Digital Solutions Division



ACT Health

St-15 Audio and Video Conferencing Standard

Version 2020.1.0 Approved



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Please Read

IMPORTANT COMPLIANCE REQUIREMENTS

This is a controlled document and is reviewed on an annual basis. The last review was carried out on September 2019. If you are viewing this document after September 2020, you will need to contact the sender to confirm you are working from the latest revision.

It is the responsibility of the contractor/vendor to read and adhere to the procedures, processes and guidelines set out in the following document when quoting for or carrying out work for ACT Health Directorate (ACTHD).

If you have questions or require clarification of any of the procedures, processes or guidelines in the following document please contact the sender of the document in writing with your questions so that a formal response can be provided. If any specific requirement is unclear, it is expected that clarification will be sought from the Health Digital Solutions Division (DSD) - ICT architect(s), rather than a decision made and a design implemented based on unclarified assumptions.

These standards are applicable to ALL Canberra Health Services (CHS) and ACTHD sites or any work funded by ACTHD (e.g. Calvary, ACTHD provided Non-Government Organisation (NGO) sites) unless specifically exempt.

All Greenfield Health sites are expected to be fully compliant with all appropriate standards.

Brownfield Health sites undergoing refurbishment should be fully compliant unless an exemption is provided by DSD Infrastructure Hub.

In the event of any design non-compliance issues, a Departures document must be completed and submitted to DSD Infrastructure Hub. These issues should be resolved, in consultation with DSD Infrastructure Hub, as soon as possible within the project process and explicitly prior to site handover.

While some test cases have been cited within these documents as examples, the list is not exhaustive, and all appropriate test procedures shall be formulated, approved prior to testing and testing shall be performed by the client system administrators before full acceptance can be signed off by the Director of ICT Infrastructure Hub.

IMPORTANT:

Any departure from the standard, whether intentional or in error shall require a completed Departures Document to be submitted to DSD infrastructure Hub for approval.

Any non-compliant designs without a pre-approved Departures Document by completion of the project or a nominated milestone or gateway, will require remediation by the Head Contractor at the Head Contractors cost.

Document review high level

Version	Summary of Changes	Author	Date
2020.1.0	Final version ready for release	Nitin Saxena	30/03/2020

Document references

Document	Version	Location

Document default review cycle

(to be review every 12 months from the release date)

Date	Version	Comments
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Mar 2021		(Next review date)

Document Owner

Name	Location
Senior Director, ICT Infrastructure Hub	DSD, Future Capability & Governance, ACT Health

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1. Document Purpose

This document is intended to provide a set of standards for the design of Audio-Visual (AV) for the meeting rooms and other collaboration spaces throughout ACT Health and Canberra Health Services. It provides a summary of recommended technologies for several room types, along with various requirements for those technologies that can assist in the fit out of both new and existing spaces.

There is an attempt to not be too prescriptive. The intention is to provide a simple list of room specifications which can be easily replicated across various sites. This will ensure that a common user experience is maintained across all the rooms or space instances while also ensuring the highest level of interoperability and supportability.

1.1. Context and Background

Meeting Rooms and other Collaboration Spaces can take many forms. Historically, AV has constituted some form of display and video or teleconferencing unit, installed in a traditional meeting room.

With the introduction of new working modes, such as Activity Based Working (ABW), the scope of AV has expanded to not only include video conferencing, but also content collaboration, co-creation, and sharing. Additionally, these capabilities need to be delivered across teams who may be geographically separated, without impacting the ability of those teams to collaborate. The technologies proposed in this document, together with the applications provided by the ACT Government through desktop and mobile computing achieve these aims.

Additionally, collaboration spaces themselves have evolved, and now include spaces such as:

- Traditional meeting rooms;
- Project spaces;
- Quiet/Focus spaces;
- · Huddle spaces;
- Training spaces; and
- Briefing spaces.

1.2. Additional Reading

CISCO Collaboration solutions

https://www.cisco.com/c/en/us/products/collaboration-endpoints/collaboration-room-endpoints/index.html

2. Design Recommendations

2.1. Meeting Rooms

Meeting Rooms normally consist of closed spaces, seating three to fourteen people, traditionally fitted out with a whiteboard, possibly a monitor of some type or size to allow for content display and some form or other of teleconferencing solution.

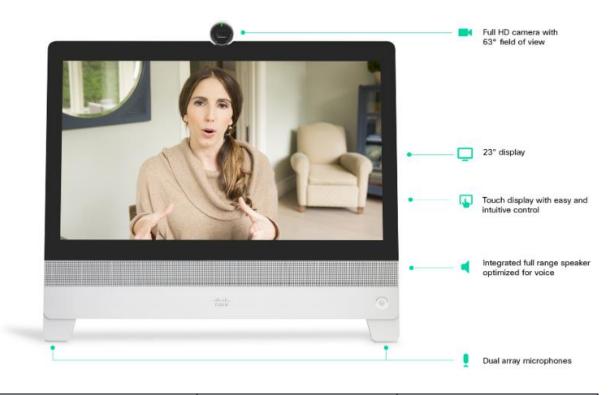
Innovative development have seen these traditional technologies evolve into all-in-one interactive products that extend the conferencing capabilities from voice, localised video and graphics to what are termed Collaboration Meeting Rooms which are fitted out with technologies that enable high quality video based collaborations combining video, voice and content sharing technologies.

The following sections outline two options for each type of meeting room addressing the technologies that are proposed to be used in that size room, capabilities provided by the technology, construction considerations and any recommendations as applicable.

2.1.1. Micro Meeting Room (2-3 Person)

2.1.1.1. Option 1—Cisco DX80 Collaboration Unit

Technologies in this room



Display	Audio	Control
Cisco DX80 desktop collaboration unit	Cisco DX80 built in speaker	Cisco DX80 multi-touch screen

Capabilities using the Cisco DX80 Desktop collaboration unit

- Voice and video conference calls;
- Wired and wireless presentation;
- Content sharing; and

Electronic whiteboard and annotation.

$2.1.1.2. Option\,2-Commercial\,Grade\,Monitor\,and\,Cisco\,Webex\,Room\,Kit$

Technologies in this room



Display	Audio	Control
27" commercial grade (16X7) Light-Emitting Diode (LED) / Liquid Crystal Display (LCD) monitor	CISCO Webex Room Kit Mini- series with microphone array and speakers	CISCO Touch 10 controller for end points

Capabilities using a commercial monitor and Webex Room Kit

- Voice and video conference calls;
- Content sharing; and
- Wired and wireless presentation.

2.1.1.3. Construction Considerations

The room will require, at a minimum:

- A single data outlet;
- Double General-Purpose Outlet (GPO); and
- No additional data port will be required as the Touch 10 controller will be directly connected to the media bar.

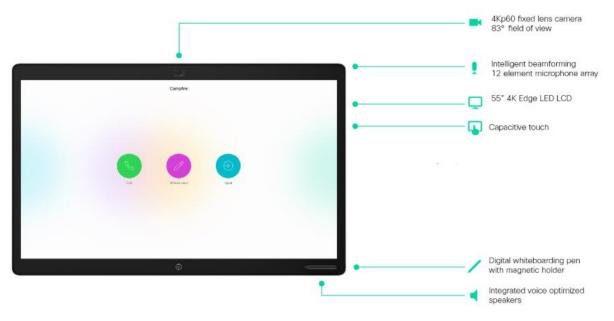
2.1.1.4. Recommendation

Appropriate acoustic measures should be in place to minimise echo and ambient noise levels.

2.1.2. Small Meeting Room (4-6 Person)

2.1.2.1. Option 1 – Cisco 55" Webex Collaboration Unit

Technologies in this room



Display	Audio	Control
Cisco Webex Board 55"	Cisco Webex Board 55" built in	Cisco Webex Board 55" multi-
collaboration unit	speaker	touch screen

Capabilities in this room using the Cisco Webex Board 55" collaboration unit

- Voice and video conference calls;
- Wired and wireless presentation;
- · Content sharing; and
- Whiteboard and annotation.

$2.1.2.2. \, \text{Option} \, 2 - 55 \text{''} \, \text{Commercial Grade Monitor and Cisco Webex Room Kit}$

Technologies in this room



Display	Audio	Control
55" commercial grade (16X7) LED LCD monitor	CISCO Webex Room Kit with microphone array and speakers	CISCO Touch 10 controller for end points

Capabilities in this room using a commercial monitor and Webex Room Kit

- Voice and video conference calls;
- · Content sharing; and
- Wired and wireless presentation.

2.1.2.3. Construction Considerations

The room will require, at a minimum:

- Dual data outlets;
- Double GPO; and
- Suitable wall support for the units that will be wall mounted.

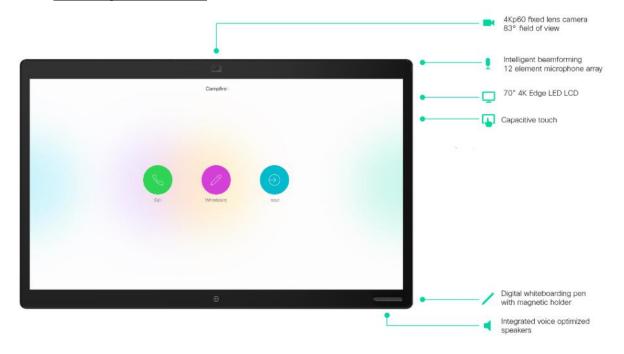
2.1.2.4. Recommendations

- Appropriate acoustic measures should be in place to minimise echo and ambient noise levels;
- Participants should sit no further than 9m from the device; and
- The seating in the room should be appropriately organised as cameras have an 83-degree horizontal field of view.

2.1.3. Medium Meeting Room (6-10 Person)

2.1.3.1. Option 1-Cisco 70" Webex Collaboration Unit

Technologies in this room



Display	Audio	Control
Cisco Webex Board 70"	Cisco Webex Board 70" built in	Cisco Webex Board 70" multi-
collaboration unit	speaker	touch screen

Capabilities in this room using the Cisco Webex Board 70" Collaboration Unit

- Voice and video conference calls;
- Wired and wireless presentation;
- Content sharing; and
- Whiteboard and annotation.

2.1.3.2. Option 2-70" Commercial Grade Monitor and Cisco Webex Room Kit

Technologies in this room



Display	Audio	Control
70" commercial grade (16X7) LED LCD monitor	CISCO Webex Room Kit Plus with microphone array and speakers	CISCO Touch 10 controller for end points

Capabilities in this room using a commercial monitor and Webex Room Kit Plus

- Voice and video conference calls;
- Content sharing; and
- Wired and wireless presentation.

2.1.3.3. Construction Considerations

The room will require, at minimum:

- Dual data outlets;
- Double GPO; and
- Suitable wall support for the units that will be wall mounted.

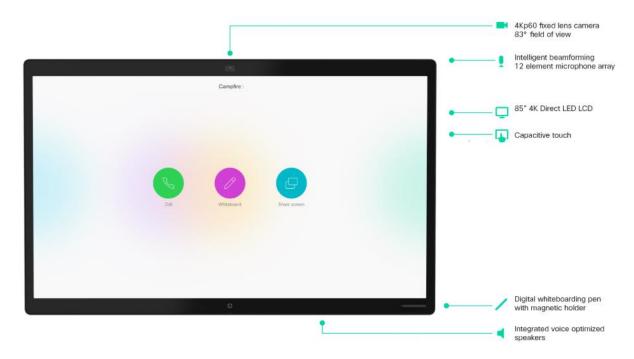
2.1.3.4. Recommendations

- Appropriate acoustic measures should be in place to minimise echo and ambient noise levels;
- Participants should sit no further than 9m from the device; and
- The seating in the room should be appropriately organised as cameras have an 83-degree horizontal field of view.

2.1.4. Large Meeting Room (10-14 Person)

2.1.4.1. Option 1—Cisco 85" Webex Collaboration Unit

Technologies in this room



Display	Audio	Control
Cisco Webex Board 85" collaboration unit	Cisco Webex Board 85" built in speaker	Cisco Webex Board 85" multi- touch screen

Capabilities in this room using the Cisco Webex Board 85" Collaboration Unit

- Voice and video conference calls;
- Wired and wireless presentation;
- · Content sharing; and
- Whiteboard and annotation.

2.1.4.2. Option 2 – Commercial Grade Monitor and Cisco Webex Room Kit

Technologies in this room



Display	Audio	Control
85/86" commercial grade (16X7) LED LCD monitor	CISCO Webex Room Kit Plus with microphone array and speakers	CISCO Touch 10 controller for end points

Capabilities in this room using a commercial monitor and Webex Room Kit Plus

- Voice and video conference calls;
- Content sharing; and
- Wired and wireless presentation.

2.1.4.3. Construction Considerations

The room will require, at minimum:

- Dual data outlets;
- Double GPO; and
- Suitable wall support for the units that will be wall mounted.

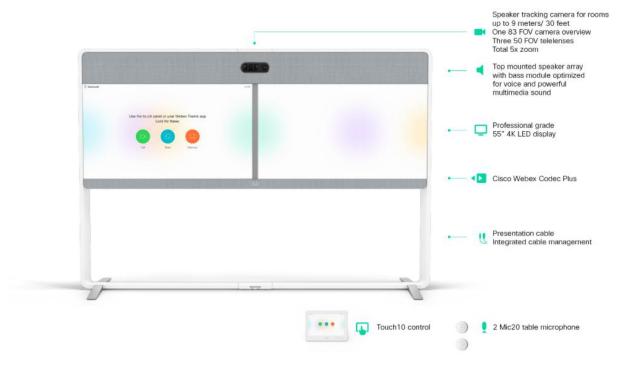
2.1.4.4. Recommendations

- Appropriate acoustic measures should be in place to minimise echo and ambient noise levels;
- Participants should sit no further than 9m from the device; and
- The seating in the room should be appropriately organised as cameras have an 83-degree horizontal field of view.

2.1.5. Board Meeting Room (14-18 Person)

2.1.5.1. Option 1—Cisco Room 55

Technologies in this room



Display	Audio	Control
Cisco Room 55 Dual 55" displays	External table or ceiling microphones	Cisco Touch10 control panel (on table)
Optional 55" Webex Board in companion mode		

Capabilities in this room using the Cisco Room 55 Dual 55" Displays

- Voice and video conference calls;
- Wired and wireless presentation;
- Content sharing; and
- Electronic whiteboard if the 55" Webex board is installed.

2.1.5.2. Option 2 – Commercial Grade Monitor and Cisco Webex Room Kit

Technologies in this room



Display	Audio	Control
2 of 55" commercial grade (16X7) LED LCD monitors	CISCO Webex Room Kit with microphone array and speakers	CISCO Touch 10 controller for end points

Capabilities in this room using a commercial monitor and Webex Room Kit

- Voice and video conference calls; and
- Wired and wireless presentation.

2.1.5.3. Construction Considerations

The room will require, at minimum:

- Dual data outlet;
- 2 of double GPOs;
- Suitable wall support for the units that will be wall mounted;
- Additional data required on table for Touch10 control panel; and
- Additional data and GPO required for optional Webex board.

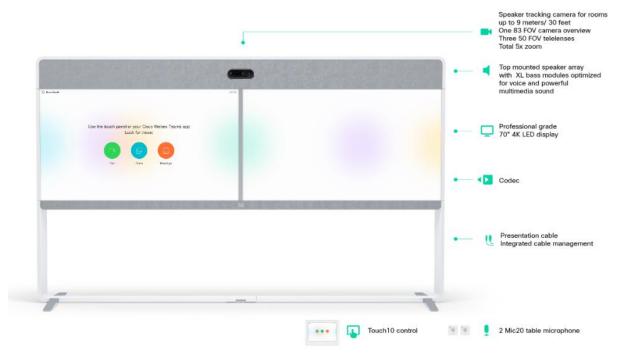
2.1.5.4. Recommendations

- Appropriate acoustic measures should be in place to minimise echo and ambient noise levels;
- Participants should sit no further than 9m from the device for speaker tracking. External microphones do allow for participants to sit further away;
- The seating in the room should be appropriately organised as cameras have an 83-degree horizontal field of view; and
- Optional Webex board can be added in companion mode if electronic whiteboard functionality is required.

2.1.6. Large Board Meeting Room (18+ Person)

2.1.6.1. Option 1—Cisco 70" Dual Displays

Technologies in this room



Display	Audio	Control
Cisco Room 70 Dual 70" displays	External table or ceiling microphones	Cisco Touch10 control panel (on table)
Optional 55" Webex Board in companion mode		

Capabilities in this room using the Cisco Room 70 Dual 70" Displays

- Voice and video conference calls;
- Wired and wireless presentation; and
- Electronic whiteboard capability if the 55" Webex board is installed.

2.1.6.2. Option 2 - Commercial Grade Monitor and Cisco Webex Room Kit

Technologies in this room



Display	Audio	Control
2 of 70" commercial grade (16X7) LED LCD monitors	CISCO Webex Room Kit Plus with microphone array and speakers	CISCO Touch 10 controller for end points

Capabilities in this room using a commercial monitor and Webex Room Kit Plus

- Voice and video conference calls;
- Content sharing; and
- Wired and wireless presentation.

2.1.6.3. Construction Considerations

The room will require, at minimum:

- Dual data outlet;
- 2 of double GPOs;
- Suitable wall support for the units that will be wall mounted;
- Additional data required on table to Touch10 control panel; and
- Additional data and GPO required for optional Webex board.

2.1.6.4. Recommendations

- Appropriate acoustic measures should be in place to minimise echo and ambient noise levels;
- Participants should sit no further than 9m from the device for speaker tracking. External microphones do allow for participants to sit further away;
- The seating in the room should be appropriately organised as cameras have an 83-degree horizontal field of view; and
- Optional Webex board can be added in companion mode if electronic whiteboard functionality is required.

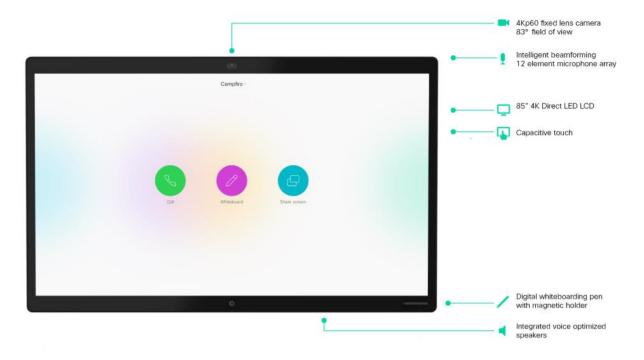
2.2. Project Spaces

Project Spaces are normally closed spaces, that closely resemble a traditionally meeting room. Project Spaces differ in that their intended purpose is to be occupied by project teams for a longer duration, sometimes for a period of months. These spaces generally focus more on content sharing and co-creation. They are also normally sized equivalent to Large Meeting Rooms (10-14 person).

2.2.1. Project Space (10-14 Person)

2.2.1.1. Option 1 - Cisco Webex 85" Board

Technologies in this room



Display	Audio	Control
Cisco Webex Board 85" collaboration Unit	Cisco Webex Board 85" built in speaker	Cisco Webex Board 85" multi- touch screen

Capabilities in this room using the Cisco Webex Board 85" Collaboration Unit

- Voice and video conference calls;
- Wired and wireless presentation;
- · Content sharing; and
- Whiteboard and annotation.

2.2.1.2. Option 2 - Commercial Grade Monitor and Cisco Webex Room Kit



Display	Audio	Control
85/86" commercial grade (16X7) LED LCD monitor	CISCO Webex Room Kit Plus with microphone array and speakers	CISCO Touch 10 Controller for end points

Capabilities in this room using a commercial monitor and Webex Room Kit Plus

- Voice and video conference calls;
- Content sharing; and
- Wired and wireless presentation.

2.2.1.3. Construction Considerations

The room will require, at minimum:

- Dual data outlets;
- Double GPO; and
- Suitable wall support for the units that will be wall mounted.

2.2.1.4. Recommendations

- Appropriate acoustic measures should be in place to minimise echo and ambient noise levels;
- Participants should sit no further than 9m from the device; and
- The seating in the room should be appropriately organised as cameras have an 83-degree horizontal field of view.

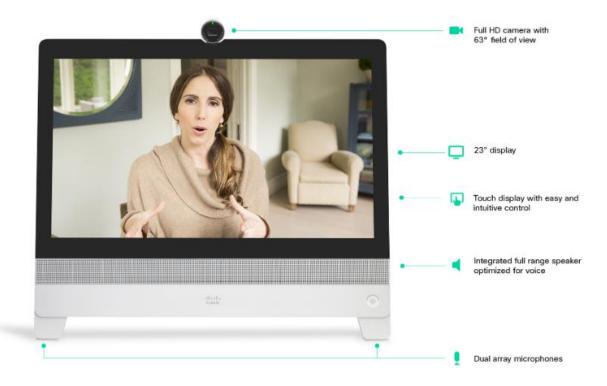
2.3. Quiet/Focus Spaces

Quiet/Focus Spaces are small one person closed spaces that allow for audio privacy for short duration calls or meetings. In an ABW type environment these spaces are important to provide for employees, as private spaces are not common in these environments. They should be non-bookable spaces available for ad-hoc meetings. Employees should be encouraged not to "camp" in these places and make them available for others.

2.3.1. Quiet/Focus Spaces

2.3.1.1. Option 1—Cisco DX80 Collaboration Unit

Technologies in this space



Display	Audio	Control
Cisco DX80 Desktop collaboration unit	Cisco DX80 built in speaker	Cisco DX80 multi-touch screen

Capabilities in this room using the Cisco DX80 Desktop Collaboration Unit

- Voice and video conference calls;
- Wired and wireless presentation; and
- Whiteboarding and annotations.

2.3.1.2. Option 2 - Commercial Grade Monitor and Cisco Webex Room Kit

Technologies in this space



Display	Audio	Control
27" commercial grade (16X7) LED LCD monitor	CISCO Webex Room Kit miniseries with microphone array and speakers	CISCO Touch 10 controller for end points

Capabilities in this room using a commercial monitor and Webex Room Kit

- Voice and video conference calls; and
- Wired and wireless presentation.

2.3.1.3. Construction Considerations

The room will require, at minimum:

- Single data outlet;
- Double GPO; and
- No additional data port will be required as the Touch 10 controller will be directly connected to the media bar.

2.3.1.4. Recommendation

• Appropriate acoustic measures should be in place to minimise echo and ambient noise levels.

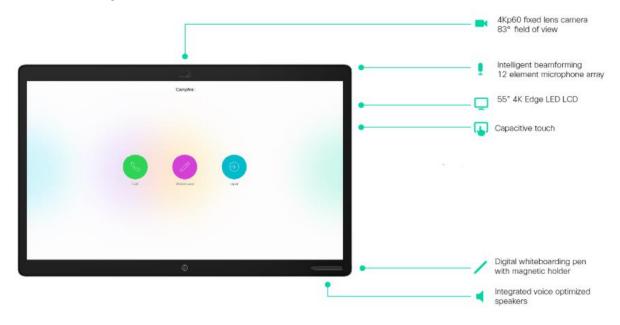
2.4. Huddle Spaces

Huddle Spaces are open plan collaboration spaces, that provide an area for local and remote co-creation for both local and remote content.

2.4.1. Small Huddle Space (4-6 People)

2.4.1.1. Option 1—Cisco 55" Webex Collaboration Unit

Technologies in this room



Display	Audio	Control
Cisco Webex Board 55" collaboration unit	Cisco Webex Board 55" built in speaker	Cisco Webex Board 55" multi- touch screen

Capabilities in this room using the Cisco Webex Board 55" collaboration unit

- Voice and video conference calls;
- Wired and wireless presentation;
- Content sharing; and
- Whiteboarding and annotations.

2.4.1.2. Option 2 - Commercial Grade Monitor and Cisco Webex Room Kit

Technologies in this room using Cisco Webex Room Kit



Display	Audio	Control
55" commercial grade (16X7) LED LCD monitor	CISCO Webex Room Kit with microphone array and speakers	CISCO Touch 10 controller for end points

Capabilities in this room using a commercial monitor and Webex Room Kit

- Voice and video conference calls; and
- Wired and wireless presentation.

2.4.1.3. Construction Considerations

The room will require, at minimum:

- Dual data outlets;
- Double GPO; and
- Suitable wall support for the units that will be wall mounted.

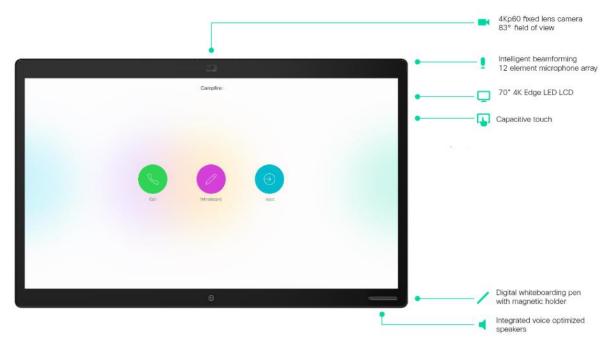
2.4.1.4. Recommendations

- Appropriate acoustic measures should be in place to minimise echo and ambient noise levels;
- Participants should sit no further than 9m from the device; and
- The seating in the room should be appropriately organised as cameras have an 83-degree horizontal field of view.

2.4.2. Medium Huddle Space (6-8 People)

2.4.2.1. Option 1 – Cisco 70" Webex Collaboration Unit

Technologies in this room



Display	Audio	Control
Cisco Webex Board 70" collaboration unit	Cisco Webex Board 70" built in speaker	Cisco Webex Board 70" multi- touch screen

Capabilities in this room using the Cisco Webex Board 70" collaboration unit

- Voice and video conference calls;
- Wired and wireless presentation; and
- Whiteboarding and annotations.

2.4.2.2. Option 2 - Commercial Grade Monitor and Cisco Webex Room Kit



Audio	Control
CISCO Webex Room Kit Plus with microphone array and speakers	CISCO Touch 10 Controller for end points
	CISCO Webex Room Kit Plus with microphone array and

Capabilities in this room using a commercial monitor and Webex Room Kit Plus

- Voice and video conference calls;
- · Content sharing; and
- Wired and wireless presentation.

2.4.2.3. Construction Considerations

The room will require, at minimum:

- Dual data outlets;
- Double GPO; and
- Suitable wall support for the units that will be wall mounted.

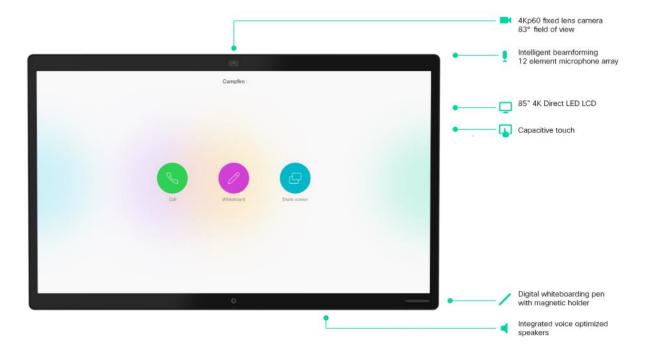
2.4.2.4. Recommendations

- Appropriate acoustic measures should be in place to minimise echo and ambient noise levels;
- Participants should sit no further than 9m from the device; and
- The seating in the room should be appropriately organised as cameras have an 83-degree horizontal field of view.

2.4.3. Large Huddle Space (8-10 People)

2.4.3.1. Option 1-Cisco 85" Webex Collaboration Unit

Technologies in this room



Display	Audio	Control	
Cisco Webex Board 85"	Cisco Webex Board 85" built in	Cisco Webex Board 85" multi-	
collaboration unit	speaker	touch screen	

Capabilities in this room using the Cisco Webex Board 85" collaboration unit

- Voice and video conference calls;
- Wired and wireless presentation;
- Content sharing; and
- Electronic whiteboard and annotation.

2.4.3.2. Option 2 - Commercial Grade Monitor and Cisco Webex Room Kit



Display	Audio	Control
85/86" commercial grade (16X7) LED LCD monitor	CISCO Webex Room Kit Plus with microphone array and speakers	CISCO Touch 10 controller for end points

Capabilities in this room using a commercial monitor and Webex Room Kit Plus

- Voice and video conference calls;
- Content sharing; and
- Wired and wireless presentation.

2.4.3.3. Construction Considerations

The room will require, at minimum:

- Dual data outlets;
- Double GPO; and
- Suitable wall support for the units that will be wall mounted.

2.4.3.4. Recommendations

- Appropriate acoustic measures should be in place to minimise echo and ambient noise levels;
- Participants should sit no further than 9m from the device; and
- The seating in the room should be appropriately organised as cameras have an 83-degree horizontal field of view.

2.5. Training Spaces

Training Spaces are usually larger mixed format spaces with a focus on local presentation.

2.5.1. Training Space

Technologies in this room



Display	Audio	Control
70/75/86" commercial grade (16X7) LED LCD monitors (dependant on room size)	Third-Party ceiling or front of house speakers	Cisco Touch10 control panel (on table)
Cisco Webex Board 55"		

Capabilities in this room

- Voice and video conference calls;
- Wired and wireless presentation; and
- Whiteboarding.

2.5.1.1. Construction Considerations

The room will require, at minimum:

- Two data outlets;
- 2 of double GPOs; and

• Suitable wall support for the units that will be wall mounted.

2.5.1.2. Recommendation

• Appropriate acoustic measures should be in place to minimise echo and ambient noise levels.

2.5.2. Briefing Space



Briefing spaces such as those depicted above can vary greatly in cost and complexity depending on business requirements. Solution and equipment to be deployed into these types of spaces are beyond the scope of this document and will require ACT Health ICT Infrastructure Hub engagement to develop a design, based on requirements and budget.

Appendix A: Document Details

Abbreviated terms

Glossary of Term	Definition
ABW	Activity based Working
ACT	Australian Capital Territory
ACTHD	ACT Health Directorate
AV	Audio Visual
CHS	Canberra Health Services
DSD	Digital Services Division
GPO	General Purpose Outlet
ICT	Information and Communications Technology
LCD	Liquid Crystal Display
LED	Light-Emitting Diode
NGO	Non-Government Organisation

Table 1 - Abbreviated terms

Amendment history

Version	Summary of Changes	Author	Date
2020.0.1	Document creation	Manfred Kahl	06/02/2020
2020.0.2	Peer Review	Nitin Saxena	21/02/2020
2020.0.3	Sent for CIO approval	Nitin Saxena	21/02/2020
2020.0.4	Updated document based on feedback from CIO's office	Nitin Saxena	24/03/2020
2020.0.5	Peer Review	Manfred Kahl	25/03/2020

Table 2 - Amendment History

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