Internet of Things

Arnaud Brolly

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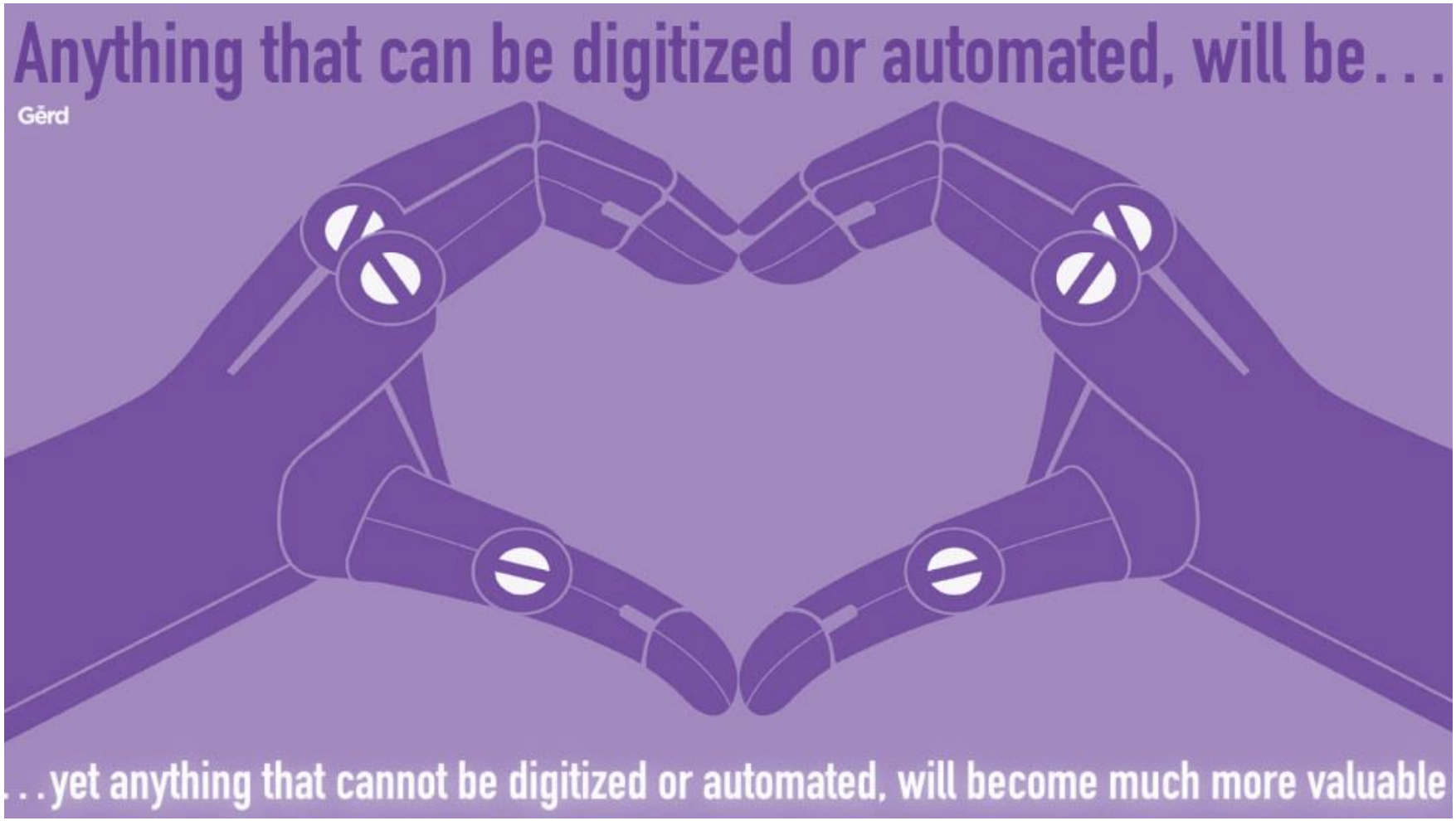
Gerd Lheonard Prophecy



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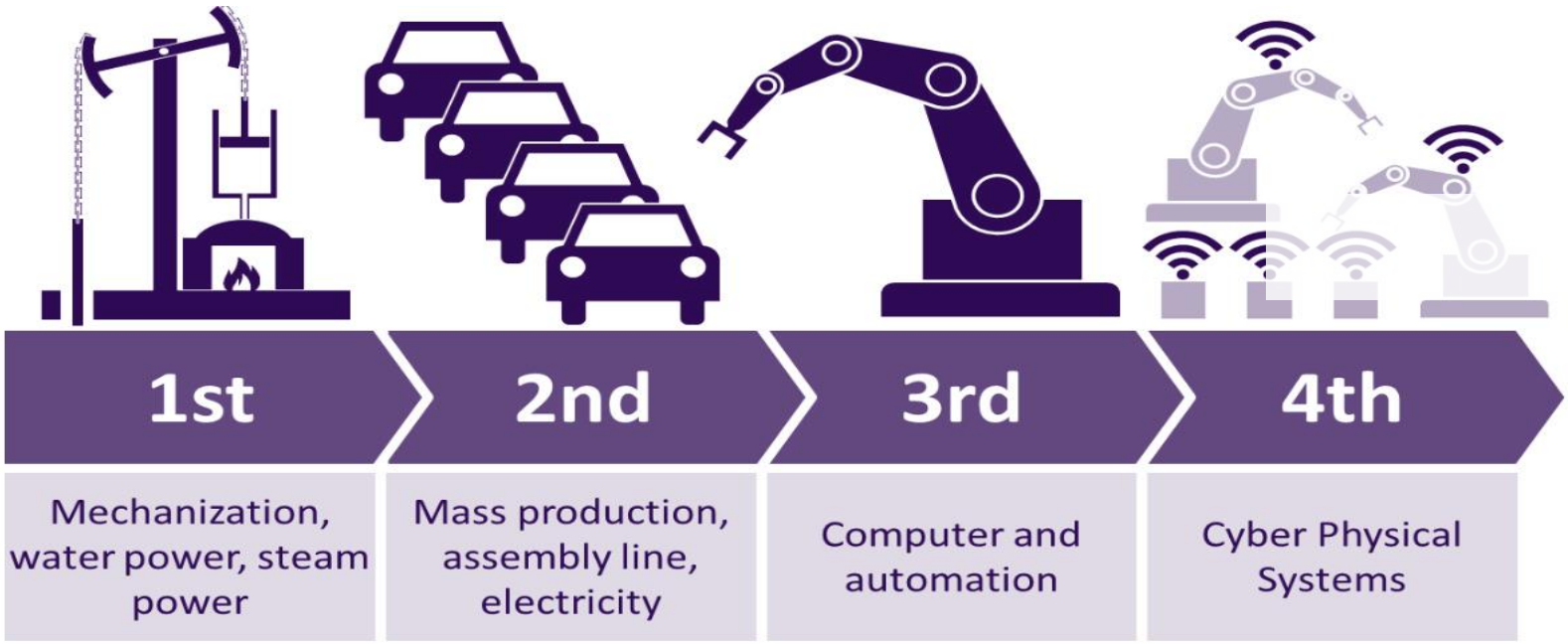
Internet Of Things is a catalyst for the 4th industrial revolution



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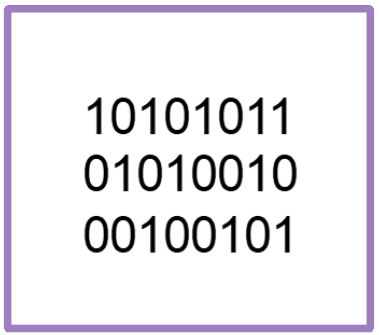
What is Internet Of Things

The Internet of Things (IoT) is the internetworking of physical devices, buildings and other items—embedded with electronics, software, sensors, actuators, and network connectivity that enable these objects to collect and exchange data

Things

Connectivity



Data

Analytics

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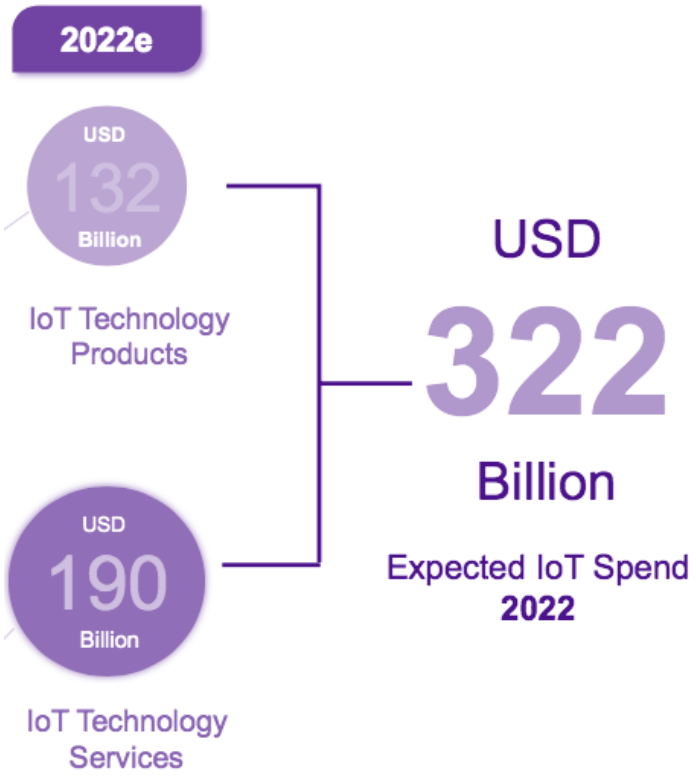
IoT market trends



- **5m** daily new devices connected (2016)
- **50b** total number of connected devices (2020)
- **10%** of data on earth Will be produced by IoT machines (IDC)

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Sources: Microsoft, internet search

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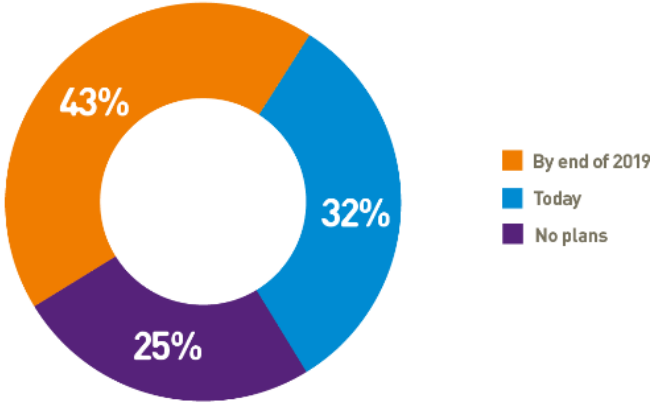
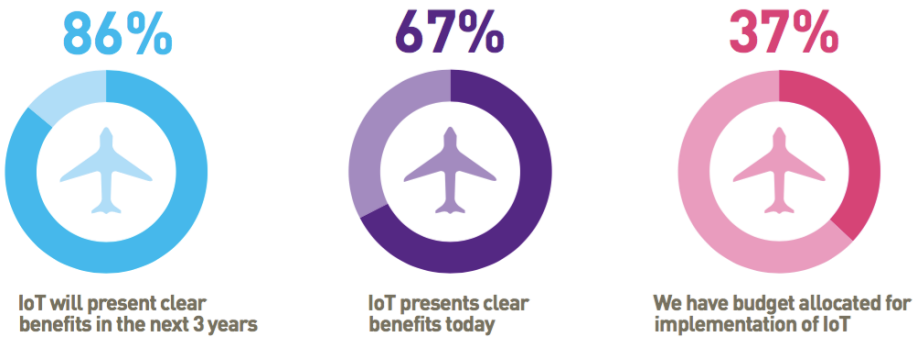
IoT market trends in Air Transport Industry

% Airports is including IoT in strategy by 2019



IoT expected benefits for Airlines



Sources: Microsoft, internet search

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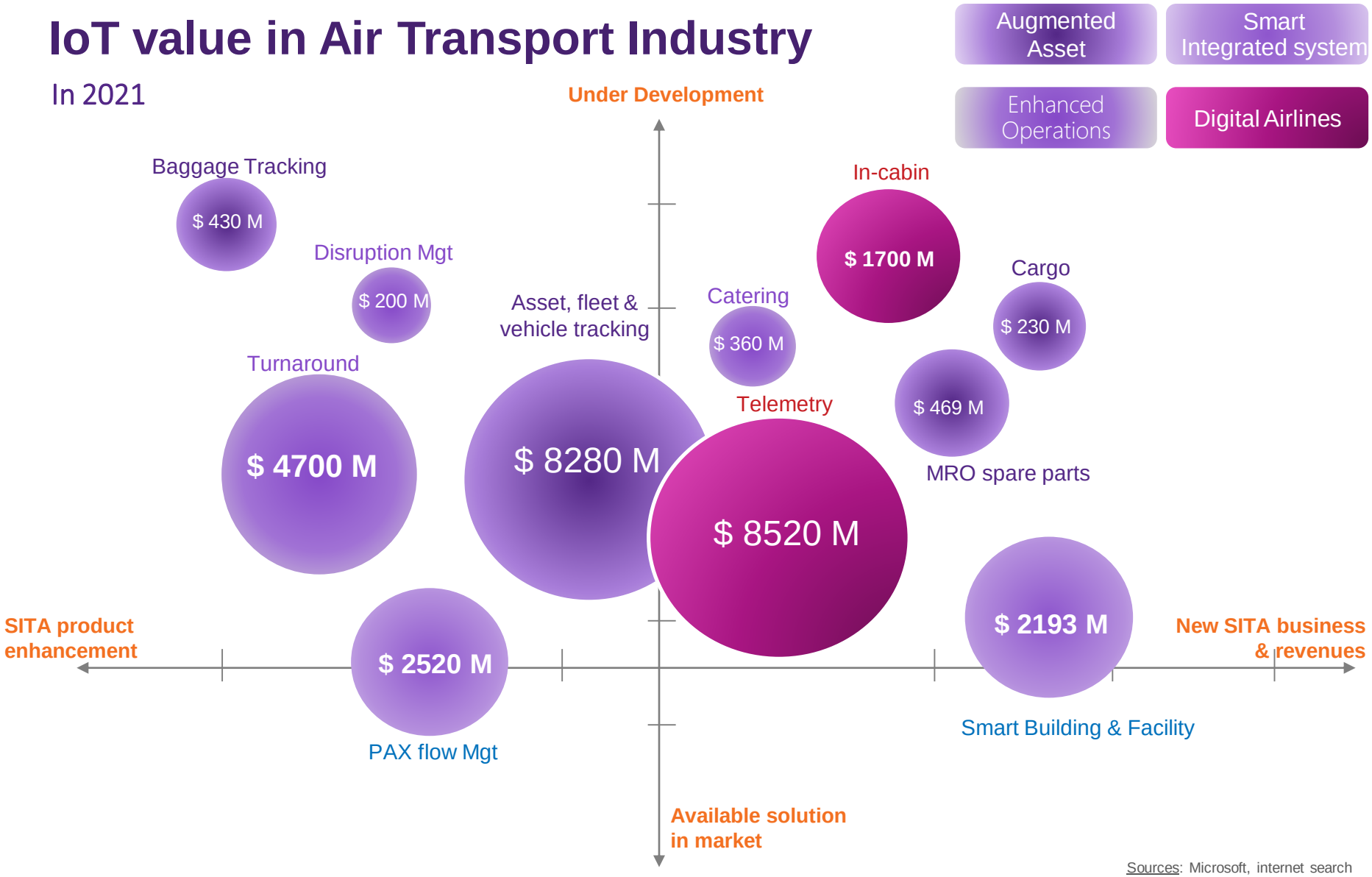
IoT value in Air Transport Industry

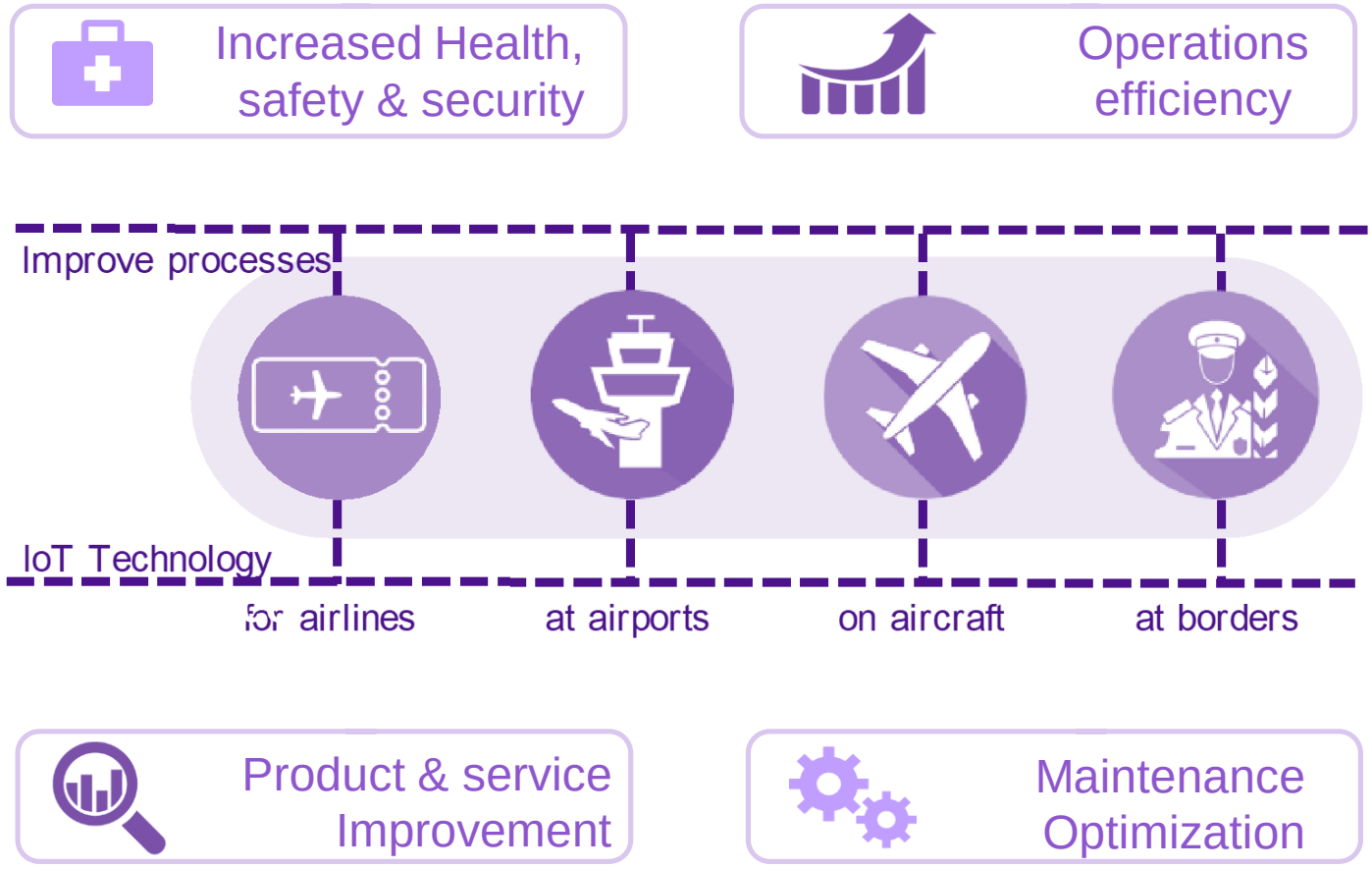
In 2021



Sources: Microsoft, internet search

Source: Altran IoT consulting

Enabling Airlines & Airport Digital Transformation



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Sources: Microsoft, internet search

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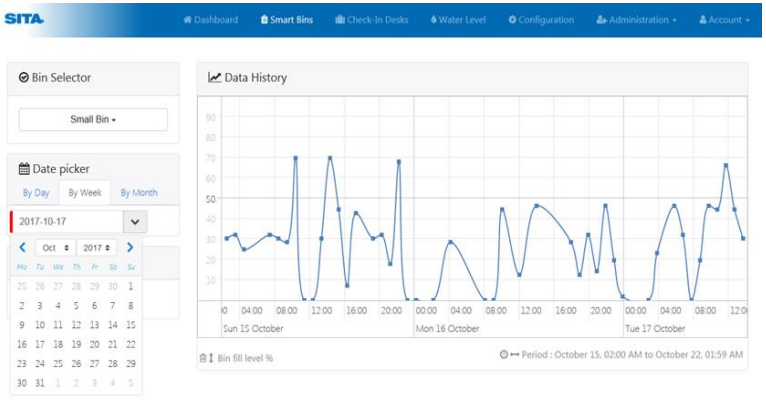
Airport Telemetry

- Measure presence of an agent at the departure counter
- Indoor Small Bin Sensors to measure garbage level in a bin
- Outdoor Large Bin Sensors to measure garbage level in a bin
- Measure water level in the pond



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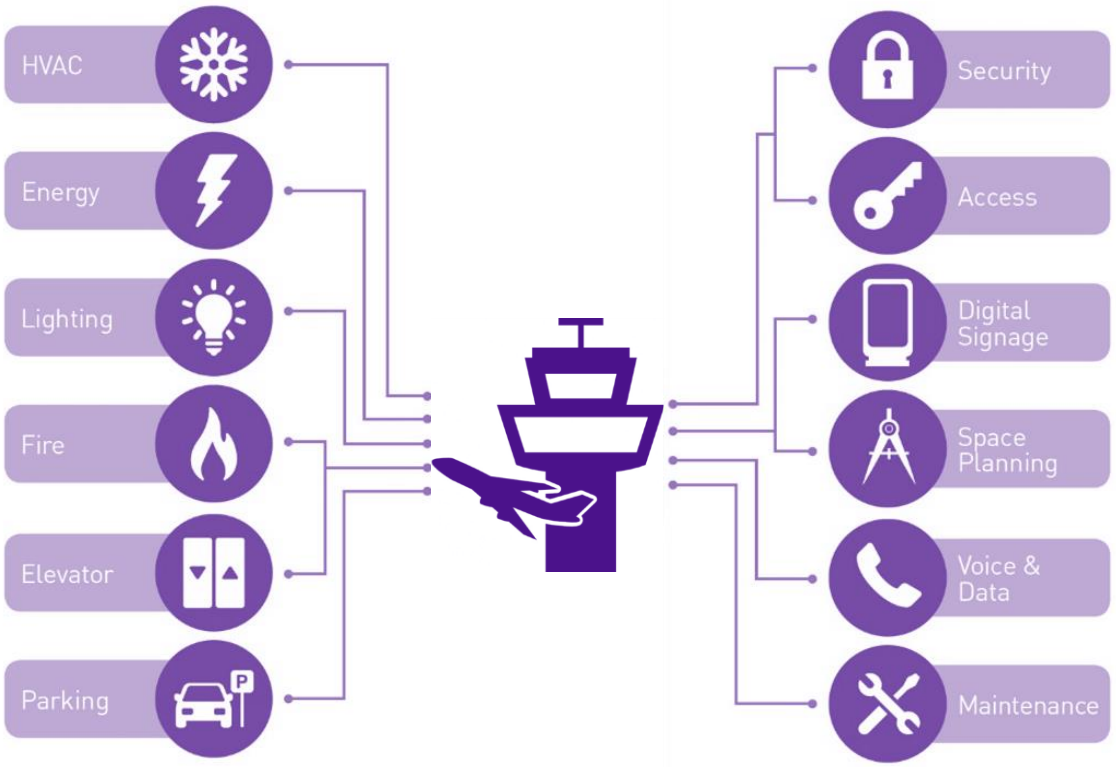
Smart Integrated system

Connect physical devices, buildings systems and sensors on integration platform.



- Work order Management
- Building Management integration
- Energy management

- Improve operational efficiencies
- Reduce energy cost and waste
- Improve reporting & dashboards

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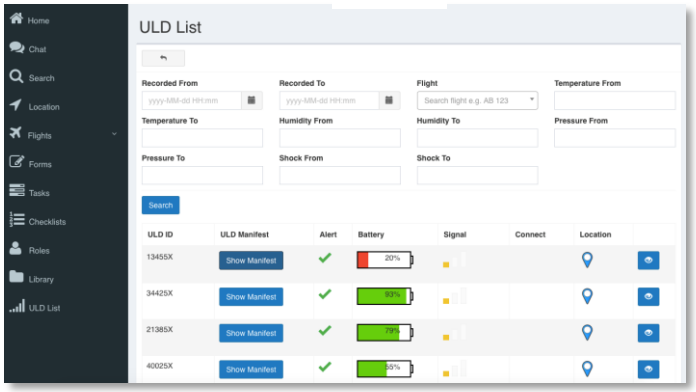
Cargo - Smart ULD
(Unit Load Devices)

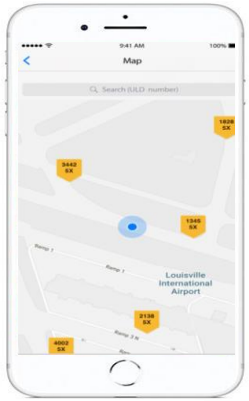
Handling

Analytics

Monitoring

- Enhance process efficiency
- Minimize disruption impacts
- Provide full visibility of Operations & share data





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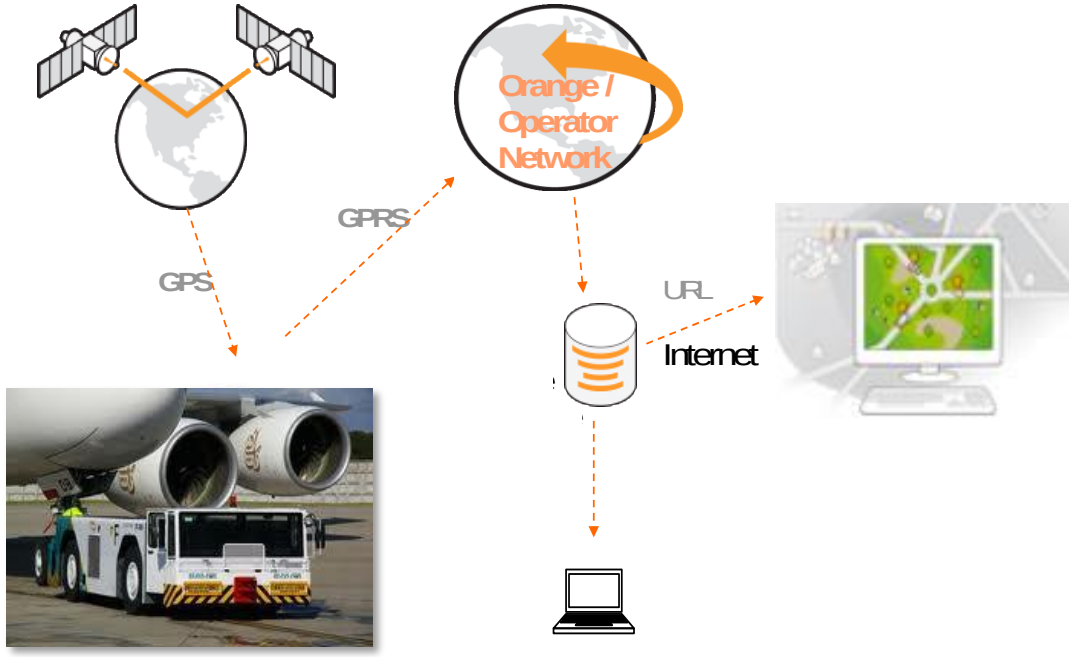
Fleet Management

- Ensure moving asset is in place in accordance to schedule
- Fleet performance asset tracking (rotation, delay…)
- Activity report (including stand-by time)
- Asset Traceability & security



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Wheelchair tracking

- Generate real-time data on wheelchair & agent movement at airport
- Record WCHR idle time
- Analyze escort walking distance
- KPI dashboard

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Digital airlines

RFID bag tag

Aircraft Health monitoring

MRO

Hard Landing

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