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# LEAN MANAGEMENT JOURNAL

Issue 5 Volume 4 | July 2014 | [www.leanmj.com](http://www.leanmj.com)

## THRIVE AND SURVIVE

Examining the challenges  
of sustaining lean when a  
business grows.

Organisations and interviews featured in this  
edition include:

Thales Air Défence, AIG, Caledonian Modular, Evoke  
People Development, Industry Forum, Mike Denison, Jeff  
Liker, Joseph Paris and Bill Bellows.

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**Global lean transformation at AIG:** *Matthew Smith*, head  
of the Lean Centre of Excellence at AIG and *Matthew  
Michael*, academy manager at AIG, reveal the challenges  
and successes of implementing a lean intervention in the  
world's largest insurance company.

**Globally lean:** *Joseph Paris*, LMJ editorial board member  
and lean expert, analyses the problem of scaling lean  
when an organisation grows, underling the importance of  
employee cooperation as the key to success.

**DIY leadership:** Director of Evoke People Development,  
*Joe Bell* discusses how his most successful consultancy  
programme was founded on basic lean principles.

**Systematic lean:** Author and lean specialist *Mike Denison*  
underlines the necessity of implementing a comprehensive  
and applied lean learning programme to keep costs down  
as businesses thrives.



# Business as unusual: shift from big problems to great opportunities



LMJ editorial board member *Bill Bellows* returns with his *Lessons from Deming*, imparting his wealth of lean knowledge on commonly accepted levels of error.

“We are in a new economic age. We can no longer live with commonly accepted levels of delays, mistakes, defective materials and defective workmanship”  
W. Edwards Deming

Since being introduced to Dr. Deming and his System of Profound Knowledge in 1990, I’ve grown to appreciate blind spots that face today’s business as usual environment, with “commonly accepted levels of delays, mistakes, defective materials and defective workmanship” as a symptom of how each organisation manages its resources, including time, money, equipment, and people.

One way to test for what is commonly accepted in terms of the level of big problems in any organisation is to investigate the focus of attention for problems with a question. “How much time is spent every day in our organisation, discussing parts, tasks, suppliers, customers, activities, and programme milestones which are going

well?” In probing with this question, through presentations, seminars and consultation efforts, I have learned that few resources are routinely dedicated to an alternate TGW (things going well).

The answer to the question is usually zero. On occasion, I have made the observation that continual improvement, with a focus on improving what is good, must not be a priority in your organisation, unless such an effort is dedicated to fixing problems faster, rather than preventing them from occurring. What’s missing from the business as usual focus on things gone wrong is the actual variation in things going well.

Imagine driving from Los Angeles to San Francisco, with a full tank of petrol, but without a petrol gauge to monitor the amount of petrol remaining. A petrol gauge is designed to reveal variation in TGW, along a continuum from very well (full tank) to very bad (empty). All the while driving to San Francisco, things are well, yet steadily declining towards very bad. Without focussing on things going well, the car will eventually run out of gas and represent TGW. With general awareness and attentive monitoring, helping to prevent and minimise big

problems, including commonly accepted levels of delays, mistakes, defective materials and defective workmanship.

The value proposition of proactively allocating resources to things going well is not always readily apparent, even with classic reminders of economic leverage from inventor and statesman, Benjamin Franklin, that “an ounce of prevention is worth a pound of cure,” and English astronomer, Francis Bailey, that “a stitch in time saves nine.”

As to what is meant by proactive, a simple explanation is to apply effort while good, OK, well, or correct is happening. By comparison, being reactive is to apply effort after bad, not OK, sick, or incorrect happens. Under these definitions, monitoring the strength of a smart phone battery and charging it before it dies and visiting a doctor for an annual check-up, while feeling well, would both be considered proactive. In the realm of a manufacturing environment, the purposeful use of things going well data to monitor the degree of goodness of a welding process, a machining process, or a plating process, could detect early shifts in the direction of things gone wrong in each of these performances, removing them from our blind spot, long before the occurrence of big problems.

It should be considered as an option and weighed against the alternative cost of being reactive and focussing on things gone wrong. On a case-by-case basis, the proposal is to make a decision

on being proactive or reactive, rather than focussing our efforts only on what is wrong and unknowingly defaulting to being reactive. Business as unusual offers opportunities to use things going well metrics to reduce the commonly accepted levels of mistakes, but only when the savings from these reductions exceed the expense of monitoring the things going well metrics.

My appreciation of the stark contrast between business as usual and business as unusual was inspired by a conversation in 1987 with consultants, while working in the gas turbine industry. The consultants provided assistance in solving a serious problem with the excessive and premature wear of mating gears in a gas turbine engine produced in large volumes for the Department of Defense. In an enlightening day of inquiry, the consultants probed the thinking of our problem solving strategy, with questions about the problem gear wear, how we determined the possible causes of this problem in an open forum for suggestions, and how we experimented a 10-hour stress test to evaluate the contributions of each of these causes to the problem. Included in our education was an exposure to what measurements to record to improve our evaluation of the causes of the wear problem. When asked what we measured during each test, we shared that our data collection was limited to a visual, post-test, evaluation of the amount of material removed on each gear.

This inspection was performed by an engineer. Upon examination, the gears were either worn (bad) or not worn (good). Subsequent experiments followed the worn or not worn conclusion of each test, designed to lead us on a path to the primary causes of wear, yet with little success in narrowing our search. Our consultants commented that the thinking used for this evaluation was black or white, which, for simplicity, uses two categories, worn and not worn, for the data we were collecting.

They further explained the variation in wear between worn gears and between unworn gears was being lost through our use of this black or white conclusion.

Their recommendation was to move away from the black or white style of data and, instead, measure the amount of wear on each gear by recording their size, both before and after each test and using this continuum style of data. With the immediate shift to collecting continuum data in our test procedure, several recent design changes were quickly identified as the primary cause of the problem.

In a determined shift from black or white data to continuum data, a serious problem was solved and I was exposed to the important differences between continuum data and black or white data. Awareness of this difference and the advantages of these modes of thinking, as well as data collection efforts, with strong parallels to a focus on things gone wrong and things going well, is a cornerstone for business as unusual.

Fast forward to 1990, when I met Dr. Deming during his visit to a nearby university, where he shared an explanation of his newly defined System of Profound Knowledge with students and faculty. While I was certainly inspired by what he presented, several years passed before I could begin to recognise business as usual, which he defined in his book, *The New Economics* (2009), as the “prevailing style of management.” More specifically, in chapter 4 of *The New Economics*, Dr. Deming states:

“The prevailing style of management must undergo transformation. A system can not understand itself. The transformation requires a view from outside. The aim of this chapter is to provide an outside view - a lens - that I call a system of profound knowledge. The system of profound knowledge provides a lens. It provides a map of theory by which to understand the organizations that we work in.

The outside view. The layout of profound knowledge appears here in four parts, all related to each other:

- Appreciation for a system
- Knowledge about variation
- Theory of knowledge
- Psychology”

Whereas business as usual suffers from the surprises of recurring big

problems, business as unusual is guided by an enlightened appreciation that big problems can be significantly reduced through knowledge about variation in things going well. Beyond the advantages of fewer big problems, including those which recur, individuals operating in a business as unusual environment have ample opportunities to seek investment by using their appreciation for a system. Instead of focussing their efforts on parts, tasks, suppliers, customers, activities, and programme milestones which are inundated with problems, they are skilled with systems insights to see these items as integrated and interdependent, not separated and independent.

Their efforts are guided by theories of big opportunities for investment, with probing questions such as “where can a stitch in time save nine?” and “where is an ounce of prevention worth a pound of cure?” For example, where might we invest £500 on software, hardware, or even training, to make an improvement that could result in a saving of more than or £500 elsewhere in the system? As with a homeowner installing energy-saving windows and doors, the challenge is to see big opportunities in our everyday efforts, in much the same way an inventor sees a great opportunity for a product invention, a so-called better mousetrap, all without apparent problems” in today’s mousetrap.

Deming envisioned a workforce of everyday leaders, each inspired and also capable of continually participating in generating ideas, with priority given to those with the greatest returns. Given the constraints of business as usual, resources are distributed across silos within an organisation, with accountability assigned to each group. Under a business as usual system, might it be considered impractical to focus attention on situations without big problems, all the while facing big problems elsewhere? Sadly, resources allocated to big problems remain focussed on the past, with narrowly focussed thinking patterns of “what went wrong?” The same resources, including time, money and idea generation, are deprived of focus on the future and broadly focussed thinking patterns of “what opportunities exist?” to invest our resources for greater returns.