

KEUZERICHTING IOT

Towards the Intelligent IoT Edge



IK...

voel de nood om eens wat meer **hands-on** te zijn met **bordjes**, **modules** en **kabeltjes**

ben geïnteresseerd in **programmeren** maar niet echt front-end websites, **meer back-end**, **low-level**, ...

zou graag **met en in de Cloud werken** en een **architectuur** maken van **geconnecteerde componenten**

wil meer **leren werken met AI en data** maar niet echt zozeer de business-kant of zware diepgang in AI

4 KERNASPECTEN



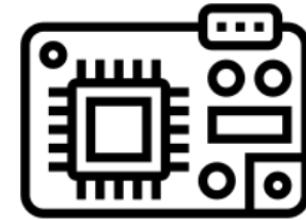
CLOUD



CONNECT



COMPUTE



CONTROL

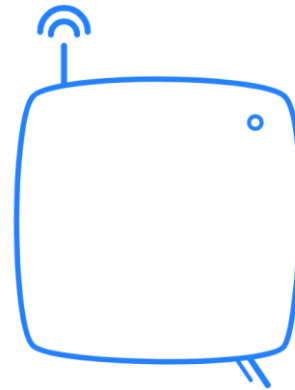
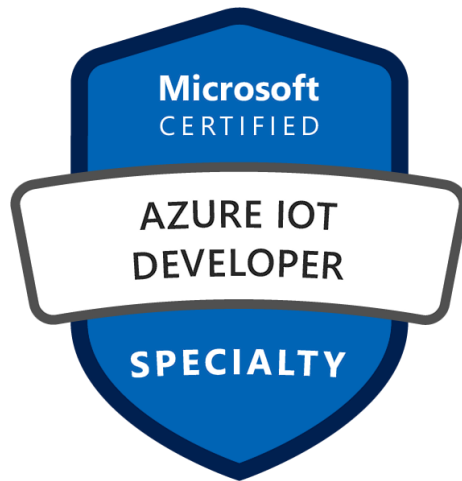


CLOUD

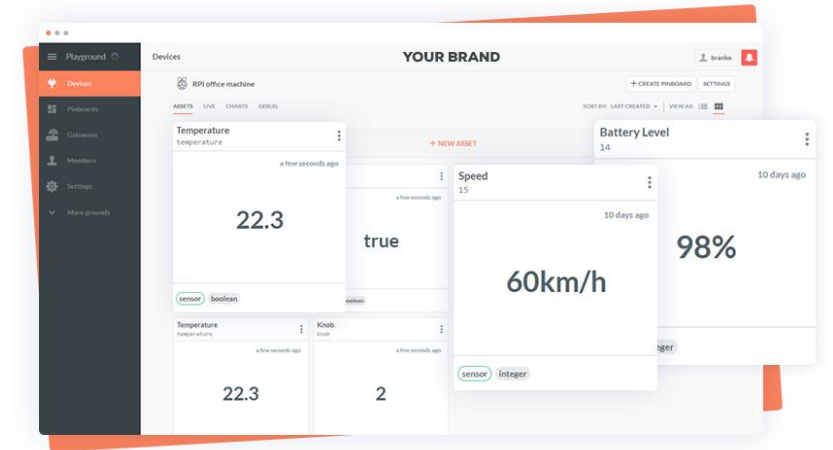
THE THINGS NETWORK

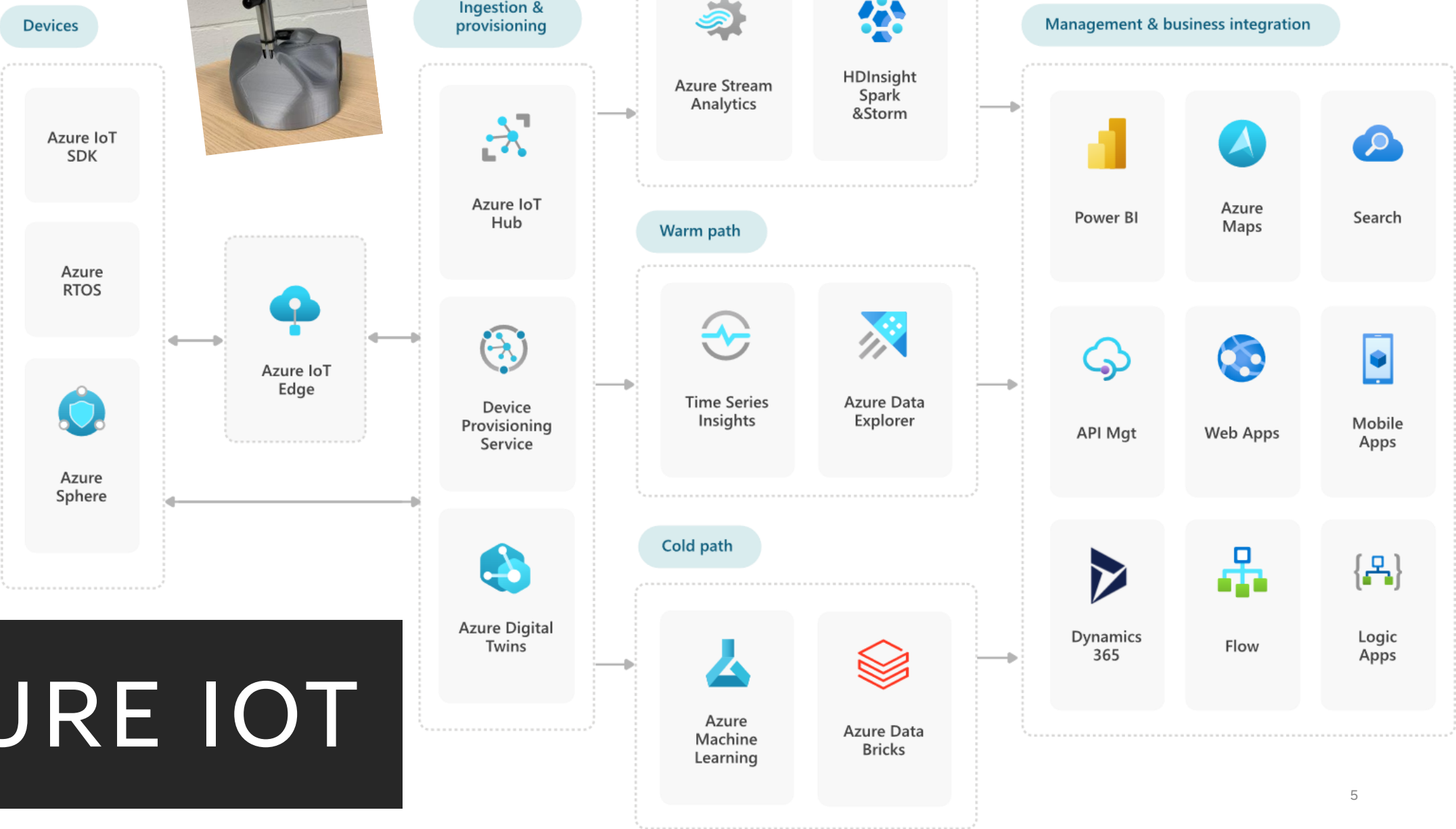
ALLTHINGS TALK

AZURE IOT



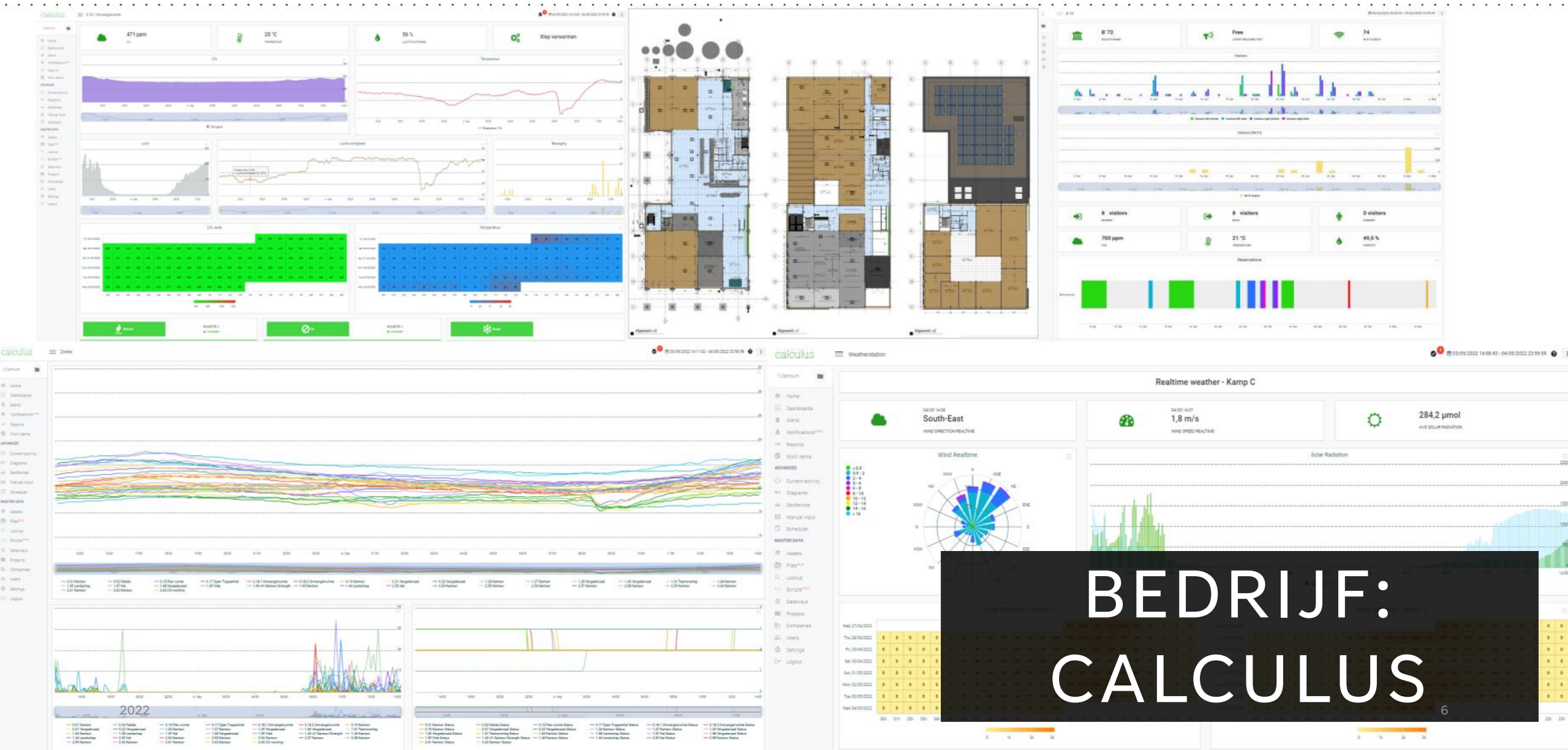
Register a gateway





AZURE IOT

BEHEER VAN COMFORT & ACTIVITEIT



BEDRIJF:
CALCULUS

DATA GEDREVEN WORKFLOW & MELDINGEN

calculius

Open Work Items

Office building I

Home

Dashboards

Alerts

Reports

Work items

ADVANCED

360° images

Current activity

Manual input

MASTER DATA

Assets

Companies

Settings

Logout

KANBAN BOARD

OVERVIEW

T000 (2)

Probleme Temperature

LV Laurent Verschaeve

Connection loss

Rob van Dun

Show archived

ACTIVE

RESOLVED

CLOSED

9:41

Cancel Update status Update

New status Resolved

Active Resolved Closed

Notes

Adjusted the cooling system configuration

'configuration' configurations

q w e r t y u i o p

a s d f g h j k l

z x c v b n m

123

spatie

return

Work items Portal Settings

Office rooms

STATUS

SHOW OVERVIEW DASHBOARD

BewegingsAlarmGang

Delta

Kitchen

Omega

ppm

21.1 °C

416 ppm

20.4 °C

878 ppm

22.5 °C

614 ppm

20.0 °C

893 ppm

22.2 °C

27/01, 12:42

27/01, 12:45

27/01, 12:45

27/01, 12:44

Kitchen

[27/01/2022 12:15:40] CO² 763 ppm

[27/01/2022 11:15:40] Too hot 22 °C

Toilet

CO² 780 ppm

Temperature 17.0 °C

27-01-2022 12:04 CO² ppm

25-01-2022 21:24 Too cold °C

Open dashboard

calculius

Twin.250.T02 Weerts Noord loskades: Tank level engine left is critical

Tank level engine left is critical

BOLDT - All Assets

Code: 20 - Error

(25/10/2021 12:33:09 - UTC +2)

Go to dashboard

For more information, e-mail us at info@calculius_group

calculius

2022

BEDRIJF:

CALCULUS

calculius

'T CENTRUM – KAMP C



't **CENTRUM**

calculūs

VISIE CIRCULAIR BOUWEN

- 1) Duurzame materialen
- 2) Energieneutraal
- 3) Modulaire werkplekken
- 4) Natuurlijk licht en groen
- 5) Demontebaar ontwerp
- 6) Digitaal bouwmodel (BIM)
- 7) Innovatief BMS systeem
- 8) Circulaire businessmodellen

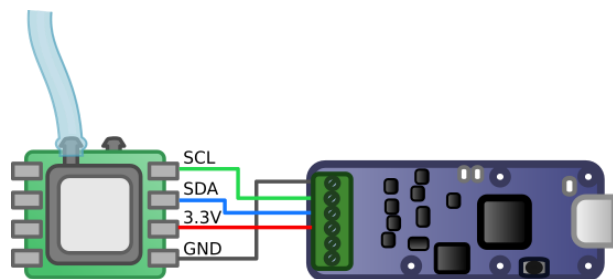


BEDRIJF:
CALCULUS

CONNECT



PROTOCOLS



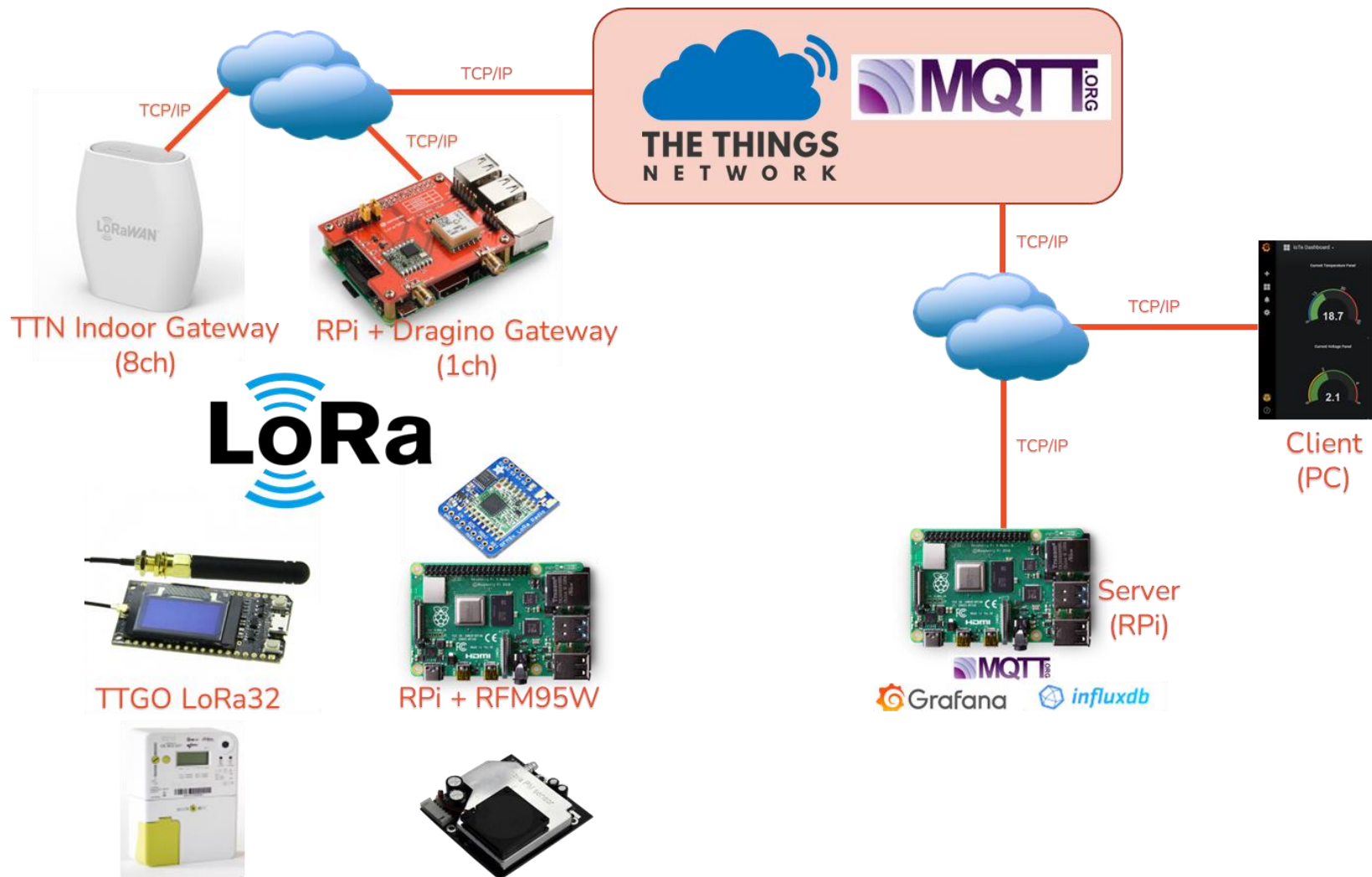
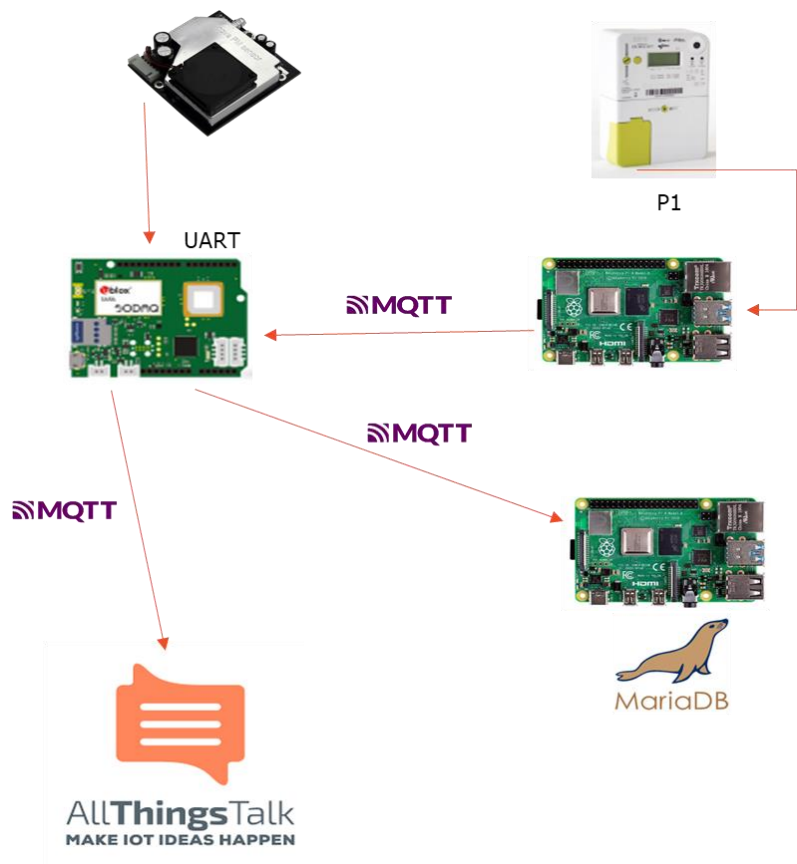
WIRELESS



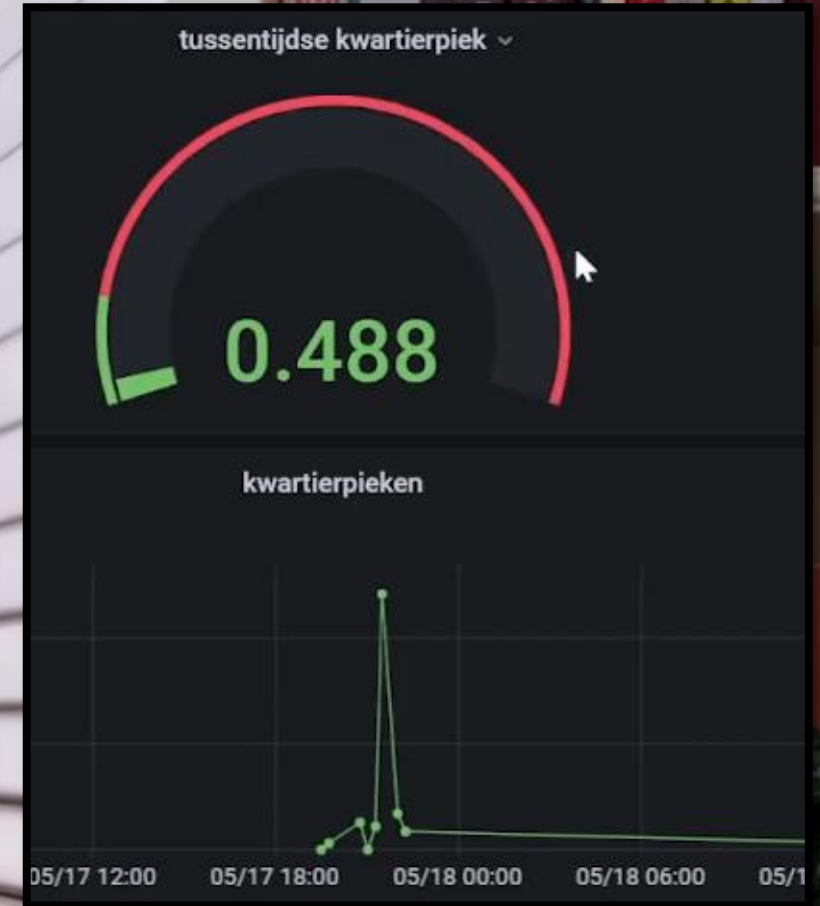
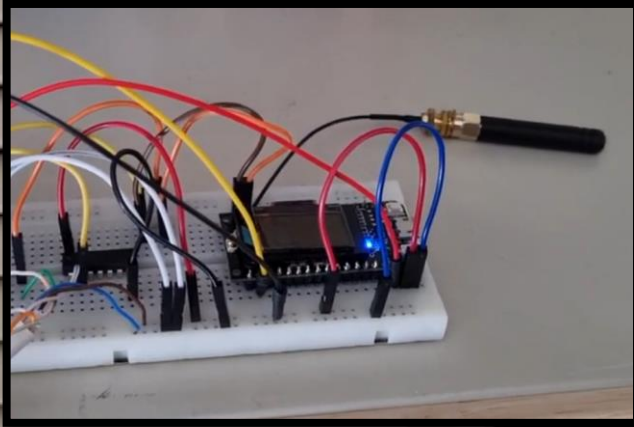
RADIO-FREQUENCY



PROTOCOLS



WIRELESS



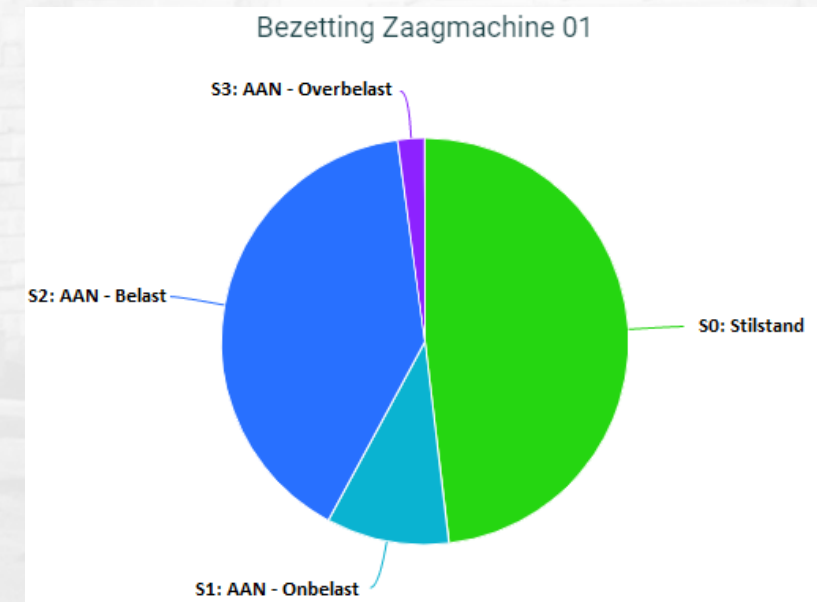
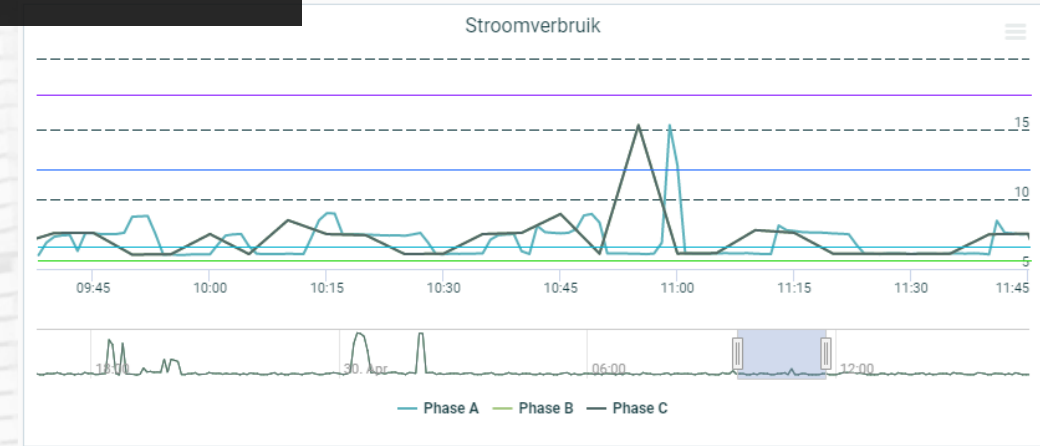
WIRELESS: LORAWAN

Machinepark (7 machines)

- Energie monitoring
- OEE o.b.v. stroomverbruik
- Predictief onderhoud machines

Resultaten

- 15% besparing op energie (€18.850)
 - Balanceren machines, gebruik, sluimer
- Inzichten op machinebezetting / performantie



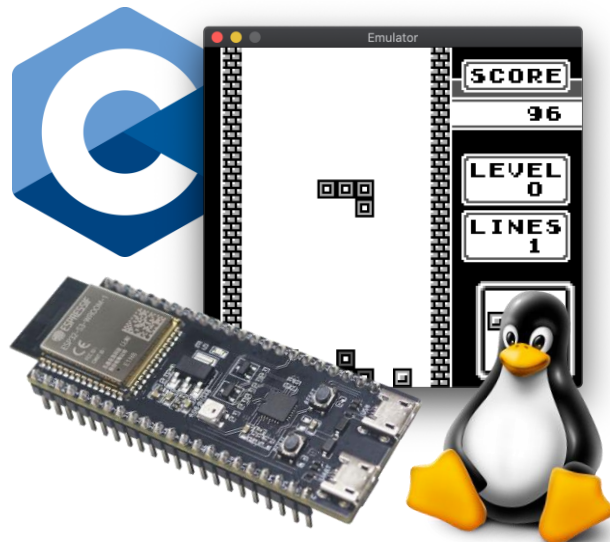
COMPUTE



HIGH-LEVEL

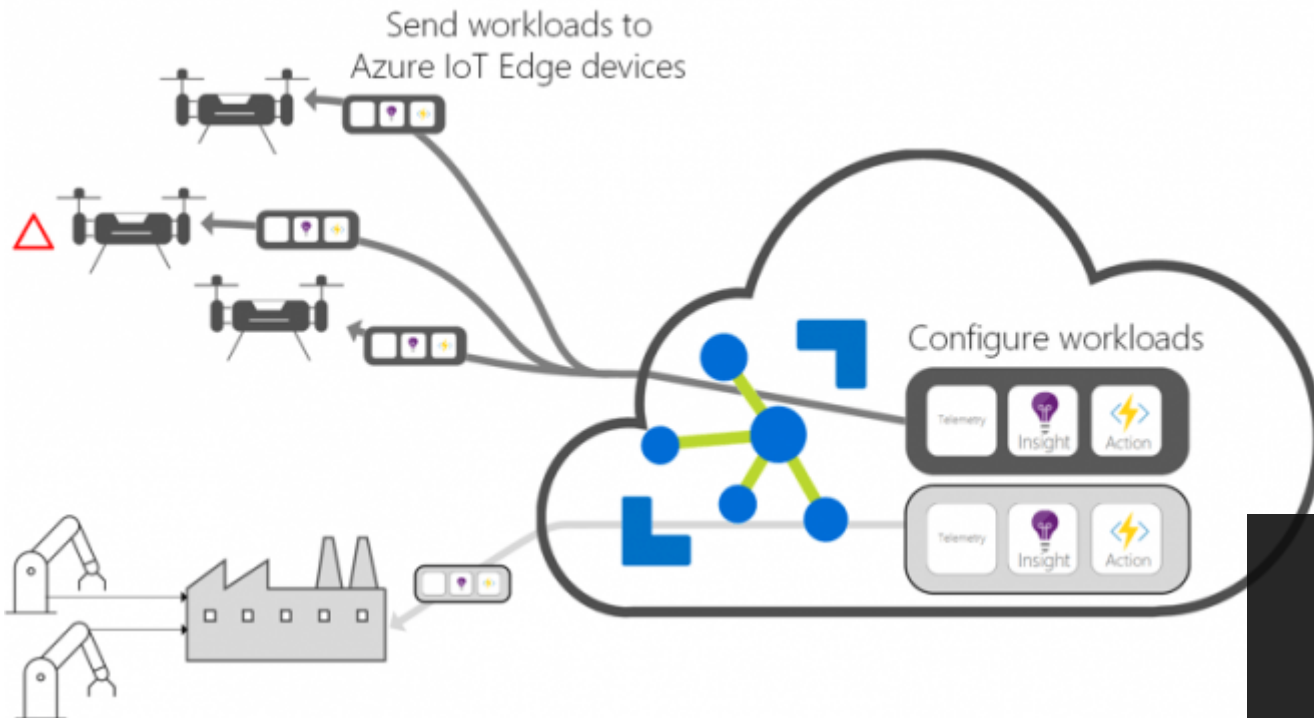
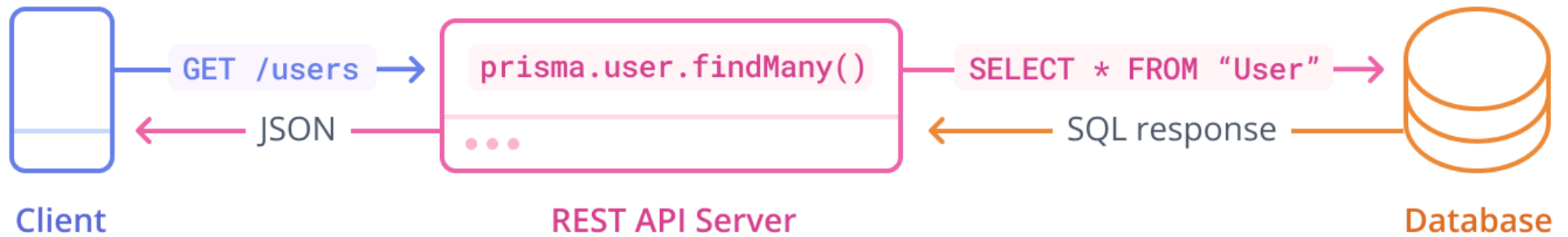


LOW-LEVEL



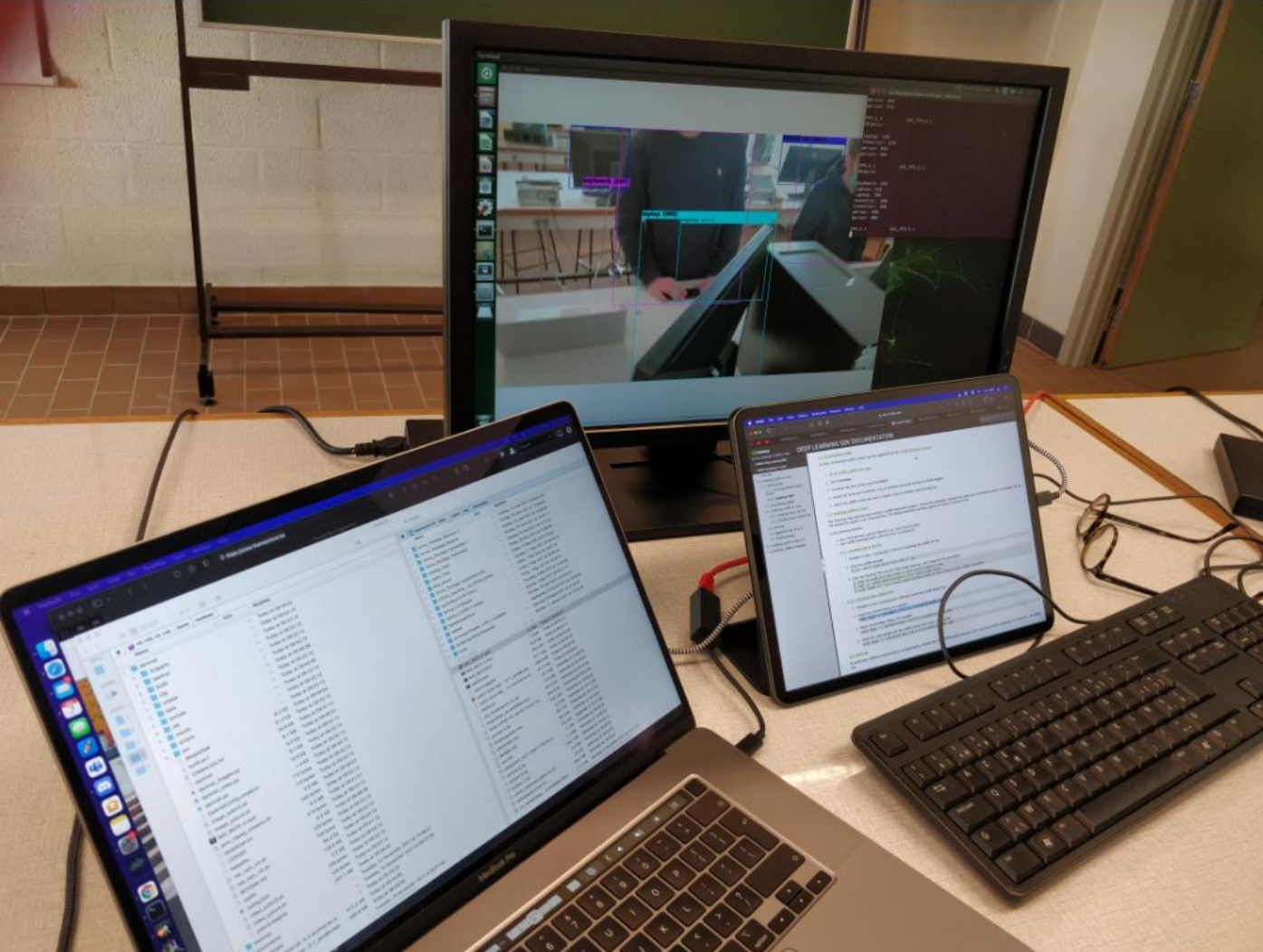
EMBEDDED AI



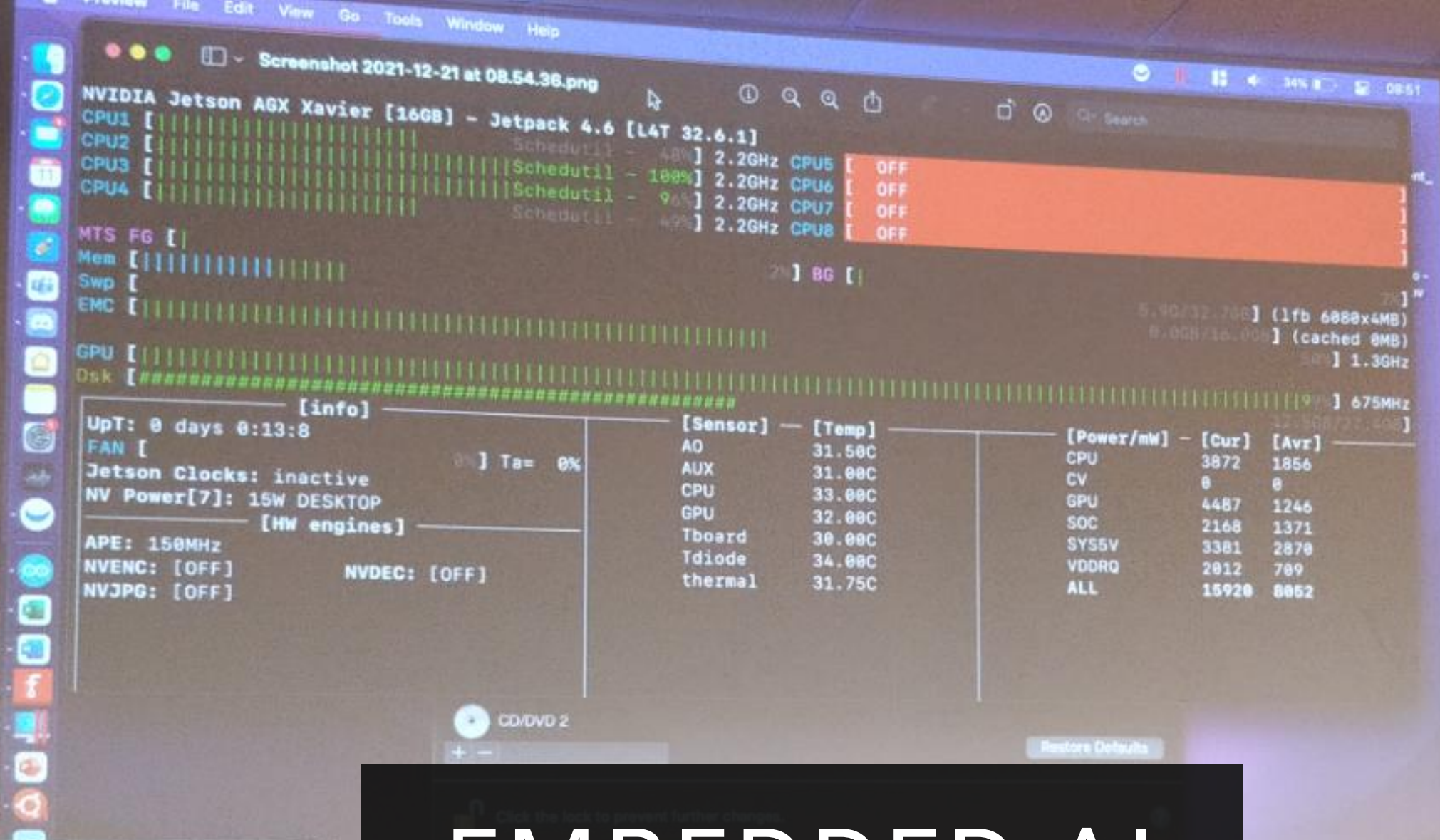


```
@app.get("/")  
def read_root():  
    return {"Hello": "World"}
```

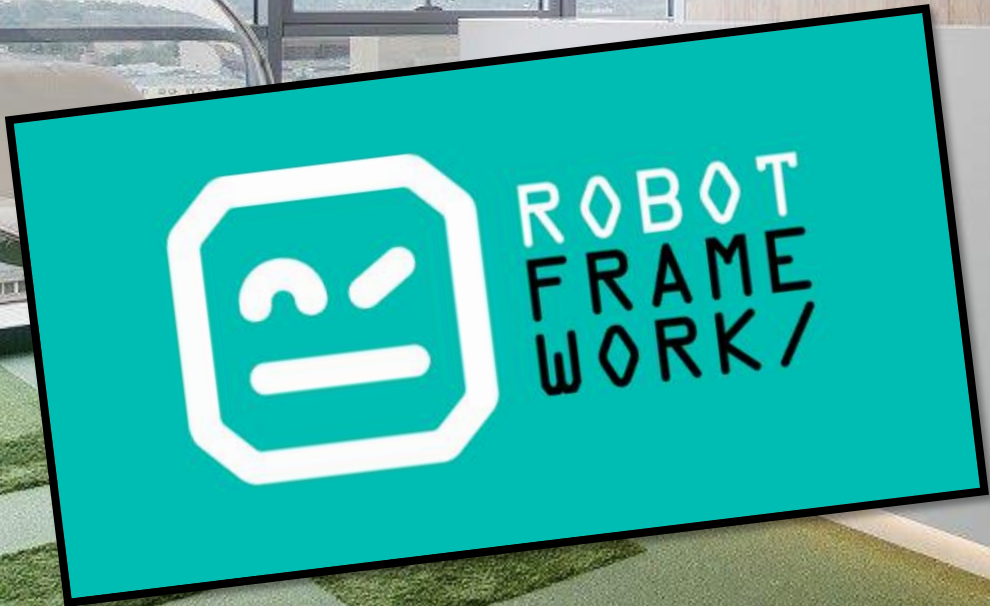
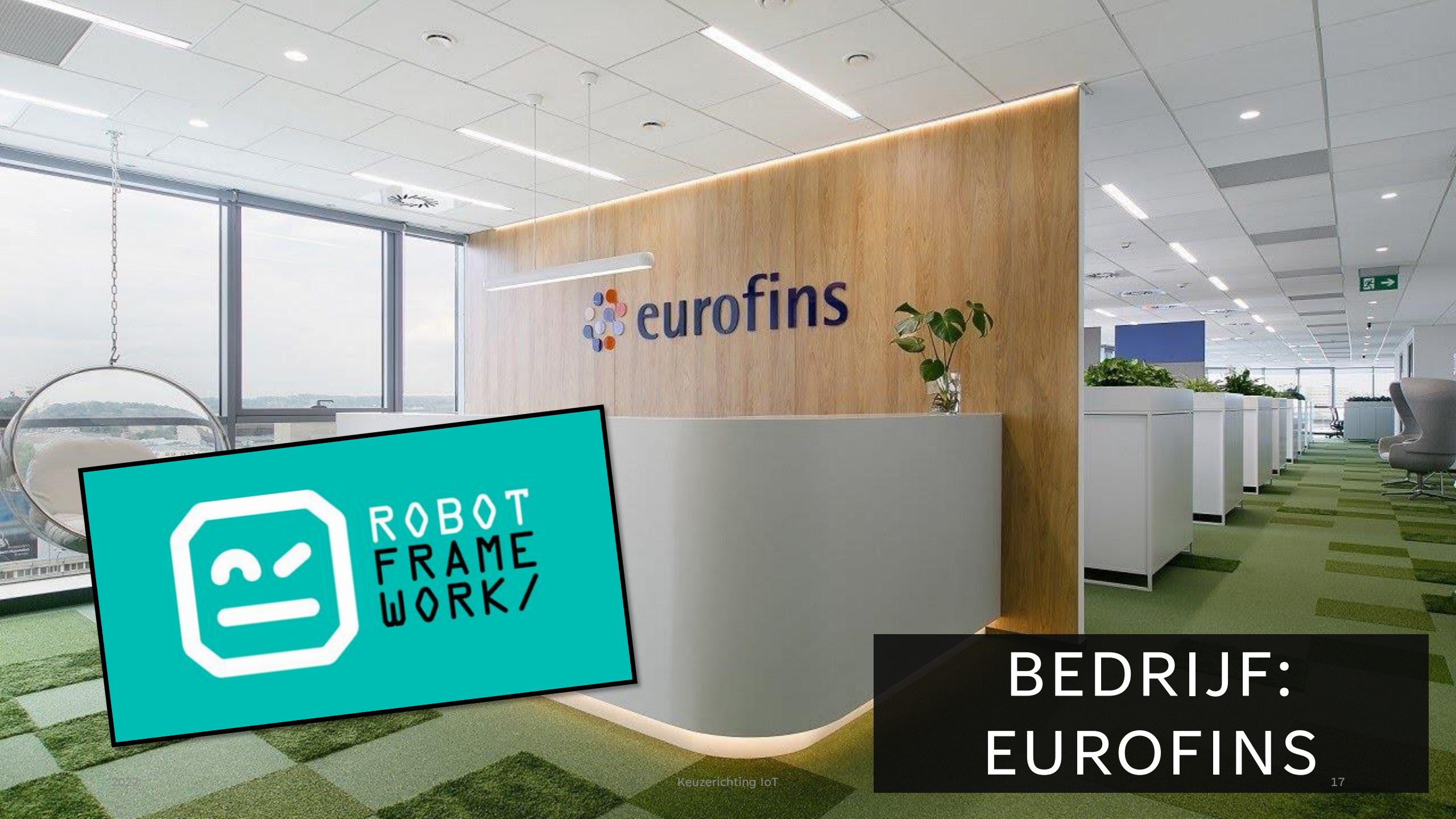
HIGH-LEVEL



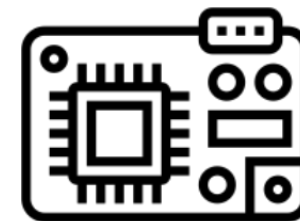
EMBEDDED AI



EMBEDDED AI



BEDRIJF:
EUROFINS

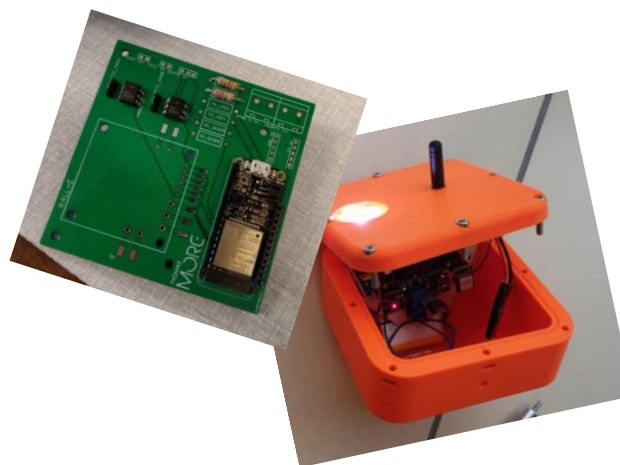


CONTROL

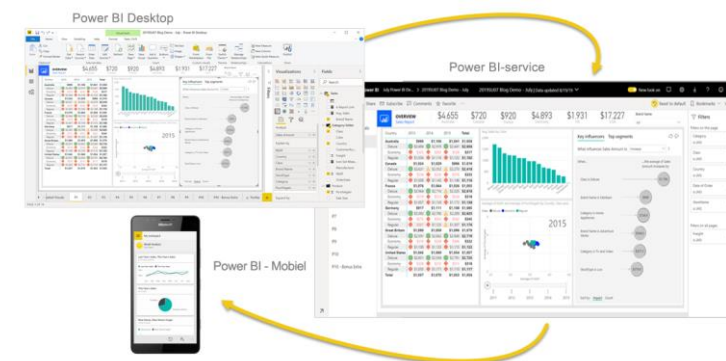
SMART
ENVIRONM.

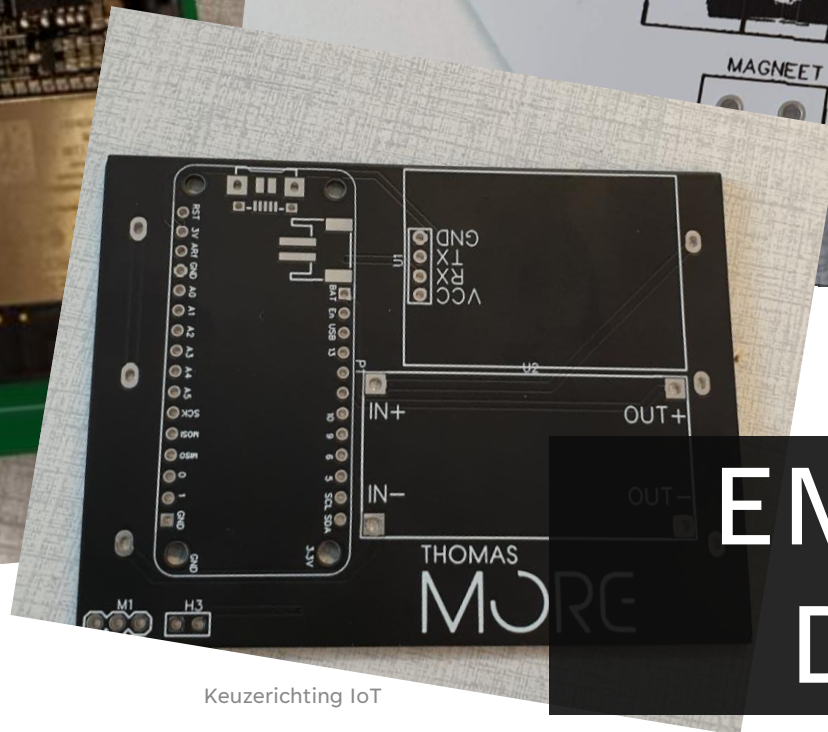
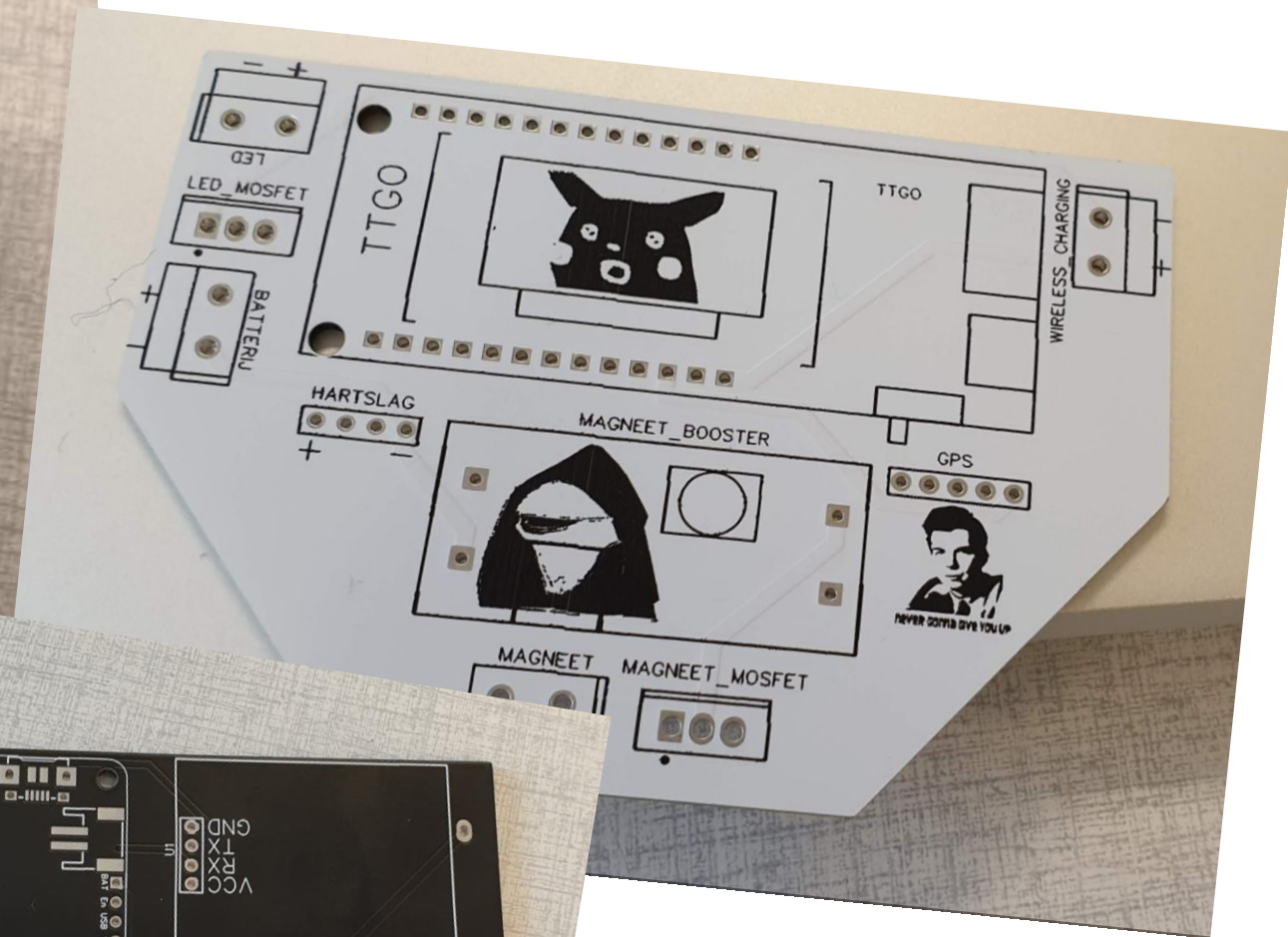
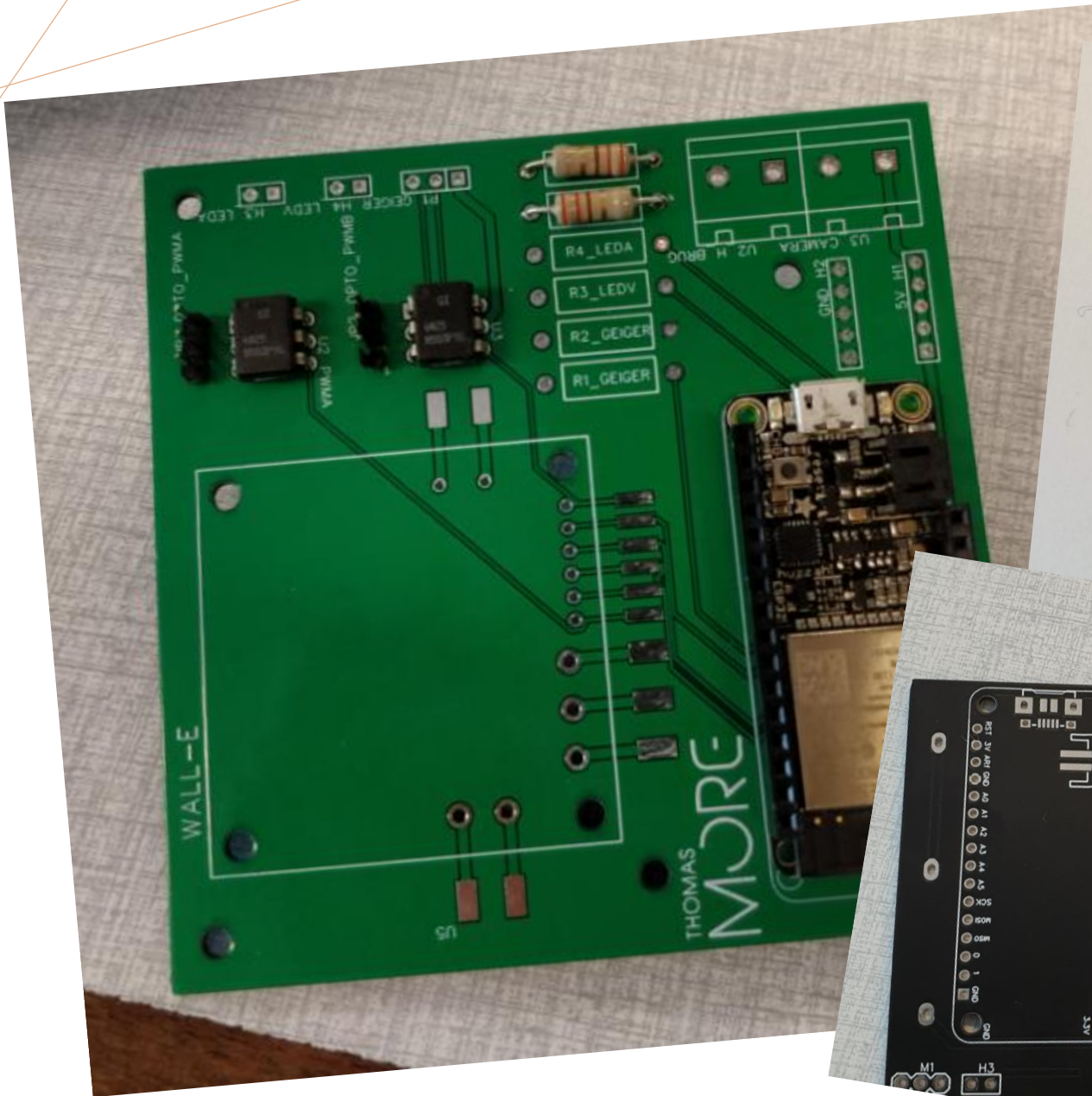


EMBEDDED
DEVICES

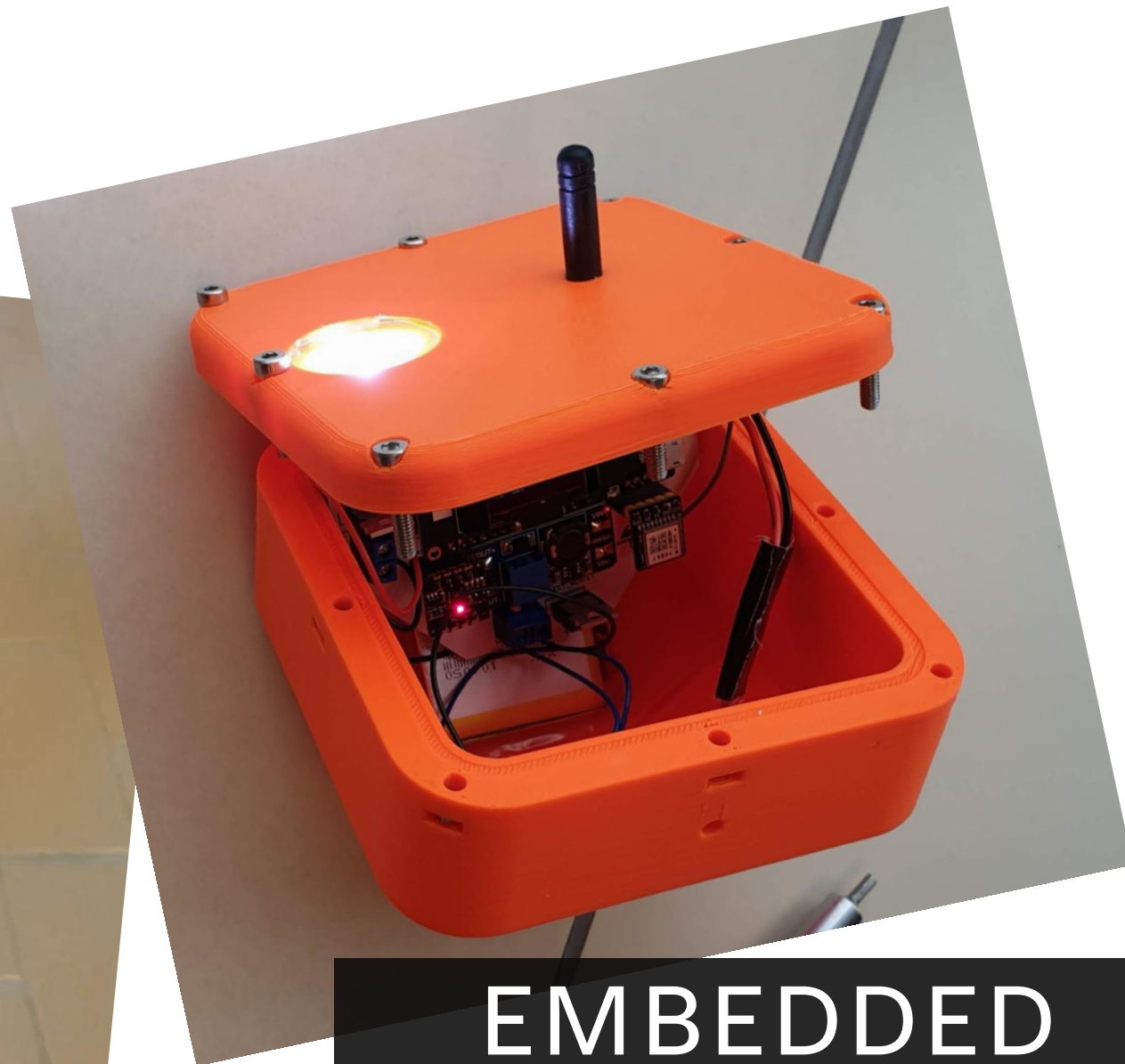
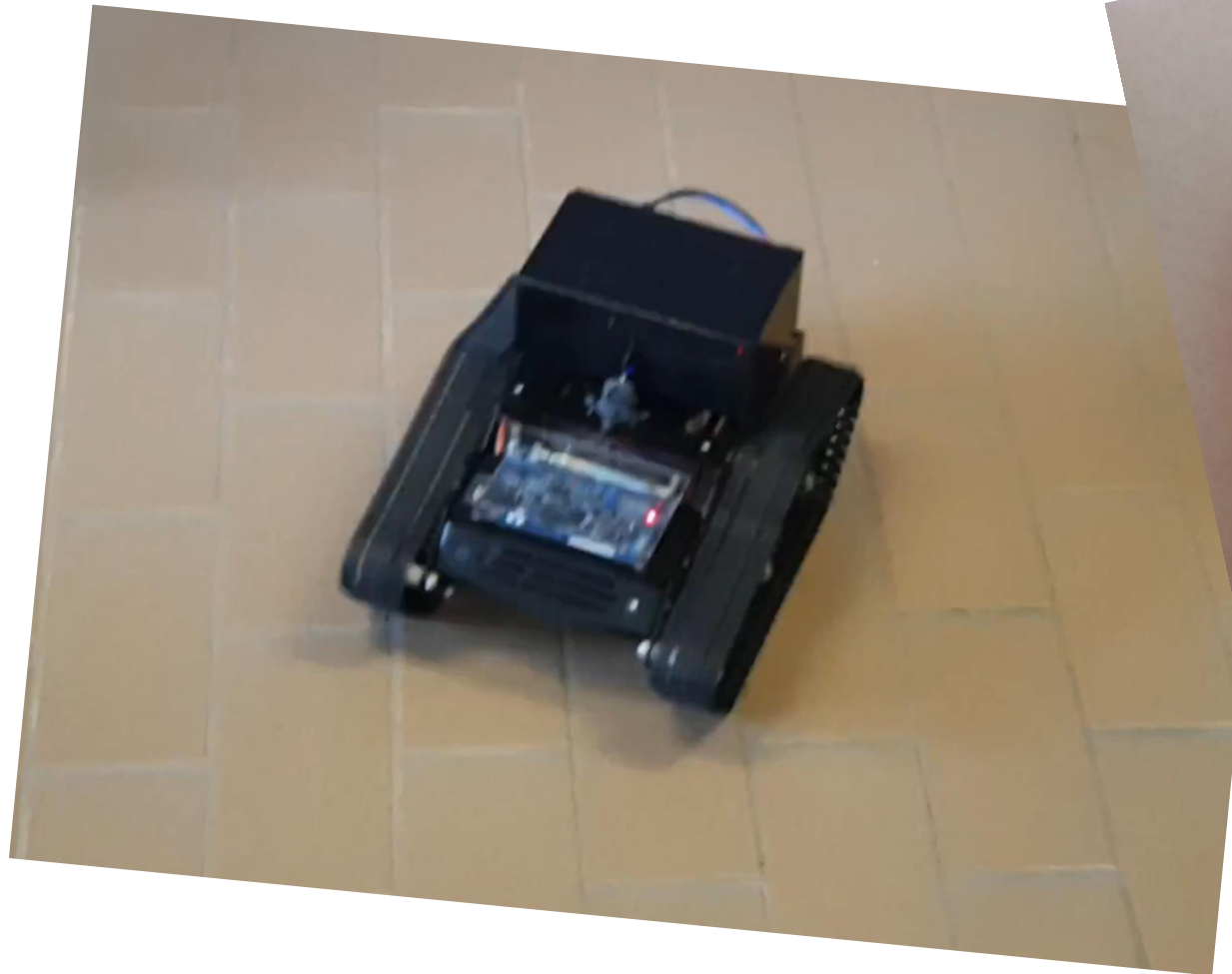


DASHBOARDS

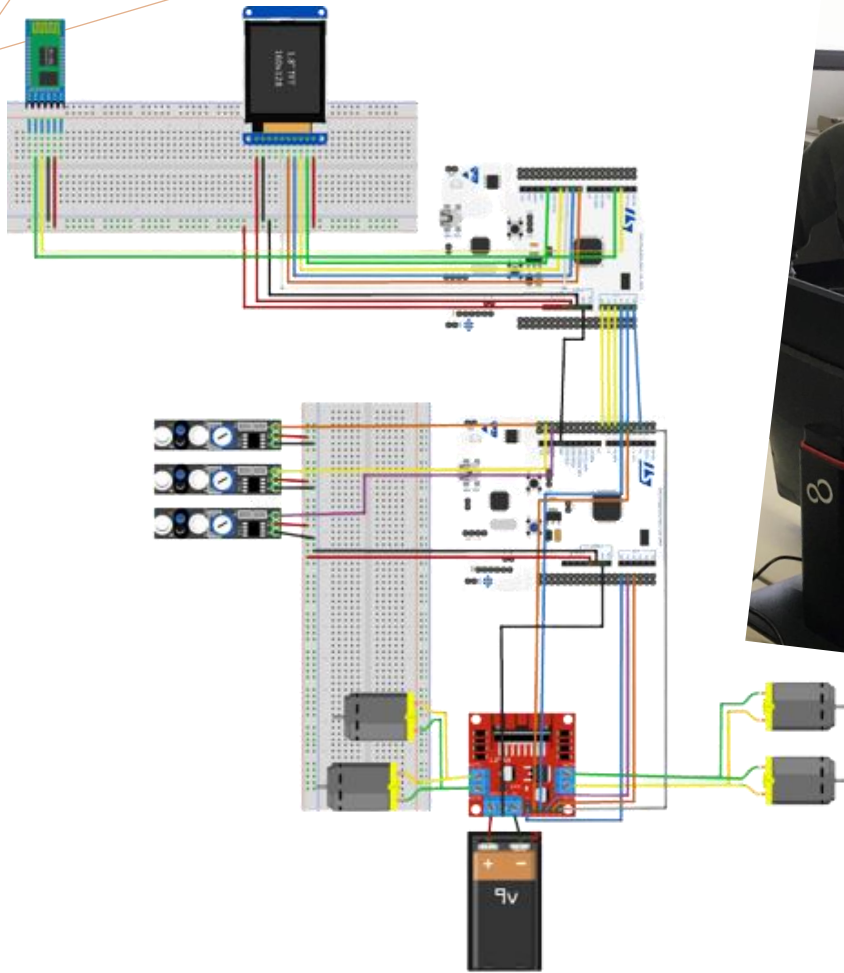




EMBEDDED DEVICES



EMBEDDED DEVICES

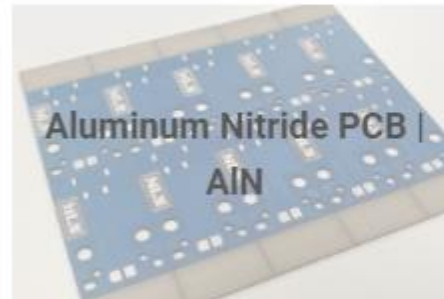
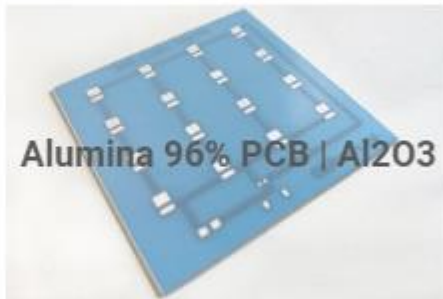


Technology
Arts Sciences
TH Köln

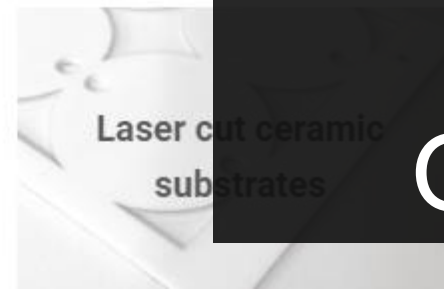
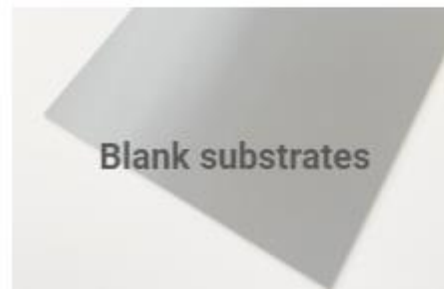
THOMAS
MORE

INTERNATIONAL:
KEULEN

Our Ceramic PCB solutions



Our Ceramic substrates solutions



BEDRIJF:
CERCUITS

EMBEDDED
SYSTEMS ENGINEER

IOT (CLOUD)
DEVELOPER / ARCHITECT

DATA ENGINEER /
ANALYST IOT

EMBEDDED AI
DEVELOPER

JOBS?

Embedded System Engineer

Magics is now looking for an **Embedded System Engineer** to join its team. At Magics, we have a family-like warm working environment, and our mission is developing technologies to enable intelligent and reliable machines for a smart and sustainable world. If you'd like to be part of us, please send your CV to hr@magics.tech, and we will contact you.

Key qualifications

- Master's or Bachelor's degree in electronics engineering or computer science.
- Excellent programming skills of C and C++.
- Hands-on experience with micro-controllers (e.g., ARM, RISC-V) and embedded operating systems.
- Experience with low-power wireless protocols such as BLE, 6LoWPAN, LoRa, and NB-IOT.
- Experience with Python programming is a plus.
- Experience with Robot Operating Systems (ROS) is a plus.
- Good communication skills in English.



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SYSTEMS ENGINEER

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EMBEDDED AI
DEVELOPER

JOBS?

2022

Your spacesuit

As IoT Developer at Sirus you are flexible and you have a hands-on mentality. **You are eager to learn and pass on your technical knowledge.** It is written in the stars that you'll help Sirus and its businesses land on the moon.

- You preferably have a master in computer sciences or engineering. If not, you possess a bachelor with IT specialization and with substantial work experience in professional software development.
 - You have experience in programming languages Python and C#, as well as a good knowledge and overview of the Python and .NET packages.
 - You are proficient in team based software development processes (e.g. agile/scrum) and version control/testing/deployment tools (e.g., Git, JIRA, Jenkins, Azure DevOps).
 - You have knowledge of the Microsoft Azure services with focus on IoT (link: <https://sirus.be/smart-cities/>), (IoT Hub, Azure IoT Edge, Microsoft Data Lake and Storage accounts), Streaming Analytics, and App services. Microsoft Certifications is an advantage.
 - You have knowledge of database design, preferably MS SQL and PostgreSQL.
 - You are pragmatic with an eye for detail and quality, you are open minded and solution-oriented and you possess a use of initiative.
- You have a good knowledge of English, both written and spoken.



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EMBEDDED AI
DEVELOPER

JOBS?

Data Analyst - IoT device connectivity

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Major Responsibilities:

- Transform business stakeholder questions and issues into clear and unambiguous technical requirements
- Troubleshoot technical issues on data coming from devices
- Perform queries to optimize the data from/to the devices
- Control and monitor the over the air updates
- Support divisions for technical requests about the data flow
- Support the Test Engineer to implement test scenarios in the field

You will work in the exiting domain of the **Industrial Internet of Things** within an international multidisciplinary environment you will see the results of your work from the data it starts together with specialists from different disciplines like embedded software developers, software non-cellular technology experts, product managers, network providers and suppliers of modems and problems and challenging products.

What we expect of you?

Competence requirements:

- Genuine interest in the world of IoT and telecom
- Knowledge of SQL, Python

EMBEDDED
SYSTEMS ENGINEER

IOT (CLOUD)
DEVELOPER / ARCHITECT

DATA ENGINEER /
ANALYST IOT

EMBEDDED AI
DEVELOPER

JOBS?

AI & ROBOTICA DEVELOPER - C++? Tensorflow

Eyetechn Solutions
Permanent contract

AI & Robotica Developer - Profiel:

- Je hebt interesse in **AI & Robotica** en je kan je goed uitdrukken in het **Nederlands** en **Engels**.
- Je hebt genoten van een hogere opleiding zoals **bachelor** of **master**.
- Technologieën zoals **.C#, C++, tensorflow & OpenCV** vormen dankzij je ervaring geen probleem voor jou.

Offer

AI & Robotica Developer - Aanbod:

- Je krijgt de mogelijkheid om een mooi bruto jaarsalaris te verdienen dat rond **60 000 euro** zal liggen, dit is afhankelijk van je kennis en ervaring. Hierdoor ge je jezelf extra kunnen verwennen nu dat de horeca terug open is.
- Als medewerker van dit bedrijf heb je recht op een **wagen** en een **tankkaart**! Zo ben je nooit meer gebonden aan vaste reistijden en heb je volledige controle over je verplaatsingen.
 - Je hebt ook recht op **extralegale voorwaarden zoals: laptop, groeps & hospitalisatieverzekeringen, maaltijdcheques, ecocheques, enz,...** Allemaal kosten die nu gespaard blijven, hierdoor ga je nog meer kunnen genieten van jouw loon!
 - Heb je ook micro management? Geen probleem! In dit bedrijf krijg je de nodige **autonomie** en **verantwoordelijkheid** zodat jij optimaal kunt functioneren.
 - Je komt te terecht in een aangename **moderne werkomgeving** met een **leider**, jouw welzijn staat in dit bedrijf centraal. Dankzij de **toffe collega's** en **work sfeer** zal de tijd hier dan ook vliegen!

BEDANKT!

Michiel Verboven

michiel.verboven@thomasmore.be

