

COS-3-06

GUIDANCE FOR DEVELOPING AND MANAGING PROCEDURES

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CERTIFICATIONS**



**GOOD PRACTICE
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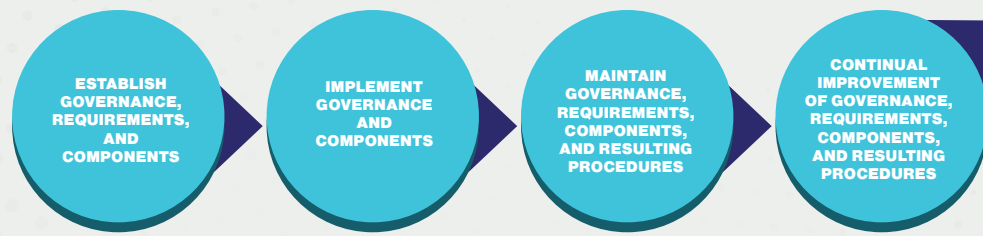
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1. INTRODUCTION

The development and management of procedures is a dynamic and iterative process designed to achieve predictable results and requiring input from multiple resources and subject matter experts all of whom need to be focused on providing the right information to the right people in the right way and at the right time to support the safe, efficient, and consistent completion of activities and tasks. Procedures provide instructions that allow for work to be performed consistently and safely based on knowledge at the time the procedure is developed. Procedures are approved and documented; the documentation may take a variety of forms (e.g. electronic, paper, audio, etc.). A Company manages risks associated with specific activities and tasks through development and use of procedures to achieve predictable outcomes. A systematic way to develop and manage procedures allows for the right personnel to be involved, incorporates appropriate risk controls, and takes into account end users at all stages. While procedures detail prescribed action steps to complete activities or tasks, user judgment is essential to account for and react to real-time changes and conditions (e.g. Stop Work). A systematic approach to developing and managing procedures will improve the likelihood that the end-user will have confidence in its content and will use the procedure to perform an activity or task. Generally, the approach covers 4 stages provided in Figure 1. Good practice within each of these stages is provided in this document.



For the purposes of this document, and to support the reader’s understanding of the various aspects of procedure development and management, a proposed relationship flow is provided of how procedures fits in amongst other management system components. The relationship covers Company Policies, Company-Wide Practices, local Safe Work Practices (including legal requirements), and asset, activity or task specific Procedures.

MOST COMPLEX



Example: A global Company works in many countries under multiple regulatory regimes. The Company has corporate Policies for governing certain activities and tasks such as rules for energy isolation, driving, or hot work so that a minimum standard is in place everywhere. These Policies do not contain details. More detail is provided in Company-Wide Practices that are applicable everywhere the Company works. These Company-Wide Practices do not provide enough detail for local sites as they do not address local legal requirements. Local Safe Work Practices are developed which incorporate the requirements of both the Company-Wide Practice and the local legal requirements. The local Safe Work Practices provide detail on how work should be conducted but are not specific to the diversity of activities and tasks. Therefore, Procedures are developed for each specific activity or task which abide by the local Safe Work Practices.

¹This is a guidance document. The document is written using active voice, as opposed to passive like most guidance documents, for ease and clarity of writing.

MEDIUM COMPLEXITY



Example: A Company works in one region under one regulatory regime. The Company has corporate Policies for governing certain activities and tasks such as rules for energy isolation, driving, or hot work so that a minimum standard is in place everywhere. These Policies do not contain details and how to achieve the requirements. The Company has local Safe Work Practices which incorporate the requirements of both the Company Policies and the local legal requirements. The local Safe Work Practices provide enough detail on how work should be conducted but are not specific to the diversity of activities and tasks. Therefore, Procedures are developed for each specific activity or task which abides by the local Safe Work Practices.

LOW COMPLEXITY



Example: A Company works in one region under one regulatory regime. The Company has local Safe Work Practices which incorporate the requirements of both the Company and the local legal requirements. The local Safe Work Practices provide rules on how work should be conducted but are not specific to the diversity of the associated activities and tasks. Therefore, Procedures are developed for each specific activity or task which abide by the local Safe Work Practices.



Example: A Company works in one region under one regulatory regime. The Company has local Safe Work Practices for certain activities and tasks which incorporate the requirements of both the Company and the local legal requirements. The local Safe Work Practices provide enough detail on how these activities and tasks should be conducted, for example, driving. Therefore, Procedures are not required for each activity or task.



Example: A global Company sells assets to other companies. The Company includes Procedures for start-up, operation, maintenance, and shutdown of the asset.

2. DEFINITIONS

- **Asset** - Equipment (individual items or integrated systems) and software used in offshore operations.
- **Checklist** - A type of procedure. A list of required steps to be done in a specific order, used as a reminder.
- **Company-Wide Practice** - Practices that are intended to be used across all of the Company's operations.
- **Component** - A policy, standard, practice, process, procedure, or control.
- **Convention** - The format, writing style, and pictorial style to be used in the preparation of a document.
- **Establish** - Management system or component is in place and documented if required by regulation or by the organization.
- **Governance** - The structures and processes designed to ensure accountability, transparency, responsiveness, compliance, stability, ownership, inclusiveness, empowerment, and broad-based participation.
- **Implement** - Management system or component is put into effect or action.
- **Maintain** - Management system or component continues to work as designed, is checked, and corrections or adjustments are made, if required.
- **Policy** - A course or principle of action adopted by a Company.
- **Procedure** - Approved and documented instructions about a specific task or activity that is used to enable the safe and consistent execution of that task or activity.
- **Requirement** - A constraint, demand, necessity, need, or parameter that must be met.
- **Risk Assessment** - An act of identifying hazards, evaluating the risks posed by the hazards, including the potential consequences and likelihood of such consequences, and identifying risk controls.
- **Risk control** - The actions (human or otherwise), equipment, or management systems components to be established, implemented, and maintained to eliminate, reduce, or mitigate the identified HSSE risks, including risks for the interactions of individuals with each other, equipment, processes, and systems.
- **Safe Work Practice** - Documented requirements for performing a specific type of work that helps minimize the potential harm to people, the environment, and property.
- **Task Analysis** - Evaluation of how a task is accomplished, including a description of both manual and mental activities, task durations, task frequency, task allocation, task complexity, and environmental conditions.
- **User** - The personnel responsible for executing a procedure.
- **Validate** - To demonstrate that the procedure will consistently yield the desired results.
- **Verify** - To demonstrate that the procedure can be consistently performed as written.

3. ESTABLISHING THE COMPANY GOVERNANCE, REQUIREMENTS, AND COMPONENTS FOR DEVELOPING AND MANAGING PROCEDURES

3.1 ESTABLISHING GOVERNANCE

The first step in effective procedure development and management is to establish governance for procedures within the Company. Once the governance is in place, establish the requirements and the components that define how the requirements will be met. A component can be a policy, a standard, a practice, a process, a procedure, or a control. The requirements can be embedded within a component to reinforce intent and provide clarity. Where applicable, local regulations may dictate specific requirements, and in some cases, how the requirements must be met. The requirements should cover all aspects of procedure development and management including:

- Triggers that prompt a procedure is required
- Risk assessment and control
- Knowledge and skills
- Roles, responsibilities, and authorities
- Affected personnel engagement
- Types and use of procedures
- Procedure design
- Procedure writing (conventions)
- Procedure verification and validation
- Education and training
- Procedure implementation
- Procedure access and control
- Procedure maintenance
- Procedure deviations
- Management of change
- Feedback and response

3.2 ESTABLISHING REQUIREMENTS

A Company's management should establish the requirements for procedure development and management. For the purpose of this document, guidance is provided using the Expectations that are provided in API RP 75 *Safety and Environmental Management System for Offshore Operations and Assets, 4th Edition*, within the Element 'Procedures'. This Element states that a Company should establish, implement, and maintain requirements for the following:

- a. Identifying the activities and tasks that require procedures.
- b. Incorporating risk controls from risk assessments for the identified activities and tasks and other applicable sources into procedures.
- c. Determining the roles, responsibilities, authorities, knowledge, and skills of personnel accountable for developing, approving, maintaining, and using procedures.
- d. Determining the type, content, conventions, method of delivery, and communication of procedures, taking into account the intended procedure users.
- e. Developing, documenting, and approving procedures.
- f. Initially and periodically verifying procedures can be performed as documented and validating they will consistently produce the desired results.
- g. Accessing and using procedures as documented.
- h. Managing requested deviations from procedures.
- i. Responding to and communicating when procedures cannot be performed as documented or when procedures produce an unintended result.
- j. Engaging procedure users when verifying and validating procedures.
- k. Resolving identified deficiencies and improvement opportunities in procedures, including those identified from internal and external learnings.
- l. Managing changes to procedures.

3.3 ESTABLISHING THE COMPONENT(S) THAT MEET THE REQUIREMENTS

The Company establishes components for how the requirements will be met. Guidance is provided below for each of the requirements.

3.3.1. TRIGGERS TO CREATING PROCEDURES

Identifying the activities and tasks which require procedures

Not all activities and tasks require a procedure. The Company determines the criteria that will trigger the creation of a procedure to control risks and achieve predictable outcomes in executing activities and tasks. A brief discussion of typical procedural triggers is provided below. These triggers also apply to changing existing procedures.

REGULATORY AND LEGAL REQUIREMENTS

New regulations and laws, or changes to existing regulations and laws, may require creation of a procedure. Companies should periodically review their procedures to verify compliance with regulatory and legal requirements.

CONTRACTUAL REQUIREMENTS

Contractual requirements between Companies may require creation of a procedure. Companies should review their procedures as well as procedures developed by others that they may implement, or others may implement on their behalf, to verify contractual requirements are met.

RISK ASSESSMENTS

Risk assessments identify hazards and assess risks associated with proposed activities and tasks and to determine risk controls. Risk assessments may identify the need for a procedure to control risk. Risk assessments include, but are not limited to, HAZOPS, Process Hazards Analyses, and JSAs.

ACTIVITY OR TASK ANALYSIS

This section addresses the activity or task to be undertaken and the factors that influence the execution of that activity or task. An analysis of the activity or task determines how work is executed and may include an analysis of a number of factors such as the number of steps, frequency, ergonomics, complexity, and language. The analysis should address the interactions of individuals with each other, equipment, and systems. The outcome of an activity or task analysis may trigger the need for a procedure.

CHANGES

Technical, administrative, and organizational changes (e.g., mergers and acquisitions) can trigger the need for a procedure. See Section 3.3.12. Managing Changes to Procedures.

PERFORMANCE OUTCOMES

Performance data, including undesirable outcomes, can trigger the need for a procedure. Examples include key activity and outcome indicators, the outcomes of work, and maintenance and safety trends.

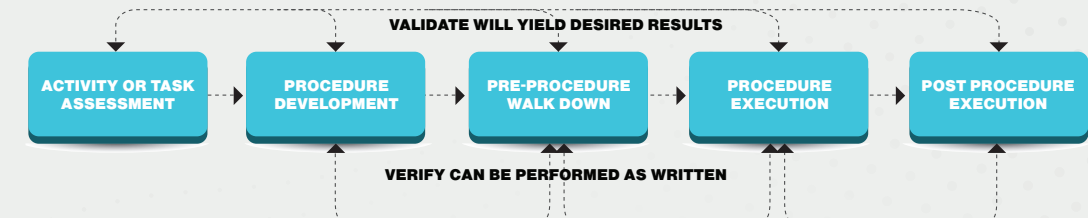
FINDINGS AND LEARNINGS

Findings and learnings from industry events, and activities such as incident investigations, audits, and leadership site engagements, may trigger the need for a procedure.

3.3.2. RISK CONTROL

Incorporating risk controls from risk assessments for the identified activities and tasks and other applicable sources into procedures

HSSE risk is assessed throughout the process of procedure development and management. The diagram below depicts the phases of procedure development and management where risk assessment is important. Risk assessment should include personnel who understand the activity or task and those who have a role or responsibility in each phase.



Risk assessment results determine the type of procedure, the knowledge and skills needed to develop and manage the procedure, and the risk controls to be incorporated into the procedures. Procedures can function as a risk control in certain conditions. In other situations, risk controls, such as physical barriers or PPE, are incorporated within a procedure.

Factors to consider in determining the type of procedure and level of detail needed for an activity or task include, but are not limited to:

- the consequences of incorrect execution,
- the nature of the activity or task,
- the frequency the work is performed,
- the complexity of the activity or task,
- activity task duration, and
- length of the procedure.

Risk should be assessed on the developed procedure to identify and mitigate hazards that exist in how the procedure is interpreted and implemented by its users. The procedure should identify and mitigate potential results that may occur that are different from desired results.

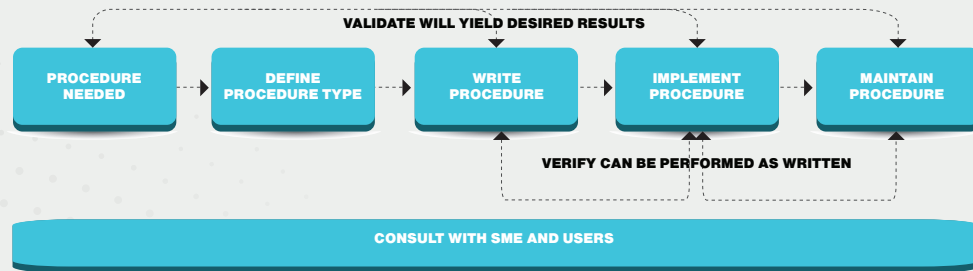
Once a procedure has been drafted, risk is again assessed through initial verification and validation processes, which may include actual implementation simulations.

Upon procedure approval for use, risk assessment and verification and validation continue through a Job Safety Analysis (JSA) prior to the execution of an activity or task, throughout its execution, and in a post activity or task review.

3.3.3. PERSONNEL DEVELOPING, APPROVING, MAINTAINING, AND USING PROCEDURES

Determining the roles, responsibilities, authorities, knowledge, and skills of personnel accountable for developing, approving, maintaining, and using procedures

Having personnel with the right knowledge and skills for the roles and responsibilities involved in the development, approval, maintenance, and use of procedures is essential. The Company should have a component to designate who should develop, approve, and maintain procedures.



The process of developing procedures begins once a decision has been made that a procedure is needed and ends when the procedure is approved for implementation. The procedure then needs to be maintained to confirm it remains valid. The process is iterative and steps may be interdependent (see Flow Chart in the Appendix).

PROCEDURE DEVELOPMENT

The knowledge and skills of the personnel involved in procedure development can range from expert to awareness levels and is dependent on the risk of the activity or task. It is important that the Company identify and verify the knowledge and skills of the personnel that are involved in procedure development, with each procedure driving its unique needs. In the simplest situation, the User may develop the procedure. In other situations, development can involve a coordinator, a Subject Matter Expert (SME), and a User. A more complex arrangement can involve multiple coordinators, SME, and Users, both internal and external to the Company.

- A coordinator is responsible for confirming that procedures are developed in accordance with the governance requirements and agreed timeframe, and that the applicable personnel are engaged.
- A SME is responsible for the technical content in the procedure. As technical content can cover various disciplines, including engineering, operations, HSE, human factors, technical writing, etc., multiple SME may be needed.
- A User is responsible for providing insight as to the execution of the activity or task, the physical environment where the work will occur, an understanding of the level of knowledge and skills of the potential Users, and any other information that would be relevant to the procedure.

A generic view of the level of knowledge and skills for given roles and function is provided below.

GENERIC KNOWLEDGE AND SKILLS

	PROCEDURE DEVELOPMENT PROCESS	ACTIVITY / TASK DESIGN AND PURPOSE	ACTIVITY / TASK IMPLEMENTATION	TECHNICAL WRITING
COORDINATOR	EXPERT	AWARENESS	AWARENESS	BASIC
SUBJECT MATTER EXPERT	BASIC	EXPERT	BASIC	BASIC TO EXPERT
USER	AWARENESS	BASIC	EXPERT	AWARENESS

PROCEDURE USERS

Users have the role of executing the procedure for an assigned activity or task. A User's responsibility is to execute the procedure as documented. The knowledge and skills in executing the procedure can be obtained through experience in the activity or task or through training on the specific procedure. The training may include participation in the verification and validation steps, formal training, simulations, and actual supervised execution.

The User's responsibilities also include constantly assessing the procedure's application and validity to the current work conditions and understanding the results of each procedural step in relation to the overall activity or task. A key responsibility for the User is to determine if the procedure can be executed as documented or when results do not match expectations. If an issue exists, or if in doubt, the User should stop work and communicate the issue so that it can be assessed and resolved prior to recommencing work.

Finally, the User has a responsibility to assess the procedure post-execution to determine and communicate continual improvement opportunities.

Using procedures requires situation awareness. Situation awareness is being aware of what is happening around you in terms of where you are, where you are supposed to be, and whether anyone or anything around you is a threat to your health and safety – in other words, perceiving the verbal, visual, and auditory signals of what is happening.

In addition to situation awareness, using procedures requires critical thinking. This means having the ability to recognize, and even anticipate, cause-and-effect relationships, e.g. 'when I do action A, then B happens as a result'. For the User, this means using good judgement, analyzing the signals in conjunction with the actions, anticipating the potential outcome(s), identifying what could go wrong, and stopping if needed.

A generic view of the level of responsibilities and knowledge and skills for Procedure Users is provided below.

GENERIC RESPONSIBILITIES AND KNOWLEDGE AND SKILLS FOR PROCEDURE USERS

ROLE - PHASE	RESPONSIBILITIES	KNOWLEDGE AND SKILLS
PROCEDURE USER - PRE-EXECUTION	STOP USE IF NOT APPLICABLE TO WORK CONDITIONS	<ul style="list-style-type: none"> • ACTIVITY OR TASK • ACTIVITY OR TASK PROCEDURE • SITUATION AWARENESS • STOP WORK PROCESS
	USE DEVIATION PROCESS, IF APPLICABLE	<ul style="list-style-type: none"> • DEVIATION PROCESS
EXECUTION	EXECUTE AS WRITTEN	<ul style="list-style-type: none"> • ACTIVITY OR TASK • ACTIVITY OR TASK PROCEDURE • PROCEDURE PROFICIENCY IN USE
	ASSESS APPLICATION AND VALIDITY OF PROCEDURE DURING USE	<ul style="list-style-type: none"> • ACTIVITY OR TASK • ACTIVITY OR TASK PROCEDURE • PROCEDURE EXPECTED RESULTS • SITUATION AWARENESS
POST-EXECUTION	REVIEW PROCEDURE FOR CONTINUAL IMPROVEMENT OPPORTUNITIES	<ul style="list-style-type: none"> • ACTIVITY OR TASK • ACTIVITY OR TASK PROCEDURE • PROCEDURE EXPECTED RESULTS

3.3.4. PROCEDURE TYPES, CONTENT, CONVENTIONS, DELIVERY, AND COMMUNICATION

Determining the type, content, conventions, method of delivery, and communication of procedures, taking into account the intended procedure users

Types. A risk-based approach should be used to help determine the type of procedure and level of detail needed for an activity or task. Not every activity or task will need a full, detailed procedure, nor will a placard or pocket card be sufficient for every activity or task. Examples of types of procedures include:

- procedures with sufficient detail provided for trainees and new users,
- procedures requiring formal acknowledgement/acceptance/verification after specific steps are performed,
- procedure used by the user during execution of the activity or task,
- checklists,
- placards posted at the site, and
- pocket cards.

Factors to consider in determining the type of procedure and level of detail needed for an activity or task include, but are not limited to:

- the consequences of incorrect execution,
- the nature of the activity or task,
- the frequency the work is performed,
- the complexity of the activity or task,
- activity task duration, and
- length of the procedure.

Some activities or tasks require procedures to be available in multiple types, e.g. a detailed training version with an operational checklist to be used in the field. If multiple types of procedures are developed for the same activity or task, the content of each should be consistent and lead to the same outcome.

Content. The content is the information necessary to execute the activity or task safely, consistently, and effectively.

The content should communicate how to perform the activity or task safely.

The content should communicate the potential hazards involved in the work.

There should be sufficient content to describe the specific steps of an activity or task. Having clear and concise content will further encourage use of the procedure.

Terminology and acronyms used should be consistent. Consideration should be given to the different cultures and languages of the Users. Content should consider the terminology used by those who are or will be performing the task, as well as by those who built the system or process. Terms and acronyms that are commonly used but have different interpretations (e.g. tripping on a production platform versus tripping drill pipe) should be specifically defined in the procedure.

Conventions. Procedures should follow a standard convention. Conventions are the format and writing and pictorial style used in preparation of a procedure and can vary by the procedure type; individual procedure types should follow a standard convention for that type. Consistency of convention allows for more effective training and makes procedures easier to use. It is important that the convention addresses the cultural and language differences of the Users.

Method of Delivery. There should be a clear, effective, and efficient method of delivering procedures to affected personnel. The method of delivery should be fit for purpose in consideration of the frequency of activity or task completion, risk, and complexity as well as the knowledge and skills of the user charged with activity or task completion.

Examples of methods of delivery include:

- Electronic files via server (onshore) or via local/backup server (offshore). These files can be accessed through personal computer, Smartphone or PDA via modem, iPhone, iPad, tablet or computer, laptop, operator console, to network terminal then to a printer.
- Videos used in conjunction with operating manuals or paper-based procedures.
- Procedure Manuals – paper-based manuals typically kept in control rooms.
- Notebooks from training courses, or training manuals that contain ‘how-to’ instructions that may provide more detailed or supplemental information.
- Troubleshooting guides.
- Local job aids or pocket cards/spinners.

Regardless of method of delivery, all relevant documents for a procedure should be reviewed comprehensively to ensure alignment. If a detailed procedure receives the primary focus, all other related procedure types – whether a checklist or job aid, etc. – should dovetail and align with the detailed procedure.

3.3.5. DEVELOPING, DOCUMENTING, AND APPROVING PROCEDURES

Developing, documenting, and approving procedures

Developing and documenting procedures covers the following steps: writing, verifying, validating, approving, and documenting new procedures. These activities are often done in a non-linear, iterative fashion due to the amount of detail that is generated, discussed, and resolved through the process. A controlled storage system for the procedures will ensure integrity of the procedure documents. A user who accesses a procedure from the controlled system will access the current, approved version. Ability to change the controlled version should be limited to those with authority.

WRITING

Once the need for a procedure has been decided, personnel should be assigned to develop the procedure. Personnel should have the skills and knowledge relevant to the subject of the procedure and in the procedure development process. The working version should be accessible to the people writing and reviewing the procedure but should not be kept in the same location as the approved procedures.

Drafting a procedure is an iterative process, involving a variety of informational sources and people. Information that should be considered includes, but is not limited to, risk assessments, relevant documents (e.g. Safe Work Practices, P&IDs, technical specifications, OEM manuals, other procedures), results from field walkdowns, and engagement with the range of users who will execute the procedure. Once the procedural steps are defined based on the collected information, the steps should be sequenced if necessary. Controls identified in the risk assessment should be incorporated into the procedure.

During the development, the functional SME identified should be consulted for their input and suggestions. Functional experts range from those with knowledge of the technical aspects of the equipment and its intended function to those who install, operate, and maintain the equipment.

The end product of the development is a working draft of the procedure.

INITIAL VERIFICATION AND VALIDATION

Once a working draft of the procedure is completed, an initial verification and validation should be done to determine if the procedure can be consistently executed as documented and will consistently yield the desired results and does not present additional risks. The verification and validation process should be based on the risk level of the activity or task. Therefore, verification and validation may range from a review of the procedure by SME and users to a full execution of the procedure in the field. Field verification and validation should be completed by the procedure writer, SME, and users. Ideally, the verification and validation should include a person(s) independent from the writing process to ensure objectivity.

Verification and validation results may lead to minor changes and corrections to the draft procedure. Minor changes may involve verbiage, clarifications, spelling, grammar, etc. If major issues are identified, the development process may need to be repeated. The results of the initial verification and validation should be recorded and maintained for reference purposes.

APPROVAL AND DOCUMENTATION

Once verified and validated, the designated approver in the organization reviews the procedure and the development process followed, assesses whether the risk controls were incorporated in the procedure, and assesses the acceptability of any unmitigated and residual risk. If the designated approver is satisfied, the procedure should be approved for use. The final approved procedure should be documented and recorded in a controlled system.

3.3.6. PERIODIC VERIFICATION AND VALIDATION

Initially and periodically verifying procedures can be performed as documented and validating they will consistently produce the desired results

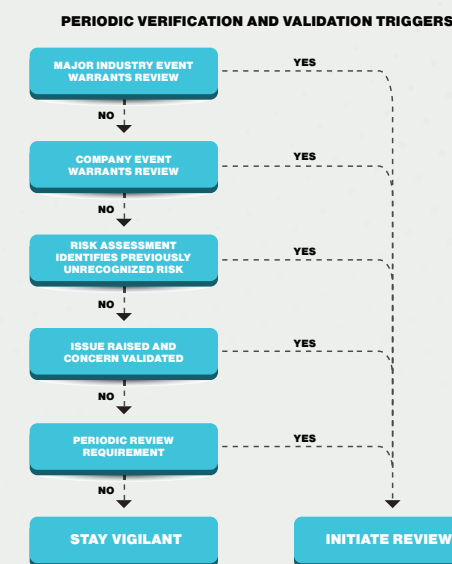
Companies should establish periodic verification and validation schedules for procedures based on risk, and ensure affected personnel are included in the process. The procedure and the current execution of the activity and task should be assessed to determine if the work as done still matches the work as imagined (the procedure) and yields the desired results. If the work as done is misaligned with the procedure or does not yield the desired results, the gap should be identified, risks identified, affected individuals informed, and the misalignment resolved. Failure to resolve the misalignment allows continued procedural deviation and can foster normalization of deviation.

Periodic verifications and validations need at least one user who is familiar with the procedure and is trained and qualified on the activity or task. Good practice is to have more than one individual with appropriate knowledge and skills provide an independent check and agreement that the steps can be performed as written and are yielding the desired results. Involvement of additional individuals can be beneficial, as others may recall specific information or objectives in the current procedure. Verification and validation may include the following:

- Field execution: simulation or actual use of a procedure in the field in multiple locations by multiple individuals (if the procedure applies to multiple locations)
- Office-based review: engineer or technical SME verifies the procedure is technically correct and subsequently assigns field personnel to verify in the field

Where modifications are needed that trigger a formal management of change, follow an approved management of change process. If there are no modifications, or there are modifications that do not trigger a management of change, it is good practice to document that the procedure was reviewed and validated or verified.

The following schematic identifies key triggers for conducting procedure verification and validation.



3.3.7. PROCEDURE ACCESS AND USE

Accessing and using procedures as documented

The requirements regarding procedure access and use must be clearly defined. It is good practice to evaluate and document who needs access to a procedure and for what purpose. Equally important is evaluating and documenting how procedures are used and by whom.

ACCESSING APPROVED PROCEDURES

Generally, those who develop, manage, and use procedures and their management need access to the approved procedures. It is important that users access the current, approved, controlled version of the procedure to execute an activity or task. Procedures should be readily available and easily accessible to the users as needed to execute the activity or task. Good practice requires that users are trained on where and how to access procedures.

Generally, controlled documents are maintained in electronic format. When printed, these documents should be considered uncontrolled. In some cases, paper copies can be managed as the controlled document; however, this should be handled with great care. It is good practice to also have a contingency plan for accessing procedures in event of a power failure or connectivity problems.

USING APPROVED PROCEDURES

Using procedures is a good practice, sets the operation up for success, and ensures institutional knowledge is captured. Specifically, procedures support the user in execution of an activity or task and shall be followed unless it is determined that following the procedure as written is unsafe or may yield undesired results. Good practice would require approved procedures be reviewed prior to use and be in hand during execution of the activity or task if:

- the activity or task is executed infrequently,
- the user has less experience with the activity or task,
- the activity or task occurs across multiple shifts,
- the activity or task is complex, or
- the activity or task is high risk.

For all other circumstances, it is good practice to at minimum review the procedure and assess risks before executing the activity or task.

In situations where the activities and tasks to be executed may not be completed by a single individual or team, time should be allotted to allow for a clear hand over of responsibilities to the subsequent individual or team assigned to complete the procedure. A good practice is to have the individual or team lead a joint walk through with those who will be completing the activity or task. All work completed up to the point of handover should be identified and documented. Subsequently, the individual or team that is taking over the activity or task should lead the completion of the pre-job walkthrough for work remaining. Where multiple shifts are required to complete work, the work should be structured to allow for a stop point where handover may be undertaken.

3.3.8. REQUESTED DEVIATIONS FROM PROCEDURES

Managing requested deviations from procedures

There may be specific situations where a procedure is correct but cannot be performed as documented due to temporary or unforeseen conditions. In these situations, there may not be a need to rewrite a procedure. A deviation from the approved procedure could be requested that would still deliver the desired results. These requests should be made and approved prior to execution of the activity or task. Such deviations should be risk assessed and additional controls implemented, if needed, to manage the existing or newly identified hazards and human performance issues. Companies should have a formal component in place to manage requested deviations from approved procedures including:

- authorization,
- documentation,
- communication to affected personnel, and
- requirements and limits of the deviation, including duration.

In some cases, expedited approval may be needed and should be covered in the formal component.

3.3.9. PROBLEMS WITH PROCEDURES

Responding to and communicating when procedures cannot be performed as documented or when procedures produce an unintended result

Procedures should be developed with the intent to be able to execute the work safely, anticipate and mitigate the potential for user error. Despite the intent, situations can arise where the procedure cannot be performed as documented or produces an undesired result. Companies should have a component for responding to individual(s) who raise the concern(s), addressing the concern(s), and communicating the resolution to affected individuals.

Good practice might include:

- Stopping or pausing the activity if it is safe and practical to do so.
- Determining whether the problem is with safe execution of the procedure, the approved procedure itself, or conditions that exist which keep the desired results from being achieved. This may involve a repetitive cyclical (iterative) process, such as repeating the procedure to see if desired results can be achieved.
- Engaging appropriate individuals to discuss the situation and identify a solution.
- Considering the risks that may emerge from the solution and determine if additional risk controls are needed.

Note: Each of the practices above should incorporate feedback loops.

Users should feel confident that their concerns will be communicated and addressed appropriately and that potentially affected personnel are aware of the situation. Companies should have a clear method for individuals to communicate their concerns and receive feedback.

Methods may include:

- Documenting concerns.
- Management recognition of individuals who communicate concerns.
- Assuring feedback is provided to the individual who raised concerns.

3.3.10. USER ENGAGEMENT

Engaging procedure users when verifying and validating procedures

It is critical that users are involved in the procedure's verification and validation process. Users provide valuable information about how work is done, as well as what is possible, practical, and safe. Users provide insight on the work environment and how this may impact execution of the procedure.

Good practice in engaging users for verification and validation include:

- Engaging the users in the procedure development process as early as possible.
- Engaging users with varying degrees of experience in the associated activities and tasks, and from multiple facilities if applicable.
- Training engaged users in using the procedure in performing the activities and tasks.
- Using realistic simulations for conducting verification and validation of the procedure.
- Repeating verification and validation in the field.

4. PROCEDURE DEVELOPMENT WORKFLOW

3.3.11. DEFICIENCIES AND IMPROVEMENT OPPORTUNITIES

Resolving identified deficiencies and improvement opportunities in procedures, including those identified from internal and external learnings

Procedures should undergo constant scrutiny by their owners and Users. Procedure deficiencies and improvement opportunities can and should be reported at any time after initial approval and implementation. The goal is to minimize the gap between work as imagined versus work as done in the most efficient way possible in order to drive continual improvement. Appropriately responding to and resolving identified deficiencies is key to gaining User trust and confidence that following a procedure will deliver the desired results safely. Deficiencies and improvement opportunities may be identified in a number of ways, such as after-action reviews post execution. Any resolution to deficiencies or improvement opportunities should assess any emerging risk.

3.3.12. MANAGING CHANGES TO PROCEDURES

Managing changes to procedures

Existing procedures may change as a result of a periodic review that may be required under a document control system. Separate from that review, changes that occur to the task or activity may prompt a formal management of change. Within a Management of Change Element of a Management System, there may be three types of changes that could prompt a change in an existing procedure: a technical, organizational, or an administrative change. When any of the three types of changes occur, personnel should use the formal components that exist in the Management of Change Element.

- A Technical Change is a change to an existing operated facility, well, rig, equipment, or deviation from either the documented design or operating limits.
- An Organizational Change is a change of personnel, organizational structure, or role and responsibilities that could lead to a loss of knowledge, experience, or continuity.
- An Administrative Change is a change to processes, practices, policies, procedures, standards, or controlled documents.

Mergers and acquisitions may involve one or more of the three changes above and trigger the need for a procedure revision or a new procedure.

Technical. New projects often involve changes resulting in a need for new procedures. For example, a Company did an expansion project to increase production capability. The change involved installation of new equipment, creating a need for new procedures. Modifications to existing equipment may identify a need for a new procedure, such as adding a safety-instrumented system (SIS). A new procedure would be needed to perform an on-line test of the SIS.

Administrative. Procedures are used to accomplish risk control for a change when it is not feasible to incur the costs of installing an engineered solution. For example, if a change requires a new activity or task such as recalibrating a new instrument, a procedure may be needed to perform the task safely.

Organizational. Organizational changes can identify a need for new procedures to ensure safe execution of activities and tasks. For example, a reduction-in-force may require tasks to be reassigned to new or different roles in the organization. An analysis is useful to determine what tasks are critical and should be reassigned.

A good practice is to notify the users when a procedure is undergoing revision, the reason for that revision (e.g., annual review, process change, revision request by worker), and where to access the status of the revision.

ESTABLISH GOVERNANCE, REQUIREMENTS, AND COMPONENTS

IMPLEMENT GOVERNANCE AND COMPONENTS

MAINTAIN GOVERNANCE, REQUIREMENTS, COMPONENTS, AND RESULTING PROCEDURES

CONTINUAL IMPROVEMENT OF GOVERNANCE, REQUIREMENTS, COMPONENTS, AND RESULTING PROCEDURES

MANAGEMENT

SME

USER

