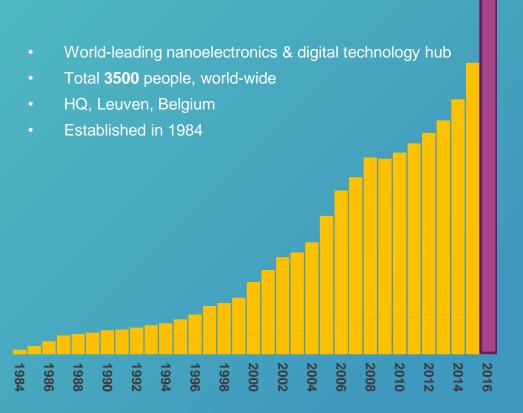


#### DRIVING INNOVATION IN THE ECOSYSTEM

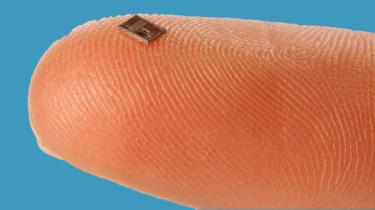
IMEC INNOVATION SERVICES

## unec



### About imec ...

REVENUE
2017: 546M€





IMEC INNOVATION SERVICES AND SOLUTIONS

CAN HELP YOU TO SET YOUR INNOVATION IN MOTION,
FROM IDEA CREATION TO DESIGN, PROTOTYPING, TESTING AND
PRODUCTION IN ANY VOLUME.

#### APPLICATION DOMAINS

SMART HEALTH SMART MOBILITY

**SMART CITIES** 

**SMART INDUSTRIES** 

SMART ENERGY

**SMART EDUCATION** 





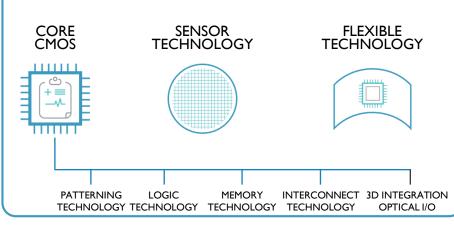








#### **SEMICONDUCTOR & SYSTEM TECHNOLOGIES**



#### DIGITAL TECHNOLOGY PLATFORMS

**NETWORKING** 

DIGITAL PRIVACY & SECURITY

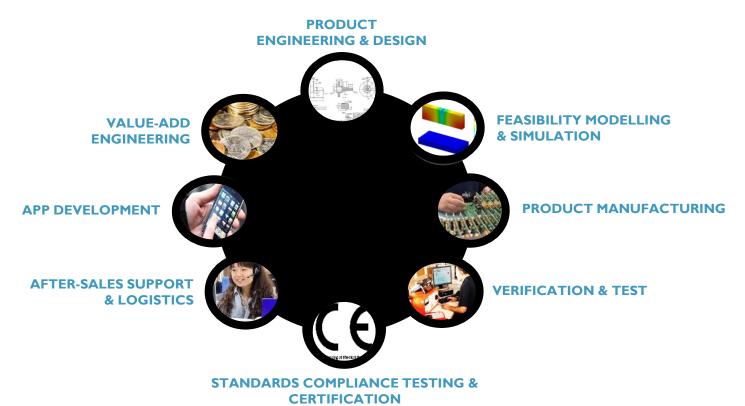
SOFTWARE & DATA MANAGEMENT SKILLS







#### **OUR SERVICES**

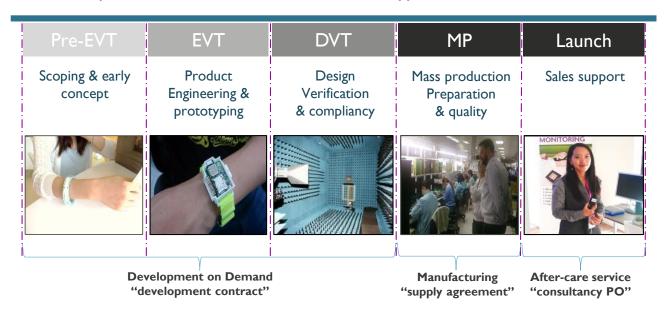




#### NPI PROJECT APPROACH

#### **CLEARLY DEFINED MILESTONES**

- A typical NPI project phased approach is used. There are 3 common contract types appropriate to each phase respectively (development contract, supply agreement contract, consultancy contract).
- Performance and specification based commitments are typical.



## A GREAT TEAM

75 STAFF
PROFESSIONAL METHODS
BROAD DIVERSITY OF SKILLS
NICE MIX OF EXPERTS & GENERALISTS
WELL CONNECTED TO THE ECOSYSTEM



# mec

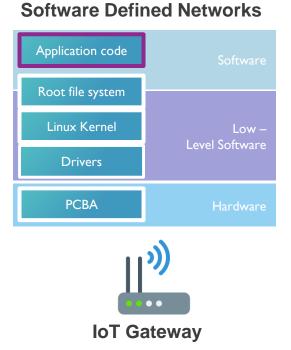
imec IoT platform
SMART REMOTE ENVIROMENTAL MONITORING



## IoT Gateway Ecosystem Scalable approach

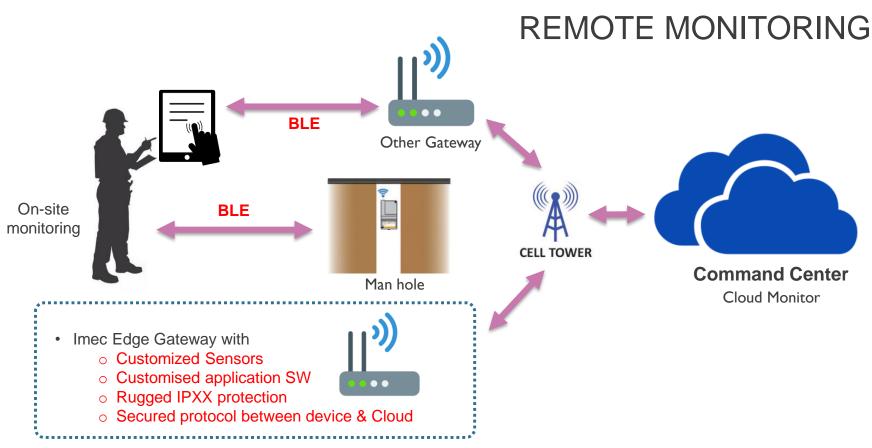
Smart Environmental Monitoring

**Smart Wearable** Prisoner Electronic Tagging **Smart Wearable** Lone Man Tracking **Smart Wearable** Hard Hat with EEG detection **Smart Vision and Imaging** Remote Tracking **Fleet Management Asset Tracking** Immobilize trailer Weight measurement

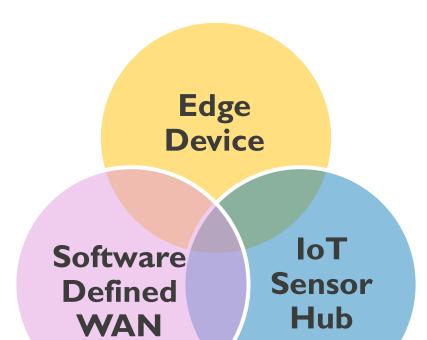




### SMART ENVIRONMENTAL MONITORING









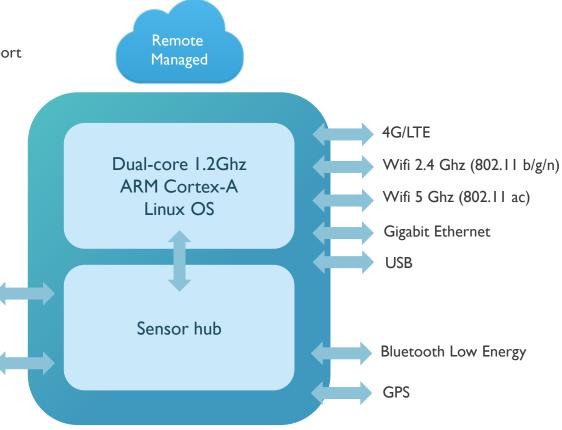


#### **IMEC EDGE GATEWAY**

#### **OVERVIEW**

- Smartphone-sized with USB-C power
- Wifi dual bands (11 b/g/n and 11AC) with MIMO support
- LTE Cat 4
- SW SDK for customized applications development
- Environment sensing
- Edge computing and event alarm
- Local data recording and information to Cloud
- Software Defined WAN (SDN) and remote management by the Cloud

Accelerometer
Gyroscope
Barometric Pressure Sensor
ECO2/TVOC Gas sensor
Temperature
Humidity
Ambient Light
Proximity detection
Sound-level





#### **IMEC EDGE GATEWAY**

#### **DIMENSIONS**

Length: 132,5 mm

• Width: 73,4 mm

Height: 17 mm

132,5 mm

#### **FULL CUSTOM BOARD DESIGN**

Plastic and Ruggedized encasings available



IPhone X (2017)



143,6 mm





#### SOFTWARE DEFINED NETWORKING

#### FLEXIBLE SOFTWARE STACK

Use our API to integrate your own dedicated application software and seamless integrate into your legacy environment.

Application code

Root file system

Linux Kernel

Low –

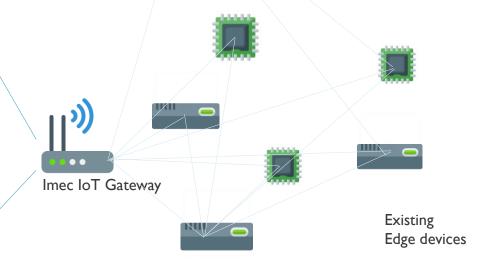
Level Software

**Drivers** 

PCBA Hardwa



Existing cloud infrastructure Communicates with existing devices





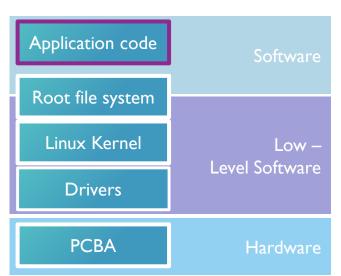
#### SOFTWARE DEFINED NETWORKING

#### FLEXIBLE SOFTWARE STACK



Receive commands from cloud infrastructure

Send data to cloud infrastructure





#### **Endless Possibilities**

- Control underlaying network devices.
  - Switch Wifi 802. I Iac to monitoring mode
  - Switch WAN connection to use 4G/LTE
  - ...
- Monitor usage of underlaying networking devices
- API to receive data from integrated sensors
  - Make If-this-than-that style applications
- API to control integrated sensors
  - Change sample rate
- API to receive data from external sensor.
  - BLE connected sensors
  - Connected image sensors
  - ...
- API to control external devices
  - Connected image sensor
  - Text-to-speech voice commands
  - Actuators
  - ...



## mec

embracing a better life

