IBM Connect 2015
Innovate. Understand. Engage.

Connecting the Internet of Things

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We live in a time of enormous transformation and opportunity

Cloud

Analytics

Mobile & Social

Big Data and the IoT

A match made in heaven

#1

GARTNER HYPE CYCLE

FOR EMERGING TECHNOLOGIES 2014

The hype is getting louder.

SOURCE: Gartner, *Hype Cycle for Emerging Technologies, 2014*, August 2014.

An exploding market

9 Billion
devices around the world are currently connected to the Internet, including computers & smart phones

The number is expected to increase dramatically within the next decade, with estimates ranging from 50 Billion devices to reaching

1 Trillion

The worldwide market for Internet of Things solutions is expected to grown to

$7.1 Trillion by 2020

# IoT value creation is being led by makers & operators

Makers

The creation of smarter, connected products will redefine every industry with new capabilities that improve functionality, reduce costs, and deliver new value

Operators

The operation of old and new systems, now integrated with intelligent things, can become interactive, reactive, and adaptive; to each other, people and places

Powered By
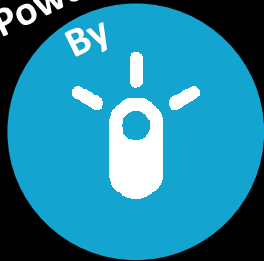
Analytics

Insight
Changes the way we design, secure, and operate

Enabled By

Cloud

What can you do with IoT data?

Monetise

Charge for usage that is tracked by things.
Enable Pay-per-use models of things.

Optimise

Improve efficiency of activities with data from things.
Anticipate & predict optimal actions and responses.

Extend

Provide more value through connected things.
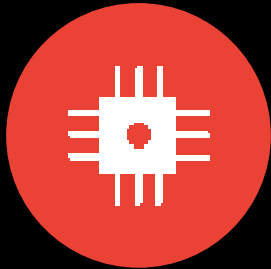Deliver data, content, services through things.

Control

Remotely affect behaviour by controlling things.
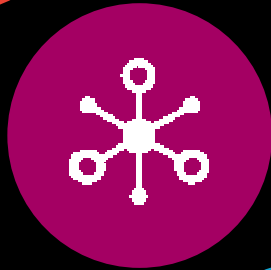Make remote adjustments to optimize things.

IBM and the IoT

A strategy by a different name.

Smarter Planet & the three I's

Digital technologies (sensors and other monitoring devices) are being embedded into many objects, systems & processes.

In the globalized, networked world, people, systems, objects and processes are connected, and they are communicating with one another in entirely new ways.

Leveraging the data generated by digital technology provides intelligence to help us do things better, improving our responsiveness and ability to predict and optimize for future events.

Start Internet of Things projects fast with low risk

For C-Suite Executives & LOB looking to:

- **Extend** the value of their assets or services by accessing the data available to their devices

- Deliver new business models which **monetize** their assets in disruptive new ways such as pay-per use enabled through tracking

- **Optimize** by understanding behaviour and anticipating most efficient actions

- Remotely affect behaviour through the **control** of things

For developers looking to:

- **Quickly**, **easily** and **securely** bring data from an Internet-connected device into the cloud

- Build an application alongside the device to collect the data and send real-time **insights** back to the developer's business

FerryMan

The Internet of things in action

Building Blocks

Vessel Automatic Identification System (AIS)
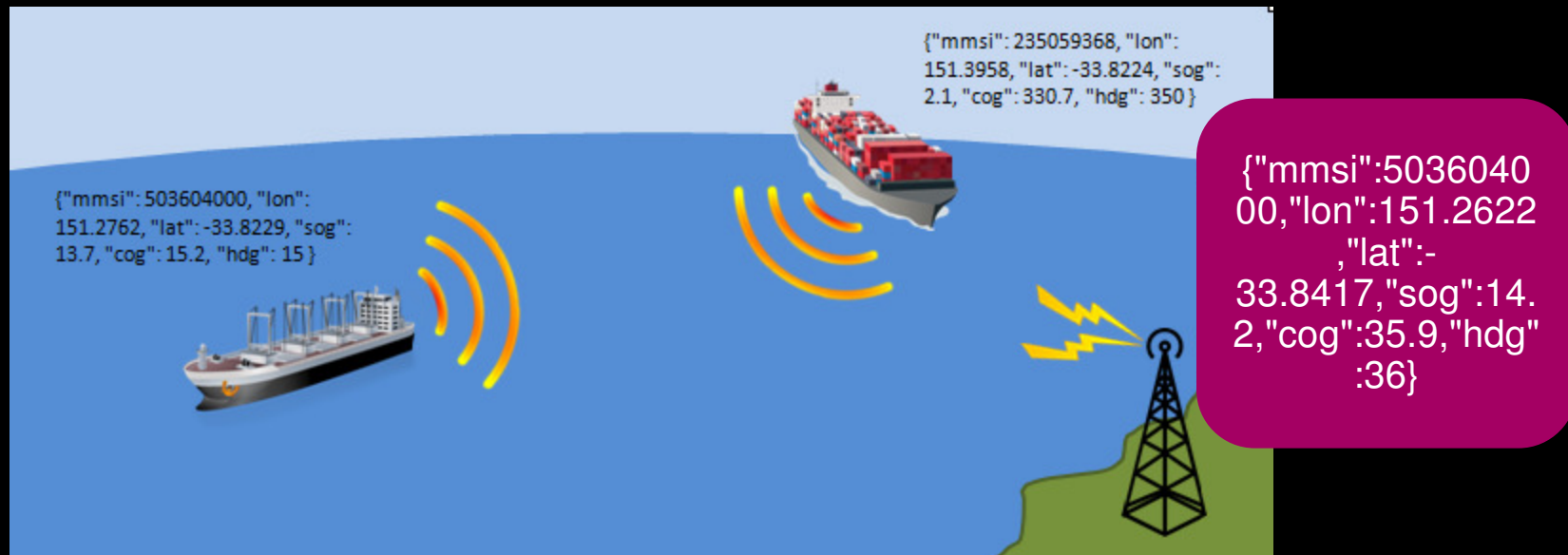
Building Blocks

Bluemix

An **open-standard**, cloud-based **platform** for **building**, **managing**, and **running applications of all types** (web, mobile, big data, new smart devices, and so on).

Building Blocks

Bluemix Geospatial service

Geofence

Entry

Exit

Geospatial Analytics Service
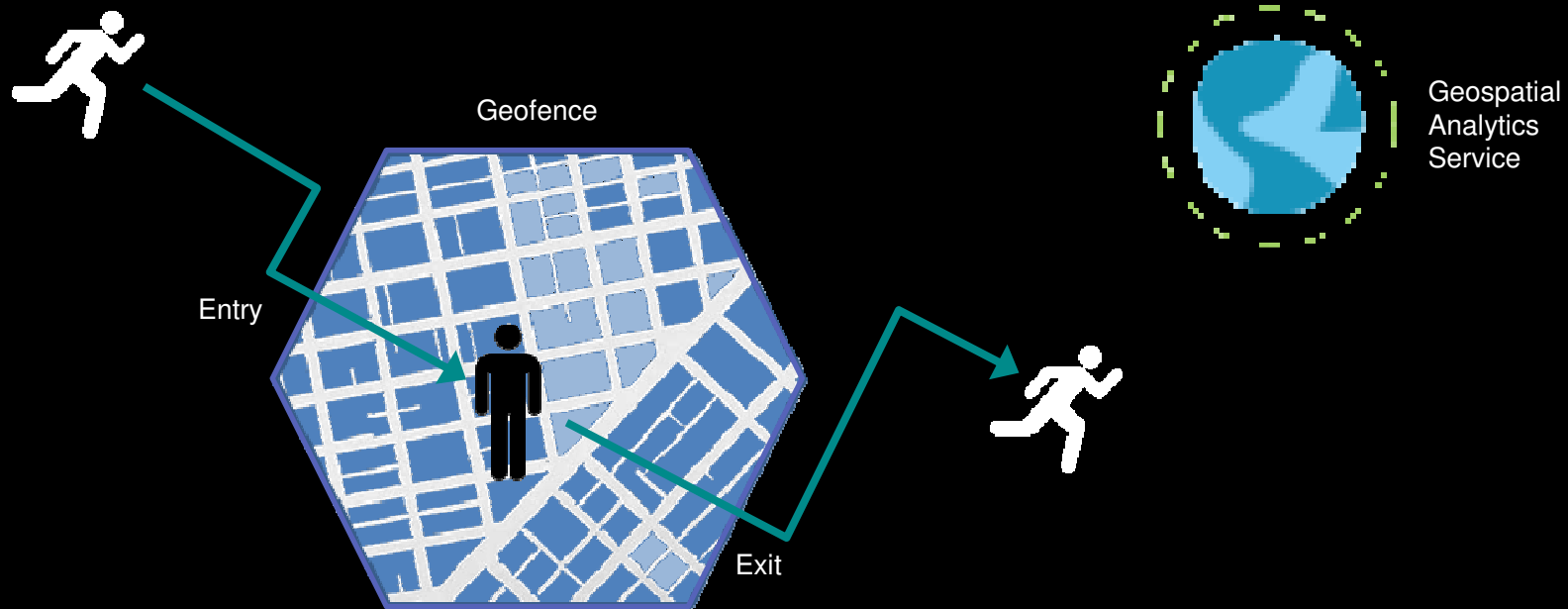
Building Blocks

Node-Red on Bluemix

Node-RED – Open source, browser-based editor for visually wiring the Internet of Things (hardware devices, APIs and online services) in new and interesting ways.

Geospatial with Node-Red

Wiring AIS feed to Geospatial Service
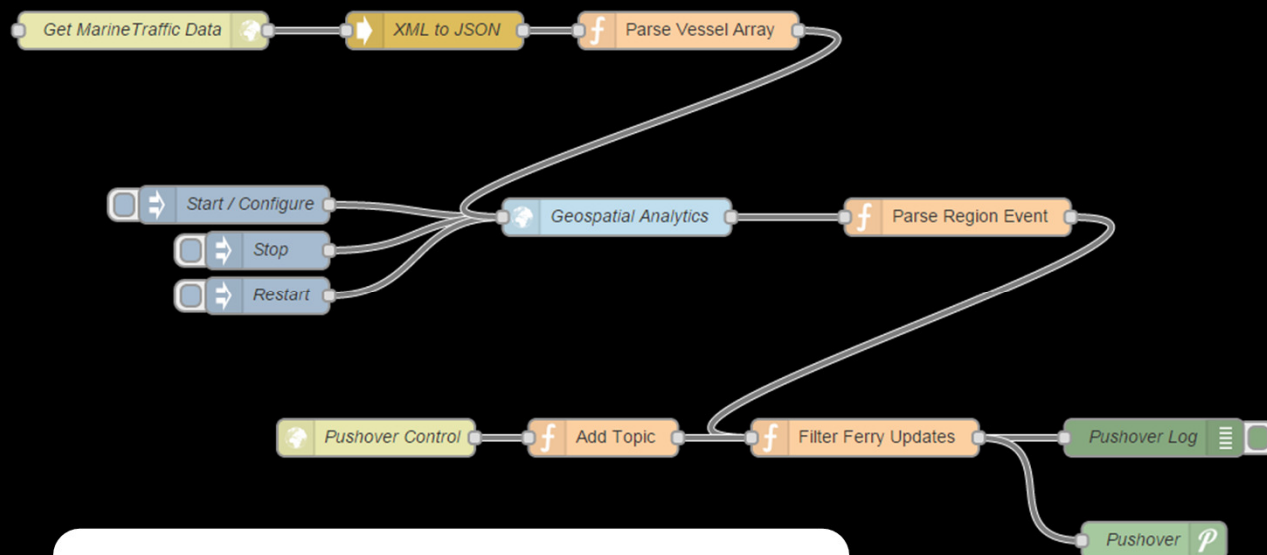
{"mmsi":503604000,"lon":151.2622,"lat":-33.8417,"sog":14.2,"cog":35.9,"hdg":36}

The big picture

AIS Receiver
Captures RF signal &
converts to binary packet
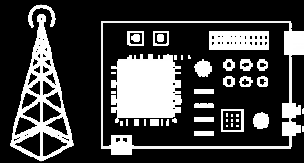
Node-RED
Parse and filter AIS Messages

REST API
Secure API to define geofence
regions and control the service

Geospatial Service
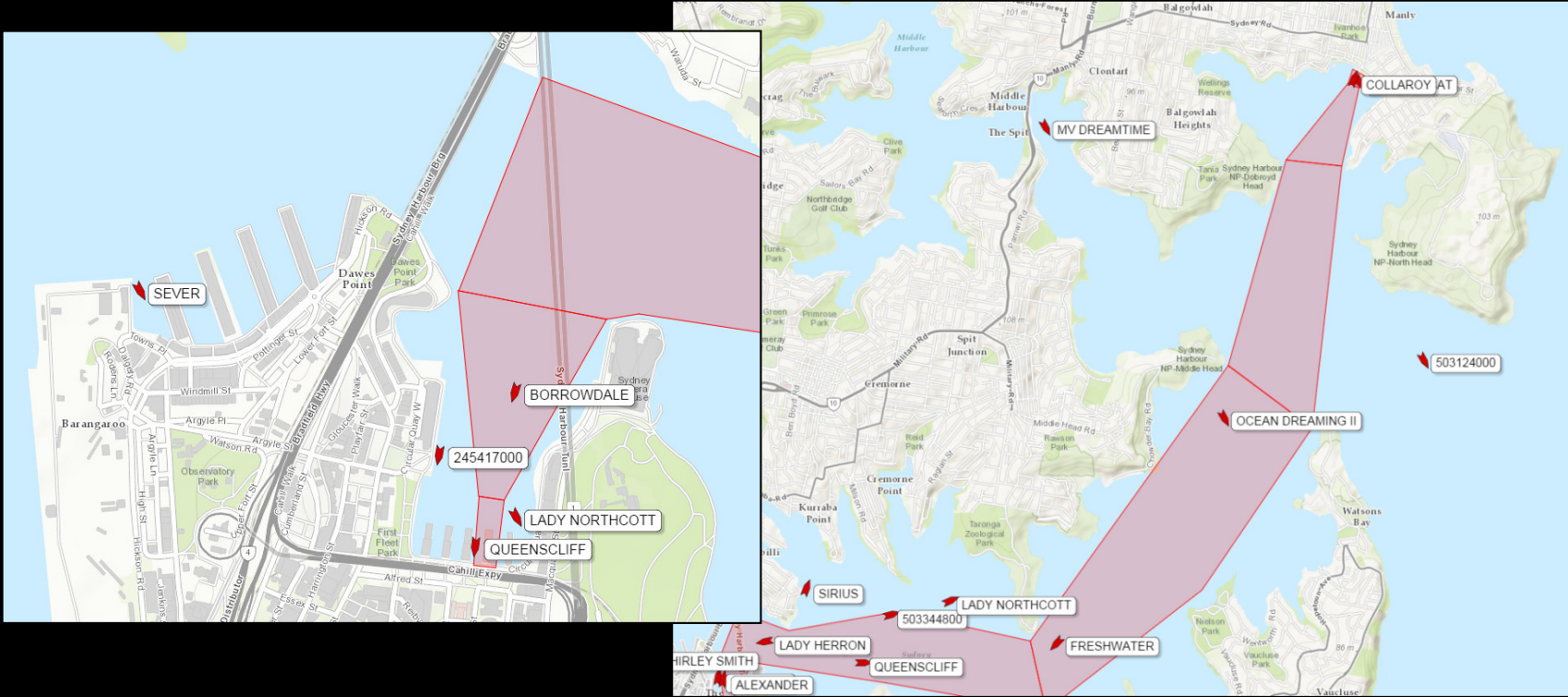Triggers geofence entry and
exit events for each vessel

MQTT
Securely send AIS data to the
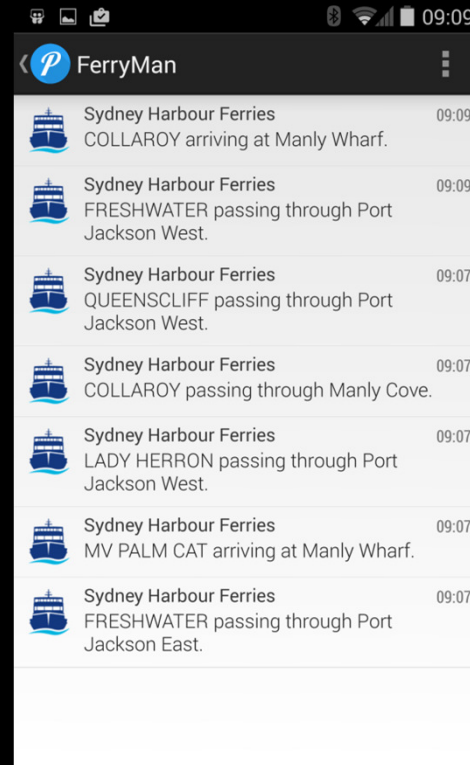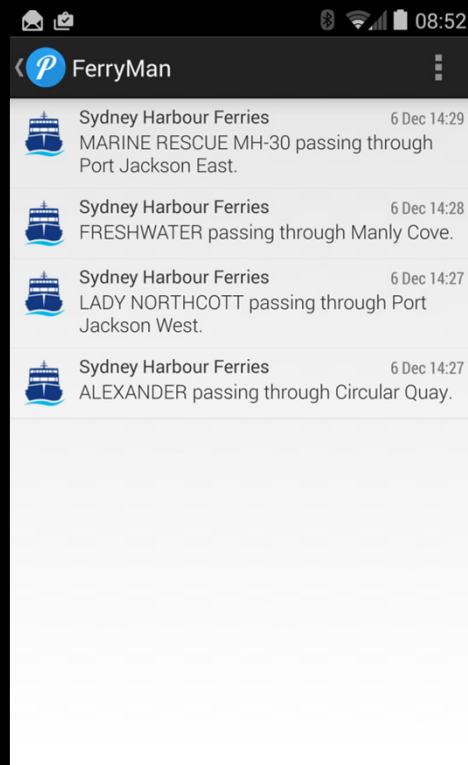cloud using the open, lightweight
MQTT messaging protocol

Pushover / **FerryMan**
Arrival / Departure alerts sent to smart device

FerryMan Live Maps

Pushover Integration

IBM

Start today

Resources to get started with your IoT project today!

IoT Zone in **Bluemix** **https://bluemix.net/solutions/iot**

Explore the **Recipes** **https://developer.ibm.com/iot/**

Visit the main **Landing page** **https://internetofthings.ibmcloud.com**

Follow the community on **Twitter** **@IBMIoT**