MEDIA AND ARCHITECTURE INTEGRATION

New Territories for Lighting and Architecture

Robert Osten, IALD

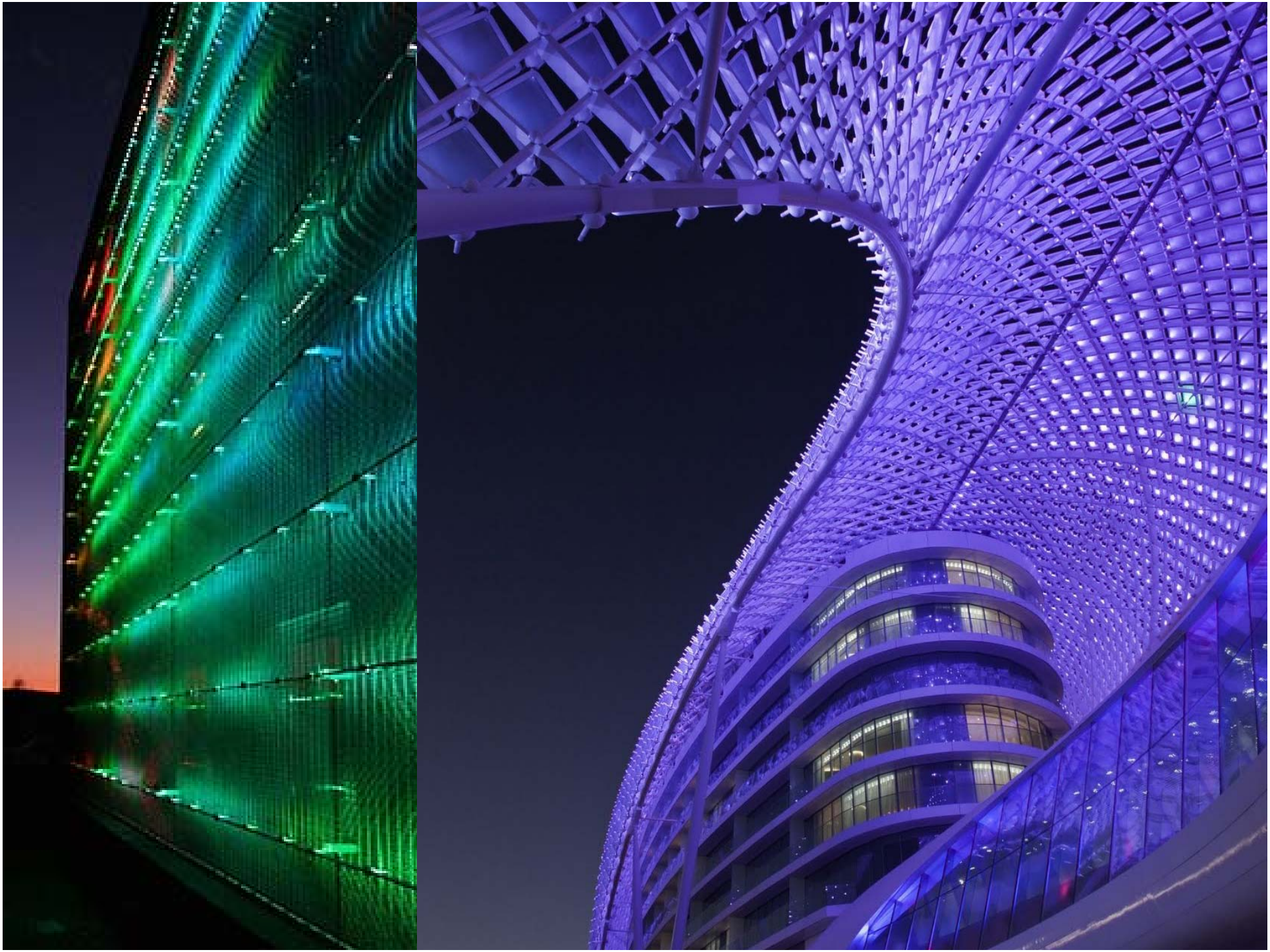
Principal, Lam Partners

Kera Lagios

Designer, Lam Partners

Lam Partners
ARCHITECTURAL LIGHTING DESIGN

Verizon
WACHOVIA
Juicy Couture
Love P&G
ONE MAN... TWO ALBUMS
NELLY
IN STORES SEPTEMBER 14
NISSIN FOODS
Budweiser
swatch
swatch + swatch + swatch
Foot Locker
927
DAN DIPERT
1-800-527-8800
Panasonic



Media integration with architecture

Architectural forms convey visual content

The visual content is dynamic: variable, animated

The visual content and the form are integrated

The content shapes the form
The form shapes the content

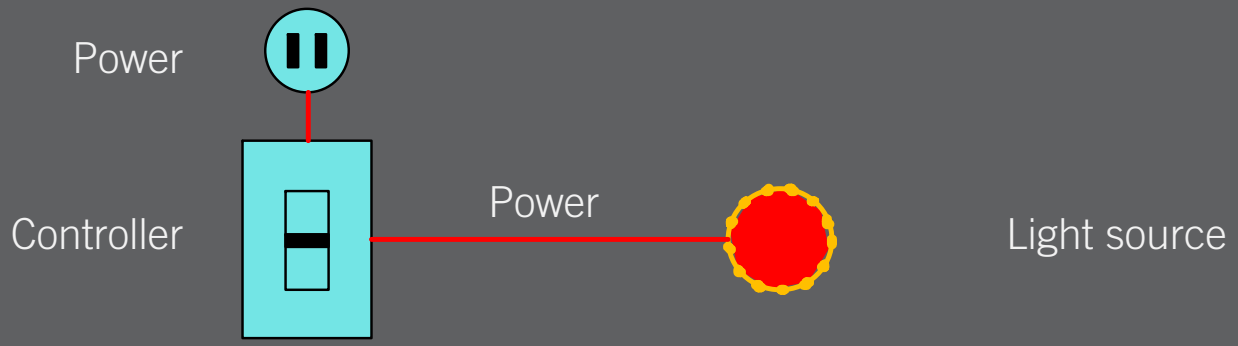
Presentation outline:

1. Technology
2. Design
3. Implementation / Case-Study

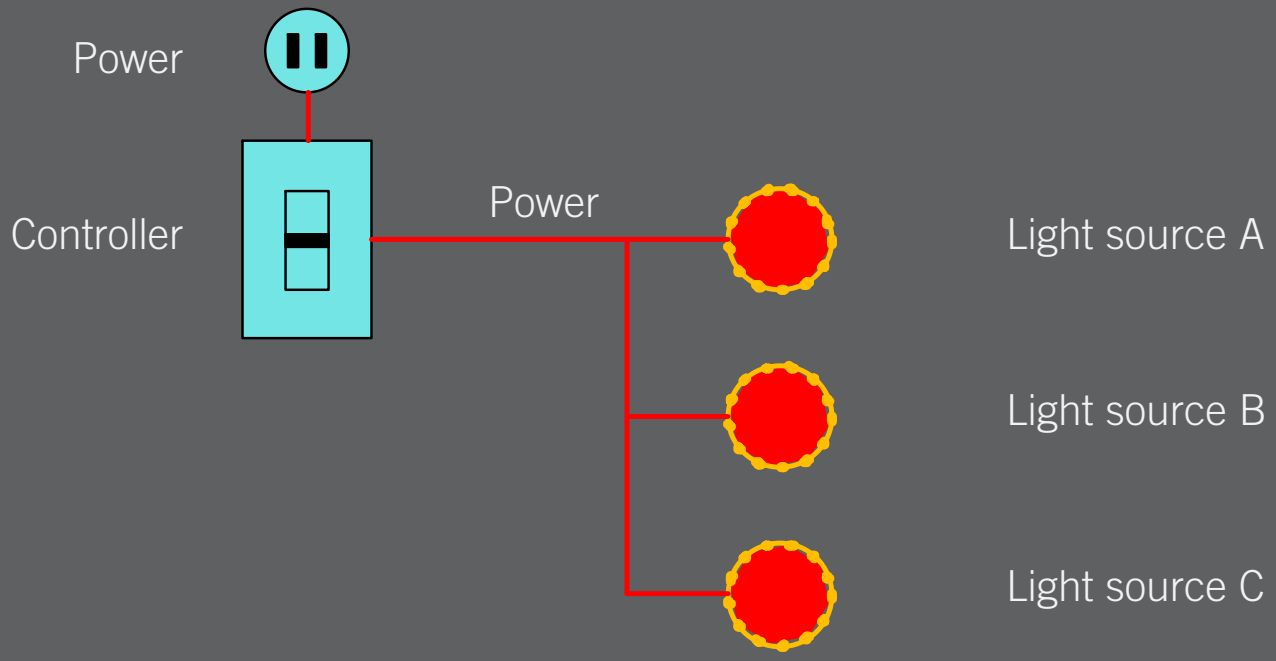
TECHNOLOGY

Light Sources and Controls

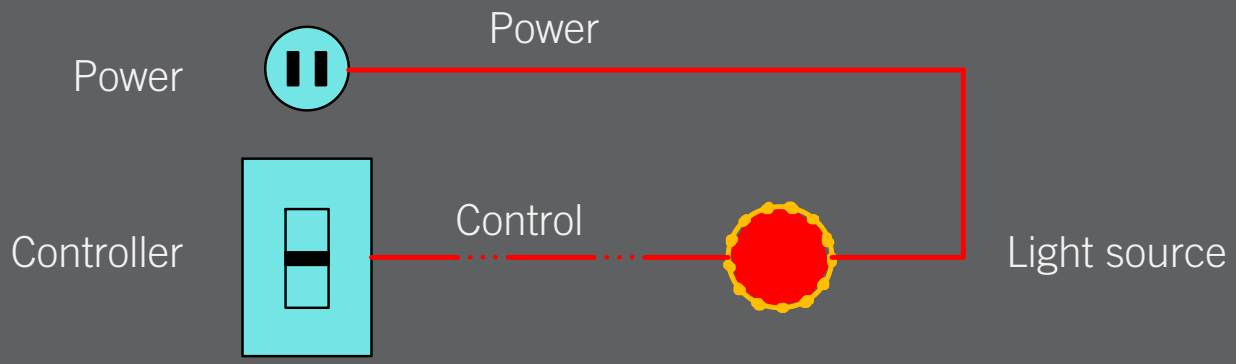
Dimming - Analog



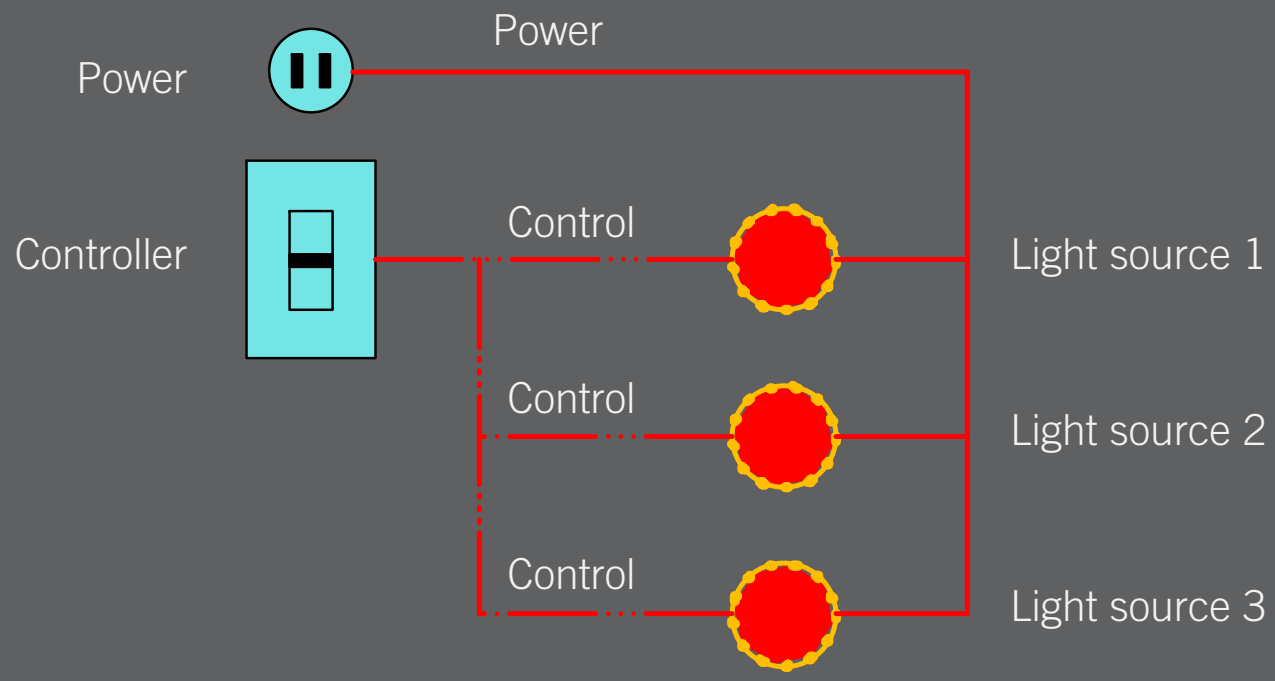
Dimming - Analog



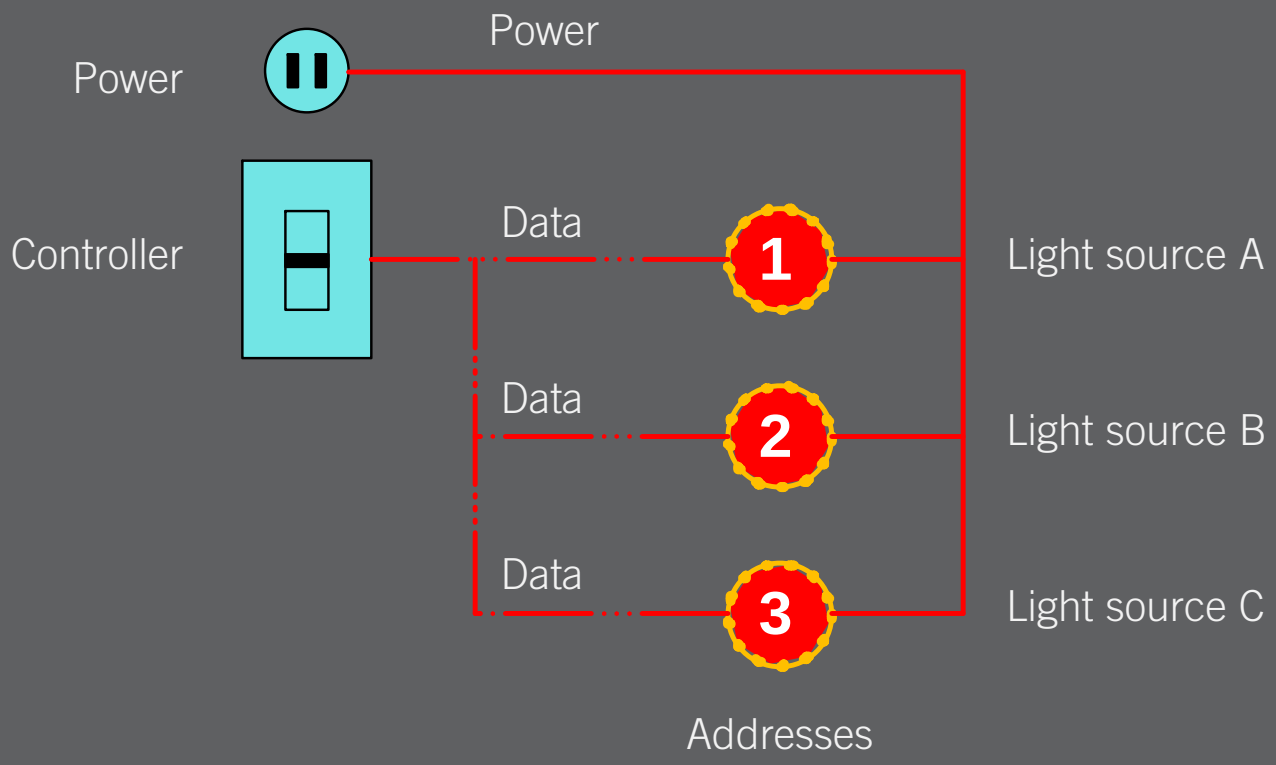
Dimming - Separate Control - Analog or Digital



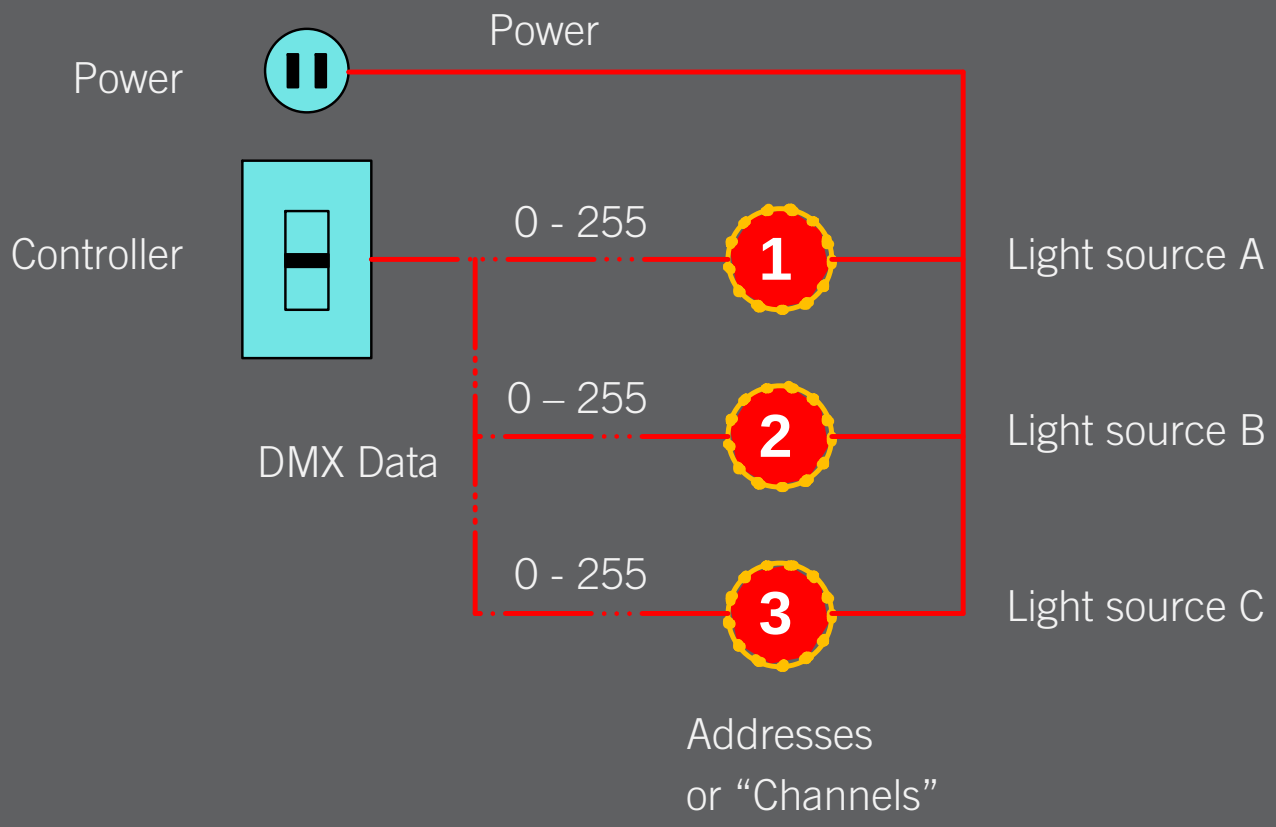
Dimming - Separate Control - Analog or Digital



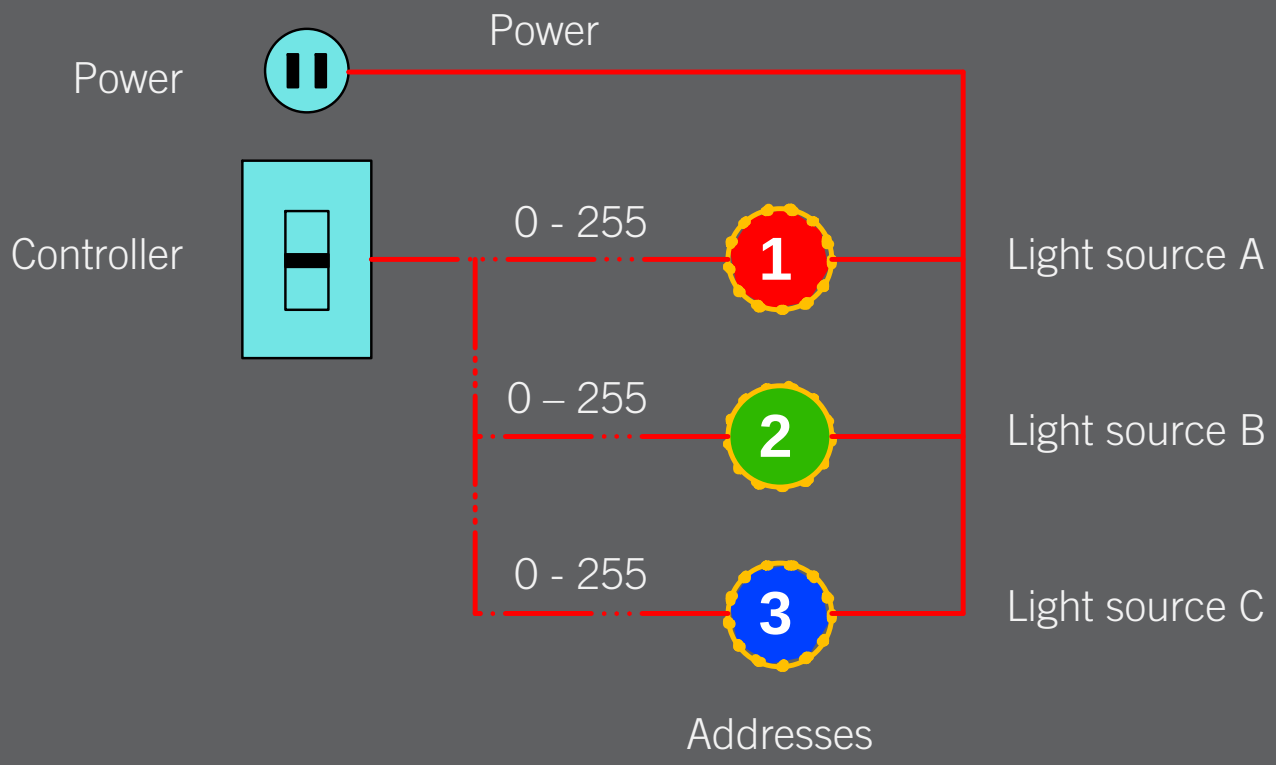
Dimming – Digital Addressable



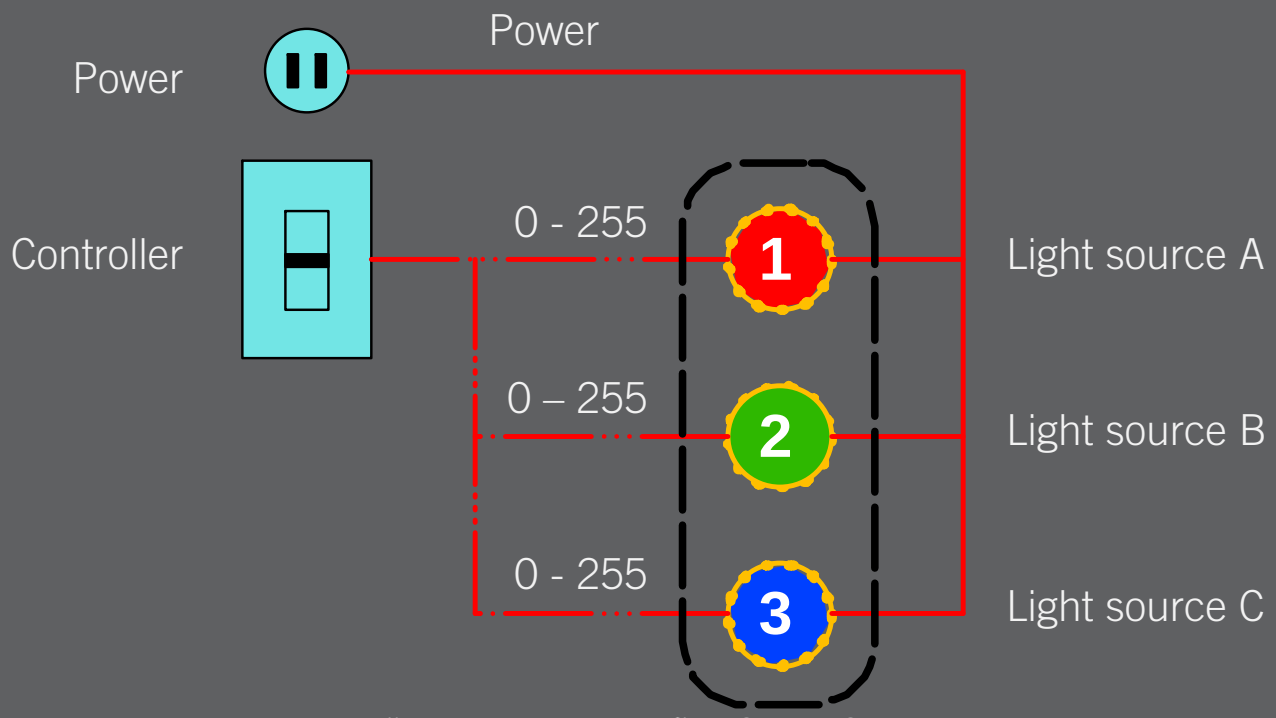
Dimming – Digital Addressable



Dimming – Digital Addressable RGB



Dimming – Digital Addressable RGB



"Addressable RGB Color Changing Luminaire"

3 Data Channels (Addresses)

256 X 256 X 256 = 16.8 Million "Colors"

Addressable RGB Luminaires

Or “Nodes” – Mini Luminaires Physically Joined Together

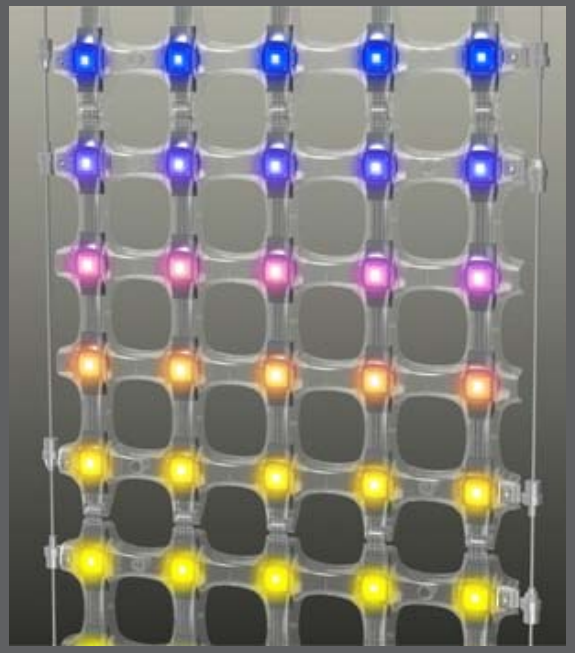
1 Node - 3 Channels

Many Nodes - 3 Channels per Node

Many Nodes – 3 Channels per Node

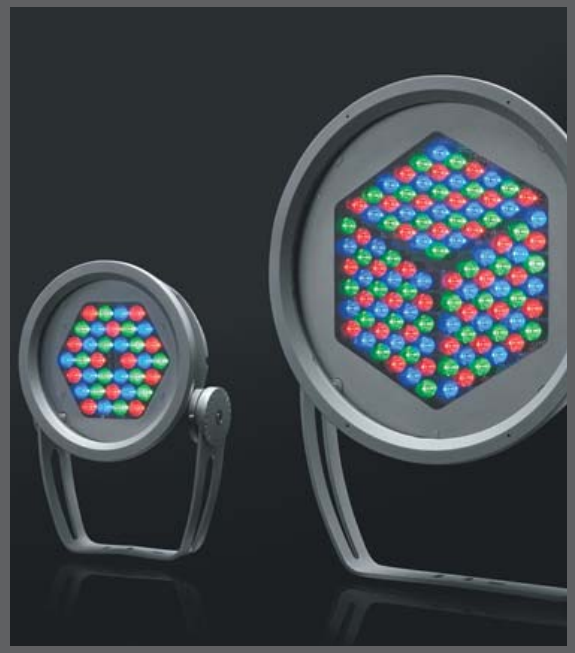
Addressable RGB Luminaires

Or “Nodes” – Mini Luminaires Physically Joined Together



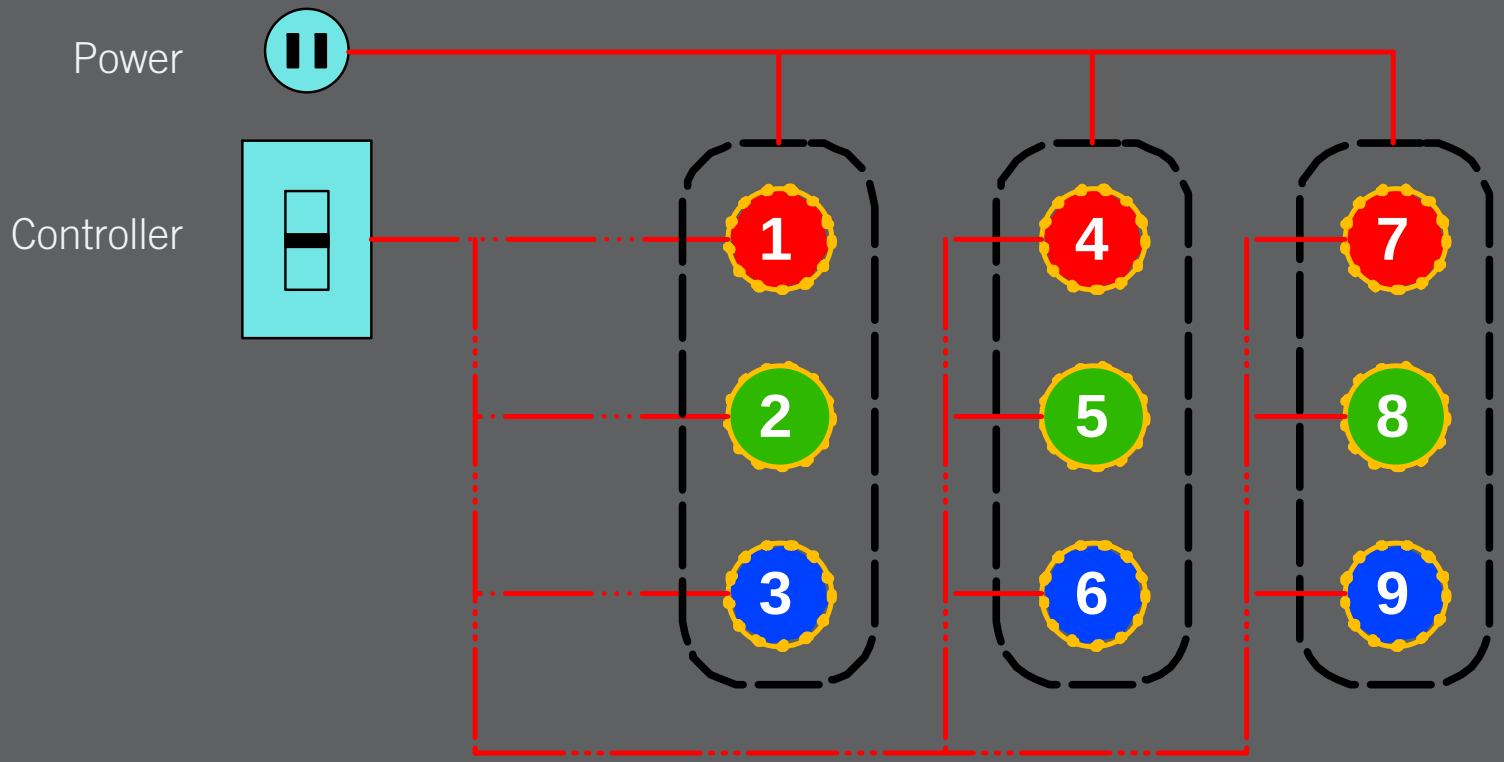
30 Nodes - 90 Channels

64 Nodes - 192 Channels



Many Nodes – 3 Channels

Independent Addresses

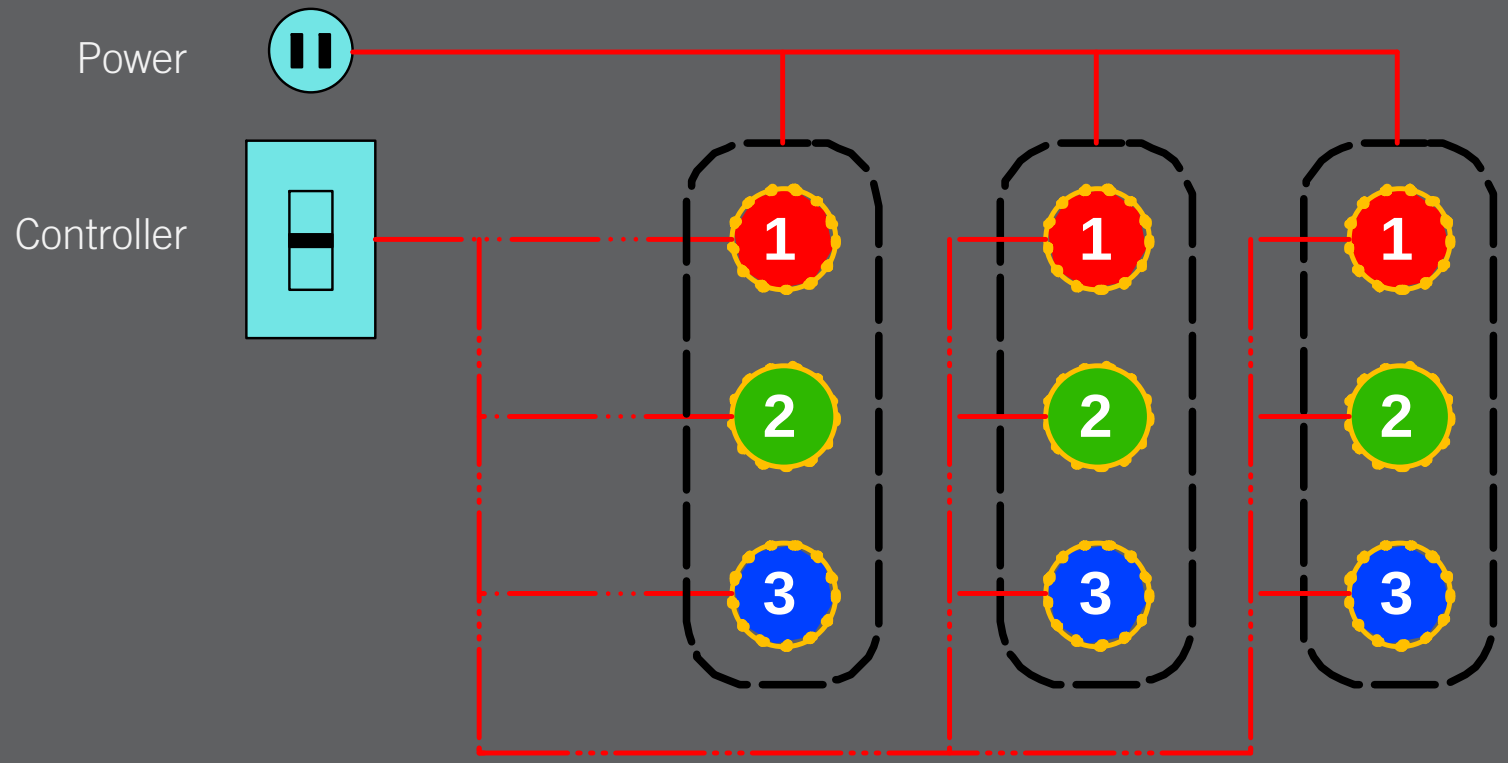


3 RGB Luminaires or Nodes

Independent Addresses

9 Addresses or “Channels”

Shared Addresses



3 RGB Luminaires or Nodes

Shared Addresses

3 Addresses or “Channels”

Shared Addresses – structuring the content

Why Use LEDs?

Long Life

Available in Colors

Small Physical size

Low Wattage

Easy to Control with data

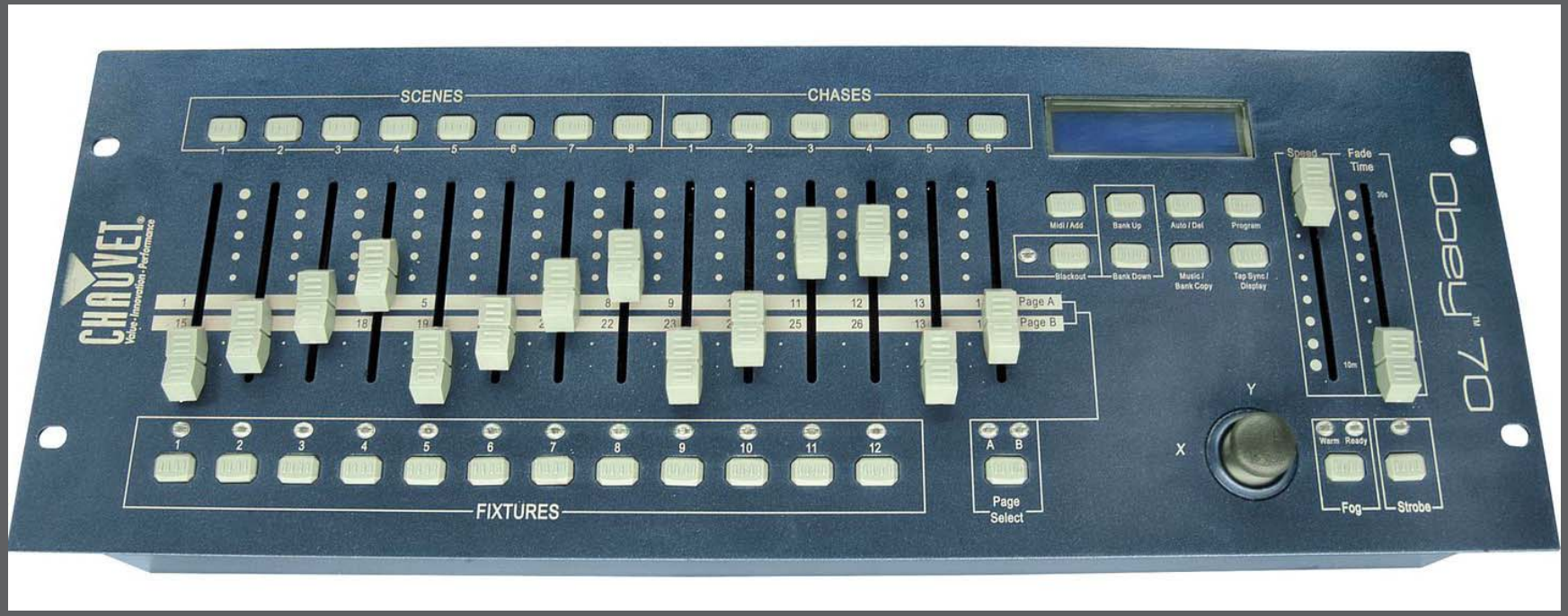
Quick Response

Controllers – Manual DMX

6 Channels plus Master

Controllers – Mostly Manual DMX

384 Channels 240 Saved ”Scenes” Automated Effects (Chases)



Controllers – Software Based Multi-Lingual

DMX:
256 Universes
(131,072 Channels)

1.3 Million Nodes

Saved Shows
- Sequences
- Fades
- Transitions
- Timing
- Triggers

Pre-programmed
Effects

Controllers – Theatre Based

"Scenes" and "Shows"

25 X 40 = 1000 Nodes

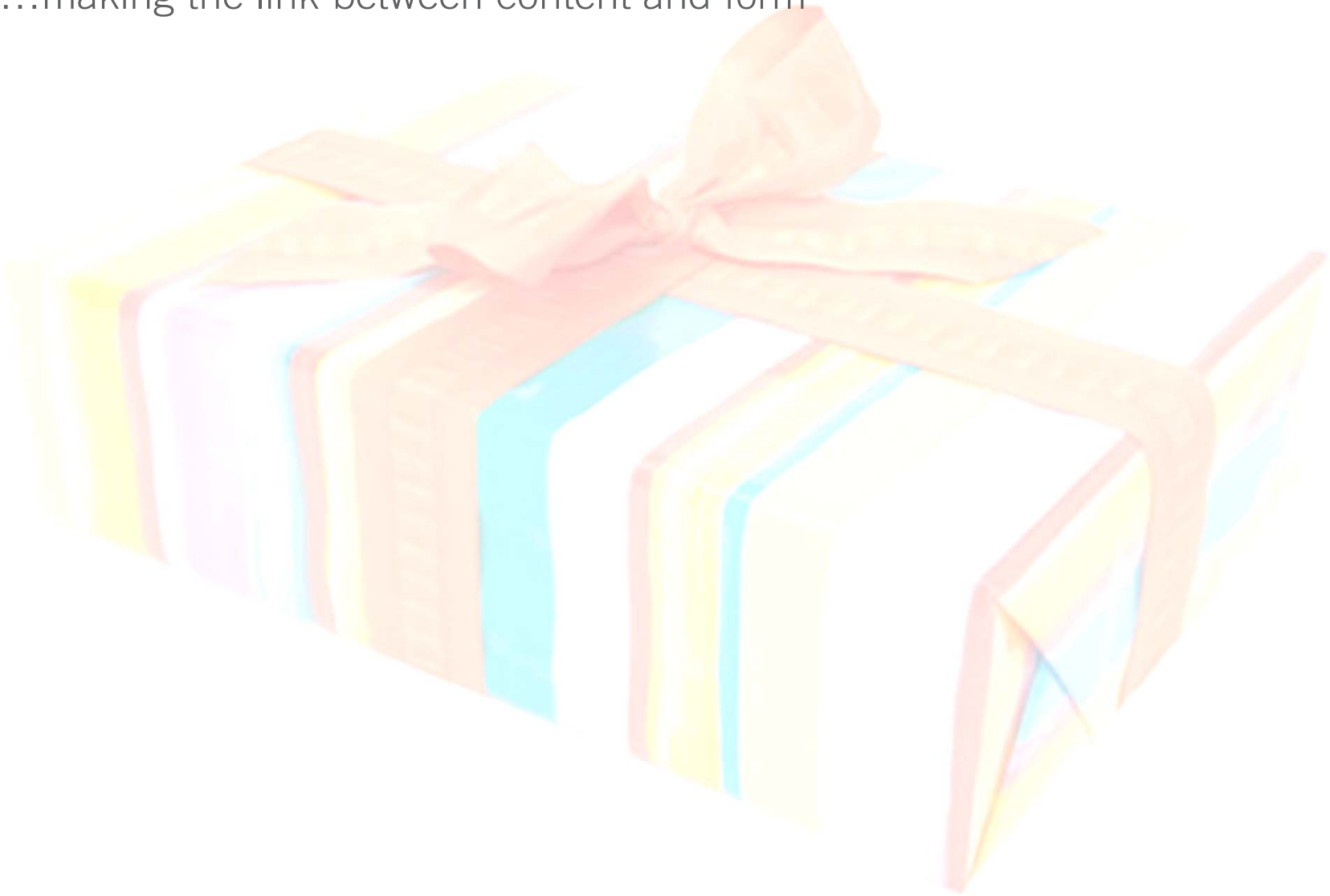
Controllers – Image Based

DESIGN BASICS

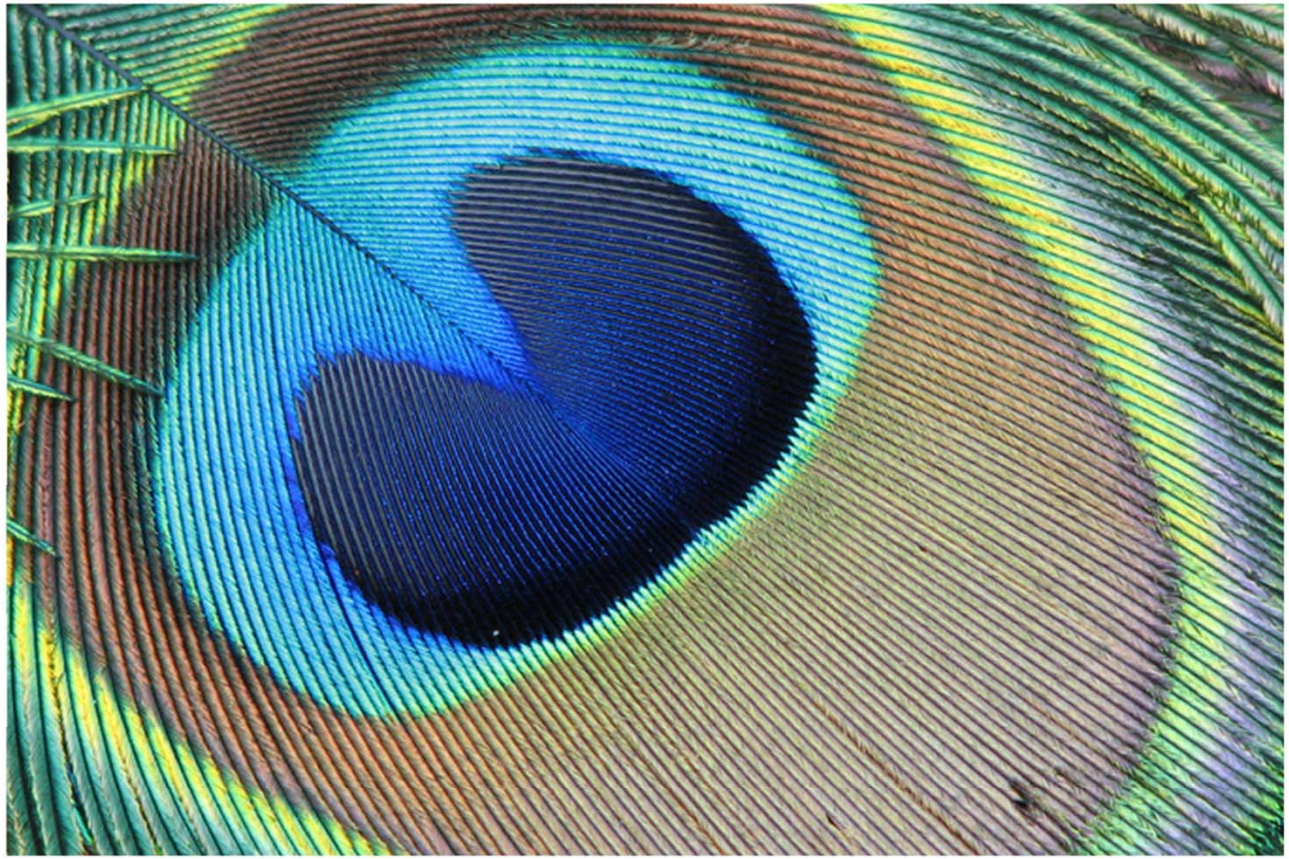
Mapping

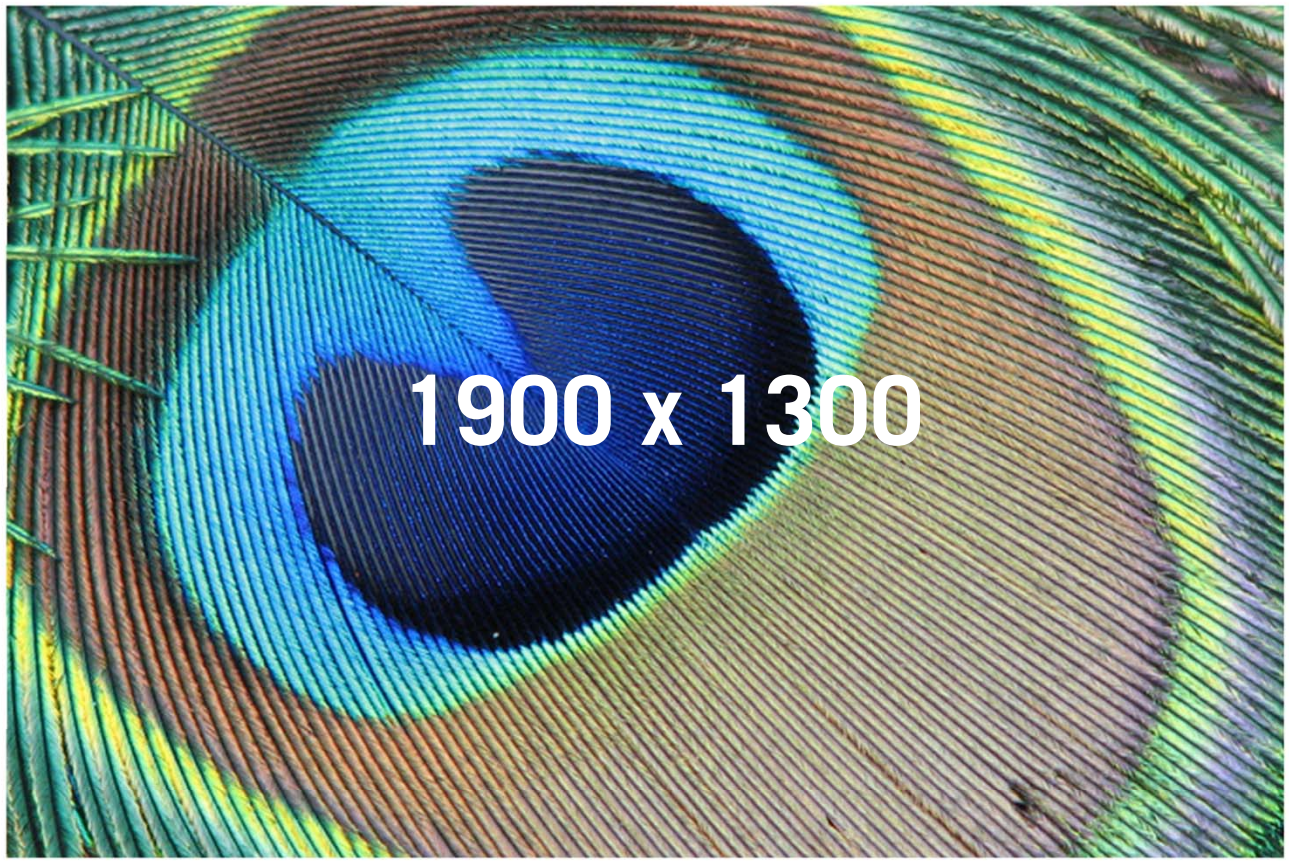
Mapping

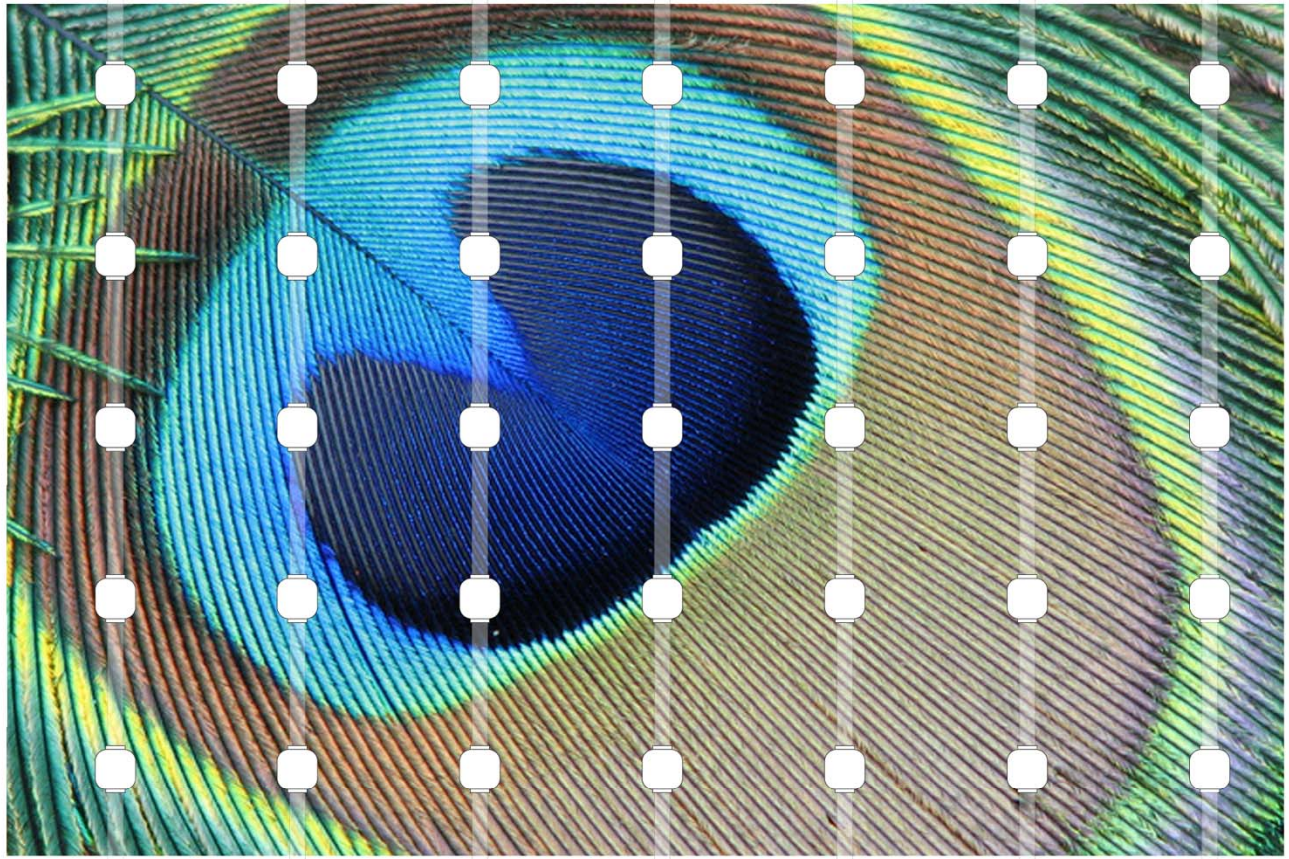
…making the link between content and form

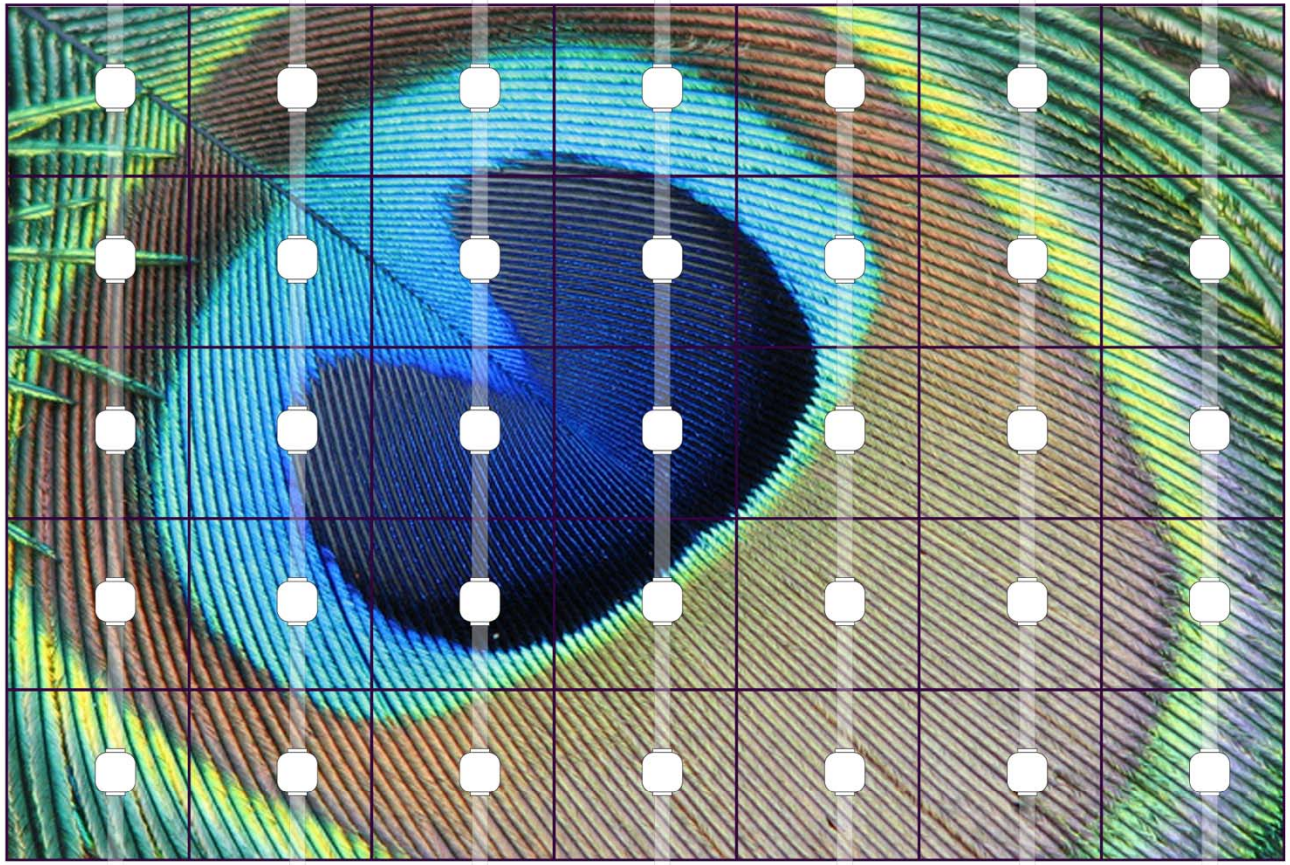


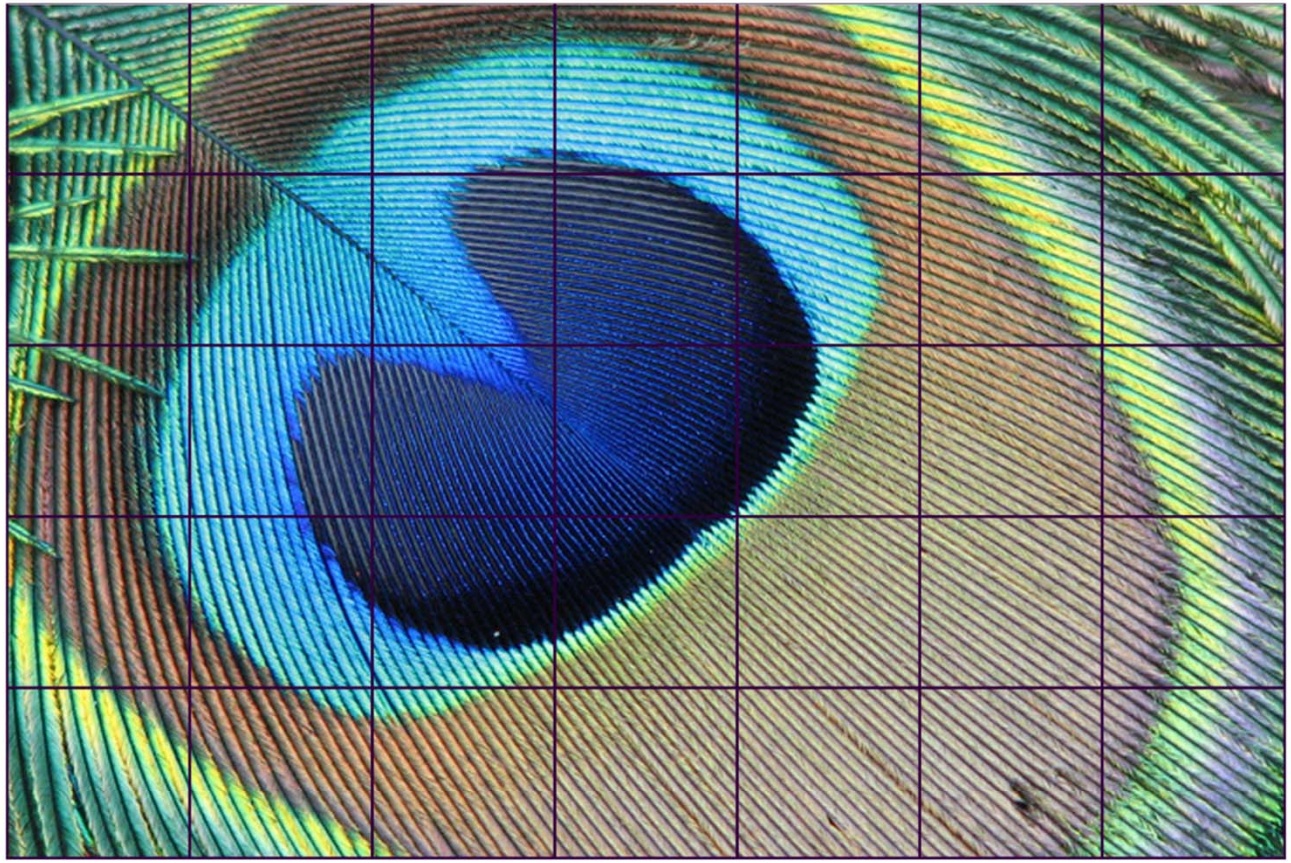
…let's take an image (content)

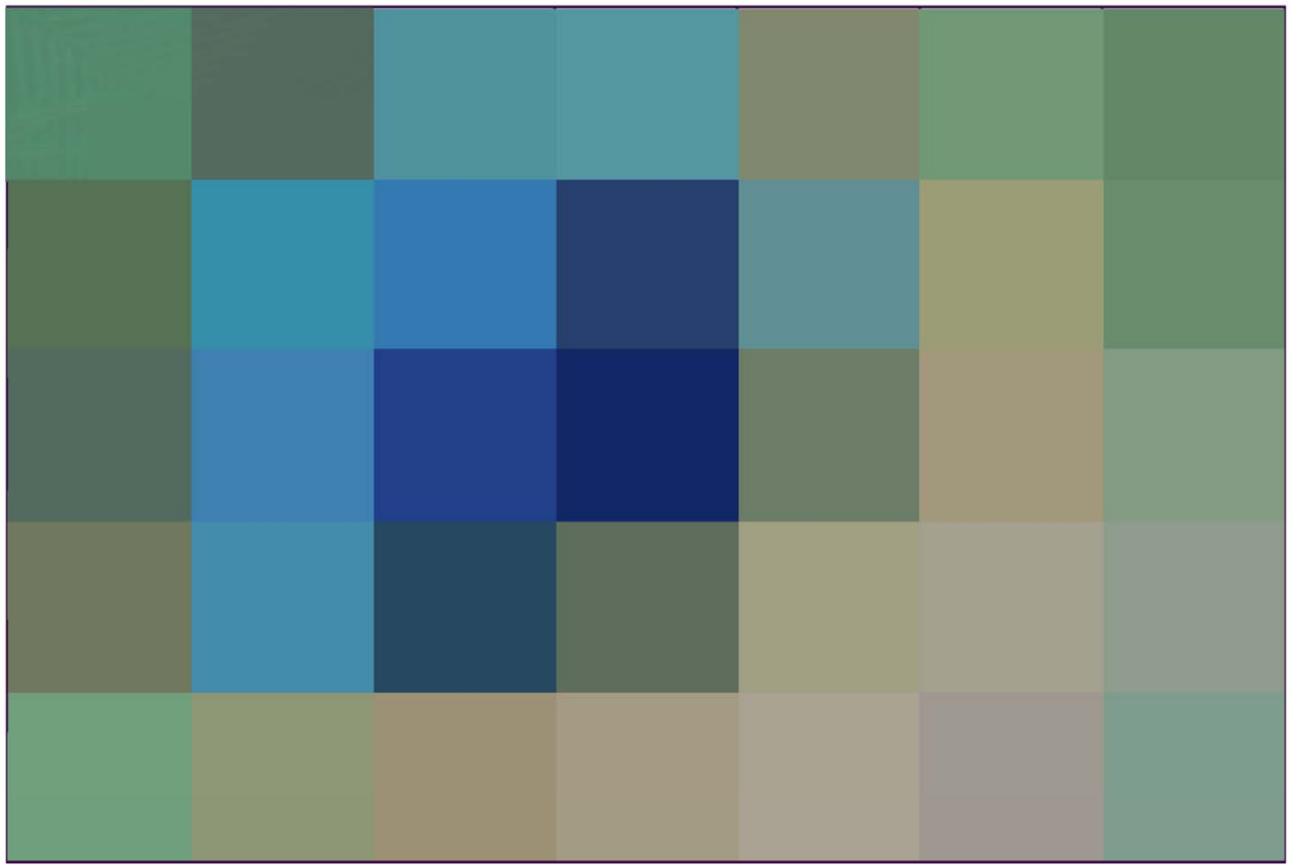


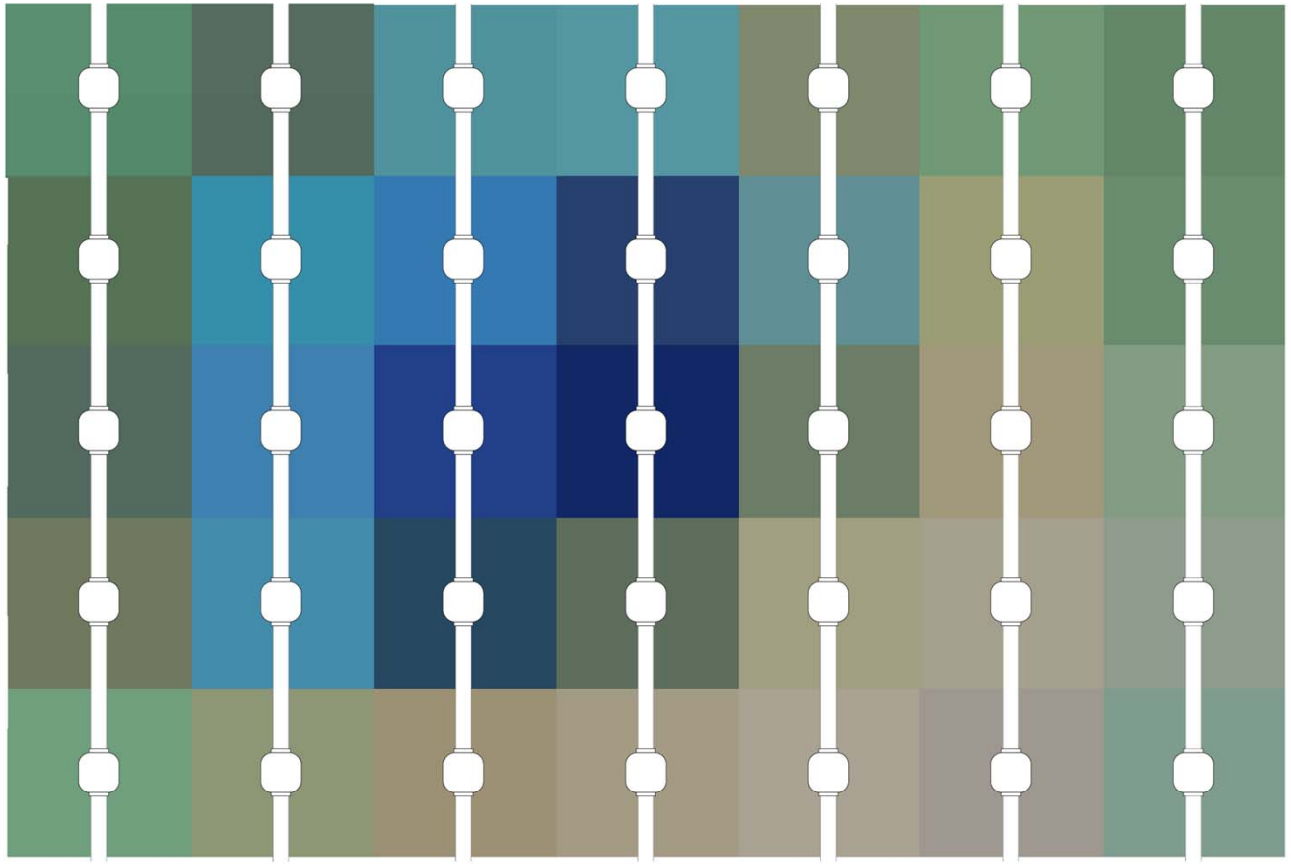

1900 x 1300

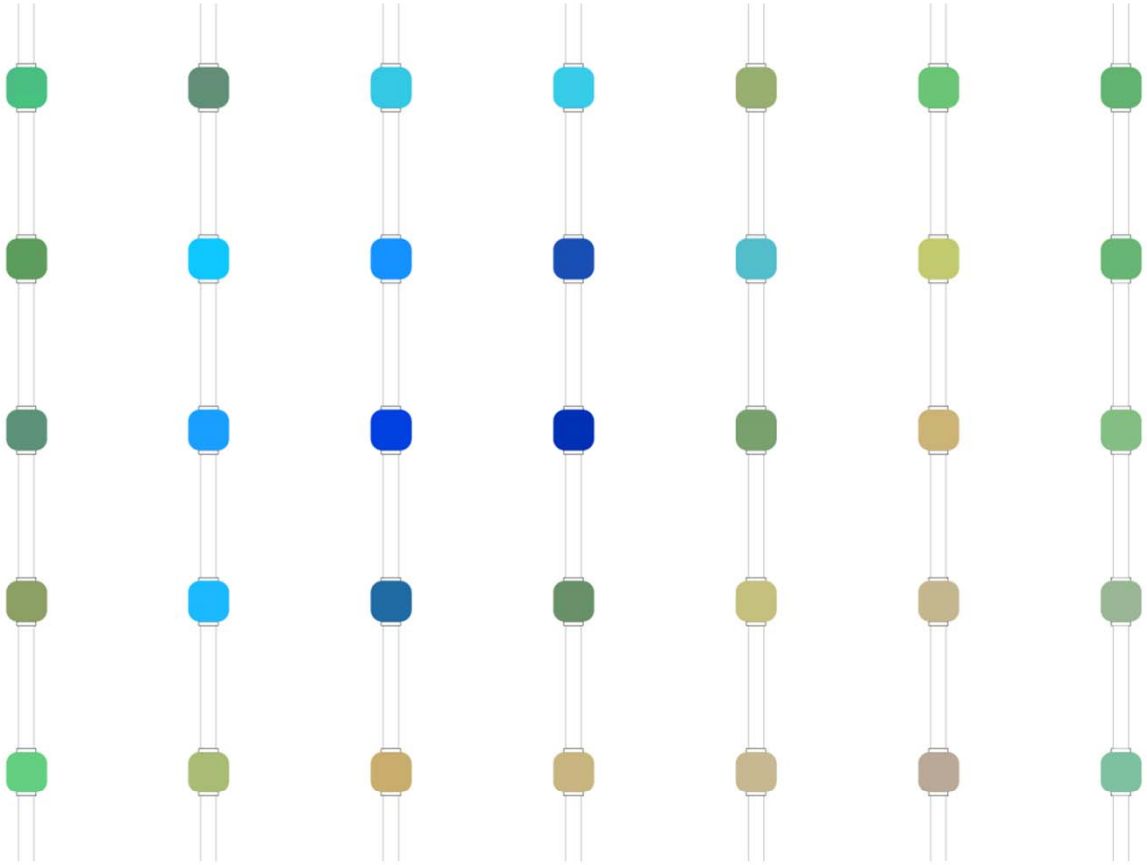


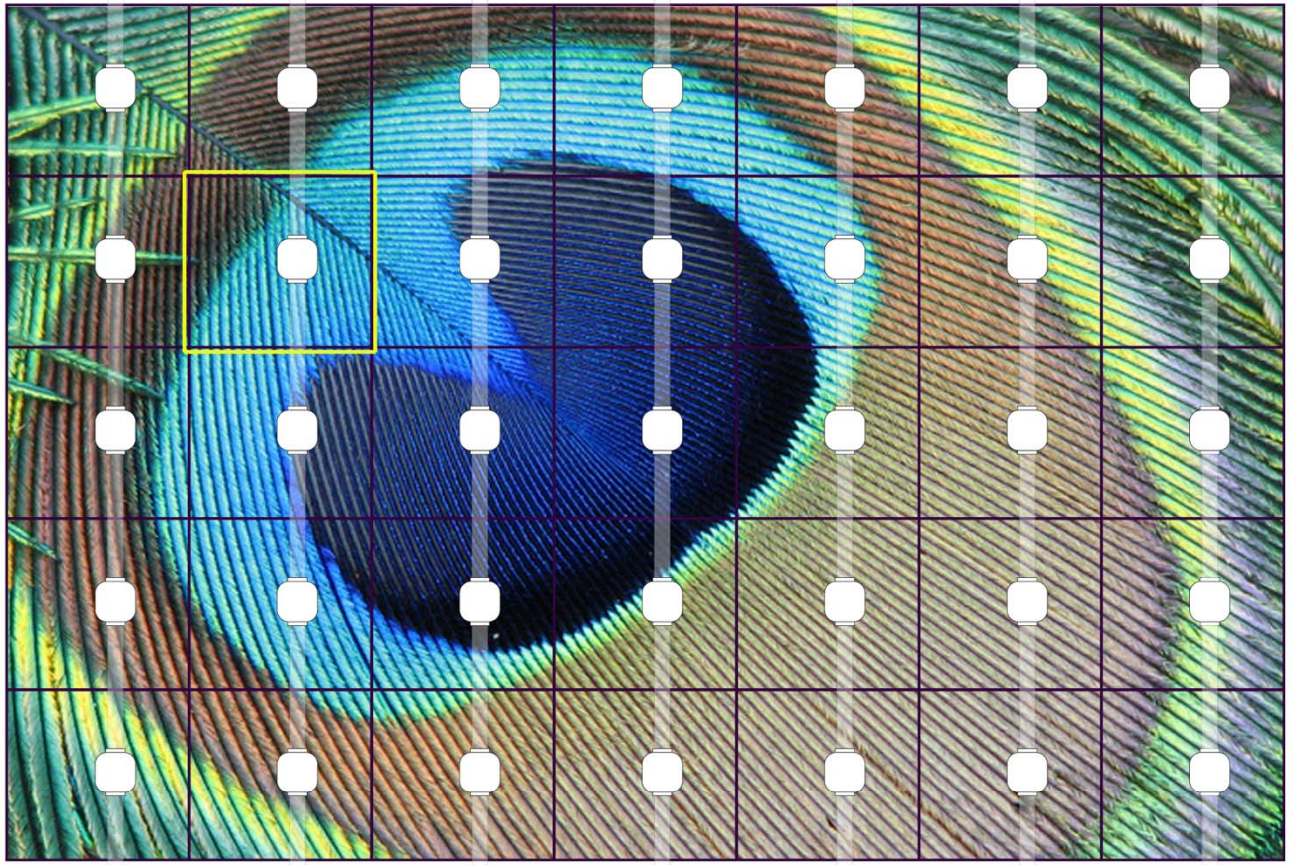


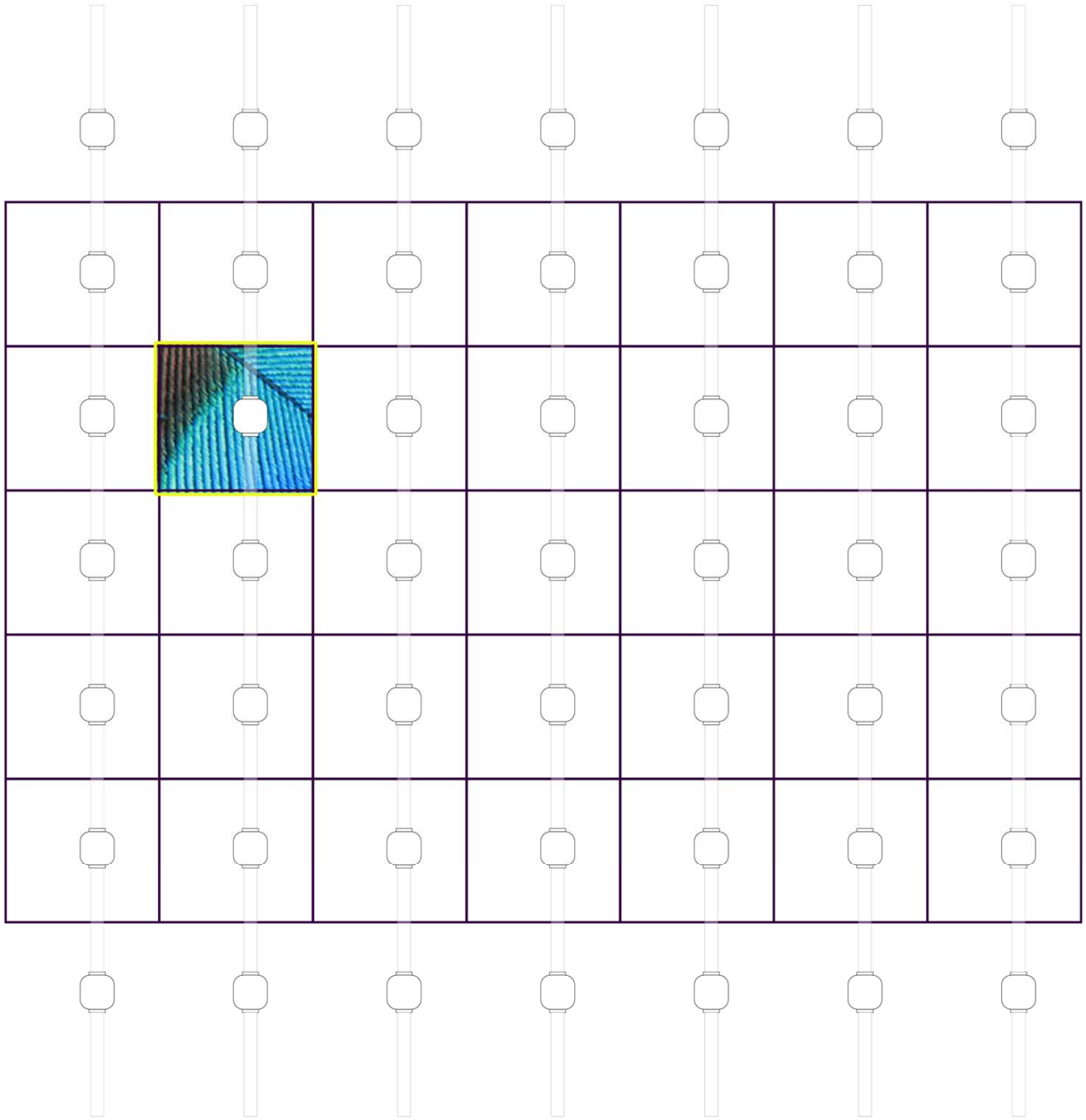


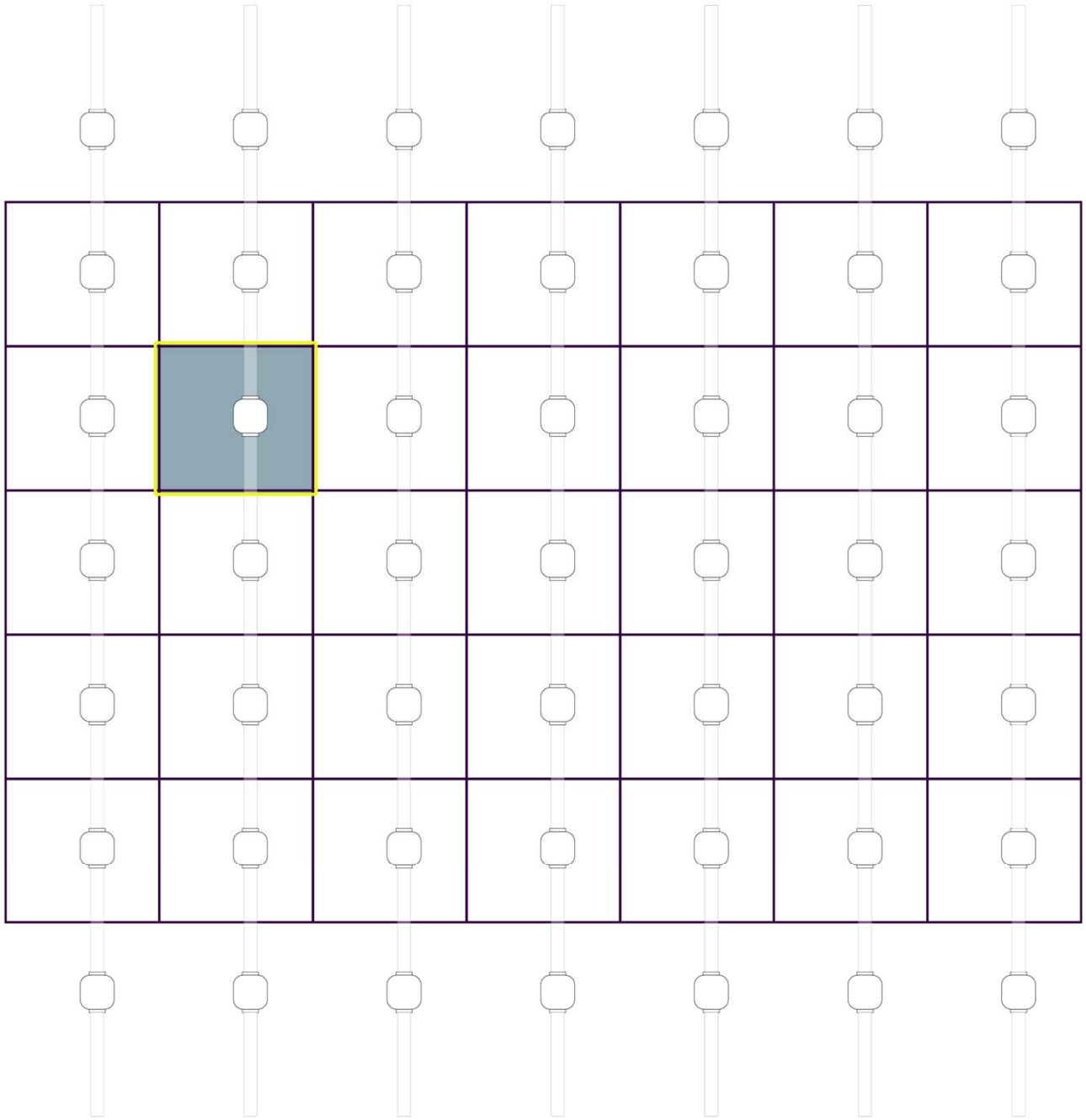


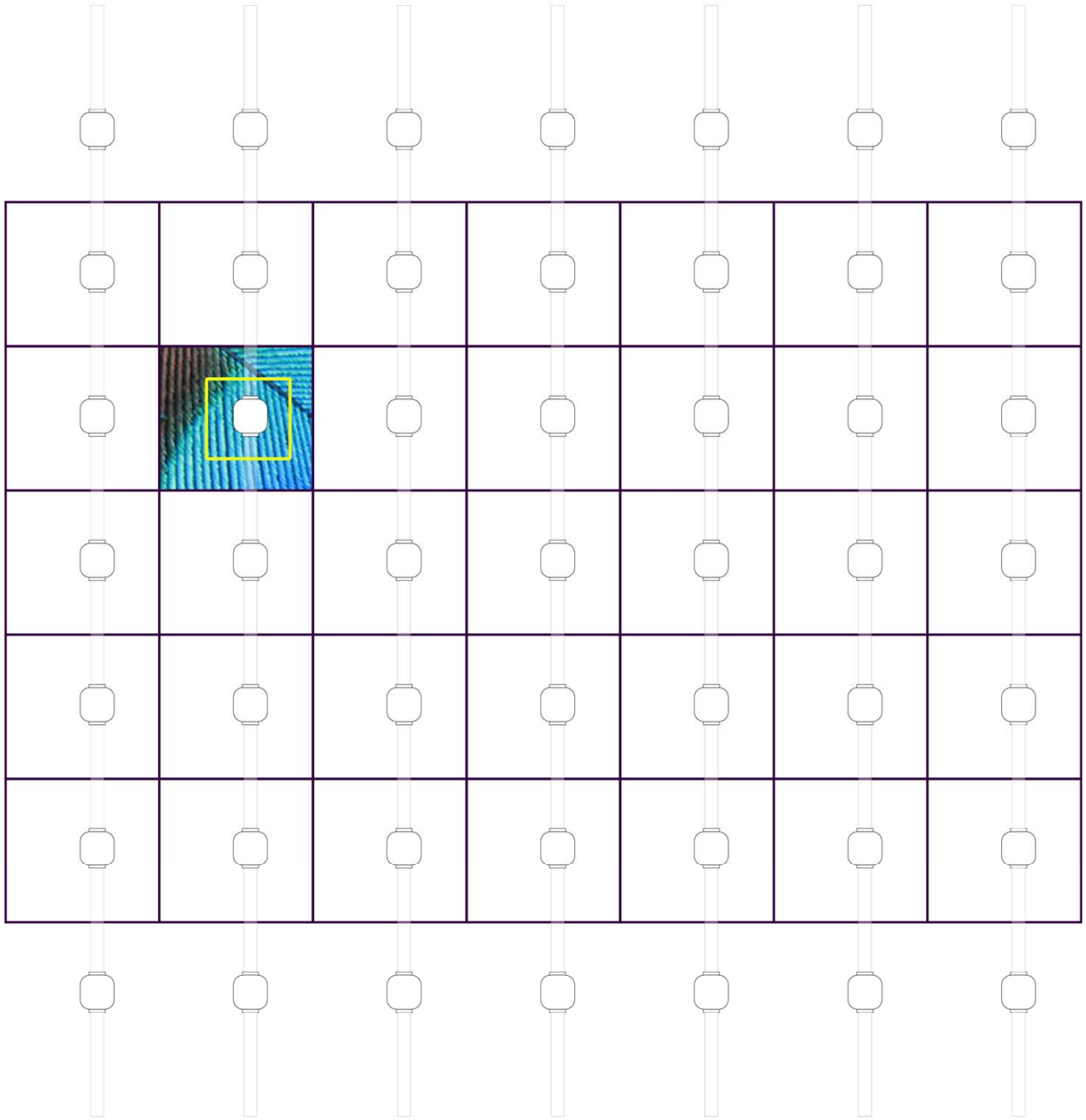


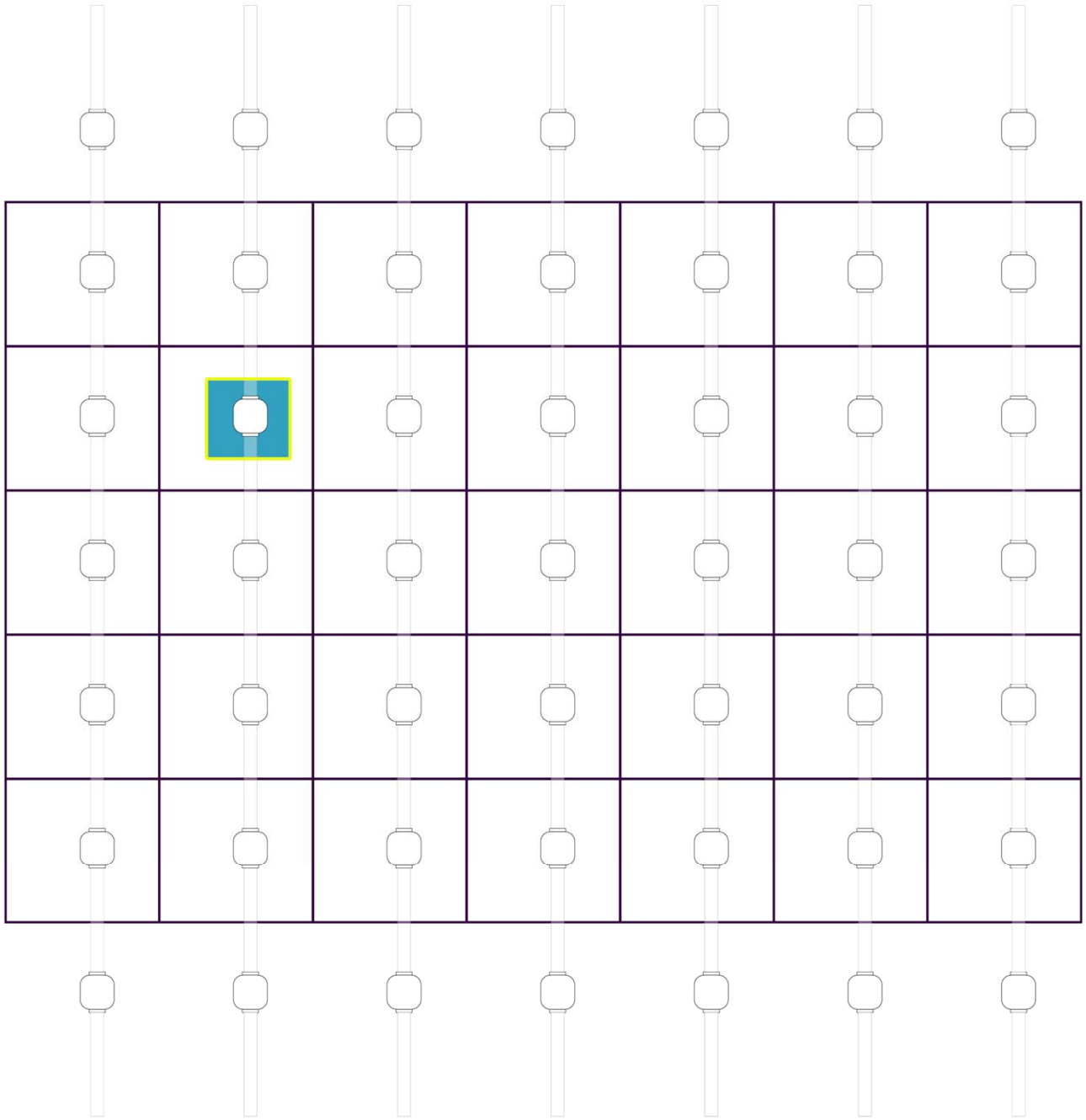


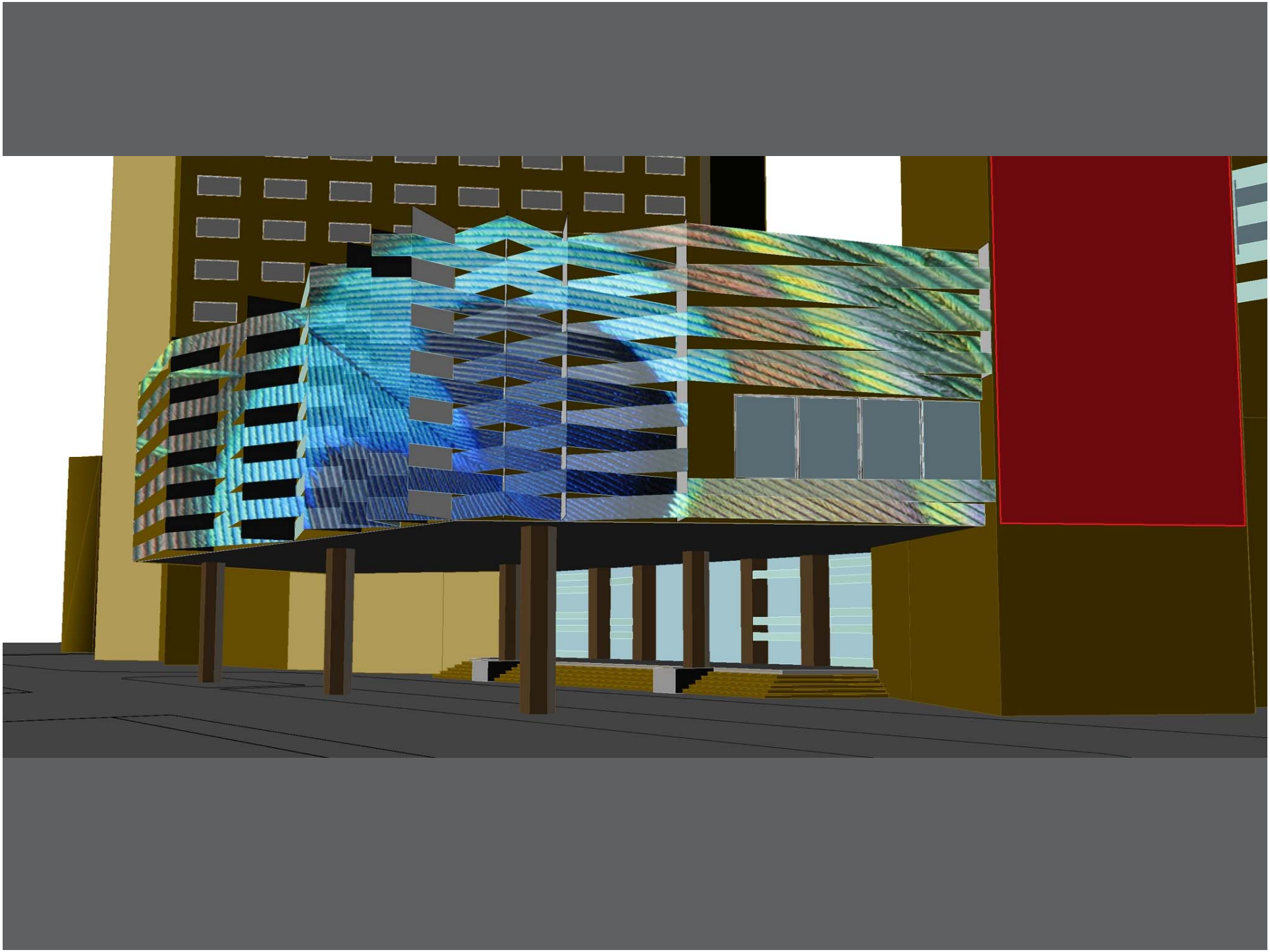


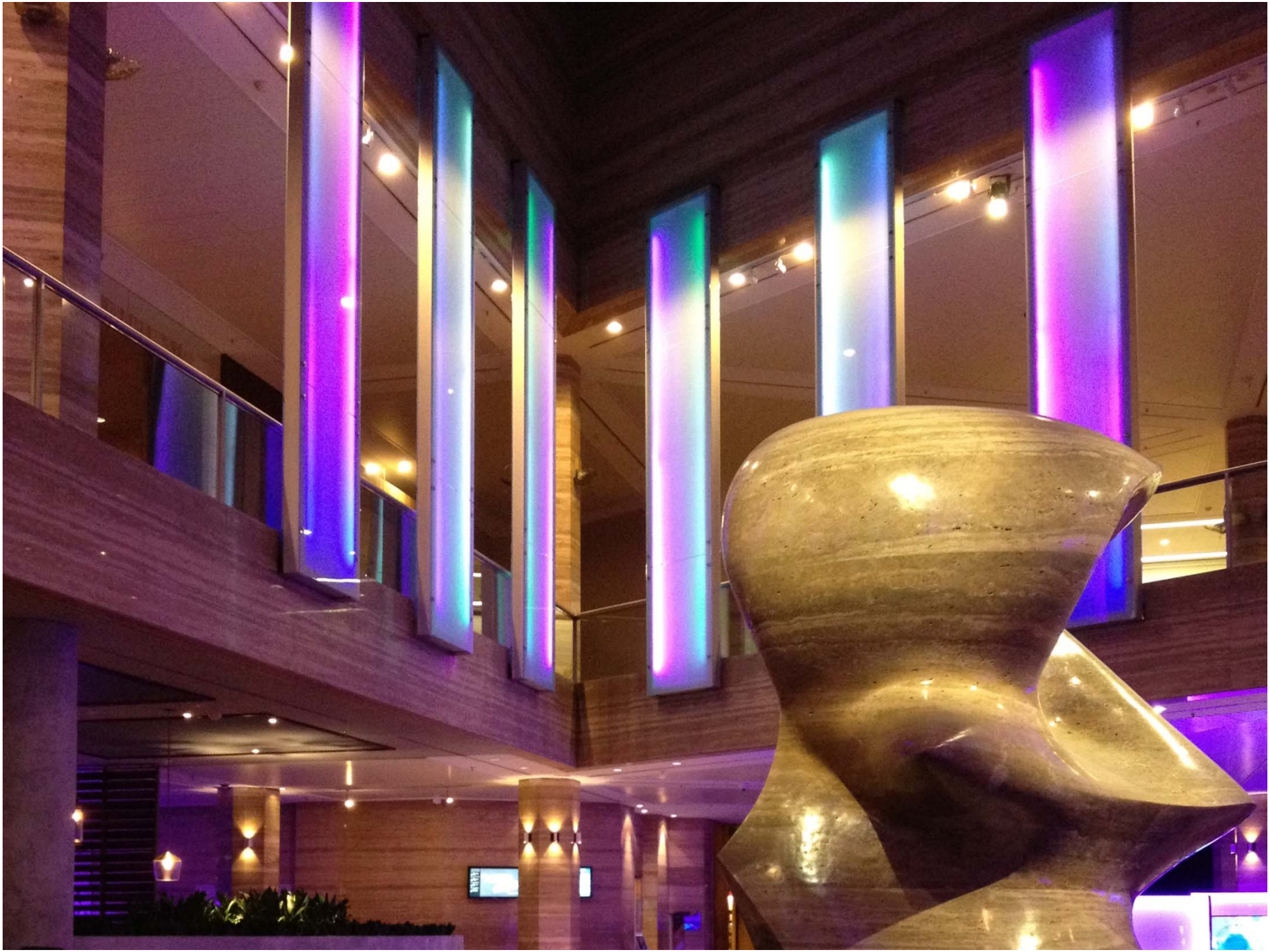


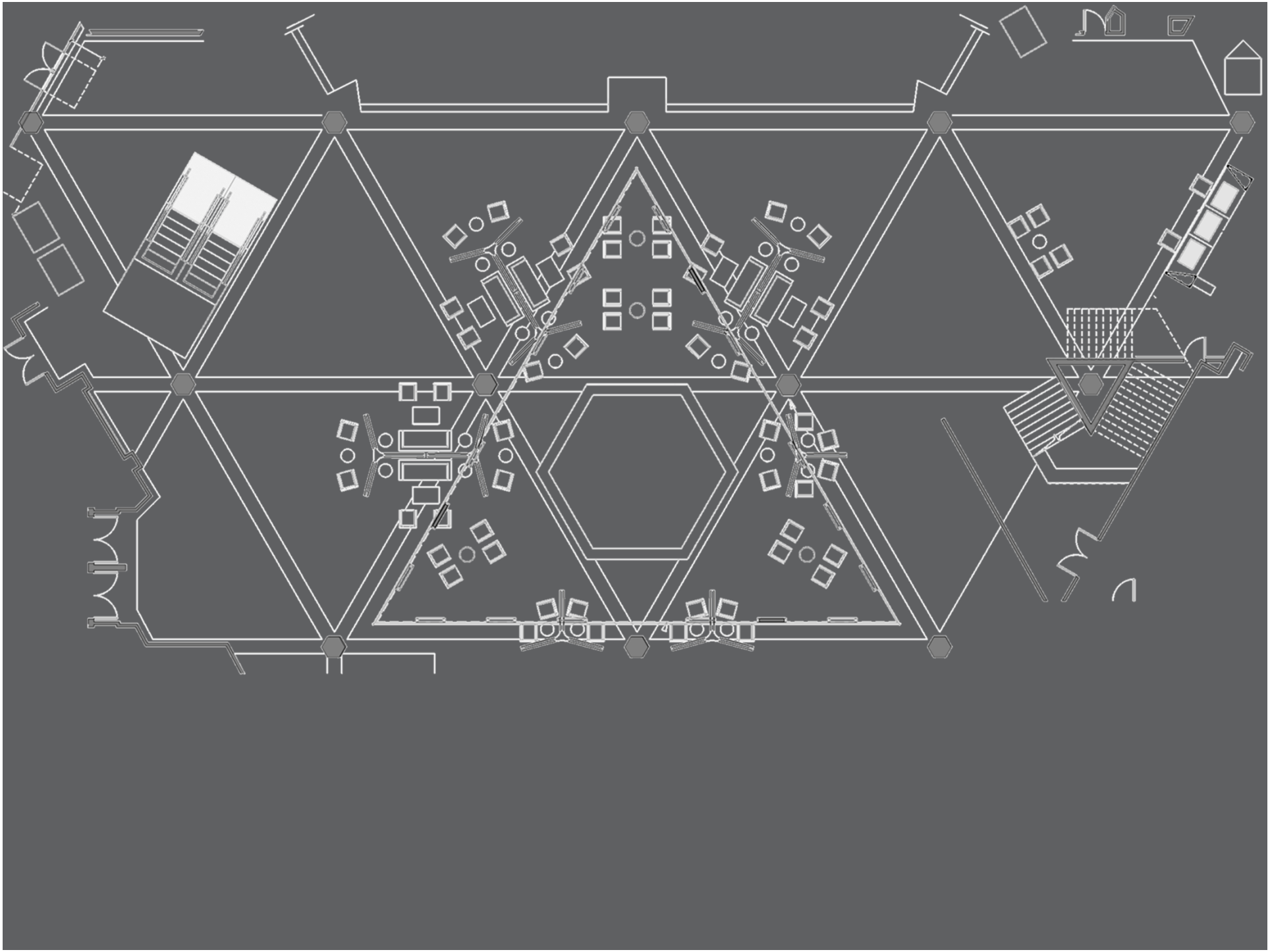


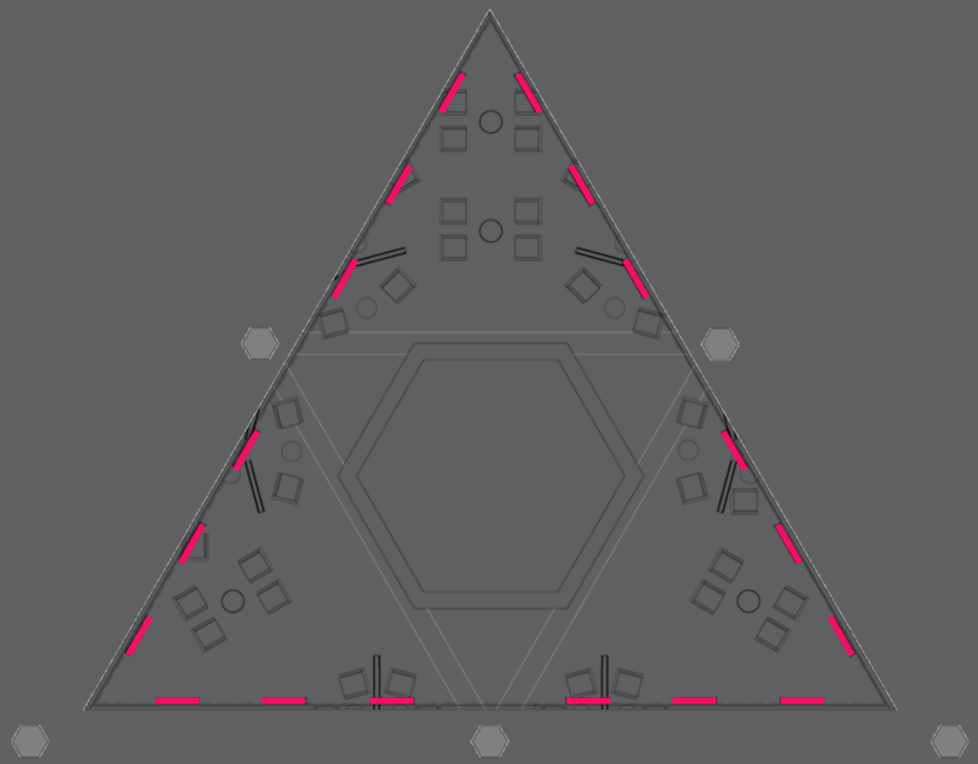


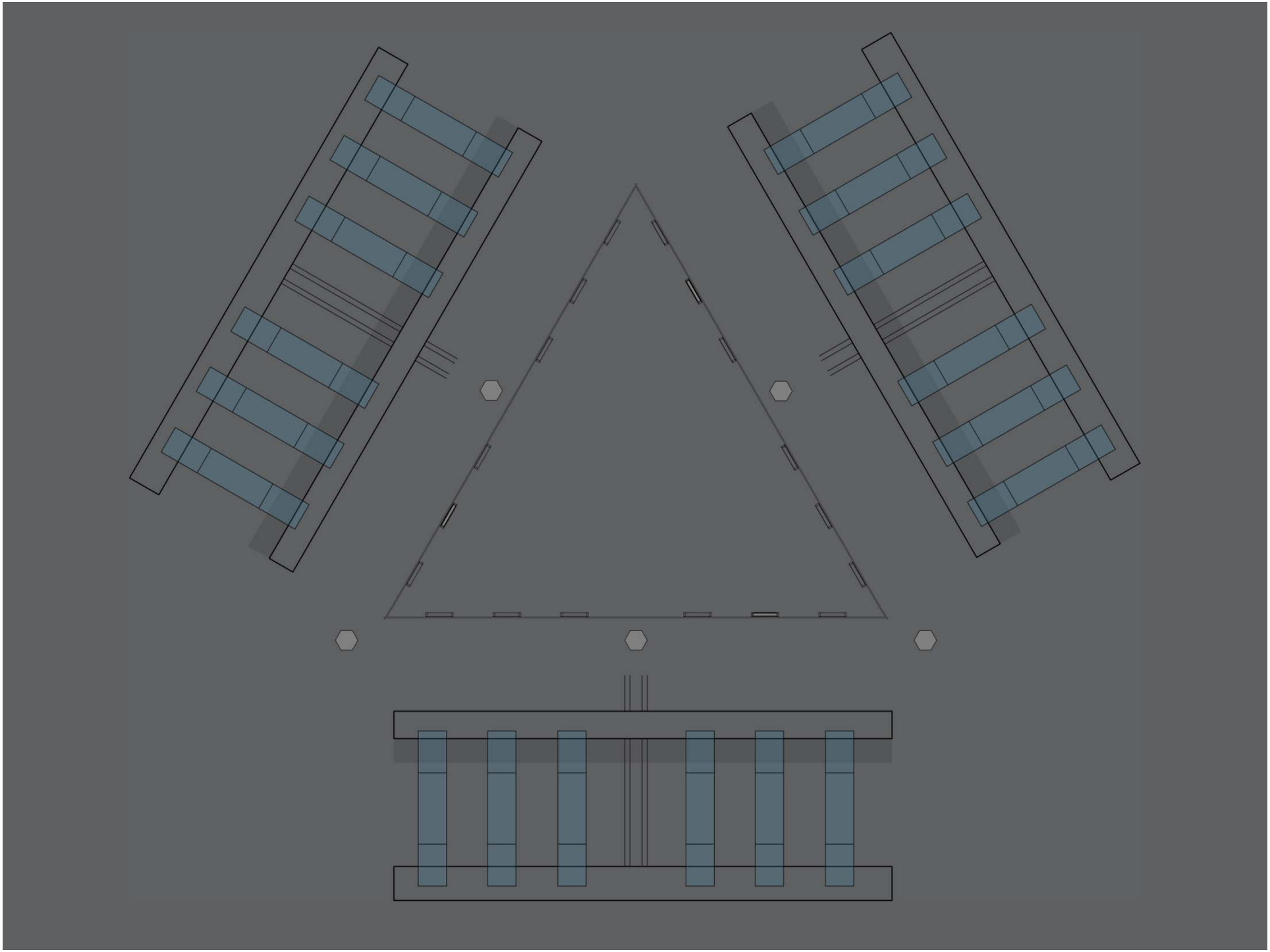


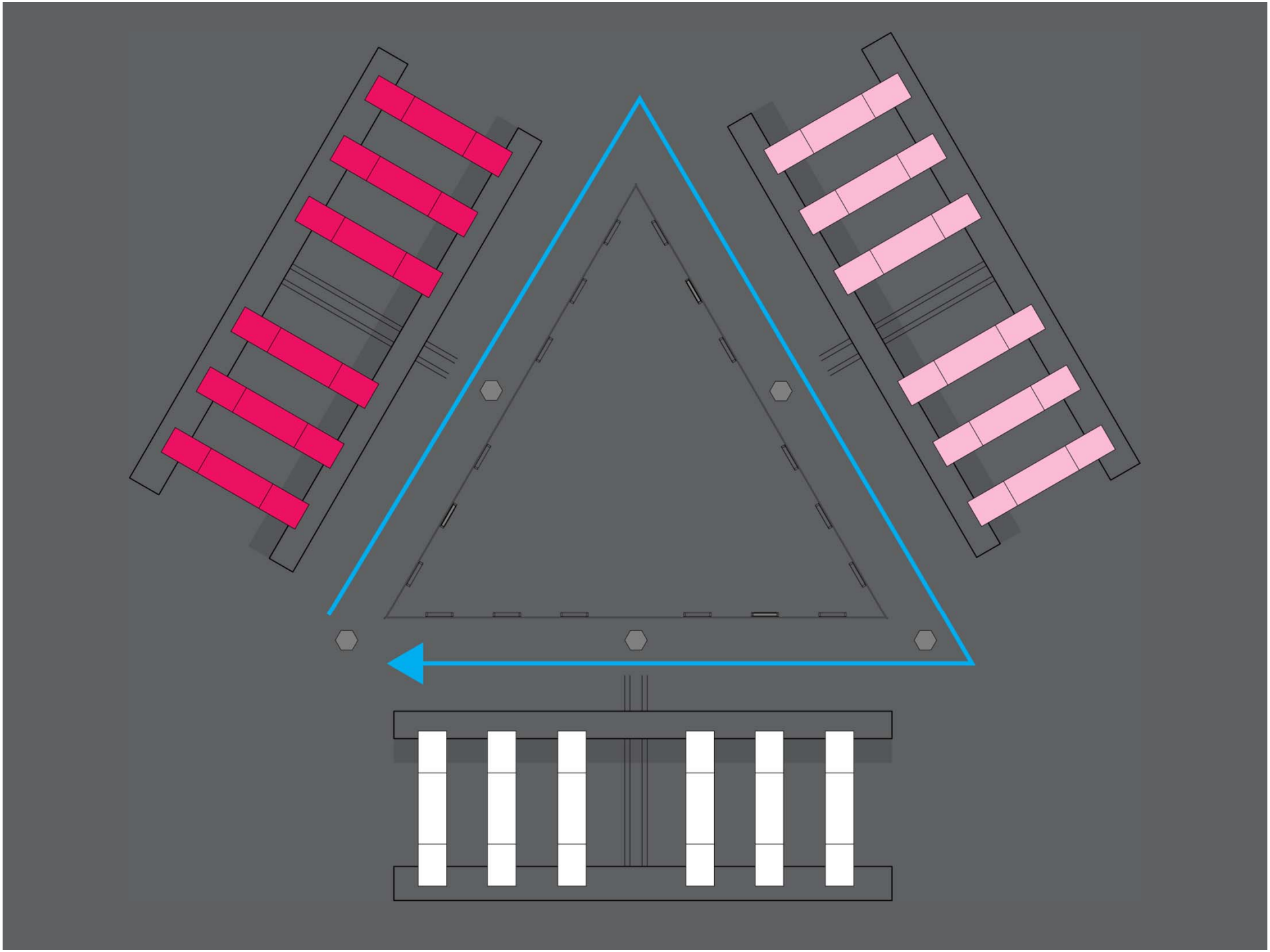


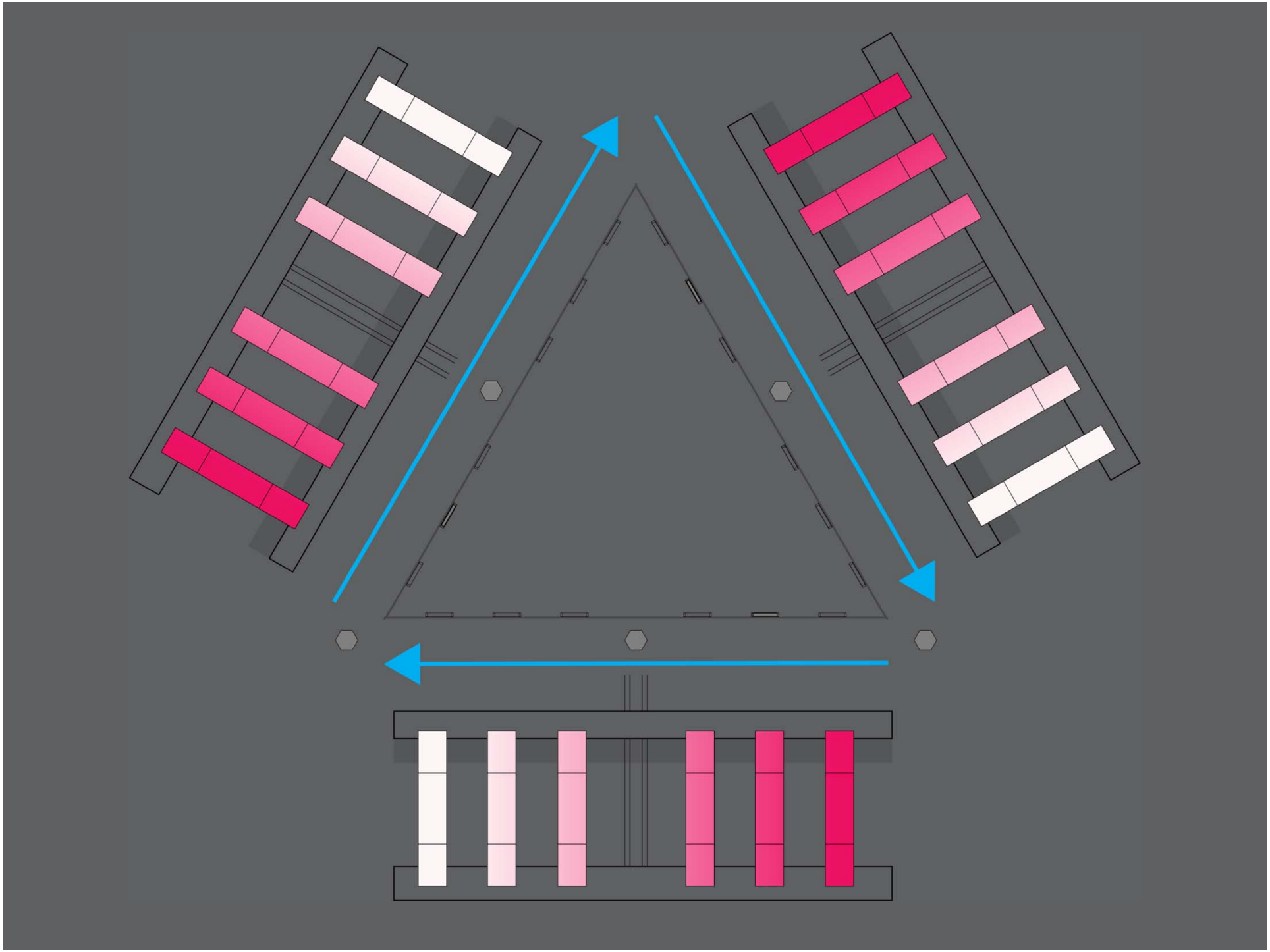


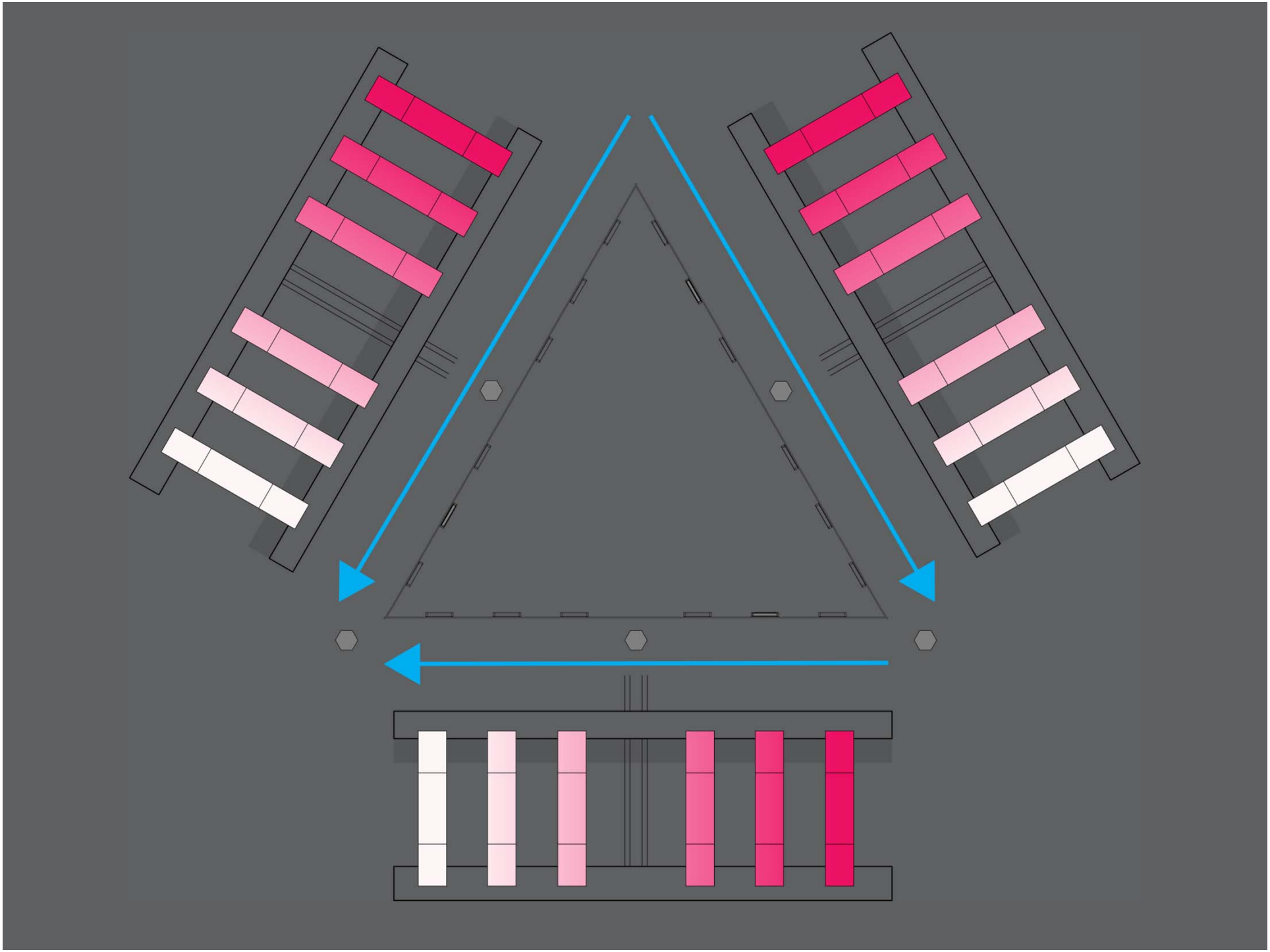


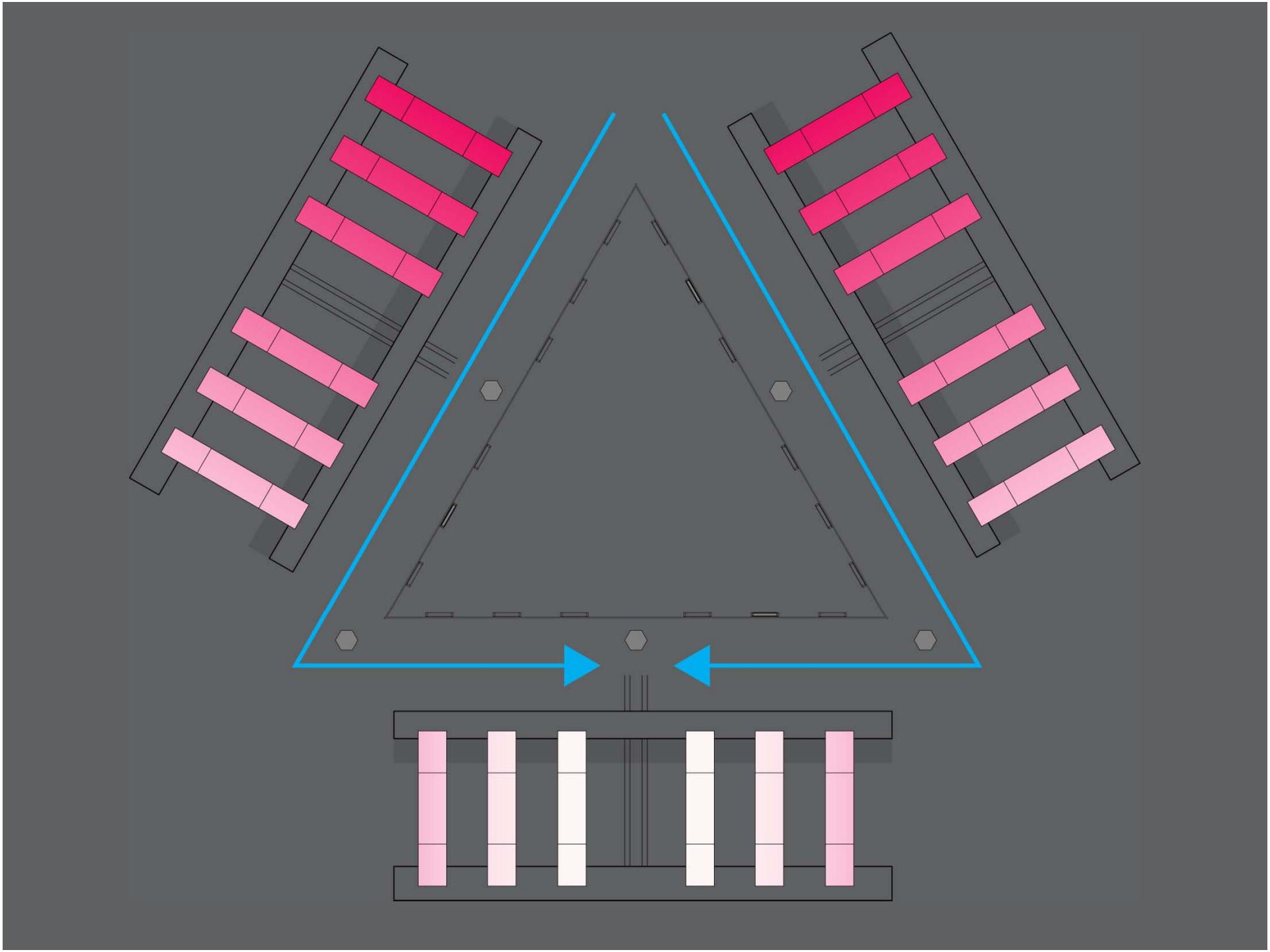


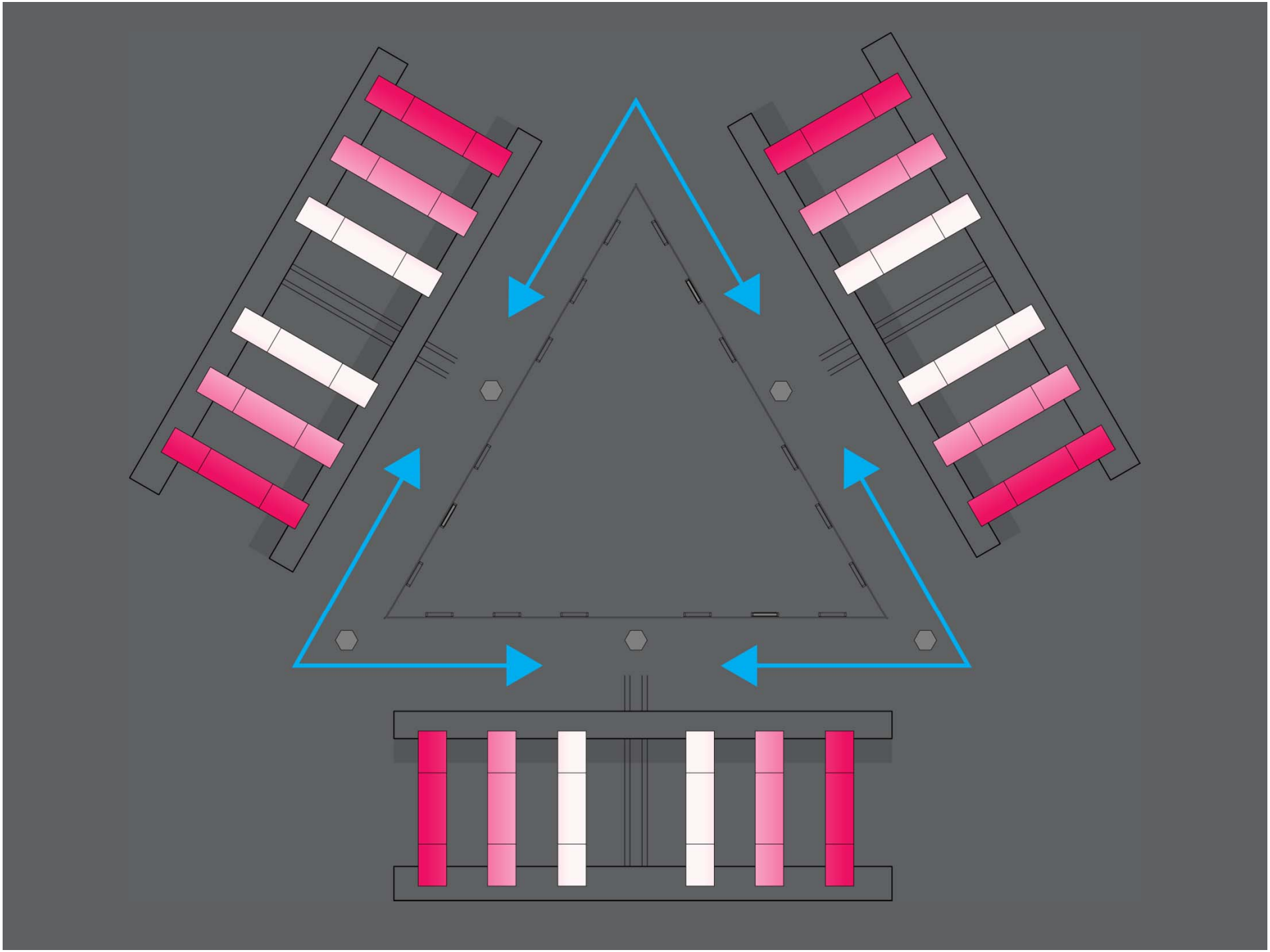


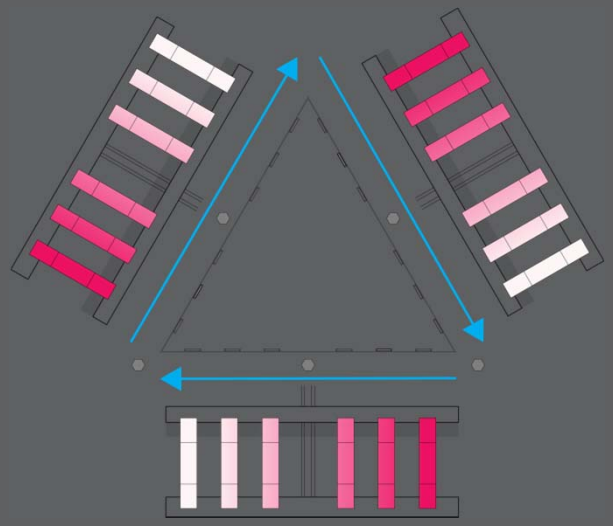


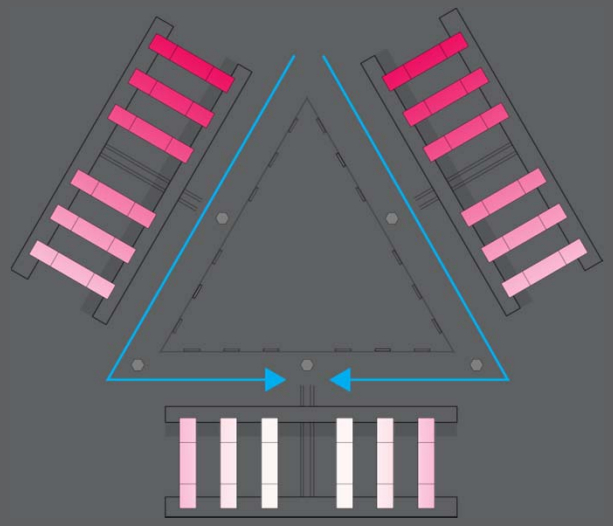


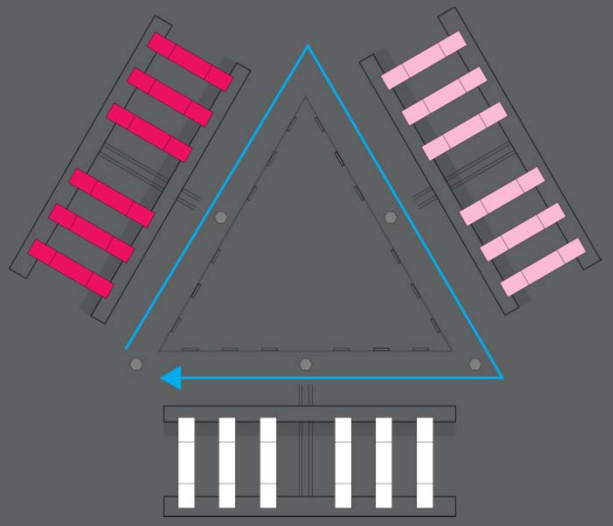


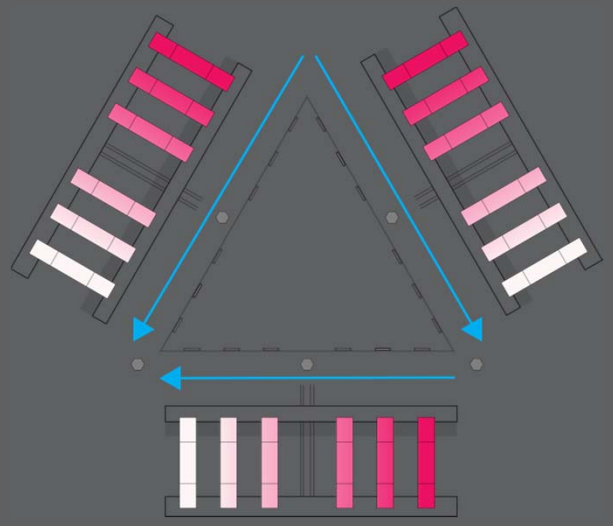








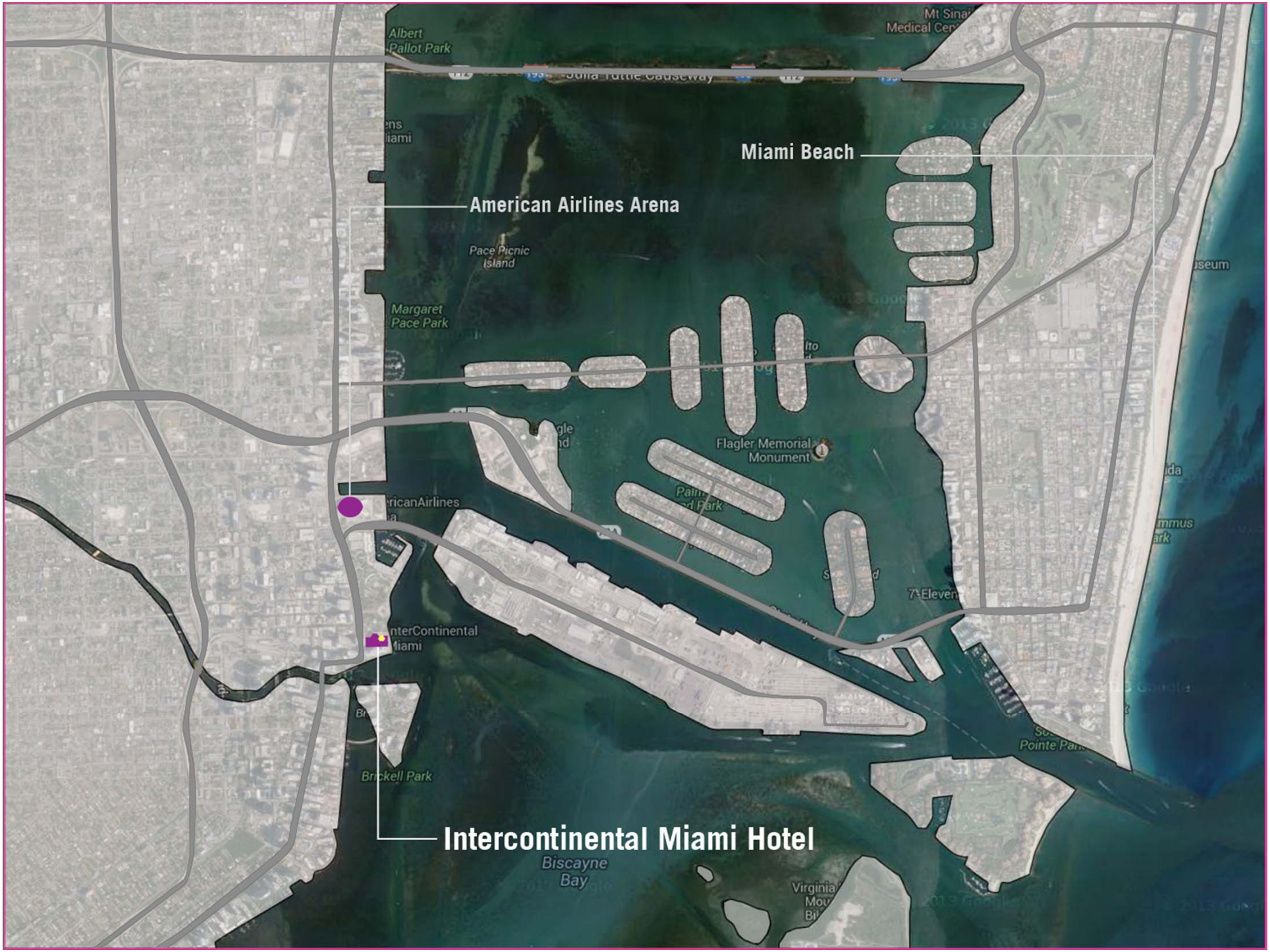


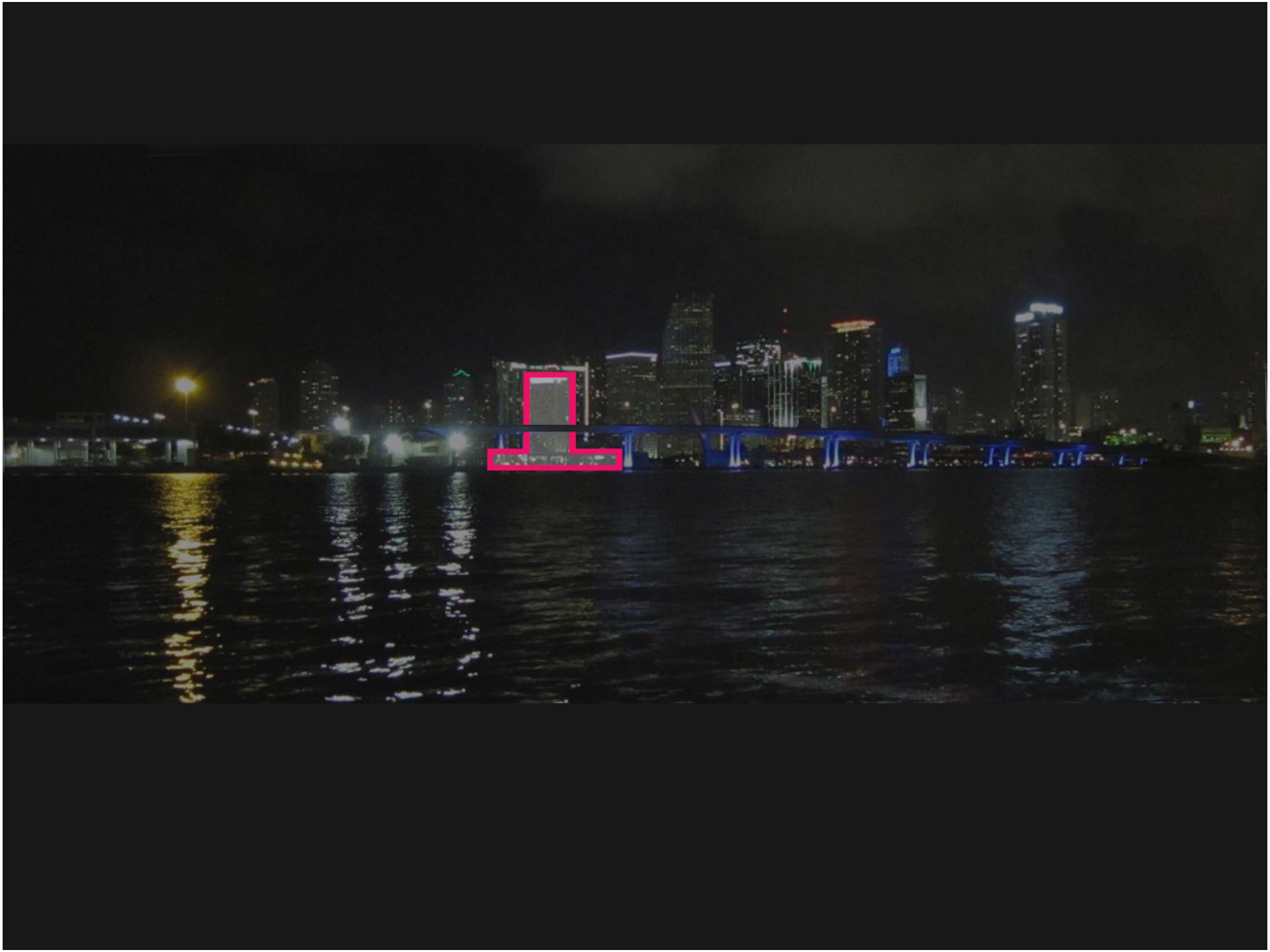


IMPLEMENTATION

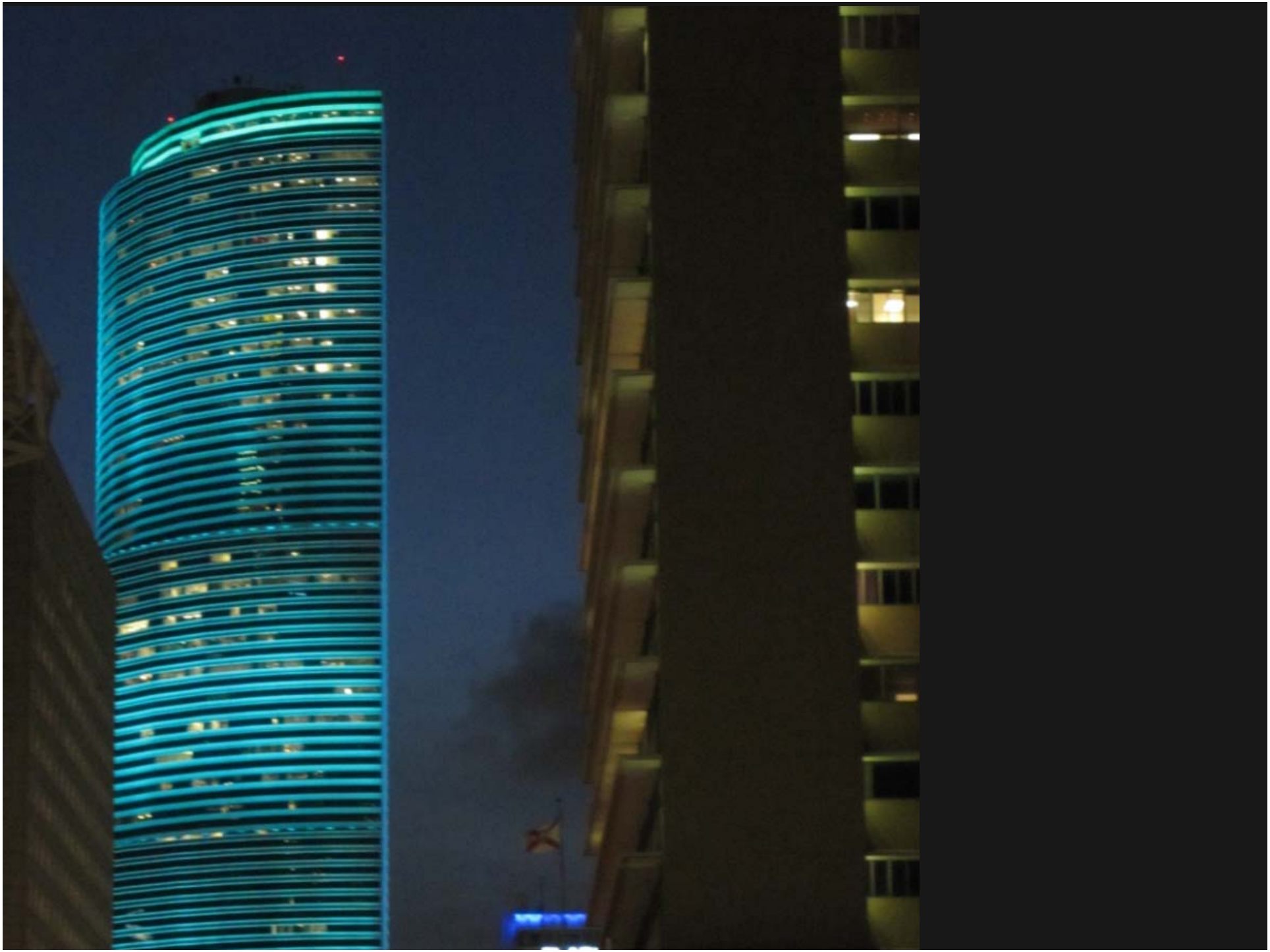
InterContinental Miami

A media façade case-study


Miami Beach
American Airlines Arena
Intercontinental Miami Hotel
Albert Pallot Park
Pace Picnic Island
Margaret Pace Park
Flagler Memorial Monument
Brickell Park
Biscayne Bay



Maimi Beach at night. From Miami Beach Real Estate, Inc.



INTER·CONTINENTAL

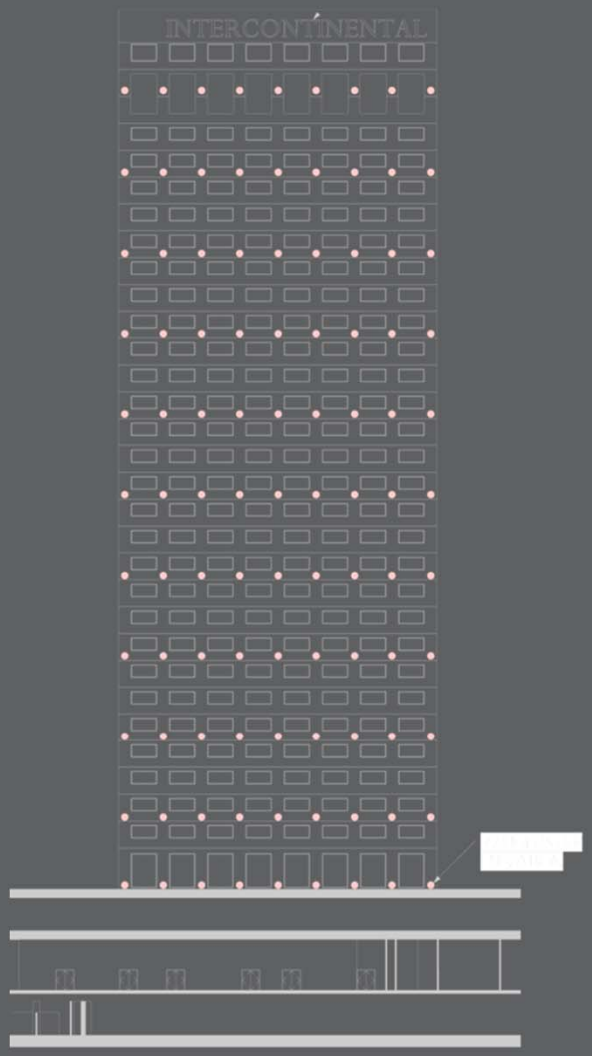
Architectural Integration

Transparency
Interactivity
Spatial qualities
Integration

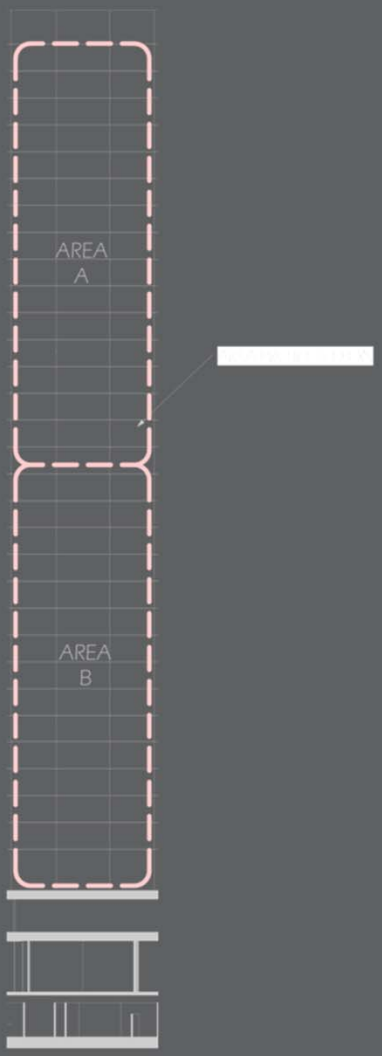
Applied
Undifferentiated
Not contextualized
Nuisance

Design challenges

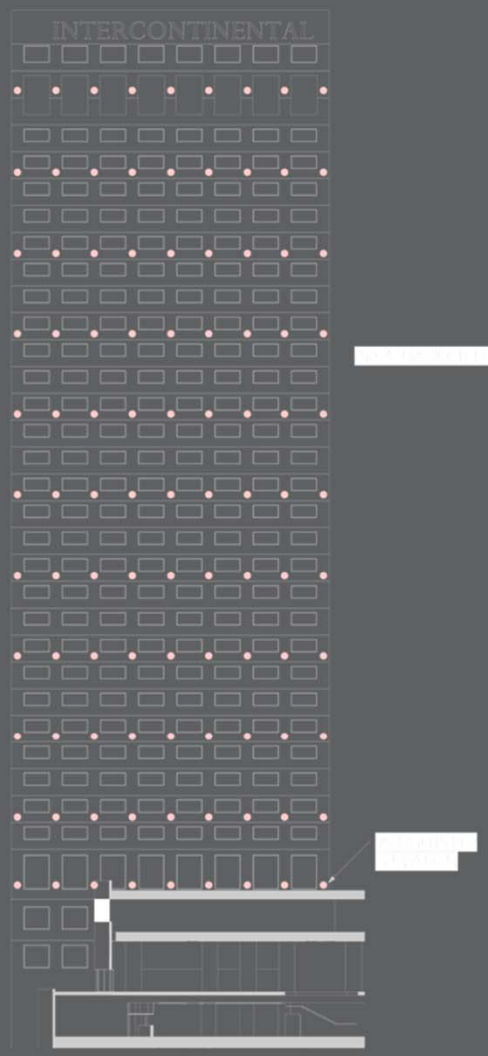
Structure
Stone facade
Visibility near
Visibility far
Content
Urban effect
Glare in hotel room
Time
Money



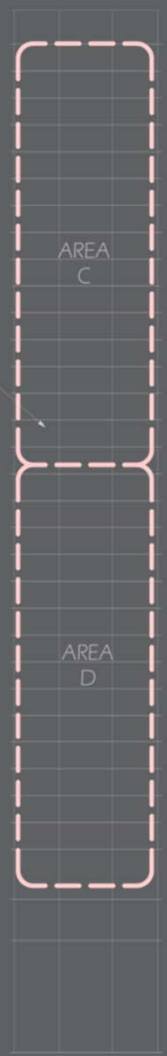
1 South Tower Elevation
3/64" = 1'-0"



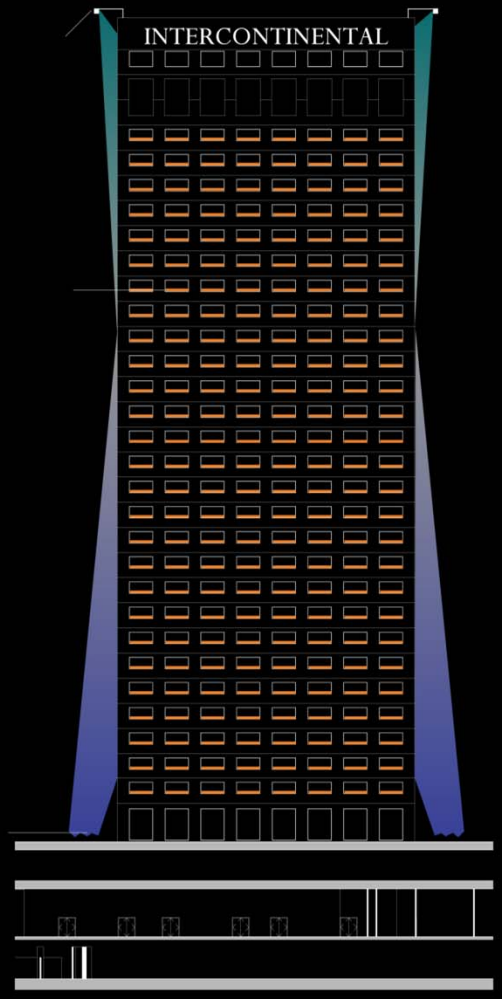
2 South West Tower Elevation
3/64" = 1'-0"



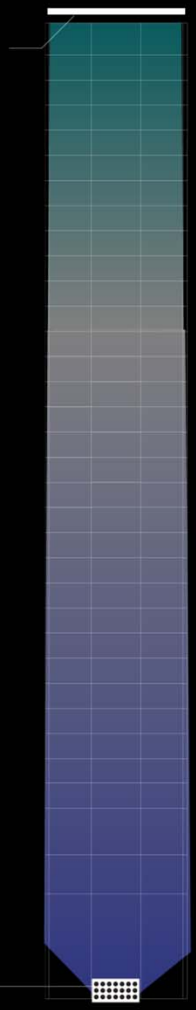
3 North West Tower Elevation
3/64" = 1'-0"



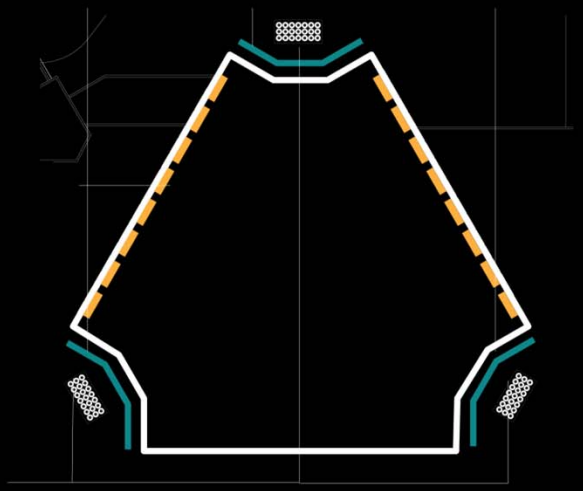
4 North Tower Elevation
3/64" = 1'-0"



TOWER-WIDE ELEVATION



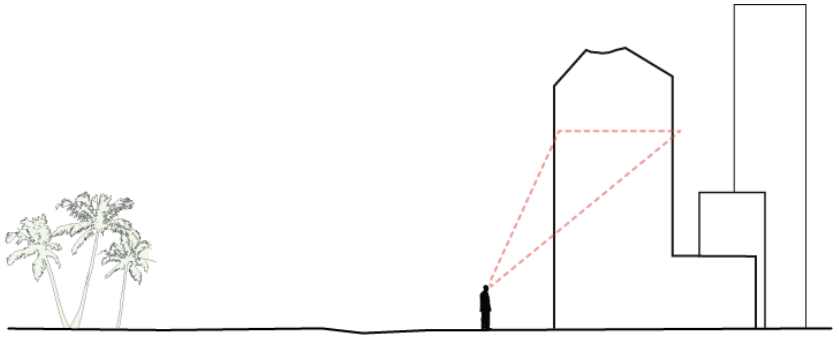
TOWER-NARROW ELEVATION

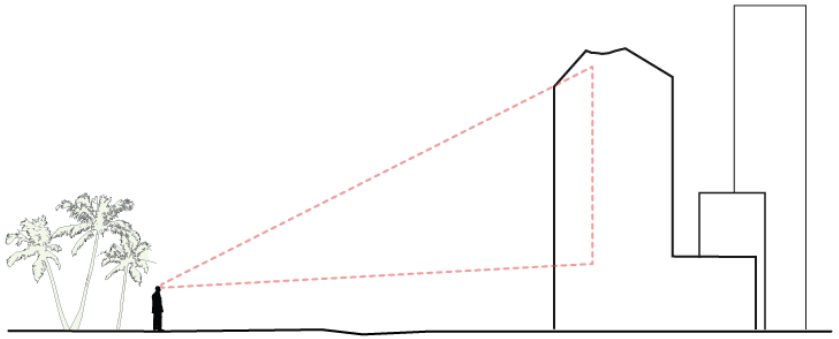


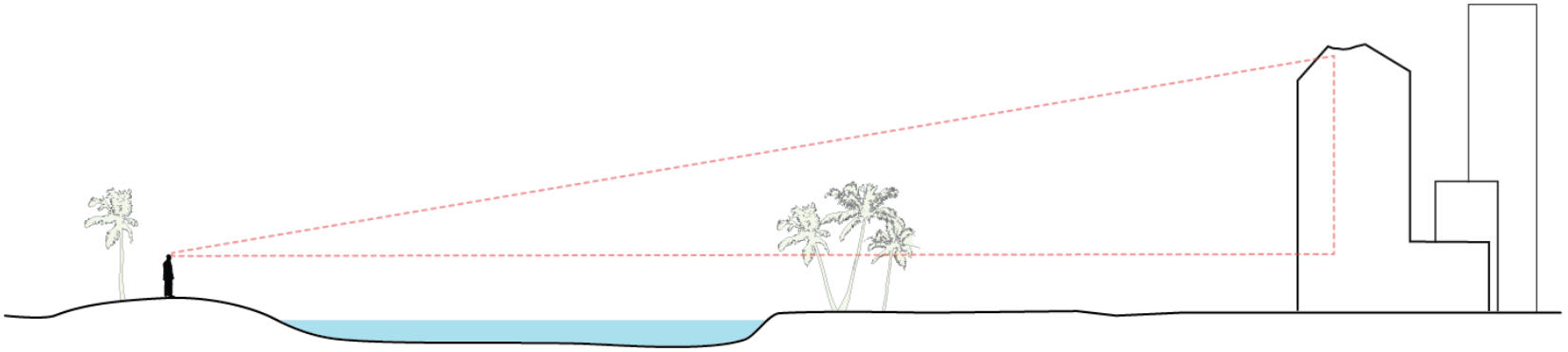
TOWER-PLAN

Design Concept Video

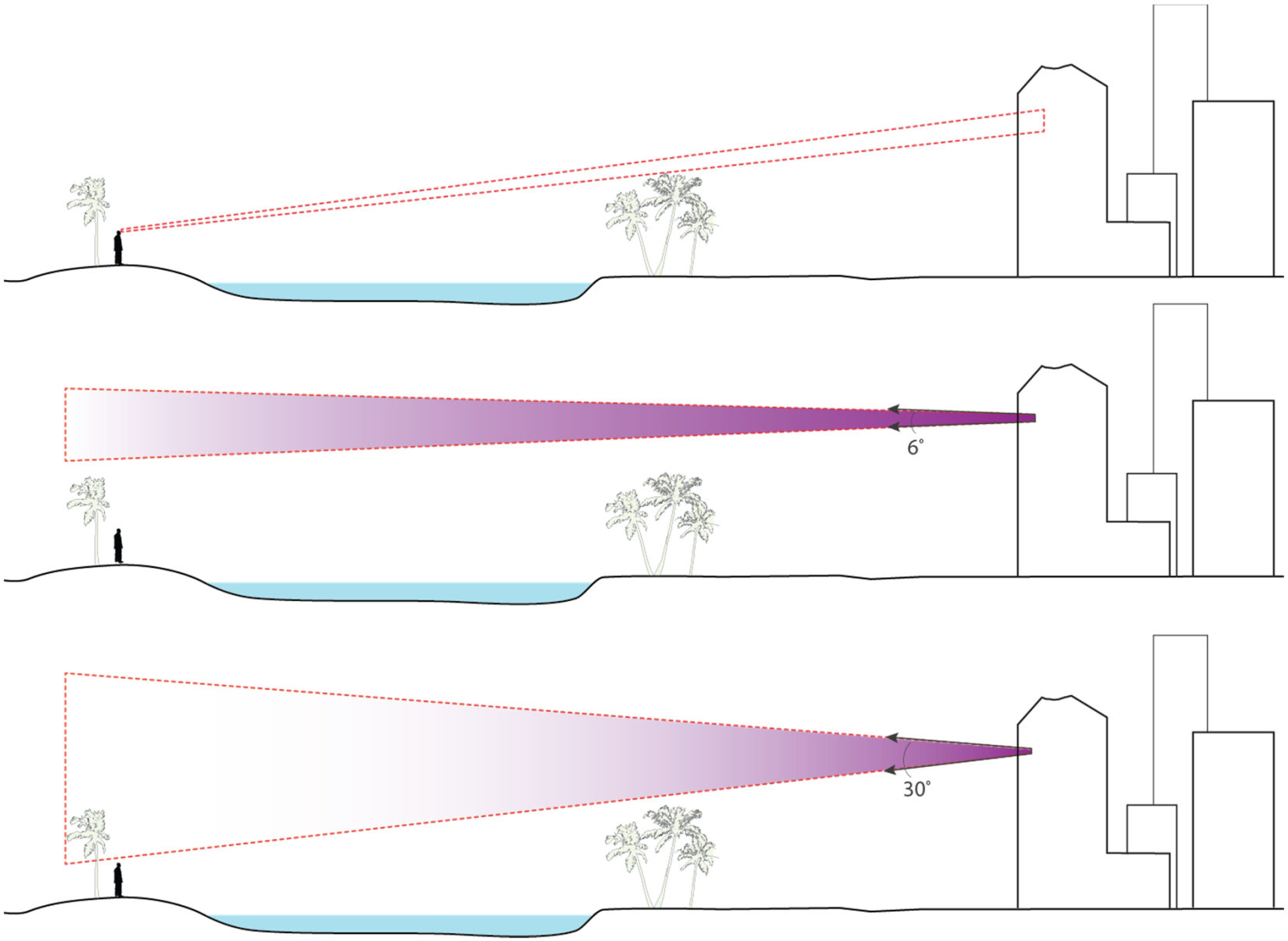
Views from various distances

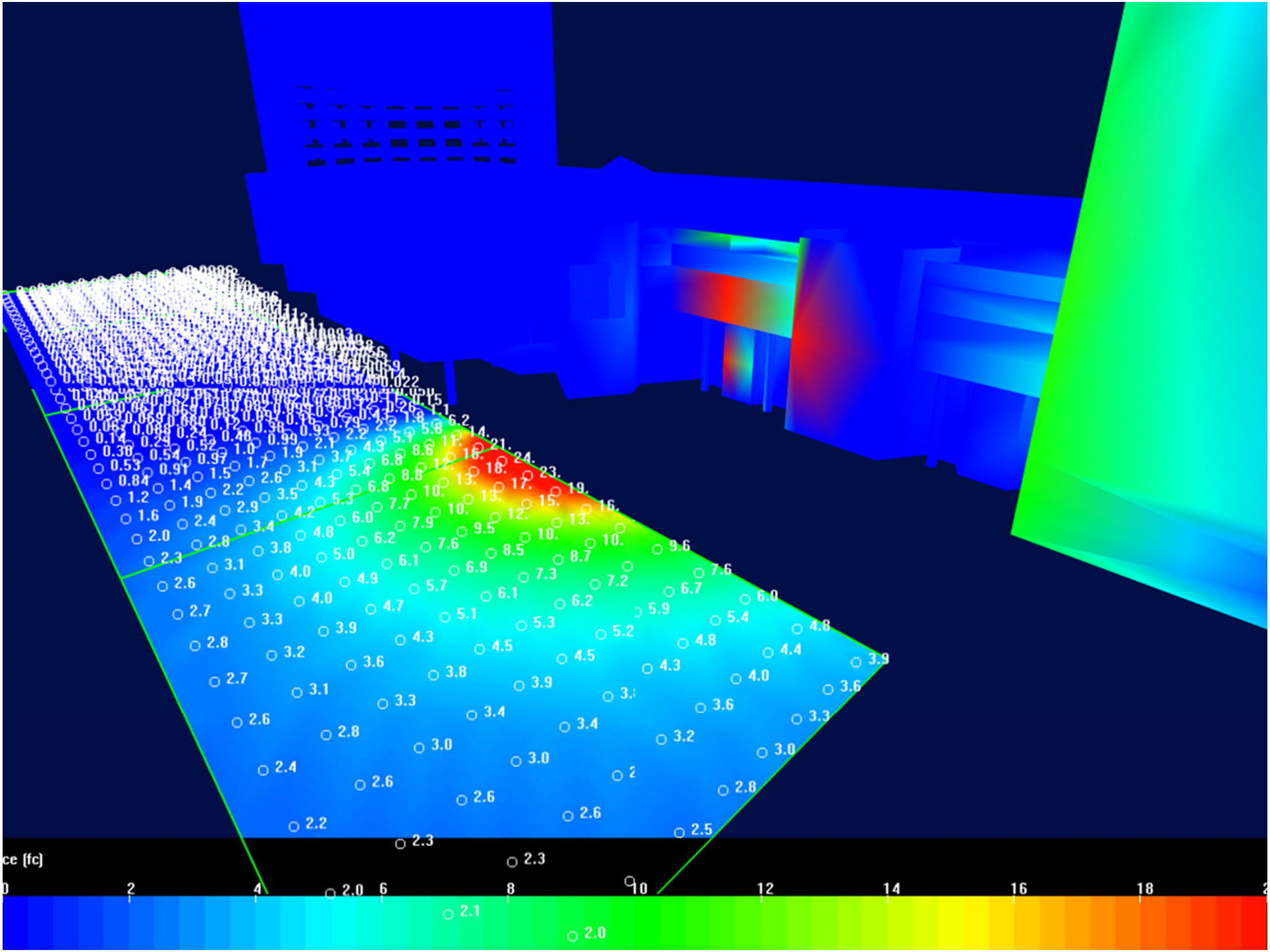






Beam angles affect light at a distance

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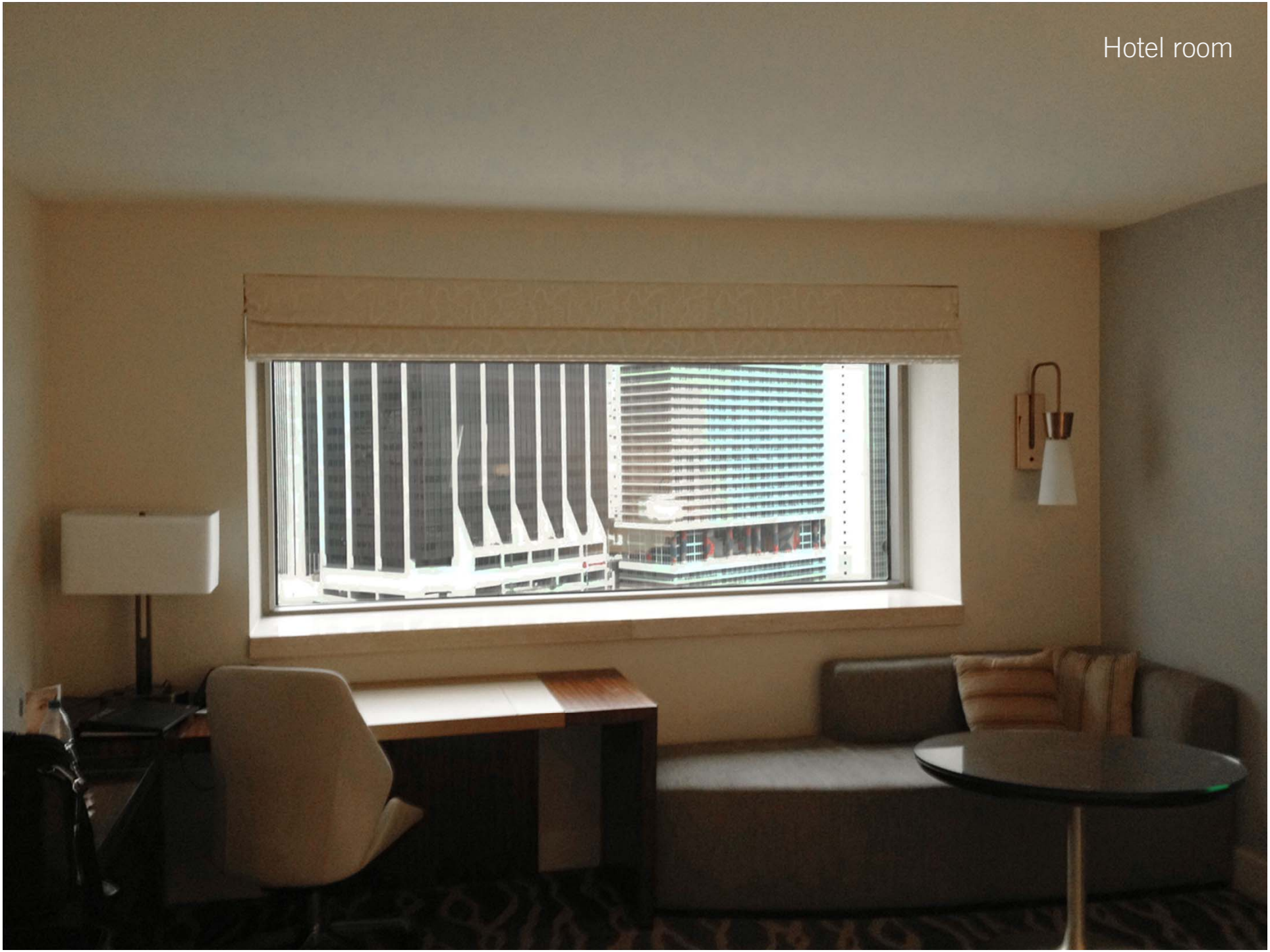
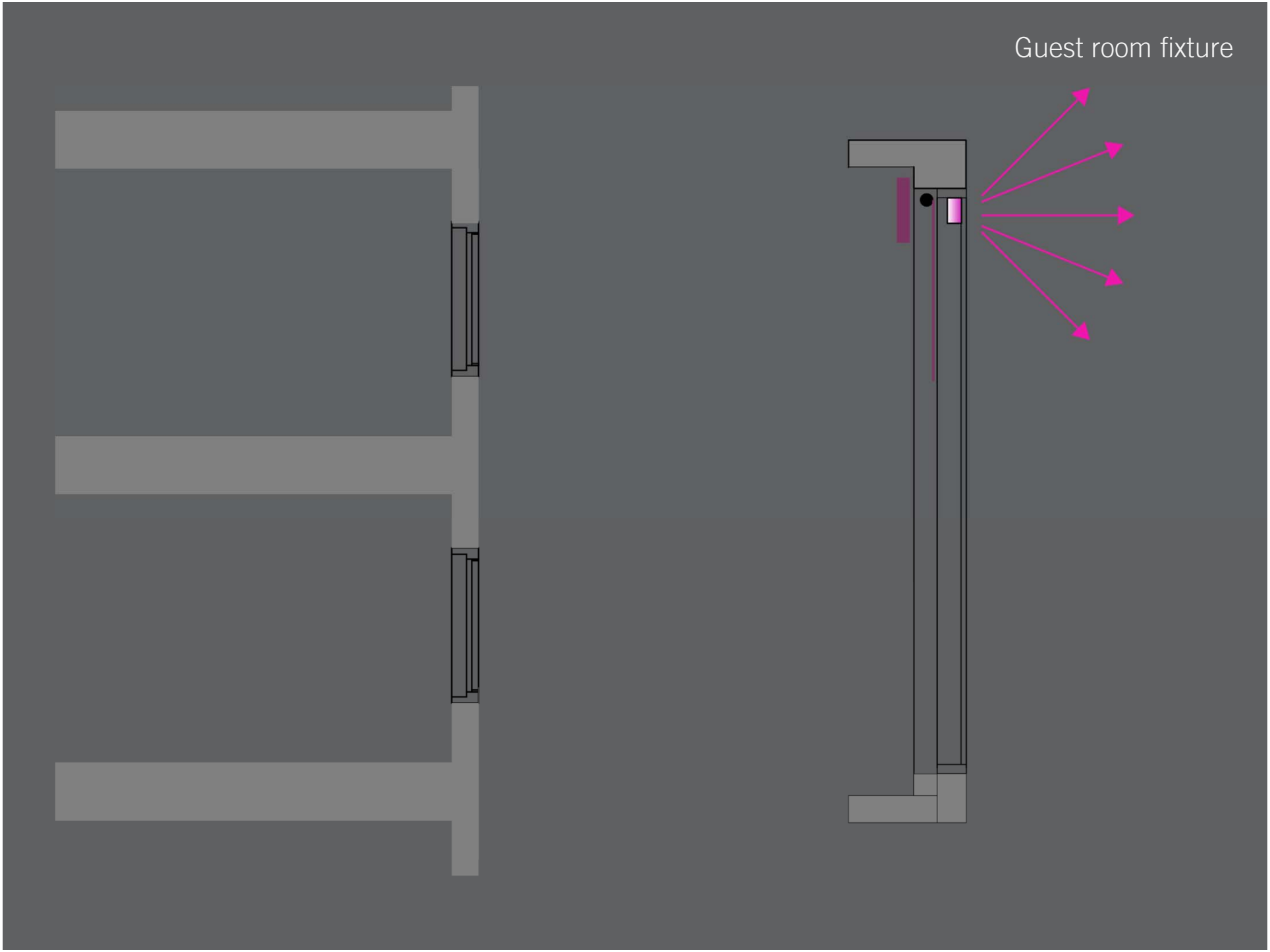
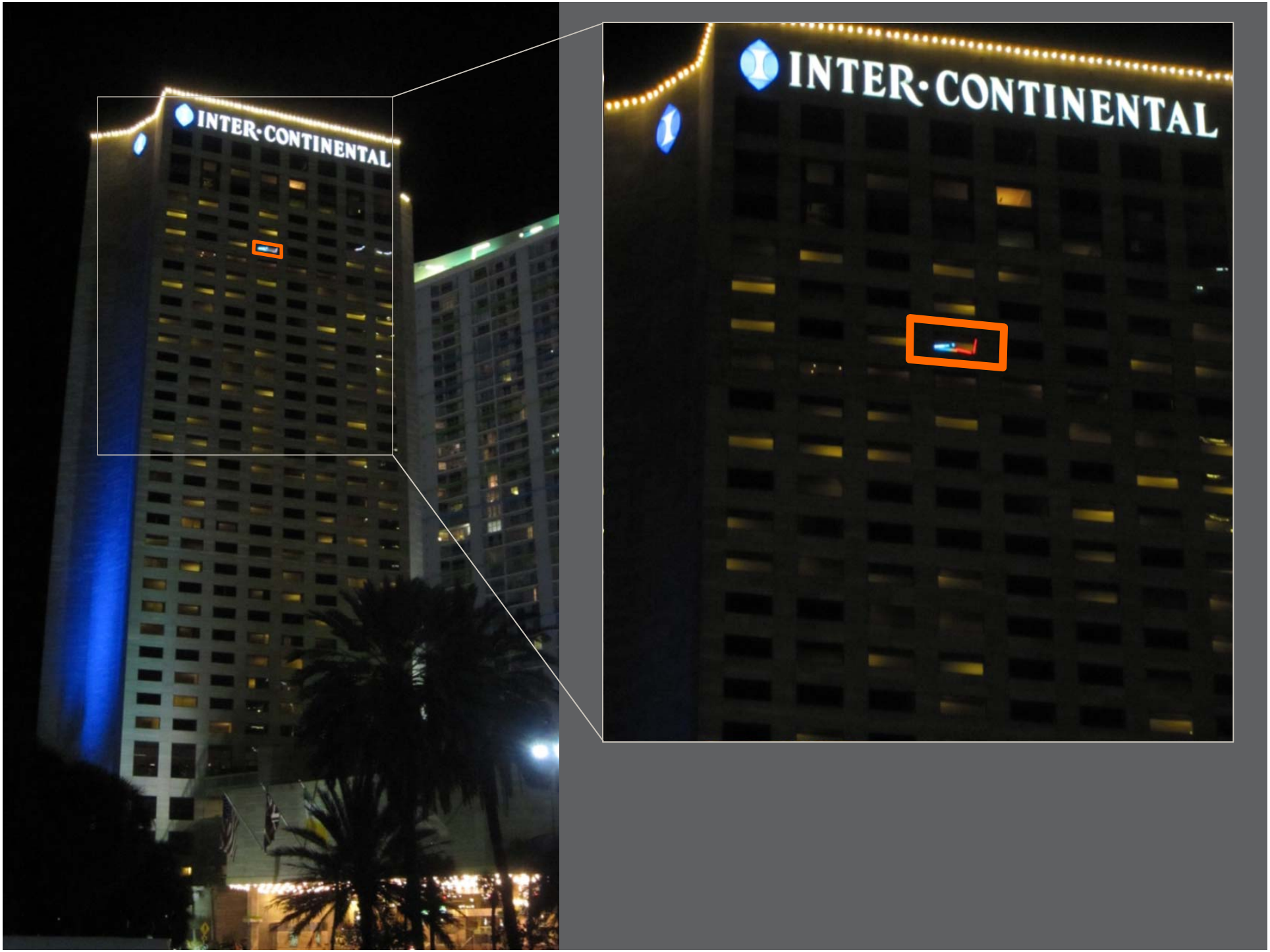

Hotel room

Window head


Guest room fixture

Mockup 1

Mockup 1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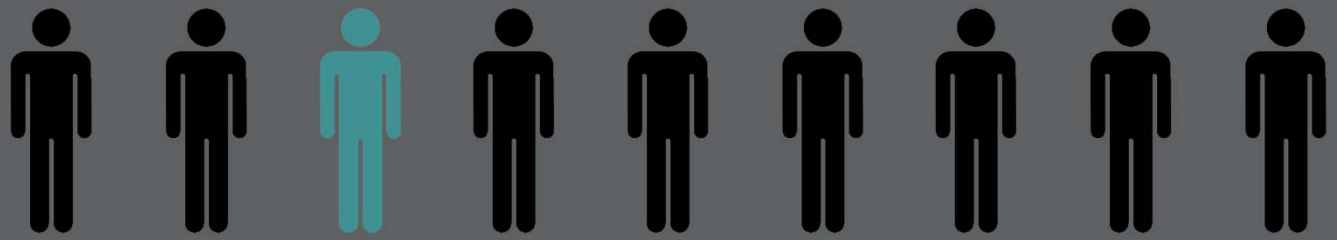
Players



Developer

Architect

Lighting designer

Integrator

Lighting manufacturer

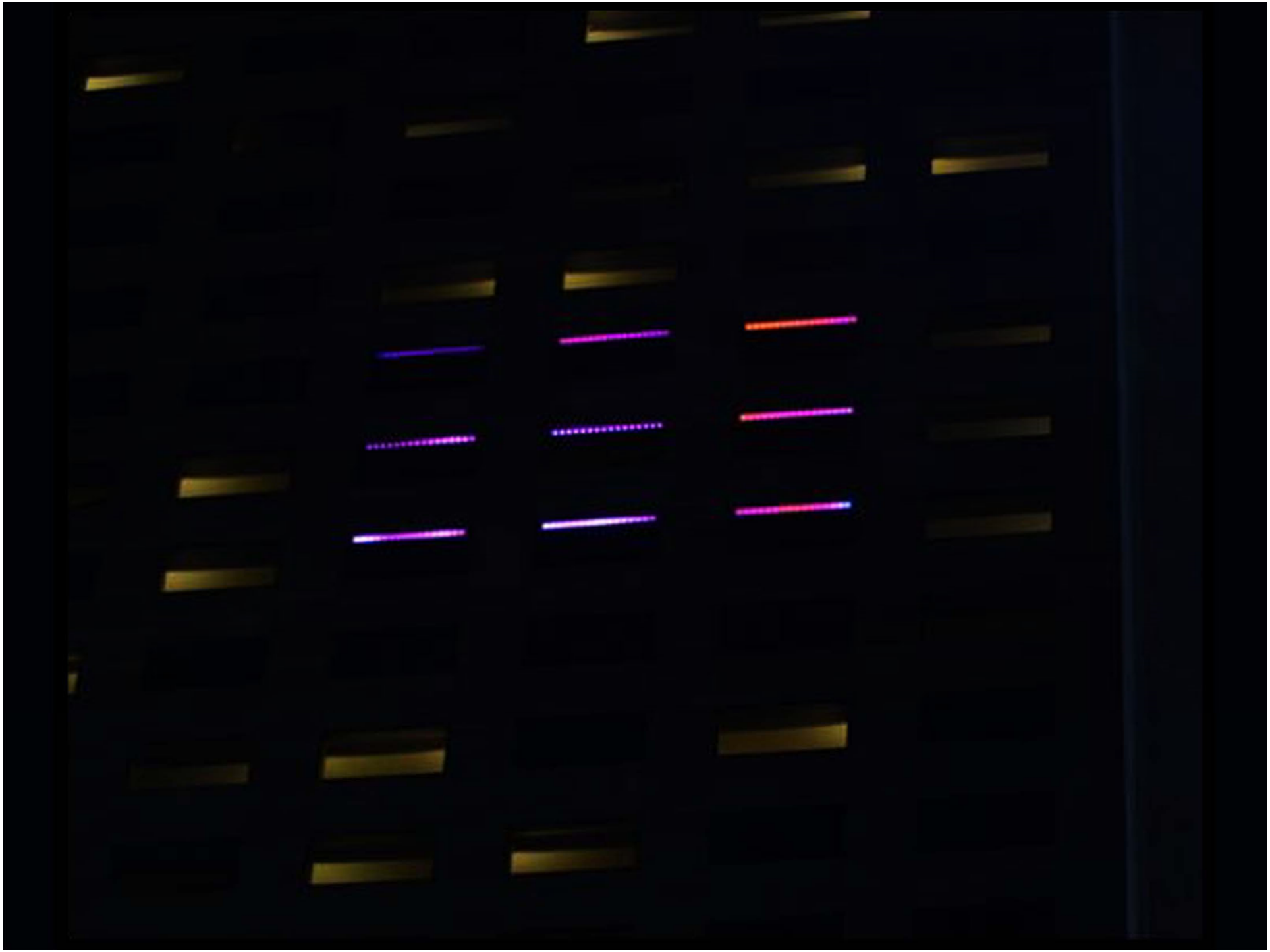
Structural/glass manufacturer

Electrical Contractor

Contractor

Content company

Data system contractor



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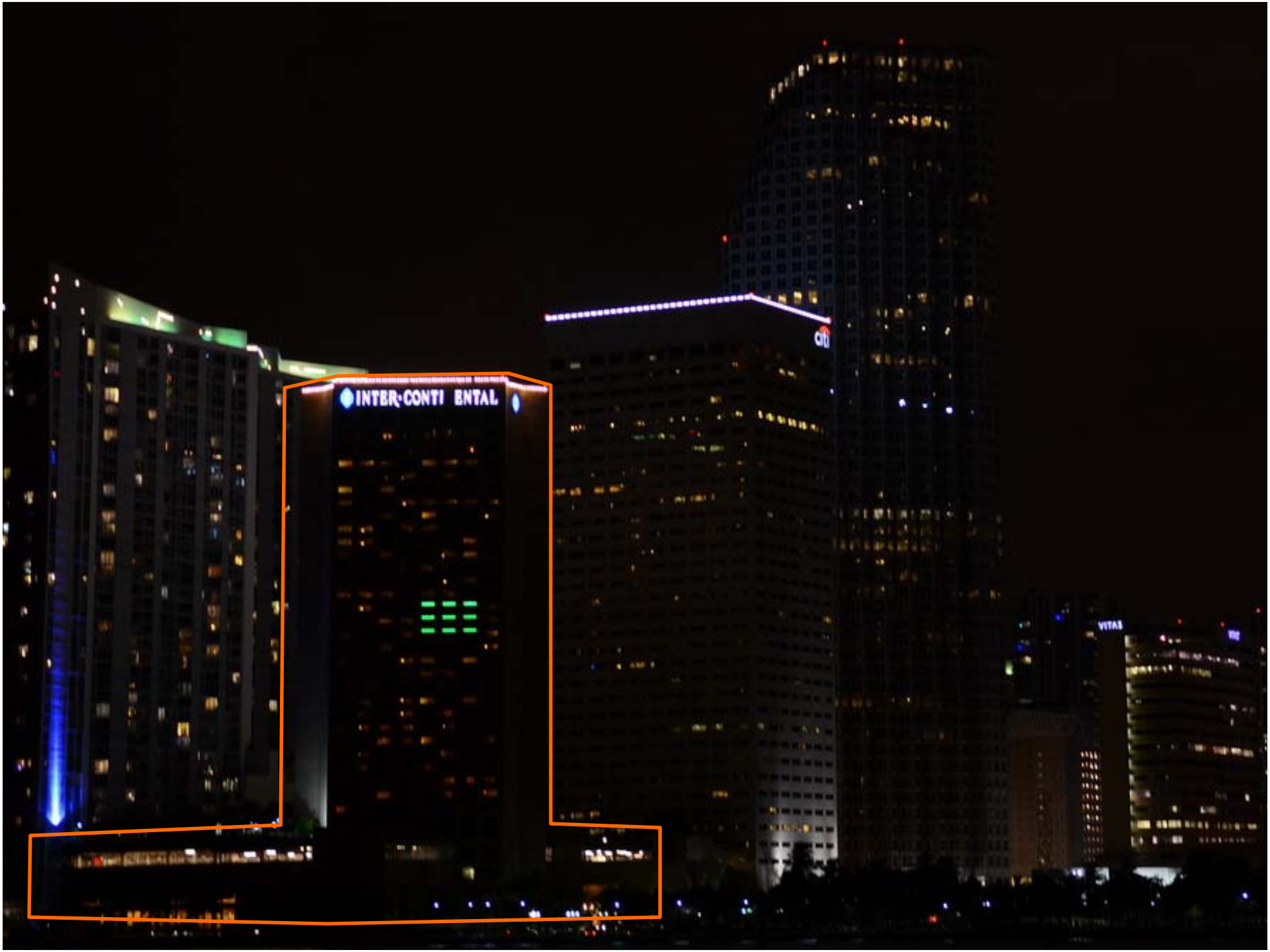
VITAS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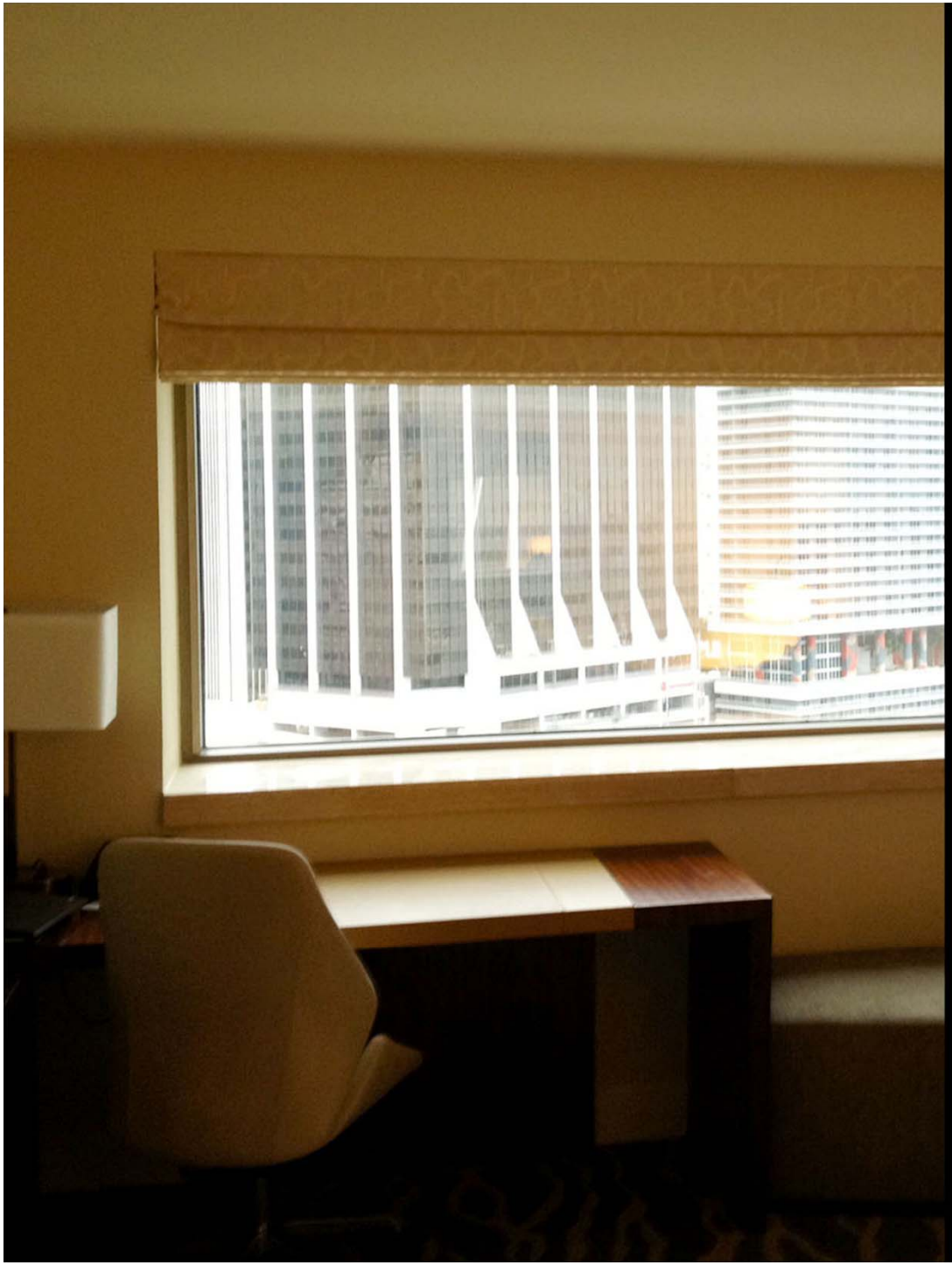
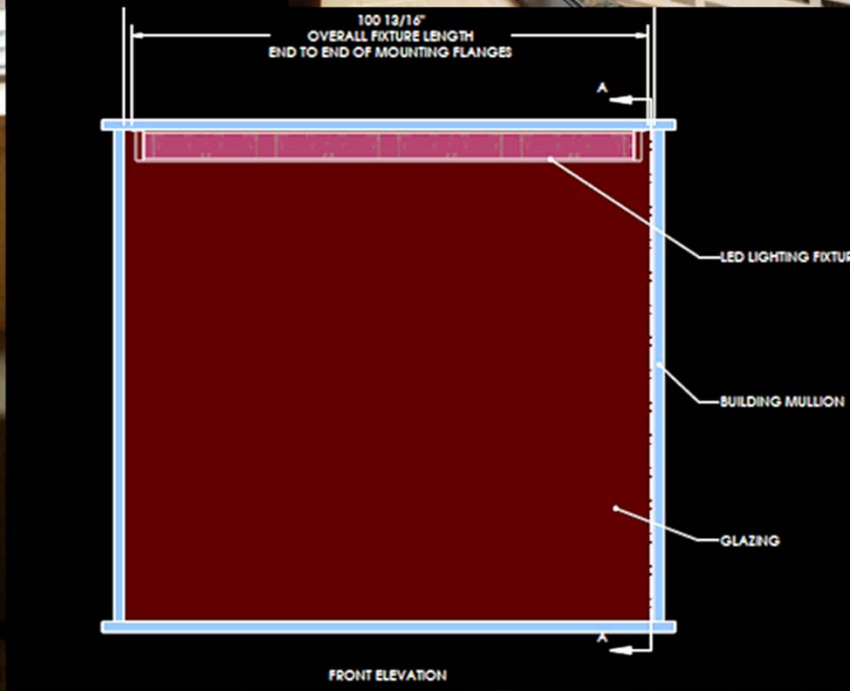
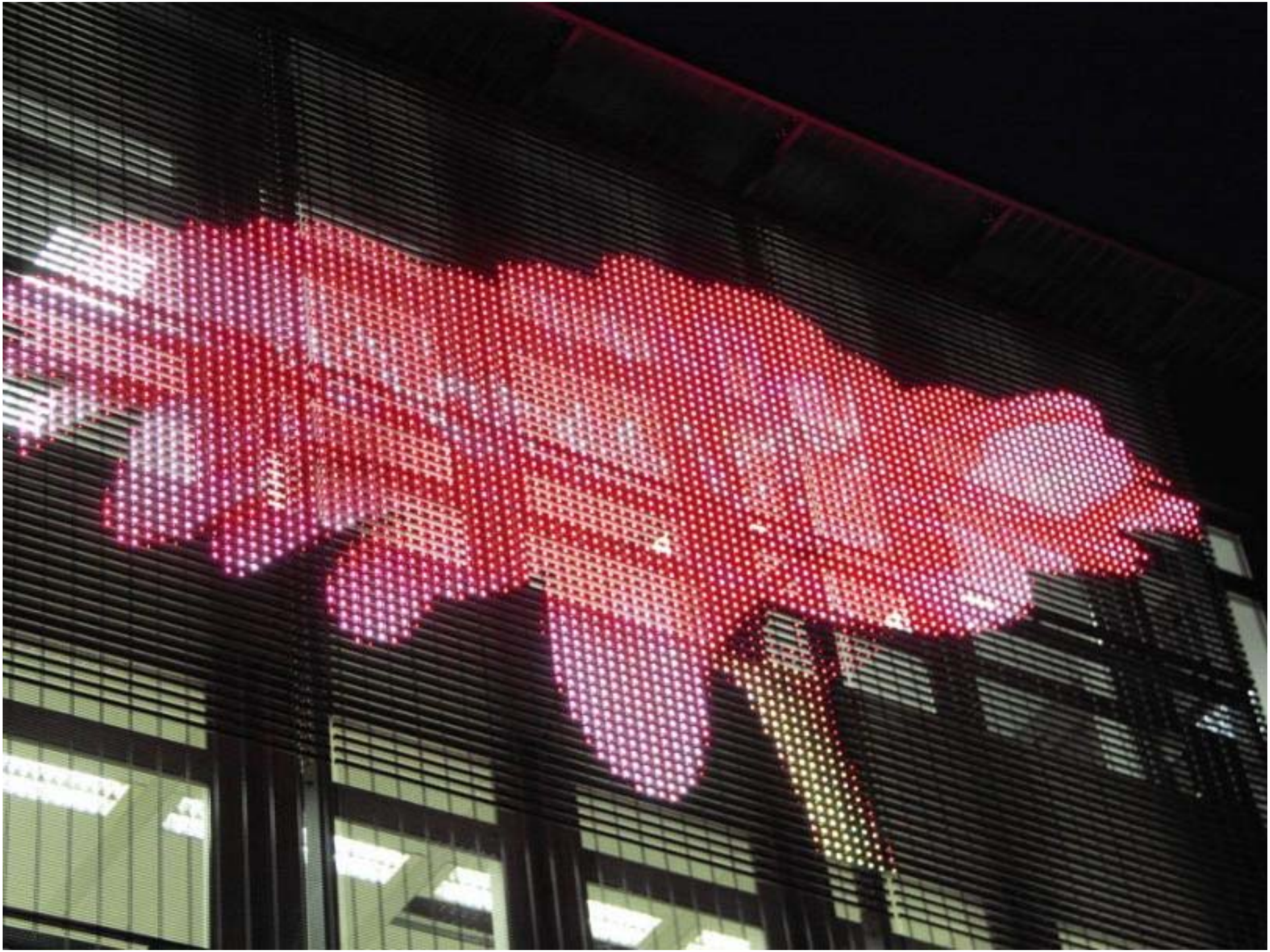
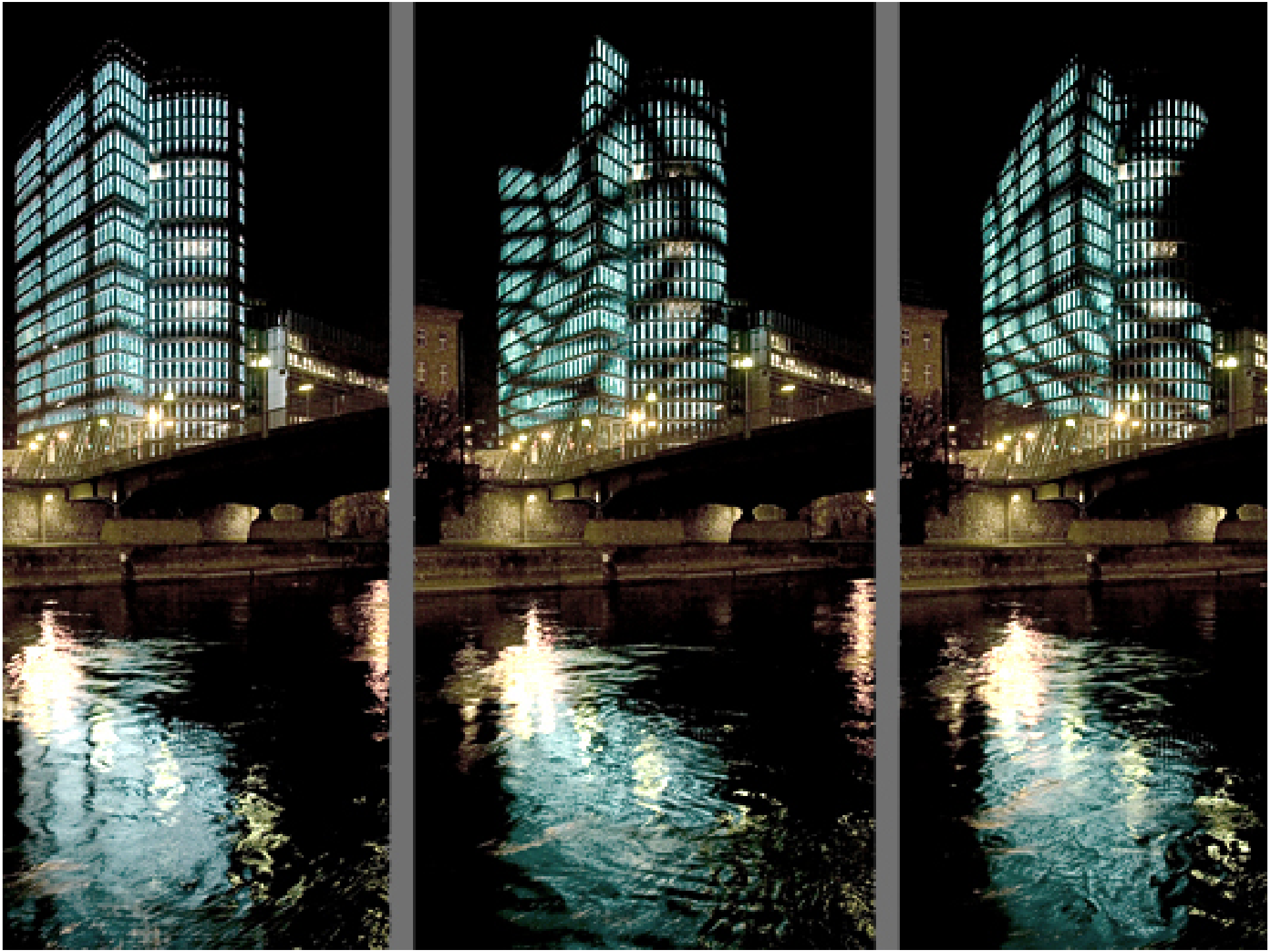



100 13/16"
OVERALL FIXTURE LENGTH
END TO END OF MOUNTING FLANGES
A
LED LIGHTING FIXTU
BUILDING MULLION
GLAZING
A
FRONT ELEVATION

OPPORTUNITIES

SUBARU
NISSAN MOTORS
SUBARU
SUBARU
AWD GALLERY
1600-5252





OSRAM

INTER·CONTINENTAL
InterContinental
MIAMI
Lam Partners
ARCHITECTURAL LIGHTING DESIGN