

CASE STUDY



DTE Gets Aligned for Sustainable, Continuous Process Improvement



DTE Energy®



PROMETHEUS GROUP

Company



DTE Energy



Detroit, Michigan



Utilities

Challenges

- Scheduling compliance.
- Lack of visibility.
- Ineffective resourcing.
- Out-of-control backlog.

Results

- Backlog reduced 20-25%.
- Efficiency increased 30-35%.
- \$2.7 million dollars' worth of time reallocated to higher value tasks.

DTE Gets Aligned for Sustainable, Continuous Process Improvement

DTE ENERGY

DTE Energy is a diversified energy company involved in the development and management of energy-related businesses and services nationwide. DTE's portfolio includes non-utility energy businesses focused on power and industrial projects, natural gas pipelines, gathering and storage, and energy marketing and trading. In Michigan alone, they service some three million customers.

CHALLENGES

DTE Energy has more than 10,000 employees in utility and non-utility subsidiaries involved in a range of energy-related businesses. With six power plants, one non-regulated unit, and an EES Coke facility coming online, planning and scheduling such widespread operations is no small feat.

Jim Martin, Project Manager in Maintenance Improvement, describes some of DTE's struggles:



Scheduling compliance: Scheduling on an individual work order-by-work order basis was not only time-consuming, but also made it difficult for the team to meet scheduling compliance. And without the ability to take a baseline snapshot of the weekly schedule, they had no easy way to report on schedule compliance.



Lack of visibility: A lack of visibility in the scheduling tool they were using meant DTE employees had difficulty seeing what work was scheduled, in progress, or complete. It was time-consuming to find this information and confirm its accuracy.



Inefficient and ineffective resourcing: DTE staff were often unsure which resources were available and had difficulty confirming the accuracy of their assignments. Sharing personnel between crews was likewise challenging; it was basically impossible in the software they were using.



Out-of-control backlog: The DTE team was contending with a years-old backlog that contained many duplicate or out-of-date work orders, resulting in a repetitive, tedious, time-consuming task to try to sift through it – more work than any person had time for.



Inefficient use of time: One of the biggest challenges was the dull and time-consuming way they had to schedule work on a work order-by-work order basis. With the Planning and Scheduling team working in busy plant environments, they needed more automation, a holistic view, and the ability to edit hundreds of work orders at once.

With these issues, it was a difficult and time-consuming task for DTE staff to understand what work should be scheduled when, based on labor, material availability, and prioritization.

SOLUTIONS

DTE urgently needed a scheduling solution that provided a visual way to see the work orders in their backlog. After reviewing different P&S applications for IBM Maximo, DTE Energy chose Prometheus Scheduler for Maximo based on ease of use, flexibility, simple implementation, and the ability to work with large amounts of data in one schedule.

Jim assembled a diverse committee of Maximo users from across the various plants. They developed a series of Work Management Procedures and Process Maps to bring consistency and scalability to DTE's many plants and facilities and define a streamlined, consistent use of the Prometheus solution across all business units.

From the first demo, Jim says the DTE team was impressed with the way Prometheus Scheduler was built for the real-world work of planning and scheduling. He recalls that during training, the team was supposed to go out for lunch. Instead, staff asked if they could play with the software and try building a schedule. "They were so excited about it," remembers Jim, "that they turned down a free lunch."

Solution components:

Jim explains how all the interconnected modules make it easy for his team to accomplish the process from end to end: "We're performing a pilot with one of our Instrumentation Tech groups. Supervisors assign individuals to the activities based on their availability, which is fed into Prometheus Scheduler from vCalendar..."



“Once they are assigned to the work order in Prometheus Scheduler, the assignments are published back to Maximo. Then these assignments in the vTimeSheet application where the supervisor can edit the hours in the event that the time planned and the time worked are different. Usually, supervisors make these edits once the week is complete.

“Then, they approve the person’s time and publish it back to Maximo. This information is sent to our labor-reporting application. And, in our case, to SAP for the person to get paid.”

Prometheus Scheduler for Maximo: In addition to one-click scheduling, assigning, and filtering, the vScheduler module includes metrics, compliance requirements, and the Daily Worksheet module, which combines the power of Prometheus with the simplicity and familiarity of Excel.

vCalendar: Jim explains, “In Prometheus Scheduler, the vCalendar application offers an intuitive method to manage people’s shifts and availability. Accurate man power availability is key to producing accurate maintenance schedules.”

vTimeSheet: The DTE team found a few small features for the vTimesheet module that Prometheus Scheduler didn’t have – so Solufy is customizing the software to meet their unique needs. vTimesheet makes it easier for DTE’s supervisors to ensure their resources get paid accurately and on time.

vJobPlan: DTE is also in the process of rolling out this module which, Jim says, “will help us clean up our job plans.” It will standardize job plans across DTE and comes with embedded, configurable analytics.

MPower: Soon, DTE will be making full use of MPower, which allows for mass changes in IBM Maximo. Jim says the team is particularly excited about the “feature that allows us to upload new assets and locations into Maximo as new plants come online.”

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“Prometheus Scheduler had every feature we wanted, and some we hadn’t even thought of yet.”

— Jim Martin, Project Manager,
Maintenance Improvement, DTE Energy



BENEFITS

DTE is enjoying widespread benefits from greater communication to more accountability, not the least of which are:

Ownership: DTE's work management specialists own the backlog in for T1-T4 (the next four upcoming weeks). Now, they're able to look in the backlog for preventive maintenance (PM) work orders and schedule the corrective maintenance (CM) work orders at the same time. If the equipment is made available by Operations, the team is committed to getting all the work done at one time. This helps to make the equipment more reliable, prevents unnecessary planned downtime, and cleans up backlogs effectively.

"The DTE team can now group work orders by asset or location and identify all the work that can be done on that asset/location. By getting as much work on as possible on that asset/location when it is available for maintenance, DTE gains efficiency and avoids taking the asset down multiple times unnecessarily," says Gerry Lamarche, Senior Solutions Architect at Prometheus Group.

Flexibility: DTE's supervisors now own the schedule in T0 (the current week). They have the freedom to move the WOs around anywhere in the week, based on equipment availability, resource availability, material availability, or weather.

Metrics: DTE uses Prometheus Scheduler's Auto Lock feature and has it set for Friday evenings. According to Jim, "We opted to use the Auto Lock function because it captures the metrics for the current week that just ended and what is scheduled for the following week. It also recalculates metrics from past weeks based on the labor actuals that are entered by our supervisors using the vTimeSheet module. The Auto Lock job sends out an email that explains what it did. This way, administrators can see if everything ran as expected."

Visibility: Furthermore, the DTE management team now has the metrics to dig deep into when and why some schedules are broken. "In some cases, the schedule was being broken daily," Jim says. "We could also see trends at some plants and some shifts that were more likely to break the schedule. The way you change behavior is to record and publish metrics. What gets measured gets done. If the reason to break the schedule is appropriate, then it can be explained."

Customization: The DTE team particularly enjoys the customizable options and flexibility of the Prometheus Scheduler for Maximo. "Prometheus Scheduler metrics panel is completely customizable, which allows us to display the metrics that we are focused on," Jim says. Furthermore, Prometheus Scheduler has different features to meet the diverse needs of the DTE crew. "In our team, some of our Reliability Supervisors aren't as tech savvy and might only need to see what's scheduled for the day. The Daily Worksheet feature is great for them, as it is a simpler version of seeing the schedule."

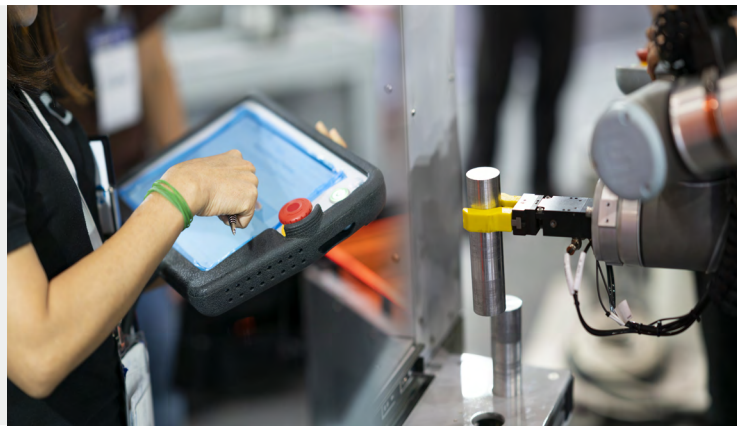
RESULTS

DTE continues to track the improvements since implementation. Three of the major quantifiable results they have recorded include:

- 1. Backlog reduced by 20-25%:** The way Jim tells it, “Prometheus Scheduler provides us with clear view of the work orders in our backlogs, the good and not so good. It’s showing us very clearly where the junk is and where we need to clean up our backlog.” With this visibility, they can now quickly identify WOs that have already been completed or are no longer required and can close them directly in Prometheus Scheduler. They’re using these features to clean up backlogs that have years’ worth of outdated and inaccurate information in them. Today, Jim estimates that the backlog has been reduced by roughly 20-25%.
- 2. Efficiency increased by 30-35%:** As a result of a clean backlog and streamlined solutions that make daily tasks faster and easier, Jim estimates
- 3. Over \$2.7 million dollars in time reallocated:** Now that the team can update hundreds of work orders at once, Jim’s team has reduced their time in the application by thousands of hours per year – which means they can reallocate that time for more important work, like being out in the field. For a team of 50 planners, schedulers, and supervisors at an average salary of \$75/hour, at eight hours per day, five days a week, and 52 weeks of the year, this equals approximately 36,400 hours (or \$2.7 million dollars’ worth of time) that they no longer have to spend scheduling.

Learn more about how Prometheus Group can help your organization today.

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About Prometheus Group

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