CURTIN UNIVERSITY

PROJECT DELIVERY GUIDELINES

AUDIOVISUAL GUIDELINES
MASTER GUIDE

000324

Curtin University

Details of revisions

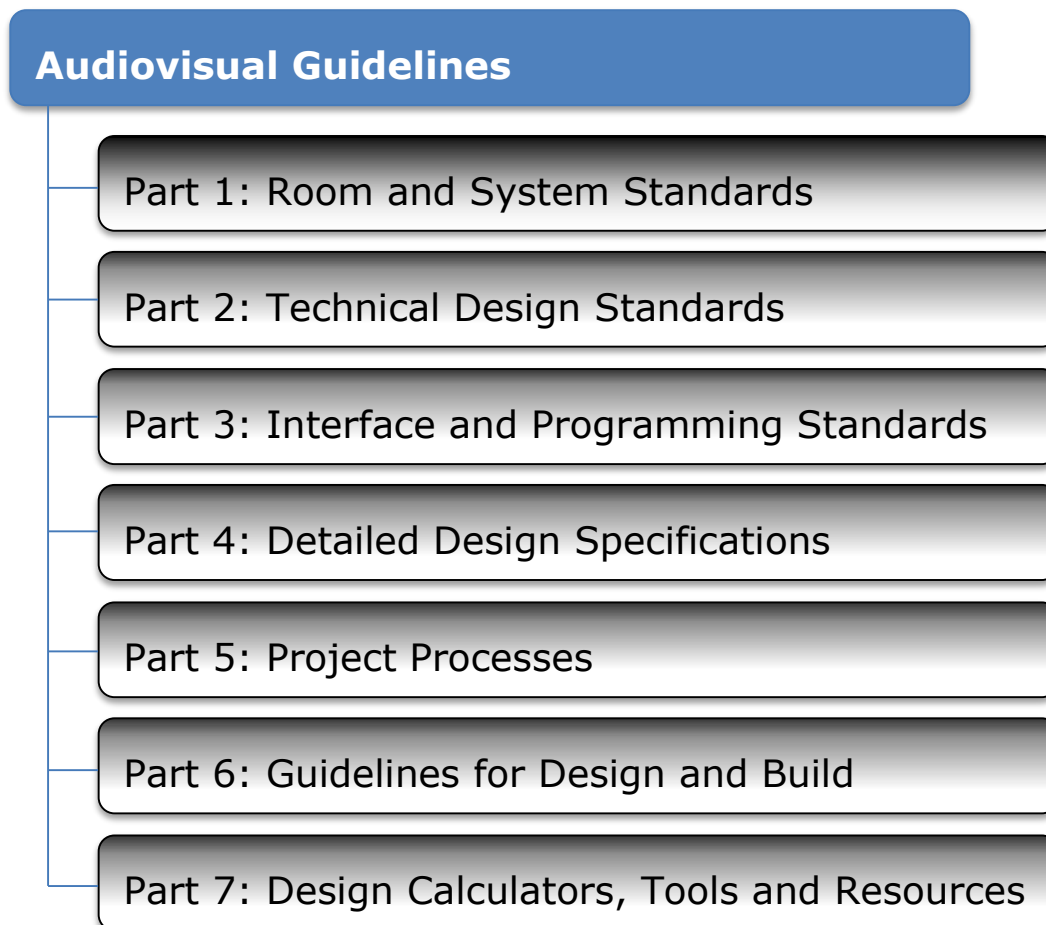| Level	Details	Date	Initial
1	Document created as a summary of Audiovisual Guidelines Part 1-6	Jan-17	RPS
2	Minor modifications to reflect changes in Audiovisual Guidelines Part 1-6	May-19	IRC
2	Inclusion of wording to allow departures from the existing guidelines	Nov-19	RPS

CONTENTS

1 INTRODUCTION

TEACHING, LEARNING AND MEETING SPACES

This master guideline, and the collection of guidelines to which it belongs, are aimed at providing clear guidance to contractors and staff engaged to undertake audiovisual installations in University teaching spaces and meeting rooms. The objectives of the documents are to ensure consistent interpretation of technical requirements and consistent delivery of fit-for-purpose and maintainable spaces.

Audiovisual Guidelines

Part 1: Room and System Standards

Part 2: Technical Design Standards

Part 3: Interface and Programming Standards

Part 4: Detailed Design Specifications

Part 5: Project Processes

Part 6: Guidelines for Design and Build

Part 7: Design Calculators, Tools and Resources

The AV Guidelines are divided into Parts 1–6, rather than being amalgamated, because different readers only need to read certain parts. Readers should ensure they have identified and understood all parts relevant to their roles.

	Part 1	Part 2	Part 3	Part 4	Part 5	Part 6	Part 7 – Resources
Architects	✓				✓	✓	
Audiovisual Consultants	✓	✓	✓	✓	✓	✓	✓
Structural Engineers						✓	
Mechanical Engineers						✓	
Electrical Engineers						✓	
Interior Designers						✓	
Project Managers					✓		
Builders					✓	✓	
Audiovisual Integrators	✓	✓	✓	✓	✓	✓	✓
Facility Owners	✓						
University Staff	✓						

The Project Delivery Guidelines have been prepared in consultation with Curtin University subject matter experts and stakeholders. It is recognised that the subject matter of Guidelines will not always be suitable for all project elements and departures from the Guidelines may be required or desirable. Departures from Guidelines must be agreed upon in consultation with the relevant University Guideline subject matter expert. Departures must be recorded in a project register and recorded and reviewed in the Project Control Group meeting minutes under its own meeting agenda item "Project Delivery Guideline Departures". Where the University subject matter expert identifies that a departure adds ongoing value to the University, the subject matter expert will update the relevant Guideline.

1.1 AUDIOVISUAL GUIDELINES PART 1 – ROOM AND SYSTEM STANDARDS

The purpose of Part 1 is to clearly define a standard set of audiovisual room and system configurations for teaching, learning and meeting spaces at Curtin University.

Part 1 should be used when planning new work or refurbishments involving audiovisual installations throughout the University. The document defines a standard set of room and system configurations that will allow the University to own teaching spaces on all campuses that are easy to use, easy to support and highly reliable. Such standards allow a common user experience – the same look, feel and operation of audiovisual and ICT equipment – across rooms on all of the University's campuses.

The room types that are in scope for these guidelines are described in the University's Archibus system as:

- **General Teaching Areas** – such as lecture theatres, seminar rooms, tutorial and informal learning spaces (TEFMA codes 200–208)

- **Laboratory Facilities and Design Studios** – including computer laboratories and facilities requiring presentation and/or recording functionality (TEFMA codes 304, 305, 307 and 308)

- **General Facilities** – boardrooms, meeting rooms, common and recreation spaces (TEFMA codes 601, 604 and 609).

1.2 AUDIOVISUAL GUIDELINES PART 2 – TECHNICAL DESIGN STANDARDS

The purpose of Part 2 is to provide the technical standards and performance verification associated with the design and installation of audiovisual systems in teaching, learning and meeting spaces at Curtin University.

The document provides technical design standards and performance verification for teaching, learning and meeting spaces at Curtin University. The intended audience is audiovisual consultants, integrators and project managers. The objectives of this guideline are to ensure consistent interpretation of technical requirements, and consistent delivery of functioning and maintainable spaces.

Section 2 of this guideline outlines the general guidelines and expectations for installations and conditions of AV system design at Curtin.

Section 3 describes the installation standards for the components of AV systems including audio, video and control devices, as well as input and output endpoints. The performance verification items for audio, video and control of completed systems are provided.

Section 4 describes the installation and verification items for related services and the environment containing AV systems.

1.3 AUDIOVISUAL GUIDELINES PART 3 – INTERFACE AND PROGRAMMING STANDARDS

The purpose of Part 3 is to clearly define the audiovisual system user interface and programming standards for teaching, learning and meeting spaces at Curtin University.

It defines a standard user interface together with standardised programming for the four types of Curtin AV systems.

Section 2 of Part 3 describes Curtin expectations for the quality of work by AV contractors, warranty and intellectual property.

Section 3 describes the user interface for AV systems that will allow a common user experience – the same look, feel and operation of audiovisual and IT equipment – across rooms on all of the University's campuses.

Section 4 describes the functional requirements for the standardised control system code where variation in functionality between system types and room options is configured using a central management service. The requirements for remote monitoring are also described.

1.4 AUDIOVISUAL GUIDELINES PART 4 – DETAILED DESIGN SPECIFICATIONS

The purpose of Part 4 is to provide the detailed design specifications associated with the standard room and system configurations in teaching, learning and meeting spaces at Curtin University.

It describes the detailed design specifications for the four types of Curtin standard AV systems. These designs are total digital solutions that incorporate modern AV specifications such as HDMI, wide screen projection and higher resolutions (WXGA and WUXGA).

The document should be referenced by AV consultants, designers, integrators and programmers in application of these Curtin standard AV systems to specific venue requirements.

AV SYSTEM TYPE 1

AMX Massio 8-button keypad controller with FPD/projector switching. Typical installations are single display systems such as basic tutorial (LEC01), and breakout/huddle (MET01).

AV SYSTEM TYPE 2

AMX touch panel with AMX NX 1200 controller and Extron IN1608 switching. Typical installations are single display systems able to show one source at a time such as computer suites (LEC02) and basic meeting (MET02) venues.

AV SYSTEM TYPE 3

AMX touch panel with AMX NX 1200 (or higher) controller with Extron DTP Crosspoint 64 switching. These venues often feature the ability to display two sources simultaneously on a Primary and Secondary display set. This system is often installed in iLecture tutorial rooms (LEC03), lecture theatres (LEC04/5) and videoconference meeting rooms (MET03).

AV SYSTEM TYPE 4

AMX touch panel with AMX NX 1200 controller (or higher) with Extron XTP Crosspoint 1600 (or Crosspoint 3200) matrix frame. The systems are often used to centrally service more than one venue with collaborative and/or distributive features (e.g. CLB01, CLOB02, and CLB03).

AV SYSTEM VARIANTS

Newer AV products allow further convergence of audiovisual systems into the ICT infrastructure and computing services. To allow for this trend, authorised variants to the four standard AV system types will be allowed.

Variant suffix:

- **'h' – hybrid** where network encoders and decoders are used to provide directed extension of AV content from source to output or vice versa (i.e. using existing structured cabling rather than separate AV cable runs)

- **'n'** – **network switching** where network encoders and decoders are used to replace all AV switching functionality. These systems are often used where audiovisual sources and displays are spread out geographically but there is a requirement for linkage (e.g. overflow from a main venue).

1.5 AUDIOVISUAL GUIDELINES PART 5 – PROJECT PROCESSES

The purpose of Part 5 is to clearly define a standard set of processes for conducting audiovisual system installations for teaching, learning and meeting spaces at Curtin University.

It provides definition and description of the methods, procedures, tasks and deliverables to be applied in the delivery of audiovisual (AV) systems for teaching, learning and meeting spaces at Curtin University. The intended audience is specialist professionals such as audiovisual consultants, system integrators and project managers. The document provides a guideline for defining the audiovisual requirements and a clear accountability structure for the development and construction of AV systems.

The AV systems being installed at Curtin are becoming increasing complex and interconnected to other building systems such as networks, electrical (lighting) and building/energy management infrastructure. The documentation described in this guideline should complement related architectural, engineering and construction documentation.

Section 2 of Part 5 describes the roles and responsibilities of the project leadership, team and contributors for the delivery of projects containing one or more audiovisual systems. Project planning and coordination is described in Section 3. The milestones and activities in each of the project phases are described in the remaining sections.

1.6 AUDIOVISUAL GUIDELINES PART 6 – ROOM DESIGN AND CONSTRUCTION GUIDELINES

The purpose of Part 6 is to provide room design and construction guidelines for teaching, learning and meeting spaces at Curtin University to design and build professionals such as architects, builders, interior design, electrical and mechanical subcontractors, acousticians, audiovisual consultants and project managers.

The information on projectors and displays and placement in the room (Section 4) will be of interest to architects, electrical consultants, interior designers and audiovisual consultants.

The section on screen placement and sightlines for the seated audience in the room (Section 5) is important for architects and interior designers.

The guidelines on artificial lighting and control of ambient lighting in Section 6 should be read by architects, builders, electrical consultants, interiors designers and audiovisual consultants.

Section 7 on acoustics is of interest for architects, acousticians, mechanical subcontractors and interior designers.

The remaining sections on infrastructure – such as equipment rooms, enclosures cabling and containment (Section 8) and the in-room environment requirements about power, furniture and HVAC (Section 9) – should be read by architects, interior designers, electrical and mechanical subcontractors and audiovisual consultants.

1.7　　PART 7: DESIGN CALCULATORS, TOOLS AND RESOURCES

Part 7 consists of a number of tools, template and resources, which will be provided to Audiovisual Integrators upon request.

Resource 1: Design Schematic Diagrams — Type 1 to Type 4 AV Systems

Resource 2: Bill of Materials

Resource 3: Standard Components

Resource 4: Device Configuration

Resource 5: Touch panel Information Windows

Resource 6: User Acceptance Testing

Resource 7: DNIS Template

Requests for Part 7 should be made to:

AV Standards Manager

08 9266 2589

avservices@curtin.edu.au