

NASA Knowledge Management Competencies

We deliver world-class learning and development opportunities, and identify, maintain, and advance critical knowledge that empowers NASA to attain successful outcomes across missions and projects.



NASA Knowledge Management Competencies

NASA's Chief Knowledge Officer (CKO) community shares responsibility for maintaining NASA's critical knowledge in alignment with NASA's [Knowledge Policy for Programs and Projects](#) (NPD 7120.6). The CKO community encompasses a diverse range of experience and expertise across an array of disciplines; however, members maintain common skills that can be leveraged to support knowledge sharing, knowledge continuity, and knowledge transfer for the benefit of their organizations and teams.

This list of knowledge management competencies provides a descriptive approach to help promote understanding and awareness of the services, value, and opportunities afforded by the CKO community, and to provide a common language among CKOs and stakeholders to support NASA's mission.

Knowledge Services	
<ul style="list-style-type: none">• Knowledge Continuity• Lessons Learned• Relationship and Network Management• Knowledge Dissemination	<ul style="list-style-type: none">• Technical Credibility• Storytelling• Content Management and Curation• Knowledge and Digital Infrastructure
Organizational Culture	
<ul style="list-style-type: none">• Organizational Awareness• Organizational Development• External Awareness	<ul style="list-style-type: none">• Facilitation Skills• Team-building• Strategic Insight
<ul style="list-style-type: none">• Organizational Acumen• Planning and Evaluation• Influence/Negotiation• Decision-making	<ul style="list-style-type: none">• Problem Solving• Consistency and Accountability• Developing Others• Stakeholder Engagement



Knowledge Services

Knowledge of systems and processes to support knowledge flow, knowledge of strengths and weaknesses of different approaches, and ability to advise organizations in selecting appropriate solutions for knowledge challenges.

Knowledge Continuity: Identifying, capturing, evaluating, and transferring knowledge in an organized fashion to improve performance and reduce the risk associated with future programs, systems, and projects.

Illustrations:

- Advise organizations on conducting knowledge capture and transfer activities
- Facilitate knowledge continuity interviews and capture results
- Provide templates and checklists for knowledge continuity activities

Lessons Learned: Identifying, documenting, analyzing, storing, and retrieving lessons learned and utilizing effective tools and templates to capture and share lessons learned

Illustrations:

- Facilitate lessons learned meetings or pause and learn activities
- Review draft lessons learned documentation
- Guide teams in gathering and applying lessons learned

Relationship and Network Management: Connecting and brokering connections among experts and organization partners to advance knowledge sharing and support improved collaboration

Illustrations:

- Identify experts and facilitate connections across disciplines and organizations
- Advise organizations on potential analogous activities or partnerships

Knowledge Dissemination: Developing a targeted communications strategy and leveraging the right messages and techniques for a target audience

Illustrations:

- Articulates knowledge gaps and knowledge needs to guide communications planning
- Develops approaches to deliver messages to appropriate audiences



Technical Credibility: Leveraging technical knowledge to engage in discussions about a skill, practice, or expertise area, with or without personal experience in that area, as learned by ongoing interactions with the practitioners of the area or previous experience.

Illustrations:

- Demonstrates understanding of engineering and project management challenges to support inquiry and surface knowledge among teams

Storytelling: Describing events and activities to relay critical knowledge using a structured, engaging narrative and advising others on using this method to enhance communication effectiveness

Illustrations:

- Coaches teams and individuals in sharing insights through storytelling
- Uses stories effectively to illustrate key learning points

Content Management and Curation: Understanding good content strategy, including how to manage assets throughout their lifecycle, the role of metadata and taxonomy, and structuring and providing access to content so that it is findable at the point of need

Illustrations:

- Advise organizations on considerations for organizing and surfacing information
- Partners with information technology and digital services providers to ensure appropriate storage and findability of resources

Knowledge and Digital Infrastructure: Identifying a need for and knowing where or how to gather information and data; advising organizations on decision-making regarding information and data systems. Maintaining an understanding of whether/when to use digital systems to support organization needs/requirements.

Illustrations:

- Determines appropriate uses of digital infrastructure
- Partners with information technology and digital services providers to ensure platforms are usable and appropriate for knowledge-sharing requirements



Organizational Culture

The ability to develop a comprehensive strategy to guide change, apply established change management techniques, and understand the prevailing organizational culture(s) and how to operate within them.

Organizational Awareness: Understanding work approach and style as it relates to NASA's functional, social, cultural, and political structure and relationships to achieve Agency, Mission Directorate, Center, program, and project goals.

Illustrations:

- Demonstrating understanding of agency history and its application to current activities
- Advising leadership and team members on organizational practices and policy considerations

Organizational Development: Understanding the principles of organizational development and change management theories and their applications to support organizational learning, including identifying and leveraging opportunities for continuous improvement and/or process improvement

Illustrations:

- Analyzing knowledge sharing practices to support organizational productivity and process improvements
- Identifying knowledge siloes and practices that inhibit knowledge sharing and making recommendations to resolve them

External Awareness: Maintaining awareness of local, national, and international policies and trends that affect the organization and shape stakeholders' views; maintaining awareness of the organization's impact on the external environment

Illustrations:

- Incorporating external factors in development of knowledge management strategy
- Providing context for lessons learned and knowledge sharing challenges that affect teams and organizations



Facilitation Skills: Supporting collaboration and communications among diverse groups to share critical knowledge; showing understanding, courtesy, tact, empathy, concern, and politeness to others; demonstrating sensitivity to diversity of culture, thought, race, gender, disability, and other individual differences

Illustrations:

- Leading and facilitating discussions at workshops and meetings
- Advising meeting leaders on practices to elicit input from meeting participants

Team-building: Working cooperatively with diverse team members; designing, facilitating, and managing team processes; developing and implementing strategies to promote team morale and productivity; motivating and rewarding team members' performance; managing relationships among team members, customers, stakeholders, and partners

Illustrations:

- Facilitating brainstorming sessions, conflict resolution, negotiation and problem-solving, communication, collaboration, integration, and other team meetings.
- Identifying and providing support for opportunities for teams to share knowledge and collaborate or improve collaboration practices

Strategic Insight: Identifying emerging needs and addressing big-picture, cross-disciplinary, and complex problems with logic, synthesis, and creativity

Illustrations:

- Analyzing organizational knowledge for alignment with mission or organizational goals
- Developing knowledge maps to support gap analyses



Leadership

Influences, motivates, and challenges others; adapts leadership styles to a variety of situations.

Organizational Acumen: Leveraging organizational awareness and organizational understanding to develop and adapt strategies to support the organizational mission

Illustrations:

- Identifying agency guidance, policies, or other resources that should guide organizational decision-making

Planning and Evaluation: Organizing work, setting priorities, and determining resource requirements; determining short- or long-term goals and strategies to achieve them; coordinating with other organizations or parts of the organization to accomplish goals; monitoring progress and evaluates outcomes

Illustrations:

- Coordinating knowledge services projects in support of organizational goals

Influence/Negotiation: Persuading others; building consensus through give and take; gaining cooperation from others to obtain information and accomplish goals

Illustrations:

- Helping organizations and teams to understand and gather knowledge internally and externally

Decision-making: Making sound, well-informed, and objective decisions; perceiving the impact and implications of decisions; committing to action, even in uncertain situations, to accomplish organizational goals.

Illustrations:

- Gathering information from diverse sources to inform organizational decision making

Problem Solving: Identifying and analyzing problems; weighing relevance and accuracy of information; generating and evaluating alternative solutions and making recommendations for resolution

Illustrations:

- Collaborating with teams to resolve challenges in knowledge sharing



- Analyzing and assessing data with teams and gathering insight from team members to address problems

Consistency and Accountability: Contributing to maintaining the integrity of the organization; behaving in an honest, fair, and ethical manner. Demonstrating consistency in words and actions.

Illustrations:

- Demonstrating fairness and equity in working with diverse groups

Developing Others: Mentoring, coaching, and supporting the ability of others to perform and contribute to the organization by providing ongoing feedback and by providing opportunities to learn through formal and informal methods

Illustrations:

- Leading and coaching teams and individuals and supporting individual and group learning through these activities

Stakeholder Engagement: Focusing on the needs and point of view of customer groups (i.e., employees or others who use KM tools and approaches) and developing effective partnership with these groups

Illustrations:

- Collecting knowledge from wide ranging stakeholder groups
- Maintaining insight into stakeholder needs and priorities
- Supporting knowledge sharing with stakeholders through effective communications