KAZAN
TELEMATICS

INTELLIGENT TRANSPORT SYSTEM OF THE CENTRAL RING ROAD

smartmicro
SMART MICROWAVE SENSORS

INTELLIGENT TRANSPORT SYSTEM OF THE CENTRAL RING ROAD

The main tasks considered for the traffic parameters monitoring subsystem:

- Traffic flow parameters collection
- Real time processing of the received data
- Data storage
- Data transfer to Apper Level ITS subsystems in the requested form

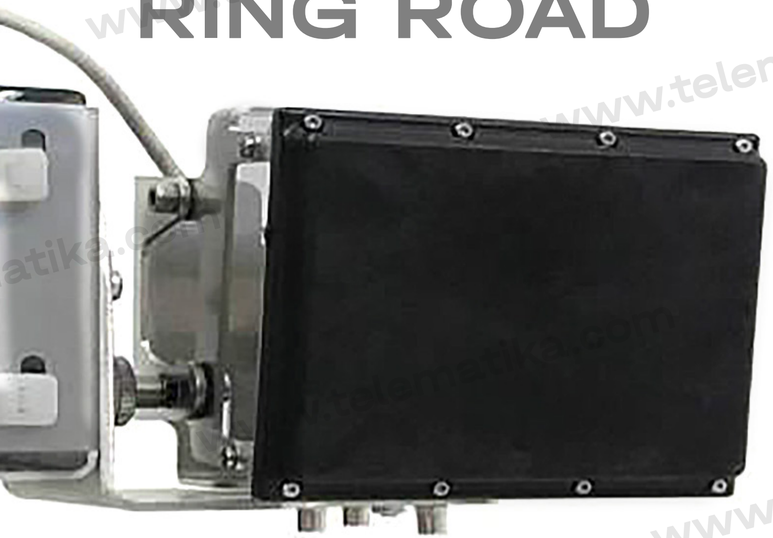
Efficiency Key-Factors subsystem purpose:

- Ensuring road safety
- Ensuring the efficiency of services (increasing user comfort)

The following functions were implemented within the ITS subsystem:

- Constant collection of traffic flows parameters on the Central Ring Road (counting, classification, speed control)
- Central Control Center Service Operator online notifications - traffic intensity witch check point location
- Decision algorithms support in according to the System Road rules
- Event card issuing for each fact of a critical change in traffic intensity
- Statistical analysis of traffic intensity data at the Central Ring Road, conditions of occurrence and timing of elimination

INTELLIGENT TRANSPORT SYSTEM OF THE CENTRAL RING ROAD



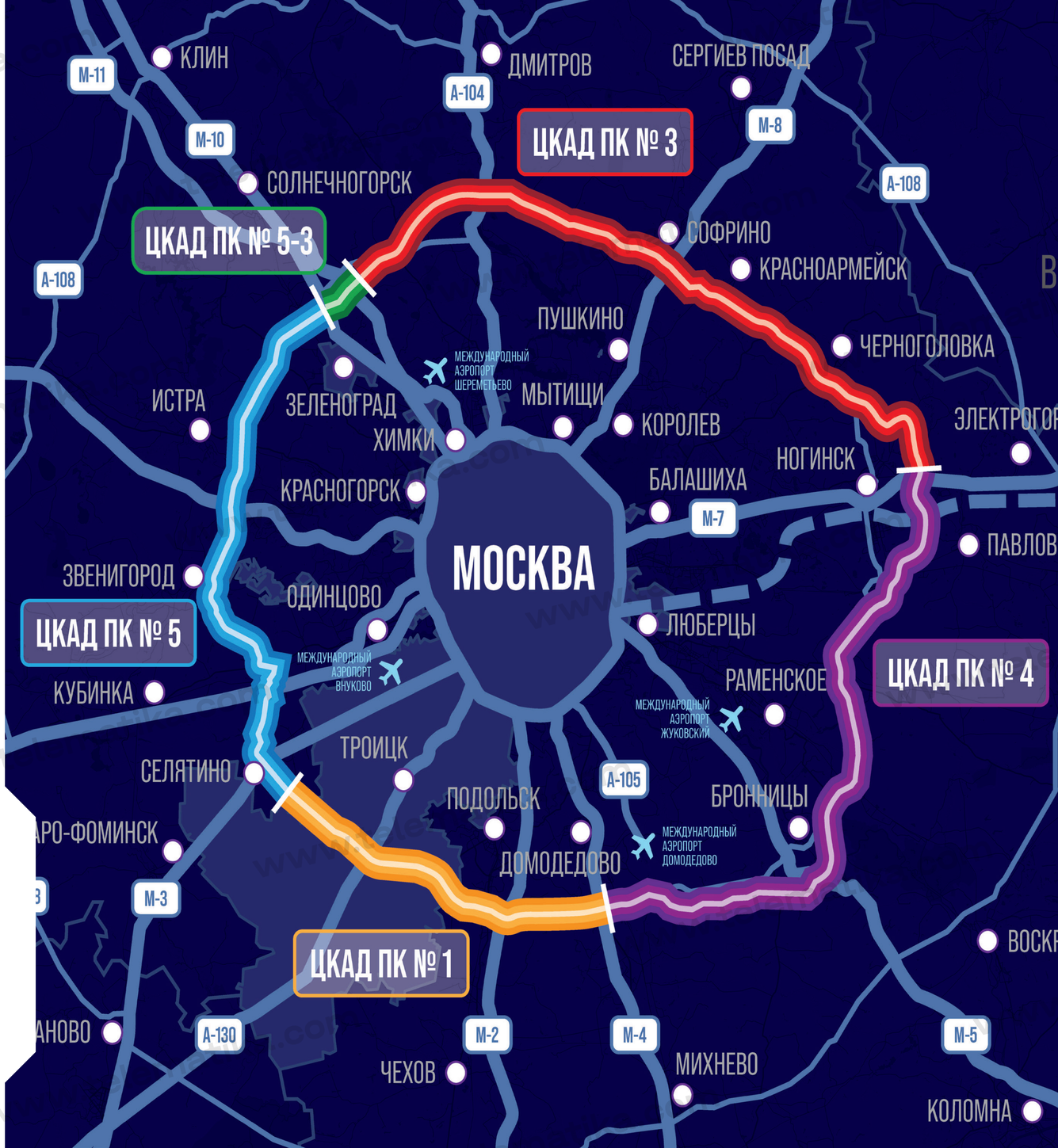
UMRR-0C TYPE 40 FORWARD+

Project timeline: Q4’2020-Q3’2021
Road length: 336 kilometers

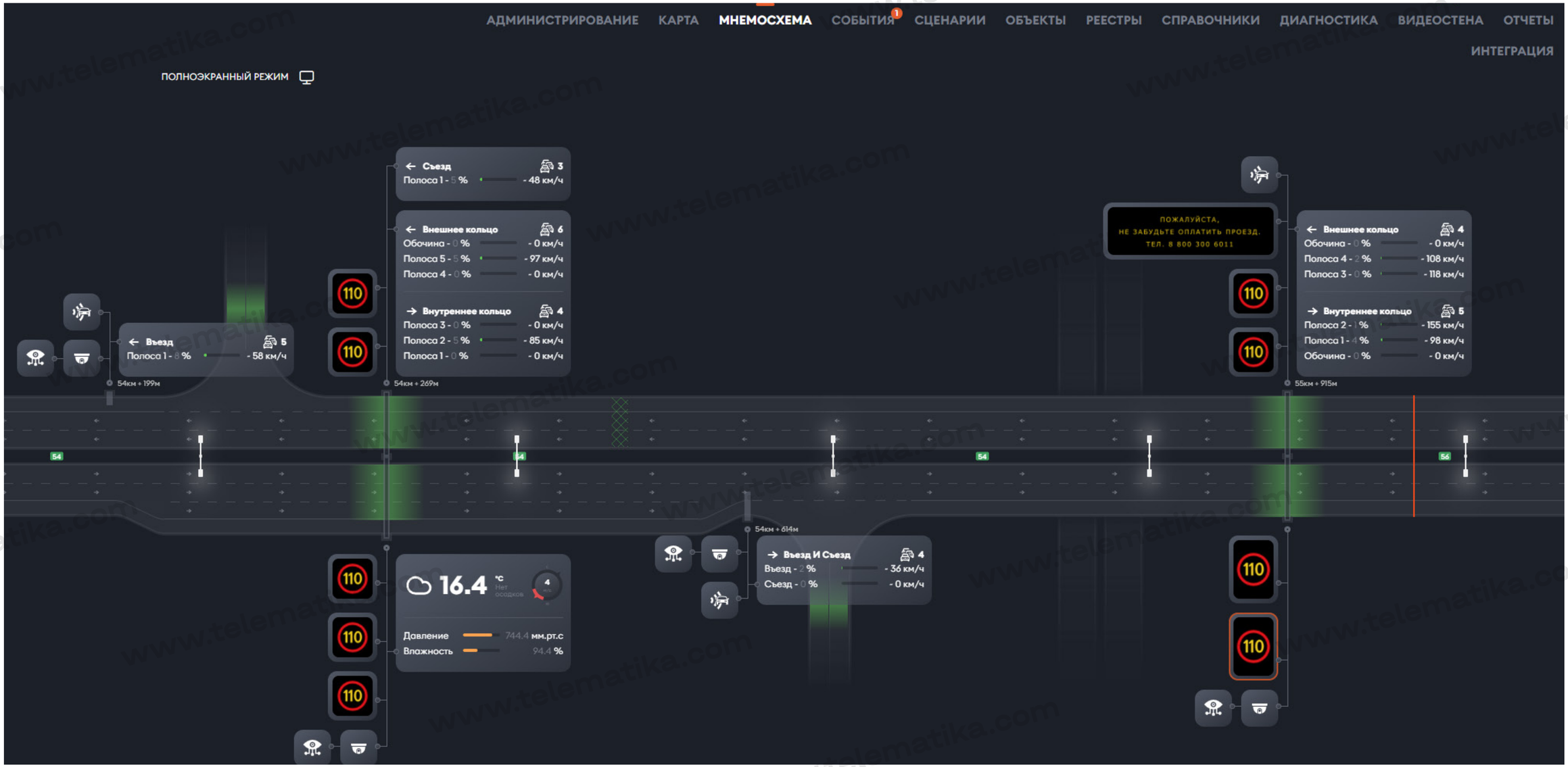
Traffic counting and classification purpose

Total number of Radar sensors installed at the CKAD:

307

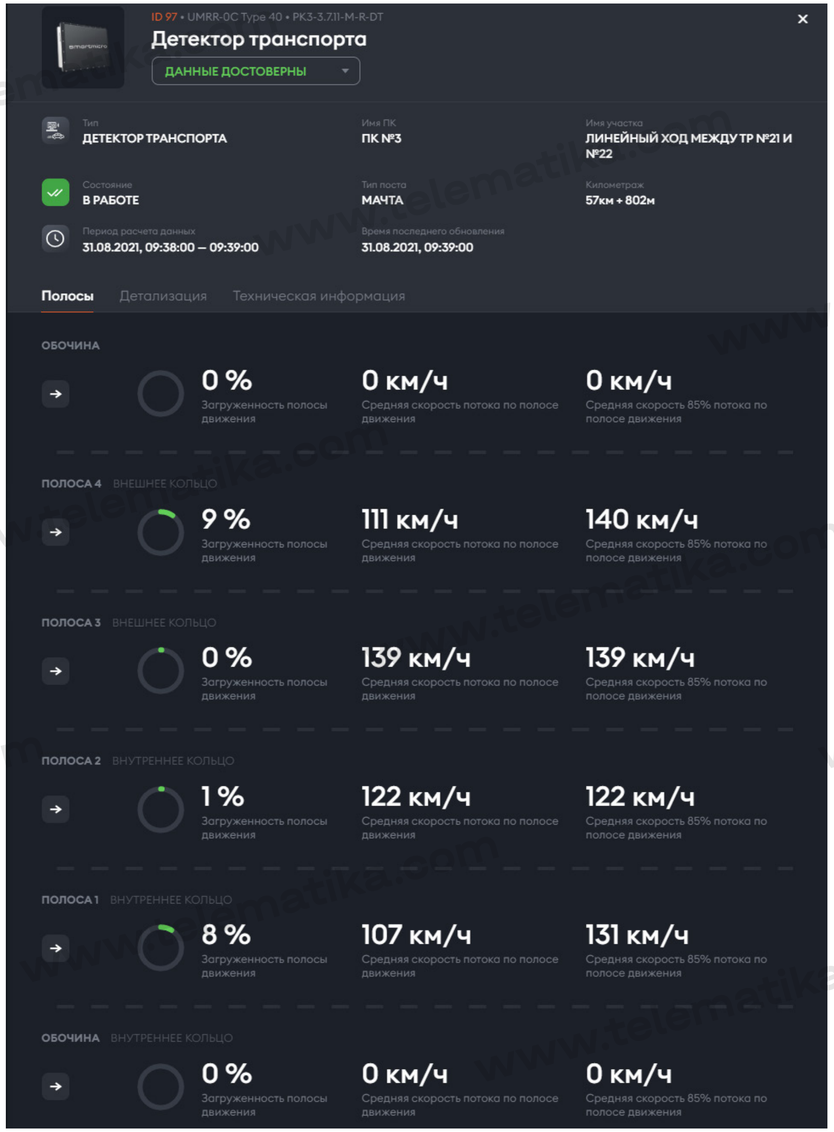


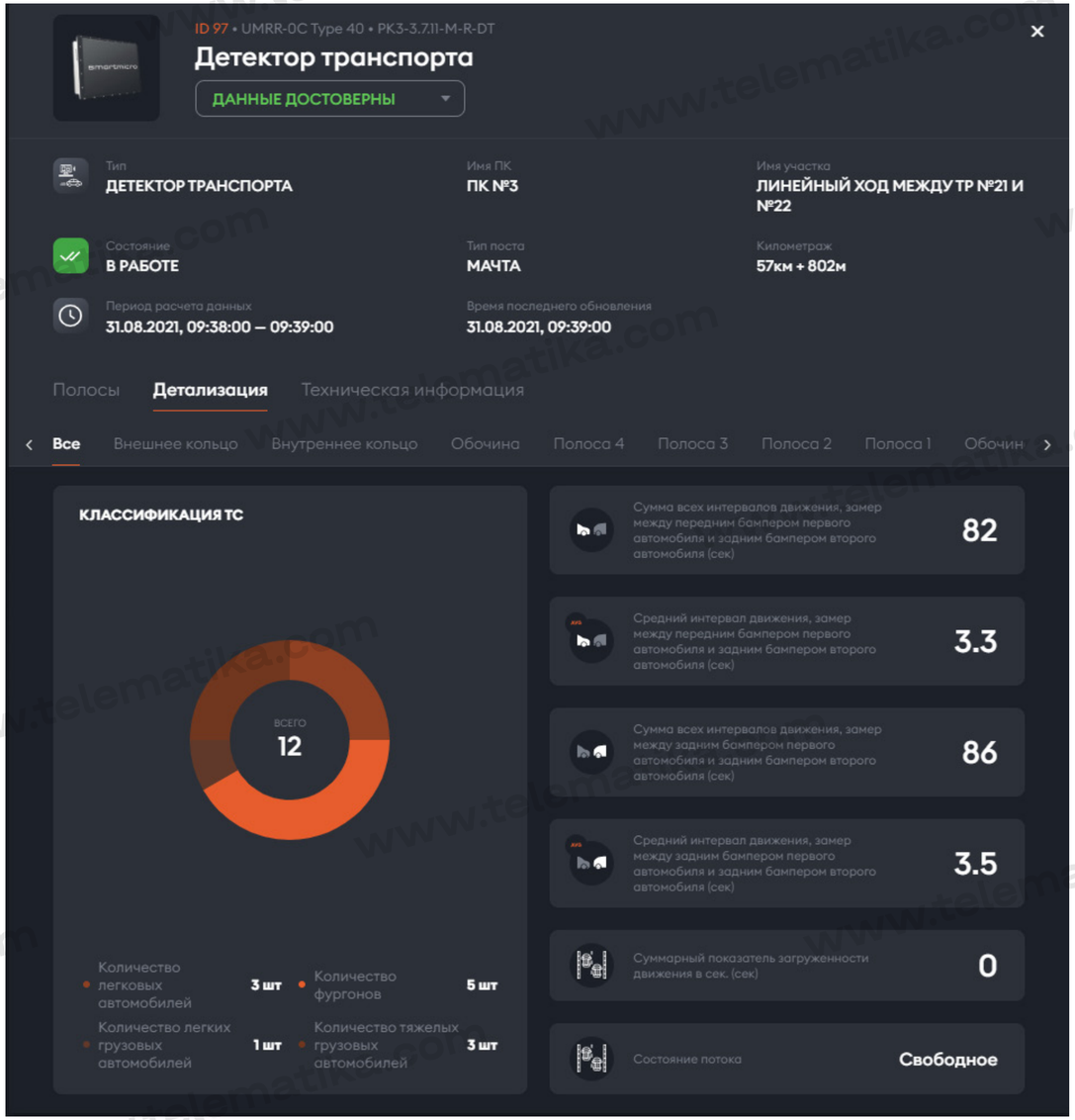
LIVETIME MNEMO



ROAD SECTOR TRAFFIC FLOW MONITORING

EACH 2 KM TRAFFIC MONITORING DATA





ITS SENSORS CHALLENGES

Problems identified during installation and commissioning:

- Sound Barriers cause a traffic vehicle signal reflections and Ghost appearing
- Big metal tracks with containers and handcarriges also did cause Ghost appearing
- Total percentage of Vehicle counting were 80-85%

Issues handling:

- Special sensors FW with Polygons releasing.
- ITS Central SW Special post-processing algorithms applying for correct counting.

Further approach

- In Q2’2021 a TRUGRD Stream sensor has been testes to compare results
- Better counting and classification performance
- Better Ghost handling - number of failure cases has been decreased

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THANKS FOR YOUR ATTENTION

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