



# VISUAL DISPLAYS

Webinar with Epson

*Projector sales opportunities out of lockdown and beyond*

*We are passionate about projection!*

**SPECIALIST MANUFACTURER, DISTRIBUTOR & SPECIALIST SERVICES**

# Presenter – Greg Jeffreys



- ▶ Managing Director of Visual Displays (formerly Paradigm AV)
- ▶ Specialist consultant in standards, displays, light & lighting, VC lighting, teaching space & meeting room design
- ▶ Current chair, AVIXA Standards Steering Committee
- ▶ Lead writer, PISCR image contrast standard – and new ISCR standard task group
- ▶ Task group chair ANSI/AVIXA DISCAS standard – image size, resolution, viewing positions/angles, content size guidance
- ▶ Task group working on AVIXA's new UX for AV Design standard
- ▶ President of InfoComm/AVIXA 2012, board member 2008-13
- ▶ Outstanding Contribution Award – AV Technology Awards 2020

*Projection evangelist and nerd!*

# Presenter – Paul Wilson



- ▶ Product Manager (Professional Displays), Epson UK Ltd
- ▶ Over 10 years' experience in projection business
- ▶ Technology enthusiast
- ▶ 3LCD champion for the world's number 1 projector manufacturer!

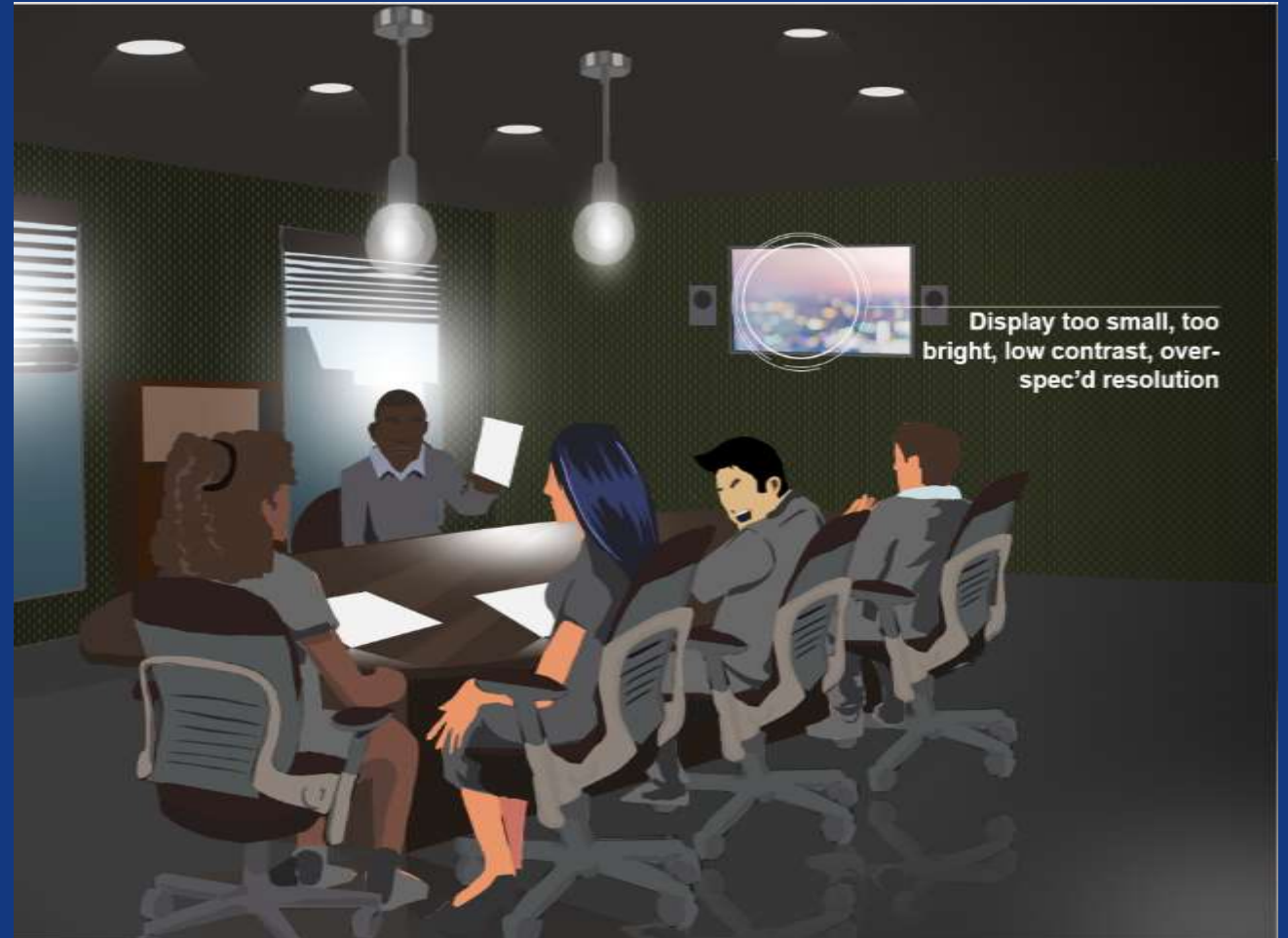
# Introduction



- ▶ Learnings from LTSMG, consultant and integrator webinars
  - ▶ ...very positive for projection
- ▶ Social distancing places spreads viewers into entire space
  - ▶ Everyone needs to see images – even from the back of the room
- ▶ Transforming projection sales by selling 'displays' rather than a list of components
- ▶ Selling on the delivered image performance
- ▶ Using using global standards – now in daily use – a game changer
  - ▶ Easy to use with powerful sales tools and calculators
- ▶ We do the work for you to sell more displays, making you and your clients look good to their users

# Background – the realities

- ▶ Some think projection is yesterday's technology
- ▶ Harder to sell than a large format display (flat panel)
- ▶ The difference between perfect brochure images and washed out realities under high ambient light is expected



# Laser projection's future is bright – *the game changer that changes the message*



- ▶ Work with AV User Group confirms this
- ▶ Viewers don't look at the projector – they look at the on-screen image
  - ▶ Unsuitable screens make good projectors look bad
- ▶ Issue: how to achieve darkened room projection quality in meeting rooms, teaching spaces etc?
- ▶ Solution: ALR (ambient light rejecting) screens!
  - ▶ Use standards to sell these exceptional viewing experiences
  - ▶ Use standards calculators to make it easy for you to impress your clients
  - ▶ Use standards to deliver guaranteed and certifiable excellence
- ▶ Quality confirmed by standards and science – better image quality at lower price/m2 than large format displays and – especially - dvLED

***By widening the focus to the screen, to the delivered image, to 'displays' we can transform existing attitudes to projection, inspire new users and find new opportunities.***

***Epson ancillary software means you can control, maintain and monitor large estates of projectors – ideal for large scale deployment.***

# Add 'projection *displays*' to the repertoire

- ▶ Objectives
  - ▶ Have specifiers and integrators get the size right
  - ▶ Focus on the delivered image
  - ▶ Sell the deliverable, not the projector spec, e.g.
    - ▶ ...offer all image sizes at 350cd/m<sup>2</sup> and 500cd/m<sup>2</sup> image luminance (brightness)
  - ▶ Make it as easy for clients to buy a 120" projected display as a 98" LFD

*It's all done with standards and their easy-to-use calculators*

For perfect images you need two  
numbers

**15 & 6**

**That's all!!**



# 15?

## 15:1 contrast ratio

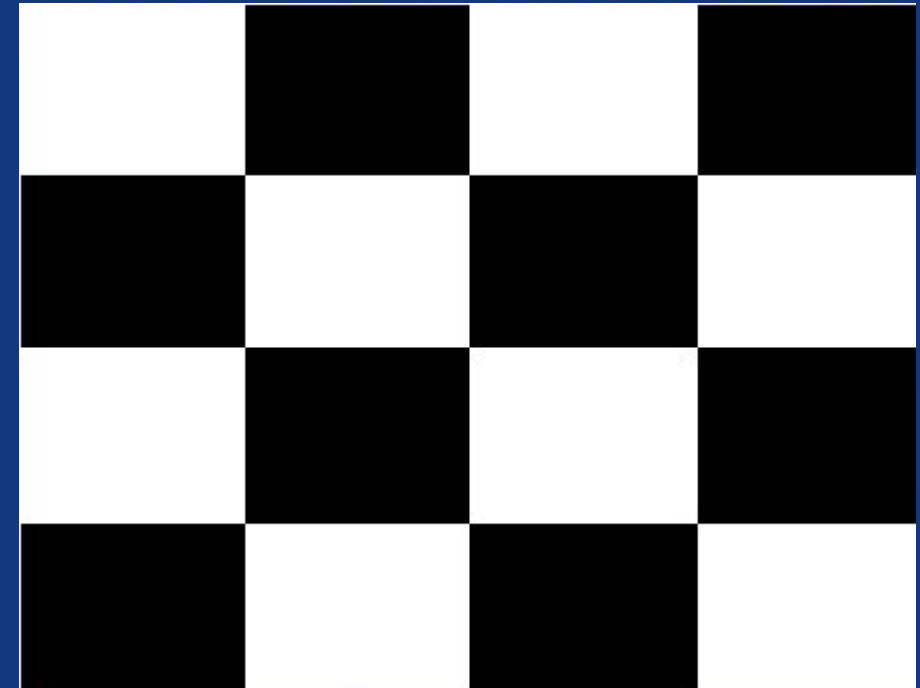
- ▶ The PISCR/ISCR image standard has four viewing categories
- ▶ 99% of our sales are Basic Decision Making Category

*The viewer can make basic decisions from the displayed image. The decisions are not dependent on critical details within the image, but there is assimilation and retention of information. The viewer is actively engaged with the content (e.g., information displays, presentations containing detailed images, classrooms, boardrooms multi-purpose rooms, product illustrations).*

- ▶ In standard installations 15:1 is almost always impossible to achieve
- ▶ ***But why.....?***

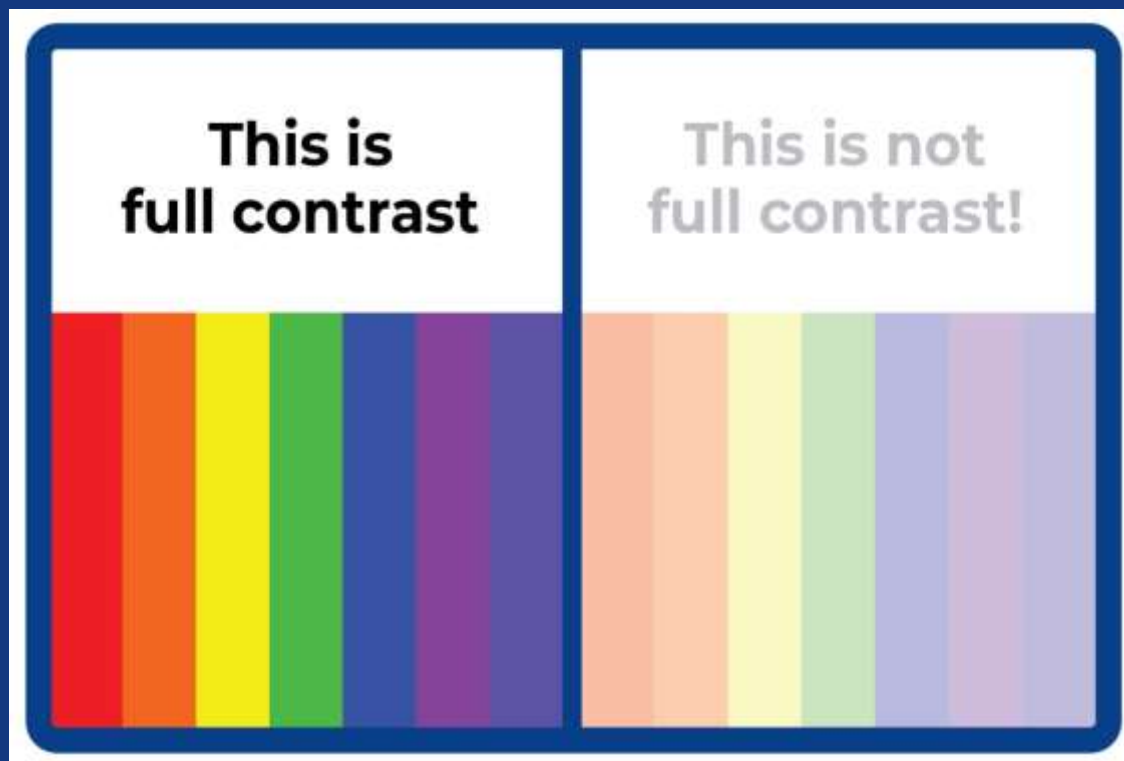


VISUAL DISPLAYS



***The white squares' average luminance (brightness) must be 15 x more than the black squares.***  
**ONSCREEN – NOT FROM PROJECTOR**

# Contrast is key driver for image quality



*Low contrast even damages perceived resolution.*

# Contrast in real life

## A typical scenario

Image contrast calculator. Front screen black levels are limited by ambient light falling on screen. (This calculator assumes projector black levels are perfect!)			Conversion to US	
If ambient light on screen is	200	lux	18.0	foot-candle (ft-c)
If the screen is	1	gain		
resulting max screen black level	64	nit	18.6	foot-lambert (fL)
so...				
If projector has	5000	ANSI lumens		
& screen size is	120	inches diagonal		
(so screen width is	2665	mm		
...and screen height is)	1499	mm		
so screen area is	3.99	m <sup>2</sup>		
Then screen max white can be	398	nit	116.3	foot-lambert (fL)
<b>So max possible contrast ratio</b>	<b>7.3</b>	<b>:1</b>		

# Double screen gain? ...no change

Image contrast calculator. Front screen black levels are limited by ambient light falling on screen. (This calculator assumes projector black levels are perfect!)			Conversion to US	
If ambient light on screen is	200	lux	18.0	foot-candle (ft-c)
If the screen is	2	gain		
resulting max screen black level	127	nit	37.2	foot-lambert (fL)
so...				
If projector has	5000	ANSI lumens		
& screen size is	120	inches diagonal		
(so screen width is	2665	mm		
...and screen height is)	1499	mm		
so screen area is	3.99	m <sup>2</sup>		
Then screen max white can be	797	nit	232.7	foot-lambert (fL)
So max possible contrast ratio	7.3	:1		

# Double the lumens (and price?!) ...small improvement

Image contrast calculator. Front screen black levels are limited by ambient light falling on screen. (This calculator assumes projector black levels are perfect!)			Conversion to US	
If ambient light on screen is	200	lux	18.0	foot-candle (ft-c)
If the screen is	1	gain		
resulting max screen black level	64	nit	18.6	foot-lambert (fL)
so...				
If projector has	10000	ANSI lumens		
& screen size is	120	inches diagonal		
(so screen width is	2665	mm		
...and screen height is)	1499	mm		
so screen area is	3.99	m <sup>2</sup>		
Then screen max white can be	797	nit	232.7	foot-lambert (fL)
So max possible contrast ratio	13.5	:1		

# Control the ambient light? ...massive improvement!

**Image contrast calculator. Front screen black levels are limited by ambient light falling on screen. (This calculator assumes projector black levels are perfect!)**

If ambient light on screen is	50	lux
If the screen is	1	gain
resulting max screen black level	16	nit
so...		
If projector has	5000	ANSI lumens
& screen size is	120	inches diagonal
(so screen width is	2665	mm
...and screen height is)	1499	mm
so screen area is	3.99	m <sup>2</sup>
Then screen max white can be	398	nit
<b>So max possible contrast ratio</b>	<b>26.0</b>	<b>:1</b>

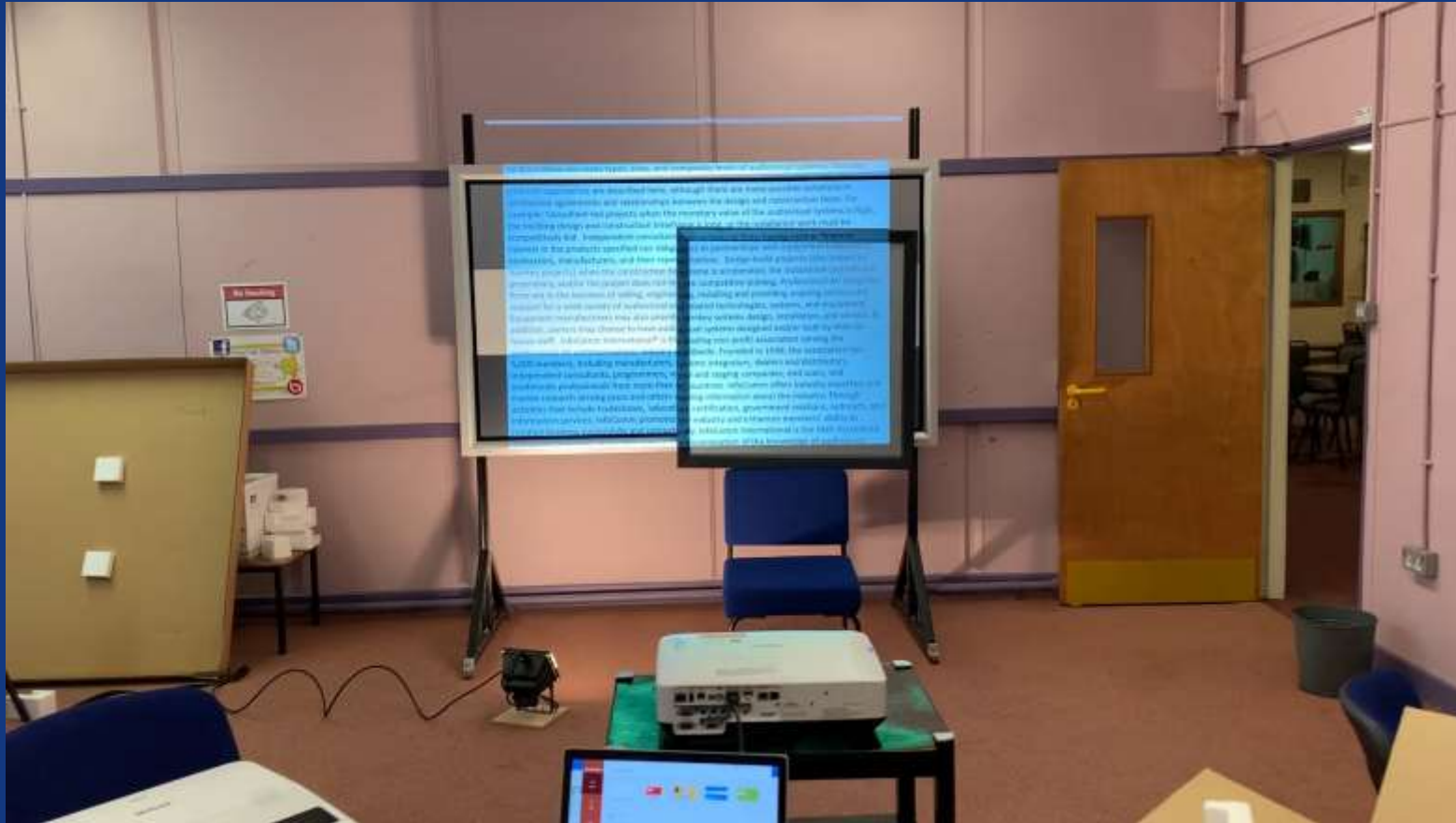
**Image contrast calculator. Front screen black levels are limited by ambient light falling on screen. (This calculator assumes projector black levels are perfect!)**

If ambient light on screen is	10	lux
If the screen is	1	gain
resulting max screen black level	3	nit
so...		
If projector has	5000	ANSI lumens
& screen size is	120	inches diagonal
(so screen width is	2665	mm
...and screen height is)	1499	mm
so screen area is	3.99	m <sup>2</sup>
Then screen max white can be	398	nit
<b>So max possible contrast ratio</b>	<b>126.2</b>	<b>:1</b>

# Real life contrast is driven 100% by ambient light

- ▶ Projector contrast can't be perceived until you're in a darkened room
- ▶ If you can't control the light, you need screen technology that can...

# The split screen technology demonstration



Play video here -  
<https://www.youtube.com/watch?v=i82O9xYxRxk>



# 15:1 contrast

## Make it happen!

- ▶ Example 120" image
- ▶ Normal lighting scenario
- ▶ 15:1 image contrast impossible with standard screen
  - ▶ Easy with dnp ALR(ambient light rejecting) material!
  - ▶ 3 x better is typical with dnp – up to 7 x better
- ▶ Try it yourself - <http://pdf.dnp.dk/html/>

Change to US unit ▶

Copy information from scenario 1 to 2 ▶

Image brightness needed based on best estimates:		
Ambient brightness level in the room	ALR	?
Ambient brightness level on the screen surface	ALS	?
Screen reflectance factor	SRF	?
Contrast level needed in final image	ICR	?
Projector checkerboard contrast	C	?
Ambient light reflected back to the audience	R	
Image brightness needed based on best estimates	B	
Maximum brightness allowed to be "eye-gonomical"	Bmax	

Scenario 1		Scenario 2	
500	LUX	500	LUX
150	LUX	150	LUX
25.0	%	5.0	%
15.0	:1	15.0	:1
120	:1	120	:1
37.5	NIT	7.5	NIT
600.0	NIT	120.0	NIT
477.5	NIT	477.5	NIT

Projector brightness needed for the actual screen size:	
Image height	Set size ▼
Image width	
Image area	
Peak gain	?
Gain efficiency for horizontal viewing position	?
Gain efficiency for vertical viewing position	?
Effective gain in viewing position	
Effective (net) projector brightness needed	PBN

Scenario 1		Scenario 2	
1,493	mm	1,493	mm
2,657	mm	2,657	mm
3.97	m2	3.97	m2
1.00		1.00	
94	%	73	%
94	%	69	%
0.88		0.50	
8,462	lum	2,969	lum

Dimensioning the projector(s):	
Loss for start-up adjustment of colours	?
Number of projectors	
Blending zone	?
Lamp efficiency	?
Brightness need adjusted for start-up adjustment of colours	
Brightness need adjusted for loss for edgeblending	
Brightness need adjusted for loss due to lamp decay	
Specified (gross) projector brightness needed	PBG

Scenario 1		Scenario 2	
15	%	15	%
1		1	
100	%	100	%
90	%	90	%
9,956	lum	3,493	lum
9,956	lum	3,493	lum
11,062	lum	3,881	lum
11,062	lum	3,881	lum



VISUAL DISPLAYS

# World-class optical projection screens from dnp denmark



As the exclusive distributor for dnp in UK and Ireland, we are uniquely placed to offer the industry's best projection screens and displays – and secure your opportunities.

Next-generation optical screen technology combats issues caused by high ambient light. High-contrast ratio (15:1 and above) means content is sharp, bright and vivid, for maximum impact.

- Pioneering true ALR technology
- Large displays - 100" to infinite size
- 7x contrast level of a standard screen
- Huge cost savings vs flat panel, videowall and Direct View LED
- ISF certified colour rendition



dnp Supernova Blade

Frameless, space-saving, sleek design. Up to 120"



dnp Supernova Flex Classic

Noiseless, motorized, retractable. With / without ceiling unit. Up to 120"



dnp Supernova Infinity

Up to any size. Modular, seamless viewing experience

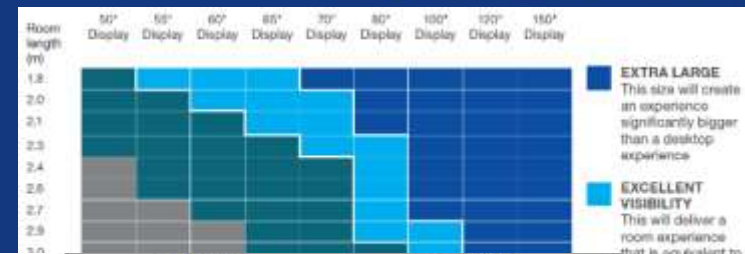
# 6 ?

## ...because size matters

- ▶ The DISCAS image size standard is globally recognised
- ▶ Content (font size/height) is the 'big new thing'
- ▶ Easy-to-use calculator
- ▶ Recommended starting point = 3%EH
  - ▶ which means...
- ▶ The maximum viewing distance should be no more than 6x the image height
- ▶ Download calculator here - <https://visualdisplaysltd.com/resources/useful-calculator-tools>

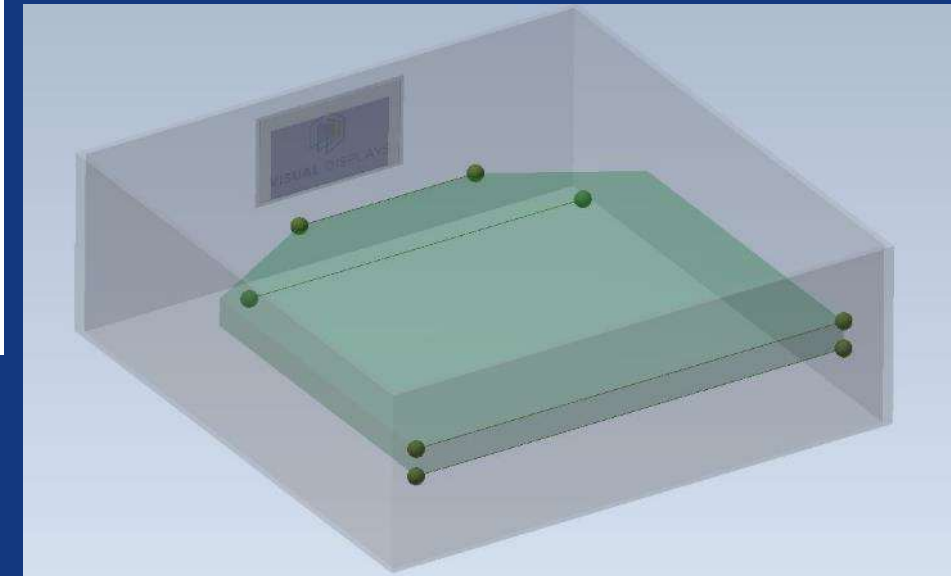
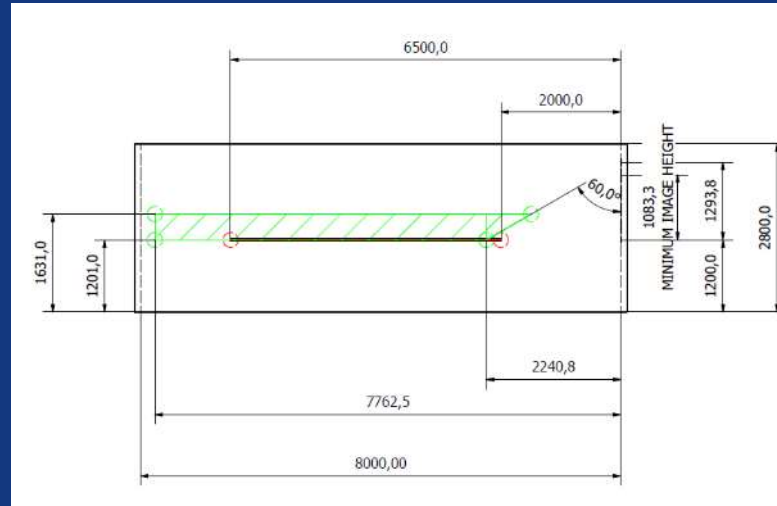
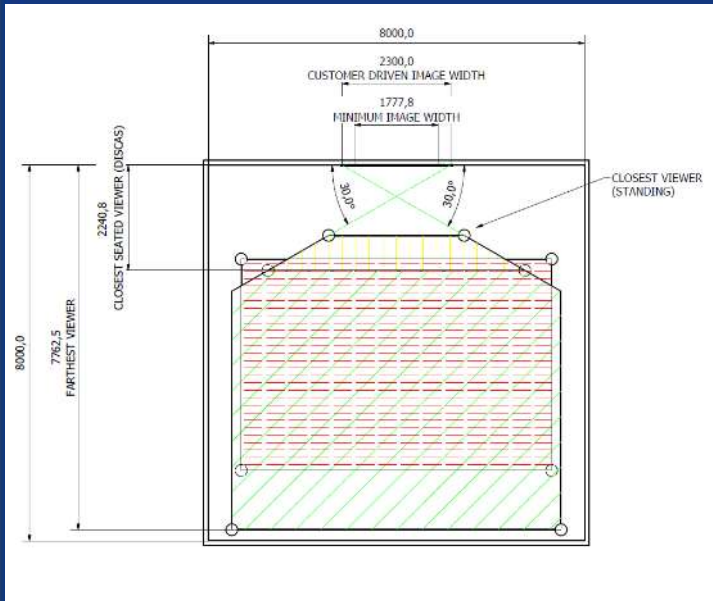


VISUAL DISPLAYS



	TO FIND:		
<i>Do not add measurement labels (", mm)</i>	<b>Farthest Viewer</b>	<b>Minimum Image Height</b>	
Image Height	1000	1000	<b>NOT RECOMMENDED</b> This is a poor experience that does not meet any standards
Distance from floor to bottom of image	1220	1220	
Image Offset	0	0	
Image Width	1780	1780	
Farthest Viewer	6000	6000	
Viewing Ratio	6.00	6.00	
Minimum %Element	3.00%	3.00%	
<b>TO FIND</b>	Farthest	Minimum	
<b>CLOSEST VIEWER</b>	Viewer	Image Height	
Vertical Viewing Factor	1000	1000	
Closest Viewer	1732.0	1732.0	
Viewing Ratio	1.73	1.73	
Nominal Viewing Depth	4268.0	4268.0	
Max. Length of CV Plane	4220	4220	

# DISCAS CAD tools ...helping partners win business



For perfect image you need two  
numbers

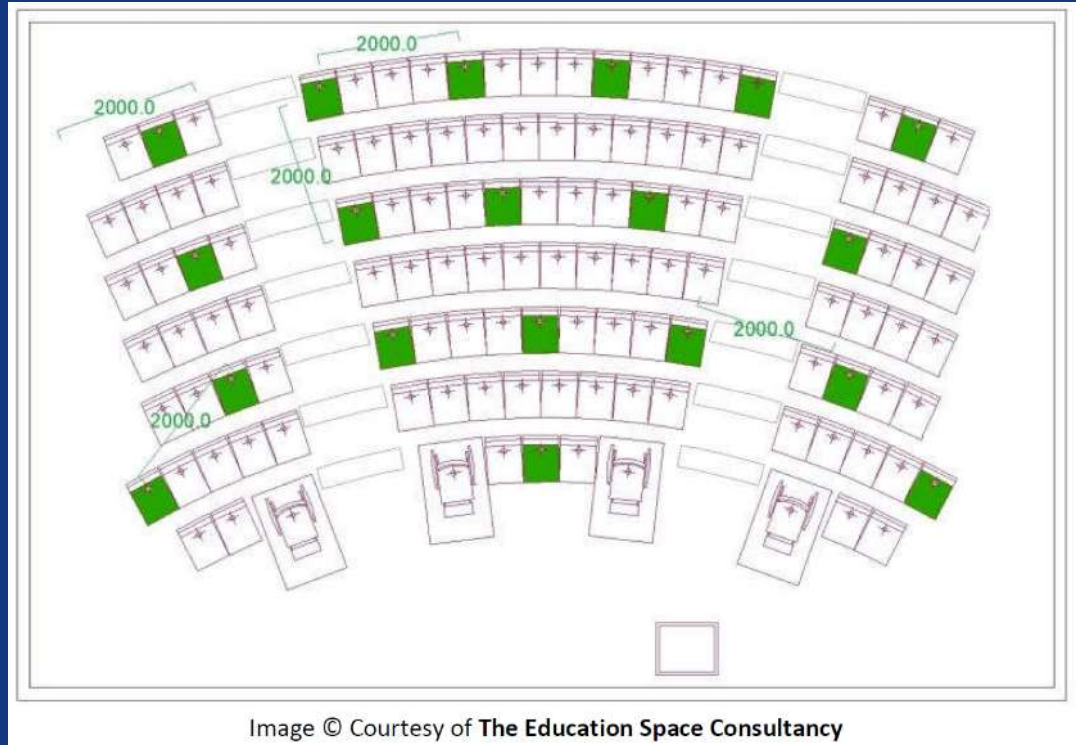
**15 & 6**

**...and that's why!!**



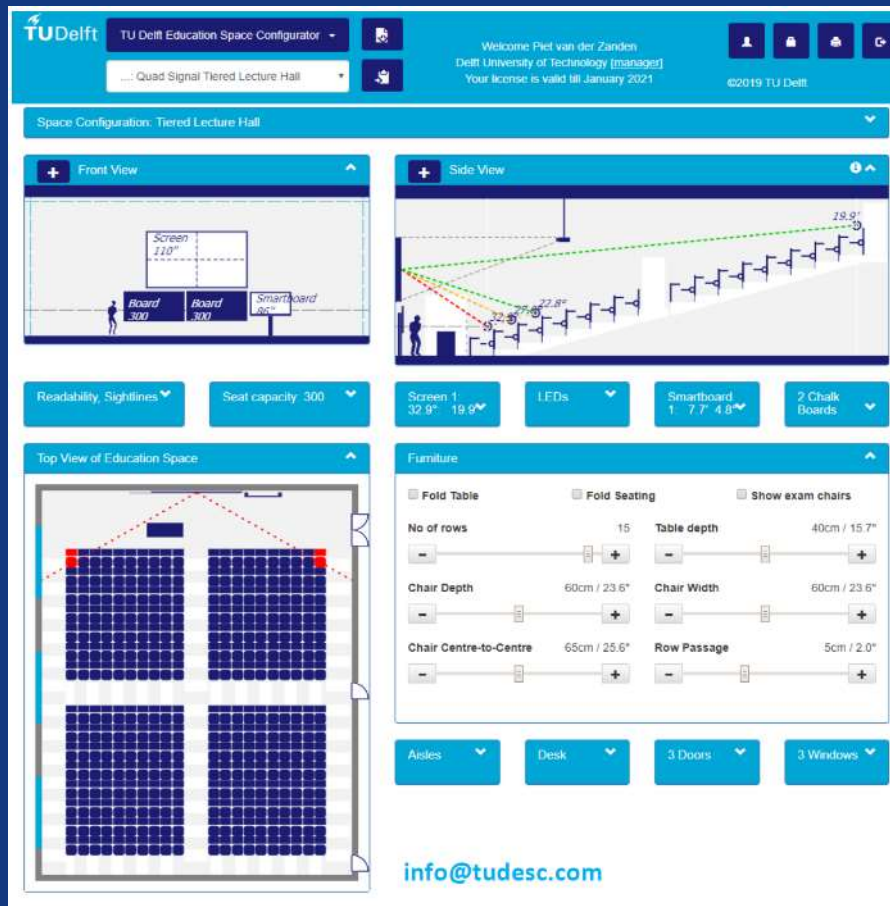
# And now size REALLY matters

- ▶ Post COVID-19 lock-down, social distancing will have radical impact on space occupancy
- ▶ Imperial College Uni expects <16% possible occupancy
  - ▶ Other estimates start at 9%
- ▶ **People will need to be at – and see from – the back of the room**
  - ▶ They won't want to spend a fortune achieving this...

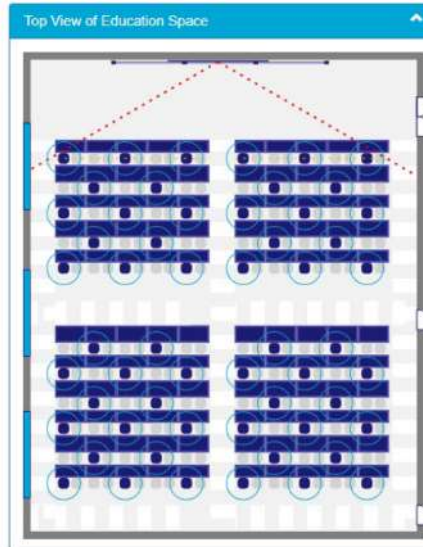


# Social distancing space configurator

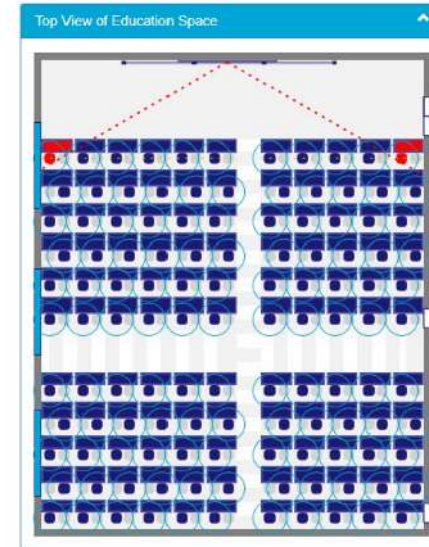
## Complete space configuration and management



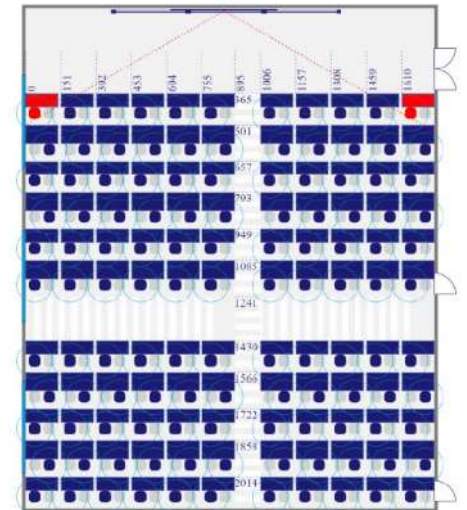
Social Distance with normally generated Seat Capacity (56)



Social Distance with optimized Seat Capacity (121)



Printed detailed Floorplan for facility instructions



# Market research – projectors

*How many units in 2020?*

*What market share to aim for?*

- ▶ Paul will speak about the UK projector market, but it's a three part story
- 1. What market share we can win in projectors > 5,000 lumens
- 2. What share of the LFD (large format display) market we can pivot to ALR projection
- 3. What share of the dvLED display market we can pivot to ALR projection



# Market research – LFDs

*How many LFD sales can we pivot to projection?*

- ▶ Total 2020 market of possible pivot to projection = 3000
- ▶ Each 1% = 30
  - ▶ 5% = 150
  - ▶ 10% = 300
- ▶ 98" 350cd/m<sup>2</sup> panels from £5,900 trade

UK		2019	2020 Q1
Screen Size	Interactive	Volume	Volume
80	No	215	37
	Yes	431	74
85	No	1001	327
	Yes	395	62
98	No	1197	418

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Selected  
Q1 x 4 x 0.8

148	
296	
1308	1046.4
248	
1672	1337.6
3672	2937.6
	say - 3000

Products  
per page: 20

Sort by:

RRP (Low - High)



#### NEC 98" MULTISYNC C981Q DISPLAY

98", Black, Large Format Display, 4K UHD, 350 cd/m<sup>2</sup>, 24/7 Operation, 3x HDMI

☐ Compare

RRP: £10,247.00

Your price: £7,029.00

5 in stock

Mfr. Part #: 60004516

Our Part #: NECLDC981Q



#### Iiyama 98" LH9852UHS-B1 DISPLAY

98", Black, Large Format Display, 4K UHD, 500 cd/m<sup>2</sup>, 24/7 Operation, 3x HDMI

☐ Compare

RRP: £10,904.00

Your price: £5,900.00

2 in stock

Mfr. Part #: LH9852UHS-B1

Our Part #: IYLCD9852UHS



#### LG 98" 98UM3E DISPLAY

98", Black, Large Format Display, 4K UHD, 350 cd/m<sup>2</sup>, 24/7 Operation, 3x HDMI

☐ Compare

RRP: £10,995.00

Your price: £5,999.00

32 in stock

Mfr. Part #: 98UM3E

Our Part #: LG98UM3E



#### PHILIPS 98" 98BDL4150D/00 DI ...

98", Black, Large Format Display, 4K UHD, 500 cd/m<sup>2</sup>, 3x HDMI and 3x VGA

☐ Compare

RRP: £11,149.00

Your price: £8,299.00

1 in stock

Mfr. Part #: 98BDL4150D/00

Our Part #: PH98BDL4150D



#### SAMSUNG 98" Q98R DISPLAY

98", Black, Large Format Display, 4K UHD, 350 cd/m<sup>2</sup>, 24/7 Operation, 2x HDMI

☐ Compare

RRP: £11,769.00

Your price: £8,616.67

23 in stock

Mfr. Part #: LH98QBREBGCXEN

Our Part #: SMOB98R



#### LG 98" 98UH5F-B COMMERCIAL D ...

98", Black, Large Format Display, 4K UHD, 500 cd/m<sup>2</sup>, 24/7 Operation, 3x HDMI

☐ Compare

RRP: £11,999.00

Your price: £8,250.00

30 in stock

Mfr. Part #: 98UH5F-B

Our Part #: LG98UH5F



#### PLANAR 98" ULTARES UR9851 D ...

98", Black, Large Format Display, 4K UHD, 24/7 Operation, 500 cd/m<sup>2</sup>, 3x HDMI

☐ Compare

RRP: £12,489.47

Your price: £10,824.21

0 in stock

Mfr. Part #: 997-7960-00

Our Part #: PLAUR9851



#### SAMSUNG 98" QM98N DISPLAY

98", Black, Large Format Display, 4K UHD, 500 cd/m<sup>2</sup>, 24/7 Operation, 2x HDMI

☐ Compare

RRP: £13,500.00

Your price: £9,239.13

43 in stock

Mfr. Part #: LH98QMNEBGC/EN

Our Part #: SMQM98N



#### PLANAR 98" ULTARES UR9851-E ...

98", Black, Large Format Display, 4K UHD, 500 cd/m<sup>2</sup>, 24/7 Operation, 4x HDMI

☐ Compare

RRP: £15,444.82

Your price: £13,385.51

0 in stock

Mfr. Part #: 997-8091-00

Our Part #: PLAUR9851ERO



#### NEC 98" MULTISYNC V984Q DISPLAY

98", Black, Large Format Display, 4K UHD, 500 cd/m<sup>2</sup>, 24/7 Operation, 3x HDMI

☐ Compare

RRP: £15,525.00

Your price: £12,569.00

5 in stock

Mfr. Part #: 60004318

Our Part #: NECLCDV984Q



#### PANASONIC 98" TH-98SQ1W COMM ...

98", Black, Large Format Display, 4K UHD, 500 cd/m<sup>2</sup>, 24/7 Operation, 2x HDMI

☐ Compare

RRP: £15,550.00

Your price: £7,999.00

4 in stock

Mfr. Part #: TH-98SQ1W

Our Part #: PPDTH98SQ1W



#### LG 98" 98UH5E DISPLAY

98", Black, Large Format Display, 4K UHD, 500 cd/m<sup>2</sup>, 24/7 Operation, 3x HDMI

☐ Compare

RRP: £16,000.00

Your price: £7,795.00

8 in stock

Mfr. Part #: 98UH5E

Our Part #: LG98UH5E

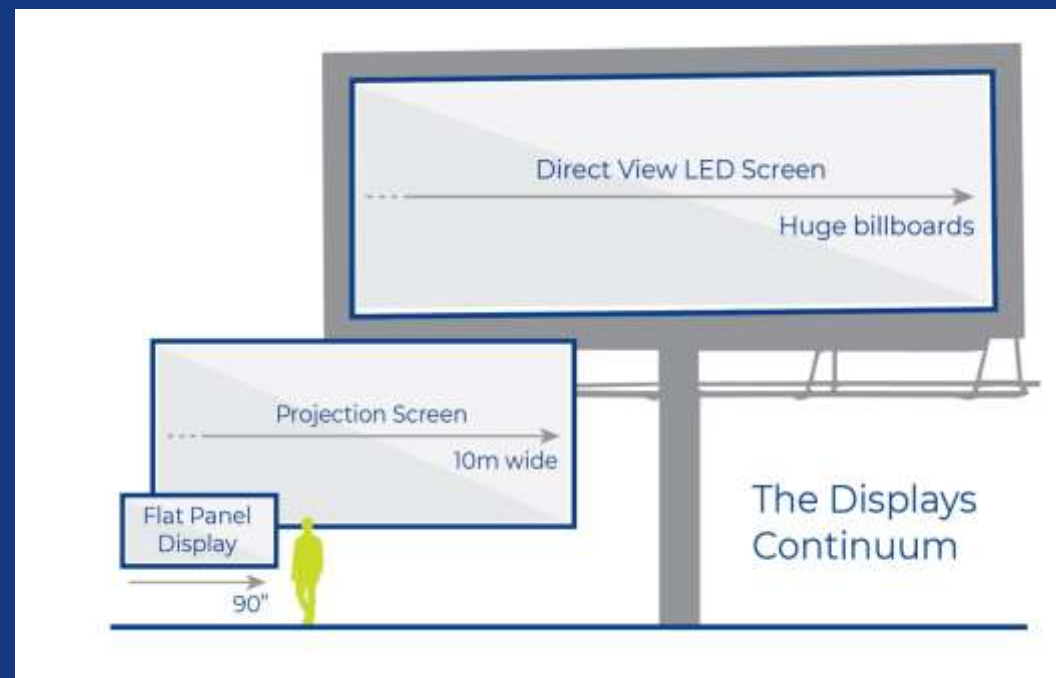
# Selling projection vs dvLED

			Lumens required for 350 cd/m <sup>2</sup> [nit]	Lumens required for 500 cd/m <sup>2</sup> [nit]
Image size " diagonal	Image width	Image area	350	500
100	2.21	2.76	3,787	5,410
110	2.44	3.34	4,582	6,546
120	2.66	3.97	5,453	7,791
130	2.88	4.66	6,400	9,143
140	3.10	5.40	7,423	10,604
	3.5	6.89	9,466	13,523
	4	9.00	12,364	17,663
	5	14.06	19,318	27,598

*Sell complete standards-conforming video displays using single SKUs*

# The displays continuum

- ▶ Up to 90" – flat panels (LFD, FPD)
- ▶ Above 90" – ALR projection
- ▶ Variable entry point for dvLED
- ▶ Projection fits seamlessly into the displays continuum – you have a seamless offering
- ▶ Post lockdown, larger image sizes needed
- ▶ Post lockdown, clients want to achieve more – for less money

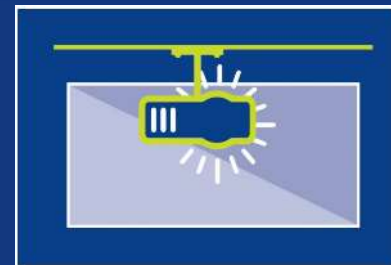


***Post lockdown, projection's place in the displays continuum will grow substantially.***

# Complete Laser Displays

*Making it easy to specify and buy*

- ▶ Visual Displays launches 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
- ▶ Resellers (& distributors) can buy screen-only to create their own display packages
- ▶ Option to buy complete displays as single SKUs



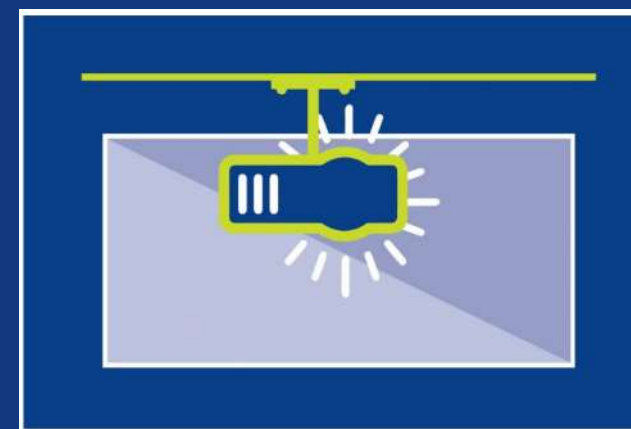


# Complete Laser Displays

## TECHNICAL SPECIFICATIONS

UST COMPACT RANGE		Image Width (m)	Image Height (m)	Epson Projector Lumens (CLO)
VDL-USTLD-100	100" Small Footprint Laser Display Package	2.214	1.245	4000
VDL-USTLD-100	120" Small Footprint Laser Display Package	2.612	1.469	4000
STANDARD RANGE				
VDL-SLLD-100R	100" Laser Display Package	2.214	1.245	5000
VDL-SLLD-100D	100" Laser Display Package - electric drop down	2.214	1.245	5000
VDL-SLLD-120R	120" Laser Display Package	2.612	1.469	5500 to 7000
VDL-SLLD-120D	120" Laser Display Package - electric drop down	2.612	1.469	5500 to 7000
ENHANCED SIZE EXAMPLES (larger & bespoke sizes available)				
VDL-SLLD-140D	140" Giant Screen Laser Display Package	3.099	1.743	7000
VDL-SLLD-160D	160" Giant Screen Laser Display Package	3.542	1.992	7000
VDL-SLLD-180D	180" Giant Screen Laser Display Package	3.985	2.241	9000
VDL-SLLD-200D	200" Giant Screen Laser Display Package	4.428	2.491	9000

► Full details here:  
<https://visualdisplaysltd.com/resources/vdl-laser-display>



# High brightness projection growth

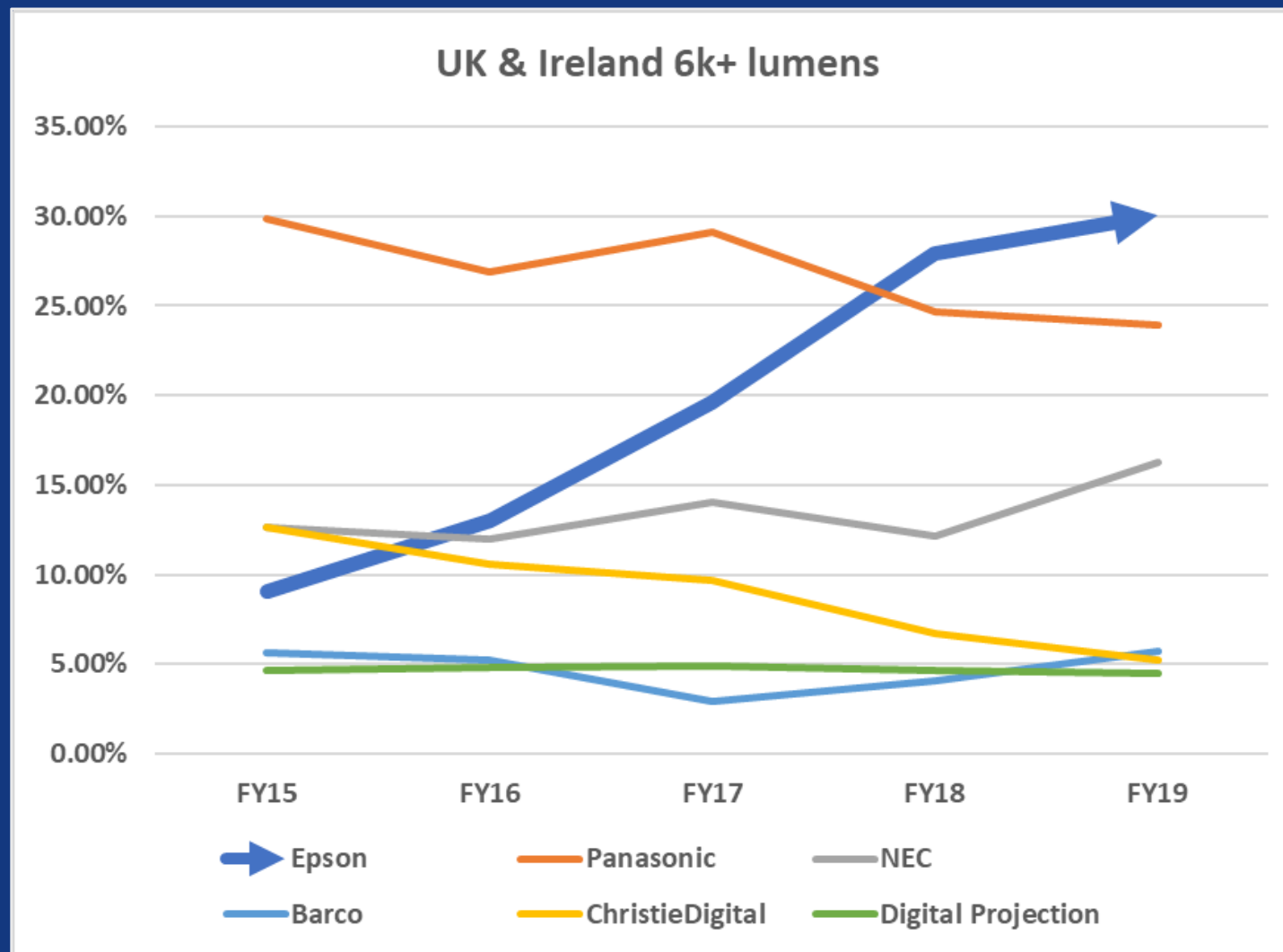


- ▶ High brightness = 6,000 lumens and above
- ▶ Total market size circa 5,500 units in FY19, up 28% in last 2 years
- ▶ 77% of high brightness projectors now use a laser light source
- ▶ 71% of high brightness projectors now use a 3-chip imaging system
  - ▶ Futuresource data for UK & Ireland

# Epson market share growth



VISUAL DISPLAYS

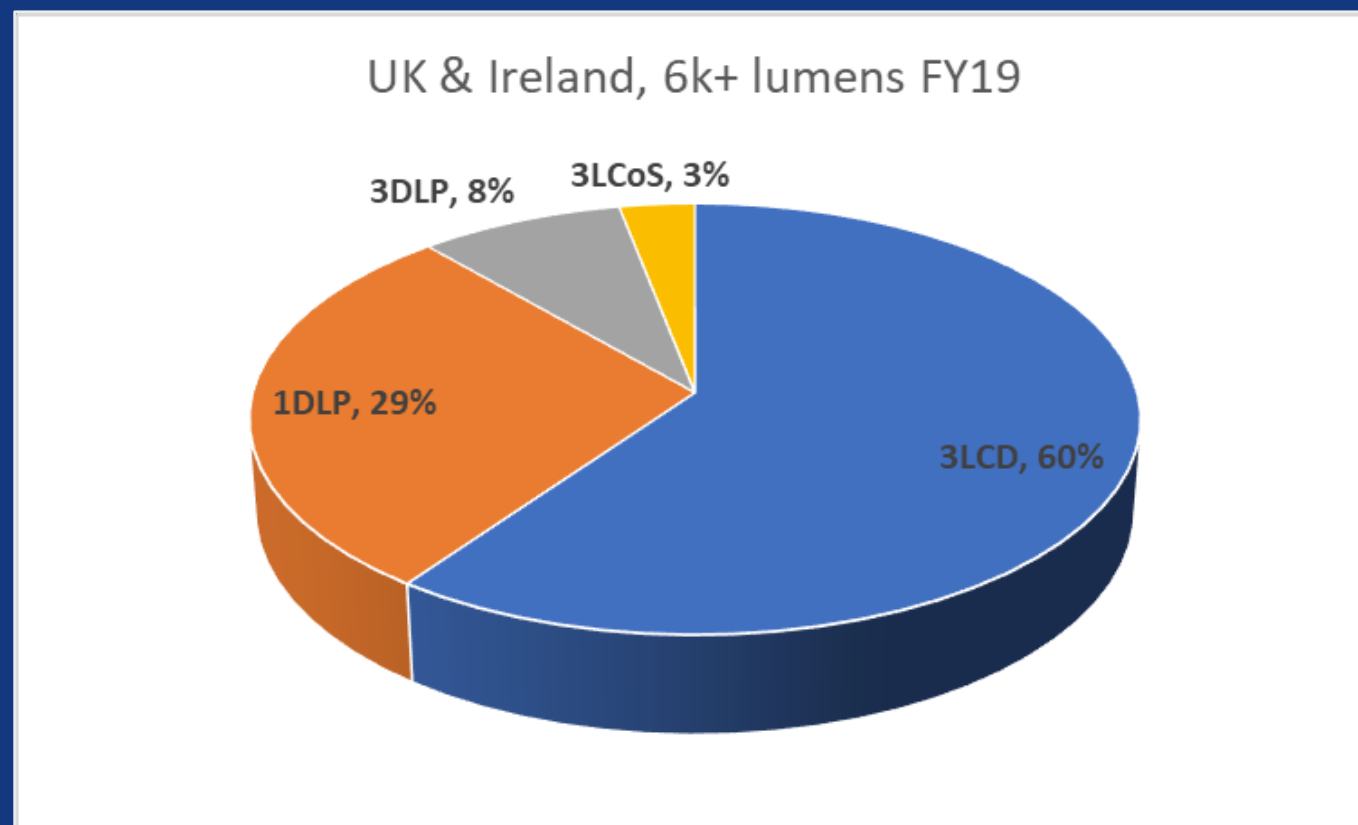




# Why laser?

- ▶ Long lasting light source (usually rated at 20,000 hours)
- ▶ Slow & gradual decline in brightness over a long period
- ▶ Minimal intervention over life span
- ▶ Long lasting filters to match light source hours (or no filter at all)
- ▶ Capable of delivering extremely high light output
- ▶ More efficient power usage e.g.
  - ▶ Epson 7,000 lumen lamp = 572W
  - ▶ Epson 7,000 lumen laser = 416W

# Why 3-chip?



- ▶ 3LCD is the leading 3-chip system, now accounting for 60% of all high brightness projector sales in the UK & Ireland

# Why 3-chip?



- ▶ 3-chip imaging sources maintain equally high White & Colour Light Output (brightness)
- ▶ Up to 3x brighter colours than equivalent 1-chip projectors
- ▶ No risk of distracting Rainbow Effect (RBE) to the eye or on camera, as colours are not sequential (no spinning colour filter wheel)
- ▶ Epson produce our own 3LCD chips exclusively for Epson projectors

# 1-chip rainbows



**UHD ALLIANCE**

**SUMMARY**

- Filmmaker Mode is the result of an industry-first collaboration between the UHD Alliance, Filmmakers, CE Manufacturers and Hollywood Studios
- Filmmaker Mode displays movies and television shows as they were intended by the filmmaker
- Filmmaker Mode disables all post-processing (e.g. motion smoothing, etc.) preserving the correct aspect ratios, colors and frame rates
- Filmmaker Mode will be easily accessible on TVs from multiple manufacturers, without searching through different menus



# Core range: UST

- ▶ EB-700U
- ▶ 4,000 lumens WUXGA
- ▶ 0.27:1 throw ratio
- ▶ Ideal for signage & smaller meeting rooms, or where ceiling install not suitable



# Core range: Fixed lens

- ▶ EB-L510U / EB-L610U
- ▶ 5,000 / 6,000 lumens WUXGA
- ▶ 1.35 – 2.2:1 throw ratio
- ▶ Lens shift
- ▶ Ideal for mid sized rooms e.g. boardrooms / seminar rooms



# Core range: Interchangeable lens



- ▶ EB-L1050U / EB-L1070U
- ▶ 5,500 / 7,000 lumens WUXGA + 4K enhancement
- ▶ 0.35 – 10.11:1 throw ratio depending on lens
- ▶ Powered zoom, focus & lens shift
- ▶ Ideal for mid sized rooms e.g. boardrooms / seminar rooms, especially when bespoke shorter or longer throw required





# Core range: Interchangeable lens



- ▶ EB-L1490U / EB-L1500UH / EB-L1750U
- ▶ 9,000 / 12,000 / 15,000 lumens WUXGA + 4K enhancement
- ▶ 0.35 – 7.41:1 throw ratio depending on lens
- ▶ Powered zoom, focus & lens shift
- ▶ Ideal for larger environments eg. Lecture theatres, halls, presentation spaces





# Included software



- ▶ Epson software is all included in the cost of the hardware, and updates are freely available online without subscription
- ▶ **Epson Projector Management** can be used to monitor & control a large mixed estate of Epson projectors, via wired or wireless network
- ▶ Set timer routines, send email alerts, provide remote assistance, etc
- ▶ TCO improvements in projector operation & support

# Warranty



- ▶ **5 year** standard RTB warranty for Epson laser projectors, including the light source
- ▶ Fixed lens models (EB-700U / EB-L510U / EB-L610U) can be upgraded to a next-day on-site warranty for a small additional cost
- ▶ Interchangeable lens models are RTB only, but Epson can provide a temporary loan unit if required

# Epson – the World Number 1 Projector Manufacturer



- ▶ Laser projectors offer high brightness, longevity & minimal intervention
- ▶ Epson 3LCD technology ensures equally high White & Colour Brightness
- ▶ Up to 3x Brighter than 1-chip projectors, and no rainbow effect
- ▶ Range from 4,000 to 30,000 lumens
- ▶ Suitable for boardrooms, seminar rooms, auditoriums and more
- ▶ Interchangeable lens options for more complex installations
- ▶ Free software tools to manage larger estates remotely
- ▶ 5 year warranty



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

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



# Laser projection's future is bright – *the game changer that changes the message*



***By widening the focus to the screen, to the delivered image, to 'displays' we can transform existing attitudes to projection, inspire new users and find new opportunities.***

***Epson ancillary software means you can control, maintain and monitor large estates of projectors – ideal for large scale deployment.***

# Win-win scenarios only

Helping you sell more displays: we do the hard work and make you look good



## Standard products – Complete Laser Displays

- ▶ Our prime objective: to sell screens
- ▶ When it works for you we can sell the packages complete with projector
- ▶ In all other cases we supply component part numbers so you can create your own SKU.
  - ▶ You are welcome to use our SKUs to win orders and we can help you 'backfill' your sourcing requirements as and when needed.
- ▶ Demonstration equipment & event support
- ▶ Marketing collateral – we will versionise for sales partners
- ▶ Seeking demo sites across England, Scotland, Wales and Dublin

## Bespoke solutions

- ▶ We help you turn opportunities into sales – especially when they're difficult
- ▶ Complete range of 3D CAD and renderings for sales support
- ▶ Expert tender response drafting using our unique standards knowledge
- ▶ Demonstration equipment
- ▶ Proof of concept
- ▶ Protected bid pricing
- ▶ Marketing collateral – we will versionise for sales partners



# Let this be a great start...



- ▶ Further, more detailed and focused webinars available
- ▶ Branded presentations/webinars available on your behalf
- ▶ Demo and event support



# VISUAL DISPLAYS

Ideal partners –  
*committed to resellers and integrators*

WE DO THE WORK TO MAKE YOU AND YOUR CLIENTS LOOK LIKE HEROES TO THEIR USERS

# Visual Displays Ltd



Specialist manufacture, distribution & services

*Working in partnership with & through the channel*

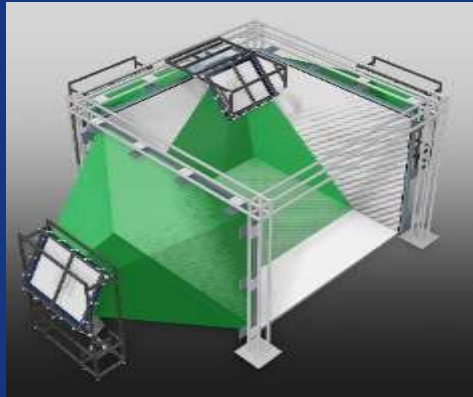
## ▶ Products

- ▶ dnp Supernova ALR (ambient light-rejecting) projection screens
- ▶ Complete laser projection 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

# We do some really cool things with projectors



CAVES



RETAIL & SIGNAGE



MULTI-PROJECTION



INTERACTIVE  
DISPLAYS,  
FLOORS –  
ANYTHING!



CURVED SCREENS



AIR TRAFFIC CONTROL



# We do some really cool things with projectors



VISUAL DISPLAYS



MIRROR RIGS,  
FLOOR PROJECTION



PEPPER'S GHOST



TV STUDIOS



CURVED  
REAR  
PROJECTION

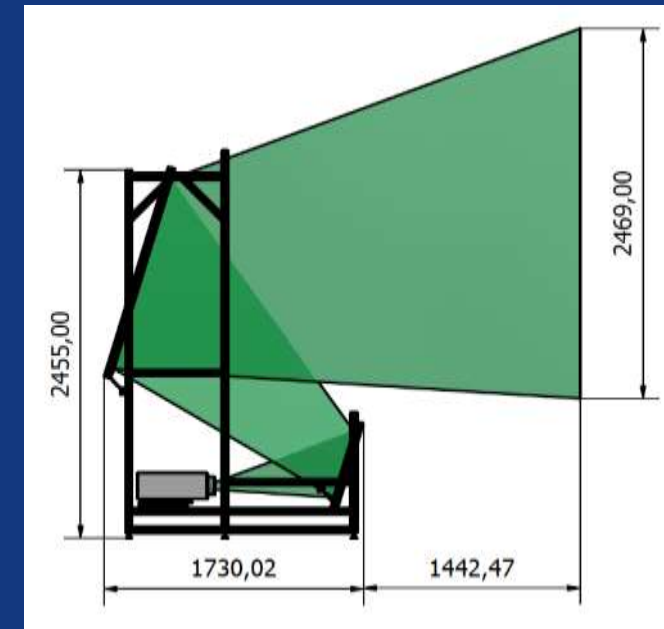
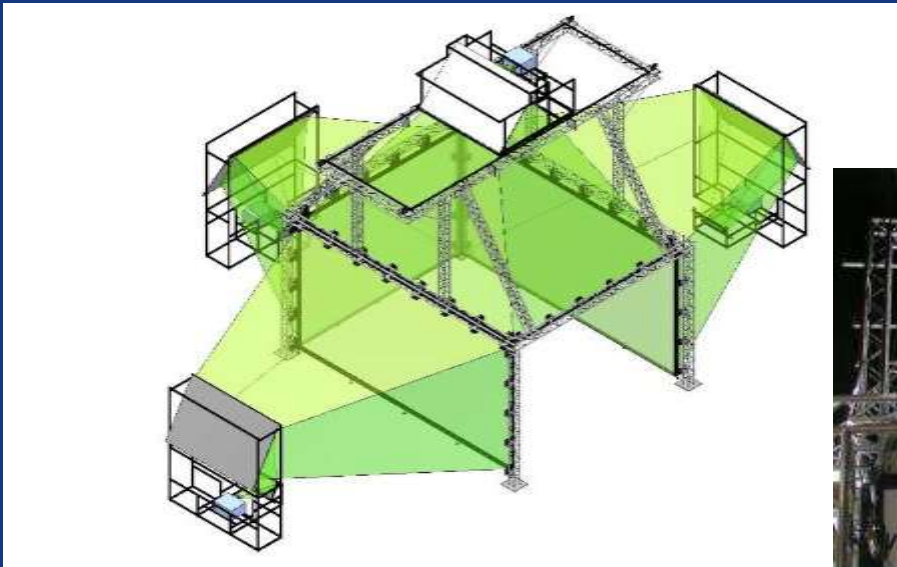


SHOPPING  
MALLS

# Adding value to projectors with world-leading 3D CAD design and bespoke manufacture



- ▶ You find the opportunities, we turn them into success stories



- ▶ You and your channel partners can offer expert and unique solutions



# Q & A



VISUAL DISPLAYS





# VISUAL DISPLAYS

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