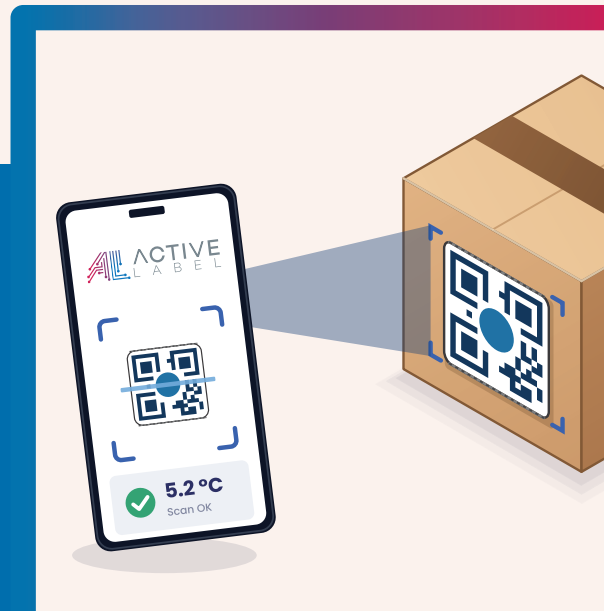




Product Catalogue



Integrated solutions for the monitoring
of perishable products

Let each item tell its story.



Discover our website

TABLE OF CONTENTS

About us 5

The problem today 7

Sectors 9

Our system 11

Our products 14

- TTI (Time-Temperature Indicator) 15
- CTI (Critical Temperature Indicator) 16
- Active RFID 18
- Passive RFID 19
- Other solutions 20

Contact us 21

ABOUT US

The data
infrastructure
that makes
the story
of every
single product
visible.

ACTIVE LABEL

About us

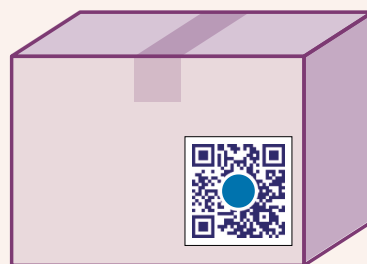
Active Label is an Italian company that develops smart labels and monitoring systems for temperature-sensitive products.

Our solutions link the physical state of every product to clear, usable data along the entire supply chain.

From the warehouse to the single pack, we help companies monitor quality, track events and make better operational decisions, turning every perishable product into an objective source of data on its thermal history, its real condition and the operational risk accumulated along the way.



A physical-digital layer that gives every product its own thermal identity: its real condition, not the average of the truck or the batch carrying it — far beyond a simple sensor.



01



Smart labels

Indicators designed to record time and temperature directly on the product.

02



Connected data

Readings become structured information, linked to product, batch, shipment and location.

03



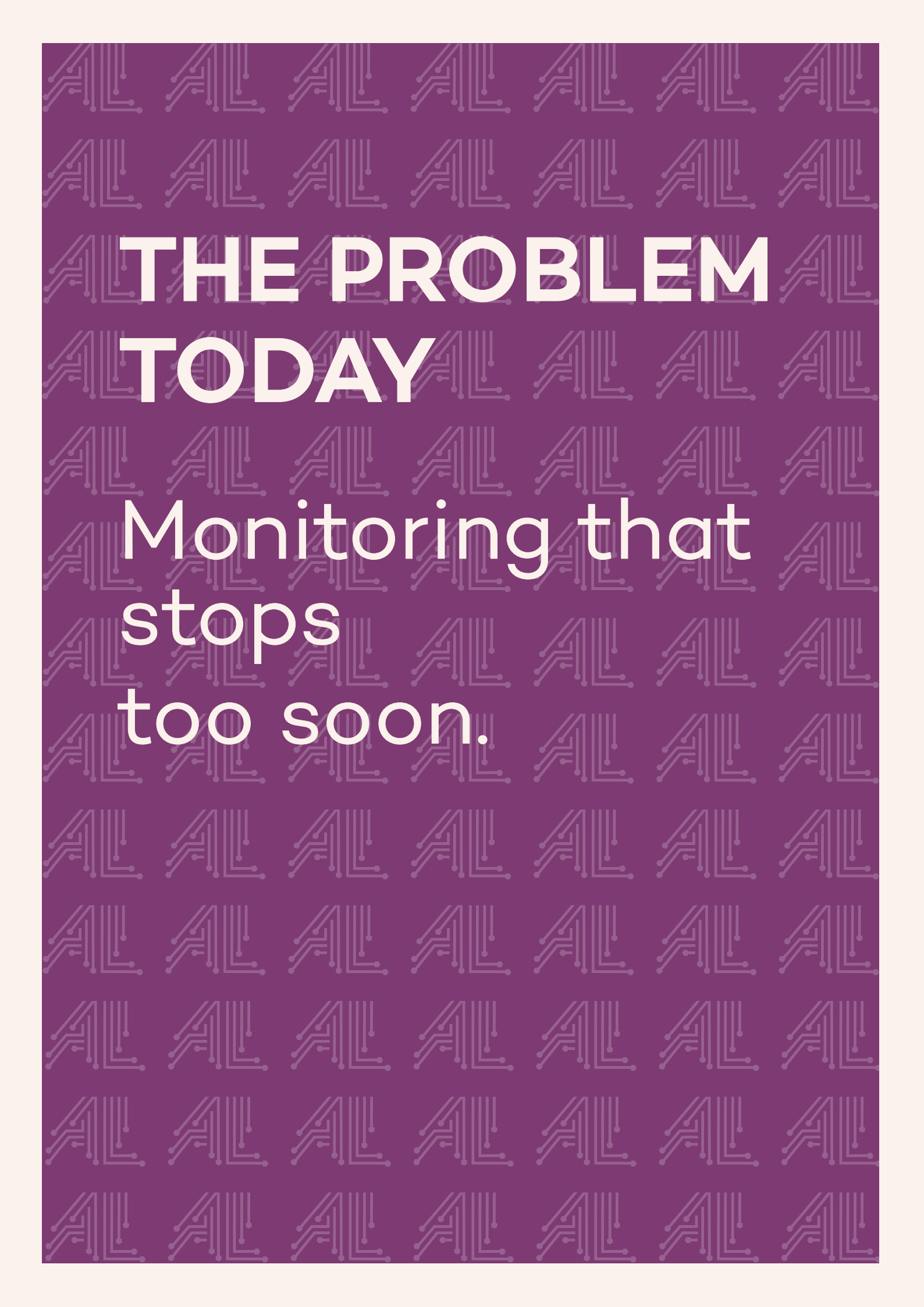
Tailor-made systems

Labels, readers and dashboards are configured around your processes and goals.



Cloud dashboard

One **Active Label app** to read every medium — TTI, CTI, NFC, ActiveSeal — and send the data, in real time, to the cloud dashboard. A simple interface designed for everyday work in the warehouse, in transit or at the point of sale.



THE PROBLEM TODAY

Monitoring that
stops
too soon.

THE PROBLEM

One sensor, an entire environment.

In most supply chains that depend on temperature control — food, pharmaceuticals, fresh produce — monitoring today relies on **a single measuring point for an entire volume**: a pallet, a vehicle, a cold room. Yet none of these environments is uniform: near a door, under an evaporator, on the top shelves, conditions change within a few metres. A single sensor tells the story of the spot where it sits — not that of every single unit.

The result is a control that looks complete but leaves uncovered what really matters:

what happens to each product, wherever it is along the supply chain.

Why this gap has a cost

FOOD

A structural waste

About a third of the food produced worldwide is lost or wasted along the supply chain (FAO estimates): a significant share is linked to breaks, even brief ones, in the cold chain.



PHARMA

A multi-billion risk

In pharmaceuticals too the issue is central: industry estimates (WHO, IATA/Pharmaceutical Commerce) report losses of billions of dollars a year linked to temperature excursions in thermosensitive products.



Sources: FAO estimates (food); WHO and IATA/Pharmaceutical Commerce industry analyses (pharma).

Granular monitoring changes the perspective

Taking monitoring from the single measuring point to the single item means:



Knowing what happened to every unit, not the average of the environment



Identifying risks in real time, before the damage is done



Cutting waste by intervening before the entire batch is compromised



Attributing responsibility precisely along the supply chain

Our labels were created to close exactly this gap: monitoring that does not stop at a single sensor per environment, but goes all the way down to the single unit — whether it is a food, a drug or any fresh or temperature-sensitive product.



SECTORS

Fields of application.

FIELDS OF APPLICATION

Designed for temperature-sensitive products, in any industry.



FOOD

From cooking and freezing all the way to the store shelf, manage shelf life based on the conditions the product has actually experienced — not just the date printed on the pack.



BEVERAGES

Protect temperature-sensitive beverages during storage and distribution, with objective shareable proof of the product's condition for retailers and export partners.



PHARMACEUTICAL

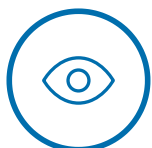
Document every temperature excursion linked to batch and shipment — evidence to support GDP compliance and always-ready audits.



LOGISTICS

Offer carriers and 3PLs objective, shared proof of the product's condition — fewer disputes, and a service you can sell as a differentiator.

Key benefits at a glance



Track your products

From packing to delivery, every box is visible in the dashboard



Control transport

Temperatures and transit incidents detected at pallet level anywhere



Reduce waste

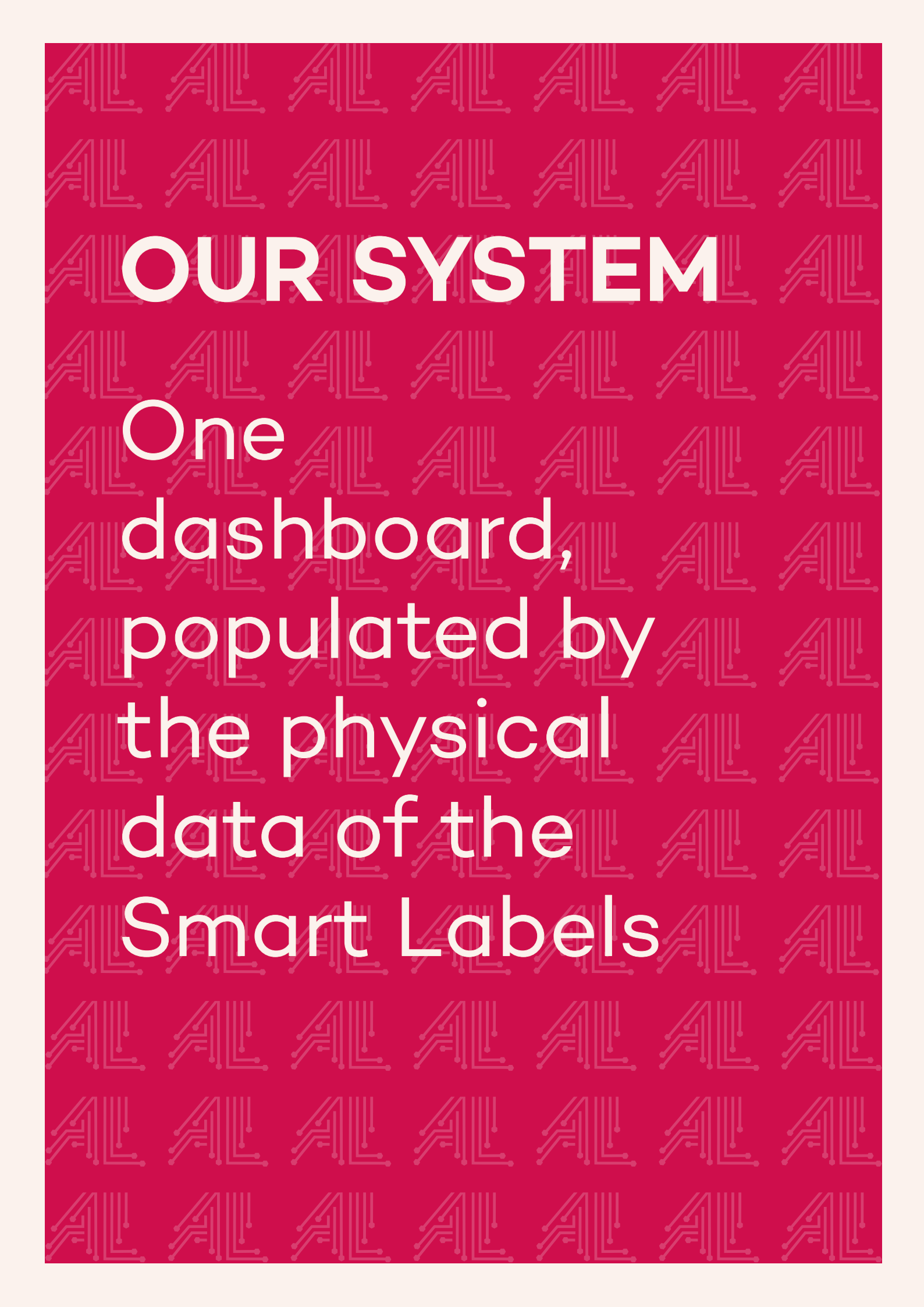
Discard only the boxes that are really damaged in a pallet, not the entire load



Guarantee quality

Objective, verifiable data to share with your customers

One system, one dashboard — configured differently for every sector you serve.

The background of the entire slide is a solid red color. Overlaid on this is a repeating pattern of a stylized circuit motif. Each motif consists of the letters 'A' and 'L' in a white, sans-serif font. The 'A' is formed by a series of parallel lines that converge at the top, resembling a circuit trace. The 'L' is a simple L-shaped line. The motifs are arranged in a grid-like pattern, with each 'AL' unit slightly offset from the others, creating a sense of depth and movement.

OUR SYSTEM

One
dashboard,
populated by
the physical
data of the
Smart Labels

THE DASHBOARD

How it works



The label is applied
and activated



It records the
product's thermal
history



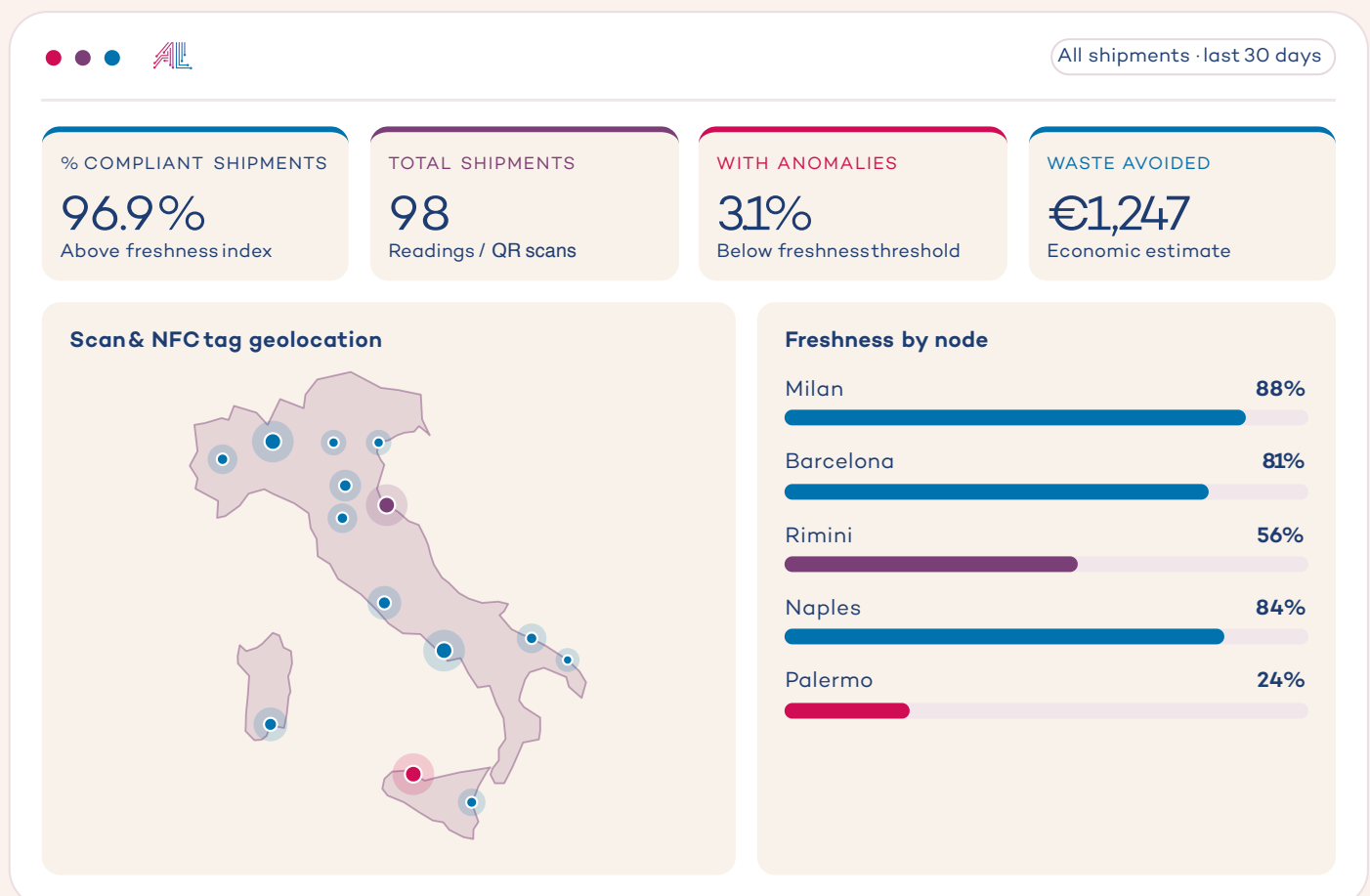
It is read and populates
the cloud dashboard

From reading to analysis

The value of the dashboard goes beyond the list of readings: the data collected feeds **advanced analytics** — residual freshness calculation, verification of the legs travelled, estimate of waste reduction and custom reports for teams, branches or customers.

DASHBOARD - EXAMPLE

The whole system, in a single configurable view



DIFFERENT TYPES OF TEMPERATURE MONITORING

From the warehouse to the single pack.



Warehouse



Shipping

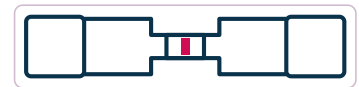


Box

WAREHOUSE

Passive RFID + hub

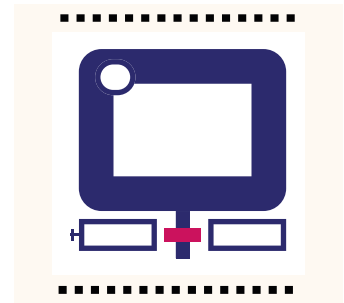
Real-time temperature and stock levels, with no batteries and no manual operations.



PALLET

Active RFID

They follow the shipment anywhere in the world, with or without SIM: live or on reading.



BOX & PRODUCT

TTI labels



The effective temperature of the entire journey, from activation to delivery.

PRODUCT

CTI labels



Immediate, irreversible signalling that a critical threshold has been exceeded.



All data converges in a single cloud dashboard, with configurable visibility for your teams, logistics partners and end customers.



OUR PRODUCTS

One single
data language,
across the
supply chain.

TTI • TIME-TEMPERATURE INDICATORS

Thermal monitoring reaches the single product.



TTI are a proprietary technology developed by Active Label, applicable to every box or single pack. They are completely passive, free of batteries and electronic components, and integrate into primary or secondary packaging without changing existing formats. Activation is optical, in a quick process that can be integrated into the final packaging stages.

The QR code printed around the indicator serves only to uniquely identify the single pack the label is applied to.



Before activation

TTI measure the **effective temperature** from the moment of activation: they integrate variations over time and turn the entire thermal history into a single, immediately interpretable metric, distinguishing a brief, insignificant peak from a prolonged, potentially damaging exposure.



After activation



Temperature: 5.2 °C
Date & Time: 29 Jun • 12:32
Location: Milan, Italy

Product with TTI App Active Label



Guarantee seal

DATASHEET - EXCERPT

DIMENSIONS 25 × 25 × 0.1 mm (indicator dot Ø 8 mm)

TEMPERATURE RANGE -30°C ~ +80°C

OPERATING LIFE Calibratable; optimal performance 1-3 weeks

STANDARD Compliant with ISO 17025 - EN 12830

READING Via the Active Label app

CTI • CRITICAL THRESHOLD INDICATORS

1/2

Unequivocal confirmation that a threshold has been exceeded.



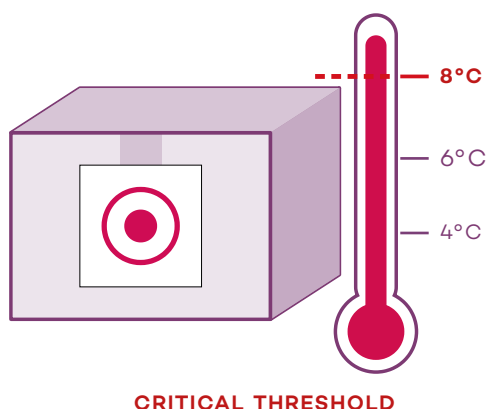
Like TTI, **CTI** are passive smart labels, designed to be applied to the single box or pack and integrated into primary or secondary packaging without changing existing formats.

CTI **activate when a critical temperature threshold is exceeded**, signalling unequivocally and irreversibly that the event has occurred.

Used together, TTI and CTI make it possible to establish whether a threshold has been exceeded and whether the excursion lasted long enough to genuinely compromise the product's life.

They are also **fully customisable**: the critical threshold is calibrated to the product and to the customer's specific needs.

Once lit, the signal never goes out



⚠ Threshold exceeded
CTI activated — irreversible
visual indication.
The pack must be checked
before sale or delivery.

Unequivocal confirmation that a threshold has been exceeded.

Available models

We have several models, for different temperatures, in two versions:

instant or **progressive**.

INSTANT RESPONSE

Instant CTI

It activates instantly when the critical threshold is exceeded: it is either on or off, with no intermediate states.



Not activated



Activated

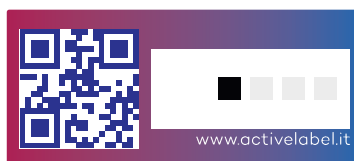
DURATION INDICATOR

Progressive CTI

It records the duration of exposure: while the label stays above the threshold, it gradually reveals the hidden design underneath, one segment at a time.



Below threshold



Above threshold: briefly



Above threshold: for long

Customisation is our strength: threshold, operating temperature and format are defined around the needs of the customer and the product.

Available pre-activated or to be activated before use.

All models can be read through the Active Label app, for a precise and reliable reading.

ACTIVE RFID

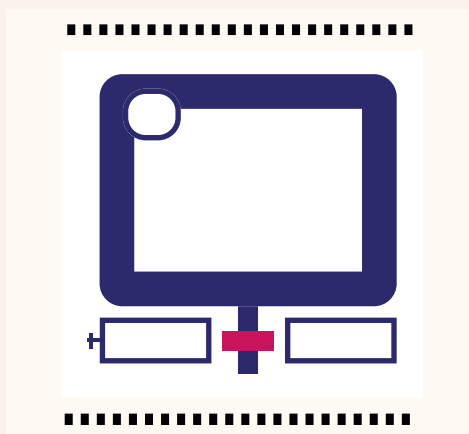
Continuous monitoring from departure to delivery.



Our new-generation active RFID devices accompany the pallet throughout its journey and continuously record temperature data, from departure to destination — even on the other side of the world. Available **with SIM** (live data transmission) or **without SIM** (on-board recording, read via app at delivery or at intermediate stops).

Continuous pallet monitoring is combined with selective verification of the single product: box-level smart labels are read in a targeted way only if deviations from the predefined thresholds emerge at pallet level.

In addition to active NFC tags, semi-active hybrid tags are available that cover both warehouse and shipping levels in a single device.



Supplied on reel

DATASHEET - EXCERPT FROM THE AL-ACTIVE NFC TAG MODEL

DIMENSIONS 50 × 50 × 0.95 mm

OPERATING FREQUENCY 13.0 - 14.5 MHz (HF NFC)

TEMPERATURE RANGE -35°C ~ +50°C (operating up to + 85°C)

ACCURACY ±0.5°C typical · ±0.1°C with factory calibration

Several models of NFC and dual-frequency tags are available, adaptable to the customer's specific needs.

PASSIVE RFID

Proximity readings from the hubs, no batteries.



The solution dedicated to warehouse monitoring: passive RFID labels, with no batteries or active electronics, that integrate directly into existing packaging or labelling flows. The warehouse only needs to be equipped with dedicated RFID hubs, placed at strategic points — no manual operations required.

Instant and continuous temperature readings, a dynamic freshness index calculated by our proprietary algorithms, early risk identification and granular validation of FIFO/FEFO rotation strategies.

We provide a **complete setup**, including readers and antennas sized to the customer's needs.



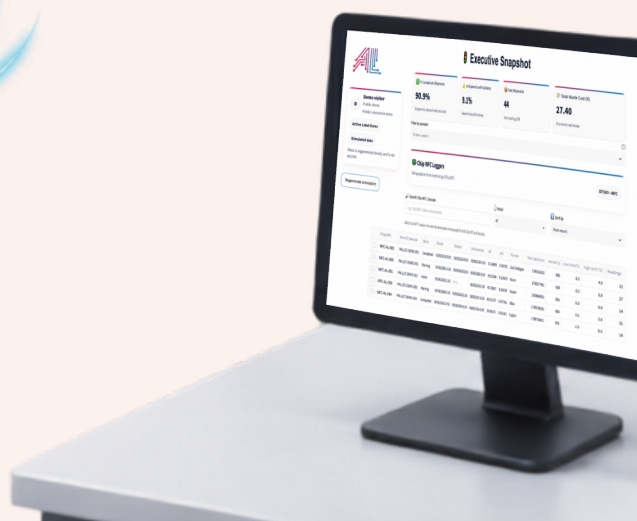
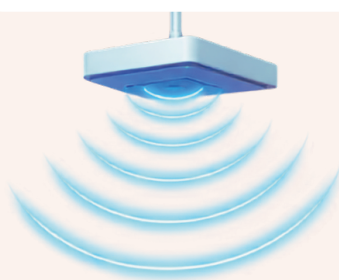
DATASHEET - EXCERPT FROM THE AL-PASSIVE UHF TAG MODEL

DIMENSIONS 98 × 24 × 0.1 mm

OPERATING FREQUENCY 902 - 928 MHz (UHF)

READING DISTANCE Up to 600 cm (~6 m)

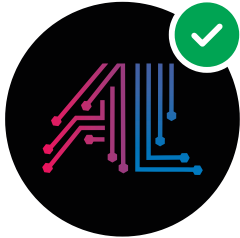
TEMPERATURE RANGE -40°C ~ +85°C



Other models are available, adaptable to the customer's specific needs.

OTHER SOLUTIONS FOR YOUR SUPPLY CHAIN

Authenticity, humidity and light: further layers of protection for your products.



AUTHENTICITY

ActiveSeal®

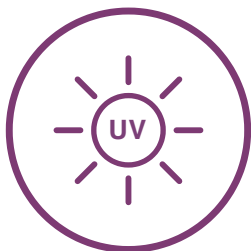
A unique, non-replicable physical fingerprint for every product, based on **engineered microcrystals** and proprietary recognition algorithms. It integrates into existing printing processes— even invisibly to the naked eye — and is verified instantly through a dedicated app: protection against counterfeiting and the grey market.



HUMIDITY

Humidity Sensors

They detect and monitor the humidity level to which the label is exposed, providing an immediate indication of environmental conditions and identifying any exposure to non-compliant levels that could compromise quality, preservation or integrity.

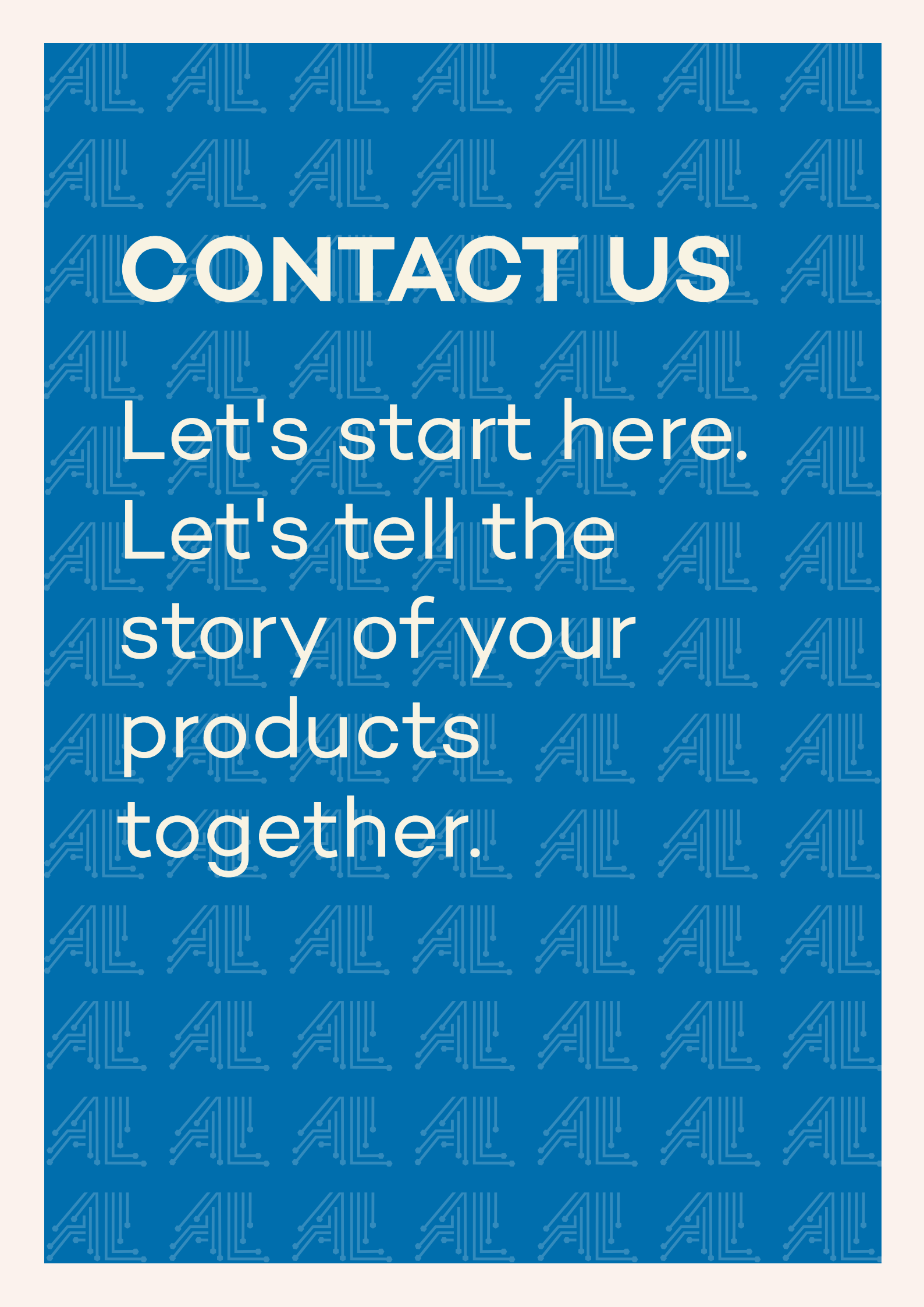


LIGHT

Light Sensors

They detect exposure to visible and ultraviolet (UV) light through a **chemical response of the material**, verifying compliance with storage conditions along the entire supply chain. Completely passive, they integrate into packaging offering continuous monitoring with no batteries or electronic components.

You can adopt one or more solutions from this portfolio according to your needs: they are all designed to integrate into the same Active Label system — a single dashboard, a single app — and to be customised on product, format and level of control required.



CONTACT US

Let's start here.

Let's tell the
story of your
products
together.

WANT TO HEAR THE STORY OF YOUR PRODUCTS?
We're here for you!



info@activelabel.it



www.activelabel.it



Carlo Ricci

CEO

+39 333 648 5167
c.ricci@activelabel.it



Andrea Pinna

COO

+39 349 3515942
a.pinna@activelabel.it



Silvia Figus

TECHNICAL SALES MANAGER

+39 351374 1323
s.figus@activelabel.it



Active Label S.r.l. · VAT No. 04096080926

Operating office: Via Pietro Valdoni, 7 · CASIC Industrial Zone · 09067 Elmas (CA)
Registered office: Viale Cristoforo Colombo, 53 · 09045 Quartu Sant'Elena (CA)

The technical data shown are reference values; application assessments under the customer's real operating conditions are recommended. Specifications may be updated without notice.

