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Bill Curtis
TeraQuest Metrics, Inc.

William E. Hefley
Q-Labs

Sally A. Miller
Software Engineering Institute

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SEI Joint Program Office
HQ ESC/DIB
5 Eglin Street
Hanscom AFB, MA 01731-2116

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FOR THE COMMANDER

Norton L. Compton, Lt Col., USAF
SEI Joint Program Office

Competency-Based Assets

A process area at Maturity Level 4: Predictable

Purpose

The purpose of Competency-Based Assets is to capture the knowledge, experience, and artifacts developed in performing competency-based processes for use in enhancing capability and performance.

Description

A *competency-based asset* captures the knowledge, experience, or artifacts developed in performing competency-based processes within an organization. A competency-based asset is a bundle of information or an artifact that has been prepared in standard format and made available for widespread use. As an organizational asset, it becomes a component of one or more workforce competencies. The concept of a workforce competency is expanded at the Predictable Level to include not just the knowledge, skills, and process abilities of individuals and workgroups, but also the accumulated assets that can be reused by other members of their competency community. Thus, competency-based assets include many of the concepts discussed in areas such as knowledge management, learning organizations, or reusable product components. The representation of competency-based assets for future deployment is determined by standards set by the organization or within a specific workforce competency.

Competency-Based Assets involves encouraging individuals and workgroups to capture and share the information and artifacts they developed while performing competency-based processes. Selected bundles of information or artifacts are organized into competency-based assets. These competency-based assets are integrated into competency-based processes for use in performing business activities. Information on the use of these assets is also captured. Competency-based assets are incorporated into competency development activities, and mentoring activities are structured to deploy them. Competency-based assets are made available for use through information and communication technology. Workforce practices and activities are adjusted to encourage the development and use of competency-based assets.

Goals

Goal 1   The knowledge, experience, and artifacts resulting from performing competency-based processes are developed into competency-based assets.

Goal 2   Competency-based assets are deployed and used.

Goal 3   Workforce practices and activities encourage and support the development and use of competency-based assets.

Goal 4   Competency-Based Assets activities are institutionalized to ensure they are performed as defined organizational processes.

Commitment to Perform

Commitment 1   The organization's stated values encourage knowledge sharing between individuals and workgroups, when appropriate.

> Refer to Commitment 1 of the Communication and Coordination process area for information regarding the establishment and communication of organizational values and the types of the workforce issues that might be covered in the organization's stated values. Also refer to Commitment 1 of the Participatory Culture process area for information regarding extending these core values to address open communication and participation in decision making by individuals and workgroups.

Commitment 2 **The organization establishes and maintains a documented policy for developing and using competency-based assets.**

Issues typically addressed in the policy include:

1. Competency-Based Assets activities, including capturing and exploiting the competency-based assets of the organization, serve its business objectives and stated values.

2. Knowledge, experience, and artifacts gained from performing competency-based processes are captured and retained for use.

3. Competency-based knowledge, experience, and artifacts are incorporated into competency development and business activities.

4. Workforce practices are adjusted to motivate capturing and exploiting competency-based knowledge, experience, and artifacts.

5. Appropriate professionals are involved, as needed, in ensuring that activities involved in capturing and exploiting the organization's competency-based assets comply with any contracts or similar agreements with other organizations regarding any of these assets.

6. Workforce practices and activities relating to the development and use of competency-based assets comply with relevant laws, regulations, and organizational policies.

> Human resources or other appropriate professionals are consulted to ensure that the activities involved in capturing and exploiting the organization's competency-based assets comply with relevant laws, regulations, and organizational policies.

Commitment 3   **An organizational role(s) is assigned responsibility for coordinating across the organization the activities involved in capturing and reusing competency-based assets.**

> Examples of individuals who might coordinate various Competency-Based Assets activities include the following:
>
> - Operational managers and executives
> - Knowledge officers or managers
> - Quality, efficiency, or performance experts
> - Human resources or other appropriate professionals
> - Training or development groups
> - Competency ownership groups
> - Information technology specialists
> - Measurement or process improvement groups

Ability to Perform

Ability 1   **Within each unit, an individual(s) is assigned responsibility and authority for ensuring that members of the unit participate in capturing and using competency-based assets, as appropriate.**

> Examples of responsibilities to be performed within units include the following:
>
> - Ensuring that knowledge, experience, and artifacts are captured from performing competency-based or interdisciplinary processes
> - Competency-based assets are used in performing the unit's business activities
> - Workforce activities within the unit motivate the capture and exploitation of competency-based assets

Ability 2   **A responsible individual(s) coordinates the activities for capturing and using competency-based assets within each workforce competency.**

Ability 3   **Adequate resources are provided for capturing and using competency-based assets.**

1. The organization's workforce competencies have been defined.

> Refer to the Competency Analysis process area for the information regarding defining workforce competencies.

2. The competency development plans for the organization's workforce competencies are made available.

> Refer to Practices 2, 3, 4, and 5 of the Workforce Planning process area for information regarding establishing and maintaining the organization's competency development plans.

3. Experienced individuals with appropriate expertise are available to advise and assist in capturing, representing, retaining, and exploiting competency-based knowledge, experience, and artifacts.

> Examples of individuals with appropriate expertise include the following:
>
> - Subject matter experts
>
> - Knowledge management professionals
>
> - Mentors or coaches

4. Adequate resources are provided for capturing and exploiting competency-based assets, including resources such as:

❑   the technology needed for capturing or exploiting competency-based assets, including information technology for storing, processing, or presenting the organization's competency-based assets and communication technology for generating or sharing the organization's competency-based assets;

❑   search and presentation technology for using the organization's competency-based assets in competency development and work performance;

❏   tools and methods for incorporating the organization's competency-based assets into its business activities; and

❏   training needed to exploit the organization's competency-based assets.

5.   Adequate time is made available for capturing and exploiting competency-based assets, including:

❏   the effort of those whose knowledge, experience, or artifacts are being captured, and

❏   the effort of those who facilitate the capture and exploitation of competency-based knowledge, experience, or artifacts.

Ability 4   **Those responsible for various tasks involved in developing and deploying the organization's competency-based assets develop the knowledge, skills, and process abilities needed to perform their responsibilities.**

Learning opportunities are provided in techniques for capturing and reusing the organization's competency-based assets that include topics such as:

❏   capturing competency-based assets,

❏   representing and packaging competency-based assets for reuse,

❏   disseminating competency-based assets,

❏   assisting individuals and workgroups in sharing competency-based assets,

❏   storing and retrieving competency-based assets,

❏   building repositories of competency-based assets,

❏   integrating competency-based assets into competency-based processes, and

❏   developing and exploiting the organization's intellectual capital.

Ability 5   **Individuals involved in capturing or using competency-based assets develop the knowledge, skills, and process abilities needed to perform their responsibilities.**

1.   Individuals and workgroups are prepared in methods for capturing knowledge, experience, and artifacts that result from performing competency-based or interdisciplinary processes.

2. Individuals and workgroups are prepared in methods for sharing the knowledge, experience, and artifacts that result from performing competency-based or interdisciplinary processes with others who might benefit from them.

3. Individuals and workgroups are prepared in methods for using competency-based assets in performing their business activities.

Ability 6   **The practices and procedures for capturing or using competency-based assets are defined and documented.**

1. Practices and procedures are defined and documented at the organizational or unit levels, as appropriate.

2. Guidelines for tailoring the practices and procedures for use in different circumstances are documented and made available, as necessary.

3. The individual(s) assigned responsibility for coordinating Competency-Based Assets activities across the organization ensures that defined practices and procedures are:

   ❏ maintained under version control,

   ❏ disseminated through appropriate media,

   ❏ interpreted appropriately for different situations, and

   ❏ updated through orderly methods.

4. Experiences, lessons learned, measurement results, and improvement information derived from planning and performing Competency-Based Assets practices are captured to support the future use and improvement of the organization's practices.

Practices Performed

Practice 1   **Individuals and workgroups capture and retain information and artifacts that emerge from performing competency-based processes.**

1. Competency-based processes are augmented with tasks for capturing information and artifacts developed while performing business activities.

> Refer to Practice 8 of the Competency Development process area for practices that encourage the capture of competency-based experience and information. At the Defined Level, the capture of this experience and information is less formal and may not be included in the definition of competency-based processes. However, at the Predictable Level, the capture of competency-based information and artifacts is formalized and becomes an ordinary part of the competency-based processes.

> Examples of tasks that can be augmented for capturing information and artifacts include the following:
>
> - Postmortem reviews and analyses of projects
> - Phase-end reviews
> - Lessons learned sessions
> - Opportunities for improvement sessions
> - Process improvement or quality circle meetings
> - Debriefings
> - Shift or workgroup handoffs
> - Progress reporting mechanisms

2. Information that can contribute to the knowledge, skills, or process abilities of workforce competencies is captured and retained.

> At the end of tasks, assignments, phases, projects, or other discrete units of work, individuals and workgroups expend effort in capturing information learned through experience that may be useful in performing future business activities. Some of this information is quantitative. Refer to the Quantitative Performance Management process area for practices involving the establishment and use of process measures.

> Examples of qualitative information that might be captured include the following:
>
> - Unexpected events or results
> - Variation in results under different conditions
> - Factors that affect processes or their results
> - Improvements in methods or processes
> - Means for reducing variation in process or result
> - Relationships between parameters such as effort, schedule, cost, and quality
> - Opportunities for innovation in product or process
> - Rationale for decisions and their outcomes
> - Customer habits or preferences

3. Artifacts developed while performing competency-based processes are retained.

> Artifacts are retained in repositories appropriate to the type of competency-based processes that produced them. Examples of artifacts that might be retained include the following:
>
> - Design documents
> - Templates for designing solutions
> - Documentation of products or internal systems
> - Plans
> - Process descriptions
> - Notebooks
> - Presentations
> - Audit reports, lessons learned, or postmortem reports
> - Test results
> - Minutes and other records from meetings

Practice 2   **Communication vehicles are established to support the sharing of competency-based information and artifacts within and among competency communities.**

> Not all information and artifacts developed through performing competency-based processes are selected for treatment as a competency-based asset. Nevertheless, some information or artifacts may be valuable to others in a competency community. Individuals and workgroups are encouraged to capture and share information and artifacts informally when they believe others could benefit. In this case, the organization provides communications vehicles, but remains passive with regard to how information and artifacts are represented and shared. As a result, these information and artifacts are a local rather than an organizational asset. When a bundle of information or an artifact experiences widespread use, it becomes an organizational asset. Informal usage patterns may provide valuable guidance in setting strategies and selection standards for developing organizational competency-based assets.

> Examples of communication vehicles to support sharing include the following:
>
> - Email
> - Electronic bulletin boards
> - Lessons learned repositories
> - Knowledge management systems
> - Intranets
> - Video-conferencing
> - Periodic meetings or forums
> - Mentoring or coaching
> - Communication between members of a competency community

Practice 3   **A strategy for developing and deploying competency-based assets is created for each affected workforce competency.**

1. The organization identifies the workforce competencies where capture, development, and use of competency-based assets are determined to have sufficient business benefit.

> Strategies for developing competency-based assets are generally specific to each workforce competency, but may incorporate elements related to programs, product lines, or the entire organization. Creating competency-based assets for some workforce competencies may not be judged to have sufficient business benefit to justify inclusion in the strategy. Thus, the strategy and resulting activities may target selected workforce competencies.

2. Within each affected workforce competency, a strategy for competency-based assets is established and maintained.

> Examples of issues to be covered in the strategy for competency-based assets within each affected workforce competency include the following:
>
> - Identification of the business objectives addressed through developing competency-based assets
>
> - How the creation of competency-based assets within this workforce competency serves organizational objectives
>
> - Identification of the mechanisms for acquiring source material for competency-based assets
>
> - Guidelines and criteria for selecting information and artifacts to be incorporated into competency-based assets
>
> - Methods for developing competency-based assets
>
> - Organization-level or workforce competency-level standards to which competency-based assets must comply
>
> - Methods for deploying competency-based assets
>
> - Plans for incorporating competency-based assets into competency development activities
>
> - Approaches for using competency communities for development and deployment of competency-based assets
>
> - How workforce practices are adjusted to motivate contribution to, and use of, competency-based assets

3. Within each workforce competency, guidelines and criteria are established for deciding which bundles of information and artifacts are sufficiently valuable to be developed into competency-based assets.

> Competency-based assets are products typically developed for users internal to the organization. Occasionally, external users may have access to competency-based assets. Since these assets are expected to produce value for the organization, they are developed with process standards similar to those used for developing products provided to customers. Quality and other standards may differ from those applied to external products or services since they must be adjusted to be appropriate for internal use.

> Examples of guidelines and criteria for selecting competency-based assets to be developed include the following:
>
> - a knowledge management strategy
> - enhanced ability to achieve business objectives or competitive advantage
> - value for increasing the knowledge, skill, or process abilities of others in the competency community
> - ability to improve the performance of individuals or workgroups within the competency community
> - ability to reuse assets in future business activities
> - ability to reduce effort or increase quality
> - value to members of the organization outside the competency community

4. Standards for representing competency-based assets are established at either the workforce competency level or at the organizational level.

> Standards for representing competency-based assets include the following:
>
> - Standards for terminology and use
> - Requirements for completeness, correctness, and other quality attributes
> - Semantic structure and organization
> - Representation of content
> - Format for storage and presentation
> - Archiving and access methods

5. Methods and processes are defined for:
   - ❏ capturing competency-based assets,
   - ❏ sharing competency-based assets, and
   - ❏ using competency-based assets.

6. The strategy and standards for selecting and developing competency-based assets are communicated to each competency community.

7. Responsibilities are assigned for acquiring, developing, deploying, and maintaining competency-based assets.

Practice 4   **Selected components of competency-based information and artifacts are organized into competency-based assets and made available for use.**

1. Information and artifacts produced within a competency community are selected according to appropriate standards and criteria for incorporation into competency-based assets.

2. Responsible individuals or workgroups transform information and artifacts into competency-based assets using appropriate methods and complying with relevant standards.

3. Competency-based assets are made available for use.

> Refer to Practice 7 of the Competency Development process area for information regarding communication vehicles within a competency community.

> Examples of mechanisms for deploying competency-based assets for use include the following:
>
> - Intranets and other electronic media
> - Asset repositories containing text, graphics, video, audio, or other forms of information
> - Remote communication access methods
> - Best practices networks
> - Competency development materials
> - Integration into competency-based processes
> - Integration into product development or service delivery technology

4. Version control is established for competency-based assets.

> Examples of issues to be addressed in establishing version control include the following:
>
> - Identification of assets to be placed under version control
> - Methods for logging problems or defects in the assets
> - Change control procedures
> - Mechanisms for releasing assets
> - Mechanisms for tracking or auditing the status of an asset
> - Mechanisms for maintaining multiple versions of an asset for different uses

5. When competency-based information and artifacts are developed into competency-based assets, actions are taken to ensure they are consistent with workforce competency descriptions.

Practice 5   **Competency-based assets are updated to reflect periodic revisions in the knowledge, skills, and process abilities constituting workforce competencies.**

1. Actions are taken to ensure competency-based assets are consistent with definitions of the knowledge, skills, and process abilities constituting workforce competencies:

   ❏ Competency-based assets are periodically reviewed to ensure they are consistent with workforce competency descriptions.

   ❏ When revisions are made to workforce competency descriptions, related competency-based assets are revised as necessary to maintain consistency.

   ❏ Information and artifacts captured from performing competency-based processes are reviewed to discover if they indicate needed revisions to workforce competency descriptions.

2. When appropriate, competency-based assets are incorporated into continuing revisions of workforce competencies.

> Refer to Practices 4 and 5 of the Competency Analysis process area for information regarding updating workforce competency descriptions and competency-based processes. Refer also to Practice 12 of the Competency Integration process area for information regarding updating integrated competency-based processes.

3. Competency-based assets are periodically reviewed for currency and are modified or removed when appropriate.

4. When appropriate, competency communities are involved in the process of maintaining and validating for use competency-based assets relevant to their workforce competencies.

Practice 6   **Competency-based assets are integrated into competency-based processes and related technologies, as appropriate.**

> Examples of incorporating competency-based assets into competency-based processes and related technologies include the following:
>
> - Revisions to processes based on knowledge of more innovative or efficient practices
> - Use of new artifacts (e.g., decision aids, templates for planning or design, reusable product components, trouble-shooting guides, customized service guides) for performing competency-based processes
> - Automatic production or coordination of artifacts in the process flow for development or service delivery
> - Immediate access to knowledge or information relevant to the performance of a competency-based or integrated competency-based process

1. Those responsible for developing and deploying competency-based assets evaluate the definition of competency-based processes to identify adjustments that will support incorporating these assets into standard work practices and business activities.

2. Workforce competency descriptions are revised to incorporate competency-based assets. These revisions may include:

❏ revisions of competency-based processes based on knowledge embodied in the asset or required for using the asset, or

❏ descriptions of the knowledge and skills embodied in the assets or required for using the assets.

3. Technologies are adjusted to deploy competency-based assets. These adjustments may include:

❏ electronically accessible repositories of competency-based assets,

❏ search tools for finding relevant competency-based assets,

❏ presentation media for displaying competency-based assets through means appropriate to the their most effective timing and use,

❏ communication technology for deploying competency-based assets remotely, and

❏ security mechanisms to ensure the protection and appropriate use of the organization's competency-based assets.

4. The incorporation of competency-based assets into competency-based processes is communicated to the competency communities affected.

Practice 7 **Individuals and workgroups use competency-based assets in performing their business activities.**

1. Individuals and workgroups receive preparation to incorporate competency-based assets into their performance of competency-based processes.

2. Individuals and workgroups plan (or replan) their committed work to incorporate competency-based assets where appropriate.

3. Assistance or mentoring is available to individuals or workgroups using competency-based assets.

Practice 8   **Information resulting from the use of competency-based assets is captured and made available.**

1. Information is captured on the use of competency-based assets.

> Examples of information on the use of competency-based assets include the following:
>
> - How the asset was used and any tailoring needed to accommodate   the use
> - New information learned or developed through using the asset
> - Extensions or new assets developed through use of the asset
> - Effort, cost, schedule, or other resource needs experienced from using the asset
> - Knowledge, skills, or process abilities gained through using the asset
> - Performance results achieved using the asset
> - Problems experienced in using the asset
> - Improvements needed to better utilize the asset

2. Information on experiences using competency-based assets is organized and made available for use.

> Information on experiences using competency-based assets can be incorporated into repositories, intranets, or other vehicles through which competency-based assets are accessed. Examples of how this information can be used include the following:
>
> - Guidelines for using the asset effectively
> - Sources of assistance or mentoring in using the asset
> - Accuracy of information contained in the asset
> - Evaluations of the appropriateness of an asset in different situations
> - Expectations about the benefits or results to be gained from using an asset
> - Methods for enhancing or expanding and asset
> - Limitations of an asset

3. Information characterizing the use of competency-based assets is used in revising or expanding these assets.

Practice 9   **Competency development activities incorporate competency-based assets.**

1. Programs of training and development in each of the organization's workforce competencies incorporate competency-based assets in the learning opportunities offered to individuals and workgroups.

2. Some learning activities are explicitly designed to impart the information contained in competency-based assets.

3. Competency-based assets are tailored as necessary to become effective components of the organization's competency development plans and activities.

Practice 10   **Mentoring or coaching activities are organized to deploy competency-based assets.**

> The basis for mentoring using competency-based assets at the Predictable Level is in making use of the process assets created in Practices 4 and 9 to support mentoring or coaching activities. Mentoring or coaching activities are organized to deploy competency-based assets. Thus, mentoring becomes a formal means of transferring a defined content of the knowledge, skills, and process abilities, typically contained in competency-based assets, to individuals and groups throughout the organization as an advanced form of competency development. Mentoring practices are more fully described in the Mentoring process area.

1. Within each workforce competency for which mentoring is appropriate, a mentoring process is defined to a level sufficient to ensure that those being mentored develop the appropriate level of competency.

> Refer to the Mentoring process area for components of a mentoring process. At the Defined Level, mentors and those they mentor are allowed to develop these relationships according to what they believed would be most effective. However, at the Predictable Level, the process is made sufficiently formal to ensure that mentors are consistent in the capabilities imparted to those being mentored.

2. Mentors receive preparation for imparting the documented knowledge, skills, and process abilities using a defined mentoring process.

3. Mentoring practices and activities are periodically reviewed to identify needed improvements or opportunities for better exploiting competency-based assets.

Practice 11   **Workforce practices and activities encourage and support the development and use of competency-based assets.**

1. Where appropriate, decisions concerning staffing and work assignments are adjusted to identify individuals with the greatest potential for contributing to and using competency-based assets.

2. Performance management practices and activities are adjusted to consider the contribution to, and use of, competency-based assets.

   ❏ Performance objectives at both the unit and individual levels include contribution to, and use of, competency-based assets.

   ❏ Ongoing discussions of work performance include feedback on an individual or workgroup's contribution to, or use of, competency-based assets.

   ❏ Each individual or workgroup's performance is assessed, in part, against contribution to, or use of, competency-based assets.

   ❏ Individuals and workgroups are recognized or rewarded for outstanding contribution to, or use of, competency-based assets.

3. The work environment is adjusted, as appropriate, to encourage or support the contribution to, or use of, competency-based assets.

Practice 12   **Compensation practices and activities are defined and performed to motivate the development and use of competency-based assets.**

1. The compensation system is adjusted, as needed, to motivate the development and use of competency-based assets.

2. Guidance and assistance for factoring the development and use of competency-based assets into compensation decisions is provided to individuals responsible for compensation decisions.

3. The basis on which the development and use of competency-based assets are factored into compensation decisions is discussed with each individual.

4. Individual compensation decisions affected by the development and use of competency-based assets are reviewed to ensure they maintain equity in the compensation system.

5. The compensation system is periodically reviewed and adjusted to improve its influence on the development and use of competency-based assets.

Measurement and Analysis

Measurement 1   **Measurements are made and used to determine the status and performance of activities for contributing to and using competency-based assets.**

Examples of measurements include the following:

- The rate and type of competency-based assets being captured

- Progress in packaging knowledge, experience, and artifacts into forms fit for dissemination and reuse

- The rate at which competency-based assets are disseminated through different sources

- The rate at which different repositories of competency-based assets grow and are accessed

- The rate at which competency-based assets are accessed

- The rate at which competency-based assets are incorporated into competency-based processes

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Measurement 2 **Measurements are made and used to determine the effectiveness of competency-based assets on improving competencies and performance.**

> Examples of measurements of the effectiveness of competency-based assets include the following:
>
> - Their effect on improving the rate of developing workforce competencies at the individual, workgroup, or organizational levels
> - Improved performance results at the individual, workgroup, unit, or organizational levels
> - Improved performance capability at the individual, workgroup, unit, or organizational levels
> - Increased motivation or retention

Verifying Implementation

Verification 1 **A responsible individual(s) verifies that the organization's activities for developing and using competency-based assets are conducted according to the organization's documented policies, practices, procedures, and, where appropriate, plans; and addresses noncompliance.**

These reviews verify that:

1. The capture and use of competency-based assets comply with the organization's policies and stated values.

2. The capture and use of competency-based assets comply with relevant laws and regulations.

3. Competency-Based Assets activities are performed according to the organization's documented practices and procedures.

4. Noncompliance issues are handled appropriately.

Verification 2   **Executive management periodically reviews the Competency-Based Assets activities, status, and results; and resolves issues.**

These reviews verify:

1. The appropriateness of activities for capturing and using competency-based assets at the organizational and unit levels.

2. Progress in capturing and using competency-based assets.

3. Results from reviews of Competency-Based Assets practices and activities.

> Refer to Verification 1 for information regarding reviews of Competency-Based Assets activities to ensure adherence to the following:
>
> - Relevant laws and regulations
> - Organizational policies, practices, and procedures

4. Status of resolution of noncompliance issues.

5. Trends related to capturing and using competency-based assets.

6. The organization's effectiveness in capturing and using competency-based assets.

Verification 3   **The definition and use of competency-based assets measures and information are periodically audited for compliance with organizational policies.**