

A Remedy to Fad Fatigue

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EXECUTIVE SUMMARY

Industrial engineering is making an important comeback as more corporate leaders realize that management fads have obscured the real goal: improving the bottom line in a timely manner with real results. Industrial engineers bring not only their expertise to problem solving but four key elements of success: accountability, authority, responsibility, and objectivity.

Fad fatigue and relentless change management have wearied manufacturing managers. While eager to compete effectively and tackle the challenges they face, they often find that the merry-go-round of tactics available to them diminishes their effectiveness. Spending more time on following protocols than addressing problems has sapped manager energy and deflated budgets. Fads can be a major distraction from real bottom-line improvement.

The cycle of fad fatigue has a remedy in industrial engineering. Businesses are tired of the bait-and-switch management fads. One Fortune 500 CEO said, "We have been doing lean and Six Sigma for the past five years and thinking they were taking care of all

our industrial engineering needs. I can tell you from this [industrial engineering-based program] launch that it was not the case."

It has been difficult to determine who, in fact, is more interested in management fads: the academics who write about them, the consultants who sell them, or the managers who implement them. It seems the academics and consultants originate the programs and popularize them through the use of the programs by managers. Managers are a willing group, always looking for a new breakthrough in organizational productivity or effectiveness.

Joel Best, author of the book *Flavor of the Month: Why Smart People Fall for Fads*, has been making the boardroom and the shop floor safe for



skeptics. American business culture is especially susceptible to fads because of a national passion for change and a belief that all things can be improved. “We live in a world where we are bombarded with announcements that somebody has solved some tremendous problem and ... most of these things don’t endure. They turn out to be fads,” Best explains in a recent podcast. “The serious institutions in our society, education, management, science, medicine and so on, are all prone to use fads.”

More than 50 manufacturing management programs have been significantly embraced by U.S. manufacturing managers during the past 30 years. They became widely practiced by manufacturers and were promoted and touted as important avenues of competitive advantage. Many of the management fads were simply offspring of earlier programs.

“Thus, the quality circle begat TQM, and TQM begat BPR, and BPR begat Six Sigma. Each program arrived on the scene bright with promise: forget those old, ineffective quality programs; this one is the real deal. Corporations adopted each new program (often with great fanfare), training their managers in its precepts, and then (usually quietly) abandoned it when the results proved disappointing. The pattern illustrates the life cycle of institutional fads,” notes Best in *Flavor of the Month*.

That fad cycle has three stages: emerge, surge, and purge. In the

emergence stage, management fads are short on evidence but long on motivational anecdotes. The key factor in their surge comes from the first steps taken by trendsetters who embrace the approach. They may find some success, which inspires others to try to replicate the process in their company.

The purge of a fad begins when a saturation point is reached and bookstore shelves become bloated with workbooks. Meanwhile, the data begins to roll in, and the evidence is there to be judged. Although many people within a firm may applaud the abandonment of a management fad, the possibility is strong that a new trend is waiting in the wings.

Unhealthy cycle

Fads are more like relationships gone sour than prudent approaches. Management discovers a new fad, they dive in, but ultimately they are disappointed because it doesn’t solve all their problems. They then try to disengage, which may be hard because of the investment they have made in the fad. The cycle begins again with a new strategy. Yet the new programs are not very different from those they replaced. They involve catchy new jargon for the industry, training programs, and more. Like singles looking for a mate, consultants and publishers wander from one program to the next.

Although the fads may have merits and can be instrumental in many ways, they remain in the fad camp and not in the toolbox because of the trappings of a fad — exaggerated enthusiasm, publishing industry marketing, and glassy-eyed commitment of the true believers. Fads stay with some institutions while they fall into decline elsewhere because the true believers are convinced that the program simply needs a higher level of commitment, a greater deployment of resources, and broader acceptance throughout the firm. The true believers remain ensconced in their conviction even as their colleagues decamp.

Once a corporation has become enamored with a management fad, it

becomes difficult for alternatives to be considered. At some companies, the culture is built around a fad. Careers are advanced because of devotion to the program. Tremendous resources have been invested. Some firms wave Six Sigma flags so enthusiastically, for example, that other problem-solving approaches cannot even be suggested.

Unique problems demand singular solutions

A manufacturing manager fearful of the fad trap yet needing to solve a production or performance problem has recourse. Industrial engineering offers an inclusive toolbox that can identify root causes, recognize specific problems, and use appropriate methods to address particular challenges. The key is figuring out the causes and having choices for resolving the problem. Perhaps some of Six Sigma’s measurement principles are advisable. Maybe lean’s focus on reducing steps is the way to go. Unfortunately, devotion to process-by-buzzword has stymied results in the past and engendered suspicion of methodology. Foregoing fads in favor of an industrial engineering approach is liberating many a manager. Released from the obligation of the managerial equivalent of a prom committee, they can skip the decorations and go straight to the dance. But therein lies a potential problem.

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Though lean and Six Sigma can be considered faddish because of the irrational exuberance attached to them by some practitioners, they do meet needs when employed for the correct situation. The key is being able to approach each challenge objectively, as a skilled industrial engineer should, and then pull the right tool from the toolbox.

A primary factor for successful industrial engineering is a focus on the basics of engineering. The foundation of the craft includes work measurement and standards, goal setting and feedback, total value analysis and manufacturing system design. According to the Institute of Industrial Engineers, an industrial engineer addresses the “design, instal-



Mental health critical to knowledge economy

In a knowledge economy, people work increasingly with their minds instead of their hands. This makes mental health a critical part of economic growth. However, knowledge workers are prone to high levels of stress and mental health problems.

“My research focuses on the Netherlands, but all modern knowledge economies are damaging their human capital to some extent,” says Dutch researcher Rifka Weehuizen. “It is a result of the pressure to be ever more productive. In the industrial sector you can achieve that by putting in more and better machines, but in the service economy the main way to achieve this is by making people work more and more intensely. By giving workers autonomy they have to effectively self-manage and self-regulate, which is much more efficient from the firm’s perspective but which adds substantially to the load and pressure of the worker.”

In the modern knowledge economy, workers need to be autonomous, flexible, adaptive, and able to deal continuously with new circumstances, tasks, and knowledge. The increased interaction with customers and colleges that this requires means that workers need to regulate their emotions and feelings. Research shows this is difficult for many workers and may lead to greater levels of stress and mental health problems.

The study by UNU-MERIT, a joint research and training center of the United Nations University and Maastricht University in the Netherlands, found that what drives economic growth is not necessarily good for people’s mental health; although mental health is essential for further growth.

lation, and improvement of integrated systems of people, materials, information, equipment, and energy by drawing upon specialized knowledge and skills in the mathematical, physical, and social sciences, together with the principles and methods of engineering analysis and design to specify, predict, and evaluate the results to be obtained from such systems.” That’s quite a mouthful and an extensive skills set. It is this level of expertise that positions industrial engineering apart from wobbly trends.

Industrial engineering addresses significant functions in the manufacturing universe that are instrumental in achieving competitive capabilities through performance, quality, and efficiencies. *The Handbook of Industrial and Systems Engineering* has identified 13 principal functions of industrial engineering and its practice:

- Designing integrated systems of people, technology, process, and methods
- Developing performance modeling, measurement, and evaluation of systems
- Developing and maintaining quality standards for industry and business
- Applying production principles to pursue improvements in service organizations
- Incorporating technology effectively into work processes
- Developing cost mitigation, avoidance, or containment strategies
- Improving overall productivity of integrated systems of people, materials, and processes
- Recognizing and incorporating factors affecting performance of a composite system
- Planning, organizing, scheduling, and controlling production and service projects
- Organizing teams to improve efficiency and effectiveness of an organization
- Installing technology to facilitate work flow
- Enhancing information flow to facilitate smooth operations of systems
- Coordinating materials and equipment for effective systems performance

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Piece of the puzzle

Fads are not necessarily primitive junk to be discarded: They can contain an element — sometimes significant — to achieving competitive advantage. But a more universal solution is going to rely on the practices of industrial engineering that can assess the situation, select the tool from the kit, and fix the problem of the time. This must be completed simultaneously with a process of continuous improvement throughout every aspect of the business.

It is important that managers avoid the herd behavior of chasing fads simply to imitate the actions of other managers. Successful managers are selective about programs that rely on real information and judgment to determine the appropriate level of fad application. The key to success with a fad is to understand the principles of the program and ensure that the intended results meet the needs of the organization. Managers must control the zeal of the program to ensure it does not get

too heated or sidetrack other important programs. Companies differ and have different issues. The correct tool should be applied at the correct time.

An industrial engineer takes on each task with the end result in mind — bottom-line savings, not endorsing management's latest passion. Although they are fads for some, the following are simply part of the industrial engineer's pragmatic arsenal:

- Kaizen, like other tactics, has merits, especially in its continuous improvement focus that helps in team building. It also can prove to be an effective incremental tack. However, it can lead firms to get caught in the training mode and is not the approach for revolutionary change.
- Lean manufacturing is a basic industrial engineering function with the focus on reducing lead-time and inventory. Lean can sometimes be short on memory, forgetting capital utilization, overall manufacturing philosophy, and overall plant flow.

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- Simulation is an effective method to ensure every aspect of the process has been designed. Animated modeling can prove especially dynamic if used for complex manufacturing situations, such as mixed-mode production and high-process variability. Hazards of this approach are omitting the many interferences that are possible, including complicated line balancing and complicated man-machine balancing.
- Six Sigma focuses on collecting data to design out variation and is a good statistical program to look at process variation. Unfortunately, tremendous energy can be put into the Six Sigma process — black belts, champions and the like — and cause the overall performance of the line or plant to be neglected. It's a good tool to have, but statistical analysis is just one part of the many tools of industrial engineering.
- The Toyota Production System is probably closest to the tenets of





industrial engineering and is often considered the father of lean. TPS does focus on eliminating waste in the production stream and can be a valuable tool, but it fails when it is misapplied.

- Total productive maintenance is a strategy that aims to make equipment maintenance part of the manufacturing process. Clearly of value, the program is a reasonable part of a comprehensive plan, including efforts to eliminate production or quality losses related to equipment maintenance.

Expertise to the forefront

Industrial engineering comes with a proud pedigree, but it should not become another *carte blanche* management fad. The manufacturing systems that products are launched under become the standard for years. Manufacturing managers should be clear about expectations of internal industrial engineering departments or outside consulting firms.

Industrial engineering supervisors must have the experience necessary for the work and should be involved in each project to guarantee qual-

ity assurance. There are four pillars upon which the successful industrial engineer stands: accountability, authority, responsibility, and objectivity. Empowered to do the job they are trained to do, industrial engineers will ask the questions that must be asked in order to achieve the real results being sought. When told to design the best warehouse possible, the industrial engineer will ask why you need a warehouse, for example. Investigation may determine that the problem is not lack of warehouse space but some hidden culprit.

Industrial engineers should solve problems, not sell programs. The focus must be on the bottom-line results. Fads can misdirect the focus. For example, one manufacturing plant executive admitted that the company measures the success of its lean program by counting the number of staff who have been trained in lean applications.

Unfortunately, the door has been left open to fads as the effectiveness of industrial engineering departments has been diluted over the years. The result is industrial engineering departments with revolving doors and a

lack of tenure can endanger those key principles of a successful department: accountability, authority, responsibility, and objectivity. The departments are too often used as management training grounds. The industrial engineers bring their broad skills set and, oftentimes, an interpersonal capability not common among many of their engineering peers. Young industrial engineers, ironically, also are frequently rising stars in the organization because they do implement the latest favored management fad. It can be a vicious circle that leaves weakened departments and susceptibility to fads.

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Return to the basics

A toolbox that contains only a hammer is not a toolbox. A company that addresses its quality, speed, or cost challenges with a single management fad philosophy fails to use the many resources industrial engineering can provide. A parade of fads have either metastasized into new bookshelf fodder or been discarded outright. Rather than seeking a new silver bullet, the critically thinking manufacturing manager will consider industrial engineering as the place to start. ❖