

**STRATHFIELD
3 BRIDGES**

**CONCEPT
DESIGN**

24 JAN 2022

Mike Daly

Media Artist & Filmmaker



Studio Chris Fox and Studio Mike Daly acknowledge the Gadigal and Wangal People as the traditional custodians of the land on which we work and travel through and we pay our respects to elders past, present and emerging.

As artist and designers, we work to create projects that are deeply connected to place through time. As a studio, we respect and celebrate Country.

CONCEPT DESIGN MIGRATION

All three bridges are connected via the overarching theme of migration.

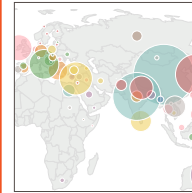
Since time immemorial, animals and people have been migrating all over the world, at a multitude of scales. Thousands of years ago, people moved with the changing seasons and weather systems - to find food and water. In modern times, the migration of people is triggered by a magnitude of push and pull factors. However, the drivers are almost always to better one's life - be that economically or socially.

This overarching theme resonates with the unique theme of each individual bridge, and provides a woven narrative that people from all backgrounds can connect to. Not only are the statistics associated with migration often surprising and interesting, but each migratory journey carries individuals' stories of change and adventure.

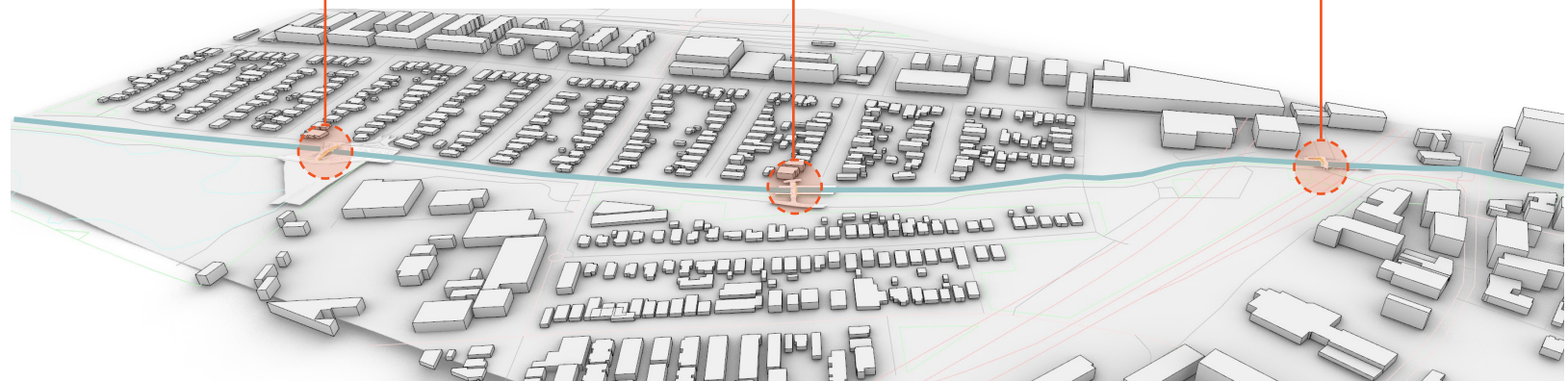
BRIDGE 1
LORRAINE ST



BRIDGE 2
HAMILTON ST



BRIDGE 3
GEORGE ST

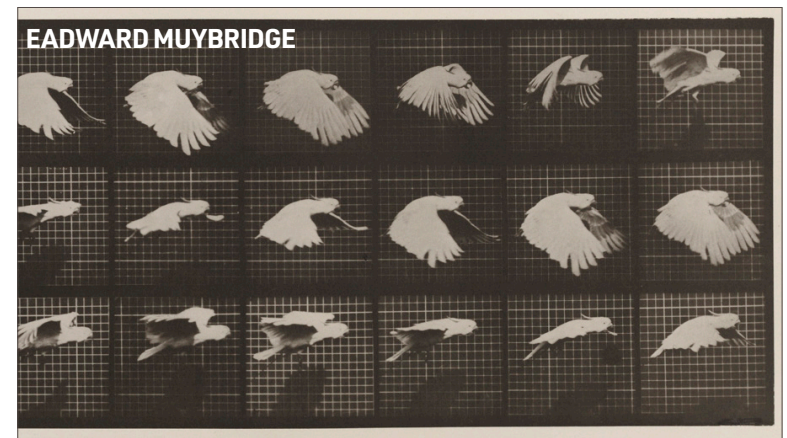
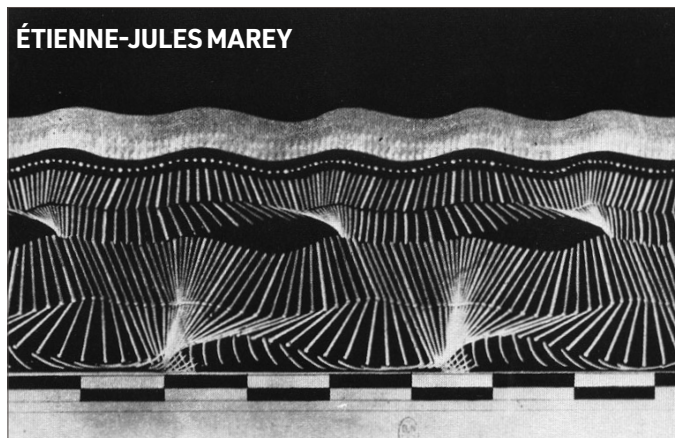
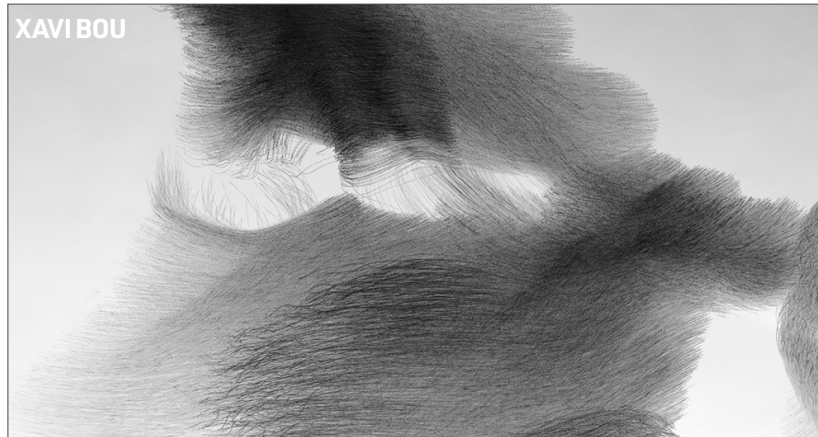
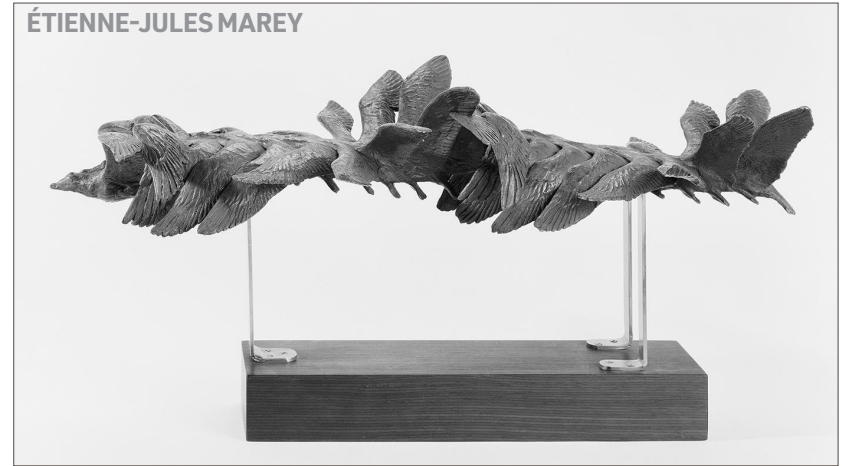
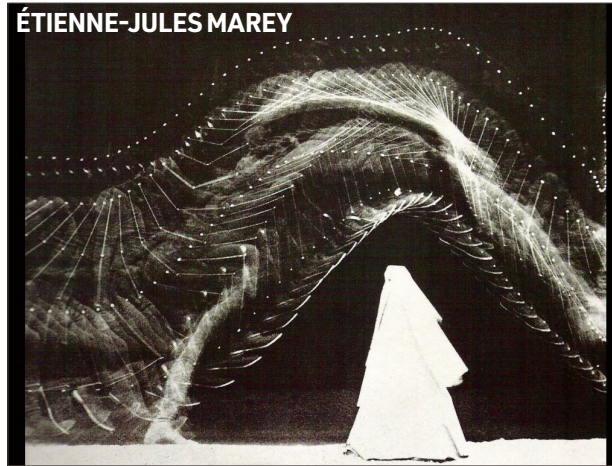


**CONCEPT
DESIGN
MOVEMENT
TRACES**

The movement of people and animals form patterns that are retraced time and time again, as thousands of individuals often follow the same path.

The light artworks are inspired by the geometries of these movement patterns, both at a micro scales in the unique way an animal moves, and at a much larger macro scales in the outstanding geographic journeys they take.

The lightworks pay testament to the power, magnitude and importance of these migratory journeys, whilst also celebrating the journey and story of every individual.



**CONCEPT
DESIGN
KEY
PRINCIPLES**



INCLUSIVE

Telling the stories of a diverse range of people



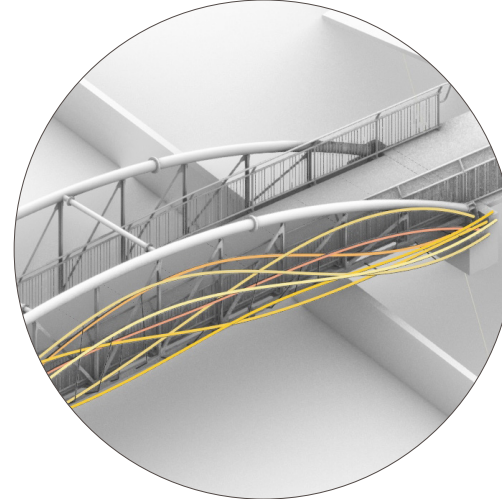
ENVIRONMENTALLY MINDFUL

Including power consumption and light levels sensitive to migrating birds



A SPECIAL MOMENT

Changing over time, each dawn and dusk, through the seasons



DAY AND NIGHT

Sculptural marker by day, kinetic light experience by night

Image 1: Strathfield Council
Image 2: Sharp tailed sandpiper,
eBird.org



BY DAYLIGHT

White LED neon flex along coloured steel structure - a unique sculptural marker that traces the patterns of migration



BY NIGHT

Warm white illuminated points dance along the LED neon flex, mapping the rhythms of migration

**CONCEPT
DESIGN
BRIDGE 1
LORRAINE ST**

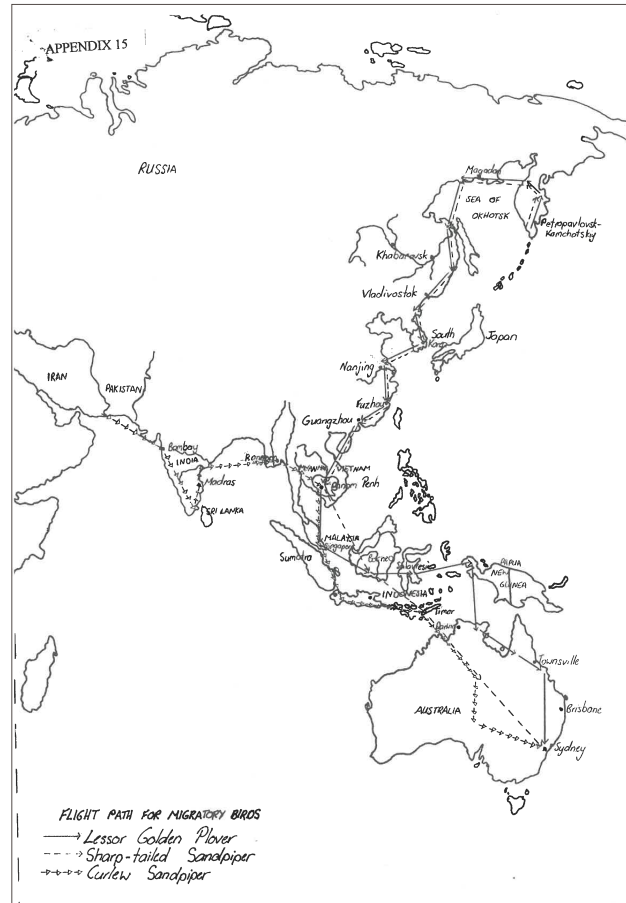
BIRD MIGRATION BETWEEN SIBERIA & STRATHFIELD

The Curlew Sandpiper is one of the most threatened migratory species in south east Australia, not just at Mason Park. With declines to almost extinction in Botany Bay, Mason Park is now the most important site for this species in the Sydney region.

When the area was poorly managed, numbers varied with counts between 50 and 100 birds and up to 240 when the tidal flushing was effectively managed by council. Unfortunately, latest counts during the 2006/07 season did not exceed 16 birds.

This small bird and many other species from the wetlands take an astonishing yearly 27,000km round trip between Siberia and Strathfield, on a quest for warmer climates and food.

Mason Park Plan of Management, 2008,
Strathfield Council



Mason Park Wetlands and Powell's Creek Environmental Report
1998

**CONCEPT
DESIGN
BRIDGE 1
LORRAINE ST**

Taking a journey that can stretch to a round-trip distance of several thousand miles is a dangerous and arduous undertaking. It is an effort that tests both the birds' physical and mental capabilities.

The majority of land birds migrate at night. Artificial light attracts and disorients migrating birds, confusing and exhausting them as well as making them vulnerable to collisions with buildings and other urban threats like cats and toxins.

The birds often hesitate to leave these lit areas. As day breaks, they quickly descend to the ground in search for vegetated habitat where they forage for food to replenish their depleted energy reserves. This dramatic rise in the concentration of birds in built environments increases the potential for bird-building collisions.

We therefore decided that our proposed bridge structures would only be illuminated for 90mins at dawn and at dusk. The lighting specified is warm in colour and lux levels are carefully controlled. This is to minimise the negative impact to migrating birds in the area.

BIRD MIGRATION BETWEEN SIBERIA & STRATHFIELD



World Map showing artificial light at night ALAN (yellow) and nocturnal migratory bird paths (white - shorter than median distance and grey - longer than median distance). Shorter distances overlap areas with high concentration of ALAN.

Image: Cabrera-Cruz, S.A., Smolinsky, J.A. & Buler, J.J. Light pollution is greatest within migration passage areas for nocturnally-migrating birds around the world. *Sci Rep* 8, 3261 (2018).

National Light Pollution Guidelines for Wildlife, 2020, Australian Government - Department of the Environment and Energy

The Basics Of Bird Migration: How, Why, And Where, 2021, All About Birds <https://www.allaboutbirds.org/news/>

**CONCEPT
DESIGN
BRIDGE 1
LORRAINE ST**

Each night, exactly at sunset, the bridge comes alive for 90 minutes to visualise the migration of the Curlew Sandpiper between the Mason Park Wetlands and Siberia, depicting 60,000 years of continued migration over 6 years on the bridge.

BIRD MIGRATION BETWEEN SIBERIA & STRATHFIELD



60,000 YEARS OF BIRD MIGRATION



SCALED TO 6 YEARS OF LIGHTING ANIMATION

**CONCEPT
DESIGN
BRIDGE 1
LORRAINE ST**

BIRD MIGRATION BETWEEN SIBERIA & STRATHFIELD

Each year of the birds' lives are experienced by us in just over 3 minutes, playing out at more than 160 thousand times normal speed.

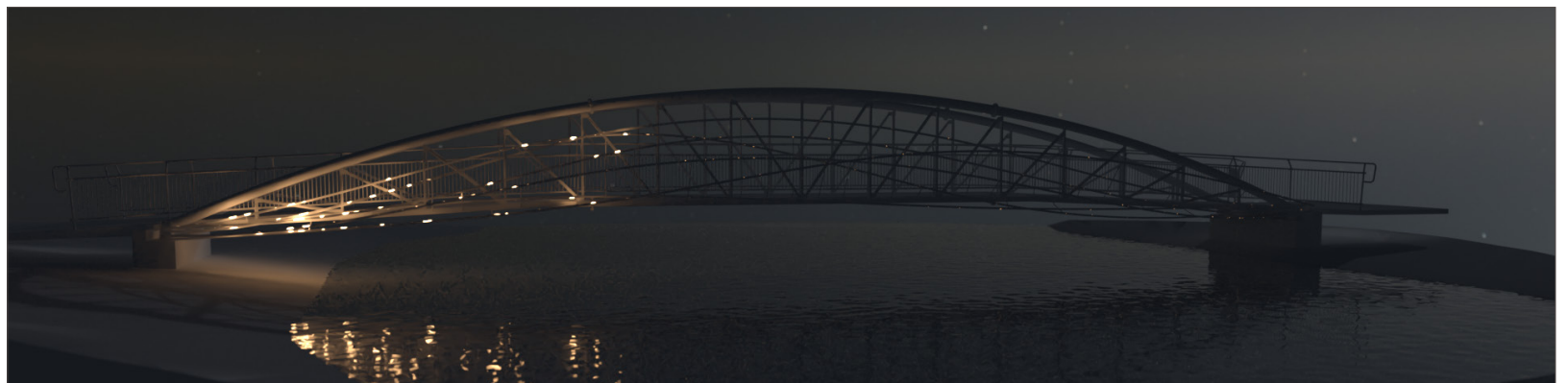
~ 2 months flying south
(~33 seconds)

~ 7 months in Australia
(~ 1 minute and 55 seconds)

~ 2 months flying north
(~33 seconds)

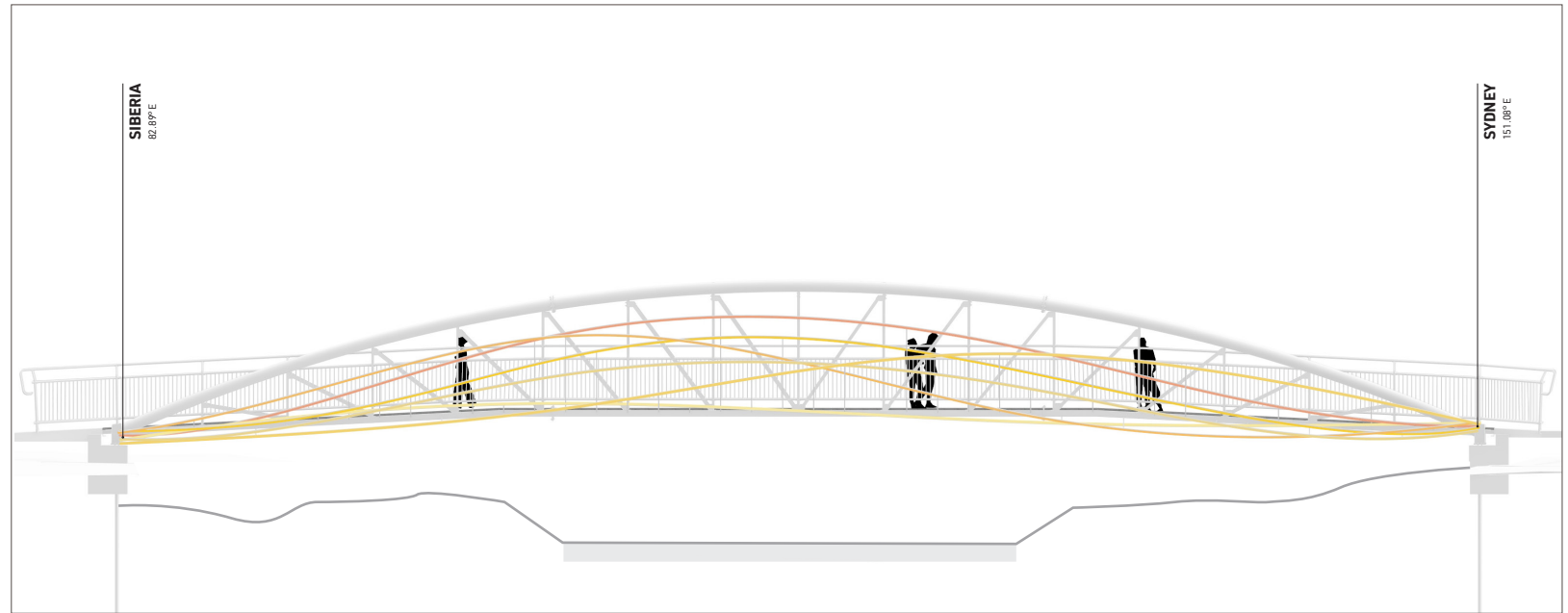
~ 1 months in Siberia and Alaska
(~16 seconds)

VIDEO LINK CLICK HERE



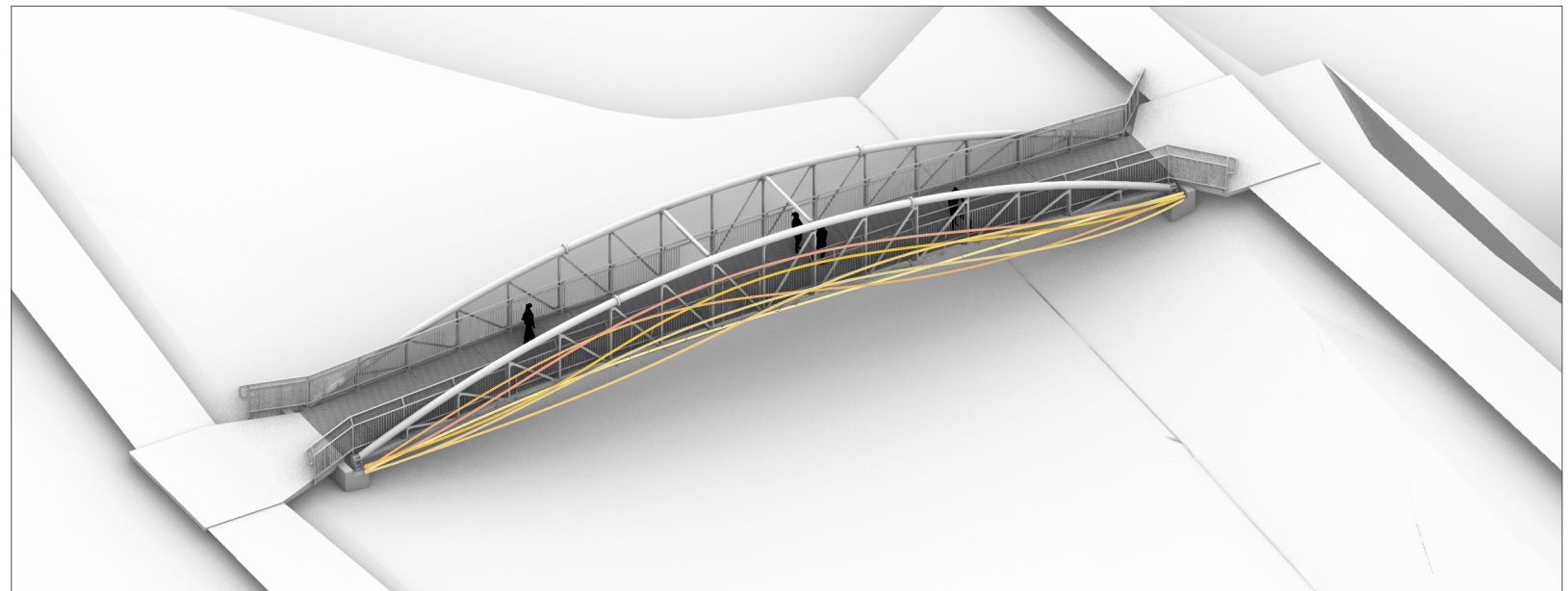
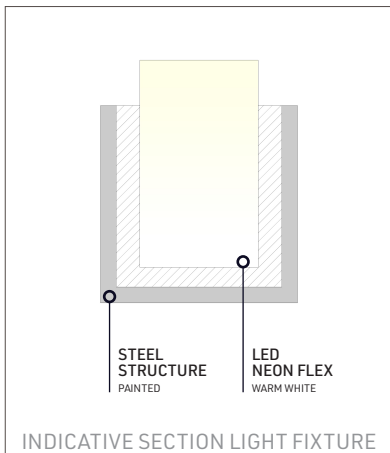
**CONCEPT
DESIGN
BRIDGE 1
LORRAINE ST**

BIRD MIGRATION BETWEEN SIBERIA & STRATHFIELD



Latitude and country name to be integrated into artwork.

A series of sequenced LED Neon Flex, fixed to painted steel structure, fixed back to bridge structure. Orientated to the North side of the bridge.



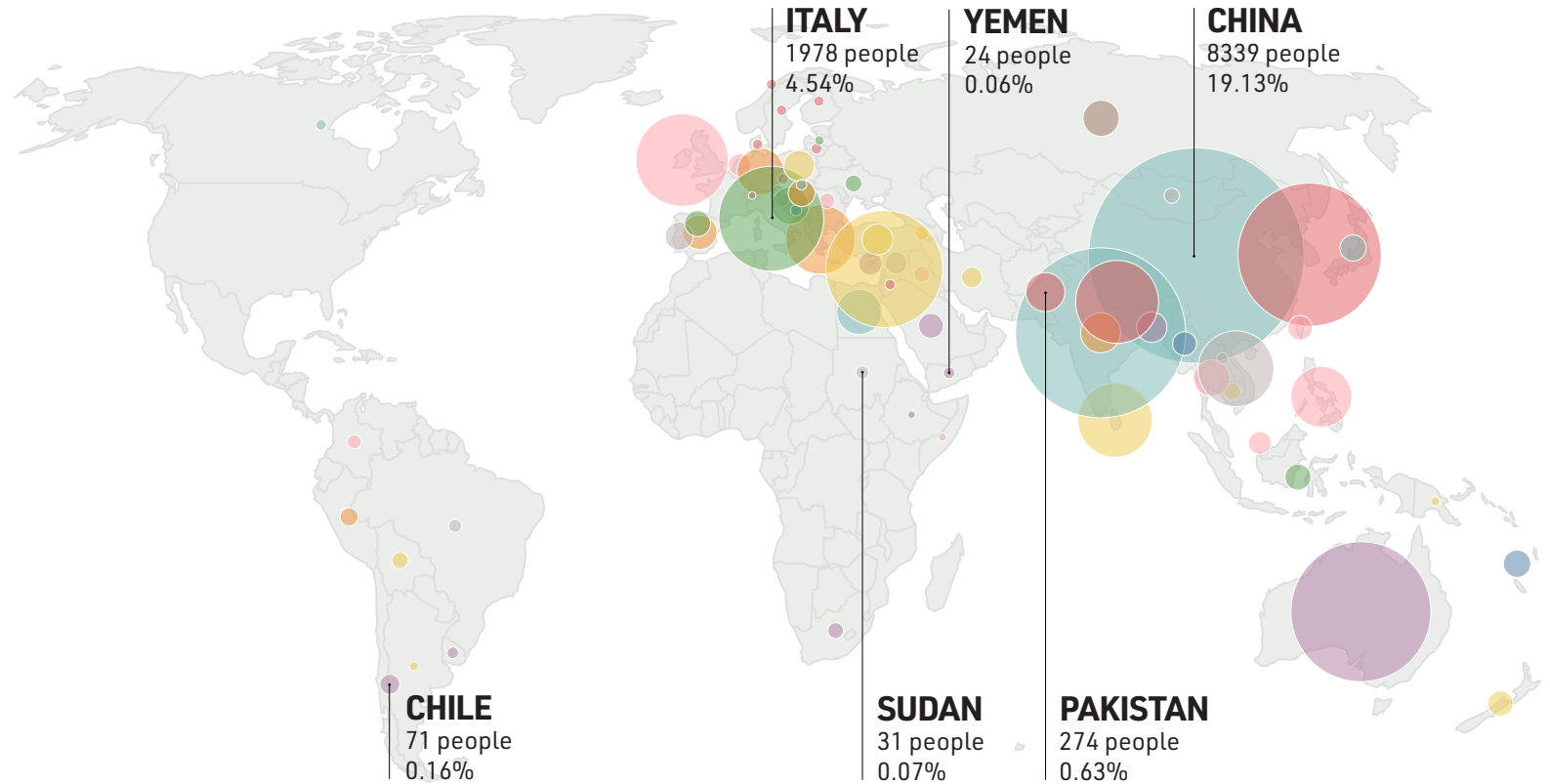
**CONCEPT
DESIGN
BRIDGE 2
HAMILTON ST**

OVER 100 NATIONS TO STRATHFIELD

First Nations people have been travelling through Australia for 10s of thousands of years. During the glacial period (40,000-10,000 years ago) Strathfield was far inland and less hospitable than it is today. Around 7,000 years ago, as the climate warmed, the rising seas flooded the nearby valley, now called the Parramatta River and the landscape completely changed.

This new riparian artery became a vital life source for First Nations people and brought them to the area - possibly Strathfield's first migration of people.

In more recent times, over 100 nations have travelled overseas and now reside in Strathfield with 56% of the population being born internationally and 64% of the population speaking another language aside from English at home. It has become a melting pot of cultures, creating a unique and rich identity of one of the most diverse areas in Australia.



World Map showing number of people currently living in Strathfield whose ancestry originates from another country. Based on 2016 Strathfield census data.

Strathfield Council, Aboriginal History
<https://www.strathfield.nsw.gov.au/history/aboriginal-history/>

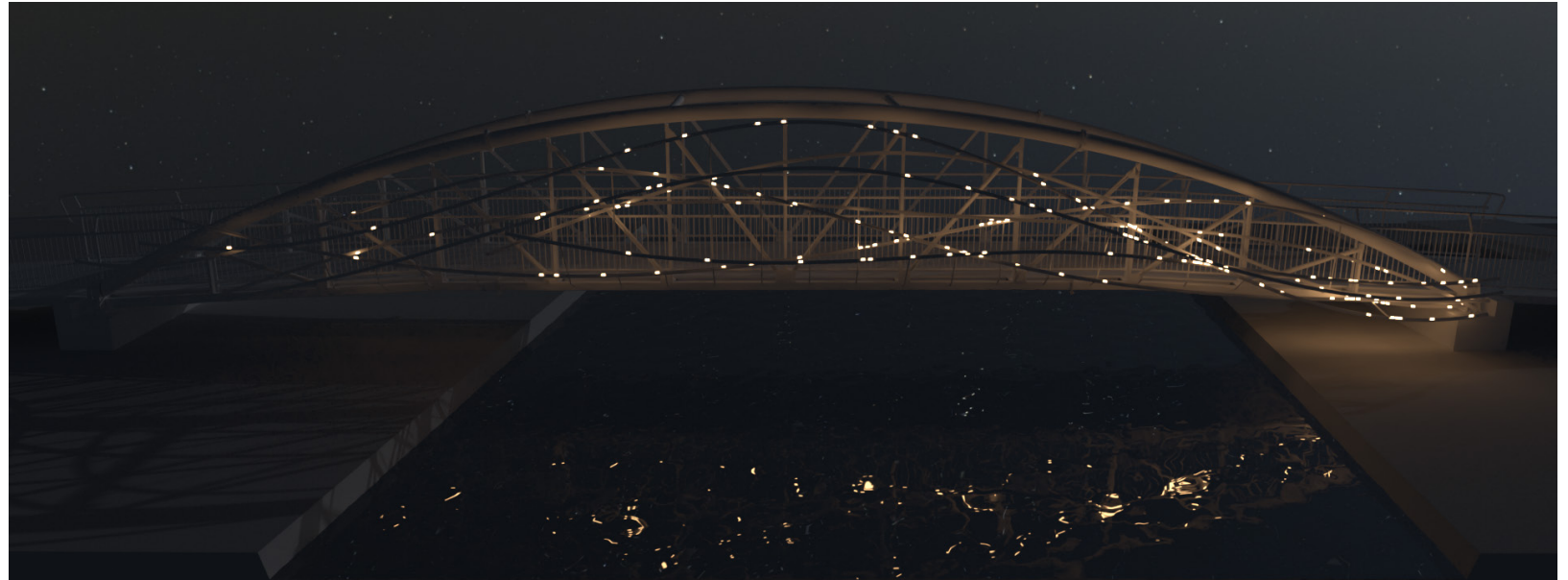
**CONCEPT
DESIGN
BRIDGE 2
HAMILTON ST**

Based on current census data, the sculptural work will map the ancestries of Strathfield's residents, tracing the geographic migratory paths of close and distant family members as they travelled to Australia throughout history, thereby illuminating vast cultural diversity within the area.

The length of the bridge will be mapped to the Earth's circumference using longitudinal data, indicating the distances of countries relative to the rest of their world.

[VIDEO LINK CLICK HERE](#)

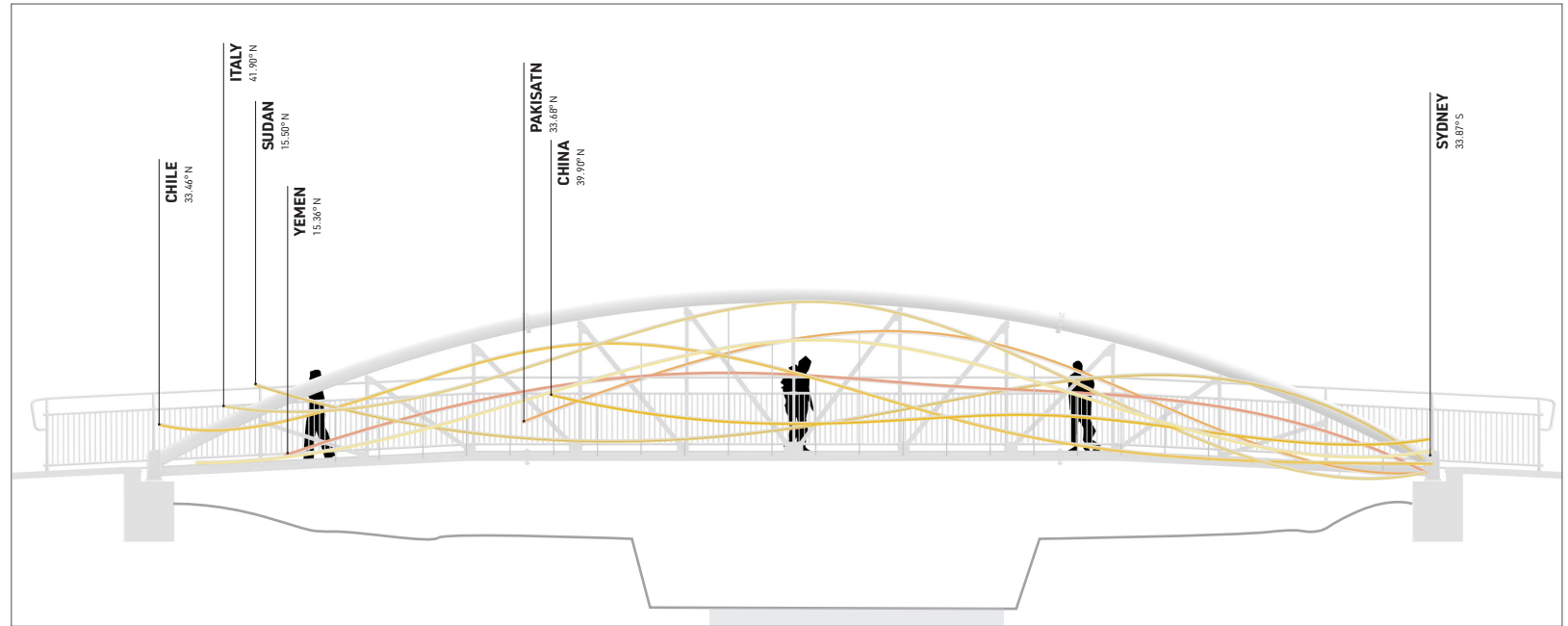
OVER 100 NATIONS TO STRATHFIELD





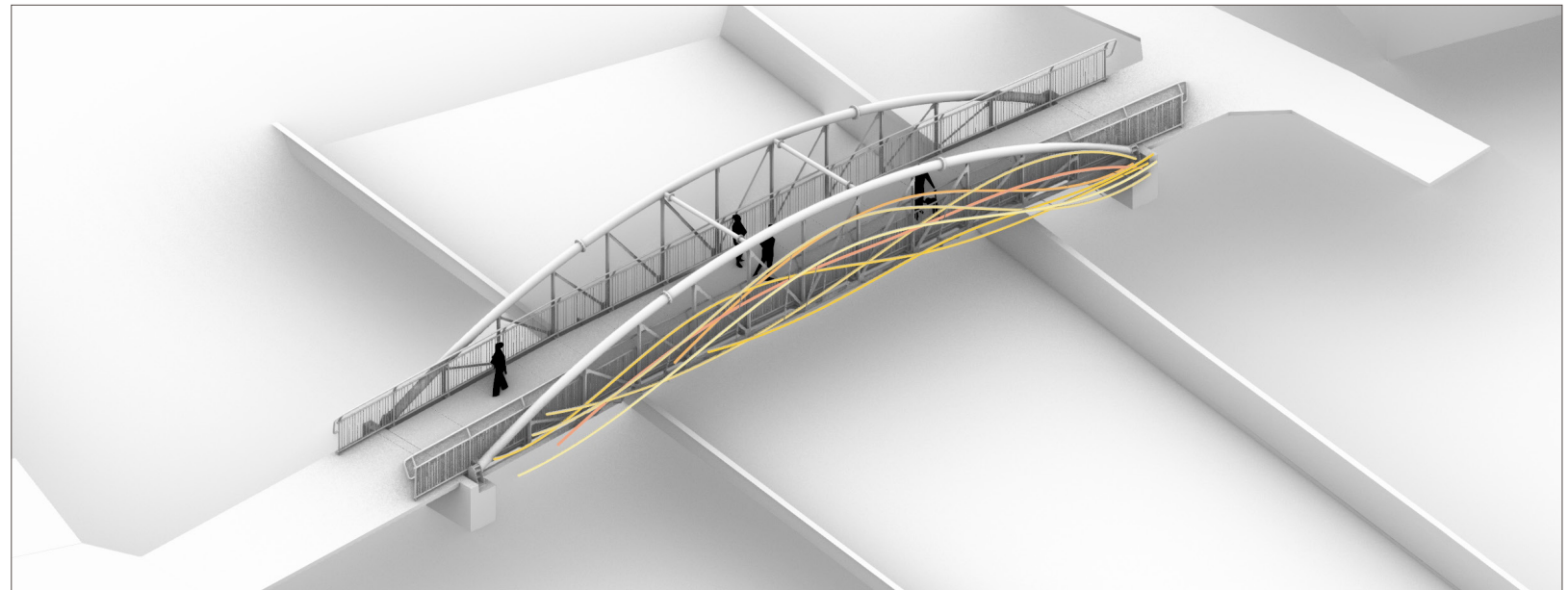
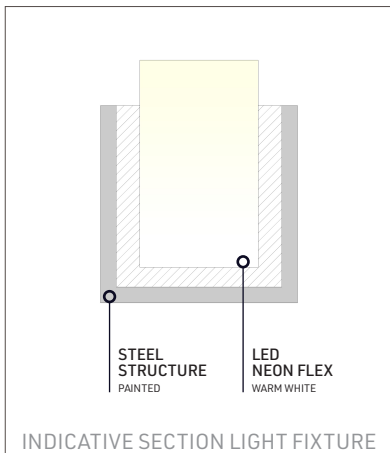
**CONCEPT
DESIGN
BRIDGE 2
HAMILTON ST**

OVER 100 NATIONS TO STRATHFIELD



Longitude and country name to be integrated into artwork.

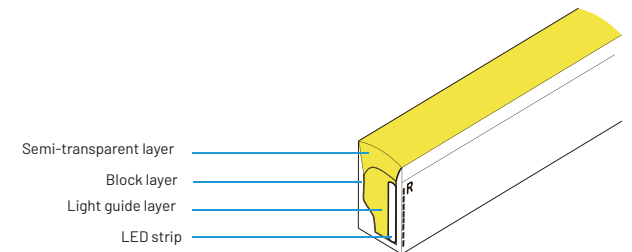
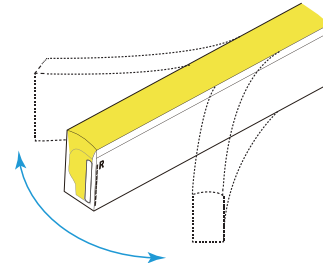
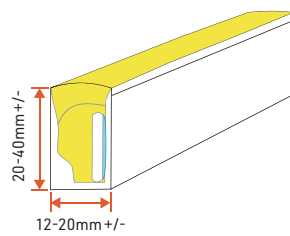
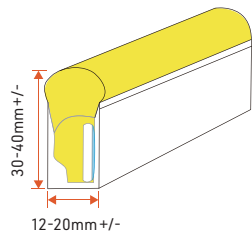
A series of sequenced LED Neon Flex, fixed to painted steel structure, fixed back to bridge structure. Orientated to the North side of the bridge.



**CONCEPT
DESIGN
BRIDGE 1 + 2
DETAIL**



INDICATIVE NEON FLEX TBC



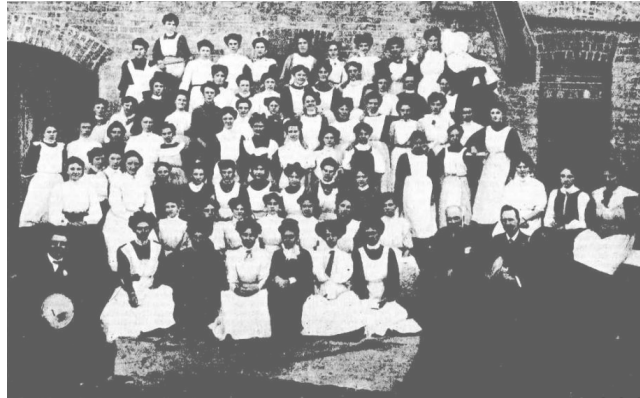
FlexiNeon Specification
Architectural Neon Flex
F15 and F21
<https://flexineon.com/architectural-led-neon-flex/>

**CONCEPT
DESIGN
BRIDGE 3
GEORGE ST**

1000s OF EMPLOYEES TO ARNOTTS

It was often commented that there were few families in Homebush who didn't work for Arnotts.

It was one of the most important of the local employers and it was not uncommon for generations of the same family to work in the factory, in many cases joining when they were teenagers and working through to retirement.



1909



1920



National Library of Australia

nla.pic-vn6194505-v

1930



1993

Fact Sheet Arnotts Biscit Factory Homebush, Cathy Jones 2018

IMAGES:

1909 Midday church, Arnotts factory female staff in uniforms, Ships Biscuits - The At Sea Necessity That Floated William Arnott's Success, Pittwater Online News

1920 A batch of biscuit packers at work, Ships Biscuits - The At Sea Necessity That Floated William Arnott's Success, Pittwater Online News

1930 Several women working on production line in the Arnotts factory, National Library Australia

1993 Workers at Arnott's factory, Sydney Morning Herald

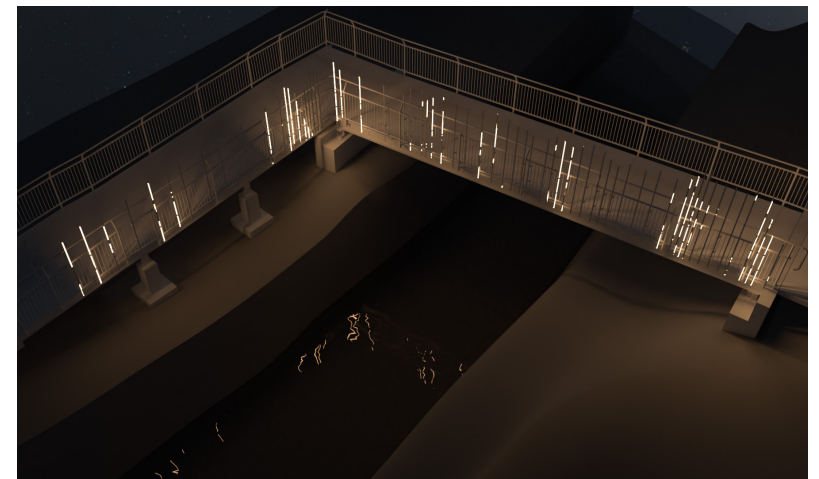
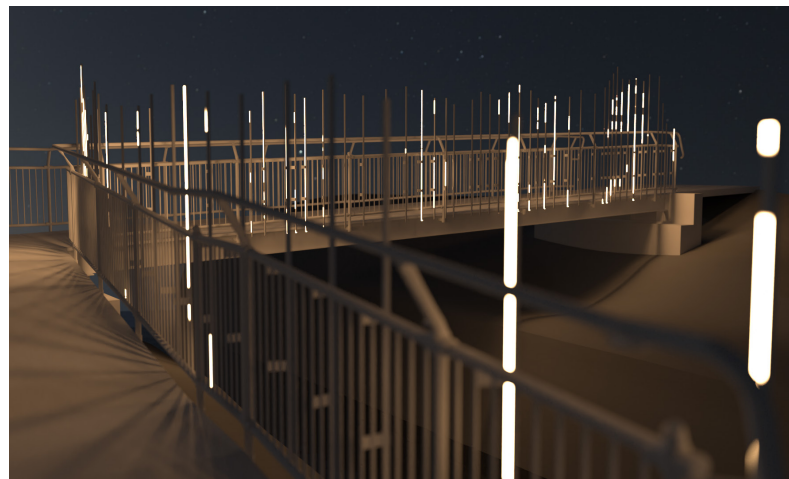
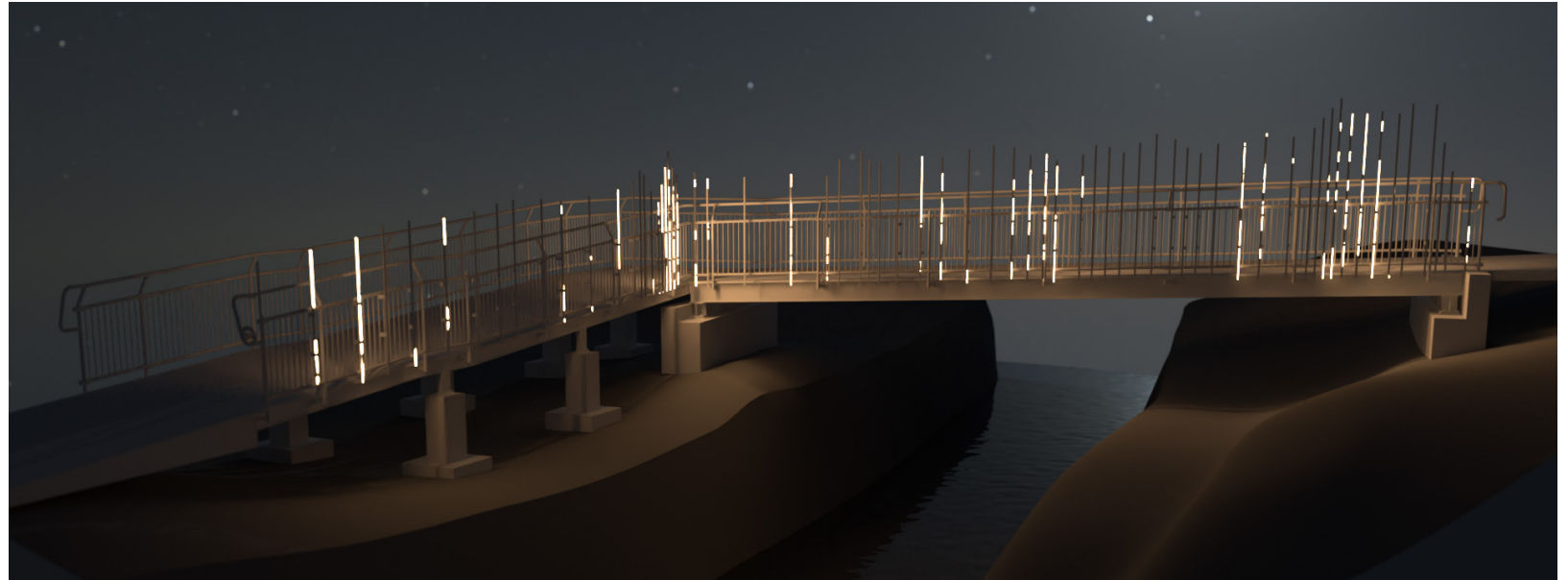
**CONCEPT
DESIGN
BRIDGE 3
GEORGE ST**

Bridge 3 traces the movement of local employees to and from the Arnott's factory from its opening in 1908 to its closing 1997. For 90 minutes each morning before sunrise and 90 minutes each evening after sunset, the forms of up to 2,500 employees pass across the bridge, visualising their passage through the factory doors.

The work will be based on data obtained from Arnott's, with each day representing a different year of data. The 89-year-long story of the factory will play out over 89 days, beginning again every three months.

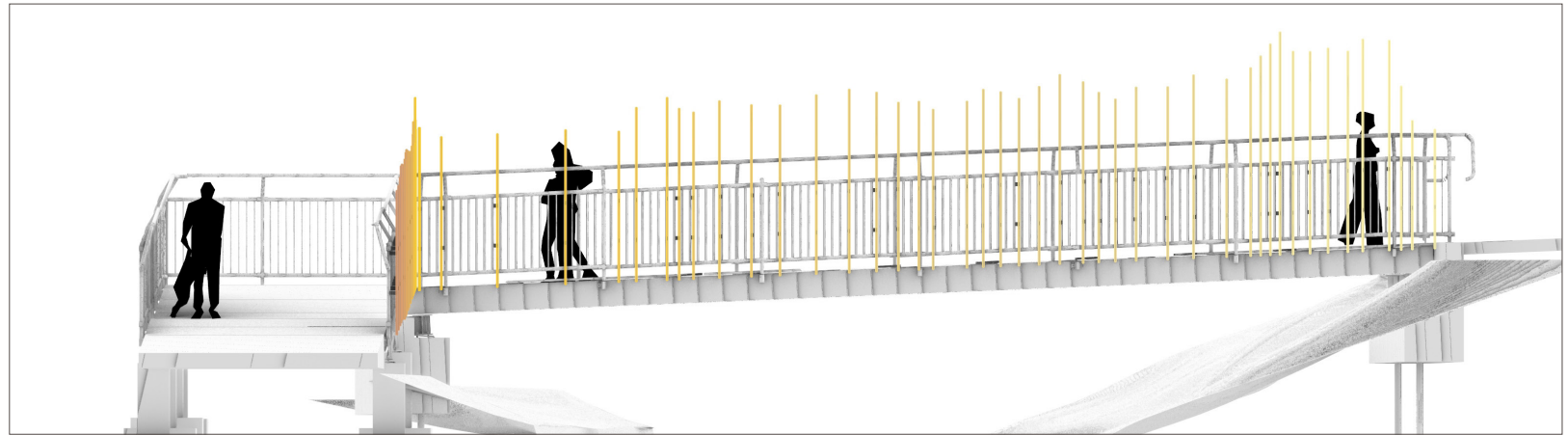
[VIDEO LINK CLICK HERE](#)

1000s OF EMPLOYEES TO ARNOTTS

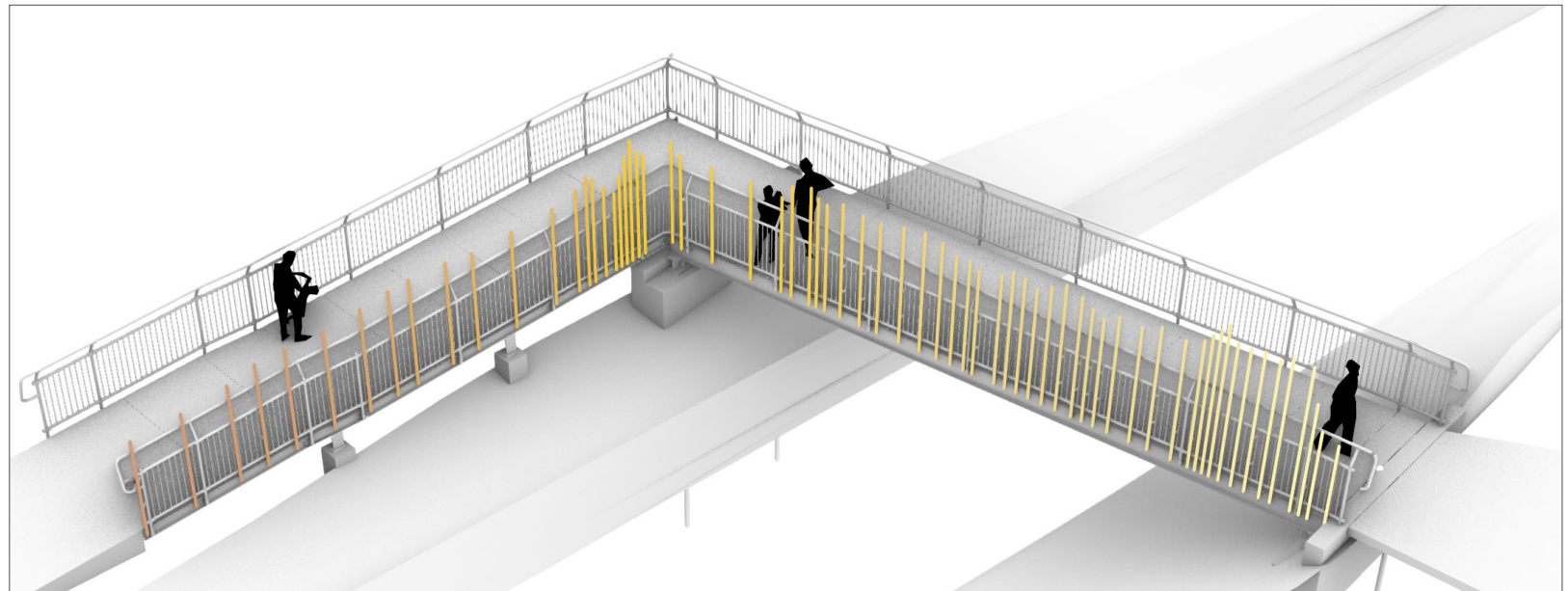
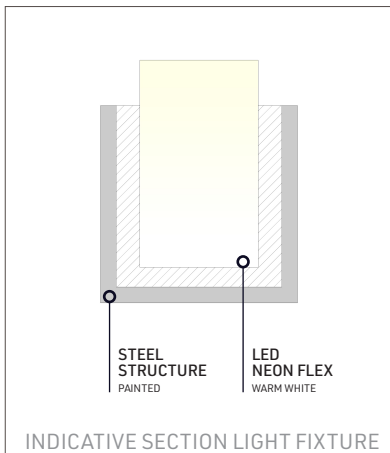


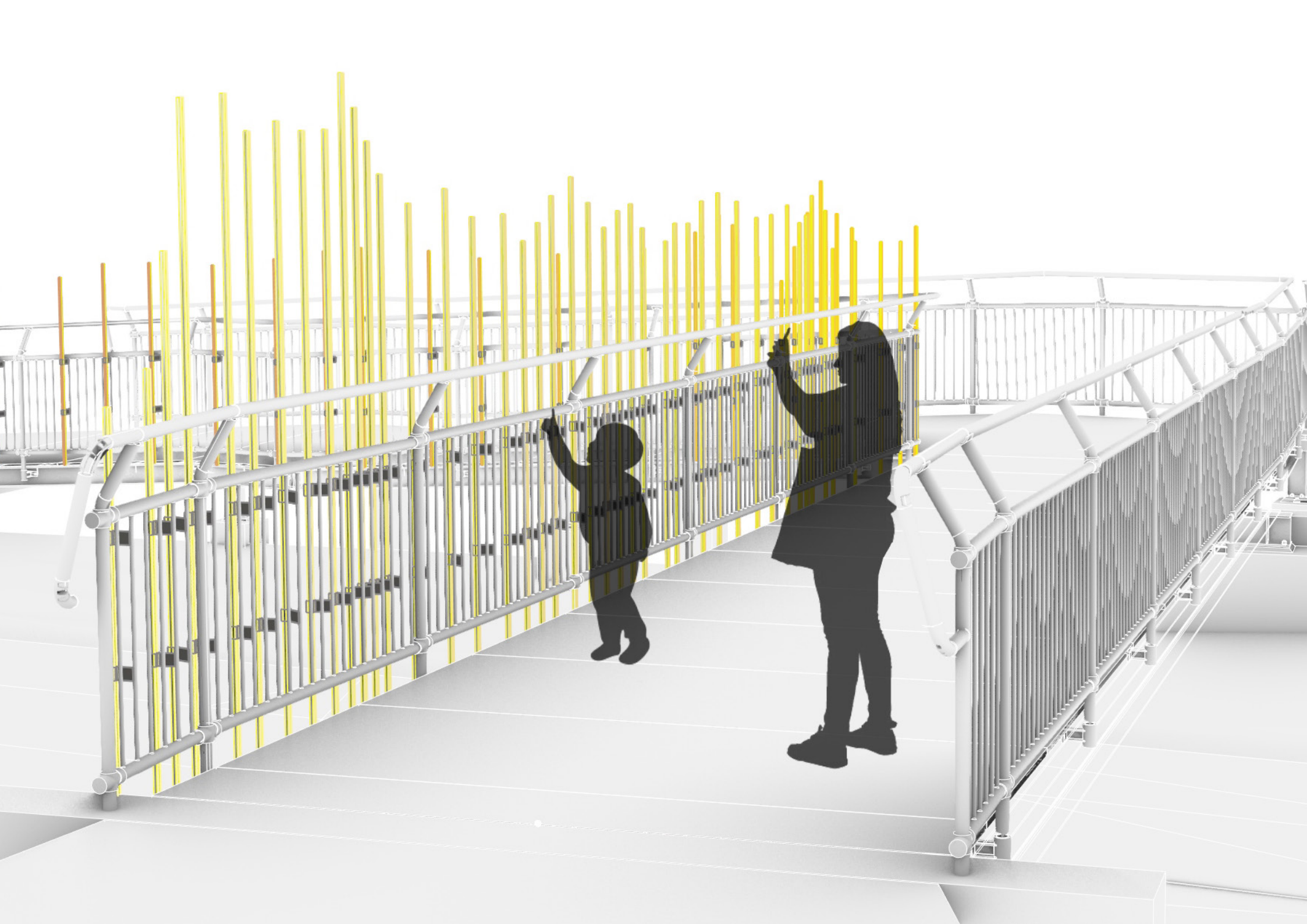
**CONCEPT
DESIGN
BRIDGE 3
GEORGE ST**

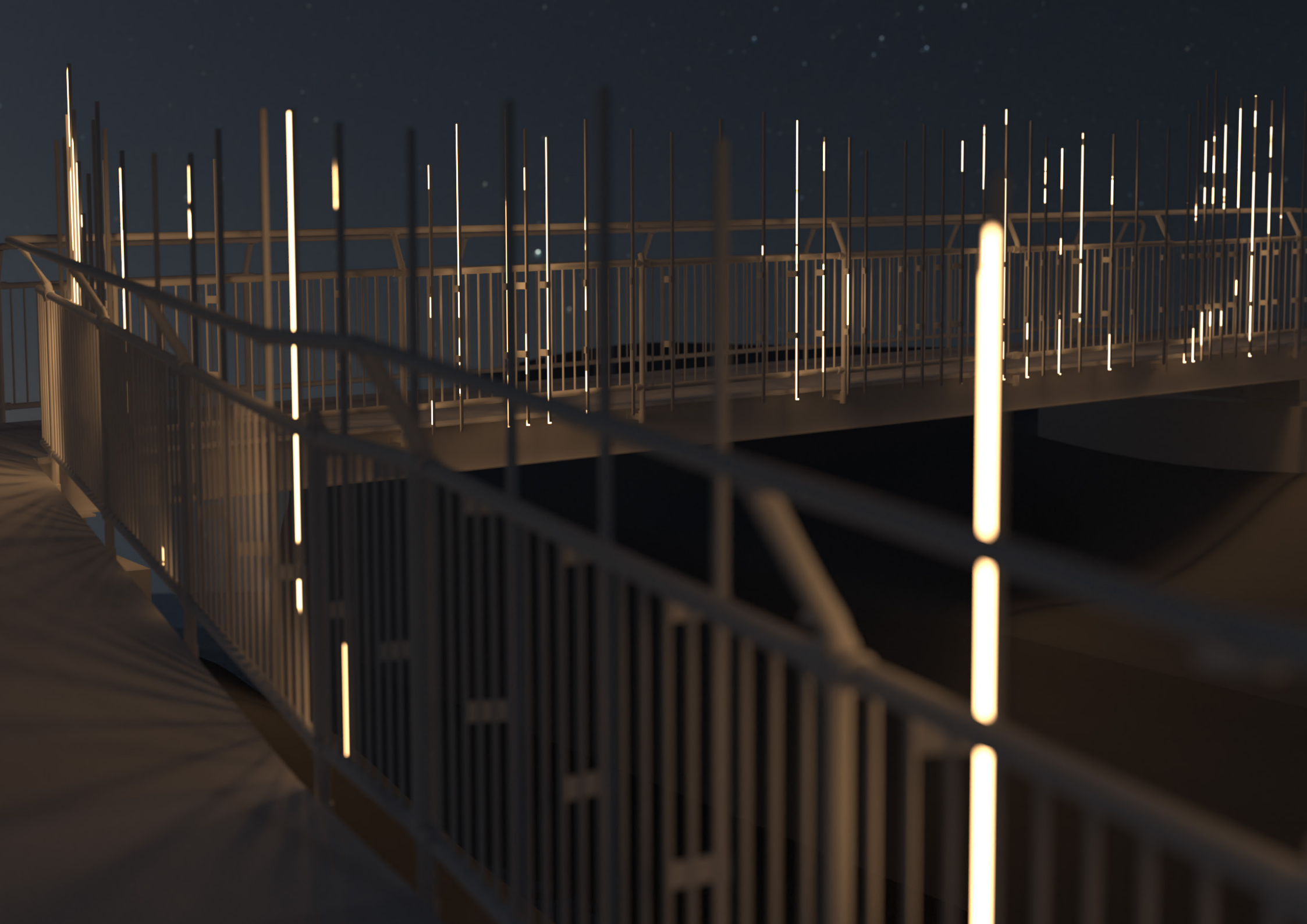
1000s OF EMPLOYEES TO ARNOTTS



A series of sequenced LED Neon Flex, fixed to painted steel structure, fixed back to bridge structure. Orientated to the North side of the bridge.







**CONCEPT
DESIGN
INDICATIVE
PROCESS**

DESIGN PROCESS

- ARTISTS WORK CLOSELY WITH RELEVANT STAKEHOLDERS FOR DESIGN DEVELOPMENT
- DETAILED DESIGN AND SHOP DRAWINGS DEVELOPED WITH ENGINEER AND FABRICATOR
- DESIGN THROUGH TO INSTALLATION IN COORDINATION WITH PROJECT TEAM

DESIGN TEAM

STUDIO CHRIS FOX

- ARTIST
- DESIGN AND DOCUMENTATION
- PROJECT MANAGEMENT AND COORDINATION

STUDIO MIKE DALY

- ARTIST
- PRODUCER
- LIGHTING DESIGN AND ANIMATION

METHODOLOGY

(BASED ON ARTWORK PRE-FABRICATED ONTO PROPOSED BRIDGES AND INSTALLED WITH MAIN BRIDGE INSTALLATION)

FABRICATION METHODOLOGY:

- MATERIALS CUT TO LENGTH AS SPECIFIED IN SHOP DRAWING.
- STEEL C SECTION TO BE ROLLED, DOCKED AND SECTIONED PER 2D RADIUS.
- FIX THE ARMATURE SUPPORT STRUCTURE ONTO FABRICATED BRIDGE STRUCTURES IN WORKSHOP.
- FIX STEEL C SECTIONS TO ARMATURE SUPPORT AND WELD TOGETHER.
- PREPARE AND APPLY PAINT FINISH.
- CUT LED STRIP LIGHTS TO LENGTH AND FIT INTO THE C SECTION.
- DISSEMBLE AND PACKAGE WITH MAIN BRIDGE FOR TRANSPORT.

INSTALLATION METHODOLOGY:

- UNLOAD AND LIFT IN PRE-FABRICATED ARTWORK WITH MAIN BRIDGE STRUCTURE.
- CONNECT ELECTRICITY TO LED LIGHTING. LIGHTING PROGRAMMING, TESTING AND INITIATING.

MAINTENANCE

AS REQUIRED WITH SCHEDULED MAINTENANCE

INDICATIVE PROGRAM

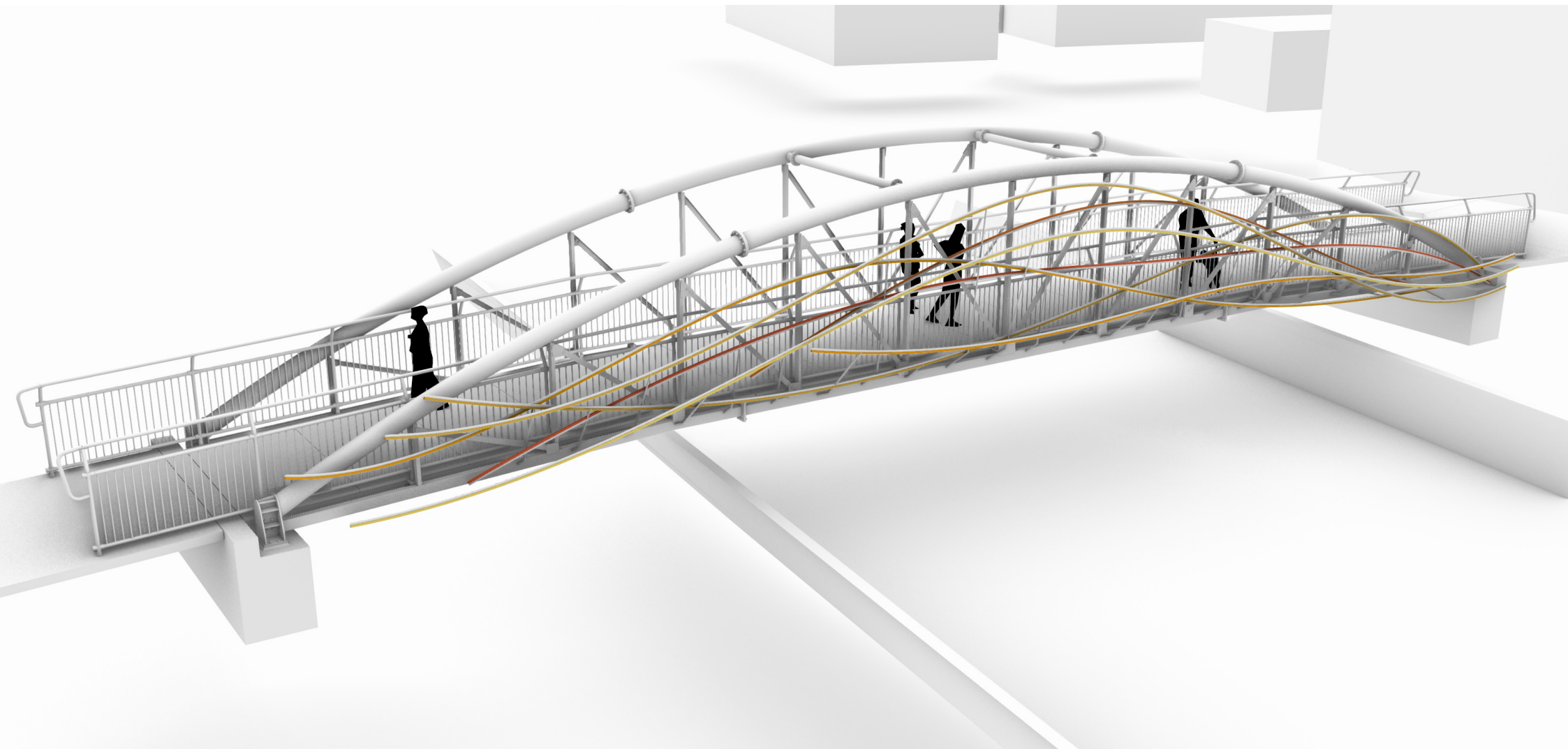
PROGRAM TO BE DEVELOPED AND AGREED WITH PROJECT TEAM:

DESIGN DEVELOPMENT
6-8 WEEKS

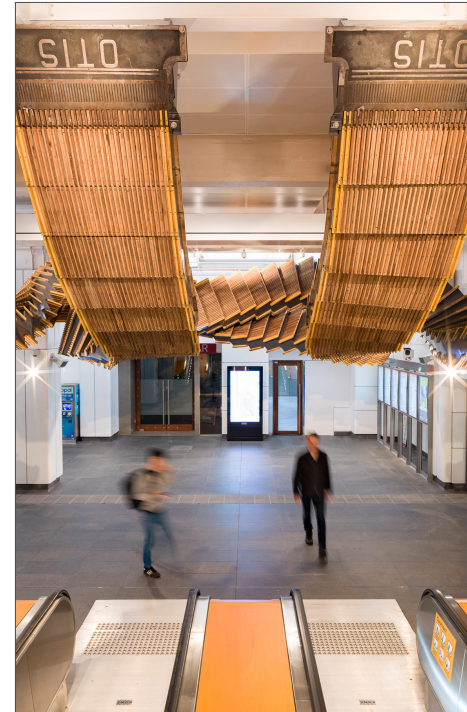
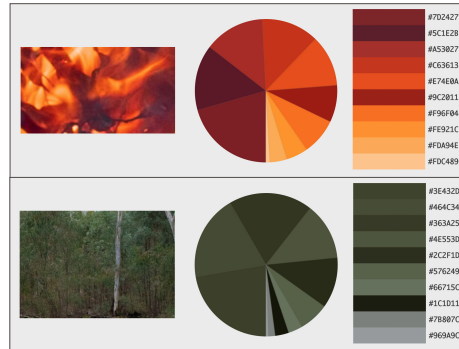
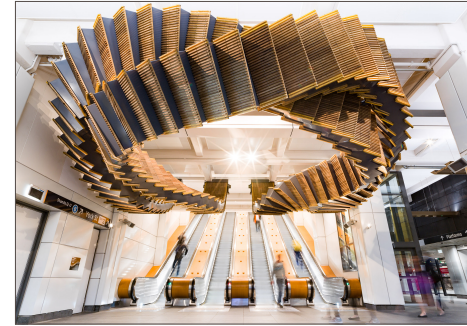
DETAIL DESIGN, ENGINEERING AND DOCUMENTATION
10-12 WEEKS

FABRICATION (BASED ON ARTWORK PRE-FABRICATED ONTO PROPOSED MAIN BRIDGES)
6-8 WEEKS

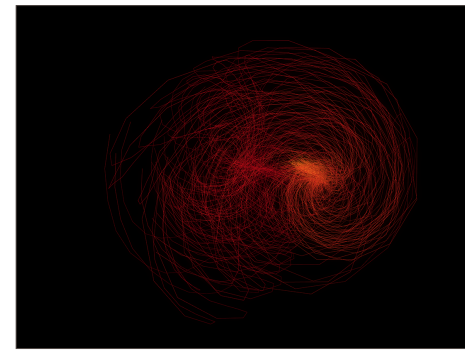
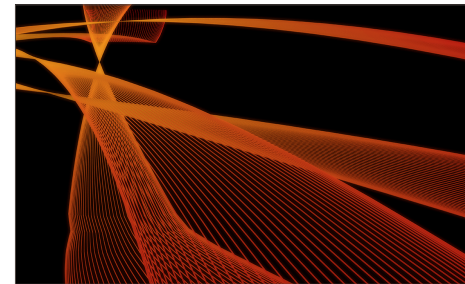
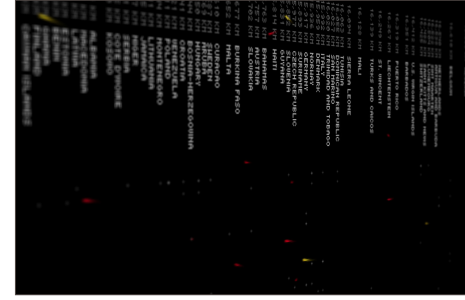
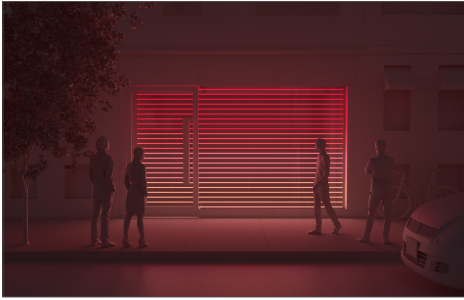
INSTALLATION (BASED ON ARTWORK PRE-FABRICATED ONTO PROPOSED MAIN BRIDGES)
3-4 WEEKS



CONCEPT
DESIGN
TEAM
EXPERIENCE



CONCEPT
DESIGN
TEAM
EXPERIENCE





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