

Book Review

Averill, Dennis; "Lean Sustainability: Creating Safe, Enduring and Profitable Operations". CRC Press (www.productivitypress.com); ISBN 978-1-4398-5716-8.

I finally made time for this informative and interesting read. The author uses (Toyota) production maintenance and Total Perfect Manufacturing (TPM) models, as well as Japanese words and phrases to describe and underscore the value and profitability of a People-Centered OEHS risk management system. That is to say, top-down management personally commits and dedicates time, money and resources to protect people, planet, profit, and posterity via an employee-driven, continuous improvement strategy focused on achieving TRIPLE ZERO (Zero Accidents, Zero Environmental Incidents, Zero Wastes/Losses). One core value is: "Doing well by doing good".

The book is divided into eight chapters (including Preface, Acknowledgements, Endnotes and Bibliography) which comprehensively outline a roadmap to "organizational excellence" by introducing, aligning and integrating S.H.E. (Safety, Health and Environmental) policies, practices, procedures and activities into the core business mission and value statement. Each employee is trained and empowered with the skills, knowledge, understanding, autonomy and motivation necessary to proactively, safely and systematically improve efficiency and remove risk from their workplace (Gemba). TPM (Lean Methodology) emphasizes the elimination of ALL *non-value-added* activities by leveraging both the employee's "brain and brawn" resulting in the delivery of high quality products at the lowest cost.

The seven (7) basic organizational silos described are: Autonomous Maintenance, Focused Improvement, Effective Maintenance, Training and Education, Early Management, Office/Administration, S.H.E. The book describes several tools and activities that improve operational efficiency and risk management by measuring the current employee safety and health climate, identifying and prioritizing at-risk behaviors and conditions, determining root causes and designing ways to eliminate and prevent injuries, illnesses, environmental incidents and losses (Triple Zero).

The basic *Lean* assertion is that safe, healthy and valued employees willingly participate in on-going, problem-solving and continuous improvement (Kaizen) activities. Root Cause Analysis (RCA) using 5W + 1H is one method discussed. Information is gathered asking the interrogatives: who, what, when, where, why, and how has the 'accident/incident/loss' occurred. Potential solutions can then be clearly defined, prioritized using techniques such as Pareto analysis and implemented. The gist of lean business principles and practices is the relentless pursuit of overall organizational efficiency via the persistent and focused elimination (prevention) of all losses (waste) from all operational sources. Continuous improvement can be realized when there is a shared set of (S.H.E.) values that permeates all decisions and activities as the accepted way of work (WoW).

(5)S - (Seiri = Sort; Seiton = Set; Seiso = Shine; Seiketsu = Standardize; Shitsuke = Sustain)

These five words illustrate a Japanese-derived Lean methodology for creating, maintaining and sustaining a clean, organized, efficient Gemba. (5)S systematically identifies/removes at-risk conditions and behaviors through self-directed work teams. **SAFE*CYCLE 2020** ([link](#)) is an example of the Reviewer's FRESH KAIZEN process which combines the tried-and-true risk management approach: "Plan-Do-Check-Act", with perception surveys; employee-driven (problem-solving) teams, and implementation evaluations, etc. It is strongly emphasized that the essential management function of OEHS systems is to continually identify, prevent through design, substitute and/or eliminate root cause

hazard exposures leading eventually to zero injuries, illnesses, environmental incidents and losses using a balanced goals scorecard approach consisting of both leading-proactive and lagging-reactive metrics (e.g. observed at-risk behaviors vs. recordable injuries)

Sustainability is generally and broadly defined as: "Meeting the needs of the present without compromising the ability of future generations to meet their own needs." The concept includes: evaluation of the entire product life cycle; conversion of waste streams into feedstocks for other processes; design product components, overproduction units, and other process outputs so that they can be minimized, reused, reclaimed, or recycled as renewable starting materials for other processes and/or products. Lean organizations develop green products and services that address consumer needs while protecting the environment, preserving natural resources, and delivering long term, profitable growth achieved through incremental improvements over time.

Lean philosophy strives to minimize, eliminate, and control all (Gemba) losses with improved operational efficiency, minimal adverse environmental consequences and smart energy consumption that translates to a smaller carbon footprint. In this business environment, employees feel safe, secure and valued. Bottom line is 'Lean Sustainability' provides the recipe for businesses to do well by doing good.

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