Furniture

Design Standard

TAFE NSW would like to pay our respect and acknowledge Aboriginal and Torres Strait Islander Peoples as the Traditional Custodians of the Land, Rivers and Sea. We acknowledge and pay our respect to the Elders; past, present and emerging of all Nations.

TAFE NSW Coffs Harbour Education Hub

Rev	Issue date	Issue	Amendments since previous issue
1	28 May 2021	Draft 1	First Draft
2	25 June 2021	Draft 2	Contents Structure
3	30 July 2021	Draft 3	Third Draft
4	13 August 2021	Pre-final Draft	Furniture type schedules
A	25 August 2021	Final	Work Health & Safety concerns added
B	31 August 2021	Revised	Furniture certification requirements
C	05 November 2021	Final	Document Accessibility Revieiw

TAFE NSW Granville Electrotechnology

Contents

Introduction

1   Introduction

1.1   Overview

As part of the TAFE NSW ITN Design Book, the ''Furniture Design Standard'' is intended to improve the quality of furniture and achieve consistency across TAFE NSW.

This Design Standard applies to all furniture design, selection, specification, procurement including replacement, repair and disposal at all existing and new TAFE NSW sites.

The key principles for the design of the Furniture Design Standard have been derived from intensive user workshops and an iterative design process.

Below are the key outcomes that the design standard aims to achieve:

Relevant and current	User-centric	Performance-based and suitable for budget, location and scale	Clear and concise

The objectives of this Design Standard are to:

- Define the guiding principles for successful furniture selection across TAFE NSW
- Provide performance-based requirements to allow flexibility for design, selection, implementation and procurement of furniture that are also adaptable to the changing needs of the users and industry, as well as evolving market trends.
- Provide guidance for furniture selection that is appropriate for its purpose with respect to the relevant:
  - User requirements
  - Space type and functional requirements (fit for purpose)
  - Site location requirements
  - Budget requirements
- Guide furniture requirements for a range of project types, ranging from maintenance, asset renewal, minor refurbishments to major capital works projects
- Be readily interpreted by the relevant users of the document and to identify responsible parties involved in the decision making process of the furniture selection & specification.

1 Introduction

1.2 Audience

The diagram below broadly defines the numerous and diverse groups and their contribution to the design, selection, procurement and delivery, and ongoing care.

Who will use this Design Standard:

Project Delivery	Design & Selection	Procurement & Supply	Operations & End Use
Program Managers	Architects	Construction Contractors	Program Managers
Design Managers	Design Managers	Procurement and Logistics	Design Managers
Procurement and Logistics	Procurement and Logistics	Project Managers	Accessibility and Disability Support
Facilities Management	Education Specialists	Furniture Suppliers and Manufacturers	Facilities Management
Project Managers	Project Managers		Work Health & Safety
Strategic Planning	Furniture Suppliers		Furniture Suppliers
	Interior Designers		Teaching Specialists
			Customer Experience
			Staff & Students
			Industry Partners
			Systems Group
			Sustainability

How this Design Standard could be used:

Project Delivery
Establish project requirements based on project complexity and scale.

Manage project requirements between designers, suppliers and end users throughout life of the project.

Assess design and selections against this Design Standard.

Design & Selection
Guide planning & design.

Understand design principles and strategies & how furniture design can contribute to learning, teaching and user experience.

Procurement & Supply
Guide procurement, delivery and supply against furniture design and selections.

Operations & End Use
Engage with furniture trials & stakeholder engagement when requested.

Monitor or assist with ongoing maintenance needs across life cycle.

Monitor or assist with evolving user needs across life cycle.

1   Introduction

1.3   Standards & Documents

The following standards and documents, as relevant to the project, should be read in conjunction with this Design Standard when considering design, specification and procurement of furniture.

1.3.1   External Requirements

Statutory Requirements

- National Construction Code and referenced Australian Standards
- Disability Discrimination Act
- NSW Work Health & Safety legislation
- Applicable Statutory planning requirements

External Certification Schemes

- Green Building Council of Australia (GreenStar) and recognised certification schemes (e.g. GECA, AFRDI, GreenTag, etc)
- Australian Furniture Research & Development Institute (AFRDI)
- Business + Institutional Furniture Manufacturers Association (BIFMA)

NSW Government Policies

- Office & Education Furniture Scheme (Procurement NSW)
- Fitout Design Principles (Property NSW)
- Workplace Design Principles (NSW Department of Planning, Industry and Environment)
- Government Resource Efficiency Policy (NSW Department of Planning, Industry and Environment)
- Net Zero Plan (NSW Department of Planning, Industry and Environment)
- Better Placed - Design objectives for NSW (Government Architects NSW)

1.3.2   TAFE NSW Requirements

TAFE NSW Overarching Policies

- Environmental Sustainability Policy
- Reconciliation Action Plan
- Diversity and Inclusion Policy
- Work Health and Safety Policy
- Disability Inclusion Action Plan and Implementation guide

TAFE NSW Interconnected Training Network

- Interconnected Training Network Design Principles
- Interconnected Training Network Design Procedures
- Other Design Standards relevant to project

1 Introduction

1.4 Definitions

Abbreviation	Definition
AS	Australian Standard
AV	Audio Visual
AFRDI	Australian Furnishing Research and Development Institute
BCA	Building Code of Australia
BIFMA	Business + Institutional Furniture Manufacturers Association
BCA	Building Code of Australia
BYOD	Bring Your Own Device, refer to Electrical Design Standards
GBCA	Green Building Council of Australia
GECA	Good Environmental Choice Australia
height	Height (mm) above finished floor level
IT	Information Technology
ITN	Interconnected Training Network
NCC	National Construction Code (Formerly BCA)
PRG	Project Reference Group
PWG	Project Working Group
SSD	State Significant Design
this Design Standard	TAFE NSW Furniture Design Standard

Applications

2　Applications

2.1　Scope

2.1.1　How this Design Standard Applies

Compliance

This Design Standard is intended to support and assist the selection, design and procurement of furniture. It is expected that projects comply with this Design Standard.

This Design Standard must also be read in conjunction with:

- Statutory and legislative requirements
- Contractual Agreement with TAFE NSW
- The Project Brief and relevant project requirements
- Other TAFE NSW Design Standards

Where there is a conflict between this Design Standard and any statutory or legislative requirement, the higher standard applies.

Mandatory/Must:

Where the word "must" is used, this indicates that a statement is mandatory

Preferred/Should:

Where the word "should" is used, this indicates that a statement is a recommendation.

Contractual Responsibility

The contents of this Design Standard does not relieve any consultant, contractor or supplier from their contractual responsibility relevant to the project.

Queries

Any project specific queries are to be raised through the TAFE NSW Project Lead.

2   Applications
2.1   Scope

2.1.2   Furniture Types that Apply

Standard Furniture

The following furniture settings are considered to be standard and performance requirements are detailed in Section 3:

- Common settings
- Learning settings
- Working settings

These furniture settings typically include furniture items such as:

Seating

- Task chairs
- Meeting room chairs
- Learning chairs
- Drafting chairs
- Stools

Tables

- Workstations
- Meeting room tables
- Teacher's desk
- Learning tables
- Workshop Benches

Other Furniture

- Mobile tool cabinets
- Social & breakout area furniture including lounges, pods, etc.
- Personal storage

Non-Standard Furniture

Other furniture settings that are non-standard are subject to specific requirements relevant to each project. However, the general design principles and strategies within this Design Standard should still be considered. Some examples include:

- Non-standard storage (e.g. open shelving, loose cupboards, archives, etc.)
- Specialist Furniture (e.g. specific to specialist departments, workshops, practical, etc.)
- Outdoor Furniture
- Joinery

2   Applications

2.2   Project Application

Due to differing project requirements, priorities may vary from project to project. The below outlines the level of adherence to this Design Standard that is required for the scale of the project.

2.2.1   Project Types and Scales

Minor Works, Major Works & Special Works pProjects

This Design Standard applies to all projects including major refurbishments, new builds and special projects. Specific requirements are as follows:

- Additional project specific requirements such as statutory conditions or Greenstar may apply.
- Where furniture exists at the subject site, every effort should be made to reuse furniture (on-site or at other sites). The reused furniture must be fit for purpose and align with current end user requirements
- Prior to any disposal or replacement of existing furniture, assessment of existing furniture must be made for the following:
  - Age and Condition (including existing warranties)
  - Potential for reuse or storage by TAFE NSW in other locations
  - Potential for disposal through supplier stewardship programs
- For proposed furniture, consideration should be made with regard to maintaining consistency of furniture colours and styles to suit the existing context.
- Major Works projects and Special Works projects must comply with the Design Standards
- Minor Works projects should make every effort to comply with the Design Standards.

Mini-Minor Works Projects

Furniture replacement projects delivered under a Mini-Minor works contract should use the principles of this Design Standard as a guide to inform decision making. These furniture needs may also be covered by the TAFE NSW check-out system.

Design Strategies

3 Design Strategies

3.1 User Wellbeing

Strategy	Background	Requirement
Furniture Certification	External certification parties such as BIFMA or AFRDI provide certification schemes for commercial furniture products assessed against the current international or Australian Standards.	Certain furniture types must be certified (or capable of complying) with BIFMA or AFRDI. Refer to Furniture Type Schedule.
Consultation	Consultation with user groups plays an essential role in achieving 'fit-for-purpose' solutions.	Furniture layouts, selection and specifications must be approved by user groups and project stakeholders.
User trials	In addition to consultation, user trials of furniture (especially in key learning & working settings) are beneficial in ensuring the correct specification of furniture.	Requirement for user trials to be determined on a project by project basis
Weight capacity	AFRDI defines a range of standard weight capacities for chairs. It is likely that TAFE NSW users exceed the minimum standard weight capacities. Therefore TAFE NSW require a higher weight capacity as standard.	Refer to Furniture Type Schedules for required weight capacity.
Seating & Tables	A common problem that projects often encounter is where table and chair combinations do not allow sufficient clearance between tables, table legs or frames and chairs. This leads to insufficient leg room impacting user ergonomics.	Tables and chairs must be compatible, such that: The user can comfortably sit in chairs with ergonomic clearance under table, clear from table legs or frames Chairs can be fully pushed in below the tables when not in use
Duration of use	Understanding the duration of use is an important consideration when selecting furniture. Furniture used for longer durations require greater emphasis of ergonomics and comfort.	The maximum duration of intended use for each furniture setting or type must be understood and reviewed to inform the appropriate furniture selection.
Integrated services	Integrated services to certain furniture types (e.g. workstations and specialist benches) will ensure a positive design outcome whilst minimising safety hazards.	Where provided, services (such as power, data, hydraulics, etc) must be integrated and concealed.
BYOD	There is an increasing need for users to access power points for charging of personal devices. Research shows that on average, a single person carries 3 personal devices at any given time.	Consideration must be given to proximity of power points for charging of personal devices. Refer to TAFE NSW Electrical Services Design Standard.

3   Design Strategies

3.2   Accessibility, Diversity, Inclusion

The aim of the TAFE NSW Disability Inclusion Action Plan 2020 – 2022 is to create an improved environment where students and staff enjoy learning and working. Accessibility could be achieved through the following strategies:

Strategy	Background	Requirement
Diversity of furniture settings	Environments with a diverse range of furniture settings is important for providing choice which ensures user.	A variety of furniture settings must be provided in each space or area to accommodate users with differing learning, physical or comfort needs.
Flexibility of furniture settings	Flexible furniture settings enable users to reconfigure the space based on their specific needs.	Large and bulky furniture types (such as lounges) must be segmented for ease of reconfiguration. Furniture items designed to be movable must be on lockable castors or lightweight.
Seating height	AFRDI defines a range of comfortable seating heights between 430mm to 510mm to accommodate a range of user heights.	A proportion of seating must be adjustable height to allow user choice. Refer to Furniture Type Schedules.
Table height	AFRDI defines a range of comfortable table heights between 705mm to 815mm to accommodate a range of user heights. In addition, AS 1428.1 and AS 1428.2 define a range of table heights to accommodate a user in a wheelchair.	Variety of heights, or some fixed height and some height adjustable. A proportion of tables must have accessible clear underbench (no shelving or cabinets) to allow wheelchair access. Proportion to be adjustable height. Proportion of workshop benches to be clear under-bench. Refer to Furniture Type Schedules.
Distribution of furniture settings	In addition to providing the variety of furniture settings and adjustable height furniture, it is important to give users a sense of agency and choice to where they would like to sit in each space to suit their individual situation (e.g. towards the front or back of a class).	Furniture settings and adjustable height furniture must be distributed or capable of being easily distributed around each space.

3   Design Strategies

3.3   Understanding Context

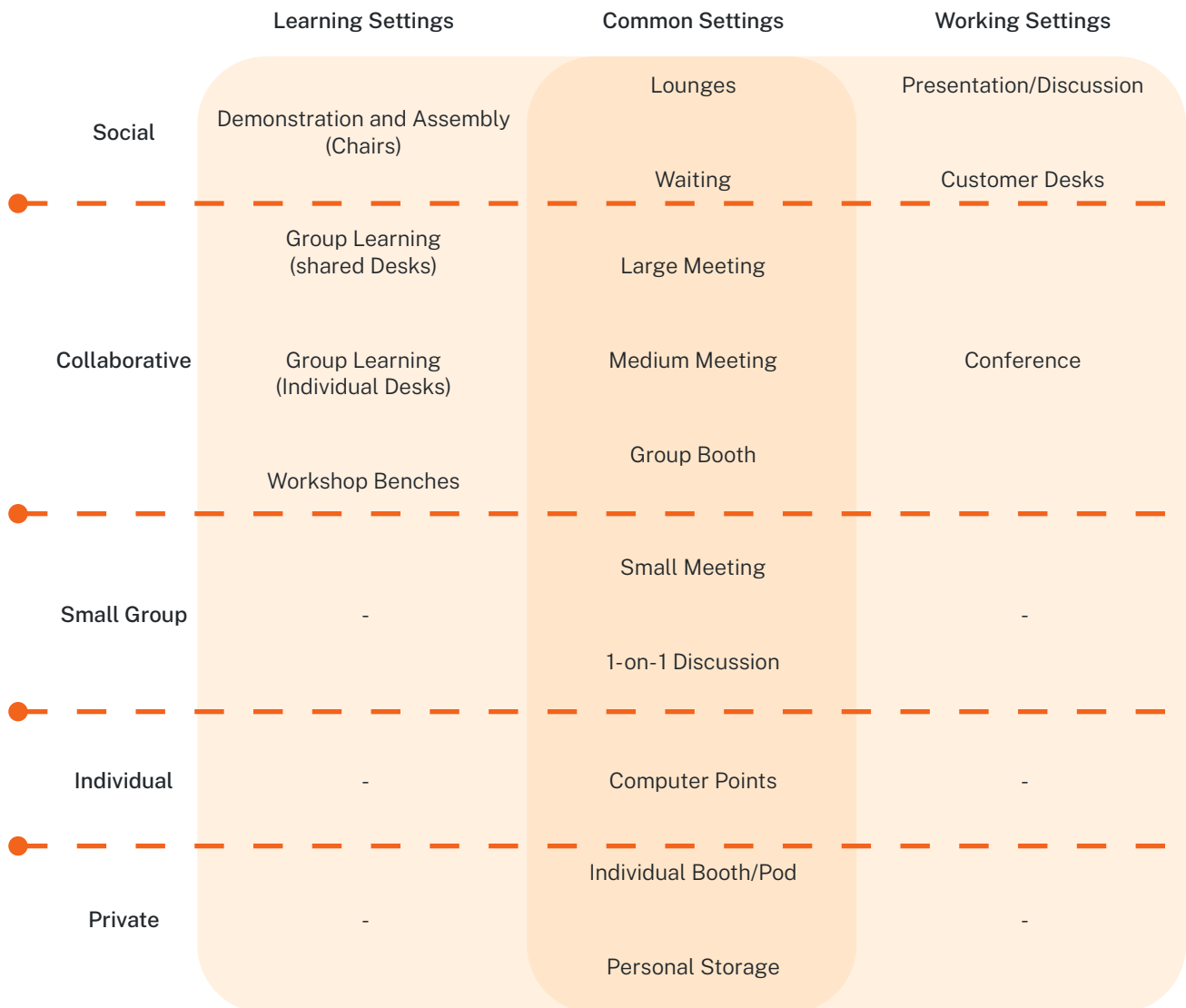| Strategy	Background	Requirement
Appropriate to Location	The location of the subject TAFE NSW site should be considered based on limitations or constraints to the delivery, servicing and maintaining of selected furniture.	Locally available furniture should be considered, where appropriate, particularly in regional areas.
Aesthetic consistency	Aesthetic consistency is critical to projects of all scales to ensure a positive design outcome for the occupants.	For furniture replacement or refurbishment projects, consideration should be made to: consistency of existing materials and finishes, colour schemes, look and feel.

3.4   Sustainability

Strategy	Background	Requirement
Certification	TAFE NSW has an obligation to achieve Whole of Government sustainability targets. In particular for furniture, sustainability targets include the efficient use of resources, low VOC content, and sustainably sourced timber.	Some furniture types must be certified by certification schemes recognised by Green Building Council of Australia (e.g.. GECA, AFRDI, GreenTag, etc). Refer to Furniture Type Schedules. Locally manufactured furniture and components should be considered where feasible.
Durability	Robustness, reliability, easy care and low maintenance are critical aspects to the longevity and sustainability of all furniture at TAFE NSW as they are highly utilised.	Minimum Warranties must be met. Refer to Furniture Types Schedule.
Stewardship Initiatives	TAFE NSW has an obligation to achieve Whole of Government sustainability targets. Partnerships with manufacturers and suppliers who offer Cradle-to-cradle and end-of-life strategies through buy-back schemes, sustainable disposal and stewardship initiatives are encouraged.	All furniture must be labelled clearly indicating: Manufacturer & contact details Product name/code Warranties and expiry date Manufacturers and suppliers with buy-back schemes, sustainable disposal and stewardship initiatives are preferred.
Maintenance and repair	To complement TAFE NSW's sustainability objectives, there is an aspiration to prolong the operational life of furniture by encouraging maintenance and repair, and delaying the requirement to replace with new.	Where possible, selected furniture products should have the ability to be reupholstered or to have components repaired or replaced. Consider products which have: Removable/replaceable components Local access and availability of spare parts.

Technical Sections

4   Technical Sections

4.1   Overview

The diagram below outlines the typical furniture settings that
are considered to be standard and covered by this design
standard. The various furniture settings are sorted in the three
categories below and by the scale of collaboration intended (i.e.
private > individual > small group > collaborative > social).

	Learning Settings	Common Settings	Working Settings
Social	Demonstration and Assembly (Chairs)	Lounges	Presentation/Discussion
		Waiting	Customer Desks
Collaborative	Group Learning (shared Desks)	Large Meeting	
	Group Learning (Individual Desks)	Medium Meeting	Conference
	Workshop Benches	Group Booth	
Small Group	-	Small Meeting	-
		1-on-1 Discussion	
Individual	-	Computer Points	-
Private	-	Individual Booth/Pod	-
		Personal Storage	

4   Technical Sections

## 4.2   Standard Furniture Settings

4.2.1   Common Settings

Common furniture settings are common to both learning and working environments. The settings may be specific to learning spaces only, working spaces only, or a combination of both. Such areas may include student or staff commons, co-working and co-learning areas, libraries and breakout areas for social activities or relaxation.

It is recommended to engage relevant user groups to define the learning activities that occur within the space. The below examples provide design guidance only and allow flexibility so that the best design outcome can be achieved for the user. Refer to Sections 4.3 and 4.4 for furniture type requirements.
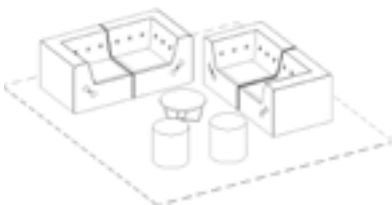
Please note the images shown are diagrammatic and are only intended to illustrate the possible configuration of the settings.

Lounges
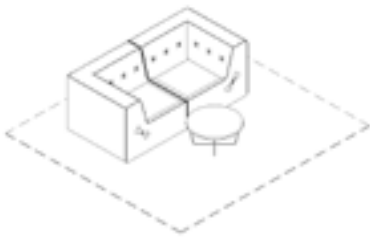
Item	Description
Furniture type:	Social couch settings for relaxation & informal conversation
	2-4 people
Furniture codes:	S07
	T07, T08
Areas/spaces:	Common areas, cafeterias, staff commons, libraries, internal circulation, group learning, open learning

Waiting -Large

Item	Description
Furniture type:	Waiting area setting
Furniture codes:	S07, S08
	T07
Areas/spaces:	Reception, common areas, cafeterias, staff commons, libraries, internal circulation, group learning, open learning
Considerations:	Pair with a variety of furniture types

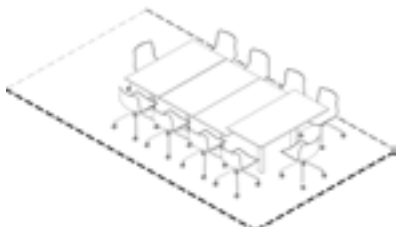### Waiting - Small

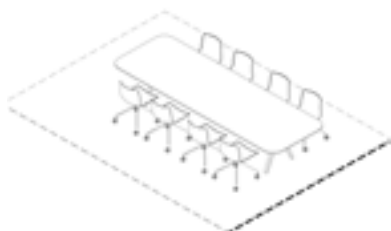| Item	Description
Furniture type:	Waiting area setting
Furniture codes:	S08
	T07
Areas/spaces:	Reception, common areas, cafeterias, staff commons, libraries, internal circulation, group learning, open learning
Considerations:	Pair with a variety of furniture types

4   Technical Sections

4.2   Standard Furniture Settings

Large Meeting

Item	Description
Furniture type:	Long table setting for informal group collaboration
	9 or more people
Furniture codes:	T05 - at least 1 per setting
	T04 - remaining tables
	S04
Areas/spaces:	Common areas, staff commons, libraries, meeting rooms, seminar rooms

Medium Meeting

Item	Description
Furniture type:	Long table setting for group collaboration
	Up to 8 people
Furniture codes:	T05, minimum 2 off per project or 15% of meeting rooms per project, whichever is greater.
	T04 for all other meeting rooms.
	S04
Areas/spaces:	Common areas, cafeterias, staff commons, libraries, meeting rooms, seminar rooms

Group Booth

Item	Description
Furniture type:	Group booth settings for small group collaboration
	Up to 4 people
Furniture codes:	T05, minimum 2 off per project or 15% of booths per project, whichever is greater.
	T04 for all other booths.
	POD2
Areas/spaces:	Common areas, staff commons, libraries, group learning, open learning

Small Meeting

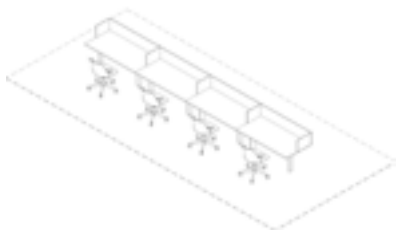| Item	Description
Furniture type:	Round or rectangular table setting for small group discussion
	Up to 4 people
Furniture codes:	T04 or T06
	S02 or S04
Areas/spaces:	Common areas, cafeterias, staff commons, libraries, internal circulation, group learning, open learning

4 Technical Sections
## 4.2 Standard Furniture Settings

1-on-1 Discussion

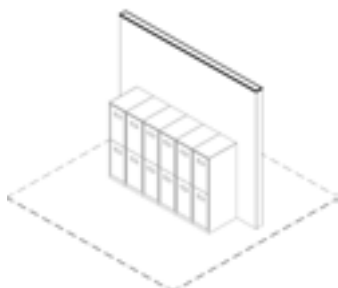| Item	Description
Furniture type:	Rectangular or round table settings for 1-on-1 discussions
Furniture codes:	T02 or T06
	S02 or S04
Areas/spaces:	Common areas, staff commons, libraries, group learning, open learning, quiet spaces, meeting rooms, support spaces

Computer Point

Item	Description
Furniture type:	▪ Individual computer point for independent tasks
Furniture codes:	▪ T03
	▪ S03
Areas/spaces:	▪ Common areas, staff commons, libraries, independent workpoints
Considerations:	▪ Acoustics: acoustic separation from other settings
	▪ Power & data: integrate power and data
	▪ Devices: variety of device formats (BYOD, PC, MAC)

Individual Booth/Pod
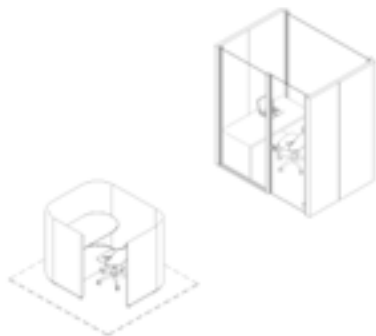
Item	Description
Furniture type:	Private settings for individual learning, connected learning, private study
Furniture codes:	POD1
	T03
	S03
Areas/spaces:	Staff commons, libraries

Personal Storage

Item	Description
Furniture type:	Personal storage locker
Furniture codes:	ST2
Areas/spaces:	Student commons, internal circulation, libraries, staff areas, end-of-trip facilities

4 Technical Sections

4.2 Standard Furniture Settings

4.2.2 Learning Settings

TAFE NSW supports diversity in their learning settings and it is the designer's responsibility to ensure furniture is selected and specified to enable such settings.

It is recommended to engage relevant user groups to define the learning activities that occur within the space. The below examples provide design guidance only and allow flexibility so that the best design and learning outcome can be achieved for the user. Refer to Sections 4.3 and 4.4 for furniture type requirements.

Please note the images shown are diagrammatic and are only intended to illustrate the possible configuration of the settings.

Demonstration and Assembly
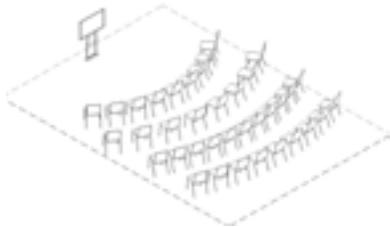
Item	Description
Furniture type:	Demonstration and assembly space for large groups
	30+ people
Furniture codes:	S01
	Associated space-specific items, e.g. mobile whiteboards, screens, AV, etc.
Areas/spaces:	Demonstration and assembly areas, large learning spaces

Group Learning (Shared Desks)
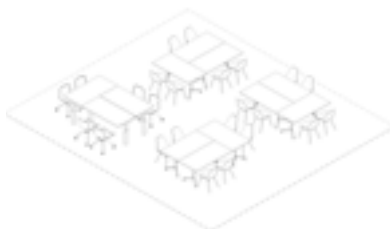
Item	Description
Furniture type:	Grouped pairs of learning desk for general learning
	2 people per setting
Furniture codes:	T02
	S02
Areas/spaces:	General learning areas

Group Learning (Individual Desks)

Item	Description
Furniture type:	Combined pairs of Individual learning desk for general learning
	1 person per setting
Furniture codes:	T02
	S02
Areas/spaces:	General learning areas
Considerations	Ability to easily reconfigure furniture for a range of activities.

4   Technical Sections

4.2   Standard Furniture Settings

Workshop Benches

Item	Description
Furniture type:	Standard practical workshop settings (seated and standing)
Furniture codes:	T01
	S06
Areas/spaces:	Specialist spaces, workshop spaces
Considerations:	Specific specialist requirements must be considered
	Diversity: Variety of fixed & mobile benches to suit the design and functionality of the space, variety of bench heights and under-bench storage to be provided

4 Technical Sections
## 4.2 Standard Furniture Settings

4.2.3 Working Settings

TAFE NSW supports diversity in their working settings and it is the designer's responsibility to ensure furniture is selected and specified to enable such working settings.

It is recommended to engage relevant user groups to define the working activities that occur within the space. The below examples provide design guidance only and allow flexibility so that the best design outcome can be achieved for the user. Refer to Sections 4.3 and 4.4 for furniture type requirements.

Please note the images shown are diagrammatic and are only intended to illustrate the possible configuration of the settings.

Presentation/Discussion
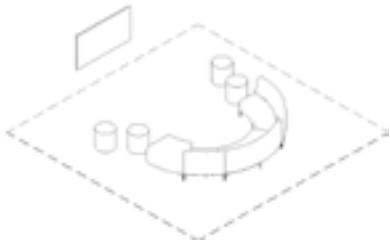
Item	Description
Furniture type:	Presentation and discussion setting for staff collaboration and sharing
Furniture codes:	S05, S07, S09
	T08
Areas/spaces:	Staff commons
Considerations:	Acoustics: acoustic separation from quiet settings.

Customer Desk
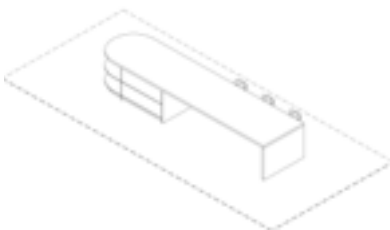
Item	Description
Furniture type:	Furniture associated with customer desks
Furniture codes:	S03, S05, S09
Areas/spaces:	Receptions, foyers, atriums
Considerations:	Joinery: must be accessible, heights and clearances to be coordinated with furniture

Conference
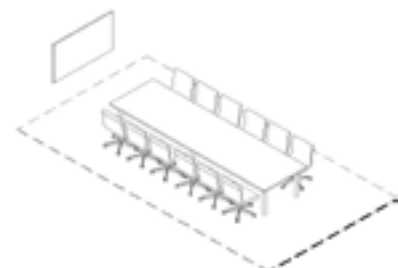
Item	Description
Furniture type:	Long table setting for formal meetings
	9+ people
Furniture codes:	T05, minimum 2 off per project or 15% of meeting rooms per project, whichever is greater.
	T04 for all other rooms.
	S04
Areas/spaces:	Conference rooms, meeting rooms

4   Technical Sections

4.2   Standard Furniture Settings

Workpoint
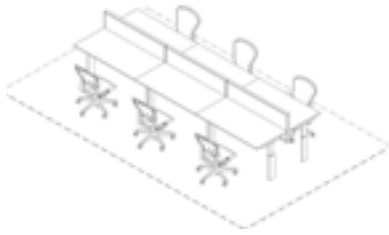
Item	Description
Furniture type:	Individual workpoints for staff
Furniture codes:	T03
	S03
	ST1
Areas/spaces:	Staff areas

4 Technical Sections

4.3 Guide to Furniture Types

This section must be read in conjunction with Furniture Type Schedules.

4.3.1 Common Furniture Requirements

General Notes

- All furniture must be commercial grade to ensure longevity & minimise wear and tear over time.
- The requirements apply to interior furniture items. Any similar items designed as joinery pieces should also consider the requirements as part of the holistic furniture scheme.
- Critical considerations for all furniture:
  - Design strategies (Section 3 of this Design Standard)
  - User ergonomics.

Components

Castors:

- All castors must be specified to be suitable for the floor finish
- All table castors must be lockable
- Consider weight-activated chair castors, especially for stools

Armrests:

- Armrests on task chairs must be adjustable (and removable).
- Armrests on other chair types must be either adjustable (and removable), or if fixed, must be coordinated with selected tables to avoid clashing.

Services Integration:

- Where power and data services are provided as part of furniture, they must be integrated with cable management systems, table boxes, grommets and the like.
- Adequate quantities of power, data and USB outlets must be provided as per the Electrical Design Standards and project-specific requirements, allowing for both fixed, portable and personal devices.
- Furniture with integrated services must not have castors to mitigate risk of users freely moving them.

4   Technical Sections

4.3   Guide to Furniture Types

Dimensions and Weights

Critical dimensions:

- For each furniture setting, selected furniture types must be compatible so that:
  - The user can comfortably sit in chairs with ergonomic clearance height under tables and clear width between table legs or frames.
  - Chairs can be fully pushed in under tables when not in use.

Minimum weight capacity:

- The stated minimum weight capacity of each seating type must be followed and supported by the respective product warranty. Particular seating types must also be supported by the relevant Furniture certification appropriate to the stated weight capacity.

Adjustable Height & Fixed Height:

- For all furniture types except for meeting tables, there must be a mix of fixed height and adjustable height.
- For meeting rooms designed for 8 people or less (single table), at least 2 rooms or 15% of rooms per project (whichever is greater) must have height adjustable tables.
- For meeting rooms designed for 9 or more people (multiple tables), at least one height adjustable table must be included. The remaining tables must be provided with lockable castors and flip-top tables to enable the space to be reconfigured.

Standard Tabletop Heights

- Height adjustable = 650-1,200mm adjustable range
- Seated Tabletop height = between 700-750mm
- Standing tabletop height = between 880-950mm or to suit project-specific requirement

Standard Seating Heights

- Height adjustable (seated) = 420-520mm adjustable range
- Height adjustable (drafting) = 650-840mm adjustable range or to suit associated table height range
- Fixed seating height = typically 450-460mm to suit seated tabletop height, or to suit associated table height
- Lounge seating height = typically 420mm

4 Technical Sections
4.3 Guide to Furniture Types

Materials

- All materials must be commercial grade, durable, minimise soiling, staining, wear and tear and be covered by the minimum furniture warranties required.
- All Materials should have zero or low VOC content where possible/feasible.
- Consider materials with recycled content (e.g. recycled timber, plastic, vinyl, fibres, etc).
- Consider colour of tables and type/duration of tasks to reduce contrast and eye fatigue

Specific properties to specialist requirements:

- Must consider water, stain, scratch, non-porous, anti-microbial, heat, chemical and/or anti static resistance in specialist spaces suitable for the intended use. Materials may include laminate, timber, stainless steel, solid surface, etc., depending on specialist requirements.

Laminate:

- Laminates must have appropriate durable edging with no sharp edges.

Timber:

- Timber products must be FSC-certified solid timber or timber veneer with durable high-traffic coating or treatment.

Stainless Steel:

- Thickness and grade must suit the use, environment and location.

Powdercoat:

- Must be commercial-grade powdercoating system with a minimum warranty to match the minimum furniture warranty required.

Upholstery:

- Upholstered and padded with commercial foam cushioning.
- Consider appropriate upholstery material, finish and colour to minimise wear and tear, soiling, staining & longevity over time.
- Martindale rub rating must be at least 100,000.

Glass:

- Generally not permitted subject to project-specific requirements. If proposed, must be safety glass in accordance with relevant Australian Standards and covered by warranty.

Certification

Furniture Certification

- Where stated as mandatory (M), furniture selections must be certified by external parties such as BIFMA or AFRDI.
- Where stated as 'not required, but can be considered' (N), furniture selections are not required to be certified by external parties such as BIFMA or AFRDI, but should be capable of being certified against the relevant Australian Standards.

4 Technical Requirements

4.4 Furniture Type Schedules

Notes:
This schedule forms part of the Furniture Design Standards and must not be separated.

This schedule must be read in conjunction with the 'Guide to Furniture Types'.

ABR	Compliance levels:
M	Must comply
O	Subject to project-specific requirements
N	Not required, can be considered
X	Not fit for purpose

4.4.1 Tables

Code	Furniture Description	Critical Dimensions	Min. % height adj. (per space)	Max. % fixed height (per space)	Light-weight/ easy to be moved	Item: Castors	Item: Flip top	Item: Services Integration	Materials: Table Top	Material: Table legs	Warranty	Furniture Cert-ification	Env. Cert-ification	Other Considerations
T01	Workshop bench	Minimum top size nominally. 1720 W x 800 D. Subject to project-specific requirements.	15%	85%	X	O	X	O	Specific properties to suit req's of the space	Specific properties to suit req's of the space	10 years	N	N	At least 1 bench per space to have Accessible clear underbench (no shelving or cabinets) for wheelchair access. Consider specialist compliance requirements.
T02	Learning table	Minimum top size for 1 person table: Nominally 900mm W. Minimum top size for 2 person table: Nominally 1500mm W (ensuring compatibility of chairs and table legs). Subject to project-specific req's.	15%	85%	M	M	M	X	Laminate, Timber	Commercial powdercoat, SS	10 years	N	M	Minimum of 1 per space to be 1500mm wide to accommodate students with supplementary equipment or support staff member accompanying them. Adjustable height to be manual.
T03	Workstation	Permanent use: Min. W. to fit 2 x screens side by side 1500 W x 750 D Occasional use: 1200 W x 750 D	70%	30%	X	X	X	M	Laminate, Timber	Commercial powdercoat, SS	10 years	N	M	Modesty and acoustic panels may be required depending on furniture layout. Adjustable height to be electric.
T04	Meeting table (foldable with castors, fixed height)	Must be suitable for number of intended users, ensuring compatibility of chairs and table legs	X	100%	M	M	M	O	Laminate, Timber	Commercial powdercoat, SS	10 years	N	M	Refer to Section 4.2 on pairing with Table T05. Coordinate with VC requirements for meeting rooms.
T05	Meeting table (non-foldable without castors, adj. height)	Must be suitable for number of intended users, ensuring compatibility of chairs and table legs	100%	X	X	O	X	O	Laminate, Timber	Commercial powdercoat, SS	10 years	N	M	Either standalone or paired with Table T04. Coordinate with VC requirements for meeting rooms.
T06	Round table	Must be suitable for number of intended users, ensuring compatibility of chairs and table legs	0%	100%	O	O	O	X	Laminate, Timber	Commercial powdercoat, SS, timber	10 years	N	N	N/A
T07	Coffee table	Minimum 350 H	0%	100%	O	N	X	X	Laminate, Timber	Commercial powdercoat, SS, timber	7 years	N	N	N/A
T08	Laptop table	N/A	0%	100%	M	O	X	X	Laminate, Timber	Commercial powdercoat, SS, timber	years	N	N	Consider additional space for mouse & cup holder

4 Technical Requirements

4.4 Furniture Type Schedules

4.4.2 Chairs

Notes:
This schedule forms part of the Furniture Design Standards and must not be separated.

This schedule must be read in conjunction with the 'Guide to Furniture Types'.

ABR	Compliance levels:
M	Must comply
O	Subject to project-specific requirements
N	Not required, can be considered
X	Not fit for purpose

Code	Furniture Description	Minimum weight capacity	Min. % height adjustable (per space)	Max. % fixed height (per space)	Light-weight/ easy to be moved	Item: Castors	Item: Swivel	Item Backrest	Item: Min. % additional lumbar support	Item: Min. % with armrests	Materials: Seat/shell/back	Material: Leg/base	Warranty	Furniture Certification	Environmental Certification	Other Considerations
S01	Assembly chair	135kg	15%	85%	M	X	X	M	X	O	Polypropylene, upholstery	To suit project requirements	5 years	N	M	Must be stackable. For spaces with over 40 chairs, suitable chair trolley must be provided. Linked chairs not permitted
S02	Learning chair	135kg	15%	85%	M	N	N	M	O	O	Polypropylene, upholstery, timber	To suit project requirements	5 years	N	M	N/A
S03	Task chair	135kg	100%	N/A	O	M	M	M	100%	15%	To suit project requirements	To suit project requirements	7 years	M	M	Integral footrest must be provided for drafting height chairs
S04	Meeting chair	135kg	100%	N/A	O	M	M	M	O	N	To suit project requirements	To suit project requirements	5 years	N	M	N/A
S05	Stool -fixed height	135kg	X	100%	O	N	O	O	X	X	Timber, upholstery, powdercoat	Timber, powdercoat	7 years	N	N	Integral footrest must be provided for drafting height chairs
S06	Stool -specialist	135kg	100%	N/A	O	O	O	O	X	X	upholstery (vinyl) Specific properties to suit specialist req's	upholstery (vinyl) Specific properties to suit specialist req's	7 years	N	N	Integral footrest must be provided for drafting height chairs
S07	Lounge	135kg	X	100%	M	O	X	X	N	N	Upholstery	To suit project requirements	7 years	N	N	Must be sectional or modular. Must be constructed from commercial grade foam
S08	Armchair	135kg	X	100%	M	X	X	M	N	O	Upholstery	To suit project requirements	7 years	N	N	N/A
S09	Ottoman	135kg	X	100%	M	X	X	X	X	X	Upholstery	To suit project requirements	7 years	N	N	N/A

4 Technical Requirements

4.4 Furniture Type Schedules

4.4.2 Other

Notes:
This schedule forms part of the Furniture Design Standards and must not be separated.

This schedule must be read in conjunction with the 'Guide to Furniture Types'.

ABR	Compliance levels:
M	Must comply
O	Subject to project-specific requirements
N	Not required, can be considered
X	Not fit for purpose

Code	Furniture Description	Dimensions and Weight	Associated furniture types	Item: Castors	Item: Lockable storage	Item: Integrated acoustic separation	Item: Services Integration	Materials	Warranty	Furniture Certification	Environmental Certification	Other Considerations
POD1	Individual booth/pod with table	Whole booth/pod and table and chair configuration must be accessible.	T03 S03	X	N/A	M	M	O	7 years	N	N	Consider either screen partitions (booth) or fully enclosed (pod).
POD2	Group booth with table	Ensure table end is free from table legs to allow wheelchair access	T04 or T05	X	N	M	M	O	7 years	N	N	N/A
ST1	Mobile pedestal	Ensure pedestal fits below desk at lowest desk height setting and does not obstruct task chair	T03	M	M	N/A	N/A	Laminate, Commercial powdercoat	7 years	N	N	N/A
ST2	Locker	Min. internal dimensions: 280mm W 400mm D 500mm H	N/A	N/A	M	N/A	M	Laminate, Commercial powdercoat	7 years	N	N	At least 15% of lockers must be accessible. Lockers must be structurally supported for stability. Locking must be keyless system.

4 Technical Sections

4.5 Work Health and Safety

4.5.1 General Requirements

The ''Common Work Health & Safety Concerns'' table identifies common Work Health & Safety concerns arising from furniture that have been identified from past TAFE NSW projects. Each project team must demonstrate that all safety concerns raised have been addressed as part of their involvement with any project to which this Design Standard applies. The safety concerns listed in the table must be included in project-specific Safety-in-Design Registers to ensure that project teams demonstrate how they have been addressed through all phases of any project.

Please note the information in the table is:

- For guidance only,
- Not exhaustive and does not take into account specific circumstances and should not be relied on in that way, and
- Does not alleviate the respective TAFE NSW team, designer, supplier or contractor from their own Work Health and Safety obligations and duties.

Level of Risk	Legend	Action Required
High	H	Implement cost effective risk control measures, and formalise procedures or management responsibility for reducing risk. Amend design to reduce risk, or seek alternative option. Only accept option if justifiable on other grounds.
Moderate	M	Incorporate cost effective risk control measures within the scope of long-term planning. Management responsibility must be specified. Check that risks cannot be further reduced by simple design changes.
Low	L	Manage by routine procedures. Check that risks cannot be further reduced by simple design changes.

4 Technical Sections

4.5 Work Health and Safety

4.5.2 Common Work Health & Safety Concerns

Safety concern raised	Potential Control or Treatment measure	Reference to Design Standards/ Statutory Requirements	Level of Risk	Phase: Project Delivery	Phase: Design	Phase: Construct, Supply, Install	Phase: Operation and End use
Injuries from moving furniture excessively, furniture being too heavy to move	Limit weight of individual element or sign larger components	Section 4.3	H	-	Y	Y	Y
Injuries from poor ergonomics (back/ hip injuries)	Furniture to meet relevant ergonomic standards.	Sections 3.1.1, 3.1.2	H	-	Y	Y	Y
Furniture being inappropriate for its intended use, or intended length of use	Furniture to meet relevant ergonomic standards.	Sections 3.1.1, 3.1.2, 4.2	M	-	Y	Y	Y
Plug-in devices and charging cables	Design Standard to develop methods of integrating these into furniture.	Section 4.3, Electrical Design Standards	M	-	Y	Y	Y
Castors and adjustable height mechanisms can cause injuries	Criteria for castors and adjustable height mechanisms to be included in design standard	Section 4.3	M	-	Y	Y	Y
Injuries from exceeding weight capacity of chairs (e.g., bariatric)	Introduce Design Standard to uplift minimum weight capacity Design Standard. Weight capacity further exceeding this requirement to be treated on a case-by-case basis.	Sections 3.1.1, 4.3	H	Y	Y	Y	Y
Capacity & stability of workbenches for workshops	Design Standards include heavy duty requirements for Design Standard workbenches	Section 4.3.1	H	Y	Y	Y	Y
Stand up desks access to electrical equipment at rear of desk as a tripping hazard.	Design Standard to mention integrated concealed cabling	Section 4.3, Electrical Design Standards	M	-	Y	-	-
Specialist equipment movement	Specialist equipment outside the scope of this standard.	-	M	Y	Y	-	-
VOC off gassing from new furniture	Low VOC furniture finishes	Section 3.1.4	M	-	Y	-	-