

## Who we are?

**WavBrain** is a spin-off start-up of the university of Toulouse.  
**WavBrain** industrializes research work in Artificial Intelligence carried out within Toulouse INP.  
**WavBrain** takes advantage from the support of Toulouse Tech Transfer since the technology entered pre-maturation in 2020.



Drowsiness

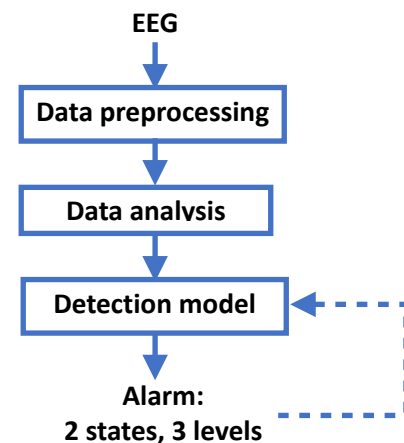


Intermediate state between wakefulness and sleep

In the brain first !

## HypoEEG

- **Real time** detection of drowsiness using **mono-signal EEG** sensor.
- **Less than 1%** of non-detection error.
- **WavBrain** HypoEEG: the result of three technological advances:
  - The miniaturization of EEG brain wave sensors.
  - Real time analysis of brain signals (one sensor) using AI.
  - AI algorithms embedded on the sensor.
- **Fully embedded** drowsiness detection system
- No need for server connexion: **GDPR conformity**.
- Visual, sonor or vibration alarm:
  - 2 states: drowsy or awake
  - 3 levels: low, medium or high risk (over time)



## Competitive advantages

- Unique calibration per user.
- Light and fully embedded system that can easily be integrated into glasses, headsets,...
- No need for specific infrastructure or central connexion.
- Secure, customizable, efficient... closer to the source of the problem.

## Validation

### Study

- 60 subjects
- Age: 18 to 25 (median age: 21)
- 78% F, 22% M
- **2 acquisitions** per subject: **9AM** et **6PM**
- No sleep troubles
- Karolinska Drowsiness Test (EEG data)
- Single calibration at **9AM**

