

Rules of the Game: Tools for Governing Climate Justice

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Keywords: climate justice, public engagement, board games

Public engagement in climate adaptation planning is often described as a matter of urgency. Global, atmospheric change indeed amplifies the need to build trust, transparency, and consensus. However, rushing to action can preclude a deeper interrogation of the very political and economic systems that framed climate insecurity in the first place. This paper reflects on a public decision-making tool that navigates this tension between pragmatic action and structural reform. *In It Together* is a tabletop board game that engages urban stakeholders in a probing deliberative process over sea level rise adaptation and social equity. Originally designed by the author to facilitate public engagement in the 2017-8 San Francisco Bay Resilient by Design Challenge, this game has been revised for publication and widespread release to designers, community-based organizations and city agencies. The revised version of the game invites players to challenge rules of fair play and rewrite common protocols of urban development. This paper will unpack the rule sets, logics, and opportunities for resistance orchestrated by this game to both ready pragmatic opportunities for action and unearth more enduring strategies for sharing power and resources.

Recent attempts to reshape cities in the face of rising seas have run aground over conflicts between high-growth investment and grassroots empowerment. Efforts to smooth over such tensions with win-win rhetoric have only reinforced suspicions—especially common in communities overexposed to financial and environmental risk—that resilience planning is a smokescreen for disenfranchisement and gentrification.¹ Instead, centering climate adaptation around social and racial justice requires a more probing decision-making process. It demands a process that not only facilitates productive dialog across diverse publics, but also challenges structural logics of urban development that have long prioritized profit over equity.

In It Together is a tabletop board game that stages role-play among a diverse cast of stakeholders in a fictional urban estuary. I originally designed the game to facilitate public engagement in the 2017-8 San Francisco Bay Resilient by Design Challenge, which invited 10 international design teams to work with urban analysts, community-based organizations, and city agencies in envisioning local resilience to rising seas. As our team's primary

collaborative tool, *In It Together* made it possible, and even fun, to air differences. It conveyed our partners' contending interests as equally legitimate perspectives and staged role-play to build empathy across them. The game also simulated cascading effects of sea level rise to reveal how various flood-control strategies, from levees to managed retreat, would impact equity in the city by redistributing resources and risks to new collectives. The game thus proved useful at building trust and weighing the tradeoffs of various adaptation strategies.²

Importantly, this game also exposes protocols of urban development to scrutiny and revision. It stages a contest between growth and empowerment by inviting players to assess their own competing motives for profit, power, or collaboration. It thus invites players to test when a true win-win condition is possible within the game's constraints, and when it's necessary to break the rules. This dynamic is especially pressing in the newest version of the game, which gives players the power to alter "policies" of their fictional city. Based on our experience using this game with our Challenge partners, I am currently working with a board game publisher to redesign and distribute the game as a boxed set available to designers, policy makers, and community activists in all cities where social inequities are exacerbated by sea level rise. This paper reflects on new design features and their outcomes in playtests to reveal how players can upend traditional notions of fair play that structure urban governance and development. I will argue that tools for an empowered deliberative process must not only uncover pragmatic opportunities for action but also pursue more enduring forms of consensus made possible by imagining alternate strategies of sharing power and resources.

BY THE BOOK

In the Challenge, *In It Together* served as both a platform for collaboration and a product of this process. The need to translate across disciplinary perspectives and interests was urgent even within our own team, which combined expertise in architecture, landscape architecture, biology, film-making, community engagement, urban economics, and environmental engineering across its members.³ More explicitly, the game was created to navigate simmering debates across the San Leandro Bay, where we worked, over the value of resilience planning. In the low-lying island City of Alameda, homeowners who regularly pump rising groundwater from their basements were eager for shovel-ready



Figure 1. Game event at the East Oakland Collective member meeting, Mills College, April 25, 2018. Image: All Bay Collective.

designs. Others, especially in Deep East Oakland, were on the verge of boycotting the Challenge. They feared it would precipitate the “same capitalist mindset” that has targeted the neighborhood’s predominantly Black and Latinx residents with redlining policies, factory closures, predatory lending practices, and evictions for generations.⁴ Eventually, we were able to form partnerships with community-based organizations including the East Oakland Collective, Oakland Climate Action Coalition, and Merritt College; as well as city and state agencies including the City of Oakland, East Bay Regional Parks District, and the Bay Area Rapid Transit.

Across such a diverse set of political perspectives and disciplinary languages, we used the game to share knowledge, identify opportunities for consensus even in our accelerated 4-month design process, and build capacity that could extend beyond the Challenge. In questionnaires and conversations following game sessions, our partners reported that role-playing other stakeholders gave them new insights into each others’ motivations and empathy for their struggles. They noted the game’s ability to open up new lines of dialogue through creative problem-solving. Players of many backgrounds also reflected on the game’s fun and engaging tone, and noted its ability to convey a high degree of complexity difficult to convey through lectures or reports alone.

Even before any rules of the game were instituted, basic elements of game play helped to give voice to our partners’ perspectives. We canvassed our partners about their goals to shape the motivations of the game’s players. We invited each other to place “adaptation tiles” on a map of San Leandro Bay, and discussed the relative merits of installations like tidal ponds and living levees, as well as policies supporting affordable housing and community land trusts. As visualization tools—but not yet a game with strategic objectives—these pieces helped to



Figure 2. In It Together played at the National Adaptation Forum conference in Madison, WI, April, 2019. Presented by game collaborator Claire Bonham-Carter, Principal, Director of Sustainable Development at AECOM. Image: All Bay Collective.

prompt dialog. Some made suggestions for new tiles, such as a community benefits agreement and a community-owned solar farm. Others debated the merits of capital-intensive investments, revealing that some of us were more concerned about tax-revenue generation while others were more focused on building community-based wealth.

Though these pieces proved useful at prompting open-ended play, we designed more calibrated rules of the game for several primary reasons. We wanted to position the diverse interests of our teams’ stakeholders against a common set of criteria to see how sea level rise scenarios might motivate competition and cooperation among them. We also wanted to understand how such dynamics would play out in the context of limited resources and inevitable tradeoffs. I determined the rules of the game through continued consultation with our East Oakland partners and have since moderated game play over 20 times, at community meetings run by community-based organizations, at the BART station, with students, and at planning conferences. Though the game has changed through multiple iterations, I will describe here the rules and design features of the most recent set.⁵

In It Together seats 6 players—developers, homeowners, tenants, a mayor, animals and a transit agency—around a soggy urban landscape, now modified to depict a fictional city rather than the San Leandro Bay. Players have unique but overlapping goals across five color-coded categories: “environment” goals in green, “mobility” in black, “profit” in orange, “sociability” in red, and “equity” in pink. To counteract the tendency for urban development to reflect profit as a bottom-line, we weighted the game to value alternate criteria necessary to support social justice in cities. Players can achieve these goals by playing adaptation tiles color-coded by goal type and varied in cost, size, and

score. The tenant, for example, might accomplish equity goals by playing the “Vendor Mart” tile, whereas the animal might score environment goals with the “Wetland” tile. Both could score mutual goals by playing the “Indigenous Land Trust” or “Community Owned Solar” tiles. Players score goals by placing tiles within their own territory, which are typically defined by wedges of the board. But as territories often overlap and tiles score goals for any player regardless of who paid for it, there’s an incentive to collaborate or at least keep track of other players’ moves. In fact, as some tiles have negative impacts (for example, the racoon den scores positive environment points but negative sociability points), tiles can also be used aggressively against another player.

In this way, *In It Together* structures cooperation and competition across distinct stakeholder interests. There are three possible end game scenarios. In a Win-Lose scenario, one player completes her goals before the others. In a Win-Win scenario, all of the players win by scoring any eight of their twelve goals. And in a Lose-Lose scenario, everything floods. Players can decide at any point whether to play competitively or cooperatively, and can adjust as strategies unfold and seas rise.

This delicate tipping point between competition and cooperation is made more acute by resource limitations. Each player

is automatically given a set of coins at the start of each round in amounts that reflect their real-world financial power. The developer, mayor and transit agency receive four coins, the homeowner three, and the tenant and animal struggle only two. (This strategic imbalance is compensated for by the ability of less wealthy players to use “votes” to change policies of the game, which I will discuss below). Players can also earn additional “bonus coins” for every profit-scoring tile they pay for within their territories. With such limited funds, players are especially strained in their attempt to protect the city from encroaching floods, which could rise by two to six feet, depending on the roll of the dice each round. Because players can’t score any goals or earn bonus coins from flooded tiles, they must weigh long-term threats against their desire to score goals and earn short-term profit. Accordingly, players have a broad range of flood protection tiles available to them, each with a different tolerance for risk and scales of collective impact, as well as different ecological and hydrological imprints.

The mayor, for example, might squeeze revenue from a tech campus to waterproof the coast with a ring of living levees. The developer might use the “Managed Retreat Tile” to relocate housing downtown—thanks to an unlikely alliance with the



Figure 3. *Game in play*, photographed in studio, May, 2018. Image: Sara Lafleur-Vetter.

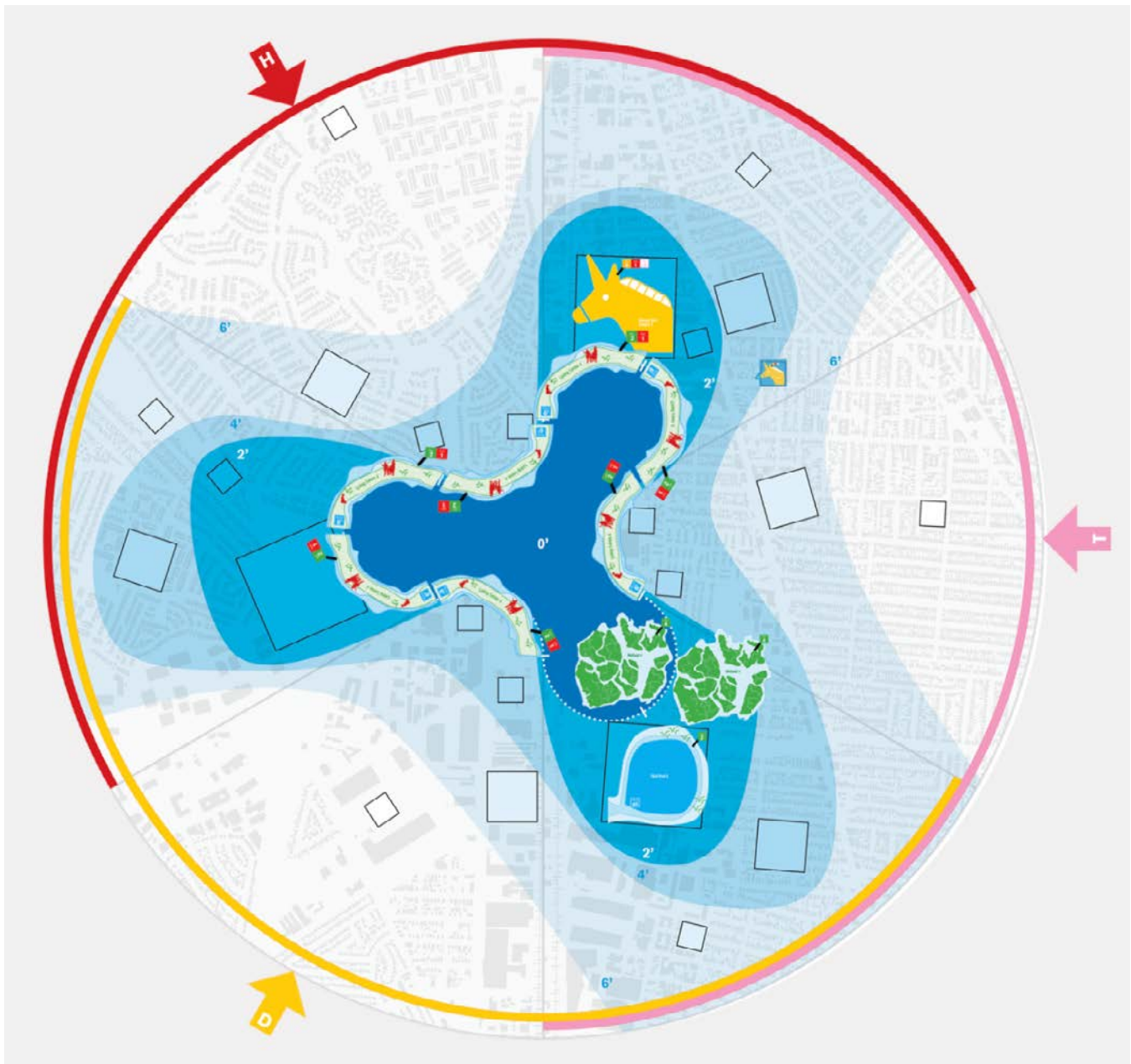


Figure 4. *In It Together* in play on Conceptboard, showing the mayor's tech campus and a ring of living levees, August, 2021. Image: Janette Kim.

animal, who is eager to reclaim the wetlands. Or the tenant might convince the homeowner to pump flood water just long enough to complete a community-owned solar farm. Each of these strategies have their tradeoffs: the mayor would promote growth over equity. The developer and animal would forge solidarity but at the risk of future infighting. And the tenant's solar farm would boost local resource ownership, but at a limited scale. By rolling the flood dice, players could see how each approach might protect them from flooding, or do nothing at all. Some playtests have been far more cooperative than others. Some have precipitated a collective win, others an ever-increasing equity gap

between the haves and have nots, and still others devastating losses across the board. Regardless of the outcome, the game reveals the relative merits of various adaptation strategies and thus enables more measured decisions beyond the world of play.

What, then, ultimately motivates competition or cooperation? Under what circumstances is it possible to be truly "*in it together*" in the face of climate change? And when is it impossible to overcome deep divisions among multiple, viable positions of urban stakeholders? In some instances, this game prompted a pragmatic search for low-hanging fruit of cooperation across

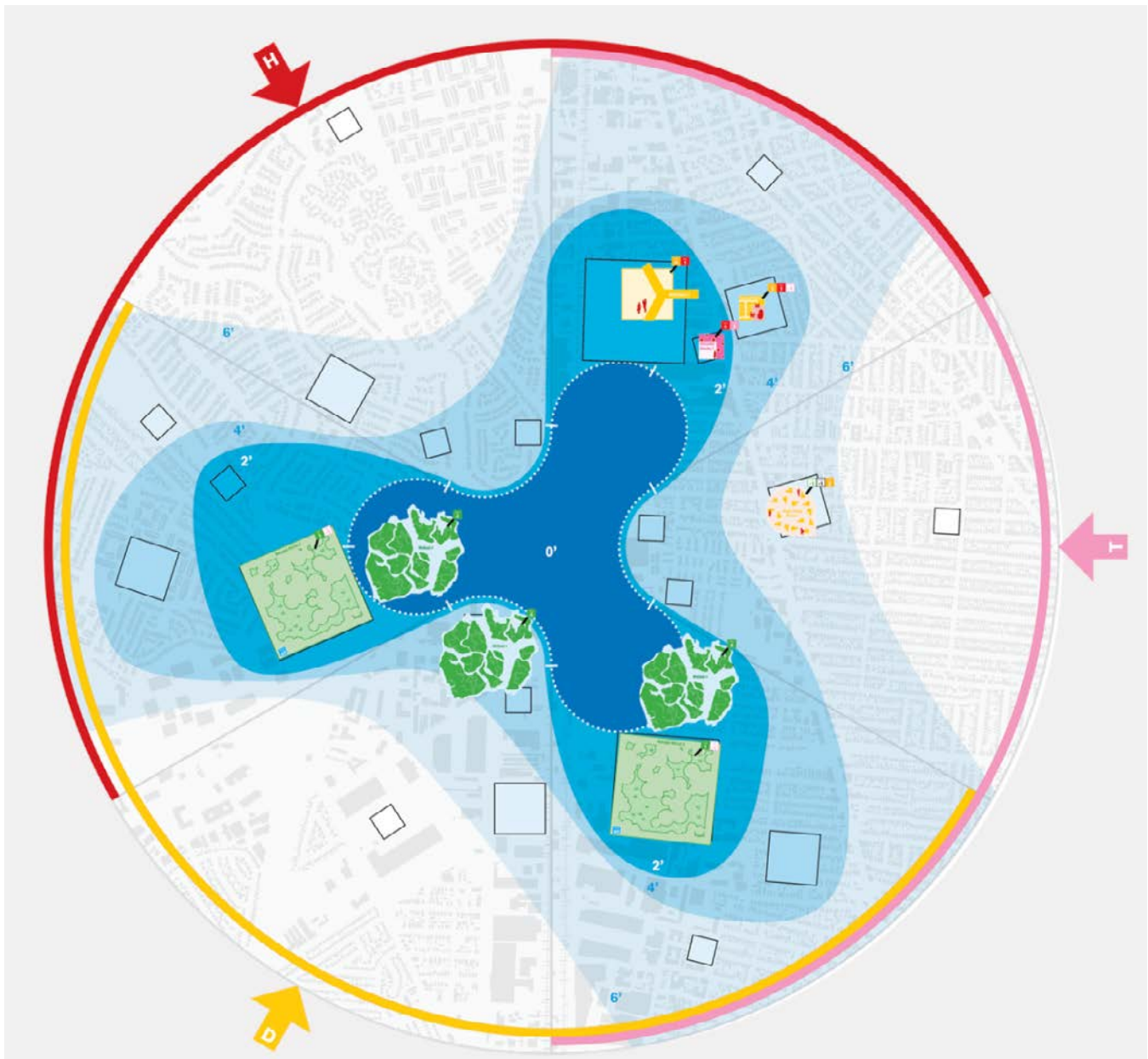


Figure 5. *In It Together* in play on Conceptboard, showing an alliance between the developer and animal players, August, 2021. Image: Janette Kim.

these voices. For example, players who initially overlooked a wetland “dead zone” between their territories found a common interest in using this landscape to buffer tidal action and thus protect inland zones from flooding. In another example, one team showed how flood protection investments, such as waterproofing retrofits, could support affordable housing by preventing tenant displacement. Despite community members’ legitimate concerns that climate adaptation would accelerate displacement, the game revealed how flood protection could also support grassroots economies and housing security. In other cases, however, preconceptions about self-interest and profiteering proved to be more entrenched than we had expected. Although some players—the mayor, animal and transit

agency—have untethered territories that make it easier to form alliances with any player, those with the most coins have had a tendency to stick together, thus pooling wealth and power in particular enclaves of the board. In such cases, zero-sum tradeoffs between contending strategies have encouraged players to take sides, rather than diffuse differences or minimize losses.

OTHER RULES

It’s important to remember, however, that not all tradeoffs are fixed. As economist Elinor Ostrom has argued, the tragedy of the commons—or the blowback of self-interest—can be avoided not through private protection or top-down regulation, as game theorists suggest, but through self-organization and cooperation.

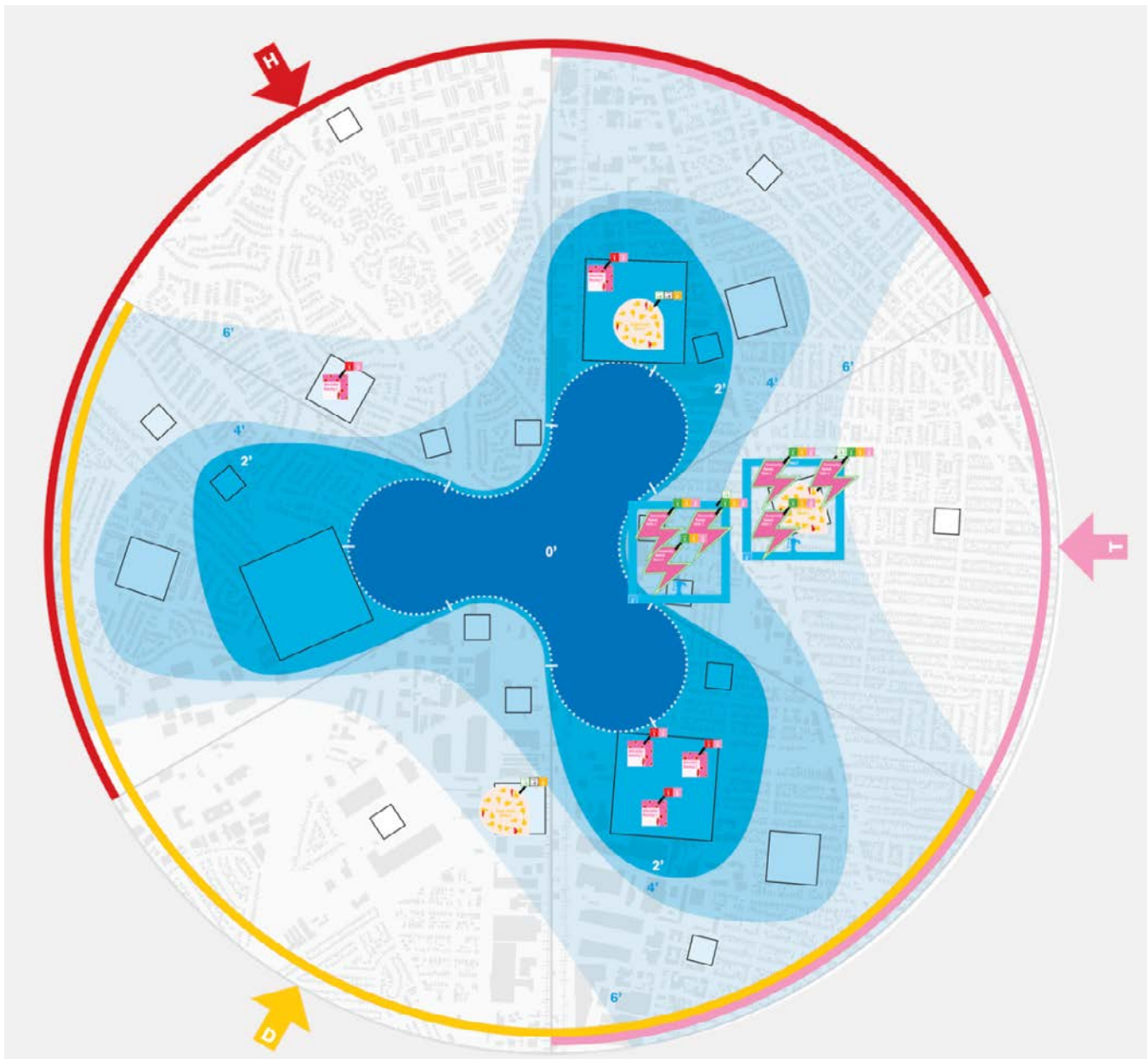


Figure 6. *In It Together* in play on Conceptboard, showing the tenant's solar farm and a series of pumps, August, 2021. Image: Janette Kim.

Tradeoffs are only necessary if we assume a finite pool of resources managed through competitive self-interest.

In It Together animates all options. Players can entrench, coerce, and ally. But they can also challenge the rules of the game to disarm presumed tradeoffs. As noted above, the latest version of the game gives players votes as well as coins (tenants and animals have three votes and homeowners two, while the developers and mayor have only one). While coins are used to pay for adaptation tiles, votes can pass policies during elections at the end of each round.

Some policies determine how wealth is redistributed. The "Mandatory Inclusionary Zoning" policy would require all profit-generating tiles to be coupled with equity-scoring tiles. The "Value Capture" policy would distribute bonus profits not just to those who paid for them, but to any player whose territory overlaps with that tile. The "Good Governance" policy would earmark additional funding for flood protection, but asks players whether to allocate a sizable fund entirely to the mayor or divide a smaller fund among all players for individual control. This policy frequently prompts the mayor player to make a pitch for strong, benevolent government while others debate whether the actions of the mayor so far have reflected the collective interest.

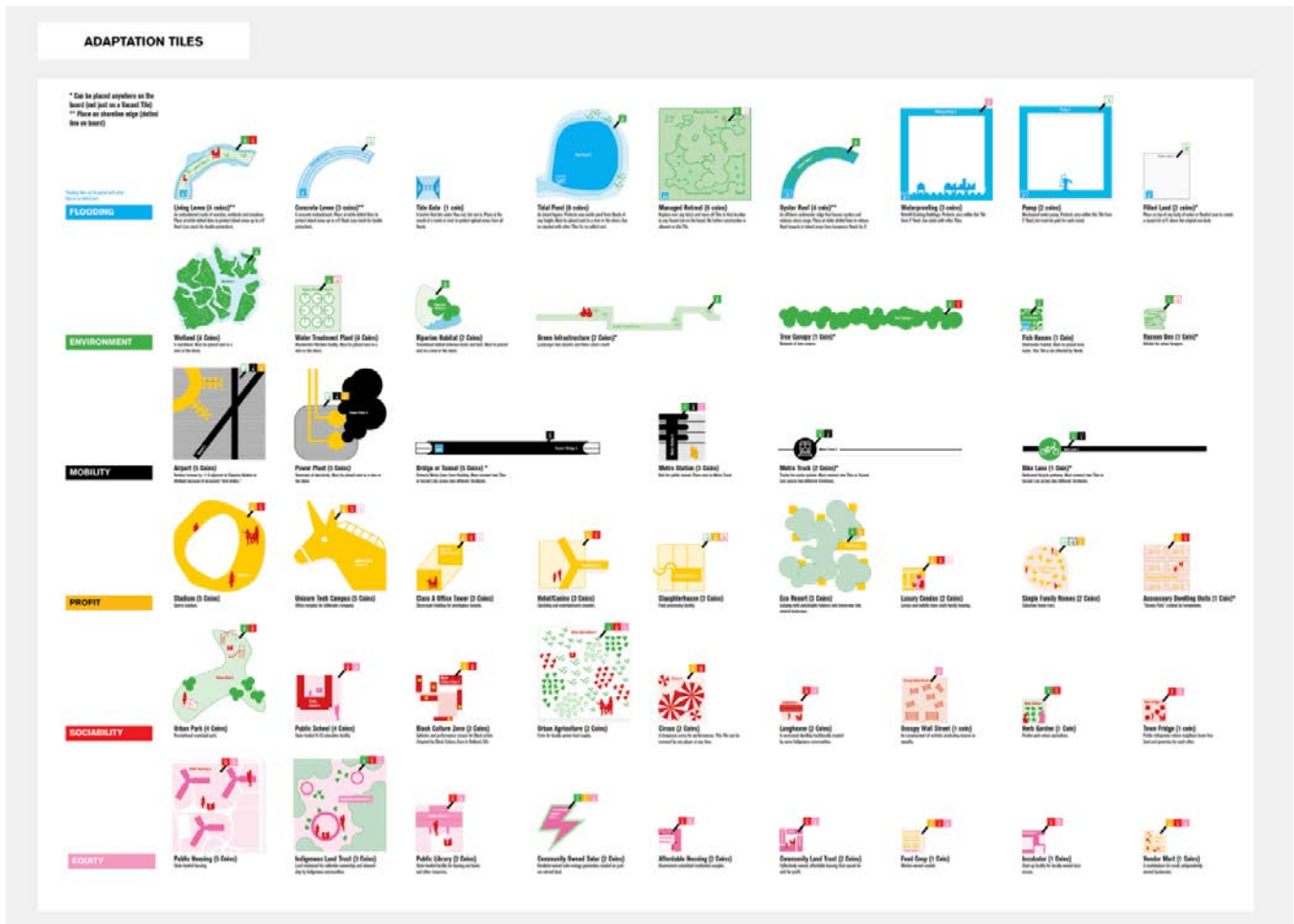


Figure 7. *In It Together* in play on Conceptboard, showing all adaptation tiles, August, 2021. Image: Janette Kim.

Other policies rethink the unique motivations and powers of each player character. The “Identity Crisis” policy allows players to alter two of their goals, for example to break the stereotype of the selfish developer and align profit-seeking with environmental responsibility. This approach became especially acute in one session, in which the players were eager to unleash unique powers held by the animal player. Even though the animal struggled with a meager base income, she coerced other players into protecting her habitat with the threat of building pesky raccoon dens near others’ prized developments.

Still other policies remind us that urban design can reconfigure tradeoffs, too. *In It Together* typically only allows adaptation tiles to be placed in a limited number of “vacant lots.” This not only increases competitive pressure in the game, but also respects the importance of existing settlements in cities. This approach resists the settler colonial mentality tendency common among board games like *Monopoly* and *Settlers of Catan*. The “Upzoning” policy plays with this constraint, but supports a more generous use of land by allowing players to stack tiles on top of each other. Similarly, the “On the Move” policy allows players to move their territory to other sites on the board. Though

the animal player always has the right to migrate her territory, this policy can allow the tenant, developer and homeowner to engage in a widespread managed retreat program. Such a play could allow players to claim a shared territory to benefit from collective action and, ultimately, reach a win-win outcome.

In this way, players can reconfigure the architecture of territory, codes of ownership, and economics of scarcity. Constituents of urban environments embroiled in climate change can upend traditional notions of fair play in what Ostrom calls a different kind of “game.” Here, managers of the commons “themselves can make a binding contract to commit themselves to a cooperative strategy that they themselves will work out.”⁶

CONCLUSION

When is it possible to work within existing rules of play, and when does it become necessary to break them? A pragmatist stance on climate adaptation would argue for the former. It would seize upon the low-hanging fruit of overlapping interests where they lie to respond to the pressing urgency of global, atmospheric change. As the partnerships and collective wins orchestrated by *In It Together* have shown, reaching such compromise deals are,

indeed, no easy feat of their own. They require trust, empathy and the ability to find creative approaches to common problems.

What is problematic, however, is that the rush towards such relatively ready solutions can eclipse real opportunities to rethink the rules of fair play. Instead of deferring to the idea that those with money have all of the power, what would it mean to bring non-human voices and the interests of those most vulnerable to climate change into the mix?

To truly rise above self-interest, one must discard the complacency implicated in the weighing of fixed tradeoffs. The question for public engagement is thus not merely one of trust or transparency, but one of empowerment. *In It Together* is just one of many tools for direct, democratic governance that include participatory budgeting and cooperative ownership. It operates in this context with particular focus on enabling a particular kind of intersection: across diverse criteria, languages of expertise, and forms of governance.

ENDNOTES

1. For more on the problems of win-win thinking, please see Kim, Janette. "Daylighting Conflict: Board Games as Decision-Making Tools." *Scenario Journal* 07, no. Power (2019). <https://doi.org/https://scenariojournal.com/article/daylighting-conflict>.
2. For more on the use of *In It Together* as a tool for building empathy and modelling climate scenarios, please see Kim, Janette. "Modelling a Critical Resilience: Board Games and the Agonism of Engagement." In *Games and Play in the Creative, Smart and Ecological City*, edited by Dale Leorke and Marcus Owens, 1st ed., 187–208. Routledge, 2020.
3. *In It Together* was originally created by Janette Kim/Urban Works Agency and the All Bay Collective for the Resilient by Design Bay Area Challenge. The All Bay Collective team comprised AECOM, CMG Landscape Architecture, UC Berkeley College of Environmental Design, and California College of the Arts Urban Works Agency (led by Janette Kim and Neeraj Bhatia), in association with Silverstrum Climate Associates, Skeo, Moll de Monchaux, and David Baker Architects. CCA students involved in the initial conceptualization of the game and its final fabrication are Shahad Alamoudi, Marwan Barmasood, Georgia Came, Denisse Correa Guerra, Ally Foronda, Eric Fura, Francisco Garcia, Jessica Grinaker, Fathmath Isha, Lori Martinez, Jennifer Pandian and Sabrina Schrader. Special acknowledgement to Claire Bonham-Carter, Kris May, Paul Peninger, Stephen Engblom, Marquita Price and Greg Jackson for their involvement in developing the game. For more information see <https://www.urbanworks.cca.edu/in-it-together> Add a link followed by a period after paper number(s) for online sources.
4. Gregory Jackson, founder of Oakland-based non-profit Repaired Nations, quoted in the Resilient by Design Challenge Mid-term Critique (2018, March 28). Unpublished video.
5. For more on earlier rule sets and playtest scenarios of *In It Together*, please see Kim, Janette. "Daylighting Conflict: Board Games as Decision-Making Tools." *Scenario Journal* 07, no. Power (2019).
6. Ostrom, Elinor. 2015. *Governing the commons*. Cambridge Univ Press. page 7.