Unit of Competency

CPCBIM4001 Plan building or construction work to comply with BIM project requirements

Modification history

Release	Comments
1	New unit. No equivalent unit. This version first released with CPC Construction, Plumbing and Services Training Package Release 8.0.

Application

This unit of competency specifies the skills and knowledge required to plan building or construction work activities to comply with Building Information Modelling (BIM) project requirements. It includes determining BIM requirements for building or construction activities, preparing the tools and technologies required to use BIM processes, and accessing and comparing 2D drawings and 3D models and related data.

The unit applies to builders, tradespersons, project and site managers who work on building or construction projects that require BIM interaction and collaboration. The unit provides BIM skills and knowledge which can be adapted to a range of tools and technologies and applied to normal building or construction work activities. It requires basic information technology skills.

A person who has achieved this unit of competency is able to work with autonomy and take responsibility for applying BIM processes to building or construction work.

Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of *CPCCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Prerequisite Unit

None.

Unit Sector

Construction.

Elements and Performance Criteria

1. Determine BIM requirements for building or construction work activities.	1.1 Access and interpret BIM execution plan to clarify BIM uses for building or construction project and specific work standards and methodologies. 1.2 Access, interpret and clarify available drawings, data and models within common data environment for collaborative project requirements. 1.3 Identify BIM tools and technologies required to comply with BIM execution plan.

	1.4 Clarify BIM-required communication methods and roles and responsibilities of self and other project participants detailed in BIM execution plan.
2. Prepare BIM tools and technologies.	2.1 Identify and access tools and technologies required to fulfil the BIM uses, standards and methodologies according to BIM execution plan. 2.2 Set up BIM tools and technologies according to manufacturer instructions. 2.3 Check BIM tools and technologies to ensure correct operation and interoperability with BIM systems for building or construction work.
3. Access and compare 2D and 3D building or construction information.	3.1 Access 2D drawings, 3D model and data relevant to building or construction work. 3.2 Use BIM tools and technologies to navigate and interpret 3D model and data, conduct measurements, enquire and extract data and quantities required for building or construction work. 3.3 Compare 3D model and data against 2D drawings to clarify understanding of requirements for planned building or construction work.

Foundation skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

New unit. No equivalent unit.

Links

The Companion Volume Implementation Guide for the CPC Construction, Plumbing and Services Training Package is available at: https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad.

Assessment Requirements for CPCBIM4001 Plan building or construction work to comply with BIM project requirements

Modification history

Release	Comments
1	New unit. No equivalent unit. This version first released with CPC Construction, Plumbing and Services Training Package Release 8.0.

Performance Evidence

To demonstrate competency, a candidate must meet the elements and performance criteria of this unit by planning building or construction work activities that comply with BIM project requirements specified in a BIM execution plan using a minimum of two different BIM technologies (tools and software) and, in doing so:

- identifying four benefits of using BIM during the construction phase of a project
- identifying six different BIM uses that can be applied across an entire project
- identifying own role and responsibilities and that of three other participants in the BIM workflow and detailed in the BIM execution plan including their relationship to the identified BIM uses
- accessing one 3D model and associated data within a common data environment (CDE) and relevant to planned building or construction work activities.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- benefits and limitations of BIM in the lifecycle management of built assets
- benefits of BIM in improving construction efficiency and safety:
    - planning, scheduling and sequencing
    - services and trades coordination
    - fabrication and assembly
    - resource procurement
    - accurate ordering of materials quantities
- BIM project delivery methods
- BIM standards relevant to planned building or construction work including ISO 19650 *Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) — Information management using building information modelling*
- BIM uses relevant to construction phases
- common BIM definitions and terminology
- common BIM tools and technologies
- level of development (LOD) definitions ranging from 100 to 500 relevant to BIM project requirements
- meaning and purpose of ‘digital twin’, its interface with BIM and its context within the facets of the operations and maintenance phase
- meaning and benefits of visual communication and extended reality technologies during the construction phase of a BIM project

- purpose and content of BIM execution plans
- role of common data environments in managing project information
- underlying concepts of the terms 3D, 4D, 5D and 6D relating to BIM
- graphical and data communication methods when working with BIM
- meaning of open formats and interoperability in the BIM context
- roles and responsibilities of BIM project participants across multiple disciplines.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment must be conducted in the workplace or a simulated workplace using realistic conditions, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

Candidates must have access to documentation and technologies required to achieve the performance criteria and performance evidence.

Links

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