HEAVY CONSTRUCTION SCHEDULING AND DISPATCHING

9 BENEFITS OF SWITCHING TO SPECIALIZED SOFTWARE

"YOU CAN'T DO THAT WITH A WHITEBOARD"

- Optimizing people, equipment and materials in the ever changing construction environment isn't easy. How well a company does it goes a long way towards keeping projects on schedule and under budget.

- Whiteboards, spreadsheets, phone calls and other traditional, offline tools for scheduling and dispatching make it difficult to share information across the company in real time, opening the door to miscommunication, errors and overall inefficiency.

- Moving to a single, specialized software system provides vital advantages, including...

Complete Visibility

SPECIALIZED SCHEDULING SOFTWARE LETS CONTRACTORS SEE:

• Employee and equipment assignments – past, current and future

• Resource requirements – days or weeks in advance – to maximize utilization and resolve conflicts before they happen

• Actual equipment location – delivered and confirmed via telematics data

• Where work is taking place and scheduled to take place – on a live map that can incorporate geofencing, street or satellite views and traffic updates

Knowing where people, equipment and materials are *supposed* to be and where they *actually* are at a given point in time are critical first steps for effective scheduling and dispatching.

This should be the easy part, but in a dynamic construction environment with many moving parts, it seldom is. Changes are made on the fly. Resources move constantly and often unpredictably. Keeping track of them with manual offline scheduling tools can be a struggle. Employees also waste valuable time and effort trying to communicate about resource logistics, taking them away from core tasks.

A specialized and centralized software solution for scheduling and dispatching makes it easy to know where resources are and where they need to be.

A live map function within that software even lets users see job sites and equipment in relation to each other, so they can schedule with maximum efficiency. Integrating GPS technology provides fool-proof verification of locations. Users can even create boundaries for equipment movement with geofencing and incorporate real-time information on traffic, accidents and road construction delays.

MOBILE CAPABILITIES ARE ESSENTIAL

Changes to the construction schedule need to be made and viewed where the action is. An effective software solution empowers users (with appropriate permission) to create needs, modify assignments, generate moves and resolve conflicts even when they are on the move.

Real-time Insight

Construction companies typically bring key operations team members together to assess project requirements and plan resources for the upcoming one-week or two-week period. That's an expensive meeting, when salaries and lost productivity are factored in.

The problem is, the schedule they produce on whiteboards and spreadsheets is usually outdated soon after they leave the room. Sometimes it's outdated before they leave the room. Change orders, equipment breakdowns, personnel issues, weather, material delays and dozens of other unplanned factors constantly intervene.

With a centralized software solution, the schedule is a live document and a single source of truth that is always up to date. Employees access it from anywhere. Depending on their roles and credentials, they can make resource requests or assign resources in real time, and those changes are visible immediately across the enterprise. Contractors can schedule more effectively while also minimizing the frequency, duration and cost of those resource planning sessions.

Structured Communication

The tools that many contractors rely on for scheduling and dispatching make it difficult to maintain accurate information and to communicate and collaborate in real time.

Communicating is a core function of construction scheduling and dispatching. People across the organization need to know about the schedule as it changes so they can get the right resources to the right place at the right time.

The tried-and-true tools many contractors rely on can be highly ineffective, and using a combination of these tools can compound the chaos, errors and inefficiency.

With specialized software, the way employees enter information into the schedule and the ways they view and communicate that information are structured. Resource status, requests and assignments are documented and visible in real time, eliminating the miscommunication and mistakes that prevent contractors from optimizing their resources.
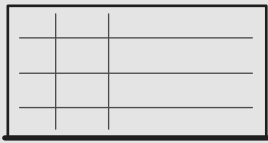
The whiteboard or magnet board, an old standby for decades, can only be seen and updated in one central location. Translating and transferring that offline information to anyone outside of the office creates extra work, the data is inherently outdated, and collaboration is difficult.

Phone calls are easy and immediate, but they usually involve two people. Decisions must then be relayed to others. That introduces lag time and invariably opens the door for miscommunication and mistakes.

E-mails and text messages provide a virtual paper trail, giving them a slight edge over phone calls. Still, these electronic communications are visible only to the selected recipients and must be repeated to others or re-keyed into systems. Extended e-mail and text chains are a recipe for confusion. Errors are common, and there is no structure to or validation of the content against actual jobs, employees or equipment.
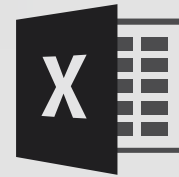
Spreadsheets lack specialized functionality. Filtering the schedule to view it according to the specific needs of individual users is difficult or impossible. Logging resource requests or creating and changing assignments cannot be done with drag-and-drop simplicity. Circulating and keeping track of continuously updated versions are also a challenge, and it is hard to manage security permissions governing who can view and edit the schedule.

EQUIPMENT MAINTENANCE

SCHEDULING & DISPATCHING

FIELD TRACKING

Unified software solutions for scheduling and dispatching, field tracking and equipment maintenance can talk to each other in real time and utilize a common database of jobs, equipment and employees.

Unified Workflows

Optimizing resources across job sites and over time requires continuous collaboration between the office, job sites, plants and maintenance operations. Specialized scheduling software allows everyone with a stake in the schedule to share information easily in real time. When that scheduling software is unified with the applications used to manage field performance tracking and equipment maintenance, the benefits multiply.

• Resource requests made in the field – using the field tracking software – are visible and actionable immediately in the maintenance and scheduling/dispatching software.

• Available and assigned resources – maintained in real time in the scheduling software – are visible within the field tracking and maintenance software.

• Assignments from the scheduling software can be imported directly to the electronic field log.

• The status of each piece of equipment from the maintenance software – when it is down for repairs, available, or scheduled for upcoming maintenance – is visible in the scheduling software.

• Scheduling material orders as well as the employees and equipment that will produce or install those materials within the same software system allows better coordination.

Customizable Views

- **Format** to focus on resources important to specific employees

- **Filter** to remove clutter

- **Group** to keep items together that should be reviewed together

- **Secure** to give the right users access to specific information and capabilities

Employees across construction workflows benefit when they can view the schedule according to their specific requirements and responsibilities.

The limitation with whiteboards, spreadsheets and other static tools is that there is only a single view. A good software solution makes it easy to filter or focus on specific time periods, types of resources or a combinations of the two. Users can custom define these views, store any number of them, and view them when needed on desktop or mobile devices. Security restrictions govern which views can be seen by which employees.

A dispatcher will likely find it helpful to toggle quickly between crew-centric and equipment-centric views
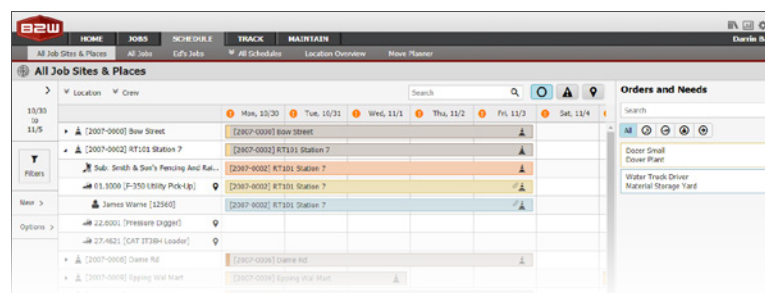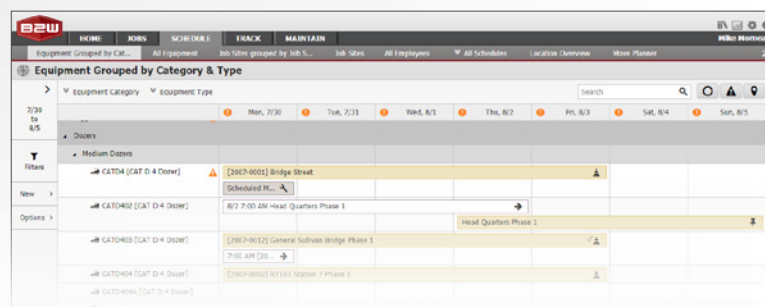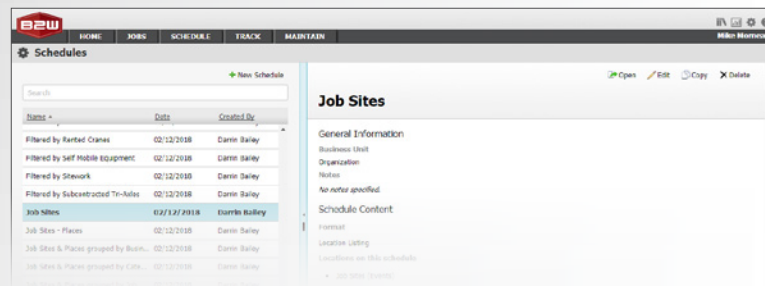
A shop manager may only want to see equipment assignments and needs

A superintendent may want to filter the schedule by job sites and then drill down to see the resources assigned to each one

Customizable Views

Through customizable views, users can toggle to view and manage scheduling information for one-day, multiple-day, one-week or two-week periods. They can also navigate easily as far into the past or future as needed to review prior schedules or plan upcoming requirements.

A detailed one-day view of the schedule with an equipment-centric view and live map
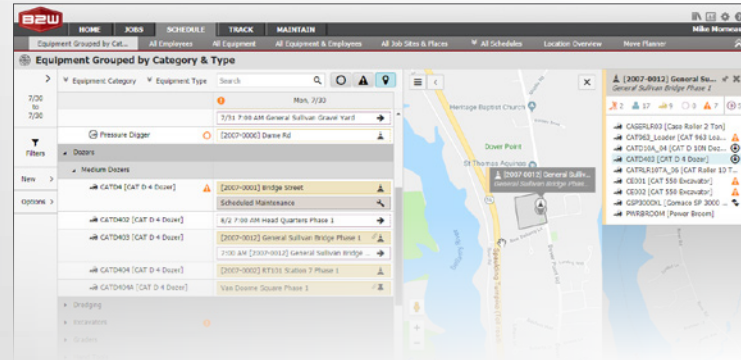
A one-week view of the schedule on a table, with equipment grouped by location
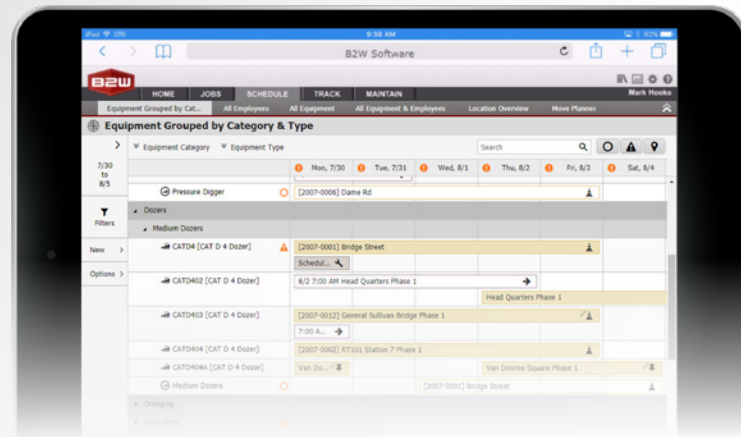
A two-week view of the schedule with a job-centric perspective

Specialized Functionality

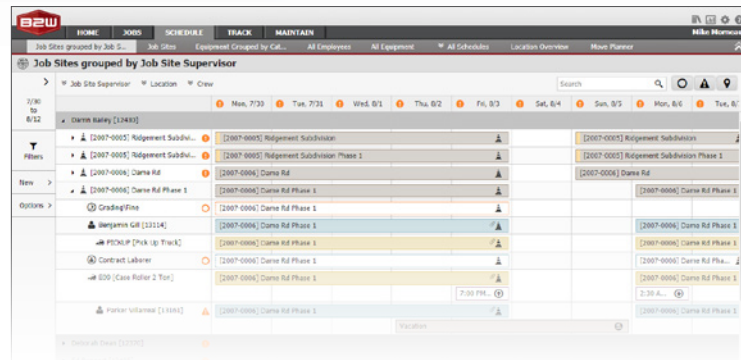Software that is highly specialized for scheduling and dispatching allows employees across the enterprise to manage resources in a consistent, standardized manner and to work faster and smarter.

Rather than reviewing outdated spreadsheets, scribbling information on paper or trying to relay it by phone, text message or e-mail, users check availability and select resources, dates and the job sites within the software. Needs, assignments, notifications and information about moves are entered online. Schedulers and dispatchers edit assignments online with drag-and-drop simplicity. All of that resource related information critical to efficient construction operations is communicated instantly between the field, the office and the shop.

The specialized software also provides schedulers and dispatchers with precise, up-to-date information and assists them in evaluating upcoming availability, potential conflicts and how to deploy resources for optimal efficiency and utilization.
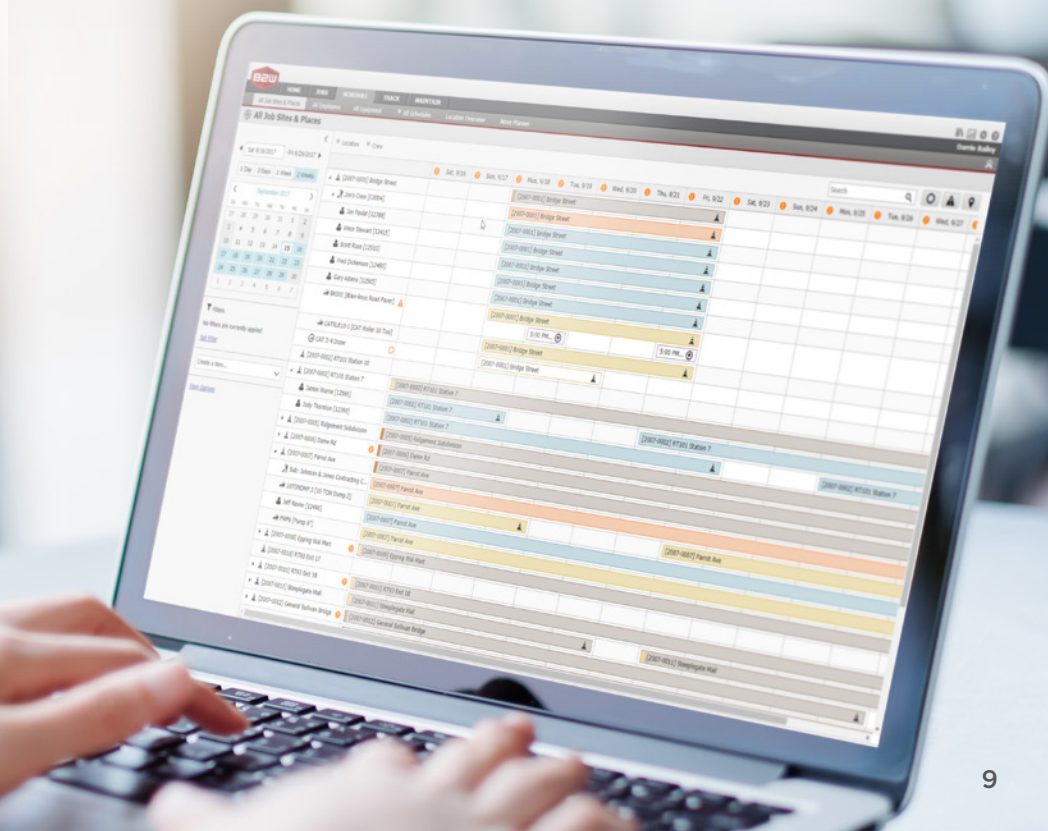
ONE CENTRALIZED, ONLINE SYSTEM

- **Resource availability**
  and needs requests in real time

- **Assigning and editing**
  with drag-and-drop simplicity

- **Generation and communication**
  of equipment moves

- **Identification and resolution**
  of conflicts

Accurate Move Planning & Driver Notification

There's a lot riding on how efficiently a heavy construction company moves its heavy equipment.

A single, centralized schedule provides obvious advantages over trying to piece together information from whiteboards, spreadsheets, phone calls and electronic messages that are frequently out of date or incomplete. Armed with real-time information on where equipment is, where it will be needed and its repair status, schedulers and dispatchers can weigh all their options and deploy those assets in a way that supports project performance objectives in the field and optimizes the efficiency of their transport crews.

The big challenge for transport crews using offline solutions is keeping up with the latest changes. A daily plan for pickups and drop-offs will almost always be revised – sometimes multiple times – during the day. When those changes come at the drivers by unstructured phone calls or electronic messages, it's easy to make mistakes – and mistakes like going to the wrong location or moving the wrong piece of equipment can be extremely expensive.
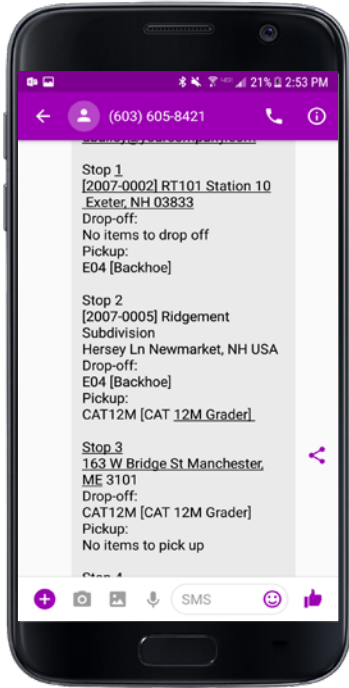
A specialized scheduling solution can alert drivers by e-mail or text messages generated automatically within the software when changes are made. The standardized process and clear documentation eliminate errors and ambiguity.

Assisted Conflict Resolution

SPECIALIZED SOFTWARE ASSISTS SCHEDULERS AND DISPATCHERS BY:

- Looking ahead to identify potential conflicts
- Producing an organized list of the conflicts
- Suggesting resolution options

Conflicts are inevitable in construction scheduling and dispatching. A crew ends up scheduled at two different places at the same time. Two superintendents request the same equipment for the same days. A dispatcher assigns a piece of equipment, unaware that the shop needs two more days for repairs.

Often, these conflicts aren't recognized until they happen. Dispatchers then go into fire-drill mode, sorting through various forms and spreadsheets and making frantic phone calls in search of the best resolution.

Specialized scheduling software provides two big advantages. "Smart" software will search in advance for instances when resources are unavailable, double assigned or being moved to the wrong place and then produce an organized list of these conflicts. The software will also suggest how to best resolve conflicts based on the overall schedule and availability. This doesn't replace human expertise, but it gives schedulers and dispatchers a valuable assist in redirecting assets in the most efficient and logical manner.

Enhanced Reporting & Analysis

LEVERAGE HISTORICAL INFORMATION

Reporting and analysis of scheduling performance can help contractors maximize utilization and efficiency for future operations and inform their strategies for acquiring and deploying resources.

Looking back to evaluate the effectiveness and efficiency of scheduling and dispatching efforts is important. This historical data can give contractors valuable insight into trends and help them identify opportunities to get more out of their resources going forward.

However, many companies forgo reporting and analysis. Their paper-based scheduling and dispatching systems make it a difficult, manual process to look up information, put it together in a logical way and draw meaningful conclusions.

Scheduling software changes that. Contractors get structured, consistent data and the ability to pull it into standard and customized reports automatically. Even though activities like equipment moves and crew assignments took place in the past, the information surrounding that activity remains in the system – it is not overwritten, deleted, thrown away like a printed schedule or erased like a whiteboard.

Combining data from unified software solutions for scheduling and field tracking is especially useful. This enables contractors to create measurements to compare scheduled versus actual utilization over time, across job sites and among resources or groups of resources.

B2W

| HOME | JOBS | SCHEDULE | TRACK | MAINTAIN | Mike Morneau |

Reports and Dashboards

Report Preview

Group by:	Location ▼	Start date:	7/15/2018 📅	View Report
Business unit:	(All)	Job:	(All)	
Equipment category:	(All)	Equipment type:	(All)	
Equipment:	(All)	Include:	(All)	

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Equipment Scheduled vs. Utilized Report For 7/9/2018 (Mon) - 7/22/2018 (Sun)

Description	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
(None)																
BCAT001 [Bobcat] (Rented)	0/0	0/0	0/0	0/0	0/8	0/8	0/8	0/24	0/8	0/0	0/0	0/0	0/0	0/0	0/0	0/8
BK001 [Blaw-knox Road Paver]	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/8	0/8	0/0	0/16
CAT560 [CAT 560 Loader]	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/8	0/0	0/0	0/0	0/0	0/0	0/0	0/8
CAT623 [CAT 623 Grader]	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/8	0/8	0/8	0/0	0/0	0/0	0/24
CATD10 [CAT D 10N Dozer]	0/0	0/0	0/0	0/0	0/8	0/8	0/8	0/24	0/8	0/0	0/0	0/0	0/0	0/0	0/0	0/8
CATRLR10 [CAT Roller 10 Ton]	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/9	0/9	0/9	0/9	0/9	0/0	0/45
CE001 [CAT 550 Excavator]	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/8	0/0	0/0	0/0	0/0	0/0	0/0	0/8
SWNGYRDR [Swing Yarder]	0/7	0/0	0/0	0/0	0/0	0/0	0/0	0/7	0/6	0/0	0/0	0/0	0/0	0/0	0/0	0/6
WTRTRK [Water Truck]	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/8	0/8	0/8	0/8	0/8	0/0	0/40

![B2W SCHEDULE]

B2W SCHEDULE

B2W Schedule provides coordinated analysis, planning, scheduling and dispatching of heavy civil construction resources across job locations and over time. Real-time, role-specific visibility and functionality allow employees throughout the enterprise to communicate and collaborate to optimize utilization of human, mechanical and material resources.

See how B2W Schedule enables collaborative, real-time scheduling of resources to keep jobs on schedule and on budget.

▶ **VIDEO:** 5-MINUTE INTRODUCTION

SCHEDULE A DEMO