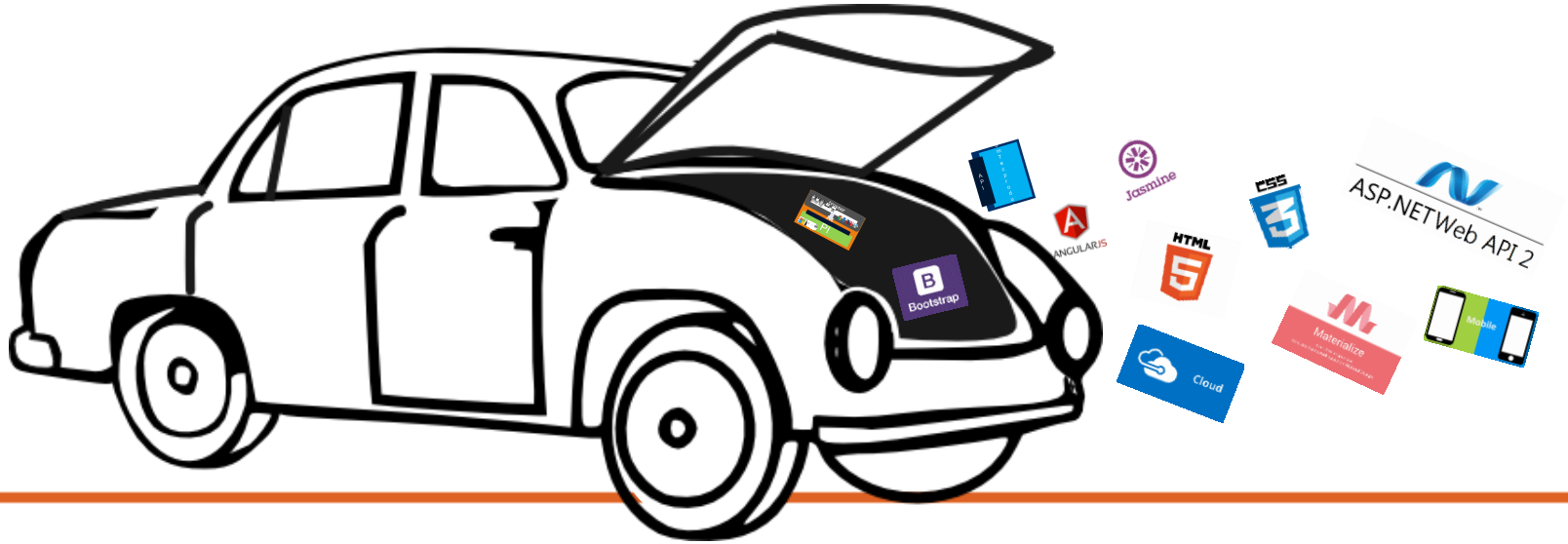
ORTEC
OPTIMIZE YOUR WORLD

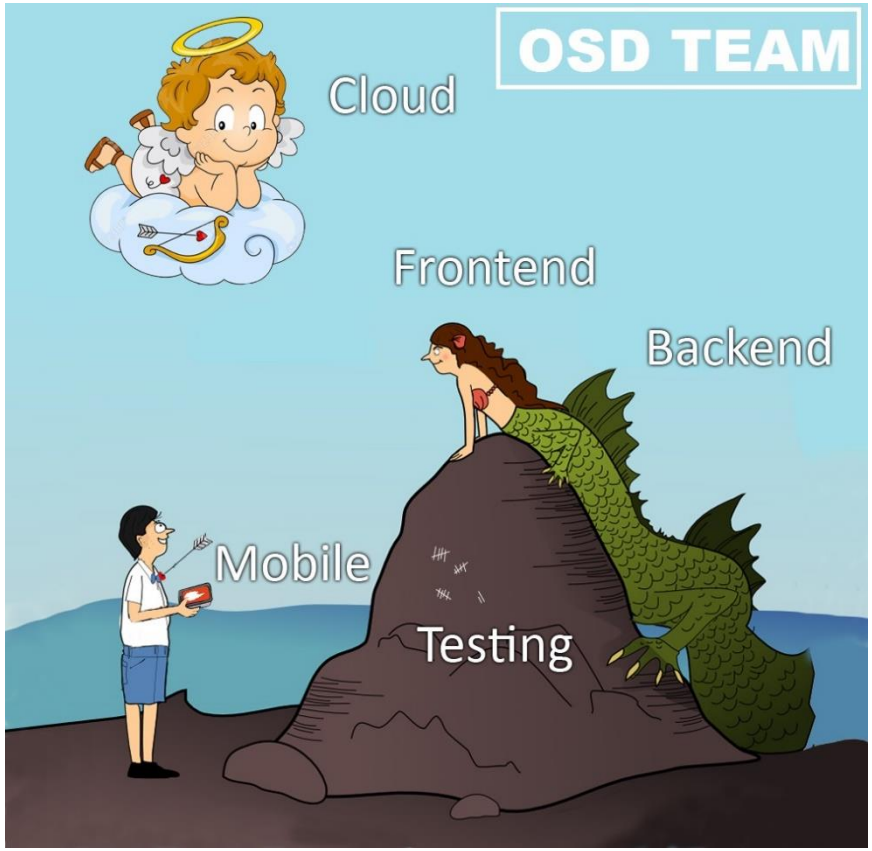


OSD – Under the hood

Flavia Obreja, Alexandru Popescu

OSD (ORTEC Software Development) – Under the hood

- Teams
- Solutions
- Technologies
- Architecture
- Development process
- Projects



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Solutions

Vehicle Routing

Workforce Scheduling

Service Planning

Load Building and Refill Forecasting

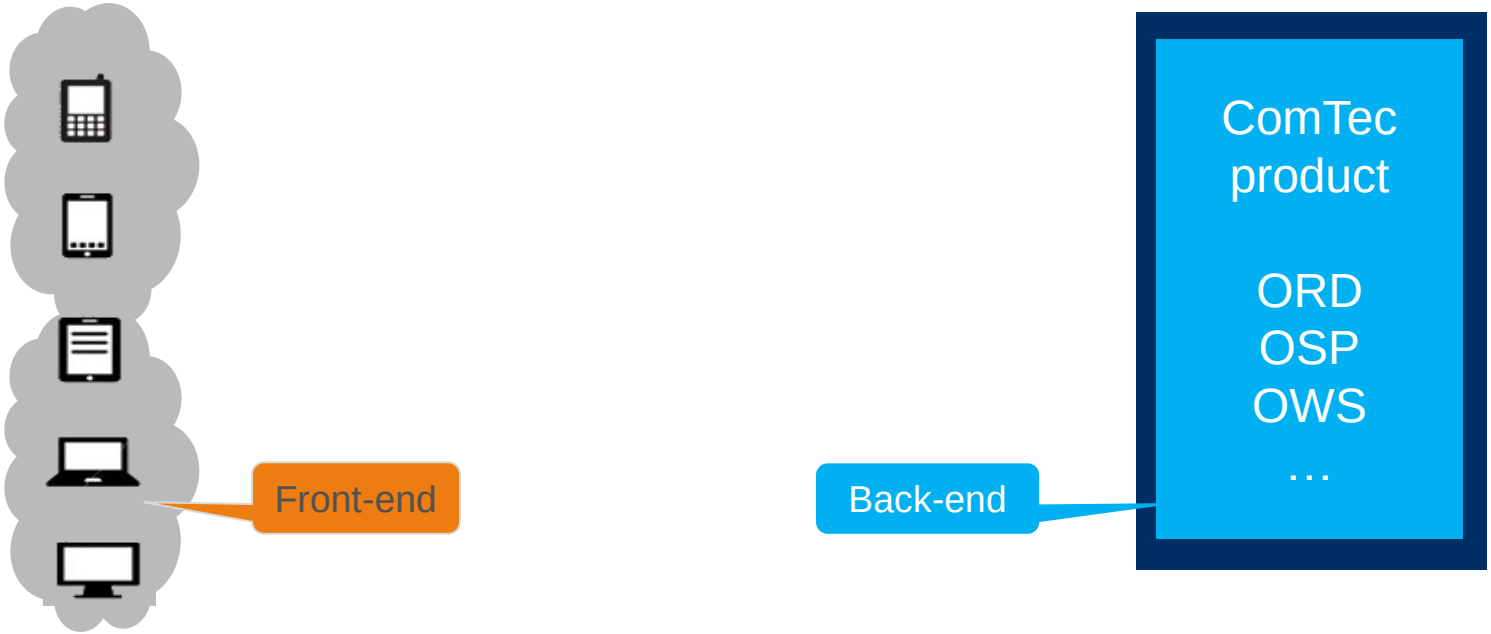
Technology Stack

- Microsoft technologies
- Use industry standard technologies
  - Bootstrap - Cross-browser/device support
  - AngularJS 1.6
  - Web API 2
  - Xamarin
  - HockeyApp
  - Firebase
  - Azure
  - PowerShell
  - T-SQL

General Tools & Sources

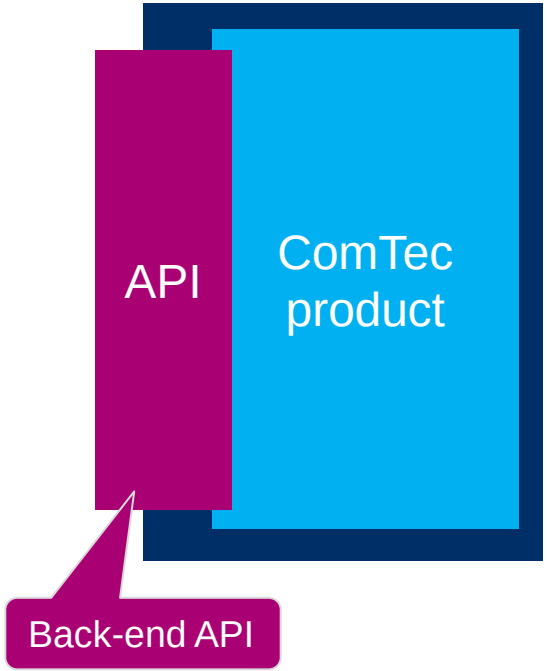
PERFORCE

Architecture

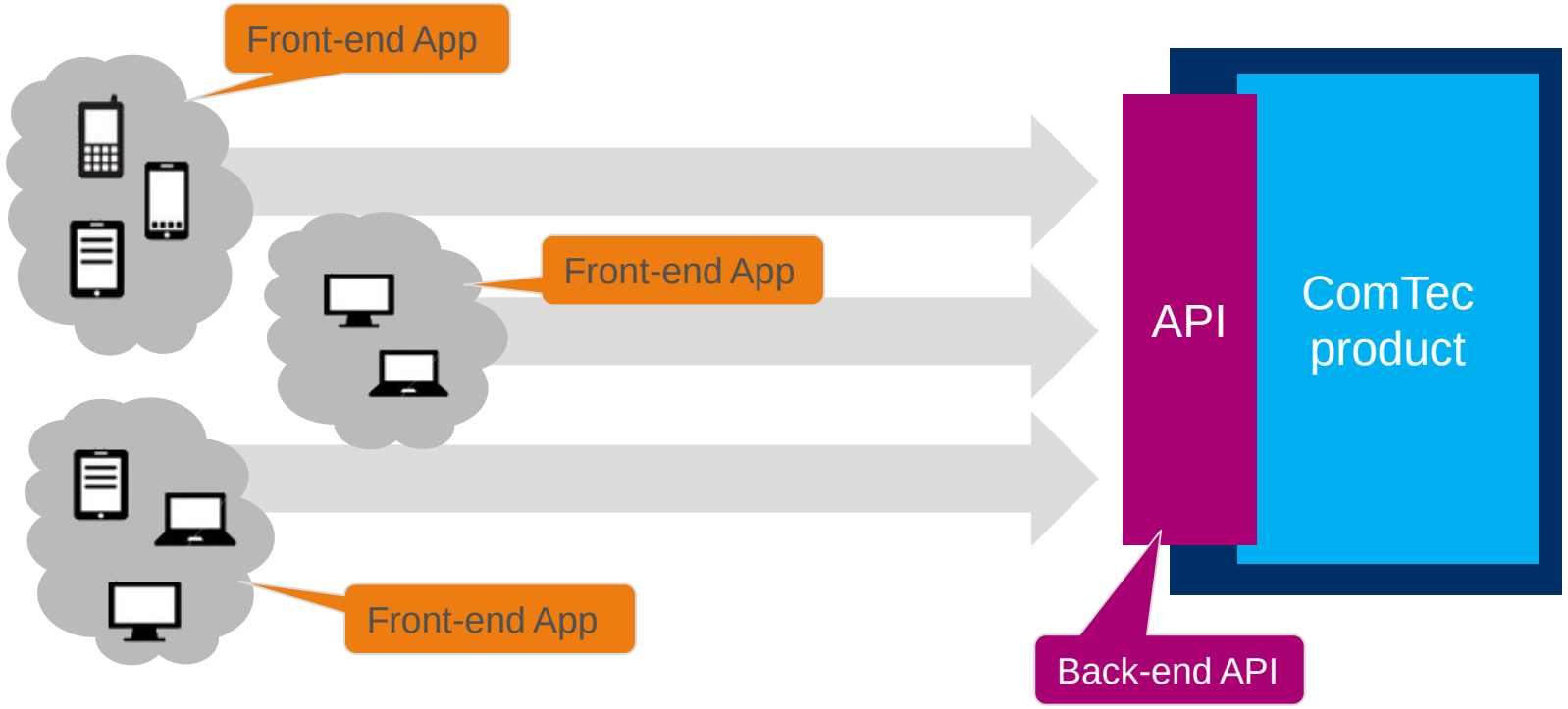


Architecture – Back-end API

- To be used by front-end apps
- Well defined
- Versioned
- Highly scalable
- Secure
- Built using well known standards
  - HTTP
  - REST
  - OAuth2
- External interface of product

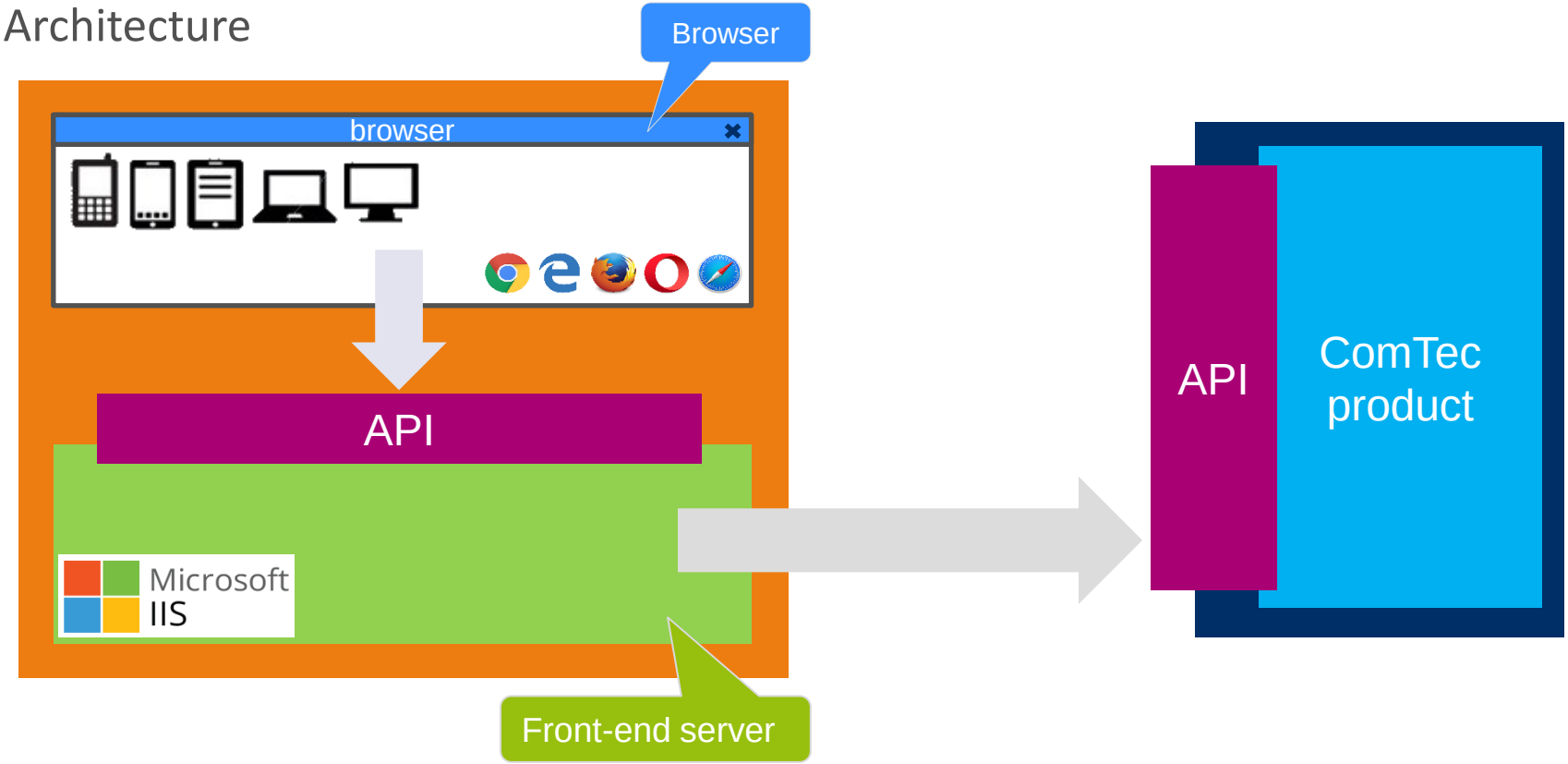


Architecture



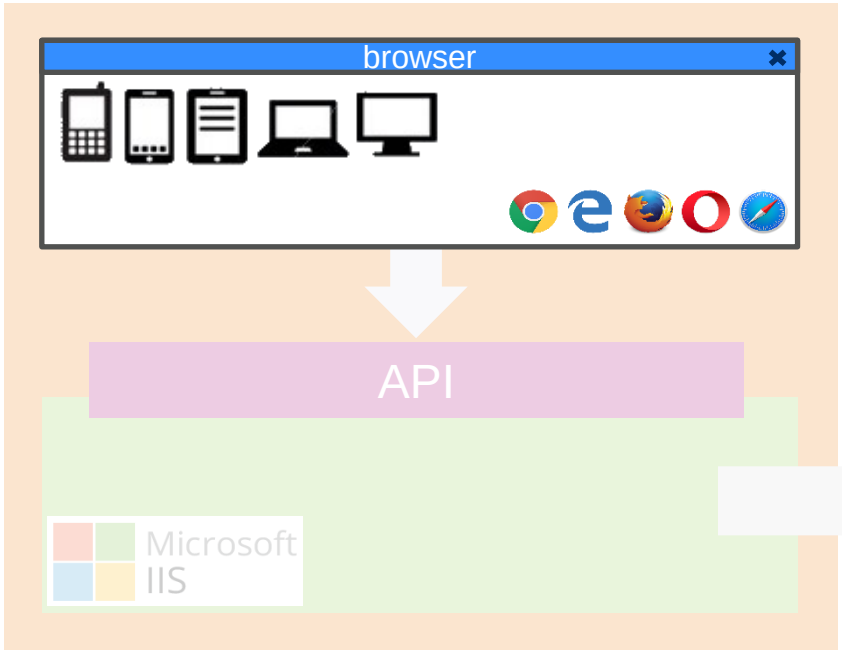
ORTEC

Architecture



ORTEC

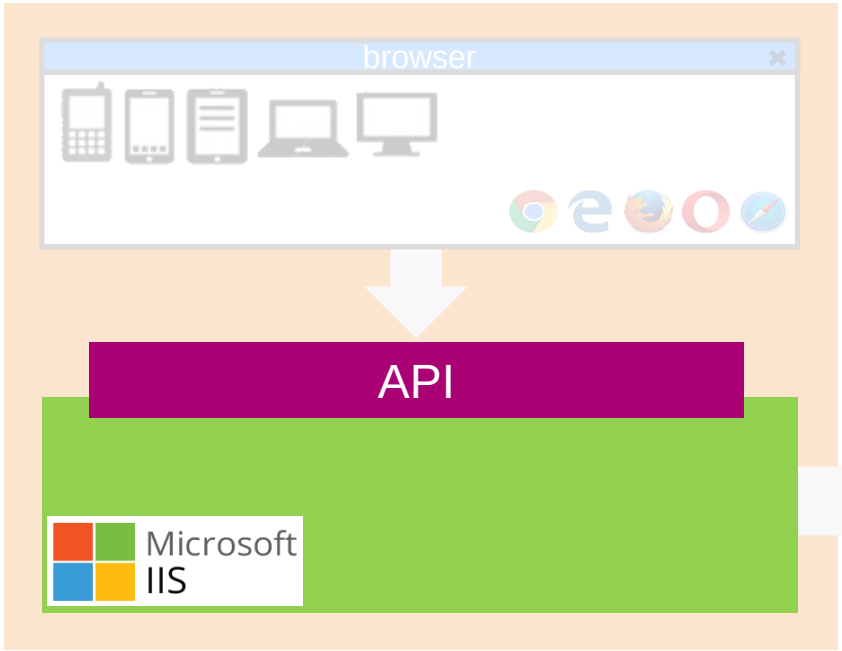
Architecture



Browser

- Renders HTML and CSS
- Runs Javascript
- Calls Front-end server via REST

Architecture



Front-end server

- Internet server for HTML, CSS, Javascript files
- Provides REST Web API to be called by Javascript in browser
- Calls Back-end server using REST
- Stateless

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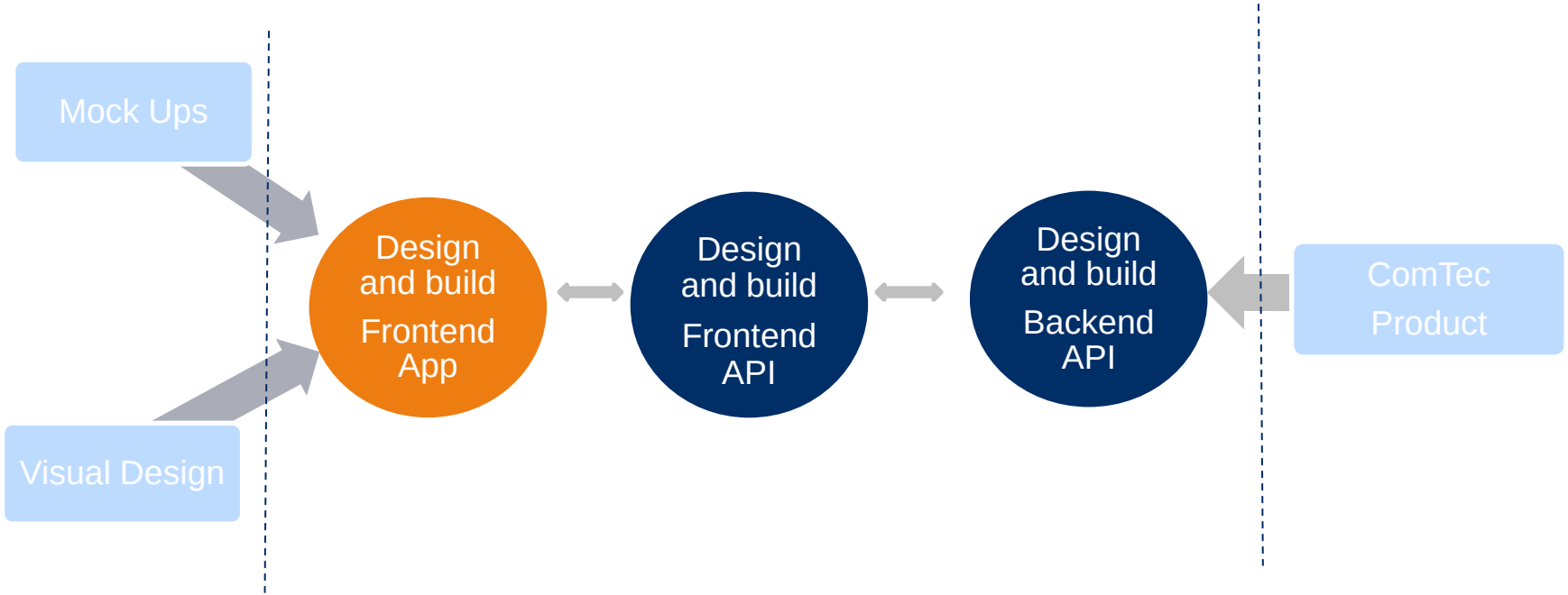
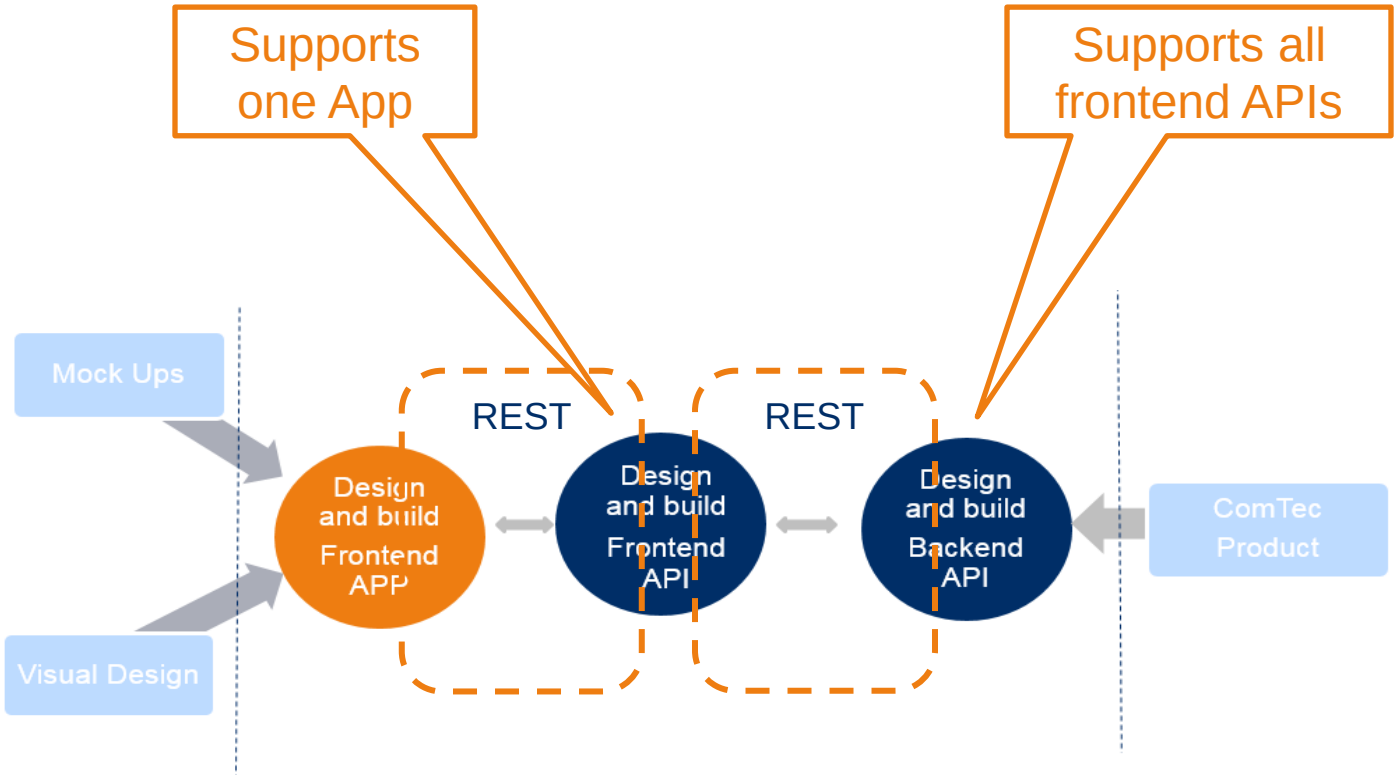
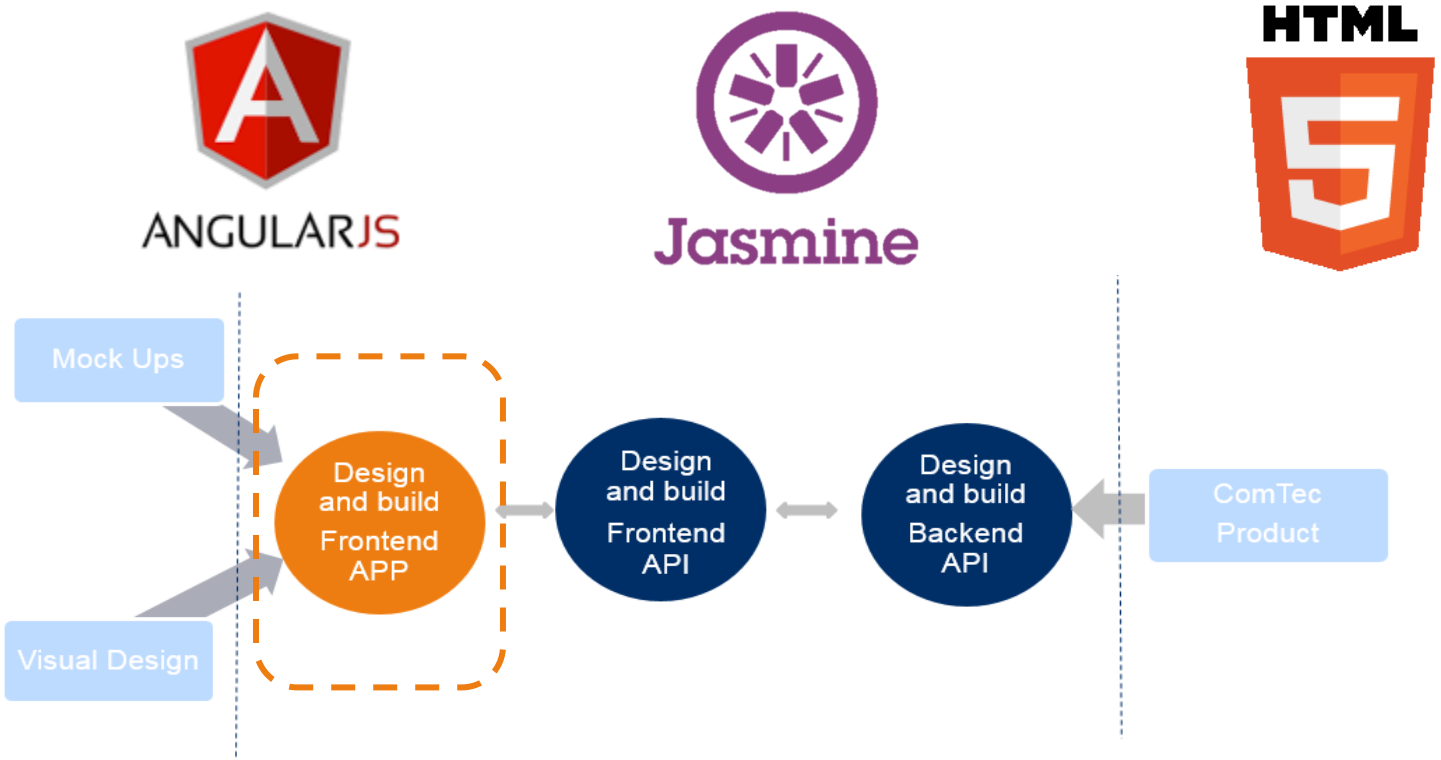
Development process 1



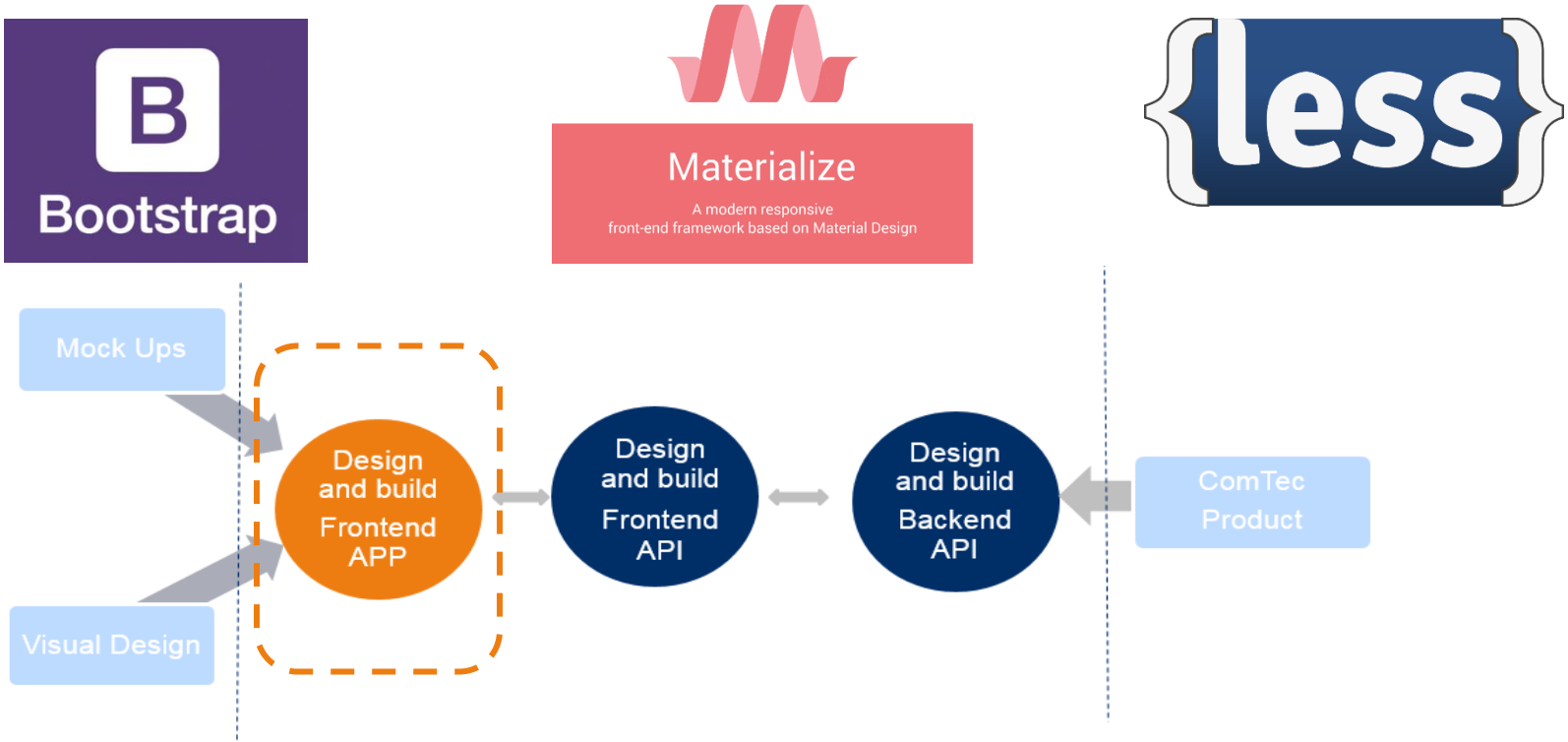
Development process 2



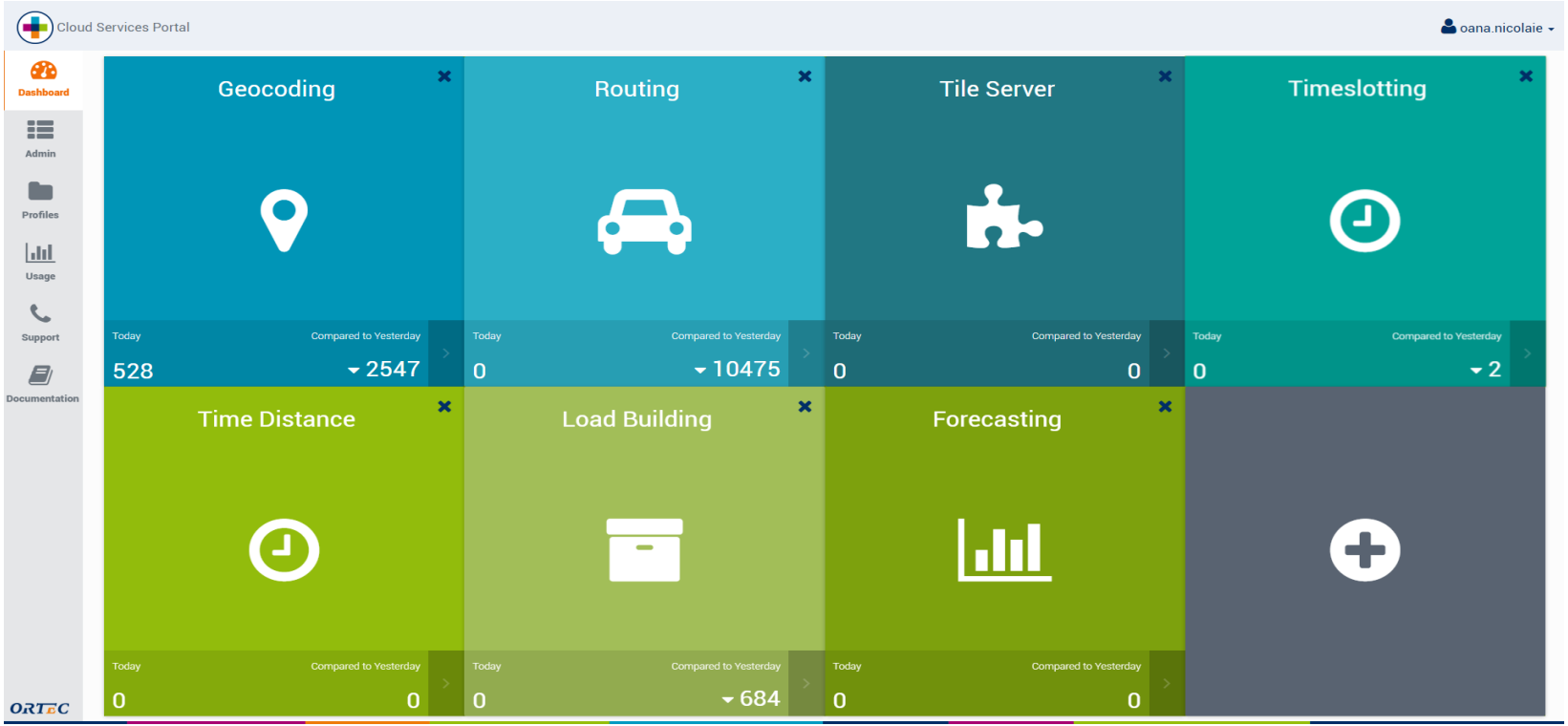
Technologies



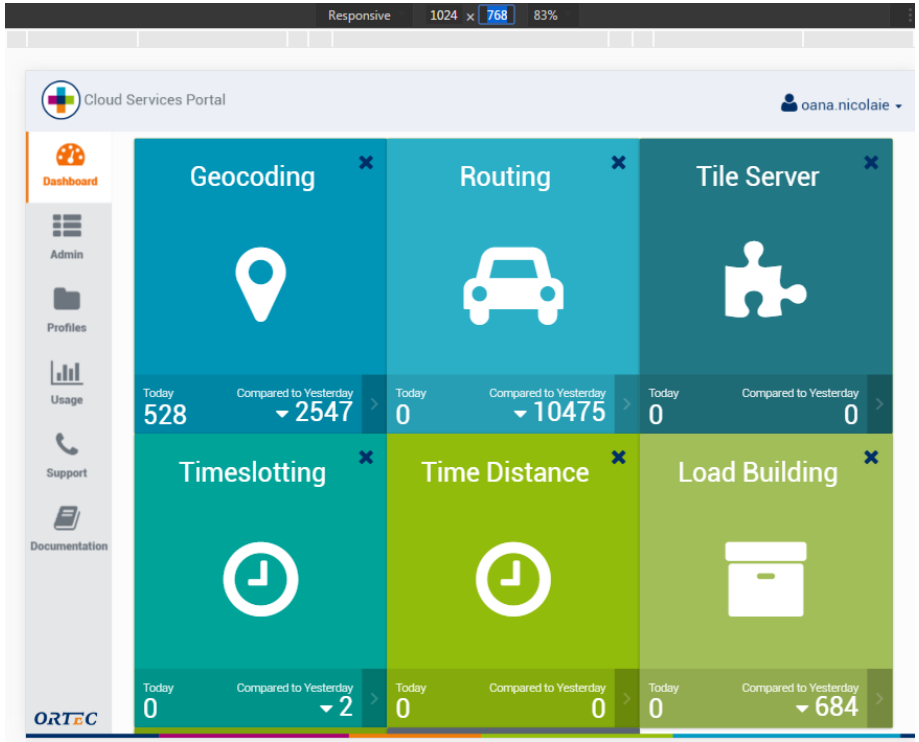
Technologies - responsiveness and styling

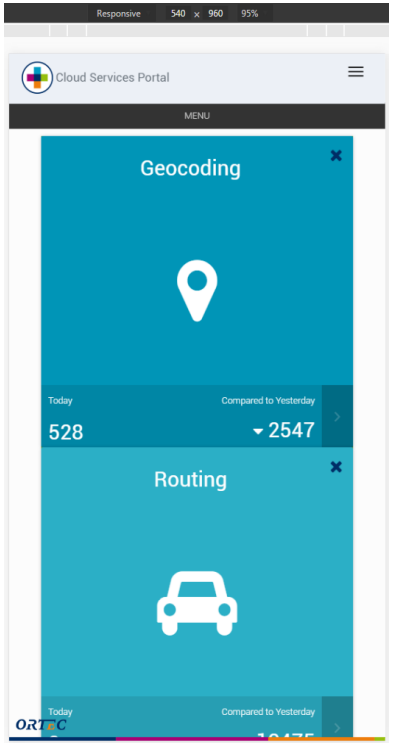


Responsiveness – desktop view



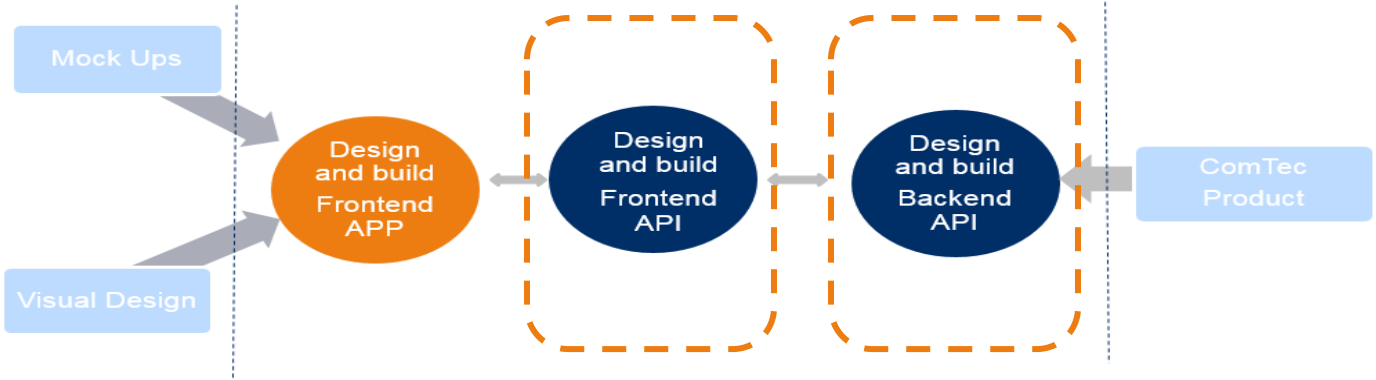
Responsiveness – tablet and mobile view





Frontend / Backend APIs - Technologies

ASP.NET Web API 2



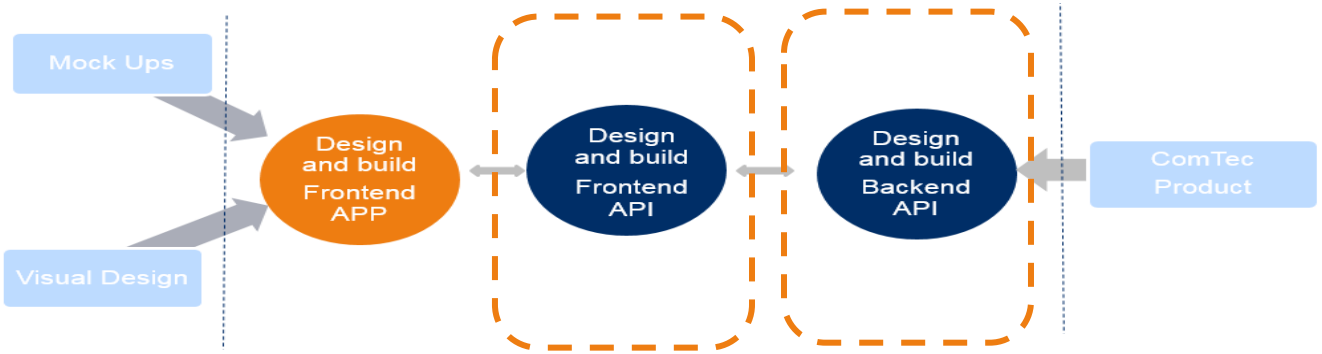
Frontend / Backend APIs - Tools

POST http://localhost:53612/api/leaverequests/

Authorization Headers (2) Body Pre-request Script Tests

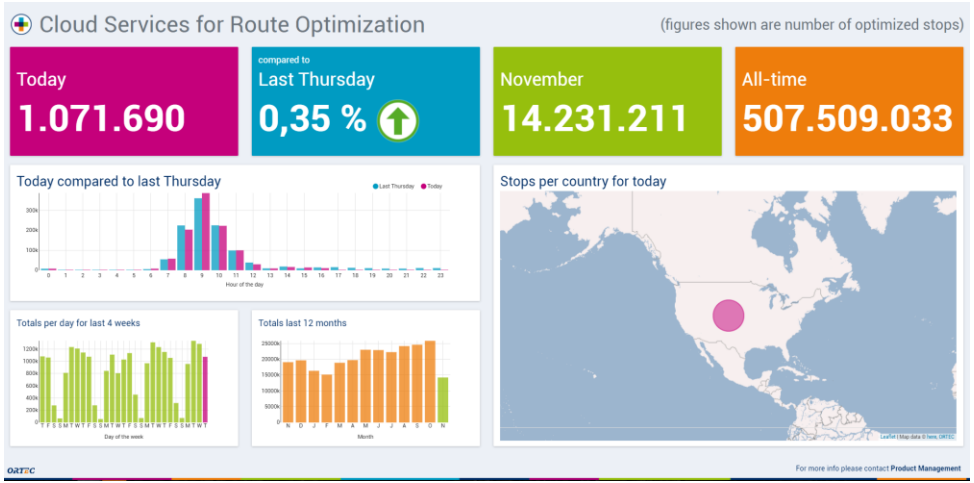
form-data x-www-form-urlencoded raw binary JSON (application/json)

```
{
"activityType" :{"id": 8523537},
"beginTime": "2016-05-11T22:00:00.000Z",
"description" : "",
"endTime": "2016-05-12T22:00:00.000Z",
"resource" :{"id": 591390, "displayName": "Barendsma, BF"}
}
```



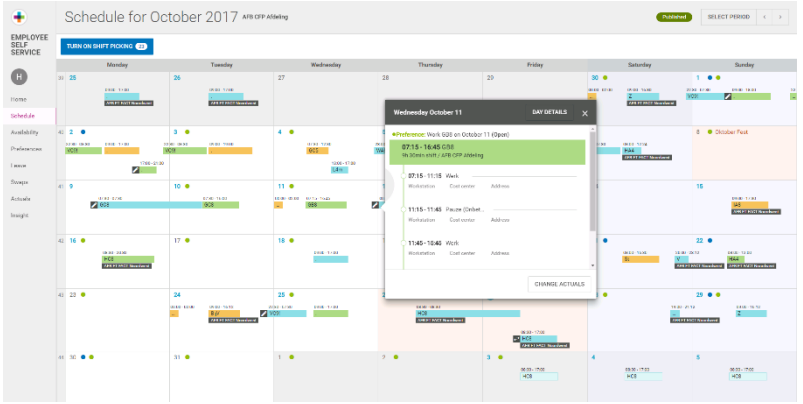
Insights

500 milion routes optimized with our cloud services



44000 users on Android apps

5 web portals in development



What do we stand for

- Continuous personal development
  - Trainings and courses
  - Flexibility to join teams or projects
  - We encourage knowledge sharing
- Nice work environment
  - Team activities
  - Benefits
  - Modern office