

Draft 0.2

This is a draft update to CPPSIS4026 Digitally enhance and process image data:
<https://training.gov.au/Training/Details/PPSIS4026>.

Code changed to CPPSSI4026.

Changed PCs to active voice.

Minor changes to PCs to improve, clarify or provide context.

Removed PC2.2 Check ground control targets for photogrammetric mapping to enhance image data (based on feedback from NSW)

Changed 'person' to 'candidate' in PE.

Range of Conditions added to Knowledge Evidence.

Unit of Competency

CPPSI4026 Digitally enhance and process image data

Modification history

Release	Comments
1	Replaces superseded non-equivalent CPPSIS4026A Read and interpret image data. This version first released with CPP Property Services Training Package Version 3.
	Replaces superseded equivalent CPPSIS4026 Digitally enhance and process image data

Application

This unit specifies the skills and knowledge required to extract information from original digital data before processing. It involves using remote sensing/GIS software to manipulate, enhance, classify and process data. The image data can be multispectral or from aircraft, unmanned aerial vehicles or satellites.

This unit is suitable for entry level technicians who will use a broad range of cognitive, technical and communication skills to select and apply a range of methods, tools, materials and information to complete routine and non-routine activities and provide and transmit solutions to a variety of predictable and sometimes unpredictable problems. Surveying and spatial information skills are applied in a range of industry contexts including town planning, civil construction, mining, engineering, health, agriculture and defence.

All work must be carried out to comply with workplace procedures, in accordance with relevant State/Territory regulations that govern surveying work as well as work health and safety, regulations and legislation that apply to the workplace.

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

Prerequisite Unit

None

Unit Sector

Surveying and Spatial Information Services

Elements and Performance Criteria

1. Identify image data.	1.1 Analyse project specifications to determine study area and image data requirements for task in consultation with appropriate persons. 1.2 Identify potential sources of image data to meet task requirements. 1.3 Identify constraints of different types and formats of image data in relation to task requirements.
2. Process and analyse image data.	2.1 Access image data and open in software. 2.2 Interpret graphical and technical information, including landscape features within digital images. 2.3 Enhance visual display to analyse image features. 2.4 Classify image data and interpret results to achieve task requirements. 2.6 Check results for accuracy and resolve identified problems.

3. Present and document results	3.1 Present results of analysis in map, table or graph form. 3.2 Document results of analysis to meet task and enterprise requirements. 3.3 Comply with health and safety requirements when using screen-based equipment and completing records and documentation. 3.4 Comply with legislative and enterprise requirements relating to data privacy and information copyright.
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Foundation Skills

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

Unit Mapping Information

Supersedes and is equivalent to CPPSIS4026 Digitally enhance and process image data

Links

The Companion Volume Implementation Guide for the CPP Property Services Training Package is available at <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

Assessment Requirements for CPPSSI4026 Digitally enhance and process image data

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Performance Evidence

To demonstrate competency, a candidate must meet the elements and performance criteria of this unit by using remote sensing or GIS applications to digitally enhance, process and classify image data for:

- one project with a built environment focus and
- one project with a natural environment focus.

Images may include:

- digital aerial photographs
- digital terrestrial images
- images from an unmanned aerial vehicle (UAV)
- satellite images.

Knowledge Evidence

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

- sources of image data
- basic properties and characteristics of image data used in spatial applications
- image classification techniques used in remote sensing including unsupervised classification algorithms
- spectral properties of images and key features of spectral signatures
- techniques for enhancing image display including contrast stretches and common band combinations
- enterprise guidelines relating to equipment use, work health and safety, and accessing and formatting image data and copyright.

Assessment Conditions

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

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting where these skills and knowledge would be performed.

Candidates must have access to:

- computer and software with image enhancement functionality
- enterprise policies and procedures relating to:
 - work health and safety
 - data privacy, information copyright and licensing.

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