

# TerranearPMC Safety Share

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## **Week of June 11, 2018 – Feedback, Continuous Improvement and Lessons Learned**

It is understandable that many people lump the organizational processes of lessons learned, feedback and continuous improvement within the same category. True, they do have similarities, but there are differences as each serving their specific purpose.

To begin, *feedback* is part of a larger, all-encompassing work process described within the department of energy's DOE P 450.4, Safety Management System Policy. The process was originally defined in such global ES&H protocol as the International Organization of Standardization (ISO) of ISO 9001 Quality Management, ISO 14001 Environmental Management, ISO 45001, Occupational Health and Safety Management & British Standard OHSAS 18001 (also occupational health and safety). These processes describe a system where tasks are initially defined, followed by identification of hazards. Next, appropriate hazard controls and working within these controls are performed. The last facet of this process, is feedback.

In general, feedback occurs after a project or task was performed so positive aspects and areas-of-improvement are reviewed and open for discussion. It is usually best to have the entire project team present so that there is a high-level of assurance that all aspects of a task or process are captured. This is important as missing a key element can mean the difference between success and failure (failure in the field of S&H generally equates to an injury or illness). For instance, a crane operation might have been performed without an unwanted event, but during the final feedback phase of the project, it was discovered that since the crane's boom had to be extended slightly further than anticipated, the cranes' 75% capacity might have been exceeded; thus categorizing this operation as a critical lift and requiring additional control measures. If the crane operator was not present during the feedback session, a potential point-of-failure would go unnoticed so that during the next project (most probably using a different crane operator), once again this potential hazard could be present, and once again, leaving the task susceptible to a very serious event. By identifying areas-of-improvement, we can implement appropriate controls so that unwanted events (in this case, a tipped-over crane) can be prevented.

Continuous improvement (or CI) is the set of on-going systems of engineering and management activities to select, tailor, implement, and assess a particular process. Many organizations incorporate a four-step cycle process to control product quality during their development process. The steps are: 1) Plan: determine what needs to be done, when, how, and by whom; 2) Do: carry out the plan, on a small-scale first; 3) Check: analyze the results of carrying out the plan; and 4) Act: take appropriate steps to close the gap between planned and actual results. This cycle then continues or repeats, starting once again at Step 1.

Thus CI is an ongoing effort to improve products, services or processes. These efforts can seek "incremental" improvement over time or "breakthrough" improvement all at once.

CI is a method that understands that through events; either directly or indirectly related to a process, that process can be affected. This means that through changing conditions, a process or task is continually changing and therefore, requires continuous reexamination. Examples of indirect



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influences can be changes location, and even weather, while direct factors would be change in personnel, equipment, or materials.

A common mantra in many businesses today is “Anything that you do well is worth doing better over time.” Thus CI speaks to something that every conscientious business should be doing, through a formalized protocol.

Incremental improvement is a step by step process integrated into day to day work, using small, day-to-day actions and ongoing examination of operations and work flow. This approach tends to be low cost, using no dramatic measures while expecting no dramatic results. This can allow us to make small changes and evaluate the results. And if the results are satisfactory, continue in the same vein - or to shift gears and start evaluating again if the outcome is insufficient. And even after we make our changes due to CI improvements, we need to continue our process of reexamination and never resting on our past achievements and to regenerate a task for an opportunity to keep improving.

Lessons learned (or LL) are experiences distilled from a project that should be actively taken into account in future projects. There are several definitions of the concept. The one used by NASA as well as international space agencies looks at LL as “A lesson learned is knowledge or understanding gained by experience.” The experience may be positive, as in a successful test or mission, or negative, as in a mishap or failure. A lesson must be significant in that it has a real or assumed impact on operations; valid in that is factually and technically correct; and applicable in that it identifies a specific design, process, or decision that reduces or eliminates the potential for failures and mishaps, or reinforces a positive result.

All three concepts of Feedback, CI and LL are based on sound principles of never resting on past accomplishments or being completely satisfied with your current processes of task performance. Having successful programs in all three areas is, indeed a verification of a commitment for hazard/quality control. However, without going a few steps further, much of the great work to control workplace occurrences can be, if not for naught, lost to others in an organization as the improvements that were identified need to be communicated to other organizations so that the shortcomings that have been identified are translated throughout the organization. If this is not done, then there could be a continuous re-inventing of the wheel or, worse, a workplace accident could occur.

Once we have identified an improvement in our work tasks, whether it is in the name of hazard identification or work efficiency, through establishing a process whereby we can effectively communicate these improvements, the positive benefits that the initiating group has reaped, can be provided to others throughout the organization. Otherwise, important process improvements can, over time, be lost.

**It had long since come to my attention that people of accomplishment rarely sat back and let things happen to them. They went out and happened to things.**

Leonardo Da Vinci

