

# Management Review / KPI's

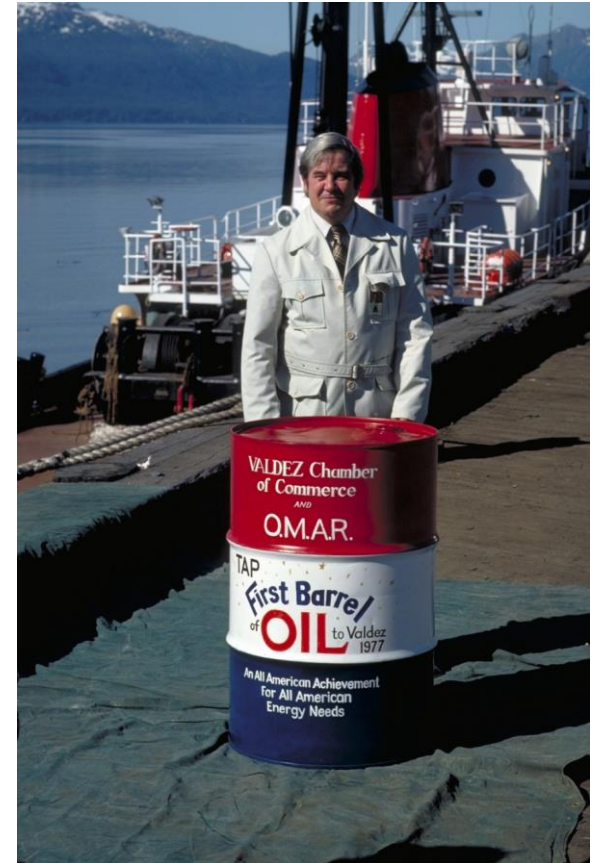
Mel Jessee, Quality Programs Manager



## Trans-Alaska Pipeline System (TAPS)

# Company Overview

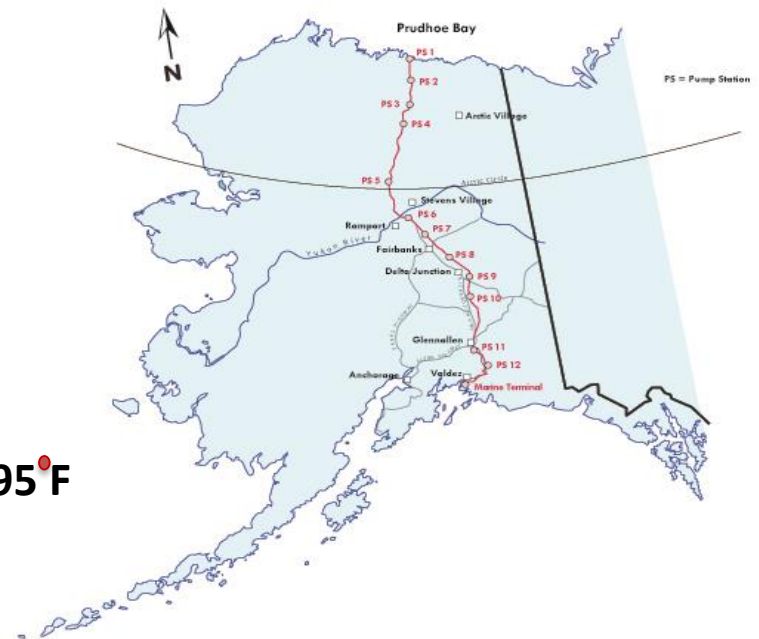
- TAPS is a Crude Oil Pipeline
- TAPS began operations in 1977 (41 Years)
- 2017 throughput average: 527 thousand bpd
- Peak throughput: 2.1 million bpd in 1988
- 18 billion barrels moved through TAPS since 1977
- TAPS is one of the world's largest pipeline systems






# Company Overview

- 48-inch diameter pipe
- 800-miles long
  - 420 miles above-ground
  - 380 miles below-ground
- 178 mainline valves
- 800 Alyeska employees
- 1,000-2,000 TAPS contractors (Seasonal)
- Air temperature along route: Minus 80°F to 95°F



A photograph showing a long pipeline running through a landscape with mountains in the background and trees in the foreground. The pipeline is supported by a series of vertical posts, many of which are topped with heat pipes. The text is overlaid on the image.

There are over 124,000 heat pipes along the pipeline. These pipes transfer ground heat into the air to ensure soil remains stable and able to support the pipeline.



A large, silver-colored pipeline is suspended across a wide river by a series of steel cables and towers. The river is calm, reflecting the clear blue sky. In the background, a dense forest of evergreen trees lines the riverbank, with rolling hills visible in the distance. The foreground shows a gravelly shoreline.

**TAPS Crosses three mountain ranges and  
more than 30 major rivers and streams.**





**Valdez Marine Terminal covers 1,000 acres and has facilities for crude oil metering, storage, transfer and loading.**

**Laden tankers are escorted more than 70 miles through Prince William Sound into the Gulf of Alaska.**

# Alyeska's Pipeline SMS Journey

## IMPLEMENTATION TIMELINE:

Date	PSMS Milestone
4Q 2015	Alyeska President Signed "Pipeline SMS Commitment Letter" to API and AOPL
2Q 2016	Completed Initial Gap Analysis to API-1173
4Q 2016	Obtained Executive Approval of Conceptual Solution for a New Management System Framework and 2017 Implementation Plan
2Q 2017	Developed New Management System Framework (Initial Draft)
3Q 2017	Obtained Executive Approval of New Management System Framework (Working Draft)
3Q 2017	Completed Implementation of Significant Fixes to Initial Gap Analysis
4Q 2017	Completed Management System Assessment for First Management Review
4Q 2017	Completed First Management Review
4Q 2017	Published New Management System Framework (TAPS Framework for Excellence)
3Q 2018	Completed More Comprehensive "TFX" Assessment Tool
4Q 2018	"TFX" Assessment for Second Management Review (13 of 15 Elements Completed)
4Q 2018	Second Annual Management Review (11/13/2018)



# Summary Results of Initial Gap Analysis

Initial 2Q2016 API-1173 Gap Analysis (Rev 0)

Heat Map Overview

(741 Discrete Elements)

## 5 - Leadership and Management Commitment

### 5.1 General

### 5.2 Goals and Objectives

### 5.3 Planning

### 5.4 Responsibilities of Leadership

#### 5.4.1 Top Management

#### 5.4.2 Management (a-f)

#### 5.4.2 Management (g-k)

#### 5.4.3 Employees

### 5.5 Responsibility, Accountability, and Authority

### 5.6 Making Communication, Risk Reduction, and CI Routine

## 6 - Stakeholder Engagement

### 6.1 General

### 6.2 Internal

### 6.3 External

## 7 - Risk Management

### 7.1 General

### 7.2 Data Gathering

### 7.3 Risk Identification and Assessment

### 7.4 Risk Prevention and Mitigation

### 7.5 Periodic Analysis

### 7.6 Risk Management Review

## 8 - Operational Controls

### 8.1 Operating Procedures

### 8.2 System Integrity

### 8.3 Management of Change

### 8.4 Use of Contractors

## 9 - Incident Investigation, Evaluation, and Lessons Learned

### 9.1 Investigation of Incidents

### 9.2 Follow-up and Communication of Lessons Learned

### 9.3 Learning from Past Events

### 9.4 Learning from External Events

## 10 - Safety Assurance

### 10.1 General

### 10.2 Audit and Evaluation

### 10.3 Reporting and Feedback System

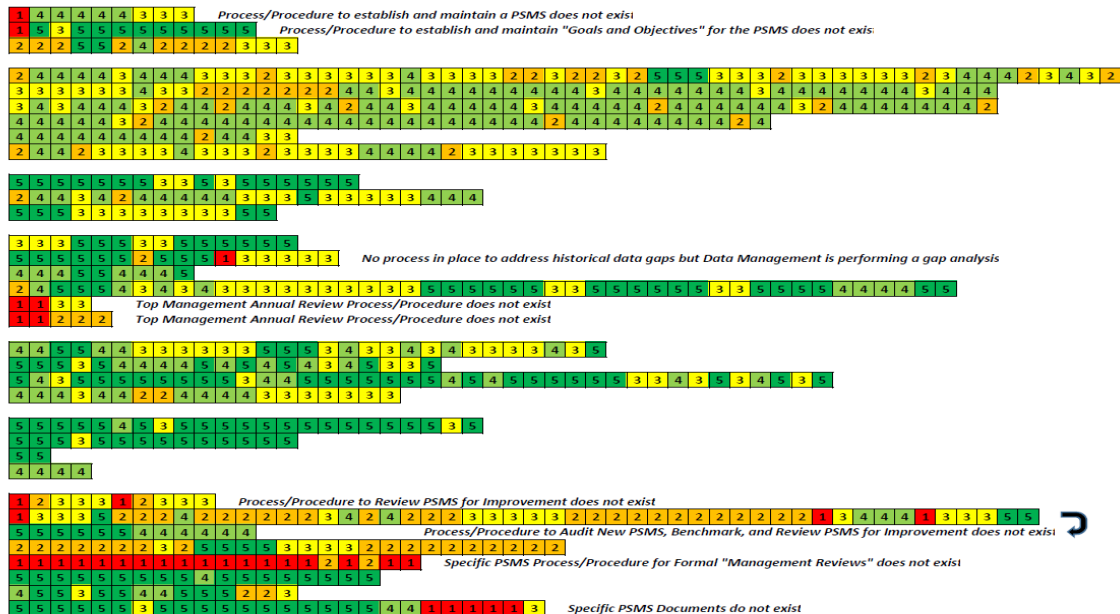
### 10.4 Performance Measurement and Analysis of Data

## 11 - Management Review and Continuous Improvement

## 12 - Emergency Preparedness and Response

## 13 - Competence, Awareness, and Training

## 14 - Documentation and Record Keeping



## Gap Analysis Criteria:

Title	Description	Count	Percentage
None	No gap found and no further work required for implementation.	207	28%
Insignificant	Although changes or improvements were identified, they are not required for implementation (e.g., Continuous Improvement).	213	29%
Minor	Minor changes or improvements were identified that are required for implementation. Minor edits and publishing of existing SPAC*.	188	25%
Significant	Significant changes to existing SPAC* is required for implementation. Dedicated time and resources are required for implementation.	98	13%
Major	Either not currently included in existing SPAC*, or a major new SPAC* development is required for implementation. Significant time and resources are required for implementation.	35	5%

\*SPAC - Standards, Procedures and/or Administrative Controls.

82% of Elements found either No Gaps, Insignificant Gaps, or Minor Gaps.

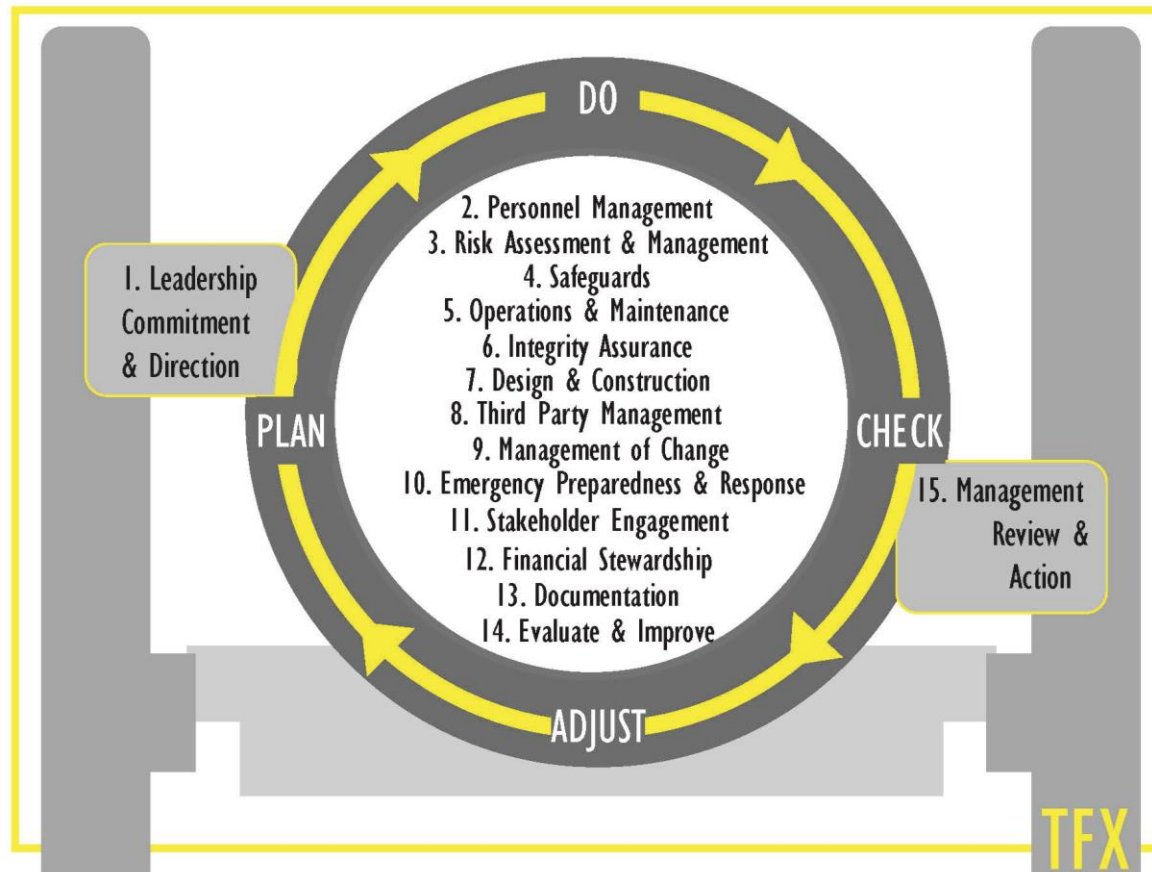
Only 18% of Elements found Significant/Major Gaps that will Require Dedicated Resources to Implement.

Only 5% of Elements found Major Gaps (See General Descriptions Above)

741

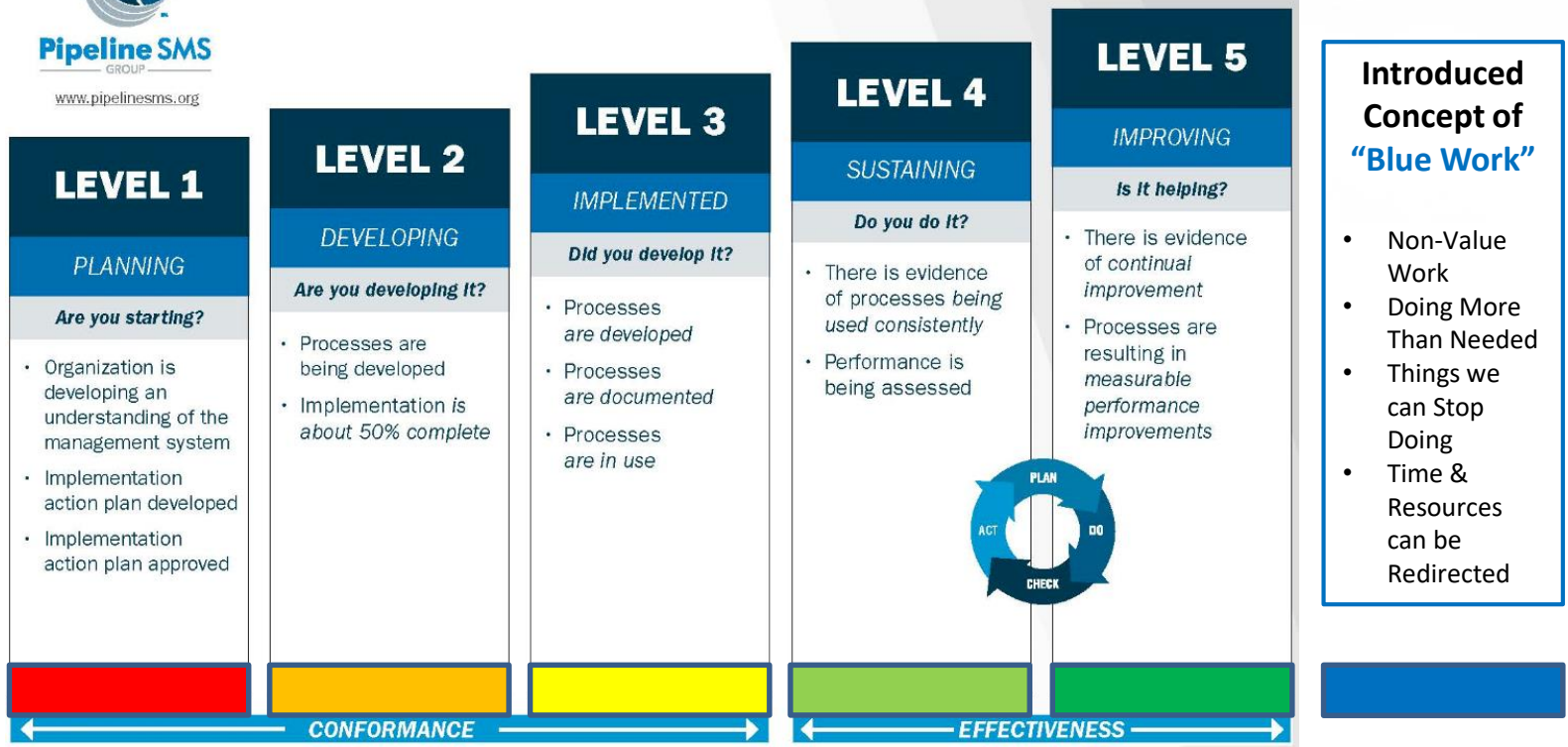


# TAPS Framework for Excellence (TFX)



# Assessment Criteria

## Pipeline SMS Maturity Model and Tools





# Our Assessment Tool

TFX #	TFX Description	API RP 1173 Requirement	QA-36 Criteria Requirement	Assessment Score	Blue Work	Primary Implementing Methods	Other Objective Information (e.g., Reports, Metrics, Audits)
15.0	<b>Element 15. Management Review and Action</b> The Alyeska executive team reviews and assesses the TAPS Framework for Excellence on an annual basis to ensure continued suitability, adequacy, and effectiveness and alignment with the strategic direction of the organization.			2.8		Assessment Process, AMS-019 Management Review Procedure, AMS-000-02	
15.1	Alyeska leadership evaluates organizational performance against established objectives and uses that information to identify improvements and opportunities.	(10.2.6) Are the findings of audits and evaluations reported in the management review?  (11.1) In the management review, are the PSMS and safety performance reviewed to determine which performance goals and objectives have been met?  (11.2) Is there a documented process for management to evaluate risk management effectiveness and foster improvement in pipeline safety performance by using a PSMS?  (11.2) Is there a documented process for management to periodically evaluate new technology that may enhance pipeline safety?		2	No	Assessment Process, AMS-019 Management Review Procedure, AMS-000-02	2017 Management Review - Did not include audit findings  2018 Management Review - In-Process to include audit findings  Risk committee - champions throughout company; presented to ET - Risk rank 1 and 2 items.  IT register.
15.2	The executive team participates, at least annually, in a review of management system performance metrics. The metrics focus on system status and effectiveness.	(11.1) Is there a procedure for conducting management review?  (11.3) Does top management review and approve the output of the management reviews at least annually?	(M12) Executive leadership ensures the performance of periodic management reviews to evaluate whether the organization's quality policy and quality assurance criteria are being met.	3	No	Assessment Process, AMS-019 Management Review Procedure, AMS-000-02	scheduled for second annual management review.  Management review process published 12/17 (AMS-000)
15.3	Management review recommendations for improvement are tracked until implemented.	(11.1.3) Are recommendations for improvement from the management review integrated into the next iteration of the PSMS and supporting processes?	(M12) Executive leadership ensures the performance of periodic management reviews to evaluate whether the organization's quality policy and quality assurance criteria are being met.	3	No	Assessment Process, AMS-019 Management Review Procedure, AMS-000-02	2017 actions were tracked in MAC
15.4	The review includes evaluating opportunities for improvement to the management system and innovation.	(11.1.3) Are recommendations for improvement from the management review integrated into the next iteration of the PSMS and supporting processes?		3	No	Assessment Process, AMS-019 Management Review Procedure, AMS-000-02	See above.

# Our Assessment Tool

TFX #	TFX Description	What's Going Well? (Highlights)	What Could be Improved? (Gaps)	Improvement Actions (Who will do What by When?)
15.0	<b>Element 15. Management Review and Action</b> The Alyeska executive team reviews and assesses the TAPS Framework for Excellence on an annual basis to ensure continued suitability, adequacy, and effectiveness and alignment with the strategic direction of the organization.			
15.1	Alyeska leadership evaluates organizational performance against established objectives and uses that information to identify improvements and opportunities.	Risk committee - demonstrating continuous improvement with the assessment against the maturity model.  Training and support for development of new set of leading indicators by Quality team.  Draft of a new AMS for IT/Technology.	<p><b>Need to develop metrics for 2019 internal scorecard.</b> (add to Element 14)</p> <p>Need to implement a company scorecard for company-wide use. - safety objectives need to be enhanced with leading indicators.</p> <p>Need behavior based leading indicators for process and personal safety. - i.e. PSMOC - Process Safety working on leading Indicators/ pilot metrics - this will allow for more visibility company-wide. Currently only have lagging indicators on PC.</p> <p>Want direct line-of-sight of what company proactive activities are. - will directly tie to individual departments/teams</p> <p>Objectives on Performance scorecard should be linked to the risks identified by ERM.</p> <p><b>Need technology implementation process.</b></p>	Develop program for development of behavior based leading indicators for department metrics.  Training and implementation of performance scorecard metrics at the department levels.  ACTION BY: Quality Lead DUE DATE: 6/30/19  Develop risk metrics for 2019 internal scorecard. (11.2) ACTION BY: Risk Lead DUE DATE: 12/31/18  Implementation of a company scorecard for company-wide use. ACTION BY: Executive Team DUE DATE: 12/31/18
15.2	The executive team participates, at least annually, in a review of management system performance metrics. The metrics focus on system status and effectiveness.	agreed timing of management review supports annual business planning and prioritization.	Risk based recommendations limited to top 3-5 improvements for across the company.  ET approval of recommendations.	
15.3	Management review recommendations for improvement are tracked until implemented.		2017 recommended actions approved by ET, and completed by LT.  Too many actions in 2017; could be focused to top 3-5 for company-wide improvements.  Suggestion: ET to approve high priority items only; LT to action low-medium priority items - ET approval not required.	AMS-000-02: post management review improvements: revision to include suggestion: ET to approve high priority items only; LT to action low-medium priority items - ET approval not required.
15.4	The review includes evaluating opportunities for improvement to the management system and innovation.		See above.	See above.



# Management Review Process

Metrics are  
a Gap

We have lots of  
metrics, and we  
measures lots of  
things.

But...we lack  
companywide  
knowledge and  
training on the  
development of  
effective  
metrics.

Alyeska Management System

---

Title: Annual Management Review Procedure

Number: AMS-000-02

Page: 2 of 7

Revision: 0

Effective Date: 12/28/17

---

Approved by:

Mel Jessee, Quality Programs Manager

---

## 1.0 Introduction

This procedure is the implementing document for Element 15, Management Review and Action, within Alyeska's TAPS Framework for Excellence (TFX) as defined in [AMS-000, TAPS Framework for Excellence \(TFX\)](#).

The management review is done annually as determined by the executive team to assess the effectiveness of the management system, to identify improvements, and to aid in setting goals and strategic objectives.

The review is done in two parts: the first is an assessment of system performance, and the second is providing results to the executive team.

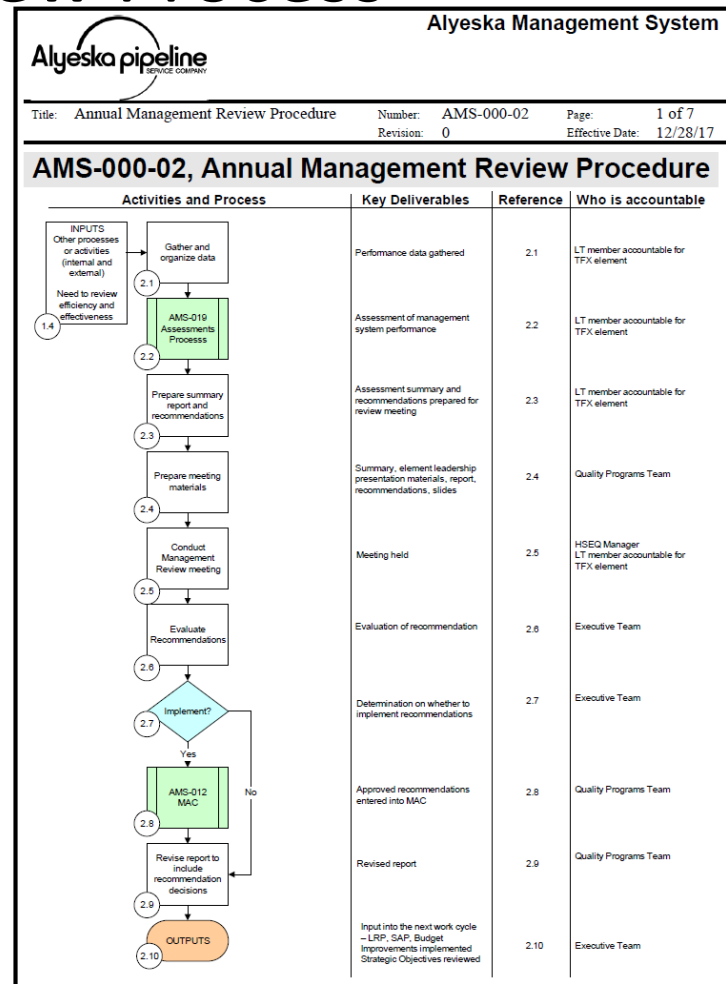
- Many sources of performance information, as well as strategic objectives and management input, are considered when selecting the assessment team, writing the plan, analyzing results, and reviewing results with the executive team. The assessment is conducted consistent with [AMS-019, Assessment Process](#).
- As part of the management review, the executive team evaluates recommendations for continuous improvement. Acting upon the recommendations and using the review information to inform the next business planning cycle enables continuous improvement of the management system.

## Purpose

This procedure describes how to identify, collect, and analyze management system performance data. At the direction of the executive team, the leadership team broadly reviews outputs from the elements of the management system to determine whether goals and objectives have been met. The review is conducted annually and is part of the "check" function in the overall management system.

Performance data is used to evaluate system effectiveness and efficiency, and is the basis for continuous improvement and, if necessary, corrective action. Consideration and implementation of improvement and/or corrective actions align with the "adjust" function of the management system.

The assessment information and improvements are used as an input to the "plan" function, which identifies the company's goals and strategic objectives. The management system's primary implementing methods connect the goals and strategic objectives to day-to-day work. Performance is measured using a variety of metrics.



# KPI/Metrics - Scorecard

**We're Just Starting Journey to Improve and Align Metrics...**

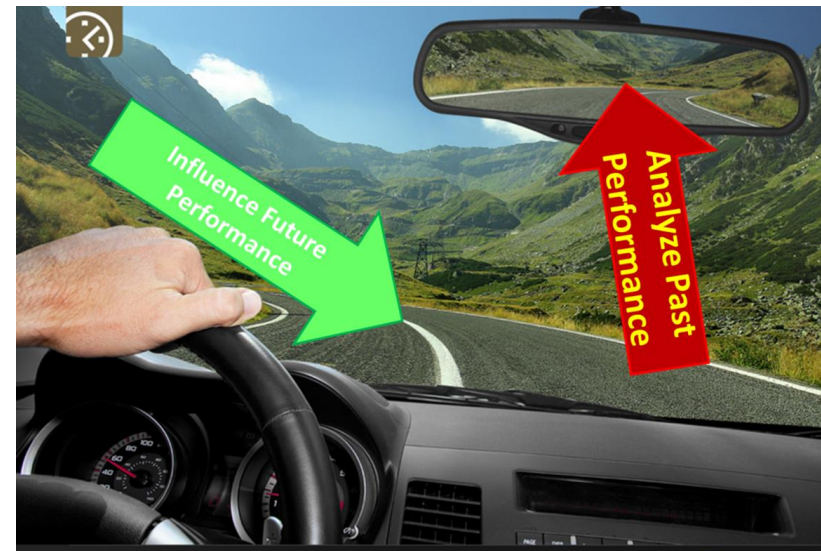
**GAP: Workers Lack Line-of-Sight Connection to Companywide Performance Goals**

- Developing Departmental/TFX Process Objectives that Support Companywide Goals
- Developed On-Line Video Training for Metrics (Leading and Lagging)
- Holding Workshops to Train and Jumpstart
- Developing Companywide “Balanced” Scorecard

**GOAL: Alignment of Individual Deliverables, Priorities and Processes with Companywide Goals**

**Management Review KPIs:**

- Overall Assessment Scores (Lagging)
- Deliverables for Management Review (Leading)





# KPI/Metrics Training

- Select metrics that:
  - YOU control
  - YOU have risk
  - YOU have accountability



- Avoid:
  - No risk
  - No control
  - Unrecoverable “Laggy”
  - Burdensome (effort \* free Work”



# KPI/Metrics Workshop Tools

TFX Element	#4 - Safeguards
Process/Program	Injury Prevention
Objective #1	Nobody gets hurt!
Lagging Metric #1 <ul style="list-style-type: none"> <li>• Result</li> <li>• What has happened?</li> <li>• “Rear View Mirror”</li> </ul>	Total # Injuries  <u>Risks (unintended Consequences)</u> : Incentive to not report injuries  <u>Mitigations</u> : Communication and training on expectation, and more punitive to not report than report
Leading Metric(s) <ul style="list-style-type: none"> <li>• Tactics to Improve Results</li> <li>• Proactive</li> <li>• We have Control/Influence</li> <li>• Effort</li> <li>• “Front Windshield”</li> </ul>	<ul style="list-style-type: none"> <li>• JLAS/LPOs (“Behavior Based” Safety Tools)</li> <li>• “Focus” Training (Situational Awareness)</li> <li>• “Safety in Motion” Training</li> </ul> <u>Risks (unintended Consequences)</u> : “Pencil whipping”, high quantity-low quality  <u>Mitigations</u> : SQR, Audit, communication and training on expectation



# Alyeska's Pipeline SMS Journey

## Questions?

