



RTLS-based location intelligence solutions: Transparency for Industry 4.0

As manufacturing gets more and more complex, one of the biggest challenge companies face is materials handling, especially keeping track of materials. But it only gets more difficult as we strive to decrease time-to-market, improve quality while cutting costs, and create flexible production environments.

With growing pressure to do more with less and boost profit margins, manufacturers can't afford any lack of transparency in production. However, tracking materials at a facility handling thousands of units per minute is anything but easy. Manufacturers need an accurate, flexible and cost-effective solution for tracking materials. Siemens real-time locating systems, SIMATIC RTLS in combination with Location Intelligence, offer a cutting-edge solution for tracking products, tools and materials with extraordinary accuracy.

Eliminate search times

SIMATIC RTLS works by attaching a transponder to any relevant object such as a tool, vehicle, workpiece, or automated robot within a facility. These transponders can then be tracked in real-time using anywhere within company premises with Location Intelligence, by pairing them with infrastructure devices at fixed locations called gateways. Location Intelligence enabled SIMATIC RTLS can achieve real-time tracking accurate to the centimeter level, eliminating search times and giving

manufacturers an unparalleled level of transparency into the flow of materials on the plant floor and grounds.

Additionally, Location Intelligence communicates the location of all relevant objects to higher level systems in real-time. This makes it a highly effective solution for navigating material flows, controlling mobile robots and vehicles, monitoring component use, and documenting the final product assembly. If a material or device moves outside pre-defined parameters, users can receive a notification immediately to fix the problem and prevent costly downtime or quality issues.

View the historical path of materials

Traditionally, the flow of materials and products within a facility has been a bit of a blind spot for manufacturers. With Location Intelligence enabled SIMATIC RTLS, manufacturers gain an incredibly detailed look at how materials are passing through their facility. Users can track the flow of materials over time, getting comprehensive data sets that allow them to identify bottlenecks, drive greater efficiency, or improve quality.

With a granular and extraordinarily accurate look at how materials, robotics and products are moving through a facility, manufacturers can create more efficient, optimized production designs.

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Optimize automation with intelligent material handling

To get the most out of automation and smart manufacturing solutions, manufacturers need to provide robotics and AI with accurate information relevant to their functions. That includes location data. With highly accurate real-time monitoring of robotics, materials, and other relevant objects, manufacturers can create systems that automatically adjust to meet shifting materials needs.

For example, Location Intelligence enabled SIMATIC RTLS can be programmed to identify when material supply is running low in a specific area, tapping robotic vehicles to compensate in order to maintain smooth production. In other words, materials can be intelligently managed on the plant floor in real-time to drive greater efficiency and maximize throughput - all without user input past the initial set-up.

Unparalleled transparency and insights

In a highly fluid and competitive marketplace, manufacturers need every tool they can get to operate with efficiency and flexibility. In virtually every manufacturing setting, greater visibility and transparency is indispensable for driving flexibility and efficiency. Our solution provides an elegant solution for tracking objects anywhere on company premises that can be easily modified for new production designs.

The Siemens solution offers the dynamic, precise real-time location tracking necessary for Industry 4.0. Operating a digital enterprise without such a system is like working while blindfolded. The time to implement Location Intelligence enabled SIMATIC RTLS is now.

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