

Tool and Equipment Visibility, Traceability, and Analytics



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

- Real-time location of physical goods with automated process reporting
- Seamless integration to manufacturing execution systems and enterprise resource programs

The Challenge

Industrial companies often have entire departments with fulltime, dedicated staff and separate capital budgets committed to tools. These departments are responsible for assuring that the right tools are budgeted for, procured, and always available for use to support business operations.

The procurement price for any tool is often the cheapest and most understood cost the organization pays for this capital equipment. However, there are ongoing costs for tools, including direct and indirect costs to manage a healthy inventory, to maintain tools in working order, as well as costs to warehouse tools with lifecycles that can last thirty years.

Tools used on manufacturing floors have a need for real-time location capabilities, automated inventory count and digitized visibility of their chain of custody, condition and certification. A misplaced tool should never shut down a production floor. That said, tools are constantly lost, hidden, or misplaced in facilities. This means that non-tooling production staff often dedicate time and effort towards wasteful activities like searching for tools and equipment needed to complete daily activities that support the core business.

Scope of the Problem

Industrial manufacturers spend hundreds of millions of dollars on tools and equipment each year. Any single facility can be responsible for managing more than forty thousand tools and thousands of pieces of equipment.

Tool management activities are labor intensive and include cycle and inventory count, warehouse storage fees, depreciation management, maintaining tool certifications, managing external vendors who calibrate tools offsite and updating paperwork related to tool condition. Any misstep related to proper tool management and condition maintenance can escalate into significant lost revenue or even worse, result in customer noncompliance, safety violations, and quality corrective action.

Þ



The Solution

Commercial Off The Shelf (COTS) Digital platform that Automates Real-time Location Tracking, Inventory Count, Work Order Traceability and Condition Management

Tego provides a combined hardware and software solution with enterprisewide visibility, ideal for industrial environments where digitalization of the management of tools and equipment is needed to support ongoing business activities.

Seamlessly deployed and powered by Tego's Asset Intelligence Platform (AIP), the solution delivers automated real-time location, automated cycle count, and traceability including workorder history, calibration notifications, customer, and chain of custody data.

The solution utilizes automated identification technology for tools combined with digitalization of the business processes to deliver enterprise-wide business analytics that support faster, more efficient tooling care and reduces

Full traceability with workorders	Constant state of audit across sites
Alerts and notifications regarding condition	Chain of custody traceability
O Enterprise-wide visibility with real-time location	Automated collection of data



Tego Connect Mobile on TSL model



Tego Connect Mobile on Zebra model





TegoConnect Mobile

TegoConnect Mobile provides workers instant access to hands free, automated real-time location of tools, notification of a tool's condition, and complete work order traceability.



Single Platform, One User Interface

TegoHub is the system-level portion of the solution, running on an internal network or hosted in the cloud, reporting key inventory indices and essential business metrics related to tools and equipment. TegoHub provides real-time location and condition reporting with automated alerts. TegoHub is where the storage and management of all the metadata related to tool and equipment tracking and tracing resides.

Tego's Software as a Service (SaaS) solution can be deployed standalone or integrated with other manufacturing execution systems or enterprise software solutions.



TegoHub

TegoHub provides enterprise-wide view of tool and equipment location, with real-time alerts in response to dynamic business processes, and proactively monitors and mitigates risk as it arises. Reporting metrics are configurable and include monitoring count, condition, chain of custody, and real-time location services.

3



Benefits

- Eliminate labor-intensive and time-consuming non-value add activities
- Automate processes to eliminate manual data entry and errors
- Reduce risk with end-to-end visibility
- Decrease unplanned downtime and receive alerts to prevent risk
- Increase production efficiency with higher quality output and outcome

ROI

Proven business benefits include:

- **30%** Reduction in costs with automated, digital management of inventory
- **18%** Improvement in throughput
 - \downarrow Reduction of manufacturing errors, waste, and revision
- Enhanced overall performance



Solution Compone	Current Current	nulative + Add Dashboard Ø Edit Dashb		Leasin * 💿 Settings * Beach	
tion Record >> Current Record >> Current Record >> Current Record >> Senders in (12/2018) >> Displayment Record >> Current Record >> Rec	Select from assets	Location	Product at Manufacturer	Case at Steriliser –	Tegolag ¹⁶ Periods 100 Period

TegoHub™

- A configurable, scalable, platform with industry specific templates for rapid deployment and a crossplatform 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.

\rightarrow <u>Get in touch</u> to find out what Tego can do for your company.