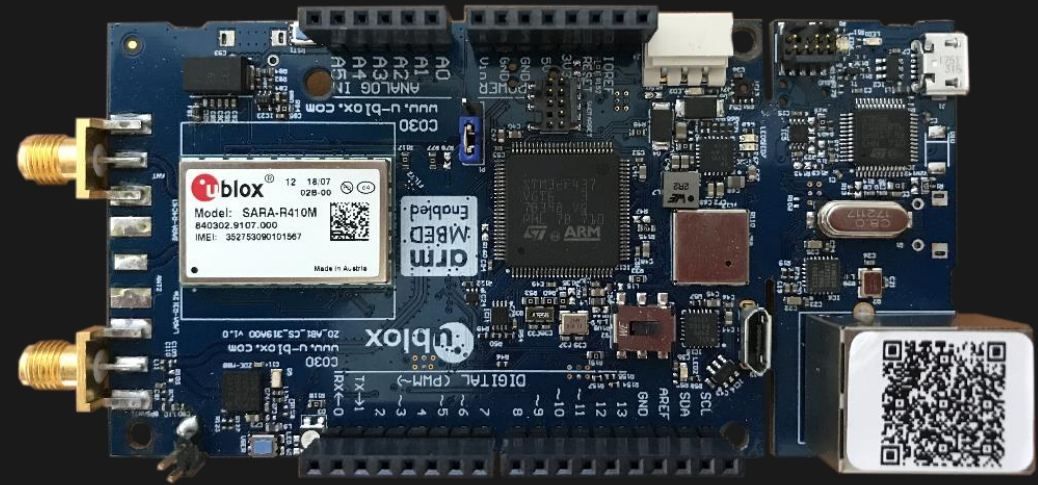


# u-track

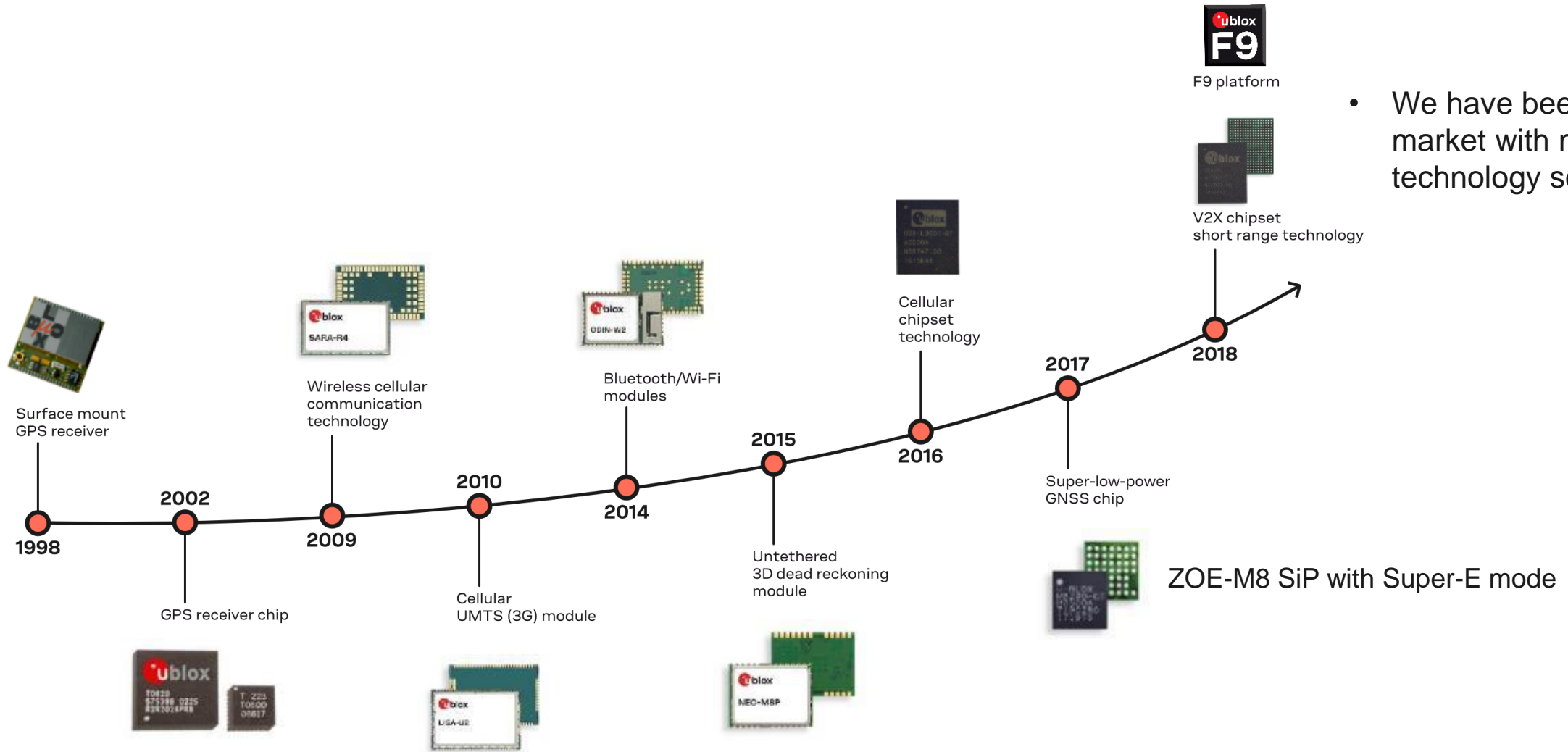
## Low power tracking demonstration toolset

Franco de Lorenzo  
Principal Product Management, Positioning  
June 2019



# Innovation is our lifeblood

Strong innovations lead to the future



- We have been first to market with many technology solutions.

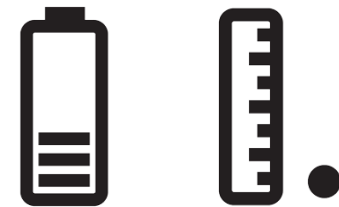
# Why does this toolset exist?

Reduced size and low power are key



- **More consumer and IoT applications want to integrate GNSS**
  - Consumer: Smart glasses, smart headsets, Virtual Reality, UAVs, ebike, Smartwatches
  - IoT applications (enabled by new LTE Cat M1 / NB1): asset, people & animal tracking, emergency call, etc.
- **Those applications can only be enabled with:**
  - Fast time-to-market and low development investment
  - Small size
  - Low power consumption

New applications can only be enabled, when small size and low power levels are reached



# Why does this toolset exist?

The typical requirements



Sport

Position on the device  
Precise and continuous  
Hours of battery life



People

Position on the device & cloud  
Building level accurate  
Days of battery life



Asset

Position on the cloud  
Block level accurate  
Month of battery life

# Why does this toolset exist?

Reduced size and low power are key



- How should I configure the GNSS to achieve my power consumption goal?
- What is the best strategy for an application requiring one position / day?
- What will my battery life be, if I upload a position every five minutes to my server?
- Which type of assistance should I use?

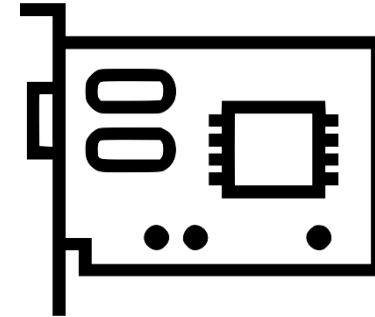
# Introducing u-track toolkit

## Technology details – 3 pillars



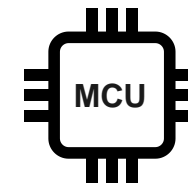
### 1. u-blox C030-R412M application board (includes GNSS and Cellular antennas)

- + SD Card
- + Battery (optional)



### 2. Embedded software sample code on C030 MCU

- MBED RTOS



### 3. u-track software running on a laptop

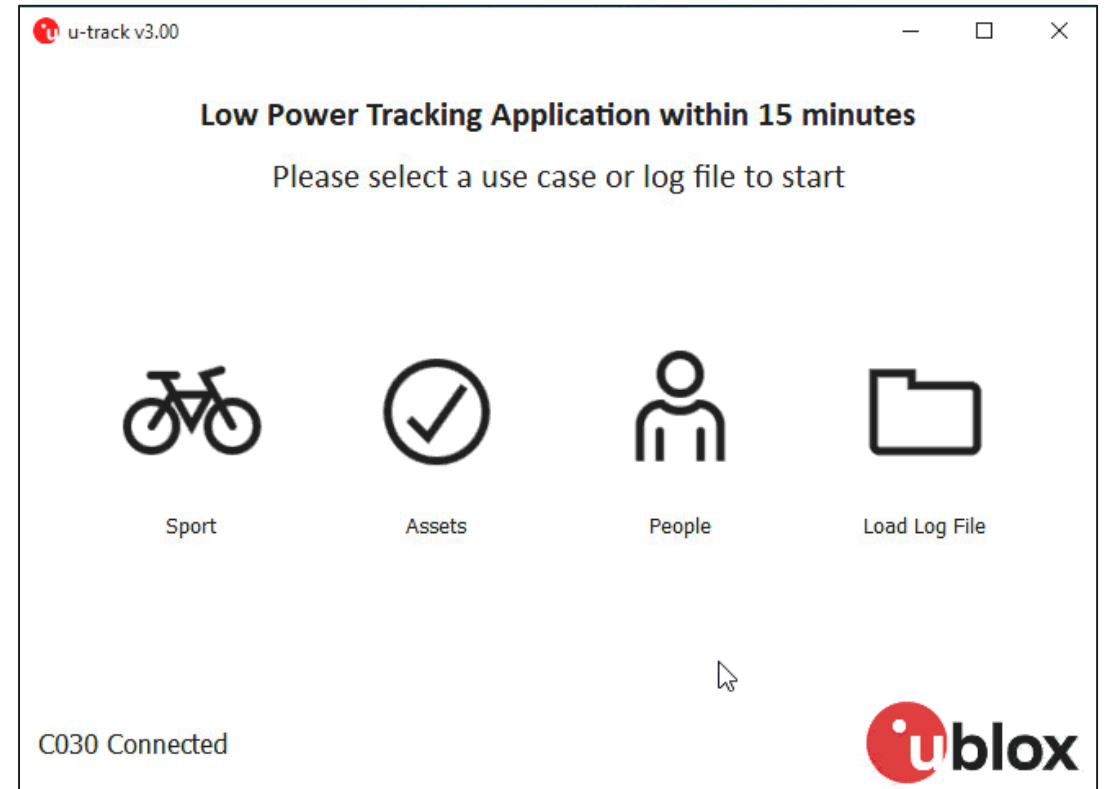


# u-track application software

## Software overview

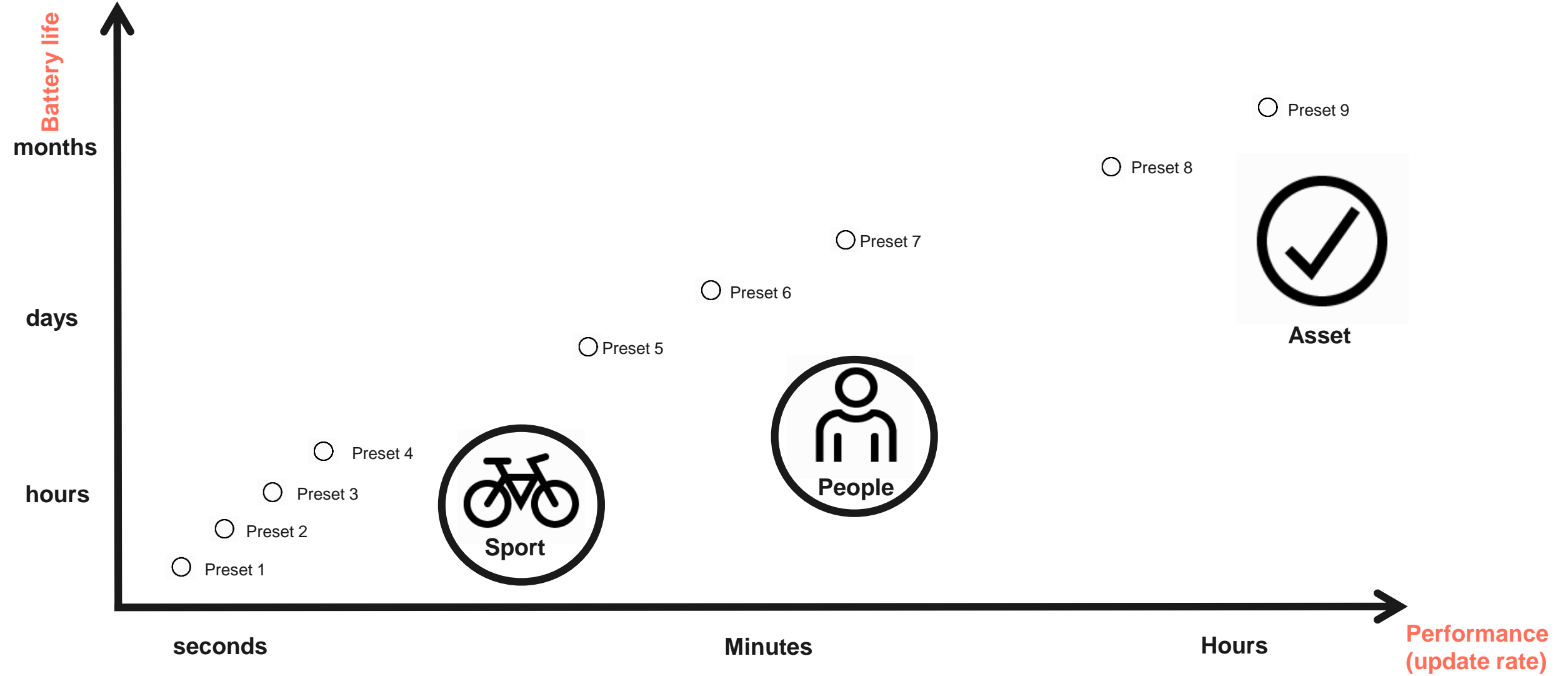


- Runs on PC or laptop (Windows 10)
- Automatically updates the embedded code in MCU
- Easy configuration of the use case (select one of available presets)
- Start / stop onboard logging
- Replay / pause / fast forward log files
- Display power, accuracy and TTFF in user friendly dashboard



# Nine optimized presets

for testing different use cases



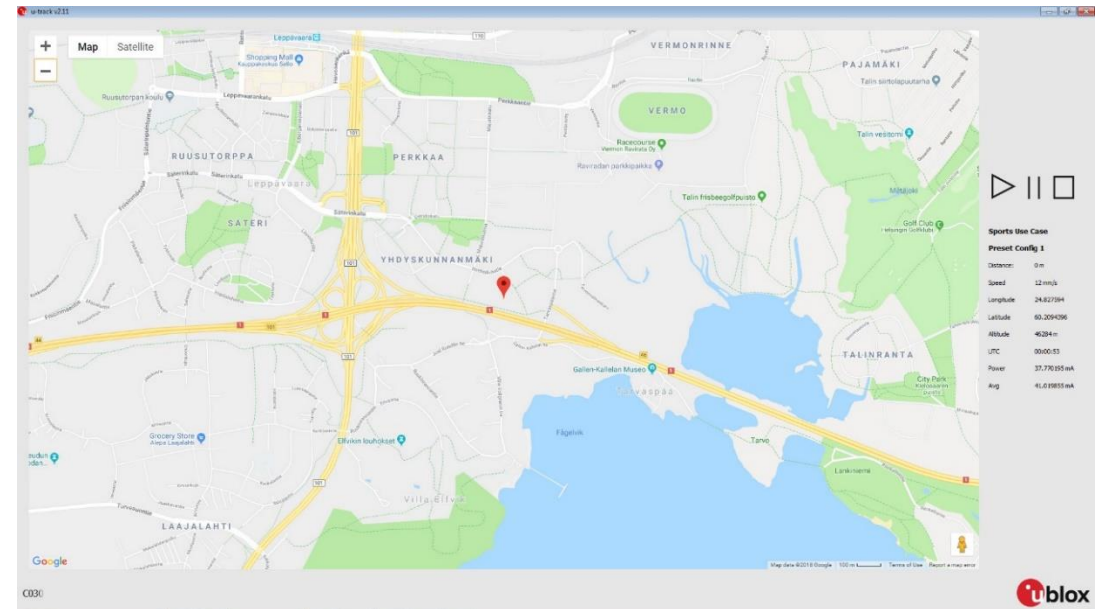


# u-track highlights

## Low power tracking application toolset



- Replicates a real low power tracking application, which is ready to test in less than 15 minutes
- Reduces development complexity thanks to ready-to-use embedded application code
- Accelerate time-to-market thanks to pre-optimized presets for different use cases
- Optimized low power GNSS and LTE Cat M1/NB1 solution
- Log, retrieve, and visualize power, accuracy, and TTFF in a user friendly dashboard



# Thank you for your attention