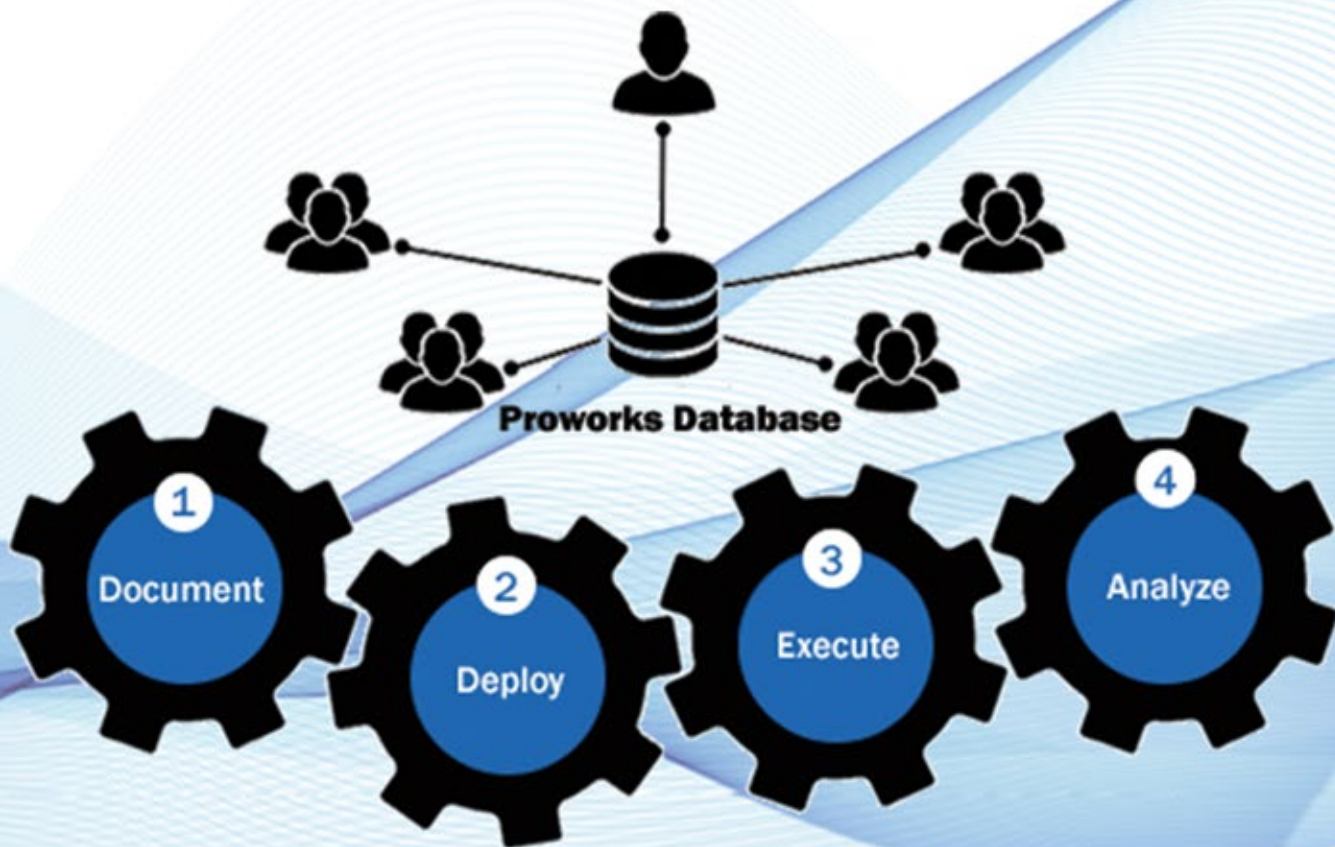


PROWORKS

Process Management &
Electronic Work Instructions Software

Revolutionize Your Process!



Affordable for small companies and
robust enough for multi-divisional corporations

Enterprise Solution



Enterprise Solution

Enterprise Solution is a multi-user process management tool. It will enable you to deploy and manage the execution of established best practices throughout your organization.

All users work in an environment that allows them to share Manufacturing Intelligence (MI) and centrally access all process-related documentation. Real time status is available at a glance and bottlenecks are immediately identified. Automatic event notification and escalation reduces process execution time, minimizing lead times. Complete process history is recorded for post process analysis or data mining. ProWorks' ability to manage and track standard processes makes it an excellent tool for supporting lean initiatives and regulatory requirements such as ISO, FDA, and accounting Sarbanes-Oxley.

Improve Quality and Productivity Today...

IOT/Industry 4.0

- ▶ Collect and store data directly from your internet aware hardware.

Fully Scalable

- ▶ ProWorks Enterprise can grow with your business, allowing an unlimited number of users, based on your needs.

Multi-site Configuration

- ▶ Share best practices or span production across jobsites, divisions and locations. Utilize low cost regions for manufacturing while maintaining tight controls over the production build process.

Microsoft SQL Server Backend

- ▶ Microsoft technologies foundation provides the highest levels of reliability for your business-critical applications while ensuring access to easy and cost-effective support and maintenance.



Reporting

- ▶ Integrated reporting with MS Excel provides insight and traceability into the production process.

Multi-language Support

- ▶ Develop and deploy work instructions in native languages for different production locales.

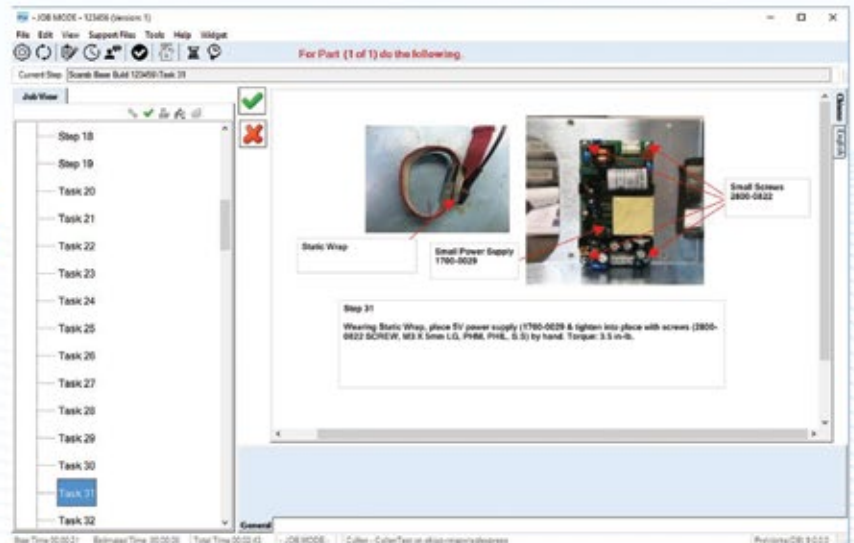
Link to Other Business Systems

- ▶ Pull existing data from ERP, MRP and PLM systems to avoid data duplication, ensuring data accuracy and reducing cost of maintenance.

Proworks combines a dynamic blend of process management, work instruction and Manufacturing Execution Software (MES) that allows for the dissemination and control of Manufacturing Intelligence (MI) on the shop floor.

Document the Process

One of the guiding design principles for ProWorks is to empower Process Experts (those who actually run the processes) to create and modify the content of the system without having to rely on IT resources.



Centralize Data

Create highly detailed, standardized processes that are accessible from a central repository.

- ▶ standard processes that are accessible from a central repository.

Simple and Efficient Editing

Drag & drop to add pictures, video, CAD files, drawings, etc. to describe the process.

- ▶ video, CAD files, drawings, etc. to describe the process.

Protect Data

Keep proprietary knowledge secure with water marking and encryption.

- ▶ secure with water marking and encryption.

Reuse Data

Link to existing documentation, forms, spreadsheets or existing databases when building processes.

- ▶ Link to existing documentation, forms, spreadsheets or existing databases when building processes.

Multiple Language Support

Store work instructions in multiple languages and/or change the user interface to display different languages.

- ▶ languages and/or change the user interface to display different languages.



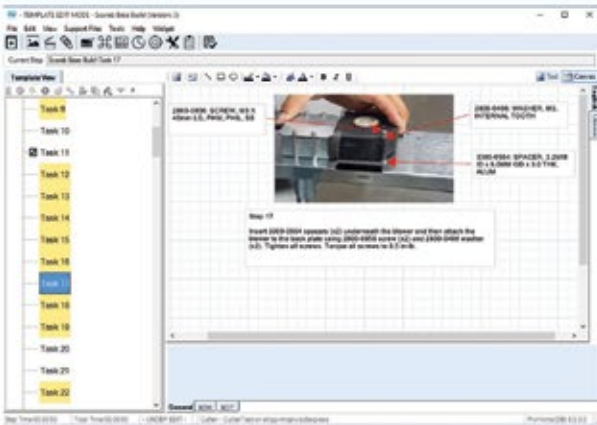
Display: Pictures, Video, Drawings

Taking the “work” out of Work Instructions

Standardize Work Instructions Across Your Entire Enterprise!



Deploy the Process



Run test and collect data from viewer

Deploying your Work Instructions can be as much work as creating them. Managing revisions, approvals, and distribution can be a time consuming task... unless you have ProWorks. With its built-in revision control and approval process, rolling out Work Instructions is as easy as clicking a mouse.

Replicate Processes Across Regions

- ▶ Share database worldwide. Collaborate across jobsites, divisions and locations.

Push-Button Rollout

- ▶ Push-button deployment ensures end users receive and use the most current information.

Standardized Training Tools

- ▶ Standardized training tools for new hires, temps, and cross-training of "best practices". Automate worker certification tracking, training and documentation.

Send Processes to Other Facilities

- ▶ Import/Export for process portability, for standalone use or to send process to other facilities or suppliers.

Revision Control

- ▶ Built-in revision control; track how processes change and how the changes are published to end users.

Approval Process

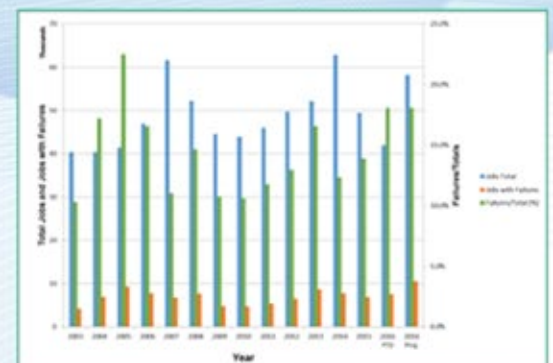
Cable Assembly Demo Approval Started (ver 30-SA)

Show Only Denied Show Only Instructions Hide All Closes

Hide All Approved

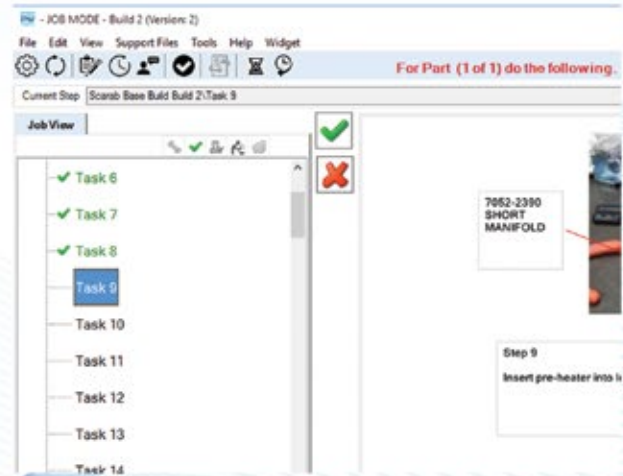
X	Status	Step Name	Change Type	Editor
<input type="checkbox"/>	Approved	1.1 Kit Inspection	Instruction Change	Trevin
<input type="checkbox"/>	Approved	1.2 Preparation	Instruction Change	Trevin
<input type="checkbox"/>	Approved	1.3 Cut	Instruction Change	Trevin
<input type="checkbox"/>	Denied	1.4 Strip	Instruction Change	Trevin
<input checked="" type="checkbox"/>	Pending	2.1 Connect	Canvas Instruction Modified	Trevin
<input type="checkbox"/>	Pending	2.4 Attach	Canvas Instruction Modified	Trevin
<input type="checkbox"/>	Pending	2.5 Other	Support File Added	Trevin
<input type="checkbox"/>	Pending	2.5 Other	Support File Deleted	Trevin
<input type="checkbox"/>	Pending	3.1 Mold USB End	Instruction Change	Trevin
<input type="checkbox"/>	Pending	3A.1 Test	AutoCommand Added/Modif	Trevin
<input type="checkbox"/>	Pending	4.2 Package	Instruction Change	Trevin

 Auto-Select Year



Execute the Process

Often, with paper-based documentation schemes or even standard PDF based documentation systems, process manuals sit on shelves collecting dust or become buried someplace on a file server. With ProWorks, the system is an integral part of the process. As users complete each step of a process, ProWorks collects their digital signatures in its database so that processes can be tracked in "Real Time".



ProWorks collects "digital signatures" in its database

Record Work Being Done

- ▶ Pass and Fail condition recorded for each step providing an audit trail for accountability.

Interface External Applications

- ▶ Auto Commands Interface allows ProWorks to be customized to interact with external applications and/or machinery.

Event Notification

- ▶ Email notification on critical events within the Process.

Troubleshooting Database

- ▶ Build a troubleshooting knowledge base to provide "step-specific" problem solving tips based on previous failures.

Takt Time

- ▶ Elapsed time recorded at each step to identify bottlenecks.

Track Processes in Real-Time

- ▶ Schedule Processes and monitor them as they are being executed.



Control Test/Collect Data



Instructions



Traceability



Analysis

Analyze the Process

ProWorks provides tools for mining the process data collected in its database for continual process improvement.



Track Processes Visually

Job Summary provides real time job status in graphical format. Colors indicate whether job is complete (green bar), on-time (blue bar), or late (red bar), and how far behind schedule (yellow bar).

ProWorks Job Summary allows managers to visually track the progress of the jobs.

Access with 'Other' Reporting Tools

- ▶ SQL Server backend allows easy access to data for mining and 3rd party reporting tools.



Identify bottlenecks and process inefficiencies – continual improvement.

Integrated MS Excel Report Generation

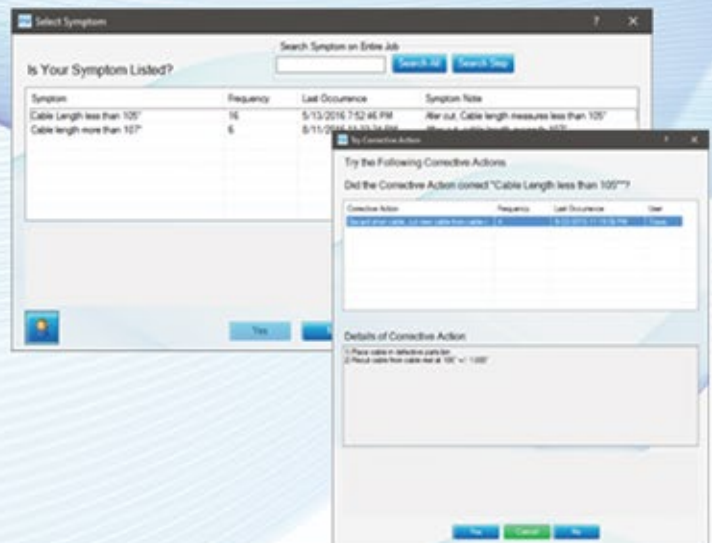
- ▶ Report Wizard for quick and easy report generation.

Drill into Processes

- ▶ Punch list provides a snapshot of process variables and events. Monitor completion of key steps in a task.

CAR / PAR Support

- ▶ Identify and address systemic issues with Corrective Action ticketing system for ISO compliance.



Symptoms and Corrective Actions are collected and leveraged to improve the process.


Enterprise Solution Key Features...

- ▶ **IOT/Industry 4.0:** Collect and store data directly from your internet aware hardware.
- ▶ **Traceability:** Automatically archive data associated with each process step.
- ▶ **Centralized Database:** Create highly detailed, standardized processes that are accessible from a central repository.
- ▶ **Editors:** Edit, modify and create Work Instructions. Link to existing documentation or existing databases when building processes.
- ▶ **Collaborative Viewers:** Run jobs and build product using the interactive viewer.
- ▶ **Multi-Language:** All Instructions, as well as all buttons and text within ProWorks, is capable of displaying multiple languages.
- ▶ **Training Matrix:** Give managers the ability to use ProWorks to monitor training by using actual production jobs for training.
- ▶ **Trouble Shooting:** When a step is failed during production, ProWorks offers suggested corrective actions to the user to help the operators solve the failure.
- ▶ **CAR/PAR:** Managers have the ability to assign a Preventative Action Request to an individual so as to solve systemic failures.
- ▶ **Auto Commands:** Ability to customize ProWorks to automatically interact with external applications and/or machinery from within a Work Instruction.
- ▶ **EDL: External Data Link (EDL)** gives companies the ability to connect to other SQL Server databases. Automatically imports existing data from ERP, MRP and PLM systems.
- ▶ **Configuration Options:** Ability to display or hide groups of steps based on product configurations, thereby permitting one work instruction set for multiple configurations. Users only “see” steps appropriate for the exact product in production. Easy maintenance.
- ▶ **Import/Export:** Transfer / Share Work Instructions and Work Orders with other divisions, locations, companies and servers by using the Import/Export routine.
- ▶ **Reporting:** Mine the data you have collected using ProWorks' built-in report generation tool.
- ▶ **Job Summary:** The manager has an instant snapshot of the progress of the work on the shop floor.
- ▶ **PCB Module:** Produce assembly programs and process documentation for Surface Mount, Insertion, Test, Inspection and Dispensing machines.

This revolutionary technology integration will transform manufacturing everywhere. Users find it easy, cost effective, and light years ahead of their current solutions.

Benefits

- ▶ **Reduce Cost** - associated with work instruction development, deployment and maintenance.
- ▶ **Higher Quality** - the process is performed the same way every time, and is not people dependent. All QA checks are performed to the same standard.
- ▶ **Improved Training Efficiency** - new users trained by software, not another user. Lower skilled workers perform higher level tasks because the knowledge is in the software.
- ▶ **Increased Productivity** - information moves in real time, repetitive functions can be automated, users are guided through the entire process.
- ▶ **Traceability** - software automatically archives data associated with each process step within a work order i.e.,: date & time stamp, elapsed time, user, and any inputs or measurements taken.
- ▶ **Process Portability** - entire process, with support documentation, can easily be exported to other facilities and/or subcontractors in multiple languages.

 **Document** **Deploy** **Execute** **Analyze**