

COMPETENCY MODEL CLEARINGHOUSE AUTHORING GUIDE

UNDERSTANDING AND WRITING NATIONWIDE COMPETENCY MODEL FRAMEWORKS



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The Competency Model Clearinghouse Authoring Guide for Competency Models

BACKGROUND

Purpose of This Guide

This guide explains the basic competency model elements and organizational structure used within the Competency Model Clearinghouse (CMC) for the nationwide Industry Competency Models, as well as providing suggested approaches to writing competency model content. Competency models are a versatile way for stakeholders in any industry to communicate the capabilities necessary for workers to successfully perform tasks in defined work settings. This guide will help competency model developers create dynamic, consensus-based competency models that clearly articulate workforce needs.

In addition, this guide provides information for individuals and organizations preparing nationwide Industry Competency Models for publication on the CMC website, as well as anyone interested in developing custom competency models using the CMC's Building Blocks Model (BBM) framework or an existing Industry Competency Model. The CMC requires all nationwide Industry Competency Models published on the CMC to be based on this conceptual framework. However, the approach described in this guide may be useful to practitioners seeking to create competency models for a wide variety of purposes beyond publication on the CMC.

The next section describes the CMC's Building Blocks Model (BBM) and its attributes, which serve as a comprehensive resource and guide for competency modeling. It emphasizes interoperability, facilitating the integration of data from multiple sources and the development of interconnected career and educational pathways. In addition, we will delve into the specific tiers of the BBM, exploring how they structure competencies and their significance in the realm of workforce development and education. Whether you're an experienced author or new to the process, the BBM offers simplicity and adaptability in creating competency models, providing

Explore more competency-modeling tools on the [Competency Model Clearinghouse](#):

- [Nationwide Industry Competency Models](#)
- [Build-a-Model Tool](#)
- [Models in Action Case Studies](#)
- [Competency Model Resource Database](#)
- [Customizing Competency Models](#)

the foundation for various applications, including nationwide Industry Competency Models and custom models.

STRUCTURE AND ORGANIZATION OF THE CMC'S BUILDING BLOCKS MODEL

Competencies and Competency Models

Attributes of the CMC's Building Blocks Model

The CMC's Building Blocks Model (BBM) is both a resource and a guide for authors experienced in competency modeling or those new to the process. The BBM can be used to communicate fundamental workforce needs, as the basis for nationwide Industry Competency Models or custom competency models. The BBM facilitates competency modeling through the following:

- ▲ **Simplicity:** The basic format and structure of the BBM and its building blocks allows practitioners with any level of experience to create useful competency models, with input from a wide variety of stakeholders.
- ▲ **Adaptability:** Competency models based on the BBM can be customized for a wide range of applications, from communicating workforce needs regionally or nationwide to enabling workforce exploration or supporting the development of educational curricula and credentials.
- ▲ **Interoperability:** Competency models based on the BBM framework are easy to combine with data from other sources, to adapt for publication in open data formats, and to develop in concert with one another to create interconnected career and educational pathways.

Learn about the way one national organization used competency models to support the development of registered apprenticeships in this Models in Action case study: [Supporting Industry Career Pathways: NIIT's Development of Competency-Based Apprenticeships.](#)

The Building Blocks Model consists of six tiers that serve as a framework for understanding competencies needed in a specific workforce. Tiers 1 through 3, known as the Foundational Tiers, provide fundamental skills required for success in a job. Tier 1 covers personal and interpersonal competencies, which might include soft skills like communication. Tier 2 involves academic and technical competencies typically learned in elementary and secondary school, forming the basis for higher-level skills. Tier 3 focuses on workplace competencies that enable individuals to function effectively in an organizational setting.

Tiers 4 and 5, referred to as the Industry Tiers, are specific to industries or subsegments. Tier 4 includes technical competencies applicable across an entire industry, while Tier 5 deals with more specialized competencies within industry subsegments. For example, Advanced Manufacturing is an industry sector, on Tier 4, while competencies specific to the manufacturing of certain products, such as Semiconductors, go on Tier 5.

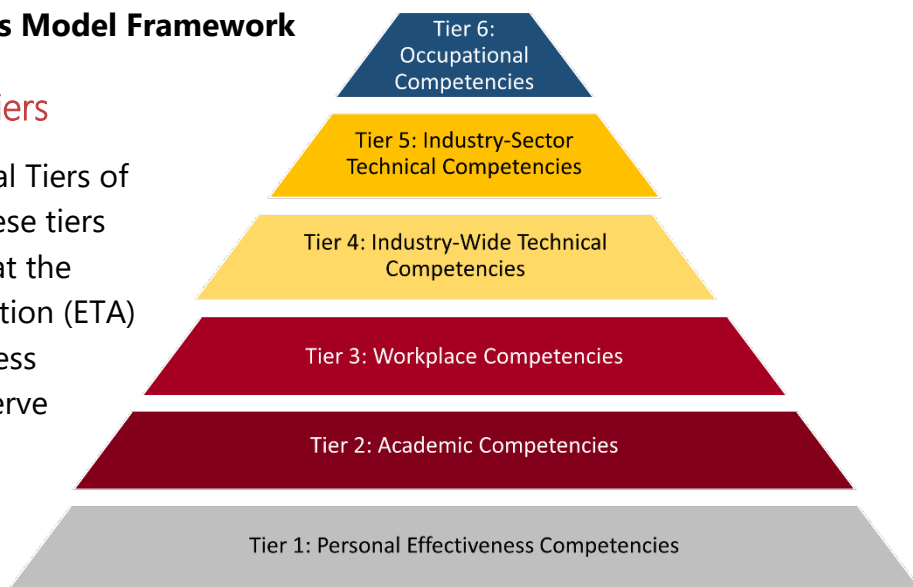
The BBM framework aids in competency modeling efforts, helping developers identify the skills needed for various roles. Tier 6 acts as a placeholder for occupation-specific and managerial competencies, which are highly specialized and specific to jobs.

In upcoming sections, we'll delve into the details of authoring Industry Competency Models within this framework, discussing guidelines for creating task and behavior statements, knowledge, skills, and tools and technologies needed in different industries and workforce development scenarios.

Figure 1. The CMC's Building Blocks Model Framework

Tiers 1 Through 3: Foundational Tiers

Tiers 1 through 3 are the Foundational Tiers of the CMC's Building Blocks Model. These tiers include generalized competencies that the Employment and Training Administration (ETA) has found to be fundamental to success throughout the workforce and that serve as the basis for all the Industry Competency Models found on the CMC. Numerous frameworks of this kind exist, and the BBM is a result of synthesizing these efforts while adhering to the guidelines outlined in this document. These competencies, sometimes referred to as "basic skills" or "core competencies," are often a prerequisite to learning new general and industry-specific skills, so they make up a foundation for success in school and the workforce.



Authors developing an Industry Competency Model for publication on the CMC should use the competencies identified in the Foundational Tiers of the BBM (or an existing Industry Competency Model) as the starting point for the Foundational Tiers of their own models. Industry Competency Model authors are permitted to add, change, or remove competencies from these tiers in their models, provided that they follow the guidelines for writing Key Behaviors, described in detail later in this guide. Authors developing custom competency models (i.e., not for publication on the CMC) are also encouraged to leverage the foundational competencies of the BBM as a basis for their work.

The CMC provides a strong foundation for any competency modeling effort so that model developers can focus on identifying more specialized competencies for an industry or region. Inclusion of these competencies in a model does not imply that all workers in the selected industry or field must demonstrate every competency or level of proficiency. It simply means

that employers in that industry are likely to consider these competencies valuable across various members of their workforce.

Tier 1: Personal and Interpersonal Competencies

Personal and interpersonal competencies, sometimes referred to as soft skills, are shown at the base of the pyramid in Figure 2 because they are essential in many life roles. Personal and interpersonal competencies often reflect attitudes and attributes acquired in the home or community and honed at school or in the workplace. They may be challenging to teach or assess directly, but they are valued by employers and important to success in the workplace.

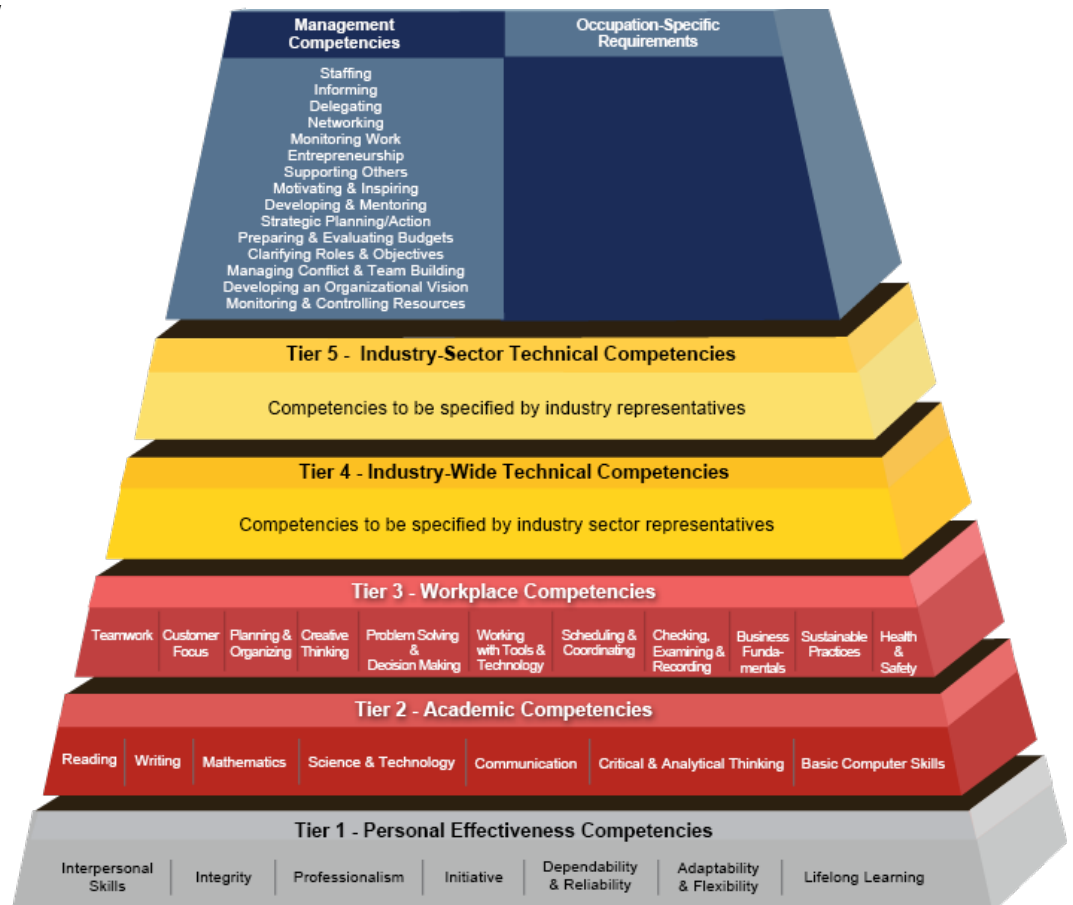
Tier 2: Academic and Technical Competencies

Tier 2 in Figure 2 contains competencies that are often learned in an academic setting. These competencies are likely to be relevant in nearly every position, although their relative importance may vary from one work role to another. They serve as an important foundation for competencies found higher up in the pyramid structure.

Tier 3: Workplace Competencies

Tier 3 in Figure 2 focuses on competencies that allow individuals to function effectively in an organizational setting. They build on the basic capabilities identified in Tiers 1 and 2, with an emphasis on competencies that may be both developed and used in the workplace. The competencies in Tier 3, therefore, represent job readiness skills that many employers expect entry-level employees to be able to perform with little or no specialized training, although

Figure 2. The CMC’s Building Blocks Model Framework Competencies



developing high levels of proficiency in these competencies may require extensive experience. Like the Academic Competencies, Tier 3 competencies are generally applicable to a large number of jobs, occupations, and work roles nationwide, regardless of industry.

Tiers 4 and 5: Industry Tiers

Tiers 4 and 5 in Figure 2, referred to as the Industry Tiers, include technical competencies that apply to many jobs, occupations, or work roles within a specific industry or industry subsegment or subsegments; or profession and optional professional specialization or specializations (for example, see [Home Energy Professional - Installation/Site Management Competency Model](#)). Competencies that are in demand across the entire industry are placed in Tier 4; competencies that cut across narrower industry subsegments are located in Tier 5. In general, Tiers 4 and 5 should be designed to support entry and advancement in occupations within the industry that span a variety of educational areas and levels.

As a rule, nationwide Industry Competency Models for publication on the CMC should be based on an industry or industry group, as identified in the North American Industry Classification System (NAICS). However, authors may work with the CMC to identify an appropriate model subject, such as a broad-based profession, if a relevant NAICS industry is not published on the CMC's website. Industry Competency Models on the CMC are typically titled according to the industry represented in Tier 4 or the subsegment in Tier 5.

The competencies found on tiers 4 and 5 are identified by the authors of each Industry Competency Model, which represent the skills, knowledge, tools, and technologies sought by employers in that industry nationwide. Representatives of an industry or profession specify and define these competencies as the main focus of development effort when creating new Industry Competency Models.

Competencies in Tiers 4 and 5 should have a nationwide geographic scope and fall within the specific industry or industry subsegment represented. That is, they apply to roles throughout the industry or industry subsegment and in all regions, making it possible to identify career pathways that enable workers to move across industry subsectors and geographic locations.

Authors are encouraged to identify key occupations that are distinctive to and in demand within the industry, or represent a major share of employment in the industry. –
Competency Model Clearinghouse

In addition, Tiers 4 and 5 should focus on competencies shared by key occupations, work roles, or jobs within the industry. Authors are encouraged to identify key occupations that are distinctive to and in demand within the industry. These may include jobs that are concentrated within the industry or a small number of related industries, such as nurses in health care–related industries. Key occupations may also reflect jobs responsible for work that distinguishes

the industry from other industries, even if that job or occupation is also found in other, unrelated industries. For example, electricians work in many industries, such as construction and energy generation and transmission, and can be a key workforce element in both.

Although there is no definitive rule for identifying key occupations when developing an Industry Competency Model, there are several approaches that model developers can take. When developing a custom model as part of a regional sector strategy approach, seeking input from sector partners is recommended. Models may also be developed by examining certification requirements or educational criteria, in which cases, the occupations covered will follow from the referenced subject matter.

For nationwide Industry Competency Models, the CMC suggests using industry staffing pattern data available from the U.S. Bureau of Labor Statistics to identify occupations with high levels of employment in the target industry. The model developer can then use resources such as the Department of Labor's O*NET (Occupational Information Network) to identify tasks, knowledge, and skills associated with these occupations and synthesize them to populate the model. For more information on using staffing pattern data to develop competency models, see the CMC's [Customizing Competency Models Through Convening Guide](#).

Tier 4: Industry-Wide Technical Competencies

The competencies included in Tier 4 represent the crosscutting tasks, knowledge, and skills needed by all the key occupations or positions within the industry or profession. As a result of their crosscutting nature, these competencies often include items that deal with comprehension, awareness, or analysis, as well as knowledge items shared across many work roles within the industry. Tier 4 must be included in all nationwide Industry Competency Models published on the CMC, which typically identify five to eight competency areas in Tier 4. However, the actual number of competency areas may vary according to the needs identified by the author. When Tier 5 is not included in a model, Tier 4 may include more specific, specialized competencies that would otherwise be placed in Tier 5.

Tier 5: Industry Subsegment Technical Competencies

Tier 5 is optional for Industry Competency Models. When included, it identifies competencies that are more specialized than those in Tier 4 and are shared across occupations or work roles in a specific industry subsegment. An industry subsegment is an identifiable group of key occupations, jobs, or work roles within an industry. It is, therefore, narrower in scope than Tier 4 but still wider in scope than a single job or occupation. When Tier 5 is included in a model, the competencies on this tier are typically more oriented toward technical tasks than those found in Tier 4, but Tier 5 should still identify competency areas, tasks, knowledge, and skills, rather than simply identifying or describing the industry subsegments.

Tier 5 may follow one of the two following organizational structures:

▲ **Single industry subsegment.** The blocks in Tier 5 in Figure 2 address only one subsegment of the industry. As in Tiers 1 through 4, each block represents a competency area, and the competencies included in the blocks are common across all occupations within the subsector. Because of the narrow focus on a single industry subsegment, the competencies, tasks, knowledge, skills, abilities, and other characteristics in the model may be relatively detailed. This approach accommodates three to eight competency areas.

▲ **Multiple industry subsegments.** Each of the blocks in Tier 5 in Figure 3 addresses a unique subsegment within the industry. Unlike the blocks in Tiers 1 through 4, each block in Tier 5 represents an entire subsegment. Competencies that are common across all jobs or occupations in each subsegment are listed within each block, along with associated tasks, knowledge, and skills. The more blocks the tier has, the more subsegments are represented, but because of the broader focus of each block, the competencies included are usually less detailed. This approach works best for three to six widely recognized subsegments.

Figure 3. Example, Single-Sector Tier 5: Residential Construction Model

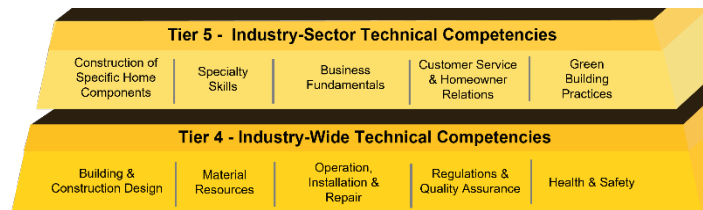


Figure 4. Example, Multiple-Subsegment Tier 5: Bioscience Model (Four Sectors)



Considerations for Developing Industry Tiers (Tiers 4 and 5)

Authors developing nationwide Industry Competency Models for publication on the CMC are advised to carefully consider the purpose of and audience for their models, as well as the time and resources available for the model development process. All Industry Competency Models published on the CMC must include Tier 4, but Tier 5 is optional. Developers may create a new Tier 4 for their model or use the Tier 4 from an existing model, with or without modifications. Furthermore, model authors may develop Tier 5 at the same time as Tier 4, or they may develop and publish Tier 4 first and then develop Tier 5 at a later time. Considering these options, model developers should consider the following:

▲ **Availability of resources.** The time and effort required to develop competencies for Tiers 4 and 5 can vary significantly among models. For example, if a model is based largely on preexisting job-specific competency models or certification requirements, development time may be shorter. It can also vary according to the number of staff members involved and the intensity of their engagement. Furthermore, developing additional competencies for inclusion in Tier 5 is likely to require additional time and resources beyond those

required to develop competencies for Tier 4, although developing both tiers at the same time may be more efficient than developing them at separate times.

- ▲ **Availability of subject matter experts.** The initial development of a competency model is often performed with the input of one or a small number of subject matter experts. The model will then need vetting by a larger group of experts, typically 12 to 15, which requires planning and logistical resources. Authors should also bear in mind that developing and vetting more detailed technical competencies may require more specialized knowledge than developing competencies that deal with comprehension, awareness, analysis, and industry-wide knowledge items. Therefore, the number and mix of necessary subject matter experts may vary depending on whether a Tier 5 (Figure 2) is being developed, and if so, whether it is being developed at the same time as Tier 4 or will be developed subsequently.
- ▲ **Positioning of the author's organization.** Organizations that have strong ties within one or more industry subsegments often have an easier path to success in developing competences for Tier 5, whereas organizations with a broader focus may prefer to develop a strong Tier 4 base that others can build on. Organizations with strong ties to a specific industry subsegment may choose to develop a Tier 5 for that subsegment only, even though other subsegments could also be viable subjects for a model.
- ▲ **Structure of the industry (or profession).** Industries that have a few, widely recognized subsegments may be good candidates for a multiple-subsegment Tier 5 or for the development of separate Tier 5 models for each subsegment. However, authors should investigate the extent to which the subsegments have different competency requirements rather than requiring similar competencies in different work roles. Industries with a high level of competency overlap in a few related fields may be good candidates for a single-subsector Tier 5.

In the context of a multiple-subsegment Tier 5, it is worth noting that it is “similar in scope and content” to several single-subsegment Tier 5 models all based on the same Tiers 1 through 4. In this multiple-subsector approach, the level of detail in Tier 5 is streamlined to ensure it can be accommodated within a single model. Given these considerations, authors are encouraged to evaluate whether their specific needs and target audience would be better served by developing a multiple-subsegment Tier 5 or establishing a robust Tier 4 that can serve as the basis for subsequent efforts to create distinct Tier 5 content for each industry subsegment.

Tier 6: Occupational Tier

Tier 6 is the uppermost tier in the Building Blocks Model and is a placeholder that represents the location where occupation-specific and managerial competencies fit into the overall structure of the framework. Within the BBM framework, occupational competencies represent the most specific level of competencies covering the narrowest scope of jobs or work roles.

Occupation-Specific Competencies

Occupation-specific competencies are not included in the Industry Competency Models published on the CMC, but the CMC will work with developers of Industry Competency Models to publish links or references to occupation-specific competency models developed in concert with an industry model.

Individual organizations often develop occupational competency models as part of their human resources function. Such models reflect the competencies required for success in a specific role within the context of that organization and may be used for performance management, creating job descriptions, and a variety of other functions. However, there are many sources of occupation-specific competency and skill information available from many sources for developers who seek to populate Tier 6 of their model.

O*NET contains a wealth of occupation-specific information that may be freely accessed and used to support competency model development. In addition, O*NET includes data such as typical task, occupational requirements (work activities and context), and worker requirements and characteristics (knowledge, skills, and abilities) for hundreds of occupations. For reference, model developers incorporating O*NET data into a competency model based on the BBM can add these elements of the O*NET Content Model as titles in Tier 6 of their model. Job descriptions and educational program curricula can also be excellent sources of information on occupational knowledge requirements.

Management Competencies

In addition to the generalized foundational competencies included in Tiers 1 through 3 of the BBM, ETA has also identified 15 generalized management competencies, which are included in the framework. These competencies are published on the CMC website and may be used freely in Industry Competency Models for publication on the CMC or in other competency modeling projects.

In the next section, we will delve into the intricacies of authoring Industry Competency Models within the framework of the CMC's Building Blocks Model (BBM). Furthermore, we will explore the guidelines for creating task and key behavior statements, knowledge statements, skill statements, and tool and technology statements within the BBM framework. Understanding these guidelines is important for effectively authoring Industry Competency Models that cater to the diverse needs of different industries and workforce development scenarios.

AUTHORING INDUSTRY COMPETENCY MODELS

Competencies in the Building Blocks Model framework are portrayed as "building blocks" sitting in tiers, as seen in Table 1, 2, and 3. Each competency block has a title and definition, as well as a list of associated statements that identify key behaviors, tasks, knowledge, skills, and

tools and technology related to the competency. Only competency titles are included in the pyramid graphic, a visual representation of the model. In the full presentation of a model, the competency titles, block definitions, and associated statements are organized in a sequential outline, and each element type is formatted uniformly throughout the model.

The numbering system for the sequential outline goes four levels deep (four digits separated by decimal points) as shown in Tables 2 and 3. Items on the fourth level may introduce a bulleted list of related items, which are placed on the fifth level of the outline structure.

The elements are organized in outline format as follows:

Table 1. BBM Competency Block Element Specifications

Outline level	Element types and characteristics
Level 1. Tiers	<p>Tier names</p> <ul style="list-style-type: none"> Standardized names that should not be changed when creating an Industry Competency Model or custom model
Level 2. Competencies	<p>Competency block titles</p> <ul style="list-style-type: none"> Short phrase that clearly and uniquely identify the competency Title case Up to 100 characters (recommended) 8–10 competency blocks per tier in Tiers 1–3 (recommended) 6–8 competency blocks per tier in Tiers 4–6 (recommended) <p>Competency block definitions</p> <ul style="list-style-type: none"> One or a few complete sentences that describe and define the competency Separated from the title by a colon Start with a verb ending in “ing” (i.e., gerund) (recommended Sentence case with end punctuation) Up to 315 characters (recommended)
Level 3. Titles	<p>Supporting statement titles</p> <p>Key behaviors (Tiers 1–3) and tasks (Tiers 4–6)</p> <ul style="list-style-type: none"> Short descriptive titles that describe a group of related associated statements and help readers navigate the model In Tiers 4–6, may be a custom title or may use standardized title of “Tasks” Start with a verb ending in “ing” (i.e., gerund) (recommended) No limit on number of titles included in each competency block Placement before knowledge, skills, and tools and technology titles, when present Sentence case without end punctuation Up to 380 characters (recommended) <p>Knowledge, skills, and tools and technologies titles</p> <ul style="list-style-type: none"> “Knowledge,” “Skills,” and “Tools and Technology” in that order Optional statement title within each competency block Sentence case without end punctuation

Outline level	Element types and characteristics
Level 4. Statements	<p>Supporting statements</p> <p>Key behaviors (Tiers 1–3) and tasks (Tiers 4–6)</p> <ul style="list-style-type: none"> • One sentence identifying a single key behavior or task, or a phrase introducing a list on Outline Level 5 • Initial plural action verb • Sentence case with end punctuation, using a colon if introducing a list on Outline Level 5 • Up to 3,000 characters (recommended) <p>Knowledge, skills, and tools and technologies</p> <ul style="list-style-type: none"> • One sentence identifying a single knowledge, skill, or tool or technology, or a phrase introducing a list • Sentence case without end punctuation except for a colon when introducing a list on Outline Level 5 • Up to 3,000 characters (recommended)
Level 5. Detail lists	<p>List items</p> <ul style="list-style-type: none"> • Bulleted list of related, discrete items, introduced by a supporting statement on Outline Level 4 • Sentence case without end punctuation

Considerations for Developing Competency Blocks

The building block structure and numbered outline format of the BBM make it easy for end users to navigate and understand, as well as providing competency model developers with flexibility in the way to best organize and present a model’s content. In keeping with the flexible nature of the BBM, the CMC does not maintain strict guidelines regarding organization of content within the industry tiers, provided that it is logical, coherent, and suitable for use by a wide range of end users. In this way, the Building Blocks Model, rather than imposing a rigid, one-size-fits-all approach, enables flexibility in the creation of models that reflect the unique nuances and idiosyncrasies of a given industry,.

The following suggestions are to assist developers in the Industry Competency Model authoring process but are not necessarily requirements for publication of a model on the CMC.

Most Industry Competency Models base their Tier 4 (Figure 2) on competencies made up of broadly defined responsibilities common to many jobs or work roles within the industry. In general terms, these might include competencies regarding specific work responsibilities, such as delivering specific products or services, planning and monitoring work, and performing routine maintenance. Tier 4 competencies may also include those focused on domains of expertise. For example, a Tier 4 competency might focus on basic, industry-specific knowledge that most workers are expected to have, such as relevant regulations or industry standards. In

most cases, there are at least some natural divisions that are apparent to subject matter experts with experience in the industry, who are often the best guides to identify these divisions.

When Tier 5 (Figure 2) is included in a model, the competencies on that tier are generally more specific and technical in nature. They may center around broad areas of specialization within the industry or categories of outputs that require distinct tasks or knowledge distinct from that required by other industry subsegments. In some cases, it may be useful to experiment with several different approaches to a model's structure and seek input from experts or practitioners on which approach provides the best fit.

Finally, model developers are encouraged to identify competency block titles and definitions that create a strong, logical organization for their model. A competency block title should be short but should clearly identify the main subject of the competency block. Competency block definitions should provide a clear sense of the overall function, purpose, or desired outcome of the tasks, knowledge, skills, and tools and technology the block references.

Competency model developers are encouraged to review several of the Industry Competency Models already published on the CMC to get a sense of various approaches.

Abilities Statements

Abilities are enduring attributes of the individual that influence performance and are frequently referenced in connection with knowledge and skills. While some approaches to competency modeling include documenting abilities, the CMC's BBM framework does not involve including abilities statements in Industry Competency Models published on the CMC. Identifying abilities as such is an important distinction in some applications. However, for the purposes of the Industry Competency Models, in almost all cases, the critical performance aspects conveyed by abilities can be captured effectively through behavior, task, and skill statements. Focusing on these types of supporting statements, therefore, reduces the complexity of developing and using the Industry Competency Models with little or no loss of critical content.

Table 2. Tier 4 Sample Competency Block Organization

4.1 Competency block title: Competency block definition.
4.1.1 Custom task title
4.1.1.1 Task
4.1.1.2 Task
4.1.2 Custom task title
4.1.2.1 Task
4.1.2.2 Task
4.1.3 Knowledge
4.1.3.1 Knowledge of . . .
4.1.3.2 Knowledge of . . . (introducing a list)
<ul style="list-style-type: none">• List item• List item
4.1.4 Skills
4.1.4.1 Skill in . . .
4.1.4.2 Skill in . . .
4.1.5 Tools and technologies
4.1.5.1 Tool or technology
4.1.5.2 Tool or technology

Table 3. Tier 5 Sample Competency Block Organization

5.1 Competency block title: Competency block definition.
5.1.1 Tasks
5.1.1.1 Task
5.1.1.2 Task
5.1.1.1 Task
5.1.1.2 Task
5.1.2 Knowledge
5.1.2.1 Knowledge of . . .
5.1.2.2 Knowledge of . . . (introducing a list)
<ul style="list-style-type: none">• List item• List item
5.1.3 Skills
5.1.3.1 Skill in . . .
5.1.3.2 Skill in . . .
5.1.4 Tools and technologies
4.1.4.1 Tool or technology
4.1.4.2 Tool or technology

Creating Task and Key Behavior Statements

Task and behavior statements constitute a core element of Industry Competency Models. Tasks, which are found in Tiers 4 and 5 of Industry Competency Models, are actions undertaken to attain specific objectives. Key behavior statements, found in Tiers 1 through 3 of the BBM and in Tiers 4 and 5 of specific Industry Competency Models, describe actions, activities, or attributes that contribute to performance in a job or work role.

In the BBM and Industry Competency Models, each competency is illustrated by a set of related task statements or key behavior statements. The statements associated with each competency identify the critical functions a job incumbent must carry out in order to perform in a job or work role. In other words, task and key behavior statements provide a more detailed, contextualized description of the expected work to be completed.

In the BBM, the key behaviors in Tiers 1 through 3 apply to a large number of occupations and industries. In an Industry Competency Model, tasks and key behaviors apply to occupations and work roles in the subject industry.

Task and key behavior statements should, with few exceptions, be unique in each Industry Competency Model. That is, model authors should avoid repetition of tasks and key behaviors by placing them in the competency to which they are most relevant.

How to Draft Task and Key Behavior Statements

Task statements should be concise descriptions of the specific activities or actions that need to be performed to accomplish a task. They should identify a specific task in concrete terms. Key behavior statements may describe actions, activities, or attributes and therefore may have greater variation in the way they are constructed. Task and key behavior statements should be flexible, consistent, clear, affirmative, and discrete. All Industry Competency Models should use either the BBM or an existing Industry Competency Model as their basis, so authors are advised to review Tiers 1 through 3 in Figure 2 for examples of the way to write key behavior statements and may not find it necessary to make extensive changes to those tiers. When writing task statements, the model authors should do the following:

▲ **Identify the task/activity being performed.**

- Start task statements with specific and concrete action verbs describing the job incumbents do.
- Start task statements with a third-person plural, present tense verb; “job incumbents” or a similar group is the implied subject.
- Specify and clearly define the object of the verb starting the statement.
- Provide an explanation of why or how the work is completed, or both.
- Refer to the following examples of correct and incorrect task statements:
 - **Correct:** Operate machinery according to safety protocols.

- **Incorrect:** Ensured operation of machinery according to safety protocols.
- **Reasoning:** The incorrect statement is not written in present tense and the verb “ensured” shifts the statement from “task” to an “objective” or “goal.”

▲ Break down the task.

- Divide multiple tasks into separate statements to create clear and succinct items.
- Avoid creating double-barreled items that include more than one task, making it difficult to follow and execute each task within the statement.
- Define task statements clearly to maximize utility and minimize potential conflicting interpretations. Distinct unidimensional statements make it easier to understand industry expectations by limiting ambiguity.
- Refer to the following examples of correct and incorrect task statements:
 - **Correct:** (Break the task statement into two separate tasks.) Tend to customer problems independently.
 - Resolve customer issues quickly.
 - **Incorrect:** Quickly and independently tend to customer problems and resolve issues with tactfulness and urgency.
 - **Reasoning:** The incorrect task statement includes two different activities, which are broken up into two different task statements in the correct statement.

▲ Align statements with industry objectives.

- Write task statements that align with but do not explicitly identify work objectives. These statements are likely to become more detailed as the industry and organizations become more specific.
- Indicate why a specific task exists without listing a specific objective or goal. Objectives may shift over time, but the tasks will remain the same.
- Refer to the following examples of correct and incorrect task statements:
 - **Correct:** Design hands-on training workshops for employees.
 - **Incorrect:** Design hands-on training workshops that improve employee proficiency.
 - **Reasoning:** The incorrect task statement specifies an objective that may be interpreted as the only reason to conduct the task. Leave room for flexibility of objectives, so that they can change as needs evolve. The correct task statement identifies what is to be done but does not specify its desired outcome.

Knowledge: understanding, concepts, ideas, and processes, needed to perform a task

Knowledge statements

- start with “Knowledge of,” followed by a specific idea, process, subject, and so forth; and
- include one concept or specific subject area per statement.

Creating Knowledge Statements

Knowledge statements further define and highlight specific areas of expertise needed by job incumbents. These statements provide guidance on the concepts, ideas and processes that are necessary for performing a job. They reflect factual or procedural information about an industry that may be tied to certain concepts, ideas, guidelines, and rules. Industry-specific knowledge can be acquired through education, training, or transferable experience. Knowledge statements can help end users (those who are creating competency model frameworks) design educational programs to meet industry needs or locate educational programs that will help workers advance in their career paths.

How to Draft Knowledge Statements

Knowledge statements should align with and support the task or key behavior statements in each competency. Knowledge statements should help end users operationalize tasks and key behaviors to support job performance by clearly and concretely identifying specific, discrete knowledge items. Knowledge items should be included only once in an Industry Competency Model, with the competency to which they are most relevant. When writing knowledge statements, model authors should do the following:

▲ **Start statements with “Knowledge of.”**

- Begin statement with “Knowledge of,” directly followed by the subject matter.
- Include only one concept or subject for every statement.
 - **Correct:** Knowledge of principles of double-entry bookkeeping
 - **Incorrect:** Basic principles for creating, maintaining, and auditing double-entry bookkeeping systems
 - **Reasoning:** Unlike the correct statement, the incorrect statement does not begin with “Knowledge of.” compared to the correct statement, which does. Starting a knowledge statement with “Knowledge of” can help end users discern knowledge statements from task and skill statements. The correct statement also uses simple language to convey meaning.

▲ Use one concept per statement.

- Use a single concept for each knowledge statement.
 - **Correct:** (Break the knowledge statement into two separate concepts.) Knowledge of the market segments within the industry:
 - Retail
 - Commercial
 - Industrial
 - **Incorrect:** Knowledge of the market segments within the industry and the market size of each

- **Reasoning:** The correct statement identifies one type of knowledge. It includes a bulleted list highlighting the knowledge identified which is permitted but not required. The incorrect statement identifies two knowledge items. Using only one concept per statement allows greater flexibility for users to interpret or modify the competency model.

Creating Skill Statements

Skills are developed capacities that facilitate the performance of tasks or key behaviors. Skills focus on the ways in which tasks or key behaviors are performed and highlight capacities that are necessary for performing jobs or work roles within an industry. Skills can be simple or complex, depending on the nature of the task and the way the skill supports it.

How to Draft Skill Statements

Skill statements should identify a single skill, to provide flexibility in the application of the Industry Competency Model. Skill statements may apply to one or more tasks in an Industry Competency Model. Model authors should seek to list a skill only once in an Industry Competency Model, in the competency to which it is most relevant. However, skills may be identified in more than one if they are determined to be highly relevant to more than one competency.

Skill statements should begin with "Skill in," followed by a skill that begins with a verb. This format creates a consistent structure for skill statements and makes it easier to recognize the action associated with the skill.

▲ **Start statements with "Skill in."**

- Begin statement with "Skill in," directly followed by a verb that describes the observable action.
- Include only one skill for each statement.
 - **Correct:** Skill in maintaining electronic records
 - Skill in maintaining paper files
 - **Incorrect:** Skill with paper files and electronic records
 - **Reasoning:** The incorrect statement does not begin with "Skill in," does not begin with a verb, and addresses skill in two things. The verbs clarify that each skill applies to performing a specific activity, and breaking the skills into separate statements allows for flexibility in identifying the nature of the activity to be performed.

Skills: developed capacities that facilitate the performance of task or key behaviors

Skill statements

- begin with "Skill in"
- include only one skill; and
- state a measurable or observable outcome.

▲ Use one skill per statement.

- Include a single skill for each skill statement.
 - **Correct:** Skill in creating financial analysis reports
 - Skill in managing budgets
 - **Incorrect:** Skill in creating financial analysis reports and managing budgets.
 - **Reasoning:** The correct skills statement(s) separate two different skills, while the incorrect statement addresses two skills. One job may require both skills. However, it is important to keep skills statements separate to enhance flexibility and accuracy.

Creating Tool and Technology Statements

Tool and technology statements acknowledge specific tools or technologies that are essential to performing tasks related to a competency block. These statements should clearly identify a single tool or technology that job incumbents in the industry use and that is widely accepted as a typical work requirement. Tools may encompass a wide variety of machines, equipment, and hand tools, while technologies generally include information technology and software, which are often integrated into the software user interfaces with equipment or tools.

How to Write Tool and Technology Statements

Items included in the tool and technology title should be clearly identified so that a typical end user will understand the item, but should not include additional descriptions regarding the manner of use or level of proficiency. As appropriate, tools and technologies may be identified generically or by specific product names and may include a brief description if appropriate, separated from the tool or technology identifier by a colon. Each tool and technology should be listed only once, in the competency block to which it is most relevant.

O*NET is an excellent source of tools and technologies used by incumbents in many occupations.

Examples of tools statements without optional brief descriptions:

- Spectrometers
- Security cameras
- High-vacuum equipment
- Laser printers
- Notebook computers and Laptops
- Calorimeters
- Digital cameras
- Lux or light meter
- Sonometers

Examples of technologies statements with optional brief descriptions:

- Microsoft Excel: widely used spreadsheet software for data analysis, calculations, and visualization
- CNC machine: Computer Numerical Control machine, used for precision machining in manufacturing processes
- Adobe Photoshop: industry-standard software for editing and manipulating digital images
- CRM system: Customer Relationship Management software, used to manage customer relationships, track sales, and analyze customer data

CONCLUSION AND NEXT STEPS

In summary, this guide offers insights into the Competency Model Clearinghouse's (CMC) approach to creating a nationwide Industry Competency Model. It not only showcases the fundamental elements and organizational structure essential for dynamic competency models, but also provides guidance to individuals interested in developing custom competency models using the CMC's Building Blocks Model (BBM) framework. The BBM, with its versatile attributes, lays a robust foundation for competency modeling, serving various applications in workforce development and education. For those considering the publication of their competency models and next steps, visit the CMC's RISE Module '[Developing Nationwide Industry Competency Models](#)'. Next steps on publication can be found at the end of that comprehensive guide, ensuring a smooth and effective process for crafting, and sharing competency models that serve the needs of industries, workers, and learners.