



3 | OPERATIONAL EFFICIENCY

4 WAYS TO EMPOWER THE MAINTENANCE PLANNER



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BEND-TECH GROUP

Bend-tech Group delivers a tailored design, engineering and fabrication service which empowers our customers towards operational safety, efficiency, and excellence. Intelligent systems and processes propel our consultative approach towards problem solving, it is imperative we create comfort and certainty. Service that takes control of problems and accountability puts solutions in motion, we have learned through a deep understanding of our customers that this is what they need.

Being global providers of designed and engineered products, services and solutions has allowed us to develop cross-industrial expertise that has galvanised our internal processes and put us at the forefront of technology and innovation. Our people are what we believe sets us apart, our culture of learning, understanding and excellence means the whole organisation progresses in synchronicity. Our team makes an impact internally, as well as throughout all our customer interactions.

Over 30 years of delivering intelligent design, custom-certified products and services has taken us across many industries and into many countries. We have provided our industry leading solutions across the Mining, Defence, Fabrication, Marine, Rail and Oil and Gas industries globally.

B | BUILT BETTER
BY BEND-TECH



OPERATIONAL EFFICIENCY

4 Ways to Empower the Maintenance Planner



01

COMMUNICATION,

communication, communication



02

KNOWLEDGE

management



03

SUPPLIERS

that partner with maintenance success



04

MORE EFFECTIVE

maintenance planning

THE POWER OF THE PLANNER

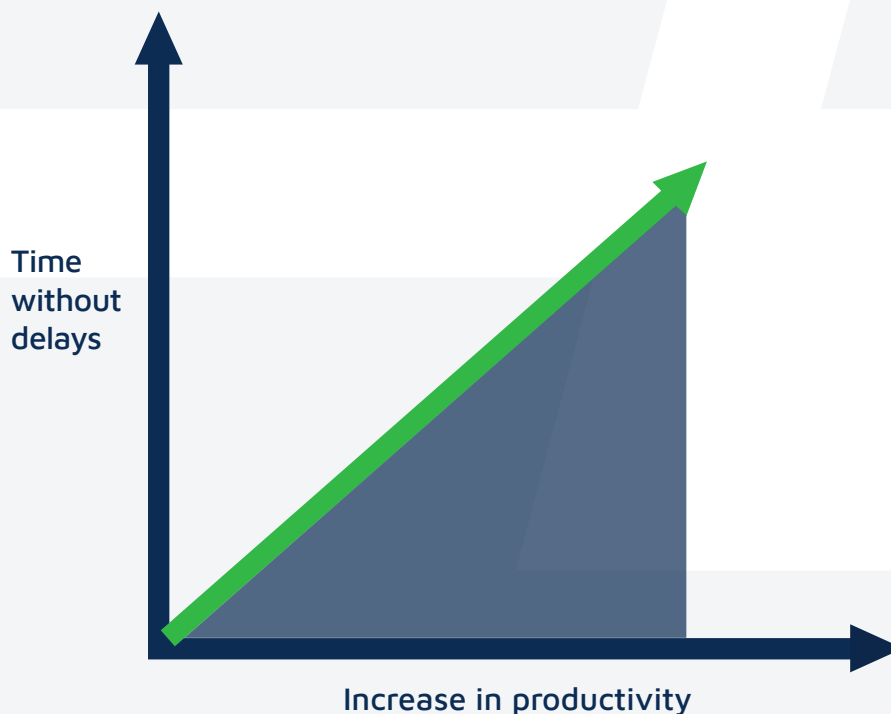
Maintenance planning improves work force productivity and quality of execution by anticipating and eliminating potential delays and breakdowns of equipment and crucial processes. Depending on requirements, planners are tasked with coordinating labour, parts, materials, equipment access, and suppliers to ensure production can remain on schedule.

Maintenance planners and schedulers enable reliable plant capacity and production. The correlation between a reduction in delays due to effective maintenance and an increase in production is linear, the ongoing predictive productivity hinges on the maintenance planner executing successfully, ensuring the plant is serviced and free from unscheduled downtime.

Planning pushes hard towards productivity. However, it can be dangerous to do so if there is not a quality focus by the staff, the organisation and the suppliers executing and delivering work. If the work or process is not effective, it does not matter how efficient it appears to be. High quality processes and output from start to finish creates long lasting benefits and enables future execution of maintenance to be efficient and effective.

Effective planning provides dramatic, tangible results creating an increase production and organisational efficiency. The work force is freed-up and can be re-allocated to value adding activities – the transformational benefits to the bottom line can ultimately be calculated, measured and reconciled with the effectiveness of the maintenance planner.

REDUCING ON-SITE DELAYS IN PRODUCTION HAS A DIRECT CORRELATION WITH INCREASES IN PRODUCTIVITY



Source: Maintenance Planning & Scheduling Handbook



PLANNING FOR ORGANISATIONAL SUCCESS

Successful planning involves stakeholders and departments working together to enable operational efficiency. It requires a consistent, reliable strategy and collaboration of processes from work order notification to final execution. The idea of a maintenance strategy is to maximise the plants lifecycle and achieve optimal operational output. For this to be possible planned maintenance needs to be scoped and executed correctly the first time, every time.

The unknown must always be planned for to ensure unnecessary delays don't disrupt site output. Sickness, unplanned holidays and breakdowns are part of life. Contingency planning is an important skill and will save a lot of headaches that result from unexpected occurrences.

Planners need to have all the necessary information in front of them, this means master data and updates should always be uploaded to a central system, embedding crucial information for the next round of maintenance, scheduled or unscheduled. When a planner is short-handed with data, plans, drawings and information they can't successfully execute. Time is wasted finding and developing the correct information for down-theline stakeholders to execute on. Sharing knowledge is sharing the power to successfully complete planned maintenance.

Communication is key between all stakeholders, breakdowns in communication between site, planners and suppliers will have negative effects on production, efficiencies and ultimately profits. The maintenance planning machine needs to be well oiled with collaborative commitment to the process.

01 COMMUNICATION, communication, communication

Communication is a vital component in coordinating and executing planned maintenance. Maintenance planners and schedulers have frequent lines of communication with on-site superintendents and supervisors, other planners, and most frequently, suppliers.

Planners must keep a finger on the pulse of what is happening on-site, and this openness of communication must go both ways in order to achieve operational efficiency. Teams must be synergised and nimble to changes.

Research conducted into maintenance planning found that communication was the highest ranked, most important planning and scheduling factor. Furthermore, planners communicate most frequently with their supplier's, highlighting the importance of the planner-supplier relationship and its correlation with effective maintenance. Quality suppliers with strong, reliable communication skills, that are available and mobile to address site requirements are what planners need to be successful.

Planners need to be able to execute effectively the first time. Deadlines are often tight, meaning fast, consistent communication with their suppliers, managers and teams on-site is essential to coordinating work orders and the associated scopes, plans and drawings. This efficiency leads to effective final implementation and execution.

COMMUNICATION IN PRACTICE

A maintenance planner who participated in the research outlined an incident when communication had broken down between the planner, site and the supplier.

A work order had been issued for a set of maintenance components but some of the information was incorrect or not supplied. There wasn't enough communication between the teams to ensure the information was correct and complete, and the fabricated parts were fit for purpose. When the parts got to site, they didn't fit, and the maintenance process had to start again to organise the correct parts that were required to keep producing.

Although the situation was rectified, this caused unnecessary delays and inefficiencies on-site. Had the teams clarified all the necessary information from the start, this would have been avoided.

“RESEARCH CONDUCTED INTO MAINTENANCE PLANNING
FOUND THAT COMMUNICATION WAS THE HIGHEST RANKED,
MOST IMPORTANT PLANNING AND SCHEDULING FACTOR”

02 SUPPLIERS

that partner with maintenance success

Suppliers that understand the need to partner their services with a planner's success are vital to on-site productivity. When a work order is issued, suppliers need to assess the scope, drawings and lead time and ensure they execute accordingly.



COMFORT

Suppliers that partner with planning success take ownership of their role with a system that holistically provides a solution. This creates comfort and empowers the planner towards their goal of on-time, first time maintenance execution.

CERTAINTY

Being available, mobile and equipped provide on-site consultations and scanning to ensure drawings and scopes of work are correct are invaluable. This gives certainty to the planner by providing an avenue for accuracy and information creation.

CONTROL

Design and engineering capabilities are crucial to providing certified and compliant maintenance order fulfillment and solutions. This gives the planner control over the end result and the quality of the final product.

MOTION

Enabling processes and production to continue on-time is a crucial to successful planning. Suppliers that provide reliable pathways towards this goal keep the planner's schedule moving forward.

IMPACT

Planned maintenance that is executed on-time consistently leaves an impact on the bottom line. Productivity receives a boost which is compounded by the benefits of the efficient use of resources which are freed up due to effective maintenance planning.

03 KNOWLEDGE management

Maintenance planners will often need to share and access information relevant to current or past maintenance. Of the planners surveyed 25% said that required information is not always readily available or stored in the required areas of their internal database.

A lack of information creates unnecessary delays; the planner will need to find or develop new information to execute on a work order. Managing organisational knowledge is as important as managing all other organisational resources (Darroch, 2005).

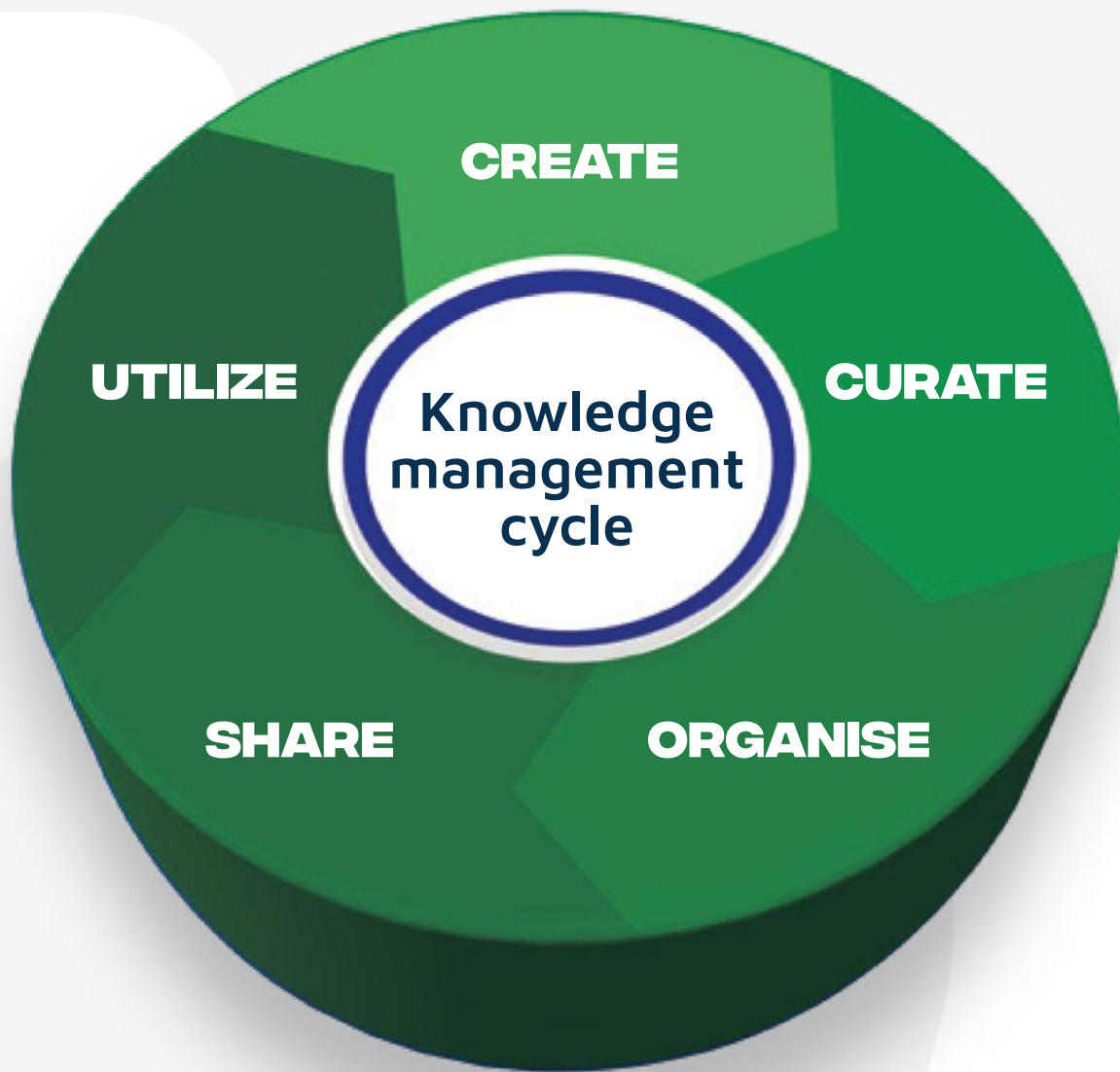
WHAT HAPPENS WHEN YOU DON'T MANAGE KNOWLEDGE?

- Inefficiencies and decreased productivity
- Inadequate management support
- Improper planning, design, coordination, and evaluation
- Inadequate skill of knowledge managers and workers
- Problems with organisational culture
- Weakened organisational structure

Knowledge management promotes an integrated approach to identifying, capturing, evaluating, retrieving, and sharing all of an organisation's information assets (Jahaspapa, 2011). These assets may include databases, documents, policies, procedures, and previously un-captured expertise and experience in individual workers. Fundamentally, knowledge management is about making the right knowledge and sources of knowledge available to the right people when they need it (Jahaspapa, 2011). Given the importance of knowledge to efficiency and productivity, it's critical that organisations manage their knowledge across teams and departments.

Stakeholder buy-in is the key to the success of managing organisational knowledge. Knowledge can often exist in the minds of team members in the form of experience, expertise and memory. Being able to transfer this knowledge into more tangible, readily available forms that can be executed on will determine how robust the shared organisational knowledge framework will be.

The benefit of such success is invaluable to efficiency and productivity. Undertaking a comprehensive Knowledge Management implementation program is necessary to successful ongoing adoption and long-term impact.



“ **MANAGING ORGANISATIONAL KNOWLEDGE IS AS IMPORTANT
AS MANAGING ALL OTHER ORGANISATIONAL RESOURCES** ”

04 MORE EFFECTIVE maintenance planning

Developing and improving upon the process is how planners grow and produce greater results. Understanding where pain-points exist and where something can be streamlined is key to optimisation. The following are areas which planners can review and assess ongoing to improve their output and results.

BUILD A CULTURE OF TEAMWORK WITH THE SUPPLY FUNCTION

- Communication
- Understanding
- Execution
- Collaboration
- Organisation

The supplier can make or break the successful execution of on-site maintenance. Developing a strong, mutual relationship with the supply function will ensure there is communication, trust, organised expectation and the ability to complete planned maintenance on-time.

MEASURE RESULTS AND PROCESS ADHERENCE

- Measure
- Review
- Optimise

Being data-driven and dialled into the effectiveness of processes and making the required changes produces greater results. The planner should have high expectations of all stakeholders and be supported by reliable execution.

FORWARD SCHEDULE TO AN AGREED PERIOD

- Stick to your scheduled dates
- Ensure stakeholders are on board
- Execute accordingly

To enable organisational efficiency, dates and deadlines must be adhered too. All stakeholders need to be onboard and accountable to provide a pathway to successful execution.

ANALYSE COMPLETED WORK AND CONTINUOUSLY IMPROVE

- Task Duration
- Materials or quantity of materials
- Work steps out of sequence
- Labour requirements under/ over resourced
- Supplier requirements
- Resource allocation
- Master data changes to strategies and plans

Analysing, optimising and improving will make often difficult planned maintenance easy. Ensuring all stakeholders are engaged and materials, information and resources are available. Supervisors and suppliers need to partner with the successful execution of planned maintenance and management needs to empower their planners towards efficiency.

Source: Asset Management Consultants

PLANNING YOUR MAINTENANCE

Our on-site consultation, 3D scanning, design and engineering as well as our fabrication as enabled us to empower maintenance planners around Australia towards operational efficiency. If you want to discuss how you or your team can streamline their processes and partner with a supplier who understands the importance of effective planned maintenance, get in contact with the team at Bend-tech.

ABOUT US

We deliver sustained value by providing cutting edge solutions through collaboration and innovation. For more than 30 years we have delivered intelligent design and custom-certified products and services to the Mining, Rail, Fabrication, Marine and Oil and Gas industries across Australia and around the world. We have achieved this through a deep understanding of our customers and their requirements as well as innovative and industry leading design, engineering and construction.

Sources:

Assetivity. (2019) Asset Management Consultants.

5 tips for more effective Maintenance Planning and Scheduling.

Darroch, J. (2005) Knowledge management, innovation and firm performance. Journal of Knowledge Management. (9)3, 101-115.

Jashapara, A. (2011). Knowledge management: An integrated approach (2nd edition). Pearson Education.

Palmer, D. (1999). Maintenance Planning & Scheduling Handbook. 3rd Edition. McGraw Hill.

TAKE NOTEA large grid of graph paper for taking notes. The grid is composed of small squares and is divided into three horizontal sections by two light gray lines. The top section is the largest, followed by the middle section, and the bottom section is the smallest. The grid is intended for students to write their notes during a lesson.

EXPERIENCE OUR CONSULTING, DESIGN AND ENGINEERING SERVICE

Projects and the associated challenges often require custom solutions which our **CDEC** system facilitates. Consultation, Design, Engineering and Construction is our holistic approach to solution development, making maintenance on-site safe, efficient, and easy.



CONSULTATION

We come to you and visit your site to get a hands-on feel for your project. The aim of our consultation is to listen to and understand your requirements. If the project requires it, our 3D scanning capabilities will streamline measurement and data capture. This approach allows us to discuss your problem on-site, possible solutions, and the benefits we can offer.



DESIGN

After the consultation we go back to our design team to begin the development of your custom solution. Our team produce designs in CAD Design complete with all drafting documentation ensuring an advanced manufacturing process.



ENGINEERING

Once the design is approved, we begin the engineering process. This ensures that the right material grade is used for your project to guarantee structural and functional integrity. We provide full certification that includes WLL, load ratings, integrity reports as well as certification plates and identifications. We design and engineer all our solutions to ensure full compliance with Australian standards.

Our engineering department includes 9 draftsman and 14 engineers. We are experienced in the design and development of complex mechanical engineering analysis and solutions.



CONSTRUCTION AND FABRICATION

Our industry leading 10000 sq/m facility in Welshpool, Western Australia is armed with highly qualified consulting, drafting, engineering and fabrication personnel dedicated to manufacturing precision, engineered high performance industrial solutions.



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