

# GUIDE TO LEARNING



## DISCLAIMER

This American Petroleum Institute (API) and Association of Oil Pipe Lines (AOPL) **Guide to Learning**, including the appendices, was developed based on the knowledge and experience of the API-AOPL Sharing & Learning Subteam and API and AOPL staff, and is to be used for general guidance and reference only. Use of the guidance does not constitute adherence with any recommended practice, standard, policy or rule. The information provided herein does not necessarily represent the official views or positions of API, AOPL, or any of their respective members. Those using this **Guide to Learning** should consult with appropriate personnel within their organizations to determine how best to use the information in this document, and before taking action on the issues addressed herein.

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# INTRODUCTION

Companies are constantly challenged to improve, from their safety performance, to their operational performance to their financial results. The pipeline industry recognizes continuous improvement is essential to risk management and safety performance. Structured programs, such as API Recommended Practice (RP) 1173, Pipeline Safety Management Systems, provide a framework for systematically managing safety performance improvement. Lessons learned from a company's own experience and the experiences and best practices of others are valuable sources of performance improvement. Indeed, learning from experience runs throughout the elements of RP 1173.

For an organization to learn, it must acquire potentially beneficial information. Information that goes unnoticed or unheeded cannot benefit an organization. For information to benefit beyond local recipients of the lessons learned, an organization must transfer the learning across the entire organization, especially to those who could benefit most. For a learning to have a lasting impact, an organization must implement accompanying changes to institutionalize the learning. Each of these steps: acquiring, transferring and changing make a learning organization. Repeating these steps over time instills a learning culture. The benefits are a more empowered continuous improvement and safety performance.

This **Guide to Learning** provides recommendations to facilitate lesson learning. The Guide breaks down the basic functions of acquiring, transferring and changing into a learning process with six actions: Recognize, Share, Assess, Implement, Evaluate and Acknowledge. Embracing actions of this Guide are a strong way to address the learning-related recommendations of a pipeline safety management system based on RP 1173. Like RP 1173, the recommendations of this Guide are intended to be flexible and scalable, based on a company's size, structure and experience with structured learning systems. Like RP 1173, line personnel, managers and senior leaders all have a role to play in this Guide and their organization's learning. The key is to implement a system that will foster a learning culture and promote continuous safety performance improvement.

## BACKGROUND

The pipeline industry has a long history of sharing safety information industry-wide to prevent similar events from occurring. Most companies also have active post-incident or near miss review, learning, and correction procedures to learn from and help prevent similar incidents from occurring in the future. Each operator likely considers, internally, a dozen or more events, situations or scenarios per year as opportunities to learn safety lessons and spread their pipeline safety culture. A dozen lessons per operator times each of the 50 pipeline operators among API and AOPL membership means literally hundreds of opportunities waiting to benefit pipeline operators industry-wide.

The potential of greater industry-wide learning to benefit company pipeline safety performance has led the pipeline industry to make safety sharing a top priority. The API-AOPL Performance Safety Excellence Steering Committee (PSE SC) strategic plan includes sharing and learning as a top priority.

To harness the untapped potential of greater industry-wide learning, the pipeline industry is developing tools to help operators consider when and how to learn from safety and operational incidents and near misses.

## PURPOSE

The **Guide to Learning** is a tool to help companies improve their total pipeline safety performance by incorporating lessons learned. The Guide will:

- Help individuals recognize a learning opportunity and share it with their company.
- Help managers encourage employees to gather learnings.
- Facilitate capture and collection of learning opportunities.
- Enable review of learning opportunities for benefits to organization.
- Update procedures to institutionalize those benefits.



### PIPELINE SAFETY MANAGEMENT SYSTEM API RP 1173 CALLOUT

Sharing and learning is a core component of a pipeline safety management system (SMS) in the “check” and “adjust” phases of the program lifecycle. API RP 1173 Pipeline Safety Management Systems specifically notes the need to benefit from share and learning in three sections: Element 3 - Risk Management, Element 5 - Incident Investigation, Evaluation and Lessons Learned and Element 7 - Management Review and Continuous Improvement. This Guide has considered those requirements and mapped them to the processes contained herein.

- Help leaders foster a culture of improvement through continuous learning.
- Complements the ***Guide to Sharing***.

The Guide's work processes and tools will assist with recognizing lessons shared within a company or received from outside sources, developing, and implementing appropriate improvement actions, validating learning within the organization, evaluating the impact of the key learnings on safety performance and creating organizational success stories. Recognizing that companies vary in their organization and formality of processes, the Guide's work processes are scalable and flexible, allowing each company to customize for their own organization how they review and incorporate safety learnings.

Regularly reviewing and incorporating pipeline safety learnings will drive a culture of safety sharing by demonstrating that the company values safety and takes tangible steps to improve overall performance.

# LEARNING IN PRACTICE

## HOW TO USE THIS GUIDE

This Guide is intended to be flexible to a company's organization, procedures, and learning culture. The Guide represents a resource for companies to use as they feel appropriate. The Guide is scalable to companies of all sizes, providing thematic steps in the sharing process, without regard to the number and scope of resources a company chooses to apply.

As a pipeline industry, we recognize the notion that in order to operate safely we need to always be on the lookout for undetected threats and are therefore committed to promoting the opportunity to learn from past events and lessons learned. The **Guide to Learning** provides ideas represented as six separate actions that collectively form a process to promote a learning culture for a pipeline company to improve pipeline safety performance. The concepts of this guide are not intended to represent an absolute or "the one way" to create a learning culture, but are simply put forth to stimulate ideas and a path that different organizations can consider when evaluating the learning processes in place at their respective companies.

## WHO CAN BENEFIT FROM LEARNING

Within an organization there are three primary roles in the learning process:

1. Individuals
2. Program Owners
3. Management / Leadership

In order to drive continuous improvement, it is necessary to ensure an ongoing learning culture is in place within each organization. Whether it be as an individual, a program owner, or in a management/ leadership role ongoing learning is essential. In the absence of learning, organizations and individuals will repeat old practices without improved results.

Role	Description	Responsibility(s)	Benefit
Individuals	Anyone within the organization. The number one asset of any company is its employee base. Each employee plays a part in the ability of a company to perform its functions and will, in some way, contribute to the overall success or failure of the entity as a whole. The performance of each company begins with each unique individual employee.	Recognize and share learning opportunities.	Continuously learn from others' safety lessons to keep yourself, colleagues, and community safe.
Program Owners	Those within the company that are responsible for a specific program or discipline. Program Owners would normally be viewed as subject matter experts at the company for their respective programs, and are expected to remain up to date with new trends and knowledgeable in their respective program topics.	<p><b>Direct Program Owners:</b> Assess learning and collaborate with affected, indirect program owners to develop and implement improvement action plans.</p> <p><b>Indirect Program Owners:</b> Work with program owners whose actions impact your program.</p>	<p><b>Direct Program Owners:</b> Continuously improve your program's safety performance to keep your colleagues and community safe.</p> <p><b>Indirect Program Owners:</b> Build collaborative relationships with program owners whose responsibilities connect with your program. Continuously improve your program's safety performance to keep your colleagues and community safe.</p>
Management / Leadership	Represent personnel at the company with a broader view and set of responsibilities than the Program Owners. It is critical for the Management/Leadership to stay abreast of trends and changes within the industry.	Reinforce and support safety improvement action plans.	Continuously improve your company's safety performance to keep your colleagues and community safe.



## CONSIDER WHAT TO LEARN

There are no prescribed limits to learning. Learning can and should be anything that covers one or more of these scenarios:

- How to do it safer
- How to do it more efficiently and effectively
- How to reduce risk

Learning opportunities are available internally through experiences and history within the company, or learnings may come externally from the experiences and best practices of others. Informal and formal, internal and external lesson learned can come from a whole array of angles that may include, but are not limited to sources such as those included in page 15 of the **Guide to Sharing**:

### Company Opportunities

- Situation or event that provides a learning opportunity
- Incident or near-miss

### Industry Sharing Opportunities

- Virtual Tailgates
- Pipeline Conferences
- Pipeline Information eXchange (PIX)
- Workshops (PSMS, Integrity, etc.)
- PSMS Webinars
- API and AOPL Committee Meetings / Roundtables
- API Recommended Practices and Standards
- Pipeline Industry Practical Experience Sharing (PIPES) Database

### Regulator and Safety Investigator Recommendations

- PHMSA Advisory Bulletins
- PHMSA Failure Reports
- PHMSA Incident Data
- NTSB Recommendations

Each type of venue occurs at a different time of the year or on a different frequency. Each forum also has a unique audience, format, and information control associated with them. PIPES is an online system where industry members can access information posted on-line in a controlled environment. The other venues provide the opportunity to share verbally through a webinar setting or in person and are great ways to really explain to your peers in a way that may be more impactful. For a description of the different aspects associated with each of the sharing venues, see **Appendix A**.

## HOW TO FACILITATE LEARNING

To learn or transfer knowledge efficiently, an organization requires systems and processes that support these activities. An organization learns when individuals recognize learning opportunities, program owners are receptive to information shared with them, and action is taken to make an improvement based on what was learned. Learning in the case of individuals, program owners, and management/ leadership is an active process. The organizational learning process involves:

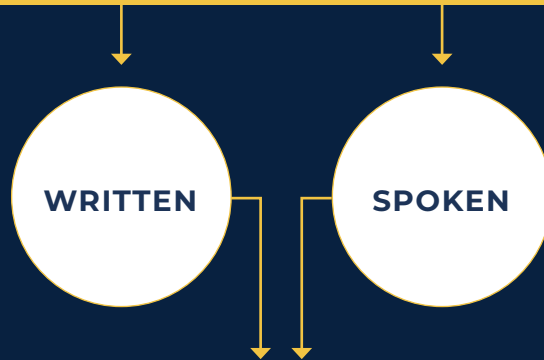
1. Recognizing a potential learning opportunity
2. Taking the time to share and receive an experience (lessons learned) from others
3. Performing a benefits/risk assessment to understand the degree to which the learning is relevant to and will benefit your organization
4. Developing and implementing an improvement action plan, which may be a new behavior or a new way of doing something
5. Evaluating whether the new action that results from the learning is an improvement
6. Developing a learning success story to recognize the benefit of learning

This illustrative learning workflow is flexible and scalable. It can be modified based on your existing processes for deciding what and how to learn. Following the guidance on how to implement the actions may reduce challenges your company may face when learning from a share.

**Click** on each section of the workflow for guidance on how to implement the action. For an editable version of the learning workflow, see **Appendix B**.

**Receive spoken or written sharing. For example, from:**

- Internal company
- Virtual Tailgates
- PIX
- Pipeline Conference
- Peer-to-peer
- Working groups
- PIPES
- NTSB investigations of pipeline failures
- PHMSA advisory bulletins and failure reports
- Common Ground Alliance Damage Incident Reporting Tool System Reports for information on damages to pipelines



<b>Who: All individuals</b>	<b>Who: All individuals</b>	<b>Who: Program owners</b>	<b>Who: Program owners with management/ leadership</b>	<b>Who: Program owners with management/ leadership</b>	<b>Who: All individuals</b>
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# ACTION 1

# RECOGNIZE A POTENTIAL LEARNING OPPORTUNITY

Each individual within a company has the potential to recognize a learning opportunity, even ones that do not pertain to their own group. Individuals should be on the lookout for information that can drive improvement and share this information with program owners, management/leadership, or the person or group responsible for organizational learning. Individuals are not expected to be an expert in all areas, but they should have the awareness to listen for and recognize when there is a learning opportunity. An effective learning process will allow a company to:

- Do something safer
- Do something more efficiently and effectively
- Do something at a lower cost
- Do something better

Information that may prompt a learning opportunity may come from written sources or may be received from spoken sources. For example: written sources, such as a presentation, news article, email, formal lessons learned, pictures, or notes; or spoken sources, such as peer-to-peer conversations, presentations, formal or informal conversations, or phone calls.

If a learning opportunity is recognized, some key questions to consider capturing are:

- What were the basic circumstances and details of the learning opportunity?
- What was the consequence and cost impact?



## PIPELINE SAFETY MANAGEMENT SYSTEM API RP 1173 CALLOUT

A program established from this Guide may help a company meet its pipeline SMS program requirements. Under API RP 1173, Section 9.4, “the pipeline operator shall establish a process for evaluating events external to its operations to identify opportunities to learn from those events. Potential sources of information include information gained from peers, regulators, the affected public, landowners, public officials, and emergency planning and response personnel.”

- What were the causes/action items/benefits?
- Who or what was the source of the information obtained from the learning opportunity?
- Which working group or area may be impacted (such as operations, maintenance, integrity, design engineering, construction engineering, ROW, public awareness, support functions, leadership / management, etc.)?

To facilitate the collection of information, a company may choose to develop and make available to employees a template for capturing key information on the learning opportunity, such as details or considerations discussed in Action 1. **Appendix C** includes a sample worksheet companies may provide their employees electronically or in written form to document a learning opportunity. Companies should ensure employees are aware of the worksheet or information submission system, where it is located and how to use it.

# **ACTION 2**

# **SHARE POTENTIAL LESSONS LEARNED**

Organizations can't learn unless information with the potential to improve is brought to the attention of the organization. Companies should consider ways to encourage employees to capture and share within the company potential learning information they receive. The individual initially recognizing a learning opportunity may not recognize the full impact of the potential learning or whether it reflects a gap in their own company's policies or procedures. Therefore, companies should encourage employees to err on the side of capturing and sharing potential learnings, as opposed to not forwarding the information, with the decision on whether to proceed made at a later stage by personnel more familiar with the subject matter, the company's own procedures and the risk it may present.

Companies should also consider how to make it easy for their employees to share a learning opportunity. Having a program to share information that is simple and well-defined within your company will help ensure timeliness, accuracy, and likelihood of learning intake. As described in Action 1, a company may provide a written or electronic

template for the employee to capture information on the learning. Companies should also make it easy for employees to submit information they capture to the company for its consideration. This can take the form of a central collection point, which may be as simple as a "suggestion box" to an electronic portal for data entry. Whatever mechanism chosen, companies should ensure their employees are aware of how to submit the information, where to submit it and are trained to complete the submission process.

While the mechanism for sharing is important, who receives the learning opportunity is also important. To facilitate the flow of information, companies should consider designating a contact person or group to receive the learning opportunity. Such a "Learning Sherpa" individual or group can then steward the process for further actions for assessment of the information (Action 3) and development and implementation of any appropriate responses (Action 4). This person or group could oversee the sharing submission process and ensure employees are trained in recognizing and sharing learning opportunities.

Some things to consider in creating or assessing your company's routing system of shared events:

- 1 Do employees know how, where, or to whom to send a potential learning opportunity?
- 2 Is there one point of contact or group that receives and processes all potential learning opportunities from shared events, or is direct submission to Program Owners preferred?
- 3 Is there a list of Program or Topic Owners available to all employees?
- 4 Are employees encouraged to forward learning opportunities so they can be assessed/acted on?
- 5 Is there a tool available to streamline the above assessment?

# **ACTION 3**

# **ASSESS RISKS IDENTIFIED BY THE LESSON & BENEFITS OF LEARNING THE LESSON**

Information shared as a learning opportunity may reflect an urgent risk the company should respond to immediately or a modest risk adequately addressed over time. Your company may already have a comprehensive program or set of procedures addressing a serious risk identified by another operator or may have gaps requiring attention. Companies should design a review process that is capable of interpreting the learning opportunity, knowledgeable of current company practices, and aware of procedures if any designed to address the subject matter.

Participation in the review by personnel with expertise in the subject matter presented by the potential learning and ownership of the procedures related to the information is essential to an accurate assessment of the risks and benefits presented by the information. Companies should also consider whether other groups across the company have an indirect role in either the subject



## **PIPELINE SAFETY MANAGEMENT SYSTEM API RP 1173 CALLOUT**

Risk management is a central function of a pipeline SMS. API RP 1173, Section 7.4 states, “[r]isk prevention and mitigation measures to reduce the likelihood and consequences of a release shall be identified and evaluated to improve situational awareness. Information to consider shall include, at a minimum: (a) learnings from internal and external events...”

matter or what could be required to address the issue presented. Examples include training and finance elements in addition to operations, or other operational units, such as control room management and scheduling in addition to integrity management. Companies may choose to have a designated sharing



and learning group facilitate the participation necessary for potential learning assessment, especially if the learning reflects more than one organization within the company.

The person or group reviewing potential lessons learned should assess each of these factors to determine whether and how to proceed with actions to help your company benefit from the lesson learned:

- 1 How significant was the risk faced by originator of the sharing?**
  - Did the risk reflect actual or potential physical injury? release volume? regulatory noncompliance? financial costs? poor safety culture? a leading indicator of safety concern?
- 2 Does your company face a similar risk?**
  - Do you operate a similar system in a similar manner? Do you have procedures in place for preventing the risk? Would procedures at your company have prevented a similar risk? Are there gaps in your company's procedures which require attention to avoid the risk?
- 3 What are the potential benefits of addressing the risk presented by the learning?**
  - Would your company face and thus avoid similar impacts from the learning? injury? release? noncompliance? cost?

- Would your company face a higher impact if a similar risk occurred in a higher consequence area or unusually sensitive location in which your company operates?

See **Appendix D** for the checklist.

To complete this action, the person or group assessing the risks and benefits of a potential lesson learned may document their assessment in a manner sufficient to describe the learning opportunity, relate the potential gaps in current company practices or procedures, and convey the importance of acting upon the lesson. The assessment provides an initial roadmap for those responsible for developing an action plan to begin that task. In addition to documenting the results of the assessment, the company should consider documenting any decision to proceed or not to proceed with further action in response to the assessment and the person or group assigned responsibility for developing and implementing an improvement action plan recommended in Action 4.

## **ACTION 4**

# **DEVELOP AND IMPLEMENT AN IMPROVEMENT ACTION PLAN**

Benefits from a lesson learned are gained only if the organization institutionalizes the change with tangible and lasting action. Institutionalizing learnings is oftentimes hard work and is reliant upon an organization's culture, systems, tools, and resources to implement effectively. Organizations with mature safety cultures have a mindset of vulnerability and are on the lookout for the next safety incident. These organizations understand that continuous improvement of programs and processes is a precondition of achieving their goal of zero incidents; leadership takes accountability for continuous improvement and employees feel both responsible and empowered to make positive change. Development and implementation of an improvement action plan based on the learning will help institutionalize any changes within the organization, enhance safety culture and provide a means for tracking continuous improvement.

The person or group assigned responsibility for developing and implementing an improvement action plan should consider

the persons and organizations necessary for this action. Effectively integrating a lesson learned in an organization is generally the responsibility of the applicable program owner, however, depending on the nature of the change, a variety of roles could be called upon to be the change leader. Development of the plan may also require multiple different organizations within the company. The plan leader must tailor an action plan that fits the learning opportunity, taking into account the organizational complexity, culture, and magnitude of change that the learning drives. Some organizations may choose to have defined processes and tools for developing and implementing this strategy in a consistent fashion, while others may opt for a simplified ad-hoc approach. In either regard, a successful improvement action plan is one where the learning is effectively and efficiently integrated into an organization's systems and processes, stakeholders are informed, and the change is sustainable going forward.



## PIPELINE SAFETY MANAGEMENT SYSTEM API RP 1173 CALLOUT

Follow-up on lessons learned is a key component of pipeline SMS continuous improvement. Under API RP 1173, Section 9.2, “[t]he pipe operator shall establish a procedure to determine and document the response to each finding and lesson learned from [an] incident investigation. The pipeline operator shall assure that actions to implement risk assessment and pipeline safety performance improvement recommendations are tracked and completed.”

A learning improvement action plan should consider the following elements, as appropriate:

- **Management Systems** – What changes are required to management system documents, contributing processes, and/or control documents?
  - **Affected Personnel** – Who needs to be informed of the changes? What changes are required to the training program to close competency gaps?
  - **Systems and Tools** – Are modified/new tools or systems required to implement the learning?
  - **Resources** – Are incremental human resources or budget required? Are all resources required prior to implementing the strategy, or can they be phased in?
- **Change Management** – What other organizational enablers will be required to implement the learning? What are perceived barriers that must be overcome? What level of leadership support is required? What existing work policies or procedures might need to be changed? How will the required pre- and post-modification tasks be managed and tracked, through an existing Management of Change (MOC) process or other means?
  - **Communication Strategy** – Are custom communications required beyond internal MOC processes, or in the interim period prior to full implementation? Common communications include safety/maintenance bulletins, stakeholder-specific emails, etc.
  - **Feedback Strategy** – How will implementation effectiveness be measured? How can the program/change owner be assured that the implementation goals have been achieved? (More on this in next section.)

See **Appendix E** for the checklist.

# ACTION 5

# EVALUATE RESULTS OF IMPROVEMENT ACTION PLAN

Evaluating the results of an improvement action plan, based on a learning, is an important part in creating a sustainable learning environment. If not already in place, a company may wish to implement a process for evaluating the results of the shared learning's action plan. Simply sending out information, without a well thought plan on implementing the information to affect the desired change of the learning will not guarantee the intended results of the learning.

Evaluating the effectiveness of a company's learning can be challenging. However, evaluating the results is a key step in the learning process and will serve to inform future efforts to implement and integrate learnings into a company's processes and procedures. Employing API 1173's Plan Do Check and Act approach to evaluate the results of an improvement action plan can offer a framework for evaluating results and can provide valuable insights into a company's learning efforts.

Below are examples of indicators of improvement that can be used to evaluate the results of implementing the learning, as well as form the basis for the development of measures or KPIs as the program matures.

## Examples of Indicators of Improvement that can be Used to Evaluate Results

- The potential learning was properly evaluated as a meaningful item that should be shared and incorporated into the organization's learning from others' efforts



### PIPELINE SAFETY MANAGEMENT SYSTEM API RP 1173 CALLOUT

Management review of the lessons learned is considered a key component of pipeline SMS. Under API RP 1173, Section 11.1.2, "[a]t the direction of top management, management shall conduct a review guided by products of the elements of the PSMS, including:...(e) results and recommendations of incidents investigations, evaluations, and lessons learned..."

- Action plan developed
- Action plan implemented
- Learning created the change that was originally intended from the action plan
- Improvement of a specific area of performance or measurable safety improvement
- Procedures changed as a result of the learning
- Learning targeted the correct audience in the company
- Learning has been accepted by the organization
- Rollout of the learning considered a success
- Barriers are identified and addressed that are impacting the implementation of the action plan
- Frequency of learning in the company is increasing
- Improved integration of the learning process within the company on a year-over-year basis
- Learnings are being captured to help form the basis of developing targets, goals, or KPIs for evaluating the success of incorporating learnings

## ACTION 6

# ACKNOWLEDGE YOUR SUCCESS STORY AND CONSIDER SHARING IT

Recognize your success story. Listed below are some of the benefits of developing, learning from and disseminating success stories to industry peers. Success Stories:

- Offer opportunities for continuous learning and improvement.
- Contribute to the search for ways to detect problems before they become accidents or incidents.
- Contain data or information that may be useful in predictive analysis.
- Demonstrate an increase in knowledge, process improvement or best practice at the company or entity level that can be shared at the industry level.
- Add to the industry's body of experience and knowledge that can be used for collaboration on common problems.
- Provide operators with increased knowledge and experience for improved risk management and reduced risk.
- Can be collected, catalogued and made available to operators for research into ways to manage specific kinds of risks.



### PIPELINE SAFETY MANAGEMENT SYSTEM API RP 1173 CALLOUT

Management Communicating any lessons learned is an essential part of institutionalizing improvement. API RP 1173, Section 9.2 requires a “procedure to assure that the cause(s), contributing factors, recommendations to prevent recurrence, and lessons learned are communicated to appropriate personnel. The operator may share lessons learned externally through peer-to-peer interactions.”

- Provide operators with awareness of potential threats and risks they may not have previously encountered.
- Provide understanding of existing and emerging technologies.
- Enhance an operator's decision-making with respect to the use of specific technologies.
- Highlight gaps in pipeline safety performance data and information that may

- lead to enhanced risk management.
- Provide an interesting way to share lessons learned – telling a story with a good ending.
  - Provide building blocks for a best practices framework.
  - Provide a “before and after” perspective of risk assessment/risk management related to specific threats or risks.

Success stories can be narrated as a journey through the Plan Do Check Act (PDCA) cycle. The first step is to outline the following elements of the Success Story:

- 1 How was the learning opportunity recognized?
- 2 How was the learning opportunity shared with relevant program owners/practitioners/SMEs within your company?
- 3 How was a risk assessment conducted and what recommendations were developed to improve pipeline safety performance?
- 4 How was an improvement action plan developed?
- 5 How were the results of the improvement action plan measured and evaluated?

See **Appendix F** for the checklist.

Next, draft a clear chronological narrative from the viewpoint of your company as it journeyed through the PDCA Cycle, including how the threat/risk was identified, how it was managed, the results of the action plan and whether there were any changes made to processes or procedures.

Success Stories that are intended for solely internal company use should include all the 5 elements listed above, and may include any and all details the operator considers useful for this learning opportunity.

Success Stories that are potential shares with industry peers should be run through the operator’s Sharing Assessment process as described in detail in the **Guide to Sharing**.



# APPENDICES



# APPENDIX A: API/AOPL REVIEW OF SHARING OPPORTUNITY AND VENUE IDENTIFICATION

There are a several different venues where sharing can occur, which include the following:

- Pipeline Industry Practical Experience Sharing (PIPES) Database
- Virtual Tailgates
- Pipeline Conference
- Pipeline Information eXchange (PIX)
- Workshops (PSMS, Integrity, etc...)
- PSMS Webinars
- API and AOPL Committee Meetings / Roundtables

Each type of venue occurs at a different time of the year or on a different frequency. Each forum also has a unique audience, format, and information control associated with them.

PIPES is an online system where industry members can access information posted on-line in a controlled environment. The other venues provide the opportunity to share verbally through a webinar setting or in-person and are great ways to really explain to your peers in a way that may be more impactful.

A description of the different aspects associated with each of the sharing venues is presented below

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<b>Venue:</b>	<b>Pipeline Industry Practical Experience Sharing (PIPES) Database</b>
<b>Occurrence/Frequency:</b>	Available on-line 24 hours a day, 365 days a year
<b>Information Recipients:</b>	API/AOPL Members, non-Member industry representatives, or consultants
<b>Sharing Format:</b>	Written materials (e.g. lessons learned, copies of presentations, etc.)
<b>Information Control:</b>	Written information available to all recipients
<b>Benefits of this Venue:</b>	<ul style="list-style-type: none"><li>• Easily available to reach a large audience of industry personnel.</li><li>• Ability to query/search for materials posted.</li><li>• Ability to post something without any company specific information, so in other words anomalously.</li><li>• Quickest way to share information.</li></ul>

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<b>Venue:</b>	<b>Virtual Tailgate</b>
<b>Occurrence/Frequency:</b>	Quarterly webinar
<b>Information Recipients:</b>	API/AOPL Members
<b>Sharing Format:</b>	Verbal summary with accompanying webinar presentation
<b>Information Control:</b>	Audience transcription such as taking notes and screen shots.
<b>Benefits of this Venue:</b>	<ul style="list-style-type: none"><li>• Provides the opportunity to express the sharing in words and not just in print.</li><li>• Opportunity to explain the impact and learnings.</li><li>• Does not require travel or extensive preparation to use this venue.</li><li>• Can reach a large audience in a relatively easy fashion.</li><li>• Provides an opportunity for question and answer.</li></ul>

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**Venue:** Pipeline Conference

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**Occurrence/Frequency:** Once per year

**Information Recipients:** API/AOPL Members, non-Member industry representatives or vendors, Government, and public/press

**Sharing Format:** Verbal summary with accompanying presentation

**Information Control:** Information left with recipients/information may become publicly available

**Benefits of this Venue:**

- With an in-person verbal sharing it can reduce the amount or need of written materials to be shared.
- Provides an opportunity for question and answer.
- Presents a forum with high visibility, when that is acceptable and desired.

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**Venue:** Pipeline Information eXchange (PIX)

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**Occurrence/Frequency:** Once per year

**Information Recipients:** API/AOPL Members

**Sharing Format:** Verbal summary with accompanying presentation

**Information Control:** Audience transcription, such as taking notes

**Benefits of this Venue:**

- A closed forum with only industry representatives present.
- Opportunity for candid peer-to-peer conversations.
- Limits the need for any written materials to be shared.
- Promotes networking opportunities.
- Provides an opportunity for question and answer.

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**Venue:** Workshops (PSMS, Integrity, etc.)

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**Occurrence/Frequency:** Once per year

**Information Recipients:** API/AOPL Members, non-Member industry representatives or consultants

**Sharing Format:** Verbal summary with accompanying presentation

**Information Control:** Information left with recipients/information may become publicly available

**Benefits of this Venue:**

- A target audience with like interests conducive to detailed discussions.
- Limited amount of written materials to be shared.
- Provides an opportunity for question and answer.
- Promotes networking opportunities.

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**Venue:** PSMS Webinars

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**Occurrence/Frequency:** Semi-annual webinar

**Information Recipients:** API/AOPL Members, non-Member industry representatives or consultants

**Sharing Format:** Verbal summary with accompanying webinar presentation; webinar audio recorded and posted to PSMS website with approved presentation

**Information Control:** Audience transcription, such as taking notes and screen shots.

**Benefits of this Venue:**

- Provides the opportunity to express the sharing in words and not just in print.
- Opportunity to explain the impact and learnings.
- Does not required travel to use this venue.
- Can reach a large audience in a relatively easy fashion.
- Ideal for situations where the cause or solution to an issue is more system or process related.
- Provides an opportunity for question and answer.

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**Venue:** API and AOPL Committee Meetings / Roundtables

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**Occurrence/Frequency:** Periodic and on an as needed basis

**Information Recipients:** API/AOPL Members

**Sharing Format:** Verbal summary with accompanying presentation

**Information Control:** Audience transcription such as taking notes

**Benefits of this Venue:**

- A defined / controlled audience.
- An ideal setting to influence the conversation of meeting participants.
- Limited amount of written materials to be shared.
- Provides an opportunity for question and answer.

A schedule for the above list of venues is maintained on API's website.

If a company feels as though they have a sharing that is better served to be presented verbally via a webinar or in-person using the venues discussed above, that opportunity does exist and is heavily encouraged. Reaching out to a contact at either API or AOPL can assist with the vetting process and can assist with the sharing through these venues. To contact API or AOPL for assistance please contact:

API: Chris Kuhman, [kuhmanc@api.org](mailto:kuhmanc@api.org)

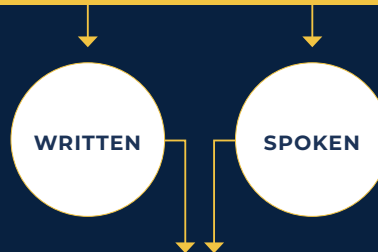
AOPL: John Stody, [jstody@aopl.org](mailto:jstody@aopl.org)

Prior to accepting a sharing event into one of the venues, API/AOPL will review the submission and will confirm with the company their understanding of the sharing venue. API/AOPL may recommend one venue over another venue on a case-by-case basis taking into consideration the actual sharing topic, timing, presenter, and audience. All companies will have the final say as to whether to share or not in the venue recommended by API/AOPL.

# APPENDIX B: EDITABLE GUIDE TO LEARNING WORKFLOW

Receive spoken or written sharing. For example, from:

- Internal company
- Virtual Tailgates
- PIX
- Pipeline Conference
- Peer-to-peer
- Working groups
- PIPES
- NTSB investigations of pipeline failures
- PHMSA advisory bulletins and failure reports
- Common Ground Alliance Damage Incident Reporting Tool System Reports for information on damages to pipelines



Who:  
All  
individuals

Who:  
All  
individuals

Who:  
Program  
owners

Who:  
Program  
owners with  
management/  
leadership

Who:  
Program  
owners with  
management/  
leadership

Who:  
All  
individuals

# APPENDIX C: CAPTURING A LEARNING OPPORTUNITY

## *Key information on a learning opportunity.*

**Name:** Name of the person capturing the information

**Date:** Date

**Source:** What is the source of the learning opportunity?

What were the basic circumstances and details of the learning opportunity?	
What was the consequence and cost impact?	
What were the causes/action items/benefits?	
Who or what was the source of the information obtained from the learning opportunity?	
Which working group or area may be impacted (such as operations, maintenance, integrity, design engineering, construction engineering, ROW, public awareness, support functions, leadership / management, etc.)?	

Person or Group to forward the Learning Opportunity to:

Insert individual's names and their department here.	
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# APPENDIX D: ASSESSING THE NEED FOR AN ACTION PLAN

*Things to consider when determining whether to proceed with actions to benefit from an external or third-party learning opportunity.*

**Name:** Name of the person performing the assessment

**Date:** Date

**Source:** Who/What was the source of the learning opportunity?

<p><b>1</b> How significant was the risk faced by originator of the sharing?</p> <ul style="list-style-type: none"> <li>- Did the risk reflect actual or potential physical injury? release volume? regulatory noncompliance? financial costs? poor safety culture? a leading indicator of safety concern?</li> </ul>	
<p><b>2</b> Does your company face a similar risk?</p> <ul style="list-style-type: none"> <li>- Do you operate a similar system in a similar manner? Do you have procedures in place for preventing the risk? Would procedures at your company have prevented a similar risk? Are there gaps in your company's procedures which require attention to avoid the risk?</li> </ul>	
<p><b>3</b> What are the potential benefits of addressing the risk presented by the learning?</p> <ul style="list-style-type: none"> <li>- Would your company face and thus avoid similar impacts from the learning? Injury? Release? Noncompliance? Cost?</li> <li>- Would your company face a higher impact if a similar risk occurred in a higher consequence area or unusually sensitive location in which your company operates?</li> </ul>	



Is an Action Plan Recommended:    Yes    No

Person or Group to Create the Action Plan: Insert individual's name(s) and their department(s) here

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# APPENDIX E:

## IMPROVEMENT ACTION PLAN

*Items to consider when creating a learning improvement action plan.*

### **ACTION TYPES**

1. **Management Systems** – What changes are required to management system documents, contributing processes, and/or control documents?
2. **Affected Personnel** – Who needs to be informed of the changes? What changes are required to the training program to close competency gaps?
3. **Systems and Tools** – Are modified/new tools or systems required to implement the learning?
4. **Resources** – Are incremental human resources or budget required? Are all resources required prior to implementing the strategy, or can they be phased in?
5. **Change Management** – What other organizational enablers will be required to implement the learning? What are perceived barriers that must be overcome? What level of leadership support is required? What existing work policies or procedures might need to be changed? How will the required pre- and post-modification tasks be managed and tracked, through an existing Management of Change (MOC) process or other means?
6. **Communication Strategy** – Are custom communications required beyond internal MOC processes, or in the interim period prior to full implementation? Common communications include safety/maintenance bulletins, stakeholder-specific emails, etc.
7. **Feedback Strategy** – How will implementation effectiveness be measured? How can the program/change owner be assured that the implementation goals have been achieved?
8. **Other** – Not listed above

**ADD ACTIONS ITEMS BELOW.**

Action No.:		
Action Type: (check one)		
Management Systems	Resources	Feedback Strategy
Affected Personnel	Change Management	Other
Systems and Tools	Communication Strategy	
Action Description:		
Responsible Person:		Due Date:

Action No.:		
Action Type: (check one)		
Management Systems	Resources	Feedback Strategy
Affected Personnel	Change Management	Other
Systems and Tools	Communication Strategy	
Action Description:		
Responsible Person:		Due Date:

Action No.:		
Action Type: (check one)		
Management Systems	Resources	Feedback Strategy
Affected Personnel	Change Management	Other
Systems and Tools	Communication Strategy	
Action Description:		
Responsible Person:		Due Date:

# APPENDIX F: COMMUNICATING EXTERNAL LEARNINGS

*Sharing a lessons learned within a company can be the same whether the source be internal or external. See Appendix D from the Guide to Sharing.*

## How to complete the template

- ❑ Do not use personal name or information
- ❑ Do not use company name
- ❑ Be clear, complete, and concise
- ❑ Communicate only factual information
- ❑ Include only facts related directly to the event
- ❑ Do not speculate on causation or embellish
- ❑ Do not use legally conclusory words

### SHARING TEMPLATE<sup>1</sup>

*(This template is in a form that is intended to be shared outside of the company with a larger industry contingent.)*

**Title:** name of the sharing  
**Date:** date published

---

**BACKGROUND:**

**What is the learning based on?**  
 Incident       Near-miss

**What is the category?**  
 Operations & Maintenance     Integrity Management     Challenge / success

**Did the event impact people or the environment (IPE)?**  
 Yes       No

**To which 2-4 strategic safety goals is your sharing tied?**  
 Promote Organizational Excellence  
 Improve Safety through Technology & Innovation  
 Enhance Emergency Response Preparedness  
 Increase Stakeholder Awareness & Involvement

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<sup>1</sup> This API-ADPL Sharing Template was developed based on the knowledge and experience of the API-ADPL Sharing & Learning Sub-Team and API and ADPL staff, and is to be used for general guidance and reference only. Use of the guidance does not constitute adherence with any recommended practice, standard, policy or rule. The information provided herein does not necessarily represent the official views or positions of API, ADPL, or any of their respective members. Those using this Sharing Template should consult with appropriate personnel within their organizations to determine how best to use the information in this document, and before taking action on the issues addressed herein.

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