



To LED or not to LED-up a store

Katelijn Quartier, Faculty of Architecture and Arts



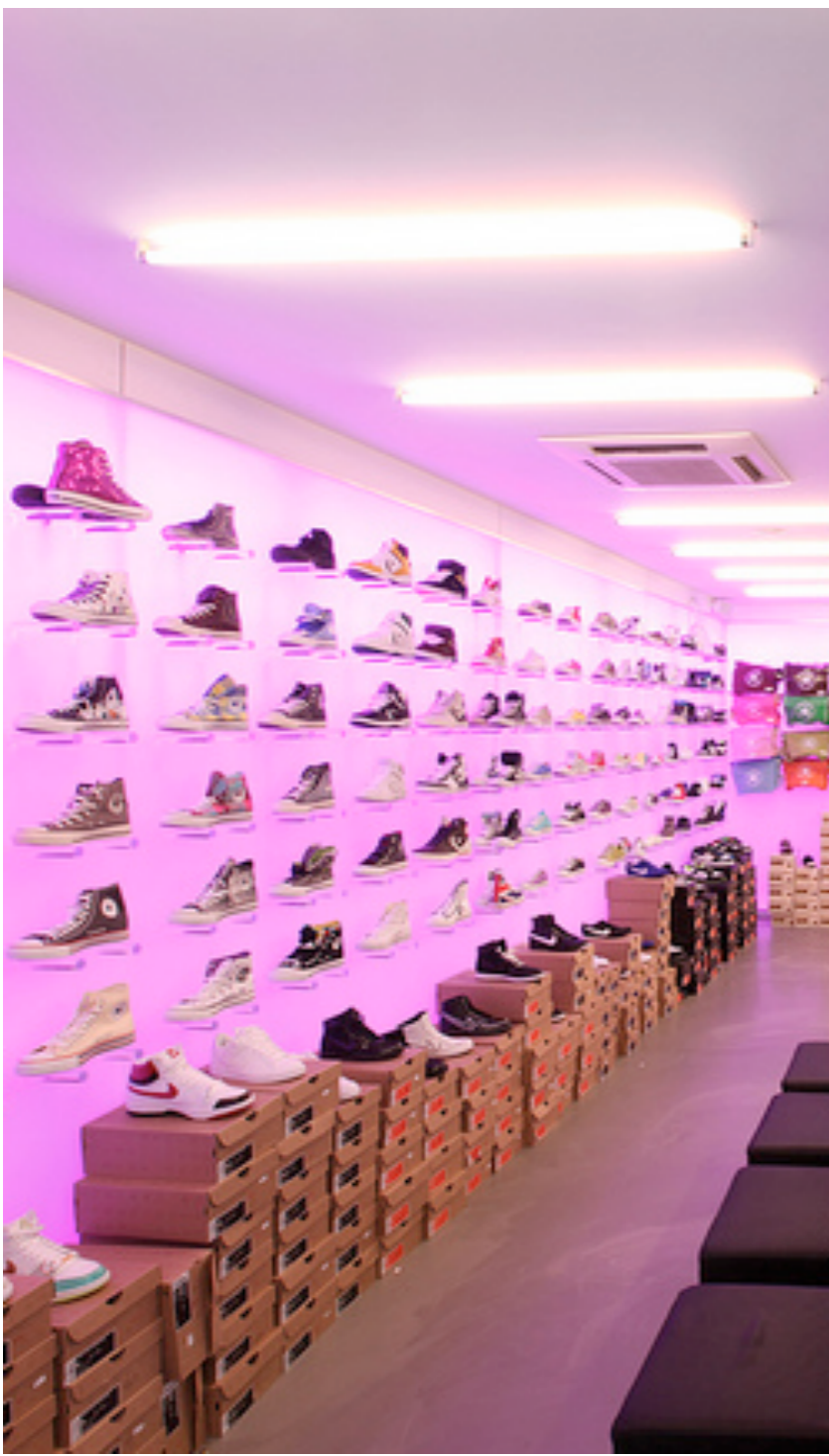
Agenda

The visibility of coloured LED in stores

The impact of coloured LED in stores

The added value of coloured LED in stores

Visibility: study by students



Flash shoe store, Hasselt BE



Planet Perfume, Hasselt BE

Visibility: study by students

RESULTS

Have you noticed the coloured lighting in the store?

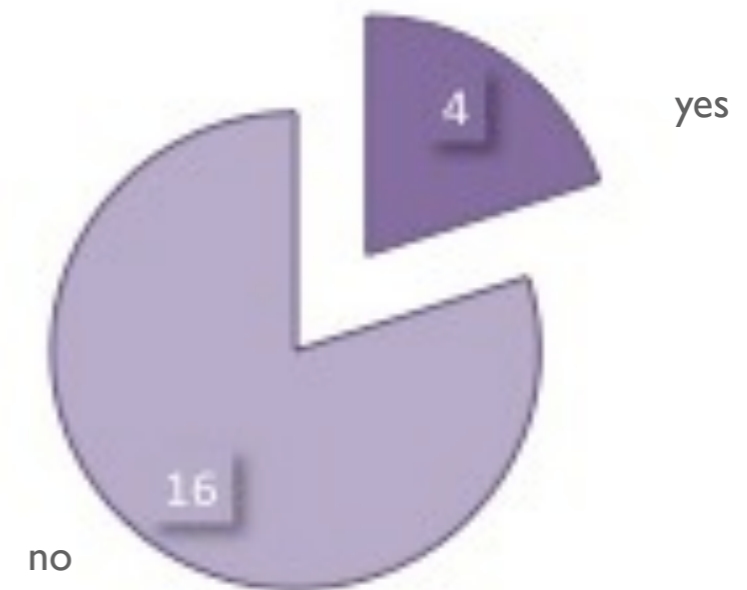
20 people questioned outside the store (of which 19 people had visited the store before that day)

Flash shoe store, Hasselt BE



contribution to the store's image 20/20

Planet Perfume, Hasselt BE



contribution to the store's image 12/20

Visibility: experiment Real Supermarket



630 lux/3000K



480 Lux/2750K



870lux/4800K



Red LED-wand



Blue LED-wand

Visibility: experiment Real Supermarket

METHOD

- During a period of 11 days, 664 people were questioned, 441 after the shopping experience and 213 during their shopping
- Behaviour was measured during 21 weeks
- Participants were unaware of the exact goal of the study

Visibility: experiment Real Supermarket

MEASURES

Mood: Short Mood Form (Brenngman, 2002)

Emotions: Pleasure, Arousal, and Dominance paradigm - PAD
(Mehrabian and Russell, 1974 < Donovan and Rossiter (1982)

Atmosphere: a tool to quantify the 'perceived atmosphere'
(Vogels, 2008)

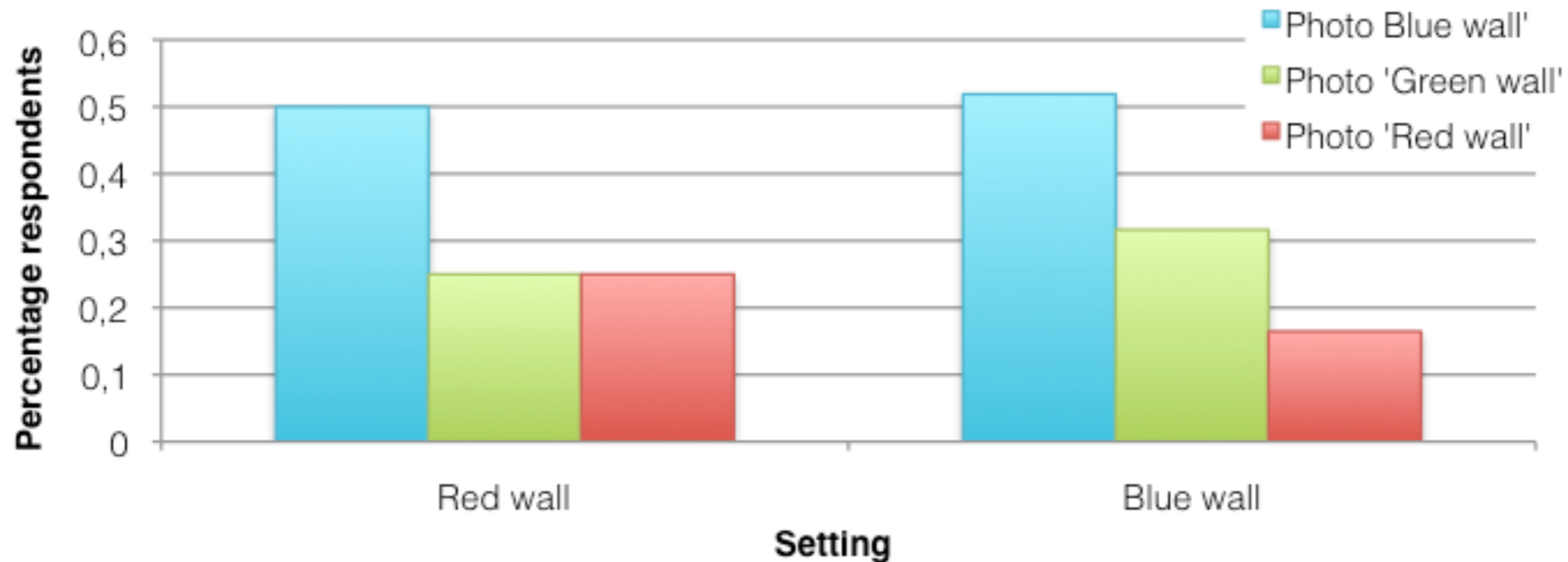
Image of Plus store

Behaviour: time spent, products bought, amount spent

Visibility: experiment Real Supermarket

AWARENESS SHORT TERM

Are the consumers aware of the light setting they just saw?



Recognition of the colour of the LED-wall (outside supermarket via 3 photographs)

Visibility: experiment Real Supermarket

AWARENESS LONG TERM

Have the consumers noticed the change of the lighting during the last weeks?

- Change of lighting during the last 3 months: 25%
- Colour change of the LED-wall: 17,5%

Visibility: experiment Real Supermarket

IMAGE

Does the perceived atmosphere correspond with Plus' image?

Based on light setting (based on 5-point scale)

LED-Wall	IMAGE
Off	4,17
On	3,99
no significant effect of light setting	
SettingLux	IMAGE LSMEAN
480lux 2750K	4,23
500lux 4000K	4,10
630lux 3000K	3,86
650lux 5400K	4,09
870lux 4800K	4,11

Impact: experiment Real Supermarket

BEHAVIOUR

Led-coloured wall & lightsettings →	<i>Note: tested for areas with changing light-settings</i>	
Attracts more people →	No relevant difference	no
More sales	No relevant difference	no
Led-coloured wall →	<i>Note: Tested for areas nearby coloured wall</i>	
Attracts more customers to area →	3% difference in %customers that visit area nearby coloured wall; less visitors with led-wall on	yes
More sales	no relevant difference	no
Led-coloured wall & lightsettings →	<i>Note: tested for whine-area</i>	
Customer changes routing in shop	No relevant difference in routing	no
Customer moves faster to led-wall	speed ↑ 2.5% for trolleys to reach whine area	no

Visibility/impact: coloured light on site

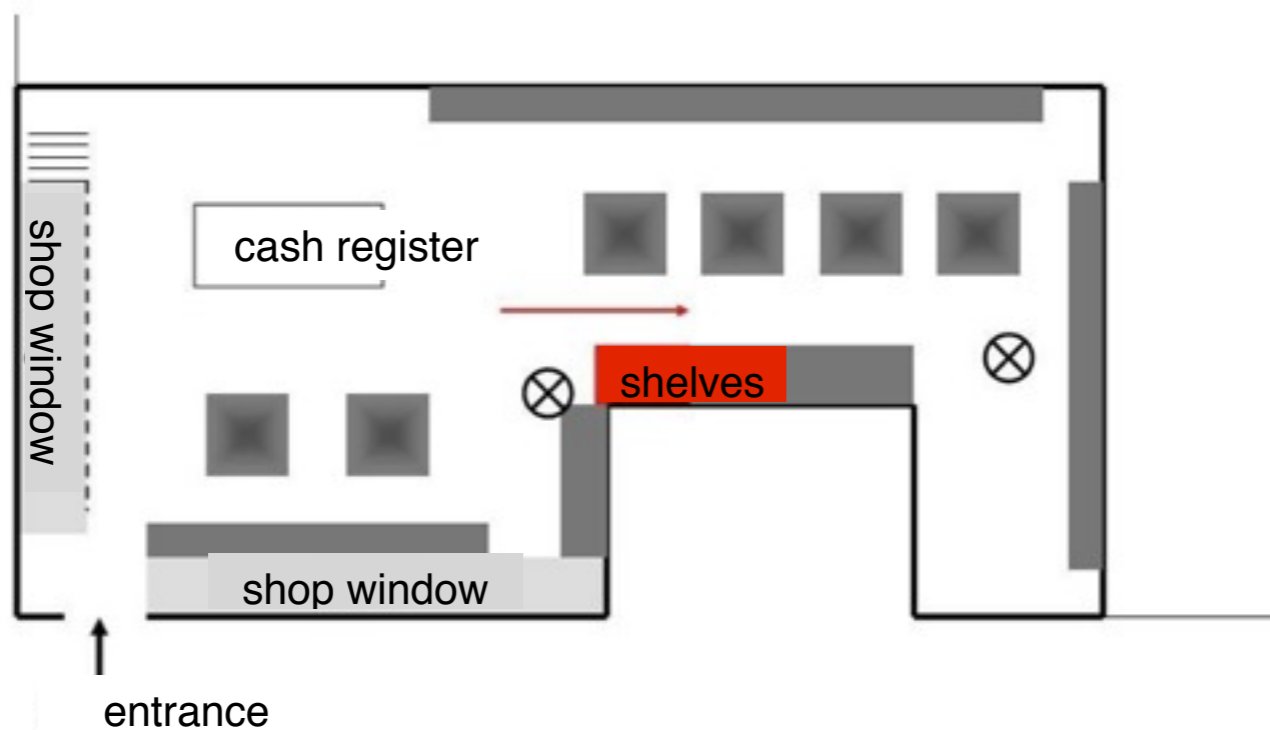


Premaman, BE

Visibility/impact: coloured light on site

MEASURES

- Subjective appreciation (interview): 30 people (5 per colour - purple/yellow/green/white/red/blue)
- Observation camera's
- Products of those shelves sold: 37 days of which 20 days the lighting was on (green).



Visibility/impact: coloured light on site

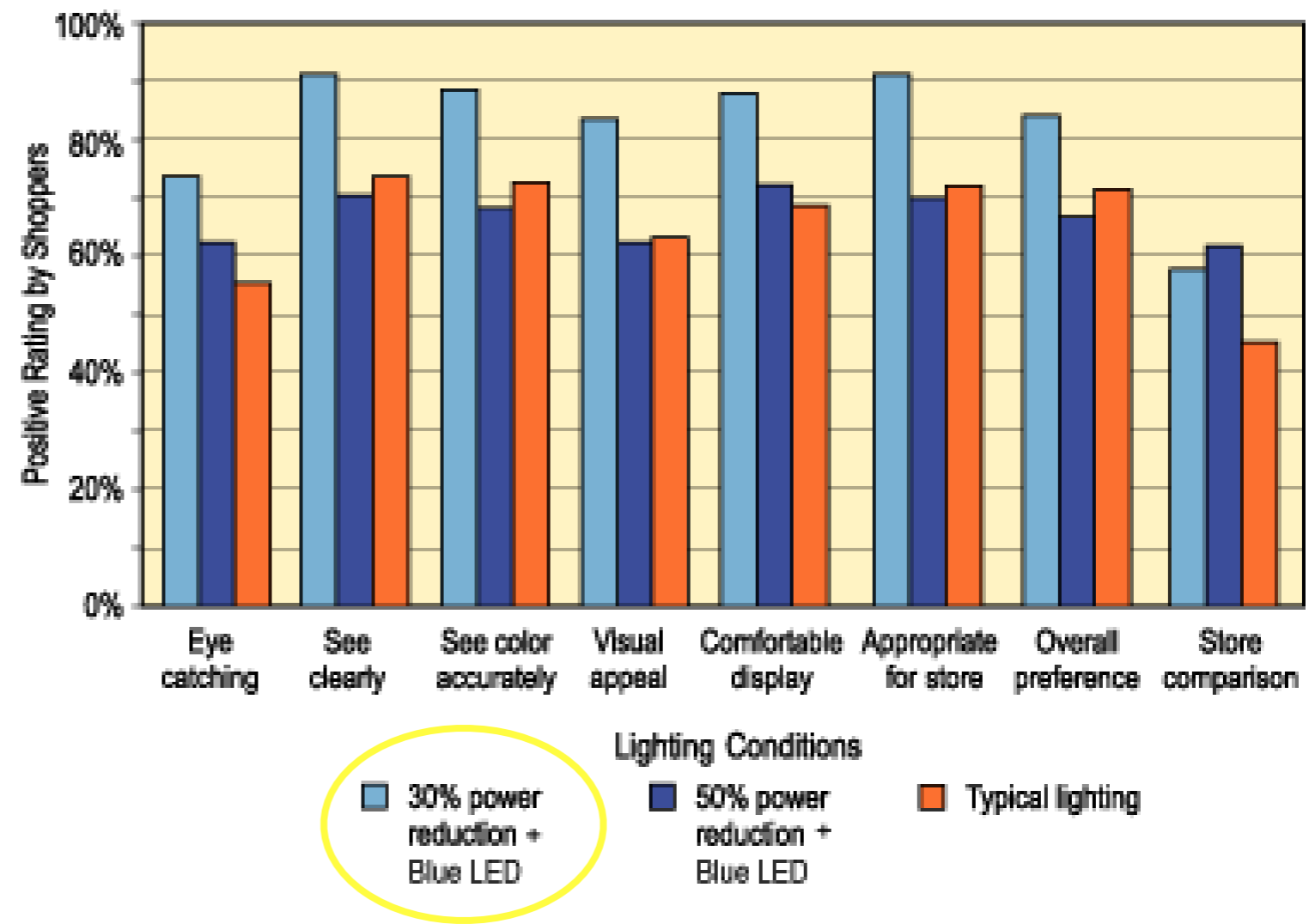
RESULTS

- Subjective appreciation:
 - 75% says positive to the atmosphere
- Observation:
 - no change in behaviour
- Products of those shelves sold:
 - no significant difference

Added value

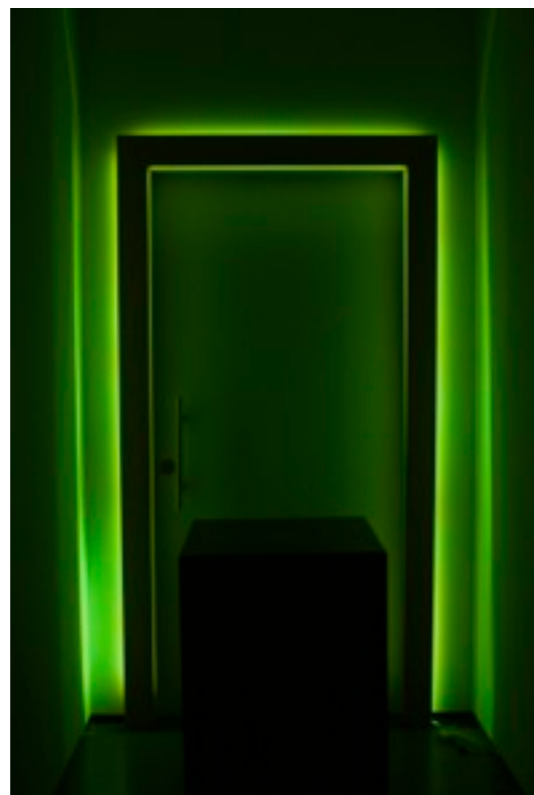


Source: LRC (2005)



Preference blue backlighting
Even with 50% power reduction, no effect on sales number

Added value: lab experiment



COLOUR PERCEPTION

80 men/women between 18 and 70

On a 6-point scale:

lively-boring

safeness-danger

warm-cool

relaxing-arousing

pleasing-displeasing

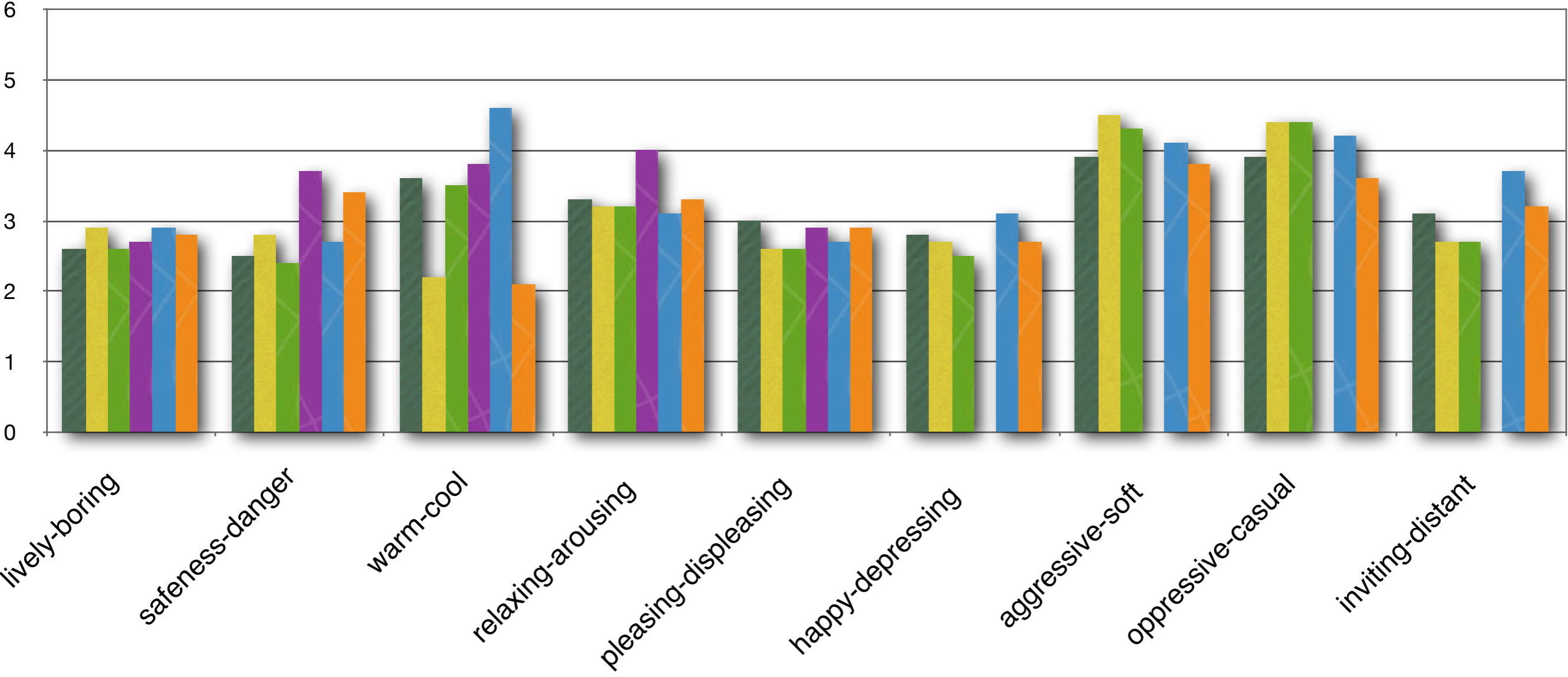
happy-depressing

aggressive-soft

oppressive-casual

inviting-distant

Added value: lab experiment



Added value?: case study



SHOEBALOO ROTTERDAM

Added value!: case study



SHOEBALOO AMSTERDAM (fluorescence)

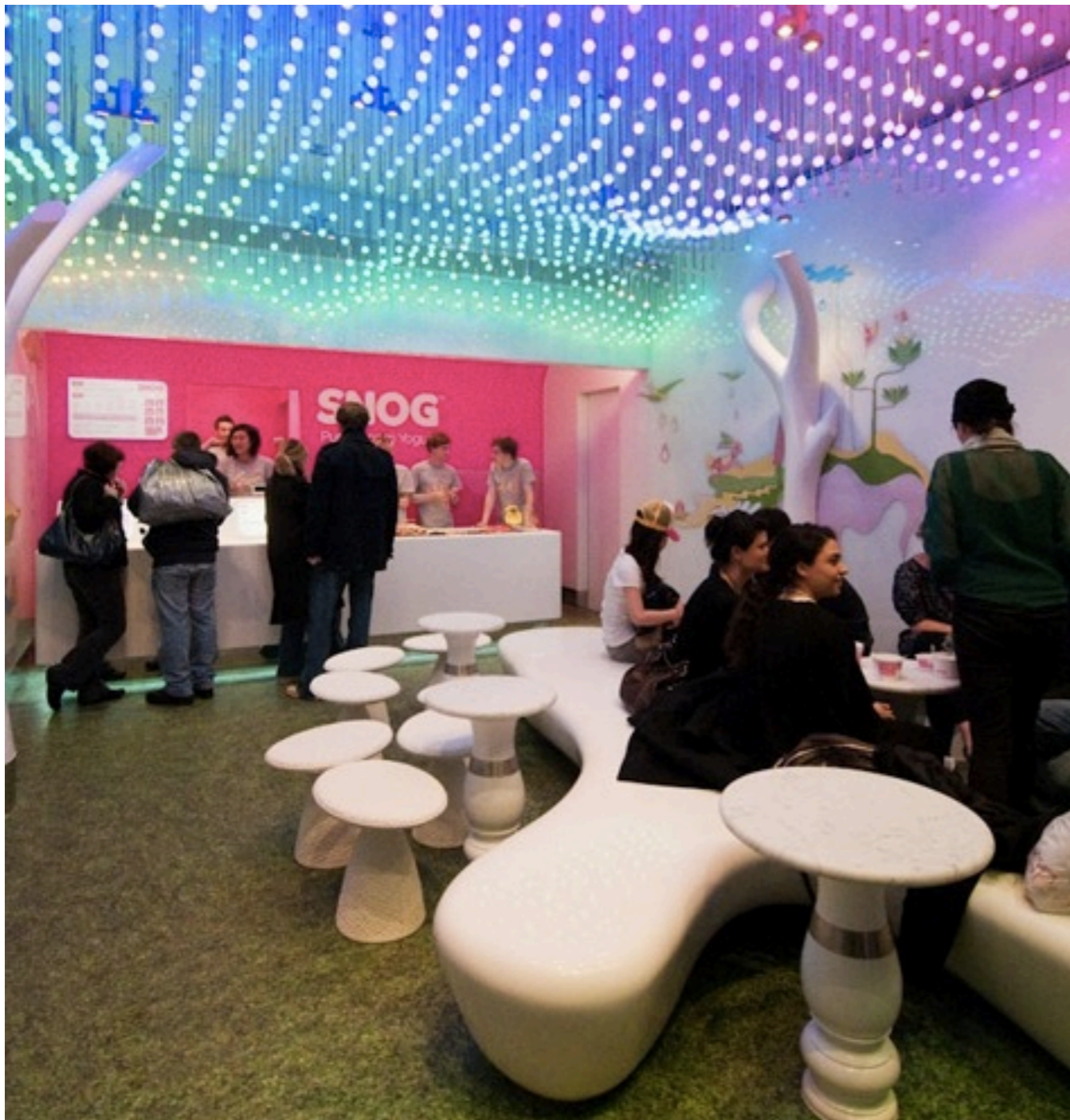
Added value!: case study



Kings Road 2008

SNOG LONDON: The sound system is specially curated and the lighting patterns respond in real time to the sound in the store. Inside each ribbon are hundreds of LEDs that shuffle and change depending the sound.

Added value!: case study



Covent Garden 2011

SNOG LONDON: The sound system is specially curated and the lighting patterns respond in real time to the sound in the store. Inside each ribbon are hundreds of LEDs that shuffle and change depending the sound.



Thank you for your attention

katelijn.quartier@uhasselt.be