Solution for Manufacturers: Visibility, Traceability, and Analytics

TEGO
Powering Assets with Intelligence

Tego's digital, automated solution delivers enterprise-wide visibility, traceability and data sharing across supply chains for:

- Quality management from design through to production

- Real-time location of physical goods, personnel and process across sites and vendors

- Seamless integration to manufacturing software and back-end enterprise solutions

The Challenge

Manufacturers are under constant pressure to improve efficiencies, maximize financial investments, and assure quality products are being released to the marketplace. The end goal is to produce more high-quality goods with the biggest profit margin to drive larger market share and beat the competition.

Discrete manufacturers and especially those production facilities characterized by low volume, but high product mix have the highest exposure to manufacturing waste. To mitigate it, organizations will hire extra runners whose sole job is to tote inventory to workstations. Others hire expensive buyers who are brought in to manage the ordering of critical parts and components to assure that capital is being timed efficiently. Despite efforts to mitigate unplanned downtime, inefficient inventory management and manual labor costs can quickly erode profit margin and reduce the organization's ability to remain competitive.

This is the Year for Digitization - Driving Not Only Efficiencies, But Competitive Advantage

Supply chain gaps created by the pandemic highlighted how fragile and exposed 'just in time' manufacturing practices left many organizations. By adopting automated and connected 'smart' solutions these gaps could be shored up and the organization could become more efficient. Heavy industrial manufacturing, and automotive manufacturers have increasingly looked to realize the efficiency and productivity that can be achieved through the application of Industry 4.0 solutions.

New 'smart' connected technologies are empowering production floors with the ability to visualize and connect, in real-time, the production floor data and activities to automate highly accurate and reliable performance metrics. By providing automated, real-time tracking and tracing of the people, the parts and the processes required for work orders, the better the team can plan, act, and execute on or below budget.

[1] A global survey of executives, McKinsey & Co., 2020

The Solution

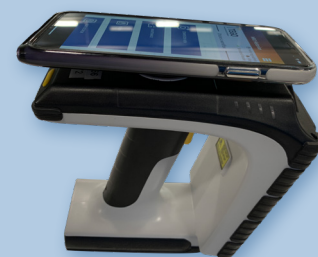**Commercial Off The Shelf (COTS) Digital platform with enterprise wide visibility, traceability and contextualized data sharing through the supply chain**

Tego provides a single, comprehensive, scalable solution enabling automation, visibility, and traceability of the parts, the processes and the people inherent in production of physical goods.

The solution integrates business process activities, work-in-process, quality management and quality assurance measures to deliver a real-time report of the materials, the capital assets, and the people directly responsible for every activity on the floor, in facilities and supply chains.

The solution provides enterprise-wide analytics addressing manufacturers and suppliers need for identifying process bottlenecks, reporting quality metrics, and sharing data and information throughout the supply chain
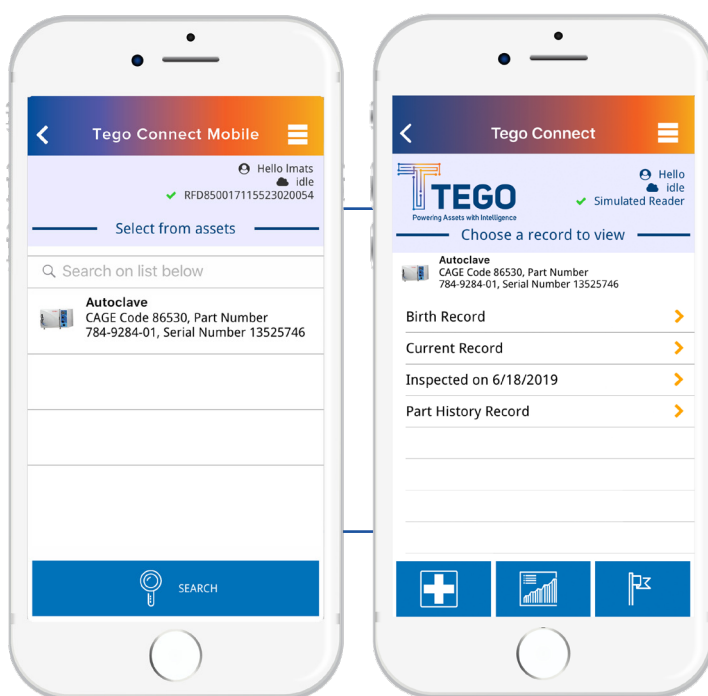
✓ Full transparency into all parts and processes

✓ Alerts to thwart operational errors

✓ Enterprise-wide visibility with WIP tracking

✓ Customizable reporting with scheduled deliveries

✓ Traceability of work orders, lifecycle records

✓ Automated collection of contextual data

Tego Connect Mobile on TSL model

Tego Connect Mobile on Zebra model

TegoConnect Mobile

TegoConnect Mobile provides local apps running at the point of use of assets and gives visibility and traceability for the parts, processes and people associated with manufacturing and supply chains
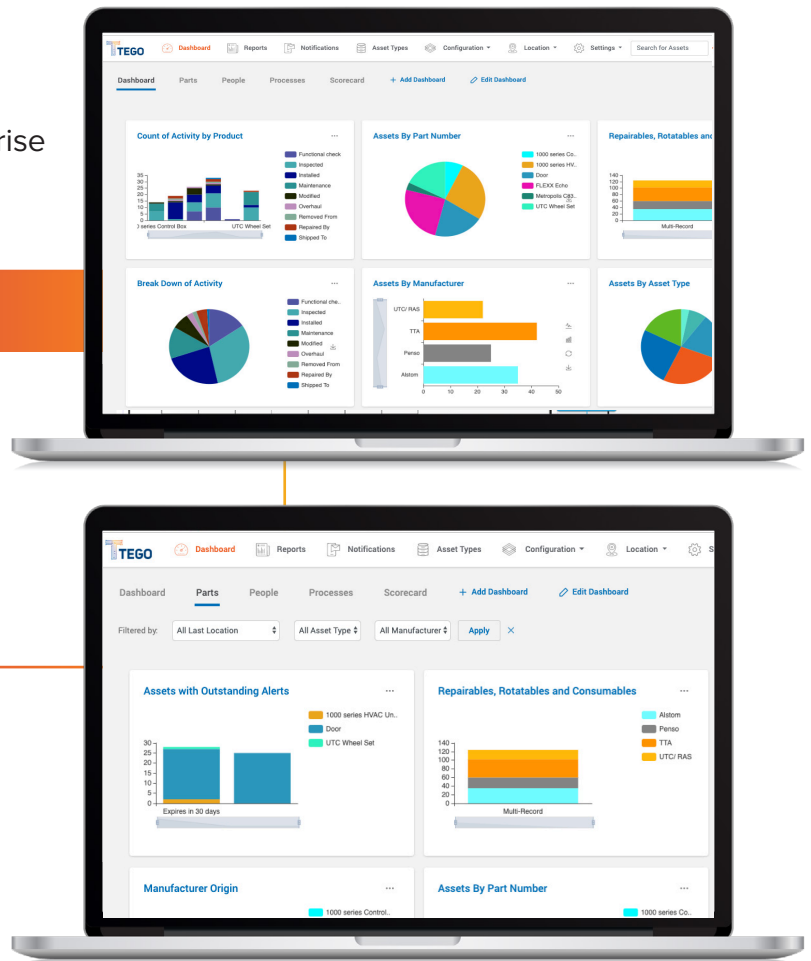
Real-time Reporting

TegoHub is the system-level portion of the solution, running on an internal network or hosted in the cloud, enabling reporting of key performance indices and essential business metrics. TegoHub provides real-time location and process control with automated alerting capability. TegoHub is where the storage and management of all the metadata resides. Information related to production, including raw materials, design, quality, production stages, finished goods and everything in

TegoHub is where all automated information related to the people, the parts, and the processes, critical to every manufacturer's production floor and supply chain, flow into for higher level trend and analysis. Tego's Software as a Service (SaaS) solution is standalone or can be integrated with other manufacturing execution systems or enterprise software solutions.

TegoHub

TegoHub is a system-wide tool and gives an enterprise-wide view of operations with real-time alerts, facilitates response to dynamic issues, and proactively monitors and mitigate risk as it arises. Reporting metrics are configurable and can include, monitoring activities of WIP, identifying processes that are creating bottlenecks, and real-time location services.

Benefits

- Eliminate labor-intensive and time-consuming production floor activities
- Automate processes so workers focus their time on more important value-add tasks
- Reduce manufacturing risk with end-to-end visibility into physical goods and personnel
- Decrease unplanned downtime with critical information digitized and alerts set up
- Increase production efficiency with higher quality output and outcome.

ROI

Proven business benefits include:

75%   Reduction in labor-intensive, non-value add costs
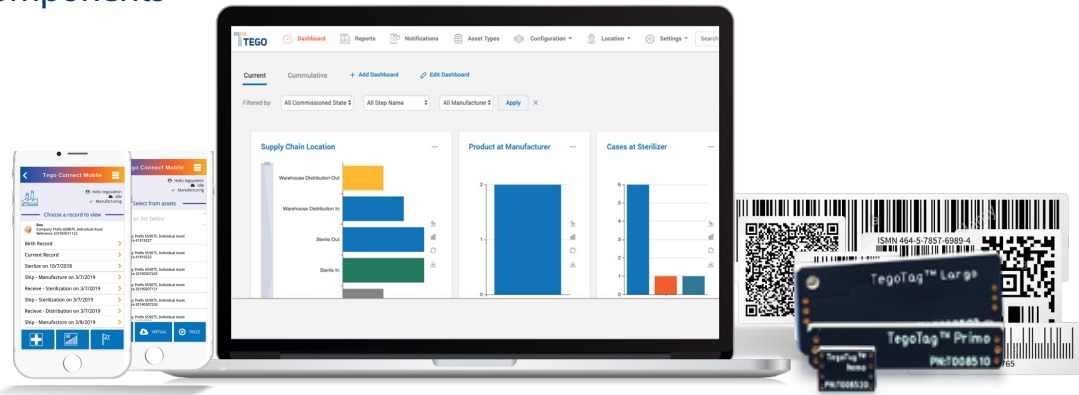
18%   Improvement in throughput

⊙   Reduction of manufacturing errors, waste, and revision

⊙   Enhanced overall performance

Solution Components

TegoHub™

- A configurable, scalable, platform with industry specific templates for rapid deployment and a cross-platform library.
- Supports all major mobile and desktop operating systems including iOS, Android, Windows, and OS X.
- APIs allow simple plug and play integration with IoT, EAM and ERP systems.

TegoConnect™ Mobile and Auto

- Easily and securely manage critical data directly on the asset through TegoConnect, a mobile or fixed device application to deliver supply chain intelligence, business analytics, workflow/process management at the edge.
- TegoConnect supports – iOS, Android, Windows and OS X – and integrates with TegoHub and enterprise applications.

Tego Tags [TegoChip™ inside] or other Auto-ID Inputs

- Suitable for disconnected, rugged, and/or field assets, with the ability to support diverse multimedia file types such as images, documentation, spreadsheets, and other types of files or unstructured data.
- First of its kind that is Gamma/E-Beam sterilization-proof and is rated for 30+ year data retention and durability through extreme temperatures, vibration and shock.
- Blockchain on a chip – first verifiable edge ledger on a chip.

➔ **Get in touch** to find out what Tego can do for your company.

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