



# The role of Russian engineering in the global automotive trends landscape

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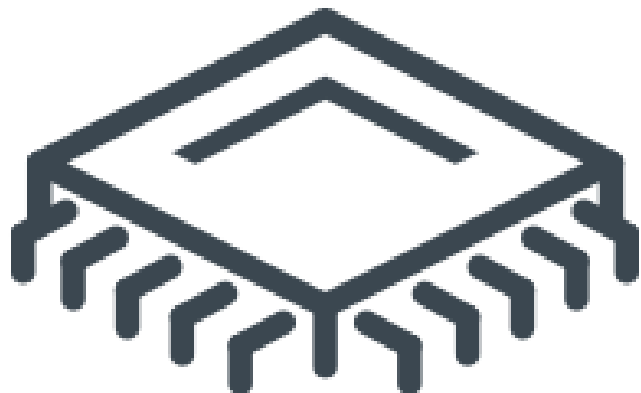
October 2017

A large, stylized orange question mark with a fine-line texture, positioned behind the main text.

# What are our customers looking for?



+



Attractive technology X  
with "whatever" car on top

OR



+



Attractive car with  
technology X on top

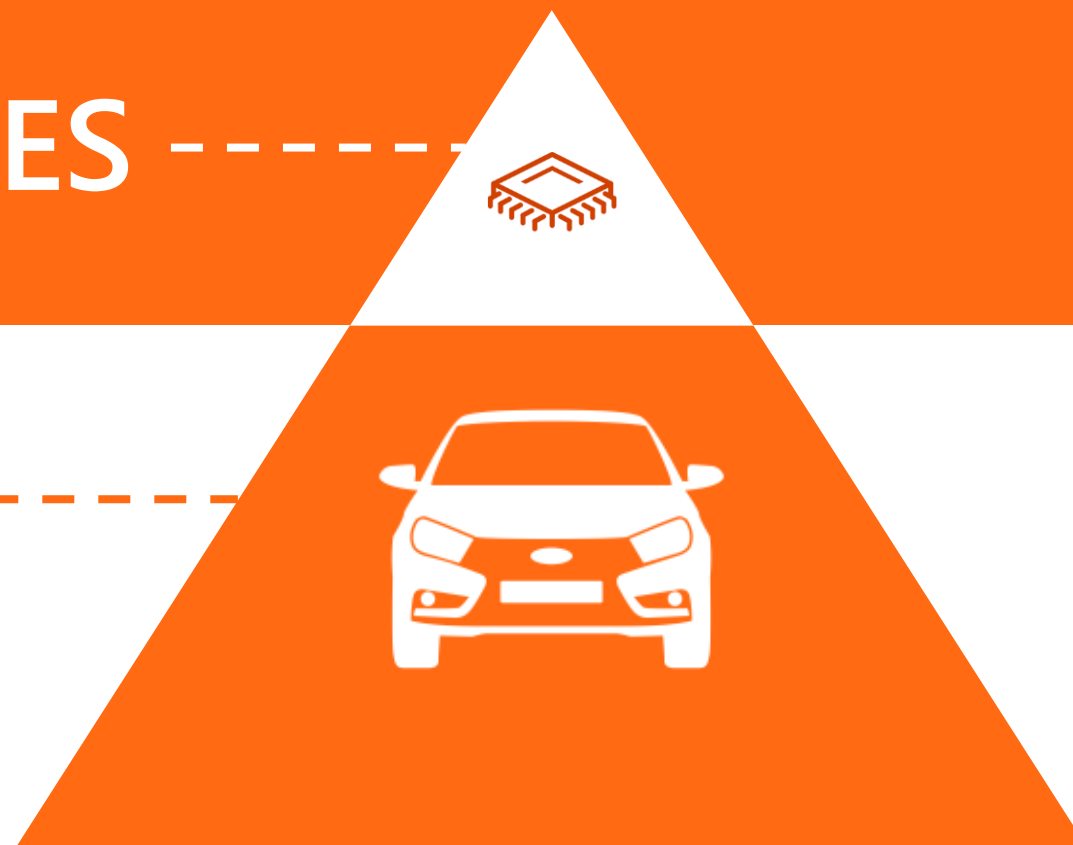


# NICE TO HAVE FEATURES

*are necessary for a complete package,*

*but can't exist at all without*

# COMPETITIVE BASE





# AVTOVAZ

## focus:



# ATTRACTIVE CARS



2 new models



4 facelifts

2017-2019

5 new models



2 facelifts

2020-2022

5 new models



5 facelifts

2023-2026



## Short & mid-term ('17-'20)

- Continued update of vehicle line-up
- Interior design & customer comfort enhancement
- LADA Connect & Advanced Multimedia Systems
- 2-pedal solutions
- CNG powertrain



Synergies with Alliance



RENAULT NISSAN MITSUBISHI

## Long-term ('21+)

- AWD solutions
- ADAS functions
- Advanced cloud connected services
- Fuel/CO<sub>2</sub> efficient powertrains



Thus, these  
3 interconnected areas



are the most important today





And to manage it all we need  
**top-tier international level specialists**



# BUT WHAT ABOUT THIS PART ?






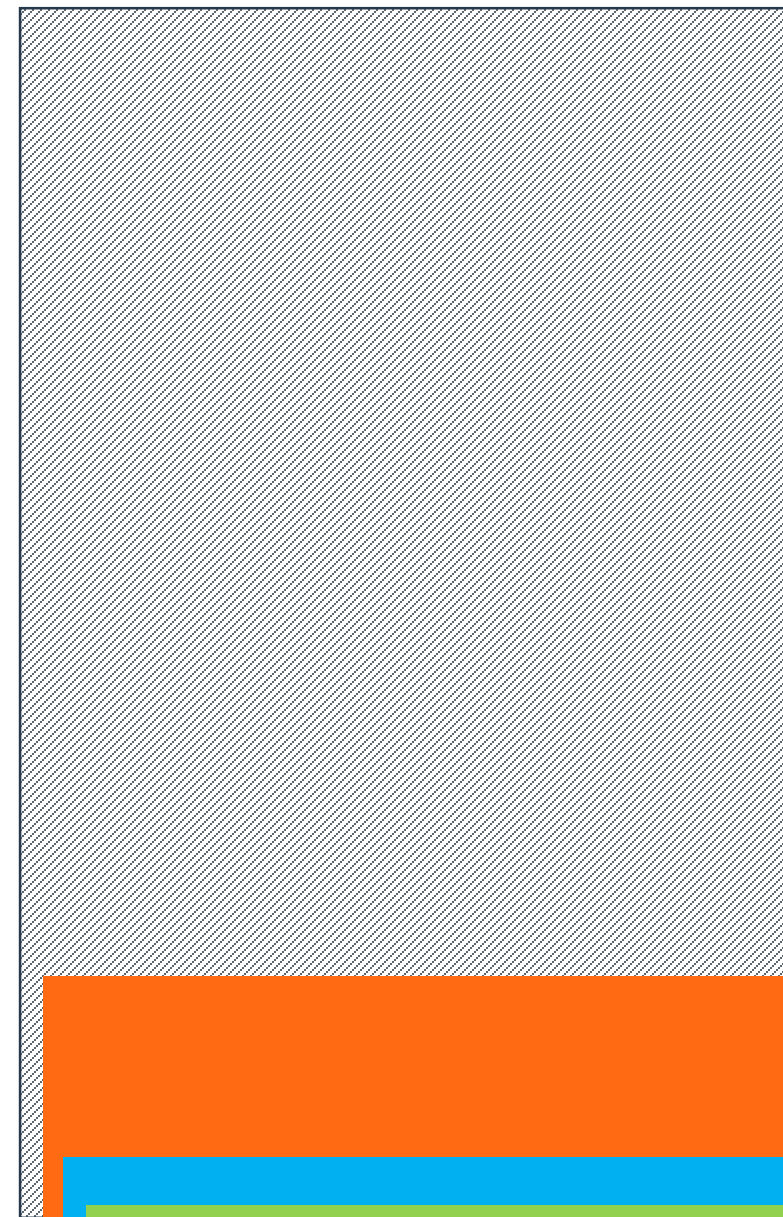
?

# Russia 2030:

Even at positive forecast,  
the best options are to  
use Alliance advanced  
technologies for full  
**EV/PHEV** & full **AD**

 2.0m

 0.4m  
 0.1m  
 20k





So should we just stay away  
from global trends?



Handy 1-page guide  
on finding **your role**  
**in global trends**



1. Select prospective market opportunity
2. Look at what others are doing
3. Forget about doing it yourself (really)
4. Now look at **what they can't do yet!**
5. **DO EXACTLY ↑ THIS ↑**



# CONNECTED VEHICLES



Hardware

Even hi-grade consumer equipment became off-the-shelf commodity

SW & market-specific features

This is what only local players can do, using Russian strength in SW dev't.



Final result:  
True integration in society & life habits



The only opportunity  
(used by Yandex)



A blue outline icon of a battery with three vertical bars of increasing height inside, representing a charge level.

# ELECTRIC VEHICLES



Affordable HEV solutions are required for Export from 2020

Engineering and system integration

Expensive hardware, limited tech. capabilities, autonomy. Military battery experience may be applicable

Execution and implementation

Infrastructure and legal base lagging behind most developed countries



Final result: True integration in society & life habits

Problems/opportunities in both stages



# AUTONOMOUS DRIVING



**Affordable ADAS/AD2 solutions are required for RF/Export from 2020**

Engineering and system integration

Great progress by leading global companies with multimillion volumes. Will be available as off-the-shelf commodity solution relatively soon.

Execution and implementation

No significant success anywhere, limited development of legal & infrastructure base, unsolved problems for safety



Final result: True integration in society & life habits

**Real problem for everybody**



Engineering and  
system integration

Execution and  
implementation



**First step proposal:**  
Creating dedicated experimental  
“Autonomous Driving Area”



**BUT AGAIN:**  
**ATTRACTIVE CARS FIRST-----**



