SERVICE · DATA

IoT and Big Data

From the sensor to the dashboard, through everything in between.

Ingestion, processing, storage, analytics and exploitation: the full data lifecycle.



cinfo

THE CHALLENGE

There are sensors and there is data, but no decisions

Organisations accumulate data sources that never talk to each other: deployed sensors, management systems, files and external APIs nobody has managed to integrate.

01

Data that never crosses over

Each system with its own store, format and report: nobody sees the whole.

02

Underused sensors

Installed devices generating readings nobody analyses or turns into alerts.

03

Reports that arrive late

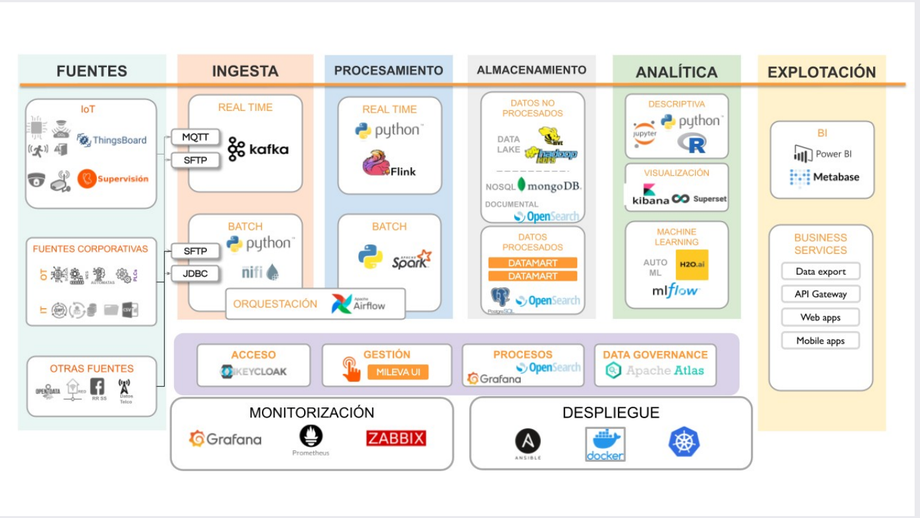
Dashboards built by hand, already out of date by the time they are presented.

WHAT IT IS

Projects that cover the whole data lifecycle

cinfo designs and deploys complete data architectures: end-to-end consulting and integration, infrastructure sensing, real-time monitoring and predictive analytics with machine learning.

- Smart facilities: presence, consumption, temperature and environmental variables, non-intrusively.
- Real-time monitoring with charts, alarms and threshold definition.
- Big Data: integration of heterogeneous sources for advanced analysis.
- Predictive algorithms for anomaly detection and future behaviour modelling.



METHODOLOGY

Four phases, from diagnosis to production

cinfo applies a four-phase methodology proven across public sector, industrial and private projects.

01

Definition

Joint work with the business areas to set the data strategy.

02

Analysis and design

Source identification, architecture design and platform sizing.

03

Deployment

Platform installation and configuration, with sensors where relevant.

04

Projects

Development and rollout of the defined use cases on the platform.

CAPABILITIES

Specialists in the data ecosystem's tooling

- **IoT platforms**

  Thingsboard and FIWARE for device management, telemetry and rules.

- **Real-time ingestion**

  Kafka and fast queues for continuous data streams from thousands of devices.

- **Storage**

  PostgreSQL, MongoDB, cloud data lakes and scalable mass storage.

- **Large-scale processing**

  Spark and Python to transform and enrich large data volumes.

- **Visualisation**

  Superset, Power BI and Grafana for dashboards by user profile.

- **Sensors**

  Supply, configuration and installation of LoRa, Sigfox and Zigbee devices.

- **Alarms and thresholds**

  Configurable rules with automatic alerts to the designated owners.

- **Predictive models**

  Anomaly detection and future behaviour modelling with machine learning.

BENEFITS

Decisions based on what is happening now

01

One single view

Every source integrated into one platform and one common dashboard.

02

Anticipation

Alarms and predictive models that warn before the problem happens.

03

Optimised infrastructure

Real use of spaces, consumption and resources measured non-intrusively.

04

No lock-in

Standard ecosystem tooling, not a closed proprietary platform.

SCOPE

What a data project delivers

Scope can range from a proof of concept on one source to a full multi-tenant platform.

Source map

An inventory of available sources, formats, frequency and integration feasibility.

Data architecture

Design of ingestion, processing, storage and the exploitation layer.

Deployed platform

Installation, configuration and go-live of the chosen platform.

Installed sensors

Supply, provisioning, configuration and installation of the devices.

Dashboards

Visualisations per profile, with KPIs, alarms and report generation.

Analytical models

Anomaly detection or prediction algorithms over the integrated data.

HOW WE WORK

The full data lifecycle

01

Ingestion

Capture from sensors, corporate systems, files and external APIs.

02

Processing

Cleaning, normalisation and enrichment of the incoming data.

03

Analytics

Aggregations, indicators and models over the integrated dataset.

04

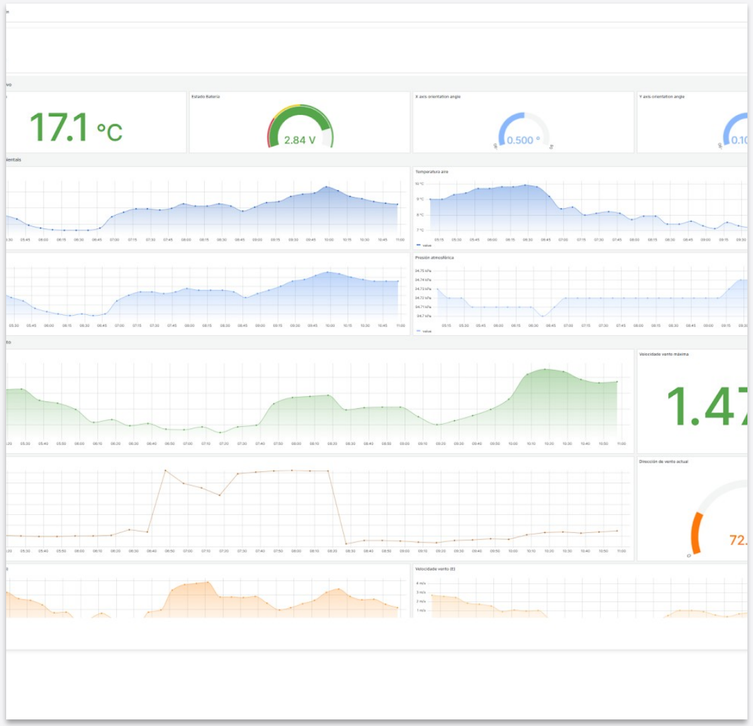
Exploitation

Dashboards, reports, alerts and APIs for other systems.

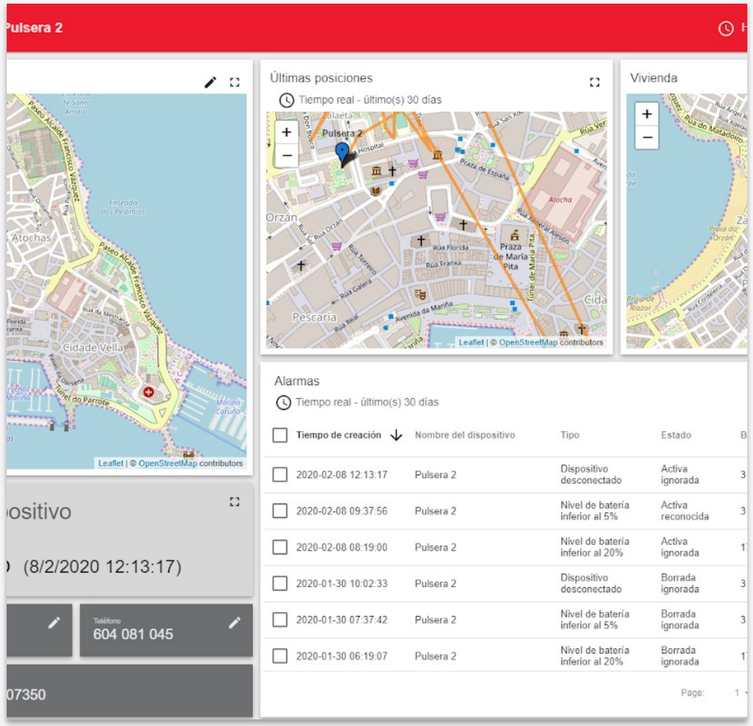
cinfo specialises in tools such as Thingsboard, FIWARE, Kafka, PostgreSQL, MongoDB, Python, Spark, Growthloop, Superset, Power BI and Grafana, among others.

GALLERY

Deployed platforms and sensors



Real-time monitoring dashboards.



Location tracking and geofencing on a map.



LoRa sensors installed in the field.

CASE STUDIES

Data in production, from vineyards to insurance

RTVE · CUSTOMER DATA PLATFORM

140 million new rows every day

A customer knowledge solution for RTVE Play users: collection from CRM, databases and analytics tools, deduplicated unification and audience segmentation.

https://www.rtve.es/play/

EBROKER

A data lake for insurance brokers

Daily dumps of broker operations to an sFTP server, ingestion into a data lake, large-scale processing and dashboard visualisation.

https://www.ebroker.es

ENERGYLAB · ALDEALIX

Automated management of energy communities

Ingestion from IoT sensors, MeteoGalicia, Omie, Datadis, E-Redes and Mibgas, with energy and financial dashboards, reports and real-time alarms.

https://cinfo.es

CINFO IN NUMBERS

Volume handled in production

140 M

new rows a day on a single project

1.500

Zigbee devices on one platform

1 min

data collection interval

7

professionals in the IoT and Big Data unit

FREQUENTLY ASKED QUESTIONS

What data leads ask

Do you supply the sensors too?

Yes. The service covers supply, provisioning, configuration, installation and maintenance of LoRa, Sigfox or Zigbee devices as appropriate.

Do you use a proprietary platform?

No. We work with standard ecosystem tooling: Thingsboard, FIWARE, Kafka, Spark, Superset, Power BI or Grafana, whichever suits the project.

Can you integrate external sources?

Yes. In production projects we integrate public APIs from energy markets, weather services, grid operators and official bulletins.

How long does a proof of concept take?

It depends on the sources, but the methodology is built to reach a deployment phase with real data and a usable dashboard quickly.

Who owns the data?

The client. cinfo deploys and operates the platform, but the data and its exploitation belong to the organisation that generates it.

Do you build predictive models?

Yes. We develop advanced algorithms for anomaly detection and future behaviour modelling over the already integrated data.

WHO IT IS FOR

Who needs a data platform

01

Public administrations

Territorial sensor networks, environmental quality and infrastructure monitoring.

02

Industry and energy

Remote facility management, energy consumption and predictive maintenance.

03

Retail and services

Integration of sales, stock and people counting in real time.

04

Media and platforms

Audience data platforms and user segmentation.

LET'S TALK

Let's start with the sources you already have

We map your data sources and propose the architecture and the first use case.

Request an assessment

See data projects

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