Safety/Security/Quality/Environmental Management Systems (MS) Continual Improvement Cycle

T. McLellan – U.S. Merchant Marine Academy – 05/10/2018

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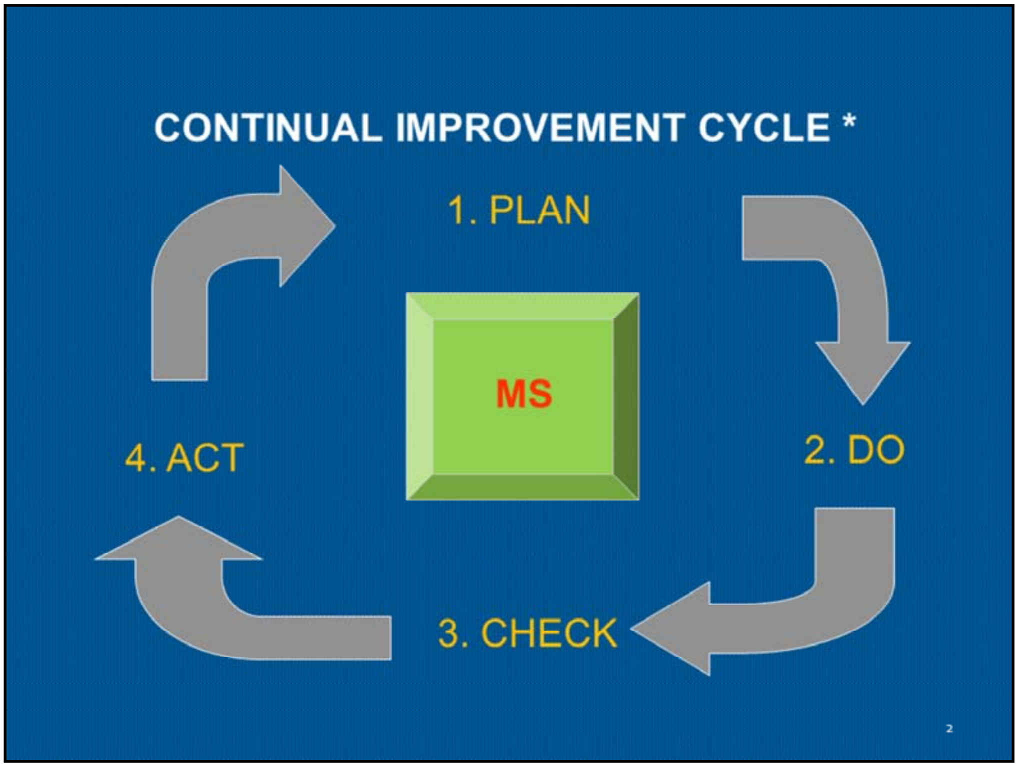
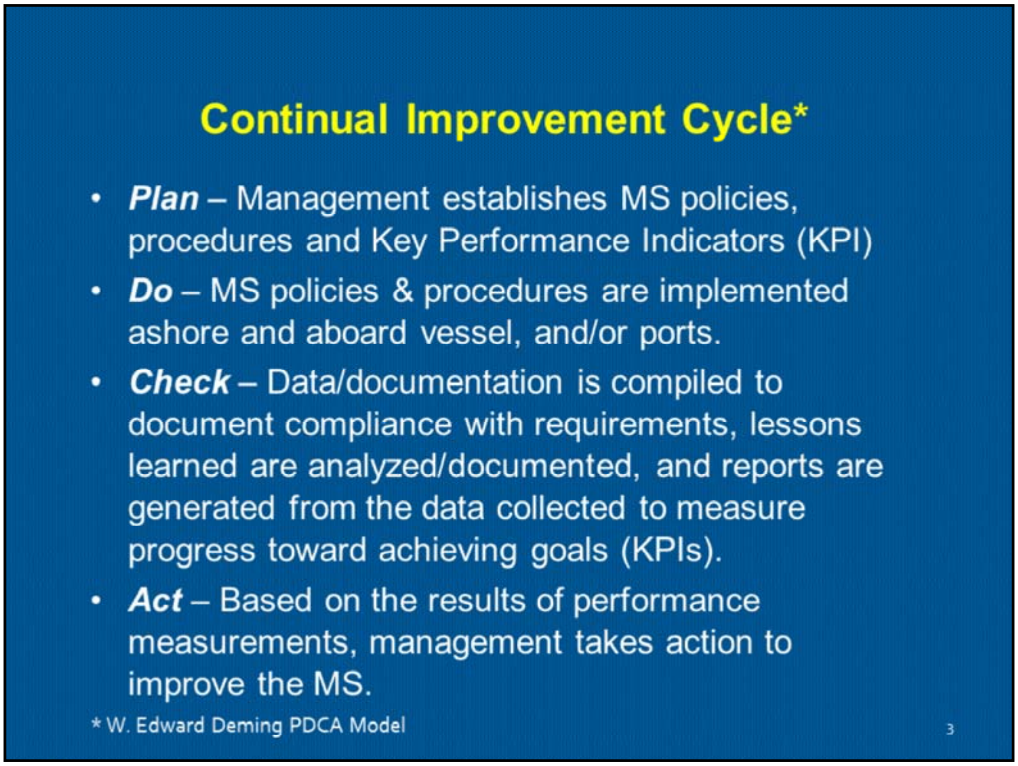
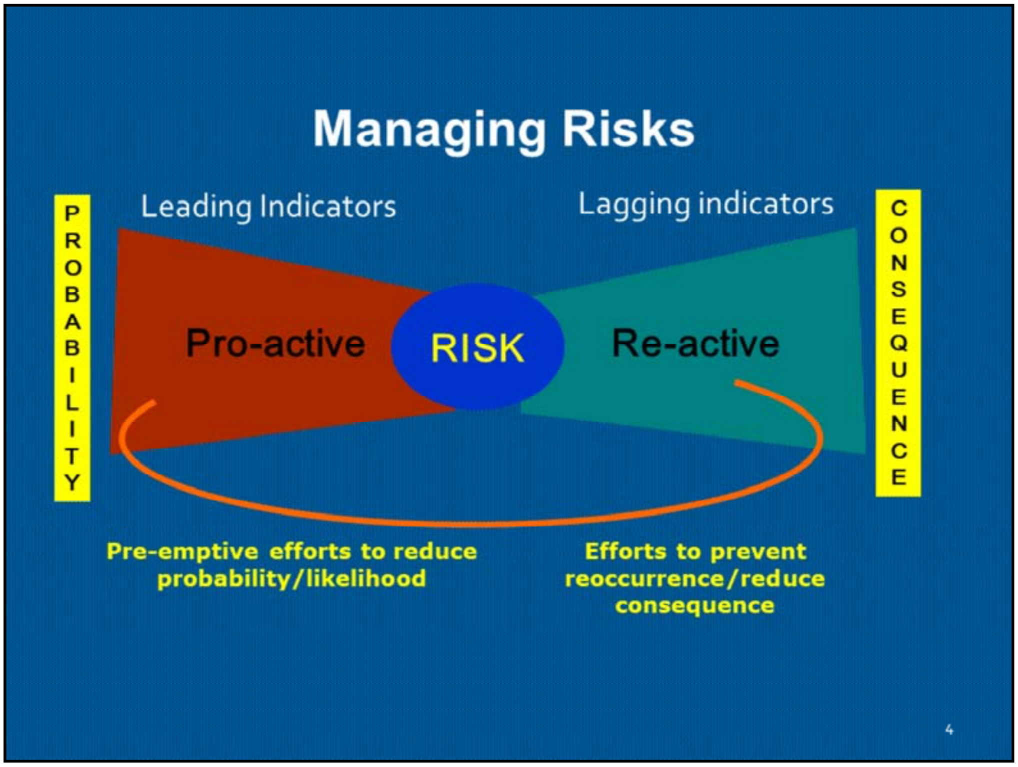


Standard Continual Improvement Process Cycle based on W. Edward Deming's PDCA Model.

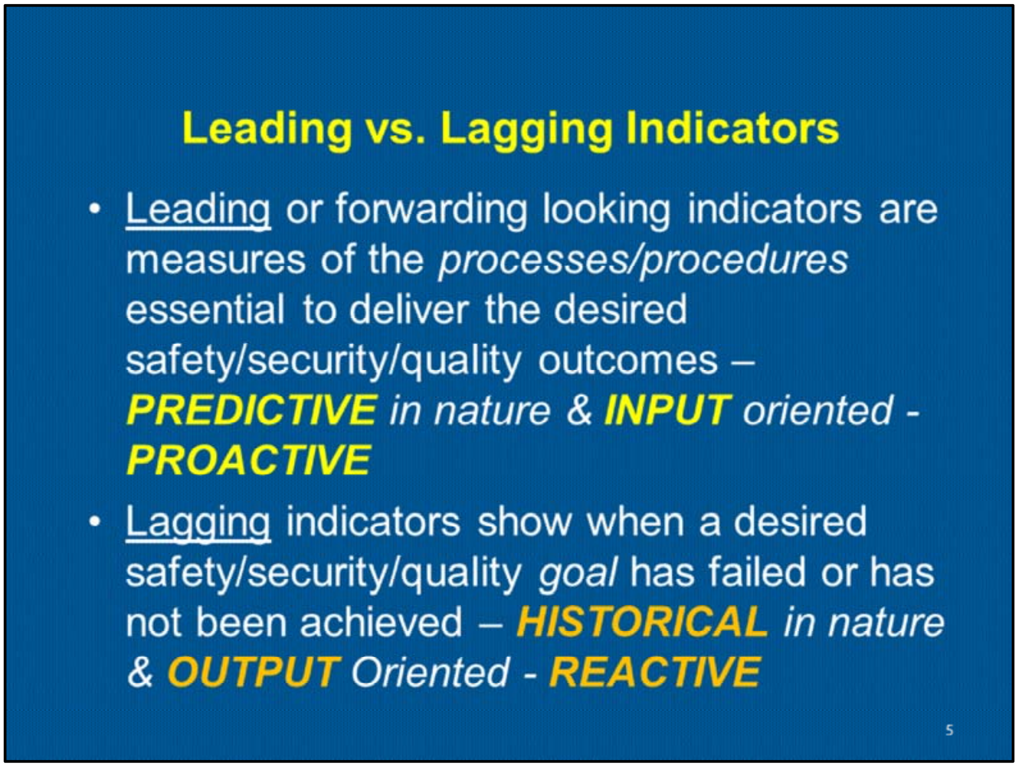
Management Systems (MS) Continual Improvement Cycle



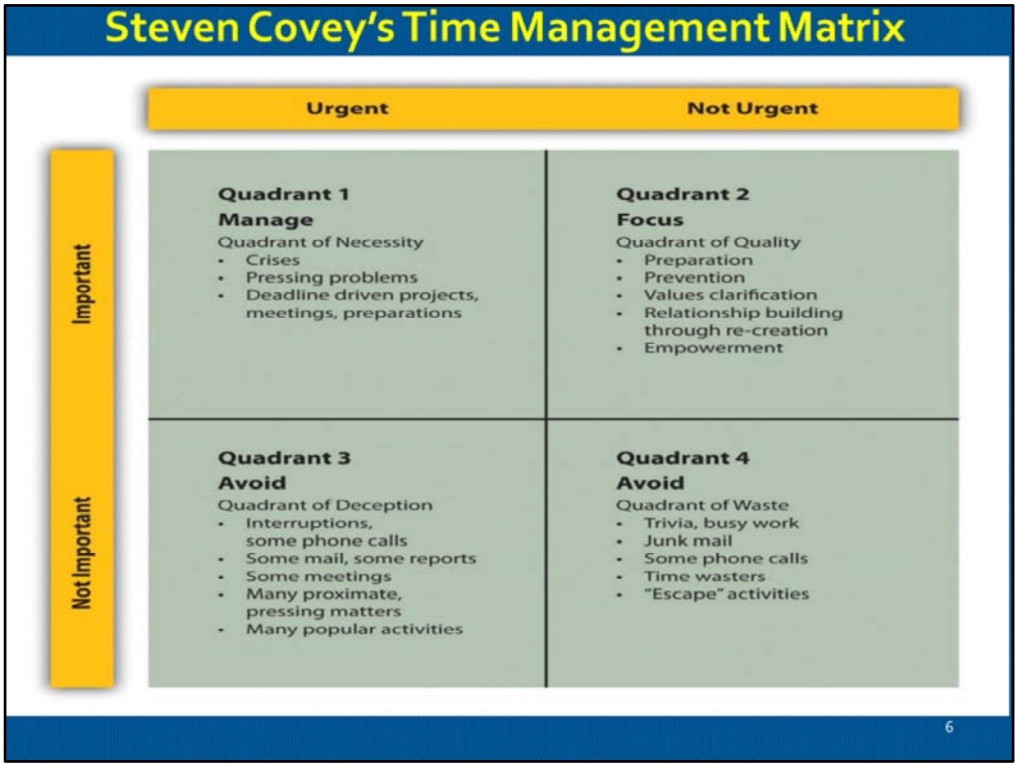
- **PLAN** - Most companies/organizations develop sufficient Management System (MS) plans & documents but many do not develop Key Performance Indicators to measure progress in maintaining and improving MS policies, procedures and processes.
- **DO** – Most companies/organizations implement MS policies and procedures to assist in managing safety/quality/security/environmental operational requirements.
- **CHECK** – Main function is to obtain data/trends that enable decision makers in Step 4 – ACT, to make informed decision based on meaningful data to make improvements to the MS – that is to make it more effective to reduce risks. Unfortunately, many companies/organizations are only effective in checking minimum compliance with the MS requirements with the focus on “auditing” the system and that is where there effort stops. That is, the management’s focus/goal of the MS planning/implementation is to meet minimum compliance audit requirements. Unfortunately, many companies/organizations do not see the “value” to monitor the effectiveness of MS beyond compliance with regulations. As a result, these efforts usually don’t go far enough to be effective for real MS improvement to reduce risks and to realize financial value.
- **ACT** – Most/Many companies Act on lagging indicators only “after the fact” of an incident/accident to make corrections to the MS.



- **Proactively Reduce Probability of an Adverse Event/Incident -** Focus should be on tracking Leading Indicators so companies/organizations can proactively reduce their operating and business risks. These activities can be effective in reducing the probability of an event/incident (in security, reduce the vulnerability or weaknesses of operating processes/procedures) and thereby reduce the risk of a particular event/incident.
- **Improve Post Event/Incident Response** – Use Lagging Indicators to make improvements in MS and to reduce consequences of an event/incident.

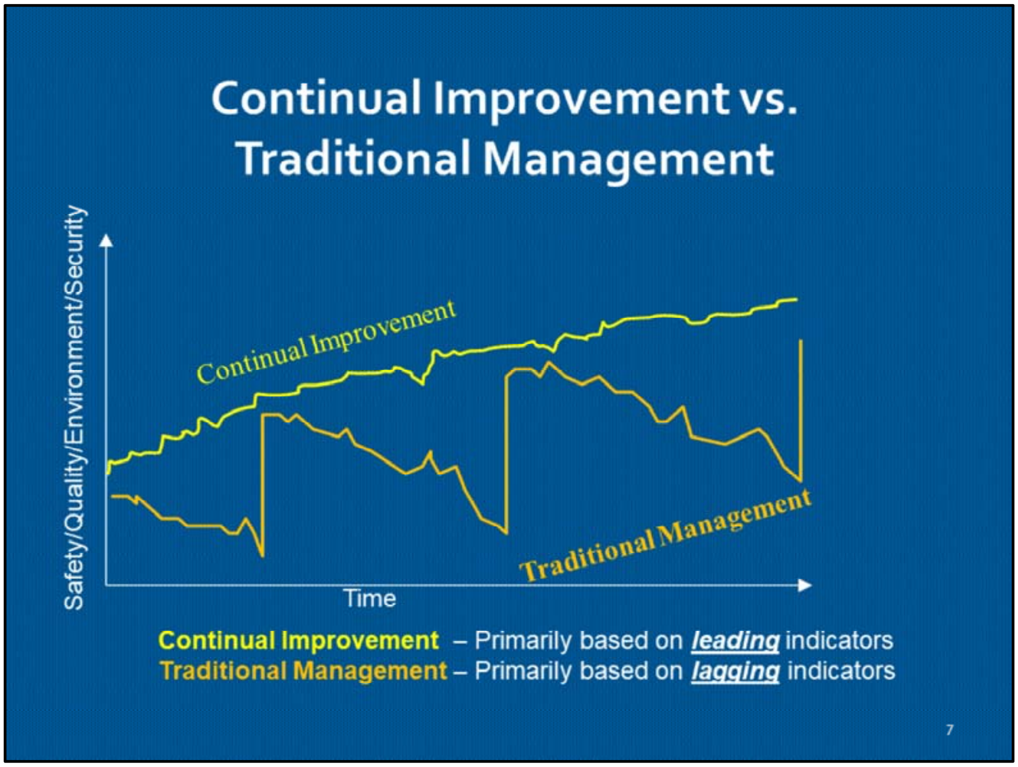


- **Focus on Leading Indicators** – to make corrections in MS to reduce risks of events/incidents and to improve financial results.
- **Lagging Indicators Are Failures in the MS** – Safety/Security/Quality/Environmental goals are not achieved when adverse events/incidents occur. Relying on lagging indicators to make corrections to the MS "after the event/incident" can be very costly.

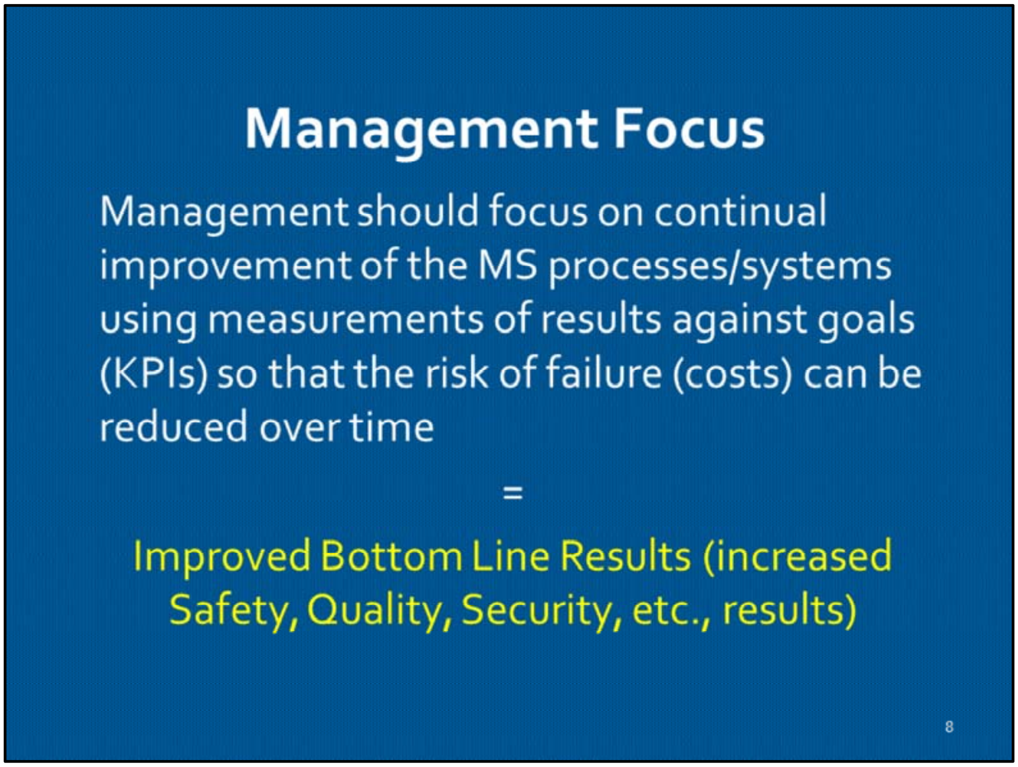


- Organizations should focus more time and energy on **Quadrant 2 activities** to improve quality of operations, to reduce operating risks and to increase financial results. Too many organizations focus on **Quadrant 1 activities** – reacting to and managing responses to adverse events/incidents. More effort spent on Quadrant 2 activities will reduce the likelihood of Quadrant 1 events occurring and will provide better management of Quadrant 1 activities that are required to respond to an adverse event.

- Time spent in **Quadrants 3 & 4** should be minimized and avoided, if possible.



- Many organizations follow the **Traditional Management approach** – reacting to adverse events/incidents (lagging indicators) as the impetus to make MS improvements. This can be a very costly strategy because of the expenses incurred from failures in the MS - damages to assets, interruption to operations, personal injuries and environmental damage.
- Organizations that follow a **Continual Improvement Process** proactively make improvements to their MS to reduce the risk of adverse events/incidents occurring, and are more likely to achieve their Safety/Quality/Security/Environmental goals and create more financial value to the organizations.

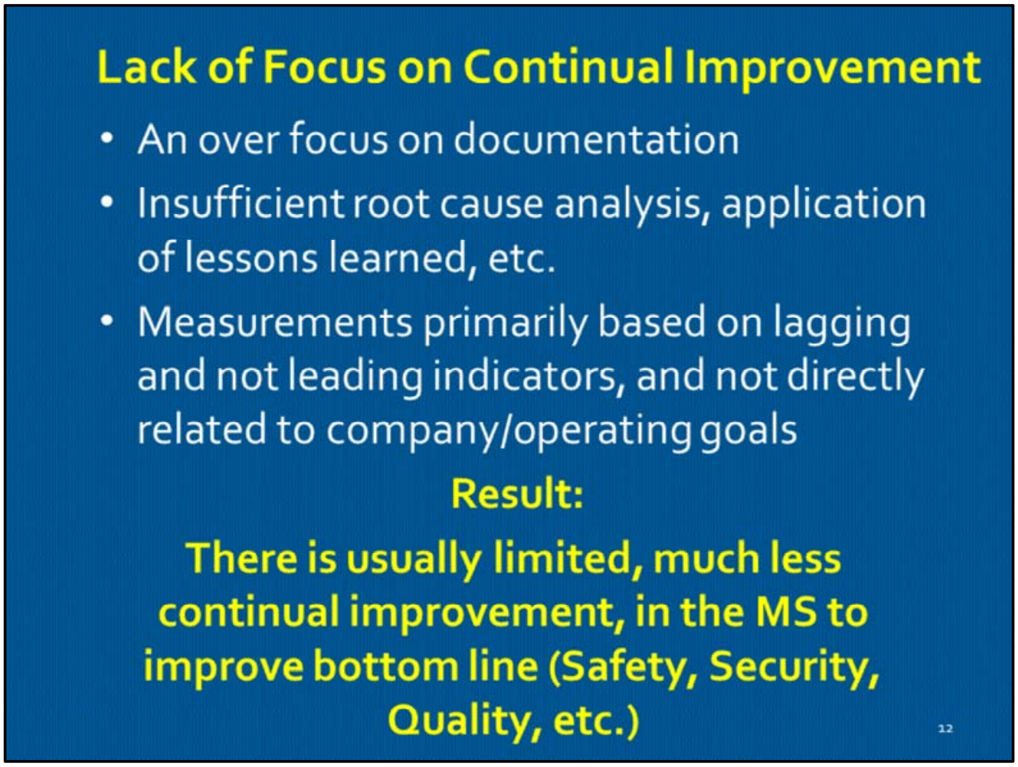


- Safety/Security/Quality/Environmental managers should evaluate the financial benefits of proposed improvements to the MS – improved bottom line and Return on Investment – and present these proposals based on the financial benefit(s) to the organization.

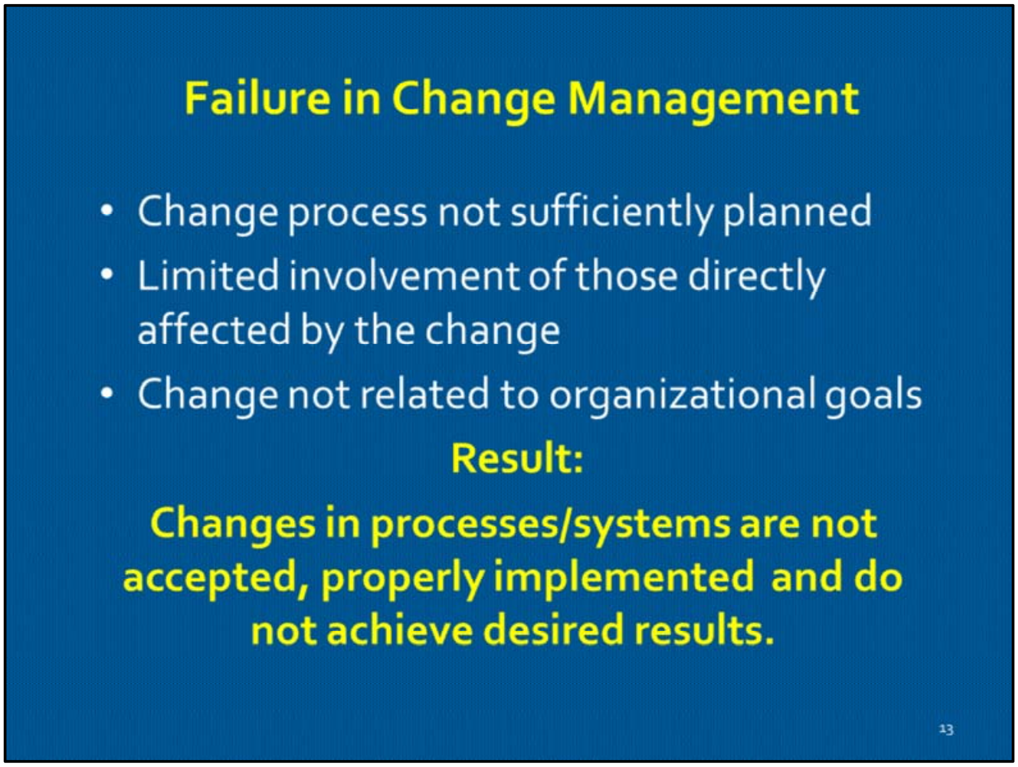
- Many Organizations do not benefit from their MS because they focus only on the minimum requirements to meet regulatory compliance.

- In many organizations, Management is not committed to the MS beyond the minimum requirements of compliance. This results in organizations not taking advantage of the financial benefits that could result from a more robust MS.

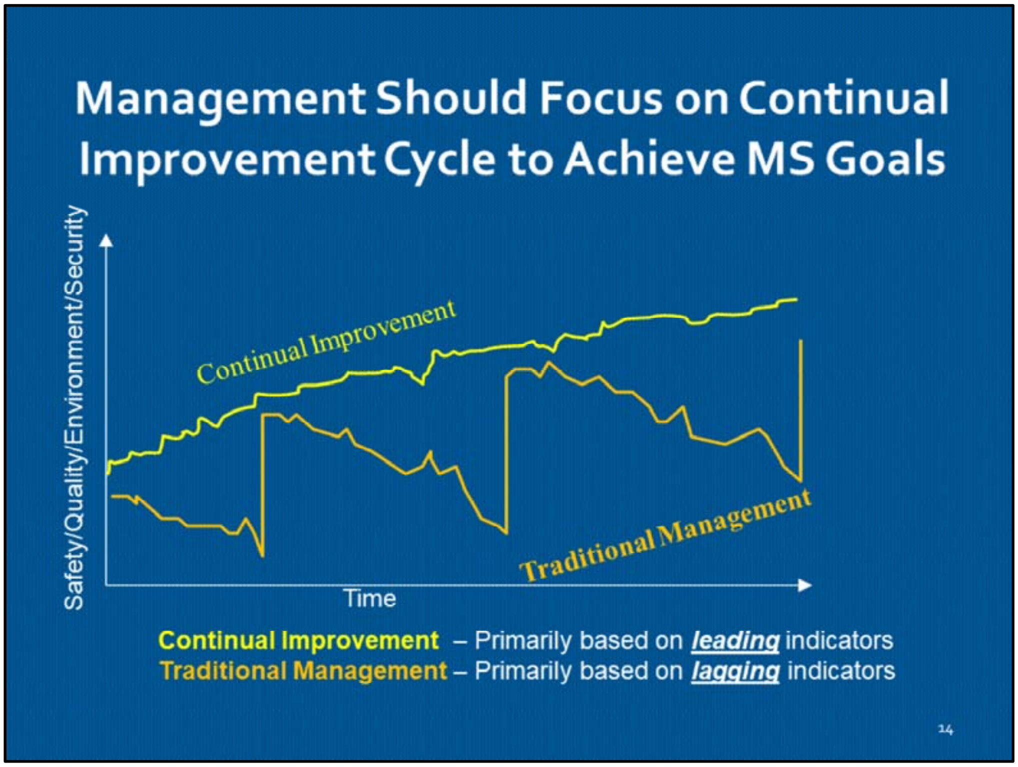
- In many Organizations, Safety/Security/Quality/Environmental initiatives are viewed as "costs" to the organization instead of "investments" that can improve financial returns from operations.



- Focus on collecting, analyzing and evaluating meaningful data to make proactive improvements to the MS to reduce operating risks and to improve financial results.



Implement a proper Change Management process to ensure changes to the MS have the desired effect and do not create other problems in the system.



- Management should focus on Continual Improvement of the MS to achieve MS goals and to improve financial results.