IADC

Competence Assurance—Guidelines for Building a Successful Program

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Dear Competence Program Developer,

This *Competence Assurance—Guidelines for Building a Successful Program*—document provides valuable lessons learned from those who have gone before you in building a successful competence program. It recognizes that there is not a single way to accomplish this task, and no "one size fits all" approach. Additionally, any competence program must, of course, take into account not only the company's competitive niche, but also its values, culture, and goals.

IADC's Workforce Development Committee comprises members who are experts in this area and was able to leverage their insights and expertise. Their overriding objective was to help industry colleagues to expedite the process of creating a company program that meets their needs and that helps develop and manage the competence of industry workers.

We start at the beginning. What exactly is competence, and what are the misconceptions we have often faced about it? How is competence determined? What terminology is particular to this kind of program? What are the essential elements of a program? How do the programs vary? How do we match the type of program with our objectives? How are the different types of programs designed and built? What are the key roles within a program?

This document offers essential guidelines for building a program from scratch, but the information can also be used to evaluate your existing program against industry-recommended guidelines, or to combine the best elements of multiple programs.

The authors of these guidelines believe, as I do, that a future is possible in which every person, on every rig, is competent to successfully and consistently perform his or her job role. Work toward achieving this goal has taken place within the newly drawn boundaries of the industry's collaborative space. A safer work environment benefits us all, helping to sustain our societal license to operate as an industry, not just as individual companies.

Recreating the wheel is not just undesirable, but unnecessary. However, working together, we can make it better. We hope you agree and, therefore, take advantage of this resource to improve the safety and effectiveness of your workers.

Regards,

Stephen Colville
President and CEO
International Association of Drilling Contractors

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1 Purpose and Scope

This document is intended to provide guidance and recommended practices to oil and gas related companies in the development, implementation, management, and sustainment of their company-specific competence programs.

Current employees will better understand the company's expectations for good or great performance if key competencies have been defined. Knowing these standards will aid in attaining professional growth and development within the organization. It can also aid in the hiring and selection of new employees by matching their experiences to the competencies that a candidate should have in order for her or him to be qualified for the position.

Robust and successful programs have a process that helps to ensure a standardized, valid, and reliable evaluation of employees' competencies. These evaluations are designed to assess proficiency and determine developmental opportunities for each employee. Being competent provides for safer working conditions and career opportunities, as well as a number of other benefits to both the organization and the employee.

This document's primary audience includes the individuals responsible for developing, implementing, monitoring, reviewing, and ensuring sustainability of the organization's competence assurance program, referred to as "competence program" throughout this document. This guidance is applicable to onshore and offshore oil- and gas-related staff, departments, and organizations.

2 What is Competence?

If you ask 100 people to define competence, you will get 100 different definitions. In this section, we establish a baseline to ensure that everyone has the same understanding of competence and that we are speaking the same language, so there is no confusion. In this section, we define "competence," discuss what competence is and is not, and provide examples of competence.

2.1 Definitions

Key terms contained in this document and typically used in competence programs are defined below.

Competence: An individual's knowledge, skills, abilities, and behavioral attributes that enable him or her to perform his or her work consistently, precisely, and reliably.

> **Note:** Although the definition of Knowledge, Skills, and Abilities—often referred to as KSAs—is not exactly the same as competencies, they serve the same purpose and are often used interchangeably.

Competence Standard: The set of competence elements that comprises the total expectation of an individual in a specific role or position. It defines the expected level of performance as determined by the organization.

Knowledge: An employee's clear and practical understanding of the material needed to perform his or her job successfully and efficiently. Knowledge can be tested.

Skill: An employee's ability to perform the job tasks consistently, precisely, and reliably. Skills can be assessed.

Ability: An employee's physical capabilities (e.g., climbing, lifting, seeing, hearing). Ability can be determined but typically cannot be enhanced.

Competence Assurance Program: A structured and documented process of identifying, defining, assessing, developing, and managing the continuous competence of company personnel. It includes the formal systems, tools, and processes that ensure personnel are competent to complete tasks to a determined standard.

2.2 What Competence is Not (Misconceptions)

There is confusion and misunderstanding about what competence is. To clarify what competence is and is not, the Workforce Development Committee's Competence Workgroup provides explanations of some common misconceptions about competencies.

2.2.1 Competence versus Qualifications

Competence differs from qualification in that a qualification is simply the prerequisite for doing a task, while competence is how well a task is done. For example, many individuals pass a driving test and are qualified to drive a car, but they may not be good drivers and may cause accidents, so they are not competent in driving cars. Another example is that a college degree gives a person the qualification to get an entry-level job in an organization, but training and time doing the job helps that person to develop the competence to do the job well.

Traditional qualification relies on attending training and on years of experience while competence relies on observation of performance (knowledge, skills, abilities, behavioral attributes, etc.).

2.2.2 Competence versus Training

There is a belief that if an individual attends training, he or she is competent. Training is a means of acquiring knowledge. Knowledge can be tested, but competence must be demonstrated on the job. We can apply the 80/20 rule to training. Less than 20% of an employee's competence comes from traditional training (e.g., classroom, eLearning, etc.). Approximately 80% or more of the learning and competence is acquired through "On-the-Job" and "Hands On" training, coupled with experience and time in position.

2.2.3 Competency Assessment versus Performance Appraisal/Evaluation

Competency Assessment and Performance Appraisal or Evaluation are both methods of assessing employee's job performance. Performance appraisal, also referred to as a performance review, or performance evaluation is the time and process when an employee meets with his or her manager to formally discuss their overall job performance and productivity over a certain period, typically on a yearly basis (sometimes twice a year). The performance appraisal includes assessment of technical skills and behavior-based skills such as the ability to lead and be a team player. Accomplishments, potential or future improvement, strengths and weaknesses, etc. are also discussed. Organizations may have a performance review period where all employees are assessed during the same timeframe, or each employee is assessed on the anniversary of the date she or he was hired. Performance assessment is more about 'how well' you do your job.

Competency assessment is a component of a performance appraisal. It focuses more on 'can you' do your job. It focuses on the latest expectations of skills required to do the job. The frequency of when a competency assessment is done will vary. Competencies may be verified a few months after an employee has been in a new position, or after a new task is assigned to the employee. More information is provided on when to do competency assessment is *Section 7.1 Process for Assessing Competence.*

Competence (as defined in *Section 2.1*) is a person's ability to perform a task as measured against a pre-determined standard, whereas performance is how well one performs against pre-determined goals. Therefore, competence determines if someone knows how to do a job and a performance evaluation looks at how well the employee does the job.

2.3 Common Components of Competency

There are many different components that comprise an individual's competence. Some components are measureable and some are not measurable. Competence programs should include only those components that are measurable. There are other components of competence such as behavior and attitude that are often not incorporated into a competence program because of the challenges in measurement.

The following common components of competence are used in building a competence program:

- Knowledge
- Skill
- Ability

Competencies are observable, measurable, verifiable, and may include a range of acceptable performance.

Attributes such as internal motivation and responsibility aid in a competence assessment and distinguish superior performers from average performers, but are not measurable, and therefore should not be considered as part of a competence assessment.

Examples

A crane operator is expected to know how to estimate the weight of a load (knowledge) and how to balance a load (skill). He must also have good depth perception and be able to distinguish colors (both of which are abilities).

Competence:

1. *Estimate the weight of a load.*
2. *Demonstrate how to balance the weight of a load.*
3. *Distinguish colors.*

A crane operator is likely to be more successful and work more safely if he or she has a mechanical aptitude and a healthy sense of responsibility (behavior); however, it is difficult to measure his sense of responsibility.

3 What is a Competence Assurance Program?

As previously defined, a Competence Assurance Program, or Competence Program, is a structured and documented process of identifying, defining, assessing, remediating, developing, and managing the continuous competence of company personnel. It includes the formal systems, tools, and processes which ensure that personnel are competent to complete tasks to a determined standard.

3.1 Benefits of a Competence Program

The benefits of an effective competence program extend to the individual, the organization and to the industry. Some of the benefits are:

- Provides expectations so that employees know what is needed to be successful in their jobs
- Increases workplace and environmental safety
- Defines standards for minimum and best practices
- Creates a skilled workforce based on defined standards
- Identifies gaps in knowledge, skills, and abilities
- Increases productivity

3.2 Components of a Competence Program

Figure 1 illustrates one structure of a competence program. Shown are the four essential components of the program: program development, assessment cycle, quality assurance and continuous improvement, and program management.

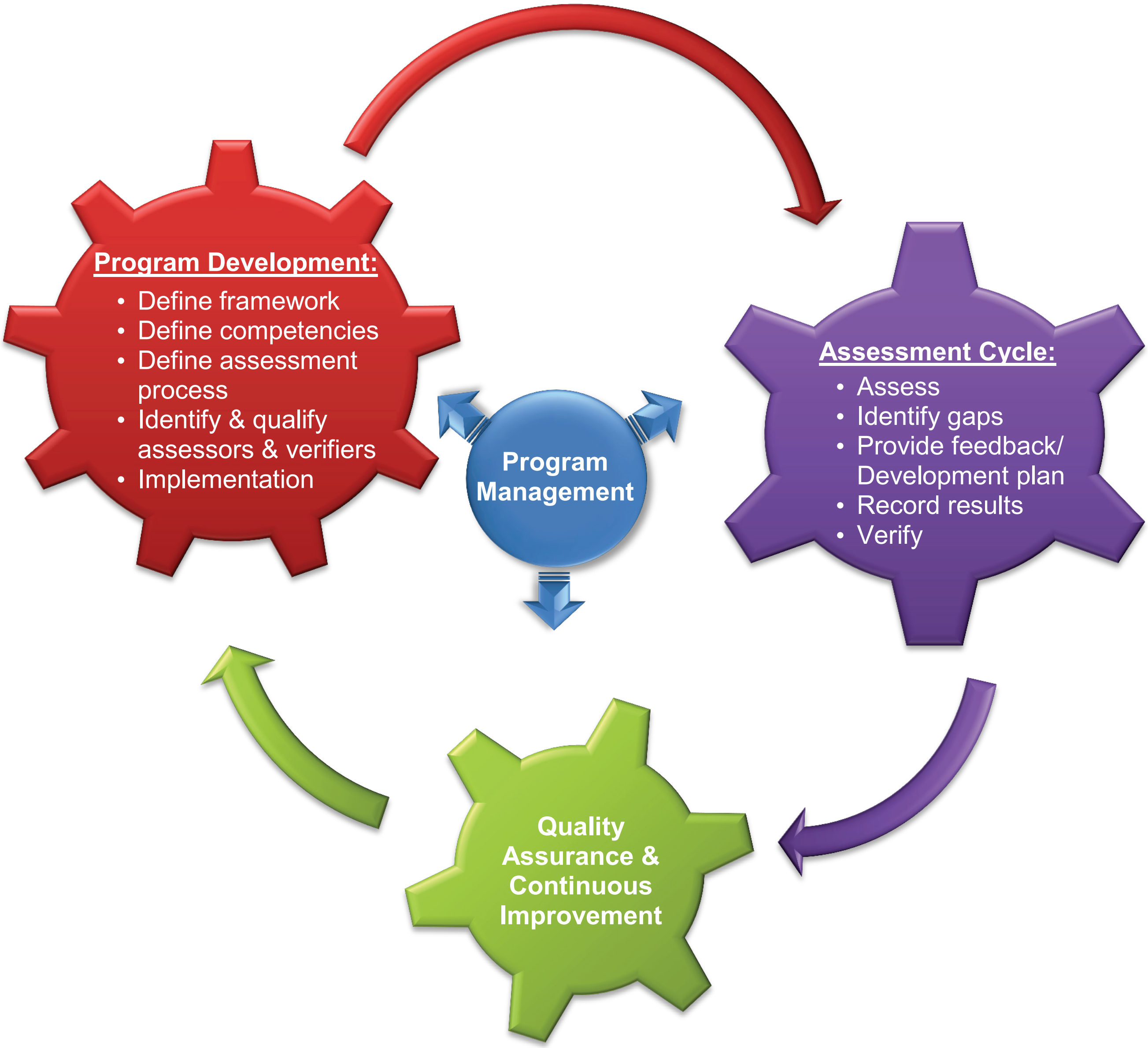
Program Development:
• Define framework
• Define competencies
• Define assessment process
• Identify & qualify assessors & verifiers
• Implementation
Program Management
Assessment Cycle:
• Assess
• Identify gaps
• Provide feedback/ Development plan
• Record results
• Verify
Quality Assurance & Continuous Improvement

Figure 1. Essential Components of a Competence Program.

These essential components may be further subdivided into other key components typically included in a competence program. While not limited to these components, the following components of competence are often included in a competence program:

- A commitment to the program by all stakeholders (i.e., a statement, standard, or policy) (See *Section 4*)
- Personnel trained to support the program (See *Sections 11.2 and 13 and Table 3*)
- A competence framework that is defined and tailored to a company's culture (See *Section 5*)
- Assessment methodologies that are matched to specific elements of competency (See *Section 7.4*)
- A plan and process for closing identified competence gaps (See *Section 7.9*)
- Confidentiality (See *Section 8.4*)
- A method of verifying the quality of a program (See *Section 9*)
- A process to ensure quality, continuous improvement, and management of changes to a program (See *Section 9, 10, and 11*)
- Methods for demonstrating competence to third parties (See *Section 14*)

See *Sections 5 and 15* for a list of resources, plans, and systems that are commonly used to facilitate a competence program.

4 Commitment

In this section, we will briefly discuss the commitment required to successfully design, implement, and sustain a program.

Commitment by all stakeholders is crucial to a program's success. Important aspects of commitment include management commitment to support the program and its processes, administrator commitment to follow the processes, and employee commitment to work cooperatively within the program.

4.1 Commitment of Management

In many cases, the decision to implement a competence program comes from the top of the organization and is delegated to lower levels.

In order for a competence program to succeed, it is critical that the commitment of management (and other key stakeholders) is communicated to employees. Documenting and then posting or distributing management commitment is something that should be considered. This commitment should include a documented, corporate-level policy emphasizing the importance of competence at all levels of the organization, the intention of management to be engaged in the process, and provision of adequate resources to support the program.

4.2 Commitment of Program Administrators

Program Administrators are the primary personnel for maintaining a sound program and ensuring success. They are the primary users of the processes, plans, and systems. This group will likely include the operations and business support personnel, human resource representatives, assessors, verifiers, and quality control specialists.

4.3 Commitment of Other Stakeholders

The competence program stakeholders comprise everyone who has an interest in or is affected by the program. In addition to the managers (decision-makers) and administrators discussed above, this group may include the subject matter experts who help to build the program's technical content, the various department heads who have to allow assessors at their worksites, and many others; however, the biggest group of stakeholders is the employees themselves who have to undergo the assessments and cooperate with program requirements. Having the "buy in" of this group is essential in facilitating a smooth process and obtaining accurate results.

5 Competence Framework

A competence framework is the way a company chooses to arrange or define their program (e.g., around positions or a product line).

This section describes optional ways to set up a competency framework. Each company should identify the competence framework to be used for their competence assurance program based on the company's operational structure. Below are examples of competence program frameworks:

Competency Type	**Explanation**
Role/Position-Based	The competencies are defined by job roles/positions, and each set of competencies are applied to individual employees based on their role or position
System/Task-Based	The competencies are defined by job tasks or product line and each set of competencies are determined based on individual tasks performed by employees.

A competency framework should be developed with the consideration of all personnel to be included in the competence assurance program to determine which competency framework is most suitable to use.

It is recommended that employers refer to the job titles for rig-based personnel identified and defined in IADC's KSA Database. By using the same job titles and core competencies, the industry can better track and report on performance gaps, recommend job standards, and determine and provide information on employment trends and needs worldwide.

6 Defining Competencies

The following information should be considered when defining competencies:

- Industry and regulatory requirements/standards
- Company-specific policies and procedures
- Job descriptions, roles, and responsibilities
- Knowledge and skill requirements for the role (may be equipment, location, and rig-specific as required)
- Criteria related to job task including criticality, complexity, frequency, importance, etc.
- Environmental factors (work environment vs. legislation)

6.1 Process for Defining Competencies

Companies should identify a process for defining competencies that includes a method of writing, approving, reviewing, revising, and finalizing competencies. The process should have the following components:

- Determination of the competence framework to be used (See Section 5)
- Identification of competence units/categories to be included such as:
    - ➢ Health, Safety, and Environmental
    - ➢ Technical/Job-specific (including equipment—knowledge of it and ability to operate it)
    - ➢ Behavioral attributes (leadership, communication, and supervisory)
- Identification of Subject Matter Experts (SMEs) who have a thorough knowledge of the job to write or review the competencies. (Examples of SMEs may include facilitators, equipment manufacturers, competence program experts, executive sponsors, operational staff, etc.)
- Mapping of competencies to current operating policies and procedures to ensure consistency, compliance and alignment to the determined standards
- Identification of the final authority (person or group) to approve competencies

Guidelines for Writing Competencies

General guidelines for writing competencies include the following:

- Define competencies simply and clearly. Anyone reading the competency should be able to easily identify what the competency is.
- Ensure the competency includes only a single task. Do not lump tasks together. The competency should be stated in as few words as possible, and be at most a few lines instead of a whole paragraph.

- Use action verbs (demonstrates, identifies, completes).

Three Health, Safety, and Environmental competency elements are given below as examples of how to write competencies:

1. Describe and identify the location of your muster point(s).
2. Demonstrate the correct donning, doffing, and stowing of emergency PPE.
3. Explain the site-specific emergency responses, exercises, and training plans for all major hazardous situations.

Resource for Writing Competencies

A list of industry-defined positional competency profiles is available through IADC at http://www.iadc-ksa.org/.

6.2 Competence Mapping

It is important to recognize that the competence program will have an impact on the organization's training programs. Competence mapping involves aligning the competence (competency) elements with training, remediation, and development modules to close performance gaps, address missing competencies, or raise the level of proficiency. Training and development can be driven by the gaps identified through the competence program.

7 Assessing Competence

The purpose of this section is to introduce and describe the factors influencing the competence assessment process.

This section outlines the qualification of assessors, how assessment content and competence ratings are defined, assessment planning, methods of assessment, documentation of assessment results, and management of assessment outcomes.

7.1 Process for Assessing Competence

Companies should have a procedure for assessment that is clearly defined, documented, and communicated. A plan and timeline for initial assessment as well as reassessment of the candidate should be recorded/documented to ensure consistency in applying the program and continued competence of individual employees.

The following events usually indicate the need for an assessment to take place:

- Initial assessment/pre-assessment
    - Implementation of a competence program
    - New hire
- Change in role or responsibilities
    - Promotion
    - Transfer to new asset class or product line
- Change in:
    - Defined competencies
    - Equipment upgrades
    - Operating procedures
- Reassessment
    - Company specific reassessment timeframes (yearly, biannually, etc.)
    - Based on outcome of a risk assessment, safety case, occurrence of, or potential occurrence of an incident, etc.

Other events may also prompt or suggest the need for a reassessment.

7.2 Competence Rating System

A competence program requires a system for rating employee performance against the competency line items. Depending on the competence framework, the rating system may range in complexity from simple to very detailed. Examples of rating systems include, but are not exclusive to, the following:

- **Two-point**—Competent / Not Yet Competent (Table 1 below shows an example record of this rating system.)
- **Three-point**—Development Needed / Capable / Proficient
- **Four-point**—Unsatisfactory / Needs Improvement / Competent / Exceeds Expectations
- **Five-point**—No Knowledge / Unsatisfactory / Needs Improvement / Meets Competency Expectations / Exceeds Expectations
- **Six-point**—No Knowledge / Unsatisfactory / Needs Improvement / Meets Competency Expectations / Exceeds Expectations / Significantly Exceeds Expectations (Table 2 below shows an example record of this six-point rating system.)

Table 1. Example of a Two-point Competence Rating System Record.

Competency (Knowledge, Skill or Ability)	Competent	Not Yet Competent	Assessor Signature	Date
Demonstrate ability to dismantle and re-assemble SPM valve.	x		EJD	10-Oct-14

Table 2. Example of a Six-point Competence Rating System Record.

Competency (Knowledge, Skill or Ability)	Competence Rating	Assessor Signature	Date
Demonstrate ability to dismantle and re-assemble SPM valve.	3	EJD	10-Oct-14
0 - No Knowledge			
1 - Unsatisfactory			
2 - Needs Improvement			
3 - Meets Competency			
4 - Exceeds Expectations			
5 - Significantly Exceeds Expectations			

Regardless of terminology used, it is important for all stakeholders to understand the meaning of each rating and the fact that the expectations are based on the job requirements.

How an organization defines, assesses, and rates employee competence may have legal as well as business implications.

7.3 Assessment Plan Communication

Companies should have a defined methodology for communicating details of the competence assessment process. Communications should include, but are not limited to, the following:

- When the assessment is to take place
- How assessments will be performed
- What standards an employee will be assessed against
- What the employee may need to do in preparation for the assessment
- What happens if an employee is found to be not yet competent

Managers and employees may need to plan assessments in line with the business needs and/or operations.

7.4 Methods of Assessment

A variety of methods exist for assessing competence. To produce quality evidence of competence, an assessment method needs to be compatible with the stated objectives. Effective selection of assessment methods is based on a clear understanding of the assessment content, including the elements of competence and competence rating system. Because each method has its inherent limitations and benefits, organizations often employ more than one in the process of measuring an employee's competence. Examples of assessment methods include, but are not exclusive to, the following:

- Observation
- Questioning or interviewing
- Written exam
- Simulation
- Third-party testimony
- Examination of work product

Many alternative methods of assessment exist. Methods that produce the highest quality evidence of competence should be selected. Once the most appropriate and effective method of assessment is determined, the assessors should be trained to use this method.

7.5 Assessment Tools and Supporting Evidence

Assessment tools facilitate the execution of the assessment process, and in many cases, result in the capture of required evidence of the assessment. The selection of the tool(s) used in performing an assessment depends upon the method of assessment.

Examples of assessment tools include the following:

- A written assessment or examination. (In this case, the method and the tool are the same.)
- A checklist to ensure that the examination of work products and observations are complete and consistent.
- A video recording to capture the outcome of an interview or simulation assessment.

The utilization of quality assessment tools creates a higher probability of standardization in the assessment delivery across the organization. They also facilitate the capture of required evidence of the assessment.

Evidence of the assessment must be gathered that supports the assessment. Without appropriate and adequate evidence of the assessment, the effectiveness of the assessment, the reliability of the assessment process, the development of the employee, and the overall success of the competence program within the organization are in jeopardy.

In many cases, the completed tool becomes the supporting documentation or evidence of the completed assessment, as is the case of the written assessment or the completed checklist. Other examples of documented evidence supporting the assessment process are certificates, employee reports, and customer or third-party feedback.

Effective assessor training in the procedures, use of the tools, and required documentation (evidence of the assessment) may be required to assure results that are current, authentic, valid, reliable, and verifiable outcomes. Development of a guidance document that details the methodology and the use of the tool may be required to support the assessor in performance of the assessments.

7.6 Assessor and Verifiers

Assessors and verifiers are integral to the assessment process. They should be qualified through a standardized process defined by the organization. The process of identifying and qualifying assessors and verifiers must be documented and implemented to ensure consistency within the program.

Assessors are responsible for carrying out the assessment and utilizing the above referenced methodologies and tools. Assessors should have the following characteristics and qualifications:

- Knowledge in the subject/tasks they are to assess

- Knowledge of the assessment methodology, tools, required evidence, and administrative procedures
- Understanding of the importance of their role in the assessment process, and in particular, the impact their assessment report has on the assessee and the outcome of the assessment
- Successful completion of training to conduct assessments
- Ability to be objective in their performance of the assessments

Verifiers ensure that the assessment process is adhered to, proper assessment methods are consistently being used, and records of assessments are properly completed and retained. They should have knowledge of the assessment processes and procedures to ensure that all are followed as outlined in the program.

Assessors and verifiers may be employees of the company or independent, third-party assessors and verifiers qualified by an outside organization. While utilization of independent, third-party assessors and verifiers is not required, utilization of these third party assessors and verifiers may provide one method for eliminating bias or subjective assessment decisions.

7.7 Assessment Decision

The assessment decision must be fair, impartial, and objective on a consistent basis. A framework for consistent and reliable assessments can be established by ensuring assessors are properly qualified and trained and by providing guidance documents, well-defined standards, and useable assessment tools.

Regardless of how achieved, objectivity in performing assessments is paramount to the success of the competence assurance program. Objectivity should be emphasized and developed during assessor training, and then reinforced during reviews of assessment results. Assessors may need additional coaching on how to eliminate or minimize the impact of individual opinion (subjectivity), how to manage personality conflicts, and similar factors that can affect the results of an assessment.

Evidence of assessment decisions should be recorded and made available for review. (See *Section 8 Data and Information Management* for guidance on managing assessment records.)

7.8 Managing the Outcome

The outcome of assessments can be used to identify competence strengths for career progression and identify competence gaps for further employee development. The company should have a clearly defined process for determining what action to take when an individual is deemed not yet competent.

7.8.1 Providing Feedback

Once the assessment is completed, the assessor should provide constructive feedback to the employee. Constructive feedback reinforces the employee's strengths and positive performance traits and provides a learning opportunity for the employee when performance is below expectation.

Constructive feedback consists of clear descriptions of what tasks the employee performed competently, what tasks were not performed to the required level of performance expectation, and what knowledge or skills the employee needs to develop further. Feedback must be described in terms of the standard or criteria and the observed performance, rather than a judgment (e.g., "right, wrong"). Comparing and contrasting the employee's performance against the criteria will reduce the employee's need to defend their performance and will provide a balanced view of the assessment outcome.

Acceptable performance should be reinforced by stressing the employee's achievement (or competence) against the standard. Below-par performance should result in feedback that is expressed as an opportunity for improvement. The assessor should indicate gaps in the employee's performance and describe the gaps in terms of further development.

Regardless of the employee's performance on the assessment, constructive feedback should include recommendations for next steps to advance or improve the employee's competency level. These actions are expressed in the context of a development plan, which points the employee to training or other means of development to close the gaps and mitigate the risks associated with the gaps.

7.8.2 Employee Feedback

Obtaining feedback from the employee is also an important factor in managing the outcome of an assessment. Employees should be given opportunity to respond to the feedback provided by the assessor, ask questions, and, if applicable, appeal the results of the assessment.

7.8.3 Appeal

An appeal gives the employee the opportunity to formally dispute the outcome of the assessment. An appeal process should be formally documented, with clearly defined criteria for the grounds on which an appeal will be submitted, reviewed, and accepted/rejected. To ensure a fair decision is reached, all parties participating in the appeals process must be committed to the same level of objectivity required in the process of assessing the employee.

The process should include steps that establish the validity of the appeal, create visibility for the response to the appeal, and document the outcome of the appeal process. Assessment results, the decision, feedback, and appeal (where applicable) should be documented in a recordkeeping system.

7.9 Closing Competency Gaps

The employee should be offered opportunities for development and reassessment whenever a competency gap is identified. Opportunities for development may include on-the-job training, formal classroom training, coaching, computer-based instruction, and hands-on/simulator instruction. A plan and timeline for reassessing the candidate should be recorded/documented to move the employee toward achieving or maintaining competence.

8 Data and Information Management

Maintaining secure, accurate, and retrievable documents and records is critical for the delivery of a competence program and provides a measure of the program effectiveness. The results of any assessment activity should be stored in a centralized tool that supports both the recordkeeping and reporting process.

The purpose of this section is to describe how data and information related to the competence program is managed. This section outlines the general requirements for data and information management.

8.1 Documented Information

A data and information management system is needed for storing competence documentation, competency definitions, employee records, assessment criteria and results, development plans, and other employee records related to competence.

Typical program information that should be tracked includes the following:

- Competencies and framework
- Position roles and responsibilities
- Assessment contents and methodologies
- Assessment tools (booklet, etc.)
- Competence assessment results
- Assessment outcome and actions
- Program implementation and communication records
- Assessor qualification records

Tracking the creation and revision of the documentation that supports the competence program is important.

8.2 Recordkeeping System

The recordkeeping system can be used by the business as a competence resource and process management solution. Additionally, the recordkeeping system should support the tracking, reporting, and analysis of organizational competence data.

The recordkeeping system should be equipped with (or linked to) a document management system, which would help to ensure that the most recent version of each document is available to those participating in the process.

In addition to recording assessment results, decisions, and ratings, the recordkeeping system should also support the retention of assessment results and feedback. Employee development is supported by maintaining a record of the comparison/contrast of the employee's performance against the criteria, the observations of positive outcomes and performance gaps, and recommendations for improvement or development.

8.3 Reporting

Reports should be developed within the recordkeeping system to:

- Monitor the progress of implementation of the competence program against pre-established goals
- Monitor progress against established goals for maintaining a certain level of competence across the organization
- Systematically identify personnel's levels of competence and their degree of competence achievement (whether higher or lower than expectation)
- Systematically determine competence "gaps" across specific roles or job tasks, allowing focus to be put on these areas to develop competence

These reports should be used to measure the effectiveness of the competence program.

8.4 Confidentiality Requirements & Human Resource Legal Interfaces

The data and information management systems must follow confidentiality requirements as set forth by local laws and company policy. It is also important to consult with legal and human resource experts to identify employee data points that must be treated as confidential. Examples of confidential data may include data related to compensation, disciplinary actions, identity, training records, competence assessments, and physical competence.

The recordkeeping system may also contain data that is linked to proprietary business information or intellectual property; therefore, confidentiality may be necessary for helping to maintain the company's competitive advantage. Examples may include assessment content, company-specific policies, and standards or data related to identity, compensation, or disciplinary actions, etc.

The data management and recordkeeping system should contain the proper controls necessary to manage and prevent unauthorized access to this data.

9 Quality Assurance

The purpose of this section is to introduce and describe how quality assurance (QA) is incorporated within a competence program.

The information provided is not intended to address the strategic decisions of an organization on the adoption of a quality management system, but instead describes the elements that pertain specifically to competency management. It is likely that the elements discussed may already be in place and /or incorporated as part of the company-wide quality management systems.

9.1 What is Quality Assurance?

There are many definitions of quality assurance available. One example is as follows:

Quality Assurance (IADC): A formal means of self-directed auditing to verify conformance with the published policies and procedures, which include reporting requirements and procedures for responding to identified discrepancies.

The competence program should include documented quality assurance procedures to ensure adherence to program policies and procedures.

9.2 Components of Quality Assurance

At a minimum, the quality assurance process should assure that:

- Audits are planned and conducted.
- Discrepancies are noted for corrective action.
- Corrective actions are planned and approved as required.
- Corrective actions are implemented, completed, closed, and effective.
- Preventive actions are defined and implemented.
- Records and reports are recorded, documented, and filed.
- Lessons learned are communicated.

9.3 Quality Assurance Audits

Audits (internal and/or external) are a reliable method that may be used to ensure comprehension and conformance to competence program processes. Audits should be conducted at planned intervals, and collect objective evidence to determine adherence to policies and procedures. They provide the means of ensuring that an organization's competency management system is effectively implemented and maintained. Examples of audits may include a global audit, service delivery audit, site self-assessment, and manufacturing audits. Evidence of audits and audit findings should be recorded and made available for review.

10 Validity and Reliability of Competency Assessments

The validity of assessments and reliability of assessors are important for the success of a competence program.

10.1 Validity

Construct validity—Relates to the assessment approach taken to validate the competence required in the context of the work environment. Simply stated, it helps you to determine if you are measuring what you intended to measure.

Criterion-related validity—Ability to demonstrate a relationship between the competency assessment and some significant job outcome (performance, safety, audit trail, etc.).

10.2 Verification

Verification is the process of monitoring and assuring consistent application of assessment tools by assessors and quality of the assessment records.

An organization should define a verification process and identify who should serve as the verifier.

A summary of the verification steps may be as follows:

1. Choose an appropriate frequency and sampling strategy to review assessments that are representative of the assessor’s performance.
2. Identify non-conforming records.
3. Correct the non-conforming records.
4. Review the verification results and identify areas of improvement, lessons learned, and best practices.
5. Provide feedback to assessors to help them improve their performance.

10.3 Reliability

Competence assessment relies on assessors consistently applying the assessment and documentation process. The work of the Verifier in monitoring consistency and quality of the assessments helps establish the reliability of the assessment process.

11 Implementation Plan

This section is intended to communicate and reinforce the importance of an implementation plan in ensuring that you have a successful rollout of your competence program. The information in this section includes elements that have proven to be integral in a successful implementation.

11.1 Purpose

The implementation plan provides a framework that ensures the competence program is rolled out effectively. It should include a clear statement of the program's purpose, the process for implementation, the roles of personnel who will be involved, and communication of the expectations.

Some of the benefits in successful implementation include the following:

- Improve the effectiveness (time, money) to implement the program to relevant parts of the organization.
- Improve comprehension and adoption of the program by employees who will be using it.
- Increase consistency of the application of the policies and procedures resulting in the desired outcome of the competence program.

11.2 Key Roles during Implementation

See *Section 13 Support Personnel* for identification of key personnel with responsibilities for implementation of the competence program.

11.3 Elements of an Implementation Plan

Rollout strategy—Defines the who, what, when, where, why, and how of the rollout process.

Communication strategy—Defines how decisions and requirements are communicated and to whom. It also ensures that the competence program, its processes, and its progress are communicated and visible to all individuals who have a role in the competence program.

Organizations should have a defined methodology for communicating implementation processes and progress, and a means for monitoring this communication to ensure it is taking place. Organizations should also proactively determine employee comprehension of the processes.

Marketing and business case--Includes the following elements:

- An explanation of benefits to the employees –This information speaks directly to the individual employees to obtain their “buy in” to the new program. It tells the employee, “What’s in it for me?”
- An explanation of the benefits to the company
- Establishment of the case for action

Measures of success—those items necessary for an effective program implementation. It answers the questions, “What does success look like?”

The following success factors or indicators of success should be present in the rollout of the new Program to identify if the implementation is meeting the program expectations:

- Right resources are in place
- Communication / training is taking place
- Comprehension and application of the program follows the processes and procedures
- Delivery of expected results increases competence and impacts business results (KPIs)
- Feedback from all levels within the organization communicates the health of the competence program

11.4 Management of Change (MOC)

In order to effectively implement and sustain any new program, a robust management of change (MOC) process/plan should be in place. The Quality Assurance personnel should manage the changes, but all stakeholders must be committed to and engaged in this process.

12 Training Strategy

Competence programs should include training for all individuals who have key responsibilities in the program (employees, assessors, managers, etc.). (See Table 3 for a list of program roles.) Elements of the training strategy will include:

- Processes and procedures
- Document control, recordkeeping, and confidentiality
- Framework for ongoing support and audit procedures to ensure effective post-implementation success
- A system for receiving feedback from line managers and end users of the program to foster continuous improvement

13 Support Personnel

Additional personnel need to be identified to design, implement, and sustain the competency assurance program. Regardless of organizational construct, the following functional responsibilities need to be addressed:

- Project leadership
- Subject matter experts
- Human resources
- Operations
- Information technology
- Communications/Marketing personnel

See Table 3 for a listing of key roles and responsibilities for the competence program.

Table 3: Key Roles and Responsibilities for a Competence Program

Role	Design Phase	Implementation Phase	Sustain Phase
Executive Sponsor / Senior Management: *The "sponsor" of the new Program, usually the senior level decision makers, whose primary role is to provide the vision, context, and visible support for the Program*	• Defines/Approves purpose and scope of the competence program. • Works with Project Team/Steering Committee to determine impact of competence program on performance management across the organization. • Approves stakeholders. • Approves budget. • Approves resources.	• Communicates the vision and context. • Demonstrates visible support for the Program.	• Maintains a documented corporate-level commitment assuring competence, management engagement in the process, and provision of adequate resources to support the program. • Monitors the impact of the program on the business performance. • Provides ongoing financial investment in the Program.
Steering Committee / Governance Board: *Body that typically consists of individuals from various Functional Groups*	• Ensures equality in decision-making. • Represents stakeholders. • Validates direction, mission, purpose, vision, and program objective.	• Maintains awareness of implementation activities.	• Provides direction to the continuous improvement to the Program. • Manages organizational change as it affects the Program.
Program Manager	• Designs the program and defines the elements. • Creates the Program framework. • Works with Executive Sponsor / Senior Management to determine the competence program impact on business performance. • Leads the design stage of the program. • Defines the roles & responsibilities required to support the Program	• Provides guidance to the implementation team.	• Leads the continuous improvement of Program. • Maintains Program resource capability.

Role	Design Phase	Implementation Phase	Sustain Phase
	framework. • Manages cross-functional teams including communication with marketing.		
Implementation Team: *(This may or may not be the same individuals that are on the Project Team/Steering Committee.)*	• Implements communication and roll out plan, highlighting the benefits of the Program; prepares to hear and discuss concerns, in advance of full program implementation. • Communicates with stakeholders (two-way); gains engagement, trust, and commitment. • Educates "Assessors" on how to observe, complete, and provide feedback on competencies. • Educates "Assessees" on what to expect before, during, and after assessment period.	• Leads the implementation of the Program. • Works with managers on developing and implementing employee development plans. • Partners with Local Implementation Lead, Champion.	• Ensures actions taken on feedback so all learnings, positive and negative, are captured and applied to improving and sustaining the program. • Ensures lessons learned and best practices are being incorporated.
Local Implementation Lead / Champion: *The "expert" assigned to implement the new Program* *A representative sample of line managers and end-users impacted by the Program*	• Provides feedback from a business and application perspective.	• Ensures the infrastructure exists for deployment. • Provides end-user training. • Provides ongoing technical support. • Reports on progress of the implementation. • Provides audit support. • Assesses the rollout plan.	• Identifies improvements. • Forwards feedback from the line managers and end users to the Steering Committee, Operations Line, and other stakeholders.

Role	Design Phase	Implementation Phase	Sustain Phase
Operations / Business Line: *The entire population of line managers and employees impacted by the new Program*	- Ensures that competency is tied to business performance (e.g., metrics). - Communicates the impact of competence on business. - Defines or assists in identifying/defining and/or developing competencies. - Provides subject matter experts.	- Supports competency development as a key business driver. - Supports and actively participates in competency process. - Tracks Development Plan progress and closes out identified gaps (micro concept). - Leads by supervisor example. - Observes and evaluates competency. - Commits and owns results of competency assessment. - Develops or works with other groups to design and implement employee development plans.	- Receives feedback from the line managers and end users. - Conducts self-audits. - Tracks development plan progress, and closes out identified gaps. - Leads by supervisor example. - Complies with regulations and policies, and ensures people are developed based on their roles and responsibilities. - Audits or oversees the audit process.
Subject Matter Experts	- Provides subject matter expertise during content definition and development. - Develops and reviews competence program. - Develops assessment tools.	- Serves as an assessor.	- Provides feedback regarding updates to content and continuous improvement. - Verifies and analyzes evaluation results, checks for quality.
Quality Department / Change Management	- Develops audit criteria.	- Assesses the rollout plan and identifying improvements.	- Performs quality audits. - Manages program changes.
Human Resources /	- Provides input to ensure program complies with legal/regulatory	- Supports record keeping system during implementation.	- Tracks competency results.

Role	Design Phase	Implementation Phase	Sustain Phase
Information Systems	requirements. • Provides recommendation for supporting technologies.	• Provides system training. • Interfaces people processes with the competence assurance program (talent management).	• Maintains personnel records. • Communicates positions requirements. • Maintains infrastructure.
Assessors	• Receives training on assessment methodologies that will be used. • Prepares checklists and other tools of assessments.	• Performs assessments. • Records results.	• Improves assessment processes, as needed.
Verifiers	• Receives training on records verification process. • Develops checklist of records to be verified.	• Ensures processes are being followed and records are being managed in accordance with program processes and company policy.	• Verifies the accuracy and validity of records. • Reports findings of nonconformance.

14 Demonstrating Competence to Third Parties

The purpose of this section is to introduce a simple process and a demonstration guideline that organizations may follow to demonstrate the competence of their workforce to third parties, whether customers, regulators, or the public.

14.1 Demonstration Process

The oil and gas industry relies on individual contributors or teams of individuals delivering assets, products, or services while satisfying safety, environmental, and quality requirements.

Third parties request a demonstration of the competence of the workforce as a mechanism to manage the risk associated with personnel and to build confidence in the organization. The organization may be requested to provide evidence on multiple occasions throughout the business partnership.

In practice, the purpose of each demonstration differs depending on its timing. The following are examples of how the purpose depends on the timing:

- During the pre-contract phase, the purpose is to demonstrate that a company has the workforce capability to satisfy the proposed contractual requirements.
- During execution of the contract, the purpose is to demonstrate that a company is sustaining its workforce capability.
- During delivery of individual assets, products, or services, the purpose is to demonstrate that particular individuals are competent to provide the assets, products, or services at the time of delivery.

The demonstration process provides evidence that:

- The company possesses a robust program.
- Individuals comprehend the program.
- The program is consistently applied across the organization.
- The company and workforce are competent.

14.2 Demonstration Guideline

The demonstration guideline is made up of three chronological checklists. Each checklist contains the minimum evidence that may be provided depending on the purpose of each demonstration.

It is important to recognize and respect that: (1) an employee's competence records are confidential, and (2) competency statements and associated materials are the intellectual property of the company.

14.2.1 Pre-Contract

This demonstration is likely to apply during the tendering process. The purpose is to establish that the company has the workforce capability to satisfy the proposed partnership requirements.

The recommended methodology to be used by the organization is to demonstrate that they possess a robust competence program.

Examples of evidence may be presented in a hardcopy form as follows:

- Outline of the company's documented commitment to training and competency development
- Overview of the competence program
- Overview of the assessment process and assessor qualifications

If the organization's competence program has been accredited by a recognized external body, generally, the certificate of accreditation will replace the need to present this evidence.

Note that in relation to individual employee's information, resumes (documents specifically prepared for the public domain) are the most relevant format at this time, not competency records.

14.2.2 Execution of the Contract

This demonstration is typically associated with an external audit and may apply at any time. The purpose of this demonstration is to establish that the company can sustain the business partnership with their workforce capability.

The recommended methodology to be used by the organization is to demonstrate that there are competency processes in place, that employees comprehend those processes, and that they are following those processes.

Examples of evidence that may be shown to demonstrate that there are processes in place are as follows:

- Outline of the company's documented commitment to training and competency development
- Detailed description of the competence program
- Detailed description of the assessment process and assessor qualification requirements

Examples of evidence that may be shown to demonstrate that employees comprehend the competence program are as follows:

- Demonstration of commitment and accountability for the program by management through conducting interviews
- Competence program training and communication records
- Adherence to competence program processes by interviewing individuals serving in process roles (employee, assessor, manager)

Examples of evidence that may be shown to demonstrate that employees apply the competency processes are as follows:

- Demonstration of the 'competency system' using a randomly selected employee's competency profile to ascertain validity of the records
- Random assessor competence and qualification records

As a general practice employee's competence records should be shown to the auditor, but not disclosed in digital or hardcopy form, as they are confidential information.

14.2.3 Delivery of Individual Assets, Products, and Services

This demonstration is typically associated with the selection of employees at the time of delivery of assets, product, or services. The purpose is to demonstrate that particular individuals are competent at the time of delivery.

The recommended methodology to be used by the organization is to demonstrate that personnel can perform their job functions under the specific work conditions they will encounter.

Examples of evidence that may be presented by the organization to demonstrate that competence information is used to assure employees' competence for the specific instance of work is as follows:

- Detailed description of the assurance process
- List of competent individuals by job function that will perform the job

15 Bibliography/References

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NOTICE

This document was designed by the IADC Workforce Development Committee for the purpose of providing members guidance in developing in-house competence programs.

This document is designed for the end user, with no intention for it to be used by those offering fee-based consulting or other services related to the development of competence programs for sale.

The information contained in this document is a compilation of research, members' views, and success and failures in implementation of in-house competence programs. The content represents the views of IADC member companies who contributed to the content's development and is based in part on the success and failures in implementation of in-house competence programs.

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