

Research through game design

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Abstract: Games are common artefacts and systems for design research, appearing as engagement tools with publics or specific audiences, expressions of ideas, and as tools for speculation. Games have proven value as instruments or outputs supporting this work, but the process of designing games is rarely centered as a moment of production of new knowledge and understanding. Taking inspiration from Research through Design more broadly, we position Research through Game Design as an approach that delineates space to challenge systems, break from norms, provoke, critique, explore, experiment, critically design, and reflect on the frictions and boundaries of ideas, artefacts, and systems. This paper is for people interested in, or who already are, designing games as part of their research. Through four games it explores what research looks like during the game design process, and how knowledge and insight from within that process can be captured and communicated.

Keywords: Research through design; game design; design knowledge

1. Introduction and background

Games are everywhere in research, education, and communications and in various forms have long been featured design research¹. There is no wonder - they are a cultural behemoth, instantly understood, appealing, and rewarding to play. They've proved a useful opportunity for researchers to reach new audiences, engage and immerse people, provide a platform for data gathering, educate, make new connections and, maybe, effect meaningful change and broad impact.

¹ An unscientific search for "game" in the DRS Conference Series Proceedings returns 630 results. 1178 results are returned when searching the entire Digital library (date searched: 13 Nov 2025).



Games are frequently reported as part of research outputs at conferences, in journals, and university press releases. This should be celebrated as one of the many successful and flexible tools we have for investigating, explaining, and having impact with our research. However, the focus in reporting such research is often on utility, and less frequently about the process of designing games (e.g., Chopra et al., 2025) or the knowledge that was produced through this process (e.g., Akmal & Coulton, 2019). Much as we don't talk about how we write papers, games are often mentioned merely as a tool, the design of which is either not explored, or only explained in terms of practicalities or utility towards broader research questions (e.g., Ballard et al., 2019; Hartman et al., 2021).

Recognising that game design is design, we argue that there is value in interrogating this process and understanding how knowledge production works in this context, and recognising the idiosyncrasies of game design as a specific kind of design work. In particular, trying to hold back the fascination with games as final objects, or fixed outputs intended for broad audiences, and refocus on the way they come to be.

To express it in terms from Frayling's key work (Frayling, 1994), this is not intended to be an exploration on how to design games for research, nor is it an investigation into how we can do research with games, both of which are very well established, but rather a recognition of researching through designing games.

1.1 Game design

Today game design practice carries a duality. On one hand it is a craft - modern board games, table top role playing games (TTRPGs) and arthouse video games often present the designer as auteurs of creative and personal visions. In contrast the teams of hundreds behind large scale digital games recognise the combination of skilled designers as teams of engineers, defining the procedural structures in relation to extensive environments, characters, and narratives.

The gravitational pull of the commercial video game industry draws our teaching and scholarship to situate game creation in terms of usability, marketability and player experience in the mass market. However, practices like game jams, hackathons, and online communities of modding, support a spirit of shared experimentation, refinement and learning (e.g. Meriläinen et al., 2020; Faas et al., 2019). Small games, concepts or ideas are often shared within communities on social media, discord groups, or sites like itch.io, and are often incomplete, buggy, or unpolished, serving as demonstrations of ideas rather than complete artefacts intended for wide audiences. This small-form experimentation alongside peers resembles the iterative, reflective and critical activities in other kinds of design practice, and demonstrates that experimentation and investigation are valued, but there is perhaps a lack of shared vocabulary or recognition of this process as the site of research.

Key game design texts such as *Rules of Play* (Tekinbas & Zimmerman, 2003) emphasise the importance of play in game design, and using play as a way to evaluate intermediate versions (Fullerton, 2004; Zimmerman 2003). Waern and Back point out that "Experimental game design should aim to explore design factors that are novel or may be problematic, rather than strive to generate good games" (Waern & Back, 2015), that serves as a particularly

useful reminder that the goals of game design need not be tied to the quality of a final product, and a reminder of the implicit assumptions in game design practice.

1.2 Research through design

This playful, loosely structured experimentation in game design speaks to constructive epistemologies in design research (Koskinen et al., 2012), and in particular the idea of “drifting” (Krogh & Koskinen, 2022) is a familiar approach to game designers since the potentials are so complex. Mason highlights the “chaotic knowledge acquisition” that characterises game design practice (Mason, 2025) and reinforces the value of shifting focus to design as distinct from the game artefact, as “purpose can be found without the end-product, even if the reason is merely to make, reflect and re-make”.

This is a materially engaged way to recognise and value insights gained during design as a reflective process (Schön & DeSanctis, 1986). As in other spaces, the game designer engages with the material in negotiation and conversation. In the case of games, that material can be quite complicated. It may include rules or mechanics, their interplay as dynamics (e.g. Hunicke et al., 2004), any physical or digital components, narrative structures, social or cultural aspects, as well as the complexities of all these aspects in combination - all the ways “the thing things” (Malafouris, 2014).

Research through Design (RtD) is itself a broad term for this kind of work, where the process of design is necessary to gain insight into a related research question. The loose definition has led to a range of interpretations (Godin & Zahedi, 2014). In Human-Computer Interaction there are more formal attempts to define specific criteria that have “agreed upon form” that can mark a “high quality contribution” (Zimmerman, 2003), as well as approaches that are intentionally open, and “take pride in its aptitude for exploring and speculating” (Gaver, 2012).

Game studies, and game design studies, has begun to embrace materially-engaged approaches. For example, Khaled and Barr’s Method for Design Materialization (MDM) (Khaled & Barr, 2023) for game designers, centred around version control as a point where design insights can be captured. This fits neatly into digital design and prototyping workflows, where incremental units of work can be reflected on in the moment, and documented using the exact same tools that record changes to code. Barr demonstrates this in a reflection on a range of projects including making 100 versions of Pong (Barr, 2023), and the fine notes and details of changes to code are captured in comments and the public source repository. This is an example of an approach to RtD that is deeply connected to the workflows of implementing digital games, that might be less useful in other contexts but is no less generative for its close coupling to those tools.

Interestingly, in HCI and Design Research, playfulness (Gaver et al., 2004), ambiguity (Gaver, et al., 2004) and fun (Blythe, et al., 2004) are often recognised as being important both in user experience and relation to design, as well as a way of doing research (Kirman, et al., 2020). Especially in speculative and critical work, playing with form and content can be useful both in process and sharing insight (Lindley & Coulton, 2016). Hook & Coulton (Hook & Coulton, 2017) link this to established scholarly game design practices such as critical

(Flanagan, 2009) and philosophical or conceptual game design (Gualeni, 2015) that further demonstrates some shared language across RtD, HCI and game studies.

2. RtGD in practice

We have collected a brief collection of examples, or annotated portfolio (e.g. Bowers, 2012) of recent projects that help us articulate value we have found in recognising game design as sites of research insight in different ways. This is categorically not intended to demonstrate “abstract regularities” (Gaver, 2012) or provide a framework for this kind of RtGD practice, or claim this as our invention. Instead, it is intended to illustrate our own experiences, raise our reflections from this kind of practice more broadly, and provide useful examples for scholars doing game design as a research practice on how this can look.

In particular we are interested in the breadth of games for exploring new ideas, things and systems. We have chosen examples that include card games, board games, and zine-based LARPs, however hopefully it is clear that the process might equally be useful in making sports, mobile games, playground games, and anything else that might be designed as a game. First, we will introduce each game briefly as an illustrative vignette, and then review examples of the kinds of insights and knowledge generated through their design. The games are varied, in both complexity and completeness, but are not the focus of the current paper. Following this, we also intentionally don’t detail the practical processes by which the design was conducted and games developed. Nor does it focus on players, their reflection (Khaled, 2018) and experiences. Instead we are focussed on the knowledge and insights that came out of the process of research through game design in these projects, to illustrate the value we found in this approach.

2.1 Game vignettes

2.1.1 Divining Carbon Futures

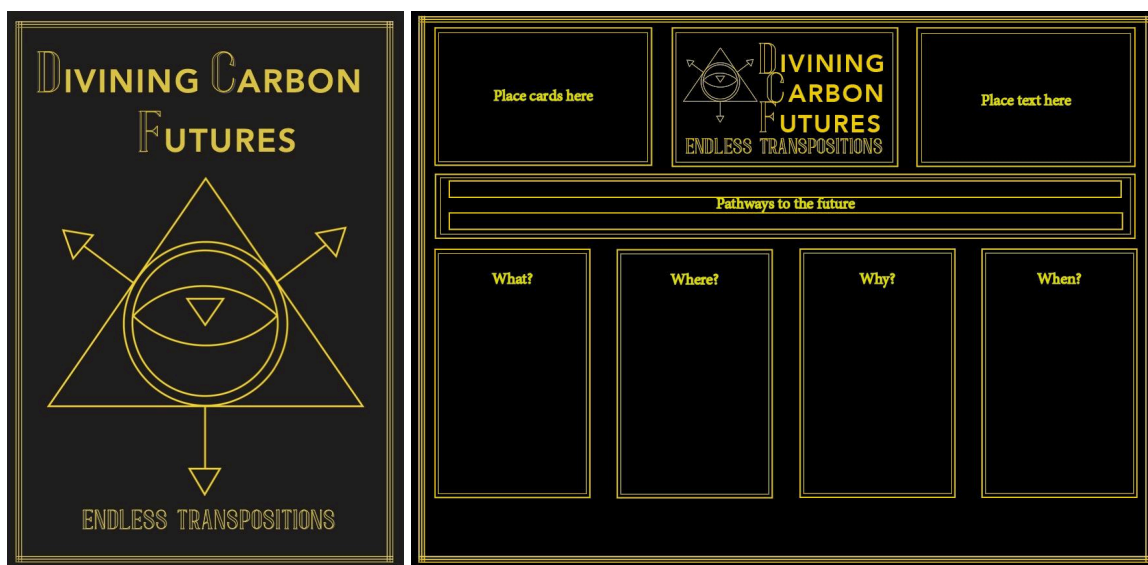


Figure 1 *Divining Carbon Futures: Endless Transpositions* is a light TTRPG where players seek knowledge and introspection through divination about climate change to communicate and

predict the future of carbon! The user/player reveals pictorial cards and reflects, guided to construct a narrative - What is this happening? Where might it happen? Why might it happen? When might it happen? This game is made for those who need “better” or “more” data in order to take action. Trust your intuition. Imagine. Act.

Divining Carbon Futures² is a creative reflection game, created as a provocation to challenge data driven green and carbon decisions through cartomancy. The game asks players to construct narratives and meaning from the images they see and how they feel, rather than relying on decision support tools (dashboards, metrics). Divining Carbon Futures promotes the abstract concept of “assumptions” to be made tangible through play and a facilitated discussion. The game presents players with 4 pictures and asked them to tell a short story about carbon futures instead of explicitly telling them to be aware of assumptions they make and how their expectations shape the ways they interpret information. The game facilitator then asks players/diviners to reflect on how much their tacit knowledge has already shaped their story, and how they create their own connections to give them meaning when there are gaps in information or clarity.

2.1.2 NotZero

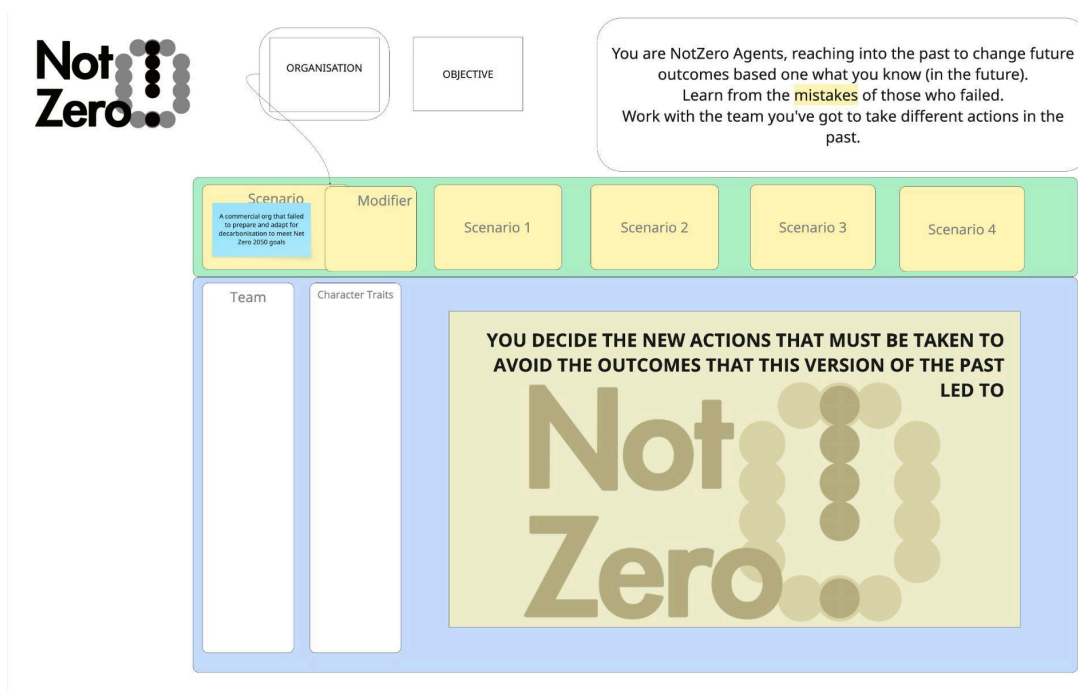


Figure 2 NotZero is tabletop social storytelling game where players imagine worlds and pathways to a net zero future.

² A playable earlier version of Divining Carbon Futures under the name “Energy Divination” (Bates & Smith, 2025) is available here: <https://oliverbates.itch.io/energy-divination>

NotZero (Bates, Tyler & Smith 2025)³ is inspired by storytelling games like Fiasco (Morningstar, 2009), and is a hack of Solarpunk futures (Lyell & Puchalsky 2020). The game asks players to consider how organisations could act differently in response to a range of decarbonisation scenarios. Players are NotZero Agents from the future researching how organisations responded to net zero policies and climate change events. Cards are turned over to describe policies that an organisation responded to, as well as the characters who were involved in these responses.

2.1.3 Meal Deal



Figure 3 Meal Deal is a game that puts players in the saddles of cycle couriers working in the gig economy. With a finite amount of stamina on tap each day, the cards allow players to weave their own gig economy story based on academic research with couriers in Manchester, York and Edinburgh in the UK.

Meal Deal (Bates & Kirman, 2023)⁴ invites players to share experiences of systems that gig economy cycle couriers face. These workers access work through platforms like Deliveroo or UberEats (etc) and deliver food, medicine, and other consumer goods on their bicycles. The aim of the game is to make enough money to pay rent, by taking courier jobs delivering food and groceries by bicycle, and dealing with the challenges of this kind of work. The game is situated in a UK context based on research with UK couriers (Bates, et al., 2021).

³ An partially playable version of NotZero can be downloaded here: <https://oliverbates.itch.io/notzero>

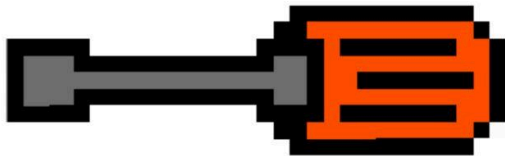
⁴ At the time of publishing limited physical copies of Meal Deal are still available. If you've missed out, a print and play version of Meal Deal can be found here: <https://oliverbates.itch.io/meal-deal>

2.1.4 Screw That



A resource scarcity game

Play.



1. Find your flat head screwdriver

Hint: It's probably not in the toolbox, even though that's where you're supposed to keep it.

3. Live with the consequences.

Hint: Water from the toilet probably needs sterilised (boiled) before consumption or being used in cleaning. A lingering off taste may remain.

Authors note: I wonder if you can run a washing machine with bottles of sparkling water?

4. Repeat stages 2-3 till satisfied or frustrated.

You can turn isolation values back on, but for the "game" to be in a "play" state, at least one valve in the house must be off.

A little game. A prototype. An experiment in collapse and scarcity. Solo RPG, or multiplayer with your "willing" house mates/co-dwellers.

In this game you will experience the kind of unreliable access to clean water that is a reality for many millions of people already.

Through the game there are things we can learn about jerry rigging, how to clean, transport and store water, etc. Some of these things might be unsafe but a necessary compromise. You also experience dread and frustration.

SOME GAME DESIGN REQUIRED

This game was designed in the UK for UK plumbing. As a player you may need to design or hack the game to localise and translate for your own plumbing situation.



2. Locate and turn an isolation value to off.

Hint: These valves are usually hidden in or behind cupboards, close to taps/faucets, or appliances that use water (e.g., washing machine, toilet)

End.

The game ends when it ends.

Turn all the isolation valves back on (or don't).

Reflect on:

- How long you lived through this game
- What you would do if you have limited access to water
- What you now know about your water pipes
- What you have learned about where you live
- How you jerry-rigged or hacked the washing machine to pump water into your coffee machine

Figure 4 Screw That. A resource scarcity game. Free game included with every copy of this paper!

Screw That⁵ (Bates & Kirman, 2025) is a simple and tiny game for either 1+ players with “willing” house mates/co-dwellers that involves physically interrupting water flow to appliances in the home to explore scarcity and systems collapse. In this game players experience the kind of unreliable access to clean water that is a reality for many millions of people already. Through the game there are things we can learn about jerry rigging, how to clean, transport and store water, etc. Some of these things might be unsafe but a necessary compromise.

2.2 Insights from RtGD

This is not following a formal methodology, but highlighting key insights from engaging with RtGD across these projects. For each project the design process helped answer specific research questions (e.g. “how can game mechanics meaningfully communicate the somewhat distant idea of water scarcity”) however it also gave meta-insight into the value of engaging with RtGD. The aim here is to summarise these insights in a way that demonstrates the particularities of game design that make it fruitful for this kind of making as thinking.

2.2.1 Hacking and borrowing bits to encourage curiosity

When researching through game design, it is valuable to borrow pieces and ideas from other games, hacking them, and building the game to a state that can be remodelled through reflection and iteration. Aside from the physical components, systems of mechanics can also be adapted and often provide a kick-start in thinking about how they might work (and how they might not) in new contexts. The critical designer may utilise “game hacking [as a] critical–creative research practice that interrogates and transforms existing games to reveal the ideologies embedded in their systems and mechanics” (Germaine and Wake, 2025), redesigning systems and mechanics to curiously tinker with the ideologies and imaginaries revealed through games design.

NotZero (Figure 2) draws on game hacking with young people (Germaine & Wake, 2023) and is a hack of the storytelling game Solarpunk Futures (Lyell & Puchalsky, 2020). After playing Solarpunk Futures we were inspired to make a hack reflecting the challenges we faced working with energy and sustainability stakeholders. We modified Solarpunk Futures to represent the kinds of people and roles in energy and sustainability decision making, exploring net zero decarbonisation strategies and climate change events. Whilst the resulting version of NotZero is a deliberately more mundane spin of Solarpunk Future, it is designed to be relatable to the work contexts of energy stakeholders and scientists, encouraging exploration of possible sustainable transitions.

Divining Carbon Futures takes inspiration from the practice of cartomancy (divination and fortune telling using cards), meshing with mechanics from visual deduction and story telling games such as Dixit (Roubira, 2008) and Mysterium (Nevskiy & Sidorenko, 2015) to ask players to divine visions of possible energy futures. Divining Carbon Futures provokes thinking about different signals and insights that could be important for climate change mitigation and decarbonisation. It asks how we can challenge normative mindsets around data, forecasting and decision making to leverage systems change (Meadows, 2015;

⁵ A booklet version of Screw That can be downloaded here: <https://oliverbates.itch.io/screw-that>

Easterbrook, 2014). *Divining Carbon Futures* discards the expected interfaces used in carbon calculation, energy dashboards, and sustainability metrics by using visual prompt cards and journaling prompts asking “what”, “where”, “when”, and “why” the future is unfolding. Bringing together existing mechanics and rituals from solo RPGs, tarot, and visual storytelling games allowed the space to interrogate and problematise the concept of the dashboard as a representational space whilst being curious about what other interfaces and interactions could be.

2.2.2 Synthesising multidisciplinary

There’s a lot about gig economy courier work that app users/consumers don’t see or experience. We order food from an app, and some time later it arrives at our door. Between the order confirmation and the arrival of food lies a chaotic \ system of apps; road networks, traffic and other road users; restaurants, how they pack the food and their approach to dealing with the orders that come through the app terminals; and, law enforcement (Bates, et al., 2021) Experienced couriers act based on their own tacit knowledge and experiences, making strategic decisions about what work to accept and how best to navigate this chaotic system in order to complete an order (Kirman, Bates, et al., 2022).

Meal Deal is an attempt to model part of what we learned about gig economy work, confronting players with the invisible aspects and dynamics of the working lives of couriers through game play. *Meal Deal* can surprise players when they are confronted with experiences that they may not have familiarity with (being stopped by the police), and unforeseen aspects of the work (unjust app bans, the role of the restaurant and not the rider in packaging or delaying an order). The making of *Meal Deal* was ungrounded from the research conducted and reports produced (Bates, et al., 2021, Lord, et al., 2023), choosing to design a game where the dynamics and experiences (that felt anecdotal in the reports and papers) could be layered together. The result is a game that is one synthesis of our multidisciplinary research where some complexities of courier work are experienced and felt throughout the consequences of game play.

This process was illuminating - by moving from a series of anecdotes and experiences, we are forced to elucidate the relationship between key aspects of the systems at play (e.g. of the apps), and the second order effects that generate the stories and experiences of the workers. It is also a site of critical action as game designers. What decisions do we make that simplify or reinterpret complexities for the sake of a game that is actually playable and legible rather than complete simulation? And what is the positionality of those actions? Are we crudely reducing lived experiences of couriers to make something “fun”, and what are the intentional and unintentional decisions communicating as “procedural rhetoric”? (Bogost, 2007).

2.2.3 Thinking about games “off the table”

Taking a game like *Screw That* as an example, one of our key problems in handling a classic “wicked problem”, like climate collapse, is around meaningfully representing that system using the tools that games provide. A crucial moment of inflection was to discard ideas of building systems entirely, and recognising this as an unquestioned and implied constraint of both the genre (i.e. games) and the platform (i.e. the table). Instead we started thinking

about games off the table, looking for opportunities to play with domestic spaces and mundane water infrastructure that many in the Global North take for granted. This forces us to think about the material that can become part of play, and become more immediate by restricting abstraction. The game is then played with a literal screwdriver that is used to isolate water supply in the players' home, instead of a board with arrows, cards and dice. By shifting the game from tabletop game or role playing game into a middle ground where it is part TTRPG and part live action role playing (LARP) form the experience that becomes more immediate and filled with real world friction (or dread!).

The end state of the game is also oblique. The rules state it ends "The game ends when it ends". There is no specific end phase, no win conditions, points scoring, or closure. This is another moment of resistance to the form of games that emerged through iterating on design. For us as game designers, the insight was recognising that we were struggling with the "end" as a reflection of our own expectations and experience of games as complete stories with satisfying conclusions. We were fitting the problem into a game, rather than making the game fit the problem. There is a thematic relevance of there being no "win state" and no way to put the game neatly back into the box, and stop thinking about climate collapse. This is convenient for *Screw That*, but from within the design process, there is also a sense of liberation when we recognise that every element does not need to fit on the table, or even exist, and sometimes the design work can end the same way.

2.2.4 Not fun by design

Meal Deal is chaotic, difficult to win, and deeply frustrating at times. The objective of the game is to complete enough work to be able to pay rent, but each job means players must resolve an event. This is one of the main ways the game adds depth and richness, drawing from real experiences of couriers, and forcing players to confront and resolve a range of situations with outcomes ranging from lucrative tips, or immediately being banned from the app and losing the game. This mimics the frustrations, frictions and systems faced by couriers dealing with restaurants that don't care, traversing busy roads, and interacting with customers who blame them for everything (Bates, et al., 2021). This created a serious conflict in our design work. There is an inherent randomness and cruelty to the real experience of courier work, and this opposes a reasonable expectation in players that games should be "fair" and give each player meaningful ways to be successful. It is understandable for a player being subject to such cruelty, or witnessing an opponent's luck, to blame poor game design. After deliberation we could not resolve this conflict for the sake of gameplay, as it felt a betrayal of the subject of the work. So, the friction remains, uncomfortable for both the players and the designers.

Like with the courier work, there's limited agency or choice in the game, players can reject jobs, but it's impossible to mitigate being confronted by police or experiencing a bike malfunction, and we refused to add any mechanics that would do this. *Meal Deal* will likely alienate players, but that's the breaks and that's what the work is like for many couriers. It makes for bad player experience, even though it elicits the same ups and downs of gig economy courier work, relaying courier experiences in a way that players feel through a breakdown in the assumption that the systems within which we work, and the games that we play, will be just and fair.

3. Discussion

For us, Research through Game Design is exciting because a) we get to make games, and b) we develop new understandings of technologies, systems, subjects, tools, theories (and loads of other stuff) through making and playing games. Just as there is no single “correct” approach to RtD, we don’t prescribe to the idea that there’s a right or wrong way of doing Research through game design. RtD encourages exploration and divergence from the consensus of methods, approaches, and theory that seem galvanised in design practice (Gaver, 2012). Exploration of divergent design practice is essential as we increasingly live and design through crises that require us to try new models of change and working (Laurell Thorslund, et al. 2025). RtGD can help work out what practice sticks and what doesn’t.

In this paper we have attempted to communicate some of the insights we have gained in engaging with this as we sought to use game design to answer research questions around: alternative approaches and mindsets, make a game that challenge assumptions and what we think we know (Divining Carbon Futures); game design to attempt to model systems and engage with the challenges of recreating complex interactions (Meal Deal); exploring how game design breaks down (NotZero); and, how we can turn something so huge as climate collapse in the scale of a simple game (Screw That). In our work we have found that RtGD is an exceptionally useful practice for generating insights and understanding through making, and in the case of games, engaging with the material of game design (mechanics, components, narrative, etc.) in particular.

Following this we want to interrogate three general ideas that have emerged from our work, relating to the opportunities and challenges around doing RtGD work with games in particular. This is partly in relation to how games are designed more broadly, and also reflective in our own practice making games as research.

3.1 Attempting to model systems and research through game making

Often multidisciplinary work exposes designers and researchers to a volume of emergent topics, ideas, and data that can seem anecdotal when presented in reports and other linear forms of documentation and knowledge production. Games, because they are systems themselves, can be designed to model and critique real-world systems (Holland, 2025). This positions games as a unique design material where understandings and insights about systems can be explored, mapped, articulated and experimented with through game making.

Meal Deal attempts to model, explore and reflect on systems through game design, helping us as researchers contextualise experiences and dynamics that are invisible to platform users. The collaborative design process of making Meal Deal was the dialogue between the multidisciplinary team and the research (Lopes, 2006), synthesising the components and anecdotes of research into a game that articulates the dynamics of real world gig economy courier systems. The results of Meal Deal is a game that is rough, blunt and not fun - and that’s by design, to promote a discussion, to get people to empathise (Brown, 2008), but not to have a fun time.

RtGD approaches help us to push at the boundaries of games and play, enabling us to challenge our own preconceptions as game makers. *Screw That* is an RtGD that explores systems through play. It does not try and explain how or why systems work to the player. It is deliberately light on context or rules, almost in an adversarial way, challenging the player to explore and understand systems that they are distant from, take for granted, or ignore in their everyday lives.

3.2 Unproductive game design

This leads into our second point, which is how RtGD focuses on research through process, rather than the process serving future research or meeting research criteria. This problematises a view of games as magical artefacts that exist uncomplicated by the processes by which they were constructed. One key part of this is that we de-emphasise player experience and response. We are not necessarily concerned with issues around things like game balance, legibility, readability, or impact.

This is a complex point because we are still interested in players - we are still making a game, and we want that game to function. Otherwise why make a game at all? Rather, it is the necessity of reducing emphasis on that final artefact, and the reception of the players, and recognising and re-emphasising the process as the site of knowledge production.

Recognising this can be tricky. There is a temptation to understand games as tools, to create immersion, generate pleasure, raise awareness, or change behaviour. The design process is then relegated to be considered in terms of the effects on the utility of the final product, maybe through iterative playtesting and evaluation that revises design elements for key measures, as if there is only one optimal outcome of design work.

A smooth user experience might seem the appropriate design conclusion for those projects where the game *is* merely a tool, but given the cultural, social and economic status of games, and the shared value we all have in making them, it is a shame to sanitise the process, and miss the complex decision making in a large project or the small things we discover through experimentation in game jams. It may feel “unproductive” to make and then talk about the process of making games that aren’t complete or successful research outcomes (Germaine & Wake, 2025), but there is value and productivity for design practice and the designer in documenting and sharing practice, helping imagine beyond the convergence and standardisation of practice, encouraging new and diverse game making practice (Gaver, 2012).

3.3 Finishing is overrated

Taking the previous point further, “finishing” was a key moment of conflict in every game we have produced. There is a balance between continuing to work on a project based on the increasing value of the final product or output, in conflict with a sense of saturation of the research insight gained in that effort. At some point, a project has helped us answer the research questions sufficiently, but the game might not be in a state where it is appropriate to share with players. They could be unplayable, unfair, have poor graphic design, too complicated or too simplistic. However these concerns are all from the perspective of the

future player, or audience - a third party to the research conversation between designer and project.

Divining Carbon Futures (Figure 1) has a purposeful unsatisfactory end that occurs when players/diviners stop their story telling. After "reading" their last card player/diviners often ask if they got it right or for the meaning behind their reading. There are no answers to these questions. The frustrating end to the game is an invitation for the player/person to realise that they are at the beginning of a self-awareness journey around their assumptions and expectations that were uncovered through the story telling.

In some respects, leaving the game ambiguous can be interesting for the player, who must come to understand the game as it exists, and be trusted to "finish" the game through interpretation (Kirman, et al. 2022) or in developing their own play practices (Wilson & Sicart, 2010; Balci, et al., 2025). However, this is outside the scope of a research through design process.

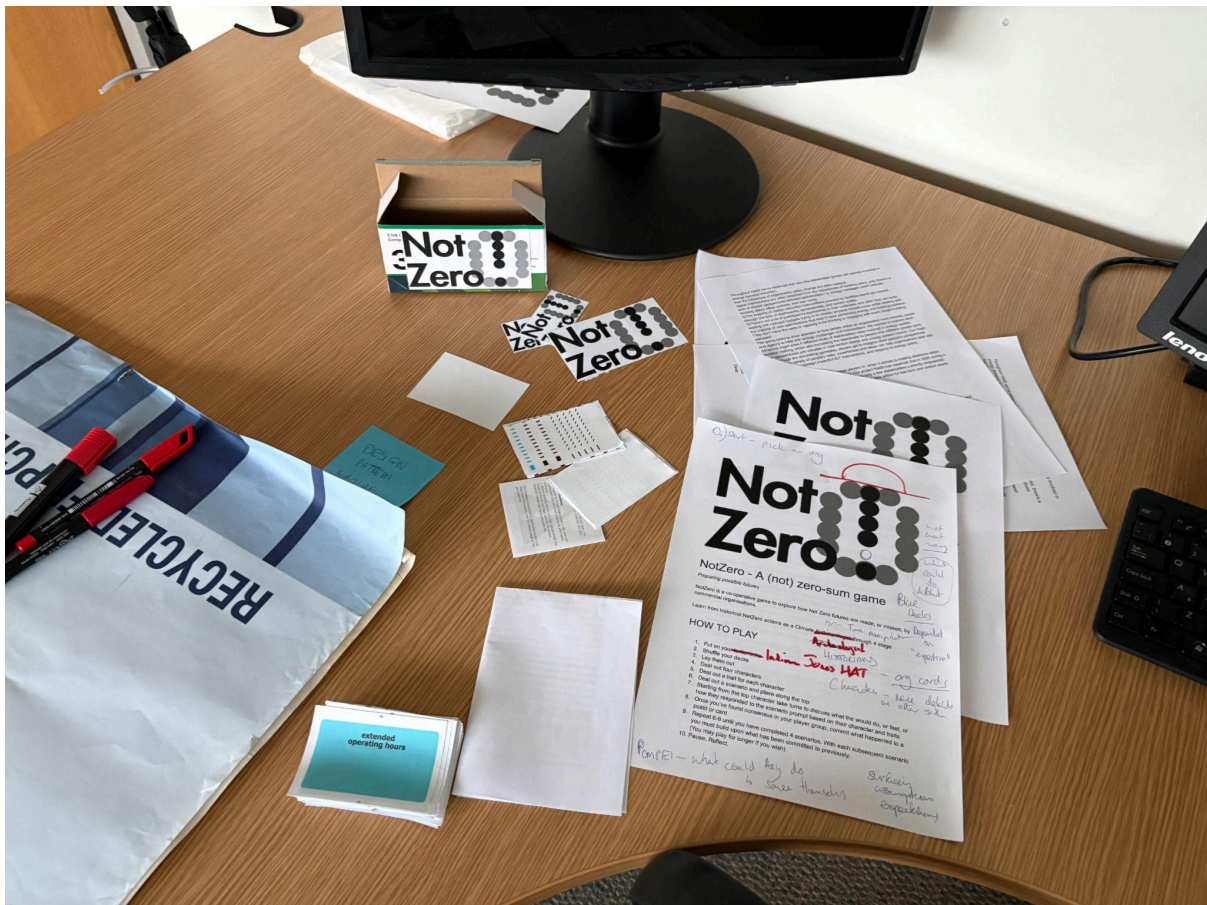


Figure 5 The increasingly dusty remains of NotZero, still discarded on a desk

NotZero (Figure 2) is unfinished. Both the game making and the surrounding research project ended. It now exists as a vestigial artifact (Figure 5), having answered its own question "Can we hack games to get energy stakeholders and scientists to explore possible sustainable transitions?" with a "No", or "Not this way". The bare bones, half finished rules and title from

NotZero may serve as a useful starting point to answer other questions in future work. But it has been successful in its job despite this final state.

Similarly, Screw That is a tiny game that we did release, at the point where we hand off significant responsibility to the player. It might even be dangerous to play, but this resonated with the themes of the game that removes guardrails and forces engagement with resource scarcity and infrastructure collapse at home. For us that was useful as it gave us space to find new game design imaginaries, turn thoughts about topics into games, and experiment with framing a game that blends game world and social world (Conway & Trevillian, 2015; Wake, 2019).

Although this fits with approaches like sketching (Boland and Collopy, 2004) and prototyping for idea generation and discovering gaps in knowledge (Cross, 2024), there is a distinction here in that unfinished represents a stop. It is not necessarily a planned part of an iterative process, or dismissed as merely an experiment. The game is done when it's done.

5. Conclusion

In this paper we discuss Research through Game Design, as a way to recognise the particularities of Research through Design when making games. In particular, game design's focus on completeness, balance, legibility, and player experience (e.g., fun). This creates a problem for us when we aim to use the design process as the site of research. By trying to de-centre finishing, productivity, and the user, we hope to encourage frivolity, low stakes and open expectations where games as artefacts are *byproducts* of a design process that encourages new and emergent game design research practice.

Research through game design is not a guide. It's an approach to encourage exploration and documentation of the process of making games, making space for research that communicates anything about the process -- the design choices and decisions, reflections and realisations, self-discoveries, new understandings and knowledge, and endings. The approach encourages a radical and generative practice of communicating the ways in which Research through game design builds upon, subverts, suggests alternatives, or constructs new and different design processes for game making. This paper ends how it ends.

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