

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

*The Plant Wellness Way can halve Annual Maintenance Cost to Replacement Asset Value ratios. If you're now at 3% RAV, you ought to expect to get down to 1.5%. Used on a \$100 Million asset base, costing \$3 Million/year to maintain, PWW can save \$1.5 Million/year*

You pay more for a Plant Wellness Way enterprise asset management system, but it is a powerful solution for world class enterprise asset management (EAM) success. There are three scenarios when it is financially justifiable to license PWW and make it your company's EAM methodology.

1. When you've 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 haven't time or the money to lose on getting 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 in order for your company to survive in business.

How can you make a business case to spend twice as much money on a unique Plant Wellness Way EAM solution than what it costs for other EAM methodologies available in the marketplace?

It's a dilemma facing every organization who wants to adopt the Plant Wellness Way (PWW) to world class enterprise asset management success. The answer has to be one based on extra profit that PWW gets companies, compared to what can be gained by using existing solutions and methods that are not as successful. The entire Plant Wellness Way methodology is explained in the *Industrial and Manufacturing Wellness* book. The book is available from the publisher's website: <http://new.industrialpress.com/industrial-and-manufacturing-wellness.html>; the ebook version is at <http://ebooks.industrialpress.com/product/industrial-manufacturing-wellness>.

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 profits. One way to justify using PWW is to estimate the return on investment (ROI) from the future new fortunes you can get if there were no operational failures.

A second means to estimate the ROI from the Plant Wellness Way is the expected improvement in the Annual Maintenance Cost to Replacement Asset Value (RAV) ratio. The RAV ratio lets you gauge the scale of the financial value and operational benefits that PWW can bring to your company. World class industrial, manufacturing, and process-based operations can reach 1% RAV. 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.

If you're 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.



If you happen to already be a world class operating site with a 1% annual maintenance costs to RAV ratio, then PWW will keep you far out in front of the rest of your industry.

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 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. Operational processes are optimized so the plant and equipment intentionally makes the most operating profit for your company.
5. Maintenance processes optimize production asset reliability so your plant and equipment intentionally costs the least to use.

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

The expected halving of the annual maintenance costs to RAV ratio lets you develop a business case to test and trial the Plant Wellness Way in your company. The projected 50% reduction in the ratio lets you gauge the potential new operating profits generated by using PWW.

You test PWW only on one production asset—one substantial equipment item gives you enough evidence to confirm the ROI and prove its viability for use throughout your company. To conduct a PWW trial involves doing the list of activities in 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	
2	Order risks by importance	Determine Total Defect and Failure Costs	2
		Critical Part Life-Cycle Threats	
		Answer the Eight Life-Cycle Questions	
		Physics of Failure Factors Analysis	
3	Numerate risk elimination options	Asset Operating Criticality	2
		Physics of Failure Reliability Strategy Analysis	
4	Introduce risk control solutions	Specify Reliability Standards by Equipment Part	3
		Maintenance and Installation Parts Deformation Management	
		Operating Strategy Parts Degradation Management	
		Spares Selection by Part	
		Supporting Business Processes	

5	Control operational processes	Risk Analysis of Supporting Business Processes	3
		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 of 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 \$35,000. 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 substantially complex asset to about USD \$50,000. The payback expected is to halve the asset's annual operating and maintenance costs on sites that are not yet world 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 asset for a site with 100 assets would be around USD \$25,000 per asset. After the project the operation can expect a halving of its annual maintenance spend.

You can now make a business case to trial PWW on one sizeable industrial asset—USD \$50,000 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 per 100 large industrial assets to halve the annual maintenance cost vs. RAV ratio. Sites using simply engineered assets can expect to pay less.

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 get back) to do a trial of the Plant Wellness Way.

To learn how to test the Plant Wellness Way at your site, or to get the full project details and costs of a trial, start by finding your nearest Plant Wellness Way Consultant online at <http://www.lifetime-reliability.com/cms/consulting/plant-wellness-consultants-worldwide/> and then contacting them by telephone or email.

All the greatest success to you, and to your operation,

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 Director  
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