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MySpot
.Gent



HoGent



Technology

- HTML
- CSS
- JavaScript
- JQuery
- OpenLayers

Front End Framework:
jQuery Mobile

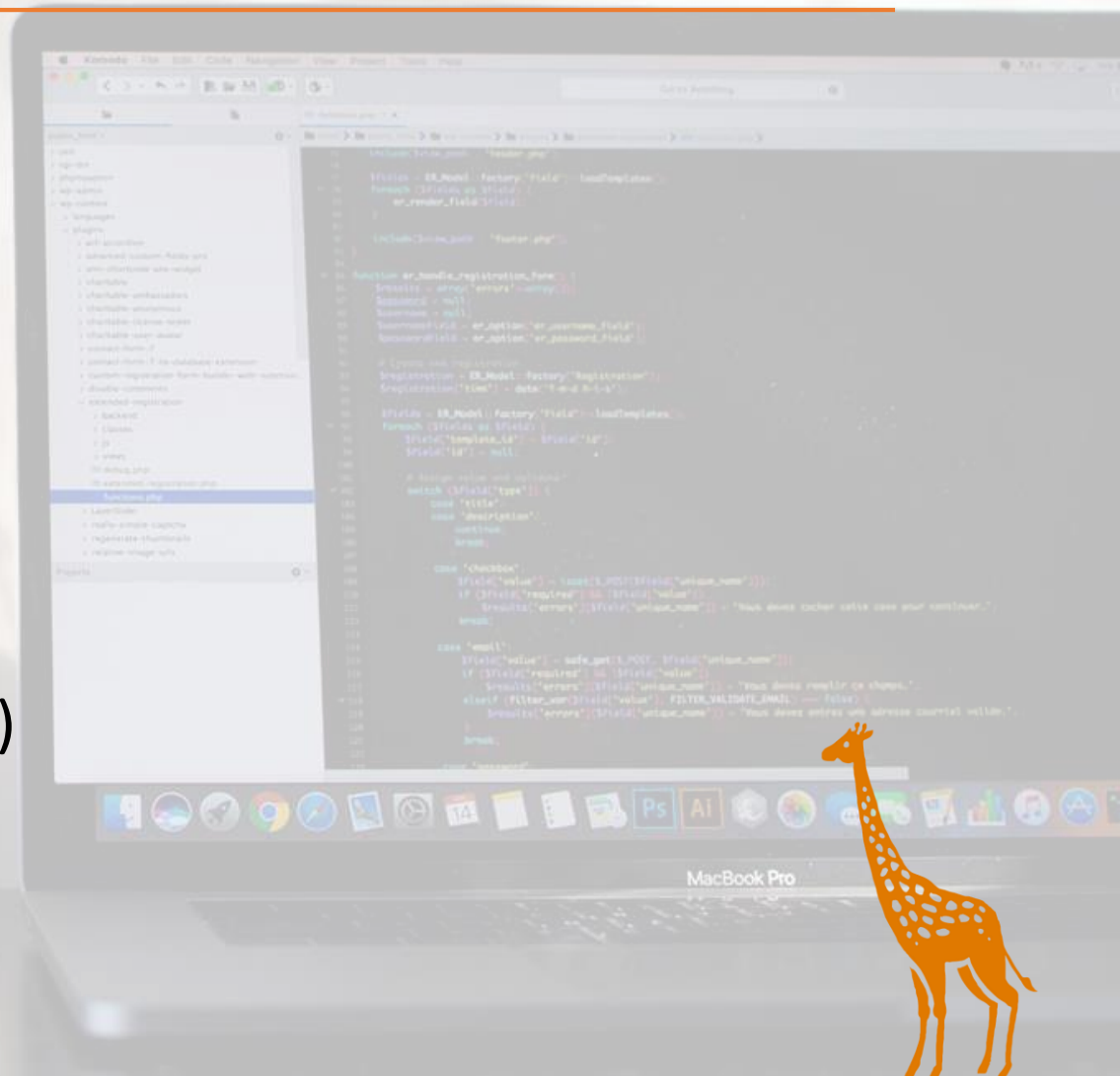
Back End Framework:
Django -GeoDjango

- PostgreSQL – PostGIS –
pgRouting
- Geoserver

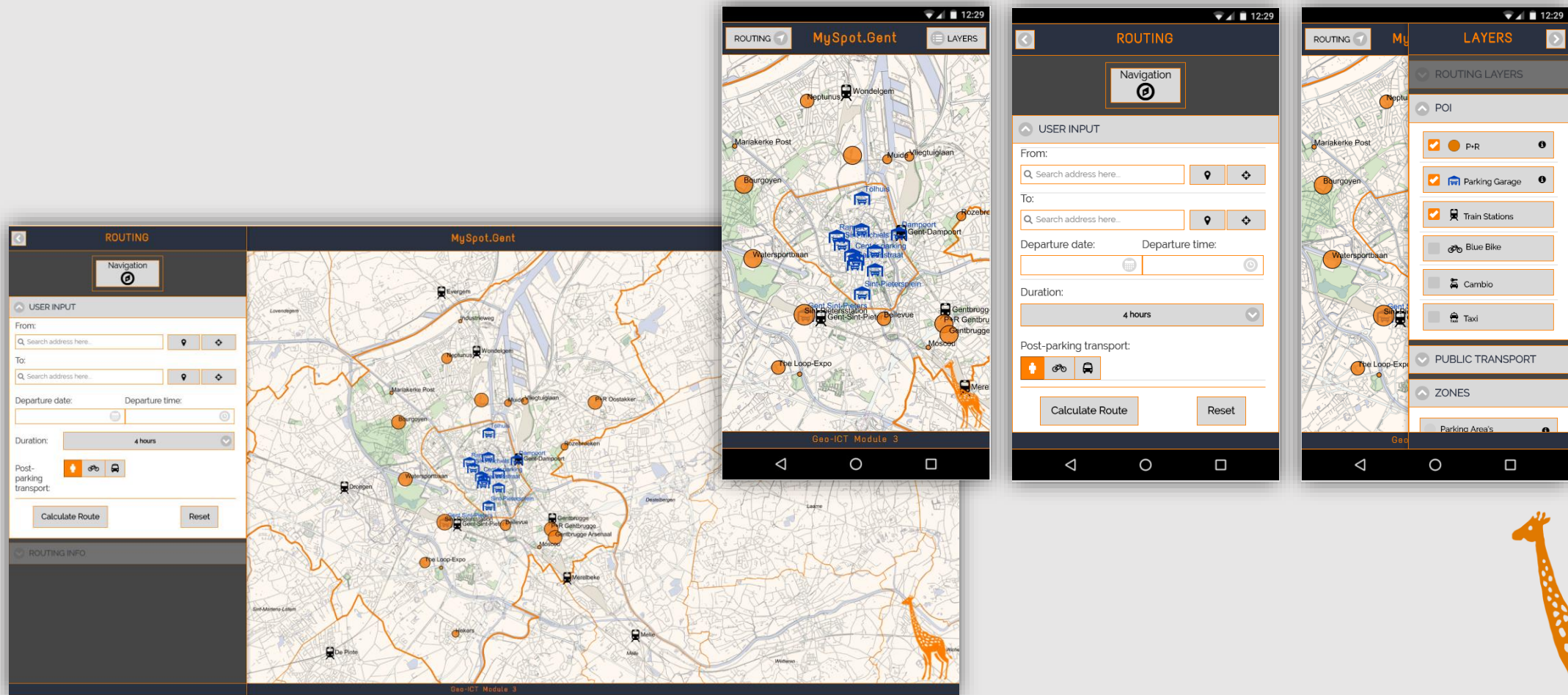


Web API / AJAX

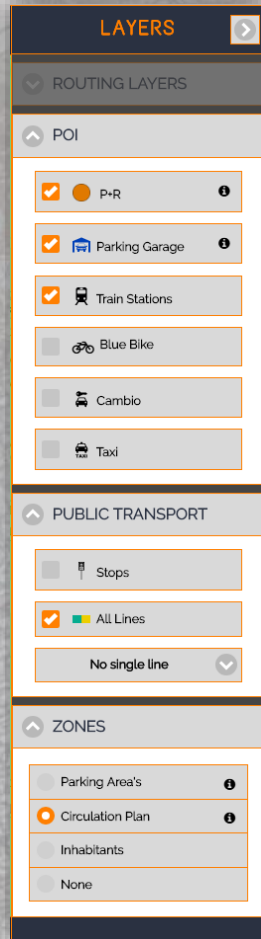
- Geopunt.suggestion
- Geopunt.location
- GeoLocation
- Real-Time parking occupation
- Geoserver (GetFeatureInfo)
- TomTom routing (car, pedestrian, cyclist)
- DeLijn routing (public transport)



User Interface / Design



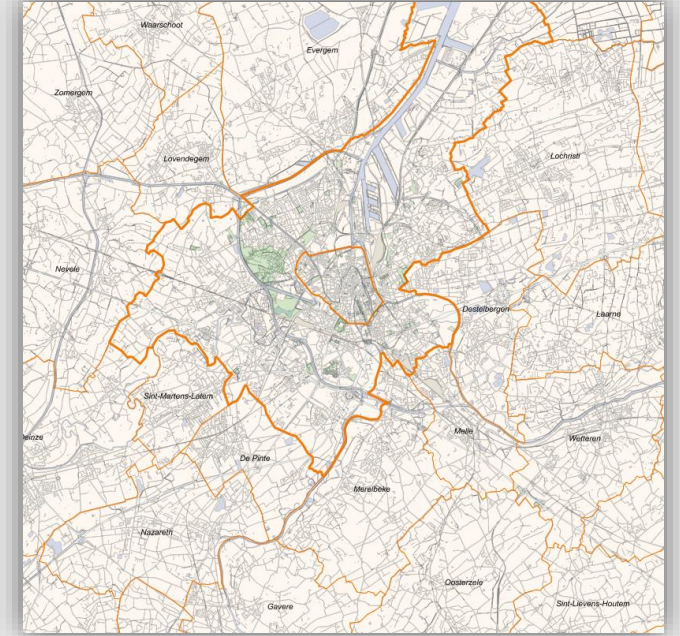
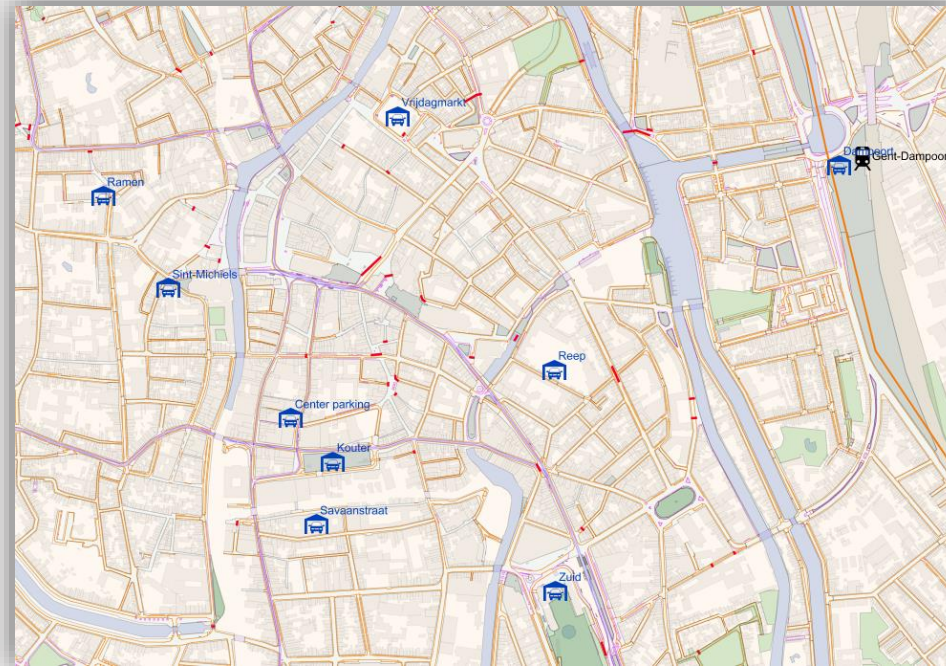
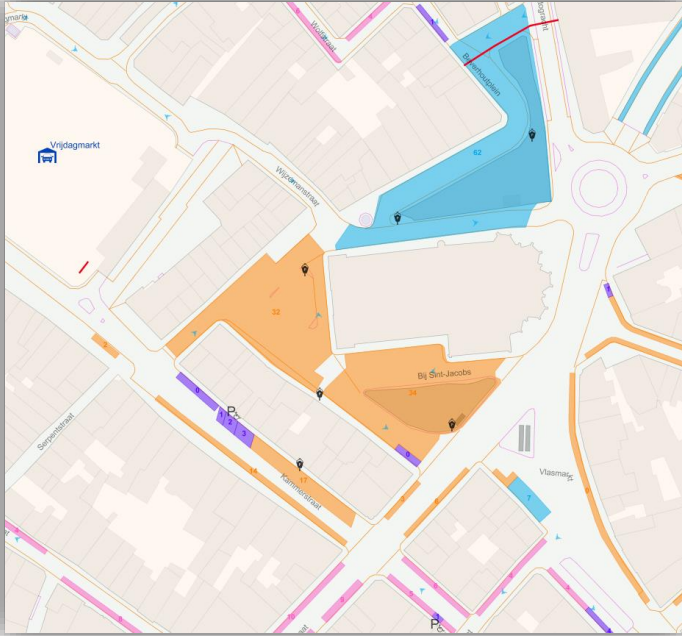
Map: Layers WMS



- Geoserver & Informatie Vlaanderen (aerial image)
- Open Data
- Source: PostGIS Database | Styling: SLD
- Tiled & Image
- 13 single layers
- 2 grouped layers
 - MySpot (12 layers)
 - Info (9 layers)

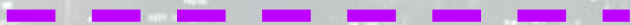
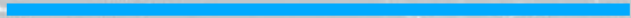


Map: WMS Examples



Map: Layers Vector

- Navigation
- Routing Linestrings
- Routing Labels (.svg)
- Location markers (.svg)




Map: Info

- Layers with info-mark
- GeoServer WMS GetFeatureInfo
- Web API: Real Time Parking occupation

Parking Garage Information


Name: Ramen
Address: Ramen 23 9000 Gent
Capacity: 280
Contact: Tel: 09 266 29 70
[Visit Parking Garage Website](#)

Current available parking spots: 27



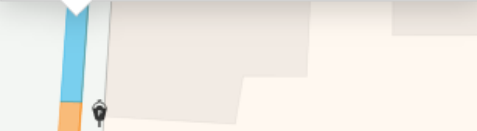
Park + Ride Information

Name: Watersportbaan
Address: Zuiderlaan 9000 Gent
Capacity: 230
Status: Operationeel tegen 03/04
[Visit PR Website](#)




Street Parking Information

Parking specification: Tijdsvenster
(Voorbehouden tijdens specifiek deel van de dag (meer dan 1 dag per week))
Capacity: 3
Remark: schooldagen 8u-9u30 15u30-16u30



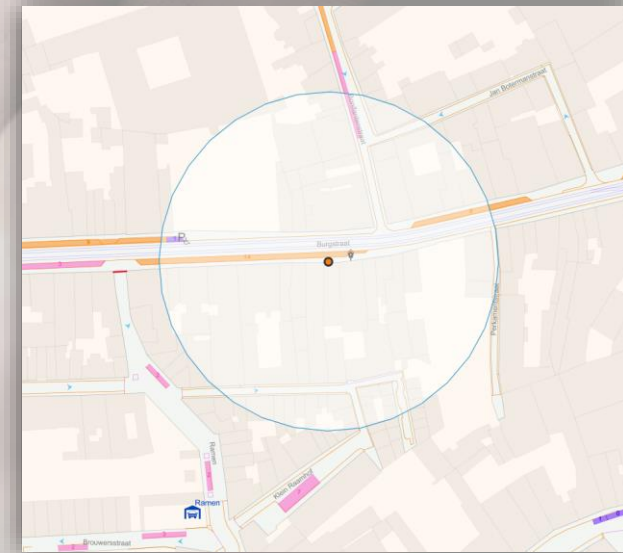
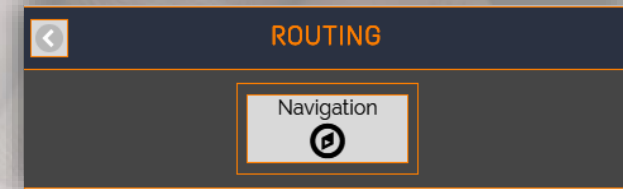
Parking Area Information

Zone: Gele zone
[Visit Parking Area](#)



Navigation




- Web API: GeoLocation
- Location point symbol
- Accuracy polygon
- Zoom to location
- Set zoom level
- Update on change position



User Input

- From – To location:
 1. Current position button
 2. Click on map button
 3. Autocomplete list search field
- Validate location
- Place marker on map
- Web API's:
 - Geopunt.location
 - Geopunt.suggestion
 - GeoLocation

From:

Drabstraat, Gent
Drabstraat, Kontich
Drabstraat, Mechelen
Drabstraat, Mortsels
Drabstraat, Wichelen



User input

- Departure date: datepicker
- Departure time: timepicker
- Duration: drop down list
- Post-parking transport: radio buttons
- Reset button:
 - Reset user input
 - Clear possible existing vector layers
- Calculate button:
 - Validate user input
 - Create Routing Object literal
 - Forward object to routing function

The 'USER INPUT' form contains the following fields and controls:

- From:** A search input field with placeholder text 'Search address here...', a location pin icon, and a swap icon.
- To:** A search input field with placeholder text 'Search address here...', a location pin icon, and a swap icon.
- Departure date:** A date picker field.
- Departure time:** A time picker field.
- Duration:** A dropdown menu currently showing '4 hours'.
- Post-parking transport:** Three radio buttons with icons for a person (selected), a bicycle, and a bus.
- Buttons:** 'Calculate Route' and 'Reset' buttons at the bottom.

The 'Departure date' date picker shows a calendar for the year 2017. The date 'Monday, June 26, 2017' is selected. The calendar grid shows the following dates:

Monday, June 26, 2017		
Apr	24	2015
May	25	2016
Jun	26	2017
Jul	27	2018

A 'Set Date' button is located at the bottom of the date picker.



Routing

- Web API's:
 - Routing TomTom
 - Routing De Lijn
 - Real time parking occupation

Fastest route: from A to Parking to B



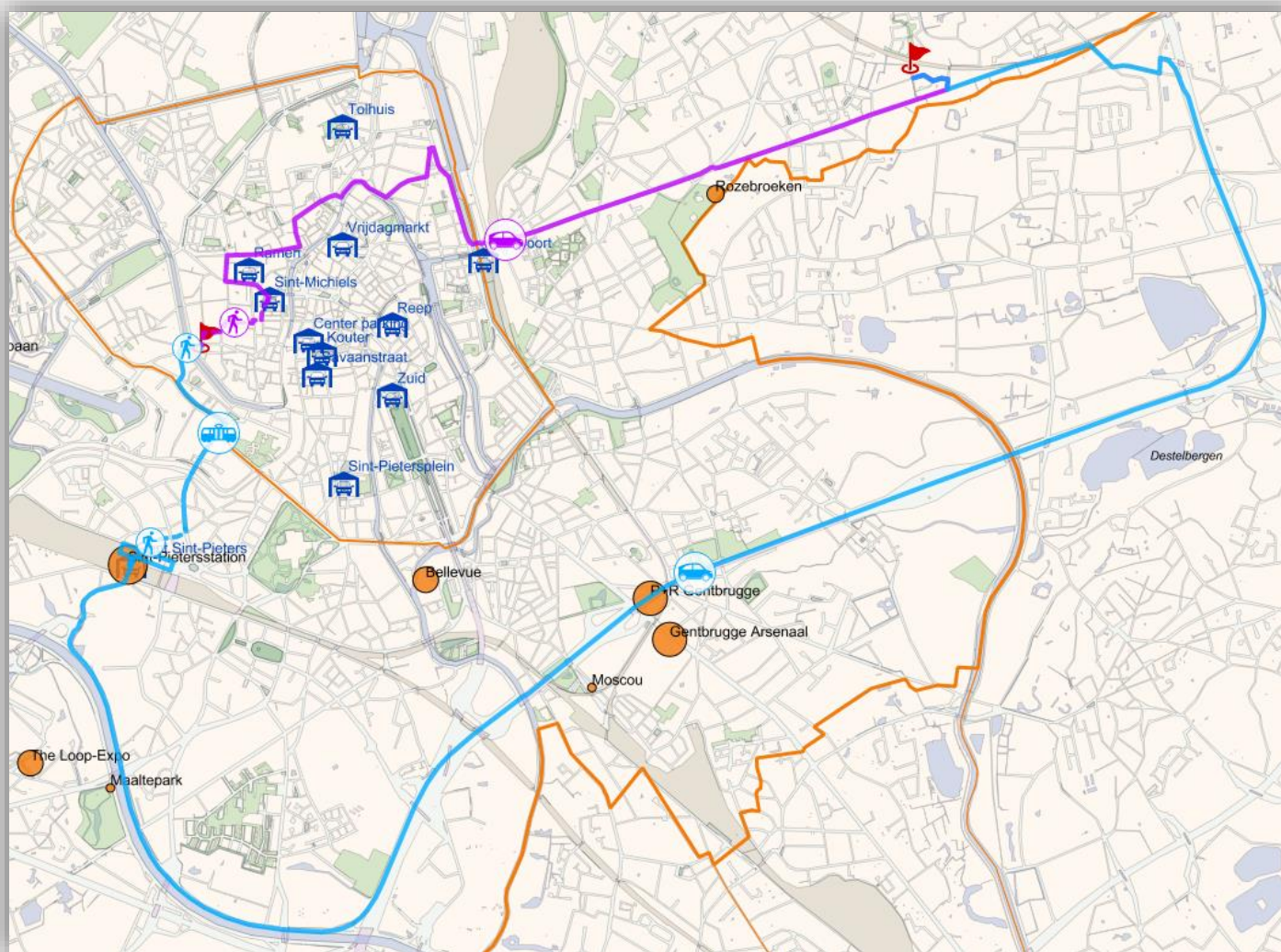
Routing

Routing for P+R and Parking Garage: Appending every step to routing object

- Find closest parking
- Routing to parking (car)
- Routing to end destination (walk – bike – public transport)
- Parse routing data
- GetFeatureInfo parking
- Get real time parking data
- Calculate parking cost
- Create vector layers
- Create routing info



Routing: Vector output



Routing: Info output

ROUTING INFO

Park + Ride

Parking Garage

Parking Garage

Parking Info

Name: Ramen
Address: Ramen 23 9000 Gent
Capacity: 280
Contact: Tel.: 09 266 29 70
[Visit Parking Garage Website](#)

Current available parking spots: 40

Parking Cost

€ 750

Routing Specifications

Start 2017-06-26 16:13 h	Parking: 16:36 h	Arrival: 2017-06-26 17:10 h
Distance: 15.98 km	576 km	Total: 21.74 km
Duration: 00:22:39	00:34:00	Total: 00:57:00

Public Transport Info

Public Transport Info

Walk135 m

Start: 16:39 h
Ramen 23
9000 Gent

End: 16:42 h
Gent Poel

Bus3740 m

Start: 16:42 h
Gent Poel

End: 16:57 h
Mariakerke Post

Line Number: 3
Description: Gentbrugge Braemkasteel - Mariakerke Post

Walk30 m

Start: 16:57 h
Mariakerke Post

End: 16:58 h
Mariakerke Post

Wait0 m

Start: 16:58 h
Mariakerke Post

End: 17:02 h
Mariakerke Post

Bus1679 m

Start: 17:02 h
Mariakerke Post

End: 17:07 h
Mariakerke Verschansingstraat

Line Number: 9
Description: Gentbrugge Groeningewijk - Mariakerke Post

Walk180 m

Start: 17:07 h
Mariakerke Verschansingstraat

End: 17:10 h
Bevrijdingslaan 133
9000 Gent



Back end

WEB API / AJAX

DJANGO

POSTGIS

GEOSERVER

Front end

USER INPUT

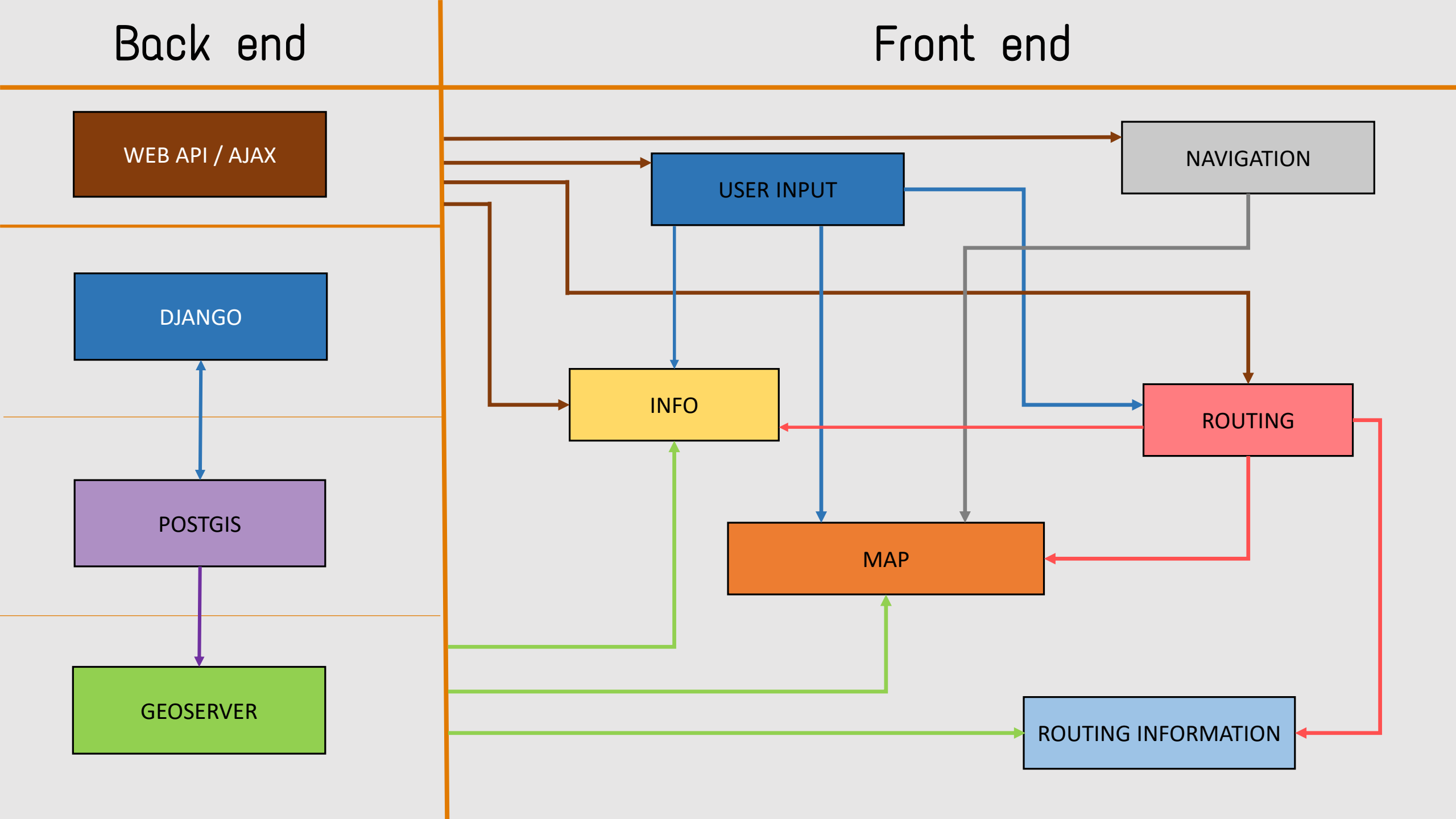
NAVIGATION

INFO

ROUTING

MAP

ROUTING INFORMATION



Future

- Make use of Django
 - One AJAX call to back end
 - Processing and routing on server
 - Routing with PostGIS - pgRouting
 - Return Object Literal routing object
- Deployment





Thank You!



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