

# Tisalabs Securing IoT Solutions

## Company Presentation

19/11/2018

# Who We are

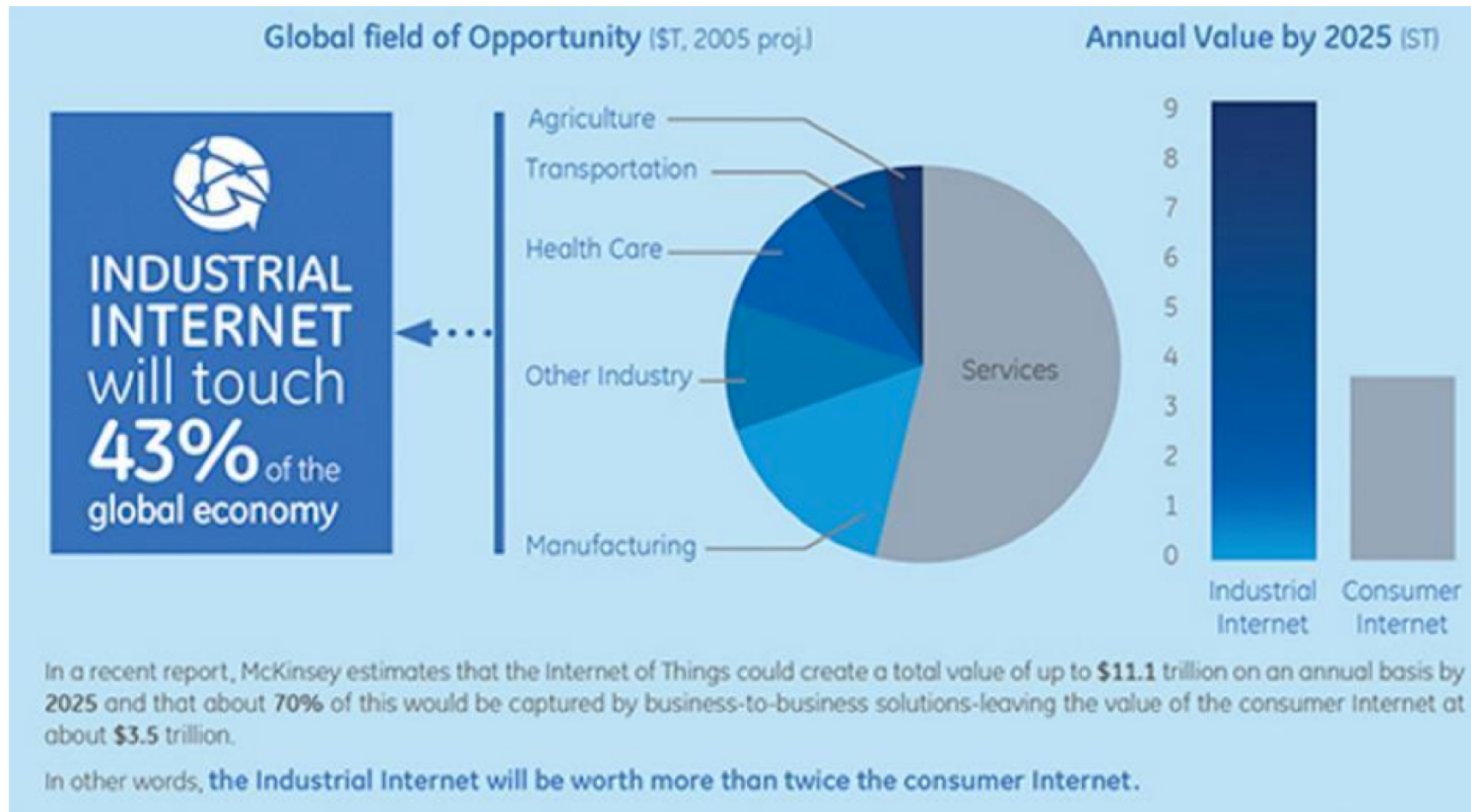
- Founded In May 2017 By
- Mo Hassine: ex Senior Director of Product Management and Marketing at MPSTOR. Part of Founding Team, Exited after acquisition \$40M.
  - Over 20 years Storage, cloud and H/W design expertise.
- Bart Ptaszynski: ex Teamwork, Fidelity Investments, Yazzgoth Ltd. Software solutions architect and software engineer.
  - Over 15 Years software development, 2 years as Enterprise architecture at Fidelity

# Vision & Achievements

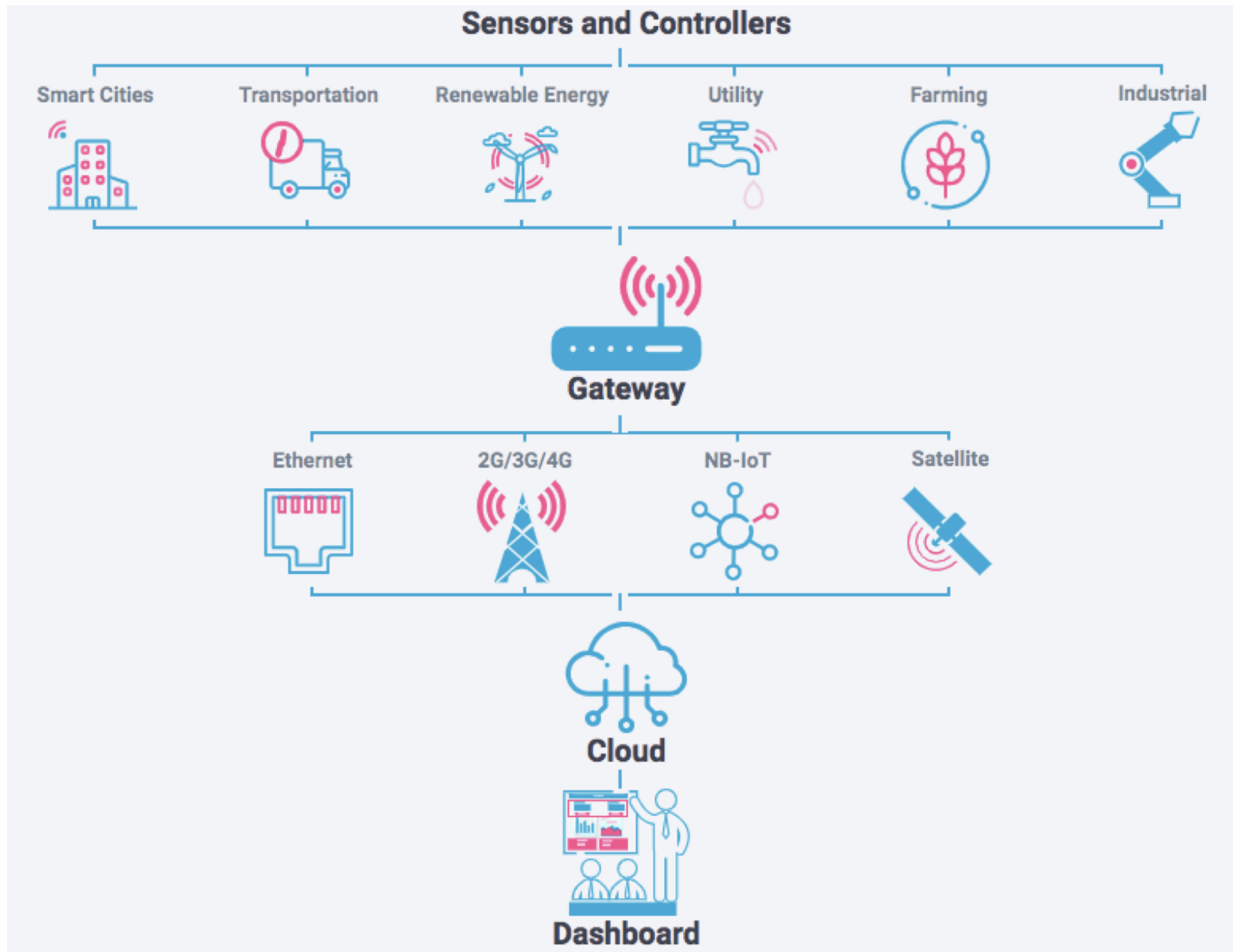
- Build world class Integrated IoT solutions
  - Through the design, production and delivery and operation of IoT services
- Provide Affordable and easy to use IoT Products.
- Offices in Ireland (Software Team),
  - Sales Offices in UK and France
- Achievements:
  - Started the Company in 2017.
  - ESA(European Space Agency) Project with DCU-Alpha Completed April 2018.
  - ESA-BIC incubation from October 2018

# IoT Market will be massive

The IoT market is expected to be one of the largest markets in the next 5 years, according to top market research companies, the IoT market will be worth over \$11 Trillion Dollars by 2020, this is a very exciting market to be in, however it is also a very crowded market.



# Secure End-to-End IoT Solution



# Secure IoT Edge Gateway

- Satellite/NB-IoT/GPRS Edge gateway device
- Edge Computing for real-time Analytics.
- IoT Management providing:
  - Failure detection of Infrastructure
  - Failure prediction of Devices
  - Vulnerability and Intrusion detection
  - Alerting
- Provide a secure OTA (Over The AIR) update mechanism for field devices
- Security Focus: Security is not an after thought.
- Build secure API for Satellite integrators.
- Provide seamless integration with Cloud providers (AWS/Google/Azure)

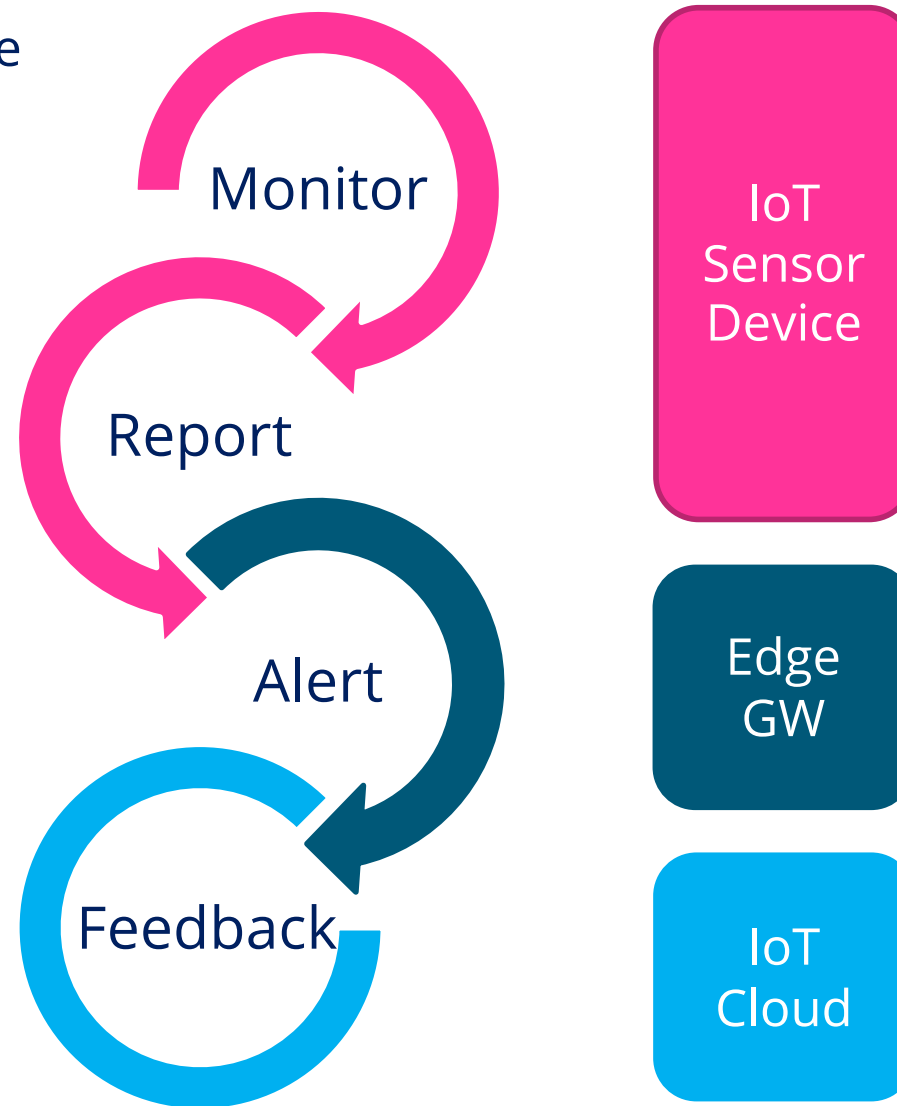
# Continuous Security Monitoring

IoT Sensor Device Monitors the Infrastructure Real-time.

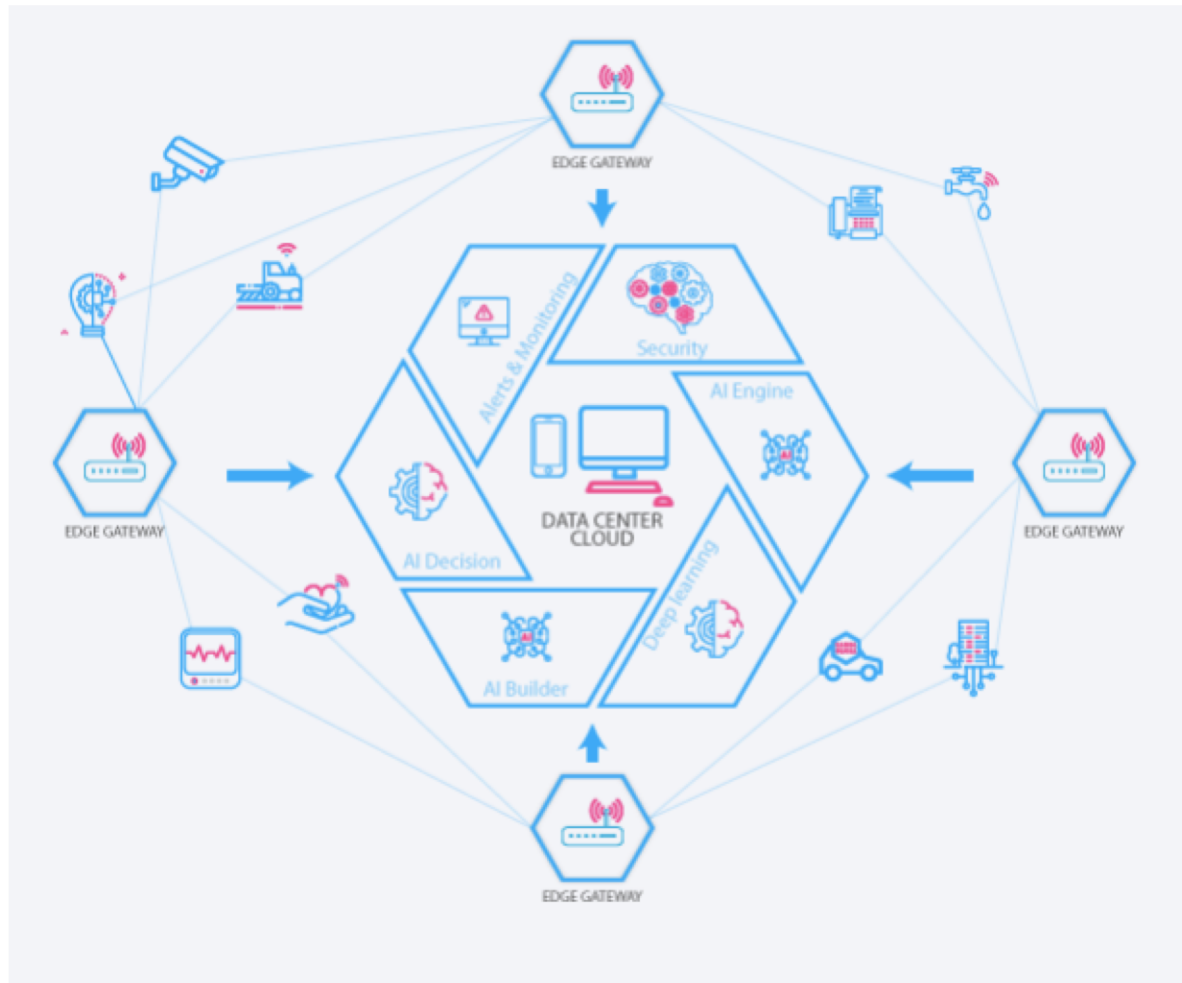
IoT Sensor Device Reports all data to Edge GW.

Edge GW based on defined Conditions will send Alert in Real-time

IoT Cloud sends Alert to user as well as building a model for AI



# Realtime Analytics Processing at the Edge





# Strong Feature Set

- IoT Intrusion Detection System
  - Threat signatures
  - Anomaly detection
  - Honeypot
  - Vulnerability rating
  - IOC (Indication of Compromise Detection)
- Machine learning for threat detection and prevention of IoT devices
  - Model built used the IDS anomaly Detection
  - Build a database of threats to be shared with all devices
- Machine learning for device failure analysis and failure prediction of IoT devices:
  - Alert user of device failures before they happen.
  - Build an smart model to deal with different failures.

# Thank You

Mo Hassine, Co-Founder &CEO

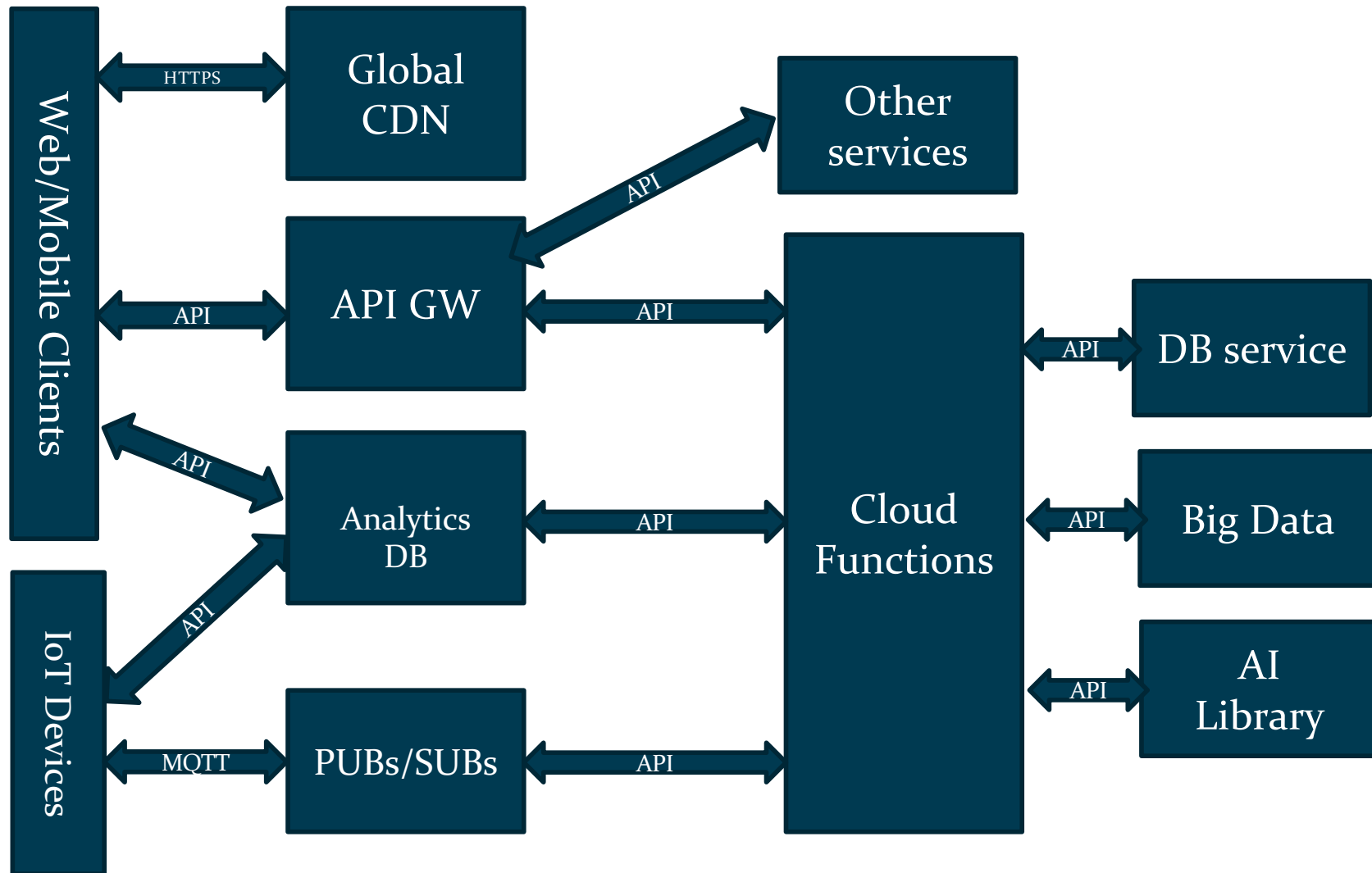
[mo.hassine@tisalabs.com](mailto:mo.hassine@tisalabs.com)

# Backup Slides

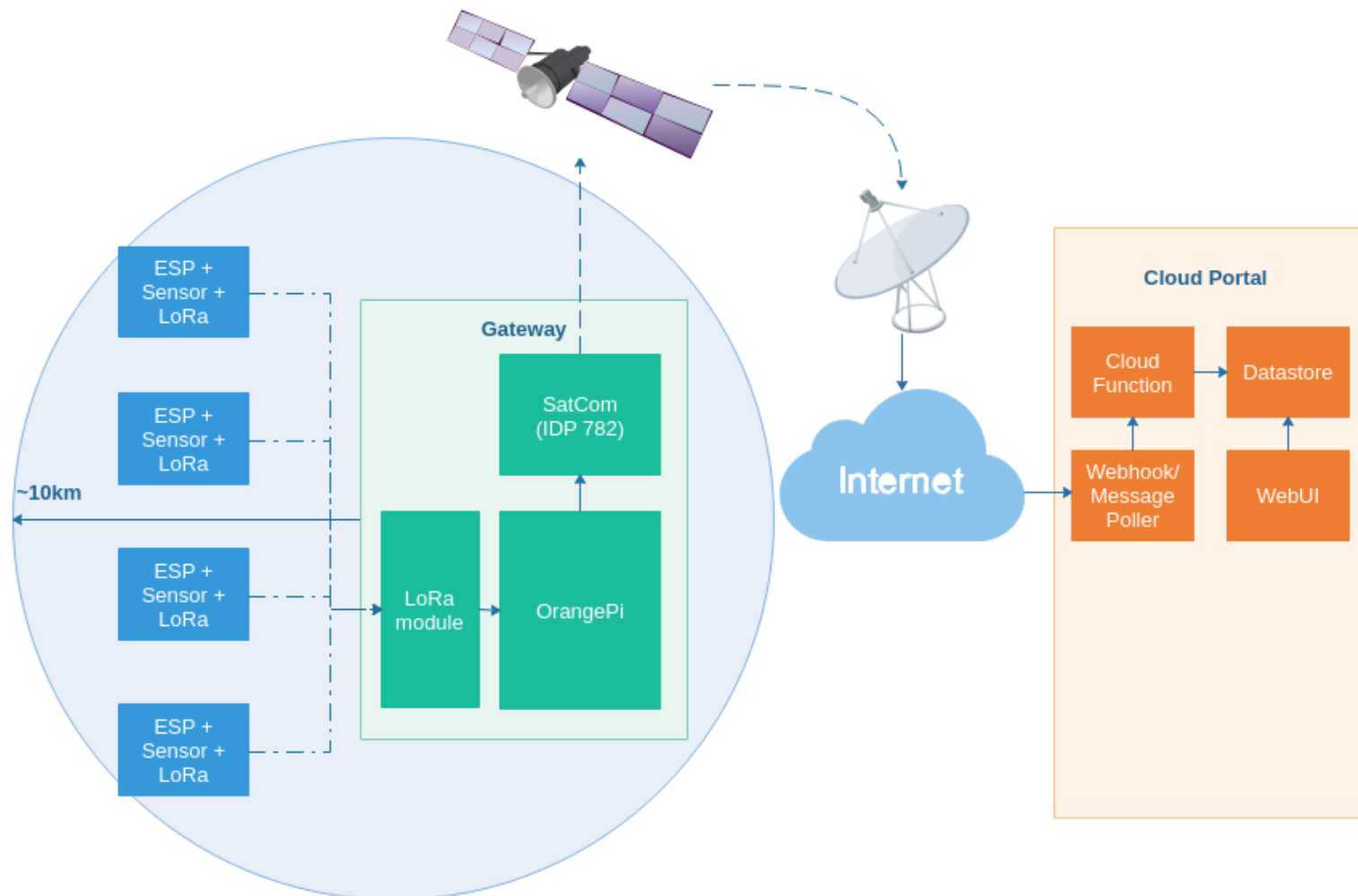
# The opportunity

- The Examples of Disasters:
  - Railway bridge collapse Malahide, Co. Dublin in 2009 just after 2 trains went over it.
  - The Oroville Dam crisis in California once again has America's aging infrastructure in the headlines. President Donald Trump has pledged to devote up to \$1 trillion in federal spending to infrastructure projects over the next decade.
  - Any device connecting to the Internet with an operating system comes with the possibility of being compromised, in turn becoming a backdoor for attackers into the enterprise

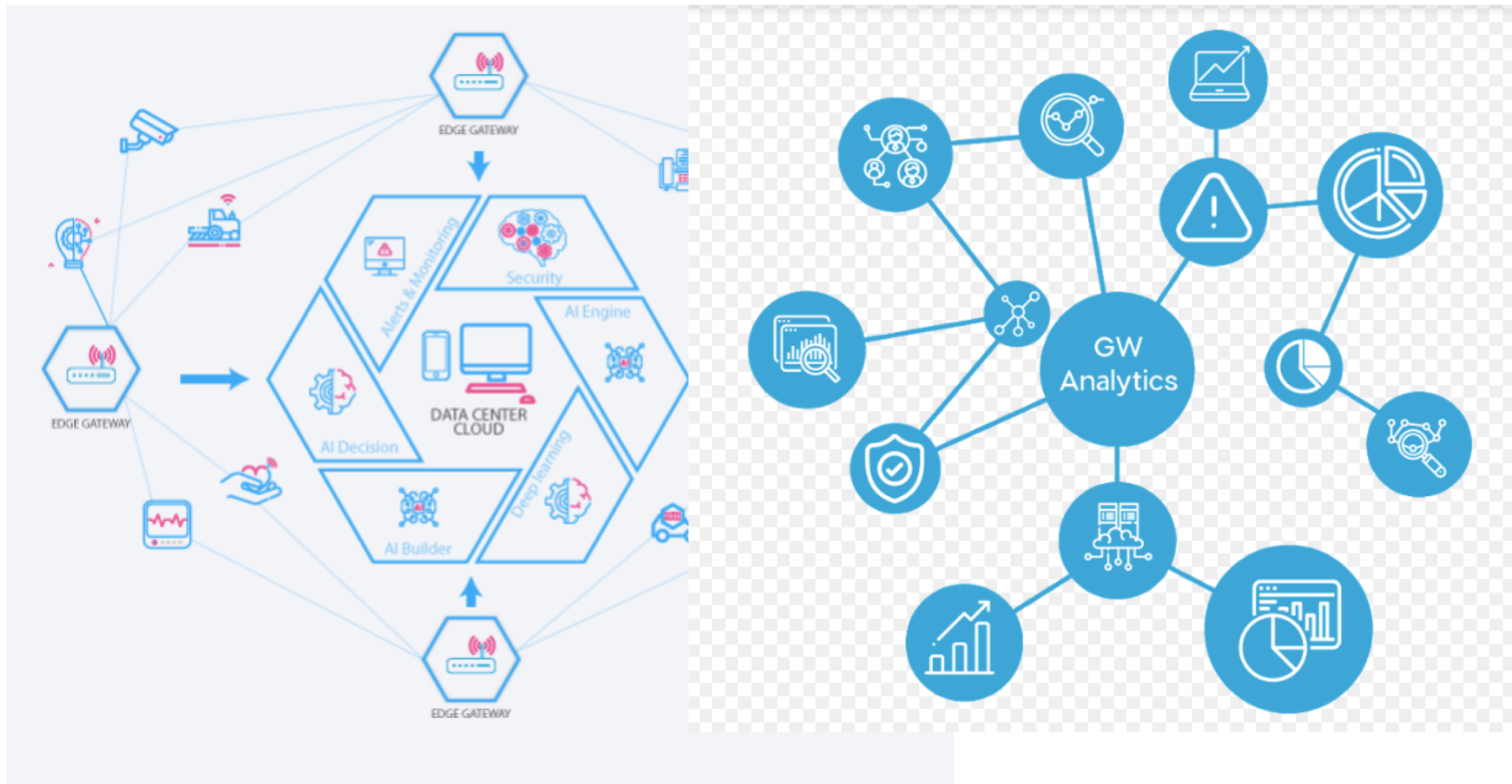
# Cloud Platform Architecture

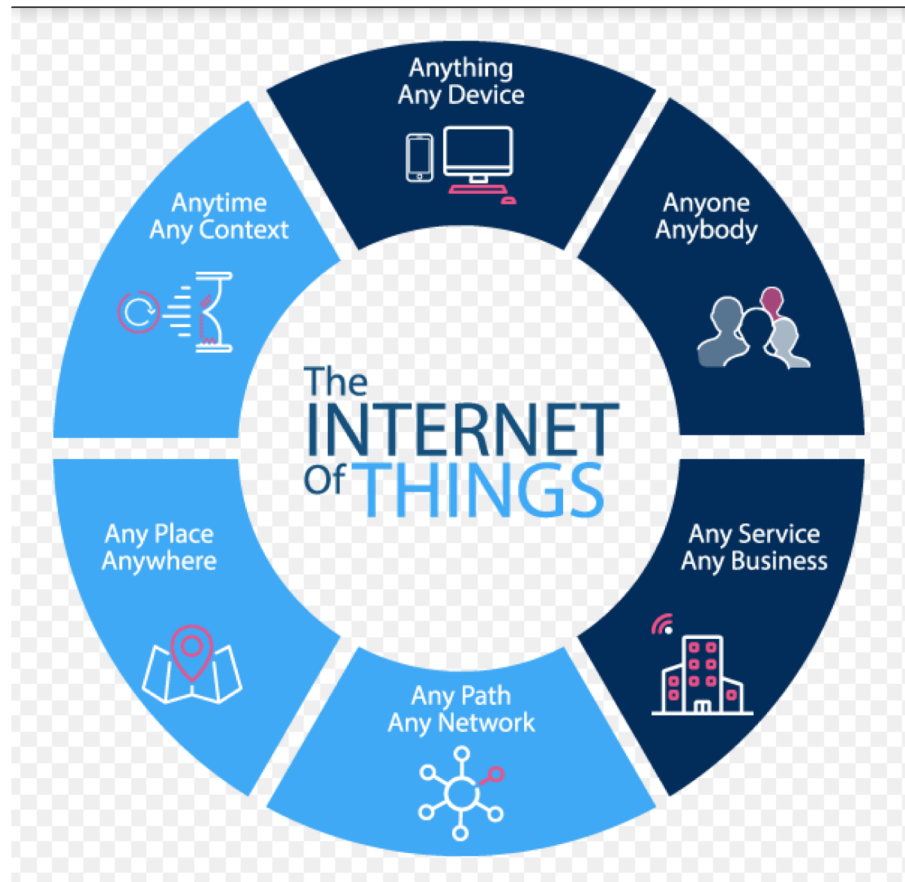


# Our Solution



# Realtime Analytics Processing at the Edge







# Revenue Stream

- We are looking at the following aspects of revenue:
  - Pen Testing
  - IoT SaaS
  - Edge GW
  - IoT GW Support
  - IoT Devices

# Intellectual Property

- IoT Intrusion Detection System
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  - Anomaly detection
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- Machine learning for threat detection and prevention of IoT devices
  - Model built used the IDS anomaly Detection
  - Build a database of threats to be shared with all devices
- Machine learning for device failure analysis and failure prediction of IoT devices:
  - Alert user of device failures before they happen.
  - Build an smart model to deal with different failures.
- IoT device models for the Enterprise user:
  - Create models for devices based

# Strong Feature set

- Monitor IoT infrastructure Security and Vulnerability
- Monitor IoT infrastructure Health
- Real-time Analytics Processing at the Edge
- Easy Update and Upgrades, with remote Accessibility