

RV PRO

For The RV Professional

THOR

Thor: God of Thunder & Fifth Wheels

The company's CrossRoads, Dutchmen and Heartland offerings make it the leader in the mid-priced segment.



Also in this Issue:

- Voltec Plugged into Success
- Power Solutions Product Showcase
- Travel Time RV Adapts to Changing Times
- RVAA Bestows New Award for Best Product

Waste, the Profitability Killer, Part II

The second installment in this series looks at the waste of over-production and over-processing as well as the waste of intellect – and how damaging those can be to manufacturers.



WAYNE RUSSELL
is the president of
*Wayne Russell &
Associates, a Tennessee-
based manufacturing
productivity
consulting firm
specializing
in operations
improvement, waste
elimination, cost
reduction, facility
layout and flow, Lean
implementation,
line balancing, cell
development, methods
and bottlenecks. Visit
www.wraconsulting.com
or call 615-
708-1224 for more
information.*

This month we continue with and conclude our discussion of the profitability killer known as waste. Waste, as we are talking about here, is unproductive activities that do not add value to the product or process and in fact consume your resources and your money. The elimination of all types of waste moves that money to the bottom line and further conserves resources.

Waste comes in many forms and virtually every wasteful practice you will encounter can be classified into one of the Eight Forms of Waste. Last month we explored *transportation waste, inventory waste, the waste of motion* and the *waste of waiting*. Let's continue.

The Waste of Over-Production

The waste of over-production is considered by many to be the worst of the eight forms of waste because, in many ways, it is the opposite of the Lean concept of JIT (Just in Time). JIT says build

what you need, when you need it, and in the right quantity. Over-production is just the opposite by making too much of possibly the wrong things, too early in the process, as they are not yet needed, and in larger quantities than you actually need for the production scheduled. In short, it is producing more than needed, faster than needed.

This poor practice:

- Commits the use of your raw materials and parts
- Wastes labor hours
- Builds unnecessary inventory
- Takes up valuable floor space and containers
- Ties up your cash
- Invokes many of the very same issues and problems as with inventory waste

Sometimes over-production is caused by well-meaning supervisors who use subassemblies or similar operations as busy-work or downtime work when



Manufacturing operations are much more productive and profitable when defects are reduced and when steps are taken to reduce over-processing and over-production.

workers temporarily go idle, seemingly to keep them productive. In reality, if the parts aren't needed for immediate production then it is usually a very bad idea.

Companies that have not embraced Lean principles are probably still producing the old fashion way, known as "batching." Batching by definition is over-production.

One example of batching is setting up a cutting operation and cutting up containers or pallets of materials for a particular use. Another example is having a machine or subassembly operation set up and manned where the operator may run those assemblies or parts all day for use at another time or by another department.

Batching is still very common. If your facility is set up in functional departments such as: the press department, welding department and assembly, you are probably batching and committing the waste of over-production.

Over-production is a symptom that signals the probable existence of many other forms of waste. The best way to avoid over-production is to transition away from "batching" and move toward a one-piece flow, as in a manufacturing cell. In addition, I would suggest seriously evaluating all downtime work to make sure you are not inadvertently committing materials and producing items that are not yet needed for immediate use.

The Waste of Over-Processing

The waste of over-processing is a very interesting phenomenon that I encounter very frequently in my travels. The basic definition is performing more work than is necessary and would be additional work that the customer does not want and will not pay for. This is obviously a waste because you are not being compensated for the extra labor or materials being used.

What are some examples of over-processing?

- The continuation of witness marking long after the problem was resolved;
- Cleaning and polishing items far beyond anyone's expectations;
- Installing additional screws to an assembly because they choose to;
- 100 percent gauging of parts long after the problem was resolved;
- Complete deburring of a part far beyond what is required and in places it is not needed.

The existence of over-processing is clearly a reflection of management not watching the ship, as is the case for most of the other forms

Introducing our single
largest 12V
Solar Power Kit
on the market.

New!
155 watt
Solar Battery Charging Kit

Contact your distributor for details.

gpelectric.com

Go Power!TM



Look inside and you'll see
what 28 years of industry
experience looks like

Over the years, we've strengthened our components, increased the size of our tubs and added a ton of new cycle options, but we've never lost sight of why our laundry centers remain the best choice in RV's: they're designed, sold and supported by seasoned experts and cutting-edge pros who all have a complete and total commitment to the RV industry. From sales to support, no one does it like Splendide.

Learn more about the Splendide,
made-for-RV difference, call

1-800-356-0766

or visit www.splendide.com today



Splendide
Laundry Centers

North America's Best-Selling RV Laundry Brand Since 1984



of waste. It also means that there are probably no method descriptions, probably poor quality standards, poor operator training procedures, and poorly trained and managed supervisors who are not paying attention.

Once again, the only good way to discover over-processing opportunities would be to systematically observe and audit your methods at each operation. Record the process steps and material usage and then question everything.

Check the actual material usage against the bill of materials; question the validity of any in-process quality checks or witness marking; question any process steps that seem out of place or excessive; and question all machine cycle times. Excessive machine-cycle-time is a good example of a widespread but well-hidden form of over-processing waste that uses resources and labor and in addition it may be inhib-

Progressive Industries Electrical Management Systems (EMS) and Smart Surge Protectors (SSP) offer state-of-the-art electrical protection. Whether going for cost efficient surge protection with our SSP models, or full electrical protection with our EMS models, we accommodate all RV's from small class B's to large class A's. All our products are Made in America and backed by the best warranty in the industry. Available in 30A and 50A configurations.



**All EMS & SSP
Models Now
With Lifetime
Warranty!**



*Progressive
Industries*

Proudly Made In the USA 

www.progressiveindustries.net

(919) 462-8280

iting production or your ability to ship.

Once discovered and corrected, be sure to document the changes well and communicate to all involved. Retrain the operators and set an audit process in place to periodically review your methods and machine cycle times. These steps will help sustain and control the improvements.

The Waste of Defects

The waste of defects is a discussion about quality. Quality is one of the foundational principles of Lean, which advocates building quality into the product. All manufacturers have a problem with quality, whether it is manufacturing produced rejects, defects, rework, sorting or scrap.

Why are defects a bad thing?

- If they get to the customer it can be a disaster resulting in recalls, fines or loss of business.

- If the item is scrapped you lose the material value and all of the labor used up to that point. In addition, you have to buy the material again and use more labor and resources to get back to the same place.
- If the defect is discovered, any number of scenarios can play out and they are all costly.
- It consumes production resources, uses machine time, causes overtime, and more. Through-put is always negatively affected.

For most manufacturers, material costs far exceed labor and overhead in the overall cost structure of the products they produce. Material can represent 70 to 90 percent of that total cost. Scrap is a costly endeavor.

One thing that I do when starting an assessment is to find the company's

scrap gondolas and take a look. This is a good indicator that they may have quality problems.

Many companies fail or have found themselves in a turnaround situation simply due to excess scrap caused by poor quality systems, out of control equipment, poorly trained operators, and by leaving the manufacturing process to chance. This always puts a strain on purchasing, as they are having to over-buy. Also, scheduling and production have to over-produce due to the poor yields coming out at the end of the process.

In order to solve your scrap problems, it is necessary to systematically investigate and identify the root causes and then implement countermeasures. Admittedly, that is easy to say, but more difficult to do. Also a key component is the simple Lean principle of not passing on a bad part. Quality



Industry Leaders In Solar Boost™ Charge Controllers Maximum Power Point Tracking (MPPT)

Celebrating 14 years of Excellence In The Solar Industry

Announcing the new Sun Charger 30



The first non MPPT, entry level PWM solar controller by Blue Sky Energy. Provides precise PWM charge voltage control to optimally charge flooded, GEL and AGM lead-acid batteries. Go to blueskyenergyinc.com for more info.

Look to Blue Sky Energy, Inc. for low cost, quality solar charging products. Known for years as one of the best manufacturers for MPPT charge controllers, we are setting new standards for budget minded consumers.

Want more power from your solar panel system? Visit our web site to learn how MPPT solar charging can improve your solar output. We provide the largest product line for MPPT solar controllers anywhere in the world.

Go to www.blueskyenergyinc.com to view our entire product line. Available in the US and Canada through quality RV and Solar suppliers

**800-493-7877 or 760-597-1642
2598 Fortune Way, Suite K, Vista, CA 92081 USA**



Our patented technology allows an increase in power from a PV array up to 30% more than conventional controllers.

All Blue Sky Energy solar charge controllers include 5 year warranty. Made in the U.S.A.



QUALITY....RELIABILITY....BLUE SKY ENERGY, CHANGING THE WAY SOLAR IS USED EVERYDAY

EXT3000
ELECTRIC START

EXTREME MAX
POWER DIGITAL
INVERTER
GENERATORS



- Highest power to weight ratio on the market, weighing only 70 lbs.
- Energy-efficient on demand power delivery
- 2800 watts peak power
- Pull-out handle and wheels for easy transport
- 10-hour run time with variable throttle
- Compact size of 22" L x 19.5" H x 12" W
- Includes: 12 Volt charger, 2 keys and tool kit
- Parallel models available for 5000 watts peak power
- One Year Parts and Labor Warranty



NORTHERN WHOLESALE SUPPLY

Call 800-666-1111 or visit www.northernwholesale.com

Coming next issue...



Special Coverage:
Elkhart Open House Extravaganza

Special Product Focus:
Must-See RVIA Show Products

Dealer Profile:
Holman RV

RV PRO

For The RV Professional

rv-pro.com

is everyone's business, so it may require some training or culture changes to get the message to stick.

The Waste of Intellect

The eighth waste is the waste of human intellect. This waste category was not part of the original seven as developed by Taiichi Ohno, the famous Toyota manufacturing efficiency expert, but in fact was added not too many years ago to bring to light the value of the intellect and brain power of your human resources, which are your employees. Some define the waste of intellect as any failure to fully utilize the talent and brain power of people.

Most companies in the U.S. that I encounter do not attempt to tap into this valuable resource, and if they do, it is mostly lip service with no real substance. A feeble example might be to put in a suggestion box or have a meeting once in a while. While these things are a good start, they are not enough if you truly are interested in tapping into the intellect that you are already paying for.

Some companies look at their employees as just another type of machine. They want them to clock in, check their brains at the door, do their job and go home. The companies don't really want any complaints, suggestions, or challenges. The attitude is: What could these workers possibly offer that could help anyway?

The fact is, your employees do have something of value to offer. You should not want them to check their brains at the door. Each one has a background of experiences from life and other places they may have worked.

They may know a better or safer way to do things. Given that they do their job every day, over and over again, they are the experts in their field and know everything about their job and the activities around them, both the good and the bad.

The key is to create a culture that will allow you, as an owner or manager, to tap into this valuable resource. You want your employees to be willing and eager to share ideas and improvement suggestions freely and without fear. Sometimes this means a companywide culture change that can take years of development to establish the needed trust. Many times you can be successful simply by being attentive to your employees and include them in what is going on in the company and what may be coming.

When projects come up, be sure to make time to talk to the workers, tell them what is coming. Ask if they have any suggestions or ideas that may make the project go smoother. Try to include them in any layout changes that may affect their world.

Also, ask them about safety and quality concerns. Mention names and give credit when you glean any useful information or find someone who is especially helpful in the process. Think about the waste of intellect within your company and how you might be able to tap into it to improve your operation.

To summarize this two-part series, waste truly is a profitability killer, but with some work it can be defeated. Being aware of the different types of waste is the first step in their elimination. It's helpful to track and graph key performance metrics as a way of measuring the success or failure of any improvement initiatives. This is a great way to get quick feedback on changes that you make. **PRO**