

REAL-TIME LOCATION SYSTEMS (RTLS)

Real-Time Location Systems (RTLS) enable the tracking of raw materials, work-in-progress, tools, equipment, shipments, and more – all in real-time and with accuracy up to inches. Drawing on our experience with various RTLS technologies and vendors, Gemba Systems can guide you through the selection and implementation of best-fit solutions for your specific use cases and environment, drastically improving visibility, control, and operational performance.

Different Technologies for Different Use Cases

Ultra-Wideband (UWB) technology provides up to inches-level accuracy and is robust in dense and steel-rich environments, which sets it apart from other positioning technologies. It provides real-time positioning information, with fast update rates, and minimal or no interference with other RF-enabled systems. Its battery-powered tags can last up to 5 years or longer, using “sleep-mode” while in rest.

Radio Frequency Identification (RFID) uses electromagnetic (RF) fields for proximity detection and automated identification of low-cost labels that are attached to the objects that need to be tracked. Passive, battery-less labels are powered by energy from the RFID readers. Besides detecting presence and proximity, certain RFID solutions are able to locate items in 2D or even 3D space, using the latest array antenna or directed beam technology.

Bluetooth Low Energy (BLE) can be a great technology for real-time location tracking in certain environments and use cases, thanks to its relatively low-cost active tags, long range, wide variety of available tag types, and outdoor capabilities - all with great accuracy and high update rates.

GPS based solutions can determine the precise outdoor location and travel of an object or person, between facilities, countries, or continents. Items can be tracked outdoors up to 10 meters accurately, without any infrastructure needs, and in near-real time. Some GPS trackers are WiFi and/or BLE enabled to also provide location information while inside of a facility.



RTLS Benefits

- Find what you are looking for instantly.
- Optimize processes based on flow analysis & heat maps.
- Provide full transparency on current and prior locations, queue and wait times, move events, routings, usage, and more.
- Automate alerts or transactions based on geofencing.
- Spot variations from the standard to help identify improvement opportunities.
- Reduce transportation and motion waste based on digital spaghetti diagrams that depict actual travel paths.
- Identify opportunities to improve equipment and storage layout on the factory floor and in the warehouse, based on data-driven insights.

About Gemba Systems Inc.

Gemba Systems is an Industry 4.0 Solution Partner. We help manufacturing companies navigate the complex and fast-evolving landscape of Smart Manufacturing technologies and the Industrial Internet of Things. We offer guidance, tools, and hands-on support in the selection, implementation, and integration of those Industry 4.0 solutions that will best support our clients' most critical business processes - and the people who perform them. Ultimately, our goal is to empower manufacturing people with smarter solutions that boost productivity and drive top-and bottom-line results.



People

Our expert team will support you through your digital transformation and operational excellence journey with e.g. the following services:

- Digital strategy development and program execution support
- Needs assessment and opportunity prioritization
- Cost / benefit analysis, ROI assessment, and project justification
- Functional & technical specifications development
- Vendor search & selection
- System implementation, configuration, and integration
- User training and support
- Go-live support (“hyper care”)
- Overall project planning and execution support



Processes

Gemba Systems can help you achieve your digit(al)ization, digital transformation, and operational excellence goals by implementing effective and efficient processes that deliver the best total return and realize the intended value of your chosen solutions, from planning and assessment through testing, deployment, operation, and continuous improvement!



Technology

Gemba Systems offers guidance, tools, and hands-on support in the selection and implementation of proven or promising industry 4.0 technologies and solutions. We have special experience in e.g. digital work instructions, Vision AI for inspection automation, real-time location systems (RTLS), productivity (OEE) reporting, and advanced planning & scheduling.

Empowering People with Smarter Technologies!

For more information, please visit www.gemba.systems or contact us at info@gemba.systems.

