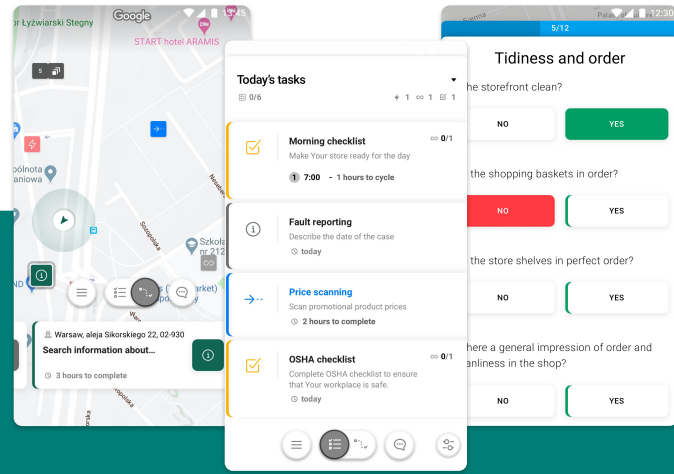


# ROUTE AND TIME OPTIMISATION



Together with scientists from Poland and USA within the project co-financed by the National Centre for Research and Development we were the first to develop heuristics and create a tool (software) for solving problems of the Multi-depot technician routing problem with task stacking class.

## Route optimisation based on:

- Locations of start and end points (users can start routes from different locations)
- Distances between locations
- Time required to complete the route
- Availability of users
- Type of tasks to be performed - a definite advantage in the case of a team with different competences and an extensive scope of work

## Characteristics

The model considers all of the following features when optimising routes and task assignments:

- Multiple task execution locations
- Multiple start locations
- Multi-day time horizon
- Multiple task types per location
- Multiple task types assigned to users
- Considering users' knowledge of task execution locations
- Optimisation of costs of contractual penalties for delays or failure to complete tasks (possibility to postpone tasks to the next day if there are not enough users)

## Time optimisation

It includes the possibility of assigning individual values to specific characteristics for task types, locations and users:

- Time needed to perform a given activity
- Time needed to reach location (does not include real-time traffic)
- Preparation time on site (e.g. registration, preparation)
- Time after completion (e.g. cleaning, packing)
- User experience at the location
- User experience at the task

## Additional possibilities

The route optimisation model is integrated with TakeTask system for assigning, executing and verifying large-scale tasks across multiple locations simultaneously for any industry. Users can quickly create and distribute tasks, as well as report on their completion and receive real-time feedback.

## Features



GPS location



Timestamps



Signature capture



Built-in OCR



SMS and voice bot



EAN and QR code scanner



Dynamic content



Pictures, videos, sound recordings



Integrated image recognition



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