

# TIWWA (This Is Where We Are)

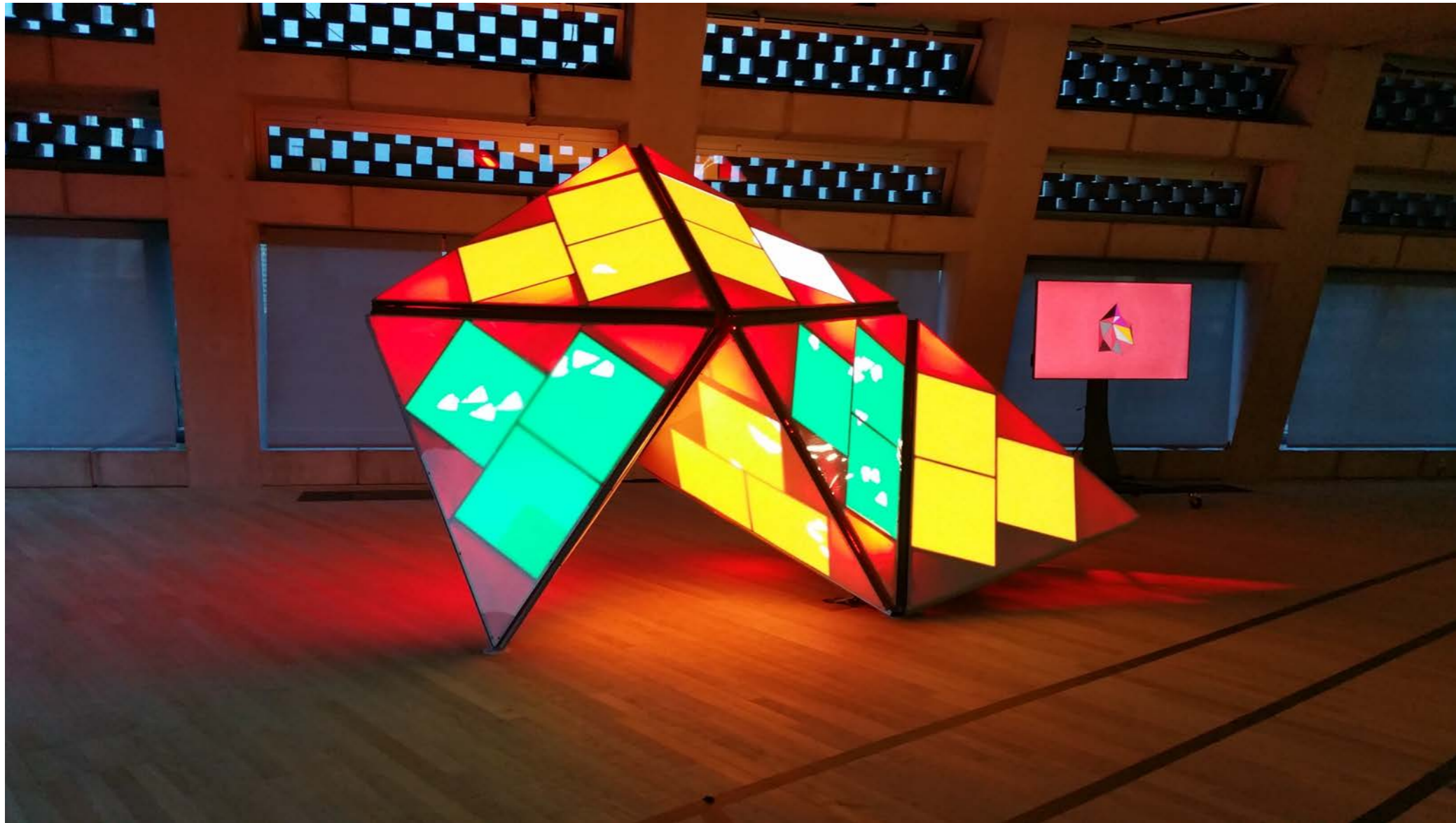
Phillips, ML

<http://hdl.handle.net/10026.1/20315>

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# This is Where We Are (TIWWA).



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# This is Where We Are (TIWWA).

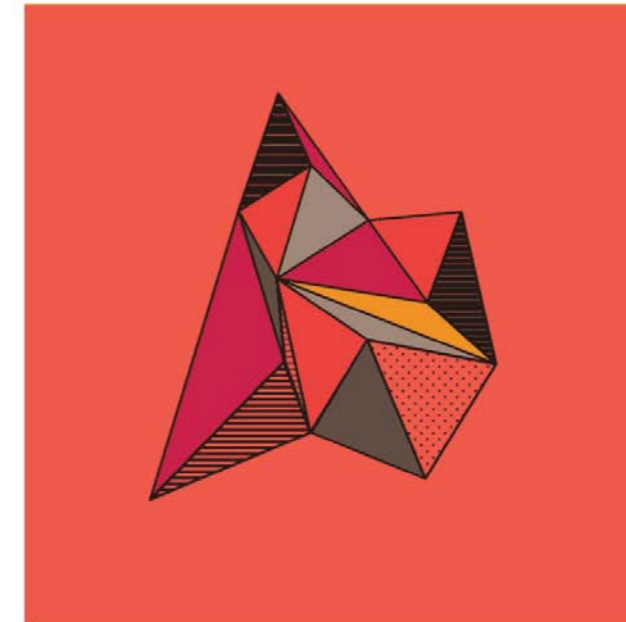
TIWWA was an interactive data-driven, large-scale, site-specific installation for the opening of the Tate Modern Blavatnik Building and the first Tate Exchange digital commission. It incorporated innovative analytical techniques which captured and enhance audience engagement through the analysis of crowd behaviour. It explored the use of predictive algorithms, incorporating sentiment analysis, to create a participatory, playful self-reflexive cyclic process.

TIWWA was an output of research undertaken by Phillips and researchers in i-DAT in the design, development and application of software and hardware that augments, evaluates and increases public engagement of cultural experiences. It built on Phillips' research with Tate Digital Learning around digitally enhancing audience engagement and evaluation, including a commission for the Tate Turbine Hall festival (2015). TIWWA supported the Tate's attempts to address art forms that challenge traditional curatorial, material, engagement and metrics processes.

TIWWA is part of an overarching research initiative called Quorum. Quorum uses participatory design processes coupled with digital prototyping, developing networked devices, apps and the incorporation of Artificial Intelligence and Machine Learning to augment, evaluate and increase public engagement of cultural experiences. TIWWA was the second practice-based output to come through Quorum, following on from Data Jam. Underlying research from TIWWA was then further developed into a high-resolution interactive simulation for the St Ives Naum Gabo exhibition (2020). The adoption of these algorithmic approaches has opened new curatorial approaches in traditionally conservative areas of conservation, exhibition and curation.

TIWWA was grant funded by the Arts Council England and through the Tate Modern Commission. The underpinning algorithmic research was funded by Nesta, Arts Council England, AHRC and IBM. Developed using i-DAT's ludile participatory design methodology with the Tate Collective, the research is validated through the scrutiny of these private/public sector commissioning and application processes, including peer review and professional standards compliance.

## Research Statement:



TATE MODERN  
DIGITAL

THIS IS WHERE  
WE ARE

17-19 JUNE 2016

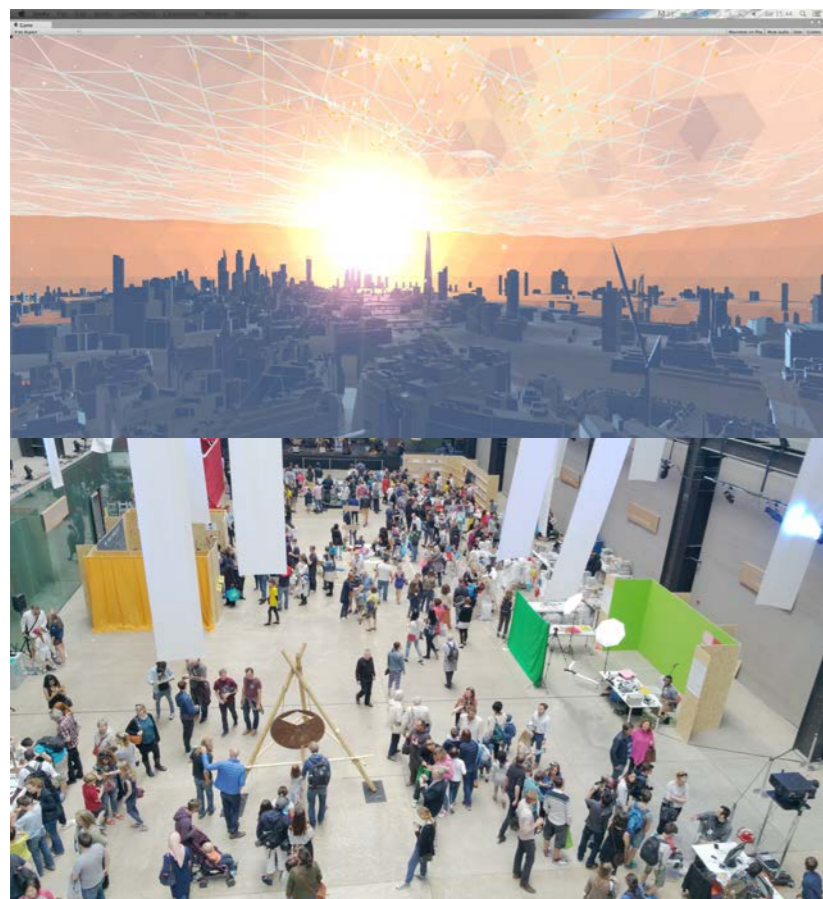


## Research Context:

### TIWWA - 2nd of 3 Tate commissions.

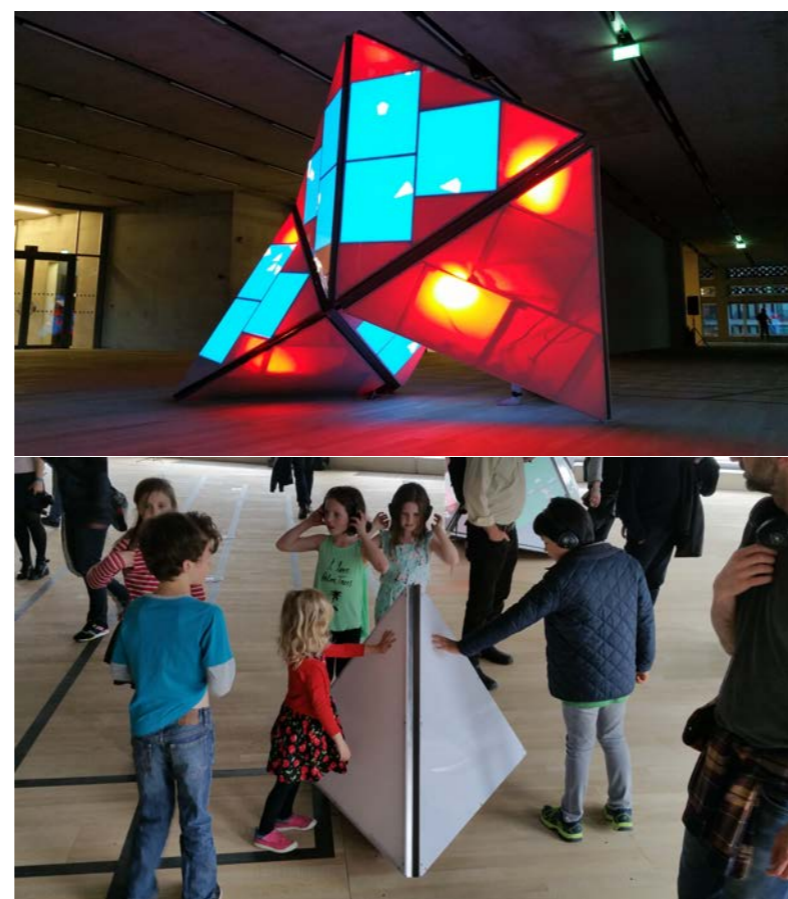
Part of the i-DAT.org **Quorum** research initiative into participatory design and digital prototyping to augment, evaluate and increase public engagement of cultural experiences.

### DataJam, Turbine Festival (25/07/2015):



### This Is Where We Are (TIWWA)

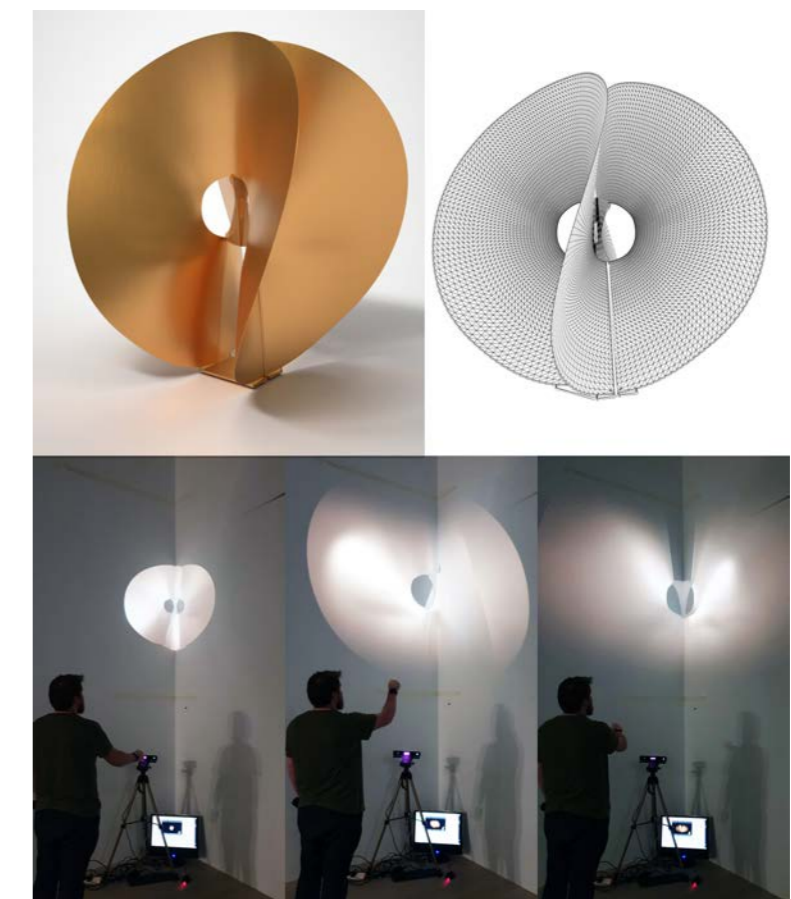
Tate Modern Blavatnik Building (12-19/07/2016):



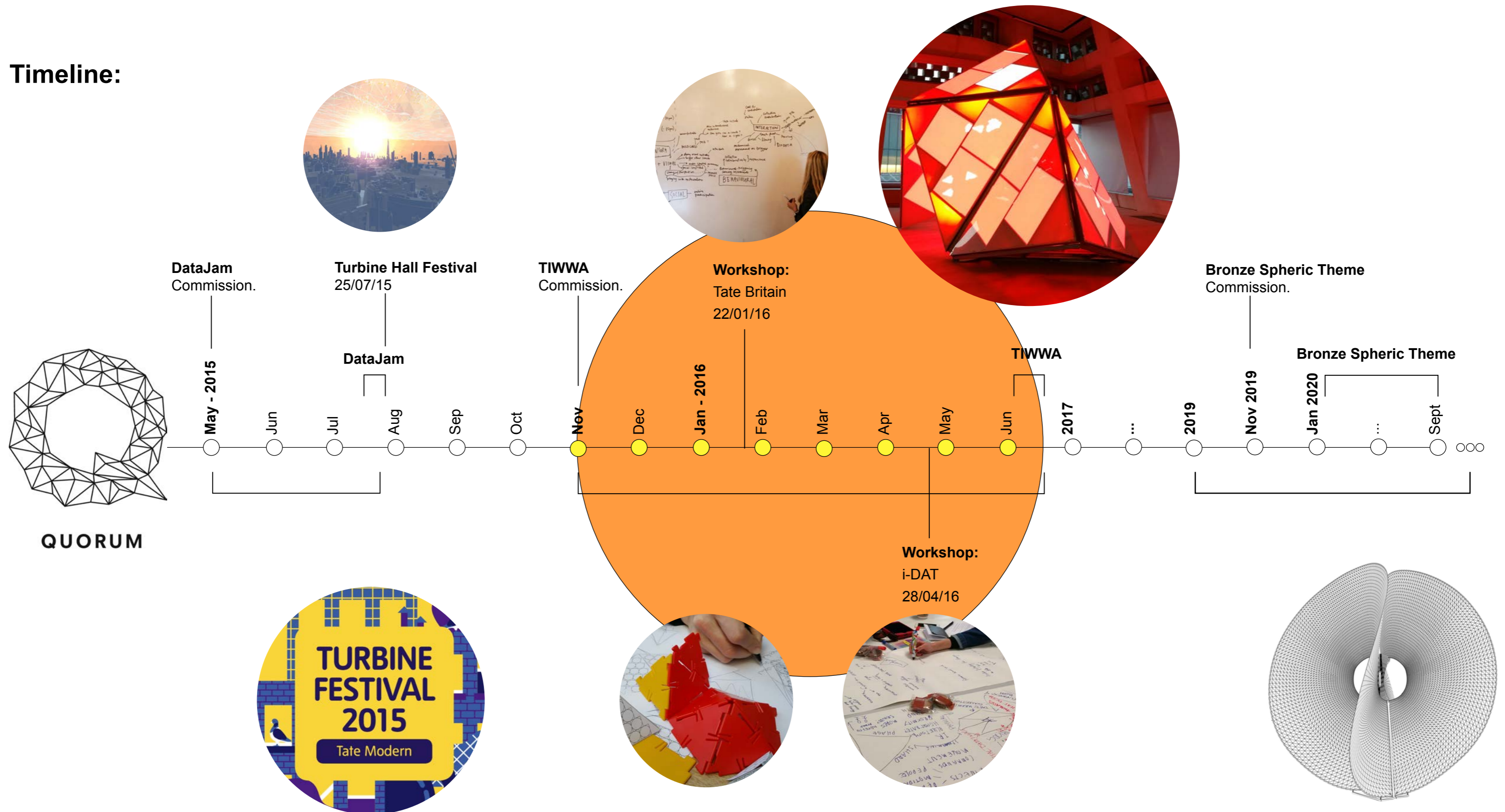
### Spheric: Interactive volumetric scan,

'Bronze Spheric Theme' (1960), Naum Gabo.

Tate St Ives exhibition (25/01-27/09/20), co-produced with Tate Digital.

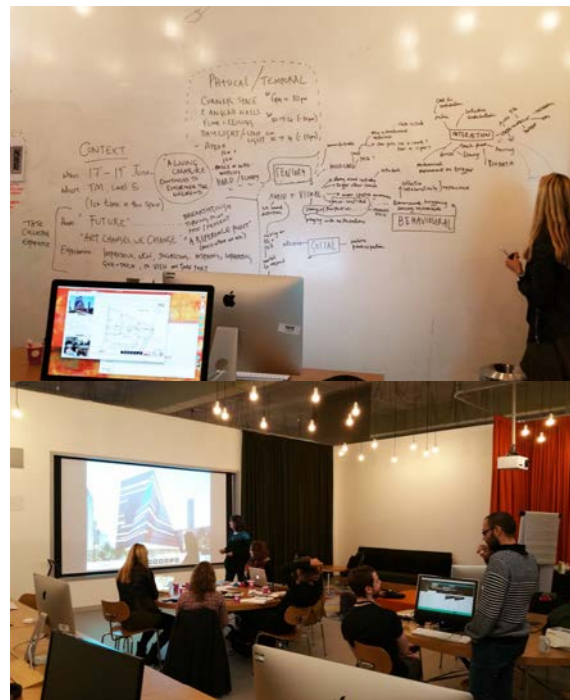


Timeline:



## Research Activity:

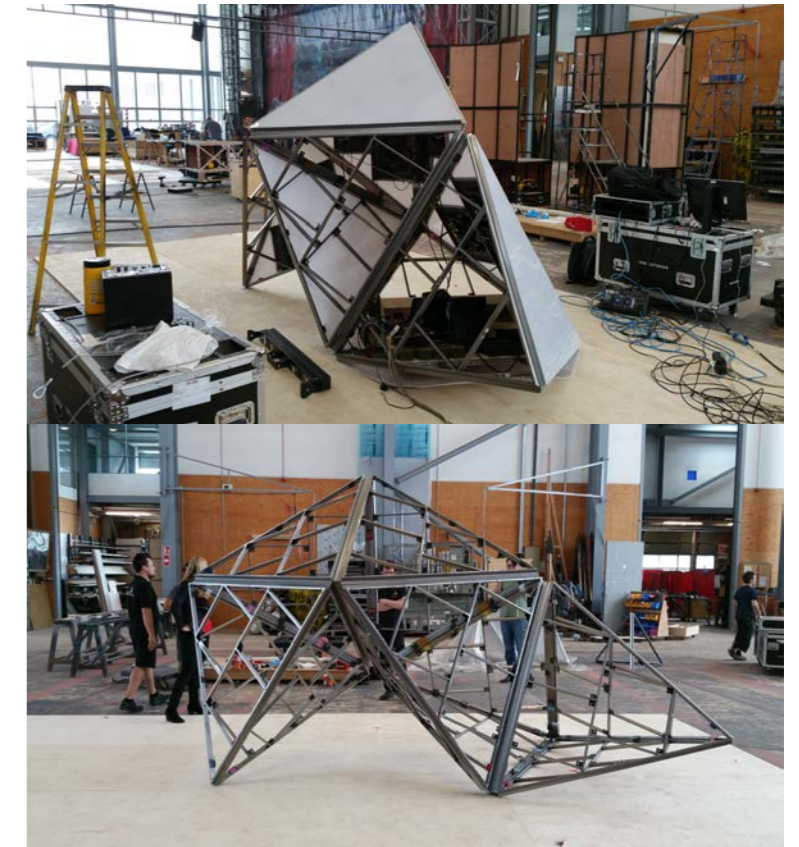
TIWWA development timeline and process: in collaboration with the Tate Collective and Tate Digital through design workshops, digital fabrication and algorithmic design.



**Iterative Design:**  
process to define the structure,  
involving generative algorithms.  
Physical maquette prototyping.



**Physical Interface:**  
Fabrication of the  
structure.



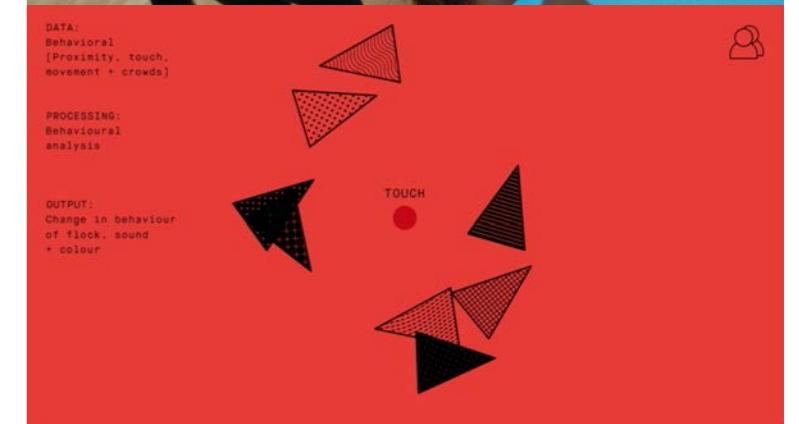
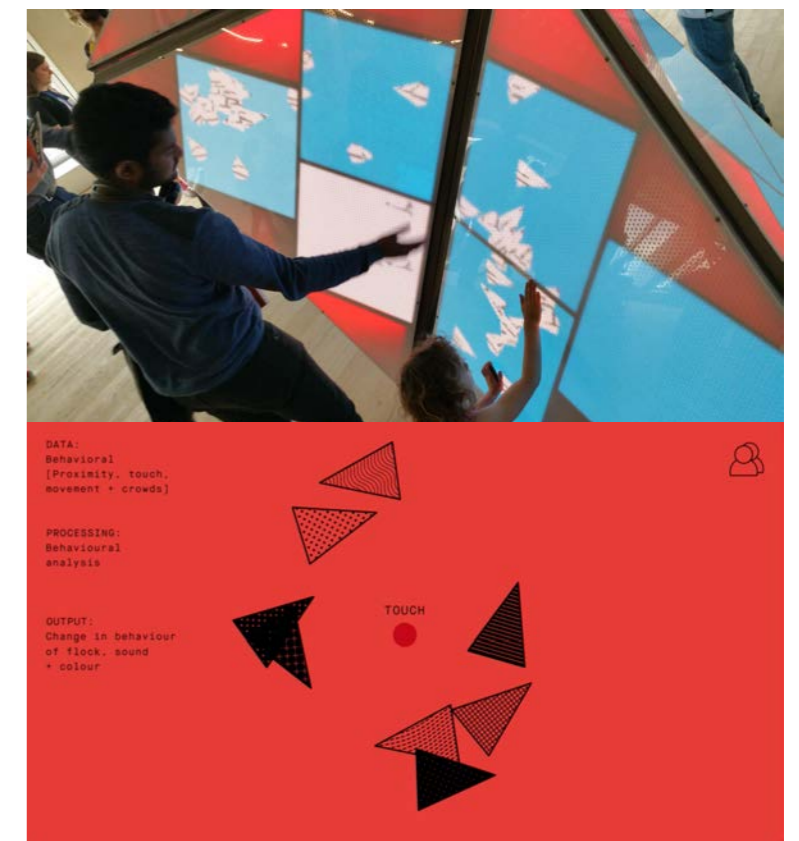
**Workshops:**  
@Tate Britain with Tate Digital &  
Tate Collective: 22/01/16

@i-DAT, University of Plymouth  
with Tate Digital & Tate Collective:  
28/04/16

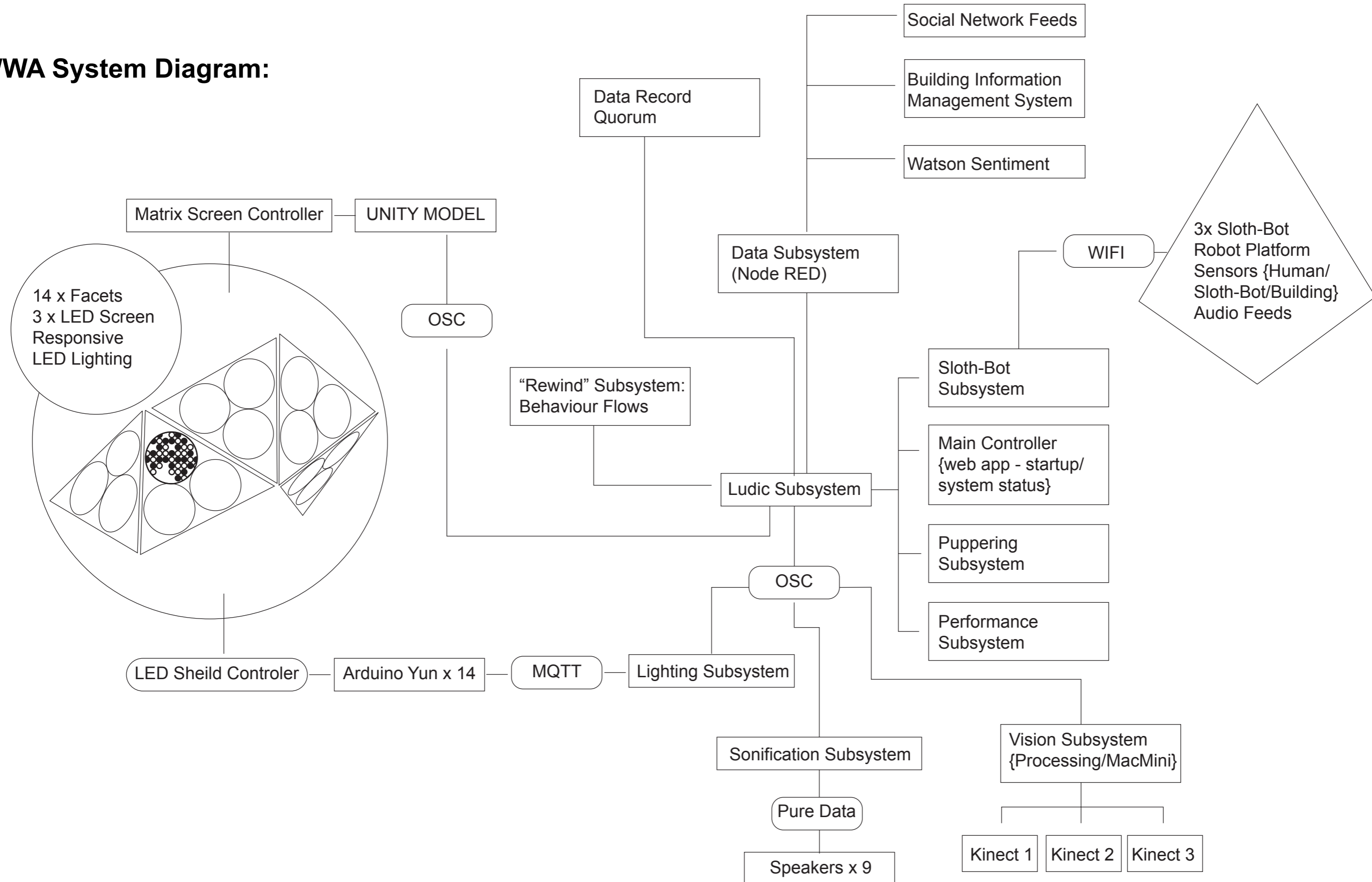
**Site Specific Design:**  
Site visits and design integration  
with: Blavatnik Building  
architects, Herzog & de Meuron.  
& Blavatnik Building estates,  
electrical, mechanical & BIMS.



**Ludic Algorithms:**  
defining data feeds,  
algorithmic behaviours and  
game dynamics.

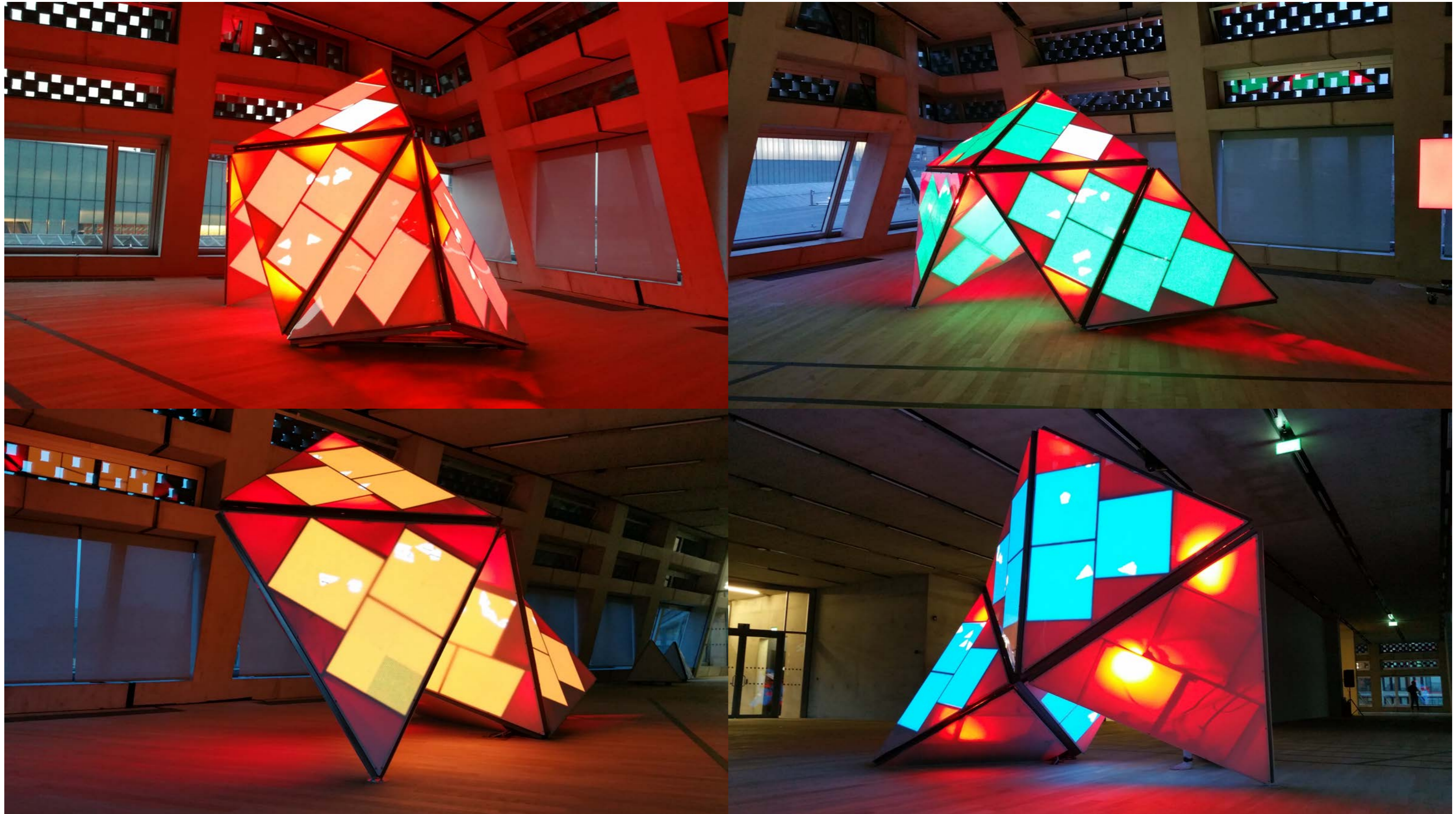


### TIWWA System Diagram:

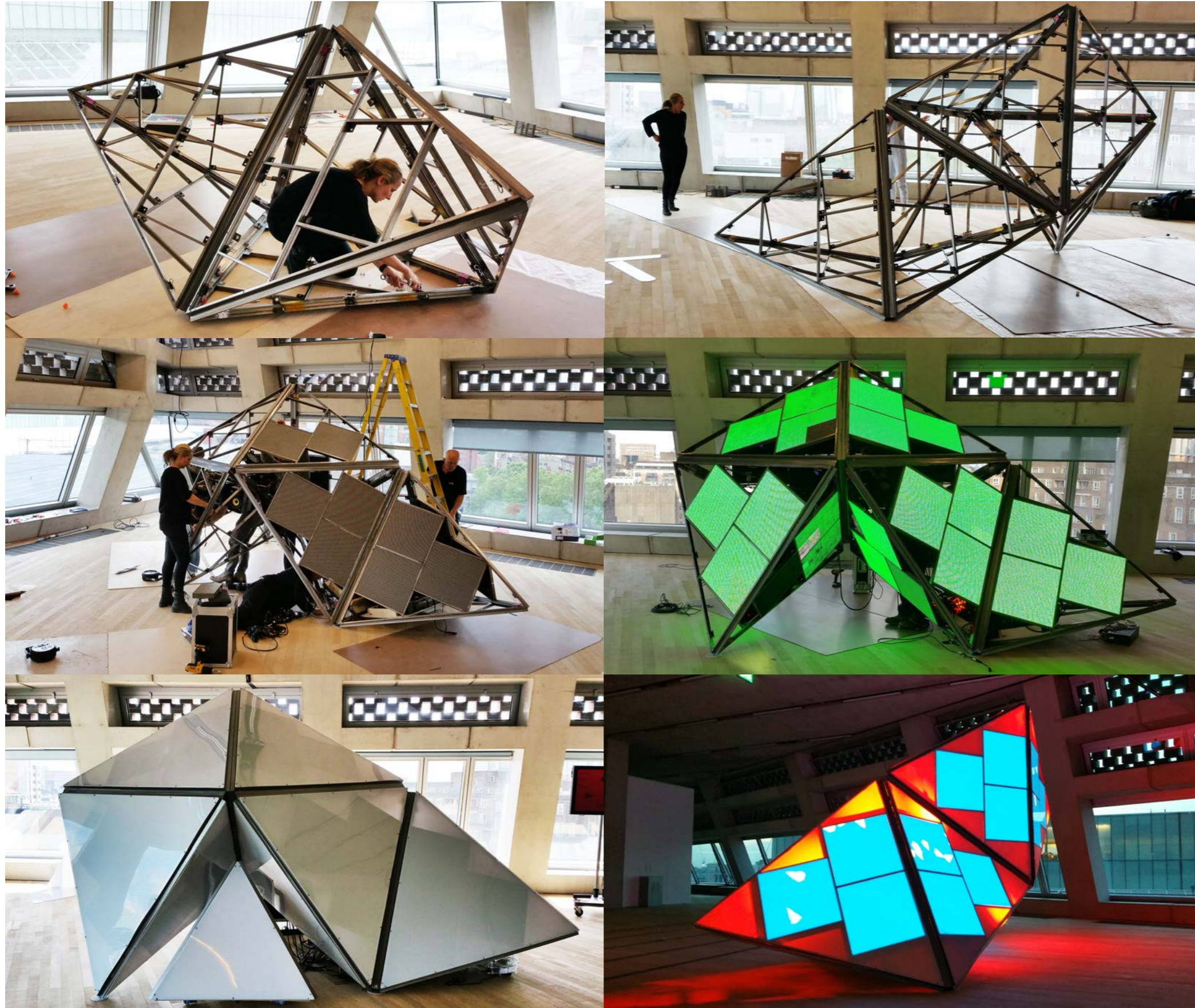




Structure#1:



## Structure#2:



### TIWWA Structure setup:

Modular low-polygon structure clad in LED screens.

The structure contains lighting, audio, control and server systems.

Framework clad in translucent textured screens.

LED matrix, audio, data processing, dynamic displays and interactive systems programmed and integrated to create a self-contained, autonomous networked system.

Click to open URL:

<https://i-dat.org/tiwwa-ref-context/>



### Structure#3:



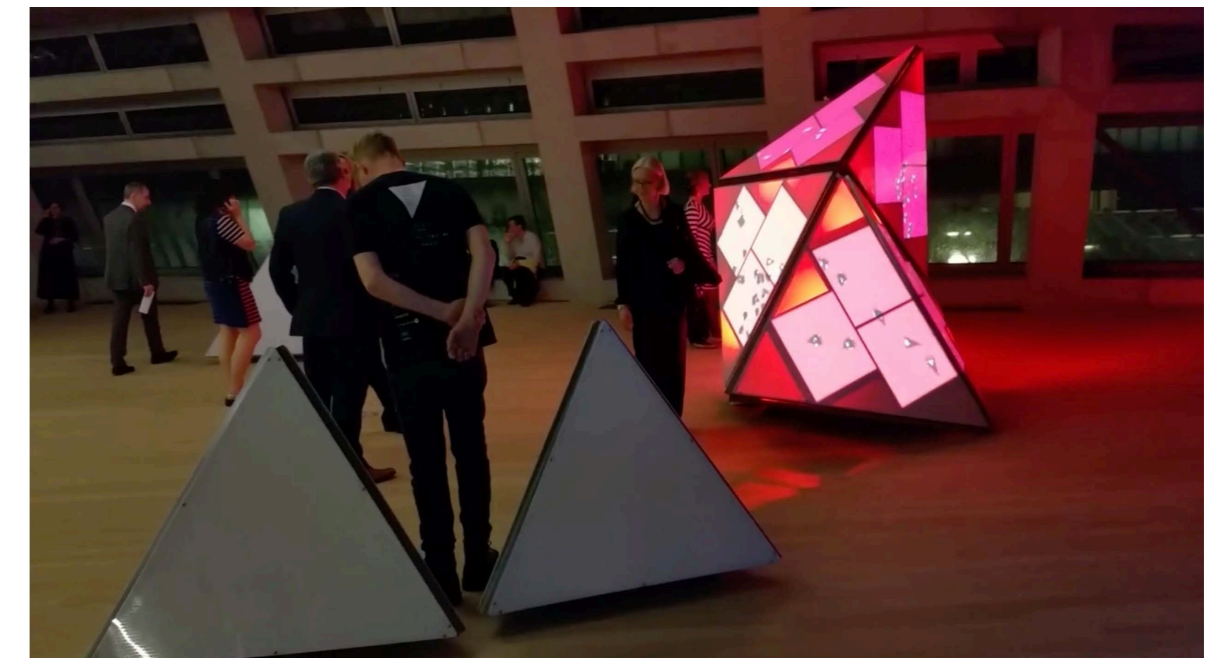
### Robotic Fragments:

Autonomous robotic roaming 'fragments' of the main structure - Object sensing and communication protocol: (flashing light and pre-defined 'dance').

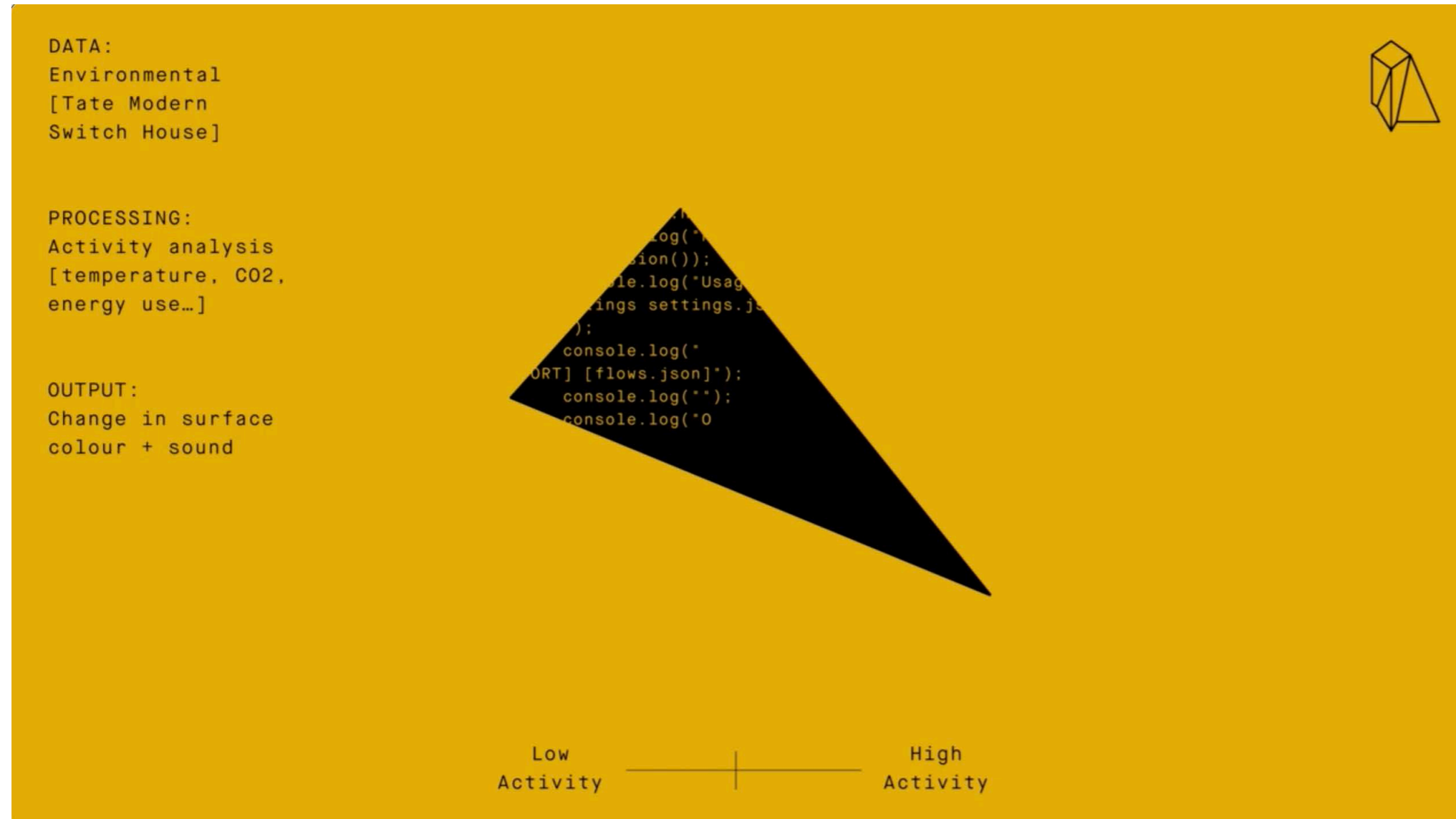
Video recording from installation:

Click to open URL:

<https://i-dat.org/tiwwa-ref-context/>



## Behaviours:



The live and interactive animated sprite behaviour is generated from a mix of data, including:

**Environmental feeds:** from the building and weather data...

**Sentiment analysis:** of Twitter feeds via IBM Watson...

**Audience behaviour:** through interactions with the touch screen skin of the large object...

**Click to open URL:**  
<https://i-dat.org/tiwwa-ref-context/>

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## Dissemination & Links:

**Audience Numbers:** 25kTurbine Festival DataJam visitors, and 197K TIWWA visitors.

**Data:** TIWWA generated around 2 gigs of data (through IBM Watson Tone Analysis including Tweets and Messages, and around 150,000 tweets processed through the TIWWA system.

### Papers and Presentations:

Phillips, M. (Keynote). Conversations with the Artificial Other. Rubrics of Transformation Symposium. The New Technologies Laboratory of the Dept. of Communication and Media Studies of the National and Kapodistrian University of Athens, The Municipality of Athens. Serafio City of Athens. 18/02/2019.

Phillips, M. (Keynote). Laugh, He Said Something Funny. Cumulus conference Wuxi 2018: Diffused Transition and Design Opportunities. Oct. 31st -Nov. 3rd 2018, Wuxi, China, Jiangnan University.  
<http://cumuluswuxi2018.org/keynote-speakers>.

Phillips, M. Aga, B. Collectively Living, Working and Being, With and Through Predictive Algorithms. EVA, Electronic Visualisation in the Arts, London, Ed: Bowen, J. Diprose, G, Lambert, N. 10-13/07/2017. Pp 198-201

Aga, B. Phillips, M. Sinkler, R. This is Where We Are- Collaborating with Algorithms. Technarte, Bilbao, 16-16/05/2017.

### Links:

Tate Data Jam:  
<https://www.tate.org.uk/whats-on/tate-modern/festival/turbine-festival/data-jam-i-dat>

TIWWA documentation:  
<http://www.tate.org.uk/whats-on/tate-modern/performance-and-music/where-we-are>

<http://quorum.i-dat.org/>

<http://quorum.i-dat.org/tiwwa/>