



SOFTWARE

THE ULTIMATE
EQUIPMENT MANAGER'S GUIDE
TO AN ENTERPRISE-CLASS MAINTENANCE PROGRAM

Formerly
BID2WIN SOFTWARE INC.
ENTERPRISE-CLASS CONSTRUCTION SOLUTIONS

AN INSIGHTFUL LOOK AT WHY CONSTRUCTION COMPANIES LEVERAGE SPECIALIZED SOFTWARE TO:

- **Maximize Uptime**
- **Cut Costs**
- **Drive Profitability**



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Statistical Information (Webinar: Closing the Maintenance Black Hole with Jennifer Angrisano – July 16, 2015)

INTRODUCTION

Not much gets done in construction without equipment. Keeping increasingly sophisticated assets on the job, maximizing their lifespan and minimizing cost of ownership are critical to profitability and command a substantial chunk of every operating budget.

The most effective enterprises hold maintenance costs to around five percent of revenue. Some spend ten percent, fifteen percent or more. For others, maintenance is a “black hole”. Reactive approaches and a lack of standardized processes and controls make it impossible to calculate actual costs or to make informed decisions.

With so much financial risk and reward riding on maintenance and repairs – and with the technology available to assist in the process advancing rapidly – many companies are exploring options to set aside their paper- and spreadsheet-based systems. This guide looks at what to consider when evaluating specialized Maintenance Management Programs, what you can expect to achieve from a software-based solution, and how to avoid common implementation challenges.

A BIG OPPORTUNITY TO BOOST PROFITABILITY BY DECREASING YOUR MAINTENANCE COSTS

Total maintenance costs, including overhead, for construction companies range from **5% of revenue to more than 15%** of revenue for companies with reactive, inefficient processes.



MAKING THE MOVE

WHY EQUIPMENT MANAGERS ADOPT SPECIALIZED SOFTWARE

Margin pressure and competition are intensifying in the heavy construction sector. With equipment costs impacting heavily on every bid and on the bottom line, it's only natural to look here for opportunities get to more cost competitive. This is especially true for companies relying on spreadsheets and paper-based systems to manage their maintenance and repairs.

Leveraging data is another way to drive profitability. Maintenance Management Programs provide accurate, real-time and historical data about your assets and what they are costing you. That's vital information you can use to make better decisions about everything from parts inventories, work order scheduling and maintenance staffing to rental and replacement strategies.



"The amount of information available to our mechanics through our equipment software allows them to better manage their time and get our equipment up and running faster."

W.C. Spratt - Fredericksburg, Virginia

MAINTENANCE HAS BECOME A BLACK HOLE

Many companies manage maintenance without standardized processes and controls. Work tends to be done reactively, with little or no enterprise-wide reporting, visibility or accountability. This makes it difficult to pinpoint causes and reverse trends when maintenance costs are increasing annually, and utilization rates are decreasing.

Companies also move to a comprehensive Maintenance Management Program if they recognize they are in the costly trap of compensating for a lack of efficiency, visibility and controls by retaining more equipment, more resources and more inventory than they actually need.



TECHNOLOGY IS ADVANCING

Software options to manage maintenance have improved and expanded dramatically. The best solutions combine reliable, enterprise-class performance with a sensible array of features (see *page 8*) that can be scaled to specific requirements. They're also far easier to use. Outdated or accounting-based systems that were intimidating and unwieldy in a construction environment have given way to intuitive options that mechanics and managers alike quickly find compelling to use.

Software on the equipment itself is also advancing. Telematics and geo tracking are having a profound impact on maintenance, but without a Maintenance Management Program, companies can't maximize the obvious potential. With a wealth of data available and no way to process it efficiently and make it actionable, they're left at a competitive disadvantage.

LEVERAGE A MOBILE SOLUTION

- Create repair requests
- Plan, manage, and monitor work orders
- Retrieve equipment history and manuals
- Capture mechanic hours and part usage
- Add photos and attachments



AN EQUIPMENT-DRIVEN DECISION

The specific characteristics of a company and its fleet can influence the urgency and the impact of implementing a Maintenance Management Program. Companies with an older fleet usually have the most to gain, as maintenance requirements and unexpected breakdowns naturally increase with age.

Operating over a wider geographic area with multiple shops and parts inventories also increases opportunities for added efficiency. Finally, companies without a strategy for replacing their equipment will find the data and analytics available through a Maintenance Management Program extremely useful in helping them develop an effective way.



5%

Industry leaders hold annual maintenance costs to **5% or less** of total replacement value of their fleet.

ESSENTIALS AND OPTIONS

Every Maintenance Management Program should include several essential capabilities:

Equipment/Asset Management	<ul style="list-style-type: none"> • Centralize information and standardize processes • Access asset status in real time
Repair Requests & Work Orders	<ul style="list-style-type: none"> • Streamline processes for completion and distribution • Provide real-time visibility across enterprise
Preventative Maintenance	<ul style="list-style-type: none"> • Establish and track user-defined programs
Labor/Time Management	<ul style="list-style-type: none"> • Optimize productivity and efficiency of Maintenance team
Planning & Scheduling	<ul style="list-style-type: none"> • Assign parts, materials, labor and tools
Inventory	<ul style="list-style-type: none"> • Provide visibility at all locations by bin • Meet parts demands
Management Reporting	<ul style="list-style-type: none"> • Track key performance indicators • Heighten management knowledge to make decisions
Asset History	<ul style="list-style-type: none"> • Monitor and manage lifecycle costs • Inform equipment replacement strategies
Security	<ul style="list-style-type: none"> • Maintain confidentiality of data via user permissions

NICE TO HAVES

Beyond the basic elements, these options increase the value and effectiveness of a Maintenance Management Program:

- **Warranty Tracking**
- **Mobile Mechanic App**
- **Telematics and GPS**
- **Advanced Reporting and Analysis**
- **Purchasing Integration**

PREVENTATIVE MAINTENANCE

Moving more maintenance and repair work from the “unplanned” or “corrective” categories to the “preventive” category represents a massive opportunity to increase equipment uptime and profitability for many construction companies. The goal is straightforward: service equipment at predetermined intervals to detect and prevent failures before they occur. Intervals are based on time or use, and the typical preventive actions include inspection, cleaning, lubrication, adjustments, component replacement and repairs.



GO FROM REACTIVE TO PROACTIVE

- Maximize uptime and prevent interruptions in productivity.
- Complete maintenance work more efficiently and at a lower cost.
- Maximize the efficiency and the morale of the maintenance staff.
- Work at advantageous times to avoid replacement equipment, including rentals.
- Prevent repetitive problems and collateral, secondary problems.
- Extend the lifespan and preserve the resale value of equipment.

PREVENTION = PROFITABILITY

The challenge is establishing and sticking to a preventive maintenance regimen when you have dozens or even hundreds of pieces of equipment in a fleet. That's where a Maintenance Management Program comes in. These programs put complete information about each asset – including the work-order history and preventive maintenance plan – in one place. They also alert and guide your team, making it easier for them to plan and execute preventive work on schedule.



50%

Preventive Work

Corrective Work

Construction companies with the most effective, proactive programs spend **50% or more** of their maintenance hours on preventive work as opposed to corrective work.

WARRANTY TRACKING

A dozer breaks down and, in the rush to repair it, nobody notices that work was under warranty. A defective part would have been covered if the inspection that discovered it was scheduled a month earlier.

Without proactive, automated warranty tracking, construction companies risk leaving big money on the table. Expecting mechanics to rummage through paper files just doesn't cut it in a fast-paced environment.



START SAVING

For many companies, the savings generated by a Warranty Tracking feature alone can pay for the cost of the entire Maintenance Management Program by providing:

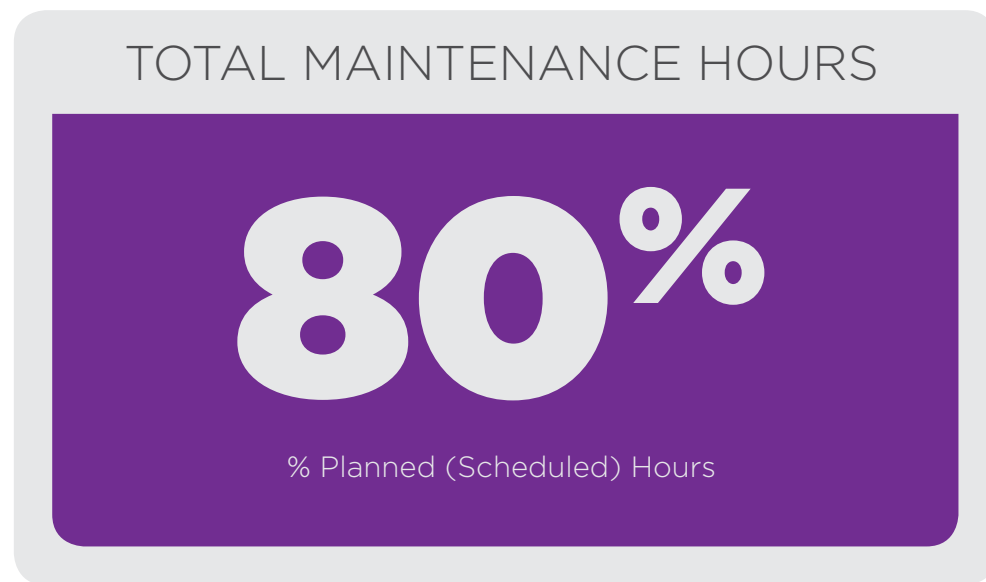
- A centralized database for warranty information on equipment, components and parts.
- Automatic warranty alerts within repair requests and work orders when an item is covered.
- Automatic reports and notifications to see in advance when warranties are due to expire.

KPI'S: HOW DO YOU MEASURE UP?

There's no magic metric or one-size-fits-all answer to how much a construction company should spend on maintenance. However, the performance of industry leaders can give you a good indication of whether you're firing on all cylinders or have room for improvement. As you've already read, maintenance costs as a percentage of revenue and preventive vs. reactive maintenance are good benchmarks. Here are a few more.

SCHEDULED VS. UNSCHEDULED HOURS

While less costly than emergencies, unscheduled maintenance or repairs are still a big threat to profitability. Using maintenance hours as the measurement, construction companies should aim to **schedule and plan 80%** of their work in advance.

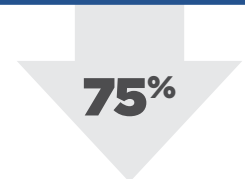


EMERGENCY BREAKDOWN HOURS



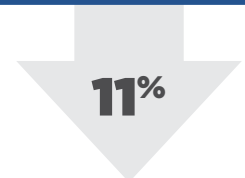
Unplanned breakdowns are a triple threat. They prevent productivity, cost far more than routine maintenance to correct, and often require the added expense of replacement equipment. Some are inevitable, but many can be avoided through preventive maintenance guided by a Maintenance Management Program. When **more than 10%** of maintenance hours go to unplanned emergency work, there's a major opportunity for improvement.

LABOR AND MATERIALS



Add up the total cost of maintenance and then make a simple division between labor and materials. For companies optimizing the efficiency of their maintenance team, the labor portion should be **below 75%**.

OVERTIME HOURS



Breakdowns and unplanned work drive up expensive overtime hours for the maintenance staff. Efficient companies emphasizing preventive maintenance should be able to keep overtime **below 11%** of overall maintenance hours.

IMPLEMENTATION CHALLENGES

WHAT TO WATCH OUT FOR

Maintenance Management Programs present powerful advantages, but any program is only as good as the ability of a company to implement it and gain acceptance among employees. These are some of the pitfalls that can threaten your success and the strategies you can pursue to avoid them.

■ INTEGRATING DISPARATE SOLUTIONS

One comprehensive, maintenance-specific program is preferable to the complexity and frustration of trying to integrate niche applications. Unifying Maintenance Management with the software elements used for estimating, planning, scheduling and field tracking delivers additional advantages.

■ INITIAL RESISTANCE FROM THE TEAM

Change can be seen as a threat. At the same time, employees want to excel and work with the most effective tools. Easy-to-use programs, training and an emphasis on the benefits are powerful incentives.

■ LACK OF MANAGEMENT SUPPORT

Prevent minor challenges from tempting employees to fall back to old, familiar processes by advocating for the new program and keeping the focus on the big-picture efficiency and profitability advantages.



■ DEFICIENT TRAINING

Optimize your investment and minimize initial resistance by going the extra mile and providing training at the outset.

■ POOR VENDOR SUPPORT

Pick a vendor that can back up its product with accessible, expert resources. Software also evolves quickly. Make sure your vendor is committed to continuous development and has a core platform that can support it.

MY COMPANY'S MAINTENANCE GOALS CHECKLIST

Is your company achieving these objectives with your current maintenance and repair systems? Print and check off what you are achieving. The more boxes you leave blank, the more a Maintenance Management Program could help you improve profitability.



- 1 Improve reliability and availability of assets.
- 2 Increase the life of assets.
- 3 Set up and manage effective preventive maintenance programs.
- 4 Reduce proportion of more-expensive corrective maintenance.
- 5 Increase proportion of less-expensive preventive maintenance.
- 6 Improve the accuracy and availability of parts inventory, while reducing costs.
- 7 Optimize the productivity and morale of the maintenance staff.
- 8 Improve control and understanding of costs.
- 9 Predict and manage the maintenance budget with more accuracy.
- 10 Use equipment data more effectively for KPI reporting, analytics and planning.



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B2W Software is located on the waterfront of historic downtown Portsmouth, New Hampshire.

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