
*Improve processes, detect current problems,
prevent costly downtimes, and produce better products*

REFERENCES

MAINFLUX LABS

Open Source Internet of Things Technology & Consulting Services

Mainflux Labs
Veljka Dugosevica 54
Belgrade Science Park
11000 Belgrade, Serbia
www.mainflux.com

What We Do

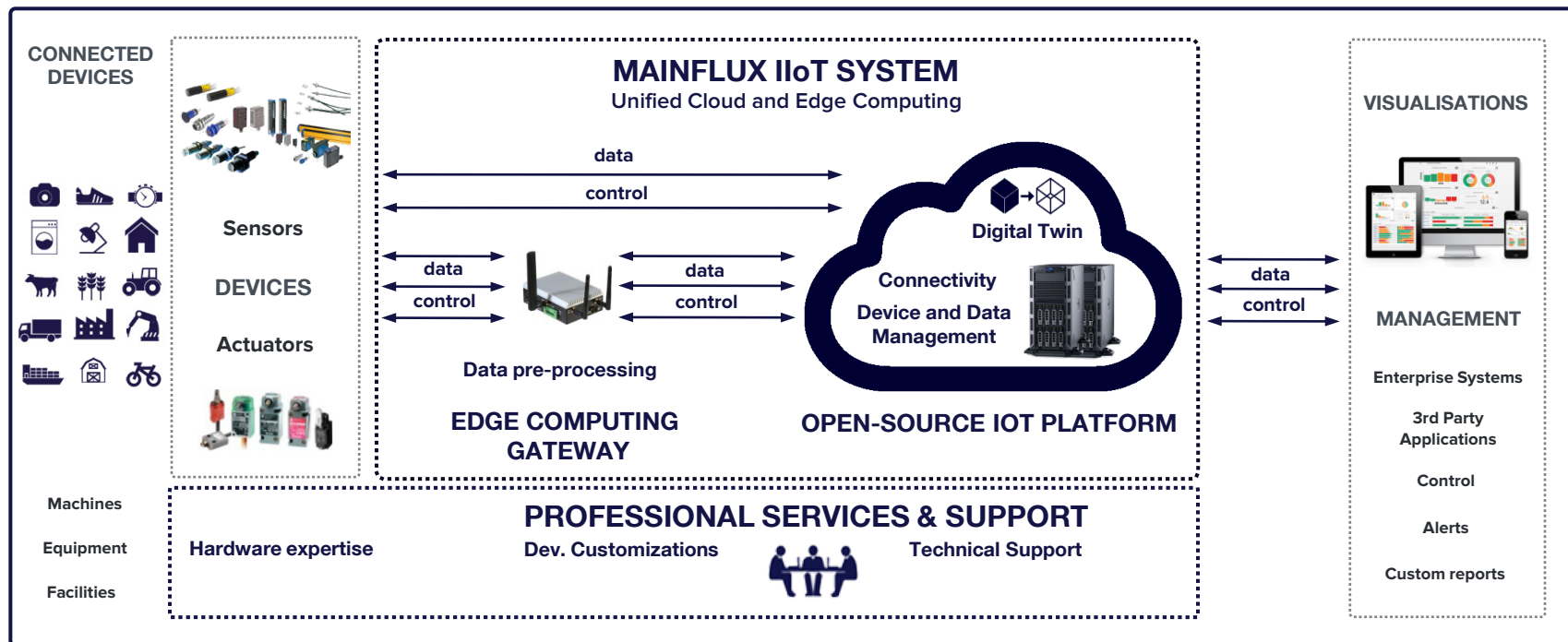
Mainflux Labs is providing

A

Mainflux
IIoT System

B

Professional
Services & Support



What We Do

PROFESIONAL SERVICES

Based on
one-off contractual agreements

Consultancy Around Product Design, And Architecturing

Proof Of Concept (Poc) Project's

Integration's And Pilot's

Advanced Services And Customizations

SUPPORT

Based on
subscription package

Technical Support

Workshops

Training

MAINFLUX ENTERPRISE EDITION

Packaged collection of open source Mainflux IoT platform components
provided as a signed binaries and/or Docker images

Mainflux Technology Adoption



**Target USA - 1800 Stores
Non-contractual Partnership**

Implementation of Mainflux IoT Platform as Core IoT platform in Smart Retail Store project. Extending LoRa support in Mainflux. Using Mainflux IoT Platform for management of remote gateways. Mainflux IoT platform deployed in 50 stores, preparing for launch the remaining 1800 stores.

Video: Principal Engineer of Target's IoT platform Dan Cundiff: Building an IoT Platform at Target.



Software DEVELOPER ZONE

**Intel USA - Non-contractual
Cooperation**

Intel demonstrates Mainflux IoT Platform for metering on the edge, with article "View Metering In Action On Edge Middleware Platforms"

**400,000 DOWNLOADS
of Mainflux SW Repositories**

O'REILLY® GoLab



**THE LINUX FOUNDATION
OPEN SOURCE SUMMIT
EUROPE**



{CODEMOTION}



**Conferences
Speaking Engagements**

Presented on 16 world conferences in Europe, USA and China

Open Networking Summit - Santa Clara
O'Reilly Software Architecture - London
ITNext Summit & Codemotion - Amsterdam
Embedded Linux Conference - Portland
IoT Solutions World Congress - Barcelona
Redis Lab - San Francisco
ONS - Shanghai



**COLLABORATIVE
PROJECTS**

EDGE X FOUNDRY™

ILFEDGE



**Linux Foundation
Membership & Awards**

Two awards from the community of 80 companies and EdgeX Governing board:

1. Community Contribution Award for Exemplary Leadership
2. Innovation Award for Extensive Technical Contribution.

572,426 DL
MQTT adapter service

106,287 DL
WebSocket

451,601 DL
HTTP adapter service

447,629 DL
Things service

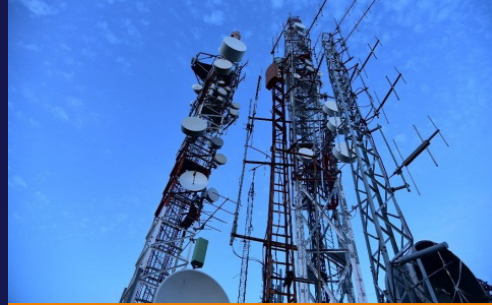
413,010 DL
Users service

Mainflux Technology Adoption



Osiris Systems for India Coast Guard

Mainflux IoT Platform is used for development of "Smart RoBo Monitoring Application Smart Server Racks with integrated Chilling Unit, UPS, PDU, environmental and safety sensors. India Coast Guard has already deployed 26 such Smart Server Racks deployed across various locations in India, and is planning to deploy 80 plus such servers in the coming months.



USA/India BTS Tower Monitoring

Asset Monitoring for Mauritius Telecom BST Towers powered up with ECB, Diesel Generator, Battery Bank. The feed from the existing sensors, do the required calibration at the hardware level, aggregate and transmit the data to the cloud for further analysis using predictive maintenance which provides energy savings.



Taloslogy – Sri Lanka Home Automation

Application catering to the home automation segment, with four components in application:

- Device Management (Mainflux)
- Application Backend
- Consumer Mobile Application (Flutter)
- Device Design, Manufacturing, Firmware
 - Smart AirCondition Automation
 - Smart Gate (Roller gate) Automation
 - Refrigerator Monitoring

Mainflux Technology Adoption – EU H2020

Participation in projects funded by EU H2020 Research and Innovation program



Horizon 2020
European Union Funding
for Research & Innovation



EU H2020 - EUR 5mil
Digital Building Twins

Member of the consortium funded by EU H2020 Research and Innovation program for development of assistants for Safe, and Productive Virtual Construction Design, Operation & Maintenance using a Digital Twin. Mainflux was invited by TU Berlin, other members include Erasmus Universiteit Rotterdam, German and Scandinavian construction structural engineering companies. Duration 2020-2023.



Horizon 2020
European Union Funding
for Research & Innovation



EU H2020 - EUR 5mil
Trustworthy AI

Member of the consortium funded by EU H2020 Research and Innovation program for development developing resilient accountable metrics, privacy-preserving methods, verification tools and system framework that will serve as critical building blocks to achieve trustworthy AI in security solutions. Member of consortium Includes Fraunhofer, Delft University of Technology, Telefonica, NEC, among the others. Duration 2021-2024.

Participation in consortiums that competed for EU H2020 funding



Horizon 2020
European Union Funding
for Research & Innovation



Quality Control In
Smart Manufacturing
EUR 10 mil

Mainflux Labs was invited by Fraunhofer IAPT to participate on 10 million EUR Call which aims to address the challenge of data reliability, the sensors, actuators and instruments used at various levels of integration in the manufacturing process.



Horizon 2020
European Union Funding
for Research & Innovation



Cloud Computing:
Towards A Smart Cloud
Computing Continuum
EUR 4mil

Invited by Universidad Politecnica de Catalunya, Barcelona, to participate on a 4million EUR H2020 call for comprehensive cloud solutions and testbeds combining for ubiquitous and seamless execution computing environments.



Horizon 2020
European Union Funding
for Research & Innovation



Upgrading Smartness
of existing Buildings
EUR 5mil

Mainflux Labs was invited by by TU Berlin to participate on a call which aims improve the smart readiness of buildings to allow for energy savings, more flexible operations, increased usability, and better maintainability.

Clients and Reference Business Cases



Worldwide Provider of Oilfield & Gas Equipment - USA

Start: 06/2018 / End: Ongoing

First phase: Consulting services for edge computing gateways.

Second phase: Implementation of Mainflux IoT Platform for management of IoT gateways deployed in the field. Implementation of Mainflux IoT Platform as the Core IoT Platform for gathering operational data from connected Oil & Gas equipment.

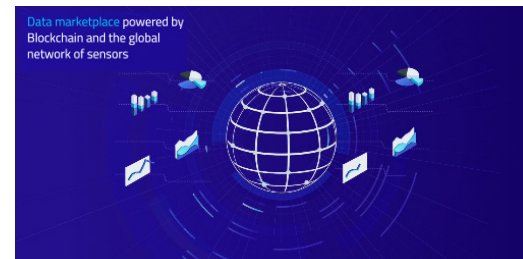


Independent Software Vendor Locomotive Digital Twins

PoC - Start: 11/2019 / End: 02/2020

Enhancing ISV Client Platform product with an automatic gathering of telemetry data from the equipment, remote and/or autonomous rule-based equipment controlling.

Monitoring of operational indicators of underlying IoT specific IT-infrastructure, remote control of the lifecycle of remote devices.

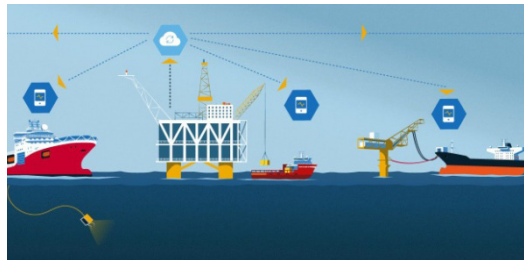


Datapace - NOKIA Digital Accelerator Startup - France

Start: 09/2018 / End: 10/2020

Development of blockchain powered (Hyperledger) data marketplace for the comprehensive, secure and automated monetization and exchange of IoT sensors and digital assets data with technical and policy-based data verification and the access to a global network of sensors provided by Nokia Sensing as Service.

Clients and Reference Business Cases



System Integrator India

PoC - Start: -10/2019 / End: 02/2020.

IoT Platform connected with provisioning, monitoring & analysis with mongoDB with full UI.

First phase: Oil & Gas use case demo kit.



System Integrator - Germany / Japan Manufacturer

PoC - Start: 12/2019 / End: 03/2020

Connecting pharma manufacturing machines via enterprise network to Mainflux. Using OPC-UA industrial protocol. Updating machine and process Digital Twin representation and record it to a semantic database. Integration of MES/ERP systems for process automation, replacing costly historians.



System Integrator East Europe

PoC - Start: 09/2018 / End: Ongoing

PoC - Customization of IoT platform for NB-IoT devices for smart metering aimed for Telecom from Eastern Europe.

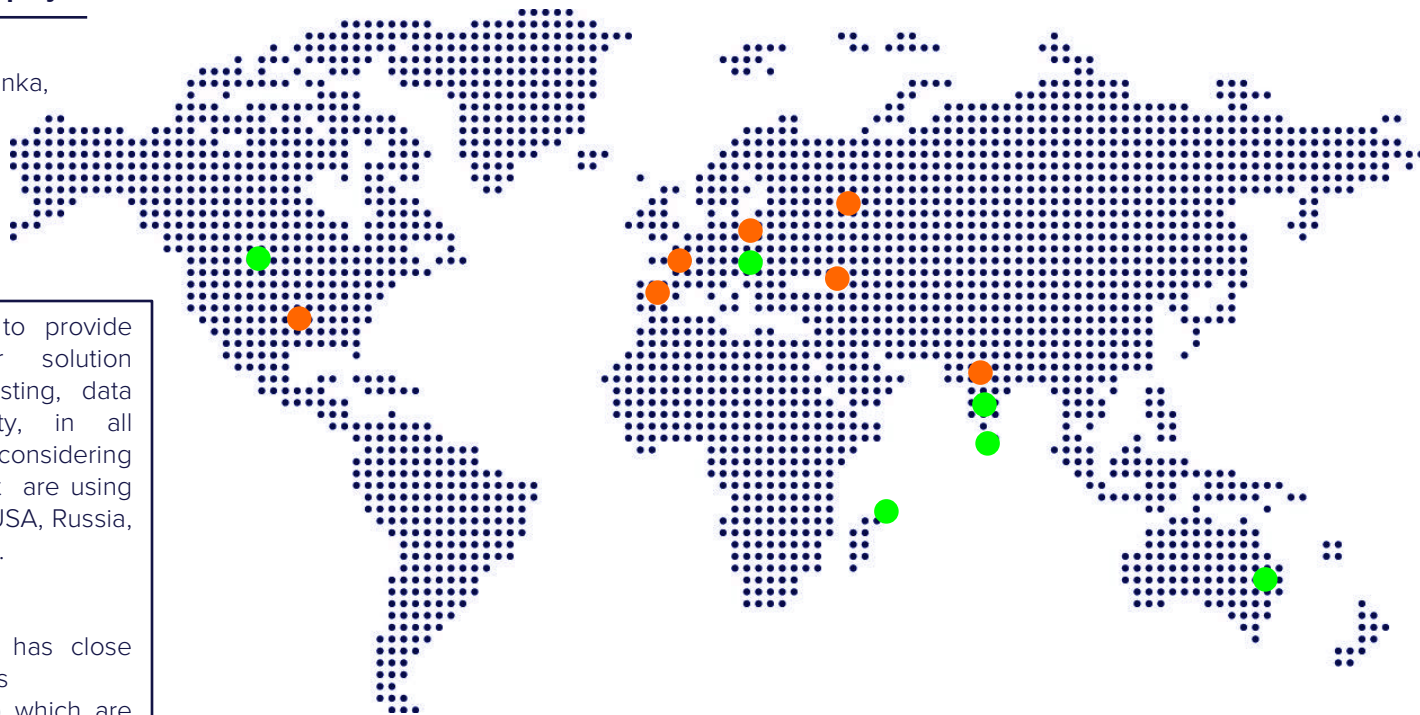
Mainflux Globally

Countries in which Mainflux is deployed

USA, Russian Federation, Germany
France, Switzerland, Georgia, Sri Lanka,
India, Mauritius, Spain, Australia

Mainflux Labs is in a position to provide credible recommendations for solution deployment with regards to hosting, data storage, communication security, in all mentioned markets except China, considering that its clients and companies that are using Mainflux technology are based in USA, Russia, EU, Switzerland, India and Australia.

Regarding Russia, Mainflux Labs has close relations with two companies/clients (from Moscow and St Petersburg) which are operating within domain of Internet of Things, and have firsthand experience with all relevant regulations.



● Mainflux Labs clients

● Companies which are using Mainflux for their projects and solutions

THANK YOU!

www.mainflux.com

info@mainflux.com