

S & T Management Core Competency Profile

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Overview

The purpose of the following Draft Core Competency Profile is to provide a guide for Managers of Science and Technology to monitor their professional development with a view to identifying and measuring areas of knowledge, skill and ability that may be improved. It is intended to be a tool for directing education, training and future development and is NOT intended as a tool for appraisal. The profile has been created by drawing on existing profiles including the PCS as well as input from community stakeholders.

The final Core Competency Profile will take into consideration three different levels of management and will also provide the “Science Differentiators” for the respective Competencies. It should be noted that some of the Competencies may require adjustment to suit the unique characteristics of managing within individual departments. Please note that “communication” is an element of many of the competencies and therefore, it has been captured within each competency rather than given separate consideration.

1.0 Technical

The scientific and technical experience and skills that are the basic qualifications for a science management role. It comprises knowledge of one’s own scientific discipline(s) and, at management levels, an ability to integrate that knowledge across the total science spectrum. Using this knowledge base, the manager is able to recognize emerging trends and priority issues in the scientific community.

1.1 Possesses knowledge of, and demonstrated ability in, one or more fields of science and technology

- manages complex technical issues within the mandate of the work group
- conceptualizes the movement of data to information and to knowledge in a relevant manner to society
- monitors scientific and technological trends and uses this knowledge to anticipate new and promising areas for research and development
- explains the scientific method, including the development and testing of hypotheses
- is familiar with the broad range of policy issues related to the scientific or technical domain for which he/she is responsible
- can read and evaluate technical terminology and concepts in his/her area of responsibility
- merits the respect of the science and technology community on the basis of demonstrated professional ability
- demonstrates an understanding of the broad principles and practices of science and technology
- continuously updates his/her personal knowledge in the field of science and technology
- articulates science and technology purpose, values and business plan
- critically and accurately analyses trends, problems situations and issues
- develops strategies to facilitate the resolution of science and technology issues and problems

- acquires, synthesizes and integrates information from various sources and develops practical applications
- possesses knowledge of the science publication system
- possesses knowledge of the innovation process
- translates analysis into sound recommendations
- understands the issues surrounding intellectual property management and technology transfer

2.0 Self-management

The ability to effectively and responsibly manage your own actions, well being and time to achieve organizational goals, self-improvement and personal growth. To maintain an effective work/life balance in response to a stressful, challenging and dynamic work environment.

2.1 Monitors personal health and effectiveness

- remains optimistic with individuals and maintains a positive attitude about the organization during difficult and challenging situations
- has an awareness of the impact of workload on personal physical and mental well being and adjusts work and lifestyle appropriately

2.2 Demonstrates personal integrity and ethical behavior

- has the courage to speak out effectively and in an appropriate and timely manner
- delivers on promises and honors commitments
- avoids conflict of interest and maintains political neutrality
- avoids promoting personal lines of scientific and technology investigation if they are not soundly based on client needs or in line with departmental policy orientations

2.3 Possesses self-awareness and self - assurance

- understands the impact of personal behavior on others
- behaves in a prudent and accountable manner in carrying out responsibilities
- addresses risks, mistakes and criticism in a constructive manner
- maintains a realistic view of one's strengths and limitations
- knows when and how to seek assistance

2.4 Able to manage stress and maintain work/life balance

- understands the impact of stress on self
- recognizes stressors and warning signs
- develops coping mechanisms
- remains effective in judgment and decision-making
- invests extra effort when required without jeopardizing own balance

2.5 Deals with complexity and maintains a high tolerance for ambiguity

- questions traditional assumptions and generates innovative solutions
- uses time management techniques to organize work and set priorities
- deals with ambiguity and stays on track
- retains composure and professionalism under pressure

2.6 Self Improvement & Personal Growth

- uses self-evaluations and feedback from others to build on strengths and improve weaknesses
- endeavors to keep up to date with pertinent public service and departmental knowledge through professional development
- desires to learn and improve continuously through the acquisition of new knowledge, skills and abilities
- learns from past experiences/mistakes and is willing to help others learn from these experiences

3.0 Teamwork

The ability to work cooperatively with others, in a participatory or leadership role to create teams that use the combined strengths of individual members to accomplish organizational goals.

3.1 Able to work effectively in collaboration with and to contribute to the success of teams as a member and a leader

- seeks and accepts feedback openly
- states opinions in value free language and treats everyone fairly
- expresses opinions and disagreements with tact and honesty
- collaborates with others to meet objectives
- seeks multi-disciplinary input to improve projects
- respects and empowers team members
- builds cooperation, efficiency and service among team members
- understands the impact of stress upon others
- promotes the use of the peer review system
- uses their knowledge of the research process, applied and fundamental, to encourage scientific networks aimed at common problems
- fosters an environment that is motivating and encourages teamwork

3.2 Able to resolve conflict

- acquires new and more effective behaviours as context and roles change
- contributes to consensual solutions for better quality outputs
- objectively considers all views when creating solutions

- accepts challenges from others to existing ideas, procedures and policies by understanding and empathizing with their perspective, seeking out alternative ideas and suggestions as requested or appropriate
- speaks frankly, constructively and diplomatically

3.3 Respects and values diversity and is sensitive to differences

- recognizes that creative individuals may be non-conforming
- manages change and transition
- encourages and expresses ideas which may be unique or unconventional
- adapts ideas to the overall benefit of the team's ultimate goal

4.0 Leadership

The ability to recognize, attract, and administer talents to work toward a shared vision and purpose in the best interests of the organization, the people comprising it and the people it serves. The “team” here should be understood broadly as any group in which the person takes on a leadership role, formally or informally.

4.1 Assertiveness

- projects a sense of confidence and assurance to others
- confronts issues as they emerge, providing suggestions and taking unpopular positions when the situation warrants it
- remaining calm and objective in the face of conflict and taking prompt action to resolve differences quickly by providing necessary suggestions and support
- effectively expresses oral and written ideas and points of view
- delegates work to appropriate members of the organization

4.2 Provides effective leadership

- provides leadership through action to achieve results and long term goals within the department and the science and technology community
- establishes effective interpersonal relationships with all stakeholders
- defines and inspires a shared vision for the organization and articulates a path forward
- communicates the organization's messages to subordinates, colleagues and superiors
- expects success and maintains productive working conditions with self-assurance and a sense of direction
- sets ambitious but attainable goals
- encourages new information, new approaches and risk taking
- takes calculated risks based on available information
- shifts priorities and adapts to change
- fosters an environment based upon trust, respect and commitment
- takes ownership and responsibility for decisions
- demonstrates creativity in problem solving, in issue analysis and organizational dynamics

- motivates an audience toward decision/action/commitment

4.3 Exercises organizational influence internally and externally

- understands the vision, mission and business lines of the public service, the department and the work unit, and how they inter-relate
- exemplifies public service values in all working situations
- establishes influential connections inside and outside of the organization
- builds support for ideas and decisions
- understands organizational decision-making processes and how to influence them

5.0 Client & partnering management

Using a variety of communication vehicles to foster open communications, exchange information and discuss strategic science policy and programs with clients, within their own organization, across the Public Service, and in national and international science communities

5.1 Adopts a client and partner orientation

- takes opportunities to explore stakeholders' viewpoints
- manages processes using a client and partner centered approach
- maintains an awareness of the dynamics of service delivery, partnering relationships and the role of science in policy and service delivery.
- contributes to the success of other business lines in the organization

5.2 Promotes the organization's messages, products and services to clients and partners

- effectively communicates with peers and related scientific, service and policy communities
- presents science and technology in an understandable manner and is able to listen and interpret the needs of various groups
- promotes cooperative goals and builds trust with collaborators
- seeks and promotes national and international opportunities for partnering

5.3 Possesses strong negotiation and facilitation skills

- listens actively and asks appropriate questions
- identifies areas of common interest
- effectively negotiates to create mutually beneficial activities

5.4 Establishes productive partnerships

- refines or invents ways of doing business
- recognizes opportunities for partnering and collaboration and cultivates networks and alliances

- assesses the scope, membership and role of the partnership(s) required

6.0 Management

The ability to apply management principles and techniques to the management of all organizational resources. This involves translating management strategies into clear and practical operational realities. It is demonstrated by using management information to support cost effective and timely decisions and the willingness to take calculated risks in the pursuit of organizational goals.

6.1 Business Approach

- aligns short and long term goals with business plans
- makes a sound business case for new science and technology initiatives
- develops and manages service contracts
- participates in multi-disciplinary work teams
- takes responsibility for improving the department and making organizational change
- examines organizational procedures with a view to recommending improvements
- develops strategies that prevent and solve problems

6.2 Understanding, building and using formal and informal systems in a complex organizational environment to achieve business objectives

- recognizes the need for change and to adapt/alter courses of action to operate effectively in an unpredictable environment
- establishes alternative courses of action and organize people and activities to achieve results more effectively

6.3 Achieving expected results through the successful and timely completion of activities and delivery of programs

- establishes goals and organizes work by bringing together the necessary resources
- evaluates processes and results and makes appropriate adjustments
- assesses performance and results and identify steps to overcome obstacles, improve performance
- strikes a balance between allowing freedom of scientific inquiry and ensuring that S&T activities remain relevant to the organization's mandate
- prioritizes new research and technical developments in his/her group become recognized as organizational priorities

6.4 Understands and practices management principles

- plans work and deploys resources to deliver results
- assembles and manages resources (financial, human, material)

- understands the principles and practices of project, program, portfolio and research management
- identifies actions and priorities that will produce improvements
- ensures the use of good occupational safety and health work practices
- understands the Canadian parliamentary system
- comprehends the distribution of power, responsibility and accountability within the department
- understands the cabinet decision-making process, the legislative process and the process leading to the creation of laws

6.5 Attracting, retaining and developing talented individuals to channel energies and skills through meeting the operational goals of the organization and achieving their potential

- recognizes and rewards talent, contributions and effort
- seeks out and retains top people
- skillfully appraises people
- develops opportunities to stretch and motivate people
- ensures that employees are trained and developed to meet the short and long term needs of the organization
- provides coaching or mentoring to employees
- capitalizes on workplace diversity to meet organizational goals
- anticipates and plans for future human resource requirements

6.6 Provides performance management

- clarifies and gives feedback to keep activities on track
- sets effective accountability systems to review activities
- sets performance management goals and framework and communicates them to staff
- monitors performance and impacts upon people and issues
- evaluates results to foster future improvements
- understands the accountability framework and the requirements of the resource management framework

7.0 Responsibility to society

The ability to advocate core ethics and values appropriate for the science and technology community under the public trust and act in keeping with those values. The desire and ability to discover and address the needs and expectations of the public and serve the public interest.

7.1 Understands and is sensitive to the dynamics of policy making

- understands the policy making process in government

- is aware of the roles of elected officials and public servants
- understands the link between science and policy
- understands the role of science and technology in Canada

7.2 Respects the public trust and acts in the public interest

- ensures that the public trust is not violated
- understands the impact of laws upon the public service
- understands the broad range of mechanisms that protect the public interest
- demonstrates actions and behaviours that reflect a positive awareness of social responsibility
- understands and implements broad government agenda items which protect the public interest