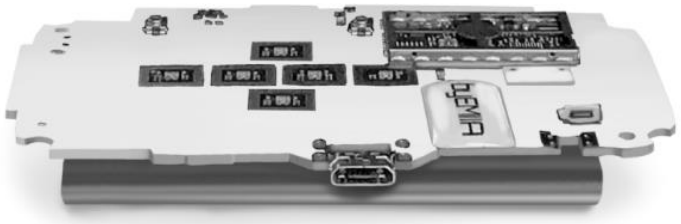
EMIIA

CONVERGENCE #1

EMIIA – autonomous cyber physical platform for the Internet of Things **IoT/IIoT**

Embedded electromechanical and software-hardware solutions based on Smart controllers and **MONOCLE** modules with integrated self-updating software and autonomous neural network for automation and machine vision based on the principles of cognitive radio optics:

– Foggy/Peripheral (boundary) computing – **Fog/Edge Computing**;
– Machine vision based on the principles of cognitive radio optics – **Cognitive radio optics**;
– Wireless mesh network – **Wireless Mesh Network**.



Without Foggy computing it is not possible to build and secure the Internet of things!

Result of implementation of hardware/software and electromechanical components of the platform:

60% reduce capital and operating costs on the Internet of things **IoT/IIoT**

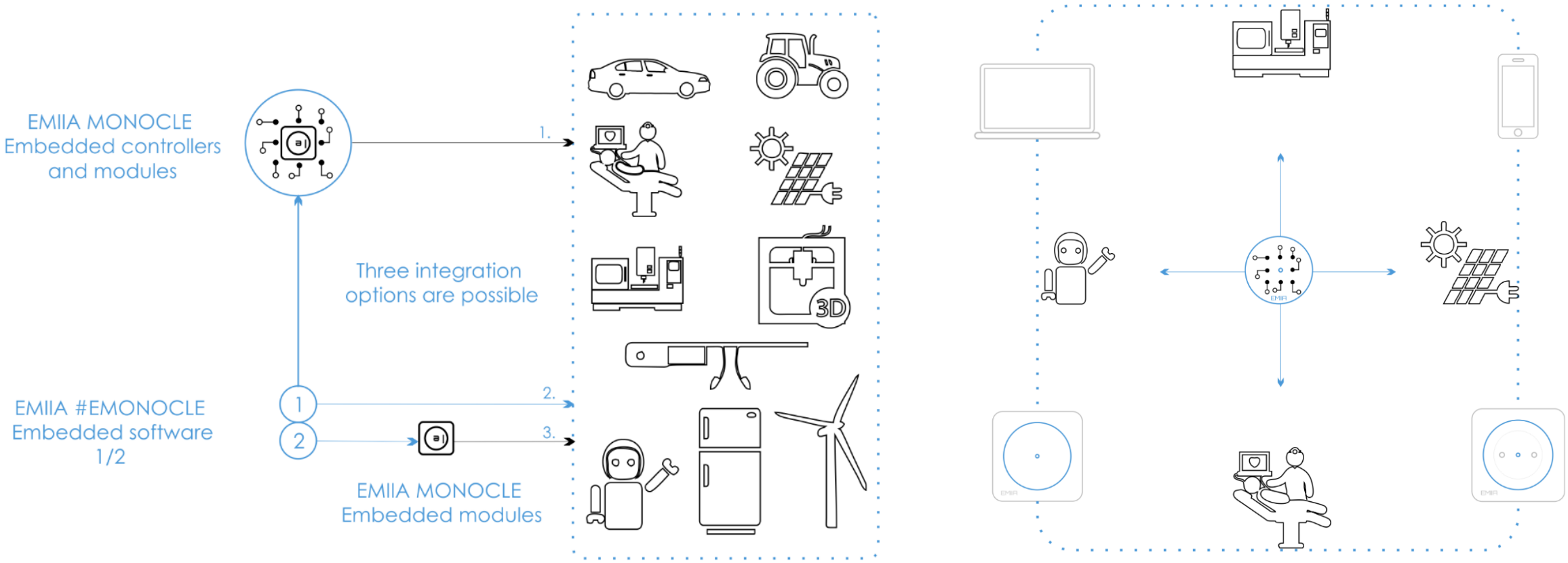
(**automation, information security, Industry 4.0**).

60-80 %
savings on IoT/IIoT infrastructure, cloud computing and information security

30 %
replacing sensors and network modems (communication module)

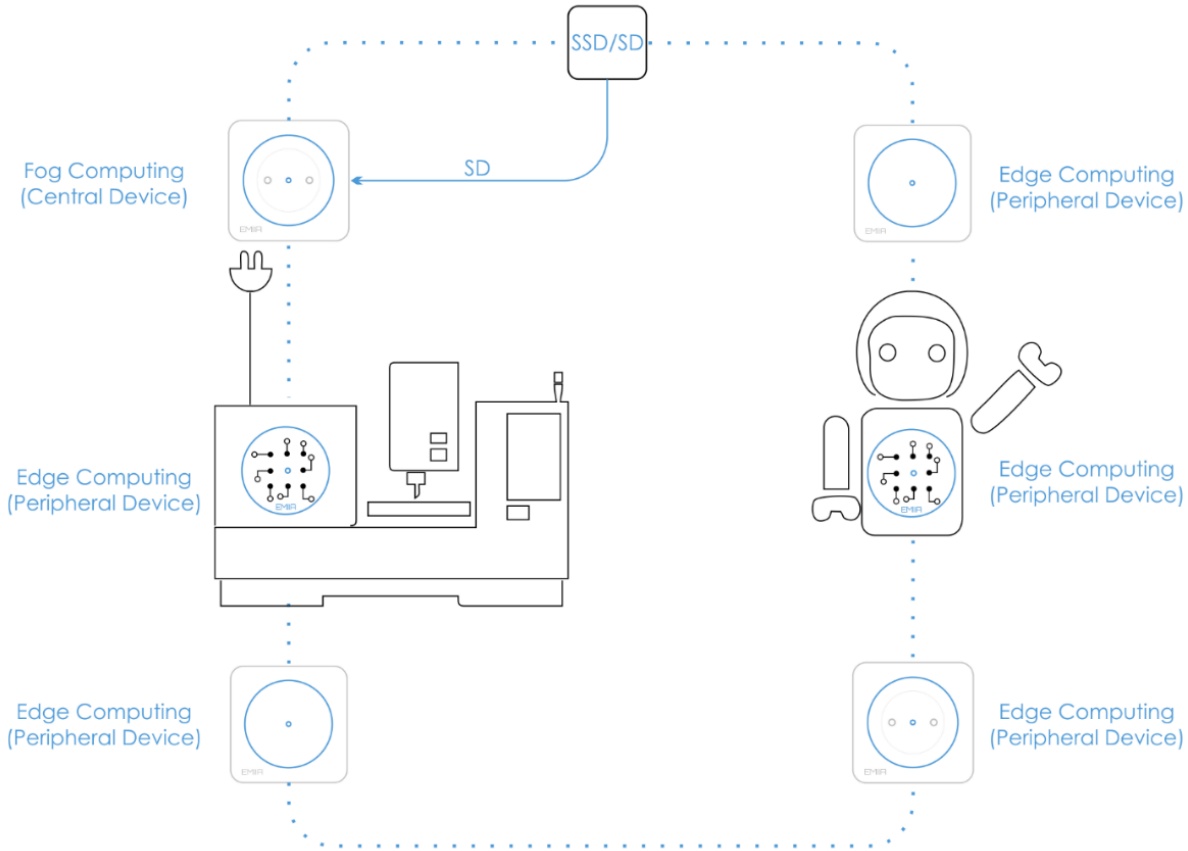
10 %
reducing power consumption

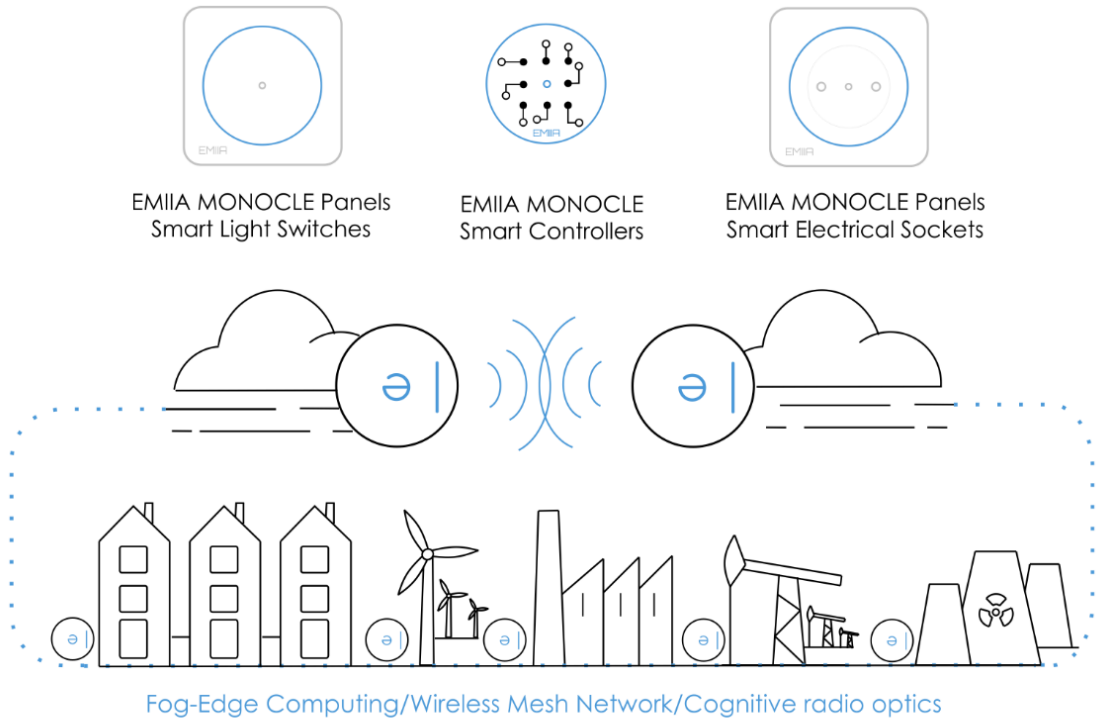
THE ORGANISATION OF AUTONOMOUS CYBER PHYSICAL PLATFORM "EMIIA": EMBEDDED SMART CONTROLLERS AND PANELS MONOCLE (CONTROLLERS, LIGHT SWITCHES AND ELECTRICAL SOCKETS)



Fog-Edge Computing/Wireless Mesh Network/Cognitive radio optics

EMIIA Autonomous Cyber Physics Platform IoT/IIoT





Fog-Edge Computing/Wireless Mesh Network/Cognitive radio optics

EMIIA Autonomous Cyber Physics Platform IoT/IIoT

MARKET, BUSINESS MODEL, STRATEGY

The project will enter the market of the Eurasian Economic Union – **2019/2020**;
BRICS, EU, Asia and the Pacific – **2020/2021**.

IDC expects global IoT spending to maintain a double-digit annual growth rate during the 2017-2022 forecast period and to exceed the **$1 trillion mark by 2022**.

Every year more than **10 billion IoT devices** will be produced in the world. Additional costs for the equipment required to create a cloud infrastructure (corporate and public clouds) of the Internet of things will amount to more than **$100 billion per year**.

Embedded Smart controllers and EMIIA Software form a new market direction of Autonomous intelligent **controllers capable of eliminating to a greater extent corporate and public clouds on the Internet of things, and therefore the equipment used to build such systems. And also replace most of the sensors, sensors and Ios devices required to create the infrastructure of the Internet of things: monitoring, data collection, automation and focus the required functionality within several devices**.

Autonomous intelligent controllers and software capable of solving such tasks will create a global market capacity **of $30 billion/2 billion devices** per year by **2022**, the estimated market share of the **EMIIA project is 40-60% ($18 billion/1.2 billion devices**, including third-party devices with integrated EMIIA Software).

GLOBAL MARKET (B2B, B2C, B2G) SOFTWARE AND HARDWARE PLATFORMS FOR INDUSTRY (IIoT), AS WELL OFFICE AND RESIDENTIAL SPACES (IoT)

Transcript for Electromechanical and hardware/software components within the platform of the Internet of things for the infrastructure of IoT/IIoT:

Platform IoT/IIoT - electromechanical and hardware:
- Switches;
- Routers;
- Server equipment;
- Uninterruptible power supply;
- Communication modules;
- Controllers;
- Actuators.

Platform IoT/IIoT - software:
- Protection against cyber threats;
- Monitoring and data analysis tools;
- Database management tools.

Sensors: temperature, pressure, humidity, flow, accelerometers, magnetometers, gyroscopes, inertial, sensor, proximity, acoustic, motion, occupancy, presence, image processing (IPOS), intelligent presence sensors (IOS), CO2/CO, light and radar sensors.

→ More detailed

Online resource of the project: www.emiia.ru

The project's blog: emonocle.blogspot.com

Github Repository: github.com/EMIIA

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→ Profiles of project participants (team)