

SECTION – IMPLEMENTATION OF PIPELINE SMS ELEMENTS

- Implementation Fundamentals
- Element Components
- Element Breakdown
- Considerations for Implementing Each



IMPLEMENTATION FUNDAMENTALS

As described earlier, this Booklet is not a prescriptive guide to implementation, but a collection of suggestions for an operator to consider as it undertakes implementation of a Pipeline SMS. All operators are encouraged to review this guide for any value they may find. Operators with an existing Pipeline SMS, or which have already designed their implementation strategy, may review this Booklet for any supplemental benefit. Operators starting the Pipeline SMS implementation journey from the beginning will find the greatest use for descriptions of implementation steps, barriers to success and opportunities to leverage.

The following pages of this chapter break down each element of API RP 1173, its purpose and involved stakeholders. Element specific pages also describe potential barriers to success and possible opportunities to leverage when implementing the element. The intent of API RP 1173 to provide a framework that is both scalable and flexible remains just as applicable to the implementation phase. The barriers and opportunities discussed in this chapter are good things for all companies to consider. However, some suggestions in this chapter may not be applicable to all operators, especially those smaller in size or those with established programs utilizing different approaches. In all cases, operators are encouraged to implement API RP 1173 in a way that makes the most sense for their own company, its size, resources and history with safety management systems.

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SECTION – IMPLEMENTATION OF PIPELINE SMS ELEMENTS

IMPLEMENTING STAKEHOLDER ENGAGEMENT

Purpose – Stakeholders for Pipeline SMS are both internal and external. External stakeholders may include Customers, Regulators, Investors, the Public and the wider Business environment. Internal stakeholders extend from the Board through every organizational level to every individual employee. All Stakeholders have different expectations of Pipeline Safety and in order to deploy an effective management system all these viewpoints need to be understood, as they represent uncertainty that must be managed. Ensuring a culture of internal and external stakeholder engagement supports proactively passing concerns to a pipeline operator where they can be addressed, promoting an environment of mutual trust.

Involved Stakeholders – Employees, Contractors, the Public, Emergency Responders, Government (Regulators), Board, Customers, Competitors

Barriers to Success

- No defined stakeholder list
- Lack of trust or low trust culture
- Lack of communications and feedback

Opportunities to Leverage

- Leveraging Stakeholders' informal influence networks
- Identify and use preferred sender of communications for every Stakeholder
- Taking advantage of non-traditional communication channels such as internet chat or social media



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Focus On: Implementing Stakeholder Engagement

QUESTIONS TO ASK YOURSELF

How will you fulfill the expectations of each stakeholder group?

How will you report to stakeholders and what data will you make available?

How will you monitor stakeholder expectations in order to detect changes?

FACTORS FOR SUCCESS

Respect each stakeholder's viewpoint

Listening techniques - 'Why they say that' as well as 'What they actually say'

Understand your stakeholder landscape - Who is most impacted?

Who has most influence? Who is supportive?



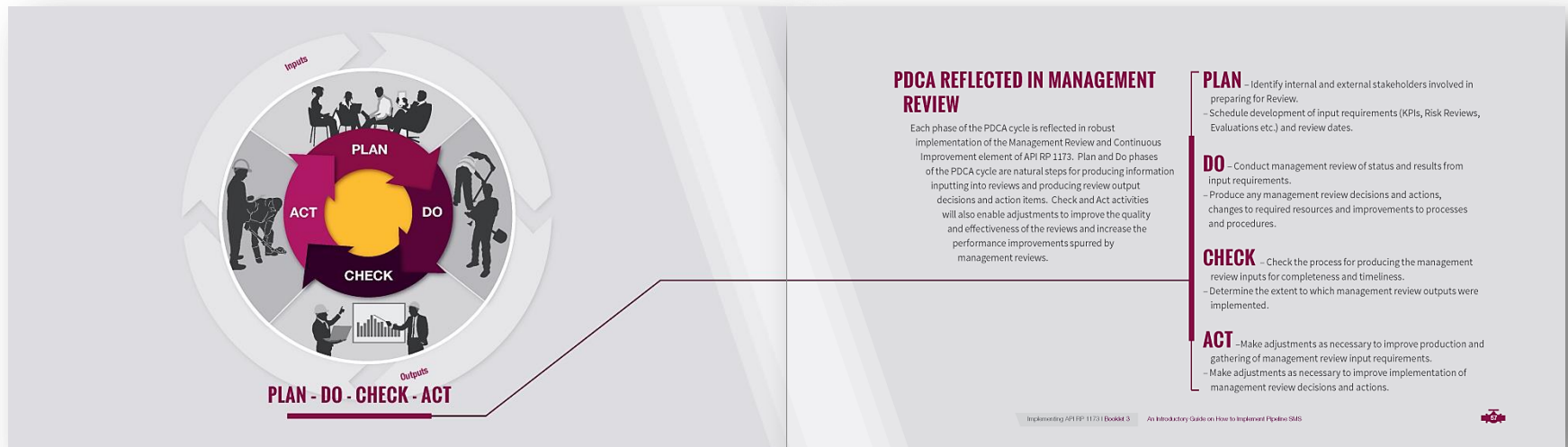
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SECTION – PIPELINE SMS IMPLEMENTATION IN ACTION: EXAMPLES OF PDCA CYCLE

- Plan-Do-Check-Act Cycle
- PDCA Applied to Integrity Management
- PDCA Reflected in Management Review



SECTION – TOOLS TO SUPPORT OPERATORS



TOOLS TO SUPPORT OPERATORS

 Website – <http://www.pipelinesms.org>

 Booklet 3 – <http://bit.ly/PSMSBookThree>

 APL RP 1173 – Implementation Spreadsheet
 Implementation spreadsheet – <http://bit.ly/RP1173spreadsheet>

 Sharing Pipeline Safety Management System Practices & Knowledge
 Peer to Peer Tool – <http://bit.ly/RP1173Sharing>

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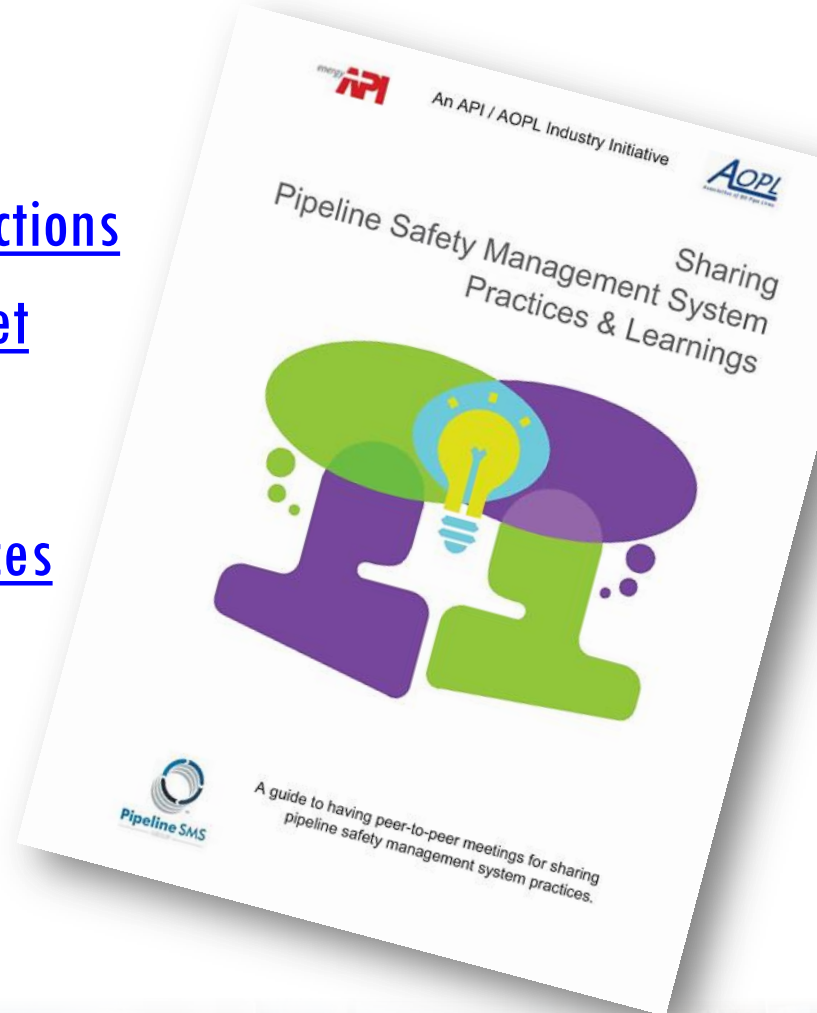
IMPLEMENTATION TOOLS

Gap analysis

- [API RP 1173 Implementation Tool Instructions](#)
- [API RP 1173 Implementation Spreadsheet](#)

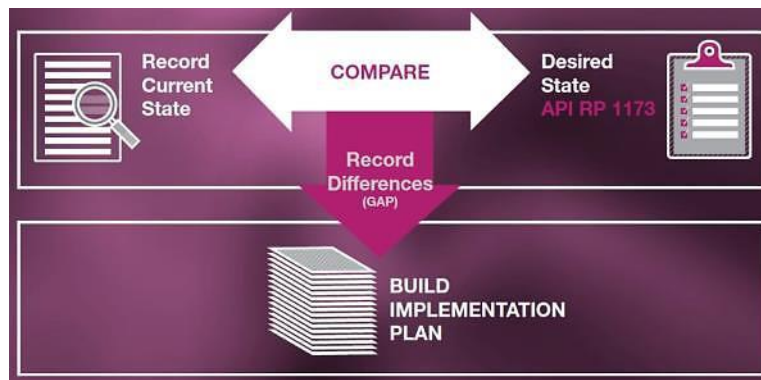
Peer-to-peer

- [API RP 1173 Peer-to-Peer Sharing Practices](#)



IMPLEMENTATION SPREADSHEET / GAP ANALYSIS

API RP 1173 Implementation Spreadsheet

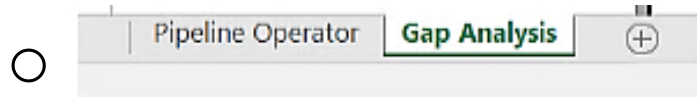


API RP 1173 Sub-element	API RP 1173 Requirement	Example Evidence	Actual Evidence (list the relevant documents / procedures)	Gap (Y/N)	Description of Gap or Gaps Use additional rows for each Potential Action.	Description of Potential Action(s) to Close Gaps. Use additional rows for each Potential Action.	Required (R),	Priority (H,M,L)	Owner	Due Date	Status
5.2	Has Top Management established and documented the goals and objectives for the PSMS?	List or statement of the PSMS goals. List of measureable objectives for the PSMS. Corporate communications. Corporate HSE Manual.	EXAMPLE Annual letter to employees from the organization's president restating the HSE goals of no accidents, injuries or releases to the environment. Sustainability Report contained specific safety initiatives.	N							
5.3	Has Management documented a process for addressing regulatory and legislative requirements?	A procedure that describes how regulatory and legislative requirements are identified, applicability to the organization is determined, how the requirements are implemented within the organization.	EXAMPLE Organization has a person monitoring regulatory activity and uses bulletins from AOPL, API and XXX Consultants for legislative activities.	Y	No documented process or procedure. EXAMPLE	Prepare a procedure that documents the process of monitoring regulatory and legislative activity for environmental, personal safety, occupational health, security, pipeline, transportation and other applicable regulatory issues.	R				
					No process for translating requirements into internal procedures and instructions	Prepare a procedure to convert applicable legislative and regulatory requirements into procedures and instructions. The procedure will include: 1. Process to determine applicability to the organization. 2. Process to determine regulatory requirements. 3. Process to identify regulatory tasks. 4. Process to communicate and assign regulatory tasks. 5. Process to prepare instructions or procedures for completing the tasks.	R				
					No process for monitoring compliance to applicable regulatory requirements.	Prepare a procedure for monitoring compliance to regulatory requirements including: 1. Documentation of completion of regulatory requirements. 2. Review of completion documentation. 3. Process for addressing identified regulatory noncompliance.	O				

IMPLEMENTATION SPREADSHEET / GAP ANALYSIS

Getting started

- Two spreadsheet tabs



- Read API RP 1173 prior

***Pipeline
operator
tab***

IMPLEMENTATION SPREADSHEET / GAP ANALYSIS

Gap analysis tab

- API RP 1173 Sub-Element & Requirement columns

A	B
API RP 1173 Sub-element	API RP 1173 Requirement
7.1	Is there a procedure for performing risk management?

IMPLEMENTATION SPREADSHEET / GAP ANALYSIS

Gap analysis tab

- Example Evidence and Actual Evidence Columns

B	D	F
API RP 1173 Requirement	Example Evidence	Actual Evidence (list the relevant documents / procedures)
Is there a procedure for performing risk management?	Risk Management procedure. Process hazards analysis procedure.	EXAMPLE <i>Pipeline pressure test procedure.</i> <i>Risk-based pressure test alternative procedure.</i> <i>Gulf of Mexico pipeline navigational risk and inspection procedure.</i> <i>Navigable water crossing risk evaluation.</i>

IMPLEMENTATION SPREADSHEET / GAP ANALYSIS

Gap analysis tab

- Gap Identification and Potential Actions columns

H	I	J	K	L
	Gap (Y/N)	Description of Gap or Gaps Use additional rows for each Potential Action.		Description of Potential Action(s) to Close Gaps. Use additional rows for each Potential Action.
		<i>EXAMPLE</i> <i>Procedures do not cover all pipeline assets.</i>		<i>EXAMPLE</i> <i>Identify the other pipeline assets and develop procedures for each asset.</i>
				<i>EXAMPLE</i> <i>Develop a risk management procedure for all pipeline assets.</i>
				<i>EXAMPLE</i> <i>Identify the risk assessment method to be included in the risk management procedure(s). (What-if, Checklist, HAZOP, FMEA)</i>
	Y	<i>EXAMPLE</i> <i>Procedures do not identify the threats to the pipelines except the toxic threat.</i>		<i>EXAMPLE</i> <i>Develop a list of threats for each type of pipeline asset.</i>
				<i>EXAMPLE</i> <i>Update the procedures for assessing all the threats.</i>
				<i>EXAMPLE</i> <i>Develop risk management procedures for other pipeline assets that includes the lists of threats.</i>

IMPLEMENTATION SPREADSHEET / GAP ANALYSIS

Gap analysis tab

- Required (R), Optional (O) or Not Chosen (NC) columns

L	N
Description of Potential Action(s) to Close Gaps. Use additional rows for each Potential Action.	Required (R),
<i>EXAMPLE Identify the other pipeline assets and develop procedures for each asset.</i>	<i>NC</i>
<i>EXAMPLE Develop a risk management procedure for all pipeline assets.</i>	<i>R</i>
<i>EXAMPLE Identify the risk assessment method to be included in the risk management procedure(s). (What-if, Checklist, HAZOP, FMEA,</i>	<i>O</i>

IMPLEMENTATION SPREADSHEET / GAP ANALYSIS

Gap analysis tab

- Priority, Owner, Due Date and Status columns

L	M	N	O	P	Q	R	S	T	U	V
Description of Potential Action(s) to Close Gaps. Use additional rows for each Potential Action.	Required (R),	Priority (H,M,L)	Owner	Due Date	Status					
<i>EXAMPLE</i> <i>Identify the other pipeline assets and develop procedures for each asset.</i>	<i>NC</i>									
<i>EXAMPLE</i> <i>Develop a risk management procedure for all pipeline assets.</i>	<i>R</i>	<i>H</i>	John Doe	9/1/2016	Not started.					
<i>EXAMPLE</i> <i>Identify the risk assessment method to be included in the risk management procedure(s). (What-if, Checklist, HAZOP, FMEA,</i>	<i>O</i>	<i>H</i>	Jane Doe	6/1/2016	In progress, on target for due date.					
<i>EXAMPLE</i> <i>Develop a list of threats for each type of pipeline asset.</i>										
<i>EXAMPLE</i> <i>Update the procedures for assessing all the threats.</i>										
<i>EXAMPLE</i> <i>Develop risk management procedures for other pipeline assets that includes the lists of threats.</i>										