



Infineon EdgeAI Startup Challenge 2025

Building intelligent IoT sensor systems with the help of Edge AI

Andreas Muehlberger, René Fabien de Montmorency

11.04.2025



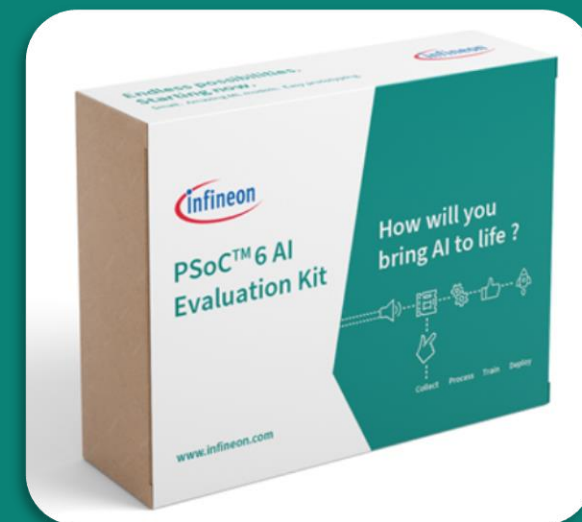
Ready for the Infineon Startup Challenge?

Boost your MVP development with this years Startup Challenge



Are you ready to enhance your application using Infineon solutions and receive support to strengthen your business case? Here's why you're the perfect fit:

- Working on AI models with use cases in the real world.
- Dreaming of creating or leveling up your own IoT applications using Infineon solutions.
- Receive complimentary Infineon AI Kits featuring Deepcraft™ AI technology, along with Infineon sensors and microcontrollers.
- Benefit from the expertise of Infineon professionals who will provide technical assistance in developing your prototype.
- Engage with our partners for valuable business coaching and pitch training.
- Showcase your progress at the upcoming demo day scheduled for October 1st, 2025.
- Connect with decision-makers at Infineon and venture capitalists for a chance to get their interest in your company.
- Seize the opportunity to advance to the next phase of a comprehensive one-year collaboration program.



[Apply here for the Infineon Startup challenge until 15th of June!](#)

PSOC™ Edge IoT Application Examples

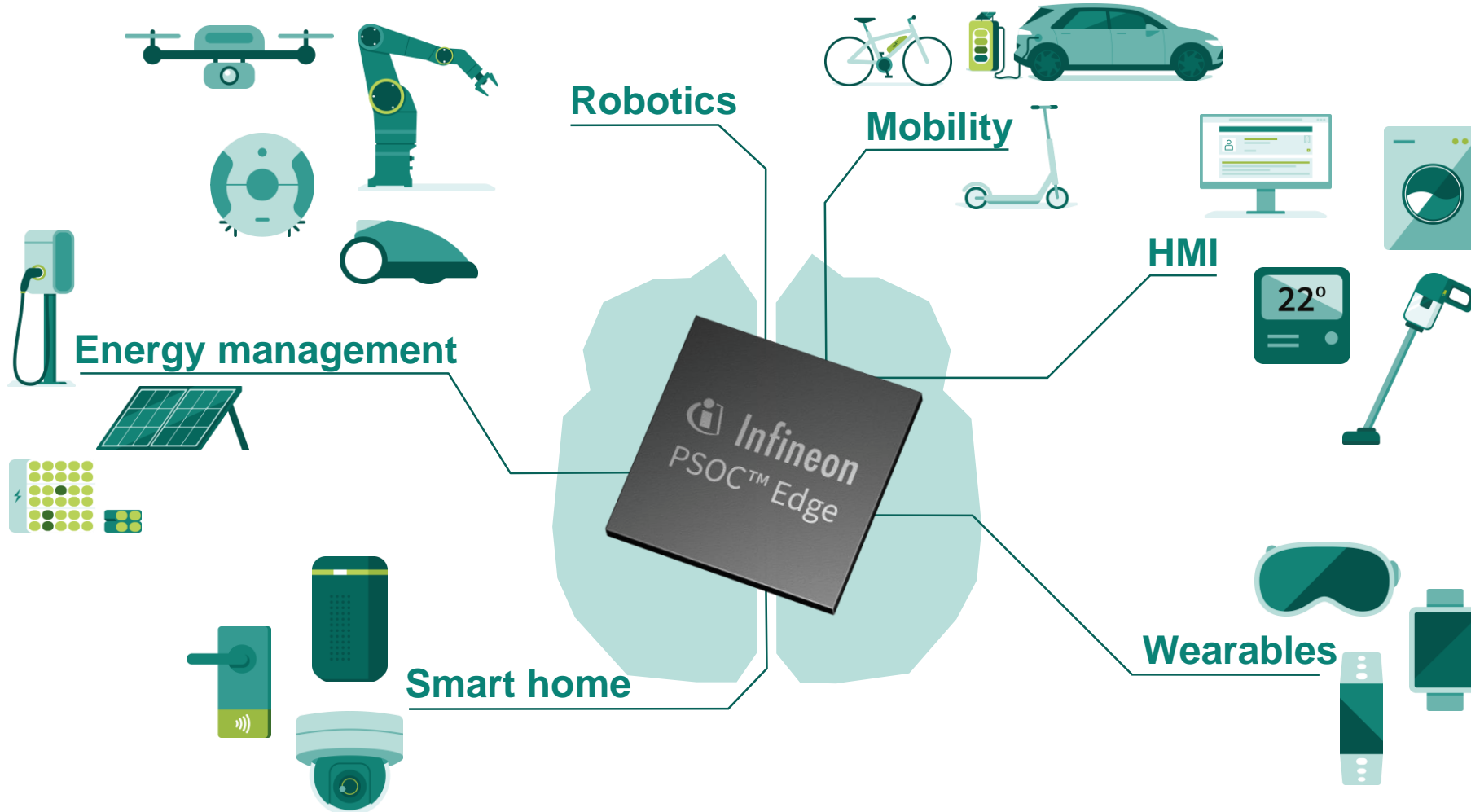
Enabling a New Generation of Responsive ML Edge Devices



IPCEI Microelectronics and
Communication Technologies



Infineon
co-innovation
program



Mobility

- E-Bikes
- Intelligent Charging

Human Machine Interface (HMI)

- Appliances
- Industrial Device Usability
- Factory Automation

Wearables

- Fitness Watch
- AR/MR/VR Glasses & Accessories
- Audio Accessories

Smart Home

- Thermostat
- Speaker
- Door lock
- IP Camera
- Doorbell

Energy management

- Solar panels

Robotics

- Vacuum Cleaner
- Vacuum Robots
- Service Robot
- Lawn & Garden Robotics
- Industrial Robotics

Your AI/ML market entry with Infineon

Infineon offers end-to-end technology solutions for your AI/ML market entry



Our Capabilities

AI-models & capabilities for a wide variety of applications

End-to-end software solutions for easy training & deployment

The right hardware for your Edge AI model



IPCEI Microelectronics and Communication Technologies



Infineon
co-innovation
program

Infineon Edge AI Solution Offering



AI Ready Models & AI Solutions



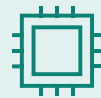
In-house AI Software

DEEPCRAFT™ Studio

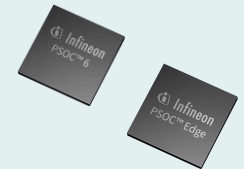


Development & AI Ecosystem

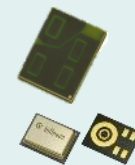
ModusToolbox™
Software



PSOC™ Microcontrollers



XENSIV™ Radar
and Microphones



Connectivity
& Security Solutions

PSOC™ Edge Power/Performance, Software & ML Ecosystem

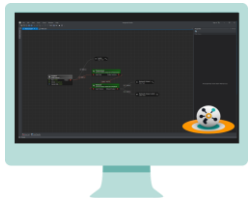
Unlock high-end user experiences for next gen devices



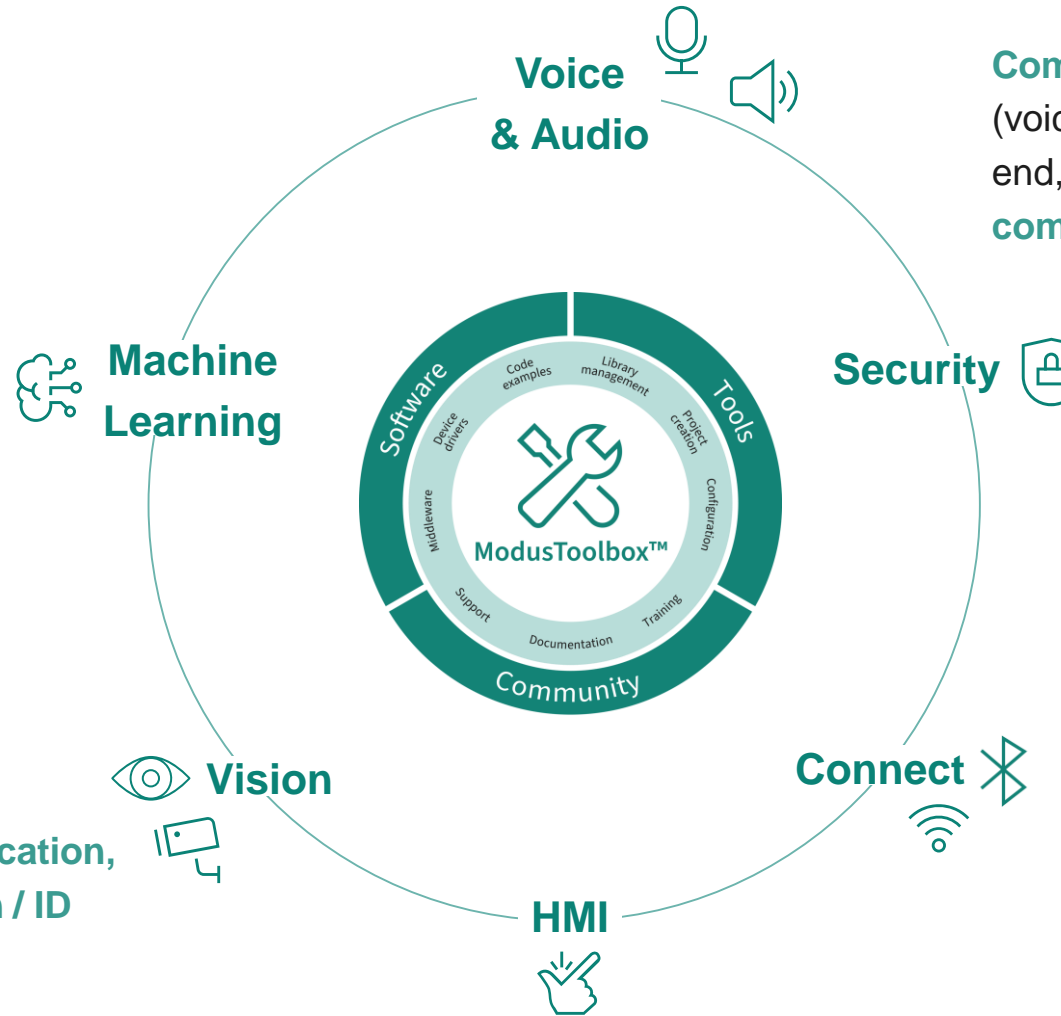
DEEPCRAFT™ Studio ML

Development Tool & ModusToolbox™

ML for data collection & pre-processing, model training, model conversion & deployment



Ready ML Models
adding specific capability immediately



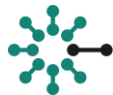
Comprehensive set of voice products
(voice assistant, wake word, acoustic front end, ..) **offering lowest power without compromising user experience**

**Object classification,
Face detection / ID**

**Full unified set of traditional
embedded Development Tools**
– provided through
ModusToolbox™ development
environment.



IPCEI Microelectronics and
Communication Technologies



Infineon
co-innovation
program

DEEPCRAFT™ Studio + ModusToolbox™

Together they provide the full journey from ML model development to embedded software



IPCEI Microelectronics and
Communication Technologies



Infineon
co-innovation
program



Bring your own data

Bring your own model

OR

Buy a Ready Model

Optimize & validate your model

Develop your embedded product
with IFX MCUs



DEEPCRAFT™ Studio



Data Acquisition

Preprocessing

Model Training

Data
Import

Data
Capture

Data
Generation

Data
Augmentation

Data
Labeling

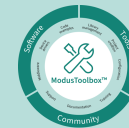
Preprocessor /
Feature
extractor
selection

Model
Selection

Model
Training

Model
Validation

DEEPCRAFT™ Studio +
ModusToolbox™



Optimization

Hardware
Optimization

ModusToolbox™



.c



.a

Deployment

Code
Generation

Target Device
Test and Validation

Field
Deployment

PSOC™ Edge

Infineon's Next-Generation of ML-enabled MCUs



IPCEI Microelectronics and
Communication Technologies

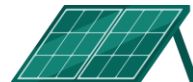
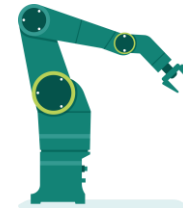


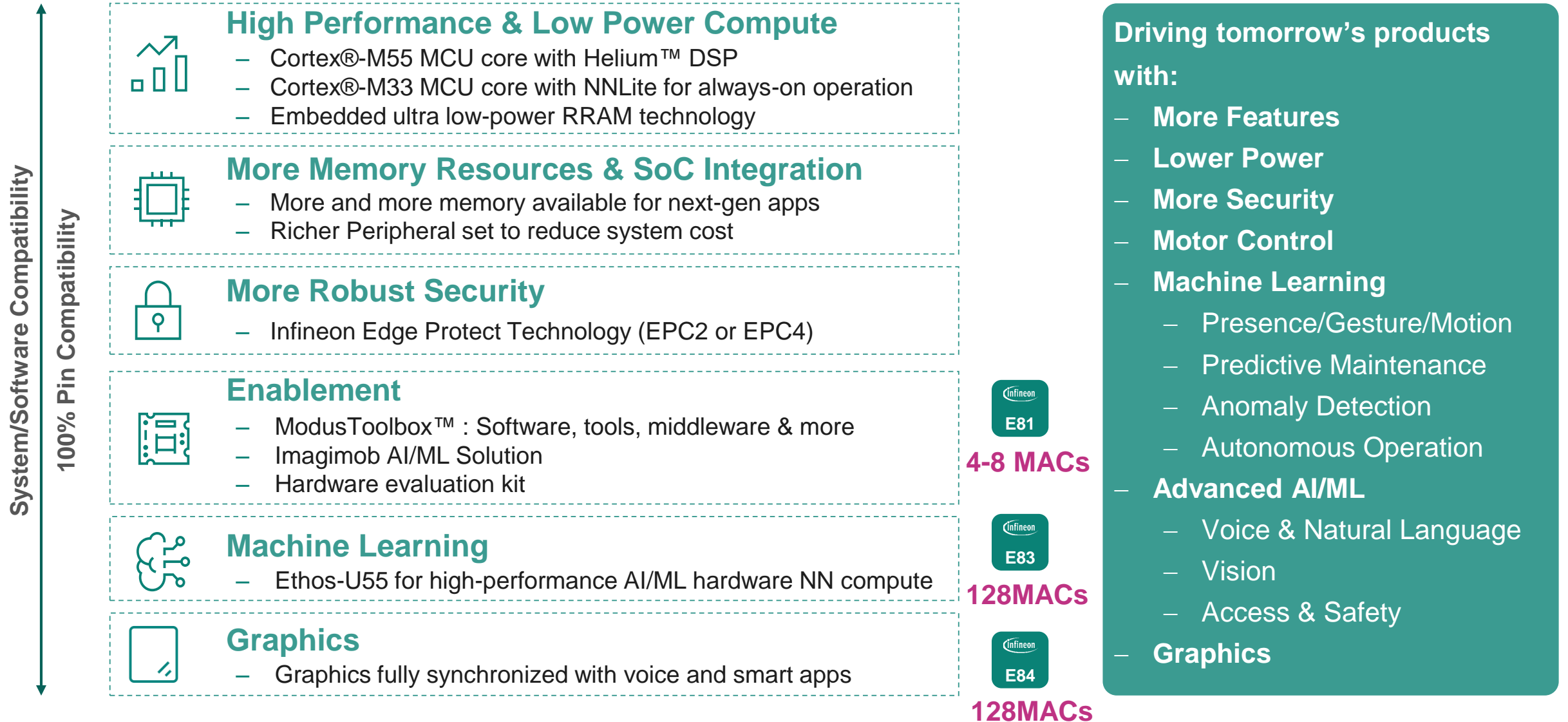
Infineon
co-innovation
program



PSOC™ Edge

- **Arm® Cortex®-M55** based micro-controllers with up to 400 MHz
- **Arm® Cortex®-M33** with up to 200 MHz
- **Ethos-U55** and **NNLite NPUs** for next-generation Edge AI applications
- **Scalable and compatible portfolio** in features, packages, pinouts, memory and performance
- **Comprehensive peripheral set**, to optimized BOM cost design
- **PSA L4 / EPC4 security**





PSOC™ Edge expands AI/ML use cases

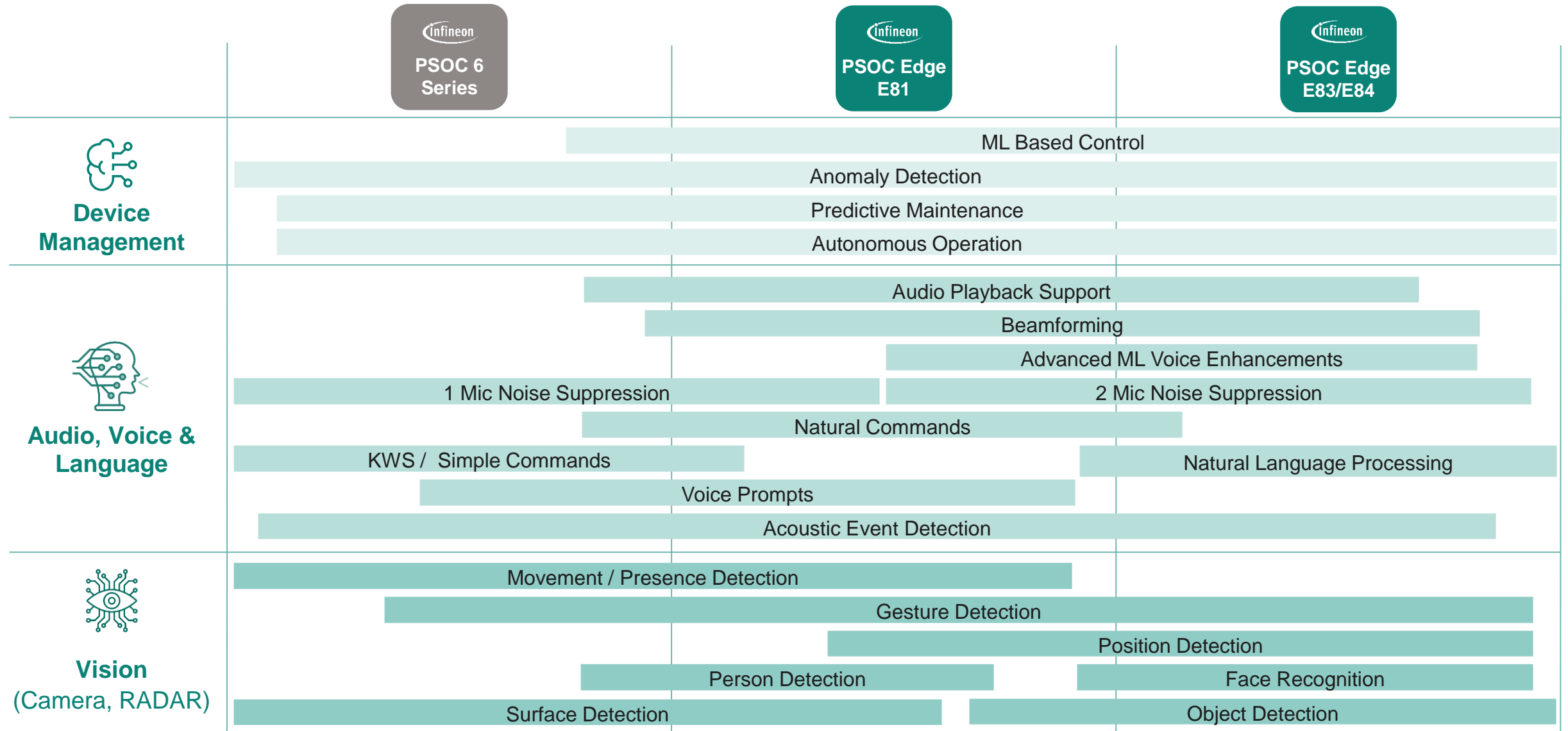
AI/ML use case compute requirements for Next Gen devices



IPCEI Microelectronics and
Communication Technologies



Infineon
co-innovation
program



PSOC™ 6 AI and Edge E84 Evaluation Kit

Infiniteon's Hardware Platform for Edge AI



IPCEI Microelectronics and
Communication Technologies



Infiniteon
co-innovation
program



Easy to use & low-cost

Evaluation board with efficient form factor for easy prototyping



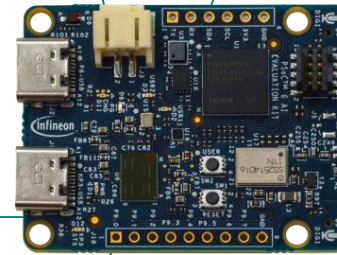
Easy creation of ML models

Sensor fusion-, ML-, acoustic-, time series- and radar models



Connect easily & continuously improve models

Wired & wirelessly



CY8CKIT-062S2-AI



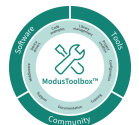
Fast time to market at minimal development cost



Direct launch for PSoC™ 6 & PSoC Edge™

End-to-end

Collect data, create, train, evaluate & deploy your ML models fast



The best of Hardware, Software & ML

Solution approach with PSoC™ 6, QSPI Flash & multi-sensor input: radar, microphone, pressure & 6-axis motion sensor



www.infineon.com/aikit

Are other sensors needed?

No issue, check out our complete sensor offering!



IPCEI Microelectronics and
Communication Technologies



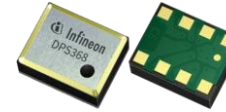
Infineon
co-innovation
program



Gas sensors



Microphones



Magnetic sensors



Magnetic switches



Current sensors

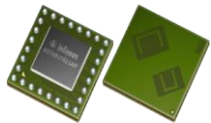


Capacitive and Inductive sensors

Time of Flight sensors



mmWave Radar



Pressure sensors



If you need other sensors for your application, have a look on our webpage and [check our offering](#) or download our sensor overview. Connect the to the microcontroller board and bring them to life in your prototype.

Making prototyping easy!

Infiniteon offers a portfolio of solutions for easy prototyping



IPCEI Microelectronics and
Communication Technologies



Infiniteon
co-innovation
program



AI Model Creation



DEEPCRAFT™
Studio

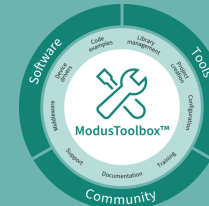
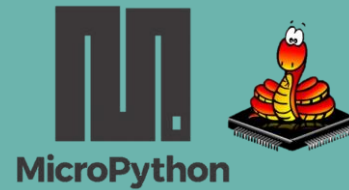


DEEPCRAFT™
Studio

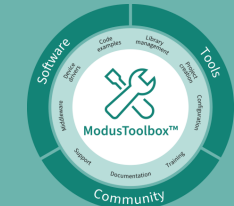


DEEPCRAFT™
Studio

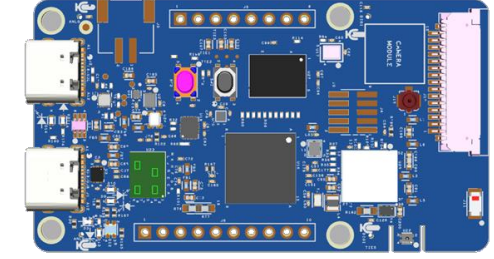
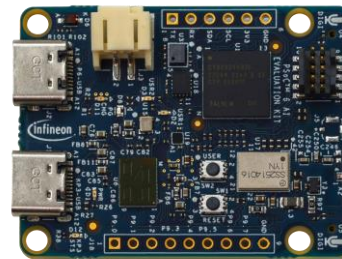
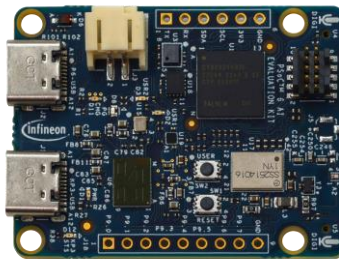
Development Platform



ModusToolbox™
Software



ModusToolbox™
Software



PSOC 6 AI Kit

PSOC EDGE E84 AI Kit

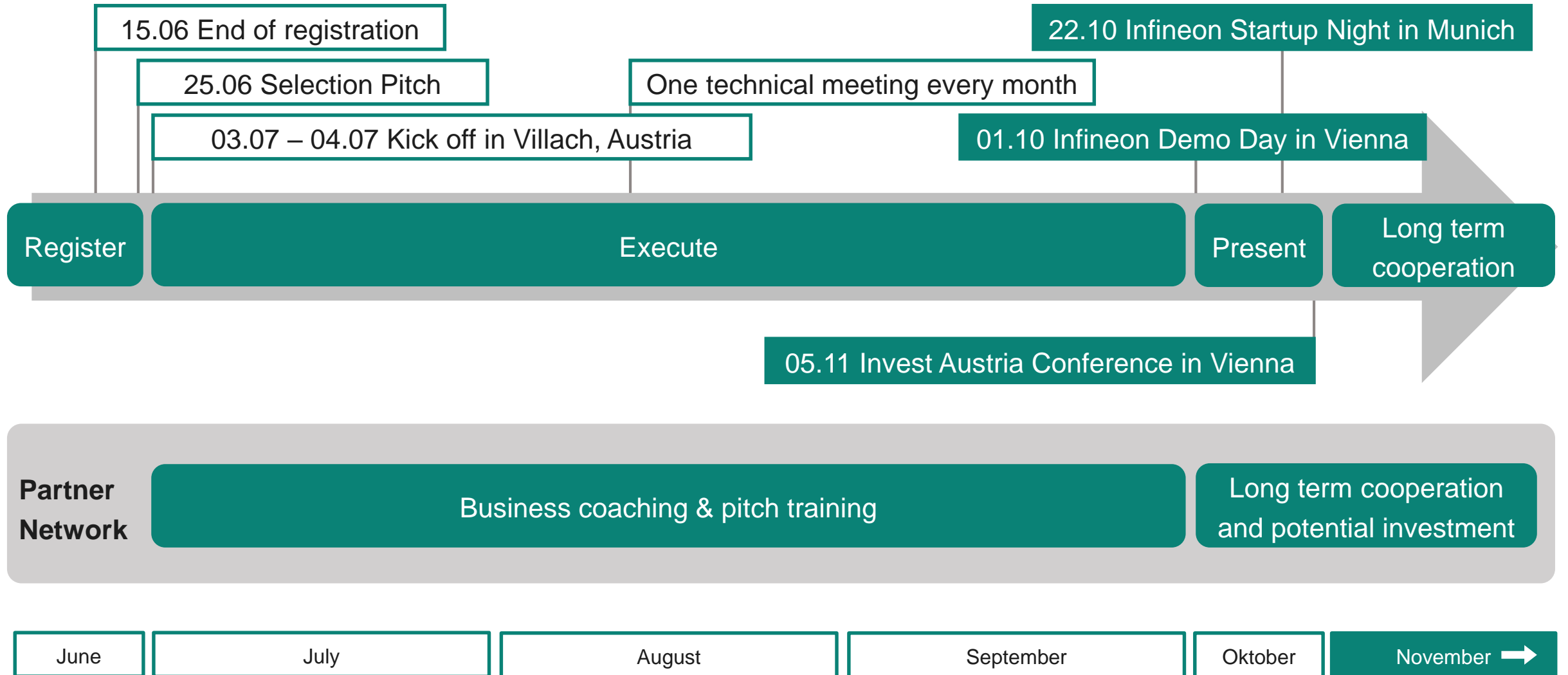
Timeline Startup Challenge 2025



IPCEI Microelectronics and
Communication Technologies



Infineon
co-innovation
program



The Partners in the Startup Challenge 2025

Our partners will support you in your quest to get your product to market



Business partners

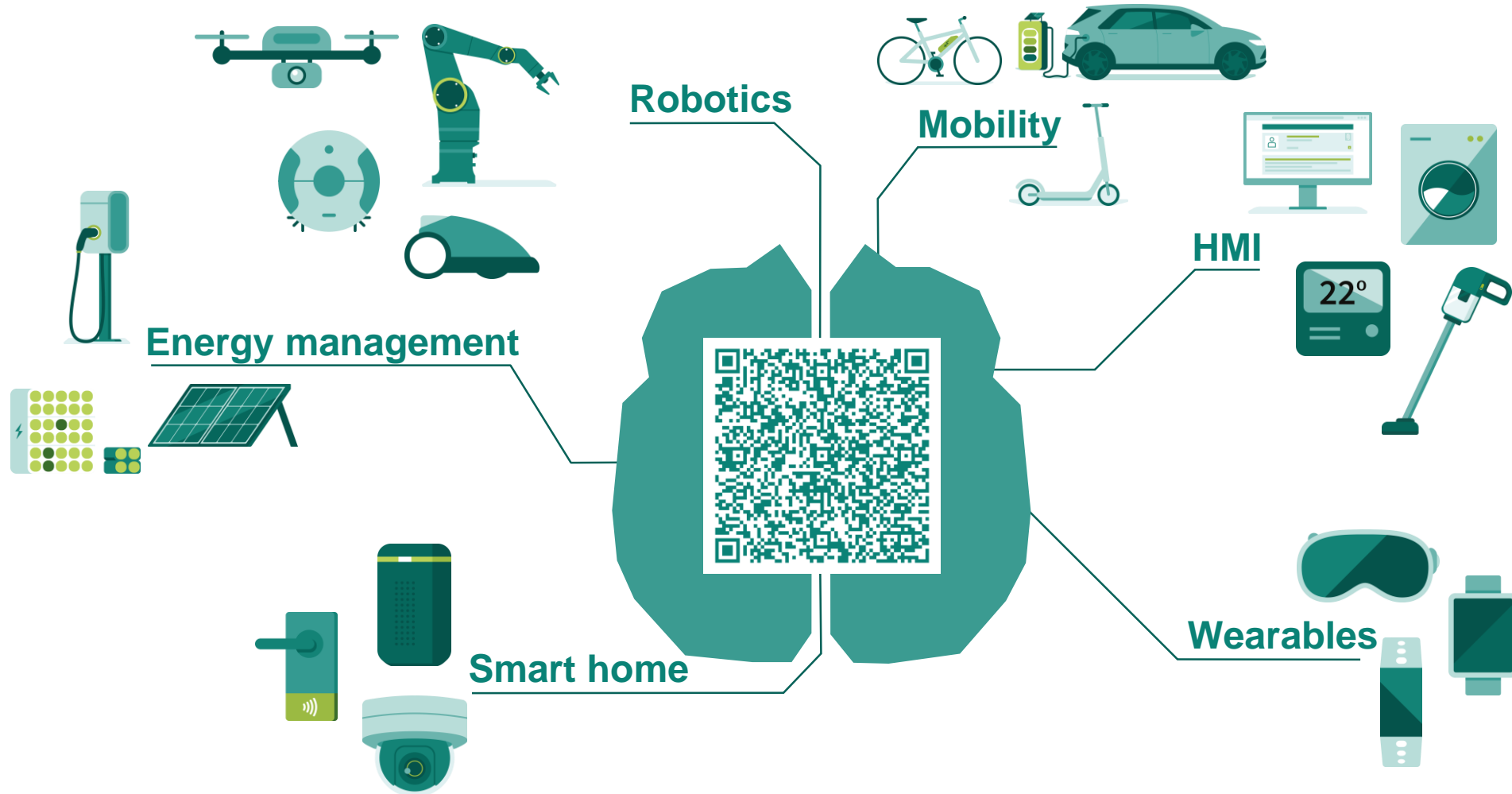


Investment partners



Join the Infineon Startup Challenge 2025!

Build the Next Generation of responsive Edge Devices



Scan the QR code to apply until the 15th of June!

