



# Navigine

CASE STADIES

# RETAIL - MOBILE PLATFORM

Solution: Smartcart solution for innovative shopping experience with wayfinding

## Parameters:

- 87+ supermarkets in Finland are covered with BLE-based indoor navigation (1-3 meter accuracy)
- 30-60 shopping carts per store are equipped with Smartcart tablets providing directions to customers

## Features powered by Navigine:

- Indoor positioning for tablets inside stores
- Directions for customers to items from shopping lists
- Location based promo campaigns and in-store offers
- Analytics collection on customers foot traffic

## Results:

- 85% of customers are happy to use Smartcarts
- Customers who liked Smartcart are the ones who spend most money in-store on average
- On average 25% of adds are seen, 13% considered to ought and 5% bought the product
- 84% of users where going to use Smartcart again
- 6% average check growth





Navigine

# Production case staff navigation inside power plants

Solution: SDK for mobile application for staff navigation at the power plant / electricity station

## Parameters:

- 20k sq m, multiple floor harsh RF environment
- Wi-Fi, BLE, IoT navigation inside smartphone

## Features powered by Navigine:

- Navigation and Wayfinding
- Real-time tracking
- Task scheduling

## Results

- Safety level improvement
- Incident reaction time decreased





Navigine

# TRANSPORTATION - MOBILE PLATFORM

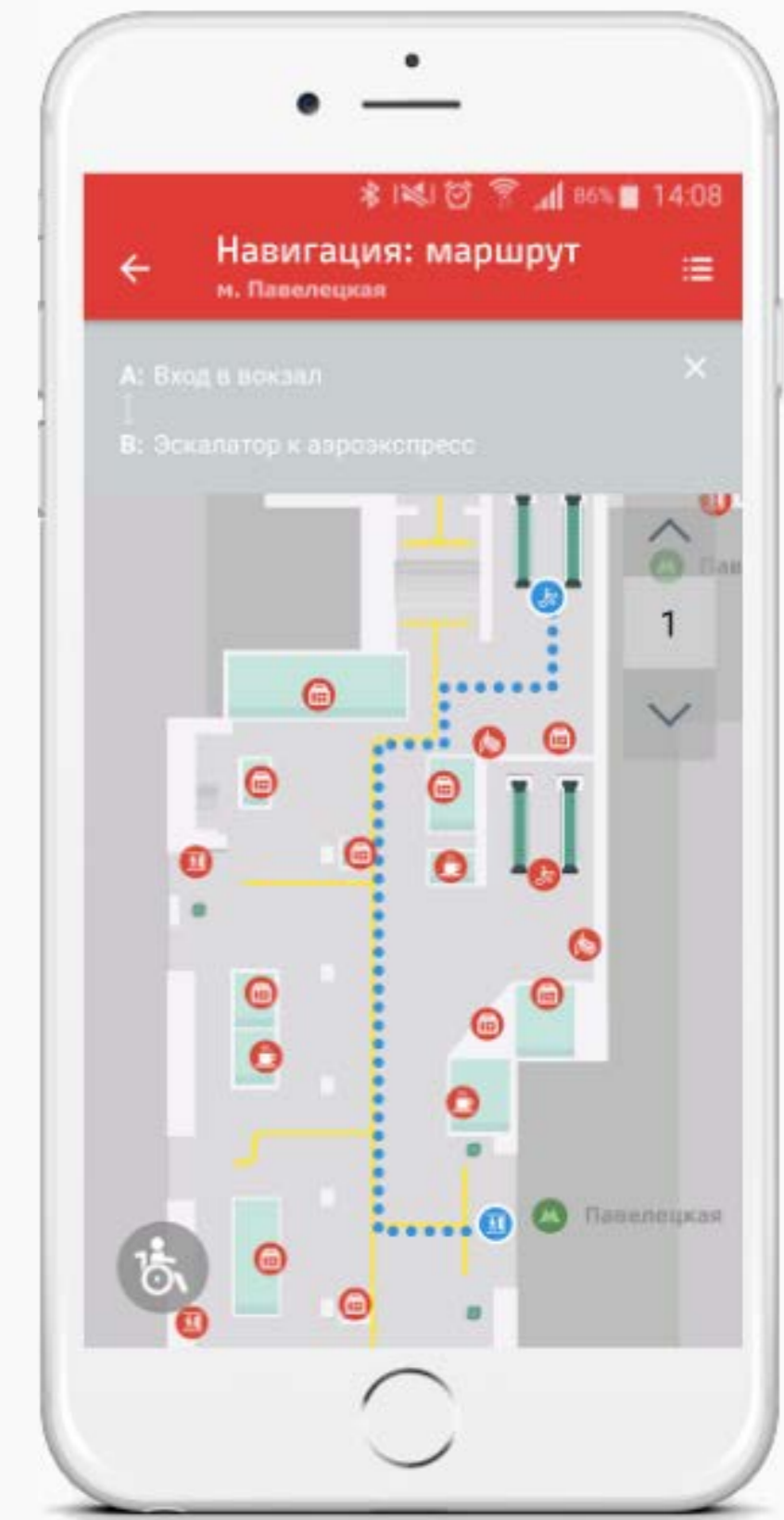
Product: Mobile application for the largest public railway system in Europe with ticket purchase and indoor navigation through train stations

## Parameters:

- 5M+ total install base of the mobile app
- 31 stations are covered by indoor navigation - 5K beacons under management

## Features powered by Navigine:

- Wayfinding and useful information for commuters such as schedule of trains with tracks location and ticket purchase function
- Real-time and aggregated passenger traffic analytics
- Additional marketing channels and revenue stream from hubs tenants
- Results
- Significant improvement of passenger experience especially for international travelers
- Advanced foot traffic statistics to analyze and manage bottlenecks
- Beacon infrastructure monetization via third-party providers



# INTERNATIONAL AIRPORT

Product: iOS/Android demo app

Project characteristics: 6000 sq.m. , 60 BLE beacons

Project deployment time: 1 month

## Results

- iOS/Android informational demo app for airport.
- Demo of new technology and showcasing potential implementations
- Mobile platform is used to provide positioning on the map, routing and POI finding Features like check-in desks, gates, restaurants etc.
- Information about position is used to collect analytics and location based push notification and ads.



# TOYSTORE

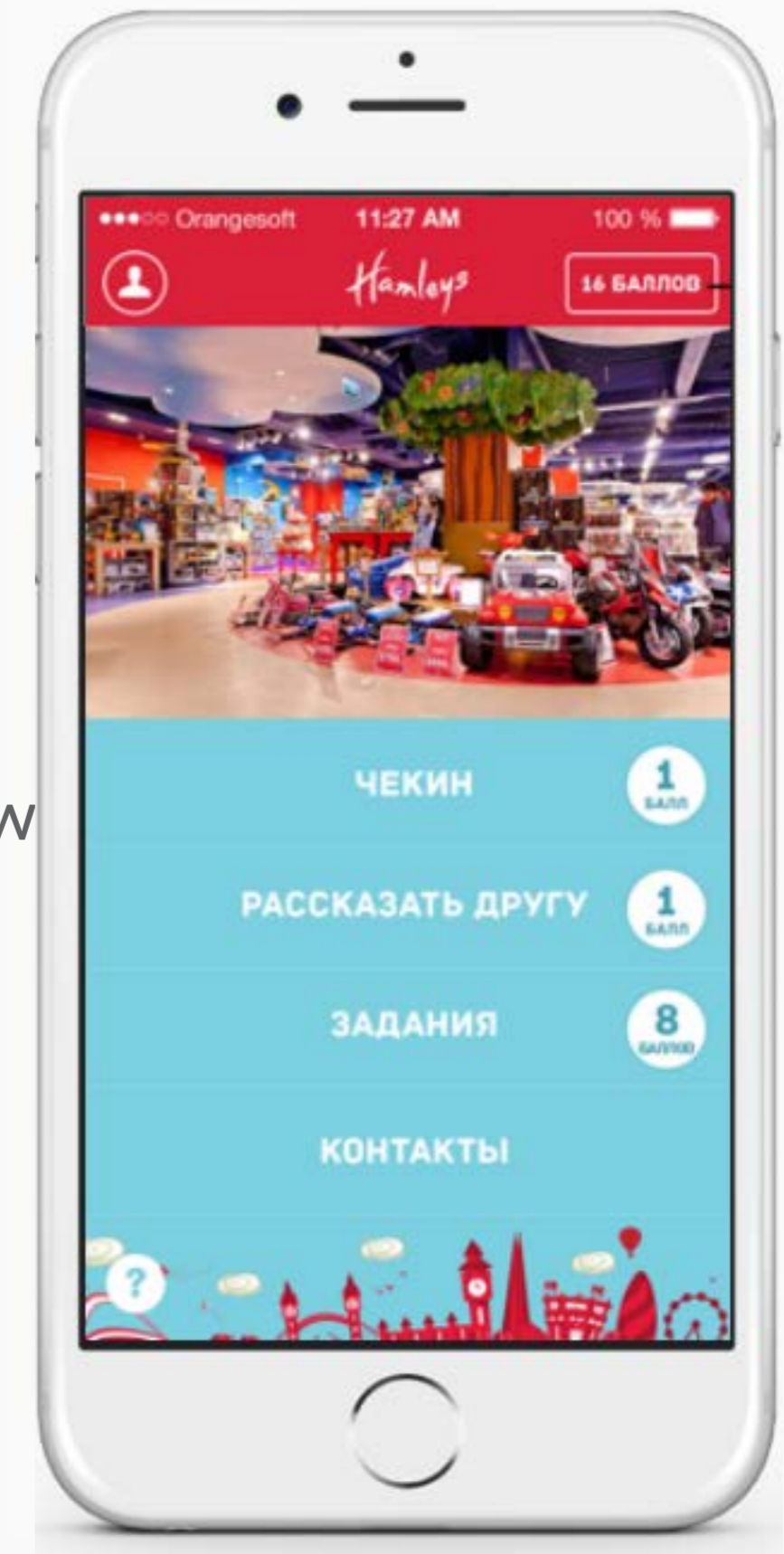
Product: mobile app with Navigine mobile platform

Project characteristics: 3000 sq.m. , 10 BLE beacons

Project deployment time: 4 months (Navigine integration - 1 month)

## Results

- IOS/Android informational app with integrated loyalty program.
- Check-ins with quiz are used to reward customers for visiting store and answer question.
- Mobile platform is used to verify that the visit was made.
- Information about visit is used to collect analytics and push notification.
- PR positioning Hamley's as advanced and innovative company.
- Social interaction and promoting Hamley's brand via sharing with friends



# SAP FORUM

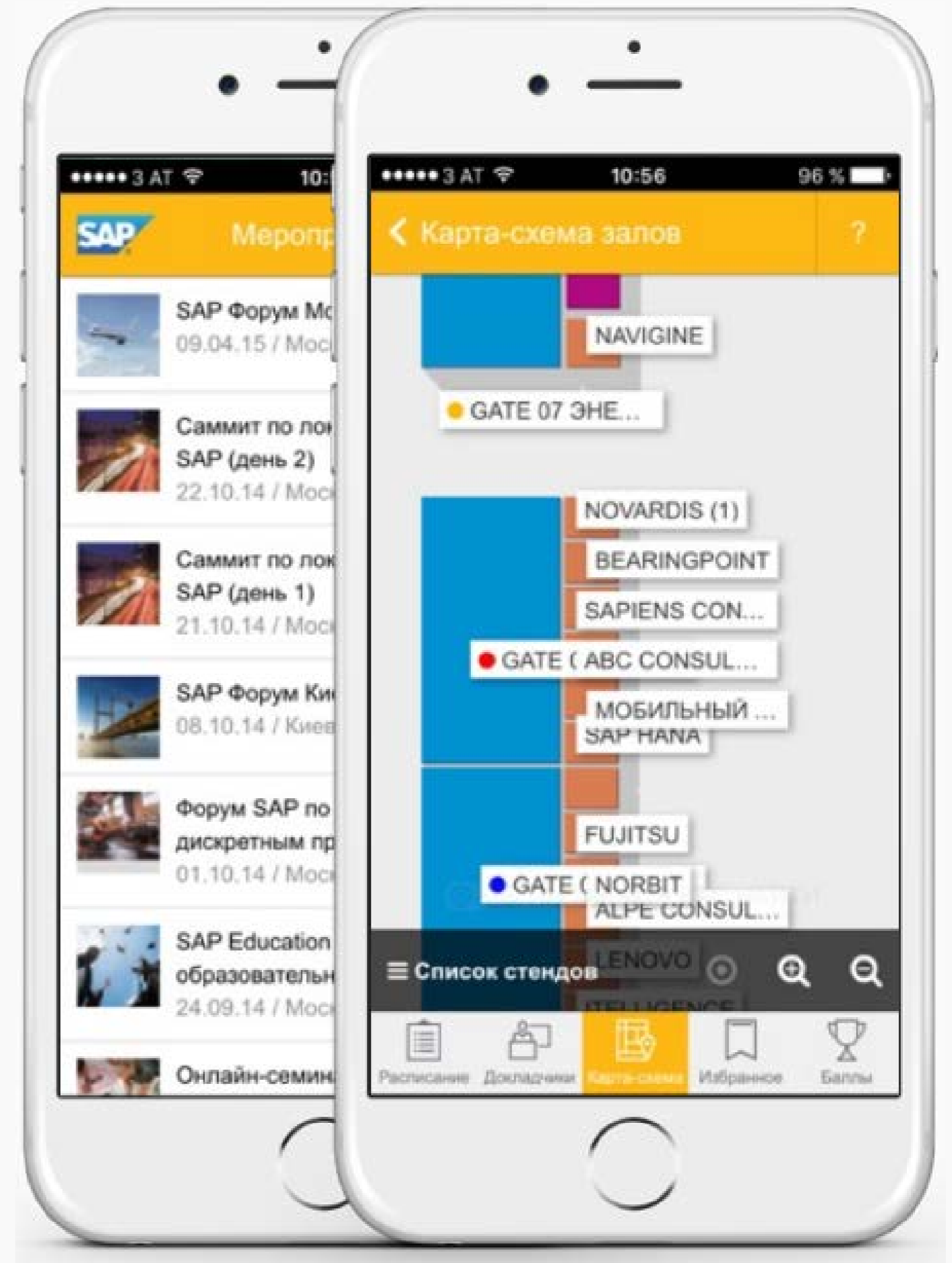
Product: mobile app with Navigine mobile platform

Project characteristics: 10000 sq.m. , 100 BLE beacons

Project deployment time: 2 months (Navigine integration - 2 weeks)

## Results

- iOS/Android informational app with integrated loyalty program.
- Mobile platform is used to track participants position for loyalty program.
- Information about position is used to collect analytics and construct heatmap to identify most interesting spots at the event.
- App was used by 1000 participants just in one day
- Demo of new technology and showcasing potential implementations for current SAP HANA customers



# 1 - SHOPPING MALL

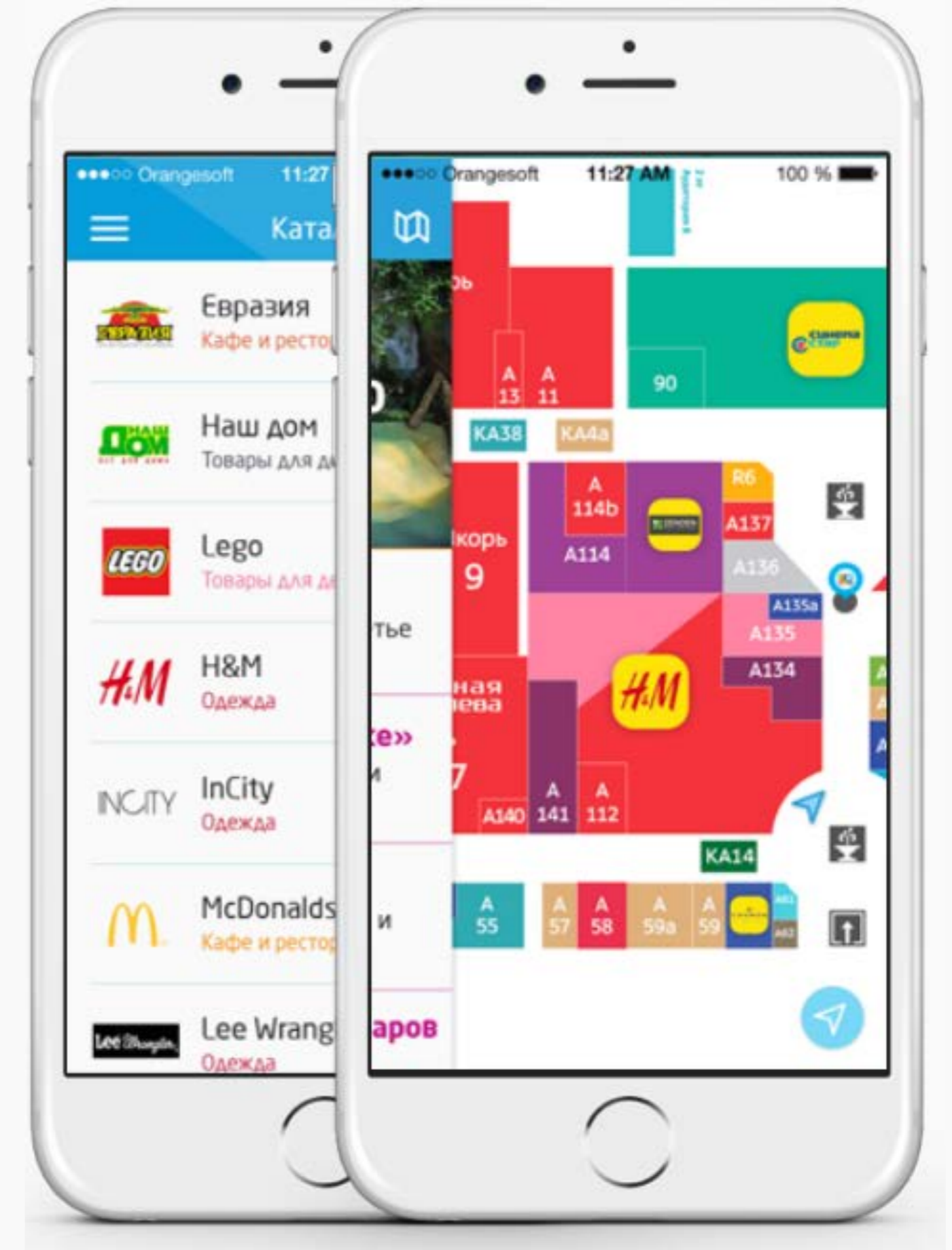
Product: mobile app with Navigine mobile platform

Project characteristics: 50000 sq.m. , 500BLE beacons

Project deployment time: 4 months (Navigine integration - 1 month)

## Results

- iOS/Android informational app for chain of shopping malls.
- Mobile platform is used to provide positioning on the map, cross floor navigation.
- Information about location is used to collect analytics and location based
- push notification and ads.
- PR positioning RIO mall as advanced and innovative company. Improvement of communication with young visitors with more than average income.





## 2 - SHOPPING MALL

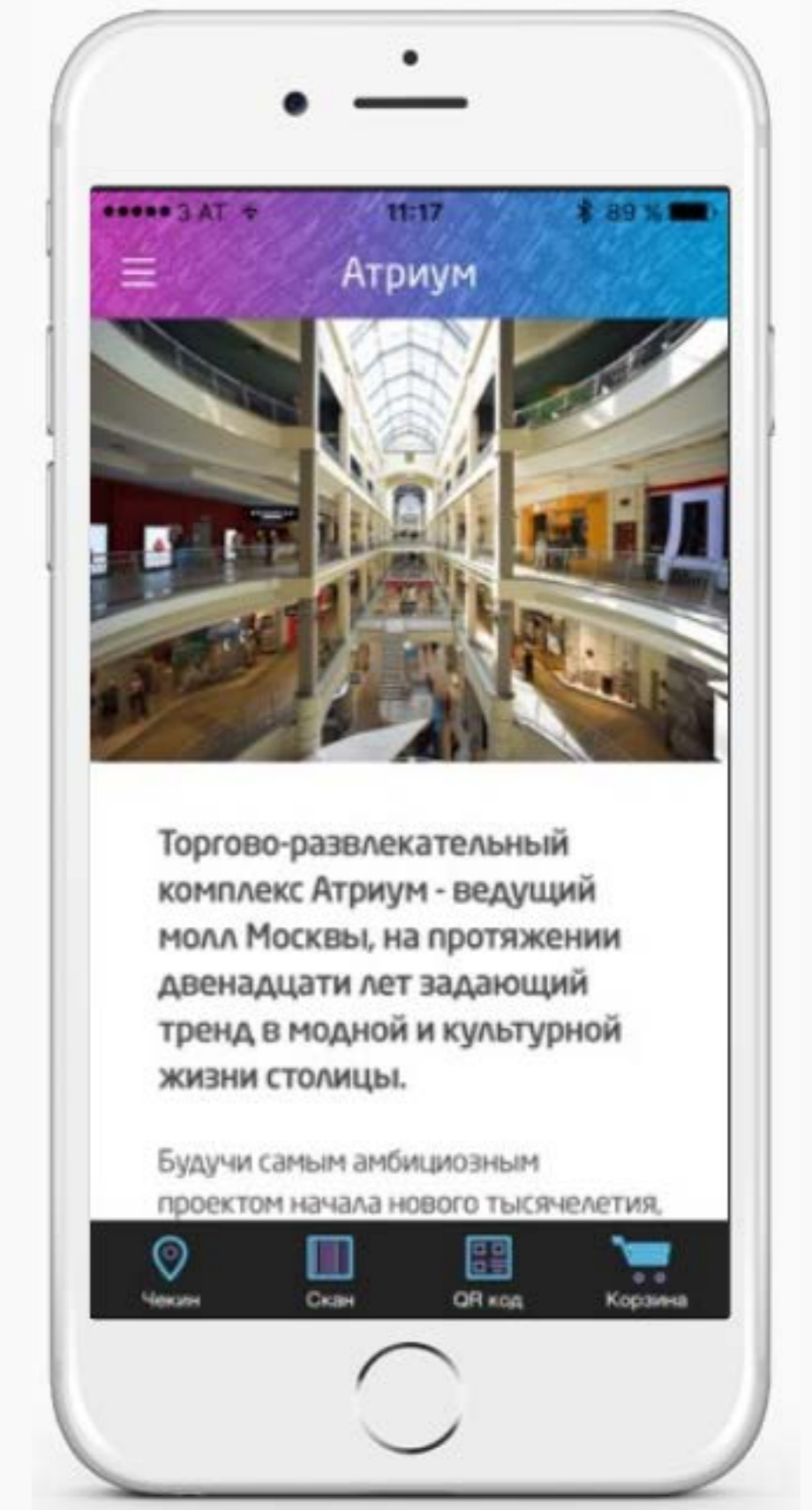
Product: mobile app with Navigine mobile platform

Project characteristics: 70000 sq.m. , 700 BLE beacons

Project deployment time: 6 months (Navigine integration - 1 month)

### Results

- iOS/Android informational app with integrated loyalty program.
- Check-ins with are used to reward customers for visiting different stores.
- Mobile platform is used to verify that the visit was made, to provide positioning on the map, cross floor navigation and car finding features.
- Information about position is used to collect analytics and location based push notification and ads.
- PR positioning Atrium mall as advanced and innovative company.



# AIRPORTS

**Product:** staff and vehicles tracking service

**Overall project:** tracking of 1000+ employees, 10000+ baggage carts and other vehicles

**Pilot project:** 3 tracking objects at Al Maktoum International Airport in 3 zones Pilot project deployment time: 2 weeks

**Pilot results:** accurate tracking of employees and vehicles by zones, control of motion efficiency and working discipline

## Expected benefits:

- Continuous monitoring and even distribution of the carts at the airport, reducing the number of bottlenecks
- Improvement of working discipline and work safety
- Improvement of effectiveness in communication with staff
- Improving the quality of customer service

# METRO: DEPOT

**Product:** staff and vehicles tracking service

**Overall project:** tracking of 30+ trains (6-8 cars each), wheel pairs and 200+ employees

**Pilot project:** 12 tracking objects at “Vykhino” depot in 1 zone 9000 sq.m.

**Pilot project deployment time:** 3 month

**Pilot results:** accurate tracking of employees and vehicles by zones, control of motion efficiency and working discipline

## Expected benefits:

- Tracking and monitoring train cars and wheel pairs, remote control of destination points
- Tracking component parts at the warehouse
- Analysis of the movements (cars, wheelpairs, component parts, employees)
- Improvement of working discipline and work safety
- Improvement of effectiveness in communication with staff

# METRO: TUNNELS

Product: staff tracking and trespassers control service

Overall project: 1000+ employees, 300 km of metro tunnels

Pilot project: 1000 m of the tunnel, 10 control points

Pilot project deployment time: 6 month

Pilot results: accurate checking of employees by zones, control of motion efficiency and working discipline

## Expected benefits:

- Improvement of working discipline and work safety
- Integration with security system and detecting trespassers (“friend or foe” functionality)
- Improvement of effectiveness in communication with staff
- Analysis of the movements of employees
- Assistance in quick management decision making in cases of emergency

# METRO: STATION

Product: iOS demo app

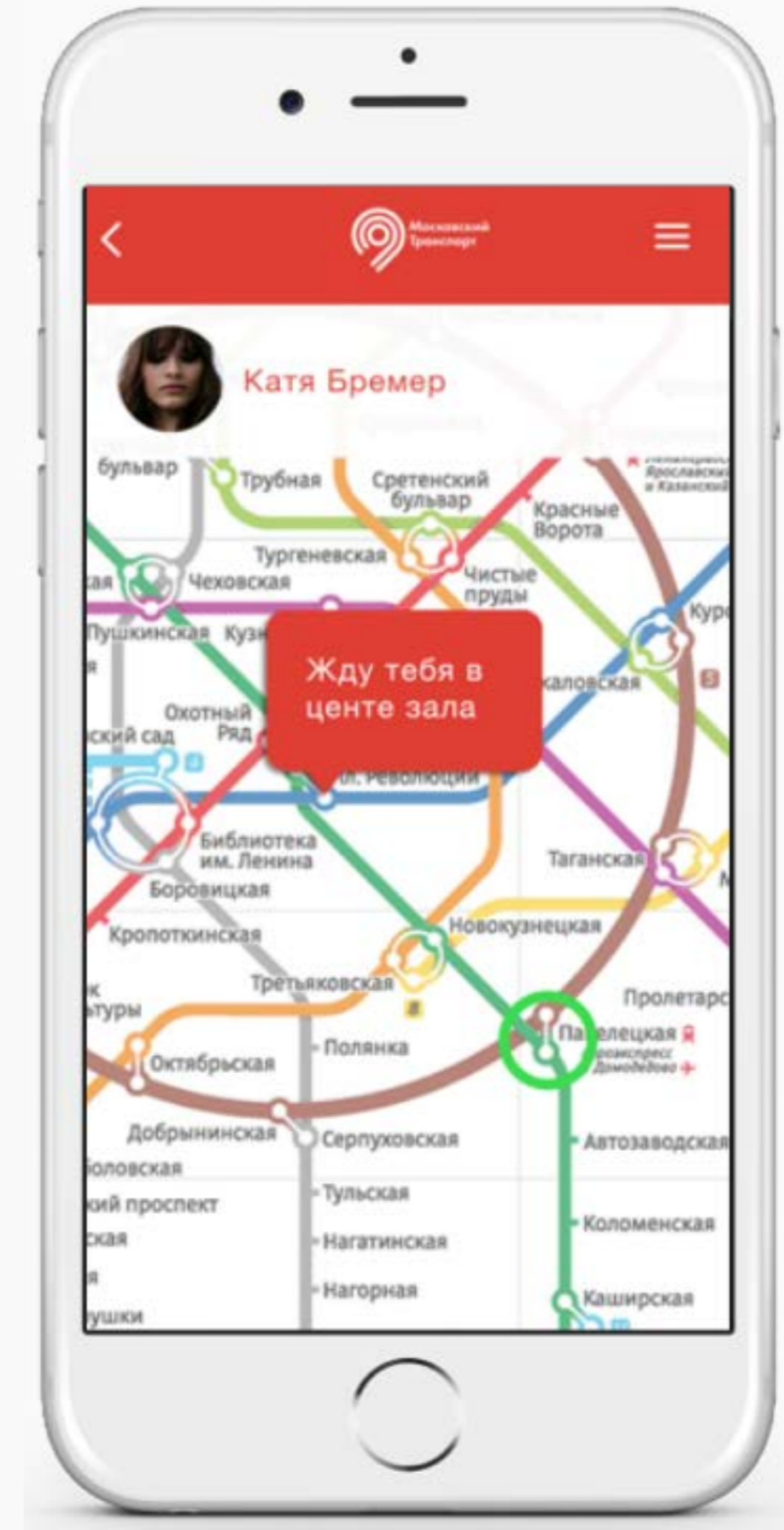
Overall project: navigation for passengers on 200 stations

Pilot project: 5000 sq.m. , 70 BLE beacons

Pilot project deployment time: 1 month

Pilot results:

- iOS informational demo app for the Metro.
- Demo of new technology and showcasing potential implementations
- Mobile platform is used to provide positioning on the map, routing and POI finding features like exits, platforms, ticket office etc.



# AUTOMOTIVE/LOGISTICS - TRACKING PLATFORM

Solution: Real-time car position tracking inside car repair service centre for a major premium brand

## Parameters:

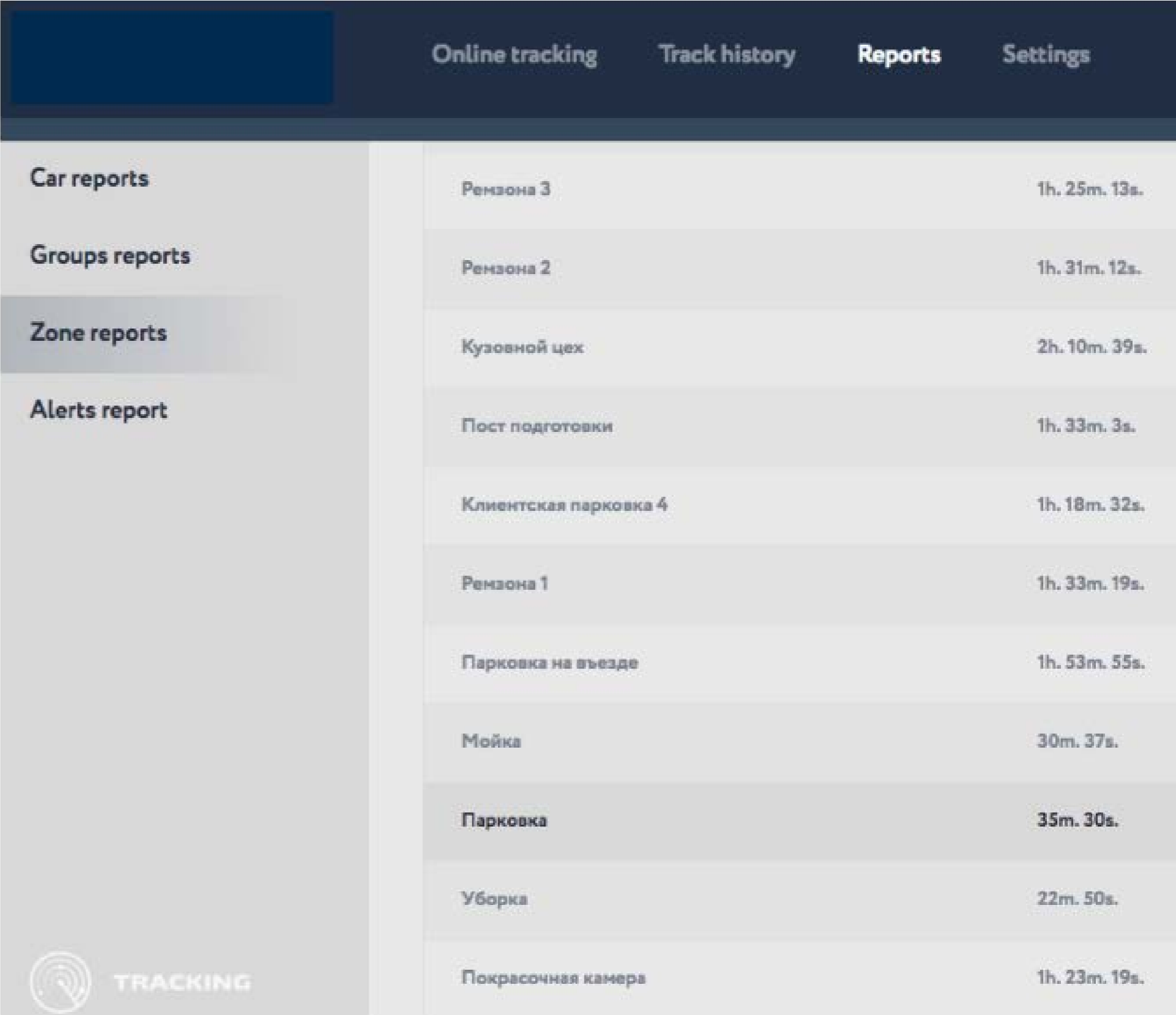
- 5K sq. m. total area with 200 parking slots and 10 working zones
- 33 IoT gateways deployed to track up to 150 branded BLE tags

## Features powered by Navigine:

- Real-time car location tracking on a floor plan
- Collection of historical movement for all cars
- Alerts for management on expiring service terms and anomalies
- Location reports by cars, time, zones, events

## Results

- Business intelligence tool to notify managers on expiring service terms and to track centre operation performance in real-time
- Reduction of time on standard operations - up to 30%



The screenshot displays the 'Reports' section of the Navigine tracking platform. The interface includes a dark blue header with navigation tabs: 'Online tracking', 'Track history', 'Reports', and 'Settings'. A sidebar on the left lists report categories: 'Car reports', 'Groups reports', 'Zone reports', and 'Alerts report'. The main content area shows a table with the following data:

Report Category	Zone/Event	Duration
Car reports	Ремзона 3	1h. 25m. 13s.
Groups reports	Ремзона 2	1h. 31m. 12s.
Zone reports	Кузовной цех	2h. 10m. 39s.
Alerts report	Пост подготовки	1h. 33m. 3s.
	Клиентская парковка 4	1h. 18m. 32s.
	Ремзона 1	1h. 33m. 19s.
	Парковка на въезде	1h. 53m. 55s.
	Мойка	30m. 37s.
	Парковка	35m. 30s.
	Уборка	22m. 50s.
	Покрасочная камера	1h. 23m. 19s.

The bottom left corner of the interface features a 'TRACKING' logo with a circular icon.

# Factories case staff tracking in dangerous areas

Solution: SDK for mobile application for staff navigation at the power plant / electricity station

## Parameters:

- 20k sq m, multiple floor harsh RF environment
- Wi-Fi, BLE, IoT navigation inside «smart» helmet

## Features powered by Navigine:

- Staff tracking in dangerous areas
- Real-time monitoring of some operational process in the factory
- Task scheduling

## Results

- Safety level improvement
- Incident reaction time decreased



## Chip maker case

# Precise IMU based navigation for autonomous cars

Solution: Navigation algorithms for autonomous navigation

Parameters:

- 1 deg/hour tactical grade MEMS IMU
- GPS (initialize), ODO, IMU data fusion

Features powered by Navigine:

- Kalman filter based aided realtime navigation
- Device design
- Evaluation testbed

Results:

- 10 m circle error after 10 min of driving without map matching (realtime mode)





# Indoor navigation and geodata collection (MAU 50 M)

Solution: SDK for mobile application for the large mobile app ecosystem

Parameters:

- 50M+ total install of mobile apps
- Wi-Fi, BLE, IoT support

Features powered by Navigine:

- Navigation and Wayfinding
- Real-time foot traffic analytics
- Offline visits-who offline store after watching online ad

Results

- Significant improvement of indoor geodata collection
- Customer loyalty
- Analytic on retail store visits

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Navigine