

**Draft 0.1**

This is a draft update to CPPSIS5032 Capture new spatial data:  
<https://training.gov.au/Training/Details/CPPSIS5032>

Changed PCs to active voice.

Changed 'person' to 'candidate' in PE.

## Unit of Competency

### CPPSUR5032 Capture new spatial data

#### Modification history

Release	Comments
1	Replaces superseded equivalent CPPSIS5032A Capture new spatial data. This version first released with CPP Property Services Training Package Version 3.
	Supersedes and is equivalent to CPPSIS5032 Capture new spatial data

#### Application

This unit specifies the skills and knowledge required to capture new spatial data to meet client specifications using a variety of data capture methodologies. The unit covers analysing project specifications, as well as organisational, administrative and legal requirements, to coordinate human resources, equipment and supplies.

The unit also covers setting up and using specialist surveying equipment and technologies to capture and manipulate spatial data, including entities, attributes, topological features and metadata; and checking and validating the integrity and accuracy of results. In addition, the unit covers performing the operational maintenance of equipment to ensure its sound working order and identifying faults and organising repairs as required. The unit requires the ability to use project management techniques to schedule, monitor and report on project activities, and supervisory skills to designate work and provide guidance to staff.

The unit supports those who work in a lead role in a surveying or spatial information services team in areas such as surveying, cartography, town planning, mapping or geographic information systems (GIS).

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. Prepare for data collection.	<ul style="list-style-type: none"><li>1.1 Identify project and client specifications, organisational requirements and available resources and key activities and schedule timeline accordingly.</li><li>1.2 Comply with and record administrative and legal requirements for data collection according to organisational requirements.</li><li>1.3 Inform appropriate persons about the project according to organisational requirements.</li><li>1.4 Select equipment, supplies and technologies according to project specifications.</li><li>1.5 Communicate designated responsibilities to staff to ensure understanding of work tasks according to organisational requirements.</li></ul>
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2. Gather spatial data	<p>2.1 Set up and operate equipment according to manufacturer specifications and organisational requirements.</p> <p>2.2 Relate entities to a reference system, and data and collect attributes according to project specifications.</p> <p>2.3 Document metadata according to industry-accepted standards and organisational requirements.</p> <p>2.4 Identify, record and report discrepancies between specifications and actual activities.</p> <p>2.5 Give guidance to staff assisting in the data collection process as required and according to organisational requirements.</p>
3. Maintain equipment	<p>3.1 Undertake operational maintenance of equipment according to manufacturer specifications and organisational requirements.</p> <p>3.2 Identify and report contingencies that may affect equipment use.</p> <p>3.3 Identify, report and refer unsafe or faulty equipment for repair according to organisational requirements.</p> <p>3.4 Store tools and equipment safely according to manufacturer specifications and organisational requirements.</p>
4. Finalise collection process	<p>4.1 Add attributes and topological structures to spatial data according to project specifications</p> <p>4.2 Record data correctly and complete documentation according to project specifications and organisational requirements.</p> <p>4.3 Check and validate data integrity and accuracy according to project specifications</p> <p>4.4 Store data and documentation according to organisational requirements.</p>

### Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance in this unit, but not explicit in the performance criteria.

- planning and organising skills to prioritise activities to meet contractual requirements
- numeracy skills to apply budget constraints to project specifications and conduct precise measurements and computations relating to length, angle, elevation, area and volume
- oral communication skills to ask questions to clarify client requirements and explain procedures to staff
- reading skills to interpret technical information detailed in manufacturer specifications and legislation
- writing skills to record technical information in organisational documentation
- technology skills to calibrate specialised surveying equipment and use equipment software to manipulate spatial data
- problem-solving skills to apply contingency measures in the event of adverse weather or equipment failure.

### Unit Mapping Information

Supersedes and is equivalent to CPPSIS5032 Capture new spatial data

### Links

Companion Volume Implementation Guide:

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

## Assessment Requirements for CPPSUR5032 Capture new spatial data

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### Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria of this unit by:

- capturing new spatial data that meets client specifications for two different projects, with each project using two of the following pieces of equipment:
  - data logger or other mobile computing device
  - global navigation satellite system (GNSS)
  - laser scanner
  - level
  - sonar
  - total station
  - unmanned aerial vehicle.

While capturing the above new spatial data, the candidate must:

- coordinate technical and human resources to undertake scheduled work activities, designate work and provide guidance to staff
- accurately record metadata
- apply contingency measures and risk management strategies to ensure data is collected safely and within project timeframes
- comply with legal, administrative and organisational requirements for:
  - communicating with clients
  - copyright
  - recording and reporting information, and completing documentation
  - using, maintaining and storing tools and equipment
  - working safely and using personal protective equipment (PPE) when collecting data and operating equipment
- apply industry-accepted methods for assessing the validity and integrity of spatial data
- conduct operational maintenance on equipment to ensure good working order
- exercise accuracy and precision when collecting and recording spatial data using two of the following data capture methodologies:
  - aerial
  - conversion or translation from existing information, including hard copy or digital
  - data logging, including GNSS
  - photogrammetry
  - remote sensing
  - scanning
  - sonar
- manage and manipulate spatial data, including entities and attributes and topological structures, using surveying technologies
- plan and organise equipment and supplies required to capture spatial data

- set up, calibrate and use surveying equipment
- use two of the following tools to assist in capturing new spatial data:
  - compass
  - clinometer
  - digital imagery
  - distance measuring wheel
  - tape
  - ultra-high frequency radio.

### Knowledge Evidence

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

- legal requirements for accessing and storing spatial data, including copyright
- methods for conducting operational maintenance on surveying equipment
- methods for validating the integrity of spatial data
- organisational policies and procedures relating to:
  - budget and resource constraints
  - client service and communication
  - completing records and documentation
  - using and maintaining equipment
  - work health and safety
- principles of risk management relating to data capture operations
- purpose and uses of various data capture technologies and equipment
- spatial data capture methodologies
- spatial data formats and structures
- key features of spatial reference systems
- supervisory processes required to delegate work tasks and communicate with staff.

### Assessment Conditions

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

The following must be present and available to learners during assessment activities:

- equipment and tools:
  - as specified in the performance and knowledge evidence
  - PPE
- specifications:
  - organisational policies and procedures relating to:
  - work health and safety
  - data privacy and information copyright
- relationships with team members and supervisor:
  - working in a team.

Timeframe:

- as specified by client and project requirements.

### Links

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