

# How Big Fortunes Are Made with the Plant Wellness Way to Enterprise Asset Management Excellence

*Let a Plant Wellness Way EAM System-of-Reliability halve your Annual Maintenance Costs*

A Plant Wellness Way enterprise asset management system is a powerful solution for world class enterprise asset management (EAM) success. There are three scenarios when it is justifiable for a business to adopt PWW EAM as your company's EAM methodology.

1. When you have already spent lots of time and money trying to get world class plant and equipment reliability, but your site is still well short of that level of performance.
2. When you do not have the time or money to lose on the quest to climb to world class production asset reliability and performance and your site must be successful on the first attempt.
3. When you are unsure how to get your site to deliver world class production equipment results, but your operation must become that good for your company to survive in business.

Justifying the cost to adopt the Plant Wellness Way (PWW) to get world class enterprise asset management results is a dilemma facing every organization who wants to use it. How can you make a business case to spend twice as much money to build a holistic Plant Wellness Way EAM system than what it costs to use other EAM methodologies? The answer is in the lasting extra operating profits that PWW brings you compared to what can be gained with less successful EAM solutions.

PWW uses life-cycle risk elimination to eradicate plant and equipment failures by creating outstanding parts reliability. It makes you design and build a business in which your machinery and equipment go right all the time. The fortunes saved from production and equipment failures you don't have become banked operating profits. The expected savings give you a way to justify using PWW by estimating the return on investment (ROI) from the new fortunes you can get if there were no operational failures in future because you follow the Plant Wellness Way.

When you have a fully developed Plant Wellness Way lifetime reliability system in your operation you can expect world class reliability from your production plant and equipment. World class industrial, manufacturing, and process-based operations can reach 1% Annual Maintenance Cost to Replacement Asset Value (RAV) ratio. If you are now at 3% annual maintenance cost vs. RAV, you should expect to get down to a ratio of 1.5% with PWW. On a USD \$100,000,000 asset base, spending USD \$3,000,000 on maintenance per year, expect to save USD \$1,500,000 annually. If you are at 10% RAV the Plant Wellness Way will drive that ratio down to as close to 1% as is humanly and technologically possible to achieve. Certainly, if your operation is a long way from world class, a 50% reduction in annual maintenance cost vs. RAV ratio should be your minimum expectation from adopting the Plant Wellness Way.

This gives you a second means to estimate the ROI from the Plant Wellness Way by using the expected improvement in the maintenance cost to Replacement Asset Value ratio. The lower RAV ratio lets you gauge the worth of the financial value and operational benefits that PWW can bring to your company. If you already are in a world class operating site with a 1% annual maintenance costs to RAV ratio, then PWW will push you far out in front of the rest of your industry and keep you there.

How is it that by using PWW you can be so radically more successful and profitable? It's because the Plant Wellness Way will only let you do what is the most profitable thing to do. Adopting PWW causes the following five outcomes to happen for a company.

1. The frequency of equipment failures drops to a third or less of what they now are.
2. Supply chain vendors, suppliers, and sub-contractors eliminate the future operating risks that they pass to you, thereby giving you lasting, extra operating profits.
3. Capital project designers maximize your operating profits with every choice they make.
4. The Operational processes are optimized so that your plant and equipment intentionally make the most operating profit for your company.
5. The Maintenance processes optimize production asset reliability so that your plant and equipment intentionally cost the least to use.

## Making a Business Case to Test Plant Wellness Way EAM in Your Operation

The expected halving of annual maintenance costs in operations with 3% or higher annual maintenance cost to RAV ratio is a powerful business case to justify testing and trialling the Plant Wellness Way in such companies. A 50% reduction in maintenance costs lets you easily gauge the size of the potential new operating profits generated by using PWW.

You do a test of PWW only on one production asset. A trial on one substantial equipment item is enough evidence to confirm the ROI and prove the viability of PWW. To conduct a PWW trial at a site with all the necessary information and operating data readily available involves doing the list of activities, over the estimated number of days, noted in Table 1.

No	IONICS Process	Process Steps	Days
1	Identify business and operational risks	Decide on Asset Requiring High Reliability	2
		Process Map Business Process to Work Levels	
		Asset Lifetime Details	
		Asset Engineering, Drawings, Manuals, Parts Lists	
		Identify All Critical Parts	
		Determine Total Defect and Failure Costs	2
2	Order risks by importance	Critical Part Life-Cycle Threats	
		Answer the Eight Life-Cycle Questions	
		Physics of Failure Factors Analysis	
		Asset Operating Criticality	2
3	Numerate risk elimination options	Physics of Failure Reliability Strategy Analysis	
		Specify Reliability Standards by Equipment Part	3
4	Introduce risk control solutions	Maintenance and Installation Parts Deformation Management	
		Operating Strategy Parts Degradation Management	
		Spares Selection by Part	
		Supporting Business Processes	3
5	Control operational processes	Risk Analysis of Supporting Business Processes	
		Build Process Robustness	
		Chance of Success Analysis for Processes	

		Performance Indicators	
6	Synthesize new ideas to continually improve	Pilot Test Trials	3
		Document the Final Process Designs	
		Embed the Final Processes	
		TOTAL	15

Table 1—Simplified Project Plan for a Plant Wellness Way Implementation for One Asset

A test of PWW on a major asset in your operation requires three weeks of work. It's likely that time will be spread over about two months, so project activities are done at times convenient to your operation's working regime. Two consultants using your operation's office facilities form the normal compliment of persons put on a site's Plant Wellness Way implementation project. Their project hours total a cost of around USD \$40,000. Other expenses will include accommodation, travel, and sundry items. A budget allowance of USD \$500 per day per person is reasonable for sites in the same country as the consultants. This brings the total cost to trial the Plant Wellness Way for a reasonably complex asset to about USD \$55,000. The payback expected is to halve the asset's annual maintenance costs on sites that are not yet top-class performers.

Substantial efficiencies accrue when large numbers of assets are included in a PWW adoption project. A reasonable expectation of the average cost per production asset for a site with 100 assets would be around USD \$25,000 per asset. From the project an operation can expect to halve its maintenance spend.

You can now make a business case to trial PWW on one sizeable industrial asset—USD \$55,000 for the test to halve the asset's annual maintenance cost. Similarly, you can judge the ROI of using PWW site-wide—USD \$2,500,000 cost per 100 large industrial assets to halve the annual maintenance cost vs. RAV ratio. Sites with simple engineered assets can expect to pay less per asset.

The reduction in the annual maintenance cost vs. RAV costing approach used above is useful for quickly gauging the worth of conducting a PWW trial. To get an accurate cost estimate requires us to quote on the specific test asset used in the project. Nonetheless, those allowances are indicative to determine the magnitude of the moneys you will pay (and the new profits you can make) to do a trial of the Plant Wellness Way.

To learn more on how to test the Plant Wellness Way at your site, or to get the full project details and costs of a trial, start by contacting your nearest Plant Wellness Way EAM Consultant.

The entire Plant Wellness Way methodology is explained in the *Industrial and Manufacturing Wellness* book. The hardcover book is available from the publisher's website: <https://books.industrialpress.com/9780831135904/industrial-and-manufacturing-wellness/> the ebook version is at <https://ebooks.industrialpress.com/product/industrial-manufacturing-wellness>.

The book is also at Amazon Books: <https://www.amazon.com/Industrial-Manufacturing-Wellness-Mike-Sondalini/dp/0831135905/>.

All the greatest success to you and to your operation,

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