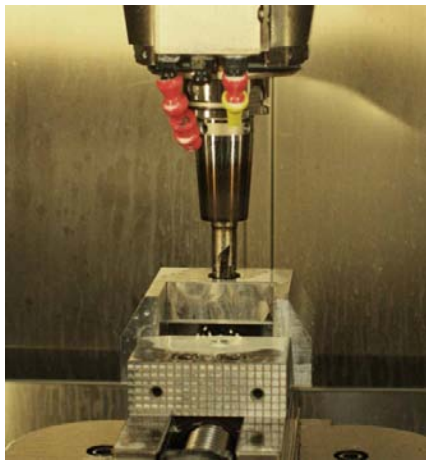




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## Shop Floor-Taking a Tour

**Purpose**  
**The Shop Floor**  
**5S**  
**Never be judgmental**

### Purpose

There are different types of shop tours.

The first type is *informational*. One example is the ongoing series of tours associated with MFGDAY. Member companies provide tours to student groups, teaching them about contemporary manufacturing and the related career opportunities. <http://www.mfgday.com>.

Another example is customer visits, or learning/sharing tours for groups such as SME. This month's newsletter focuses on this kind of an informational tour.

The second basic type is *assessments*, viewing the shop from a performance perspective or as part of a GAP analysis. This requires skill and knowledge, and while experienced shop people may take a tour for informational purposes, there will always be an element of the second. Next month's letter will cover assessments, specifically as it applies to ERP.

## The shop floor

Production facilities are not equal. For example, a company builds two identical facilities, making precisely the same product. Each plant will change the moment production starts. Both plants may use the same types of tools, equipment, and Lean, but in different ways. The probability is high that one plant will outperform the other.

The reasons are numerous. It may be culture, worker skill level, etc. Perhaps the management and associates in one plant are more innovative, open, and motivated than the other. They may be willing to take the risks associated with both disruptive and continuous improvement. The point is that every facility is a unique story.

Walking through a production or distribution facility is like reading visual snapshots. Those persons familiar with processes see the good, bad and ugly. The reasons behind highly variable situations are invisible.

The 5S program, used for Lean Six-Sigma, provides one foundation for understanding the shop. While the developers, Hirano and Osada, truncated the system at five points, most Lean proponents include safety, not as the sixth S, but often as the first principle. It applies to everything we do in the shop, and it is an all-encompassing principle.



## Safety

Experienced people will notice safety issues because awareness is burned into the shop mentality.

### 1. Sort (Seiri)

Sort is a clean work area with only the materials, tools, and support equipment necessary to do the job at the work center. Are there parts and tools lying around? Does it look like workers have performed this step?

### 2. Set in order -Straighten (Seiton)

Set in order is arranging the shop floor and work areas in an orderly way. Are jigs, fixtures, and tools neatly arranged? Does everything have a place, and is everything in place? Are there pallets of materials cluttering up the shop, or other obstructions? If so, it raises flags about adherence to schedule, and push vs. pull. Look for red-tags and damaged materials. These are symptoms of quality issues.

### 3. Shine (Seiso)

Shine or cleanliness, is obvious because it is immediately observable. Even here, one has to put the visual in context. Some types of production are inherently dirtier, like a foundry. Even in these operations, there are levels of cleanliness. A messy shop always sets a mental flag. Why is it like this?

### 4. Standardize (Seiketsu)

Standardize means that once a process has been refined and made efficient, those methods are repeated to provide continuity throughout the plant. A tour provides minimal evidence of process standardization. If the previous three are practiced, this one logically follows.

### 5. Sustain (Shitsuke)

Sustain maintains the other four, plus the concept of continuous improvement. It is easy to fall back into past practices. While sometimes a cultural issue, a number of constraints make it difficult to sustain programs.

## Other

Lean provides some inputs, but there are other observations that provide additional information.



- Are quality metrics posted?
- Are there unique and/or new processes and equipment?
- Do people talk in Lean terms? Are there Kanban transactions, or visual measurements?
- Do they use paperwork or electronic transactions?
- Are machines idle? Are operators working? Are workers of all ages?
- Are new products in development?

The technological evolution of equipment, both production and material handling, indicates the sophistication of operations. It does not indicate a failure of capital investment or the current equipment to get the job done. In most shops, there is a mix of technologies.

I could add additional pages but these are sufficient to make the point. The number of variables is infinite. Experienced people see a shop differently than someone lacking operational knowledge.

### Never be judgmental

All observations are a moment in time, providing clues not answers. If some things seem wrong, that is normal. It is impossible for everything to be perfect, or continuous improvement programs would be unnecessary. Conversely, the process may be outside of our knowledge, and one reason for being there, to learn what others are doing. I am delighted to see a new or different process, even simple ones. When observing macro conditions, low levels of capital investment for example, it could indicate a future plant shutdown, or insufficient demand to justify a more sophisticated piece of equipment. Regardless, all observations are only data unless verified.

I make stuff, and it is easy to reflect back on my workshop. Most of the tools are older, but upgrades are unnecessary because each serves its purpose effectively. I buy new ones when needed and justified. While immersed in a project, there are tools and materials lying around. I clean up before quitting for the day, or if things get in the way. Sometimes, cleanup has to wait. To avoid hypocrisy, while writing this newsletter, 5S activities were also in process.

If not a maker, and unless you have walked a thousand shop miles in another person's safety shoes, do not make critical judgments about their business. Every shop tour is an education opportunity. Catalog the observations and experience as lessons learned. If asked, provide objective inputs, but never forget that on tours, we are guests and our hosts have shared something of value. Be grateful for the opportunity, as I always am.

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Building the SMART Enterprise

# ERP Lessons Learned

# Structured Process

Strategy

+

Business Assessment

+

Gap Analysis

+

Future State

+

Software Selection

+

Implementation

Wayne L. Staley

