VAS Experts ITG

Geodata Analysis Module

Basic Functions

- Mobile, wired and wi-fi control in one interface
- Map visualization of subscriber routes and network load intensity
- Outlier detection based on AI (subscriber congestion, traffic spike, etc.) with automatic triggers
- Configuration of Stingray Service Gateway’s network policing on a selected map fragment: prioritization or blocking of specified services or subscribers

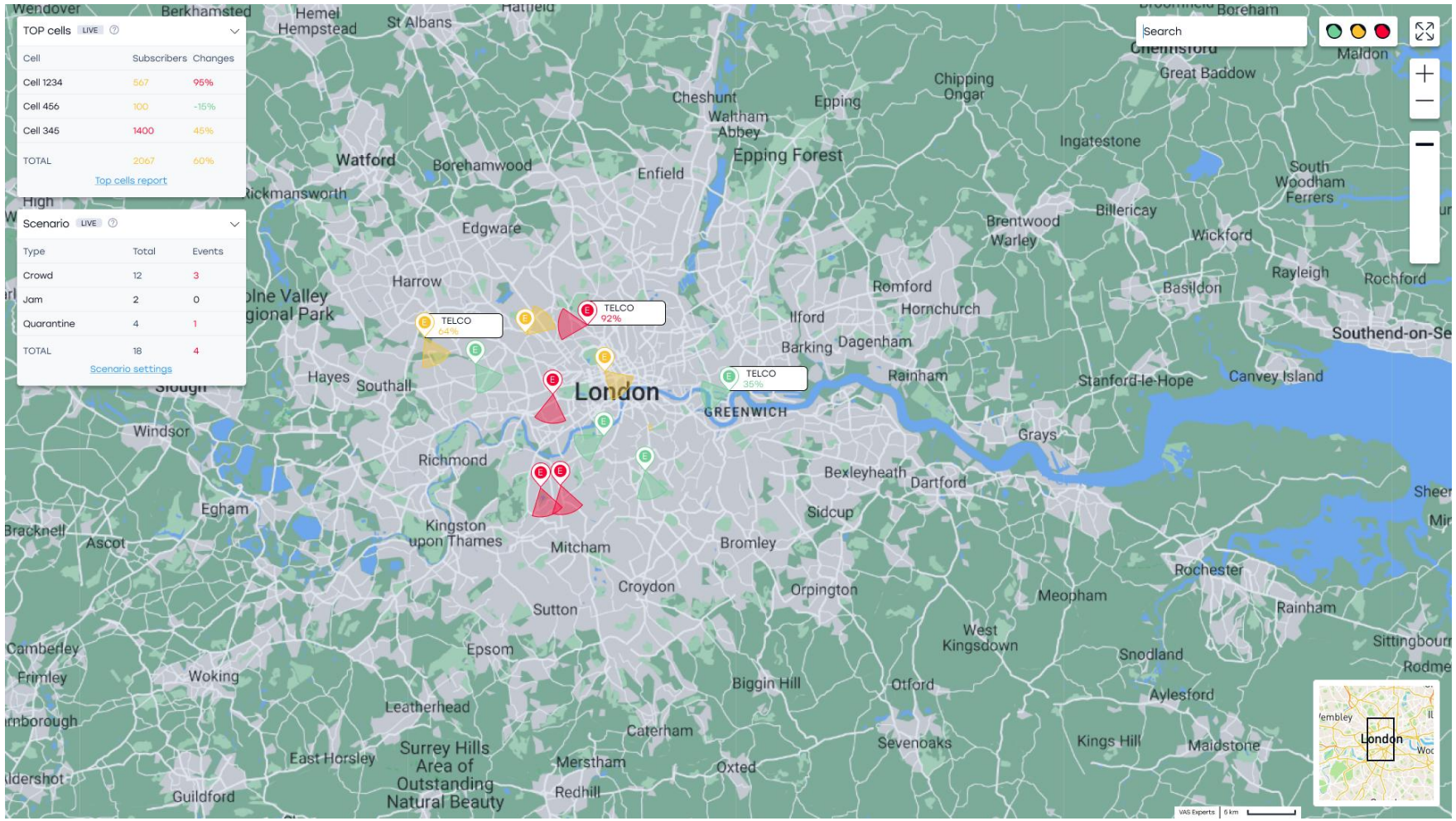
Case 1. Anomaly monitoring at GSM Cell towers

The system accumulates load data from all base stations and automatically determines the load rate profile for each - depending on the day of the week and time of day

The operator on the map-dashboard can see GSM Cell towers with capacity anomalies, and a special widget helps to see the largest anomalies

The operator can search for a particular GSM Cell towers by its ID or address, display data on the current load

The Operator’s work station: Dashboard for situation centers



Interactive map with information widgets and search by subscribers and base stations to overview the network by anomalies and load

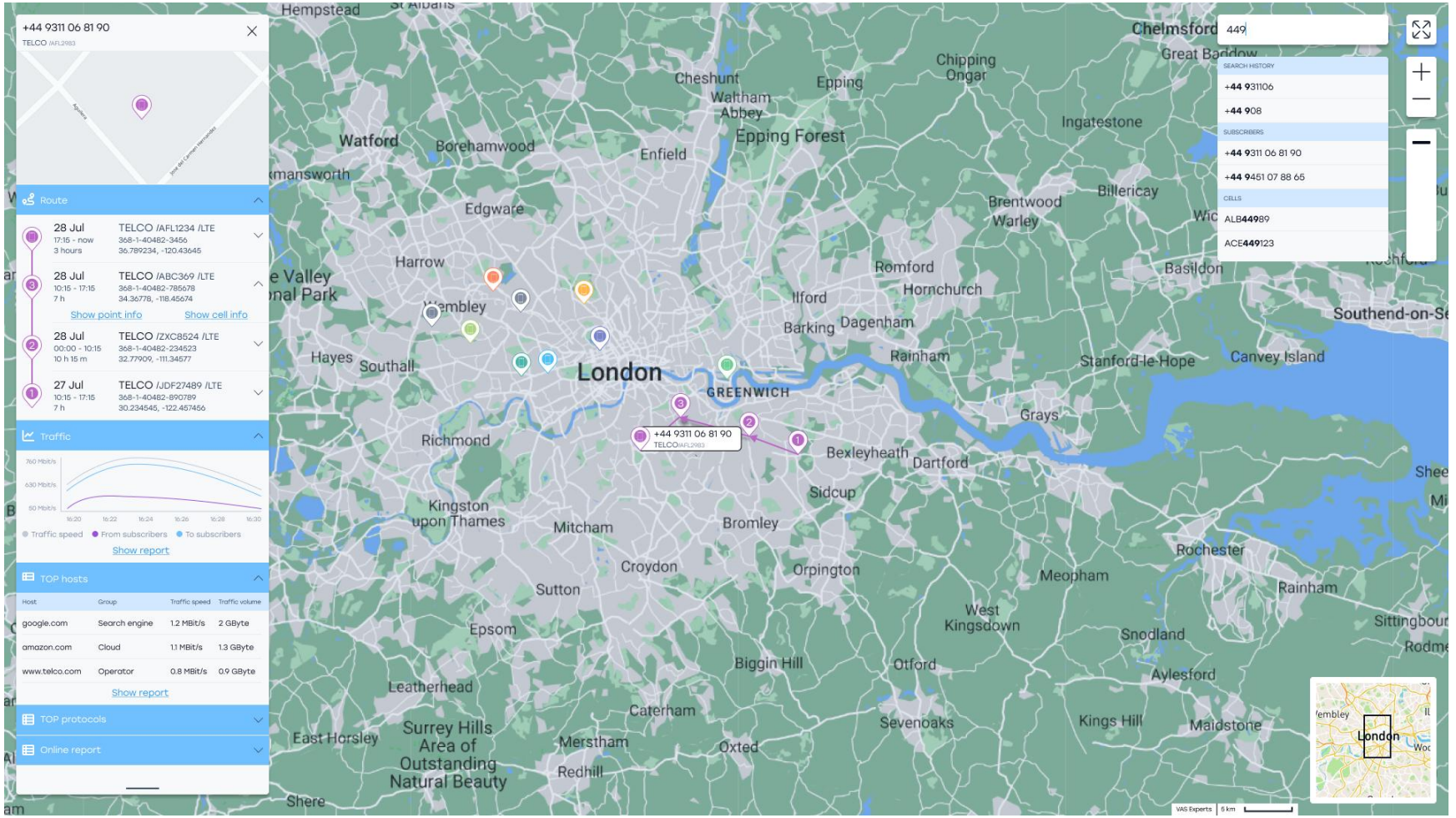
Case 2. Location and subscriber routes

The operator uses the search to find a specified subscriber or a group of subscribers

The map-dashboard displays the current location and chronological route of the subscriber for a given period of time

It is possible to export the route information into a file

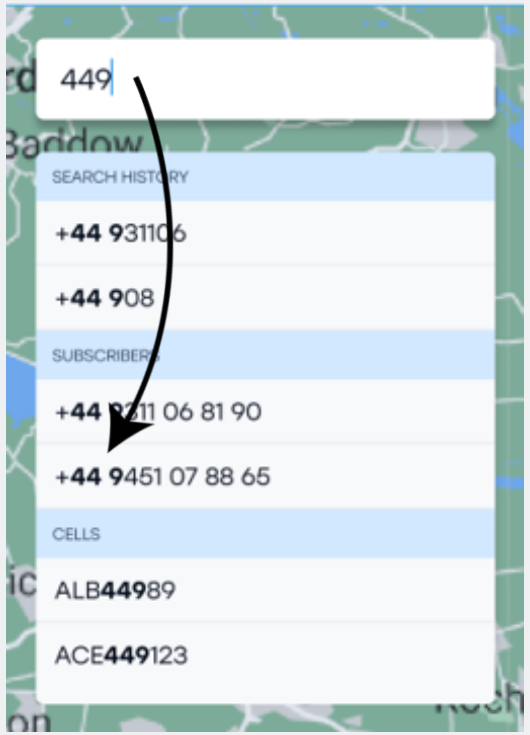
The Operator’s work station: subscriber search, routes tracking



- View the subscriber's routes over a specified period of time
- View the subscriber's network activity in each point, including Online.

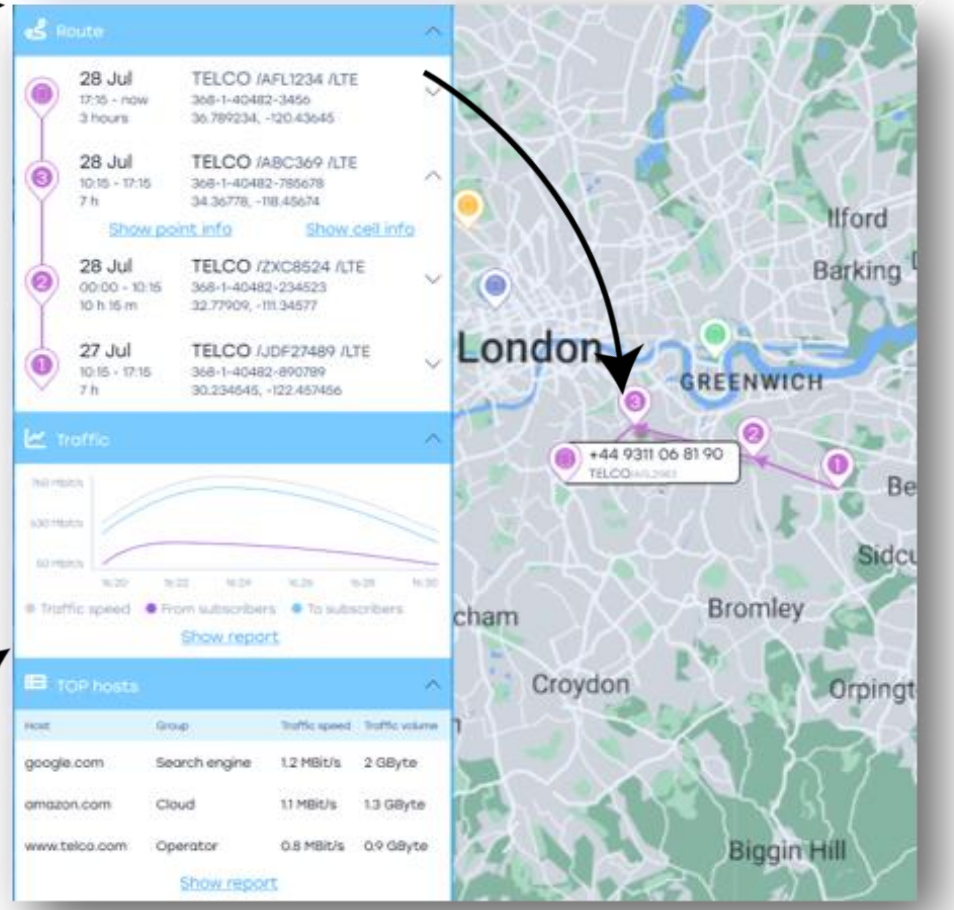
The Operator’s work station: subscriber's real-time route

Subscriber search
by phone number



Route display on the map and chronology of the route

Subscriber network activity



Case 3. Working with scenes

The operator selects a fragment of the map and assigns one of the preset DPI policies to it, and sets the trigger

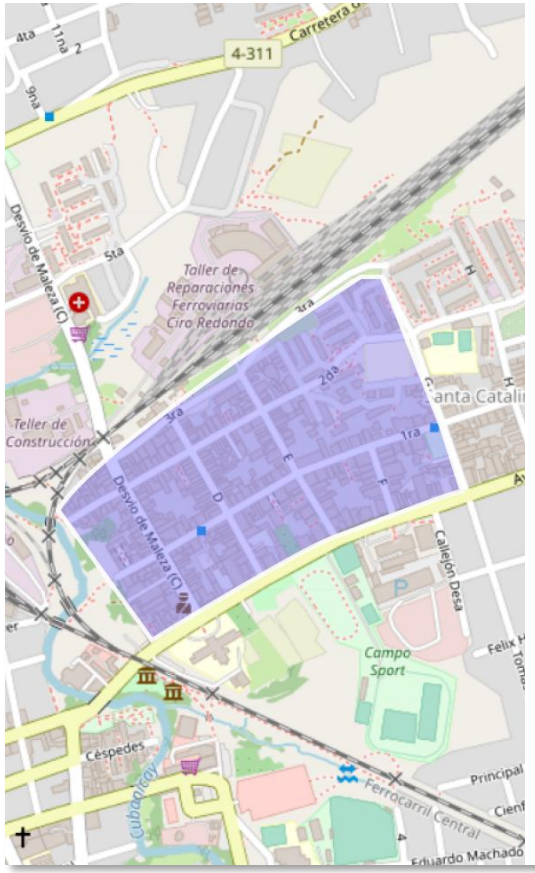
All created scenes are available on a handy dashboard with current statuses (on/off)

Scenes notifies by e-mail or messenger when triggered, can store exported files with the lists of subscribers

The Admin’s work station: Management and control of scenes*

Automatic detection of abnormal clusters of subscribers in certain areas and activation of network policies

Example* →



- **Alert system**
- **Video**
- **Social networks**

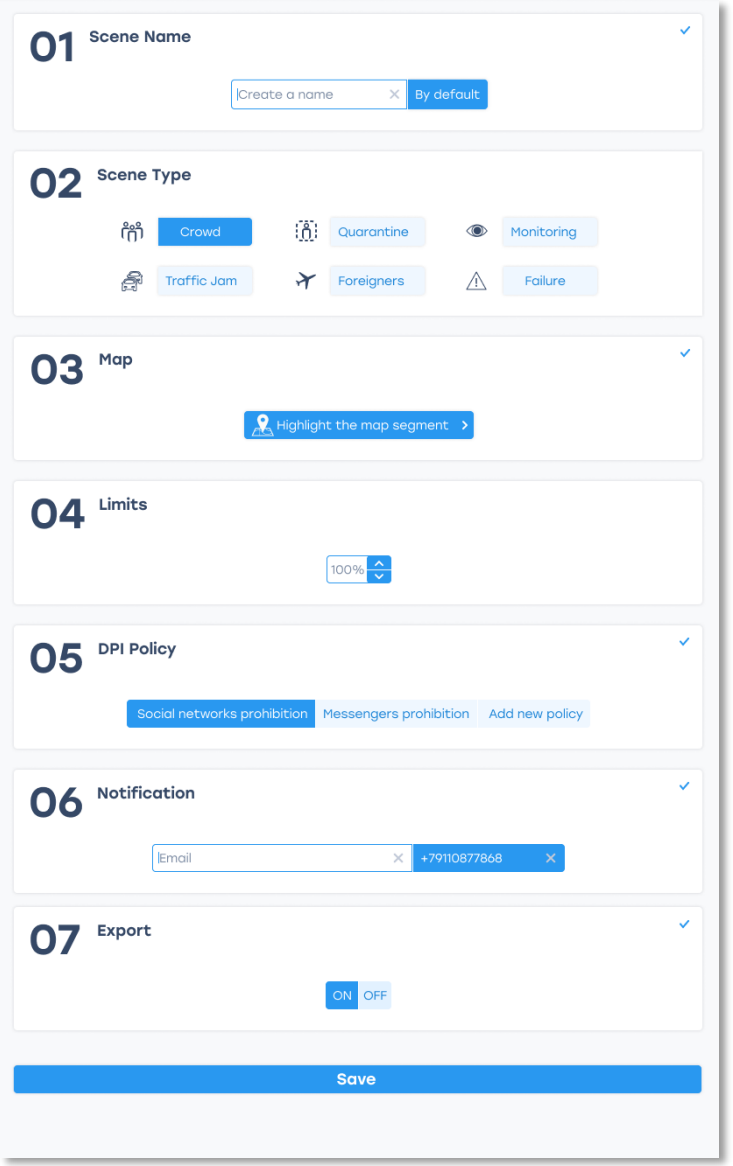
The Admin’s work station: Setting up scenes

7 simple configuration steps

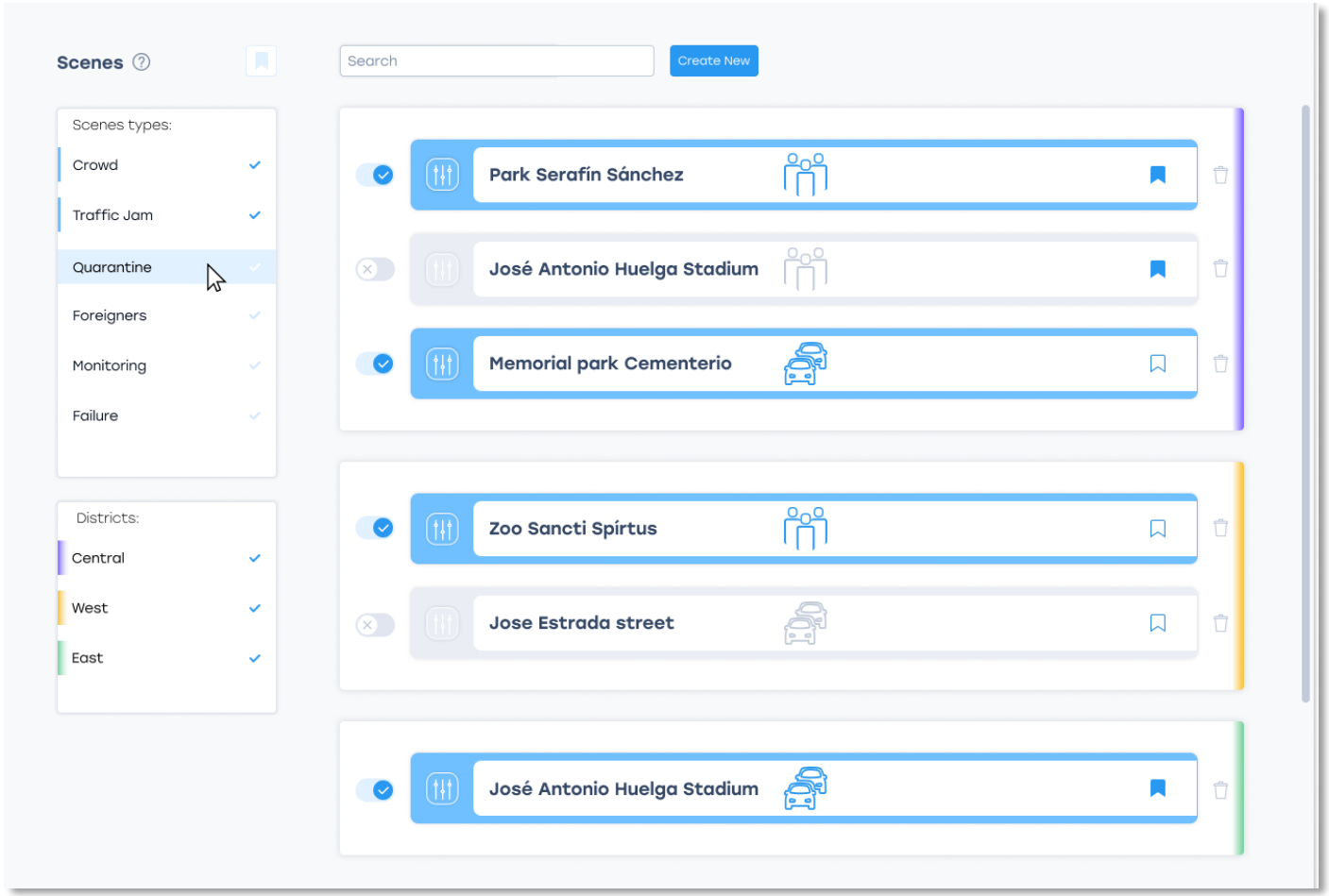
You need to select the scenario, the map fragment and the system response (notification, policing and exporting to a file)

Example

When the crowd in a given place exceeds 100% of the norm (the norm is determined by ML when the statistics are collected), the system automatically turns on blocking YouTube and all messengers, sends a notification, and exports a list of subscribers in the area



The Admin’s work station: Scenes dashboard



- You can click and turn on the scene manually
- Previously created scenes can be edited
- New scenes appear here after configuration

The Operator’s work station: Preset scripts

Name	Description
Crowd	An increase in the number of people in the city squares or major streets
Traffic jam	An increase in the number of people on important streets, slowing of movement
Quarantine	Control of quarantine compliance with the loaded list
Monitoring	Monitoring of a single subscriber or group of subscribers
Foreigners	Abnormal roaming subscriber activity
Network failure	Failure or overload at a particular network node

Module Implementation Steps

1. The geodata analysis module is implemented on the Stingray Service Gateway, no additional integration is required. Data are collected from wired and Wi-Fi NetFlow, and mobile protocol GTP (300-400m accuracy in the city, the data are obtained only when using the Internet).

2. Adding cellular subscriber location data sources to the module. Integration with A-BIS and LMU is required. Location accuracy grows up to ~100m, the subscriber is tracked without using the Internet.

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