

How Guardian Business Solutions helped a leading and award-winning sand casting company **improve labor & parts costing, from 70% to 90% accuracy**, by providing a customized ERP driven mobile communication and reporting system.



## The Customer



Badger Alloys, family owned since 1966, is a leading manufacturer of sand castings. A progressive user of state-of-the-art equipment and casting technology, Badger won the Wisconsin Manufacturers and Commerce "Manufacturer of the Year" award.

## The Challenge

Despite being an established, leading and very competitively placed sand casting company, Badger Alloys had the potential to improve both its process and employee efficiency.

In order to improve efficiency on these two fronts, Badger Alloys had two significant problems they had to overcome. These were as follows.

1. Reporting on jobs carried out in the company's critical core/clean room
2. Having a bi-lingual workforce, the lack of illustrative 'How to' guides/documentation that would help to clearly understand and execute assigned processes

Despite being a leading market player, core/clean room scheduling, labor costing, labor scheduling and critical performance metric reporting was an ad-hoc, time consuming and inconsistent process.

In an industry where process instructions included very specific instructions such as where to cut off risers to prevent overgrinding, what parts to use, what patterns to use and how optimal a particular welding should be, it was clear that instructions in the written form weren't being conformed to, at least not at the optimal levels desired by Badger Alloys management.

Another critical issue impacting both production technicians and process productivity was the dependence on a dated scheduling and reporting system. Technicians contributed on any number of on-going production jobs without recording their activities and time. This variability resulted in a lack of data capture which limited the ability to capture labor job costing, a metric that would otherwise produce actionable management intelligence.

This lack of purposeful scheduling meant that manufacturing resources were not allocated with the appropriate priority. Instead they spread their time evenly across all projects without tactical purpose driven by due dates and profitability. Not only was manufacturing not strictly adhering to data driven scheduling, but their own input of data was restricted to a single shared central kiosk which resulted in critical time lost and an additional lag in time for otherwise actionable data.

## The Solution

Guardian Business Solutions, in conjunction with Badger Alloys, concluded that the lack of illustrative instructions that a bi-lingual workforce could clearly understand and the lack of a decentralized point of information both in terms of input and output, was significantly hindering both employees as well as process efficiency.

Guardian Business Solutions wrote and facilitated a mobile app solution that was capable of retrieving from as well as returning information to their ERP system.

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Through the new mobile app, workers were given the leeway to report, schedule and pause core/clean room runs, without the need to report to a centralized kiosk. This solution has been implemented with 36 tablets that are currently being used by about 75% of the employees on the factory floor.

Technicians are also now presented with immediate access to thousands of digital illustrative instruction documents. They are available when and where they're needed, which drastically improves process conformance. Their new mobile app also includes tools that allow for quality inspectors to access and report their inspection details, leading to an additional improvement for overall product quality.

## The Results

The most significant impact that was realized from Guardian Business Solutions implementing a mobile driven tablet reporting/guide system was that reporting of labor costing and parts costing increased to 90%, from a mere 70%.

With the new mobile app system collecting much more accurate critical performance metrics such as employee time for parts costing, management now has access to actionable intelligence information that allows them to tweak product and product mix, to drive profitability, increase utilization ratios and improve employee scheduling. All of this can tangibly and positively impact the business's bottom line.

With the new mobile app system implemented by Guardian Business Solutions, management also has access to department-wide data, knowing how many pieces are scheduled for which department, progress and progress estimates for each department and also real time on-time/late status updates on project runs assigned to each department.

Using technology, Badger was able to refine its shop floor, which also provided the front office with better job status information. Not only were they able to run smart and make incremental improvements but their communication also improved, leading to better internal synchronicity as well as happier, better informed, customers.

Because of the new mobile app system implemented by Guardian Business Solutions, management is able to:

- Access previously unavailable real time data points such as labor reports, process reports, bills of materials etc.
- Access highly accurate gross profit analysis, courtesy of improved labor/parts costing.
- Use real time data to schedule and manage its workforce, streamlining it to both employee availability as well as profitability.
- Optimize product and product mix, to maximize employee/facility productivity and profitability.
- Identify unfeasible or rampant processes that could be considered for elimination or reprioritization.
- Avoid unsustainable and untenable price increases to stay competitive, instead using data to drive continuous improvement to reduce waste and improve market competitiveness.

## Long-Term and Continued Process Efficiency Improvements at Badger Alloys

Guardian Business Solutions continues to implement process efficiency improvements at Badger Alloys through continued phases of system implementation and integration.

There is a work plan in place to enact the following envisioned items:

- Provide parts and process data that will allow management to reduce scrap.
- Provide full-fledged inspection pictures and videos to achieve higher levels of conformity, especially with the production of complex parts.
- Provide advanced or enhanced communication protocols between management and employees.
- Provide avenues to invite and enhance employee participation, thereby increasing employee satisfaction and engagement.

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### Guardian Business Solutions

Guardian Business Solutions is an established ERP solutions provider. Guardian's core team has decades of collective experience exclusively helping manufacturers in the metal fabrication, plastics, foundry, capital equipment and medical device space. That experience has fine-tuned our process and ability to seamlessly bridge the gap between processes and technology. Guardian's understanding of manufacturing enables practical, business-forward solutions, which our clients can successfully implement and in this way expedite their return on investment.



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