Industrial IoT

ThingsTalk

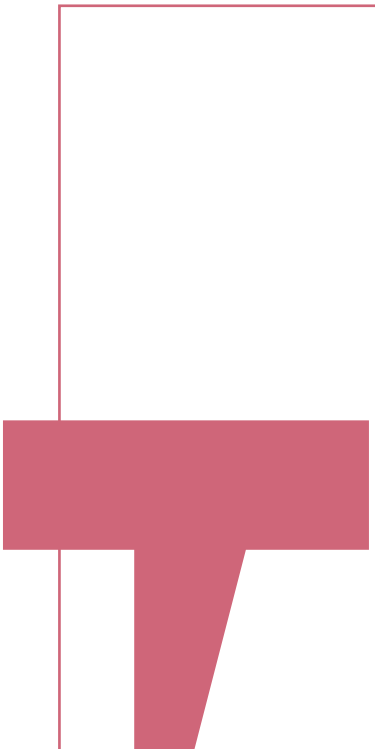
Contents

Industrial IoT

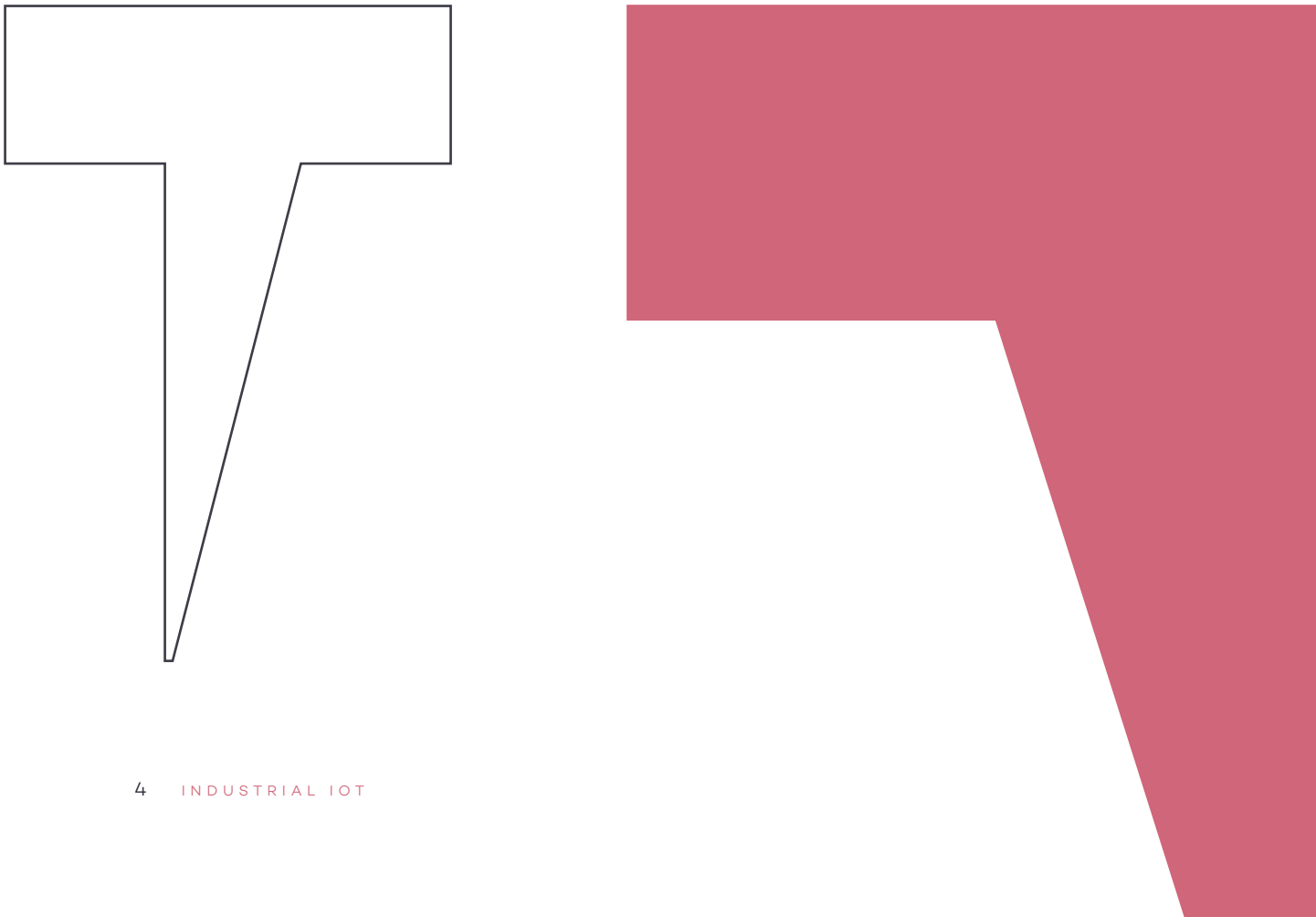
Technology, architecture, flexibility and vertical integration are key success indicators of industrial Internet of Things solutions.
Industrial Internet of Things (IoT) monitors, automates and optimizes connected systems. It is often deployed on a diverse set of infrastructures and operates in different conditions. It receives large amounts of information (e.g., measurements and alerts) from many sources – constantly or in frequent, predefined periods. As a consequence, IoT systems need to be able to perform quick calculations, pair their outcomes with data gathered from other sources (such as averages, minimums, maximums or other values recorded during a set period), and automatically send this aggregate data over the notification system.
The staff working with Industrial IoT should be relieved of operational tasks as much as possible and equipped with dashboards that provide comprehensive reporting and full insight into field-collected data.

Industrial Internet of Things (IoT)
monitors, automates and optimizes
connected systems.

Industrial Internet of Things systems exchange data with other integrated systems. They consolidate information into datasets ready for processing by artificial intelligence and machine learning systems. AI and ML algorithms bring new, valuable insights by finding data correlations (e.g., following the alert A and alert B in 95% of cases alert C also occurs).



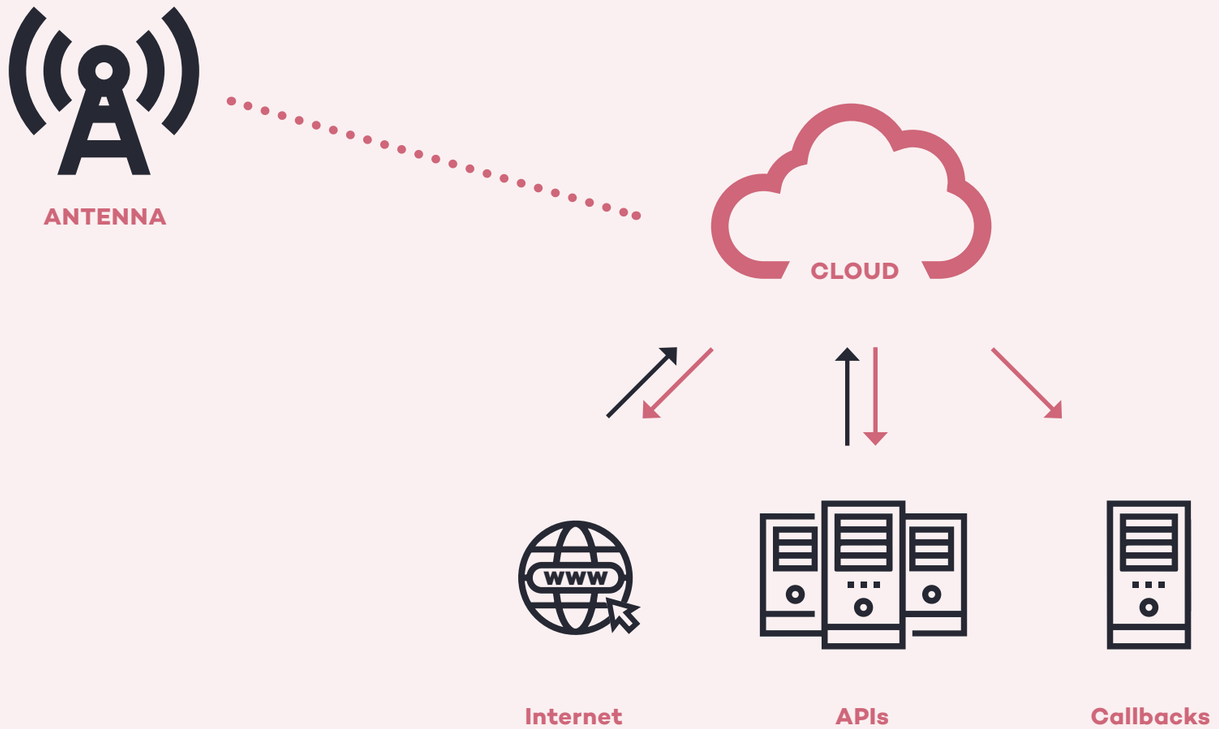
Our solution for the industrial Internet of Things is flexible and modular. It is being upgraded and extended continuously by adopting best practices and keeping its time-tested functionalities up to date.
Comping's Industrial IoT is a comprehensive, vertically integrated service delivered on a turnkey basis: starting with sensors, IoT networks, the ThingsTalk platform, custom applications, data sanitization and storage, all the way to all other types of integrations. From the user's perspective, it is a commercial service that offers well-defined deliverables under simple and clear terms of use.



ThingsTalk platform

Comping's ThingsTalk platform is available as a digital service. It collects and processes data coming from IoT networks and turns it into new insights that lead to better business decisions. The ThingsTalk platform is compatible with all IoT networks and service providers and is simple to manage. It enables quick and easy use of information collected by smart devices.

The ThingsTalk platform is network agnostic and is integrable with all relevant IoT network standards. It automatically collects information from all sources and constantly monitors assets through a specialized application for portable devices available for users.

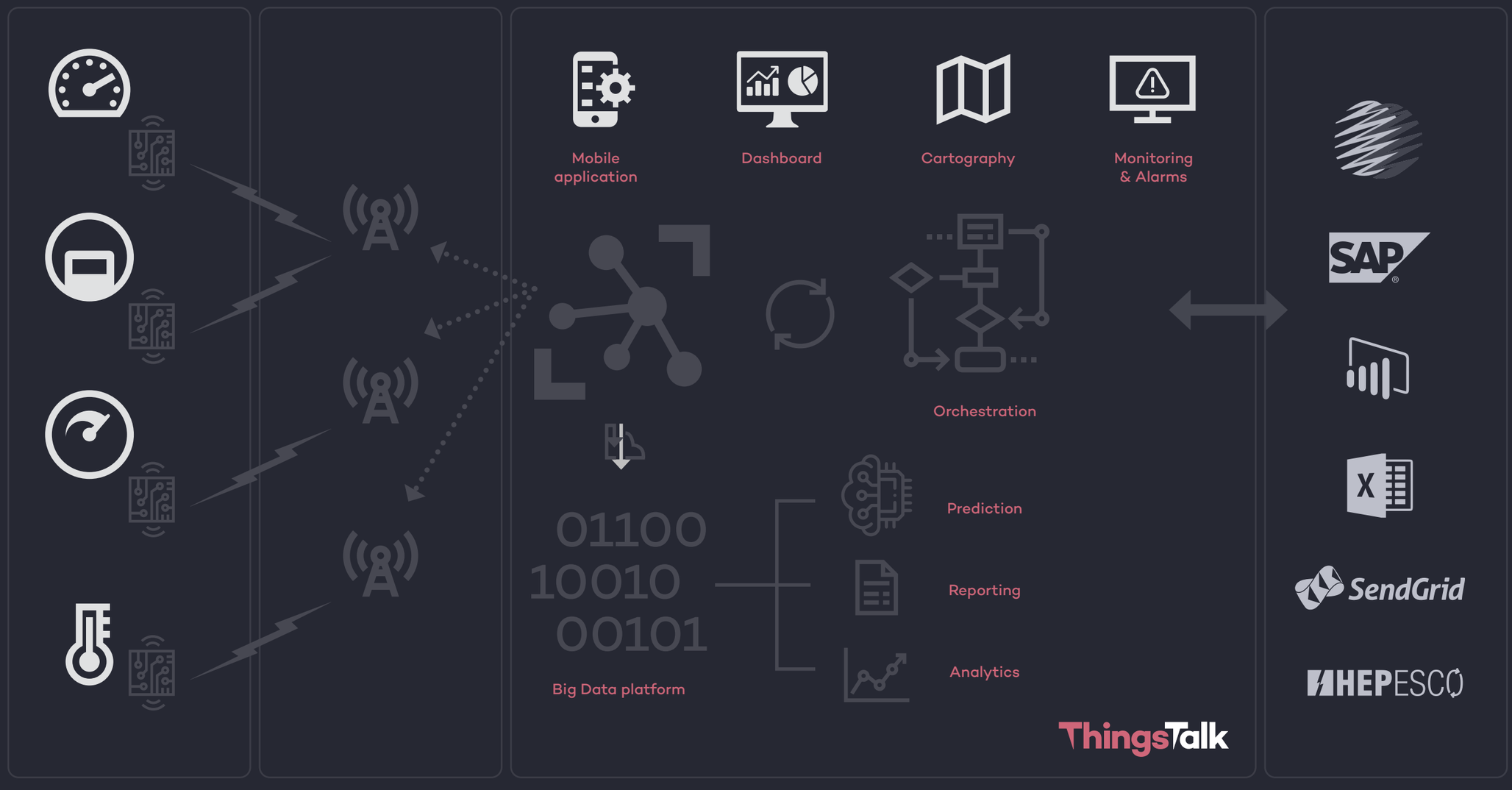


ThingsTalk platform advantages

With Comping's IoT platform, you can quickly improve your business by providing new services or boosting the existing offer, reducing costs by applying better processes, modernizing your business model, and creating entirely new sources of income. In addition, ThingsTalk allows you to communicate better with your customers - through easier acquisition of new ones, by raising the quality of experience of those who already do business with you, by monetizing data offered via digital services on the Internet, or by selling advertising space. We already emphasize that: the ThingsTalk platform is flexible and scalable, ensuring the company is prepared for market changes. And one more thing: ThingsTalk is fully compliant with all requirements of the green economy.

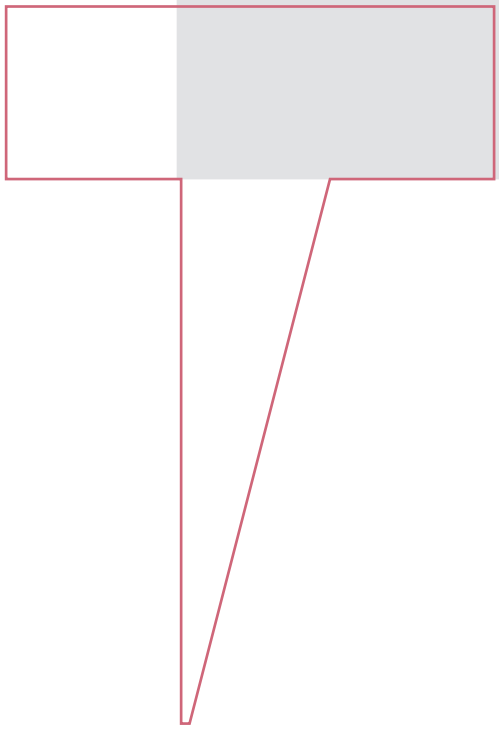
ThingsTalk is fully compliant with all requirements of the green economy.

THINGSTALK


Mobile application
Dashboard
Cartography
Monitoring & Alarms
Orchestration
01100
10010
00101
Big Data platform
Prediction
Reporting
Analytics
ThingsTalk
SAP
SendGrid
HEPESCO
DEVICES
TRANSPORT
IoT PLATFORM
CONNECTED SYSTEMS

Technologies

Open source technologies, agile methodologies and microservice architectures used in its design make the ThingsTalk platform flexible and sustainable in the long term. In order to achieve maximum performance, constant availability, and scalability of the service, ThingsTalk is implemented on the OpenShift cloud.



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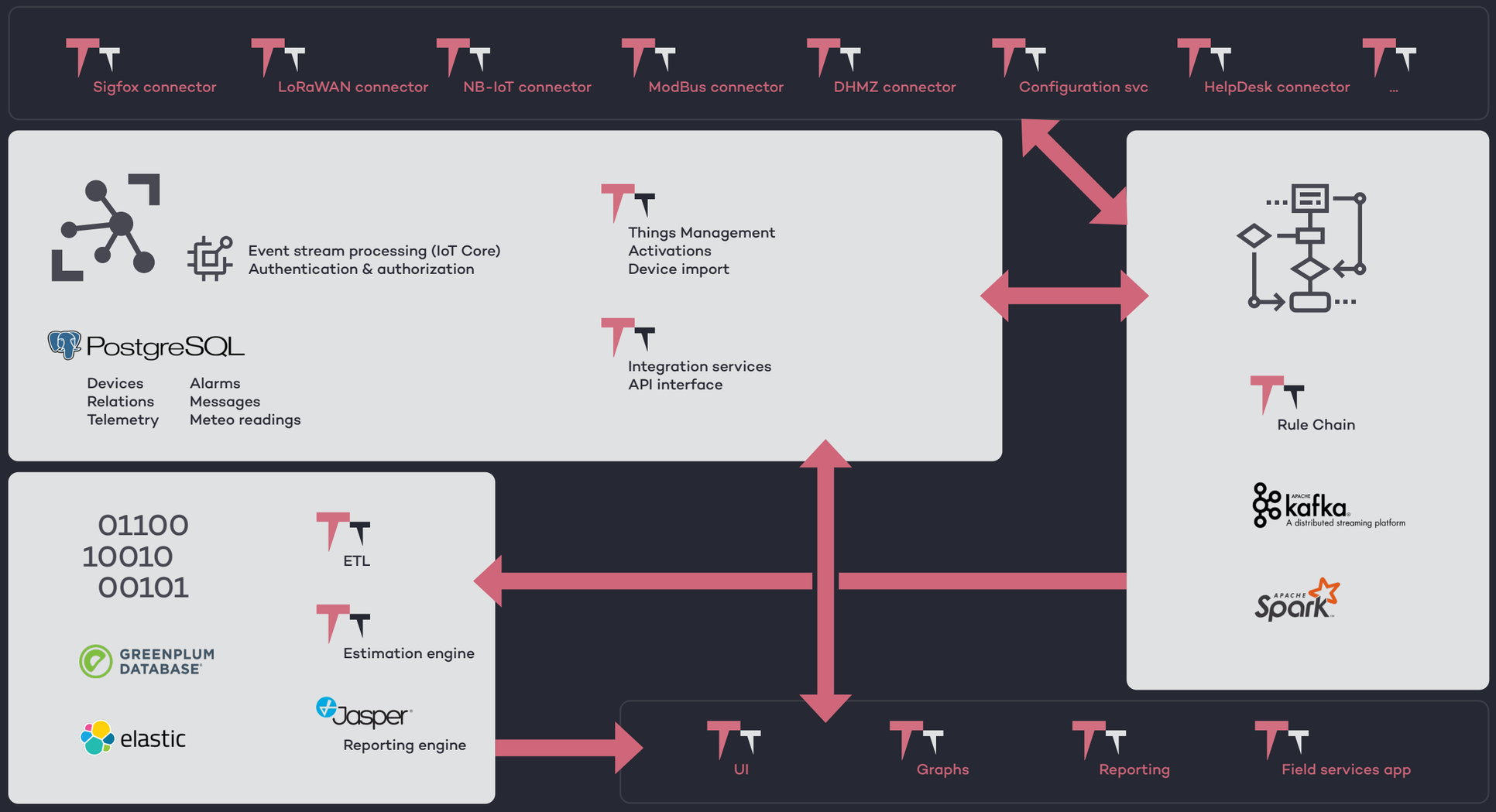

Sigfox connector
LoRaWAN connector
NB-IoT connector
ModBus connector
DHMZ connector
Configuration svc
HelpDesk connector
...
Event stream processing (IoT Core)
Authentication & authorization
Things Management
Activations
Device import
PostgreSQL
Devices
Relations
Telemetry
Alarms
Messages
Meteo readings
Integration services
API interface
Rule Chain
kafka
A distributed streaming platform
Spark
01100
10010
00101
ETL
GREENPLUM DATABASE
Estimation engine
elastic
Jasper
Reporting engine
UI
Graphs
Reporting
Field services app

Operational excellence

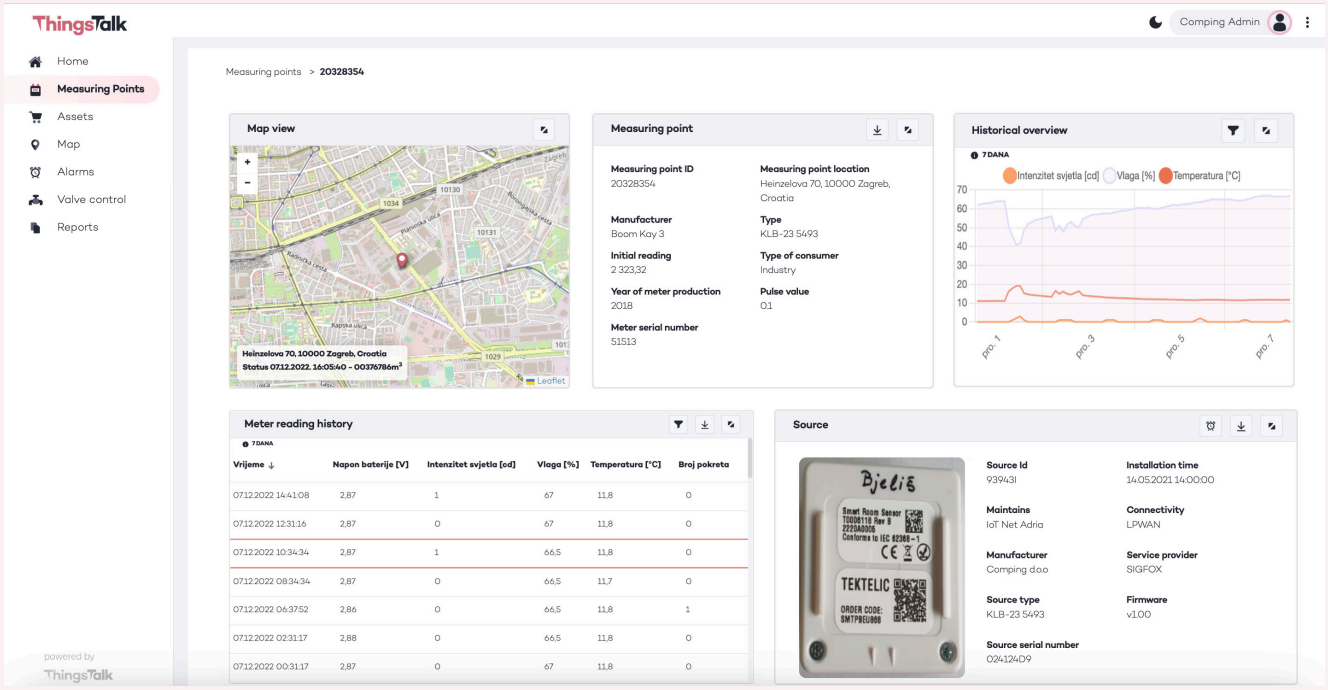
Maintaining a balance between people, processes, and technologies is a key success factor. User satisfaction, higher profits and quality of service depend on it. And finally: this is what will elevate you above the competition.

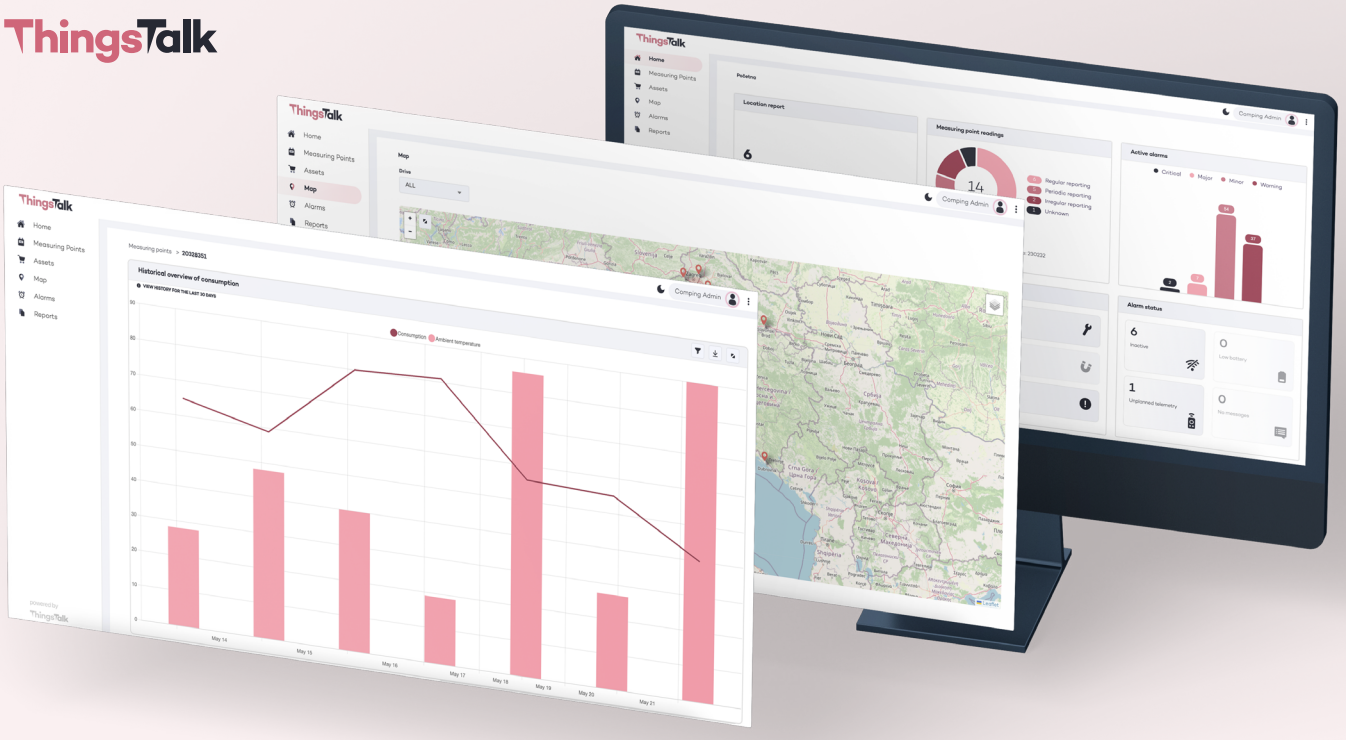
Supervision and administration center

It is the hub of the ThingsTalk platform – where all devices are configured, and all data is updated. The center provides a full overview: all devices are visible on the network map, along with statuses (alerts), master data and technical information. Field agents are able to access it via a smartphone application, which facilitates and simplifies the devices installation process.

User experience

The solution has multiple user interfaces designed according to the requirements of different industries, whether it is gas meter reading, water meter reading, or asset tracking. The application is transparent, ergonomic, responsive, and easy to use. All out-of-the-box reports are adapted to specific industry needs and are compliant with regulatory requirements and provisions of supervisory authorities.


ThingsTalk
Comping Admin
Home
Measuring Points
Assets
Map
Alarms
Valve control
Reports
Measuring points > 20328354
Map view
Heinzelova 70, 10000 Zagreb, Croatia
Status 07.12.2022. 16:05:40 - 00376786m³
Measuring point
Measuring point ID
20328354
Measuring point location
Heinzelova 70, 10000 Zagreb, Croatia
Manufacturer
Boom Kay 3
Type
KLB-23 5493
Initial reading
2 323,32
Type of consumer
Industry
Year of meter production
2018
Pulse value
0.1
Meter serial number
51513
Historical overview
7 DANA
Intenzitet svjetla [cd]
Vlaga [%]
Temperatura [°C]
Meter reading history
Vrijeme
Napon baterije [V]
Intenzitet svjetla [cd]
Vlaga [%]
Temperatura [°C]
Broj pokreta
07.12.2022 14:41:08 2,87 1 67 11,8 0
07.12.2022 12:31:16 2,87 0 67 11,8 0
07.12.2022 10:34:34 2,87 1 66,5 11,8 0
07.12.2022 08:34:34 2,87 0 66,5 11,7 0
07.12.2022 06:37:52 2,86 0 66,5 11,8 1
07.12.2022 02:31:17 2,88 0 66,5 11,8 0
07.12.2022 00:31:17 2,87 0 67 11,8 0
Source
Bjelis
TEKTELIC
Source Id
93943I
Installation time
14.05.2021 14:00:00
Maintains
IoT Net Adria
Connectivity
LPWAN
Manufacturer
Comping d.o.o
Service provider
SIGFOX
Source type
KLB-23 5493
Firmware
v1.00
Source serial number
02412409
powered by ThingsTalk


ThingsTalk
Historical overview of consumption
Comping Admin

Integrations

The ThingsTalk solution integrates various business systems, such as billing, ERP, automatic data delivery systems, business support solutions (BSS), and systems for collecting data from remote locations. It also improves other processes, such as business planning, maintenance and customer support.

Data security and quality

ThingsTalk enables automatic classification and storage of structured data by each device and according to a variety of parameters. In addition, it protects data from theft, manipulation, and destruction in accordance with ISO27001 and ISO27017 standards. It has built-in automated processes for periodic data quality control and reporting on any irregularities detected. As a part of its backup and recovery process, it regularly creates additional copies of data and stores them at a secondary location. All of this guarantees maximum availability and a high level of business continuity.

Implementation models

ThingsTalk service is a standard data center cloud service owned and fully controlled by Comping and Data Target. It requires dedicated Internet links with a network service provider, most often a telecom sector company.

Implementation models:

- **Greenfield implementation**

  Greenfield implementation is a ready-to-operate installation - a comprehensive configuration of IoT devices network that connects to the platform.

- **Implementation of the existing network of interconnected devices**

  Replacement of the existing third-party platform with Comping's solution. This model requires data migration from the previous system to our network. Data migration is an additional service.

- **Implementation of the ThingsTalk platform as an "umbrella platform."**

  In this case the existing platform serves as a data source for our platform. This model is the best fit for situations where users are satisfied with their existing system, and they yet need a solution to unify their information systems. In addition, the umbrella implementation includes networks with which the current platform is incompatible.

About Comping

Comping develops solutions for digital transformation, and one of its solutions is **ThingsTalk**, the IoT-as-a-service platform. About thirty experts – specialists in software development, business analytics, and the Internet of Things – work continuously on its development and implementations.

The Comping Group is comprised of three companies:

Comping (system integrator),

IoT NeT Adria (provider of the Sigfox 0G IoT network), and

DataTarget (data center management specialist).

In addition to IoT platforms, Sigfox network and data centers, Comping develops custom user-specific solutions, deploys IT infrastructures, and implements business analytics systems, employing more than 160 experts in a wide range of information technology fields.