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*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](http://www.mainflux.com)

# What We Do

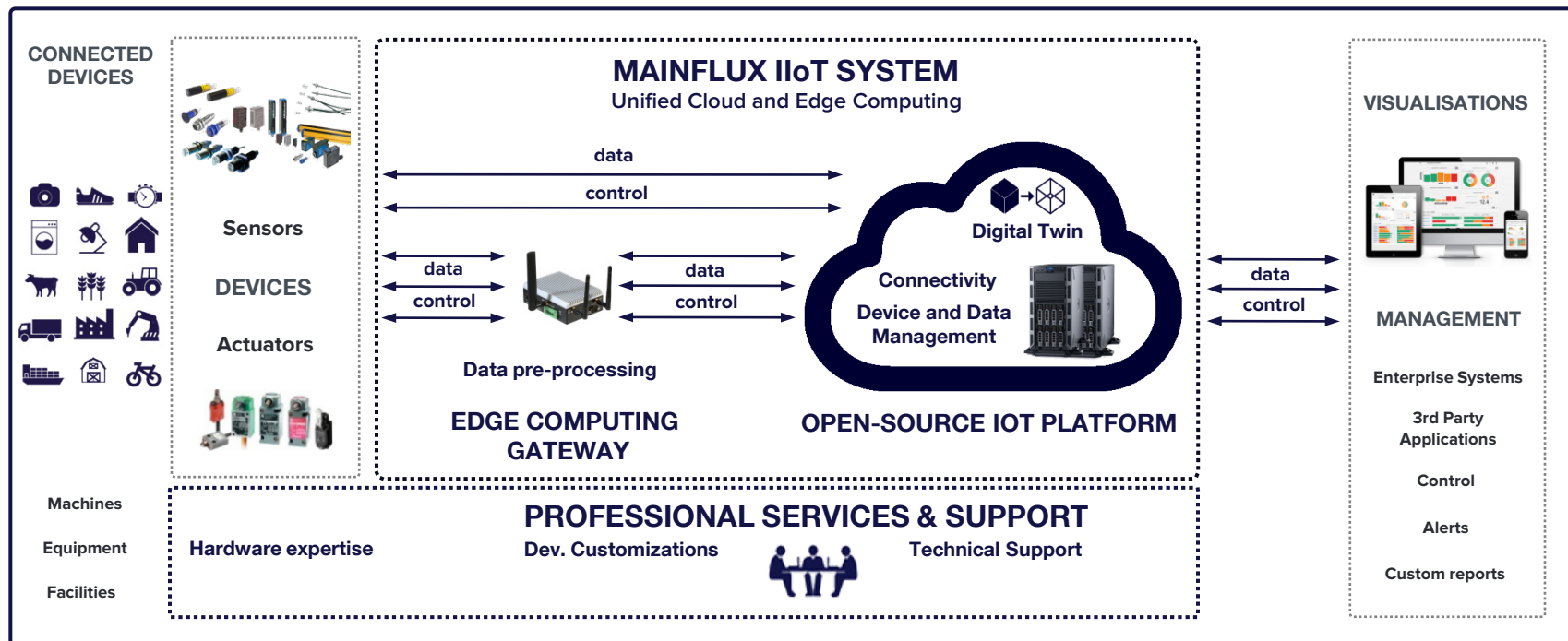
Mainflux Labs is providing

A

Mainflux  
IIoT System

B

Professional  
Services & Support



# What We Do

## PROFESIONAL SERVICES

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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

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Based on  
subscription package

Technical Support

Workshops

Training

## MAINFLUX ENTERPRISE EDITION

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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.



**Intel USA - Non-contractual**  
**Cooperation**

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



**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



**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.

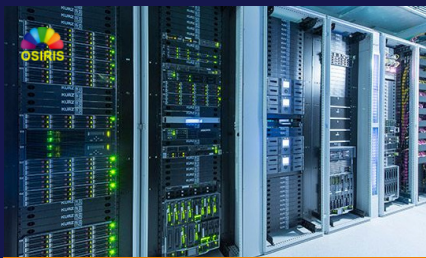
**300,000 DOWNLOADS**  
**of Mainflux SW Repositories**

**512,743** DL  
MQTT adapter service  
**300,691** DL  
HTTP adapter service

**282,537** DL  
Normalizer service  
**370,174** DL  
Things service

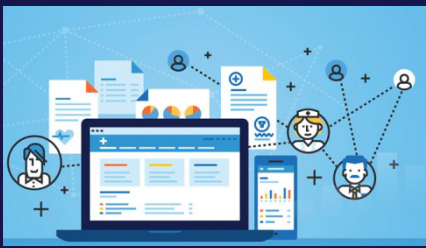
**347,206** DL  
Users service

# 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.



**Strictit  
School Management System**

Strictit ERP and Quality Management and industrial automation company, working mostly in German SME as well in industrial facilities on 4 continents of the world, developed and commercialized school management solution for Switzerland high schools, using Mainflux IoT platform.



**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.



**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 Technoogy, Telefonica, NEC, among the others.

# Clients and Reference Business Cases



## Worldwide Provider of Oilfield & Gas Equipment - USA

**Start: 06/2018 / End: Ongoing**

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**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.



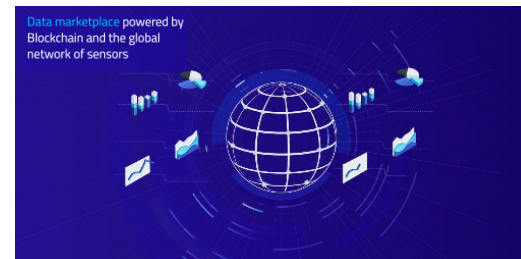
## Independent Software Vendor Locomotive Digital Twins

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

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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.



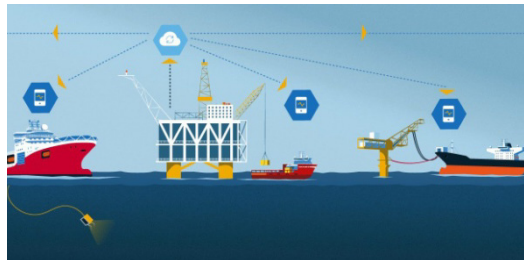
## Datapace - NOKIA Digital Accelerator Startup - France

**Start: 09/2018 / End: 10/2020**

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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.**

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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**

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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**

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



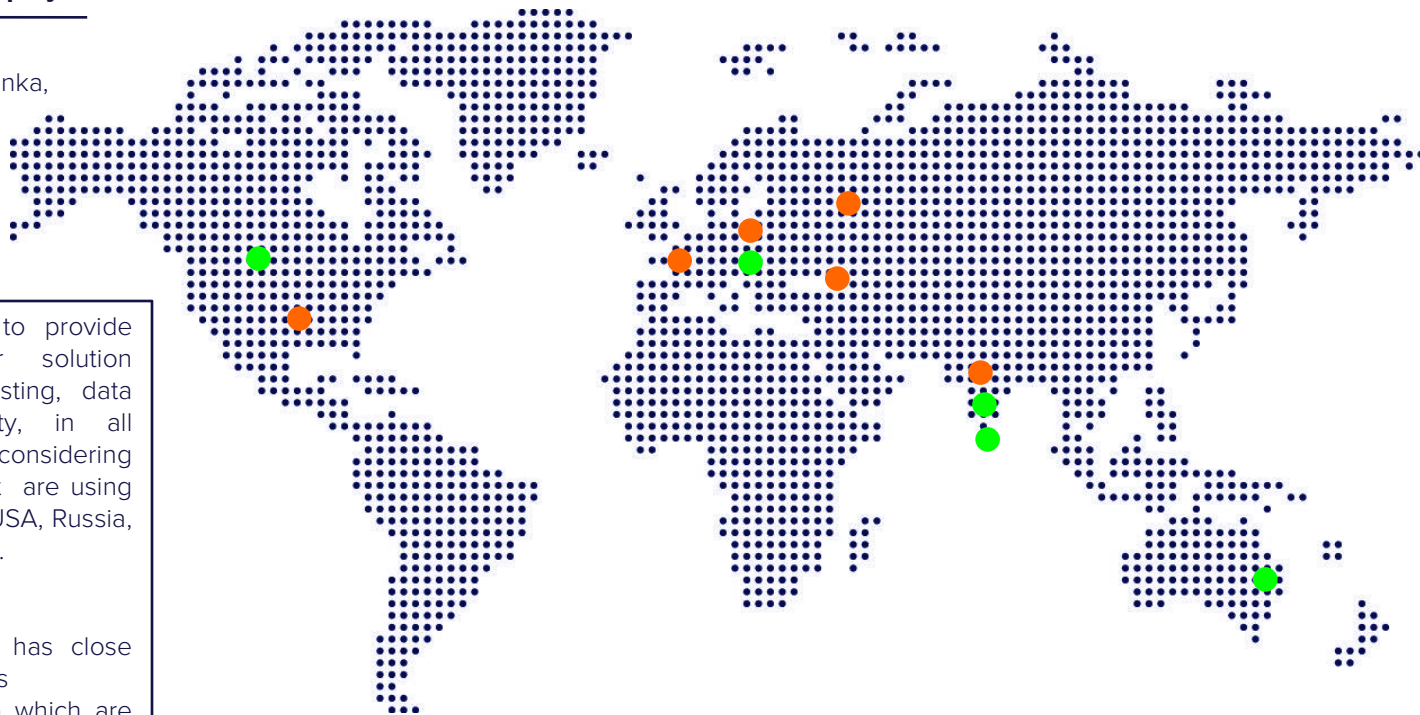
# Mainflux Globally

## Countries in which Mainflux is deployed

USA, Russian Federation, Germany  
France, Switzerland, Georgia, Sri Lanka,  
India, 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!

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