



# Leading Producer of Steel Pipe Takes ERP to the Next Level

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*A leading producer of steel pipe for the oil and gas industry has implemented a web based Enterprise/Operations Resource Planning solution to support their North American operations. The solution enables the plants to manage a customer's job throughout the manufacturing lifecycle, support both the organization and customer infrastructure with one site while ensuring quality and accuracy. This has reduced costs, errors and delays traditionally associated with the steel pipe industry.*

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## **Situation**

In today's highly competitive manufacturing environment, having all of your data accessible with the push of a button is crucial. With this mind, a leading producer of steel pipe contacted Conperio to analyze their current business/manufacturing processes and disparate systems and make recommendations for improvement.

The current processes, involving over 40 applications from multiple providers, was heavily reliant on written notes, written logs, emails and spreadsheets; across multiple locations. Customer inventory was tracked through spreadsheets that were at a minimum 24 hours behind operations. Handled across multiple applications and different databases, these varied locations & applications were in no way standardized or easy to maintain and use. The existing infrastructure did not accommodate customer needs and resulted in late, lost or jobs completed incorrectly. All of these non-value added steps led to questions about the future growth and profitability of the organization.

The existing processes required employees to dedicate numerous man hours weekly to track the location of jobs within the manufacturing process and find essential job information. The majority of time was spent searching for paper based quotes, tracking projects and trying to determine where paperwork was in the process as opposed to getting the job done.

Off the shelf Enterprise Resource Planning (ERP) solutions only addressed a few of their opportunities and came with a new set of challenges including maintenance/patching costs. At the same time, these solutions did not provide for plant floor integration and would force many changes to their processes that did not align with the business.

## **Solution**

After analyzing the situation, Conperio was able to propose a solution that would not only automate and standardize the customer's business process, but also align with their customer and third party vendor data. This solution was the Enterprise Resource & Operations Planning Suite (EROPS).

Conperio created the EROPS that integrates the following modules: Sales Process, Operations, Job Tracking, Resource Management, Downtime and Waste Tracking, Reporting, and Customer Portal. The EROPS incorporates a scalable architecture that allows for additional modules and locales to be added as applicable in the client environment.

EROPS is a web-based environment that contains a set of standard modules:

- **Sales Order Process** – Allows for controlling the sales order process through automated notifications and controlling all aspects of order entry.

## Solution Overview

### **Customer Profile**

An API licensed manufacturer of Oil Country Tubular Goods (OCTG), line pipe and structural piling (ASTM standard) products.

**Business Situation** Client needed a way combine sales order entry, raw material ordering, operations, and other essential tasks; effectively eliminating a wide range of disparate and manual systems.

### **Solution**

A web platform utilizing SQL Server for quick and responsive data harvesting and presentation.

### **Benefits**

- Fast, simple usability
- Customized email scheduling and alerts
- Reduction in man hours
- Reduction in errors and cost
- Life cycle management
- Customized Reporting
- Total Manufacturing Integrated Solution



- **Resource Management**
  - Raw Materials – Ordering of raw materials is integrated with sales orders for tracking P/L. Integrated with third party vendor manufacturing and shipping systems to track on time delivery.
  - Human Capital – Integration with a time & attendance system allows for tracking actual costs as product is created.
  - Inventory – On hand inventory tracking of raw materials, work in progress (WIP) and finished product.
- **Operations**
  - Operations Planning – Jobs are scheduled ad hoc or are tied back to a specific sales order.
  - Ingredient Receiving – Raw materials are unloaded and tracked throughout the process to ensure quality and traceability.
  - Operational Interfaces – Custom screens are produced to work in parallel with, or in some cases are imbedded in, the manufacturing SCADA system. These screens facilitate the capture of information from operators or directly from the controls layer, to ensure data input with or without interlocks to machinery.
  - Plant Floor Integration – Through production schedules, recipes are pushed down to the plant floor and data is harvested automatically from machines utilizing the SCADA and controls systems. In addition, for quality assurance purposes weather conditions are logged throughout the process.
  - Shipping – Through use of shipping requests and pick tickets; the shipping process is streamlined process which minimizes mistakes and allows for product shipments to be tied in with sales orders. In addition, truck driver management allows for tracking and managing all elements of the loading process for both quality assurance as well as continuous improvement.
  - 3<sup>rd</sup> Party Vendor Operations – External manufacturing facilities are allowed to integrate with operational data through a secure and efficient pipe.
- **Downtime & Waste Tracking** – Capturing cascading downtime events with the ability for user defined reason codes is a critical component when implementing a downtime reduction plan. In addition, capturing and quantifying the associated production and materials losses as well as waste generation allows an organization to attach hard costs to these events.
- **Quality Assurance** - Integrating quality specifications with raw material receipt and the manufacturing process allows for automatically alerting users to the potential of a quality incident.
- **Job Tracking** – Internal and external users are able to login to the website and find out where a job is based on predefined milestones. In the event of prioritization issues, jobs can be assigned quicker turn times to make sure the work is completed in a timely manner based on the customer's needs and expectations.
- **Reporting** – Allows for reports to be created dynamically on all data collected within the system. Whether it's a report to show the number of jobs run in one month, the number of shipments sent out in a week, the average time it took a specific operator to work up a job or all jobs in a quarter, or what revenue was generated for a specific customer order.
- **Customer Portal** – Through the use of a browser a customer can manage their own inventory and schedule shipments. In addition, based a job ticket form, a customer can give as much detailed job information as they have at the time and request a quote. Once created this information becomes the foundation for the sales order that is used internally.

The only client side dependency is an internet browser. The EROPS is a solution that can be rolled out with little impact and with minimal training. In addition to ease of use, the EROPS also boasts a small footprint in relation to required infrastructure and is highly customizable to fit a customer's environment.

Labor costs, job integrity, process consistency, and turn time are not the only benefits of the EROPS. Product quality and customer experience/satisfaction are also improved through better process management.



## **Benefits**

### **Manufacturing Life Cycle Management**

The EROPS manages all aspects of a customer's order throughout the entire manufacturing life cycle, from request for quote to shipping finished product. As a job progresses through the operation, both the customer, sales person and company management are kept abreast of its progress through automated emails, job schedules and dynamic dashboards.

### **Reduced Man Hours**

After analyzing the current processes, Conperio found that manually writing orders, manually entering job information multiple times into multiple systems, manually entering operational results data and manually creating standard reports/forecasting models was taking mountainous man hours. The EROPS allows automation and streamlining all of these processes. Users can enter information once and it is used throughout the process quickly and efficiently and most importantly, completely. Users now spend more time working with customers, working on jobs, as opposed to researching, reworking and correcting, thus increasing the over all throughput of the organization.

### **Reduced Errors and Costs**

By automating many of the tasks associated with a standard paper workflow, such as filling work order forms or job tickets, the EROPS reduces time and costs. Through the concept of "input once and output often," the EROPS removes the costs and hassles of sending email attachments and manually updating spreadsheets.

### **Quantify and Reduce Downtime & Waste**

Capturing downtime events and waste is critical in any organization to continuously improve their processes. Through the plant floor integration and web browser solution, organizations gain the ability to assign reasons and costs to all downtime and waste, and become proactive allowing predictive action based on historical trends and key metrics.

### **Customized Reporting**

The EROPS allows for reports to be created dynamically on all data collected within the system. Whether it's a report to show the number of jobs run in a month, the average time it took a specific operator to produce in a quarter, or how much the organization spent on raw materials with a vendor in a given year; the EROPS is the answer. Once reports are configured, they can now be scheduled, ran, and emailed automatically. Daily, weekly, monthly or yearly; the EROPS allows for complete customization of email/report scheduling.

### **Total All in One Solution**

The EROPS has provided Conperio customers with a complete solution. Through the use of the EROPS, clients are able to manage the lifecycle of a job from start to finish, and support the infrastructure of a modern manufacturing environment.

For more information please go to our website, [www.conperio.com](http://www.conperio.com)  
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