RFID solutions

A story of innovation, quality and customer care

Rfid engineering for your ideas

The Story

SMARTRES

Development of copper wire RFID technology on paper

Smart Res creates a versatile RFID product on paper, anticipating the issue of sustainability

2006

2008

2010

Patented product for luxury brand protection

Smart Res is at the forefront of anti-counterfeiting, creating a family of special customized products

Re-branding and new investments

Smart Res renews the brand, invests in the development of new solutions and equips itself with a latest generation aluminum RFID production line

First HD+SW RFID platform

Smart Res becomes a pioneer and installs one of the first complete RFID hardware and software solutions
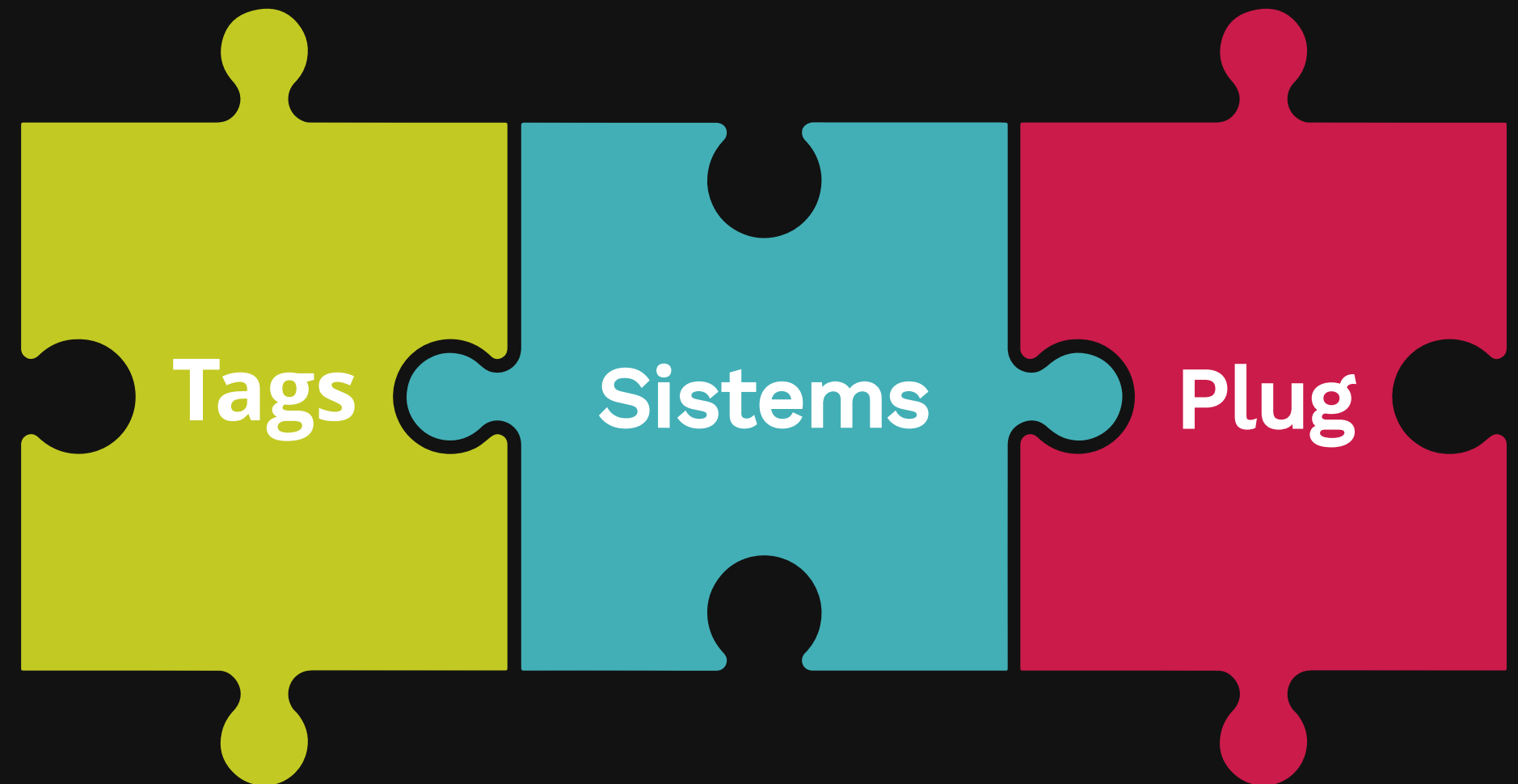
2017

2024

All inclusive RFID solutions

Smart Res offers all inclusive RFID solutions: business process conversion, pre-sales services, project management, RFID software development, installation and after-sales service

What Smart Res does

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Tags

Sistems

Plug

RFID tag production and customization services

Integrated RFID read-write systems

Plug-in devices

Systems & plug-ins

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RFID for logistics
Complete RFID solutions for logistics

RFID consultancy for logistics
Engineering consultancy for RFID projects, analysis of processes and customer needs, change proposal and proof of concept

Assistance
Complete after-sales assistance on each system installed: on-site assistance, helpdesk, dedicated hot line, ticketing, remote assistance

RFID reading systems for pallets
Tunnel and gates for reading products on pallets for checks, for pre-shipping list or automatic inbound-outbound DDT

RFID system integrations for automatic taping machines
Read-write RFID tag integrations on automatic taping machines

RFID reading systems for products
Gates, tunnels, antennas, readers for reading products with RFID on cassettes, trays, totes, packages

RFID technology integrations for label factories
Integrations of RFID technology on printing machines for label factories, RFID tag testing systems

UDM tracking with RFID for automation
Movement unit tracking systems for automatic movement systems

RFID smart shelf
RFID Continuous Inventory IoT Smart Shelf

Anti-counterfeiting and anti-burglary systems
Anti-counterfeiting and anti-burglary solutions for products and packages, distribution chain tracking

RFID tag service

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Selection of RFID tag
Customer support for selecting the best RFID tag for each use

RFID tag with augmented reality
Development of augmented reality RFID tag solutions (e.g. NFC tag with augmented reality application via smartphone)

Sanity check on site
RFID tag reading tests in the field (sanity check)

Multimedia RFID tag
Development of solutions with multimedia RFID tags (e.g. NFC tag with web-page landing)

Electromagnetic measurements laboratory
Laboratory tests on RFID tags

RFID label production
Supply of RFID labels printed on various materials and with various finishes

On-site troubleshooting
Search for on-site RFID tag reading errors on systems and equipment already installed, on RFID tags already purchased

RFID tag
Mass RFID tag coding service

RFID tag supply
Prototyping, in-house production, supply of various UHF, HF, NFC tags, aluminum technology, aluminum inlay on paper, copper wire technology, hard tags, active tags

Why they choose Smart Res

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Quality

All our products leave our factory 100% checked, we know how much non-conformity costs, which is why we eliminate the risk of it happening. Hardware and software system integrations go through rigorous validation processes before being released, our customers' time and effort are precious, we sell things that work

Dedication to the customer

More and more often we have to help customers who have been disappointed and abandoned by some of our major competitors, but this does not happen with those who choose us. Whether the business is important or modest, all customers are for us a treasure of human relationships to be preserved with care and attention

Skills

Since 2004, we have been dealing with RFID technology, the skills accumulated through a myriad of technological challenges faced and a multitude of customers with different needs satisfied they allow us to claim to be a virtuous reference in the world of RFID

Savings

The agile structure of the company combined with the possibility of internally producing the products and services we offer make us capable to offer particularly aggressive prices

Case history

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RFID smart shelf

The challenge

Create a shelf for a retail customer capable of constantly monitoring the stock of individual items

The solution

A shelf equipped with antennas and RFID readers, easily configurable on new products, connected to the cloud and equipped with the Qlink Sense platform

The benefits

Updated availability of each item, understock control, sales statistics, integration with management systems

Smart RFID display

The challenge

Born as an evolution of the shelf, the exhibitor is asked by the customer to remotely show and modify the price of each of the 120 products on display on-time

The solution

The display can accommodate up to 120 locations equipped with displays to indicate to the consumer the price and other information of each of the 120 types of products on display. The cloud application allows you to interact with the consumer on-time

The benefits

In addition to the benefits of the shelf, the display allows timely and instant control on the single item displayed (and RFID tagged) which can be purchased via smartphone app

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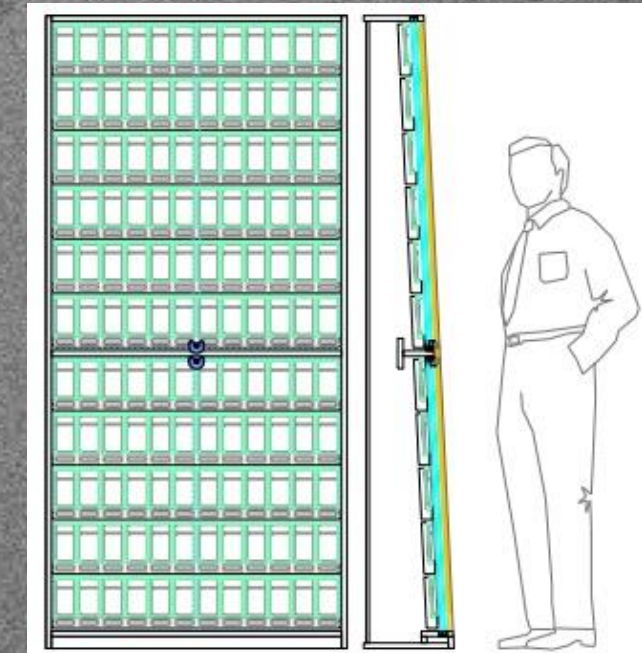
Automated logistics with RFID for cosmetics

The challenge

Integrate RFID technology on a complex automatic handling system for cosmetic products to track and inventory inbound and outbound flows on crates and pallets

The solution

Through a proof of concept phase carried out on site, the reading quality of bags of powders and liquids with various tags was evaluated, then selecting the best one. High precision massive reading gates were then designed

The benefits

A complete all inclusive solution for tracking, verification and inventory with RFID technology on products moved by an automatic handling system

Smart label integration for label factories

The challenge

Transform a traditional label factory into a label supplier with integrated RFID tags

The solution

A testing bench for RFID tags, an add-on to the machine, was created with a partner company that produces label printing machines. The label factory is supported by Smart Res in all RFID tag integration processes for the customer

The benefits

Qualitative upgrade of the label factory which can boast an innovative offer on a market increasingly attracted by intelligent labels

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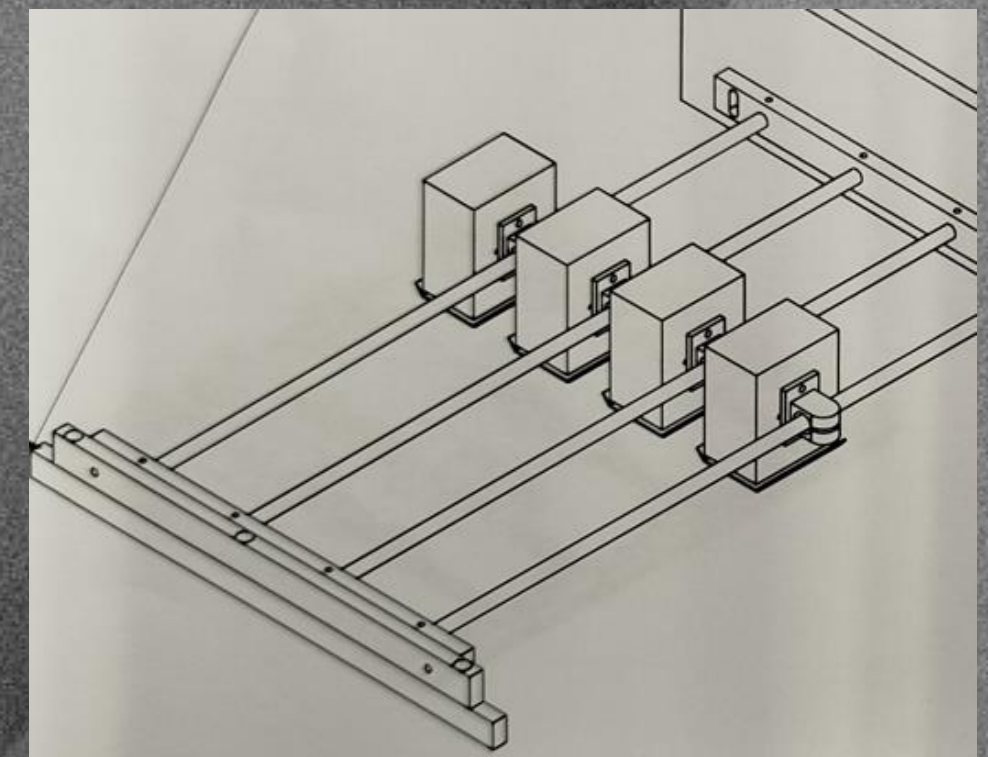
NFC tag with augmented reality

The challenge

Generate augmented reality content through an NFC RFID tag placed on a valuable product

The solution

Bringing any smartphone close to the NFC tag located inside the packaging of a product triggers a graphic process that overlaps with the image on the product packaging framed by the device's camera

The benefits

Added value is created to the product with high impact, notable and immediate perception on the final consumer thanks to animated images equipped by audio streams

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Anti-counterfeiting and monitoring of the distribution chain

The challenge

The customer, a well-known perfume manufacturer, complained of numerous cases of product falsification and unauthorized resale outside the official distribution chain

The solution

Through an NFC tag on the packaging of each product and encrypted serialization on the cloud platform, the consumer easily verifies the originality via smartphone before purchasing. An outbound product and package tracking system allows you to verify the distribution chain of the products sold

The benefits

Eliminate cases of counterfeiting and cases of parallel market / unauthorized resale

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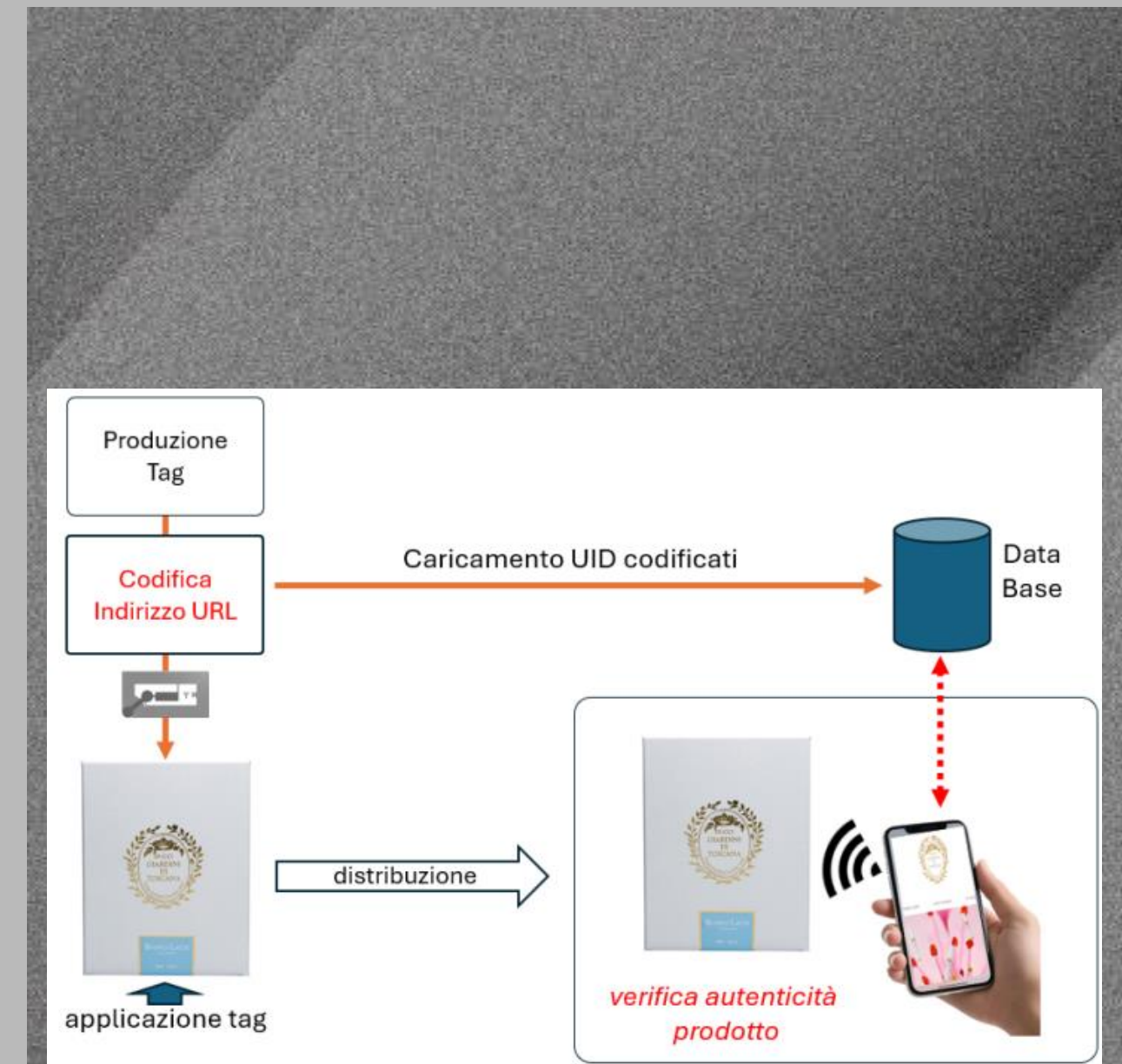
Efficient internal processes for analysis laboratories

The challenge

Reduce the times and dysfunctions of the barcode management of the test tubes sent from the blood sample collection sites to the analysis center

The solution

By replacing the barcode with a barcode label + RFID tag (which can thus coexist with the old management) fast and accurate punctual or massive readings are obtained on individual test tubes or test tube holders through gates and table antennas interfaced via middleware to the customer's management system

The benefits

Obtain precision and speed from the sampling to the analysis center, reducing the times and costs of checking the sent test tubes. Accountability of sampling center employee with automatic tracking of the operator ID. Fast stock inventories.

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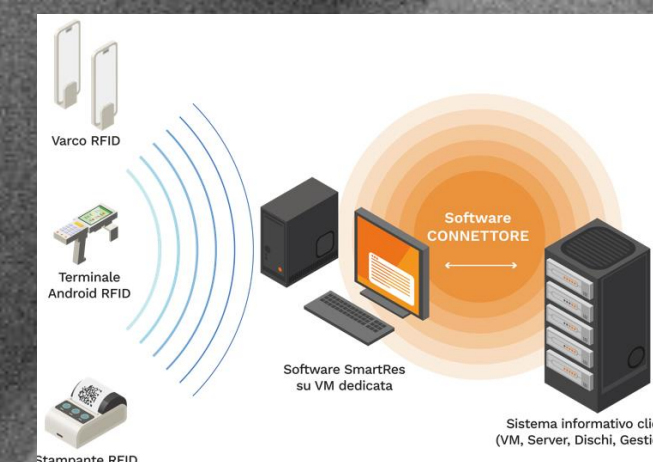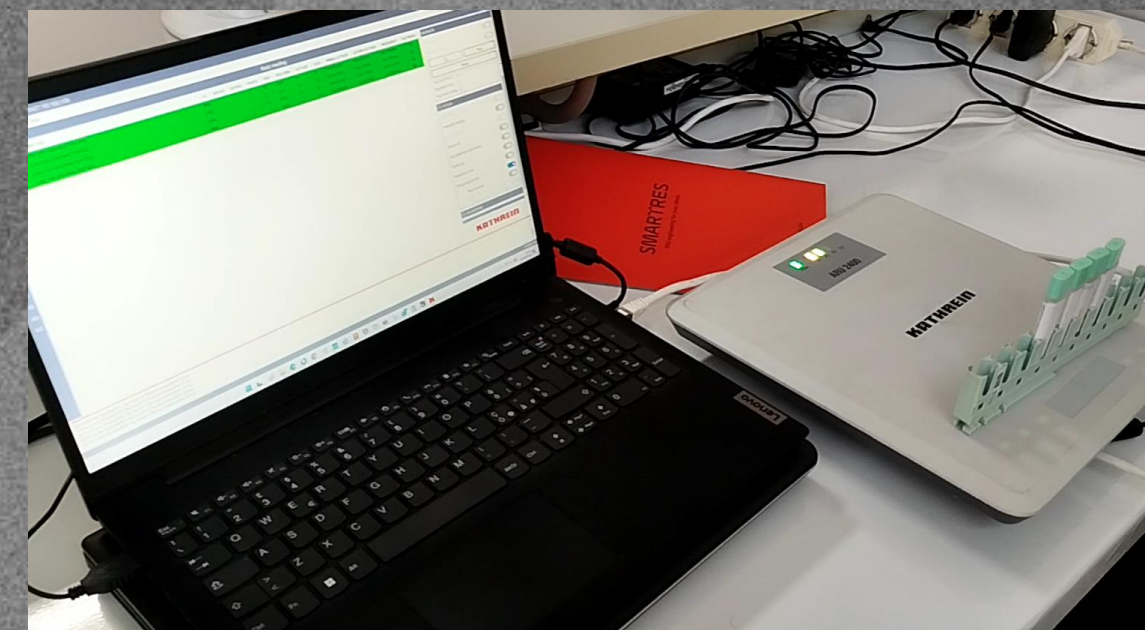
Drents Museum: Personalized experience for visitors

The challenge

The need to be able to track the visitors' movements inside the building

The solution

At the entrance the visitor is provided with a UHF RFID card, from that moment on no action is required from the visitor, distributed antennas and readers monitor his movements reporting them to a management system

The benefits

Statistical verification of the visitors' movement, possibility of acting accordingly to improve the service offered. A new form of visitor experience

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Imperial Fashion: the perfect solution for fast fashion

The challenge

The customer needed to accelerate its sales procedures in its wholesale sales points, 80% of the flow of customers was concentrated in the first two days of the week

The solution

Each item has a UHF label attached during the manufacturing process. The customer places the selected items on a stand or in baskets, places them on a reading station and in a few seconds the pre-payment slip comes out

The benefits

A 50% reduction in waiting times and therefore an increase in the quality of service provided to customers. Real-time sales control for statistical processing

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Bottega Veneta: brand protection and anti-counterfeiting

The challenge

The customer in question needed to fight counterfeiting and the gray market with an imperceptible and non-visible tag, therefore completely incorporated into the product

The solution

Smart Res selected an HF RFID tag with high security specifications, then patented a thermo-transfer process on a cotton label which is subsequently codified and sewn directly onto the product

The benefits

Reduction in the gray market counterfeiting, control of returned goods and repairs. Acceleration in the supply chain

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Maliparmi: from barcode logistics to RFID one
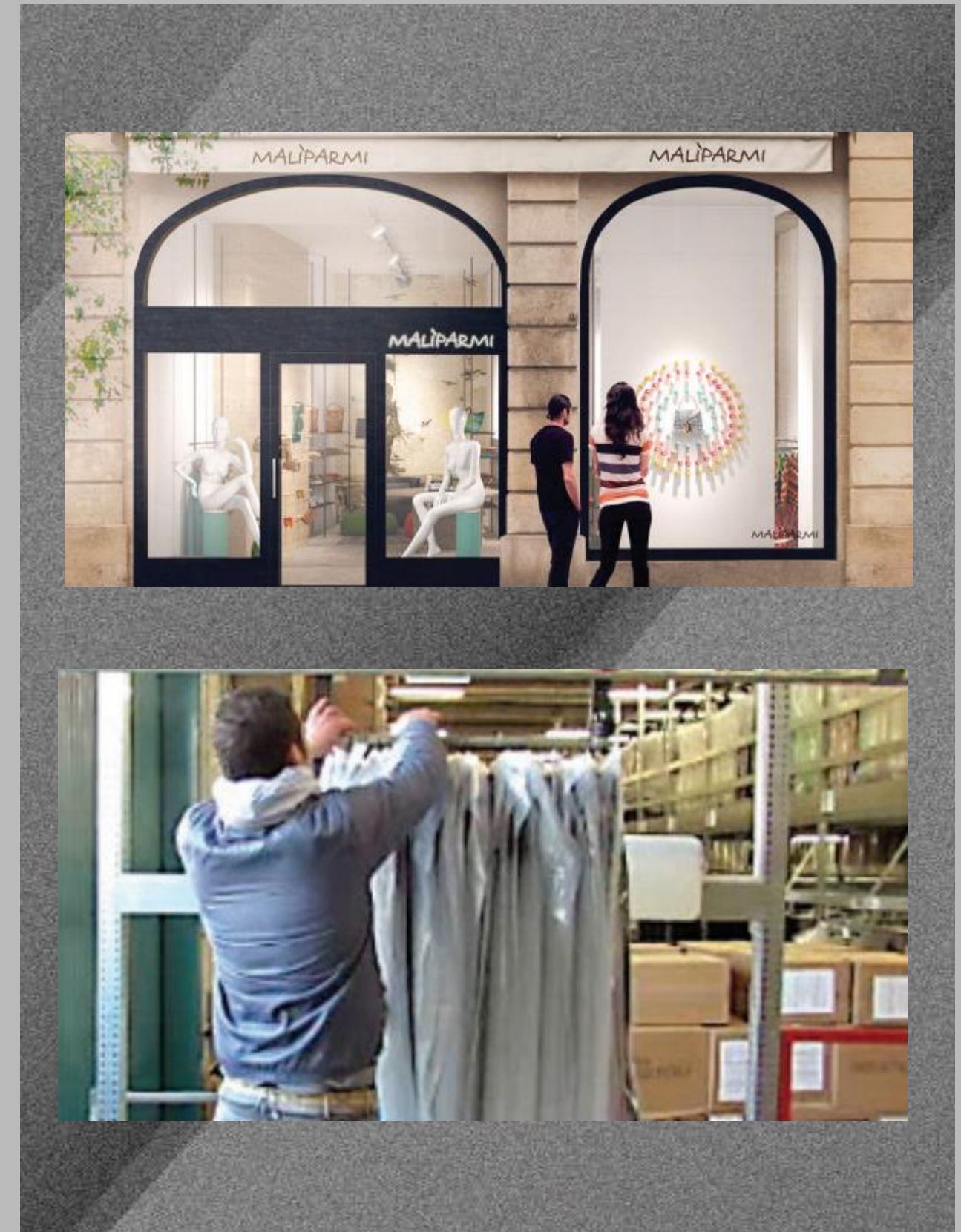
The challenge

Maliparmi's objective was to improve the logistics management of barcode: acceptance-picking-shipping

The solution

Smart Res produced a tag on paper with the pre-printed Maliparmi logo having the dimensions of the barcode label already used, has created the interface middleware with the management system and the RFID reading infrastructure.

The benefits

Reduction in goods receipt errors and reduction in supervising operators. Increase in productivity. Acceleration in carrying out customer orders. Traceability of product. Accuracy in physical inventory

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Sartori Ambiente: optimization of waste management

The challenge

The customer who operates in separate waste collection needed to identify the waste bags/bins in order to correctly account for the consumption of each family

The solution

A tag has been developed to be applied to bins, one to plastic bags, and readers to be installed on trucks which provide the results of the reading to the staff on duty using light and sound indicators. The UHF tag code, assigned to the user, is transmitted to the data collection center, thus certifying that the container has been emptied

The benefits

Tag reading high speed, precision in consumption accounting and relative increase in separate waste collection

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Borsheims gioiellerie: inventory in minutes and traceability

The challenge

Jewelry stores are often subject to serious inventory errors taken through manual counting or barcoding

The solution

Special HF tags applied to the products uniquely identify them. Using a handheld device it is possible to take an inventory of a display in a few seconds and communicate it to ZeroShrink, the world's best-selling RFID software for jewelry

The benefits

80% reduction in thefts, acceleration in stocktaking and as a consequence more time to dedicate to sales activities (increase in sales). Previously the store was closed early in order to carry out inventory and this obviously generated a reduction in sales

Mondoplastico: the inbound/outbound of perches for plastic films

The challenge

The customer, a leader in the production of plastic films wrapped on metal perches, needed a system for reading the flows of perches entering and exiting the site with automatic pre shipping bill functions

The solution

A special On Metal UHF tag is fixed to each perch with rivets which uniquely identifies it. Two loading gates have been set up on the ramps protected by a sturdy metal structure which send all the IN and OUT flow data to the management system

The benefits

The automatic readings of the perches are quick and easy, furthermore after a certain number of steps the red warning light informs you when it is time to carry out maintenance on the perch

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Roline: Roline: to track and to check your tyres

The challenge

Roline regenerates 550 tires per week, it needed to identify and keep track of each tyre, to associate a customer with it, to record its regeneration history. The barcode system placed on the tire sidewall was unsatisfactory, due to poor visibility, degradation due to dirt and long inventory times

The solution

Smart Res has studied an RFID tag to be integrated into the tire capable of resisting the vulcanization process at 100 degrees for four hours, it then developed a Motorola handheld scanner system, the read data is transferred to the ERP system

The benefits

Greater process precision, faster and more accurate inventory, easier fleet management

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Automatic taping machine with integrated anti-theft RFID
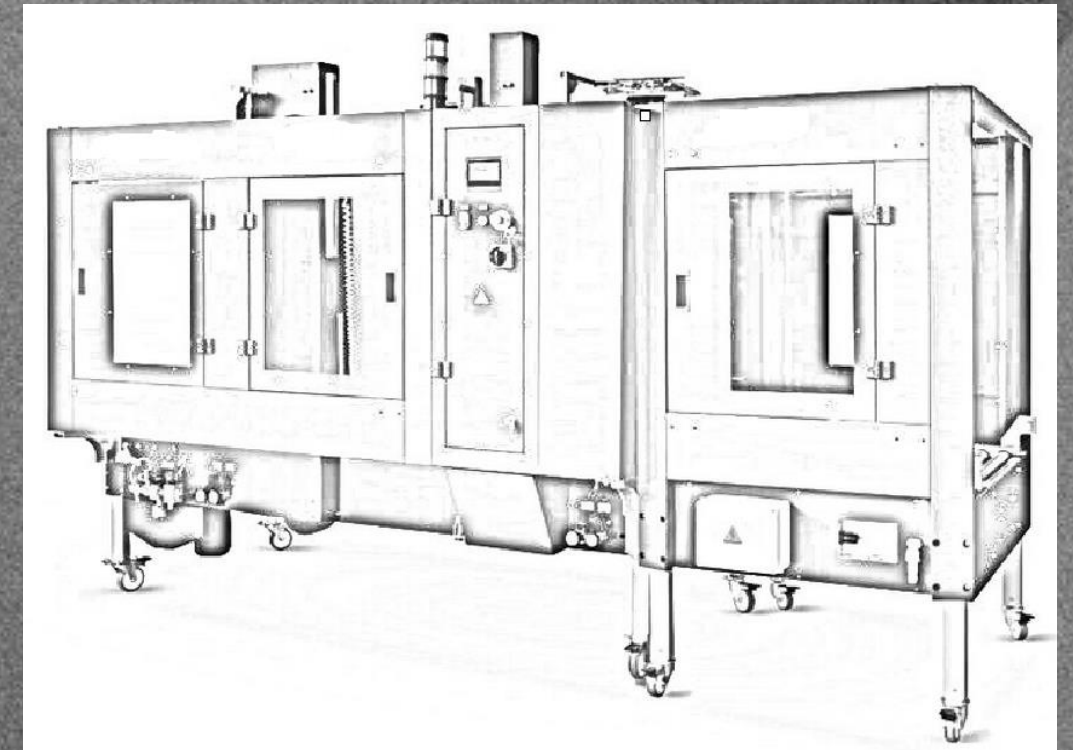
The challenge

Guarantee the anti-theft of a cardboard package to be shipped through a certified process

The solution

Through collaboration with a partner company producing automatic taping machines, an automatic process is developed which places two RFID tags with a tamper circuit between the tape and the two cardboard packaging flaps capable of electronically identifying any attempt or successful package opening

The benefits

In additon to the taping machine with integrated RFID, a certified anti-burglary process can be obtained by installing gates or tunnels, on a pallet in shipping and reception. By associating the RFID tag to the package you also obtain the classic tracking and inventory benefits

High-precision RFID pallet tunnel

The challenge

Propose for the logistics market a device capable of analyzing a high content of RFID tags inside a pallet

The solution

Through collaboration with a company producing automatic handling systems, a tunnel is developed with pallet entry and exit on conveyors, fast automatic shutters, radio absorbent materials to guarantee massive readings of RFID tags with precision > 99.8%

The benefits

Creation of automatic pre-shipping list and DDT on warehouse entry and exit flows, pallet inventory, break-in verification processes for packages equipped with RFID tamper tags

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The UDM tracking system for logistics automation

The challenge

In the context of automatic handling systems, replace the standard process using barcode readers for tracking the handling unit (totes, trays, pallets) with a system of readers + RFID antennas

The solution

Apply a UHF RFID tag to each UDM, track the movements and changes in physical position of the same UDMs within a conveyor system thanks to directional RFID antennas and RFID readers (replacing barcode scanner cameras)

The benefits

RFID reading response much faster than barcode reading, lower hardware costs, UDM reading in the absence of light/visibility
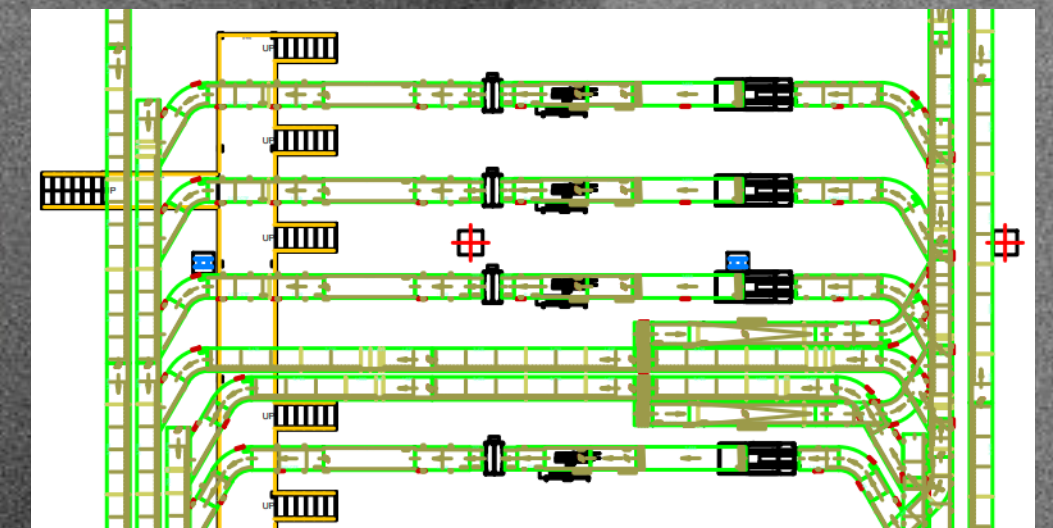
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Thanks

Rfid engineering for your ideas

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