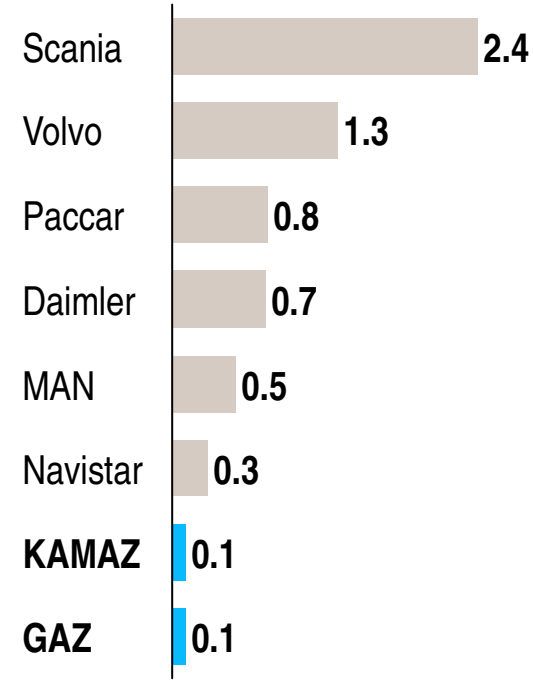
Significant gap in productivity and profitability between Russian and international OEMs – Focus on core competencies required

D Modernization of local OEMs – Comparison of Productivities and Profitabilities

PRODUCTIVITY
[trucks produced/employee]



PROFITABILITY
[EBIT/trucks sold in k EUR]



COMMENTS

- Benchmark shows a **gap in productivity** and **profitability** of Russian OEMs compared to international OEMs
- **Russian OEMs** need to **modernize** their business to stay competitive
- Domestic players are **highly vertically integrated** – at the same time **hindering access to intl. suppliers**
- **Focus on core competencies** required – **Carve-out** of component business **for JVs/partnerships**

Source: Company information, LMC Automotive, Roland Berger Strategy Consultants

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Domestic integrated suppliers with inefficiencies & outdated processes – Parts production not competitive with intl. quality standards

E Technology and quality standards of domestic players – Example

DOMESTIC PLAYERS

Production facility

> Equipment in reasonable condition
> Modernization required

Machine park

> Low degree of automation
> Mostly very old machine park

Production process

> Many employees work in high risk areas
> Modernization required

Office buildings

> Average condition of buildings
> Renovation appropriate

● Very good ◑ Average ○ Problematic

COMMENTS

> Domestic suppliers with **high inefficiencies** and **out-of-date processes**

> Parts production **not competitive** with **international quality standards**

> **Efficiency programs** and **modernization** are required to **ensure profitable production**

Source: Roland Berger Strategy Consultants

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Strategy Consultants

Parts with low investment requirement, low production complexity & high labor costs, such as casting parts, are suitable for localization

F Prioritization for localization of components

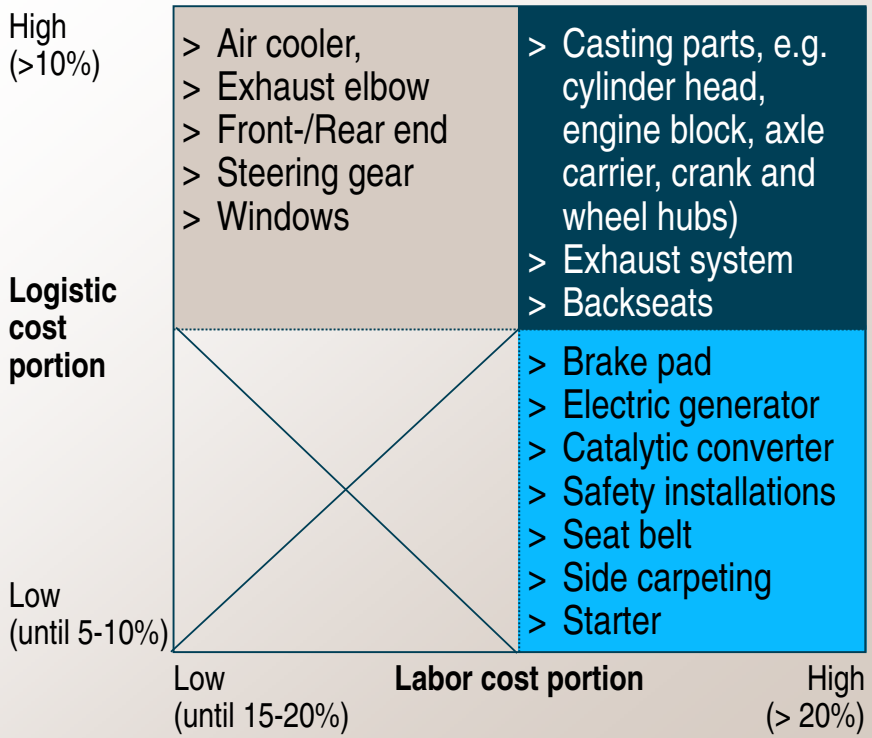
High production complexity (i.e. not suitable for a short-term relocation)

DE-PRIORITIZED COMPONENTS:

- > ABS
- > Airbags
- > Air condition
- > Alarm
- > Amplifier
- > Anti-theft device
- > Automatic gearbox
- > Brake system
- > Cockpit
- > Damper
- > Engine fuel supply
- > Electronic control unit
- > ESP
- > Fuel-injection system
- > Gateway-control box
- > HVAC
- > Intake system
- > Locking system
- > Navigation system
- > Radio/CD
- > Sun roof
- > Wheel suspension

= Priority 1 = Priority 2 = Priority 3

Components for localization



Source: Interviews, Roland Berger Strategy Consultants

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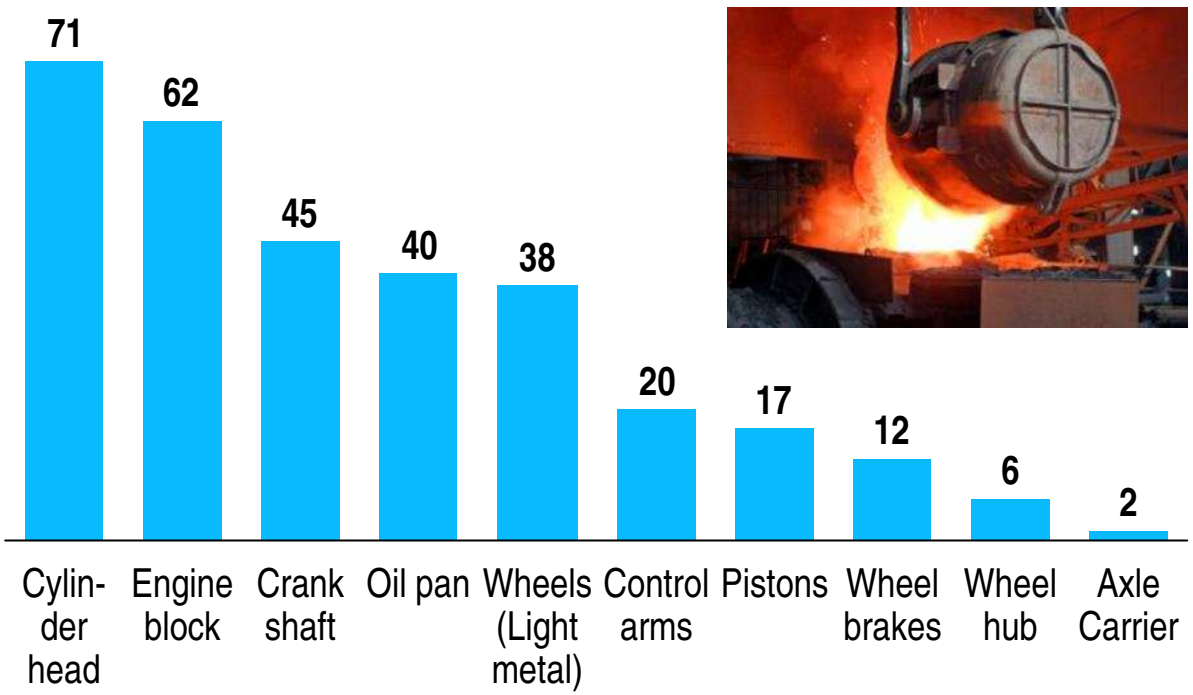
High component value per car for casting components – Upgrade of domestic technology by cooperation or JVs with intl. suppliers

F Localization example – Casting components

TOP 10 CASTING COMPONENTS
Component value per car [EUR]



COMMENTS

- **High component value** per car for **casting components**
- **Casting** process as **energy-** and **work-intensive** procedure – **Russia** offers **ideal preconditions**
- Russian suppliers with **low quality standards**, as shown in example
- **Upgrade** of **domestic technology** & ensure **know-how transfer** by cooperation or JVs with intl. suppliers

Source: Roland Berger Strategy Consultants

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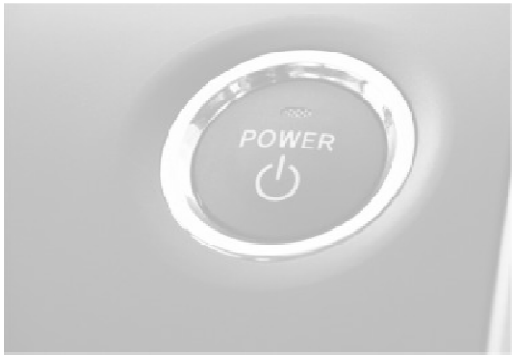

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Seven key strategic directions have to be addressed to establish a competitive automotive industry through 2017/18

Strategic directions for the development of the Russian automotive industry

I Setup **financial development program for localization** as counter measure for import increase due to decreasing import duties from WTO entry – Cross financing by vehicle usage taxes

II **Introduction of structural programs** to support industrialization of structurally weaker regions, including transport infrastructure, and to ensure workforce qualification & availability

III Introduction of **regulations and guidelines especially for international suppliers** to increase local content as counter measures for decreasing tariffs after WTO entry

IV **Modernization of domestic OEMs** to stay competitive, in particularly against Asian players – Focus on OEM core competencies allows access to international supplier

V **Upgrade supplier landscape** – Carve-out of component business of domestic OEMs and creation of partnership & JVs with international supplier to increase quality standards and local content

VI **Strengthening process technologies** – Russian advantage of low labor and energy costs plus raw material availability, e.g. casting parts with high value added per car

VII **Introduction of a "Russian Automotive Principal"** – Introduction of a department/key person in charge in the government for the realization of the strategic automotive vision

Source: Roland Berger Strategy Consultants

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Increasing local content to targeted 48% leads to a GDP increase of EUR 10.4 bn and around 360,000 more employees until 2017/18

Effect of increase of local content on GPD and employment rate

EFFECTS

INCREASING LOCAL PRODUCTION RATE

> Higher production level due to market growth and modernization of production facilities

TECHNOLOGY AND QUALITY UPGRADE

> Increase of production efficiency due to technology upgrade by cooperation or JVs with intl. players

INCREASE OF LOCAL CONTENT

> Higher local content supported by regulations and financial support for foreign suppliers

RESULT

Increasing local content by 18% to target of 48%

LEADS TO

GDP increase of EUR 10.4 bn

and

increase of employment by 360,000 people

Source: Roland Berger Strategy Consultants

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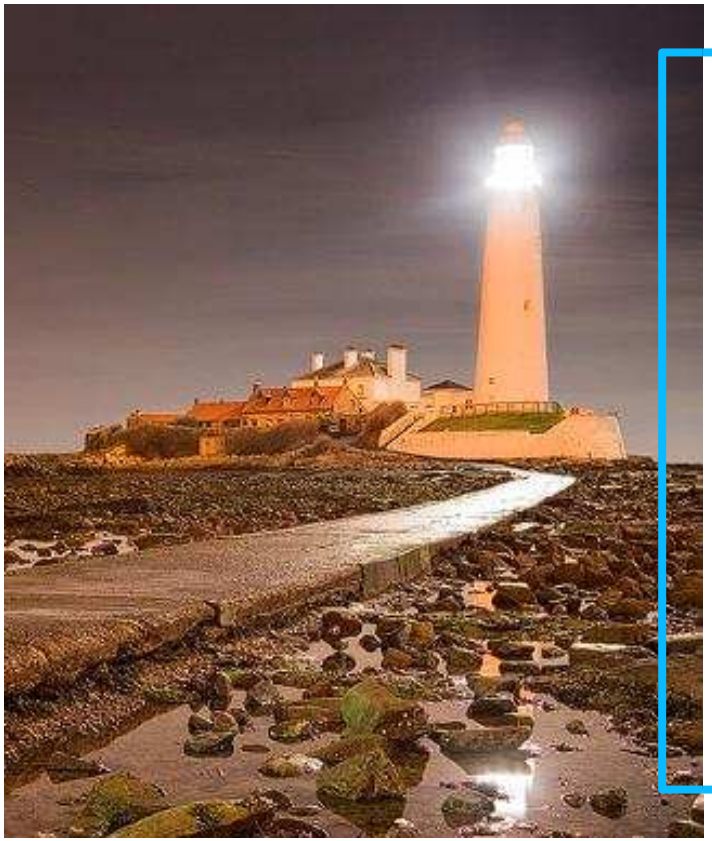
Successful development of automotive industry will act as a lighthouse project for overall development of the Russian industry

Impact of success story automotive industry



- **Success story automotive industry** will act as **lighthouse project** for overall manufacturing industry development
- Strengthening of automotive industry will **further stabilize overall situation** and **create jobs in Russia**
- Strong automotive industry with **higher impact on GDP** will **reduce Oil & Gas dependency**
- Successful implemented of automotive vision 2017/18 with **positive signal for WTO accession**

Source: Roland Berger Strategy Consultants

It's character that creates impact!

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Strategy Consultants