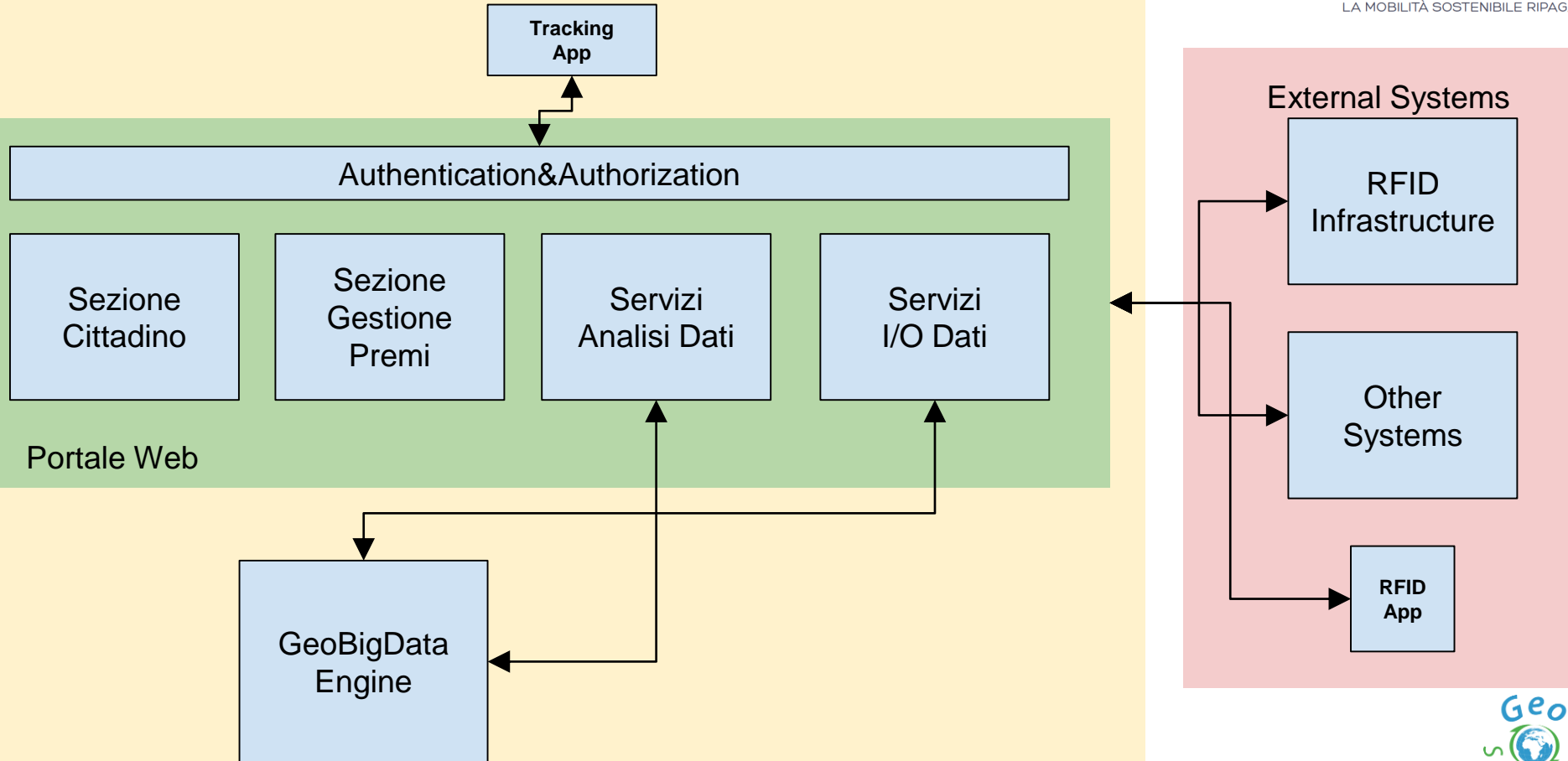


# SaveMyBike

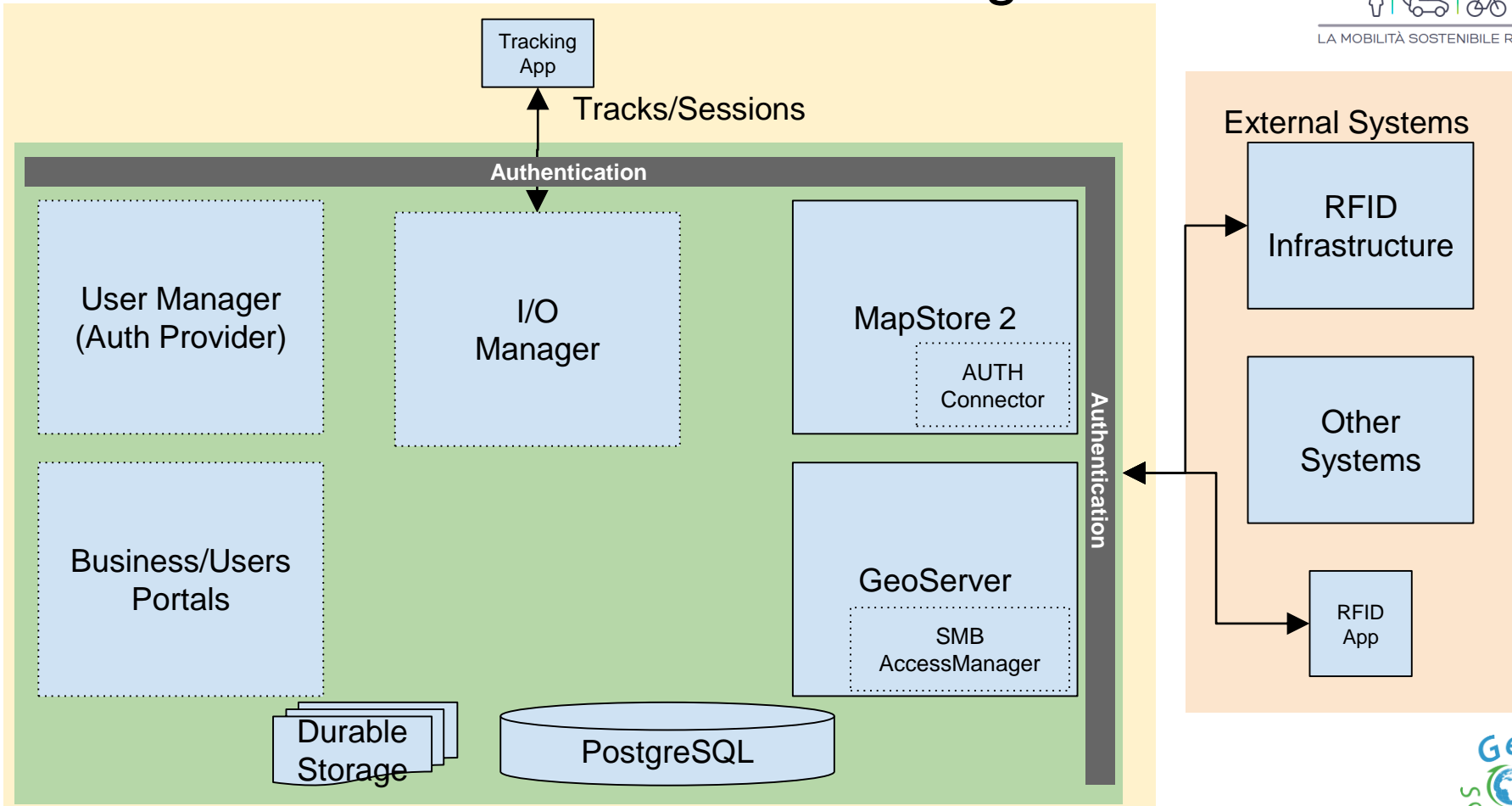
## Status of activities

Dott. Eleonora Fontana  
Lorenzo Pini  
Ing. Simone Giannecchini

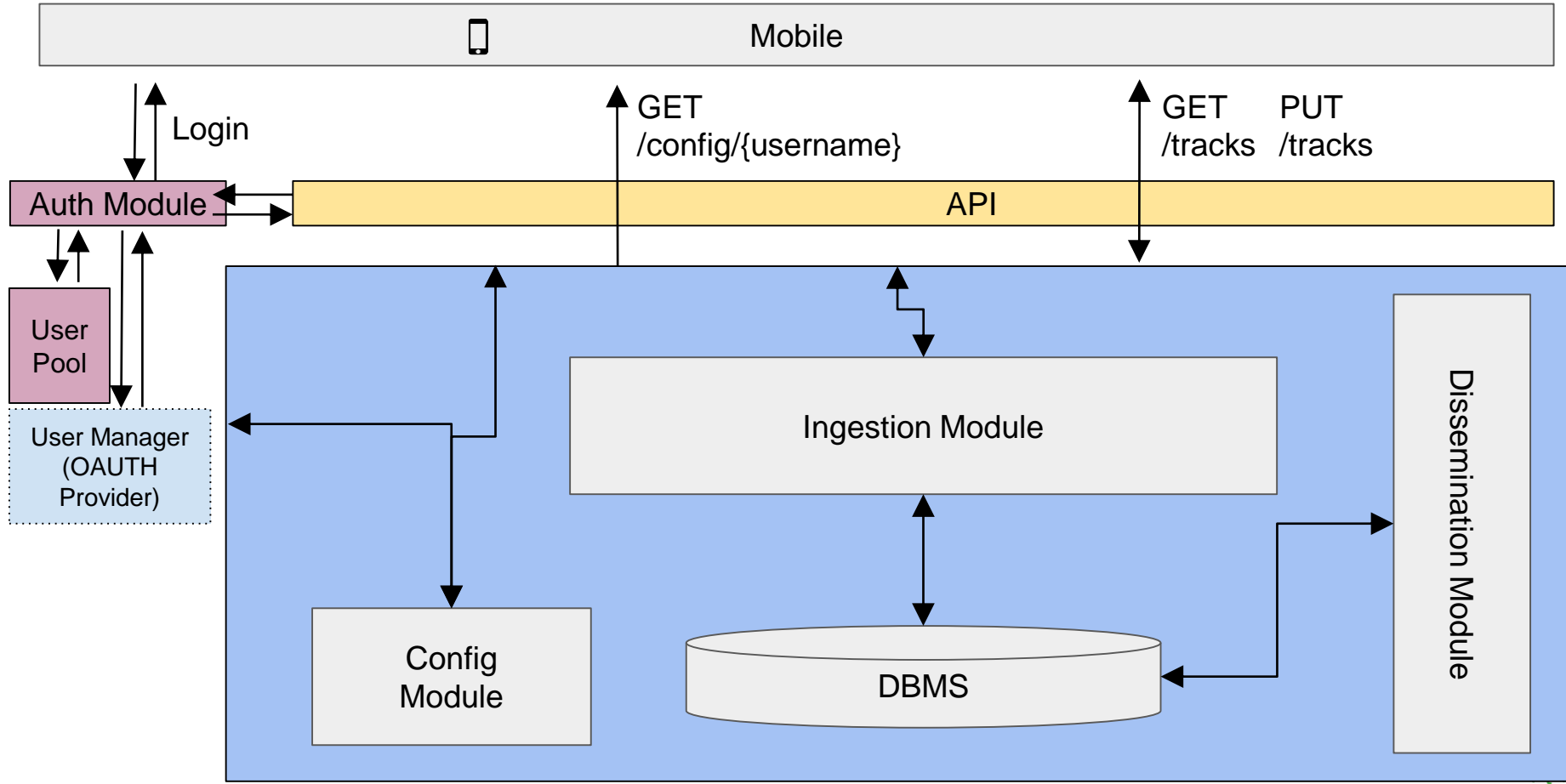
# Overall Design



# More Detailed Design



# Work In Progress - Overall Design



SDK AWS Mobile



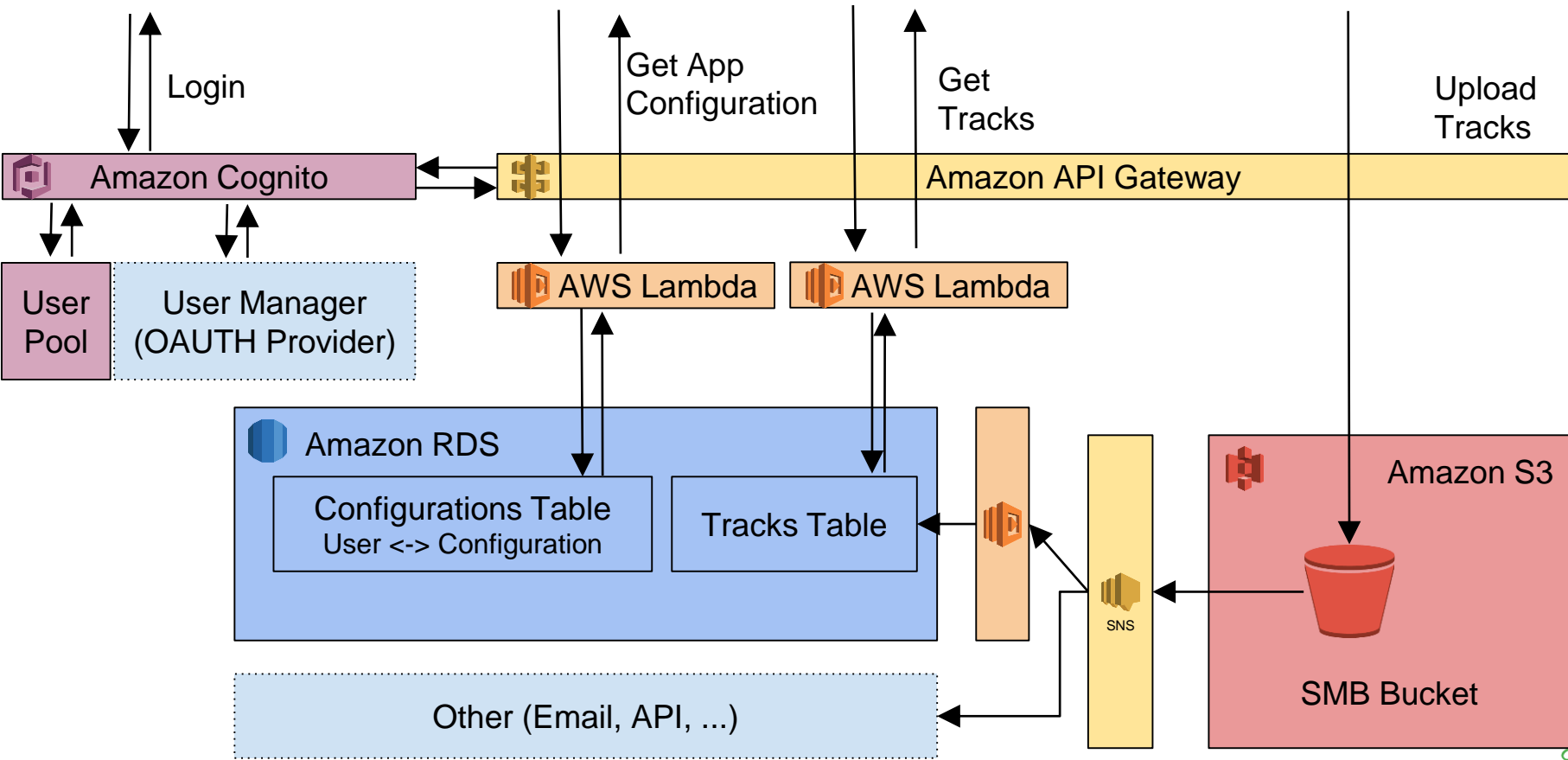
Android



iOS



WIP - Back-end

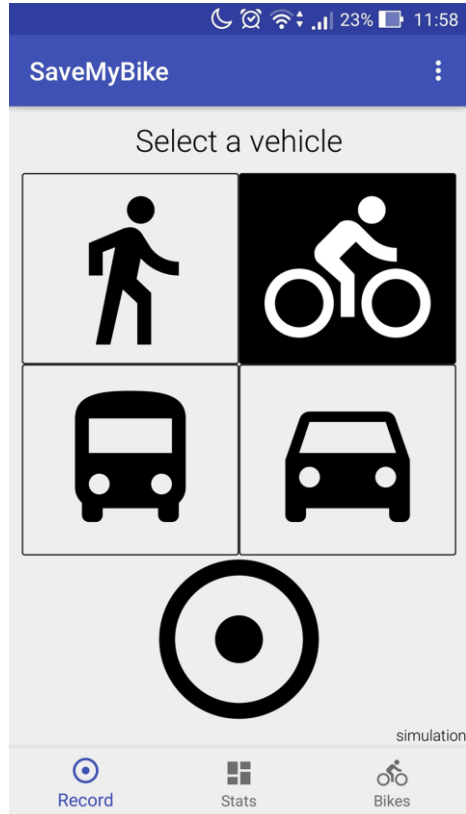


# Work In Progress - Tracking App

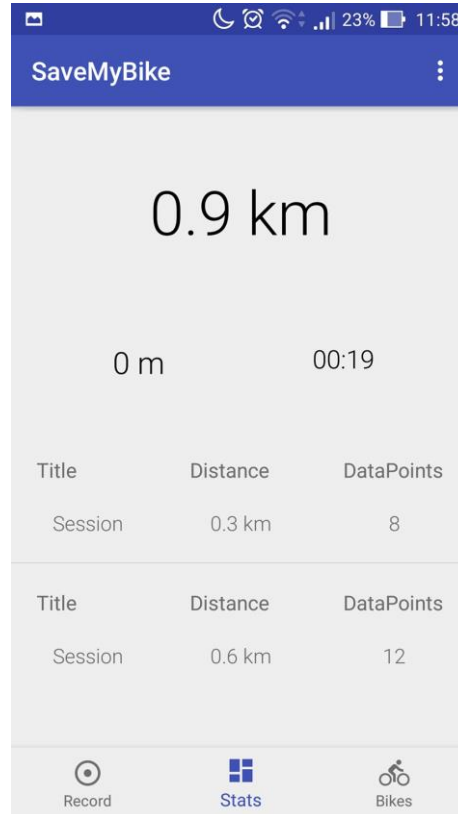
- Simplified, Configurable GUI with basic statistics
- JSON Configuration file
- Local for **now**, **soon** coming from the server
- Configurable acquisition rate
- Configurable array of sensors to acquire
- Save to local DBMS
- Asynchronous upload (no user action required)
- Integrated authentication (in progress)

# Work In Progress - Tracking App

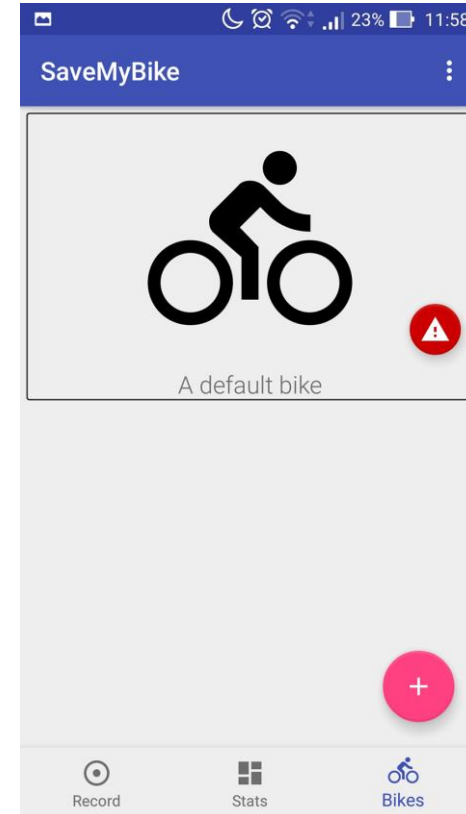
Main Page



Statistics

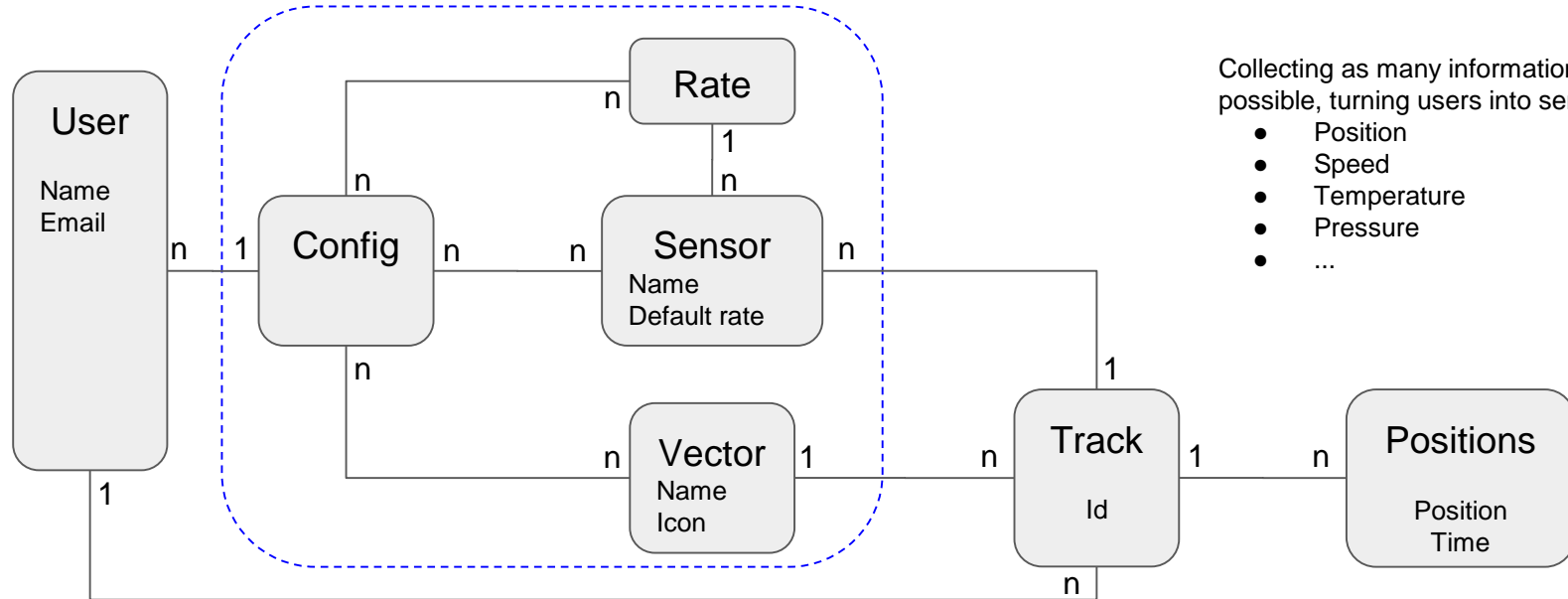


My Bicycles List



# Work In Progress - Internal ER Model

Each user will receive a custom configuration, with different sensors sampling rate based on the device it is using.



Collecting as many information as possible, turning users into sensors:

- Position
- Speed
- Temperature
- Pressure
- ...



# Work In Progress - Collected Data

	ROWID	_id	session_id	vehicle	lat	lon	time	elev	bearing	accuracy	speed	pressure	battery_level	battery_cons	acc	orientation	temperature
1	1	1	1	1	1.#INF00	1.#INF00	1512040412823	0.000000	0.000000	0.000000	0.000000	0.000000	0	0.000000	3.213985	0	0.000000
2	2	2	1	1	1.#INF00	1.#INF00	1512040413246	0.000000	0.000000	0.000000	0.000000	0.000000	0	0.000000	0.492696	0	0.000000
3	3	3	1	1	43.725399	10.397701	1512040414251	0.000000	0.000000	15.000000	6.000000	0.000000	0	0.000000	0.727314	1	0.000000
4	4	4	1	1	43.725861	10.397867	1512040415253	0.000000	0.000000	15.000000	6.000000	0.000000	0	0.000000	0.671033	1	0.000000
5	5	5	1	1	43.726250	10.398002	1512040416253	0.000000	0.000000	15.000000	6.000000	0.000000	0	0.000000	0.944922	1	0.000000
6	6	6	1	1	43.726440	10.398068	1512040417253	0.000000	0.000000	15.000000	6.000000	0.000000	0	0.000000	0.990254	1	0.000000
7	7	7	1	1	43.726871	10.398088	1512040418254	0.000000	0.000000	15.000000	6.000000	0.000000	0	0.000000	1.908868	1	0.000000
8	8	8	1	1	43.726856	10.397500	1512040419254	0.000000	0.000000	15.000000	6.000000	0.000000	0	0.000000	0.711102	1	0.000000
9	9	9	1	1	43.727028	10.396843	1512040420254	0.000000	0.000000	15.000000	6.000000	0.000000	0	0.000000	0.910426	1	0.000000
10	10	10	1	1	43.727276	10.394311	1512040421255	0.000000	0.000000	15.000000	6.000000	0.000000	0	0.000000	1.094867	1	0.000000
11	11	11	1	1	43.727413	10.393290	1512040422255	0.000000	0.000000	15.000000	6.000000	0.000000	0	0.000000	1.002443	1	0.000000

The app tries to store as much information as possible given the specific device it is running on

# Next Steps

- Short Term (Beg of 2018)

- **APP:** Complete authentication integration
- **APP:** Implement data upload
- **APP:** Implement configuration download
- **Back-End:** complete REST Endpoints for upload
- **Back-End:** wire ingestion to PostgreSQL
- **Back-End:** install and wire GeoServer
- **Front-End:** install and wire MapStore

- Longer Term

- **APP:** Complete integration from mobile
- **APP:** various optimizations (mitigate power and bandwidth impact, autorecognize vehicle), theft management
- **Back-End:** Portale Cittadino
- **Back-End:** Portale Premi
- **Back-End:** Analysis Component (GeoBigData)

# Questions?