

National Occupational Standard Project Manager

Electricity Human Resources Canada is a non-profit organization supporting the human resources needs of the Canadian electricity sector.

Our Vision

Keeping the lights on in Canada by preparing and empowering a world-class workforce for the entire electricity industry.

Our Mission

Working to strengthen the ability of the Canadian electricity industry in meeting current and future needs for their workforce—one that is safety-focused, highly skilled, diverse and productive.

Our Values

We are a values-driven organization, committed to the improvement of our sector, the growth of Canada's economy, and the stability of our power grid. Our core values are:

Collaboration

Working with all stakeholders in Canada's electricity sector for our mutual benefit.

Trust

Forging relationships and products built on unwavering integrity.

Innovation

Leading the industry to be future-ready.

National Occupational Standards (NOS)

NOS are voluntary guidelines that have been developed to provide businesses, educators, trainers, and job seekers with practical guidance.

How are NOS used?

Employers, employees, and educational institutions can put NOS to a wide variety of uses supporting effective workforce planning:

- Support personnel certification or accreditation programs.
- Inform curricula for colleges and apprenticeships.
- Assist recruitment by informing job descriptions and providing a benchmark for employee appraisals.
- Identify career paths in order to promote employee retention.
- Help employers evaluate and determine the competencies of potential employees, including Internationally Trained Workers (ITWs).

Electricity Human Resources Canada has developed National Occupational Standards for a range of in-demand occupations.

Visit electricityhr.ca for more information.

Key Terms within the National Occupational Standard:

Major Category	A general functional area within the industry
Competency Area	A specific area of responsibility within a Major Category
Competency Unit	A specific task that contains a description of the knowledge and performance components that are needed for successful, safe and effective completion

Each Competency within the National Occupational Standard is made up of (some or all of) the following elements:

- **Purpose:** A statement that describes what the competency is, and why it is important.
- **Performance:** What a job incumbent must be able to do to perform the competency.
- **Knowledge:** What a job incumbent must know to perform the competency.
- **Glossary:** Definitions for key terms used in the competency.
- **Range of Context:** Specific variables or situations that may impact the way that the competency is performed.
- **Level of Practice:** The level of job incumbent that typically performs the competency.
- **Adapted Bloom's Taxonomy:** The level of cognitive performance required for the competency (of particular interest to trainers/educators).
- **RWATEM:** The Requisite Work Aids, Tools, Equipment and Materials used by job incumbents to perform the competency.

Chart of Competency: Project Manager

This Chart outlines the competencies (also known as skills and knowledge) that are performed by Project Managers.

Occupational Definition:

Project Managers working in the electricity and renewable energy sector plan, execute and evaluate projects. They are employed by electrical utilities, independent power producers and private companies that build power infrastructure for utilities and municipalities.

Major Category	Competency Area	Competency Unit						
Project Management	Plan Projects	Develop project charter	Develop Project Execution Plan	Develop work breakdown structure	Develop project management plans	Develop project schedule		
	Execute Projects	Oversee procurement of contractors, service providers and suppliers	Monitor project activities	Manage project changes and disruptions				
	Close Projects	Complete project close-out	Evaluate finished projects					
Finance	Control Finances	Develop budget	Control budget performance					
Human Resources	Monitor Employee Performance	Maintain a positive work environment	Motivate employees	Build teams	Schedule employees	Conduct performance review	Address employee performance issues	Build an inclusive work environment
	Supervise Staff in a Union Environment	Comply with collective agreement	Respond to grievances	Maintain a positive relationship with the union				
Information and Communication Technology (ICT) Foundations	Use Digital Technology	Use communication applications	Use common software applications					
	Use Organization's ICT System	Use Organization's ICT system						
Information/Record Management	Complete Information/Record Management Tasks	Maintain technical information and data						
Safety	Maintain a Safe Working Environment	Follow safe work practices	Use personal protective equipment (PPE)	Participate in safety meetings and emergency drills	Isolate component, equipment or system	Perform lock-out, tag-out procedures		
	Maintain a Sustainable Working Environment	Follow sustainable work practices						
Security	Follow Security Practices	Follow security practices for physical work environment	Follow cybersecurity procedures					
Organizational Policies and Procedures	Follow Organizational Policies and Procedures	Follow organizational policies and procedures						
Leadership	Provide Leadership	Develop action plans	Implement action plans	Delegate tasks				
	Facilitate Change	Promote continuous improvement	Implement change					
Personal Competencies	Demonstrate Professionalism	Work as a member of a team	Develop professionally	Demonstrate professional and ethical conduct	Mentor/coach others	Manage stress	Manage time	
	Communicate Effectively	Use active listening skills	Use speaking skills	Use writing skills	Negotiate with internal and external stakeholders	Conduct meetings and presentations	Exchange information with internal and external stakeholders	

Purpose

Developing the project charter provides a clear and cohesive vision for the deliverables of the project and the roles of those involved. This helps to ensure that all stakeholders are aware of their roles and responsibilities. A charter supports decision-making activities and is often used as a communication tool to keep all parties focused on the same goals. This skill is critical for managing processes and people.

Performance/Abilities

- P1** Define scope of project:
- define deliverables
 - identify boundaries of project, e.g. applies to single system or asset
- P2** Describe project objectives not covered by scope, e.g. secure future work with new stakeholder/client
- P3** Identify stakeholders in the project:
- assign roles and responsibilities to stakeholders, as required
 - describe authority of project manager
- P4** Define budget/cost targets relevant to the project
- P5** Determine timelines/schedule for completion of deliverables
- P6** Identify what might be exposed to risk:
- identify interdependencies in activities, e.g. technology and implementation, rezoning
- P7** Identify project assumptions and constraints
- P8** Create draft project charter document
- P9** Circulate draft project charter to other relevant parties, as required, e.g. team members, management, contractors:
- facilitate consensus on final charter, as required
- P10** Finalize project charter:
- obtain required signatures
 - communicate to all relevant parties

Knowledge

- K1** Project management theory, e.g. Project Management Body of Knowledge
- K2** Organization policies, procedures and plans
- K3** Organization/project goals, vision and status
- K4** Organizational document management system, e.g. where to find latest copies of policies and communication documents
- K5** Details of relevant contracts
- K6** Challenges that may impede implementation of project charter

Glossary

- Project charter:** document issued by the project initiator or sponsor that formally authorizes the existence of a project, and provides the project manager with the authority to apply organizational resources to project activities.

Contextual Variables

Range of Context

- Number of variables to be considered and identified will vary with size/scope of the project.
- Type and number of challenges/risks to project charter that must be considered at this stage will vary with the complexity of the project/organizational tasks.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Software, e.g. Microsoft Word

Purpose

Developing the Project Execution Plan (PEP) sets out the strategy for managing the project. The PEP is a narrative document that describes policies, procedures and priorities that will be adopted. It can be used as a communication tool to keep all parties focused on the same goals.

Performance/Abilities

- P1** Review project charter, including scope
- P2** Analyze all project elements, including but not limited to:
- engineering, as required
 - design, as required
 - contracting and procurement strategies, as required
 - communication and information systems
 - roles, responsibilities and authorities
 - monitoring and reporting strategies
 - safety issues
 - environmental protection
 - quality assurance
 - construction execution strategy, as required
 - commissioning strategy
 - resources needed/to be used, including:
 - human resources
 - effort of other departments, as required
 - equipment
 - administration
- P3** Determine major phases of the project
- P4** Determine major project milestones
- P5** Develop a high-level schedule, including timeline
- P6** Develop draft Project Execution Plan:
- use template(s), as required
 - write project narrative, explaining:
 - how project will be executed
 - factors considered during plan's development
 - rationale/thought process for project execution
- P7** Share draft Project Execution Plan with other relevant parties, as required, e.g. team members, management, contractors:
- solicit input, as required
 - facilitate consensus on final PEP, as required
 - seek approval(s), as required
- P8** Finalize Project Execution Plan:
- communicate to all relevant parties

Knowledge

- K1** Project management theory, e.g. Project Management Body of Knowledge (PMBOK), AACE International Body of Knowledge
- K2** Organization policies, procedures and plans
- K3** Organization/project goals, vision and status
- K4** Relevant design documentation
- K5** Project Charter
- K6** Project budget, if available
- K7** Relevant legislation/regulatory requirements
- K8** Available resources
- K9** Details of relevant contracts
- K10** Project stakeholders
- K11** Roles and responsibilities of project team members
- K12** Current events that may impact project execution
- K13** Execution plans of similar projects, if available
- K14** Typical structure of Project Execution Plan
- K15** Organizational document management system, e.g. where to find latest copies of policies and communication documents

Glossary

- **Project Charter:** document issued by the project initiator or sponsor that formally authorizes the existence of a project, and provides the project manager with the authority to apply organizational resources to project activities.
- **Project Execution Plan (PEP):** the governing document that establishes the means to execute, monitor, and control projects. The plan can serve as the main communication vehicle to ensure that everyone is aware and knowledgeable of project objectives and how they will be accomplished.

Contextual Variables

Range of Context

- Number of variables to be considered and identified will vary with size/scope of the project.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Project Charter
- Project Execution Plan templates, if available
- Project management software
- Other software, e.g. Microsoft Word

Purpose

Developing the Work Breakdown Structure(WBS) provides stakeholders with a clear visual representation of a project's work packages. The WBS breaks project outcomes into a collection of specific activities. The format of a WBS varies, and may include an outline/numbered list, a hierarchical table, a flow-chart or a diagram. A WBS is a useful communication tool for both the project team members and relevant stakeholders outside of the project team. Developing a WBS can also help to identify any gaps in the project scope. Failure to develop a Work Breakdown Structure can cause delays, confusion amongst team members, and project overruns.

Performance/Abilities

- P1** Review Project Charter and Project Execution Plan, including scope, as required
- P2** Review project budget, as required
- P3** Analyze all project elements:
 - seek input for analysis, as required, e.g. finance department, management, engineering
 - identify interdependencies
- P4** Estimate overall timelines and costs
- P5** Divide project into work packages, for example:
 - first level of overall project deliverables
 - second level of project phases to accomplish deliverables
 - third level of tasks to accomplish project phases
 - more levels, as required, depending on size and scope of project
- P6** Assign to each level and/or element of the WBS:
 - identification number
 - description
 - department or person responsible, if applicable
- P7** Develop draft WBS:
 - create visual, e.g. use template(s), sketch draft on whiteboard
- P8** Share draft WBS with other relevant parties, as required, e.g. team members, management, contractors:
 - solicit input, as required
 - facilitate consensus on final WBS, as required
 - seek approval(s), as required
- P9** Finalize WBS:
 - communicate to all relevant parties

Knowledge

- K1** Project management theory, e.g. Project Management Body of Knowledge (PMBOK), ACCE International Body of Knowledge
- K2** Organization policies, procedures and plans, e.g. approval processes
- K3** Organization/project goals, vision and status
- K4** Relevant design documentation

- K5** Project Charter, including scope
- K6** Project Execution Plan
- K7** Project budget
- K8** Available resources
- K9** Project stakeholders
- K10** Roles and responsibilities of project team members
- K11** Details of relevant contracts
- K12** WBS of similar projects, if available
- K13** Typical structure of WBS
- K14** Options for visual representation of WBS, e.g. Excel, drawings, project management software templates
- K15** Organizational document management system

Glossary

- **Work Breakdown Structure (WBS):** a deliverable-oriented hierarchical decomposition of the work to be executed by the project team. The work breakdown structure visually defines the scope into manageable chunks that a project team can understand, as each level of the work breakdown structure provides further definition and detail.
- **Work package:** a group of related tasks within a project.

Contextual Variables

Range of Context

- Number of variables to be considered and identified will vary with size/scope of the project.
- Project Managers may develop the WBS on their own, or may collaborate with several others to develop the WBS, depending on the organizational structure, size and scope of the project.
- WBS may be formal or informal. For instance, it may be developed through group discussion and sticky notes on a wall or a whiteboard, or developed in an electronic project planning template. Ultimately the form needs to be shareable to project team members when finalized.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Project Charter
- Project Execution Plan
- Project budget
- Project management software
- Other software, e.g. Microsoft Word, Excel

Purpose

Developing project management plans provides stakeholders with a clear and detailed description of specific aspects of a project. For any given project, there will be multiple project management plans, which may include, but are not limited to: procurement plan, contract plan, time management plan, resource plan, risk management plan, information/communication plan, environmental protection plan, site preparation plan, safety plan, commissioning plan, compliance monitoring plan and change management plan. These plans set out the direction for the project and are used to measure progress against project deliverable goals.

Performance/Abilities

- P1** Review Project Charter, Project Execution Plan (PEP), and project Work Breakdown Structure (WBS) including scope, as required
- P2** Determine regulatory requirements that may impact project
- P3** Determine which project management plans must be developed, e.g. risk management plan, communication plan, site preparation plan
- P4** Review project budget, as required
- P5** Analyze all project elements for each plan to be developed:
 - seek input for analysis, as required, e.g. finance department, management, engineering
 - identify project risks, as required
 - determine requirements that must be included for each plan, e.g. dust mitigation and run-off controls for environmental protection plan, loss prevention or risk financing for risk management plan
- P6** Evaluate all project elements for each plan:
 - determine priorities and interdependencies
- P7** Document each draft plan:
 - determine structure of plan, including major sections/headings, e.g. scope, definitions, overview:
 - refer to organizational policies and procedures for plan development, if available
 - use templates, as required
 - ensure all aspects are addressed, including identification of:
 - roles and responsibilities
 - decision-making and communication protocols
 - contingency plans
 - develop, or oversee development of, visuals to be included in plan, e.g. tables, graphics, flow-charts
- P8** Coordinate/integrate separate plans, as required
- P9** Share draft project management plans with other relevant parties, as required, e.g. team members, management, contractors:
 - solicit input, as required
 - facilitate consensus on final plans, as required
 - seek approval(s), as required
- P10** Finalize project management plans:
 - communicate to all relevant parties

Knowledge

- K1** Project management theory, e.g. Project Management Body of Knowledge (PMBOK), AACE International Body of Knowledge
- K2** Organization policies, procedures and plans, e.g. Standard Operating Procedures (SOPs) for project planning, approval processes
- K3** Organization/project goals, vision and status
- K4** Relevant design documentation
- K5** Project Charter, including scope
- K6** Project Execution Plan
- K7** Project Work Breakdown Structure (WBS)
- K8** Project budget
- K9** Relevant legislation/regulatory requirements
- K10** Available resources
- K11** Details of relevant contracts, as applicable
- K12** Project stakeholders
- K13** Roles and responsibilities of project team members
- K14** Current events that may impact project execution
- K15** Potential environmental impacts for project to be completed
- K16** Potential risks for project to be completed, e.g. safety, security, interdependencies
- K17** Typical structure of each type of project management plan
- K18** Considerations when developing each type of project management plan, e.g. what is exposed to risk for risk management plan, who needs what information and how it will be provided for communication plan, site-specific risks for safety plan, contractual specifications for quality plan
- K19** Organizational document management system

Glossary

- **Project Charter:** document issued by the project initiator or sponsor that formally authorizes the existence of a project, and provides the project manager with the authority to apply organizational resources to project activities
- **Project Execution Plan (PEP):** the governing document that establishes the means to execute, monitor, and control projects. The plan can serve as the main communication vehicle to ensure that everyone is aware and knowledgeable of project objectives and how they will be accomplished.
- **Work Breakdown Structure (WBS):** a deliverable-oriented hierarchical decomposition of the work to be executed by the project team. The work breakdown structure visually defines the scope into manageable chunks that a project team can understand, as each level of the work breakdown structure provides further definition and detail.

Contextual Variables

Range of Context

- Number of project elements to be considered and identified will vary with size/scope of the project.
- Project Managers may develop the project management plans on their own, may collaborate with several others to develop the plans, or may delegate this activity to others, depending on the organizational structure, size and scope of the project.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Project planning templates
- Organizational checklists for plan development, as required
- Project Charter
- Project Execution Plan
- Project WBS
- Project budget
- Project management software
- Other software, e.g. Microsoft Word, Excel

Major Category

Project Management

Competency Area

Plan Projects

Competency Unit

Develop project schedule

Purpose

Developing the project schedule helps to ensure that activities are completed on time, and that all stakeholders are aware of their roles and responsibilities. This skill is critical for managing processes and people.

Performance/Abilities

- P1** Determine all activities needed to complete the project
- P2** Create logical relationship between activities, i.e. use project management software
- P3** Review previous projects' outcomes and "lessons learned," as applicable
- P4** Estimate time required to complete each activity
- P5** Estimate effort required to complete each activity
- P6** Assign resources to activities:
 - define resources needed, e.g. internal human resources, contractors, material supplies, equipment
 - consider availability of each required resource
 - consider constraints and restraints, e.g. weather, site availability
- P7** Review project budget, as necessary
- P8** Document project schedule, e.g. use project management software
- P9** Circulate project schedule to other relevant parties, as required, e.g. team members, management, contractors:
 - facilitate consensus on schedule, as required
- P10** Finalize project schedule:
 - communicate to all relevant parties

Knowledge

- K1** Project management theory, e.g. Project Management Body of Knowledge
- K2** Organization policies, procedures and plans
- K3** Organization/project goals, vision and status
- K4** Organizational document management system
- K5** Skills and abilities of project personnel
- K6** Project budget
- K7** Details of relevant contracts, as applicable
- K8** Means and methods of project management/execution
- K9** Contract strategy, e.g. internal versus external as required
- K10** Procurement strategy, as required

Glossary

- **Lessons learned:** learning gained from the process of performing the project. Formally conducted lessons learned sessions are traditionally held during project close-out, near the completion of the project. However, lessons learned may be identified and documented at any point during the project's life cycle.

Contextual Variables

Range of Context

- Number and types of project resources will vary with size/scope of the project.
- Project manager may not be responsible for estimating, e.g. estimating effort/time, but will coordinate others' work in this area or ensure this activity is completed.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- | | |
|---|--|
| <input type="checkbox"/> Recall, Remember | <input type="checkbox"/> Analyze |
| <input type="checkbox"/> Understand | <input type="checkbox"/> Evaluate |
| <input type="checkbox"/> Apply | <input checked="" type="checkbox"/> Create/Transform |

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Project management software, e.g. Primavera P6, Microsoft Project

Major Category

Project Management

Competency Area

Execute Projects

Competency Unit

Oversee procurement of contractors, service providers and suppliers

Purpose

Overseeing the procurement of contractors, service providers and suppliers correctly ensures that due process is followed and that the project will remain within budget and on schedule.

Performance/Abilities

- P1** Determine need for contractors, services providers and suppliers, e.g. access project execution plan, review project schedule
- P2** Track the procurement process, e.g. enter in project management software
- P3** Coordinate relevant parties (e.g. engineering, project controls department, regulatory) to document required criteria for contractors, service providers and suppliers, as required, e.g. specifications
- P4** Review requests for contractors, service providers and suppliers (e.g. Request for Quotation (RFQ), Request for Proposal (RFP), Request for Tender (RFT)), as necessary:
 - ensure relevant information is included, e.g. delivery dates
- P5** Ensure requests are reviewed by other relevant parties before they are released, e.g. engineering, project controls department, regulatory
- P6** Ensure requests are released, if applicable
- P7** Review submissions from potential contractors, service providers and suppliers, as required:
 - compare to established criteria, e.g. level of expertise, cost
- P8** Follow established selection procedures, as required
- P9** Negotiate on price, availability, schedule and customization with preferred contractors, service providers and suppliers, as applicable
- P10** Finalize details of agreement
- P11** Oversee contracting of contractors, service providers and suppliers:
 - access legal advice, as required

Knowledge

- K1** Project management theory, e.g. Project Management Body of Knowledge
- K2** Organization policies, procedures and plans
- K3** Organization/project goals, vision and status
- K4** Organizational document management system, e.g. templates for contractor and supplier requests, contracts
- K5** Project budget
- K6** Project schedule
- K7** Details of relevant contracts
- K8** Relevant parties that should be included in the procurement process

Contextual Variables

Range of Context

- Number and types of contractors, service providers and suppliers will vary with size/scope of the project, e.g. environmental assessment, electrical components and systems.
- Complexity of negotiations will vary.
- Some organizations will have internal legal advice available, whereas others will contact external legal professionals.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- | | |
|---|--|
| <input type="checkbox"/> Recall, Remember | <input type="checkbox"/> Analyze |
| <input type="checkbox"/> Understand | <input checked="" type="checkbox"/> Evaluate |
| <input type="checkbox"/> Apply | <input type="checkbox"/> Create/Transform |

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Project management software
- Other software, e.g. Excel

Major Category

Project Management

Competency Area

Execute Projects

Competency Unit

Monitor project activities

Purpose

Monitoring project activities is critical to the execution of a successful project. By identifying potential issues before they become problems, project managers ensure that activities are completed according to schedule and on budget. When done correctly, this task can help to identify when change is needed, what it entails, and how to implement the change so that there is minimum impact on the project's progress.

Performance/Abilities

- P1** Communicate with all stakeholders at regular intervals:
 - ask what can be done to better support work being completed
 - identify concerns and issues
 - address concerns and issues as they appear
- P2** Conduct site visits and inspections frequently:
 - verify progress
- P3** Coordinate site visits/audits with regulatory agencies
- P4** Implement risk management strategies, as necessary
- P5** Ensure project plans are being executed, including:
 - Safety Management Plan
 - Quality Management Plan
 - Risk Management Plan
 - Communication Plan
 - Stakeholder Management Plan
 - Project Controls Management Plan
 - Site Preparation Plan
- P6** Compare progress using key performance indicators (KPI), including:
 - schedule, i.e. analyze critical path and milestones
 - budget
 - safety
 - quality
- P7** Reforecast project schedule, budget, resources utilization, as required
- P8** Reforecast potential risks and opportunities, as required
- P9** Manage project change
- P10** Assess need for adjustments to project plan:
 - document changes and reasons for them, e.g. review change order
 - receive approval for project adjustments, as necessary
- P11** Communicate project plan adjustments to relevant stakeholders, as necessary:
 - reassign activities, as needed
 - explain reasons for changes
 - monitor implementation of adjustments
- P12** Conduct regular progress review meetings:
 - present information about project progress and challenges
 - facilitate discussion, e.g. potential issues, potential solutions, improvements

P13 Ensure ongoing project evaluation/“lessons learned” is completed:

- communicate results, including best practices, to project team

P14 Follow up on discussions/recommendations made by stakeholders:

- inform stakeholders of what has become of recommendation

P15 Create project documentation, as necessary, for example:

- status report
- budget report

P16 Circulate project documentation to appropriate stakeholders, e.g. director, service provider:

- file according to organizational/project protocol

Knowledge

K1 Project management theory, e.g. Project Management Body of Knowledge, Earned Value Management

K2 Organization policies, procedures and plans

K3 Organization/project goals, vision and status

K4 Organizational document management system

K5 Skills and abilities of project personnel

K6 Project Charter

K7 Project management plans

K8 Project schedule(s)

K9 Project budget

K10 Contract administration, as required

K11 Details of relevant contracts

K12 Progress basis, i.e. rules of credit

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Project management software, e.g. Microsoft Project, Primavera P6
- Enterprise management system, e.g. SAP, JD Edwards
- Other software, e.g. Excel

Glossary

- **Lessons learned:** learning gained from the process of performing the project. Formally conducted lessons learned sessions are traditionally held during project close-out, near the completion of the project. However, lessons learned may be identified and documented at any point during the project’s life cycle.

Contextual Variables

Range of Context

- Size and scope of project will affect the complexity of this competency unit.
- Number of stakeholders to be managed will vary by project.
- Tools and metrics used will vary depending on size/complexity of project.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom’s Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

Purpose

Managing project changes and disruptions efficiently and effectively helps to minimize the impact on the project's outcomes, and ensures that all stakeholders, including clients, will be satisfied with the deliverables. Substantive change can require large changes to budget, schedule and the associated project documentation and implementation, including the project charter and site plan, and may require the involvement of other authorities and agencies for an adjustment to permits.

Performance/Abilities

- P1** Identify reason for change or disruption
- P2** Estimate impacts on project, including:
- cost
 - schedule
 - resource requirements
 - labour
 - material costs
 - equipment required
 - indirect costs
 - quality
 - profit, if applicable
- P3** Consult internal or external expertise, as needed, e.g. legal, technical, political
- P4** Negotiate with internal and external parties, as necessary, e.g. subcontractor, team members:
- communicate what is flexible and what is not
 - provide rationale for priorities
- P5** Assess need for adjustments to project plans
- P6** Document changes and reasons for them, for example:
- describe potential impacts of changes
 - receive approval for project changes, as necessary
- P7** Communicate project plan adjustments and their impacts to relevant stakeholders, as necessary:
- reassign activities, as needed
 - explain reasons for changes
 - monitor implementation of adjustments
- P8** Revise project documentation, as necessary, for example:
- Project Charter
 - status report
 - budget report
 - project schedule
- P9** Circulate revised project documentation to appropriate stakeholders:
- file according to organizational/project protocol

Knowledge

- K1** Project management theory, e.g. Project Management Body of Knowledge, Earned Value Management
- K2** Organization policies, procedures and plans, e.g. authority/approval structure and requirements
- K3** Organization/project goals, vision and status
- K4** Organizational document management system
- K5** Project Charter
- K6** Project plans
- K7** Project schedule
- K8** Project budget
- K9** Details of relevant contracts
- K10** Resource, material availability, e.g. influences of global market
- K11** Quality standards, e.g. required specifications
- K12** Potential disruptions to projects, e.g. commercial dispute, labour dispute, public protest

Contextual Variables

Range of Context

- Who initiates the change will vary (e.g. client, department, contractor), and this will impact how this skill is performed.
- Who or what is impacted by the change will vary.
- Amount of analysis and effort required in managing change varies by the size and complexity of the project.
- Number and type of stakeholders to be included in change requests will vary by project.
- The type and nature of a project disruption may be complex and require the involvement of multiple parties and expertise.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Project management software, e.g. Microsoft Project, Primavera P6
- Enterprise management system, e.g. SAP, JD Edwards
- Other software, e.g. Excel

Major Category

Project Management

Competency Area

Close Projects

Competency Unit

Complete project close-out

Purpose

Completing project close-out correctly ensures that all parts of the project are successfully concluded for all stakeholders. It also ensures that project information will be available for future enquiries.

Performance/Abilities

- P1** Complete project report
- P2** Verify site remediation is complete, as required
- P3** Verify performance tests are completed
- P4** Handover deliverables to client:
 - conduct final evaluation with client
 - provide client with required documentation, e.g. as-builts, maintenance manuals, commissioning reports
- P5** Ensure all documentation is signed-off, e.g. substantial completion certificate, commissioning certificate
- P6** Ensure invoices are submitted
- P7** Ensure financial activities are completed:
 - ensure accounts are closed out
 - ensure accounts payable are paid
 - reconcile accounts
 - place asset in service
- P8** Ensure contracts are closed
- P9** Conduct performance reviews for direct reports, if applicable
- P10** Disband project team:
 - communicate project close-out
 - recognize success
- P11** Archive project materials, including:
 - Project Charter
 - schedules
 - status reports
 - audit reports
- P12** Celebrate success

Knowledge

- K1** Project management theory, e.g. Project Management Body of Knowledge
- K2** Regulatory requirements for closing projects, as required, e.g. posting in public registry
- K3** Organization policies, procedures and plans, e.g. process of closing project
- K4** Organizational document management system
- K5** Project Charter
- K6** Project schedule
- K7** Project budget
- K8** Details of relevant contracts

Contextual Variables

Range of Context

- Type and size of project will affect complexity of this competency unit.
- Jurisdictional requirements for closing projects vary, e.g. by province.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Project management software, e.g. Microsoft Project, Primavera P6
- Enterprise management system, e.g. SAP, JD Edwards
- Other software, e.g. Excel

Major Category	Project Management
Competency Area	Close Projects
Competency Unit	Evaluate finished projects

Purpose

Evaluating finished projects emphasizes the learning and achievements acquired during the project, and identifies areas for future improvement. If this task is not completed, there is a risk of repeating similar mistakes in future projects or failing to sustain improvements. This is often referred to in the sector as “lessons learned.”

Performance/Abilities

- P1** Schedule evaluation directly after project completion
- P2** Establish positive and learning-focused environment for the evaluation, i.e. do not focus on mistakes or blame
- P3** Determine most effective method(s) of gathering feedback, e.g. in-person meeting, survey, email
- P4** Create agenda for in-person meeting, if applicable, including:
 - purpose of evaluation
 - recap of project and outcomes
 - time for comments and questions
- P5** Conduct in-person meeting:
 - encourage questions and comments
 - collect recommendations for improvement
 - end with focus on positive
- P6** Develop evaluation report:
 - include list of action items to be improved for future projects
- P7** Communicate evaluation report to relevant parties, e.g. manager, contractor, employees

Knowledge

- K1** Project management theory, e.g. Project Management Body of Knowledge (PMBOK)
- K2** Organization policies, procedures and plans, e.g. process of closing project
- K3** Organization/project goals, vision and status
- K4** Organizational document management system
- K5** Project charter
- K6** Other relevant project documentation, e.g. status reports, audit reports

Glossary

- **Lessons learned:** learning gained from the process of performing the project. Formally conducted lessons learned sessions are traditionally held during project close-out, near the completion of the project. However, lessons learned may be identified and documented at any point during the project’s life cycle.

Contextual Variables

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom’s Taxonomy

- | | |
|---|--|
| <input type="checkbox"/> Recall, Remember | <input type="checkbox"/> Analyze |
| <input type="checkbox"/> Understand | <input checked="" type="checkbox"/> Evaluate |
| <input type="checkbox"/> Apply | <input type="checkbox"/> Create/Transform |

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Software, e.g. Excel, Microsoft Word

Major Category

Finance

Competency Area

Control Finances

Competency Unit

Develop budget

Purpose

Developing an accurate and realistic budget is important to define and achieve financial goals. A budget is a tool for the ongoing evaluation of the financial health of a project or organization and provides a mechanism (e.g. review meetings) to respond to ongoing changes in a project or organization.

Performance/Abilities

- P1** Gather information as required, for example:
 - seek input from relevant individuals, e.g. project team, stakeholders
- P2** Review estimates provided during project initiation, if applicable
- P3** Review previous budgets:
 - compare actual to projected costs
- P4** Establish budget format:
 - create master budget for fiscal year or project term
 - determine budget categories
 - incorporate critical factors, e.g. inventory, turnover, labour performance, regulatory commitments
- P5** Determine detailed costs, including:
 - labour
 - material
 - operating, including equipment rental/leasing
 - travel
- P6** Estimate income and sales, as required
- P7** Incorporate contingencies:
 - assess probability of exceeding costs
 - determine contingency reserve
- P8** Break down revenue and expenditures into weekly or monthly budgets
- P9** Prepare budget statements
- P10** Establish budget control guidelines
- P11** Submit budget for approval, as necessary:
 - obtain funding approval
 - revise budget based on feedback
- P12** Schedule regular budget reviews

Knowledge

- K1** Relevant legislation
- K2** Regulatory reporting requirements
- K3** Budget formats
- K4** Estimating norms
- K5** Previous similar budgets and their outcomes
- K6** Costs relevant to project/organization
- K7** Revenue streams/income relevant to project or organization
- K8** Potential issues within project or organization that require contingency planning

Contextual Variables

Range of Context

- Complexity of costs, income/revenue and contingencies to be accounted for will depend upon the type of work or project, the scale of the work or project, the length of the work or project, and the location of the work.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Computer software, e.g. estimating and cost control tools

Major Category	Finance
Competency Area	Control Finances
Competency Unit	Control budget performance

Purpose

Controlling a budget's performance is critical to achieving financial goals. A budget is a tool for the ongoing evaluation of the financial health of a project or organization and provides a mechanism to respond to ongoing changes in a project or organization.

Performance/Abilities

- P1** Adhere to budget control guidelines
- P2** Monitor revenues and expenses within established time frames
- P3** Identify variances between budgeted and actual figures:
 - track changes to scope
 - determine cause
 - apply contingency plans, as necessary
- P4** Revise budget and activities, as required:
 - adjust estimates or forecasting
 - adjust project costs for change requests
 - delete risks from budget as they are avoided
 - re-allocate funds, as necessary
- P5** Develop regular budget statements, as necessary:
 - communicate budget performance to sponsor and stakeholders:
 - provide current financial reports
 - explain changes to scope and schedule
 - apply for further funding approval, if required

Knowledge

- K1** Regulatory requirements and commitments
- K2** Budget formats
- K3** Budget control guidelines
- K4** Financial reports (e.g. cost report) and how to interpret them
- K5** Implication of change requests and unexpected events on budget performance
- K6** Costs relevant to project or organization
- K7** Revenue streams or income relevant to project or organization
- K8** Change management procedures

Contextual Variables

Range of Context

- Complexity of costs, income/revenue and contingencies to be accounted for will depend upon the type of work or project, the scale of the work or project, the length of the work or project, and the location of the work.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Computer software

Major Category	Human Resources
Competency Area	Monitor Employee Performance
Competency Unit	Maintain positive work environment

Purpose

Organizations/projects with positive work environments experience lower rates of absenteeism and turnover. Employees in positive work environments are more engaged, experience lower stress, and perform better overall.

Performance/Abilities

- P1** Recognize achievements:
 - encourage team members to express recognition and gratitude, e.g. nominate for award programs
- P2** Respect all ideas and feedback
- P3** Ensure guidelines and rules are applied consistently to all team members
- P4** Promote employee wellness, e.g. describe available organizational programs, encourage breaks
- P5** Provide opportunities for autonomy, when possible:
 - communicate levels and limits of decision-making authority to employees
- P6** Encourage positivity:
 - lead by example, e.g. display optimism
- P7** Create sense of purpose by communicating with employees regularly, including:
 - performance expectations
 - organization/project goals
 - organization/project goals, vision and status
- P8** Foster diversity and inclusion, e.g. be open to different perspectives
- P9** Treat setbacks as opportunities to reflect, analyze and re-evaluate as a team:
 - create action plans to prevent reoccurrence

Knowledge

- K1** Organization policies, procedures and plans, e.g. wellness initiative
- K2** Methods of recognition
- K3** Workplan and skills needed to complete it
- K4** Organization/project goals, vision and status
- K5** Methods of stress management

Contextual Variables

Range of Context

- Available employee programs that can be accessed will vary, e.g. recognition programs, wellness programs.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

Major Category	Human Resources
Competency Area	Monitor Employee Performance
Competency Unit	Motivate employees

Purpose

Organizations/projects with motivated employees experience higher rates of employee loyalty and morale, and lower rates of absenteeism and turnover. Motivated employees are more engaged, experience lower stress, pursue their own professional development, and perform a higher quality of work. They are also more likely to be prepared for the present and future needs of the organization/project.

Performance/Abilities

- P1** Assess what motivates each employee, e.g. time off, recognition, compensation, challenging tasks
- P2** Ensure employees understand performance expectations
- P3** Provide employees with tools and training needed to perform tasks
- P4** Assess employee's strengths and weaknesses
- P5** Delegate tasks effectively, e.g. ensure skill and interest match assignment:
 - give ownership of tasks to employees
- P6** Use positive reinforcement to recognize team and individual achievements
- P7** Collaborate with employee to identify his/her career goals and continuous learning path, e.g. ensure certifications and licenses are updated, identify relevant manufacturer's training:
 - provide challenges or development opportunities
- P8** Encourage:
 - sharing of knowledge, e.g. on-site mentoring
 - suggestions to improve, develop and diversify
 - ongoing training and learning
 - opportunities for personal growth
 - social activities
- P9** Be receptive to employee input:
 - follow up on input, e.g. communicate what resulted from feedback
 - give credit to those who provided input
- P10** Monitor morale levels:
 - identify symptoms of low morale
 - seek feedback from employees
- P11** Provide constructive feedback, when appropriate

Knowledge

- K1** Organization/project goals, vision and status
- K2** Organization policies, procedures and plans
- K3** Workplan and skills needed to complete it
- K4** Available continuous learning resources, e.g. training programs
- K5** Specific motivators of individual employees, e.g. time, recognition, compensation
- K6** Methods of recognition
- K7** Signs of low morale, e.g. absenteeism, turnover, poor performance or quality of work, increase in incidents

Contextual Variables

Range of Context

- Number of employees on the team may vary.
- Employees may be permanent and long-term or contract, which will affect approach to career growth and continuous learning plans.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

Major Category

Human Resources

Competency Area

Monitor Employee Performance

Competency Unit

Build teams

Purpose

Effective teams build successful projects and organizations. High-performing teams have better communication, increased trust, and are more efficient and productive. This results in a project/organization with motivated employees that produce more innovative approaches and provide better service to internal and external customers.

Performance/Abilities

- P1** Assess each employee's strengths and limitations:
 - consider attitudes and skills
- P2** Assign employees with complementary skills to same project or task
- P3** Establish team objectives
- P4** Establish ground rules for the team, i.e. norms of behaviour
- P5** Encourage collaboration among team members, e.g. ask questions, seek input
- P6** Facilitate communication:
 - be open to suggestions and concerns
 - address confusion by clarifying message and intent
- P7** Monitor progress of team:
- P8** Identify signs of difficulty within group dynamic
 - employees withholding information
 - inattentiveness at meetings
 - low productivity
 - high negativity, e.g. negative body language
 - tense environment
- P9** Delegate problem-solving tasks to team members as much as possible, e.g. encourage ownership
- P10** Address difficulties as they arise:
 - determine root cause
 - mediate and resolve minor disputes
 - emphasize collective goals of team
- P11** Seek consensus among team members, as necessary, e.g. hold meeting to agree on solution to issue

Knowledge

- K1** Organization/project goals, vision and status
- K2** Organization policies, procedures and plans
- K3** Workplan and skills needed to complete it
- K4** Specific strengths and limitations of individual employees
- K5** Signs of poor group dynamics, e.g. absenteeism, turnover, poor performance or quality of work, increase in incidents

Contextual Variables

Range of Context

- Number of employees on the team and number of teams will vary.
- Reasons for forming teams, and duration of teams working together will vary.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

Major Category

Human Resources

Competency Area

Monitor Employee Performance

Competency Unit

Schedule employees

Purpose

Scheduling employees appropriately ensures that a team's level of performance is maintained, and that team objectives are reached within the required timeframe. Effective schedules help to keep costs in line with budget guidelines and reduce instances of under- or over-staffing.

Performance/Abilities

- P1** Communicate policies and procedures about scheduling to employees, e.g. time off, collective agreement
- P2** Determine scheduling requirements, e.g. specific tasks and skills required, employee requests
- P3** Draft schedule:
 - balance schedule, e.g. overtime load
 - consider work/life balance for employees, e.g. shift work
- P4** Review schedule to ensure that all shifts/positions/requirements are covered:
 - ensure schedule meets budget guidelines
- P5** Finalize schedule:
 - seek input and approvals, as required
- P6** Communicate schedule to employees, e.g. email notice of new schedule
- P7** Revise schedule, as required
- P8** Notify employees of changes made after original schedule was communicated

Knowledge

- K1** Organization/project goals, vision and status
- K2** Organization policies, procedures and plans, e.g. HR policies
- K3** Workplan and skills needed to complete it
- K4** Specific strengths and limitations of individual employees
- K5** Collective agreements
- K6** Employee requests and preferences

Contextual Variables

Range of Context

- Employee issues, such as personal emergencies and illness, can affect the complexity of this competency.
- Organizations with flexible work options may require specific documentation related to scheduling.
- Unionized environments will have collective agreements that will affect the performance of this competency.
- Budget limitations and an insufficient number of employees can make this competency challenging to perform.
- Work/life balance and flexibility expectations vary among employees.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Software, e.g. In Time

Major Category

Human Resources

Competency Area

Monitor Employee Performance

Competency Unit

Conduct performance review

Purpose

Conducting a performance review provides an opportunity for open communication and helps to ensure that employee performance aligns with project/organizational goals. They provide the opportunity to discuss the expectations of the project/organization and the employee, as well as any systemic barriers that may affect the achievement of those expectations. These discussions help to improve work processes, employee skills, and the overall performance of the project/organization. In addition to mandated annual performance reviews, many organizations hold more regular informal sessions to provide feedback and to invite questions, feedback and discussion.

Performance/Abilities

- P1** Prepare for performance review:
 - use standard format and established criteria, e.g. prepare notes
 - seek input from employee's co-workers, if appropriate
 - schedule time and place for performance feedback session with employee
- P2** Greet employee:
 - put employee at ease
- P3** Ask employee for written or verbal self-evaluation
- P4** Compare performance to established criteria
- P5** Provide feedback on skills, knowledge and attitudes
- P6** Discuss areas for improvement:
 - ask employee for input
- P7** Reach agreement on future short- and long-term goals, e.g. education/training
- P8** Invite feedback on policies and procedures that affect performance:
 - ask how you and the project/organization can better support the employee, if appropriate
- P9** Follow up after performance review:
 - document performance feedback and communicate/file document according to policy
 - monitor progress towards goals

Knowledge

- K1** Collective agreement
- K2** Relevant legislation, e.g. labour
- K3** Organization/project goals, vision and status
- K4** Organization policies, procedures and plans
- K5** Employee's goals
- K6** Workplan and skills needed to complete it
- K7** Relevant job descriptions
- K8** Specific strengths and limitations of individual employees

Contextual Variables

Range of Context

- Unionized environments will have collective agreements that may affect the performance of this competency.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- | | |
|---|--|
| <input type="checkbox"/> Recall, Remember | <input type="checkbox"/> Analyze |
| <input type="checkbox"/> Understand | <input checked="" type="checkbox"/> Evaluate |
| <input type="checkbox"/> Apply | <input type="checkbox"/> Create/Transform |

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Software, e.g. Microsoft Word, Success Factors
- Paper-based or electronic performance feedback forms provided by the organization

Major Category

Human Resources

Competency Area

Monitor Employee Performance

Competency Unit

Address employee performance issues

Purpose

Addressing performance issues is important to improve the working environment for all employees. Addressing issues early can help to avoid more complex problems in the longer term and can also support or improve productivity. When performed correctly, this activity is an opportunity for learning for supervisors/managers, employees and the project/organization as a whole.

Performance/Abilities

- P1** Determine the source of the issue, for example:
 - lack of training
 - behavioural deficiency
 - interpersonal difficulties
 - workload
 - personal issues
- P2** Assess the impact of the issues on other team members
- P3** Apply procedures dictated by legislation, organization's policies and collective agreement:
 - access documentation, as required, e.g. previous performance review
- P4** Discuss issue with employee privately:
 - have witness present, if necessary
 - ask if employee is aware of issue
- P5** Focus on issue and behaviour, not personality
- P6** Collaborate on ways to solve issue:
 - refer employee to resources, if applicable, e.g. counselling service, training provider
- P7** Work with employee to set a mitigation plan:
 - set time frame for improvement
 - obtain signature of employee on documentation, as required
- P8** Monitor employee's performance to ensure issue is resolved:
 - recognize progress
- P9** Document details, as required
- P10** Follow up, as necessary, e.g. escalate to manager or HR Department

Knowledge

- K1** Importance of confidentiality for sensitive issues
- K2** Relevant legislation, e.g. protection of privacy
- K3** Collective agreement, if applicable
- K4** Organization/project goals, vision and status
- K5** Organization policies, procedures and plans
- K6** Workplan and skills needed to complete it
- K7** Specific strengths and limitations of individual employees
- K8** Documentation requirements for performance issues
- K9** Situations that require due diligence, i.e. duty to report, including substance abuse, potential for harm to self or others

Contextual Variables

Range of Context

- Unionized environments will have collective agreements that may affect the performance of this competency.
- Some issues require due diligence, i.e. duty to report, and will be escalated immediately, e.g. issues related to physical/mental harm, substance abuse.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- | | |
|---|--|
| <input type="checkbox"/> Recall, Remember | <input type="checkbox"/> Analyze |
| <input type="checkbox"/> Understand | <input checked="" type="checkbox"/> Evaluate |
| <input type="checkbox"/> Apply | <input type="checkbox"/> Create/Transform |

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Collective agreement
- Organizational policies
- Software, e.g. Microsoft Word
- Paper-based or electronic forms provided by the organization

Major Category

Human Resources

Competency Area

Monitor Employee Performance

Competency Unit

Build an inclusive work environment

Purpose

Building an inclusive work environment enhances the flexibility and creativity of the team, which are key to meeting performance goals and building competitiveness. Diverse work teams have been proven to produce better solutions to problems, while ignoring inclusion costs time, money and efficiency.

Performance/Abilities

- P1** Be aware of biases, i.e. own and others'
- P2** Demonstrate respect, curiosity and empathy towards differences
- P3** Build own intercultural cultural competence:
 - pursue learning of own and others' culture
- P4** Pursue learning relating to diversity, e.g. challenges of gender, needs of single parents
- P5** Assess current policies and systems and their potential impact on different groups:
 - identify changes that can be made to improve policies and systems
- P6** Welcome all new employees onto teams
- P7** Mentor/coach new employees to assist their integration into work teams, as needed:
 - be open to feedback and new perspectives
- P8** Hold open conversations:
 - explain why things are happening, e.g. if one individual is getting more coaching explain that they are receiving assistance with language issues
- P9** Encourage all team members' cultural learning
- P10** Integrate diverse perspectives into work planning and processes

Knowledge

- K1** Legislation, e.g. Charter of Rights and Freedoms
- K2** Organization/project goals, vision and status
- K3** Organization policies, procedures and plans
- K4** Different perspectives and how they affect the workplace, e.g. culture, age, gender identification
- K5** Biases and impact on the workplace
- K6** Diversity/diverse groups, including benefits of diversity to the workplace
- K7** Distinction between diversity and inclusion
- K8** Signs of low morale, e.g. absenteeism, turnover, poor performance

Glossary

- **Diversity:** a recognition of individual differences, including dimensions of: race, ethnicity, gender, sexual orientation, socio-economic status, age, physical abilities, religious beliefs, political beliefs, or other ideologies.
- **Inclusion:** the action or state of including or of being included within a group or structure.
- **Intercultural competence:** the ability to act appropriately and effectively in situations that involve two or more cultures.

Contextual Variables

Range of Context

- Background and cultural perspectives of individual employees on the team will vary.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

Major Category

Human Resources

Competency Area

Supervise Employees in a Union Environment

Competency Unit

Comply with collective agreement

Purpose

A collective agreement sets out the requirements for the working environment between management and employees. To meet project/organizational goals, it requires the cooperation of both workers and management. The collective bargaining process, and the resulting collective agreement, provide the basis for a common understanding and cooperation. Once the collective agreement is in place, it must be complied with to maintain a positive work environment for all involved. There are legal consequences for the project/organization if these requirements are not honoured.

Performance/Abilities

- P1** Identify all relevant aspects of collective agreement(s), e.g. duties, seniority
- P2** Apply collective agreement(s) consistently to all activities, e.g. scheduling
- P3** Investigate employee concerns and issues according to terms of collective agreement(s), as required
- P4** Build good working relationship with union representatives

Knowledge

- K1** Relevant Collective Agreement(s) and their requirements
- K2** Relevant Letters of Understanding
- K3** Relevant individuals (e.g. Labour Management Committee (LMC) representatives, union representative)
- K4** Organization/project goals, vision and status
- K5** Organization policies, procedures and plans

Glossary

- Collective agreement:** A collective agreement is a written contract between the employer and a union that outlines many of the terms and conditions of employment for employees in a bargaining unit. The terms and conditions are reached through collective bargaining between the employer and the union. The kinds of terms and conditions covered by a collective agreement typically include wages and benefits, as well as terms and conditions of employment that relate to e.g., job postings; obligations and responsibilities of the employer, the employee and the union; and a dispute resolution process (usually a grievance and arbitration procedure).

Contextual Variables

Range of Context

- Employees may be permanent and long-term or contract, which may change how the collective agreement applies.
- An organization or project may have multiple collective agreements in place that must be honoured.
- Size of the project or organization may affect whether the project manager is involved with collective agreement.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Collective agreement(s)

Major Category

Human Resources

Competency Area

Supervise Employees in a Union Environment

Competency Unit

Respond to grievances

Purpose

The grievance process outlined in the collective agreement details the process to be followed in the event that an individual or a group has an issue related to fair treatment on the job, or if there is a policy situation that is potentially unfair. The grievance process outlined in the collective agreement must be followed by all parties to ensure that the issue is addressed in a way that is unbiased, equitable, and meets legal requirements.

Performance/Abilities

- P1** Determine type of grievance, i.e. individual, group or policy
- P2** Determine reason for grievance, e.g. review documentation from union representative
- P3** Apply grievance procedures outlined in collective agreement, e.g. follow progressive steps as outlined
- P4** Collect additional information, as necessary, e.g. interview team members
- P5** Meet with employee(s) and union representative to discuss grievance, as required
- P6** Collaborate with all parties to determine solution:
 - access legal advice, as required
- P7** Document process and outcomes, as required

Knowledge

- K1** Collective agreement(s) and their requirements
- K2** Organization/project goals, vision and status
- K3** Organization policies, procedures and plans
- K4** Organizational support for grievance process

Glossary

- **Collective agreement:** A collective agreement is a written contract between the employer and a union that outlines many of the terms and conditions of employment for employees in a bargaining unit. The terms and conditions are reached through collective bargaining between the employer and the union. The kinds of terms and conditions covered by a collective agreement typically include wages and benefits, as well as terms and conditions of employment that relate to e.g., job postings; obligations and responsibilities of the employer, the employee and the union; and a dispute resolution process (usually a grievance and arbitration procedure).

Contextual Variables

Range of Context

- Employees may be permanent and long-term or contract, which may change how the collective agreement applies.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Collective agreement(s)
- Grievance forms

Major Category

Human Resources

Competency Area

Supervise Employees in a Union Environment

Competency Unit

Maintain positive relationship with the union

Purpose

Maintaining a positive working relationship with the union creates a productive working environment for both management and employees. To meet project/organizational goals, it requires the cooperation of both workers and management. Once a collective agreement is in place, it must be complied with to maintain a positive work environment for all involved. There are legal consequences for the project/organization if these requirements are not honoured.

Performance/Abilities

- P1** Apply collective agreement consistently
- P2** Maintain open communication between all parties, including union representative, employees and management:
 - hold open discussions regarding requirements of collective agreement
 - discuss improvements that can be made
- P3** Demonstrate respect:
 - acknowledge union has legitimate and valued purpose
- P4** Fulfil obligations to others, e.g. attend committee meetings, be punctual
- P5** Follow established procedures when agreement cannot be reached

Knowledge

- K1** Collective agreement(s) and their requirements
- K2** Organization/project goals, vision and status
- K3** Organization policies, procedures and plans
- K4** Role and responsibilities of union representatives

Glossary

- **Collective agreement:** A collective agreement is a written contract between the employer and a union that outlines many of the terms and conditions of employment for employees in a bargaining unit. The terms and conditions are reached through collective bargaining between the employer and the union. The kinds of terms and conditions covered by a collective agreement typically include wages and benefits, as well as terms and conditions of employment that relate to e.g., job postings; obligations and responsibilities of the employer, the employee and the union; and a dispute resolution process (usually a grievance and arbitration procedure).

Contextual Variables

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Collective agreement(s)

Major Category

Information and Communication Technology Foundations

Competency Area

Use Digital Technology

Competency Unit

Use communication applications

Purpose

Communication applications allow efficiencies when sending and receiving messages. This includes combinations of visual and audio communication and document sharing over distance which in turn allow for virtual meetings, educational webinars, and other communication formats that can save time and money.

Performance/Abilities

- P1** Open desired communication application on system, online, or on cell phone e.g. email, text messaging
- P2** Verify message before sending
- P3** Select communication recipients:
- verify who will receive message, e.g. only include relevant parties
- P4** Use email:
- follow email etiquette, e.g. do not use all uppercase, keep message professional in tone
 - include purpose of message in subject line
 - create concise and clear message
 - add attachments following email application protocols, e.g. drop and click, select file using paperclip icon:
 - follow application instructions to make attachment smaller or use alternative document sharing applications if attachment is too large
 - close message with appropriate salutation and sign-off, e.g. organization logo and contact information
 - proofread message before sending
 - manage mailboxes:
 - use settings to designate type of mail, if appropriate, e.g. check junk mail regularly, check auto rules to ensure up to date and correct
 - delete messages in trash and junk mail periodically
- P5** Use text messaging:
- keep messages brief
 - do not use texting abbreviations, e.g. lol, btw
 - do not use emojis and animated images, e.g. GIFs
- P6** Use conferencing applications authorized by organization:
- ensure appropriate documents are open and screen background is appropriate when screen sharing
 - ensure quiet environment when using audio
 - mute microphone when not speaking
 - consider lag time when speaking and sharing documents
 - announce name when entering conference and before speaking, if appropriate

Knowledge

- K1** Organization's policies and procedures, e.g. cybersecurity, logging into applications
- K2** Application functions and icons, e.g. trash can, flags, reply
- K3** Purpose of communication
- K4** Audience
- K5** Writing protocols for email and text messages
- K6** Communication considerations, e.g. background noise, time lag, pitch of voice

Glossary

- **Cybersecurity:** the practice of protecting systems, networks, and programs from digital attacks that interrupt normal business operations. Digital or cyberattacks try to:
 - access confidential and/or sensitive information to use for illegal purposes, e.g. identity theft;
 - destroy or change confidential and/or sensitive information to disrupt business operations; or,
 - extort money from users by holding their systems hostage until some form of payment is received.
- **Emoji:** a small digital icon used to express a feeling or idea.
- **GIF:** series of images encoded to automatically replay back as an animated sequence.

Contextual Variables

Range of Context

- Communication applications on mobile devices may differ from desktop system and clarity of communication may vary.
- Communication applications differ depending on system and device being used.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Computer
- Tablet
- Cell phone
- Communication software applications
- Headsets

Major Category

Information and Communication Technology Foundations

Competency Area

Use Digital Technology

Competency Unit

Use common software applications

Purpose

Common computer software applications for word processing, data spreadsheets, and presentations help to increase the productivity and efficiency of the organization.

Performance/Abilities

- P1** Select appropriate application for task, e.g. word processing, presentation, spreadsheets
- P2** Use application's tools to create, enhance or customize content
- P3** Save document to appropriate folder and drive

Knowledge

- K1** Organizational policies and procedures, e.g. file naming, file sharing, cybersecurity
- K2** Purpose and features of common applications
- K3** Links between applications, e.g. cell phone camera photos are saved automatically in photo application

Glossary

- **Cybersecurity:** the practice of protecting systems, networks, and programs from digital attacks that interrupt normal business operations. Digital or cyberattacks try to:
 - access confidential and/or sensitive information to use for illegal purposes, e.g. identity theft;
 - destroy or change confidential and/or sensitive information to disrupt business operations; or,
 - extort money from users by holding their systems hostage until some form of payment is received.

Contextual Variables

Range of Context

- Applications will differ depending on device and operating systems.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Computer
- Tablet
- Cell phone
- Common software applications

Major Category

Information and Communication Technology Foundations

Competency Area

Use Organization's ICT System

Competency Unit

Use organization's ICT system

Purpose

Following the organization's protocols to enter and retrieve information in the computer system is essential to ensure the organized, accurate, and secure documentation of an organization's activities across various types of computerized equipment.

Performance/Abilities

- P1** Follow organization's policies and procedures, e.g. data entry, cybersecurity
- P2** Retrieve required information from saved files or databases, for example:
- access information from saved files or databases as permitted from:
 - computer hard drive
 - organization's shared drive(s)
 - use appropriate search terms to find required information, e.g. file name, subject matter, customer name
- P3** Enter/update information, for example:
- complete all data fields accurately
 - check accuracy of manual data entry
 - do not enter same data more than once
 - do not edit or change data without appropriate permissions
- P4** Upload information, e.g. files, photograph, prints, data:
- ensure information sources are secure
- P5** Save work:
- use file naming protocol
 - save in appropriate drive(s) and folder

Knowledge

- K1** Organization's protocols, for example:
- cybersecurity
 - access permissions
 - file naming
 - organization of shared drives
 - printing
 - file sharing
- K2** Applications purposes and functions
- K3** Consequences of inaccurate or incomplete data
- K4** Different uses of data
- K5** Allowable data requests
- K6** Organization of shared drive(s)
- K7** Uploading and downloading of documents, files, drawings and photos

Glossary

- **Computer Aided Design (CAD):** a computer application that is used to produce 2- and 3-dimensional drawings of an engineered design that details the physical components and layout.
- **Cybersecurity:** the practice of protecting systems, networks, and programs from digital attacks that interrupt normal business operations. Digital or cyberattacks try to:
 - access confidential and/or sensitive information to use for illegal purposes, e.g. identity theft;
 - destroy or change confidential and/or sensitive information to disrupt business operations; or,
 - extort money from users by holding their systems hostage until some form of payment is received.
- **Geographic Information Systems (GIS):** a computer application that manages geographic information, which can be manipulated to display aspects of geographical information in a map format.

Contextual Variables

Range of Context

- Organizations will have different levels of permissions and access to different applications and shared drives based on occupational requirements and responsibilities.
- Organizations may use proprietary closed computer systems and networks.
- Access to system and applications may differ if using a mobile device.
- Cybersecurity protocols may differ in levels of automation and auto-surveillance, e.g. audit trails.
- Organizations may use different purchased applications.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- | | |
|---|---|
| <input type="checkbox"/> Recall, Remember | <input type="checkbox"/> Analyze |
| <input type="checkbox"/> Understand | <input type="checkbox"/> Evaluate |
| <input checked="" type="checkbox"/> Apply | <input type="checkbox"/> Create/Transform |

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Computer or mobile device
- Software programs

Major Category

Information/Record Management

Competency Area

Complete Information/Record Management Tasks

Competency Unit

Maintain technical information and data

Purpose

Maintaining technical information and data is important so that critical and up to date information is available. This data is the basis for setting goals and objectives for the short-, medium- and long-term. It also ensures that legislative requirements are met.

Performance/Abilities

- P1** Identify types of information/records that are required, for example:
 - operations and maintenance manual
 - bill of material parts
 - asset related information, e.g. type of equipment, location
 - event and call logs
 - drawings
 - test results
- P2** Provide information as required, e.g. fill out online or paper forms:
 - ensure information is provided/records are completed within required timelines, e.g. daily, weekly, monthly
- P3** Ensure information recorded is accurate and complete
- P4** Complete field mark-ups, as required
- P5** Verify that drawing revisions match field wiring, as required
- P6** Update drawings or ensure drawings are sent for update, as required
- P7** File revised drawings according to information/record management protocols

Knowledge

- K1** Legislation, e.g. NERC Standards
- K2** Organization policies, procedures and plans
- K3** Organization/project goals, vision and status
- K4** Organizational document management system
- K5** Use of relevant software, e.g. CAD, GIS

Contextual Variables

Range of Context

- Work environment can make it challenging to ensure that the documents are filed in the right repository in a timeline manner, e.g. outdoors or off-site.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- CAD software
- Mobile workforce technology

Major Category

Safety

Competency Area

Maintain a Safe Working Environment

Competency Unit

Follow safe work practices

Purpose

Following safe work practices is critical to protect employees, contractors, customers and the general public against injury or death, and to protect the organization and its assets from loss and liability.

Performance/Abilities

- P1** Participate in safety orientations and training
- P2** Complete safety certifications, as required, e.g. confined space
- P3** Identify locations of:
 - first aid kit
 - emergency equipment
 - emergency access routes
- P4** Participate in daily safety meeting/tail-board meetings
- P5** Follow safety policies and procedures on site, e.g. limits of approach
- P6** Respect physical limitations of self and others
- P7** Use protection systems, as required, e.g. lockout/tagout, card system
- P8** Inspect safety systems, as required, e.g. guards, emergency stops
- P9** Perform tests, as required, e.g. test voltage level
- P10** Establish exclusion zones, when required, e.g. around open trench or working heavy equipment:
 - place barriers and/or signage
- P11** Identify hazards on site, e.g. personal safety, work site, environmental:
 - monitor weather conditions, as necessary
- P12** Minimize or remove hazards, as necessary, for example:
 - protect self from weather-related conditions, e.g. wear sunscreen and sunglasses, keep hydrated, wear warm clothing
- P13** Use equipment only as intended/classified:
 - ensure equipment is appropriate for work site conditions
- P14** Maintain clean, orderly work area
- P15** Dispose of waste materials, as required:
 - dispose of hazardous materials (e.g. chemicals, batteries) according to legislation and organizational policies
- P16** Store materials and equipment in designated areas
- P17** Communicate issues to relevant personnel, e.g. co-workers, project manager:
 - document work safety issues, as required

Knowledge

- K1** Relevant legislation, including Occupational Health and Safety (OH&S)
- K2** Safety Management Plan
- K3** Organizational safety policies and procedures, including OH&S
- K4** Workplace Hazardous Materials Information System (WHMIS)

- K5** Required training and certifications for specific work, e.g. confined space
- K6** Required Personal protective equipment (PPE)
- K7** Types of safety hazards on site
- K8** Available emergency response services and their contact information
- K9** Available equipment on worksite/in vehicles, e.g. first aid, containment equipment
- K10** Procedures for safe excavation, if required
- K11** Safety reporting procedures

Major Category	Safety
Competency Area	Maintain a Safe Working Environment
Competency Unit	Use personal protective equipment (PPE)

Contextual Variables

Range of Context

- Quantity and type of safety hazards varies with type of work and work location.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- | | |
|---|---|
| <input type="checkbox"/> Recall, Remember | <input type="checkbox"/> Analyze |
| <input type="checkbox"/> Understand | <input type="checkbox"/> Evaluate |
| <input checked="" type="checkbox"/> Apply | <input type="checkbox"/> Create/Transform |

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- First aid kits
- Safety equipment, e.g. spill kit, fire extinguisher
- Safety features on equipment
- Personal protective equipment (PPE)
- Rated tools, e.g. screwdriver rated for particular voltage

Purpose

Using PPE correctly protects employees against injury or death, and protects the organization and its assets from loss and liability.

Performance/Abilities

- P1** Ensure required training is up to date, e.g. fall arrest equipment training
- P2** Select equipment appropriate to task and work environment
- P3** Inspect/test PPE before use:
 - check expiry dates, if applicable
 - document condition
- P4** Ensure PPE is properly fitted and adjusted
- P5** Use PPE only for intended purpose
- P6** Communicate issues with PPE to relevant personnel, e.g. co-workers, supervisor
- P7** Tag defective equipment:
 - turn in to relevant personnel or department
- P8** Clean PPE after use:
 - store in designated location

Knowledge

- K1** Relevant legislation, including Occupational Health and Safety (OH&S)
- K2** Organizational safety policies and procedures, including OH&S
- K3** Potential safety hazards on site
- K4** PPE required for specific tasks, equipment and environments

Contextual Variables

Range of Context

- Quantity and type of PPE varies with type of work and work location.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- | | |
|---|---|
| <input type="checkbox"/> Recall, Remember | <input type="checkbox"/> Analyze |
| <input type="checkbox"/> Understand | <input type="checkbox"/> Evaluate |
| <input checked="" type="checkbox"/> Apply | <input type="checkbox"/> Create/Transform |

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- PPE, e.g. hard hats, safety glasses, safety boots, rubber gloves, fall arrest and restraint equipment, fire-retardant clothing, shock hazard PPE, arc flash hazard PPE, hearing protection, respiratory protection equipment

Major Category	Safety
Competency Area	Maintain a Safe Working Environment
Competency Unit	Participate in safety meetings and emergency drills

Purpose

Participating in safety meetings and emergency drills is important to ensure employees, contractors and customers work in a safe manner and are prepared for unexpected events. This also protects the organization and its assets against loss and liability.

Performance/Abilities

- P1** Attend meetings and drills at scheduled times
- P2** Identify role of self and team members in meetings and drills
- P3** Share knowledge and skills with co-workers
- P4** Communicate work issues to the group
- P5** Participate in emergency drills, e.g. evacuation, fire, environmental, sabotage/terrorist/bomb threat, electrical restoration
- P6** Debrief drills and exercises:
 - provide feedback
- P7** Take notes, if applicable

Knowledge

- K1** Relevant legislation
- K2** Organizational safety policies and procedures, including communication protocols
- K3** Own and others' roles and responsibilities during emergencies
- K4** Contact information for emergency services
- K5** Types of safety hazards on site

Contextual Variables

Range of Context

- Types of meetings and emergency drills will vary with organization, type of work and work location.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

Major Category	Safety
Competency Area	Maintain a Safe Working Environment
Competency Unit	Isolate component, equipment or system

Purpose

Isolation procedures must be performed correctly to protect self and others (e.g. other employees, contractors, customers and the public) in preparation for work on powered components, equipment or systems. Performing this task incorrectly can lead to serious injury or death. This task also protects the organization and its assets against loss and liability.

Performance/Abilities

- P1** Identify all sources of hazardous energy that may be encountered when performing work on component, equipment or system
- P2** Disconnect each hazardous energy source in component, equipment or system, e.g. disconnect linkages, open breakers, open disconnect switch
- P3** De-energize component, equipment or system, if required:
 - release stored or residual energy, for example:
 - ground electrical devices, e.g. capacitors, batteries/UPS, accumulators
 - release hydraulic liquid
 - vent air pressure
 - brake mechanical movement
- P4** Perform lock-out tag-out procedures
- P5** Verify isolation using one of following methods:
 - activate controls to ensure no response:
 - complete visual inspection, ensure electrical connections are open
 - test component, equipment or system to ensure zero potential energy, for example:
 - test circuitry
 - check pressure gauges to ensure energy removed
 - check temperature gauges to ensure thermal energy discharged
- P6** Document, as required
- P7** Return component, equipment or system to normal configuration
- P8** Ensure component, equipment or system can be safely re-energized, e.g. phase testing, Megger testing
- P9** Re-energize component, equipment or system, if no other locks on equipment or system:
 - coordinate re-energization with controlling authority
- P10** Test component, equipment or system to ensure operating properly
- P11** Document

Knowledge

- K1** Relevant regulations, e.g. work protection, grounding and bonding code
- K2** Organization's policies and procedures, e.g. electrical safety, arc-flash policies, hazard assessment, lock-out tag-out procedures
- K3** Type and rating of PPE required for isolation
- K4** Testing procedures

- K5** Electrical and mechanical principles, e.g. AC and DC, pressure
- K6** Primary energy sources (i.e. electrical, mechanical, hydraulic, chemical, thermal and gravitational) in components, equipment and systems
- K7** Safety tests to ensure zero energy state
- K8** Electrical and mechanical control systems and components, e.g. SCADA, program logic controllers (PLC), breakers, fuses, disconnects

Glossary

- **De-energize (aka depressurize):** a process used to remove residual or stored energy from isolated component, equipment or system to eliminate the chance that residual or stored energy could accidentally harm workers
- **Isolate:** a process used to disconnect component, equipment or system from a primary source of energy to eliminate the chance that the primary source of energy in component, equipment or system could accidentally harm workers
- **Lock-out tag-out (LOTO):** a safety procedure used to ensure that components, equipment or systems are locked off and not able to be started up again prior to the completion of maintenance or repair work. It requires that hazardous energy sources be isolated and rendered inoperative before work is started on the component, equipment or system in question.
- **Tag-out:** a labelling process that is always used when lock-out is required; the process involves attaching or using an information tag or indicator (typically a standardized label) that includes tag #, name of component, equipment or system that has been isolated or re-configured, why lockout is required, the time of application, and the name of the authorized person who attached lock and tag.

Contextual Variables

Range of Context

- A multi-point isolation procedure requires more than one lock and may need more than one worker to execute.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- | | |
|---|---|
| <input type="checkbox"/> Recall, Remember | <input checked="" type="checkbox"/> Analyze |
| <input type="checkbox"/> Understand | <input type="checkbox"/> Evaluate |
| <input type="checkbox"/> Apply | <input type="checkbox"/> Create/Transform |

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- PPE, e.g. arc flash protection equipment, safety glasses, steel-toed boots, hard hats
- Lock-out tag-out devices, e.g. breaker lock, multi-lock, lock box, tag, hold cards
- Energy testing equipment, e.g. voltmeters, pressure gauges
- Energy removal devices, e.g. ground straps
- Locking devices, e.g. rotor pins

Major Category

Safety

Competency Area

Maintain a Safe Working Environment

Competency Unit

Perform lock-out tag-out procedures

Purpose

Lock-out tag-out procedures are performed for self-protection and as part of work protection procedures. These safety procedures eliminate the chance that equipment or systems could harm people through the unintended release of energy or the unintended start-up or motion of equipment or components. Not following proper lock-out tag-out procedures can lead to serious injury or death. These procedures also protect the organization and its assets against loss and liability.

Performance/Abilities

- P1** Ensure required training is up to date
- P2** Plan lock-out tag-out with relevant personnel:
 - clarify scope of work to be done
 - identify potential energy sources that must be controlled
 - identify equipment and/or system to be locked-out tagged-out:
 - refer to panel schedules, drawings, single-line diagrams, cable and equipment tags
 - confirm details:
 - when lock-out tag-out will begin
 - how long it will continue
 - authorized person responsible for applying locks and tags
 - affected persons to inform of lock-out tag-out
- P3** Inform affected persons of lock-out tag-out
- P4** Select appropriate PPE
- P5** Isolate component, equipment or system:
 - de-energize component, equipment or system, if required
 - coordinate with controlling authority, if required
- P6** Apply locking mechanisms or approved devices (e.g. locking pins, rotor locks), on component, equipment or system, as required
- P7** Apply approved tag with required information, including:
 - tag number
 - name of component, equipment or system that is locked out
 - why lock-out is required
 - time component, equipment or system was locked out
 - name of authorized person who attached tag and lock
- P8** Verify component, equipment or system is locked out and tagged out properly:
 - conduct visual inspection, e.g. tag filled out correctly
- P9** Remove lock-out devices and tags when maintenance or repair activities are completed

Knowledge

- K1** Organizational safety policies and procedures, including lock-out tag-out procedures
- K2** Relevant legislation
- K3** Training renewal requirements for lock-out tag-out

- K4** Hazards associated with lock-out tag-out
- K5** Energy potential in components, equipment and systems
- K6** Procedures for potential energy testing
- K7** Safety checks to ensure zero energy state
- K8** Types of lock-out procedures, e.g. individual, group, and complex
- K9** Types of locking devices and their applications
- K10** Types of tags and their applications

Glossary

- **De-energize (aka depressurize):** a process used to remove residual or stored energy from isolated component, equipment or system to eliminate the chance that residual or stored energy could accidentally harm workers
- **Isolate:** a process used to disconnect component, equipment or system from a primary source of energy to eliminate the chance that the primary source of energy in component, equipment or system could accidentally harm workers
- **Lock-out tag-out (LOTO):** a safety procedure used to ensure that components, equipment or systems are locked off and not able to be started up again prior to the completion of maintenance or repair work. It requires that hazardous energy sources be isolated and rendered inoperative before work is started on the component, equipment or system in question.
- **Tag-out:** a labelling process that is always used when lock-out is required; the process involves attaching or using an information tag or indicator (typically a standardized label) that includes tag #, name of component, equipment or system that has been isolated or re-configured, why lockout is required, the time of application, and the name of the authorized person who attached lock and tag.

Contextual Variables

Range of Context

- Types of systems that may be locked out vary, e.g. electrical, mechanical, hydraulic, pneumatic.
- Approved devices used to lock-out equipment/systems vary depending on the types of energy involved.
- Types of approved devices and voltage-rated equipment used to perform this task vary.
- A multi-point isolation procedure requires more than one lock and may need more than one worker to execute.
- The procedures for lock-out and tag-out may vary when provided as part of work protection.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- | | |
|---|---|
| <input type="checkbox"/> Recall, Remember | <input checked="" type="checkbox"/> Analyze |
| <input type="checkbox"/> Understand | <input type="checkbox"/> Evaluate |
| <input type="checkbox"/> Apply | <input type="checkbox"/> Create/Transform |

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Locking mechanisms or devices, e.g. locking pins, rotor locks, bars, cribbing, chains
- Tag devices, e.g. test and operate cards, hold cards
- Approved safety devices, e.g. arc flash protection equipment, energy removal devices, PPE
- Potential energy testing equipment, e.g. voltmeters, pressure gauges

Major Category

Safety

Competency Area

Maintain a Sustainable Working Environment

Competency Unit

Follow sustainable work practices

Purpose

Following sustainable work practices is critical to protect the environment and to protect employees, contractors and the general public against personal injury. It creates a positive public impression of the organization and its commitment to social responsibility, and protects the organization from loss and liability.

Performance/Abilities

- P1** Ensure required training is up to date, e.g. WHMIS
- P2** Identify potential environmental hazards, including:
 - contaminants of water, air and soil
 - hazardous materials
- P3** Identify locations of:
 - first aid kit
 - spill kits
 - emergency access routes and personnel
 - safety data sheets (SDS)
- P4** Monitor weather conditions, as necessary, e.g. consider direction of chemical drift
- P5** Follow waste management practices:
 - sort waste by type
 - place waste in correct disposal container or area
- P6** Use recycled products and materials when possible
- P7** Store hazardous materials and equipment in designated areas
- P8** Dispose of hazardous materials (e.g. chemicals, batteries) according to legislation and organizational policies
- P9** Communicate issues to relevant personnel, e.g. co-workers, supervisor:
 - document issues, as required

Knowledge

- K1** Relevant legislation, including Occupational Health and Safety (OH&S)
- K2** Organizational safety policies and procedures, including OH&S
- K3** Sustainability plan and practices, e.g. energy and water conservation, commitment to low-carbon energy
- K4** Importance of sustainable practices, e.g. controlled use of ozone depleting substances
- K5** Safety Management Plan
- K6** Workplace Hazardous Materials Information System (WHMIS)
- K7** Types of hazardous materials associated with specific work activities
- K8** Available emergency response services and their contact information
- K9** Available equipment on site or in vehicles, e.g. first aid, containment equipment
- K10** Procedures for safe evacuation, if required
- K11** Procedures for containment, if required
- K12** Safety reporting procedures

Contextual Variables

Range of Context

- Quantity and type of hazards vary with type of work and work location.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- First aid kits
- Spill kit
- Personal protective equipment (PPE)
- Safety data sheet (SDS)

Major Category

Security

Competency Area

Follow Security Practices

Competency Unit

Follow security practices for physical work environment

Purpose

Following practices to protect the physical work environment is critical to protect project/organizational assets, employees, contractors, customers and the general public.

Performance/Abilities

- P1** Adhere to security procedures, including:
 - participate in NERC training, as required
 - use tools and equipment, e.g. access cards
 - identify situations that may cause security issues, e.g. door propped open, gate access point unmanned
- P2** Update procedures/tools on regular basis, as required, e.g. use new codes
- P3** Report unsafe or suspicious activity, e.g. unauthorized visitors, equipment being removed from site unexpectedly
- P4** Document work security issues

Knowledge

- K1** Relevant legislation
- K2** NERC Standards
- K3** Organizational/project security policies and procedures
- K4** Types of security hazards on site
- K5** Authorized access systems and their use

Contextual Variables

Range of Context

- Quantity and type of security hazards varies with type of work and work location.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Access tools and equipment, e.g. key cards, identification cards

Purpose

Along with Information and Communication Technology (ICT) security functions that are built into an organization's computer system, it is essential for users to follow cybersecurity protocols to prevent intentional damage to an organization through cyberattacks. Users following security protocols are another layer of protection from external threats.

Performance/Abilities

- P1** Follow system log-in/out protocols:
- log out of system when work is completed
- P2** Participate in organization's cybersecurity training
- P3** Use passwords:
- change passwords when requested or required by organization's ICT procedures
 - do not share passwords with others
 - do not write passwords down in a visible place
 - use a mix of characters, letters and numbers for passwords
- P4** Operate organization's computer system in a secure manner, for example:
- use computers and smart mobile devices approved by organization
 - do not leave computer equipment unattended, e.g. computer, smart phone, tablet, flash drives, hard drives
 - do not plug unauthorized flash drives or smart phones into computer
 - use organization's sites and applications for field devices
 - comply with assigned permissions and access limits
 - upload security updates as directed, and use newest versions of application software
- P5** Carry out work on organization's computer system securely, for example:
- use approved web browsers and search engines
 - check all URLs for indications of a phishing site, e.g. spelling errors, complete "https://" on secure sites
 - avoid using links, when possible, even on secure websites
 - do not download from unknown websites
 - do not work using unsecured internet connections or public computers
- P6** Use communication applications in a secure manner:
- do not accept or open mail or attachments from unknown senders
 - use approved communication channels and protocols, especially when communicating with other organizations
 - do not provide confidential work information to an unknown email source/caller:
- P7** Do not upload personal applications or access personal websites on organization's devices
- P8** Do not post unauthorized work information on social networks
- P9** Back up files to specified drives and at specified times, as directed
- P10** Contact ICT immediately when:
- computer device is unresponsive or is operating in odd manner
 - windows or communications open with unusual messages, demands, or instructions, especially when system will not respond
 - there are frequent information or data disruptions, misconfigurations, and gaps or unexplained changes

Knowledge

- K1** Organization's cybersecurity protocols
- K2** Approved applications
- K3** Personal password for access to system
- K4** Access permissions and restrictions
- K5** Indicators of data corruption
- K6** Potential risks to system, e.g. viruses, malware, ransomware
- K7** Normal application operations
- K8** Indicators of unsecured or fraudulent websites

Glossary

- Cybersecurity:** the practice of protecting systems, networks, and programs from digital attacks that interrupt normal business operations. Digital or cyberattacks try to:
 - access confidential and/or sensitive information to use for illegal purposes, e.g. identity theft;
 - destroy or change confidential and/or sensitive information to disrupt business operations; or,
 - extort money from users by holding their systems hostage until some form of payment is received.
- Malware:** software that is specifically designed to access and/or damage a computer without owner of the computer being aware of what is happening, e.g. viruses, worms, spyware.
- Ransomware:** software that prevents users from accessing their own data until the user pays a ransom.
- Phishing:** a scam to obtain personal information to commit fraud, often involving social engineering, e.g. email or phone calls from distant relative requesting money, phony websites with sign up forms, message from bank requiring confirmation of account information.
- Social engineering:** attempts to obtain personal or confidential information or to get the user to perform certain tasks by what appears to be a legitimate source or person; a component of phishing.

Contextual Variables

Range of Context

- While many cybersecurity safeguards are built into the design of the system software, users working from home, working remotely in the field, or on personal devices, e.g. smart phones, may change the performance of this skill.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Passwords
- Computers, mobile devices
- Cybersecurity software
- Key fob, e.g. RSA SecurID token

Major Category	Organizational Policies and Procedures
Competency Area	Follow Organizational Policies and Procedures
Competency Unit	Follow organizational policies and procedures

Purpose

Following policies and procedures is important to create a consistent work environment for employees and to provide consistent service delivery to internal/external customers.

Performance/Abilities

- P1** Review organizational policies and procedures
- P2** Participate in orientation and on-the-job training
- P3** Complete all work-related tasks according to organizational policies and procedures
- P4** Identify opportunities for improvement to policies and procedures:
 - communicate to team members and supervisors, as appropriate
- P5** Keep up to date with changes to policies and procedures, e.g. access online library for updates

Knowledge

- K1** Organization policies, procedures and plans, e.g. occupational health and safety, workplace health and wellness
- K2** Organization/project goals, vision and status
- K3** Organizational document management system, e.g. where to find latest policies and communication documents

Contextual Variables

Range of Context

- Number of policies and procedures to be followed will vary.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Organizational policies and procedures manual
- Documents associated with organizational policies and procedures, including forms, checklists

Major Category	Leadership
Competency Area	Provide Leadership
Competency Unit	Develop action plans

Purpose

Developing action plans is important to ensure that project/organizational activities are planned in a realistic way and to ensure that tasks are completed according to schedule. This skill is critical for managing processes and people.

Performance/Abilities

- P1** Assess tasks to be completed:
 - identify skills and knowledge needed
 - identify resources needed
 - determine what tasks are dependent upon others being completed, i.e. which tasks must be completed first
 - determine timelines for completion
- P2** Organize tasks into logical sequence:
 - ensure timelines are realistic
- P3** Identify what tasks might be exposed to risk:
 - develop contingency plan, as required
 - obtain sponsor buy-in
- P4** Circulate draft plan to relevant parties, as required, e.g. team members, management, contractors, sponsors
- P5** Facilitate consensus on final action plan, as required
- P6** Determine assessment methods that will be used to measure success, e.g. milestones

Knowledge

- K1** Organization policies, procedures and plans
- K2** Organization/project goals, vision and status
- K3** Organizational document management system
- K4** Challenges that may impede implementation of action plans, e.g. competing goals or projects, environmental/weather conditions

Contextual Variables

Range of Context

- Size of organization/project and number of action plans to be created will vary.
- Type and number of challenges/risks to action plans that must be considered at this stage will vary with the complexity of the project/organizational tasks.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Organizational policies and procedures manual
- Software, e.g. project management software

Major Category

Leadership

Competency Area

Provide Leadership

Competency Unit

Implement action plans

Purpose

Implementing action plans correctly is important to ensure that tasks are completed according to schedule. This skill is critical for managing processes and people.

Performance/Abilities

- P1** Review action plan to:
- identify skills and knowledge needed
 - identify resources needed
 - determine what tasks are dependent upon others being completed, i.e. which tasks must be completed first
 - determine timelines for completion
 - review risks and contingency plan
- P2** Assign tasks:
- empower employees to complete their assignments
- P3** Communicate action plan to all relevant parties, as required, e.g. team members, management, contractors, sponsors:
- keep informed of status of project/tasks and consequences to schedule
 - maintain open lines of communication to build trust and confidence of team
- P4** Periodically assess progress:
- hold regular update meetings to discuss progress
- P5** Make adjustments to action plan, as required, e.g. revise timeline
- P6** Document progress and any changes made to action plan

Knowledge

- K1** Organization policies, procedures and plans
- K2** Organization/project goals, vision and status
- K3** Organizational document management system
- K4** Roles and responsibilities of team members
- K5** Skills and knowledge of team members
- K6** Challenges that may impede implementation of action plans, e.g. competing goals or projects, environmental/weather conditions
- K7** Collective agreement

Contextual Variables

Range of Context

- Collective agreements in union work environments may change how this skill is performed.
- Size of organization/project and number of action plans to be implemented will vary.
- Type and number of challenges/risks to action plans that must be considered at this stage will vary with the complexity of the project/organizational tasks.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Organizational policies and procedures manual
- Software, e.g. project management software
- Collective agreement

Major Category

Leadership

Competency Area

Provide Leadership

Competency Unit

Delegate tasks

Purpose

Delegating tasks is important to help maintain productivity levels, to share the workload, and to give employees a chance to develop their skills.

Performance/Abilities

- P1** Determine tasks and responsibility to be delegated
- P2** Ensure individual's skills and interest match position and assignment
- P3** Consider employee's ability to fit tasks into current workload
- P4** Communicate expectations clearly:
 - outline requirements and timelines
 - invite questions
 - confirm understanding
- P5** Empower employee to complete task or responsibility:
 - provide training, time, resources, budget to support employee, as necessary
 - set priorities
- P6** Periodically check task in progress:
 - ask for feedback
 - offer suggestions, as appropriate
- P7** Ensure task is completed, as required
- P8** Recognize successful completion, e.g. thank employee

Knowledge

- K1** Organization policies, procedures and plans
- K2** Organization/project goals, vision and status
- K3** Roles and responsibilities of team members
- K4** Skills, knowledge and interests of team members
- K5** Challenges that may impede implementation of action plans, e.g. competing goals or projects, environmental/weather conditions
- K6** Collective agreement

Contextual Variables

Range of Context

- Collective agreements in union work environments may change how this skill is performed.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Organizational policies and procedures manual
- Collective agreement, if applicable
- Software, e.g. project management software

Major Category

Leadership

Competency Area

Facilitate Change

Competency Unit

Promote continuous improvement

Purpose

Promoting continuous improvement is important to ensure that the project/organization keeps up to date with, and even anticipates, changes in the sector. This helps to ensure the project/organization remains efficient and successful.

Performance/Abilities

- P1** Encourage all employees to generate ideas for continuous improvement
- P2** Identify opportunities for beneficial change, for example:
 - use own observations
 - review new and alternate methods of construction
 - research new technologies
 - review customer/client feedback
- P3** Assess who and what will be affected by change, for example:
 - employees and customers and their key issues of concern
 - resource allocation/budget
 - work program
- P4** Assess the impact of change
 - define benefits of potential change
- P5** Choose what potential changes to implement based on assessment:
 - forward recommendations to management, if required
- P6** Document what is changing, e.g. develop new policy/procedure, ensure technical documentation is adjusted

Knowledge

- K1** Organization policies, procedures and plans
- K2** Organization/project goals, vision and status
- K3** Organizational document management system
- K4** Trends in the sector
- K5** Roles and responsibilities of team members
- K6** Challenges that may impede implementation of change, e.g. employee resistance, collective agreement

Contextual Variables

Range of Context

- Collective agreements in union work environments may change how this skill is performed.
- Size of organization/project and levels of approval for changes to be implemented will vary.
- Management support and organizational policy may make this task challenging to complete.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Organizational policies and procedures manual
- Collective agreement, if applicable

Major Category

Leadership

Competency Area

Facilitate Change

Competency Unit

Implement change

Purpose

Implementing change is important to ensure that the project/organization keeps up to date with, and even anticipates, changes in the sector. This helps to ensure the project/organization remains efficient and successful.

Performance/Abilities

- P1** Communicate changes to all employees:
 - define new expectations
 - explain the rationale and benefits
 - promote open dialogue
- P2** Identify potential barriers to change, e.g. employee resistance, current logistical structures:
 - develop strategies to mitigate challenges, e.g. collaborate with other departments or vendors
- P3** Monitor implementation of change:
 - measure change progress
 - foster organizational persistence and patience while change is being implemented
 - recognize success, e.g. reward staff
- P4** Identify changes that are not being successfully implemented:
 - take action to resolve issues

Knowledge

- K1** Organization policies, procedures and plans
- K2** Organization/project goals, vision and status
- K3** Reason for, and benefits of, change being implemented
- K4** Roles and responsibilities of team members
- K5** Methods of measuring change
- K6** Challenges that may impede implementation of change, e.g. employee resistance
- K7** Collective agreement

Contextual Variables

Range of Context

- Collective agreements in union work environments may change how this skill is performed.
- Authority to implement change, and to adjust/revise changes and their methods of implementation varies across organizations.
- Management support and organizational policy may make this task challenging to complete.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Organizational policies and procedures manual
- Collective agreement, if applicable

Major Category

Personal Competencies

Competency Area

Demonstrate Professionalism

Competency Unit

Work as member of a team

Purpose

Working as a member of a team helps to ensure that operations run smoothly, and allows project managers, supervisors, employees and contractors to be proactive before small issues become large problems.

Performance/Abilities

- P1** Demonstrate respect and empathy towards others:
 - respect diversity
 - respect differing perspectives
 - promote an inclusive work environment
 - recognize changes in team members' behaviours, e.g. mental health strain
- P2** Be accountable:
 - report unexpected conditions
 - be punctual
 - comply with schedule
 - take action when issues arise
- P3** Initiate contact with other team members on regular basis:
 - ask questions
- P4** Share knowledge and skills
- P5** Recognize others' contributions and success
- P6** Accept and provide constructive feedback
- P7** Ask for help, when needed
- P8** Offer help to team members
- P9** Respond to requests in a timely manner
- P10** Be open to change
- P11** Participate actively in team meetings

Knowledge

- K1** Organization policies, procedures and plans
- K2** Organization/project goals, vision and status
- K3** Roles and responsibilities of team members, including own role
- K4** Team members' contact information
- K5** Sector and project terminology and common abbreviations
- K6** Symptoms of psychological strain, e.g. decreased quality of work, withdrawal

Contextual Variables

Range of Context

- Team members will vary, for instance, there may be a range of small, temporary working groups and more permanent, long-term working groups.
- Physically locations may change the way this skill is performed, e.g. communication may have to occur via distance means.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- | | |
|---|---|
| <input type="checkbox"/> Recall, Remember | <input type="checkbox"/> Analyze |
| <input type="checkbox"/> Understand | <input type="checkbox"/> Evaluate |
| <input checked="" type="checkbox"/> Apply | <input type="checkbox"/> Create/Transform |

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Software, e.g. video chat, virtual meeting
- Communication tools, e.g. email, telephone

Major Category

Personal Competencies

Competency Area

Demonstrate Professionalism

Competency Unit

Develop professionally

Purpose

Developing professionally is important to keep current with sector trends, products and services. It improves an individual's attitude, knowledge, self-confidence and skills.

Performance/Abilities

- P1** Maintain qualifications and certifications, as required, e.g. trade license, professional designation, First Aid, CPR
- P2** Assess own skills, knowledge and abilities:
 - reflect on feedback from peers and supervisor
 - identify areas for improvement
- P3** Identify areas of interest where new skill and knowledge development might be useful, e.g. new methods/products used in the sector
- P4** Upgrade skills and knowledge, for example:
 - attend courses offered by equipment manufacturers
 - read sector-specific publications
 - conduct research
 - enroll in educational and professional development courses and programs
 - participate in mentorship programs
 - ask for assistance or instruction
- P5** Participate in local trade and business organizations, as applicable
- P6** Network with professional peers, e.g. attend conferences or trade shows
- P7** Join and participate in associations, as applicable
- P8** Ensure professional development is documented in organization's record management system, as required

Knowledge

- K1** Organization policies, procedures and plans
- K2** Organization/project goals, vision and status
- K3** Own skills, knowledge and abilities
- K4** Roles and responsibilities of team members, including own role
- K5** Where to find up-to-date and accurate information on the sector
- K6** Relevant training providers and their offerings

Contextual Variables

Range of Context

- Access to resources may affect the way this skill is performed, e.g. organization's professional development budget, individuals may only attend provided professional development sessions during work time.
- Physical location may change the way this skill is performed, e.g. all professional development may have to be pursued via distance means.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- | | |
|---|---|
| <input type="checkbox"/> Recall, Remember | <input checked="" type="checkbox"/> Analyze |
| <input type="checkbox"/> Understand | <input type="checkbox"/> Evaluate |
| <input type="checkbox"/> Apply | <input type="checkbox"/> Create/Transform |

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Computer access
- Mentoring/coaching program
- Education grant program, if available
- Collective agreement

Major Category

Personal Competencies

Competency Area

Demonstrate Professionalism

Competency Unit

Demonstrate professional and ethical conduct

Purpose

Demonstrating professional and ethical conduct is important to build trust and respect in relationships with others. It also helps to promote a positive image of the organization and the sector.

Performance/Abilities

- P1** Participate in relevant training, e.g. conflict of interest, code of conduct, ethics
- P2** Support high standards and practices that protect public and bring credibility to organization, sector, and community, for example:
 - follow professional code of ethics/code of conduct, as applicable
 - implement responsible policies
 - avoid degrading or malicious discussion
 - recognize potential conflict of interest
- P3** Demonstrate professional attributes, including:
 - approachability, e.g. be available to coworkers and clients
 - composure, e.g. remain calm in emergency
 - empathy, e.g. show concern for others' problems
 - emotional intelligence, e.g. awareness of own and others' emotional states
 - fairness, e.g. treat all equally
 - flexibility, e.g. be open to new situations and approaches
 - being proactive, e.g. address issues before they become large problems
 - initiative
 - QA/QC principles in relation to work, e.g. catching potential errors prior to issues
 - trustworthiness, e.g. honour commitments
 - social responsibility, e.g. report injured wildlife to appropriate authorities
- P4** Ensure appearance is professional, e.g. wear uniform or organizational id/tag, ensure attire is in good repair
- P5** Comply with legal requirements, e.g. high visibility clothing, NERC requirements, conflict of interest
- P6** Maintain confidentiality of information, as required
- P7** Maintain accurate records
- P8** Show respect for organization's assets, e.g. take proper care of tools and equipment

Knowledge

- K1** Relevant legislation, e.g. Freedom of Information and Protection of Privacy (FOIP), NERC Standards
- K2** Organization policies, procedures and plans
- K3** Organization/project goals, vision and status
- K4** Code of conduct/Code of ethics
- K5** Own skills, knowledge and abilities
- K6** Roles and responsibilities of team members, including own role
- K7** Where to find up-to-date and accurate information on standards and practices

Contextual Variables

Range of Context

- Formal codes of ethics may exist in some subsectors and not others.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- | | |
|---|---|
| <input type="checkbox"/> Recall, Remember | <input type="checkbox"/> Analyze |
| <input type="checkbox"/> Understand | <input type="checkbox"/> Evaluate |
| <input checked="" type="checkbox"/> Apply | <input type="checkbox"/> Create/Transform |

Major Category

Personal Competencies

Competency Area

Demonstrate Professionalism

Competency Unit

Mentor/coach others

Purpose

Mentoring/coaching others is important to help create an environment of continuous learning within the organization. It helps to ensure consistency in the work being completed, and assists with building positive workplace relationships. It contributes to an improvement of both individual and team performance.

Performance/Abilities

- P1** Initiate contact with other team members/learners on regular basis:
 - ask questions
- P2** Use positive approach to help team members/learners solve problems:
 - ask questions to help focus on problem
 - guide resolution/performance
 - demonstrate patience
- P3** Demonstrate tasks for others, as required:
 - explain importance of and reasons for process/tasks
 - link learning to other tasks and overall job
- P4** Set up environment for learner to practice skills, as required:
 - ensure safety of learning environment
- P5** Recognize success, e.g. praise team member/learner
- P6** Assess learners' progress, as appropriate
- P7** Provide supportive and corrective feedback
- P8** Ask for feedback on own performance as coach/mentor

Knowledge

- K1** Organization policies, procedures and plans
- K2** Organization/project goals, vision and status
- K3** Roles and responsibilities of team members/learners, including own role
- K4** Role of workplace mentor/coach
- K5** Sector and project terminology and common abbreviations
- K6** Different ways of learning/learning needs and strategies to address them, e.g. language proficiency, learning preference
- K7** How to adjust to different learning styles
- K8** Importance of, and techniques for, providing effective feedback

Contextual Variables

Range of Context

- Mentoring/coaching may be a formalized or informal process, which will affect how this skill is performed.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- | | |
|---|---|
| <input type="checkbox"/> Recall, Remember | <input checked="" type="checkbox"/> Analyze |
| <input type="checkbox"/> Understand | <input type="checkbox"/> Evaluate |
| <input type="checkbox"/> Apply | <input type="checkbox"/> Create/Transform |

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Software, e.g. video chat, virtual meeting
- Communication tools, e.g. email, telephone

Major Category

Personal Competencies

Competency Area

Demonstrate Professionalism

Competency Unit

Manage stress

Purpose

Managing stress is important to improve one's own ability to balance personal and professional demands, perform one's job competently, and contribute to a harmonious workplace.

Performance/Abilities

- P1** Attend to own physical, emotional, spiritual, family and financial needs
 - ask for help, if needed
- P2** Recognize own limitations and those of others, e.g. know when to say no
- P3** Recognize how your stress affects others
- P4** Manage time effectively:
 - prioritize tasks to be done
 - ensure schedule is realistic
 - negotiate or discuss with team members/supervisor, as required
- P5** Delegate responsibilities, when appropriate
- P6** Adapt to shift work, as required, for example:
 - prepare self for shifts
 - ensure proper rest/sleep
 - ensure proper nutrition
- P7** Maintain open communication with others
- P8** Identify coping strategies, e.g. maintain a sense of humour

Knowledge

- K1** Organization policies, procedures and plans
- K2** Organization/project goals, vision and status
- K3** Organization's wellness program, e.g. available gym memberships, counselling programs
- K4** Own skills, knowledge and abilities
- K5** Roles and responsibilities of team members, including own role
- K6** Symptoms of psychological strain, e.g. fatigue, irritability, difficulty concentrating, isolation

Contextual Variables

Range of Context

- Availability of an organization wellness program, and its associated offerings, may alter the way this skill is performed.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- | | |
|---|---|
| <input type="checkbox"/> Recall, Remember | <input checked="" type="checkbox"/> Analyze |
| <input type="checkbox"/> Understand | <input type="checkbox"/> Evaluate |
| <input type="checkbox"/> Apply | <input type="checkbox"/> Create/Transform |

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Psychological health and wellness program

Major Category

Personal Competencies

Competency Area

Demonstrate Professionalism

Competency Unit

Manage time

Purpose

Managing time is important to support efficiency and productivity by allowing the required time to be spent on the areas/tasks of most importance, and ensures that all tasks can be completed according to schedule.

Performance/Abilities

- P1** Set goals:
 - ensure goals are realistic and relevant
 - outline objectives to be achieved for each goal
- P2** Identify tasks that need to be achieved for each objective:
 - prioritize based on importance and urgency
- P3** Determine amount of time each task will take, considering:
 - previous experience
 - available resources
 - competing priorities
 - possible delays
- P4** Use time management system, e.g. electronic calendar, daytimer:
 - record appointments, meetings and critical dates
- P5** Create action plan:
 - identify timelines and critical dates
- P6** Schedule tasks:
 - delegate tasks, as required
- P7** Monitor progress of tasks and action plan:
 - review/update timelines regularly
- P8** Identify incomplete tasks:
 - develop plan for completion
- P9** Review goals and objectives periodically:
 - review time management system
 - evaluate own tasks
 - evaluate progress toward goals
 - make adjustments, as required

Knowledge

- K1** Organization policies, procedures and plans
- K2** Organization/project goals, vision and status
- K3** Own skills, knowledge and abilities
- K4** Roles and responsibilities of team members, including own role

Contextual Variables

Range of Context

- Complexity of time management will vary with job role and current tasks.
- Goals, objectives and action plans may be provided, depending upon job role and organization.
- Unplanned situations, including emergencies, can make it difficult to perform this skill.
- Collaboration may or may not be required, e.g. some activities need to be coordinated with others/other work teams.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- | | |
|---|---|
| <input type="checkbox"/> Recall, Remember | <input checked="" type="checkbox"/> Analyze |
| <input type="checkbox"/> Understand | <input type="checkbox"/> Evaluate |
| <input type="checkbox"/> Apply | <input type="checkbox"/> Create/Transform |

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Time management systems, e.g. electronic calendar, daytimer
- Software, e.g. project management software

Major Category

Personal Competencies

Competency Area

Communicate Effectively

Competency Unit

Use active listening skills

Purpose

Using active listening skills helps to ensure that all parties understand each other. This promotes effective teamwork, improves productivity and reduces stress.

Performance/Abilities

- P1** Choose appropriate time and place to listen, if possible:
- remove distractions, as required
- P2** Listen carefully to message:
- be open-minded
 - use attentive body language, e.g. face speaker
 - listen until message is complete, i.e. do not interrupt
 - give speaker undivided attention
- P3** Watch for nonverbal indicators that reinforce or contradict message, e.g. nod, rolling eyes
- P4** Respond to message, for example:
- use nonverbal indicators, e.g. nod, smile
 - offer comments
 - use questions to seek additional information or clarify details
 - paraphrase to confirm understanding

Knowledge

- K1** Relevant legislation, e.g. Freedom of Information and Protection of Privacy
- K2** Organization policies, procedures and plans
- K3** Organization/project goals, vision and status
- K4** Effective communication practices, e.g. verbal versus non-verbal, characteristics of respectful communication
- K5** Sector, trade and project terminology and common abbreviations
- K6** Question types, e.g. open-ended, closed, probing, mirror
- K7** Communication that constitutes harassment and discrimination

Contextual Variables

Range of Context

- Physical location may change the way this skill is performed, e.g. all listening may have to occur via distance means.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- | | |
|---|---|
| <input type="checkbox"/> Recall, Remember | <input checked="" type="checkbox"/> Analyze |
| <input type="checkbox"/> Understand | <input type="checkbox"/> Evaluate |
| <input type="checkbox"/> Apply | <input type="checkbox"/> Create/Transform |

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Software, e.g. video chat, virtual meeting
- Communication tools, e.g. telephone

Major Category

Personal Competencies

Competency Area

Communicate Effectively

Competency Unit

Use speaking skills

Purpose

Using speaking skills helps to ensure that all parties understand each other, and reduces errors due to misinterpretation. This promotes effective teamwork, improves productivity and reduces stress.

Performance/Abilities

- P1** Identify purpose of message
- P2** Consider needs and limitations of listeners
- P3** Organize ideas before speaking
- P4** Determine appropriate time and place to deliver message
- P5** Determine appropriate format, e.g. formal/informal, group/individual
- P6** Make final revisions to message
- P7** Communicate message:
 - be concise
 - speak clearly
 - use proper grammar
 - vary tone, volume, inflection and rate of speech
 - make eye contact
 - use positive language whenever possible
 - ensure that verbal and non-verbal communication convey same message
- P8** Adjust message to listener, if appropriate, for example:
 - simplify technical information
 - use different question types to determine listener's needs
 - avoid using slang, jargon, profanity or sarcasm
 - consider impact of message on listener, e.g. time restrictions, emotional impact
- P9** Confirm understanding:
 - ask for questions and feedback
 - review what was explained
- P10** Encourage additional questions at later date, if appropriate
- P11** Answer questions or know where to find answer:
 - follow up with listener who asked question

Knowledge

- K1** Relevant legislation, e.g. Freedom of Information and Protection of Privacy
- K2** Organization policies, procedures and plans
- K3** Organization/project goals, vision and status
- K4** Organizational communication protocols, e.g. who needs what information, speaking to media
- K5** Effective communication practices, e.g. verbal versus non-verbal, characteristics of respectful communication
- K6** Sector, trade and project terminology and common abbreviations
- K7** Question types, e.g. open-ended, closed, probing, mirror
- K8** Communication that constitutes harassment and discrimination

Contextual Variables

Range of Context

- Physical location may change the way this skill is performed, e.g. speaking may have to occur via distance means.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- | | |
|---|---|
| <input type="checkbox"/> Recall, Remember | <input checked="" type="checkbox"/> Analyze |
| <input type="checkbox"/> Understand | <input type="checkbox"/> Evaluate |
| <input type="checkbox"/> Apply | <input type="checkbox"/> Create/Transform |

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Software, e.g. video chat, virtual meeting
- Communication tools, e.g. telephone

Major Category

Personal Competencies

Competency Area

Communicate Effectively

Competency Unit

Use writing skills

Purpose

Using writing skills helps to ensure that all parties understand each other, and reduces errors due to misinterpretation. This promotes effective teamwork, improves productivity and reduces stress.

Performance/Abilities

- P1** Determine purpose of message
- P2** Identify target audience
- P3** Provide accurate, complete and concise information
- P4** Use format, tone, and style suited to purpose, e.g. email, business letter, report
- P5** Consider reader's:
 - perceptions
 - reading ability
 - needs
 - technical understanding
- P6** Write first draft, if required:
 - arrange ideas logically
 - be clear and concise
- P7** Proofread message:
 - correct errors
- P8** Produce final copy:
 - send to reader(s)/recipient(s)
- P9** File copy according to organizational/project protocol
- P10** Follow up, as required, e.g. ensure message was received

Knowledge

- K1** Relevant legislation, e.g. Freedom of Information and Protection of Privacy
- K2** Organization policies, procedures and plans
- K3** Organization/project goals, vision and status
- K4** Organizational document management system
- K5** Organizational communication protocols, e.g. who needs what information
- K6** Basic spelling and grammar
- K7** Sector, trade and project terminology and common abbreviations
- K8** Communication that constitutes harassment and discrimination

Contextual Variables

Range of Context

- Depending upon the message and audience, process may be formal or informal.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- | | |
|---|---|
| <input type="checkbox"/> Recall, Remember | <input checked="" type="checkbox"/> Analyze |
| <input type="checkbox"/> Understand | <input type="checkbox"/> Evaluate |
| <input type="checkbox"/> Apply | <input type="checkbox"/> Create/Transform |

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Software, e.g. Microsoft Word
- Communication tools, e.g. email

Major Category

Personal Competencies

Competency Area

Communicate Effectively

Competency Unit

Negotiate with internal and external stakeholders

Purpose

Negotiating effectively with internal and external stakeholders helps to ensure all parties are satisfied with the resulting outcomes.

Performance/Abilities

- P1** Determine who needs to be involved in negotiation
- P2** Determine own position:
 - represent project/organization's position, as required
- P3** Identify what is flexible and what is not
- P4** Present offer to other party
- P5** Acknowledge position or offer of other party
- P6** Discuss possible outcomes with other party:
 - remain open, honest and flexible
 - focus on positive outcomes
 - clarify position, as required, e.g. provide supporting information, discuss ramifications
 - focus on issue at hand
 - suggest alternatives
- P7** Analyze impacts of possible outcomes, e.g. schedule, resources/cost
- P8** Facilitate agreement
- P9** Confirm agreement in writing:
 - file agreement according to project/organizational protocol

Knowledge

- K1** Relevant legislation, e.g. Freedom of Information and Protection of Privacy
- K2** Organization policies, procedures and plans
- K3** Organization/project goals, vision and status
- K4** Organizational document management system
- K5** Effective communication practices, e.g. verbal versus non-verbal, characteristics of respectful communication
- K6** Project stakeholders and their contact information
- K7** Relevant government agencies and their contact information
- K8** Sector and project terminology and common abbreviations
- K9** Negotiation techniques and strategies

Glossary

- **Stakeholders:** individuals and groups who are impacted by the activities or decisions of others; the individuals and groups could be within (internal) or outside (external) of the organization or project, e.g. co-workers, supervisors, contractors, customers, the public, government, union, shareholders.

Contextual Variables

Range of Context

- Stakeholders involved in interactions will vary, e.g. tradespeople, team members, managers, agency representatives, and this may affect the tone of the communication, i.e. formal or informal.
- Physical location may change the way this skill is performed, e.g. all communication may have to occur via distance means.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- | | |
|---|--|
| <input type="checkbox"/> Recall, Remember | <input type="checkbox"/> Analyze |
| <input type="checkbox"/> Understand | <input checked="" type="checkbox"/> Evaluate |
| <input type="checkbox"/> Apply | <input type="checkbox"/> Create/Transform |

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Software, e.g. video chat, virtual meeting, Microsoft Word, project management software
- Communication tools, e.g. email, telephone

Major Category

Personal Competencies

Competency Area

Communicate Effectively

Competency Unit

Conduct meetings and presentations

Purpose

Conducting meetings and presentations effectively allows the sharing of information and ideas, which results in positive and solution-focused working relationships and working environments.

Performance/Abilities

- P1** Determine if meeting or presentation is required:
 - identify what message needs to be conveyed and within what timeframe
 - identify best type of meeting/presentation for the purpose
- P2** Determine who needs to be:
 - participant at meeting
 - in audience at presentation
- P3** Prepare for meeting/presentation:
 - confirm availability of key persons
 - prepare outline or agenda
 - make room arrangements, as required
 - determine resources or materials required
- P4** Inform participants/audience of location, start time and duration
- P5** Conduct meeting/presentation:
 - stay on topic
 - allow time for questions and feedback
- P6** Adjourn according to schedule
- P7** Document event, as necessary:
 - distribute documentation, as necessary
 - file according to organizational/project protocol
- P8** Complete any follow-up required, e.g. find answer to question asked during session

Knowledge

- K1** Relevant legislation, e.g. Freedom of Information and Protection of Privacy
- K2** Organization policies, procedures and plans
- K3** Organization/project goals, vision and status
- K4** Organizational document management system
- K5** Effective communication practices, e.g. verbal versus non-verbal, characteristics of respectful communication
- K6** Sector and project terminology and common abbreviations
- K7** Software applications for building visual presentations

Contextual Variables

Range of Context

- Stakeholders involved in meetings and presentations will vary, e.g. tradespeople, team members, managers, agency representatives, and this may affect the tone of the communication, i.e. formal or informal.
- Physical location may change the way this skill is performed, e.g. all communication may have to occur via distance means.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- Recall, Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create/Transform

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Software, e.g. Powerpoint, project management software, video chat, virtual meeting
- Communication tools, e.g. email, telephone, projectors, flip charts

Major Category

Personal Competencies

Competency Area

Communicate Effectively

Competency Unit

Exchange information with internal and external stakeholders

Purpose

Interacting effectively and appropriately with internal and external stakeholders helps to ensure that operations run smoothly and allows managers, supervisors, co-workers, customers and other stakeholders to be proactive before small issues become large problems. Exchanging relevant and accurate information in a timely manner is essential for good performance and relations between individuals and stakeholder groups.

Performance/Abilities

- P1** Determine what information needs to be shared and within what timeframe:
 - respect confidentiality of sensitive information
 - tailor message to audience
 - collect information from stakeholders to make decisions or take action, e.g. communicate with host of co-generation station to meet their needs
- P2** Determine who needs information, e.g. department head, team members, customers, government agency
- P3** Determine best method for communicating information, e.g. conduct meeting, hold conference call, send email, share data analysis via SCADA
- P4** Share information through best method, including:
 - conduct or participate in face-to-face meetings
 - communicate over distance, e.g. call department of environment about a log jam in dam, share video or photos of equipment and systems with maintenance team
 - email information and updates to have permanent record of exchanges
 - use specialized communication/reporting software, e.g. OASIS, Reliability Coordinator information System
 - use three-way communication to confirm understanding and ensure safety
- P5** Monitor own communication devices frequently, e.g. smartphone, email
- P6** Document communication, as necessary:
 - file according to organization's information/record management system

Knowledge

- K1** Relevant legislation, e.g. NERC Standards of Conduct, Freedom of Information and Protection of Privacy
- K2** Organization policies, procedures and plans
- K3** Organizational goals, vision and status
- K4** Organizational information/record management system
- K5** Effective communication practices, e.g. verbal versus non-verbal, characteristics of respectful communication, three-way communication
- K6** Relevant stakeholders, e.g. team members, other departments, contractors, customers, government agencies,
- K7** Information needs of stakeholders
- K8** Industry terminology and common abbreviations
- K9** Basics of how overall electricity system works and how components impact each other, e.g. how distribution and transmission affect generation

Glossary

- **Stakeholders:** individuals and groups who are impacted by the activities or decisions of others; the individuals and groups could be within (internal) or outside (external) of the organization or project, e.g. co-workers, supervisors, contractors, customers, the public, government, union, shareholders.
- **Three-way communication:** sharing a message in three steps: 1. sender states message, 2. receiver repeats message, 3. sender confirms that receiver has repeated message correctly or corrects any misunderstandings.

Contextual Variables

Range of Context

- Stakeholders involved in interactions will vary, e.g. tradespeople, team members, managers, agency representatives, and this may affect the tone of the communication, i.e. formal or informal.
- Physical location may change the way this skill is performed, e.g. all communication may have to occur via distance means.
- Continuous training for proper communication, and monitoring of practice, is commonplace for many occupations within the industry.

Level of Practice

- Frontline
- Supervisor
- Manager/Executive

Adapted Bloom's Taxonomy

- | | |
|---|---|
| <input type="checkbox"/> Recall, Remember | <input checked="" type="checkbox"/> Analyze |
| <input type="checkbox"/> Understand | <input type="checkbox"/> Evaluate |
| <input type="checkbox"/> Apply | <input type="checkbox"/> Create/Transform |

RWATEM (Requisite Work Aids, Tools, Equipment or Materials)

- Software, e.g. video chat, virtual meeting, OASIS, RCIS
- Communication devices, e.g. email, telephone

Notes

Electricity Human Resources Canada would like to acknowledge all of the industry subject matter experts from across Canada who were involved in drafting, reviewing and validating this National Occupational Standard.