R3 IoT

We digitise the planet.

Overview

Obtaining data from assets in rural locations can be difficult as, by nature, they are located where dependable connectivity cannot be guaranteed. In fact, 90% of the earth has no cellular connectivity, yet organisations operate in these areas. Remote businesses suffer from large inefficiencies in extracting sensor data that is critical to their operations and service delivery models.

Obtaining this data is not straightforward as current solutions are fragmented, difficult to assemble and difficult to integrate into existing business systems.

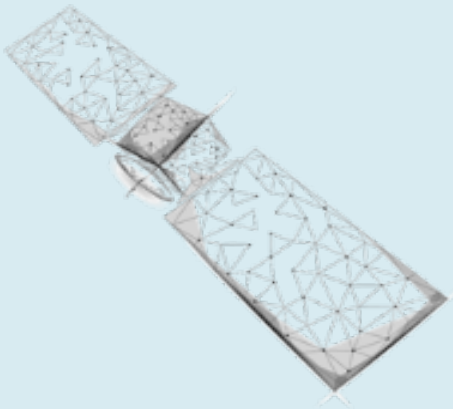
R3 IoT's smart gateway combines traditional cellular technology with cutting edge satellite communications to guarantee connectivity no matter the location. Smart devices such as sensors can connect to the R3 gateway using low-power, long-range communications technology.

Benefits

- Large reduction in operational costs due to automation of sensor data collection
- 24/7 continuous data collection providing peace of mind
- Turnkey solution that is quick to install and simple to operate
- End-to-end security
- Low-cost, low maintenance with high ROI
- No need for on-site infrastructure (power, comms.) - can be set up to run completely off-grid
- Open interfaces that are compatible with existing and future systems
- Data delivered in raw format or processed on the edge for autonomous response

1. The **R3Cell** smart gateway - collects, processes and communicates Industrial IoT sensor data

2. The **R3 Service** carries the data over a secure satellite/terrestrial link back to the cloud



3. The **R3 Cloud Platform** manages the network, processes the data and provides higher quality datasets providing actionable insight

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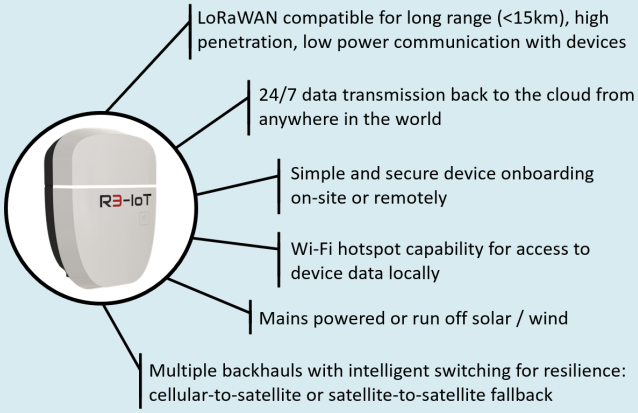

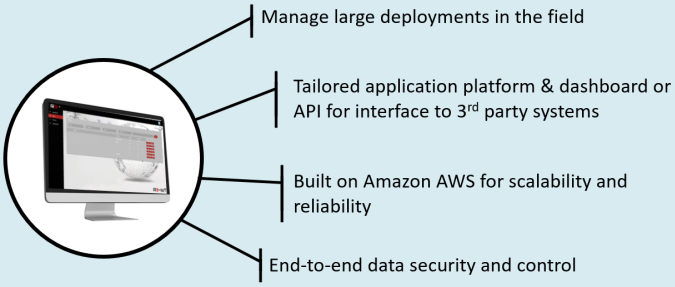

R3's resilient communications service enables continuous monitoring of key operational parameters critical to the efficient and productive operation of key assets.

The R3 service can connect hundreds of devices and digitise areas up to a 15km radius from an R3Cell gateway, enabling the monitoring of multiple assets, sensors, parameters and even employees.

Use Cases

We enable organisations based in challenging environments to improve their operations by giving them access to state of the art Satcom IoT technology. This technology unlocks many use cases and, just like in towns and cities (where cellular connectivity is abundant), this provides a platform for innovation.

Some examples of use cases

- Predictive maintenance solutions for Assets
- Security of assets
- Facilities Monitoring – Aqua/Agriculture monitoring
- Environmental monitoring of air, land, water (flood, pollution, etc)
- Livestock monitoring
- Transport infrastructure monitoring
- Utilities infrastructure monitoring (Energy, Water, etc)
- Healthcare – provision of telehealth solutions to monitor patients and vulnerable members of the community in their homes
- Large area monitoring – combining in-situ monitoring with Satellite imagery provides a new level of insight

We are working within several exciting industries and organisations.

- Aquaculture – Environmental monitoring of Salmon pens and farm infrastructure to reduce burden and risk of fish stock loss
- Energy – Renewables
- Telehealth – Rural and Remote telehealth provision
- Environmental - Flood Monitoring

Demonstrated Capability – Case Study

Successfully deployed and operational since Nov '19 with global salmon producer.

Validated capability with rigorous in-situ testing offshore in Shetland.

Customer receives 24/7 critical environmental data from inside and out of all the salmon cages.

Data supplied by the R3 service is used to predict and prevent environmental events that can cause significant loss of stock and operational costs.

Contact

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