MOBILE NETWORK QUALITY ANALYTICS

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PRODUCT DESCRIPTION

Mobile Network Quality Analytics Overview

InfoNet specializes in providing geo-analytical information services to mobile operators based on cellular networks operation data.

Data is collected by agent applications installed on mobile phones and smartphones of subscribers. Mobile applications act as agents.

Communication in buildings

We show how cellular networks performance inside buildings

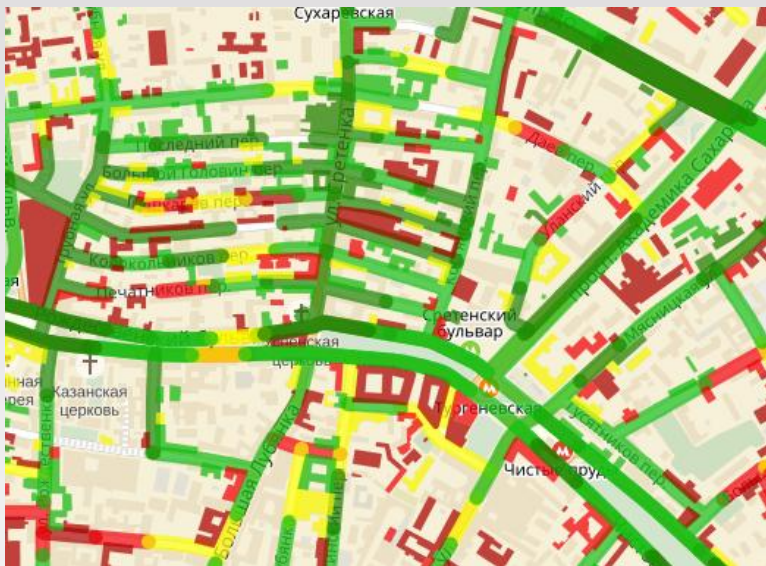
Communication on the street

We show how cellular networks performance on roads and outdoors

Comparison of operators

We show the difference in cellular networks performance inside buildings and on the street

What can "Mobile Network Quality Analytics" do

- Estimate the coverage quality of GSM, UMTS and LTE networks

- Determine whether a subscriber is inside buildings or outside

- On street coverage display is similar to traditional drive tests

- Identify the coverage within specific buildings and display them on map

- Calculate KPI (Key Performance Indicators) for coverage

- Compare quality of networks performance for different operators, visually and by KPE

- Visualize information or provide it as data sets

"Mobile Network Quality Analytics" service positioned as an addition to traditional methods of network planning and field measurements.

Significantly reduces the amount of work and improves the interaction of technical and non-technical services of operator.

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Mobile Network Quality Analytics Applications

- Indoor Network Quality for all buildings for all operators

- Roads/Outdoor Network Quality for all operators

- Competitive market analytics

- Number of each operator subscribers in city objects

- Real-Time Quality monitoring for key city objects

- Call Centre DB indoor objects historical quality data

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How it works?

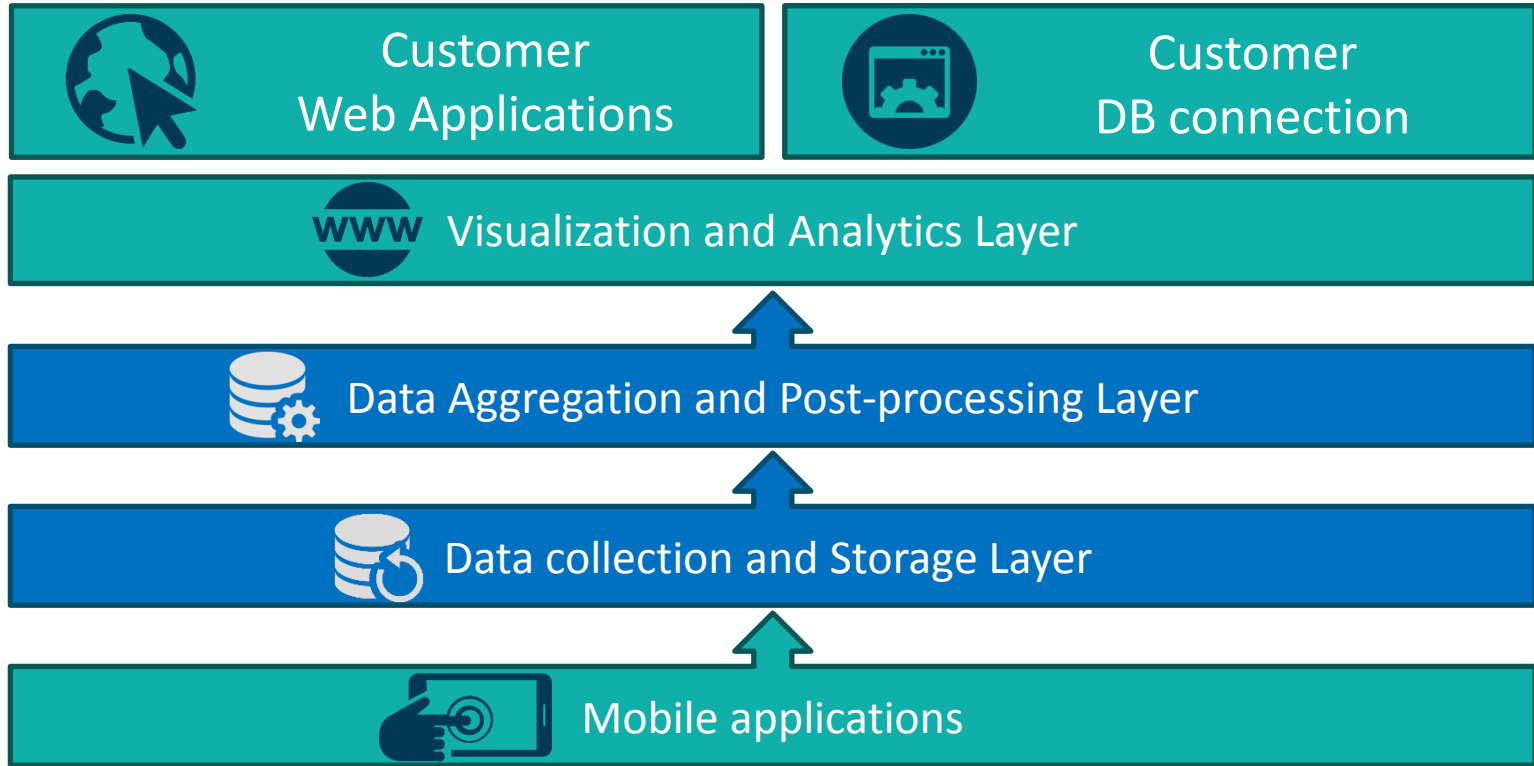We are collecting the depersonalized data from End User Mobile Applications

Collected data is aggregated and being processed with innovative data mining algorithms

Visualization of investigation results

Product architecture

Customer Web Applications	Customer DB connection

Visualization and Analytics Layer

Data Aggregation and Post-processing Layer

Data collection and Storage Layer

Mobile applications

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What is the accuracy and size of data sample

The ability to receive information about cellular network depends on the penetration of application agents in each specific region.

CASE STUDY: CITY OF MOSCOW

The conditional square 7x8 kilometers in the city of Moscow has the following parameters of statistical sampling:

- **59 000 000 - total number of samples**
  - 50 000 000 - number of samples with possibility of referring to the category "on the roads" or "in the building"
    - 39 000 000 - number of samples with possibility of referring to the category "on the roads"
    - 11 000 000 - number of samples with possibility of referring to the category "in the building"
      - 4 000 000 - number of samples of "in the building" category with unique binding to address

- **16 000 - number of buildings in the conditional square (structures of any type, including uninhabited ones)**
  - 11 000 - number of buildings where the quality of the UMTS network is determined
  - 8 000 - number of buildings where LTE network quality is determined

- **7 000 - number of road sections (of any type, including yard passages)**
  - 5 000 - number of road sections where the quality of the UMTS network is determined
  - 5 000 - number of road sections where LTE network quality is determined

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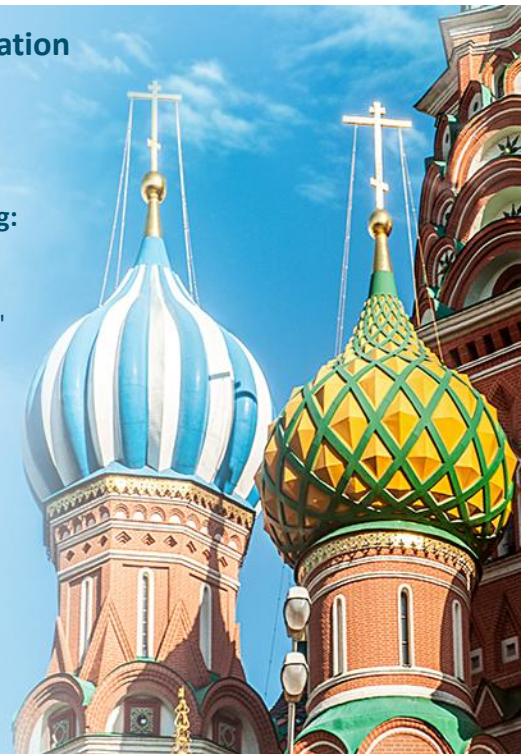
Roadmap "Mobile Network Quality Analytics"

- Increasing the number of "in-building" samples and the accuracy of their reference to the address - will reduce the time intervals for formation of coverage maps and will allow estimating the number of subscribers for "in the building" category.

- Reliable determination of the number of subscribers "on the roads" and "in the building" will allow to evaluate the potential effect of operator's efforts to promote services and expand network or from release of individual network elements.

- Determining the quality of "Data transfer" service - will allow to show the real availability of the service to end users.

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CUSTOMER BENEFITS

What is "Mobile Network Quality Analytics" for

Use of "**Mobile Network Quality Analytics"** service will help mobile operators increase the efficiency of marketing and technical services, clients department work, provide easy access to information about cellular network to managers of various levels.

Marketing department
- Have direct access to information about cellular network functioning
- Quickly get information about network functioning in different regions
- Conduct comparisons with competitors
- Plan development

Corporate clients department
- Assess cellular network quality, available to subscribers and corporate clients
- Plan to attract new customers based on network quality
- Objectively evaluate the cellular network quality from existing customers

Technical Service
- Reduce time to search, plan and enter new base stations
- Reduce the amount of drive tests performed
- Prioritize and speed up the resolution of incidents

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Improve Customer Loyalty
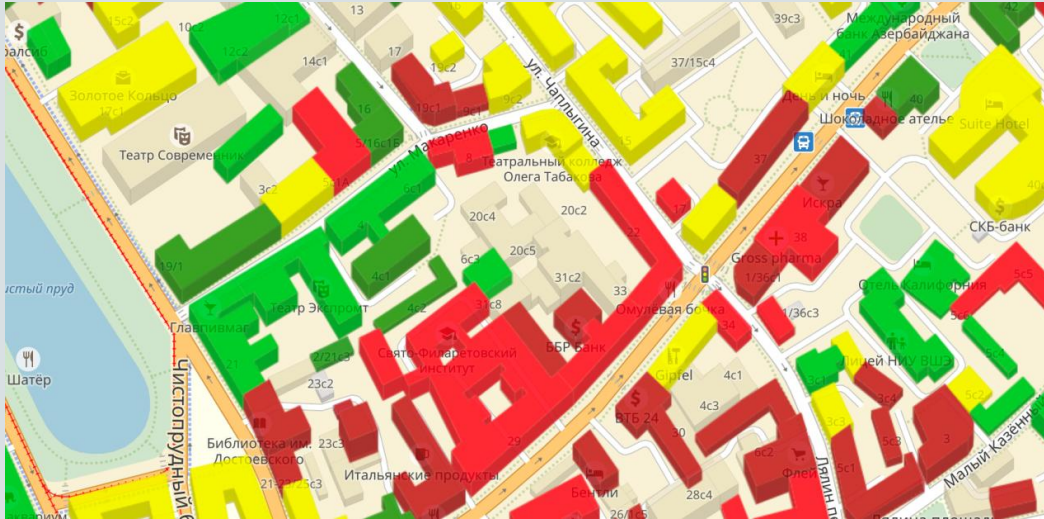
✓ "Building" data granularity

✓ Customer complaints analysis

✓ Data Provision for Call-Center

✓ NPS analytics

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THANK YOU