Digital games and the UrbanSCOPE tool

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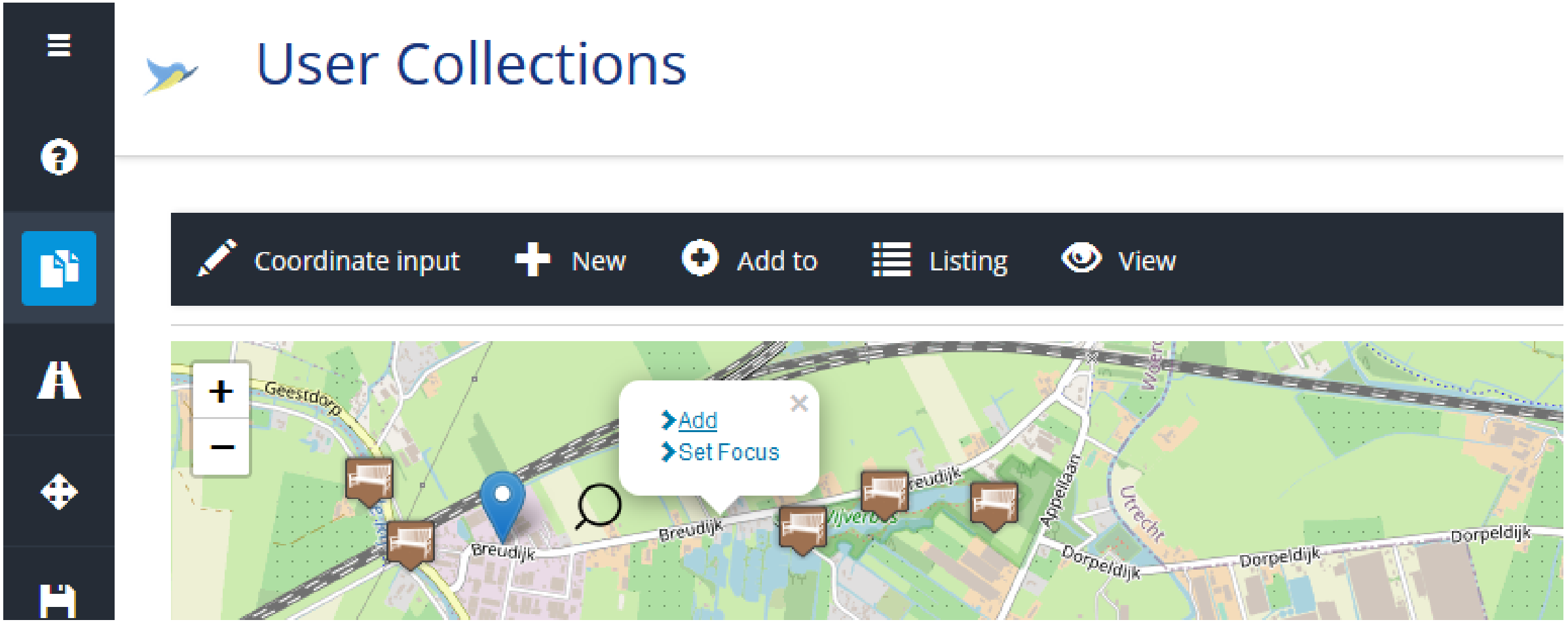
UrbanSCOPE Tool

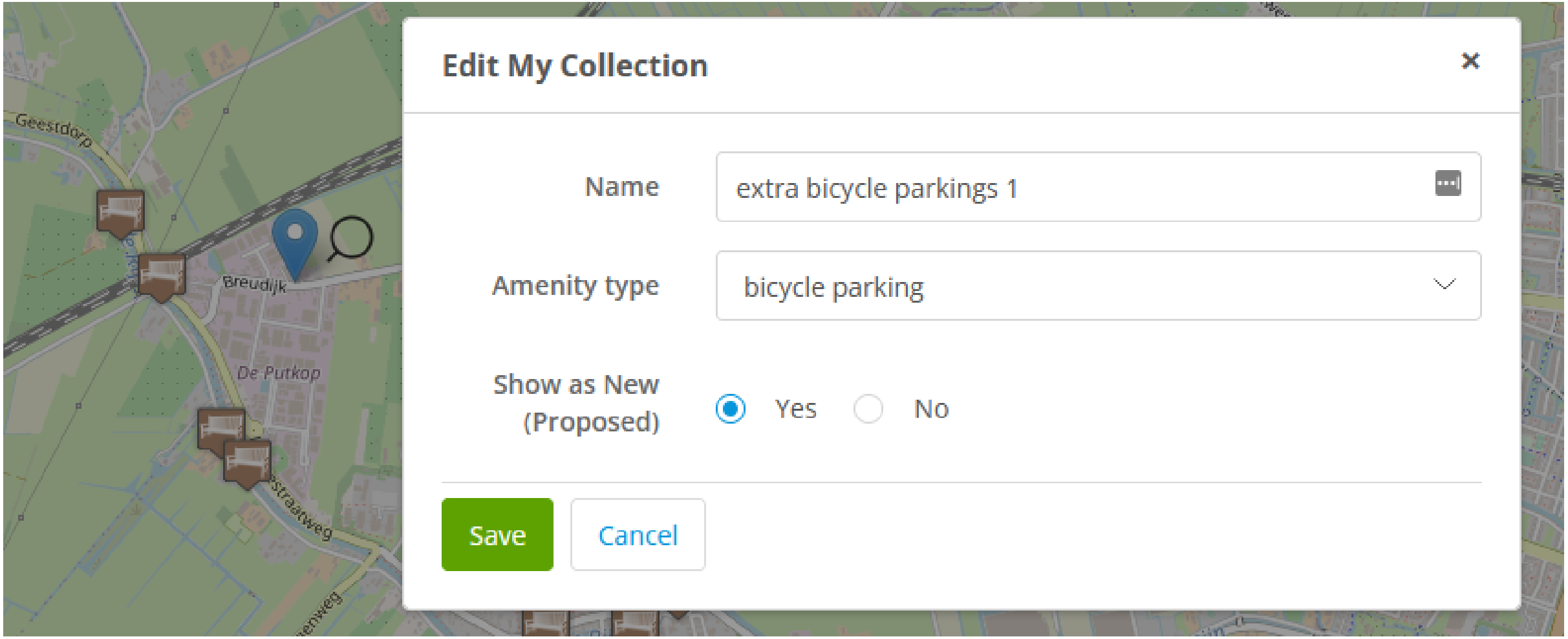
- Sustainable Urban Mobility Planning tool
- Explore scenarios
- Effect of extra facilities on route planning

- Benches
- Bus stops
- Bike lanes
- Etc.

Collections of Facilities



Add Amenities



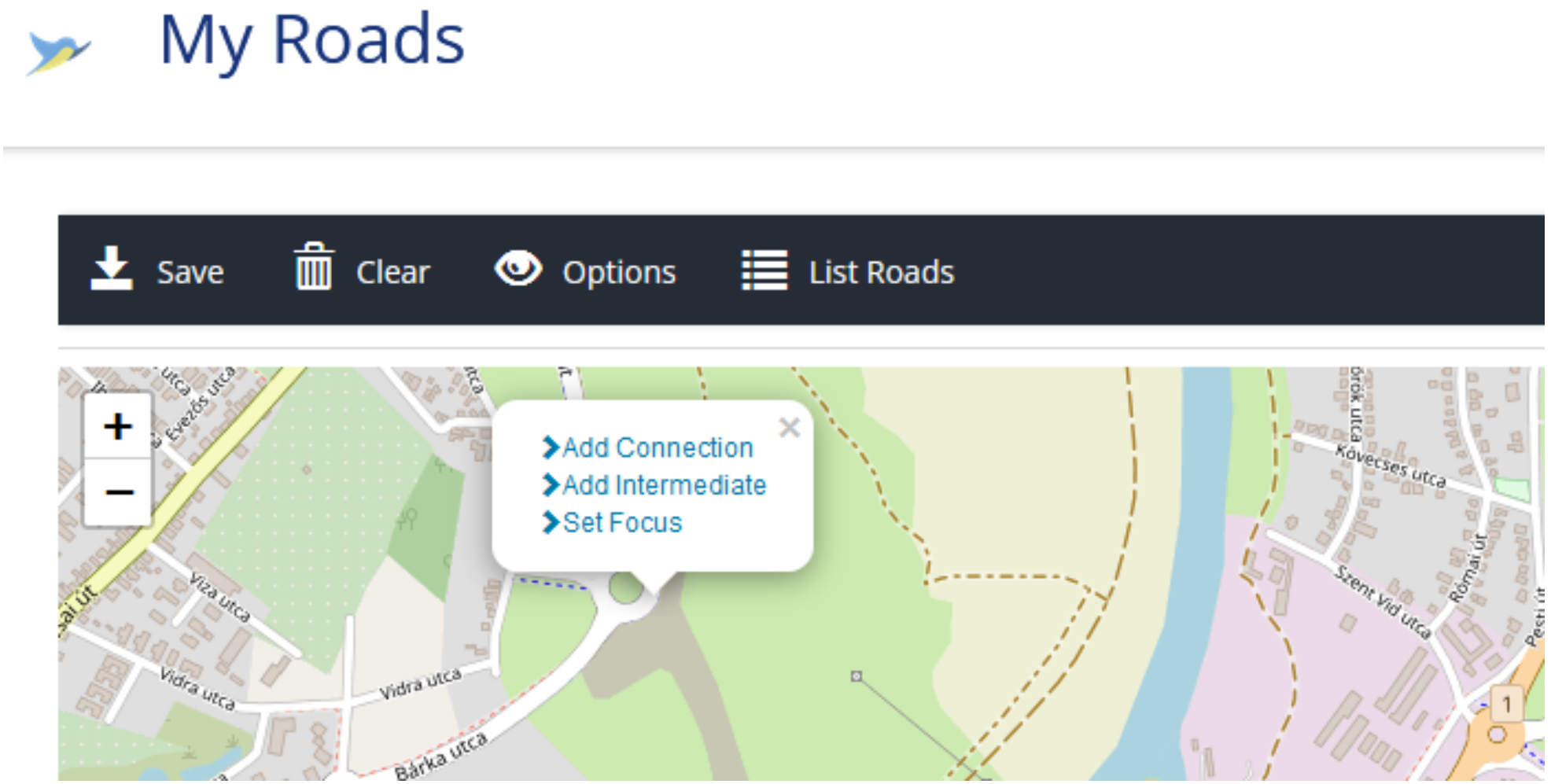
Amenities

Image_collection [Elements] ×

Add | Rename | Delete | Find usages | Move to other image collection | Export to file...

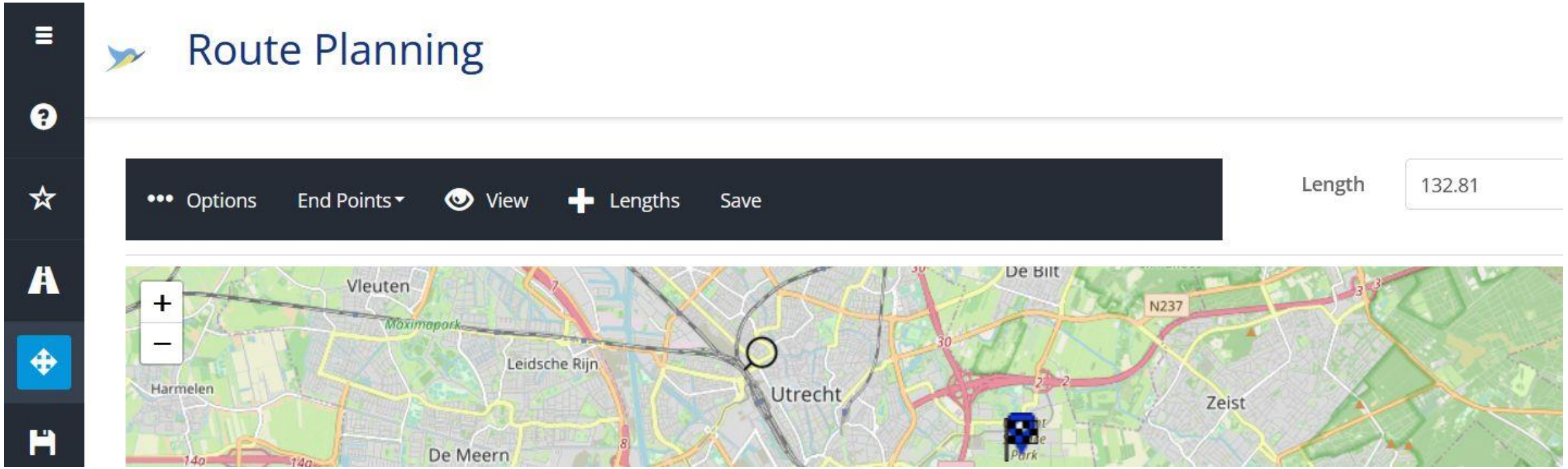
Image	Name	Format	Size
	bench	png	32x37
	bin_closed	png	32x32
	bus_stop	png	32x37
	tourist_info	png	32x32
	danger	png	24x24
	traffic_light	png	32x32
	cinema	png	32x37
	cycling	png	32x37
	drinkingwater	png	32x37
	ecarcharge	png	24x24
	police	png	32x37
	repair	png	32x37
	shoppingcenter	png	32x37
	sports	png	32x37
	streetlamp	png	32x37

Adding Roads



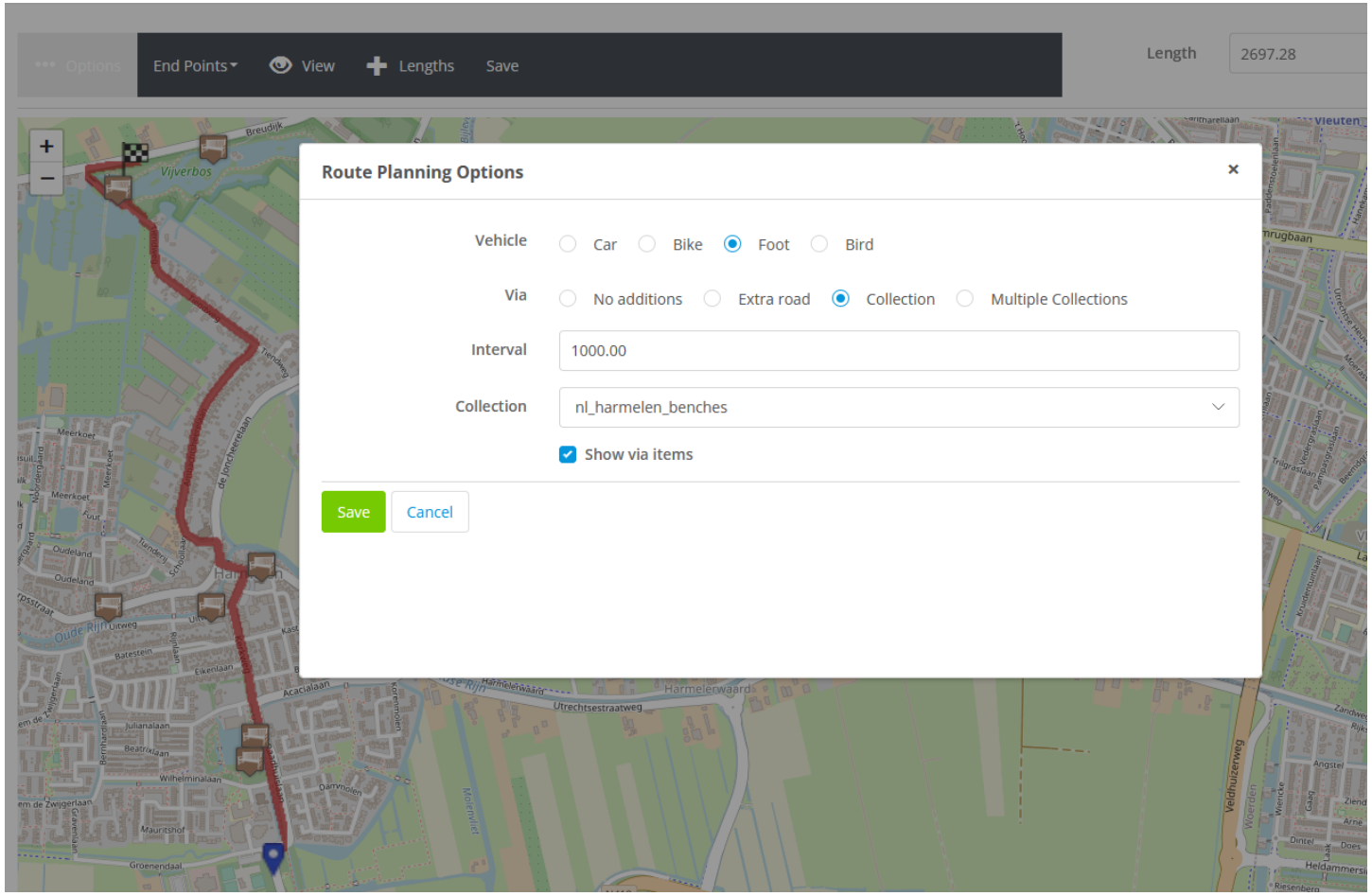
Route Planning

- From start to finish



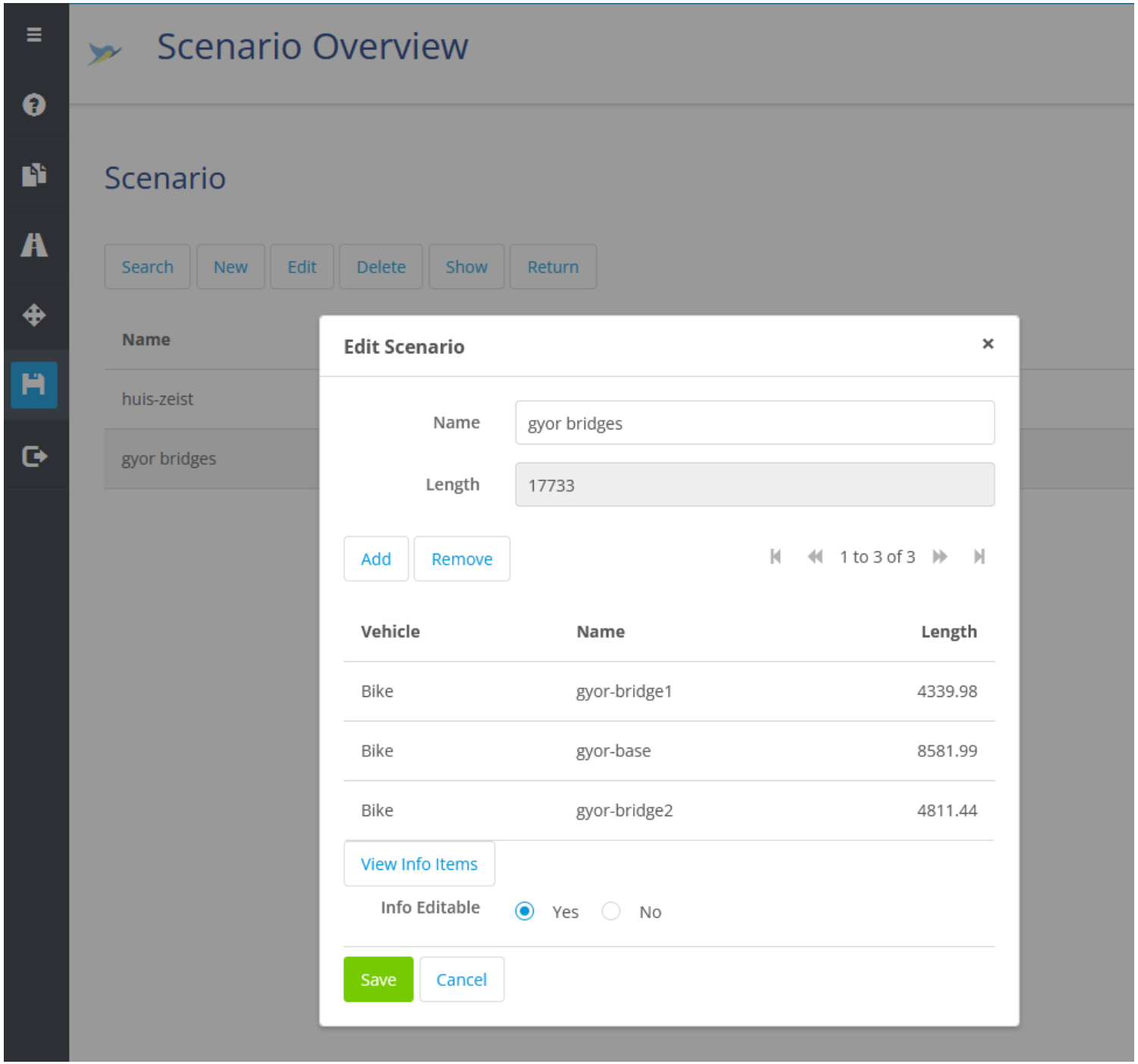
Route Planning

- Car, bike, foot, straight line
- Via collection of amenities with preferred interval
- Via extra roads

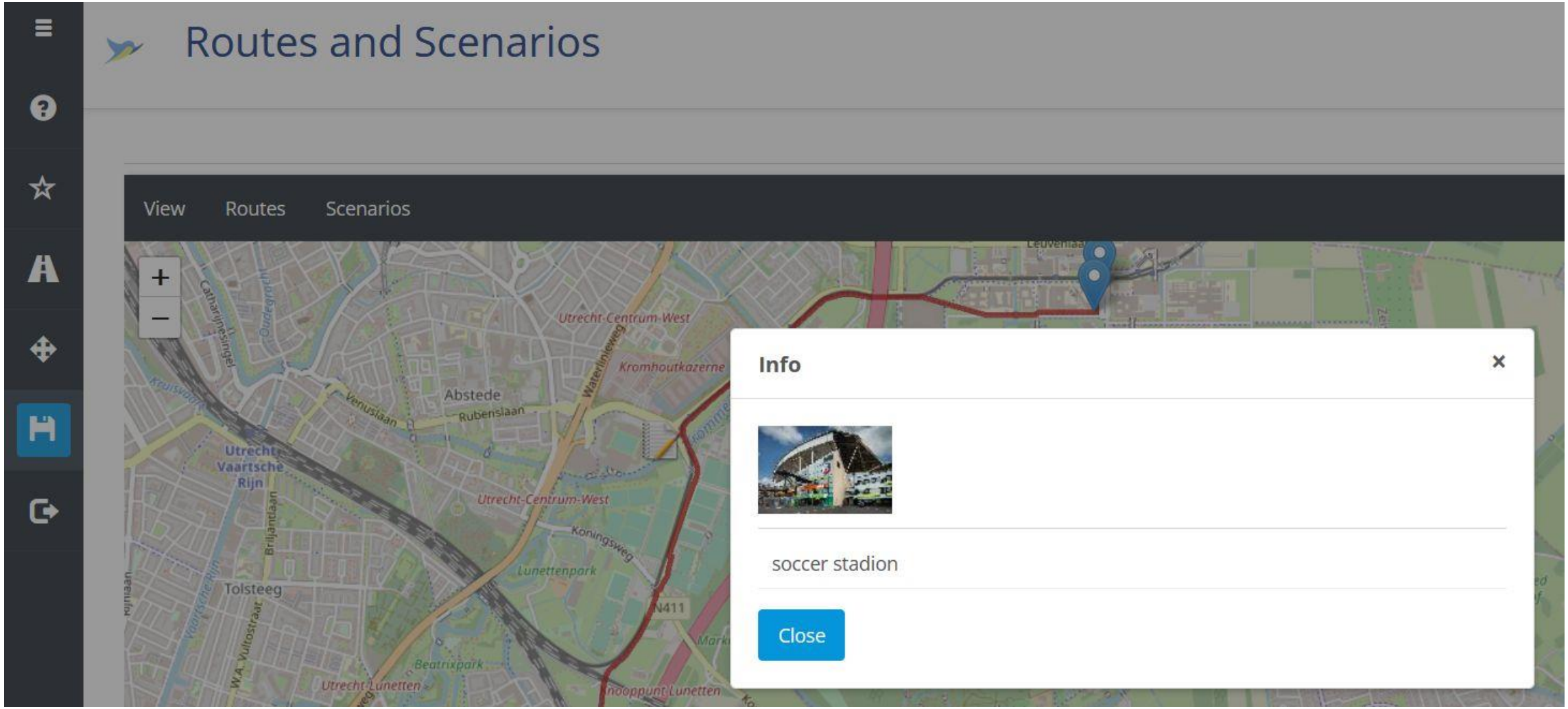


Scenarios

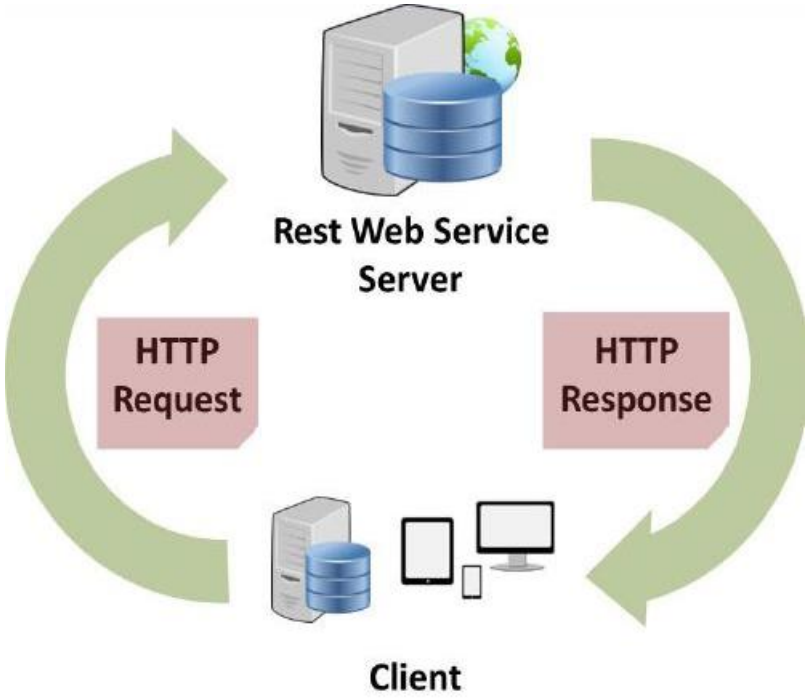
- Collection of routes: walk to bike parking, cycle to train station



Add Photos


Routes and Scenarios
View
Routes
Scenarios
Info
soccer stadion
Close
Utrecht-Centrum-West
Kromhoutkazerne
Abstede
Rubenslaan
Venuslaan
Utrecht Vaartsche Rijn
Utrecht-Centrum-West
Koningsweg
Lunettenpark
Tolsteeg
Briljantlaan
N411
Beatrixpark
Utrecht-Lunetten
Knooppunt Lunetten

Technical Implementation



Applications

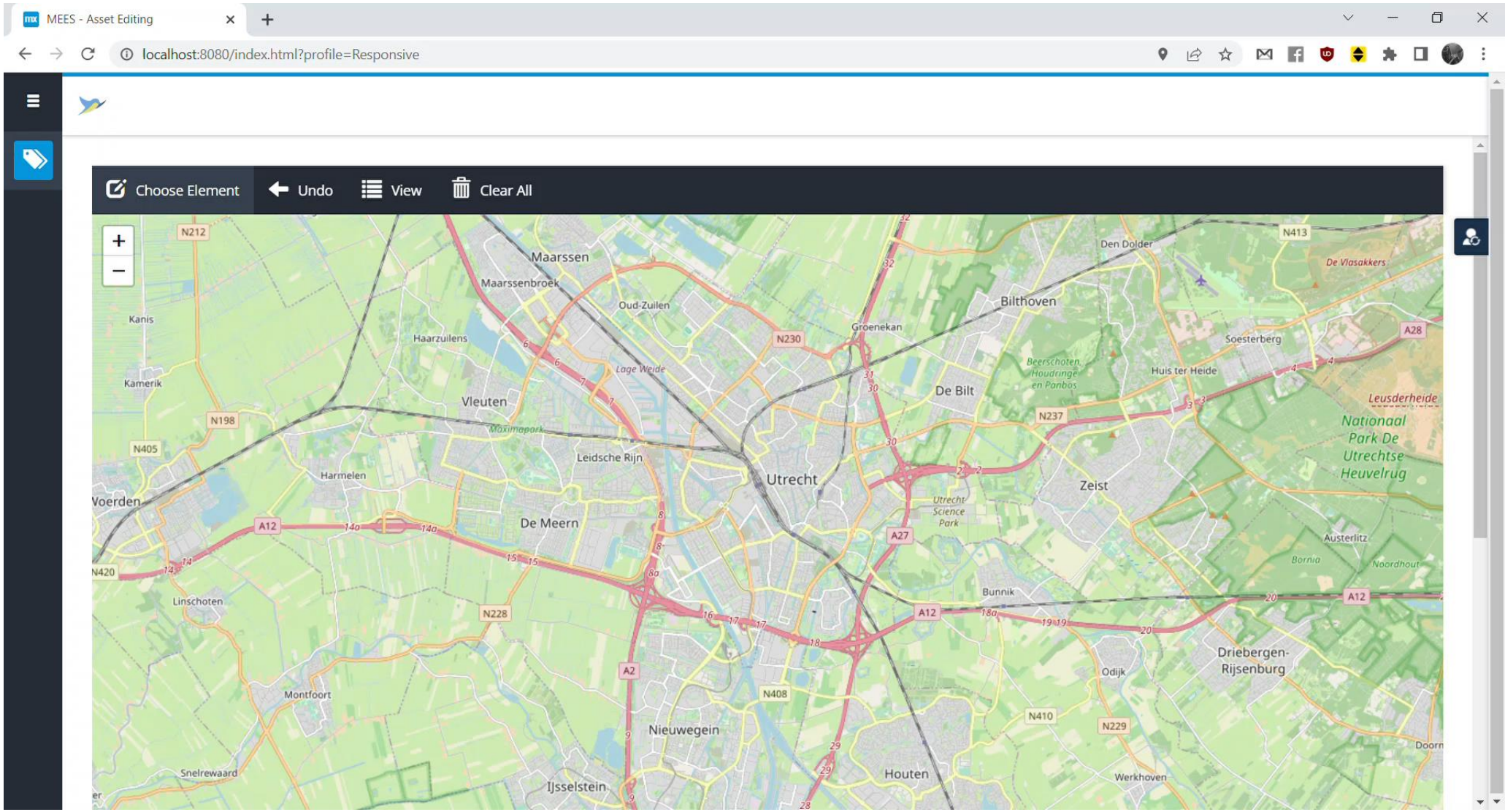
Urban Sustainable Mobility in focus: student education, community involvement and participative planning

Digital games and the UrbanSCOPE tool

- Teaching urban planning
- Competitions at schools
- Research tool user experience (UX)
- Location-based games

Location Specification

- Typing coordinates in text box
- Cursor or finger click on map
- GPS



Performance

- 25 participants
- Statistical analysis and UX questionnaire show:
- GPS input most accurate
- Cursor/finger click on map best UX

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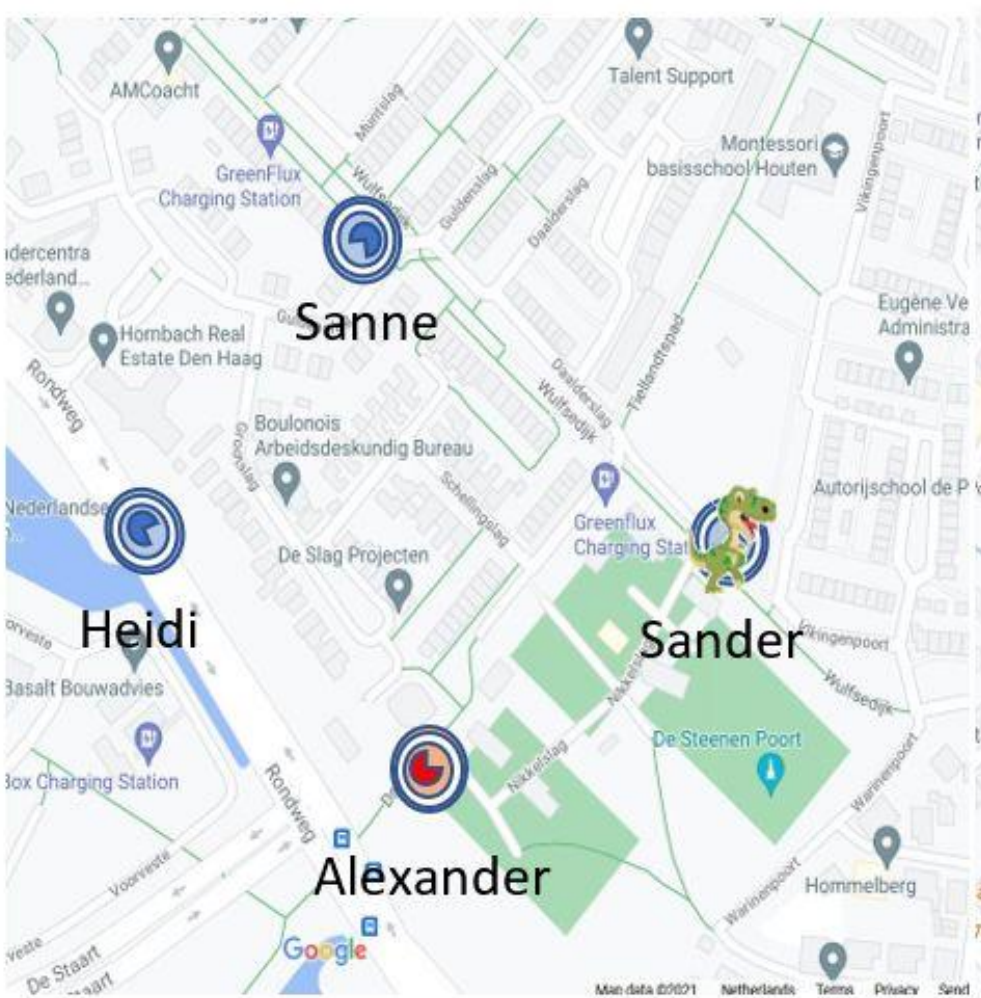
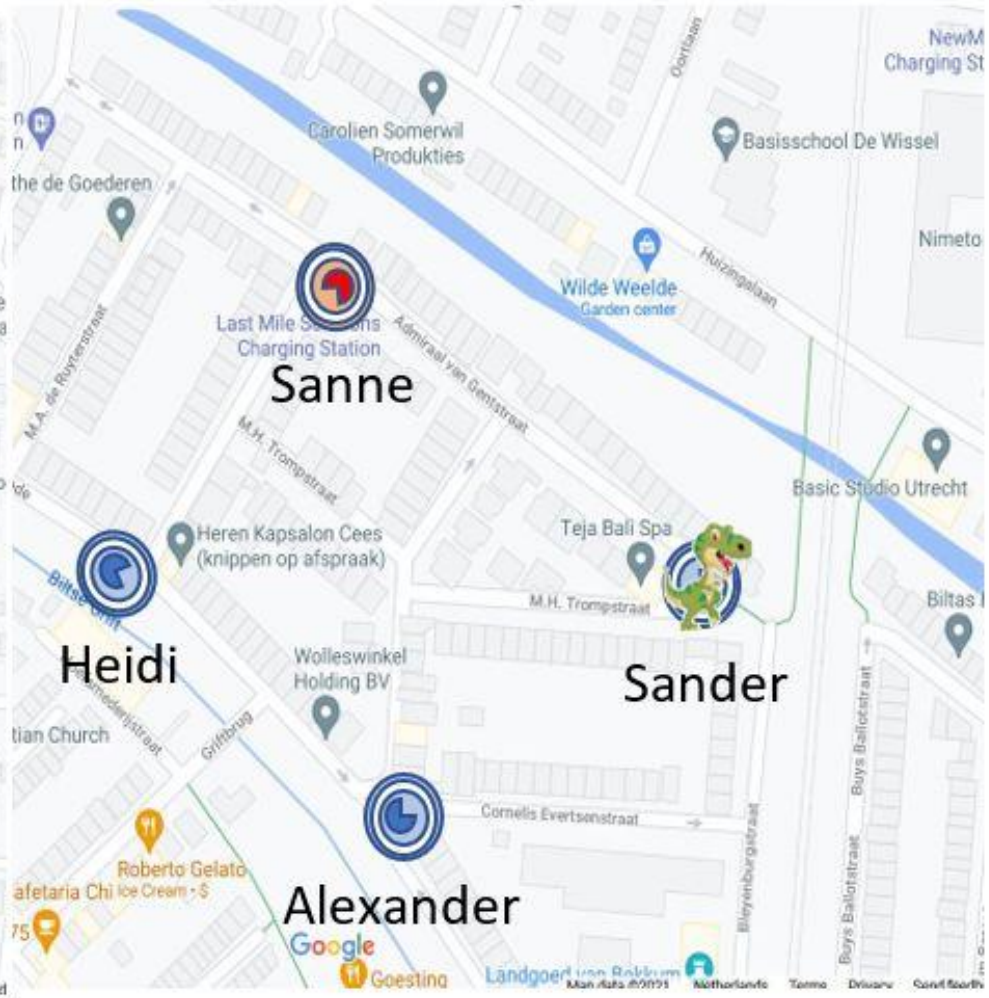
Location-Based Games



Player Alexander's view in the game

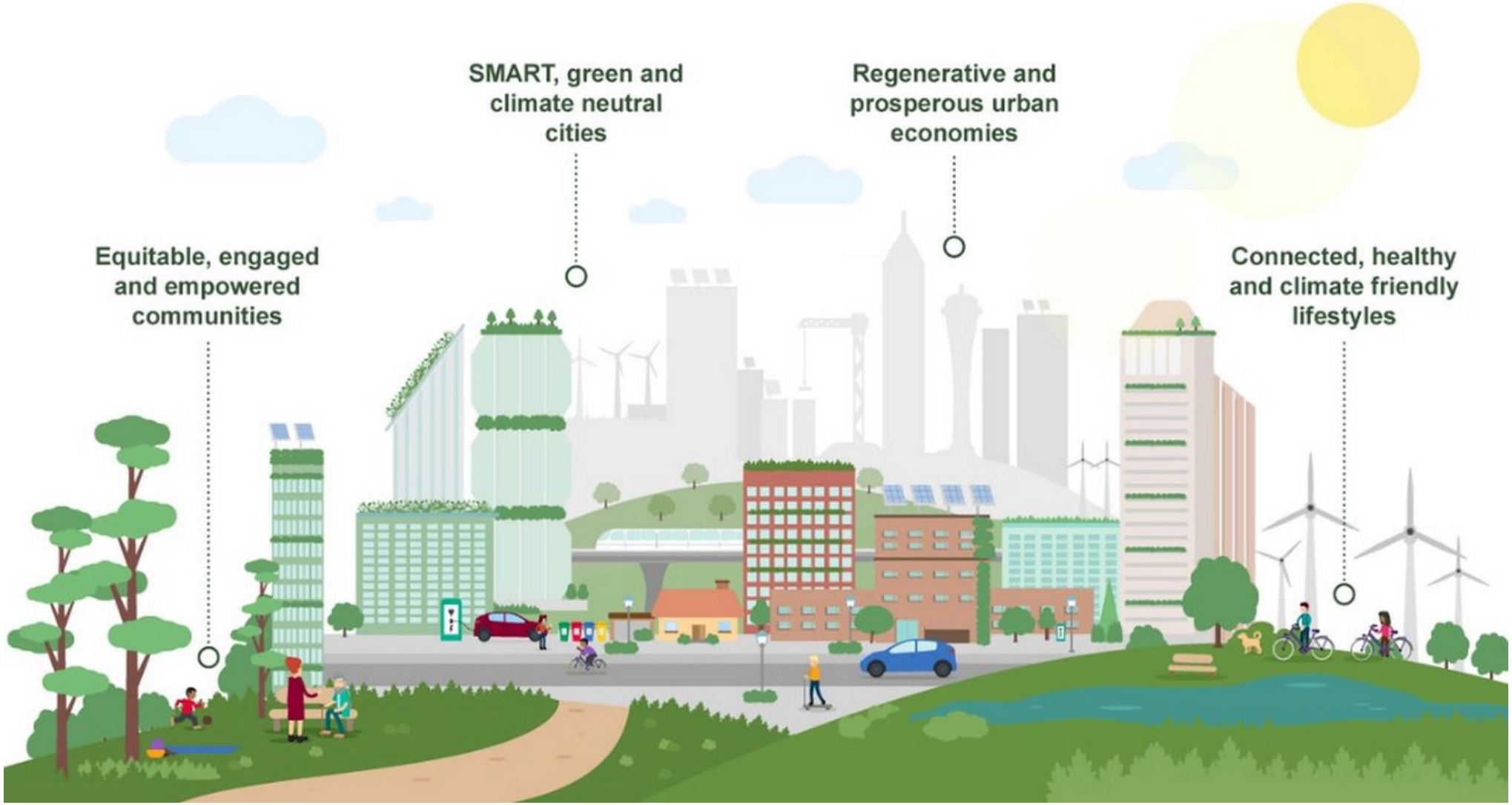


Player Sanne's view in the game

Game Mechanics

- Collecting: for a given object, place photos on map
- Surprise: Easter eggs/geocashing, find virtual object/asset
- Creation: create a route with a figure like a flower
- Gifting: when (virtual) object found, give away as act of kindness
- Place icons: place smiley, thumb, clapping on virtual amenities
- Awards: give points for placing amenities or new roads
- Leading others: team-based cooperative challenge
- Being the hero: plan the cleanest route to reduce pollution
- Gaining status: hand out limited-edition items
- Nurturing: perform activity, otherwise negative points

Thank You


SMART, green and climate neutral cities
Regenerative and prosperous urban economies
Equitable, engaged and empowered communities
Connected, healthy and climate friendly lifestyles