

Design by Consensus: Makerspaces

An interactive co-design workshop from
The Glass-House Community Led Design



Facilitation Guide

How to run your own co-design workshop
to engage multiple stakeholders
in shaping a creative makerspace
or other mixed-use community building



Design by Consensus: Makerspaces

This workshop explores the benefits and challenges of working with a broad mix of stakeholders (people with an interest in or connection with a building or place) through a collaborative design process in order to create more successful and sustainable places.

Design by Consensus: Makerspaces uses the context of a creative makerspace, a building where people come together to make things using a variety of traditional and digital tools, to explore the role of design in connecting people and in shaping how a place looks, feels and functions.

The intention of this workshop is not to develop formal design propositions, but instead to create a safe and playful environment to explore the complexity, opportunity and challenges of designing with and for a diverse group of stakeholders. Through a series of role-play and scenario-based activities, participants work together to develop a shared vision for an imagined building, and experiment with basic design principles and configurations. They also develop tools for working more collaboratively with others, and with a greater sense of understanding and empathy.

The Design by Consensus workshop was originally created by The Glass-House Community Led Design in 2006, and through various iterations has helped people explore the co-design of buildings, open spaces, high streets, and even collaborative research projects. The workshop was adapted by The Glass-House in 2019 to focus specifically on makerspaces for the *Fostering Creative Citizens through co-design and public makerspaces* research project. This workshop and the accompanying bilingual resources were designed for use within the confines of the research and beyond in both the UK and in China.

This facilitation guide aims to help you use the workshop in your own community to bring people together through co-design. It will take you through the stages of planning and delivering the *Design by Consensus* workshop, and includes templates of the workshop resources that you can copy or download and use.

While this workshop was designed specifically for exploring the design of makerspaces, we encourage you to consider how you might adapt and use it to explore the co-design of any community building or space used by multiple and diverse individuals and groups. This is a flexible model for a workshop that can easily be adapted to suit your needs.

We hope this guide will become a useful tool for your community, and that it can help you kickstart your own journey of collaboration through co-design.

Sophia de Sousa
Chief Executive
The Glass-House Community Led Design

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About the Workshop

Workshop summary

Focusing on the design of a makerspace, participants are asked to step into a series of stakeholder roles, representing various users and interests. Participants are asked to represent their roles in an exploration of conflicting and shared concerns and aspirations for the building, and then tasked with working together with their fellow stakeholders to negotiate a shared vision for the site.

Workshop participants are divided into working groups, with each group configured to involve different combinations of stakeholders. This helps participants explore the impact of inclusion or exclusion of different stakeholders in a design process.

The workshop also aims to introduce some basic principles of design, and in particular the balance of form, function and feeling within a building shared by many different users.

By placing people into the role of diverse stakeholders, participants must negotiate design ideas that both respect their shared vision and respond to the very specific needs and concerns of each individual or interest group.

We use an imagined or anonymised building, as the context for the task, and provide participants with stakeholder profiles which represent a mix of interests, sectors and socio-economic groups, and which identify specific needs, concerns and aspirations.

Each group is asked to progress from a shared vision to develop design ideas for the site provided, based on the roles and interests within their group. These design proposals are then presented and a discussion follows to explore the themes and ideas that have emerged during the task.

This is a flexible workshop model that can be adapted to different lengths of time. To ensure that there is sufficient time for all of the activities and for a meaningful discussion, we recommend that it should be planned for at least 90 minutes, but it can run for significantly longer if time is available.

This workshop is intended for a large number of participants, and requires a minimum of 16 to form two effective working groups. In principle, and with adequate space and facilitators, the workshop could comfortably accommodate up to 50 participants, or even more.

Why use this workshop

This workshop can be used in a number of contexts, using roleplay and co-design activities to introduce people to:

- Basic principles of designing spaces shared by multiple users
- Opportunities and challenges of designing for diverse user groups
- Opportunities and challenges of engaging diverse user groups in the design process

It can be used

- To help build capacity within a working group tasked with developing a shared brief for a makerspace or other community building
- Within the context of formal education (secondary, further or higher education) as an introduction to collaborative design
- As a continuing professional development (CPD) workshop for design practitioners wishing to build skills in stakeholder engagement in design.

Resources you will need

We have created a series of print resources so that you can easily produce a range of workshop props and prompts. These include:

- 1 base plan for the building (A1 sheet)
- 1 vision statement card
- 1 list of stakeholder roles
- 12 role cards
- 1 legend of icons used
- 7 different types of collaging paper
- 1 sheet of scaled objects
- 4 different types of tokens

You may of course wish to create your own version of these resources.

This workshop can also be adapted to help you explore your own building project and the wants and needs of its diverse stakeholders.

There are also some basic stationery supplies that you will need to provide:

- pens & colour markers
- scissors
- white tac
- glue sticks
- blank sheets of A4 paper.

Key Stages of the Workshop

1 Introduce the design task

1

Participants are divided into working groups and introduced to the workshop and the design task. Setting the context of designing a space for a diverse group of makers, the lead facilitator sets out the stages of the workshop and some of the key themes that participants will explore.

2 Take on stakeholder roles

2

Each participant is asked to step into a stakeholder role. For the purposes of the workshop, there are 12 stakeholder profile cards (see below and in the resources section), any combination of which can be distributed among each workshop group to support role-play.

The roles are categorised in four types of stakeholders: tenants, regular users, casual users and centre staff.

Jewellery Maker 珠宝制造商	
Space requirements	
 4m ²	 3m ²
Space qualities	
	 
Tools	
	
Design by Consensus Makerspaces 	

3 Develop a shared vision

3

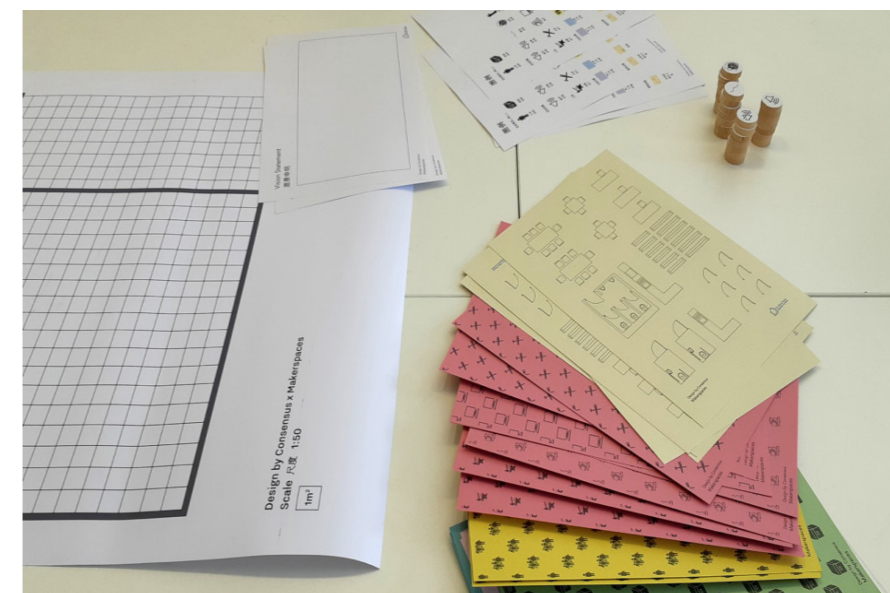
During the workshop, participants are asked to work together to develop a shared vision for their makerspace. We have created a simple card (see below) on which they can articulate their shared vision statement.

Vision Statement 愿景申明

4 Co-design the makerspace

4

Members of each working group work together to agree some shared design ideas and principles for the shared space and co-design the plan.



5 Test & refine the vision statement

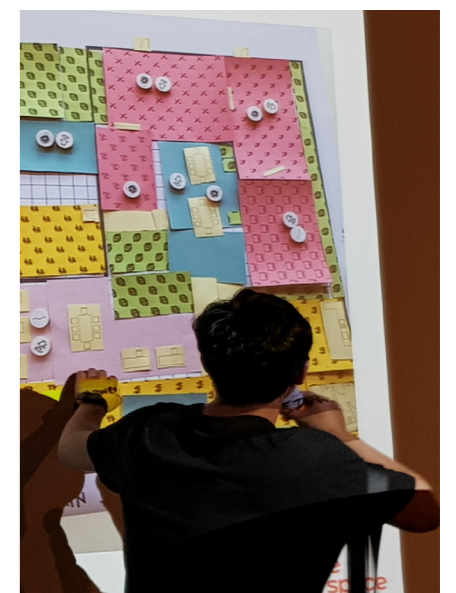
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Having co-designed their spaces, groups revisit their vision statements and change them if needed.

6 Share & compare

6

Following the co-design exercise, the lead facilitator will ask each group to share their design with the other participants, and invited to talk about how they reached that design. This will be followed by a discussion exploring the similarities and the differences in approaches taken.



Workshop Resources

Role cards

There are 12 role cards which represent the range of people who might use the building. Each sets out the basic needs and interests of that particular stakeholder, but participants should be encouraged to imagine themselves in that role and further develop the character of the role they are taking on.

Each role card contains a series of icons to describe the needs of that particular stakeholder role. These represent different types of requirements, including their space requirements, the qualities of the space they would like, and the tools they use for their making activities.

There is an information card outlining the various stakeholders for reference by both facilitators and workshop participants

Jewellery Maker

珠宝制造商

Space requirements


4m²


3m²

Space qualities





Tools




Design by Consensus Makerspaces 

1. Space requirements

An estimate is given for the approximate square footage required both for each person and for the storage needs associated with their activity.

2. Space qualities

This describes the type of environment they want, focusing on whether it is:

- quiet or noisy
- a space they must keep clean or where they can do messy activities
- whether they would like to work on their own or with others

3. Tools

This describes the type of tools each character requires at the makerspace. We imagine these to be tools that are kept permanently at, and may belong to, the makerspace.

If no tools are listed, it is assumed that anything that is required for that activity can be easily be taken to and from the makerspace or easily stored away when not in use.

Space requirements (per person)



Space qualities



Tools



Stakeholder roles

<p>Tenants</p> <ul style="list-style-type: none"> Startup Business Jewellery Maker <p>Regular users</p> <ul style="list-style-type: none"> Digital Maker Existing Circle Pottery Workshop Group build <p>Casual users</p> <ul style="list-style-type: none"> Enjoys Making Retired professional Casual maker <p>Centre staff</p> <ul style="list-style-type: none"> Equipment manager Facilities manager Business manager 	<p>People occupying a fixed space for their own private use</p> <p>A small group setting up their own company and developing early stage business ideas and prototypes</p> <p>An independent professional jewellery maker who needs a space to work on a regular basis, and who would like to share some equipment</p> <p>People who regularly use the space in order to share facilities and interact with other makers</p> <p>People who are using TIC technology to develop new ideas, and who need to use equipment such as digital printers and laser cutters</p> <p>A group of people who enjoy knitting together, to share techniques and to enjoy socialising with other knitting enthusiasts</p> <p>A group of people who enjoy doing pottery together, to share techniques and to enjoy socialising with other pottery enthusiasts</p> <p>A group of people who come together to do specific projects and commissions that require a team of people to build them</p> <p>People who use the makerspace only occasionally</p> <p>A person who enjoys making things and would like to learn from people with more experience, and to socialise with other people who like making</p> <p>A retired professional maker who still enjoys making as a hobby, and is happy to share skills and experience to help others</p> <p>A person with some experience of making, who occasionally needs a space for working on projects</p> <p>People employed by the makerspace centre</p> <p>This person looks after the making equipment, ensuring that it is working properly and that people know how to use it safely</p> <p>This person looks after the building, and manages maintenance and cleaning</p> <p>This person looks after the finances of the makerspace, ensuring that it is financially sustainable</p>
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Design by Consensus Makerspaces 

There is an information card (left) outlining the various stakeholders for reference by both facilitators and workshop participants

The Legend (right) sets out the iconography used on the stakeholder role cards and on the collaging material.

Legend


Space requirements (per person)


Working space


Storage space

Space qualities



Noisy space


Quiet space



Clean space


Messy space



People working alone


People working together

Tools


Metal working



Wood working



Pottery



Digital



Cleaning supplies


Floor plan


Private workspace



Shared workspace


Social space



Storage space


Specialist workspace

Building facilities


Kitchen


Toilet


Door


Corridor






Window

Design by Consensus Makerspaces 

Workshop Resources

Stakeholder roles

The roles are categorised in four type of stakeholders: tenants, regular users, casual users and centre staff, as set out in the pages that follow. Each of these categories has been allocated a specific pattern on the Stakeholder Role Cards, which you will find in the swatches above each category.

	<p>Tenants</p> <ul style="list-style-type: none"> Start-up Business Jewellery Maker 	<p><u>People occupying a fixed space for their own private use</u></p> <p>A small group setting up their own company and developing early stage business ideas and prototypes</p> <p>An independent professional jewellery maker who needs a space to work on a regular basis, and who would like to share some equipment</p>
	<p>Regular users</p> <ul style="list-style-type: none"> Digital Maker Knitting Circle Pottery Workshop Group build 	<p><u>People who regularly use the space in order to share facilities and interact with other makers</u></p> <p>People who are using ITC technology to develop new ideas, and who need to use equipment such as digital printers and laser cutters</p> <p>A group of people who enjoy knitting together, to share techniques and to enjoy socialising with other knitting enthusiasts</p> <p>A group of people who enjoy doing pottery together, to share techniques and to enjoy socialising with other pottery enthusiasts</p> <p>A group of people who come together to do specific projects and commissions that require a team of people to build them</p>
	<p>Casual users</p> <ul style="list-style-type: none"> Enjoys Making Retired professional Casual maker 	<p><u>People who use the makerspace only occasionally</u></p> <p>A person who enjoys making things and would like to learn from people with more experience, and to socialise with other people who like making</p> <p>A retired professional maker who still enjoys making as a hobby, and is happy to share skills and experience to help others</p> <p>A person with some experience of making, who occasionally needs a space for working on projects</p>
	<p>Centre staff</p> <ul style="list-style-type: none"> Equipment manager Facilities manager Business manager 	<p><u>People employed by the makerspace centre</u></p> <p>This person looks after the making equipment, ensuring that it is working properly and that people know how to use it safely</p> <p>This person looks after the building, and manages maintenance and cleaning</p> <p>This person looks after the finances of the makerspace, ensuring that it is financially sustainable</p>

Vision statement card

Vision statement cards create a frame for articulating the group's vision for their makerspace. This is a very simple frame which can be printed in A4 or A5 format. You can also easily adapt this template or create one with plain card or paper should you prefer.

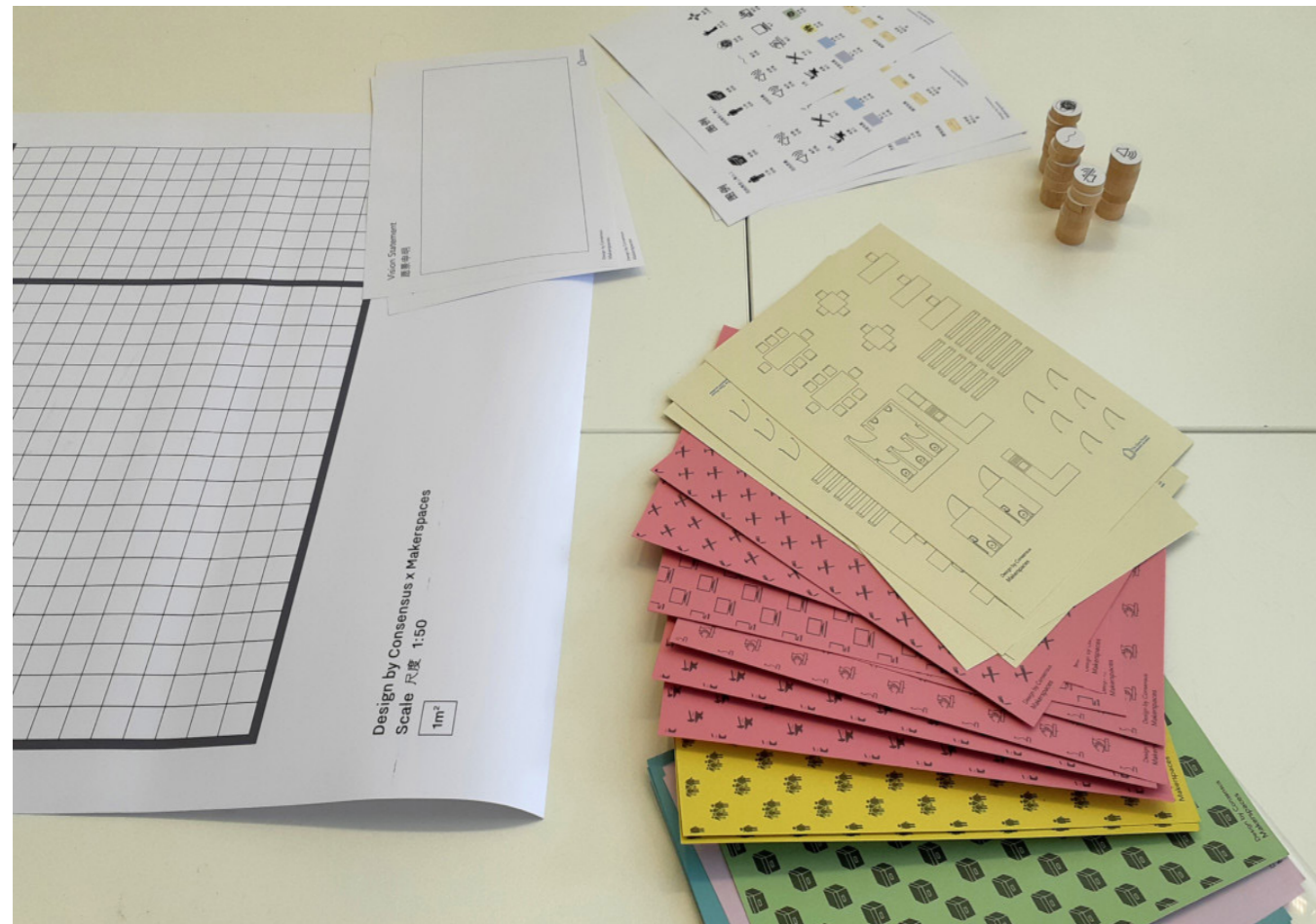
Vision Statement
愿景申明

Design by Consensus Makerspaces



Workshop Resources

Co-design kit

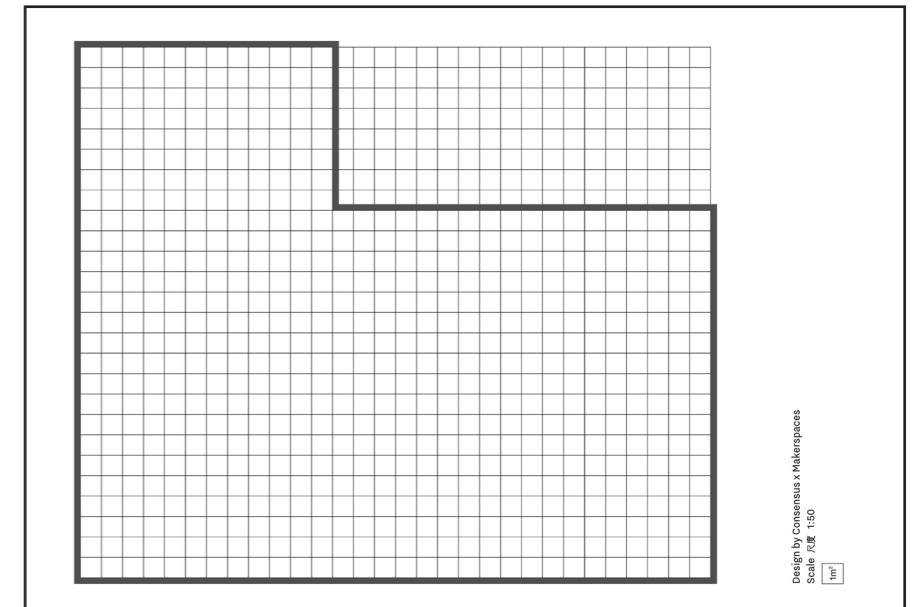


Each group will be given a set of printed materials to help them explore the future of an imaginary makerspace and to negotiate the basic design of the different spaces and how they fit together. The co-design aspect of this workshop is very simple, focusing on the allocation of space for different activities, and how to combine both fixed and flexible spaces to satisfy the needs of all of the characters represented on the role cards.

The following components will be used as physical props and prompts for the conversation to explore the potential design of this building.

1. Floor plan

This sets the parameters of internal and external space available for the makerspace. It is assumed that this is all on the ground floor. The floor plan is an A1 sheet, set out on a scaled grid, with each square representing one square metre.

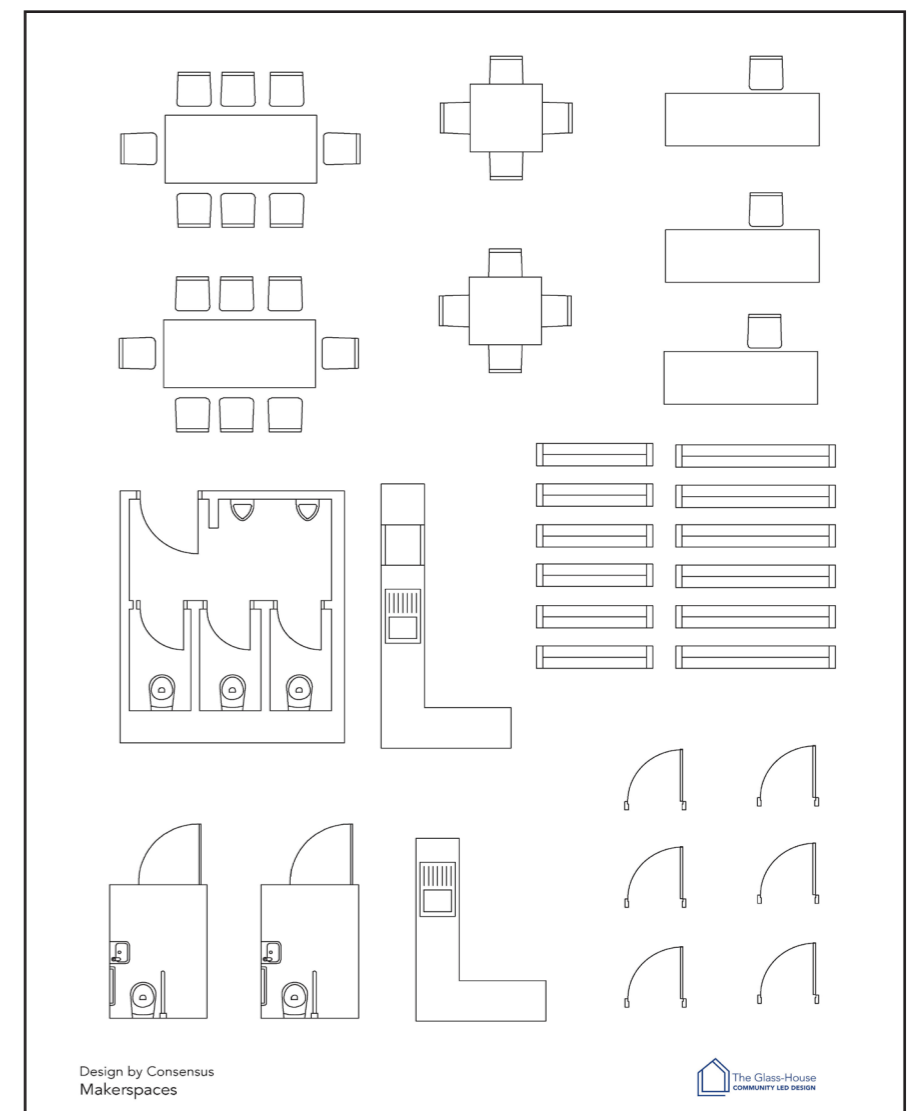


2. Fixed elements

These are spaces and elements of furniture that are necessary elements of any community building. These include:

- office (in 2-3 different size options)
- kitchen (in 2-3 different size options)
- toilets (in individual room units)
- building utility (for building maintenance/cleaning equipment)

There are also paper strips representing a standard corridor width, which can be cut to the appropriate size, and symbols to represent where doors and windows will be positioned.



Workshop Resources

Co-design kit



3. Collaging paper

There are several different types of collaging paper that represent a variety of different spaces. These include:

- Private work space (fixed work space to which limited people have access)
- Shared work space (space that is open, flexible space for making)
- Social space
- Makers' storage space
- Specialist work space (coded on different sheets with icons to represent wood, metal, pottery and digital activities)

Each sheet is double-sided, with graph paper on the back scaled to match the A1 base plan, with each square representing one square meter.

These collaging sheets have been designed in black and white and can be printed on A4 colour paper.

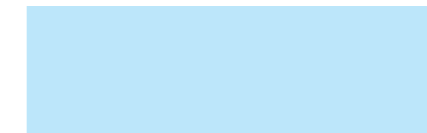
We recommend using heavy printer paper in light or pastel colours for maximum legibility. You may like to refer to our legend for colour coding, or to adapt the legend as appropriate in line with the paper you are using.

Participants can cut this paper to represent the size they agree for various spaces. They will have enough sheets to test a few different scenarios.



Shared work space

This represents space that is open, flexible workspace for making with or alongside others



Private work space

This represents fixed work space to which limited people have access



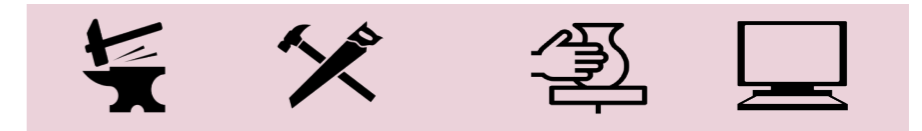
Social space

This represents space that has been designated for socialising, rather than making



Makers' storage space

This represents space that has been allocated for storing materials, equipment and work.



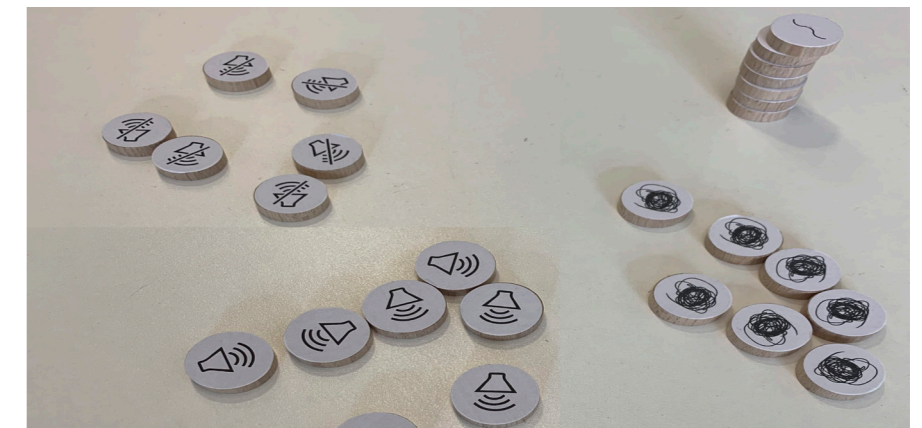
Specialist work space

These specialist making spaces are coded on different sheets to represent different types of making, with icons to represent wood, metal, pottery and digital activities.

4. Space quality tokens

These are round tokens that participants can place in the various spaces to indicate whether the spaces are quiet or noisy and whether they are clean or messy.

For our workshop kit, we created a set of reusable tokens using stickers on round wooden game pieces that were 1 inch or 2.5 cm in diameter. We found these to be nice, tactile props that participants could easily move around while they test design ideas, and at an appropriate scale with the other material being used.



quiet



noisy



clean



messy

To make this easy for others to produce, we have created a template for printing the stickers on A4 sheets of self-adhesive circular stickers (70 per page).

Alternatively, you can simply print these pages on heavy paper or card and cut out the tokens.

Preparing for the Workshop

Planning your workspace

Workshop participants are divided into working groups of 8-12 people, so this is worth bearing in mind when choosing your venue and setting out the room.

The exercise will work best if each table has a participant for each role (including or in addition to facilitators). If there are not enough people for this at each table, ensure that each table has different combinations of roles, as this will make for interesting discussion following the design exercise.

Tables should be large enough to comfortably seat all of the participants in each group, but also small enough for all participants to reach the middle of the table. This will allow everyone to play an active role in conversation and in the co-design collaging activity.

If using a projector and/or screen to share work at the end of the session, each person in the room should have a clear view of the screen or there should be space to move all the chairs to an area in front of the screen.

Your facilitation team

This is an extremely flexible workshop in facilitation terms, and it is possible to deliver it with varied numbers of facilitators based on:

- the number of people in the room
- facilitators' experience and skill sets
- the maturity and experience of the participants

For the large groups and less experienced facilitators, we recommend that you plan to have one facilitator per table, and one facilitator who can chair the workshop and guide all the groups through the series of tasks.

While the groups are working on the activities, this person can be time-keeping, and moving around the room to check that all is going well at the tables, and to provide any additional support when needed. It is also useful for this person to be able to quickly supply any additional print resources that are required by the groups while they are working.

The facilitators who will be working at the tables, should feel comfortable guiding participants through the steps, and should be familiar with all of the material and able to answer any questions that emerge throughout the activity.

Printing your materials

We have created a series of print resources so that you can easily produce a range of workshop props and prompts. These include:

- 1 base plan for the building (A1 sheet)
- 1 vision statement card
- 1 list of stakeholder roles
- 12 role cards
- 1 legend of icons used
- 7 different types of collaging paper
- 1 sheet of scaled objects
- 4 different types of tokens

You may wish to create your own version of these resources.

This workshop can also be adapted to help you explore your own building project and the wants and needs of diverse stakeholders.

Equipment checklist

Each table should be set with the following:

- Building base plan
- Sheets of colour-coded collaging paper (3-4) sheets of each per table
- Role card for each participant
- 3-4 copies of the icon legend and stakeholder profile summary
- Tokens for clean/messy and for quiet/noisy (5 of each kind of token)
- 2 vision statement cards
- Scissors for each participant, or to share in pairs

There should be a facilitator at each table. If required to ensure the critical mass of different stakeholders in the group, the facilitator can take on one of the roles.

Capturing your event

This workshop produces a series of highly visual outputs, and engages people in activities built on interactivity and collaboration.

This makes it an ideal workshop to capture through photography and video. If you would like to do this, be mindful that you will need make sure that everyone is aware of your intent to use photography, video or audio recording and to gain the consent of all those participating. We recommend that you do this before the workshop, and that if any participants are uncomfortable about being captured, you are able to either avoid capturing them or able to remove them from any recording that will be shared.

Always be very clear about what you wish to capture, how you will capture it and with whom you intend to share it. Are you trying to just capture a flavour of workshop or documenting stages and outputs for a case study or as an evidence base?

Clarity on your objectives and how you will use it will help both your facilitation team and those taking part feel more comfortable, as well as help ensure that you are documenting what is most useful to you.

Facilitating the Workshop

1. Introduce the design task

The lead facilitator should welcome participants and introduce the workshop. This should include:

- Setting the context for this workshop (e.g. within this research project)
- Setting the context of co-designing makerspaces
- Setting specific objectives for the workshop and how it fits into a longer journey of collaboration
- Explaining how the workshop will work, and introducing the workshop material and stakeholder roles. We have created a legend to help participants makes sense of all of the collaging materials at a glance.



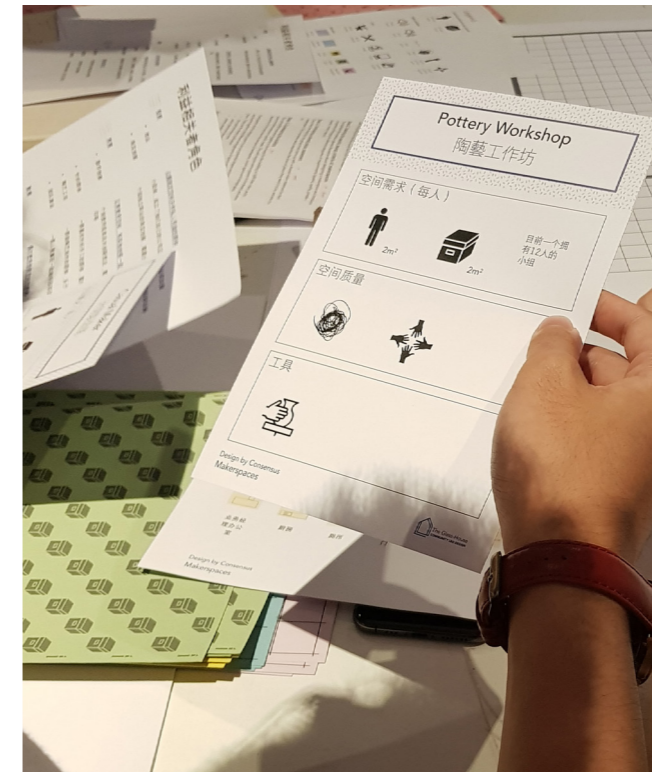
Exploring the specific design criteria

The facilitator then enables a general discussion about designing a makerspace and introduces the complexity of managing the different categories of requirements (spatial, quality, private vs shared, messy vs neat etc.).

The facilitator should stress that this activity has been created to help them explore how design can help cater for diverse needs, and that participants should treat it as a way to test various ideas and experiment with different ways of configuring the space through a collaborative design process.

2. Take on stakeholder roles

Each participant is given a role card, representing the interests of a person or group with a connection to the makerspace. Participants must step into the persona of that role, and negotiate on their behalf.



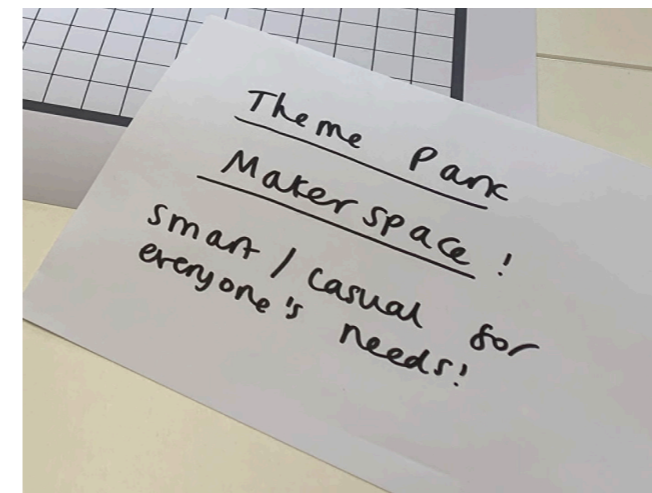
Each role card gives participants basic information about the specific needs of their character to represent in the conversation about the future of the makerspace.

This information is listed on the role cards using icons and minimal text. Participants can refer to the legend cards for more information, but the facilitator should be prepared to explain the symbols for those who may have trouble reading the legend.

Each participant takes on a stakeholder role, and steps into that persona. People are given a few minutes to look at their role card and to think about whom they will be representing.

Each participant then introduces themselves from the perspective of their role, and talks very briefly with the group about what they would like from the makerspace. Time should be given to each participant to state their needs and their ideas, so adequate time should be planned for this activity by calculating 2-3 minutes per person at each of the tables.

3. Develop a shared vision



Once they have done this, the group must come up with a shared vision statement for their makerspace. This is a sentence which describes the kind of place they want it to be, and who it is for.

Once they have agreed on their vision statement, the groups should write it on their vision statement card (left).

Facilitating the Workshop

4. Co-design the makerspace

The group then must work together to find ways for the building to fulfil their vision, and to accommodate everyone's specific needs. This will require some spaces to be shared, and some decisions to be made about the amount of workspace, social space and storage space.

Participants use the collaging paper to cut out potential shapes and sizes of the various spaces, and work together to test different arrangements of spaces and allocation of what happens in them.

They should also think about:

- where people will work on their own and where they will work with other people
- where makers gather to socialise
- which areas are open to the public and which are only open to makers
- how they organise and access their storage

They use the tokens to talk about:

- the quiet and noisy zones
- which spaces are clean and which will get messy

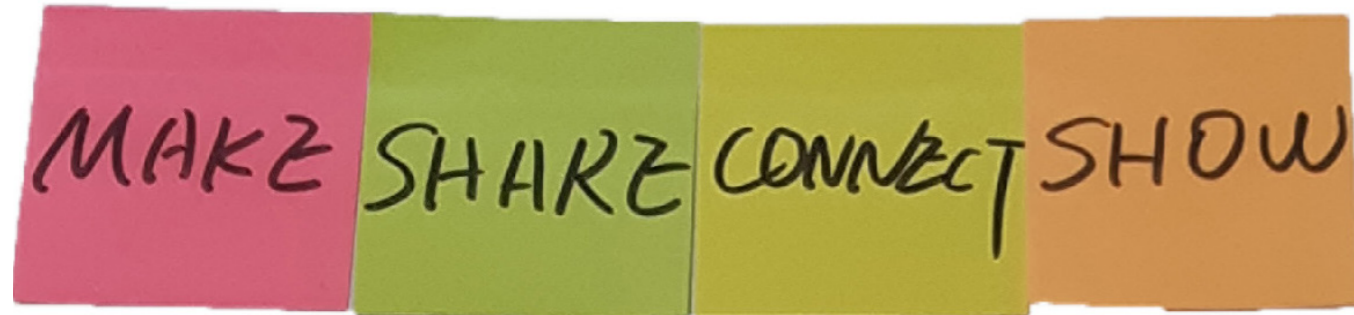
The groups should also consider how they will use the outside space, whether as a space for working, socialising or exhibiting and whether the the outdoor space is a route into the building or an enclosed private space.

Remind participants to stay in character while negotiating on all of these points, and to represent the interests of the stakeholder role they have been allocated.



Facilitating the Workshop

5. Test & refine the vision statement



Groups may find that through conversation and their co-design activity, their perceptions have changed and their vision for the building with them.

At this stage, groups should take a moment to look at their original vision statement and decide whether it needs rephrasing or indeed changing. There is a second vision card so that if they do need to change their vision statement, they are able to create a clean version for their presentation.

If groups do create a second version statement card, it is useful for them to annotate which is which, using either the numbers 1 and 2, or the words *original* and *revised*.



6. Share & compare

Help the groups share

The lead facilitator should give everyone a five-minute warning to prepare for sharing their group's work. Each group should nominate a spokesperson or two.

Guide participants around the tables, looking at each other's work while each group shares their ideas and experience of the co-design process.

If you have more than two groups, it is preferable to photograph the plans and project them during the discussion (as below).

This will make it easier for everyone in the room to see the plans from their seats and for representatives of the group to present their work.



Lead a discussion

In the discussion that follows, the lead facilitator should draw out the following points from participants:

- What struck them in this process about designing makerspace? How is it different from other community buildings?
- Did they think there was a tension between designing for regular and casual users?
- Did they have any ideas about what would attract new people into their building?

Also spend some time talking about the design process itself:

- How did the co-design process feel within their group?
- Did everyone in the group feel that they were able to satisfy their individual needs with the group's design?
- Were there any particular points of conflict or issues that felt difficult to resolve?

Don't forget to thank everyone for their contribution before winding up the workshop.

Resources to print



Legend

Space requirements (per person)



Working space



Storage space

Space qualities



Noisy space



Quiet space



Clean space



Messy space



People working alone



People working together

Tools



Metal working



Wood working



Pottery



Digital



Cleaning supplies

Floor plan



Private workspace



Shared workspace



Social space



Storage space



Specialist workspace

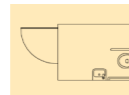
Building facilities



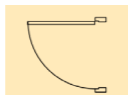
Building Manager's office



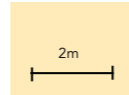
Kitchen



Toilet



Door



Corridors



Windows

图例

空间需求 (每人)

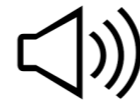


工作空间



储备空间

空间质量



噪声区域



安静区域



整洁区域



杂乱区域



独立工作者



集体工作群

工具



金属加工



木材加工



陶艺



电子



清洁设备

平面布置



私人工作区域



共享工作区域



社交区域



存储区域



专家工作空间

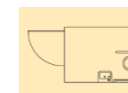
建筑设施



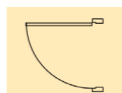
业务经理办公室



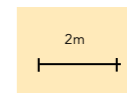
厨房



厕所



门



走道



窗

Stakeholder roles

利益相关者角色



Tenants

People occupying a fixed space for their own private use

- Start-up Business: A small group setting up their own company and developing early stage business ideas and prototypes
- Jewellery Maker: An independent professional jewellery maker who needs a space to work on a regular basis, and who would like to share some equipment



租客

占据固定空间并作私人用途的群体

- 创业: 小团体，成立了他们自己的公司正初步创业和发展
- 珠宝创客: 个别独立职业的珠宝创客，需要分享一些基本空间和设备



Regular users

People who regularly use the space in order to share facilities and interact with other makers

- Digital Maker: People who are using ITC technology to develop new ideas, and who need to use equipment such as digital printers and laser cutters
- Knitting Circle: A group of people who enjoy knitting together, to share techniques and to enjoy socialising with other knitting enthusiasts
- Pottery Workshop: A group of people who enjoy doing pottery together, to share techniques and to enjoy socialising with other pottery enthusiasts
- Group build: A group of people who come together to do specific projects and commissions that require a team of people to build them



常客

正常使用空间，和其他创客一起分享设备和想法

- 数字创客: 个别使用信息技术创新想法，需要电子设备如数字或激光打印等
- 针织群体: 一群喜欢针织手工的群体，喜欢社交和并交流针织技术
- 陶艺工坊: 一群做陶艺创作的群体，乐于社交和交流手工技术
- 团队建设: 一群人聚集在一起做特别项目，进行团队建设



Casual users

People who use the makerspace only occasionally

- Enjoys Making: A person who enjoys making things and would like to learn from people with more experience, and to socialise with other people who like making
- Retired professional: A retired professional maker who still enjoys making as a hobby, and is happy to share skills and experience to help others
- Casual maker: A person with some experience of making, who occasionally needs a space for working on projects



散客

偶尔使用创客空间的群体

- 享受制造: 个别喜欢制作东西并想从别人身上学东西的人，乐于社交
- 退休职员: 个别退休员工，制作是爱好，喜欢跟别人分享并帮助他人
- 偶尔出现的创客: 个别偶尔需要一些空间制作自己物品和项目的人



Centre staff

People employed by the makerspace centre

- Equipment manager: This person looks after the making equipment, ensuring that it is working properly and that people know how to use it safely
- Facilities manager: This person looks after the building, and manages maintenance and cleaning
- Business manager: This person looks after the finances of the makerspace, ensuring that it is financially sustainable



员工

受聘的创客空间员工

- 设备管理员: 他负责看护设备并保证能安全有序进行
- 后期管理员: 他负责整个空间运营和维护
- 业务管理员: 他负责创客空间的财务，保证其正常运行

Start-up Business

創業

Space requirements



12m²



6m²

Space qualities



Tools



Design by Consensus
Makerspaces



Digital Maker

數字製造商

Space requirements



2m²

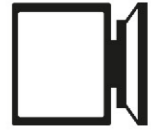


1m²

Space qualities



Tools



Design by Consensus
Makerspaces



Jewellery Maker

珠寶製造商

Space requirements



4m²



3m²

Space qualities



Tools



Design by Consensus
Makerspaces



Knitting Circle

針織圈

Space requirements



1m²



0m²

Space qualities



Tools

Design by Consensus
Makerspaces



Pottery Workshop 陶藝工作坊

Space requirements



2m²



2m²

Currently
a group of
12 people

Space qualities



Tools

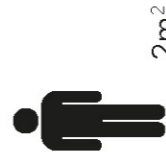


Design by Consensus
Makerspaces



Enjoys Making 喜歡製作

Space requirements



2m²



0m²

Space qualities



Tools



Design by Consensus
Makerspaces



Group Build 陶藝工作坊

Space requirements



16m²



10m²

Space qualities



Tools



Design by Consensus
Makerspaces



Retired Professional 退休專業

Space requirements



2m²



0m²

Space qualities



Tools



Design by Consensus
Makerspaces



Casual Maker

休閒製造商

Space requirements



1m²



0m²

Space qualities



Tools



Design by Consensus
Makerspaces



Equipment Manager

設備經理

Space requirements



3m²

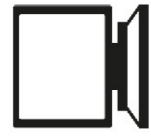


8m²

Space qualities



Tools



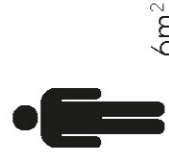
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Makerspaces



Business Manager

业务管理员

Space requirements



6m²



2m²

Space qualities



Tools



Design by Consensus
Makerspaces



Facilities Manager

設備經理

Space requirements



2m²



2m²

Space qualities



Tools

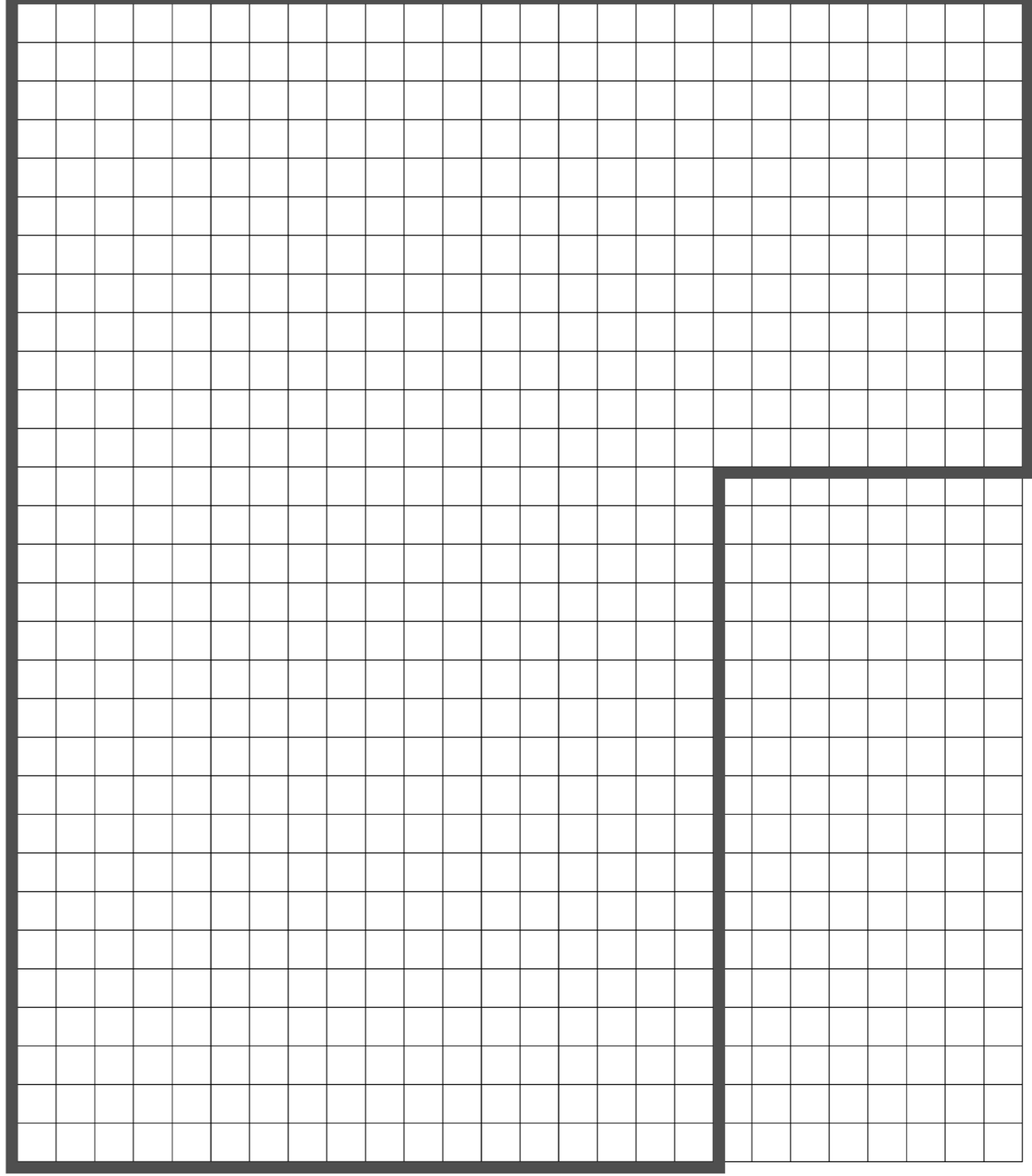
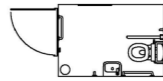


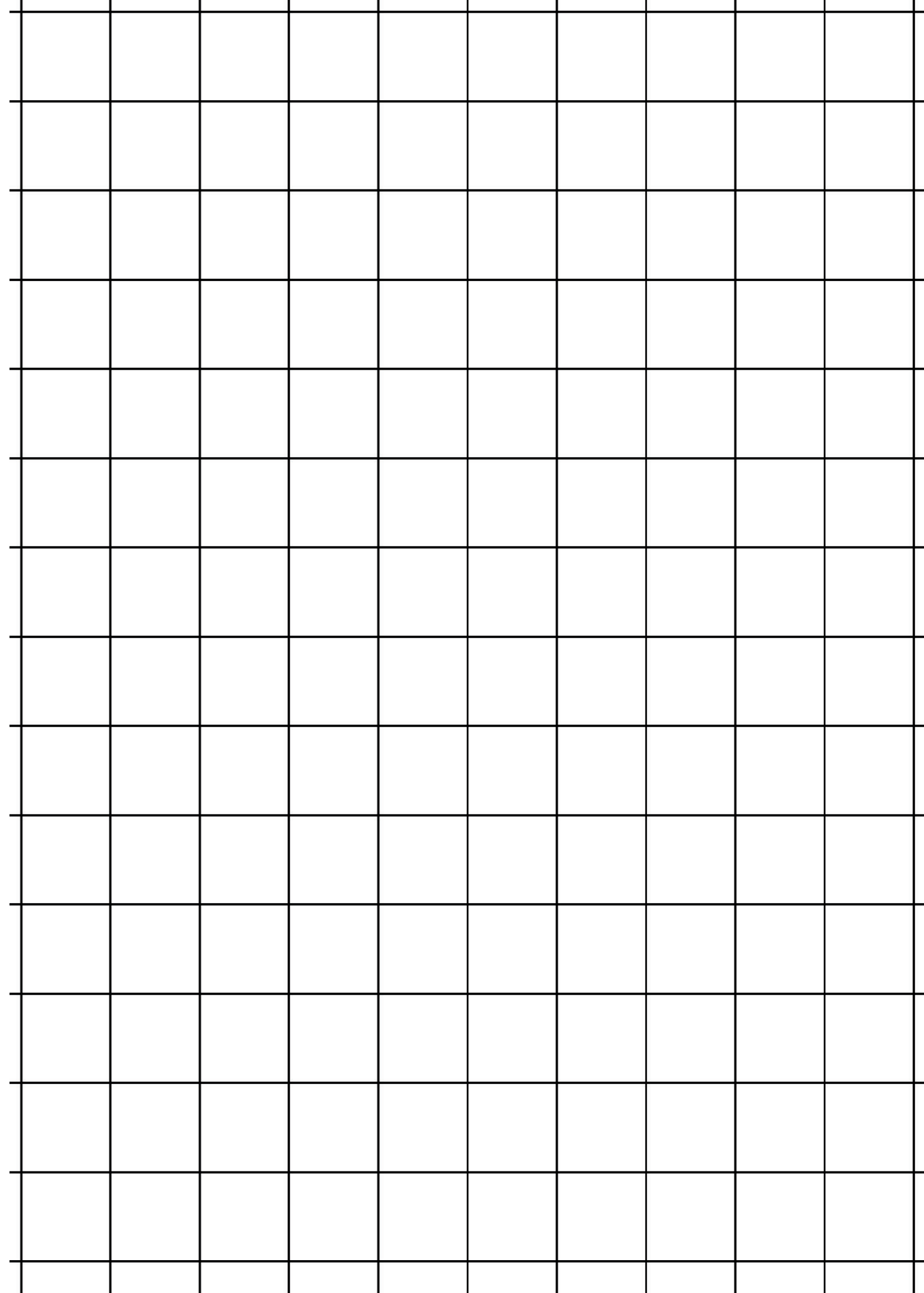
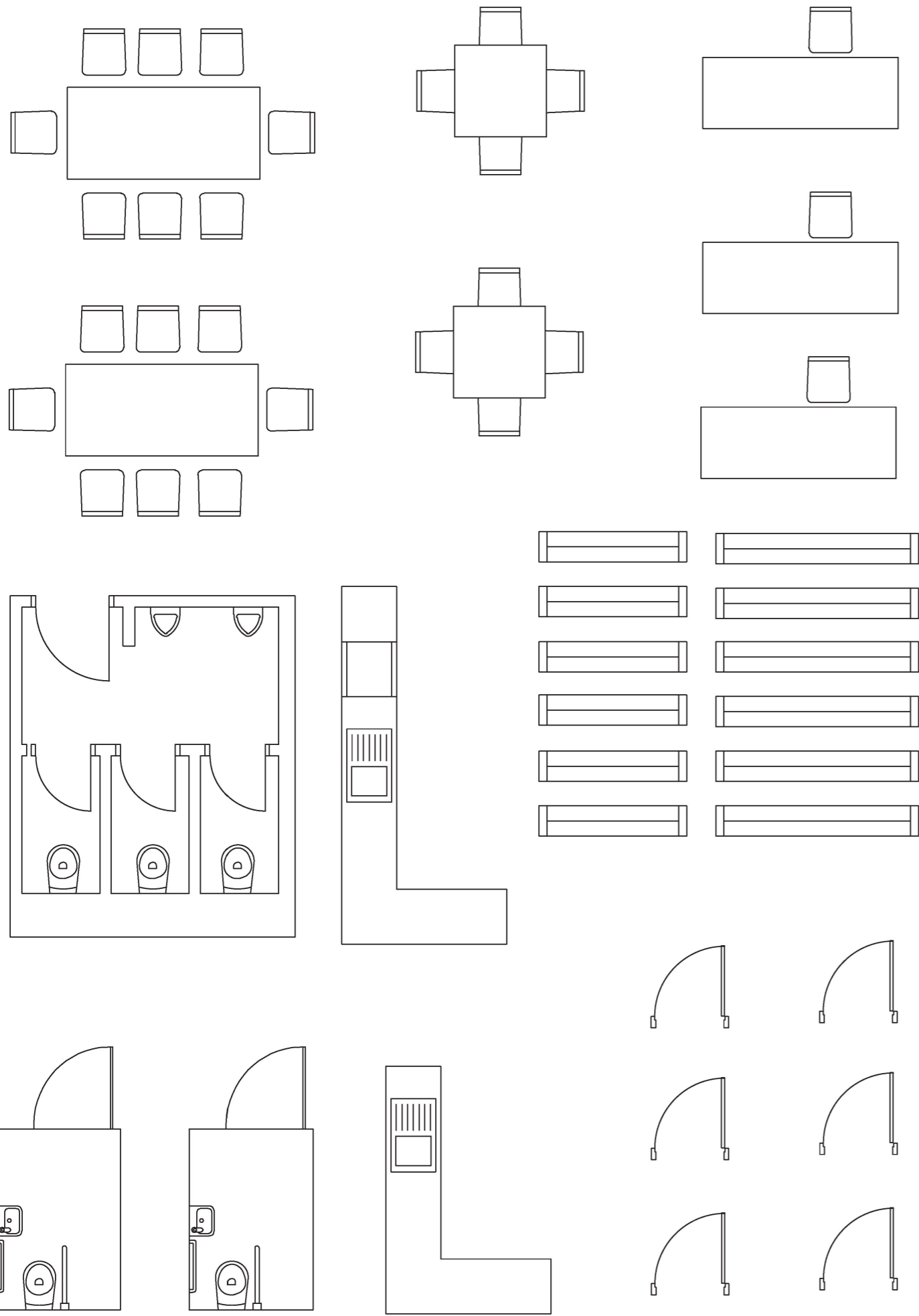
Design by Consensus
Makerspaces

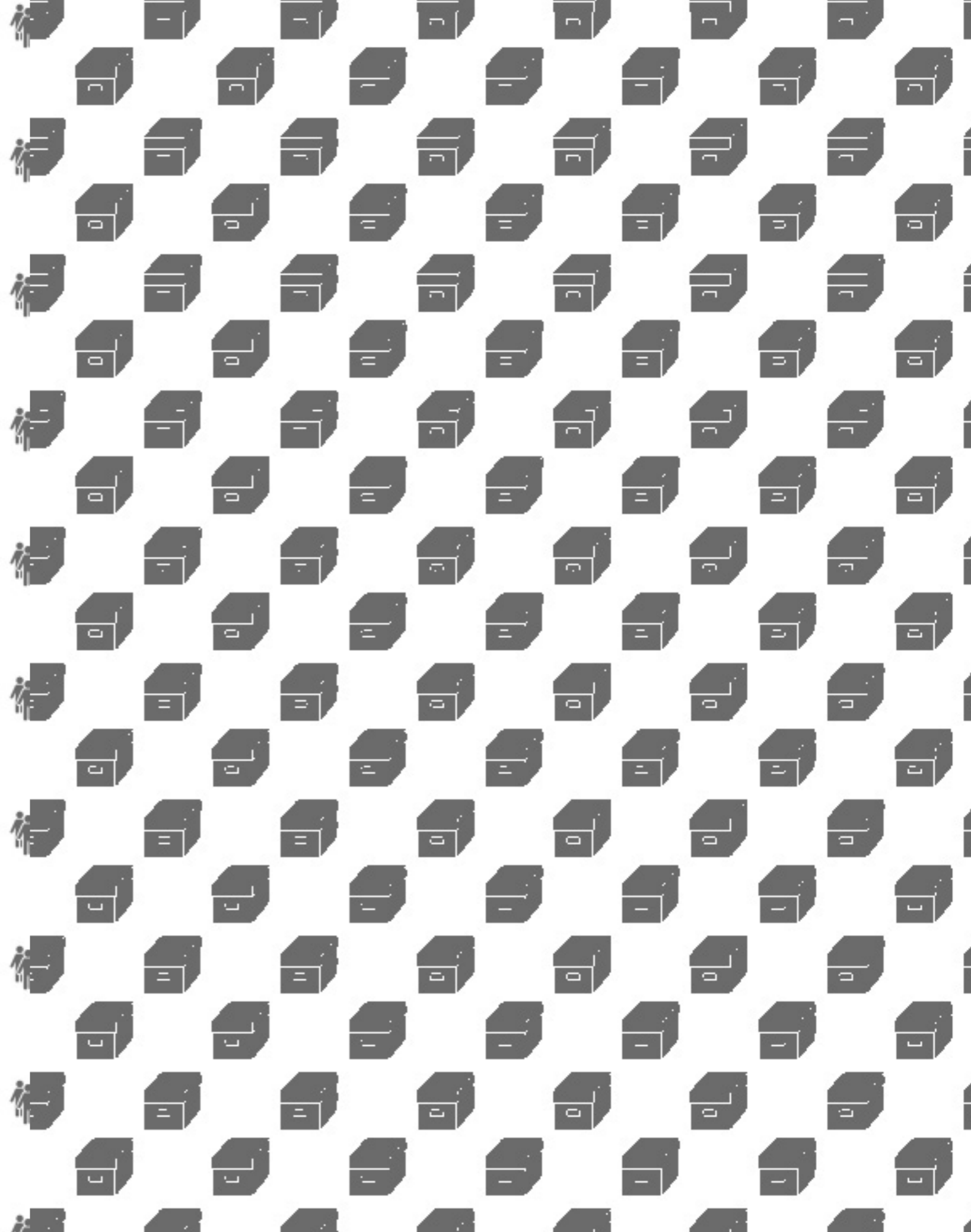
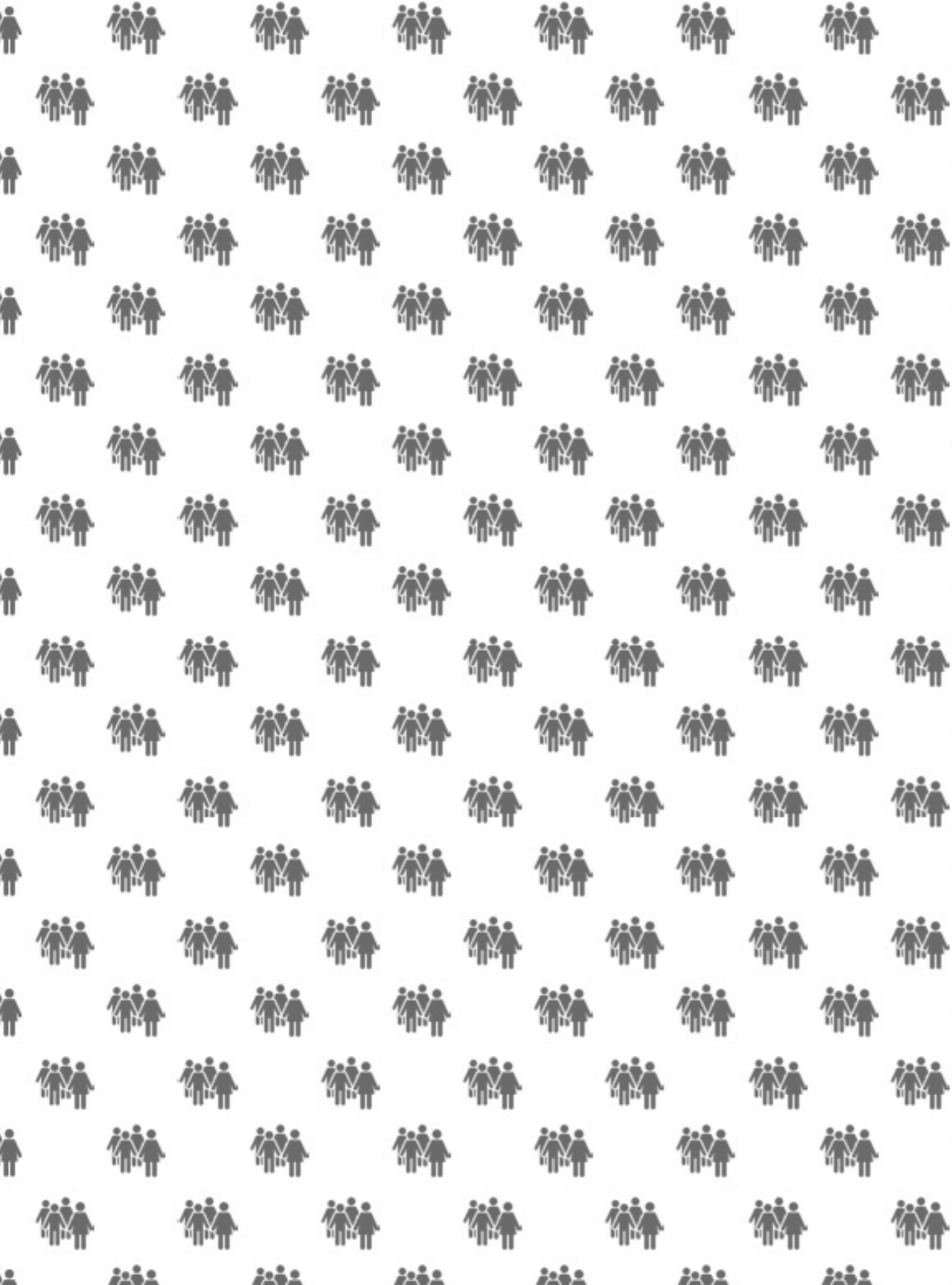


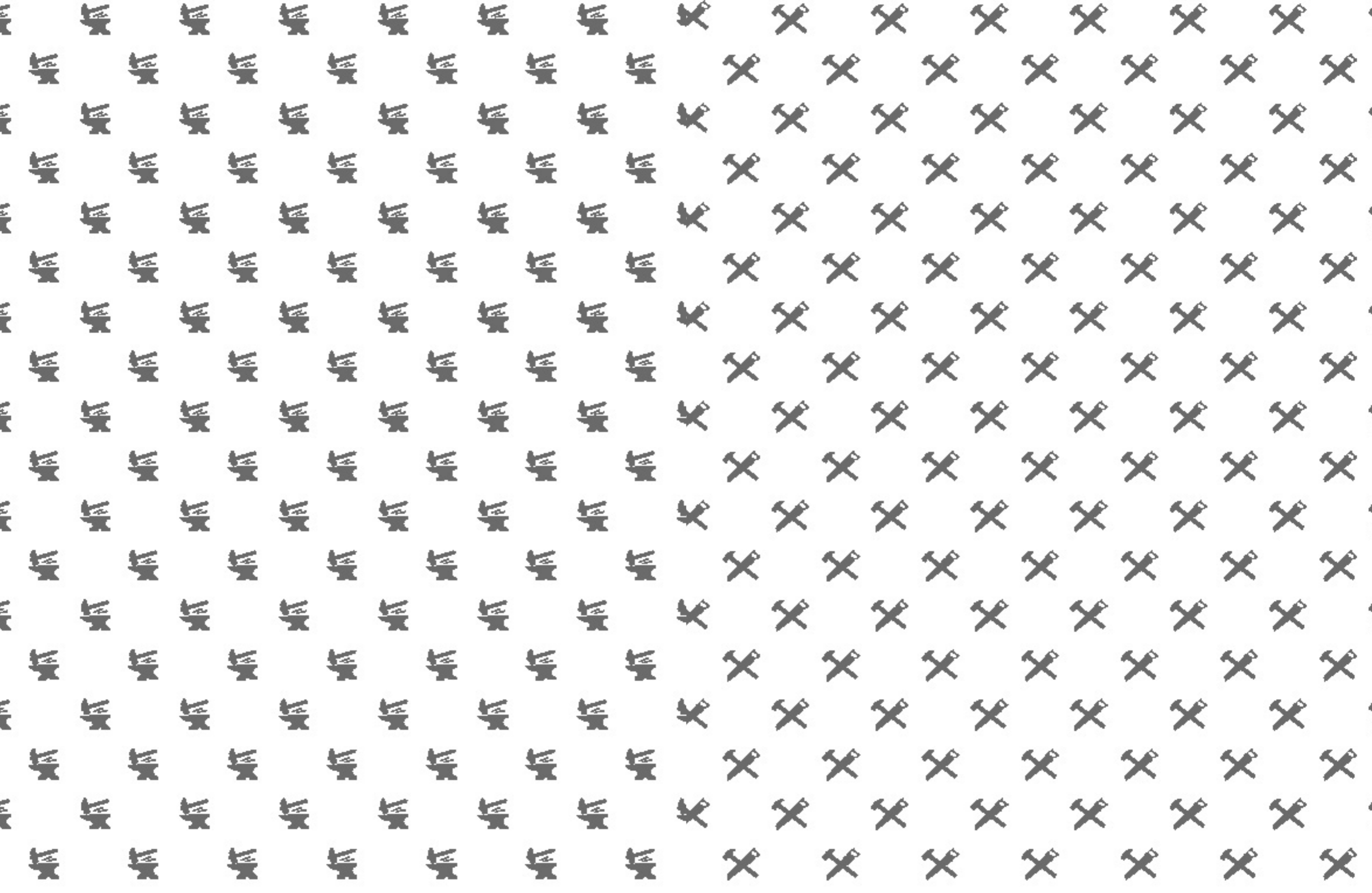
Vision Statement

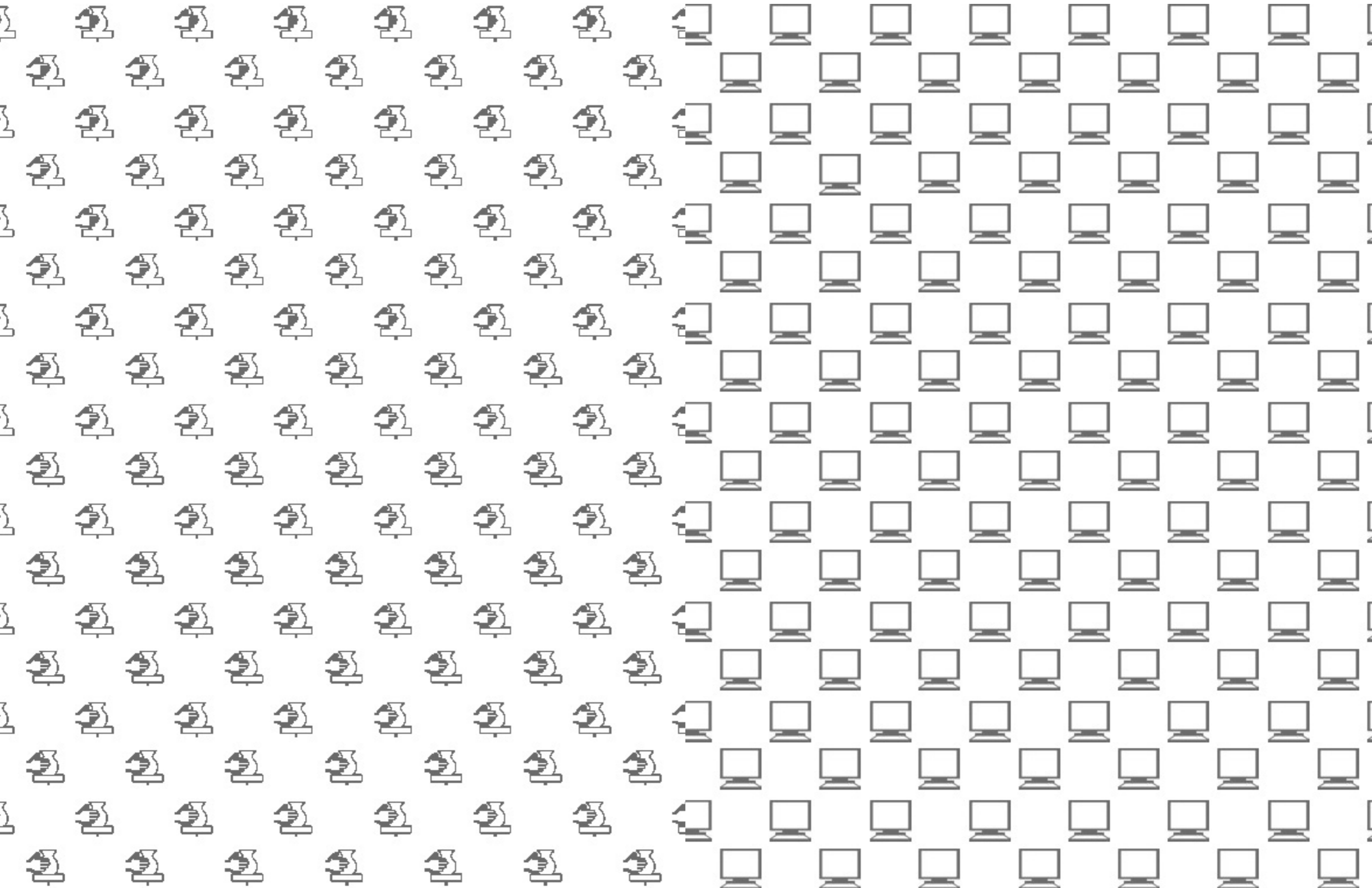
愿景申明

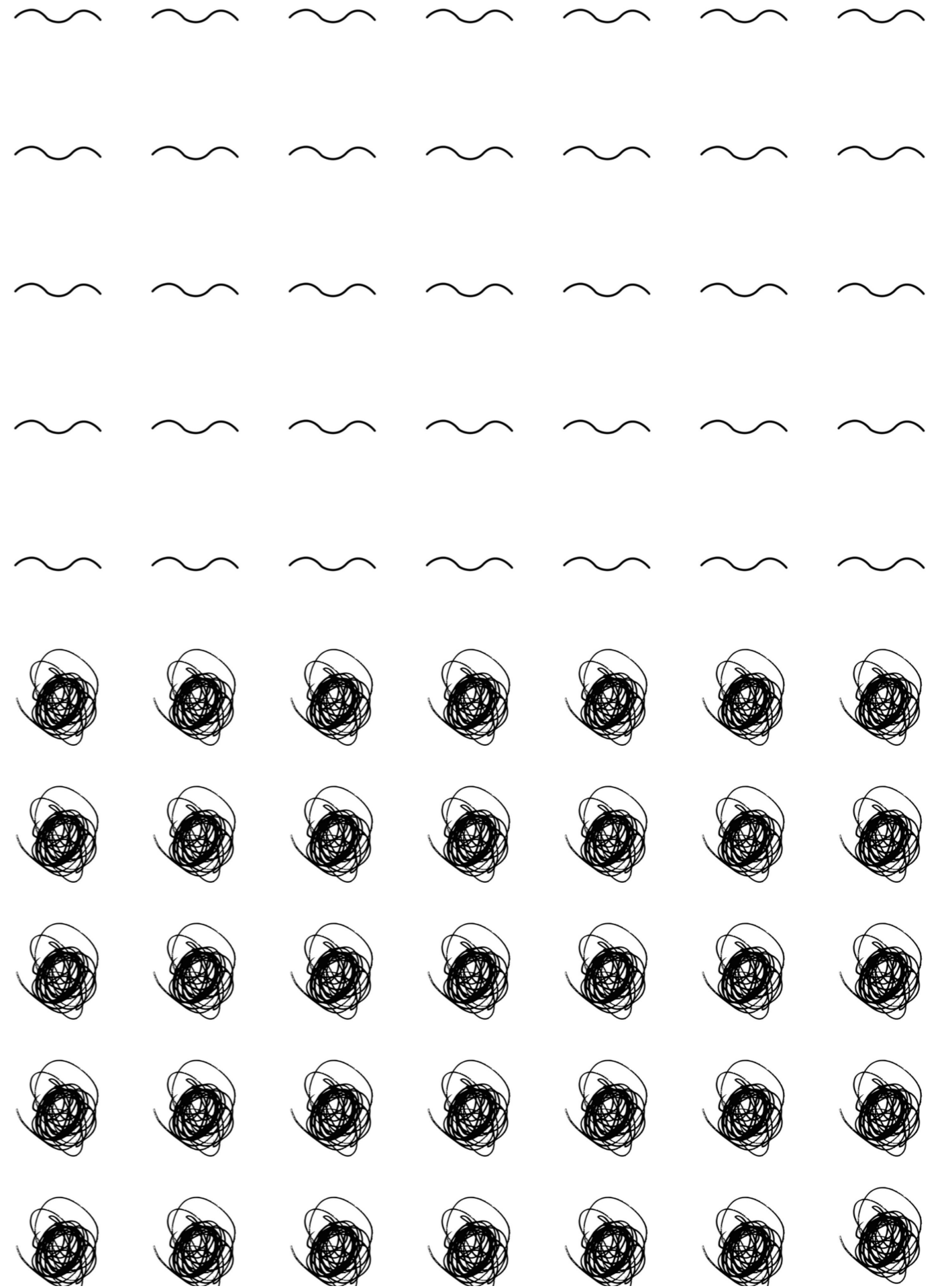












Acknowledgements

This resource was produced in 2021 by the *Fostering Creative Citizens through co-design and public makerspaces* research project.

Text and design: Sophia de Sousa (The Glass-House Community Led Design)

Advisors: Debora Ajia, Elly Mead, Jake Stephenson-Bartley (The Glass-House Community Led Design)

Xi Chen, Youngok Choi, Busayawan Lam, (Brunel University)

All images courtesy of the *Fostering Creative Citizens through co-design and public makerspaces* research project.

The *Design by Consensus* workshop was originally designed at The Glass-House Community Led Design in 2006 by Sophia de Sousa.

The *Design by Consensus: Makerspaces* resources were designed at The Glass-House Community Led Design in 2019 by Grace Crannis, Emma Newman, Sophia de Sousa and Myra Stuart.

Fostering creative citizens through co-design and public makerspaces is a three-year action research project in collaboration with Brunel University London and Tongji University in Shanghai, funded by the Arts and Humanities Research Council and Newton Fund, UK.

This project seeks to develop a novel and inclusive means of fostering creative citizens in China in a bottom-up manner through strategic use of co-design and public makerspaces. The project will produce bilingual resources that share experience and learning from the UK and China, to help inspire makerspaces of the future.

www.creativemakerspaces.org

The **Glass-House Community Led Design** is a national charity dedicated to connecting people with the design of their places, and connecting design with people. For the past two decades, The Glass-House has supported communities, organisations and networks to work collaboratively to improve the design of their homes, open spaces, buildings and neighbourhoods.

We provide hands-on support and training, share knowledge and learning, and inspire new thinking and debate through action research, events and resources. We see design not only as a tool for creating great places, but also as a way to connect people and empower them with enhanced confidence, skills and a greater sense of agency.

www.theglasshouse.org.uk





Design by Consensus: Makerspaces

An interactive co-design workshop from
The Glass-House Community Led Design