



**Continental**  
delivered by Zerintia Technologies

AUTOMOTIVE

4ACTION powered by Sewio RTLS reduces the response time caused by lack of materials, reduces the down time of the AGV and significantly increases its operational availability.

**2%**

increase in plant OEE

Background

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## Working for Global Automotive Parts Leader

Continental is a German multinational automotive parts manufacturing company employing more than 245,000 people in 60 countries and markets. While Continental is known mostly for being the world's fourth-largest tire manufacturer, it is also ranked **third in global OEM automotive parts sales**. The Spanish factory, in the city of Barcelona, is one of Continental's facilities, producing **electronic components for car dashboards**.



*Continental factory in Barcelona.*

## Goals

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# Reducing Downtime and Improving Efficiency

The Barcelona manufacturing plant is made up of SMT (Surface Mount Technology) lines of over 40 meters in length. Operators at these lines must be attentive to their tasks and to warnings and incidents along the entire line to avoid any unnecessary stops. Continental required a solution to **improve the efficiency of its equipment and reduce downtime to a minimum**. For example, if a material ran out at an electronic component placement station, a warning was triggered and the operator had to identify and replace it as soon as possible, otherwise, it resulted in a line stop and a consequent loss of productivity.

Screens were installed on the lines to show alerts, however, this system required operators be attentive to the screens while carrying out their work. This caused distractions in production tasks, plus the response to alerts was not prioritized and did not have resources allocated to respond to them, resulting in a breakdown in coordination.

Continental's aim was to improve the process by providing the employees with the information they needed just when they needed it without having to constantly look for it on screens.

## Challenges

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# Orchestration of All Data Through a Single IIoT Platform

Continental partnered with Zerintia to achieve the project's goal by unlocking the maximum possibilities that **a fully digital Smart Factory** solution can provide. To support the current, and especially future, use cases, the Zerintia IIoT platform, namely its 4ACTION solution, needed to be connected to all existing systems at Continental, including plant production control software (MES), machinery logic controllers (PLC) and the native alert system.

To provide Zerintia's 4ACTION with accurate the real-time location data of guided vehicles (AGV), Sewio RTLS has become an integral and essential part of the digitalization mix.

## Solution

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# Smart Wearables to Boost Productivity

The power of 4ACTION far exceeded the project's expectations. Based on all the data integrated and received in real time, alerts are generated based on complex events occurring at the plant, automating workflows generated by those alerts, launching actions in response, involving employees, machinery and plant information systems. In short, **4ACTION integrates and orchestrates the information of all the systems, turning it into specific actions, as defined by Continental.**

4ACTION allows communication in real time with different employees at the industrial plant, which is key to the project. Operators now use **wearable devices** to receive all the information they need to carry out their work in a more efficient manner.



*Smartwatches for the operators.*

When an employee picks up their Smartwatch, they must identify themselves in the system. Each employee is then assigned a role, and the system recognizes the employee and is able to identify the skills and tasks that can be carried out and the type of alerts and notifications that they should receive. The information is made available to the employee to notify them only when their intervention is necessary, without taking their attention away from the tasks they are performing.

*“Sewio RTLS empowers our IoT solution with the real-time and highly accurate positions of tracked entities within the factory, allowing us to increase Continental’s efficiency through a Smart Factory as well as a 3D Digital Twin virtual management tool.”*



**Alvaro Alonso**  
IT Delivery Lead at  
Zerintia Technologies

For example, during raw material procurement, the system automatically generates a material order in the ERP. This triggers logistics operators to prepare an AGV with the material requested by the production line. When the Sewio-RTLS-tracked AGV reaches the point of delivery, the logistics operator **receives a notification on their smartwatch to unload it**. 4ACTION reduces the response time caused by lack of materials, reduces the down time of the AGV and significantly increases its operational availability. In short, its commissioning at Continental has reduced unnecessary waiting times by improving the plant's OEE.

Continental also uses this system to trigger alerts to **the maintenance team**. The integration of the information from the factory's MES with the BRMS allows the automatic alerting of a maintenance technician when a specific number of incorrect parts reach the end of the assembly line of electronic components, eliminating any necessary downtime for resolving a possible incident.

### Solution Numbers:

**3,200 m<sup>2</sup>**

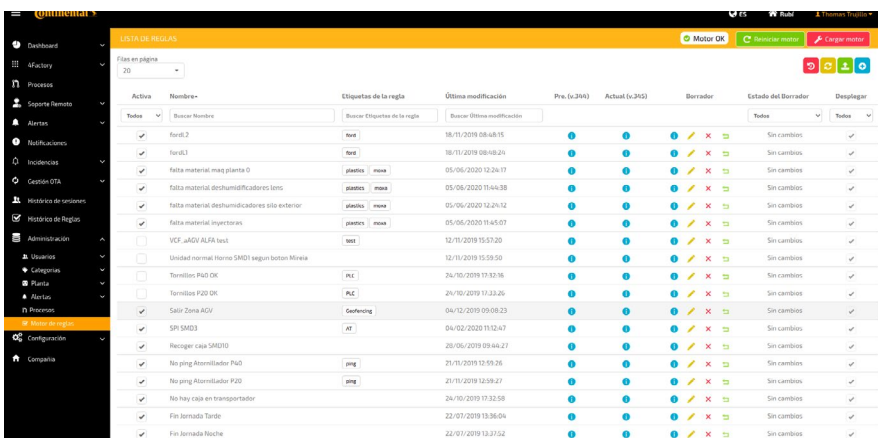
area covered

**30**

receivers (=anchors)

**70**

tracked objects (=tags)



Activa	Nombre*	Etiquetas de la regla	Última modificación	Pre. (x-216)	Actual (x-215)	Borrador	Estado del Borrador	Desplegar
<input checked="" type="checkbox"/>	Barril 2	baril	18/11/2019 08:48:15	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sin cambios	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Barril 3	baril	18/11/2019 08:48:26	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sin cambios	<input checked="" type="checkbox"/>
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<input checked="" type="checkbox"/>	Falta material deshumidificadores lens	planta   meq	05/06/2020 11:44:38	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sin cambios	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Falta material deshumidificadores sito exterior	planta   meq	05/06/2020 12:26:12	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sin cambios	<input checked="" type="checkbox"/>
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<input type="checkbox"/>	VCF aAGV ALFA lens	meq	12/11/2019 15:57:20	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sin cambios	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Unidad normal Horno SMD1 según boton Mixta		12/11/2019 15:59:50	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sin cambios	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Tronillos P20 OK	PLC	24/10/2019 11:42:16	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sin cambios	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Tronillos P20 DN	PLC	24/10/2019 11:42:26	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sin cambios	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Salir Zona AGV	Geofencing	04/12/2019 09:09:23	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sin cambios	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	SPH SMD3	AT	04/12/2020 11:12:47	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sin cambios	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Recojer caja SMD20		28/06/2019 09:44:27	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sin cambios	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	No ping Alomillador P20	ping	21/11/2019 12:59:26	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sin cambios	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	No ping Alomillador P20	ping	21/11/2019 12:59:27	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sin cambios	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	No hay caja en transportador		24/10/2019 17:32:58	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sin cambios	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Fin Jornada Tarde		22/07/2019 18:36:04	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sin cambios	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Fin Jornada Noche		22/07/2019 18:37:52	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sin cambios	<input checked="" type="checkbox"/>

List of rules to trigger and process actions.

## Results

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# Increasing Plant OEE While Enabling a 3D Digital Twin

The commissioning of 4ACTION has had a positive impact on Continental's operations. The most immediate was the integration of all plant systems, logical, physical and human, allowing **decisions to be made based on all information** integrated into a single IIOT platform.

Other direct impacts include a reduction of **incident resolution time, of production line downtime and of the costs of the resources** dedicated to monitoring and maintaining production lines.

However, thanks to the IIOT Platform and 4ACTION, the most significant impact is the creation of **a digital twin of the 3D plant**, allowing visualization, in real time, of all the physical and logical elements of the plant as well as everything that is happening in the plant, including sensors, alerts and processes. The information now available to a connected employee has led to **a significant increase in efficiency and productivity**.

### Results:

**2%**

increase in plant OEE

**3%**

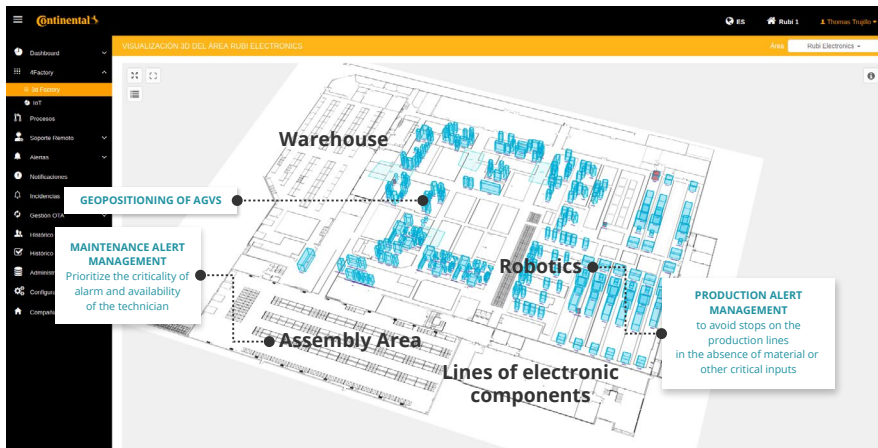
reduction MTTR  
(Machine Time to Ready)

**3D**

Digital Twin overview  
of the factory

**6 months**

deployment time



3D overview of the factory.

## Reasons for Sewio

### Key Factors for Choosing Sewio RTLS

- **30 cm accuracy**, which allows the full flexibility and variability of virtual zones without any changes of infrastructure
- The ability to easily set an **unlimited number of virtual zones** that can be updated with a single click at any time in the future to adapt to any updates of processes
- Bi-directional seamless third-party integration with a **fully-documented Open API**
- Proven successful IOT projects using methodology and technology, backed up by unrivalled **10+ years of UWB expertise**
- Multi-level support based on SLAs **from the people who built the product**
- The ability to **scale the system easily and quickly** to track more objects and expand the system to more halls



Partner

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We are a company specialized in Industry 4.0 and eHealth solutions based on new Wearable, IoT and Augmented Reality technologies. We promote the convergence of the physical and digital world in companies, integrating and orchestrating all their systems, machines and PEOPLE.

We are considered as 25 Top Influencers of the World in Wearable Technology by Onalytica and we have been awarded for innovative projects, such as the Award for the best Technological Project in Industry 4.0, in the Digital Enterprise Show or as the Most Innovative SME in Industry by the Official College of Industrial Engineers of Madrid.

**Our axes of work:**

- The CONNECTED EMPLOYEE as the central axis of our solutions, connecting the industrial computing and information systems of the organizations to make available to people the information necessary to carry out their work efficiently, safely and assisted and provide the industry with greater agility and productivity.
- DIGITIZATION OF OPERATIONS, analyzing in real time all the data, identifying events, triggering actions and generating digital workflows



- INFORMATION FOR CONTINUOUS IMPROVEMENT, thanks to the information from the connected platform in real time (wearables, IoT), we provide exhaustive analytical knowledge, traceability and auditing of all operations
- DIGITAL HEALTH, with solutions to assist and monitor patients remotely and in real time, telemedicine or teleconsultation, training or mentoring solutions, having made possible the world's first 5G assisted surgery

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Manufacturer

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### **Sewio Networks s.r.o.**

Sewio Networks is a manufacturer of a **real-time location system (RTLS)** for indoor tracking that drives business results for companies in the intralogistics, retail, sport, entertainment and livestock industries. Sewio system is built on **ultra-wide band technology (UWB)** and delivered with RTLS Studio, remote management and visualization software.

It gives partners and customers a precise, easy-to-integrate, reliable and fully scalable IoT solution for indoor tracking that allows process visibility, boosts production efficiency, simplifies the inventory process and increases safety. Founded in 2014, Sewio is headquartered in the Czech Republic with offices in Germany and France. Sewio has 70+ system integration partners and powers customers in 37 countries. Customers include: Volkswagen, Budvar, Pirelli, Matador, TPCA, Škoda.

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