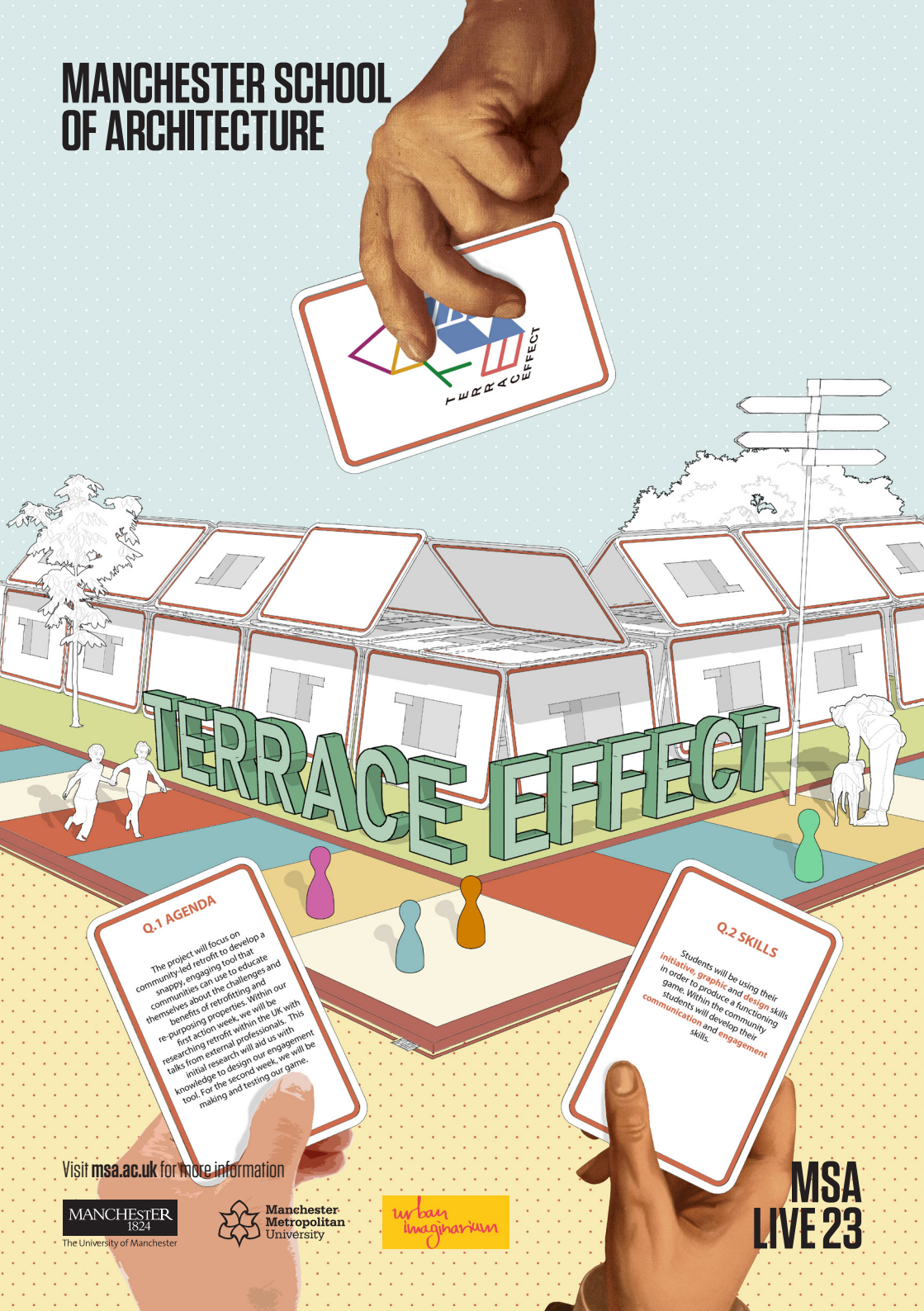
MANCHESTER SCHOOL OF ARCHITECTURE



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MANCHESTER 1824
The University of Manchester

Manchester Metropolitan University

urban imaginarium

MSA LIVE 23

Team

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Ahmad Hariz Bin Zahidi (MArch1)
Chenkai Shao (MArch1)
Vidal Jackson (MArch1)
Yanjun Liu (MArch1)
Yining Zheng (MArch1)

Dieu Nguyen (BA1)
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Weronika Sadzawicka (BA1)
Rory Mclaren (BA1)
Charlotte Olivia Farrell (BA2)
Nicole Odellia Ho (BA2)
Saida Poci (BA2)
Yiang Wu (BA2)
Erica Lau (MLA1)

Partners

Urban Imaginarium

Urban Imaginarium is the main partner working with the MSA Live Team. They developed Climania, the climate action board game, an existing game that will be our main precedent and inspiration for designing our own version of a board game. Climania was developed in 2021 by two Birmingham City University staff members and other collaborators together with the help of thirteen young people aged 14-18 from Balsall Heath, Birmingham in a co-design process. The main purpose for making the game was to inform people of the role of the built environment in the climate emergency debate.

Simeon Shtebunaev - Urban Imaginarium

Simeon is a Doctoral Rresearcher and Lecturer at Birmingham City University, specialising in youth engagement in the built environment, co-design and participation in the planning of future cities; cultural and arts-led research methods. He was the principal investigator on the Climania project and will be our main collaborator throughout the project.

John Christophers - Zero Carbon House

John is an architect based in Birmingham and his Zero Carbon House project acted as a main precedent in our research on real terrace housing retrofit case studies for our game.

Scott McAulay - Founder of the Anthropocene Architecture School

Scott's advice on more general topics about retrofit helped us understand the challenges and benefits of retrofit more broadly and how they can be applied and used within our game.

Agenda

Terrace Effect - Climate & Retrofit Game

Project Background

Last year, Urban Imaginarium developed a board game called Climania, created as an engagement tool in the form of a game to raise awareness about climate change and the role of the built environment in combating the climate emergency crisis.

Climania was co-created by young people of ages ranging from 14 to 18 years old as one of the points that Climania: The Climate Action Game project promotes is the importance of informing all generations but especially young people about the matter of climate action. Climania has been used for campaigning community-led retrofit in Balsall Heath, Birmingham as it engaged and informed various groups of people about climate issues and retrofit in an accessible way. With the help of researchers, the thirteen young people involved developed the game concept over nine workshops focusing on research, design and prototyping.

More information about the original game and its community impact can be found from the following website:
https://climaniathegame.com

Project Aims & Objectives

Inspired by Climania, our MSA Live group aims to develop an educational engagement tool in the form of a board game that focuses specifically on residential retrofit with terrace housing as our main case study. At the moment the housing crisis and climate emergency are overlooked in the UK. Through the creation of a short, snappy and fun game we hope to create conversations and inform various communities in the UK and abroad about the importance of urban planning, retrofitting and climate change. We will be working together to develop an exciting board game similar to Climania but which is more visually and aesthetically attractive as we found that besides the gameboard in Climania everything else relied too much on text instead of visuals. The project will focus on community-led retrofit to develop a snappy, engaging tool that communities can use to educate themselves about the challenges and benefits of retrofitting residences within the terraced house typology.

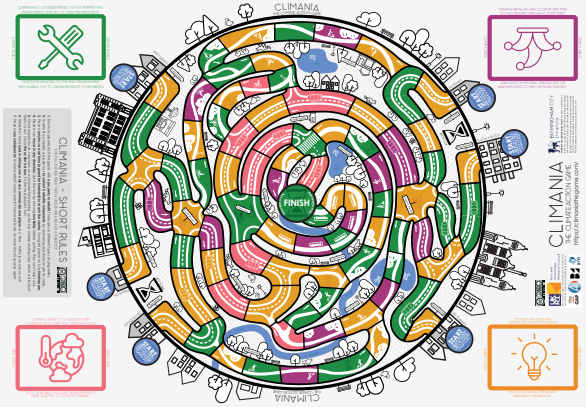
Original Game Analysis

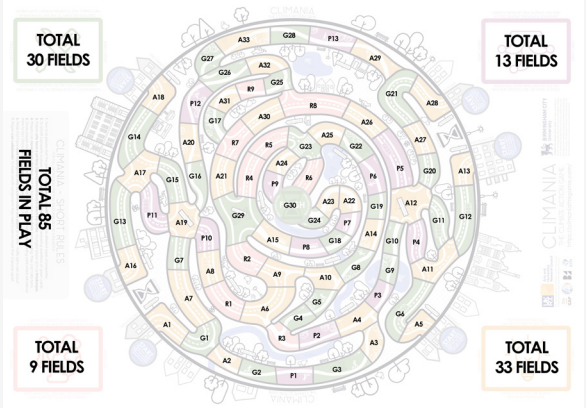
We are improving upon an existing board game:

CLIMANIA is a printable, free-to-play climate action board game that teaches you how the built environment has a major part in averting man-made environmental collapse, narrowing down specifically on two issues: Urban Planning and Retrofit.

The map is shaped after a real neighbourhood in Balsall Heath, Birmingham. We found that this is a great way to make the project rooted to reality and making it aesthetically appealing and familiar to the users playing it. However we found that the layout was a bit confusing as it was following a layout similar to snakes&ladders which might be confusing to people playing it and might not necessarily reflect the reality of a real life neighbourhood.

After we play-tested the game with the BA students during the first day, we found that the current gameplay is thoughtful but very repetitive after a few rounds are played. The game relies too much on trivia and collaboration and there are not enough competitive and risky elements that could make the gameplay more intense and fun. We seek to incorporate competitive elements found in other games and changing the playstyle to make it more fun while retaining the cooperative mindset of combating climate change through retrofit.

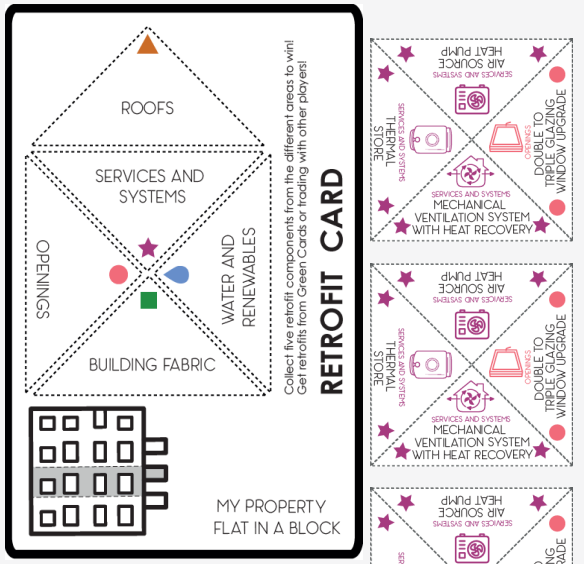


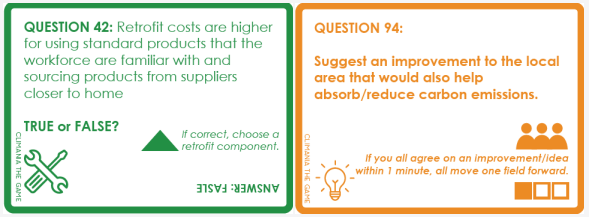


Climania: The Climate Action game's purpose is to distribute knowledge of climate issues and retrofit within the built environment as an engagement tool. Starting at the edge of a circular game board, the goal of the game is to answer trivia built environment questions and collect retrofit components to fill out a retrofit property card as the player moves closer towards the centre of the board.

Players move two fields each turn and take action based on the colour of the field they land on. There are 4 types of tiles representative of the 4 types of question cards that the players will have to read out and answer. Movement is also restricted by the type of road that players take. Pedestrian paths, bus lanes and cycle lanes allow players to move freely whereas on roads only one player can be on a field at any one time and players can't pass over each other, creating traffic jams.

Our project will improve upon these mechanics by adding more competitive and collaborative elements and removing game mechanics that don't add too much to the gameplay. Alongside with the knowledge from the original board game, during the first week we will have guest lectures which will broaden our knowledge on retrofit and climate change allowing us to develop new questions for our own game. More emphasis will be put on the collection of retrofit components as players will have to race against time to fully retrofit a whole neighbourhood.





FRAMEWORK

Week One - Research

Focus on research through guest lectures to design & prototype our own board game.

Monday 08 | Tuesday 09 | Wednesday 10 | Thursday 11 | Friday 12

Day One - Tuesday (May 9th)

Ice-breaker introductory activities between team members.

Playthrough of the CLIMANIA game and feedback session, sparking our game design development and research about terrace housing retrofit in the UK.

Day Two - Wednesday (May 10th)

Lecture on Zero Carbon House in Birmingham as a case study by architect John Christophers.

Group divided into research and design team.

Identifying improvements that can be done to research and challenges that come with the overall game design.

Day Three - Thursday (May 11th)

Lecture on Climania and Game Design by Simeon Shtebunaev, our collaborator.

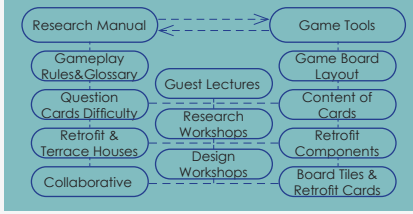
Presentation of initial brief of research findings to collaborators and recording feedback.

Finalising initial research brief and advancing the first design draft of the game.

Day Four - Friday (May 12th)

Lecture on General Climate Awareness & Retrofit strategies by Anthropocene Architecture School founder Scott McAulay.

Further development of game iterations through workshops and finalising research on terraces retrofit.



Week Two - Design

Focus on designing the game visuals and physical/digital components of the game.

Monday 15 | Tuesday 16 | Wednesday 17 | Thursday 18 | Friday 19

Day Five - Monday (May 15th)

Game Design development within small groups focusing on specific game components and areas of research.

Game mechanics development through testing.

Day Six - Tuesday (May 16th)

Game Design development within small groups focusing on specific game components and areas of research.

Game mechanics development through testing.

Day Seven - Wednesday (May 17th)

Game Design development within small groups focusing on specific game components and areas of research.

Game mechanics development through testing.

Day Eight - Thursday (May 18th)

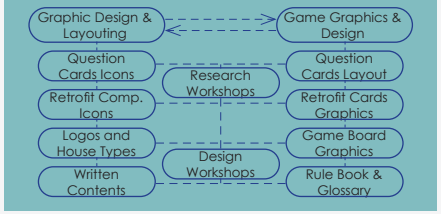
Game Design development within small groups focusing on specific game components and areas of research.

Game mechanics development through testing.

Day Nine - Friday (May 19th)

Preparation of final design package and finalising the visuals into a consistent package for handover to collaborator & preparation of MSA Live Publication.

Final game test and recording own feedback to give to collaborators before they test it within their communities.

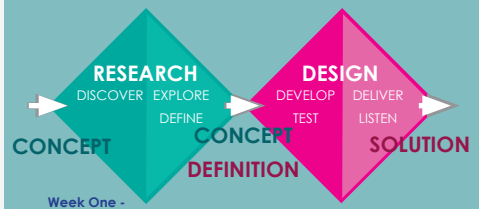


Project Approach & Outcomes

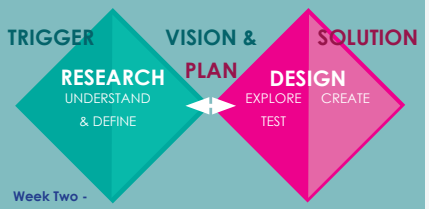
We aim to develop an engagement tool in the form of a game that is also educational. The goal is to create a short, snappy and fun board game which can be used by a wide variety of people to create conversations and inform communities about the importance of urban planning, retrofitting and climate change.

Approach to research and design through making: **Double Diamond Process**

1. **Discover** - Thinking broadly and having an open mind to gathering all information from various places.
2. **Define** - Narrow down thinking and identify key issues to focus on.
3. **Develop** - Re-open mind to all methods of resolving one issue.
4. **Deliver** - Focus down and discuss which is the best solution to achieve goals.



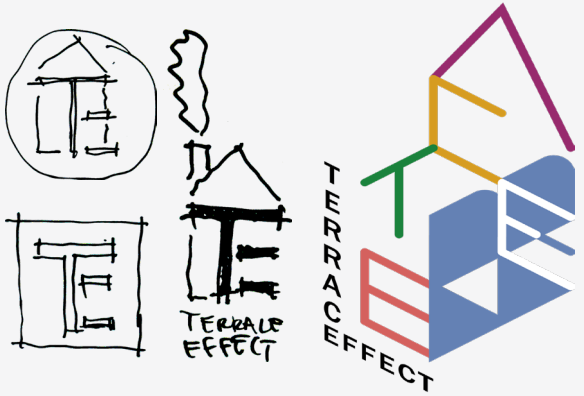
Week One -
Brief Development + Research + Prototyping



Week Two -
Design through making + Prototyping + Documentation

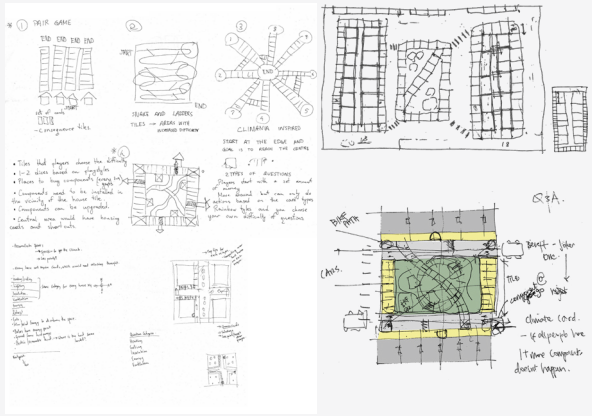
Logo Design

The team has designed a logo for the board game that represents a terraced house made up of letters and shapes that add up to the name "Terrace Effect". From the very beginning the students involved in the project had the idea to incorporate text graphics into the terrace house typology in order to create a logo for the game.



Development Sketches

During the first week, following the testing on the original climania game, we conducted brainstorming sessions and design workshops where each student was encouraged to come up with ideas on the layout of the game board. Initially we looked at various other games trying to incorporate different layouts into our game until we settled on two rows of terraced houses and a "neighbourhood" layout that reflects real life.



Advanced Board Design

By the end of week one we had a final board game layout that was created through testing out previous iterations. By designing and testing we found that some of the gameplay mechanics we wanted to include did not fit the type of game we wanted to make or the layout was too large and so we settled with a layout that was made up of 64 tiles in total. This amount of tiles was balanced with the amount of question cards we had and the game time limit we set.


CHANCE
TERRACE EFFECT
CLIMATE
POLLUTION PATH
BUS STOP
RETROFITTED
CHANGING POINT
IN
OUT
GREEN BANK
Q&A
How to Play
Set up the game board
Lay out the gameboard on a flat surface, ensuring it's properly oriented according to the game's instructions.
Arrange game pieces
Place the pawns, cards and components on their designated positions on the gameboard.
Determine turn order
Establish the order in which players will take their turns. Player with the lowest house number starts first and the game continues clockwise.
Follow the gameplay rules
Read and understand the specific rules of the game you're playing.
Take turns
Players take their turns one by one by rolling a pair of dice and responding to the type of tile they land on.
Maintain fair play
It's important to play the game with fairness and respect for all players. Remember that the objective of the game is to retrofit the whole neighbourhood , so trade as much as you can to benefit everyone.
Hariz Zahidi - Chenkai Shao - Cosmin Dobrea - Vidal Jackson - Yanjun Liu - Yining Zheng - Dieu Nguyen - Sambhav Soni - Khadijah Farooqi - Weronika Sadzawicka - Rory Mclaren - Charlotte Olivia Farrell - Nicole Odellia Ho - Saida Poci - Yiang Wu - Erica Lau
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Manual & Glossary Design

The game is based on a topic that is not given enough public attention, namely the benefits of retrofitting in regards to its impact on the environment. Only people with a background in architecture or urban planning might know about such issues. Therefore, in order to make this game engaging and accessible to the average user with no previous knowledge about retrofit, the team has developed and included a game manual that is made up of a rule book explaining the mechanics, how to play and the objectives of the game and a glossary made up of terminology related to retrofit and climate change within the built environment as well as some real world case studies that were used in the research phase of the project.

Colour & Symbols Design

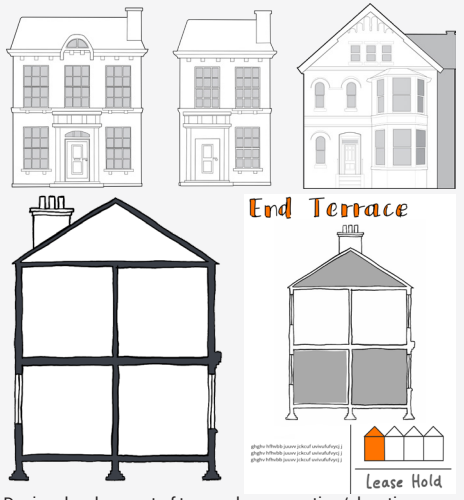
We have chosen a colour scheme that is accessible to people that are colourblind. Since the game we have designed is a free to print and play game, we have also included symbols and icons on all game components so that the game is still playable even if people cannot print the game files in colour.

The symbols chosen have been actively tweaked throughout the two weeks in which the project was made to simplify the graphics as much as possible in order to make the game more readable to the users.

Retrofit Cards Re-design

The original Climania retrofit cards had a very simple and minimalistic layout. The team has improved the housing retrofit cards by adding four types of terrace housing that can be retrofitted, introducing 3 player roles and redesigning the whole layout.

We started out by researching and sketching different types of terraced housing found in the UK and then took the design into illustrator to create the final layout and graphics.

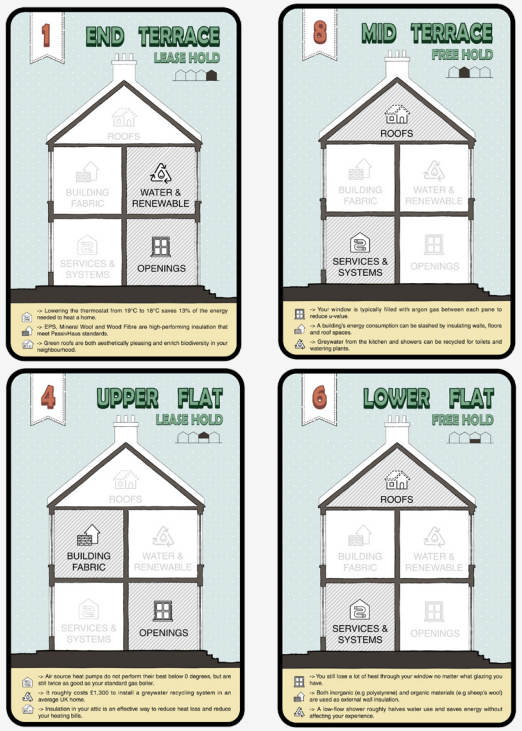


Design development of terrace house section/elevation

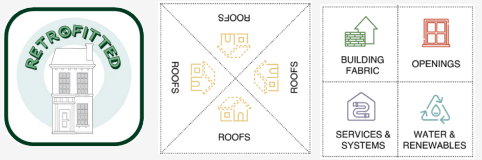
House Cards & Retrofit Components

For the final design of the House Retrofit Cards we chose a similar colour palette to the MSA Live poster we created and the game board in order to keep the graphics of the game consistent.

There are a total of 10 Housing cards corresponding to the 10 terrace houses at the top and bottom of the game board. Each player gets assigned one housing card at the start of the game and their short-term goal is to retrofit the house fully by collecting the missing white retrofit components. Players also have an inventory where they can store up to two duplicate retrofit components and trade with other players. Once a house is fully retrofitted the player gets a new house card and starts over until all 10 houses are retrofitted and the game ends or time runs out.



Final design of the Housing Cards & Player roles



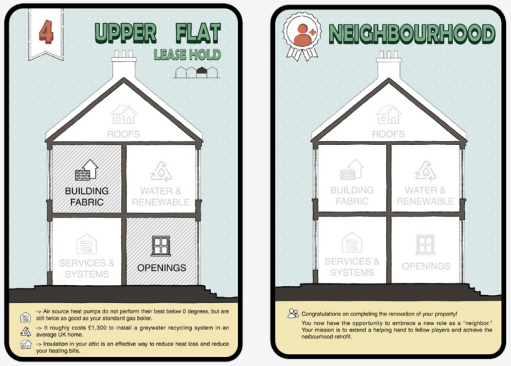
Final design of the Retrofit pieces

How to use the Cards

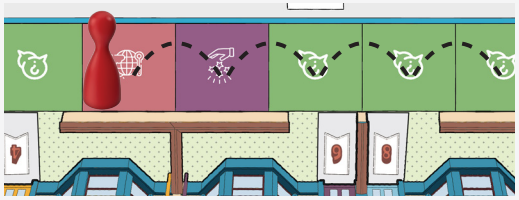
Players will roll a pair of dice each turn and they will land on a specific game tile that will determine the type of question the player must answer. Q&A tiles are the most common as they are the main way to collect retrofit components within the game. Players gain one specific component per question answered correctly which they then have to store inside one of the white slots in their retrofit card. In total there are 10 houses that need to be retrofitted in the neighbourhood and if a player finishes retrofitting their house and there are no more houses left to retrofit they are assigned the "neighbourhood" card which allows them to keep playing the game to collect retrofit components and trade them to other players to help them finish their houses, encouraging collaboration between players.

Question Cards Design

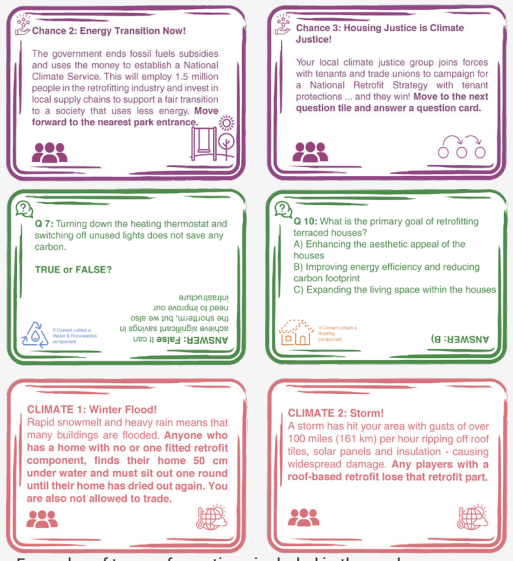
We have re-constructed and re-written over 150 question cards and divided them into three categories: Chance, Q&A and Climate. Q&A cards are trivia questions and the main source of learning about retrofit in the game and gaining retrofit components, whereas the chance and climate cards trigger positive or negative events that either make the game easier or harder for the players, increasing the intensity and the need for collaboration between players in order to win the game before it gets too difficult or the time runs out.



Housing retrofit cards - used to store retrofit components



Chance Cards | Q&A Cards | Climate Cards



Examples of types of questions included in the cards

Types of Question Cards and Retrofit Components

As part of our research during the first week we looked at the original Climania cards and we have re-designed and re-written the cards during the second week using information gathered through group research workshops and lectures given by guests such as Scott McAulay and John Christophers who specialise in retrofit and climate responsive design. In total we have designed and written 99 Q&A Cards that award retrofit components, 36 Chance cards that are split 60-40% beneficial and negative outcomes and finally 25 Climate event cards which are negative cards that increase the difficulty of the game.


MSA
LIVE 23
CHANCE
CLIMATE
Q&A


LOWER PLAY
MID TERRACE
NEIGHBOURHOOD
LOWER PLAY


LOWER PLAY

ABOUT

Each year the MSA LIVE programme unites Masters Architecture year 1 students with those in BA year 1 and year 2 and Masters Landscape Architecture 1 in mixed-year teams to undertake live projects with external partners to create social impact.

LIVE PROJECTS

All MSA LIVE projects are live. A live project is where an educational organisation and an external partner develop a brief, timescale, and outcome for their mutual benefit.

SOCIAL IMPACT

All MSA LIVE projects have social impact. Social impact is the effect an organization's actions have on the well-being of a community. Our agendas are set by our external collaborators.

EXTERNAL PARTNERS

MSA LIVE projects work with many organisations: charities, community groups, social enterprises, community interest companies, researchers, practitioners and educators.

STUDENT-LED

Our MSA masters students take the lead in the project conception, brief development, delivery and co-ordination of a small project. Other cohorts joined for an eventful 2 weeks of activities at the end of the academic year.

KNOWLEDGE TRANSFER

Working in teams within and across year groups and courses; MSA students participate in peer to peer learning. In addition, collaborators, participants and students engage in the transfer of tangible and intellectual property, expertise, learning and skills.

LARGE SCALE

This year approximately 650 students from 4 cohorts in MSA have worked on 42 projects with partners.

QUESTIONS

For questions about MSA LIVE please contact the MSA LIVE team:
msalive@mmu.ac.uk

BLOG

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