

Introduction to Plant Wellness Way EAM System-of-Reliability

There is no shortage of enterprise asset management (EAM) strategies and methods in use, yet incredibly few companies have great operating asset management performance. Something is wrong with the way most organizations go about managing their physical assets. What Plant Wellness Way EAM does that no other EAM methodology has done before is to focus on building a complete business system to get world-class asset management performance and profits.

Plant Wellness Way EAM methodology lets you design and build a holistic life-cycle system for enterprise asset management that delivers world-class plant and equipment reliability and locks it into place forever. With this methodology, you optimize production plant performance through the correct selection and application of financial, project design, operations, maintenance, risk management, and reliability engineering. You use effective methods, techniques, and tools that get outstanding equipment reliability and maximum life-cycle operating profits by creating risk-free operation. You pick the best strategies, tactics, and practices to give your plant and equipment failure-free life. The Plant Wellness Way's methods and techniques use science, accounting, and math so that its answers deliver sound, highly profitable, and defensible business choices. Yet the methodology is straightforward to follow so that every operation can use it.

Building an EAM System of Reliability

Outstanding physical asset reliability is a formulaic result that you can deliver in any operation. We know what to do to make any industrial asset outstandingly reliable—don't let its parts fail. Getting highly reliable equipment is a certainty because reliability is simply the result of meeting achievable engineering outcomes. When you use the methods that keep machinery parts'

microstructures healthy, you'll get world-class plant and equipment reliability. It's impossible to do that unless you build a holistic, integrated, reliability creation system in your business and across the asset's life cycle—this understanding is what has been missing in the way organizations have been going about physical asset management. You'll get outstanding reliability when your business uses a business-wide, life cycle long system for creating reliability. World-class plant reliability cannot be achieved any other way. To do so, you'll need a methodology that is sure to give you a lifetime of equipment health and wellness.

An operation that is built to be a system for creating reliability is structured so it that optimally achieves that purpose. When your company is a “system-of-reliability”, you engineer and use your business processes to get utmost operating success. A Plant Wellness Way system of reliability learns how to perform better. It actively generates new and better solutions and ensures that they become the new company standards that your people use. All successful methods and solutions are taken into your business so that you accelerate ahead of your competition with powerful innovations, new knowledge, and the excellent skills of a masterly workforce. With the Plant Wellness Way, there is no limitation on the achievement of world-class maintenance, reliability, and operational performance. Your day-to-day struggles disappear as your processes create the world-class reliability that you need to achieve Operational Excellence.

The Plant Wellness Way is used to design and build a business-wide, life-cycle system for world-class physical asset reliability. It puts a systematic solution to create exceptional operating asset performance into companies. A Plant Wellness Way operation makes world-class reliability a part of its business DNA. Its operating assets are highly reliable because all its people understand, do, improve, and sustain a system of reliability that can only produce outstanding production from outstandingly reliable assets.

Plant Wellness Way Overview

A great enterprise asset management methodology will rapidly deliver sure physical asset management success. The accompanying chapters introduce and explain how to create world-class reliability by designing and then building the necessary integrated asset management system with its highly effective processes. You'll be able to build a combined business and life cycle EAM system to keep your plant and equipment highly reliable and generate optimal operating profit.

The simple Plant Wellness Way techniques and templates use regular professional office software and computers. You need to know only the basics of engineering, risk management, and financial management to use the Plant Wellness Way. You do not require proprietary RAMS (reliability, availability, maintainability, safety) modelling software that only mathematicians, degreed engineers, and specialists can understand. When operations do have access to reliability analysis and maintenance and operations optimization tools and software, they can be used to better understand which options will be most effective. But you do not need such programs and software to benefit from using the Plant Wellness Way methodology. Use the PWWEAM approach and the accompanying spreadsheets introduced and explained in the following chapters to develop sound and powerful operations, maintenance, and reliability improvement strategies and to make great choices for outstanding equipment performance.

Three premises guide the Plant Wellness Way. The first is that equipment only stops after a critical part fails. The health of every critical part determines your equipment performance. Keep those components strong and healthy, and your equipment will be exceptionally reliable. This premise is the cornerstone of all enterprise asset management success. Its achievement is what the

Plant Wellness Way EAM delivers, and it is fundamental to creating Operational Excellence and getting outstanding operating and maintenance results.

The second premise is humans will make errors. We destroy equipment reliability by our misunderstandings and mistakes. Whenever possible, remove the “human element” from your processes. If people are necessary for your business processes, then their degree of competence, interest in doing better, level of curiosity, level of dedication, desire to learn more, and many other normal human traits cannot be left to chance. As you eliminate and control more human errors, your plant and equipment will run more successfully and failure-free. Whenever possible, use technology to replace humans. When people are necessary, use technology to help them achieve excellence and assist them in doing great work. When people do tasks where technological assistance is not available, teach them to be experts in their duties and organize them into a collaborative team of experts so they use right knowledge and make fewer mistakes.

The third premise is that your organization wants to be a world-class company, built of highly reliable processes producing top-class results that stakeholders and customers are delighted to have. Poor plant and equipment reliability is a business process failure that prevents business success. As plant and equipment are built, used, and maintained more precisely, work quality will be higher, the risk of failure will be lower, production costs will fall, and delivery time will be shorter. Customers like that and will buy your product, thereby making the business a success.

Parts, people, and processes—these are what make your products and services. Each one is important to business performance and must be nurtured to achieve excellence if a company is to be a leader in its field. Figure 0.1 situates the Plant Wellness Way among the methodologies

that are currently available for asset reliability growth and shows the direction in which it will take a business.

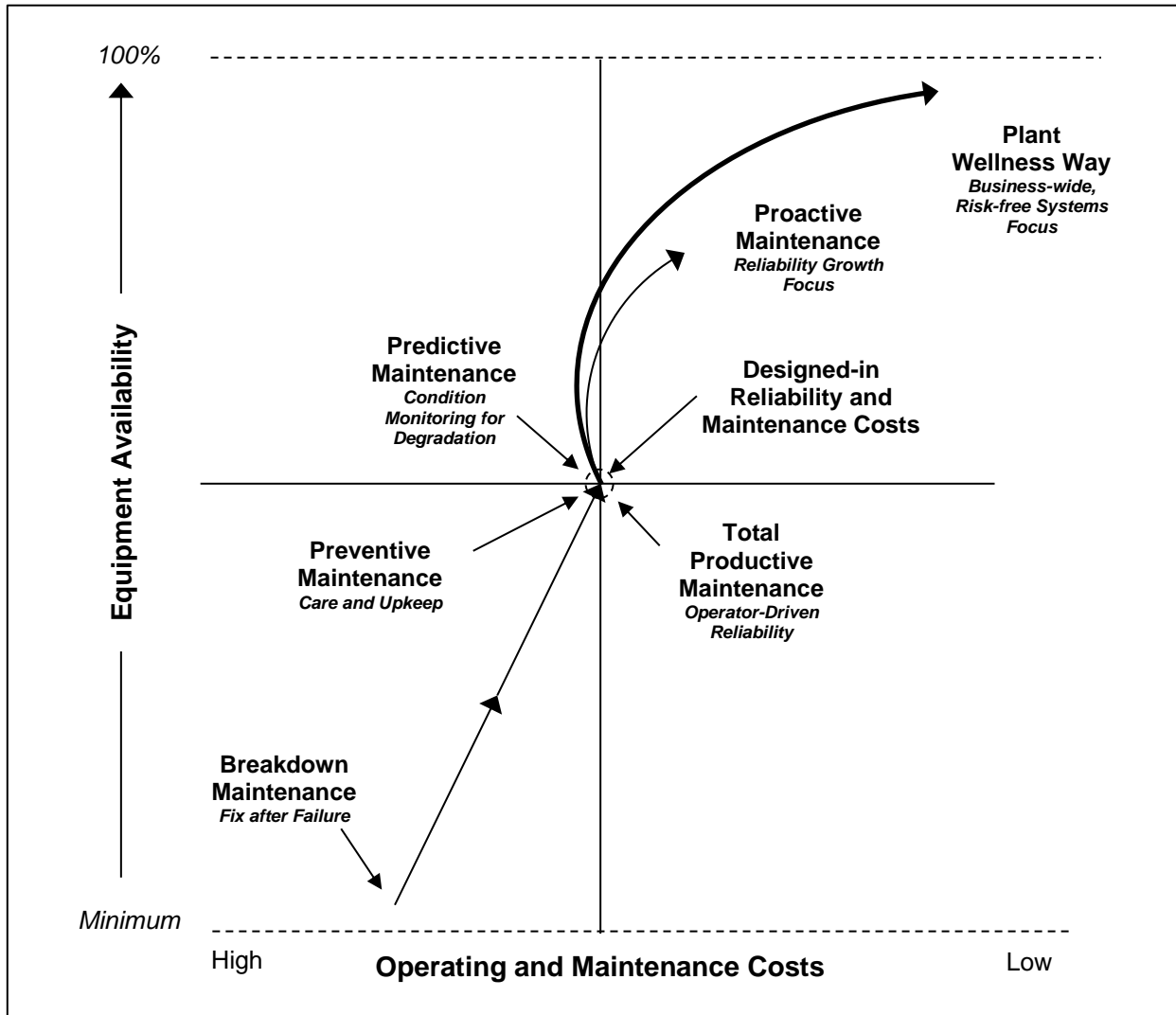


Figure 0.1—Climb to the Heights of Enterprise Asset Management Success

The sole purpose of the Plant Wellness Way is to deliver outstanding physical asset reliability and operational performance. Zero failures in your processes and work are the aim. You do not seek acceptable failure rates for plant and equipment—the objective is to have no failures whatsoever during the service life of the asset. You identify and implement effective asset management strategies that optimize operating profits using the fewest resources for the least cost.

A business that needs its plant to operate trouble-free for five years will make different choices than a business that wants a 30-year trouble-free service life. The PWWEAM methodology caters to all scenarios while helping each operation tailor the best solutions to their specific situation.

The Six IONICS Processes

The life cycle asset management strategies and solutions that you apply are the outcomes of the six IONICS processes¹ of the Plant Wellness Way EAM methodology:

- **Identify** business and operational risks from asset failure
- **Order** risks by criticality importance
- **Negate** component risks
- **Install** risk control solutions
- **Cultivate** chance of process success
- **Synthesize** continual improvements

Figure 0.2 is a simple flowchart of the Identify – Order – Negate – Install – Cultivate – Synthesise processes used to create a lifetime of highly reliable plant and equipment. Work through them one by one. None is difficult.

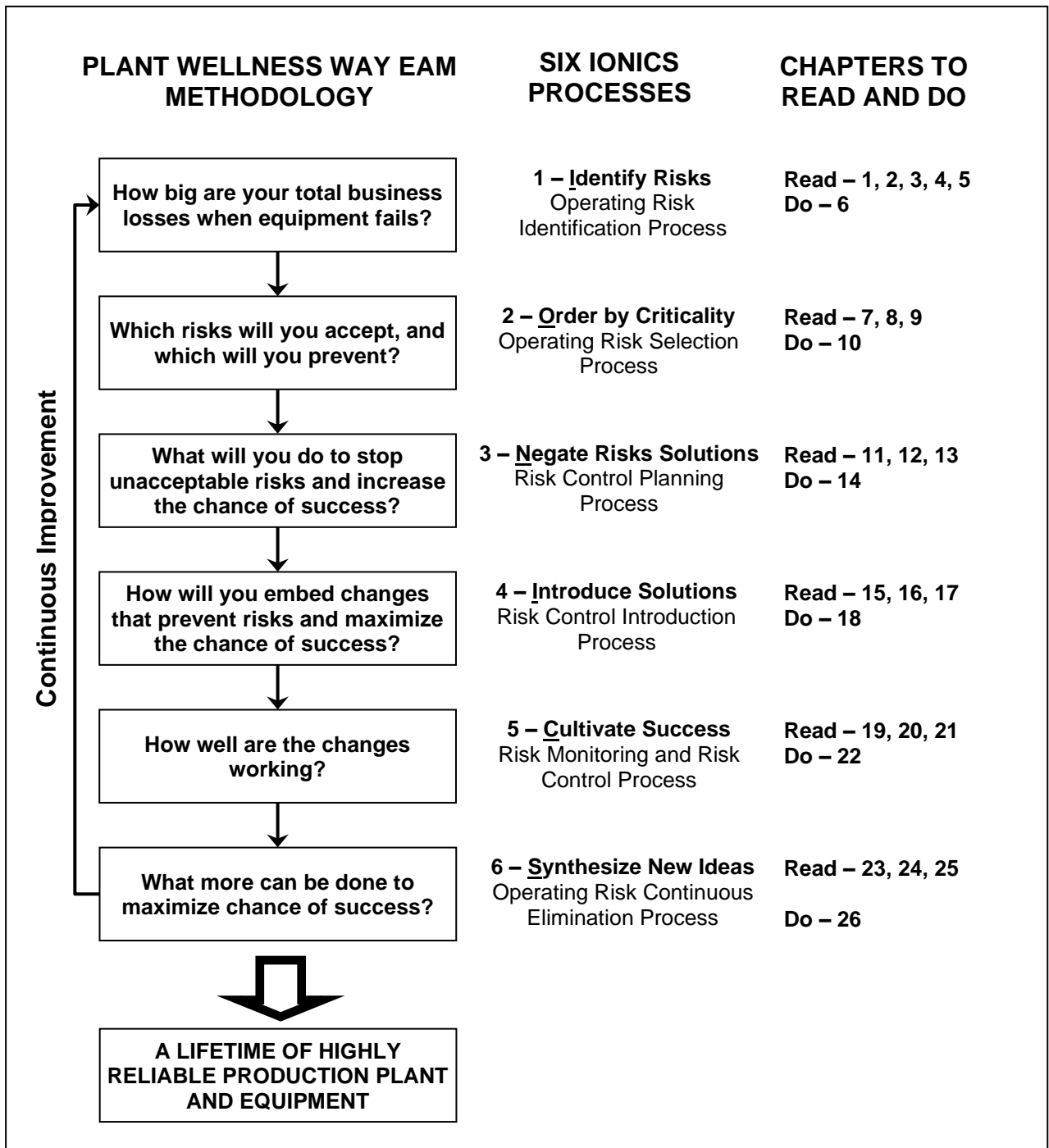


Figure 0.2—The Plant Wellness Way Asset Management Methodology

By adopting the Plant Wellness Way as your company standard, you bring an enterprise asset management philosophy and methodology into your organization that helps you do the following:

- Fix the problem, not minimize its symptoms
- Optimize the operational value-added streams by eliminating plant and equipment risk
- Remove all physical asset failures with best component failure prevention practices
- Target world-class quality results with accuracy-controlled work tasks
- Use precision maintenance and precision operation on all physical assets
- Normalize exactly how to achieve outstanding reliability and production success
- Establish a culture of world class reliability in your company

These seven points form the acronym FORTUNE, and that is what you get from reliable assets that deliver least operating costs and outstanding operational performance. You improve asset maintenance and plant operations processes and practices to always deliver world-class production asset performance. When a company adopts Plant Wellness Way EAM, it cannot stay the same—it becomes a world-class operation because it does world-class practices.

Plant Wellness Way EAM Vision

The Plant Wellness Way EAM system of reliability methodology...

Maximizes operating profit by...

Creating a holistic, life cycle long and business-wide system to...

Proactively eliminate equipment failures through...

Controlling work process variation to get only high-quality results that...

Deliver failure-free components and equipment by...

Creating and sustaining ideal parts' microstructure health conditions and...

Markedly reducing human error, thereby...

Ensuring high precision quality results that...

Produce world-class plant and machinery reliability for...

The least engineering, operations, and maintenance commitment to...

Give the lowest plant and equipment risk profile and life-cycle costs, so that...

You get world-class operating performance and profits forevermore.

All the Plant Wellness Way concepts and techniques needed to build a complete system for successful enterprise asset management are covered in the accompanying chapters. You can have the know-how to get world-class asset management and reliability results. The six IONICS process steps are introduced and explained in sequence. They each cover relevant key business, engineering, and reliability concepts and principles of the PWWEAM methodology. Use the learning to help you climb a sure and safe path to the pinnacle of outstanding plant and equipment performance. The methodology is built on solid science, physics, and math, so your decisions are grounded in facts and reality.

Figure 0.3 shows how using the Plant Wellness Way² puts people, processes, capital, and culture together in a never-ending cycle of innovation and learning that lifts your organization to the heights of Operational Excellence by making excellence the normal way of doing business. Follow this methodology and use its techniques and templates to climb to world-class performance by creating, designing, and building a holistic, integrated, lifetime system for world-class reliability. With Plant Wellness Way EAM good fortune awaits you!

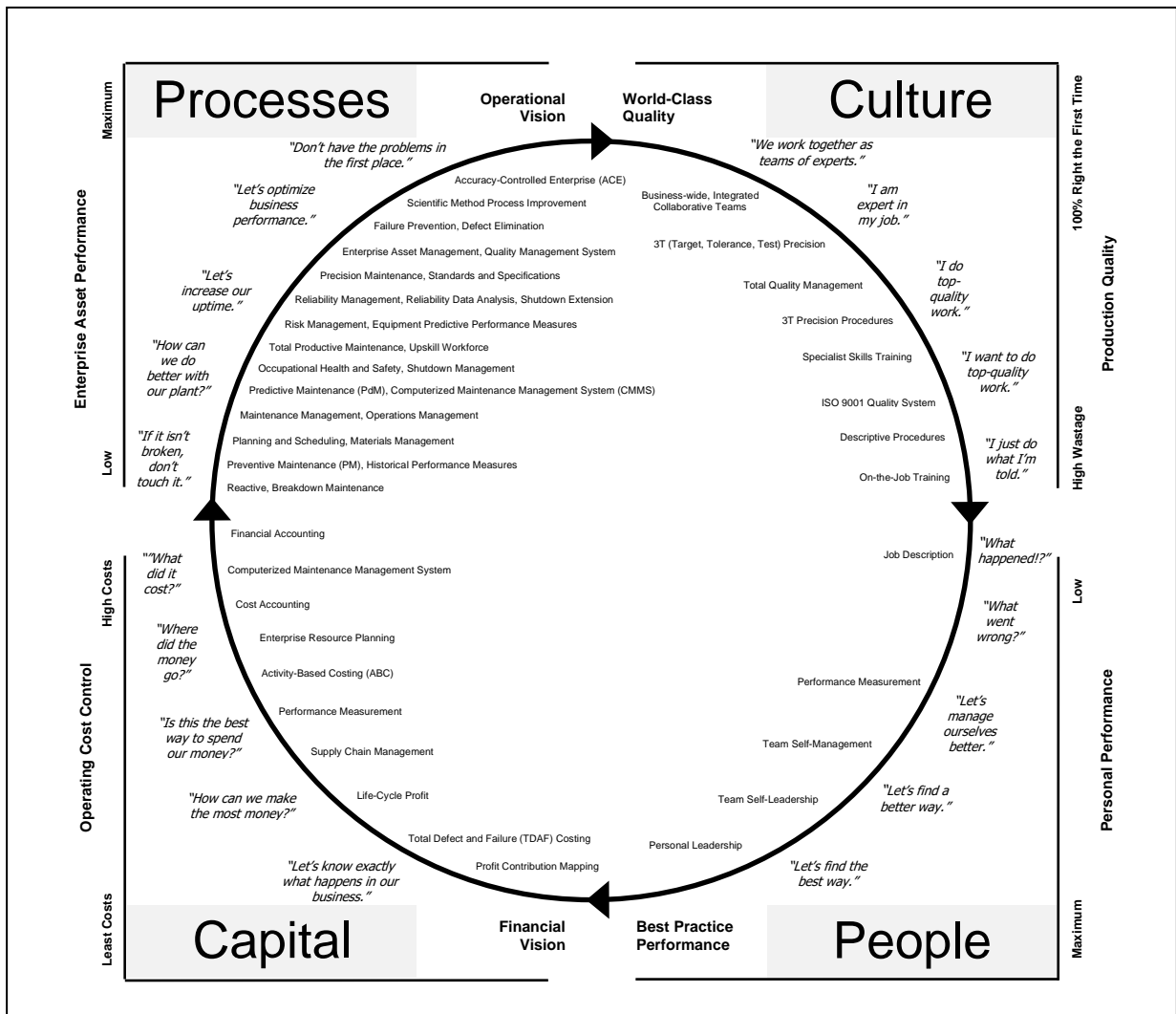


Figure 0.3—The Plant Wellness Way EAM System-of-Reliability Cycle

FOOTNOTES

1. Thank you to Bruce McLaughlin for his contribution to the development of the IONICS and FORTUNE acronyms.
2. Thank you to Peter Brown, formerly of Industrial Training Associates in Perth, Western Australia, for suggesting the “Plant Wellness” name.