OD&M at Tate Exchange: A Case Study

A case study report about EU Open Design & Manufacturing (OD&M) project at Tate Exchange in association with the Digital Maker Collective (DMC), UAL

Introduction:

Building Open Design & Knowledge Exchange Communities at Tate Exchange

Between late 2017 and June 2018, University of the Arts London (UAL) Digital Maker Collective (DMC) in association with the EU funded Open Design & Manufacturing Project and its partners from Green Lab, Fablab Lodz & MA Industrial Design students, Central St. Martin's, UAL, have been experimenting with ways of encouraging open collaboration, knowledge exchange and open design communities. The focus for exploring open design collaboration & community development with the OD&M project was centred around the DMCs week long residency at Tate Exchange, Tate Modern, London in March 2018.

- The **Digital Maker Collective (DMC)** are an open group of University of the Arts staff, students, alumni who share common goals of exploring digital & emerging technologies in the context of arts, education, society and the creative industries. DMC are supported by Camberwell, Chelsea & Wimbledon, UAL.

- The EU funded **Open Design & Manufacturing Project (OD&M)** is a Knowledge Alliance dedicated to create and support communities of practices around the Open Design & Manufacturing paradigm,

making the most of openness, sharing and collaboration to create new value chains of innovation in design and manufacturing oriented to the social good.

- The DMC are founder members of **Tate Exchange**, an experimental space for everyone to collaborate, test ideas and discover new perspectives on life, through art.

What we did at the Tate Exchange?

The Art Works of the Future event at Tate Exchange, Tate Modern took place between 6th-11 March 2018.

The Digital Maker Collective invited guest contributors and makers from across the globe to help transform Tate Exchange into a large public tech innovation studio, a space to get hands-on with technology exploration and rapid prototyping, and discover new forms of collaborative digital making experimentation.

The event was focused around the two provocations:

- Are humans sustainable?
- What is the future of interaction?

Through these provocations, the collective explored new forms of open making, collaboration and co-creation, with public and external partners.

See full programme link and the programme on the Tate Modern website

Partners involved

Tuesday 6th March 2018

Wednesday 7th March 2018

Thursday 8th March 2018

Friday 9th March 2018

Saturday 10th March 2018

Sunday 11th March 2018

UAL internal collaborators:

- 60+ University of the Arts London (UAL) Digital Maker Collective (including current Undergraduate and Postgraduate students, Alumni and staff)

OD&M related external collaborators:

- Green Lab: event link
- Lodz University of Technology, Fablab Lodz: event link
- MA Industrial Design students (Central St. Martin's, UAL) My Furniture Works: event link
- Open Design and Manufacturing (OD&M) project: event link (OD&M conversations across above)

Other External collaborators:

- Space10: event link
- Cyland Media Art Lab: Community artists, critics, curators, coders, engineers, activists (St. Petersburg, RU) event link
- South Devon College: event link
- South London Raspberry Jam: event link
- Future Makers Collective Creative Digital Media at the Institute of Technology Tallaght, Dublin: event link
- SenSat: Commercial drones producing 3D city maps for driverless car systems – event link

Aims & objectives?

The aim of the residency/event at Tate Exchange was to bring together an open creative community from across education and the tech sector together with the public to explore the impact of rapid technological change in the creative industries and to question and re-think its wider impact on our lives.

The focus was on dissolving the divisions of formal University curriculum and college structures, forming links with industry and external Fab Labs and exploring new and meaningful avenues for knowledge exchange.

Our overall objectives of the Tate Exchange event were to:

- Raise awareness/debate around the changing landscape of creative education & technology
- Explore the positive & negative impacts of technology on work of the future, society & our lives
- Explore what Knowledge Exchange means to education & industry & encourage collaboration
- Explore sharing of open design practices with the general public
- Build new networks & partnerships so we have the capacity to respond to future opportunities
- Help embed and disseminate the OD&M project at UAL and externally
- Raise awareness of the DMC so to highlight and capture all the above,
- Be better placed going forward in terms of embedding similar activities in UAL strategic objectives
- Gain formal support
- Explore future project funding opportunities
- Gain experience of participating in international collaboration & exchange

How the OD&M stakeholders were engaged

All the partners were involved in planning meetings in the weeks and months leading up to the event, where possible in person but mostly virtually connecting via email or skype. We also visited each other's makerspaces.

The OD&M partners involved in Tate Exchange included – Green Lab, Lodz University of Technology, FabLab Lodz and My Furniture Works (MA Industrial Design students, CSM UAL) were invited to participate in the event following the OD&M workshop in January, held at Central St. Martins, UAL.

Event Planning

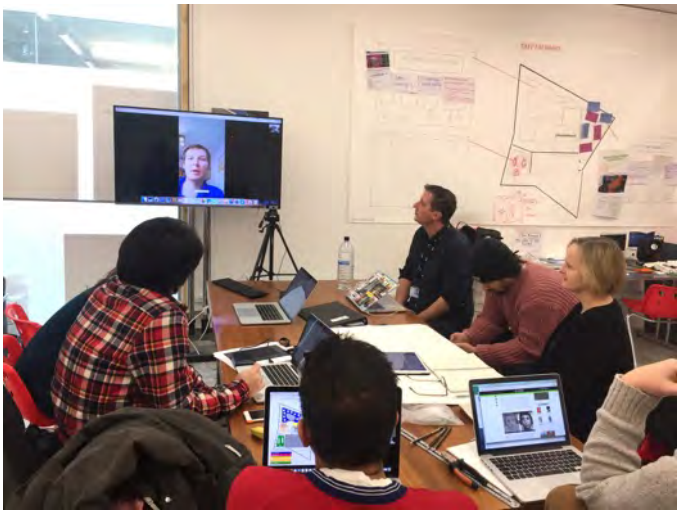


Image above: Skype meeting with Igor and the team in Poland & members of the DMC at Chelsea College of Arts MakerSpace – see list of Tate planning meet-ups here

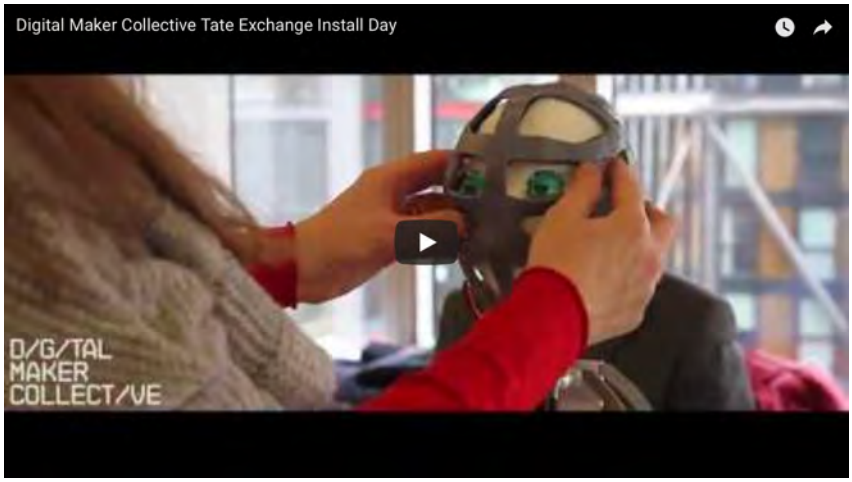
Image above: Students from CSM at a DMC Tate Exchange planning meetings at Chelsea College of Arts MakerSpace – see list of Tate planning meet-ups here

Image above: Tate Exchange planning meetings with Ande from Green lab at Chelsea College of Arts MakerSpace

Image above: DMC members also visited Green lab for Tate Exchange planning meetings

Other external partners were invited as a result of existing relationships, connections made with individual DMC members, or shared interests and values with the Digital Maker Collective as a whole.

OD&M stakeholders: Event participation



Video above of the Install day https://youtu.be/_w-6yEU0Ml8

Below are three examples of OD&M stakeholders' participation in Tate Exchange. There were two levels of OD&M participation during the Tate Exchange residency.

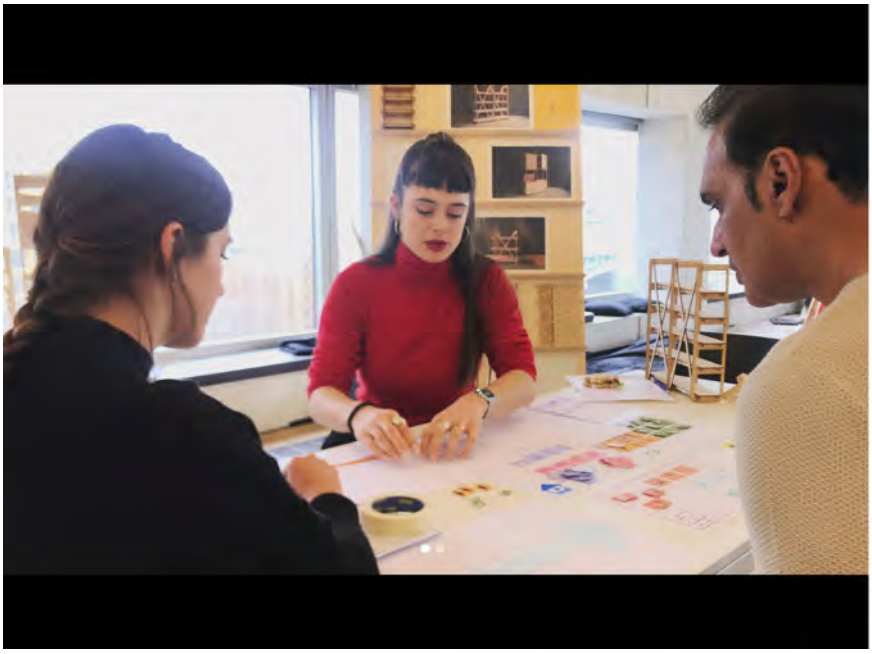
1. The **My Furniture Works** and **FabLab Lodz** participation was more focused on sharing existing specific open design practices, research with other participants and the visiting public, as well as offering short open design challenges.

2. The **Green Lab** participation included a more advanced level of collaboration with the Digital Maker Collective, the activation offered a co-designed space where participants and the public visitors were invited to contribute to its ongoing and evolving design over the week of the residency.

All three OD&M activations provided a space and context to talk and share findings from the OD&M project with all the event stakeholders and participants as well as visitors, the OD&M reports were printed and shared across the OD&M activity spaces for conversational purposes.

My Furniture Works, MA Industrial Design students, CSM UAL

The UAL MA Industrial Design students took part in all six of the residency days. The students discussed their open design project with fellow participants & public visitors. They provided examples of the link they hoped to create between the maker world, a public and social institutions and how they can engage a community through making activities.



Lodz University of Technology, Fab Lab Lodz

Representatives from Lodz University of Technology, Fab Lab Lodz including Igor Zubrycki took part in four days of the residency.

Igor and the team from Lodz provided a hands-on open design challenge which explored "robotic representation" a continuation of work form their "Fantom" project (robot for presenting epilepsy attack).

The team from Lodz wanted to answer the question of how people want a robot to represent them, also what people do not want to have on their robotic representation. The team from Lodz had lots of fun at the event, and made lots of friends through open for collaboration.

Growing Space: Collaborative project between Green Lab and UAL Digital Maker Collective

Growing Space is developed from the idea of an indoor greenhouse. The project investigates open source and flat pack furniture, temporary shelters, end of life materials, indoor farming and sustainable food systems.

The Tate Exchange Event enabled the project team, with public participation, to create a growing environment/structure, within the Tate Exchange, using locally salvaged/recycled and non-specialist materials. The space was designed around 'modules' which were easy to build and be replicated by anyone (of any age/ability). It was constructed using intentionally simplistic building methods that could be transferred to other materials, depending on availability. Public participation was strongly encouraged with many subsequent structures developing beyond the initial 'module' prototype.

The modularity of the space provided the capacity for expansion/growing, housing plants to create an intimate and pleasant environment. Chilli plans, seeds, microgreens, cress and beans were planted prior to and throughout the event, in recycled cups, bottle and containers.

The intention of the space was to rethink design as a collective and evolving activity that can be shared and used between its members. It also served as an environment to house conversations and knowledge exchange in the form of a DIY hydroponics workshop from Edward Hill (Green Lab).

Image above: Growing Space build in progress with members of the public. DIY bucket Hydroponics system (workshop output) in foreground.

Image above: Growing Space build in progress with members of the public.

Image above: Growing Space and members of the project team (Hanna and Anna) UAL DMC and Green Lab.

Image above: Growing space early build in progress with UAL DMC members of the project team.

Impacts

- Encouraged discussion and knowledge exchange around common themes of urban agriculture, urban green spaces, reusing waste materials, modular systems, sustainable food systems etc.
- Enabled presentation of the project at the There and Back Again event held by the Centre for Circular Design, UAL.
- Initiated the development and improvement of the design, through feedback from visitors and peers at UAL.
- Facilitated first stage in the development of a collaboration with Green Lab.

More information about the realisation of the project at the Tate Exchange is available here.

Further images are available on instagram: @growingspaceproject

What were the impacts, what did it achieve? Evidence to support these achievements/impacts.

We are currently in the process of documenting the specific impacts of the different stakeholders involved in the Tate Exchange.

Please see here for updates on this, which will include a video case study. http://digitalmakercollective.org/node/337

Also see this video by Chelsea College of arts about the Maker Space, Tate Exchange featuring an interview with one of the students working on the OD&M Growing Space collaboration https://youtu.be/ml2YtHA-Y3g?t=6m2s

External reach

- Tate Exchange audience numbers over the six days of the residency were:
  - 3981 public visitors
  - Including 2200 public visitors over the weekend 10-11th March.
- DMC website full programme link (Tate Programme pages had over 2k visits)
- Programme on the Tate Modern website (Tate Exchange website had over 22k views)

Press

- Sky news feature - http://digitalmakercollective.org/node/324 (5k views online and many tweets)
- Sky News spent 5 hours filming and interviewing participants which went out live on TV and 8 further times over the event weekend and is also online. Sky also tweeted the event feature to its 5 million twitter followers across the world.
- Igor and the Lodz team had some media interested in the event, Igor gave quite long (half an hour) telephone interview with a local (Lodz) radio while still in London about the event and the

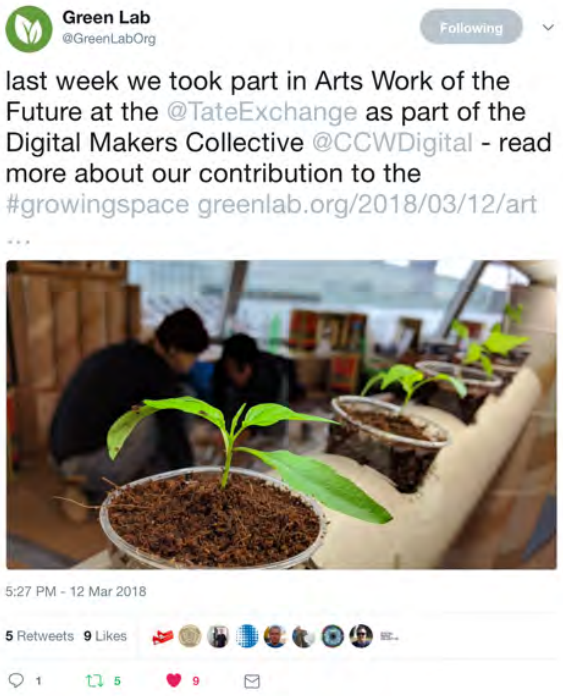
"Representation" project, unfortunately, it was live and we have not recorded it. Nationwide TV (TVN) was also interested but they are still considering how to report about this, as it does not fit "art" or "technology" boxes well.

Documentation

- Videos of each day of the residency - here
- Opening Day Digital Maker Collective Tate Exchange 6 March 2018 - See video
- Day 2 Digital Maker Collective Tate Exchange 7 March 2018 - See video
- Day 3 - #TateExchangeIWD Tate Exchange 8 March 2018 - See video
- Day 4 - Digital Maker CollectiveTate Exchange 8 March 2018 - See video
- Day 5 & 6 Busy Family Weekend - Tate Exchange 10-11 March 2018- See video
- Green Lab Blog Post about it collaboration with DMC - here
- Igor and the Lodz team are in process of setting up a website about "Representation" and Marian the robot, they will share a link when we finish

Social Media

- https://www.instagram.com/digitalmakercollective/
- https://www.instagram.com/explore/tags/artsworkofthefuture/
- https://twitter.com/hashtag/artsworkofthefuture?src=hash



Reports & case studies

We are in the process of producing a number of DMC evaluation & case study reports on the go which all focus on DMC Tate Exchange & Knowledge Exchange activities, these include:

- UAL KE Tate Exchange Video Case Study **Deadline 29/06/18**
- CCW KE Web & Publication DMC/Tate Exchange case study report **Deadline 06/07/18**
- Tate Exchange Evaluation Report for Tate which will form part of the official Tate Exchange evaluation report **Deadline 04/07/18**

What exchanges were captured?
Actions/possible outcomes following the Tate Exchange Project

Growing Space: Green Lab X UAL DMC

Following the Tate Exchange, the Growing Space collaboration has further developed involving both existing and new project team members from Green Lab and the Digital Maker Collective.

Retaining the same design parameters of the initial realisation of the project at the Tate Exchange, an open design brief was produced to co-design the next iteration of Growing Space.

This is to be a modular, accessible and replicable space for indoor growing, knowledge exchange and generating a community of interest. The project is developing through a series of co-design workshops.

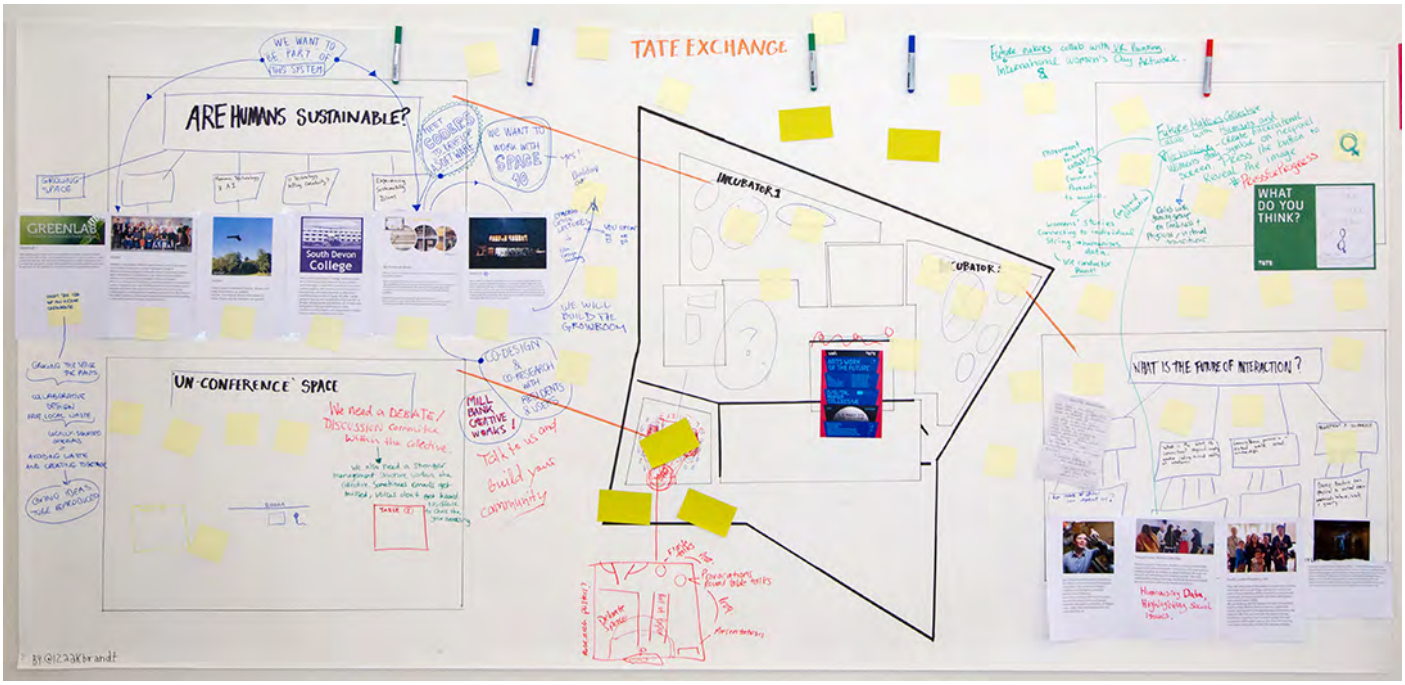
Image above: Co-design workshop 1: initial ideas generation. Project members from Green Lab and UAL DMC, held at Green Lab.

Image above: Co-design workshop 2: cardboard prototyping. Project members from Green Lab and UAL DMC, held at Chelsea College of Art Makerspace.

Image above: Co-design workshop 3: design development. Project members from Green Lab and UAL DMC, held at Chelsea College of Art Makerspace.

Image above: Co-design workshop 4: initial materials research. Project members from Green Lab and UAL DMC, held at Green Lab.

New collaborations

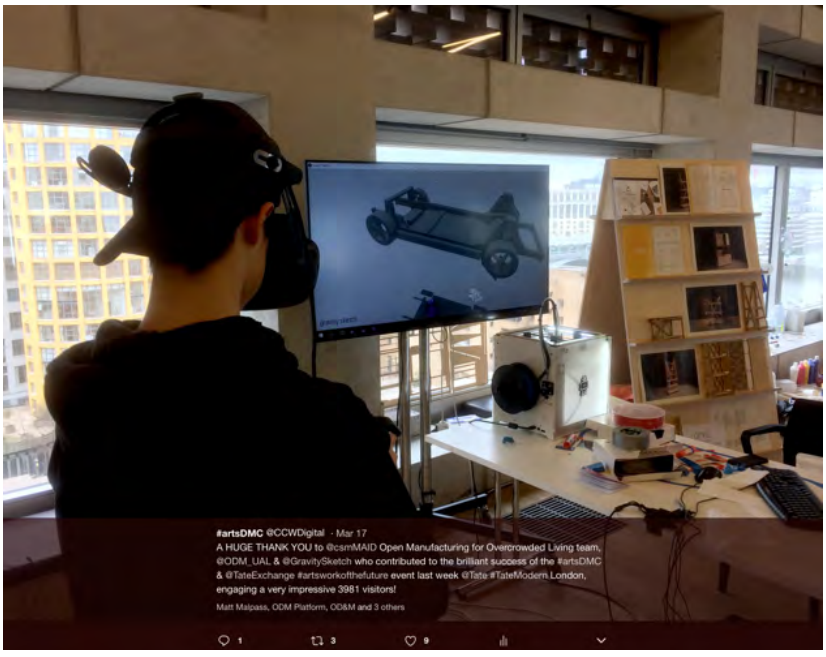


The Tate Exchange event provided the opportunity for new connections to be made, in addition to OD&M-specific collaborations, across external partners and within the UAL Digital Maker Collective. This opportunity provides the landscape in which new open design ideas and avenues for collaborations can form.

In particular, we are looking into developing a collaborative and publicly accessible educational programme with Space10, embedded in the OD&M open design framework and UAL strategic objectives.

Image left below: Space 10 adding connecting to the wall chat, lots of interest expressed by OD&M partners to work with SPACE 10 in the future

Image left below: Throughout the week we tested out new open design technology, Gravity Sketch donated free software for us to explore Virtual Reality use in Open Design & Manufacturing



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