

# CLOUD FOR IOT

Collect and manage the information produced by connected objects in real time.



The Internet of Things is changing the ways companies are designing their products and, consequently, the ways these are used by end users. Products become connected and their life cycle can be monitored remotely to gather usage statistics, to improve production processes and to develop new features. The same business models are strongly influenced by the capabilities offered by IoT technologies, with a progressive transformation of products into services.

This scenario is made possible by the ability of objects to talk to each other, to learn habits and to take action to support these habits.

When connected objects become millions or billions, the real challenge is to be able to collect and manage the information they themselves produce, effectively and in real time, while meeting the requirements of reliability and scalability that this scenario entails. Cloud technologies are the ideal solution and an indispensable tool for achieving these goals.

The range of cloud vendors has quickly evolved, enriched with numerous added services to provide the market with a fertile ground on which to build solutions and value-added services for customers.

The leading cloud platforms offer many services designed to meet the specific requirements of the IoT: from connectivity for millions of distributed and heterogeneous devices, to life cycle management and remote control, services for the development of intelligent gateways, warehousing and real time processing of enormous data streams.

Reply is one of the leading European players operating on this new frontier.

# REPLY'S CLOUD-BASED IOT APPROACH

Thanks to the company's assets and the multidisciplinary expertise it has developed, Reply has positioned itself as a player capable of offering products and services that cover a broad spectrum of the IoT range:

- Consulting (scouting, feasibility studies, product development)
- Innovation, through Breed Reply, the advanced incubator for innovative startups focused on the delivery of IoT solutions
- Solutions development (architecture, integration, end-to-end solutions and accelerators for the main vertical markets)
- Testing and validation (prototyping, development and testing of electronic and communication devices)

Over the years, Reply has partnered with leading vendors operating in the IoT market and can count on multi-year partnerships and certification programmes with all major cloud service and IoT providers (Amazon AWS, Microsoft Azure, Google Cloud Platform, IBM, Oracle, SAP, Thingworx). The ultimate objective of Reply's IoT solutions is to connect objects to processes, leveraging the power and potential of the cloud to achieve scalability, flexibility, reliability and reduced time-to-market.



# IOT REFERENCE ARCHITECTURE

Reply has developed a reference architecture for its cloud-based IoT solutions, consisting of the following “pillars”:

**Things:** connected objects, with the support of all major communication protocols and the ability to customise the hardware and mechanical design.

**Gateways:** domestic or industrial gateways display on the Internet objects that do not have built-in IP connectivity on the Internet, can be administered remotely and implement fundamental storage and local processing functionality in mission-critical contexts.

**Connectivity:** communication layers, typically Internet-based, between the objects and the platform, which can be based on technologies such as ADSL, 4G or modern LPWAN networks.

**Platform:** the core of the solution. The platform is based on cloud technologies that render the system scalable up to millions of devices. It manages the connected objects' database, it is able to configure the objects and to control them remotely, it stores the information in Big Data systems and analyses data flows in real time and in batch mode to create analytics or execute machine learning models.

**Business Integration:** integration components with leading enterprise systems (CRM, ERP, PLM, support and KPI dashboards, billing systems, support systems, etc.).

The technological solution is part of Reply's broader end-to-end product and services offer, designed to meet all the needs of customers and end users, including production, distribution and support.

Reply's offer is available in the public cloud, the private cloud and on-premise.

# WHY REPLY

Reply boasts extensive experience in the IoT sector, developed through strategic partnerships, investments in start-ups and extensive research and development activities.

Hi Reply is the innovative Reply services, devices and middleware platform focused on the Internet of Things.

The platform is at the core of the solutions that Reply has already been offering for years to leading Italian and European players in every sector.

The unique combination of these components, together with the end-to-end offer and the availability of accelerators in major vertical markets, offers clients a competitive time-to-market and the reliability of proven and up to date solutions.

**REPLY** specialises in the design and implementation of solutions based on new communication channels and digital media. Reply is a network of highly specialised companies supporting key European industrial groups operating in the telecom and media, industry and services, banking,

insurance and public administration sectors in the definition and development of business models enabled for the new paradigms of big data, cloud computing, digital media and the Internet of Things. Reply services include: Consulting, System Integration and Digital Services.