



MALLEABLE DIGITAL: WE LOVE DONUTS!!

How might we design digital objects from a variety of data, like walking, exercising, eating, sleeping, listening to music etc and place them in new exciting contexts and environments?



This brief is a 3D interpretation of the Game of Consequences.

In the original game, players take turns in contributing sentences to a story. Each player then folds the paper over to hide the most recent line, and hands it to the next person. The final story is then read out, usually with surprising results.

In our variation, this game is driven by data, fabricated and placed in a virtual environment.



TECHNICAL Brief

HOW/Consequences ideas

**The project is broken down into four key sections:
Data, Play, Model and Move**

1: DATA

For the first portion of the project, as a group you will select and define a theme. This could be an activity, an object, an environment or other medium.

You will then collect data from your chosen theme. You can be as creative and abstract as you choose with your collection. Take for example the theme of 'Walking', you could collect data on heart rate, incline and altitude, the route of a walk you take, changes in speed, music you listen to etc. You can collect this data first hand, or research on the internet. Try to collect data as accurately as possible.

You will then analyse and refine this data to create FOUR strong variables. These variables will be used as a core focus to inform your modelling.

As an entire group, you will eventually model a series of donuts from the chosen theme, which will be made up of four sections, with each quarter representing one of the 4 data variables of your theme.

2: PLAY

The data is then used to playfully and creatively to inform your modelling. For the example of 'Walking', perhaps heart rate could be modelled as a wave, or the music you listen to modelled as mountains with the peaks dictated by genres of music most listened to as a group.

Play should also factor in to all other areas of the project.
Being playful with your work will help make creative decisions.

3: MODEL

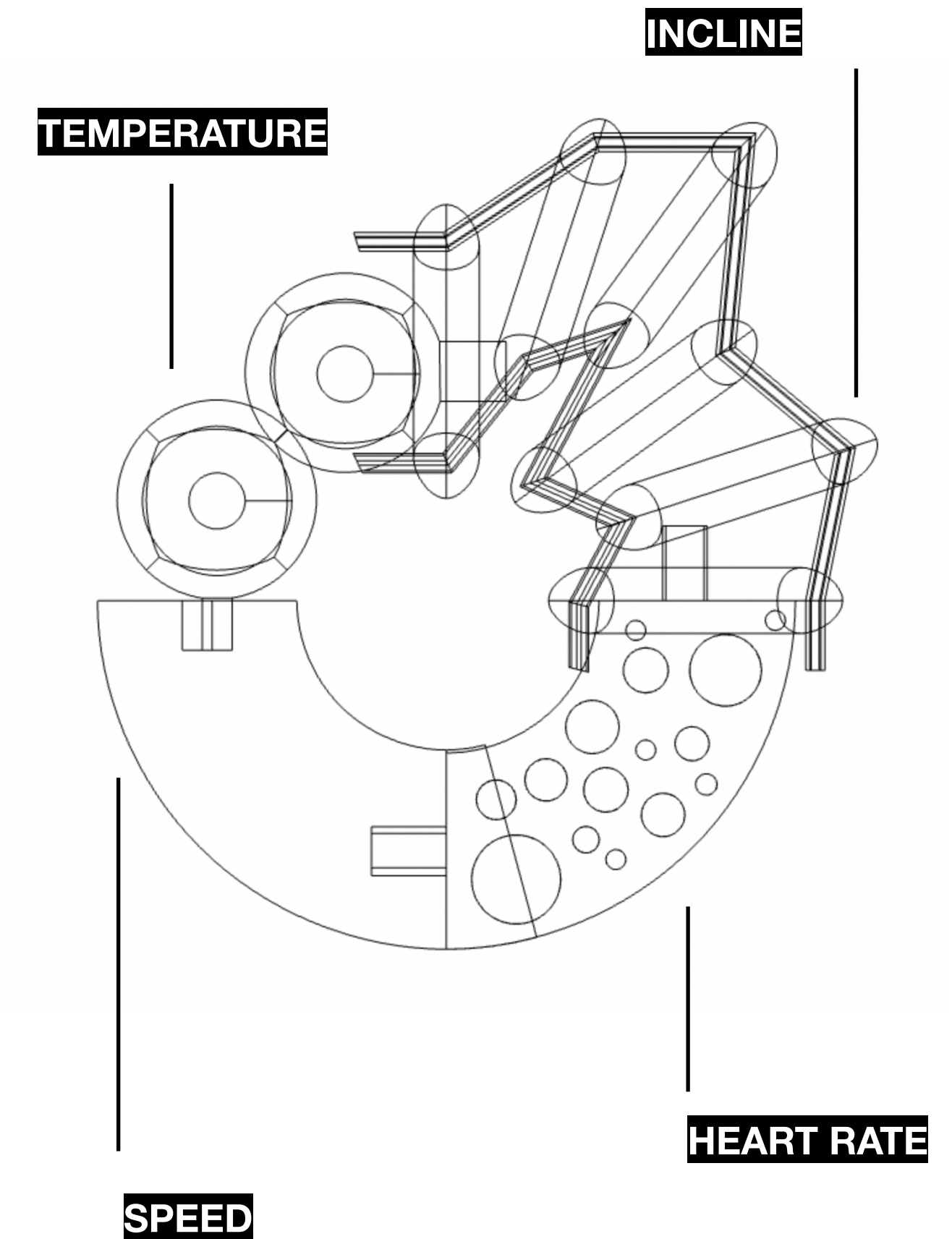
You will then take your ideas and data and use them to model in a 3D virtual environment as a group. The model you will be creating will be your interpretation of a donut. You will be creating a quarter section of a donut with each of the variables.

You will only create 1 section from the 4 data variables, so choose your most interesting insights. Another group will then take one of the three remaining variables, and use this variable to model a section that joins onto yours.

4: MOVE

You will then move in the virtual environment to another groups donut, and work, using another groups variables to model a section of their donut. This move will happen several times, resulting in a set of completed donuts, where each group will have made one quarter.

EXAMPLE: WALKING



Brief:

MALLEABLE DIGITAL

Background:

- A data *object* is a region of storage that contains a value or group of values. Anything that can be measured could be turned into a data object.
- Data is complex. It can measure, track, shape, describe and deliver understanding in terms of analysis, trends and forecasts.
- From improving public education to preventing disease and better understanding natural disasters, data has unlimited potential .
- Stories have always been for everyone. Since ancient times, we've been using stories to conserve and pass on information. With game-changing inventions like the printing press, widespread access to information has become a reality. We're also seeing an explosion of authorship around the world today.
- With data, hundreds of millions of rows can be distilled into a single narrative. By following that narrative, it's much easier to understand what's going on beneath the surface. The data can tell you what's happening, and a story can elucidate the cause.

Why donuts? When you buy a donut, you are not buying one thing, but two things instead - the edible donut and the void in the middle. You can't buy a donut but leave the donut hole at the store. Just like the world around us, the objects and environment contain not only one, but two things - the physical and the hidden data that cannot be left behind. It is up to us as designers to identify this data and turn nothing into something. The seemingly simple, humble donut becomes a canvas for expression.

How to approach the brief

- We encourage ideas that are creative and playful. Proposals should incorporate creative data aspects, and could be abstract and playful. We want you to have fun!
- In your group start with a theme, this could be an object, a space, an activity or anything else that you think of. Use this theme to extract data that you can collect, refine, and model in a 3D virtual environment. With this refined data, you will create a digital doughnut shape, this can be split, sandwiched, extruded, morphed and manipulated to incorporate your digital assets.
- This is all about being imaginative with your choices, and creating diverse touch-points, contexts for data gathering, and expressions of this data in objects.
- Co-design is key - through conversations with your group proposal, make sure you understand the challenges and ambitions, and have clear goals and direction.

PROJECT Considerations

HOW/Consequences ideas

Criteria

Your entry should demonstrate a design thinking approach to the brief and **carefully consider** the following principles:

Rigorous Research and Compelling Insights: How have you combined your groups firsthand research with a review of existing research and wider trends? Can you show a clear path between your key insights and your outcome? How are your insights grounded? How did you get feedback and incorporate new ideas through prototyping and iterating?

Systems Thinking:

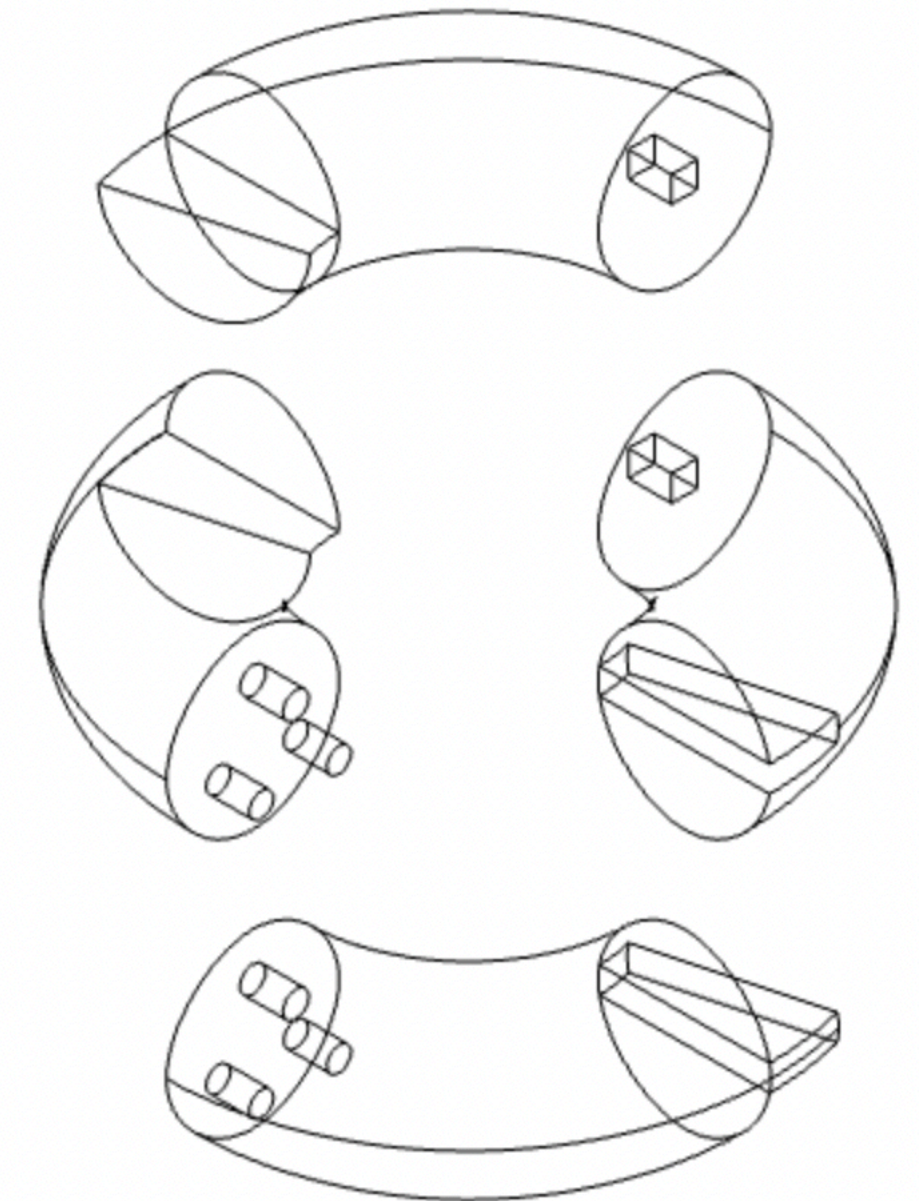
What's the bigger picture? How have you considered the data points of the theme that you're exploring? How does your idea connect to a wider set of issues? What might be some unintended consequences of your data, and can you express these as part of your design?

Creativity and Innovation:

How is your idea different from existing expressions? Are there any unexpected or surprising elements that have been highlighted research that you are keen to express?

Group Experiences:

Consider and discuss with your group. Is your research group led? Try to make sure that you consider and discuss as an entire group when making decisions.



*Try to test your ideas early and get feedback, from both the target group and from experts.
Be creative in the way you test ideas and include any learnings and experiments!*

Workshop Timeline

Day 2

Model Making

Morning:

Use this data to inform your modelling.

Spend 30 minutes playing with the data, then 1 hour visualising this as a quarter of a doughnut. Go wild!

Afternoon:

You will then move onto a new donut and repeat the data - play / modelling process.

You should end the day with 1/4 of two different donuts.

Day 4

Final Touches

Make sure your data is well represented in the 3D world.

Presentations

Show off your Data Doughnut Models and see what you have created as a big team!

Day 1

Introductions

An introduction and exploration of the software and of the projects you will be carrying out.

Data collection

Refine, analyse and reinterpret your data.
End the day with four strong sets of data.

Day 3

Model Making

Similarly to day 2 you will spend 30 minutes playing with the data and then 1 hour visualising this as a quarter of a doughnut.

You will then move onto the next doughnut and repeat the data play / modelling process.

You should end the day with 2/4 of two different donuts.
There should now be four WHOLE donuts!

REFERENCES

Brief

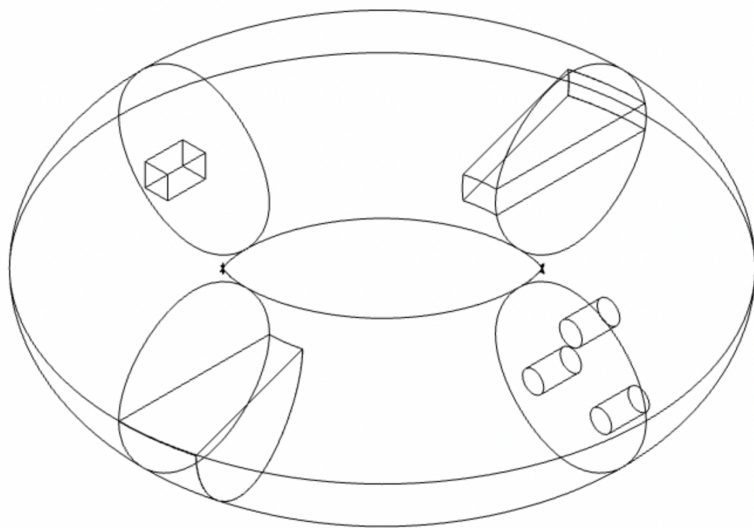
REFERENCES:

FURTHER READING

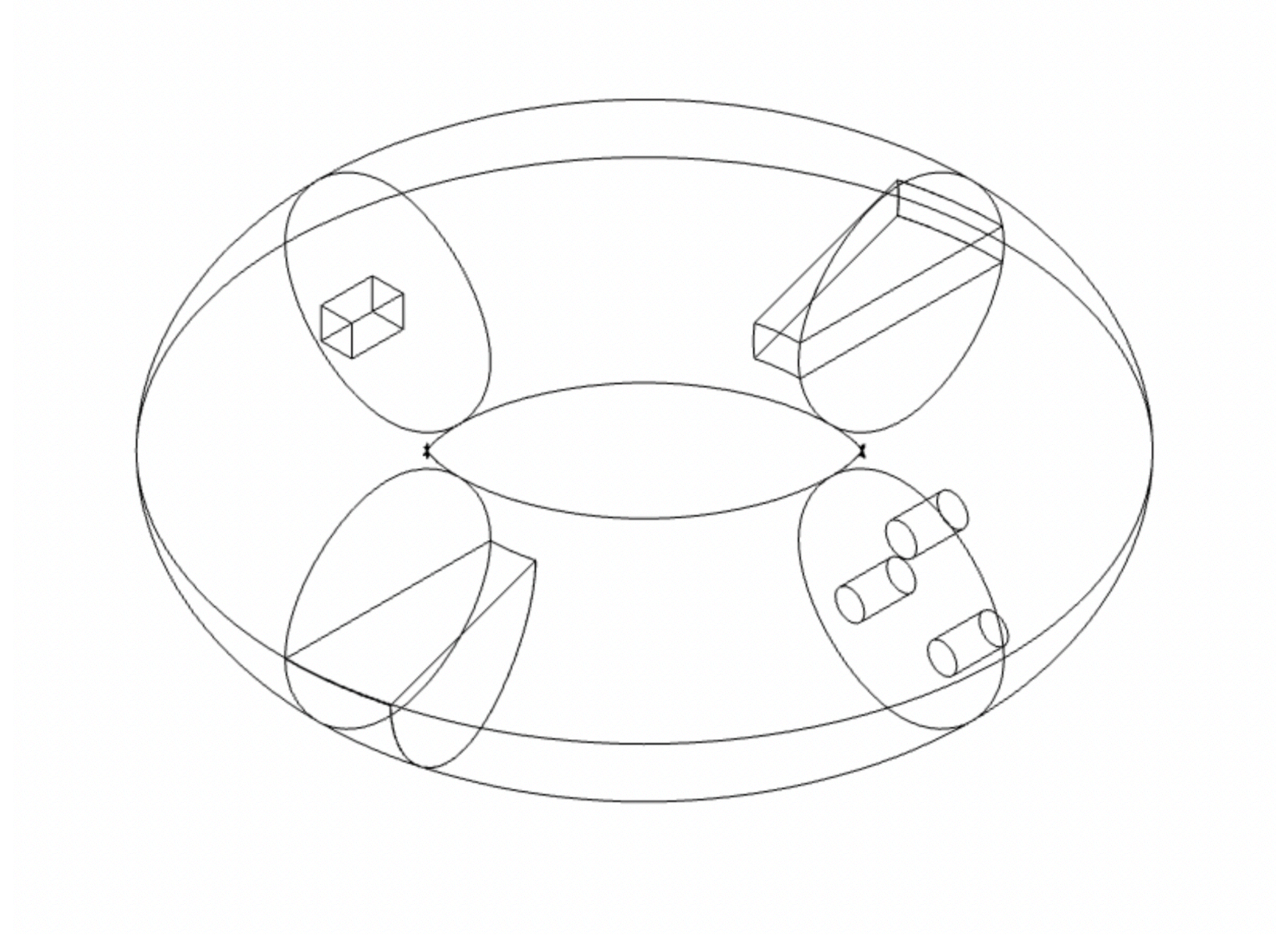
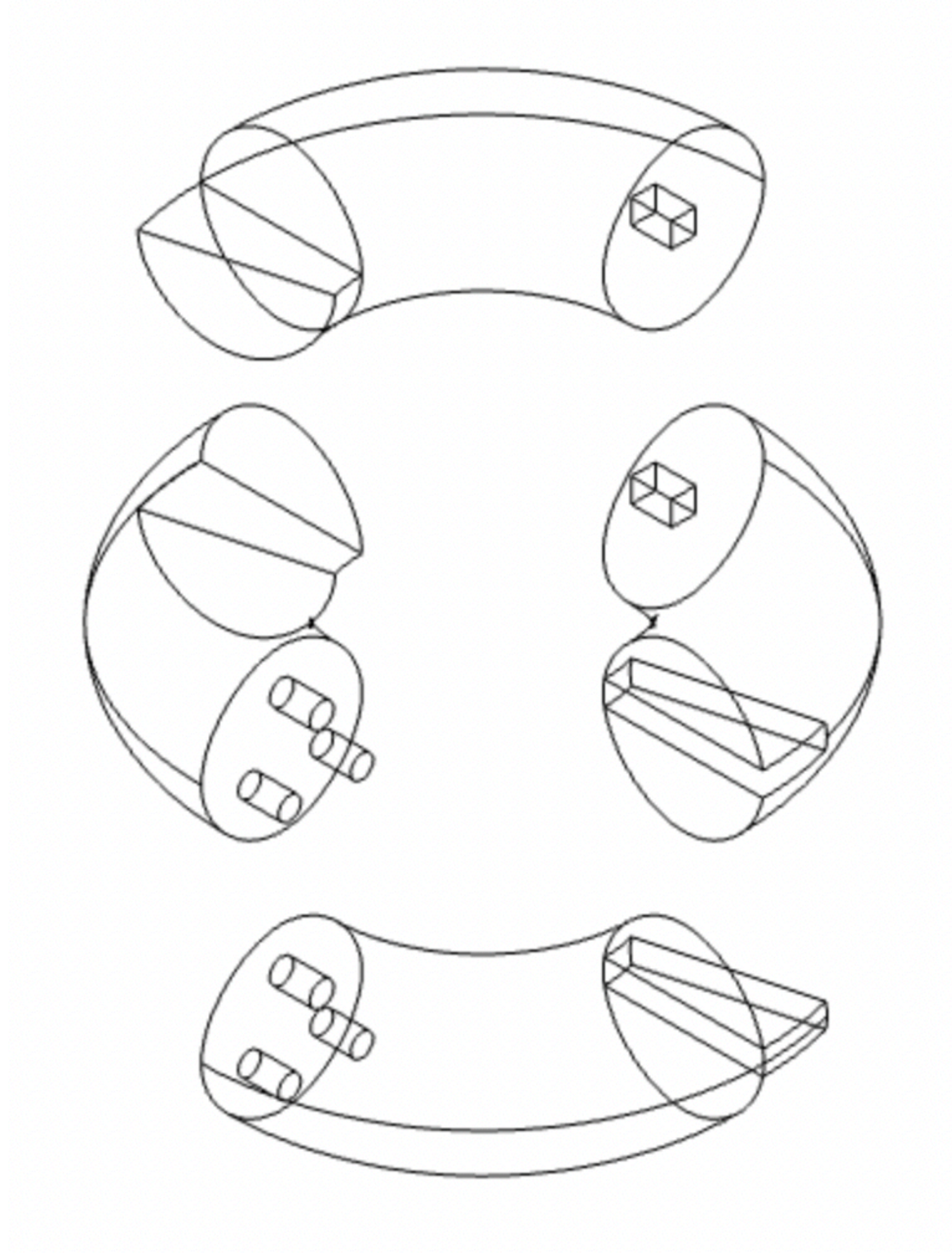
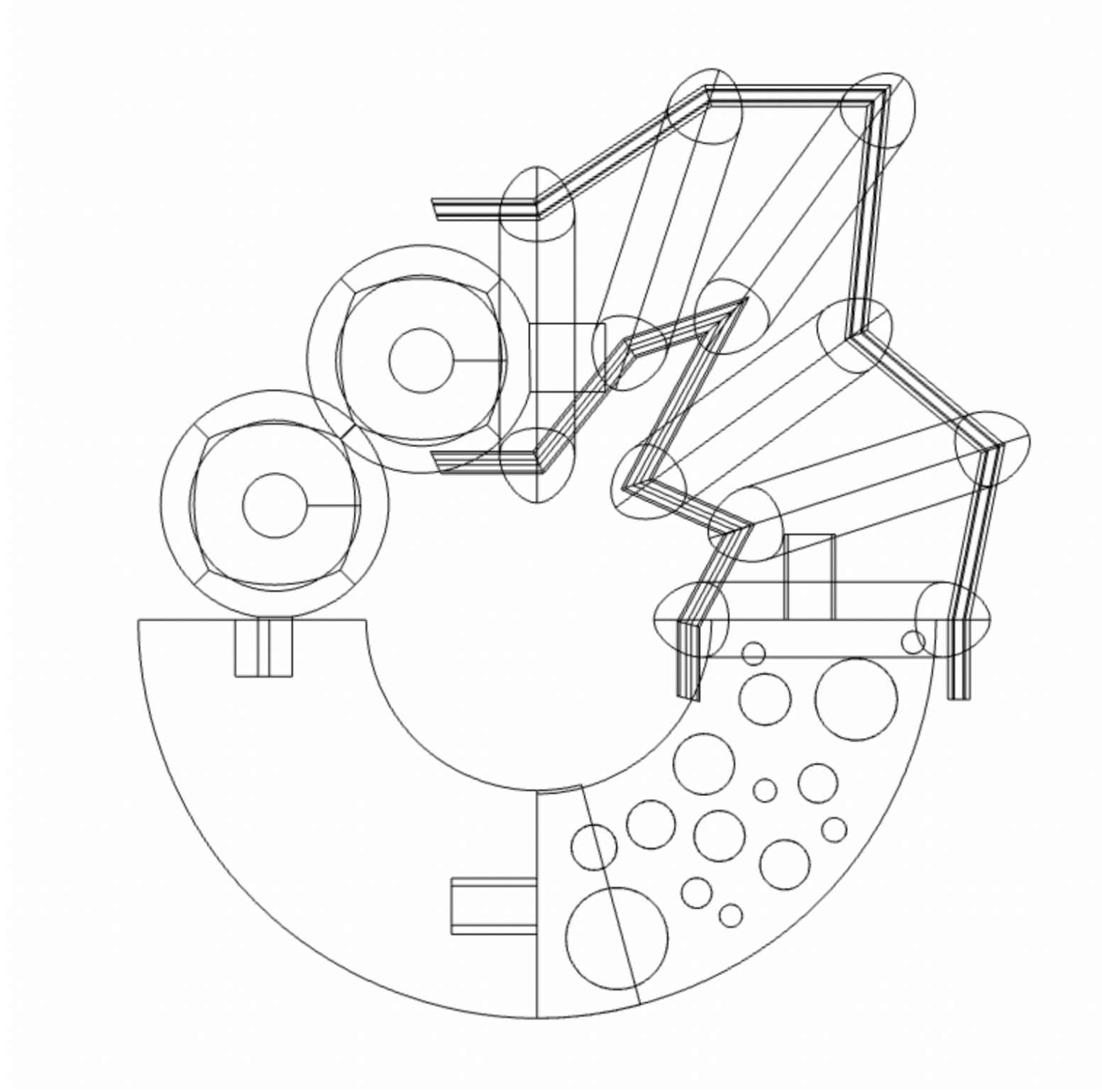
Here you can find a range of useful links for inspiration and further reading to help get yourself into a good frame of thinking.

Topology of a donut: <https://pcwww.liv.ac.uk/~petesmif/petesmif/help%20for%20non%20biologists/topology.htm>

The game of consequences: https://www.google.com/search?q=french+surreal+the+game+of+consequences&tbm=isch&ved=2ahUK E w i 2 z e W n w 8 P 4 A h U E w Y U K H f s P C 7 Y Q 2 - cCegQIABAA&oq=french+surreal+the+game+of+consequences&gs_lcp=CgNpbWcQAzoECCMQJ1DrF1jnP2CpS2gDcAB4AoABnwKIAeANkgEFNy4zLjSYAQcGqAQGqAQtn3Mtd2l6LWltZ8ABA



Autodesk Sustainability Workshop: <https://sustainabilityworkshop.autodesk.com/product-design/concepts>
Designing eTextiles for the Body: Shape, Volume & Motion: <https://tei.acm.org/2018/cp-studios/#S2>
Organized by Rachel Freire, Paul Strohmeier, Cedric Honnet, Jarrod Knibbe, Sophia Brueckner
Sociomateriality: Infrastructuring and Appropriation of Artifacts: <https://tei.acm.org/2018/cp-studios/#S1>
Organized by Tom Jenkins, Vasiliki Tsaknaki, Karey Helms, Ludvig Elblaus, Nicolai B. Hansen
Deformable Controllers: Fabrication and Design to Promote Novel Hand Gestural Interaction Mechanisms: <https://tei.acm.org/2018/cp-studios/#S3>
Organized by Victor Cheung, Alexander K. Eady, Audrey Girouard
Kinetic Body Extensions for Social Interactions: <https://tei.acm.org/2018/cp-studios/> - S4
Organized by Kate Hartman, Boris, Kourtoukov, Erin Lewis
Internet of Tangibles: Exploring the Interaction-Attention Continuum: <https://tei.acm.org/2018/cp-studios/#S5>
Organized by Leonardo Angelini, Elena Mugellini, Omar Abou Khaled, Nadine Couture, Elise van den Hoven, Saskia Bakker
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