

## **One-Page Lean Presentation**

***Appendix to "Lean, Green & Safe: Integrating Safety Into the Lean, Green and Sustainability Movement," by Michael A. Taubitz. Published in Professional Safety, May 2010, pp. 39-46.***

## Getting Safety into the Lean, Green and Sustainability Movement

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### Background & Challenge

- Lean manufacturing concepts are employed by numerous businesses and industry sectors with a goal of becoming more productive.
- *Green* describes initiatives designed to reduce environmental impacts.
- Safety is promoting the health and well-being of all employees on and off the job.
- Often, these activities function in organization silos resulting in waste and inefficiency.

### Lean & Green Are Aligning

- Recognizing the synergy of lean manufacturing and green, EPA is promoting efforts among state and federal agencies.
- A 2003 report (68 pp.) details numerous benefits of lean initiatives—see [www.epa.gov/lean/leanreport.pdf](http://www.epa.gov/lean/leanreport.pdf)
- A quick Internet search will show numerous hits for lean and green—with safety rarely mentioned.

### Waste Is a Key for Integration

- Identification and elimination of the seven forms of lean wastes is the enabler for green and safety. These can be married with:
  - Safety waste—injury and illness;
  - Environmental waste—air, water and solid.

### Lean Is an Enabler for Green & Safety

- Many people hear the term *lean* but have little understanding of its true meaning.
- There are two fundamentals to lean: 1) identify waste; 2) eliminate waste.
- Properly done, the integration of lean, green and safety will lead to an improved organizational culture for several reasons:
  - All require the demonstrated leadership of top executives.
  - Lean initiatives should begin in the office since it is the home turf for leaders and staffs who make decisions impacting safety and environment.
  - Lean business systems and processes not only make the workplace safer and more productive, but emotional stress and strain are greatly alleviated.
- ***Teamwork and standardizing nonstandard work result in work that is faster and easier to perform with less training; lean should begin in the office.***

### Lean in the office

Examples of lean waste in the office include:

- 1) **Correction:** transaction errors
- 2) **Overproduction:** printing too many copies
- 3) **Motion:** excess motion of personnel to complete a task
- 4) **Material movement:** movement of material or information that adds no value
- 5) **Waiting:** meetings start late and/or run over allotted time
- 6) **Inventory:** ordering more supplies than necessary
- 7) **Process:** often cumbersome or nonexistent (e.g., unnecessary reviews or approvals)

### Culture change

- Top management must lead and infuse vision, values and new skills into the management workforce.
- Lean tools, processes and skills that must be learned as part of the culture change include:
  - 5S
  - Value stream mapping (a process that unlocks the hidden waste of office and business systems)
  - Standardized work
  - One-page reports
  - Knowledge folders
  - Lean thinking
  - Lean metrics
  - Lean communications
  - Problem solving (e.g., 5-why analysis, fishbone)
  - Safety (on and off the job for all staff, including those in manufacturing, sales, service)
  - Risk management
- Repetition builds skills and changes thinking by personnel challenged to “act their way to a new way of thinking.”

### Conclusion

- The current state is both threat and opportunity for SH&E professionals
- Doing nothing may result in safety and health moving to the side of the more forefront issues of lean and green.
- Opportunity exists to make a business case for leaders offering culture change via leading lean in the office. Benefits include:
  - Immediate operational improvements, answering the age old question of “how can we show value?”
  - Lean becomes an enabler for green and safety.
  - Culture change opens doors for safety, health and the environment in the concept and design stages of new products or process.