Cluster activities. Localization and suppliers development.
Cluster key indicators

- **>50 000** personnel of Cluster members
- **>300** bln. roubles turnover of Cluster members
- **66** Cluster members
- **>14%** GRP of region is generated by Cluster

**Partners**

- **10** OEMs
- **>50** Engineering companies
- **>150** Suppliers
- **26** Regions
Members and Cluster geography

**Cluster of Automotive Industry of Samara Region:**
- 59 industrial enterprises – members of the cluster
- 3 technological infrastructure places
- 2 financial infrastructure places
- 3 industrial infrastructure places
- 2 research, development and training institutions

**Executive Authorities**
- Government of the Samara Region
- Ministry of Economic Development, Investments and Trade of the Samara Region
- Cluster Development Center
- Ministry of Industry and Technology of the Samara Region
Cluster main goals

1. Development of cooperation between members
2. New customers capture, new markets and deliveries geography development
3. Reduction of purchases from outside the cluster, promotion of localization processes, searching for local suppliers
4. Assistance to members in the implementation of development projects, increasing the members' compliance level with the requirements of consumers
5. Assistance in the attraction of state support
6. Assistance in the development of cluster members export potential
Industrial cluster of the Russian Federation

The Cluster was included in the Federal Register of the Russian industrial clusters (*PPRF of 31.07.2015 № 779*).

The Cluster has the opportunity to participate in program of state support of joint projects for the development of production and import substitution (*PPRF of 28.01.2016 № 41*).
## Supplier development tools

<table>
<thead>
<tr>
<th></th>
<th>Q</th>
<th>C</th>
<th>D</th>
<th>D</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Support while integrating Renault-Nissan requirements</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Engineering center – solution of engineering tasks and training</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>Support for the introduction of cost-management tools, loss reduction</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attracting new customers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>Attraction of recourses for development</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Supplier development (from lowest D to acceptable C)

- **ASES result rank**
  - Excellent (80-100)
  - Satisfactory (60-79)
  - Acceptable (40-59)

- **Improvements are needed**
- **Does not meet requirements**
- **More than 20 suppliers received rank «C»**

- **ASES-audit of selected suppliers**
- **Recommendations according to ASES-audit**
- **ASES re-audit**
- **Development of action plan according to ASES results**
- **Implementation of action plan and improvements**
- **Training and seminars**
- **Monitoring**

- **Realization of suppliers self-assessment**
- **Selection of supplier group according to results**

- **Cluster**
- **AVTOVAZ-Renault-Nissan**

- **Graph**
  - Points: A, B, C, D
  - Axes: a, b, c, d

Recommendations according to ASES-audit

Development of action plan according to ASES results

Implementation of action plan and improvements

Repeated ASES-audit

Training and seminars

Monitoring

ASES result rank

- Excellent (80-100)
- Satisfactory (60-79)
- Acceptable (40-59)
- Improvements are needed
- Does not meet requirements

Cluster: AVTOVAZ-Renault-Nissan

7 suppliers received rank «B»
4 suppliers in progress
Cluster: support of supplier development

- Training and professional development
- Support for certification
- Support for implementation of customer requirements (ASES, etc.)

- Assistance in the solution of engineering tasks
- Development of QMS and production system
- Reducing losses, support while implementing lean manufacturing and Monozukuri

- B2B, business missions
- Searching the orders and attracting new customers
- Assistance in obtaining state support
Cluster training center

Creation of training center
- 2016

Obtaining a license for educational activities
- 2017

Expansion and participation in tenders for new projects
- 2018

- Suppliers training
- Participation in the program of advanced training for AVTOVAZ employees
- Organization of specialized seminars
- Organization of specialized trainings
- Qualification Assessment Center
Cluster training center: competencies

| Development and implementation of quality management system in automotive industry in accordance with IATF 16949:2016 and OEM requirements |
| 1 | Changes in IATF 16949: 2016 requirements and implementation practices |
| 2 | IATF 16949: 2016 requirements and implementation practices. ISO 9001: 2015 requirements |
| 3 | 1st and 2nd parties audits in accordance with IATF 16949: 2016, ISO 19011: 2011 requirements |
| 4 | IATF 16949: 2016 requirements and implementation practices. 1st and 2nd parties audits in accordance with IATF 16949: 2016, ISO 19011: 2011 requirements |

### Core tools in automotive industry

| 5 | Advanced Product Quality Planning in accordance with AIAG APQP. Basics of the project approach. Production Part Approval Process (PPAP). Customer requirements to new product development management and change management |
| 6 | ANPQP procedure |
| 7 | Failure Mode and Effects Analysis (FMEA) |
| 8 | Evaluation of the technological concept of the product based on DFMA. Failure Mode and Effects Analysis (FMEA). Management of special and key characteristics. |
| 9 | Failure Mode and Effects Analysis (FMEA) Design and Process FMEA (DFMEA / PFMEA) |
| 10 | Statistical Process Control (SPC) and Measurement System Analysis (MSA) |
| 11 | Introduction in statistical quality control methods and statistical process control. How to control variability of key characteristics |
| 12 | Problem Solving Process 8D. Methods for investigating the root causes of quality problems |
| 13 | Methods for investigating the root causes of quality problems QC-story, QRQC. Analysis and managing data |
| 14 | Product and process management tools |
| 15 | Quantitative methods for improving processes. 6 Sigma. |
| 16 | Basic quality tools |
| 17 | Customer requirements analysis and Quality Function Deployment (QFD) methodology, Quality Assurance Matrix (MQA) |
| 18 | Risk management |

### Management system development

| 20 | Retraining of quality management system internal auditors in accordance with ISO 9001: 2015, ISO 19011: 2011 requirements |
| 21 | Internal audit in accordance with ISO 9001: 2015, ISO 19011: 2011 requirements |
| 23 | Project management |
| 24 | Knowledge management as a tool for problem solving and achieving organizational goals |
| 25 | From interested parties - to KPI system (Key Performance Indicators) |
| 26 | Supply Chain Management |
| 27 | Management by objectives, KPI, BSC, motivation |

### Production system development. Cost management. Loss reduction. Lean Manufacturing Tools.

| 28 | Effective production systems. Development of lean management system |
| 29 | TPM (Total Productive Maintenance). SMED system |
| 30 | Practice of 5S implementation, visualization, standardization |
| 31 | Practice of value stream mapping, analysis and improvement |
| 32 | Enterprise cost reduction using Lean, LeanLogistics, LeanCost methodology |
VALEO supplier day – 25-th of April 2018

Objectives:
• Looking for new potential local suppliers
• Presentation of VALEO and its plants
• Optimization of purchase costs
• Clarification of VALEO requirements to suppliers and principles of cooperation
• Reduction of import content

Participants: 49 suppliers from RF and Belarus, 77 people, 54 B2B spent
HYUNDAI supplier days in Samara region

Hyundai supplier days – May 22-23, 2018

Objectives:
• Looking for new potential local suppliers
• Presentation of Hyundai and its plans for localization
• Presentation of Hyundai Tier-1 local suppliers and their plans for localization
• Clarification of requirements to suppliers and principles of cooperation
• Reduction of import content

Participants: 55 suppliers from 6 regions of RF, 99 people
81 B2B spent
30 visits to suppliers sites
HYUNDAI supplier days in Kaluga

Hyundai supplier days – September 24-25, 2018

Objectives:
• Looking for new potential local suppliers
• Presentation of Hyundai and its plans for localization
• Presentation of Hyundai Tier-1 local suppliers and their plans for localization
• Clarification of requirements to suppliers and principles of cooperation
• Reduction of import content

Participants: 33 suppliers from 8 regions of RF, 70 people
42 B2B spent, 16 visits to suppliers sites
KAMAZ and OAT supplier days

3-4 of October 2018, Togliatti

Participants:
216 people from 14 regions of RF
79 suppliers

Realized:
116 B2B for 55 suppliers
33 visits on 31 companies

Cluster organized the biggest event of auto component industry in the Samara region with the aims to
- deepen the localization of KAMAZ and OAT,
- increase the number of orders for potential suppliers
- substitute the import
HYUNDAI supplier day in Nizhniy Novgorod

Dates: 30 of October – 1st of November 2018
Location: technopark Ankundinovka

Supplier day key indicators:

- 42 suppliers from 12 regions of Russia
- around 100 participants
- 64 B2b with 34 suppliers
- 28 visits on 18 Nizhniy Novgorod companies
Assistance in obtaining state support, development of export potential

5 companies of Cluster and Samara region participated in the state program of export support

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9.2</td>
<td>5.1</td>
<td>235.5</td>
</tr>
<tr>
<td></td>
<td>13.9</td>
<td>5.1</td>
<td>437.9</td>
</tr>
<tr>
<td></td>
<td>1.9</td>
<td>1.6</td>
<td>76</td>
</tr>
<tr>
<td></td>
<td>5.6</td>
<td>1.8</td>
<td>239.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>32.1</td>
</tr>
</tbody>
</table>

| Total: >1 billion of rubles in 2017 |
New customers: within and outside the Cluster

New requests with Tier 1 suppliers
Cases:

- Valeo
- Brose
- Faurecia
- ATTR
- Nobel Automotive
- HI-LEX
- Grupo Antolin
- Gestamp
- Brisk
- Autoliv
- CIE Automotive

New consumers outside of the Cluster
Cases:

- Magna
- ABTOTOP
- PSA
- Hyundai
- KAMAZ
- Daimler
- Schaeffler
- YAZ
- Daimler
- TAKATA
- Mitsubishi
- Oak
- Volkswagen
Cooperation with automotive clusters in Russia

INDUSTRIAL CLUSTER: NORTH-WEST AUTOMOTIVE INDUSTRY

INDUSTRIAL CLUSTER OF NIZHNY NOVGOROD REGION

INDUSTRIAL MACHINE-BUILDING CLUSTER OF THE REPUBLIC OF TATARSTAN

KALUGA REGION

ULYANOVSK AUTOMOBILE CLUSTER
Partners in the engineering field

Regional engineering center
implementation of engineering projects and trainings

R & D, engineering, test activities

ZHIGULI VALLEY
TECHNOPARK

SAMARA UNIVERSITY

Engineering projects

CAI SR

ТОЛЬЯТТИНСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ

SAMARA POLYTECH
Flagship University

R & D, engineering
Thank you for your attention!

Machine-building association
Cluster of Automotive Industry of Samara region
165 Yuzhnoe shosse, Togliatti, Samara region, Russian Federation
+7 (8482) 27-09-55

office@caisr.org
http://en.caisr.org/