# Change Concepts Langley, Nolan, Nolan, Norman, and Provost

#### A. Eliminate Waste

- Eliminate things that are not used
- Eliminate multiple entry
- Reduce or eliminate overkill
- Reduce controls on the system
- Recycle or reuse
- Use substitution
- Reduce classifications
- Remove intermediaries
- Match the amount to the need
- Use sampling
- Change targets or set points

### B. Improve Work Flow

- Synchronize
- Schedule into multiple processes
- Minimize handoffs
- Move steps in the process close together
- Find and remove bottlenecks
- Use automation
- Smooth workflow
- Do tasks in parallel
- Consider people as in the same system
- Use multiple processing units
- Adjust to peak demand

#### C. Optimize Inventory

- Match inventory to predicted demand
- Use pull systems
- Reduce choice of features
- Reduce multiple brands of same item

#### D. Change the Work Environment

- Give people access to information
- Use proper measurements
- Take care of basics
- Reduce demotivating aspects of pay system
- Conduct training
- Implement cross-training
- Invest more resources in improvement
- Focus on core processes and purpose
- Share risks
- Emphasize natural and logical consequences
- Develop alliance/cooperative relationships

# E. Enhance the Producer/Customer Relationship

- Listen to customers
- Coach customers to use product/service
- Focus on the outcome to a customer
- Use a coordinator
- Reach agreement on expectations
- Outsource for "free"
- Optimize level of inspection
- Work with suppliers

# F. Manage Time

- Reduce setup or startup time
- Set up timing to use discounts
- Optimize maintenance
- Extend specialist's time
- Reduce wait time

### G. Manage Variation

- Standardization (create a formal process)
- Stop tampering
- Develop operational definitions
- Improve predictions
- Develop contingency plans
- Sort product into grades
- Desensitize
- Exploit variation

# H. Design Systems to Avoid Mistakes

- Use reminders
- Use differentiation
- Use constraints
- Use affordances

# I. Focus on the Product or Service

- Mass customize
- Offer product/service anytime
- Offer product/service anyplace
- Emphasize intangibles
- Influence of take advantage of fashion trends
- Reduce the number of components
- Disguise defects of problems
- Differentiate product using quality dimensions

Source: Langley, G.J., Nolan T., Nolan K., The Improvement Guide : A Practical Approach to Enhancing Organizational Performance. 1st ed. The Jossey-Bass Business & Management Series. 1996, San Francisco: Jossey-Bass Publishers. xxix, 370.