



**Active** RFid  
Active radio-frequency identification

# ELA Innovation

on behalf of Texim Europe BV

## Your Partner in Industrial Wireless Tags and Sensors

March 08th, 2016

voor Industrie & logistiek  
**Auto ID event**

8 maart 2016  
Kontakt der Kontinenten  
in Soesterberg





# Active RFid

Active radio-frequency identification

## Agenda

1. Definitions and basics
2. Active RFID global forecasts
3. ELA at a glance
4. 4 markets where Active RID makes really sense

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# Active RFid

Active radio-frequency identification

## DEFINITIONS

**RFID** means **Radio Frequency Identification**.

**Active RFID** is a form of **Auto ID (automatic identification)** characterized by the use of ID **tags which are self powered**. They have their own battery, and typically emit a signal at a predefined rate, usually with an interval of about one second between transmissions.

Active RFID's frequencies are free / **either 433MHz, 868MHz or 2,4GHz**.

**Active tags or sensors** work like **beacons**, with periodic transmission of the ID number (and the measured value in case of integrated sensors).

So a **mono-directional** transmission way : **from the tag to the reader**

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# Active RFid

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## When does the Active RFID make sense for industrial applications ?

- ✓ **Long range** detection and identification in a real-time way
- ✓ **Ultra long lifecycle** (10 years) higher than the market demand
- ✓ **No points of passage** for tagged people or assets
- ✓ **Detection independent of severe use conditions** (dust, humidity or rain, darkness, ...)
- ✓ **Intelligent behaviors** thanks to internal sensors
- ✓ **Robust & compact** industrial design

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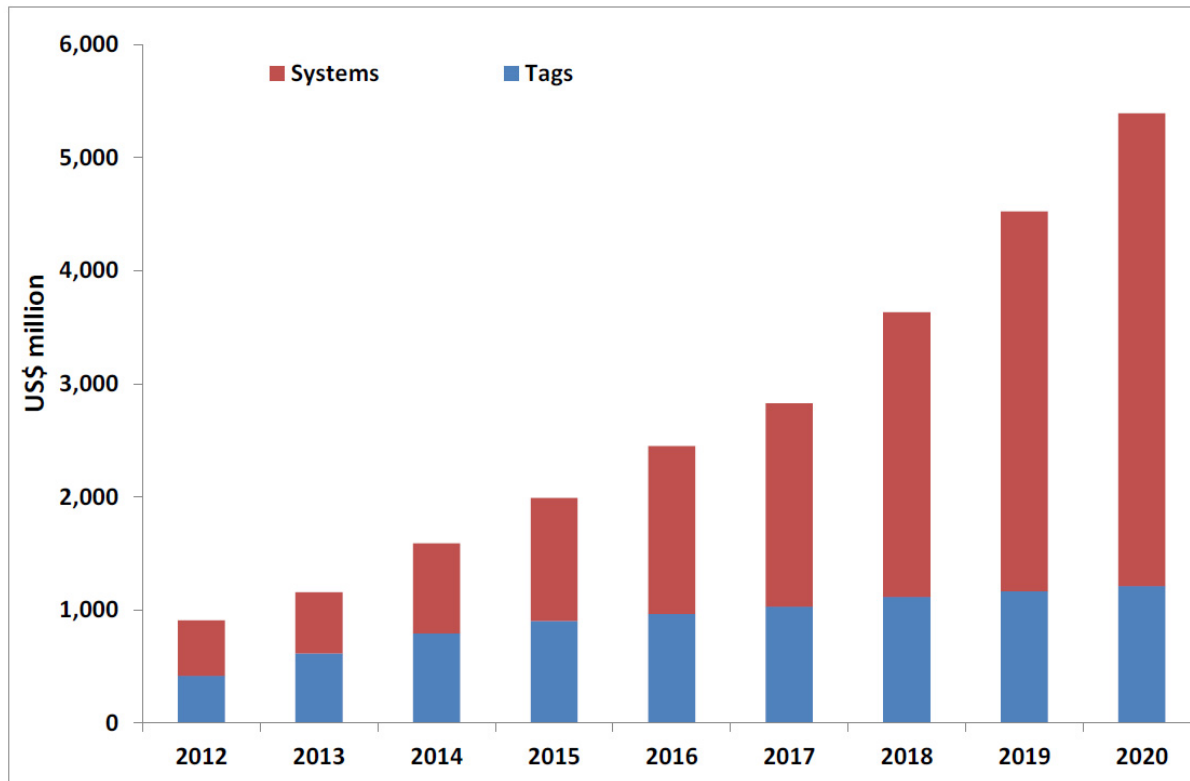




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## The Active RFID market : the market to be !



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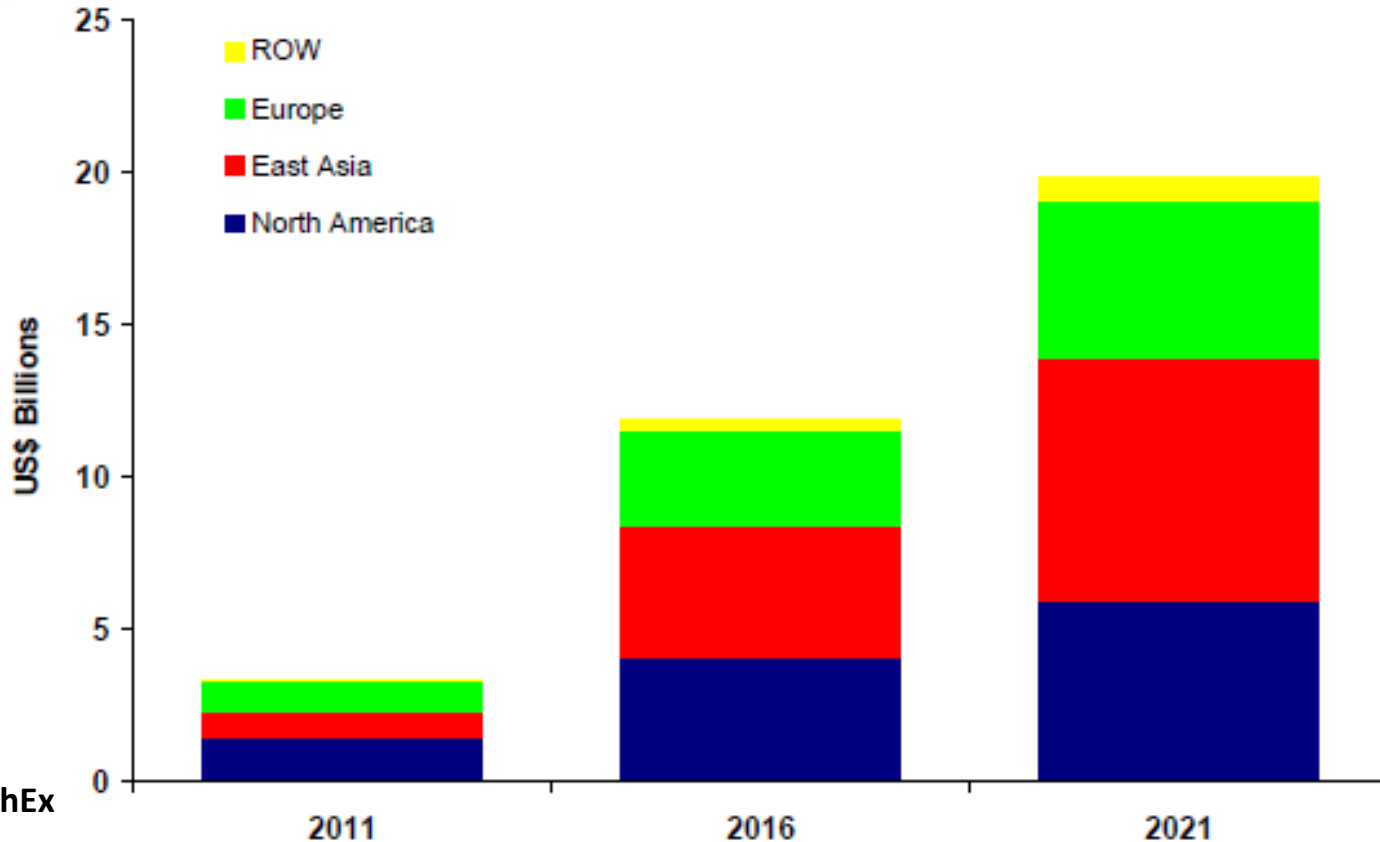
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 **The European market : the place to be too !**



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## ELA Innovation at a glance :

- 👁️ French leader in patented **active RFID technology**
- 👁️ Specialist in the **ULPW (Ultra Low Power)** RFID products
- 👁️ **Created in 2000**, with a R&D phase up to 2004.
- 👁️ **2014 – 2015 growth : +130%** & 2-digit profitability
- 👁️ **More than 200,000 devices deployed**
- 👁️ **100% Made in France** (Design & Manufacturing)
- 👁️ **International footprint through network of distribution partners**

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## The Key points of ELA Products :

- 🌀 **A wide range** of active tags, readers, softwares and antennas
- 🌀 **In-House Design** of tag's Radio Transmission core
- 🌀 **Ultra Low Power Management (ULPW)** providing significant Tag's autonomy : **up to 10 years !**
- 🌀 **Long RF range** (an average 100m)
- 🌀 **« Green » Focus** : Very Low Electromagnetic Emissions, eco-design, ...
- 🌀 **Integrated Environmental Sensors** (temperature, RH, motion, ...)

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## REMINDER

### When the Active RFID makes sense for industrial applications ?

- ✓ **Long range detection and identification in a real-time way**
- ✓ **Ultra long lifecycle (10 years) higher than the market demand**
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- ✓ **Detection independent of severe use conditions (dust, humidity or rain, darkness, ...)**
- ✓ **Intelligent behaviors thanks to internal sensors**
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***The 4 main markets where the Active RFID Technology provides answers to complex identification and traceability requirements ?***

- 1. Security applications (3 cases)**
- 2. RTLS applications (3 cases)**
- 3. Telematics applications (3 cases)**
- 4. Smart Buildings / Smart Cities (2 cases)**

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SECURITY



## Single RFID Anti-Theft Marking System

- ✓ For High-End Asset Tracking
- ✓ For the theft detection and the access control
- ✓ Automatic detection, localization and stop of any unauthorized exit
- ✓ Available TAG's auto-protection



## Customer References :

- ✓ CARREFOUR
- ✓ LECLERC
- ✓ LIDL



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# Active Rfid

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## Intelligent RFID Anti-Theft Marking System

- ✓ For outdoor applications (IP68 tag)
- ✓ Automatic detection of unauthorized movement of construction machinery's tank with our motion sensor COIN MOV
- ✓ Coupled with 3G / 4G router and IP camera



### Customer References :

- ✓ VINCI



SECURITY

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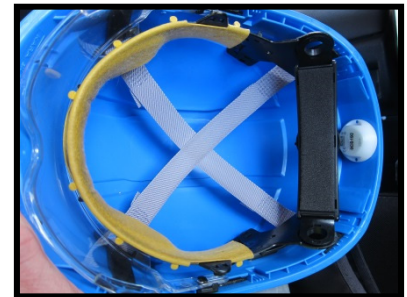
## Worker Safety in Tunnel

- ✓ Real-time automatic counting of entrances & exits
- ✓ Real-time location of workers per area
- ✓ Easy and Quick installation
- ✓ Compact and discreet TAG inside the worker's helmets.



## References :

- ✓ EIFFAGE TP
- ✓ VINCI Construction
- ✓ BOUYGUES CONSTRUCTION





## RTLS : Inventory & Location

- ✓ 1200 tagged containers and 70 monitored logistic platforms of one of the major French transport carriers
- ✓ Powerful and robust active tag (150m / 10 years every 2 seconds)
- ✓ Automatic detection when a container carried by a truck enters or leaves a site



## Customer References :

- ✓ DPD (ex. EXAPAQ)





## RTLS solution for handtooling

- ✓ Customized miniaturized active tag placed in each handtool (even inside sockets for wrench!)
- ✓ Automatic detection if the tool is missing after the assembling operation is finished.
- ✓ Complete Maintenance IOT platform running on tablets with real-time communication over BT.
- ✓ Real-time location of missing tools over the whole manufacturing sites.



Customer references :

- ✓ SAM OUTILLAGES





## RTLS : People location & counting

- ✓ Automatic detection, identification and counting of 50 workers inside a 15-floor building
- ✓ 2 SCIEL READER R and SLENDER I antennas per 500m<sup>2</sup> floor
- ✓ Real-time location per half of floor for each worker with 98% success rate



### Customer References :

- ✓ SATELEC – FAYAT group







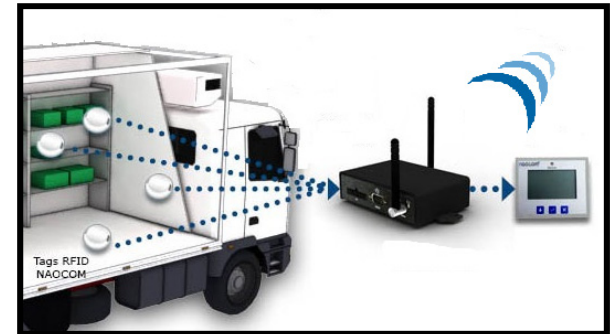
## Telematics & Cold Chain Traceability

- ✓ Active RFID Integration with Fleet Management Solutions
- ✓ Trailer's temperature and humidity monitoring
- ✓ Trailer & Driver ID
- ✓ Asset inventory (bins, construction equipments, ...)
- ✓ Event detection (door's opening, asset's movement, ...)
- ✓ 3rd party sensor monitoring



### References :

- ✓ ORANGE Business Services
- ✓ NAOCOM
- ✓ UBINAM





## Gas & Oil Telematics Applications

- ✓ Automatic opening detection of distribution valves and manhole cover on tanker trucks thanks to motion and magnetic sensors
- ✓ Realtime temperature monitoring of distributed liquid products
- ✓ Waterproof & heavy-duty tags and sensors
- ✓ ATEX compliant tags and sensors



### References :

- ✓ DISTRI MOBILES - GRIZZLY





## NME tracking in airports

- ✓ Automatic detection for Non Motorized Equipments deployed in the whole surface of an airport
- ✓ 50m detection through vehicles equipped with GSM tracker and Active RFID reader
- ✓ Real-time location of all the assets thanks to continuous scanning by the vehicles
- ✓ Very optimised TCO : 10-year lifecycle for tags placed on each NME equipment and few tens of vehicles with GSM –RFID trackers.



References :

- ✓ ADP (Aéroport de Paris) – AIR FRANCE





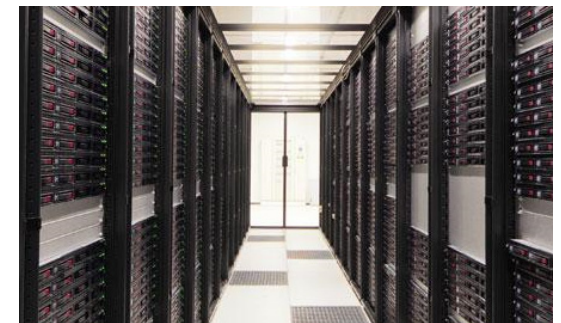
## Humidity & Temperature monitoring

- ✓ Wireless Temperature and Humidity Monitoring solution with our wireless temperature and humidity sensors
- ✓ 10-years lifecycle and 150 m range with our new PUCK RHT sensor
- ✓ Fixed installation centralized on local network for indoor application or through 3G router for outdoor application
- ✓ Option : customized monitoring dashboard on IOT platforms



### References :

- ✓ EBV (military applications)
- ✓ BAXTER (medecine storage)
- ✓ VINCI (Château de Versailles)
- ✓ OVH (datacenters)





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## Parking Assistance Solution

SMART BUILDING

- ✓ New PUCK PARK – Automatic detection of presence of car.
- ✓ Based upon magnetometer sensor.
- ✓ Easy to Install.
- ✓ No wiring cost for the detection sensor.
- ✓ Ultra long lifecycle : 10 to 20 years.
- ✓ Compliant with all the types of car.
- ✓ Industrial and robust design for indoor and outdoor spaces
- ✓ Real time Monitoring – Immediate User information

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## CONCLUSIONS

- 🌀 Active RFID technology is a **proven technology** for Industrial Internet of Things, deployed **for 15 years**
- 🌀 Active RFID is focused on the ultra long lifecycle (**10 years and more**)
- 🌀 Active RFID technology brings real added values for real time detection and **long range identification**
- 🌀 Active RFID means **Identification and much more** now, thanks to **sensors**
- 🌀 Any added details: please visit the **Texim Europe booth**.

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**Thank you!**



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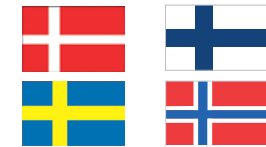
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