IoT Definition
A network of networks of uniquely identifiable end points (or things) that communicate without human interaction (by either wired or wireless access) using IP connectivity—be it locally or globally. (IDC Research)

Key Areas of Interest

• Smart Objects and how it relates to people
• Smart City and Places. How it will affect our infrastructures
• Automotive and Smart Transportation
• Smart Energy, production and consumption
• Smart manufacturing, Industry 4.0

Smart Things
People
Smart City
Places & Gov
Automotive
Energy
Manufacturing
IoT – Reply positioning

Reply’s point of view

A **strategic** approach to the IoT requires to move from a **focus on the objects** to an approach that considers the **overall integration** within a broader ecosystem.

**IoT challenges in a not-integrated approach**
- **A proliferation of objects** without a business logic that has to be defined in a model with well-defined goals
- Creation of «**silos**»
- Mass-market devices exposed to **rapid obsolescence** due to their shortening lifecycle
- Professional devices requiring **extended lifecycle** (e.g. smart meters).
- Possible targeting in «**BYOD IoT**» logic that requires an increasing flexibility
- An **unmanaged data asset**, not usable to understand the customer and the product
- A **business model based on obsolete logics** with negative effects for both customers and internal organization

Reply’s value proposition

- **Specific vertical capabilities** provided by many Reply Companies already building solutions in the IoT space for specific Markets – Customers.
- **Innovation and experimentation on IoT** (Concept) plus advanced **IoT Incubator** (Breed)
- **IoT Support Services** (Big Data, Analytics, Fraud, Workflow, CRM) of specialized Reply technology companies.

Reply’s Role

- **Partner**
- **Product & Services**
- **System Integration**
Innovation and Incubator

03 Pronged Approach

- General Management
- Marketing and Sales
- Technology
- Office space
- Reply ecosystem
- Presence in many EU countries
- Vertical market sectors

Top end of the market industry

Funding
Seed and Early stage

Tailored support
for 12 months

Go-to-market
Long term commitment
Gartner IoT reference architecture

Source: Gartner 2014
Conventional architecture cannot be used

IoT at a scale introduce severe Infrastructure challenges

- High number of users
- Heterogeneous devices/sensors
- Unreliable connectivity
- Un-deterministic storage growth
- Middleware must scale at needed
- Responsiveness to real time request
- Bi-directional data consumption
- Batch analysis
Big player are proposing their own solutions to bring together IOT and Data processing
Lambda architecture is a data-processing architecture designed to handle massive quantities of data by taking advantage of both batch and stream-processing methods and we need to implement it on the cloud...several cloud
Healthy Reply – Tele Health & Tele Care

**Patient**
- Takes the readings according to the doctor prescribed plan
- Can check readings and historical data via web and mobile devices

**Operation Center**
- Receives and analyses the readings
- Detects and handles possible anomalies or alarms
- Alerts the doctor in case of need

**Doctor**
- Takes in charge alarms and manages assistance requests

**Main characteristics:**
- Chronic Patients program or frail subjects to keep under continuous monitoring
- Personalized Kit of medical devices and wearable or environmental sensors wirelessly connected to the ops center and the monitoring plan
- Server Stored Data on a secure cloud and available via Web and Mobile to the patient and doctor for trend or detailed analysis
Patients are given a personalized kit of wireless medical devices connected to the central system (i.e. glucose meter, pressure meter) and a plan defined by their physician.

The devices measure vital parameters and sent data to the ops center where a medic operator or a physician is alerted if the data are above defined levels for each patient.

In addition data are store on a secure cloud server and are made available to the physician to analyze historical readings.
Telehealth and care coordination

The project starts from the centralization of all data collected during Day Hospital stay, with the goal to follow the patient closely during the whole year instead of concentrating solely on the hospital visit.

The project is about all 500 Down Syndrome patients, 100 will receive remote monitoring medical devices (weight scales, ECG, etc.). The plan includes the launch for all 43 Day Hospitals starting with Cardiology, Rare Diseases, Oncology.

Data are collected from different sources (DH, remote monitoring, Self care portal), the personal physician and pediatrician will be involved as well in the process.

The main benefits include a more efficient follow-up and a better adherence to the medical plan prescribed.

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Project: DH e DS
Client: Pediatric Hospital
Energy Efficiency

Strategic partnership with associations, universities and innovative technological platform providers

Provision of end-to-end services for efficiency and customer engagement
Enabling infrastructure for services

Consumption is measured either using an optical LED sensor on the smart meter or using clamps installed on the electrical panel. In case of long distances between the smart meter and the gateway, repeaters can be introduced in the first option.

Measurements are sent through a wireless channel and collected using an intelligent receiver/gateway.

Measurements are sent to the cloud applications either using an ADSL connection or a 3G connection.
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Thank You....