



University
of Glasgow



VIDEO GAME RESEARCH INNOVATION STARTER TOOLKIT

A BEGINNERS' GUIDE FOR INNOVATION AND INDUSTRY & COMMUNITY ENGAGEMENT THROUGH GAME DEVELOPMENT

By Dr. Mark Wong and Innovators Assemble team and partners (Dr. Tim Peacock, Rachel Porteous, Lauren Watson, Education Evolved, Ethnic Minority Environmental Network, The Floating Designer, University of Glasgow's Games and Gaming Lab)

Illustrated by: The Floating Designer



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SEVEN

Seven Voices. One Future.



📍 About the Innovators Assemble Project

Our project, Innovators Assemble (INASSEM), promotes gaming and game development as a creative pathway for researchers, especially in [Social Sciences, Humanities and the Arts for People and the Economy/Environment \(SHAPE\)](#) and beyond, to pursue their innovation journeys and further academics' engagement with industry and communities.

This project is led by Dr. Mark Wong (Urban Studies), Dr. Tim Peacock (History), Dr. Helen Mullen (consultant), Rachel Porteous, and Lauren Watson at the University of Glasgow.

The project partners are: [Education Evolved Ltd](#), [Ethnic Minority Environmental Network](#), [The Floating Designer](#), and the project is hosted by the [UofG's Games and Gaming Lab](#).

This project was made possible thanks to funding from the Aspect Innovation Fellowship, with funds from Research England, and an Economic and Social Research Council Impact Acceleration Account (ESRC IAA) grant ES/T501918/1, which is part of UK Research and Innovation (UKRI).

INTRODUCTION OF OUR TOOLKIT

What is the toolkit?

This is a “starter toolkit” to support beginners in video games innovation, particularly in [Social Sciences, Humanities and the Arts for People and the Economy/Environment](#) (SHAPE) and beyond, sharing our project’s own innovation journey as an example.

This toolkit walks through the process of how our project, Innovators Assemble (INASSEM), co-developed a video game with industry and community partners. This journey was underpinned by a strong academic-industry-community partnership, which we are incredibly proud of.

Who is it for?

You will find this toolkit useful if you are thinking about developing a video game, or a game prototype, within a research or higher education environment but not sure where to start.

This toolkit is designed to inspire and provide guidance for researchers, academics, professional services staff, and/or students to embark on their own innovation journeys—whether individually or collaboratively—especially for the first time.

INASSEM’s vision is to be a “demonstrator of innovation”, showcasing how academics can collaborate with industry and community stakeholders through game development and apply SHAPE and diverse forms of knowledge to game design and external engagement.

This toolkit is suited for anyone with an interest or experience with innovation through video game development, and no prior knowledge or experience is required.

Why should we (or anyone) care about games?

Gaming is one of the fastest growing creative industries, populated by >3 billion players worldwide, and recognised by the [UK Innovation Strategy](#) as a key exemplar of creativity “nurturing interdisciplinary innovators”.

UK Ministers also recognise the potential of games in creating economic and social benefits in the [Video Games Research Framework](#) (published in May 2023), calling for more research to focus on video games in academia and UK’s research funding councils.

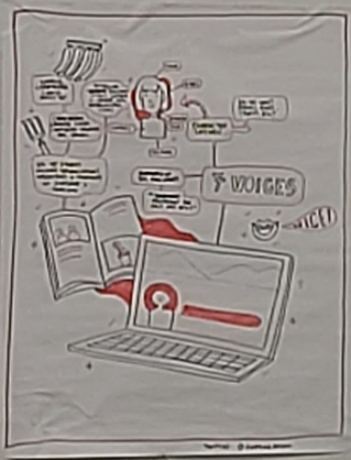
INASSEM believes video game development offers a step-change in enabling SHAPE academics to engage with industry, businesses, and communities and citizens.

There is strong potential to use SHAPE knowledge to drive responsible innovation in video games for the social good. For example, developing video games with a strong social message or to highlight an important, alternative narrative about a social issue or policy issue, based on research and community perspectives.

In INASSEM’s approach, video game provided an immersive, creative way to invite the public to re-think what sustainability and a just transition towards the reaching “Net Zero” by 2045 – a policy target set by the Scottish Government – means and for whom.

Our project is all about Innovation for the community, with the community.

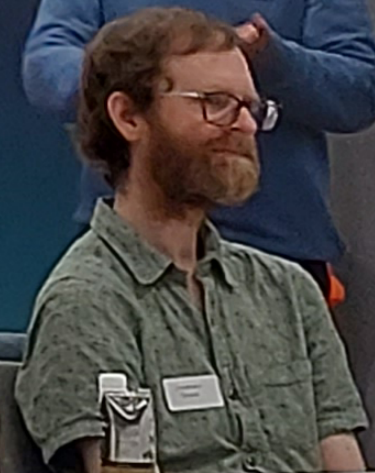






**Education
Evolved**

**Making Educational
Experiences Accessible**



ABOUT OUR JOURNEY

ABOUT OUR JOURNEY

What did INASSEM create?

Our project co-developed a video game, “[SEvEN - Seven Voices, One Future](#)”, with the project’s industry and community partners, to amplify Minoritised Ethnic people’s voices and Traditional Ecological Knowledge in Scotland’s sustainable future.

Players of the game are invited to immerse in a thought-provoking narrative of the future, where the actions and voices of Minoritised Ethnic people are centred.

Set in the Western Scottish Highlands in the year 2045, SEvEN features the ‘voices’ of seven Minoritised Ethnic people.

Players get to interact with seven narratives and mini-games, based on real-life climate actions led by Minoritised Ethnic-led organisations and initiatives across Scotland. The characters in the game are voiced by and created in the likeness of real Minoritised Ethnic people in Scotland.

Players are encouraged to learn about the importance of Traditional Ecological Knowledge and individual and community actions that can create bigger change by working together.

Our game invites people to reflect on what a sustainable future truly means and for whom.

The game is publicly available **online** and is free to play on any web browser, designed to be accessible to all, including non-gamers.





What is the process? What did we do?



Workshop 1 :
Brainstorming & Ideation

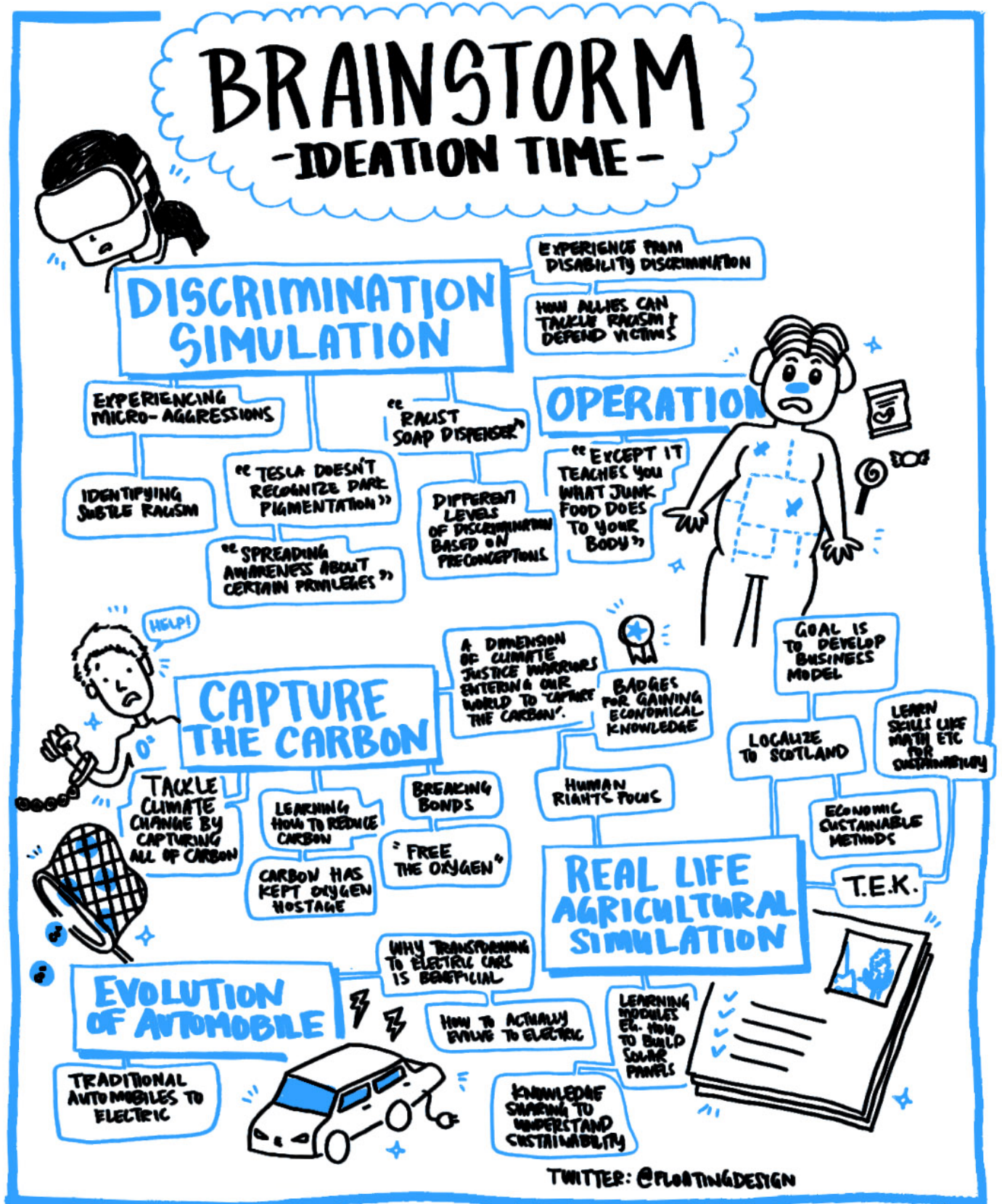


Workshop 2 :
Decision-making on technical aspects such as graphics, aesthetics, and game environment – to authentically represent Minoritised Ethnic people in the game



Workshop 3 :
Soft launch & game testing

Workshop 1 : Brainstorming & Ideation





BRAINSTORM - IDEATION TIME -

REAL REPRESENTATION

POSITIVE UNDERSTANDING OF DIFFERENT COUNTRIES

CONTEXTUALIZE NUMBERS, STORIES, EXPERIENCES, OUTCOMES

ETHNIC MINORITIES COMMUNITIES WITHIN SCOTLAND: HOW DECISIONS AFFECT THEIR COUNTRIES OF ORIGIN

URGENCY



WILL PLANTING A COUPLE OF TREES BENEFIT THE WORLD?

30 SECOND ALARM

7% WIN RATE



TREE BUILDING

TRAVEL FROM CITY TO CITY TO COMPARE INITIATIVES

HISTORICAL ASPECTS OF POST COLONIAL COUNTRIES

MORAL DILEMMA

CLOCK STOP TO GATHER INFO + LEARN

SEE THE DIRECT EFFECTS

SAVE + RELOAD

POSITIVE CHANGE CAN HELP UNDERSTAND CURRENT STAGES OF DEVELOPED NATIONS

CHILDREN HAVING OPPORTUNITY TO EXPERIENCE VR

TICKING OVER EVERY 30 SECONDS

DOMINO EFFECT OF OUTCOMES BASED ON DECISION MAKING



BRIDGE BETWEEN ACTIVISTS + ETHNIC MINORITIES EXPERIENCING EFFECTS OF CLIMATE CHANGE

Eg. RISING WATER LEVELS

Eg. OVERPOPULATION

TREE BUILDING CHALLENGE

UNDERSTANDING OF GLOBAL SOCIAL ISSUES

“WHO IS DOING BETTER IN TALKING CLIMATE CHANGE?”

NEW SKILLS + KNOWLEDGE

LEVELS OF LEARNING ABOUT IMPACT OF IMPLEMENTATION

THE IMPACT OF YOUR DECISION AT THE OTHER SIDE OF THE WORLD

GAMEPLAY TRANSACTIONS TO BRING CARBON INTO HUNDREDS

“WHAT ARE DIFFERENT COUNTRIES DOING?”

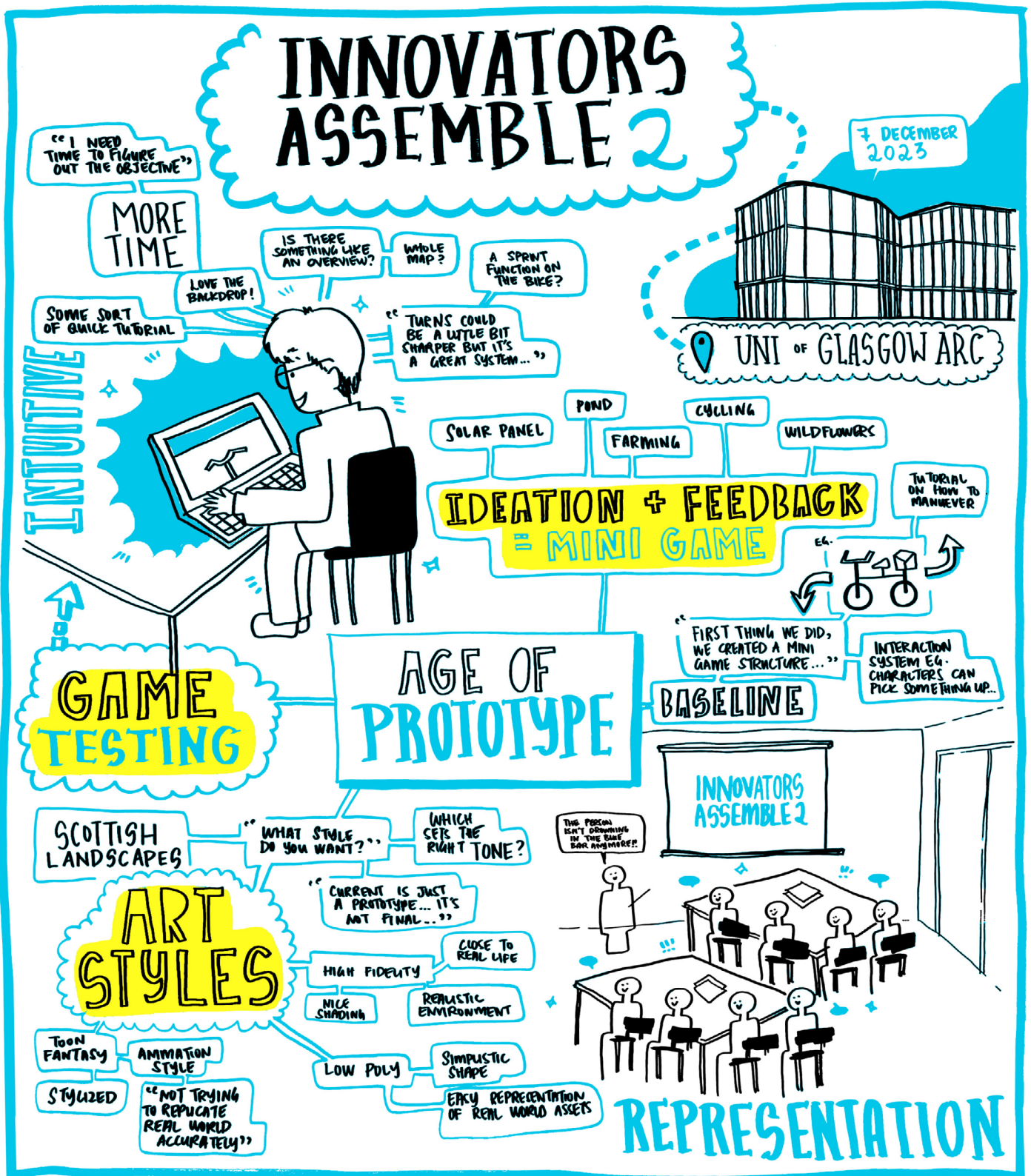


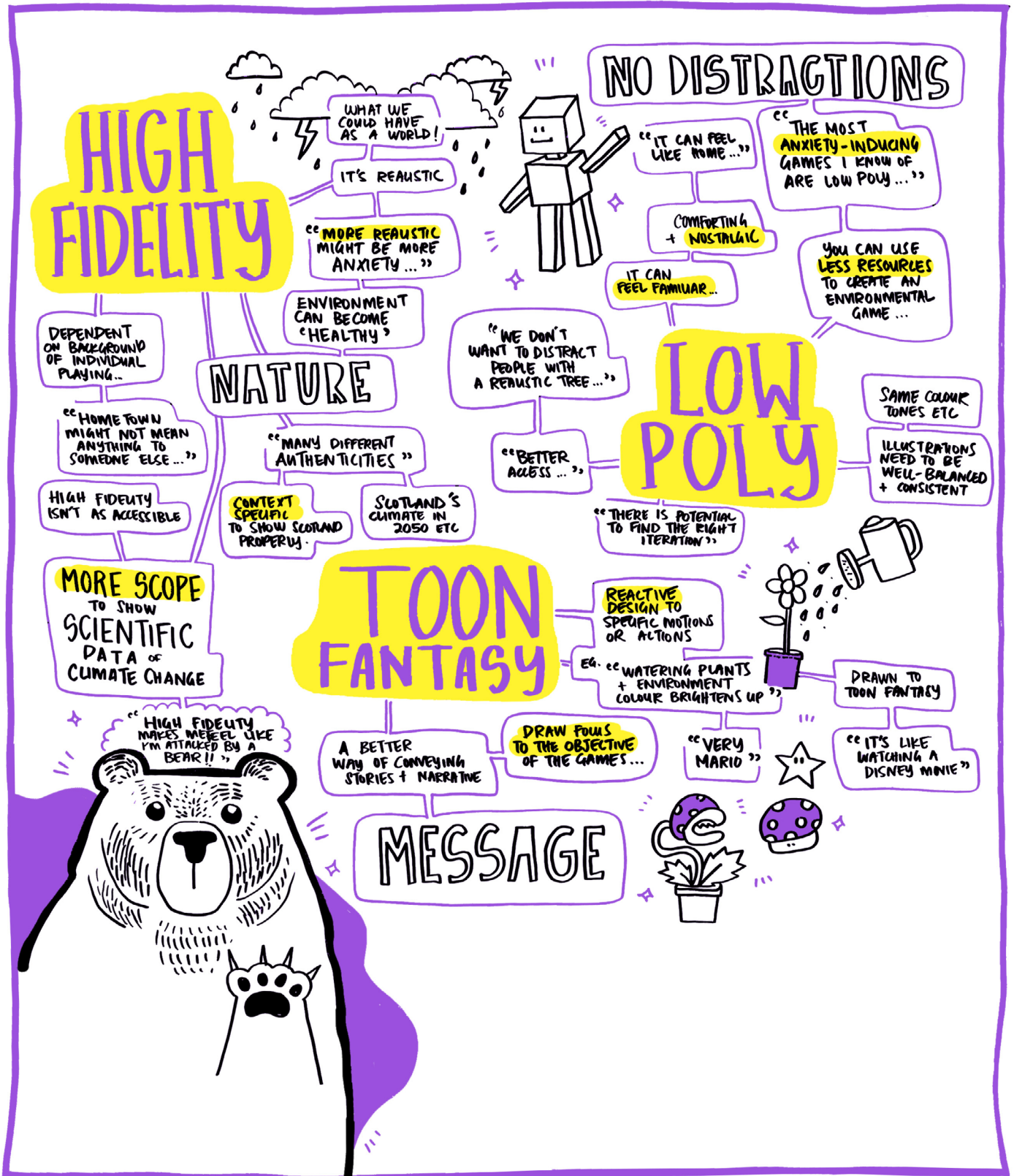
UNWINNABLE?

TWITTER: @FLOATINGDESIGN

Workshop 2 :

Decision-making on technical aspects such as graphics, aesthetics, and game environment – to authentically represent Minoritised Ethnic people in the game





Workshop 3:

Soft launch & game testing







SEvEN Soft Launch

The soft launch was an interactive event on Friday 19 May 2023, at the University of Glasgow's Advanced Research Centre, giving people the chance to be one of the first to try out the game.

It was also an opportunity for attendees to hear more about INASSEM's work and speak with the creators of SEvEN.



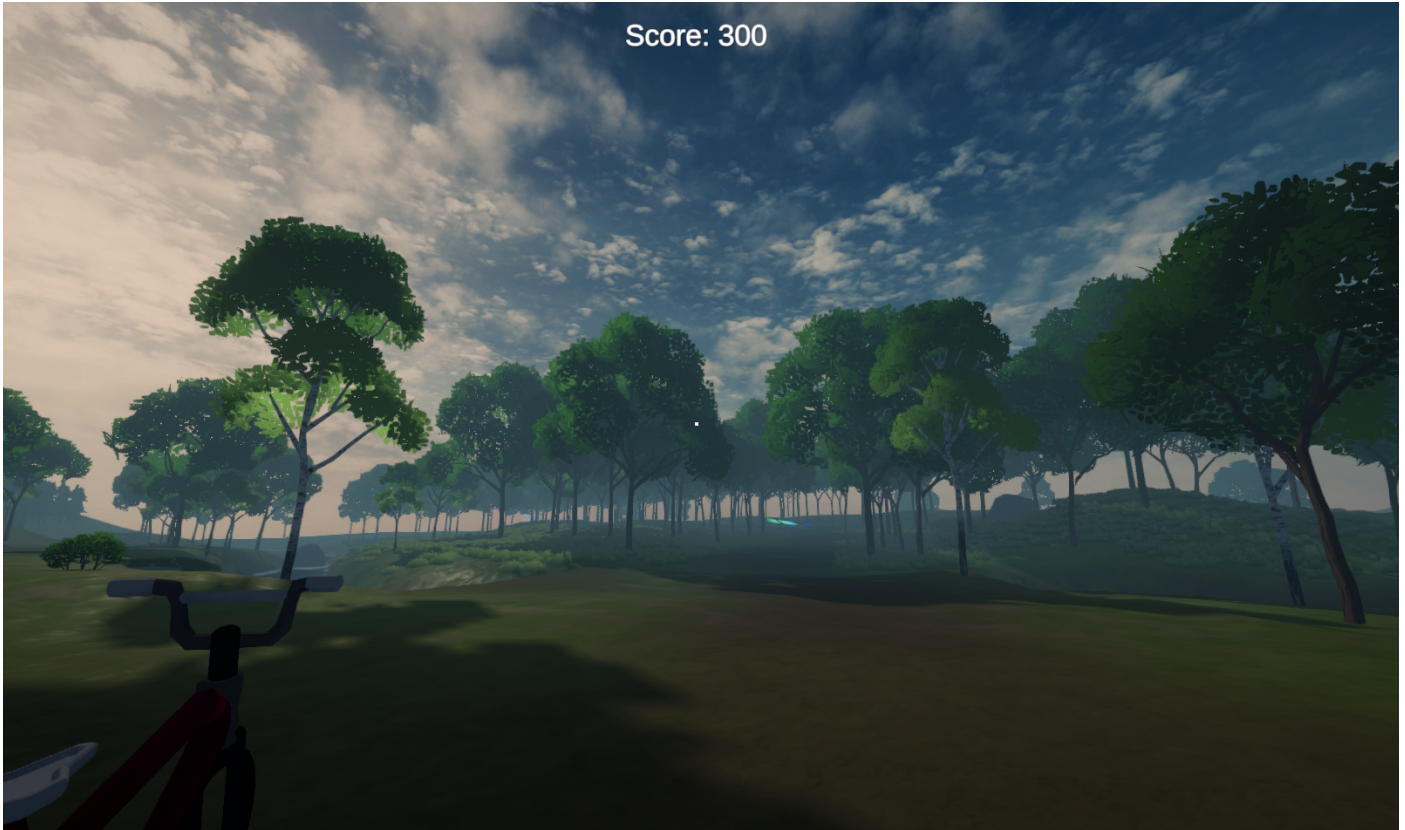


The event reached 54 attendees from a wide range of backgrounds. The event was open to the public, with targeted invites to internal and external academics and professional services staff, students, researchers, public/third sector organisations, and game industry workers/organisations who have an interest in video games with a strong social message, especially one created through an academic-industry-community partnership.

The event also disseminated an end-of-event questionnaire to collect information on the potential significance of the impact of our game in the attendee's work and sector.



SEvEN Game Design





Planting and growing your own food provides a great deal of benefits for your wellbeing and for the environment. And food is an important part of the culture and identity of many Minoritised Ethnic communities in Scotland.

[Spacebar] to Continue



LEARNINGS
FROM OUR
JOURNEY

LEARNINGS FROM OUR JOURNEY



1. Co-creation underpinning game development

INASSEM was strongly driven and informed by the principle of co-creation.

Embedding co-creation in the game development process was hugely rewarding for the team and the partners involved. It also benefited the development of the game itself.

INASSEM's academic-industry-community partnership underpinned every step of the game development process, from ideation to making decisions about technical aspects of the game's graphics.

TOP TIP: Open the door for the communities and partners you work with to make decisions on the game development together—iteratively and as early as possible.

Creating a meaningful partnership to co-create a game is not only more rewarding but also more equitable.

INNOVATORS ASSEMBLE

GAME WORKSHOP

30th SEPTEMBER

EQUALITY

BRIDGE

INCLUSIVITY

TIME TO IDEATE!!

CREATE PLATFORM

COLLABORATE

DEVELOP IDEAS

AMPLIFY MINORITY ETHNIC VOICE!!

EXPERIENCE

TWITTER: @LBSATINDESIGN

BRAINSTORM - IDEATION TIME -

DISCRIMINATION SIMULATION

EXPERIENCE DISCRIMINATION

OPERATION

CAPTURE THE CARBON

REAL LIFE AGRICULTURAL SIMULATION

EVOLUTION OF AUTOMOBILE

TWITTER: @PLANTHUBDESIGN

BRAINSTORM - IDEATION TIME -

TREE BUILDING

HISTORICAL ASPECTS OF TREE BUILDING

PERIODS

LEVELS OF LEARNING

UNWINNABLE?

TWITTER: @LBSATINDESIGN



LEARNINGS FROM OUR JOURNEY



2. Academic and participatory research inform game design process

INASSEM worked with the project's industry and community partners to craft a game prototype based on the team's research on public policy, just transition, racial justice in green and digital transformation, and video games research.

But this was only our starting point. The project also valued diverse forms of knowledge production across and beyond academia.

The game development process was informed by participatory methods, which the project lead, Dr. Mark Wong, uses in his own research.

This enables an open process to share and mobilise knowledge across disciplines and sectors, and recognise the value of expertise and knowledge beyond "traditional" academia.

Whether you already use this in your own research or hearing about this for the first time, embedding participatory methods and putting the communities you work with at the heart of the game development process is crucial.

TOP TIP: Be open to learn from your industry and community partners. Embed that learning and their expertise as well as yours across the game design process and/or the game itself.

WHAT'S THE GAME?

HOW DOES THE WORLD LOOK?

NARRATOR? MULTIPLE?

DETAIL OF LOCATIONS?

AMBIGUITY + ABSTRACT

3D?

2D?

VOICE



ACCESSIBILITY

REPRESENTATION

IS IT REALLY AMPLIFYING VOICES?

CHAPTERS

PAIRING OF SCOTLAND + ANOTHER COUNTRY
EG. PAKISTAN

BUILDING FRAMEWORK TO EVOLVE TO DIFFERENT COUNTRIES

HOW DO WE COMBINE TEK + TREE BUILDING?

"IT'S NOT JUST A TREND"

EDUCATION ON WHAT REAL CLIMATE + SOCIAL JUSTICE

"THESE ARE AFFECTING PEOPLE IN MY NEIGHBOURHOOD"

RECOGNIZING THAT SCOTLAND DOESN'T HAVE AN ANSWER

FINDING CONNECTIONS BETWEEN TARGETS OF SCOTLAND WITH OTHER COUNTRIES

IDENTIFY WHAT IS GOOD IN DIFFERENT COUNTRIES OF ETHNIC MINORITY

HOW DO WE MAKE SURE WE ARE REMINDED OF SUCCESSES FROM OTHER COUNTRIES

THE MANY DIFFICULTIES OF HAVING GOOD INTENTIONS

SNOWBALL EFFECT OF CERTAIN DECISIONS

PEOPLE



IDENTITY

NET ZERO

LEARNINGS FROM OUR JOURNEY



3. Collaborate with partners with shared values

From the start, our project carefully considered how to nurture good partnerships with industry and community collaborators.

Most crucially, we spent a significant amount of time to identify partner organisations that share our own values, such as social justice and fairness. Choosing who you collaborate with is critical to the success of your innovation journey.

For INASSEM, Education Evolved was an ideal choice as our technology industry partner. They have a strong social ethos in their business in making education accessible for all, and they had a track record in developing technology that provides educational experiences and virtual guided tours for students who are from lower socio-economical backgrounds.

Ethnic Minority Environmental Network (EMEN) not only offered networks with people from the Minoritised Ethnic communities in Scotland but also generously offered their expertise in traditional ecological knowledge and knowledge on Minoritised-Ethnic led organisations and climate actions. Both became essential elements reflected in the game. EMEN is also part of CEMVO Scotland, a strategic partner of Scottish Government on racial justice.

Sarah Ahmad, The Floating Designer, offered a wealth of experience as a digital designer. She completed graphic recording to document the ideation and innovation process of the workshops. She also developed illustrations for the game, including the illustration of the game characters created in the likeness of real Minoritised Ethnic people in Scotland.

TOP TIP: Ensure your partners, including businesses and industry, align with your own values and share a sense of social responsibility.

Our project also built in significant time to ensure our project partners understand each other's value and what's important to each other.

This became extremely important to build a successful partnership and created a game that really champions our core value – to represent Minoritised Ethnic people's voices authentically in the game.



LEARNINGS FROM OUR JOURNEY



4. Celebrate the partnership

Having a chance to work closely with the industry and community partners is one of the most enjoyable aspects of our innovation journey.

In the game's launch event, we gave as much time as possible for attendees to hear directly from our partners about collaborating with us and our University.

Invite colleagues and key nodes in your academic and non-academic network to come to this launch to celebrate this success with you.

It was a truly magical moment when others get to see and celebrate this partnership with you.

5. Innovation doesn't have to be about making money

One thing the INASSEM project quickly learn is that innovation, or even commercialisation, doesn't have to be about making money from the game you create.

We made a joint decision early in the project with our partners that SEVEN should remain publicly available free-of-charge and accessible for all.

The game's mission to amplify Minoritised Ethnic people's voice in the sustainable future and just transition is too important to hide behind a paid wall, and we decided that charging people to access the game would contradict the overall mission and social message of the game.



LEARNINGS FROM OUR JOURNEY



6. Create impact through innovation - with the industry, community, and people you work with

We received a congratulatory letter from the Minister for Equalities, Migration, Refugees (Emma Roddick MSP). We also got an invite to meet with the Cabinet Secretary for Net Zero and Just Transition's (Màiri McAllan MSP) officials of the Scottish Government to discuss our project and potential collaborations in the future.

"I agree wholeheartedly that all voices in Scotland should be heard... I am heartened to see the University of Glasgow coming together with gaming industry and community organisation partners, to develop this project around these important issues." – Emma Roddick MSP.

"Ms McAllan hopes that the event was a success... The Cabinet Secretary wishes to reaffirm her commitment to highlighting the voices of those from minority ethnic groups throughout the just transition. As such, she would like to offer a meeting with her officials to learn more about your project and discuss potential collaboration on just transition moving forward" - Private Secretary, Cabinet Minister for Just Transition and Net Zero.

Make sure you identify who in your context(s) are important stakeholders to hear about your success, and reach out to them regardless of whether you have connected with them in the past.

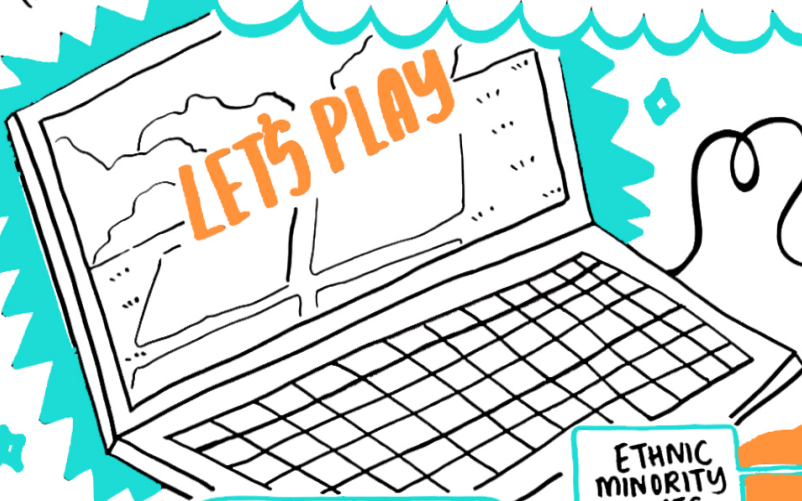
Your success needs to be heard, and it can lift up the partners and people who contributed to the game development and innovation.

SEVEN

SEVEN VOICES. ONE FUTURE.
OFFICIAL LAUNCH

LET'S PLAY

WHAT NEXT?



STEALTH LEARNING

VOICE

ETHNIC MINORITY VOICES

HIGHLIGHT REAL WORLD ACTIONS + EXPERIENCES

COLLABORATION

GAMING DEVELOPMENT

SUSTAINABILITY



RACHEL

PATHWAY FOR MEANINGFUL DISCUSSION



MATTHEW

CELEBRATION!

GAMIFICATION OF RESEARCH

IMPACT

ACCESSIBILITY

EDUCATION ACCESSIBLE FOR ALL!



MARK

ARTIST TWITTER: @FLOATINGDESIGN

CONCLUDING THOUGHTS

We hope this toolkit, through highlighting our innovation journey, provides a source of inspiration and a useful guide on how to create research innovation in video game development.

This toolkit hopes to stimulate new networks and engagements in innovation and promote partnerships between academia, industry, and community in game development.

It is important that researchers, academics, professional services staff, technicians, and students, who have interests or experiences of research innovation in video game to connect with one another.

More importantly, there is tremendously value to engage with external organisations in the industry and community, who offer diverse perspectives and produce relevant expertise and knowledge that can help make innovations through video game develop successful.

This toolkit hopes to act as an accelerator of universities' connections with the game sector, industry, and community networks, who can offer valuable support with their community organisation and networks, to promote further successes and progress in development of commercial and/or educational games.



Useful Resources

- The graphic recordings from [The Floating Designer](#)

Innovators Assemble workshop 2 video:

- [Innovators Assemble](#)

UK's Video Games Research Framework:

- [Video Games Research Framework - GOV.UK \(www.gov.uk\)](#)

The University of Glasgow's Games and Gaming Lab:

- [University of Glasgow - Games and Gaming](#)
- INASSEM has developed a fireside chat series, offering a forum for inspiration, support, and a springboard for academics with experience/interest of using gaming to pursue innovation and engagement, particularly with industry and community. Find out more on the [Eventbrite page](#).

Our project partners:

- Education Evolved Ltd, Ethnic Minority Environmental Network (CEMVO), The Floating Designer

