LTSMG

VISUAL DISPLAYS

LTSMG Webinar
May 2020 Programme

1 – Standards for Campus Technology Management

DISPLAYS, LIGHT & ENVIRONMENTAL EXPERTISE

PRODUCTS, SERVICES, SPECIALIST CONSULTANCY

Presenter – Greg Jeffreys

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- Managing Director, Visual Displays (formerly Paradigm AV)
- Specialisms include standards, displays, light & lighting, VC lighting, teaching space & meeting room design
- Chair, AVIXA Standards Steering Committee
- Task group member, AVIXA's new UX for AV Design standard
- Task group chair ANSI/AVIXA DISCAS standard – image size, resolution, viewing positions/angles, content size guidance
- Lead writer, PISCR image contrast standard – and new ISCR standard task group
- President of InfoComm/AVIXA 2012, board member 2008-13
- Former visiting lecturer, UMIST – post-grad MSc *Sustainable Electronic Building Design* (Prof Geoff Levermore)
- Proud associate of AV User Group!

LTSMG webinar series programme

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- Monday – Standards for Technology Campus Management
- Tuesday – HE Teaching Space Design
- Wednesday – Display Specification and sign-off
- Thursday – ANSI/AVIXA DISCAS Standard for HE
- Friday – On-campus Room & System Auditing

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Poll questions

PLEASE KEEP QUESTIONS COMING DURING THE WEBINAR!

ANYTHING YOU WANT ADDED INTO THE WEEK'S SESSIONS??

Themes for the week

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- AV is complex, multi-disciplinary, multi-stakeholder – why standards provide the tools you need to get the results you need
- Easier to use than not to use
- Removes subjectivity
- Improved communication with senior management and other stakeholders
- Metrics for achieving best budget value
- Better and unequivocal communication with integrators
- Clearly defined and measurable outcomes with integrators
- AV being considered at earliest possible project phase
- Post lockdown, students will need to see and hear content in the farthest corners of teaching spaces
  - AV Standards
  - Linking ‘hooks’ into environmental standards

Today's objectives

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- Management summary of relevant standards
  - Summary of existing and in-development AVIXA and ANSI/AVIXA standards
  - New UX standard and its use on campus
  - Summary of relevant environmental standards
  - Review of new WELL Building Standard V2
    - Radical new standard which can act as hub for all other relevant standards
    - Addresses wellbeing
- Post COVID implications and applications
- Provide follow up materials and resources
- Q&A
- Please help me help you – write questions, comments in Q&A

Background

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- AVIXA Standards out of Best Practice group
- Appointed as ANSI SDO (Standards Development Organisation) 2008
- Good reaction to first published standards but limited adoption
- PERFORMANCE standards – NOT system specifications
  - 'Start with the end in mind'
- 'Standard' has two meanings
- Easy to adopt
- 'The Haiku Principle'. Just a handful of essential benchmarks and guidelines effectively needed from each.
- Adaptable – make them work for you, not the other way round!
- Calculators – tools – guides

Current AVIXA standards

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- A102.01:2017 *Audio Coverage Uniformity in Listener Areas (Under Revision)*
- 4:2012 *Audiovisual Systems Energy Management (Revised publication expected 2Q 2020)*
- 10:2013 *Audiovisual Systems Performance Verification (Under Revision)*
- J-STD 710 – 2015 (CTA/AVIXA/CEDIA) *Audio, Video, and Control Architectural Drawing Symbols*
- F501.01:2015 *Cable Labeling for Audiovisual Systems (Under Revision)*
- V202.01:2016 *Display Image Size for 2D Content in Audiovisual Systems*
- RP-38-15:2018 (IES/AVIXA), *Lighting Performance for Small-to-Medium-Sized Videoconferencing Rooms**
- 3M-2011 *Projected Image System Contrast Ratio (Revision V201.01 Image System Contrast Ratio – see below)*
- F502.01:2018 *Rack Building for Audiovisual Systems*
- F502.02:2020 *Rack Design for Audiovisual Systems (New Release!)*
- RP-C303.01:2018 *Recommended Practices for Security in Networked Audiovisual Systems*
- 2M-2010 *Standard Guide for Audiovisual Systems Design and Coordination Processes (Under Revision)*
- TR-111.01 *Unified Automation for Buildings*

Audio #1 – Audio Coverage Uniformity

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- **A102.01:2017 *Audio Coverage Uniformity in Listener Areas (Under Revision)***
- This Standard defines measurement requirements and parameters for characterizing a sound system's coverage in listener areas. It provides performance classifications to describe the uniformity of coverage of a sound system's early arriving sound with the goal of achieving consistent sound pressure levels throughout defined listener areas.
- https://www.avixa.org/standards/audio-coverage-uniformity-in-listener-area
- WEBINAR - https://www.avixa.org/insight/webinars/Details/what-you-need-to-know-about-the-revised-audio-coverage-in-listener-areas-standard/
- UPDATED VERSION DUE IN PUBLIC REVIEW THIS SUMMER

Audio #2 - Spectral balance
in development

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- A103.01 Sound System Spectral Balance
- This Standard defines a measurement and verification process for sound system reproduction of spectral balance, also known as uniform frequency response, accomplished by documenting the frequency response from the sound system across a specified bandwidth within a low- to high-frequency range within the listening area.

Audio #3 Sound System Dynamic Range

in development

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- A104.01 Sound System Dynamic Range
- This Standard provides a procedure to measure and classify the dynamic range, or signal-to-noise ratio, of early arriving sound from a sound system across a listener area.

Energy

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- **4:2012 *Audiovisual Systems Energy Management* (*Revised publication expected 2Q 2020*)**
- This Standard defines processes and requirements for ongoing power-consumption management of audiovisual systems. The revision uses a tiered conformance approach. Audiovisual systems conforming to this Standard will meet the defined requirements for automation, measurement, and analysis will vary based on each tier.
- https://www.avixa.org/standards/energy-management-for-audiovisual-systems
- ROI worksheet available from above link
- Energy Management Plan available from above link
-

Systems Performance Verification

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- **10:2013 *Audiovisual Systems Performance Verification* (*Under Revision*)**
- This Standard provides a framework and supporting processes for determining elements of an audiovisual system that need to be verified; the timing of that verification within the project delivery cycle; a process for determining verification criteria/metrics; and reporting procedures.
- https://www.avixa.org/standards/audiovisual-systems-performance-verification
- Handbook - https://store.avixa.org/CPBase__item?id=a13f200000C2iPzAAJ
- Documentation Standards - https://avixa.azureedge.net/portal/docs/default-source/default-document-library/avprojectdocsample_fullcontents.pdf

CAD symbols

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- **J-STD 710 – 2015 (CTA/AVIXA/CEDIA) *Audio, Video, and Control Architectural Drawing Symbols***
- This Standard defines architectural floor plan and reflected ceiling plan symbols for audio, video, and control systems, with associated technologies such as environmental control and communication networks. It also includes descriptions and guidelines for the use of these symbols.
- https://www.avixa.org/standards/audio-video-and-control-architectural-drawing-symbols
- Symbol files - https://store.avixa.org/CPBase__item?id=a13f200000C2iQdAAJ

Cable Labelling

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- **F501.01:2015 *Cable Labeling for Audiovisual Systems* (*Under Revision*)**
- This Standard defines requirements for audiovisual system cable labeling for a variety of venues. It provides requirements to easily identify all power and signal paths in a completed audiovisual system to aid in operation, support, maintenance, and troubleshooting.
- https://www.avixa.org/standards/cable-labeling-for-audiovisual-systems

DISCAS

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- **V202.01:2016 *Display Image Size for 2D Content in Audiovisual Systems***
- This Standard determines required display image size and relative viewing positions based on user need. It can be used to design a new space or to assess/modify an existing space, from either drawings or the space itself. It applies to permanently installed and temporary systems. The Standard does not apply to the performance or efficiency of any component. A free online calculator is available for ease of conformance (one-time registration).
- https://www.avixa.org/standards/display-image-size-for-2d-content-in-audiovisual-system
- Online calculator - https://www.avixa.org/standards/discas-calculators
- Offline calculator - https://visualdisplaysltd.com/resources/useful-calculator-tools
- Delft Uni DISCAS tool - http://homepage.tudelft.nl/9c41c/Readability/ReadabilityTool4EducationSpaces.htm

DISCAS CAD tools

Formulae in parametric 3D CAD (+ renderings)

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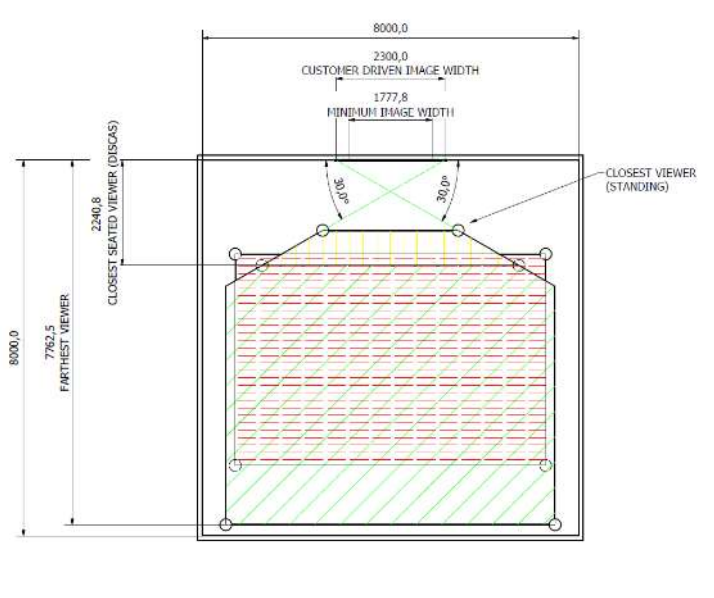

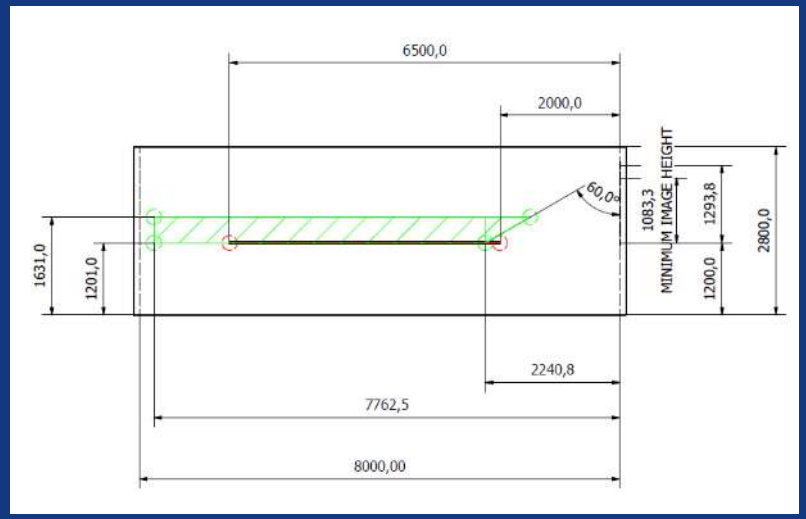

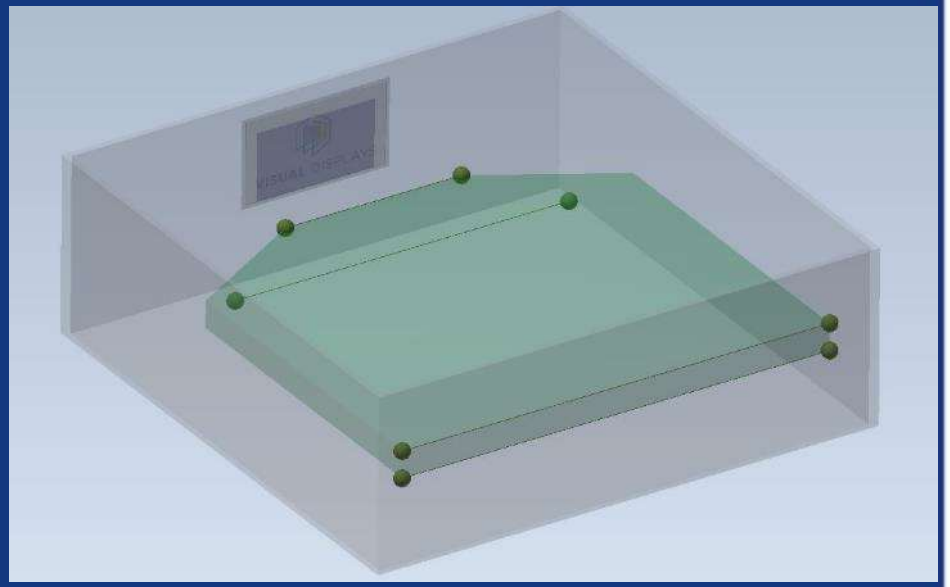

VC lighting

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- **RP-38-15:2018 (IES/AVIXA), *Lighting Performance for Small-to-Medium-Sized Videoconferencing Rooms****
- This Standard provides parameters and performance criteria for lighting small-to-medium sized single-axis videoconferencing spaces (maximum of 25 participants), defined as one set of video displays and cameras oriented toward a group of seated participants, providing technical and practical requirements to assist practitioners who configure and specify lighting systems specific to videoconferencing projects.
- https://www.avixa.org/standards/recommended-practice-for-lighting-performance-for-small-to-medium-sized-videoconferencing-rooms

PISCR

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- **3M-2011 *Projected Image System Contrast Ratio* (*Revision V201.01 Image System Contrast Ratio – see below*)**
- This Standard defines projected image system contrast ratio and its measurement. Four contrast ratios based on four categories of content-viewing requirements are defined. Practical metrics to measure and validate the defined contrast ratios are provided.
- https://www.avixa.org/standards/image-system-contrast-ratio
- Related tools - https://visualdisplaysltd.com/resources/useful-calculator-tools

ISCR – in public review

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- V201.01 Image System Contrast Ratio (In Public Review as of December 2019)
- This Standard defines contrast ratios based on user viewing requirements. It is designed to facilitate informed decision making for any display, projector, and screen selection, relative to location and purpose. It applies to permanently installed systems and live events; front and rear projection, and direct view displays.

Rack building & design

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- ***F502.01:2018 Rack Building for Audiovisual Systems***
- *This Standard defines requirements for building audiovisual equipment racks which are defined as assembly of rack(s), mounting of audiovisual equipment and accessories, cable management, and finishing.*
- https://www.avixa.org/standards/rack-building-for-audiovisual-systems
- **F502.02:2020 *Rack Design for Audiovisual Systems* (*New Release!*)**
- This Standard defines minimum requirements for the audiovisual rack planning and design process including required process inputs and outputs. Key performance criteria validate the impact to internal and external integration with the facility requirements.
- Not available on web site yet

Network security

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- **RP-C303.01:2018 *Recommended Practices for Security in Networked Audiovisual Systems***
- This Recommended Practice provides guidance and current best practices for securing networked audiovisual systems including how to recognize risks and develop a risk mitigation management plan to address those risks.
- https://www.avixa.org/standards/recommended-practices-for-security-in-networked-audiovisual-systems

Systems Design and Coordination

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- ***2M-2010 Standard Guide for Audiovisual Systems Design and Coordination Processes (Under Revision)***
- This Standard provides a framework for the methods, procedures, tasks, and deliverables typically recommended or applied by industry professionals in the design and implementation of audiovisual communication systems. The framework enables clients and other design and construction team members to assess whether responsible parties are providing expected services. The revision will define minimum documentation requirements for audiovisual systems design.
- https://www.avixa.org/standards/Standard-guide-for-audiovisual-systems-design-and-coordination-processes
- Handbook - https://store.avixa.org/CPBase__item?id=a13f200000C2iPzAAJ
- Documentation sample - https://avixa.azureedge.net/portal/docs/default-source/default-document-library/avprojectdocsample_fullcontents.pdf

Unified Automation for Buildings

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- **TR-111.01 *Unified Automation for Buildings***
- This Technical Report provides a detailed overview of the building automation environment and identifies the need for a unified set of standards to integrate multiple building systems, including but not limited to traditional Building Automation Systems (BAS), into cohesive and functional systems and/or sub-systems for increased benefits.
- https://www.avixa.org/standards/unified-automation-for-buildings

Standards in development

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- V201.01 Image System Contrast Ratio (In Public Review as of December 2019)
- A103.01 Sound System Spectral Balance
- A104.01 Sound System Dynamic Range
- UX701.01 User Experience Design for Audiovisual Systems

User Experience Design for AV Systems

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- UX701.01 User Experience Design for Audiovisual Systems
- This Standard defines processes that optimize user experience for audiovisual-equipped spaces. Processes include user engagement, design, testing, deployment, and continuous refinement.

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Any questions about AVIXA standards?

WELL Building Standard v2™

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IWBI delivers the cutting-edge WELL Building Standard™, the leading global rating system and the first to be focused exclusively on the ways that buildings, and everything in them, can improve our comfort, drive better choices, and generally enhance, not compromise, our health and wellness.

- This standard captures every aspect of building and user wellbeing and management
- Provides 'hooks' into AV standards
- Powerful tool to work with senior management and other stakeholders
- Helps 'silo conflict' such as lighting damaging display performance – and learning outcomes

- https://v2.wellcertified.com/v/en/overview

INTERNATIONAL WELL BUILDING INSTITUTE™

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Specialist manufacture, distribution, services.

Supporting HE framework integrators to excel.

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Visual Displays Ltd

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Specialist manufacture, distribution & services

Working in partnership with & through the channel

- Products
  - dnp Supernova ALR (ambient light-rejecting) projection screens
  - Complete Epson laser display bundles – from 100" to any size
  - Comprehensive projection screens, materials
  - Immersive displays
  - Bespoke display & mounting solutions
  - Bespoke interactive displays
  - Daylight control (blinds)
- Services
  - Display design and specification
  - Parametric 3D CAD design
  - Expert tender response support and consultant liaison
  - Space redeployment design for social distancing
  - System troubleshooting
  - Room surveys and audits (using meters & reporting to standards)
  - Proof of concept
  - Specialist consultancy

Ambient light rejecting screens

…best known for dnp Supernova

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dnp Supernova 08-85

dnp Supernova 20-25

Standard white Da-Lite gain 1

See full Gary Kayye ISE video here - https://www.dnp-screens.com/en/video/dnp-ambient-light-rejecting-screens-at-ise-2015/

https://www.dnp-screens.com/

We've got great Epson/dnp success stories already!

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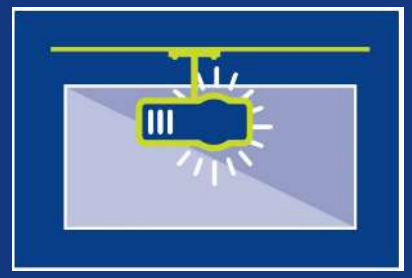
- Southampton Uni with ProAV
- 3 x dnp Supernova Infinity
- 3 x EB-L1500UH
- *All over 15:1 contrast ratio*

Complete Laser Displays



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Standards-compliant large screen displays

- Complete bundled packages, Epson projector (with warranty), dnp screen & Epson mount.
  - 100", 110" & 120" with UST (e.g. EB-700U)
  - 100" to any size with standard lens laser projectors
  - Furniture & bespoke options available
- Option to buy complete displays as single SKUs
- Fraction of £cost/m^2 compared with LFD, dvLED etc
- *Available through all framework integrators*

www.visualdisplaysltd.com

Specialising in the difficult!

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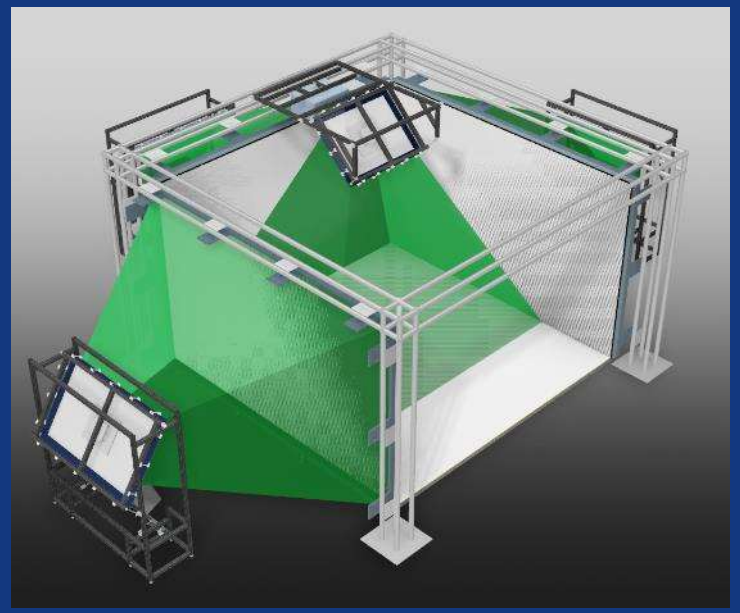

CAVES

MULTI-PROJECTION

CURVED SCREENS

LARGE SCREEN INTERACTIVE

IMMERSIVE, SIMULATION, AR, VR, CR etc

World-leading 3D CAD design and bespoke manufacture

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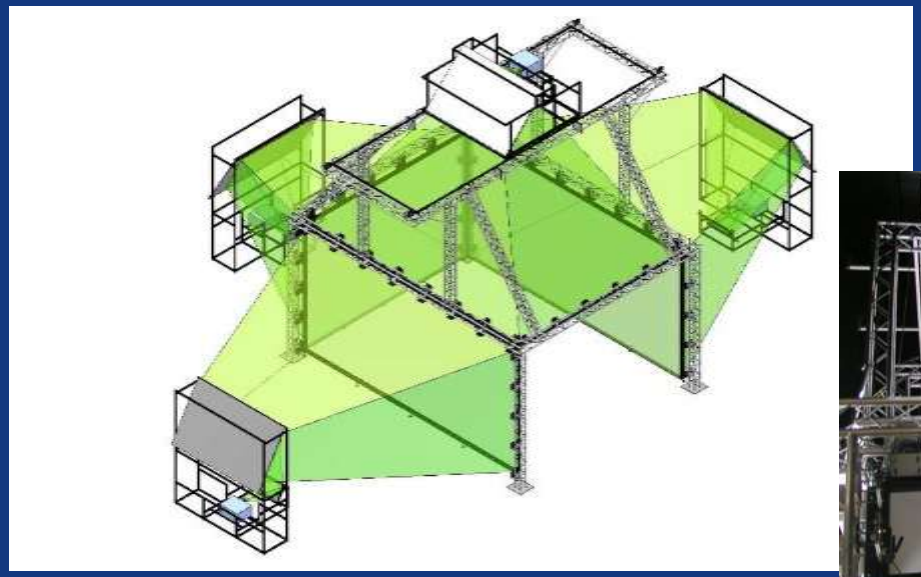
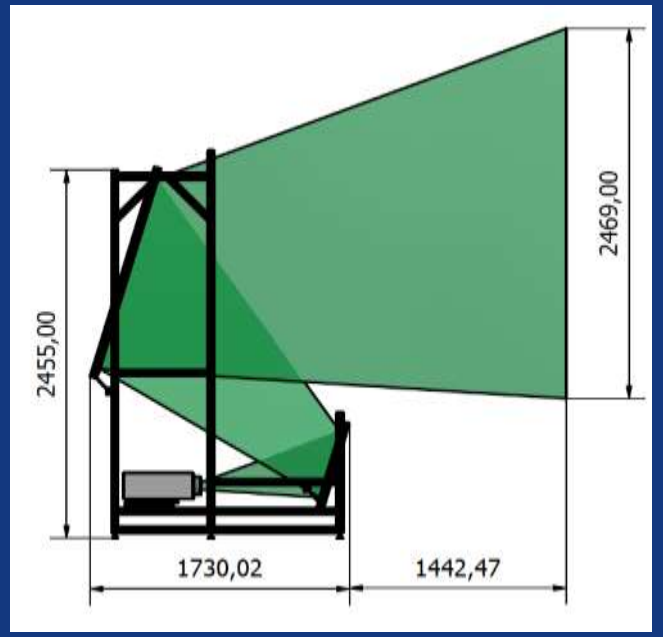
- We solve problems





Social distancing space configurator

Complete space configuration and management

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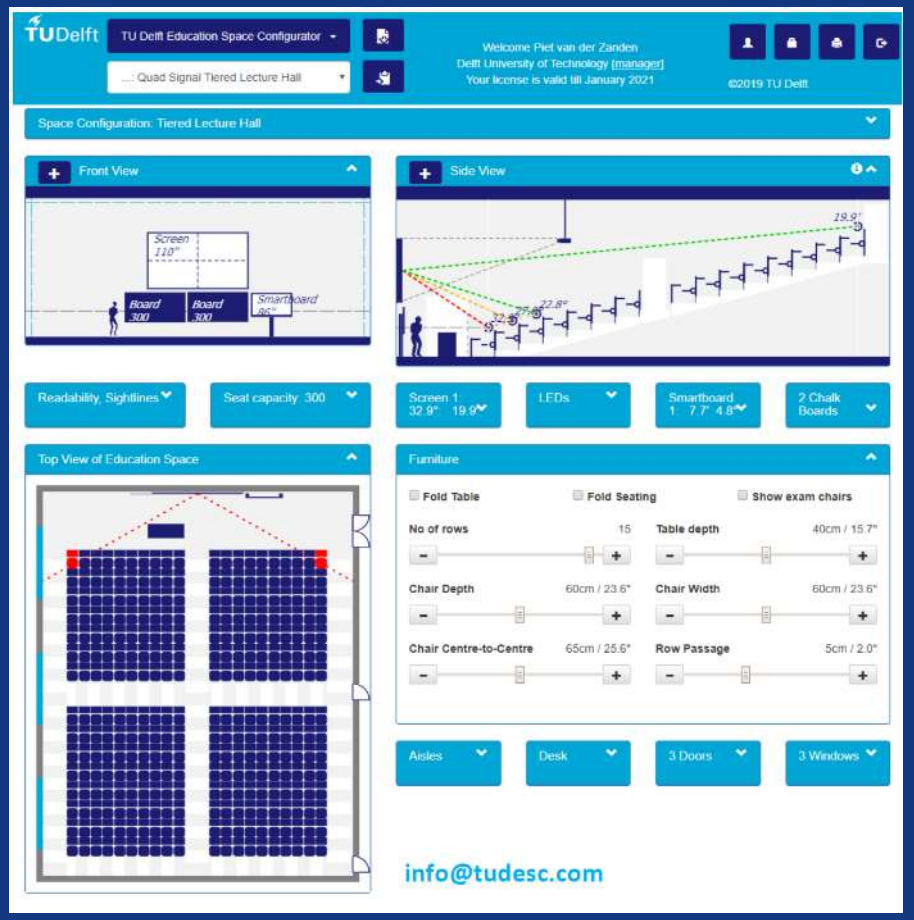
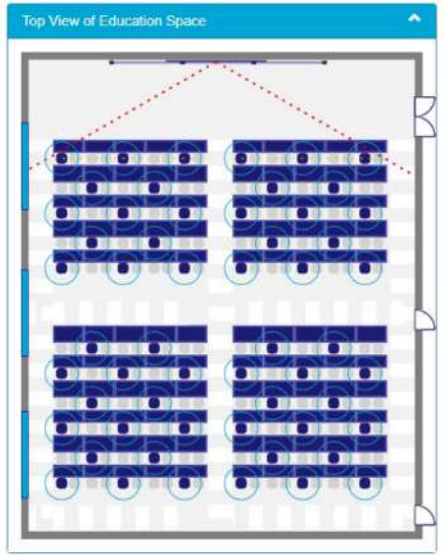
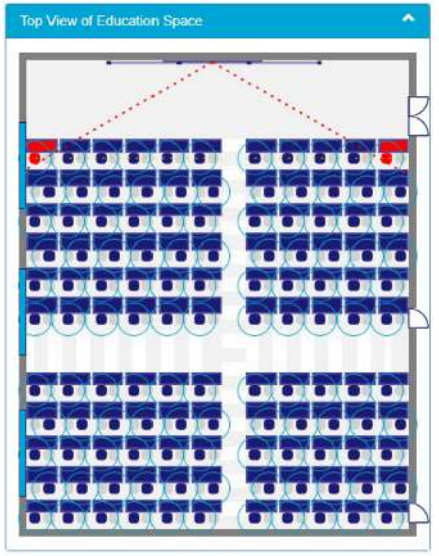


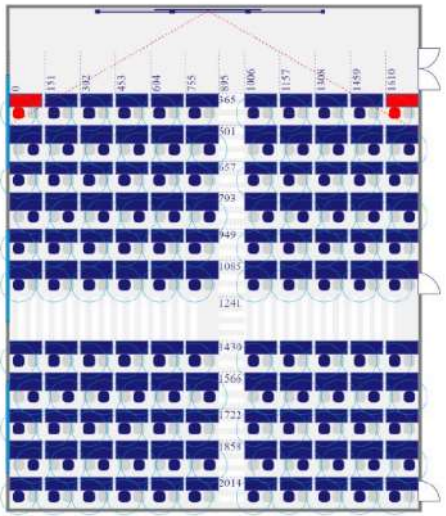
Social Distance with normally generated Seat Capacity (56)



Social Distance with optimized Seat Capacity (121)



Printed detailed Floorplan for facility instructions



Q & A

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