

An Adaptation Framework for Turning Real Life Events into Games: The Design Process of the Refugee Game

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Abstract. Many games are inspired by real life events. The presented adaptation framework is based on the design of a board game with a companion app that addresses the Syrian refugee crisis. The aim of the game is to allow players to simulate the experience of being a Syrian refugee traveling through Europe. We applied an agile development method and participatory design to achieve our ambition. In conclusion we found that turning real life events into board games can be advanced by the following game design adaptation framework, which balances four interrelated layers: (1) real life events (game fiction), (2) game system (formal game elements), (3) movement system (game mechanisms), and (4) meaning (player choice) which prioritise game over story.

Keywords: Game design · Agile development · Board game · Real life events

1 Introduction

The field of game design has attracted many different genres and approaches to game creation [1–4]. Fewer have dealt with the design of board games, whether the interest is in Ameritrash or Eurogames [5], even though it is an area of growing design interest. Fewer still are concerned with researching adaptive design strategies for turning real life events into board games.

This brings us to the topic of this article: creating a board game against the backdrop of the current refugee crisis in Europe with a companion app run on a mobile device. In this paper the term ‘board game’ refers to games that include either a board or tiled playing field, as opposed to open world, ‘non-tiled’ tabletop games.

The refugee crisis is all over the news. We hear, see and read about refugees escaping the war in Syria in search for a better place to live. Most governments are discussing what to do with the vast numbers of fugitives and how to provide shelter; others are discussing how to keep them from crossing their borders and entering their countries. The intensity of the debate has risen with the swelling number of refugees.

The question addressed here is how to create a game around such a serious topic. Especially a game promoting the experience of being a refugee, even if done in order to inform players about some of the experiences refugees encounter. We wanted to communicate the situations and choices refugees face on their long journey in simulated forms of play, including real events from the refugees’ real world and from the ensuing political debate.

Initial considerations quickly turned into discussions about which aspects of the refugee experience would be best suited for inclusion in a game. It became clear that it was by no means easy to determine what to include and exclude. The design process later revealed an adaptive framework, which could guide this complex question.

Instead of trying to solve this question, we focused on the game format. We chose the board game format over a traditional video game to meet our aim of maximizing player-to-player interaction, discussion [6, 7], and immersion [8] with subsequent reflections and insights on the current refugee crisis.

Making a game that adequately addresses such a sensitive subject requires not only a firm grasp of the *game's fiction* (understood as its theme or semantics), but also a clear conception of *formal game elements* [2], if how to distil an gripping [10] movement system through the game space [9]. Such a system was later referred to as *game mechanisms* [1, 11] and meaning understood as *player choices* [12], since it is important not only to create choice in games, but also to differentiate between here and now choices and those that are to do with establishing longer-term player strategies.

Furthermore, how do you create a board game about a sensitive subject like refugees from Syria that will be interesting to play and generate insight without forcing a specific political or ethical perspective on its players? A board game that is not unintentionally provocative or outright offensive [13], yet still fun and enjoyable to play [14] in a family setting. Choosing the Syrian refugee crisis is in itself bordering on the offensive, but it was a risk we were willing to take in our effort to create an interesting and different board game.

The adoption of a game design stance that might be seen as offensive is generally either overlooked or unintentionally misused in efforts to create interesting games [15–18].

To reach our ambition we used an adapted agile development process [19, 20], because it allowed us to move back and forth in the design process and make rapid changes without having to begin again [21].

The following sections will elaborate on our adapted agile methods, and demonstrate how it was used, and why it was usable in this particular context. It will also present results from our game tests. Following this will we outline a game design framework balancing *game world fiction* [22, 23], *formal game elements* [2], *game mechanism* [1] and *player choice* [24] to promote a player experience that would approximate to the chosen topic.

2 Methods

In order to develop the *Refugee Game* we started out by defining the overall development method we were going to apply. Given the uncertainty regarding the final form of this project, we decided to use an agile development method. This enabled us to make rapid prototypes for testing out different approaches without fully committing to anything before we had analysed and further tested new design choices to see whether they propelled the underlying game concept or not. In this project we did not commit to one particular method within the range of accessible agile development processes, instead we followed the general philosophy in a revised and simpler format (Fig. 1). We adopted an

object-oriented approach in a small team to benefit from quick iterations with internal and external play tests. Some of these took the form of participatory design sessions [25, 26], which are effective early phases of the design process, when ideas are less constrained by existing codes or other infrastructures [27].

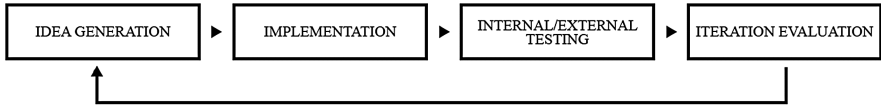


Fig. 1. Adapted iterative process

In addition to this, we approached prototypes as a form of communication tool between the team members themselves [28]. By this I mean that all ideas were developed as paper prototypes to be tested and experienced instead of regressing to verbal discussions, which run the risk of prematurely dismissing essential formal game elements [29] such as game procedures [2] – understood as who is doing what in which order – or game mechanisms [1] – understood as core actions unfolded with core purpose.

As a result of this constraining approach we needed to limit each prototype to include only essential elements in order to prevent the workload from becoming overwhelming and to be able to respond appropriately to game design changes. We did this by filtering our prototypes [30] to narrow down our focus on interaction and functionality (and on a small scale, appearance) and keeping the scope of the prototypes limited to the particular game elements, mechanisms or choices that we were exploring.

Once we found the right game elements and mechanisms, we could progress and expand our scope to include further aspects of the game without falling prey to feature creep [1]. This is where we began to deviate from the ‘standard’ game development method. Nevertheless, we found ourselves facing the problem of working with real life ethical dilemmas especially how to convey them in a game format. We handled this challenge in three steps.

First, we approached the subject as if it was a regular game designed from a story, but we quickly discovered that this was not just another fictional story that we could shape, form and expand on as we saw fit. Reality dictated that we had to stay true to the experiences of refugees. To fully grasp the situation of refugees, we researched their situation by talking with volunteers at train stations as well as interviewing refugees in trains from Germany travelling towards Copenhagen (and, incidentally, Sweden).

Second, we tried to distil game elements (number of players and their relationship, objectives, procedures, rules, resources, conflicts and quantifiable outcomes [2, 3, 29, 31, 32] and design game mechanisms (actions with core purposes) to fit the contextual frame. We explored both the competitive and co-operative possibilities these entailed as a part of a family friendly setup using a complex set of resources such as morale and money made tangible by dice or cards.

Third, drawing inspiration from games like [33–35], we explored movement systems for traversing the game space and investigated the spatial layout and possible routes from Syria to the chosen final objective, Sweden (See Fig. 2).



Fig. 2. Prototypes of traversing the game space.

Traversing the game space in an interesting way, taking player experience, procedures, and challenges into consideration, made it possible to establish a consistent movement system where players move from one place (country) to the next facing ever-changing obstacles. This approach concluded in creating a spatial game space based on a revised geographical version Europe. The movement system was partly inspired by [36–38] (See Fig. 3.), all games with clear, known and recognizable game mechanisms for moving through the game space.

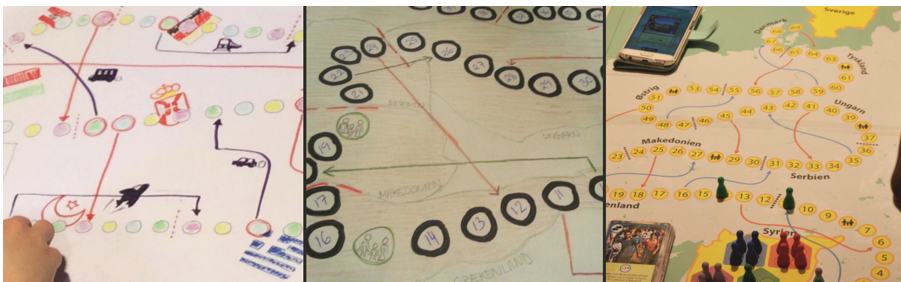


Fig. 3. Movement system for traversing the game space.

Having found the mechanism supporting movement through the game space, we began developing supporting mechanisms that delivered and expanded the core mechanism [1], making our game unique and not just a collection of well-known mechanisms dressed in new clothes. These mechanisms were discussed not only from the point of view of providing interesting choices [39] or for the sake of interesting gameplay [40], but also as being representations of actual real world events. A supporting mechanism would be discarded if it did not add depth and complexity or have plausible reference to a real life event (the game fiction). The issue arose, for example, in asking whether a player should be returned home if another landed on the same space. In the current context this would translate into deporting one refugee because another occupied the same space. We decided against such a supporting mechanism since it would not make sense that when two refugees meet one should be deported.

2.1 Findings

The Refugee Game underwent several qualitative user tests during its iterations, most notably two external tests. One took place immediately after an internal test, used to determine whether or not the intended game experience was achieved.

The participants consisted of four people (the game allows for four players) two male and two female between 20–30 years. All of them were ethnic Danes. They were instructed in the overall rules of the game and were allowed to ask clarifying questions on rules and cards. We tested for overall game coherency, meaning and choice as well as players perception of how the game handled the sensitive game world fiction. From their feedback and by observing play we recorded the following results:

- (a) All players immediately recognized the theme of the game, two players felt uncomfortable with the theme prior to starting the game, but doubts were erased as the game proceeded. All players recognized the movement system from its game ancestors, but they did not feel that its reuse lacked foundation or was inappropriate for the topic. The game quickly opened up possibilities for becoming a game a family could play together.
- (b) Players became immersed in the play and the simulation of controlling a family of refugees. They rejoiced when two or more game pieces ‘met’ on the board, and would at times purposely make inferior game progression choices in order to have their pieces meet up, despite this not being to any advantage in the game. Pieces owned by other players were viewed as an amalgam of competitor and fellow-traveller [41, 42]. The element of competition included did not seem to bother the players. This particular issue had been a subject of discussion during the design process, as we found the idea of having simulated refugees competing against each other both distasteful and unrealistic. For the same reason we placed less focus on rules that allowed players to manipulate an opponent’s game pieces and on failing to attain their goal [43].
- (c) The companion app controlled global game changes, which could turn events upside-down after each turn. As intended, this introduced both fun and frustration. Players would plan series of good choices to advance towards the game goal, only to find that external events forced their hands and made life either harder or easier. The aim was to approximate game world fiction, game mechanisms, and the choices confronting players in the volatile experience of being a refugee.
- (d) The companion app served to make global game state changes each turn. It changed the values and meaning of cards already dealt, so that a card’s initial value (e.g. to move 4 spaces ahead) was suddenly reversed. Now the player would move backward if that card were played. Such changes were accompanied by text highlighting the shortage of food or sudden border control. All were accepted as a simulation of real world changes and therefore seen to be in compliance with game world fiction.
- (e) Still the game needed tweaking as regards its supporting movement mechanisms. To increase correlation between the world events and game world fiction, we decided to change terminology by renaming moves like *shortcuts* and *detours* with *being smuggled closer to the boarder* or *being exposed, and/or deported*. Changing

terminology enhanced the experience of being a refugee fleeing war. These changes accelerated immersion [8, 44] and enhanced meaning of player choices.

3 Discussion

This project set out to turn real life events into a board game. In the present case we investigated the possibilities of opening the refugee experience to the players in a way that was neither politically loaded nor satirical. We wanted to translate real world events into game fiction, bringing them as close to each other as possible.

The main challenge was how to convert a sensitive real life subject as truthfully as possible while still ensuring that the game was fun and interesting.

We found that it is not advisable to design a game from a storyline. Instead focus should be on the story's context or frame. We have termed the context 'game world fiction'. The benefit of such an approach is that designers can decide which real life events to choose from when adapting them to a game world. We found that the selection process benefitted from being performed on the basis of formal game elements. This enabled correlation between real life events and game objects, between their values and behaviours. Included in this are rules, objects, challenges, conflicts and goals. Designers could be tempted to include too many real life aspects. That is not advisable, since raising levels of complexity negatively impacts players' experience of the game instance [45]. It enhances increases the risk of creating a game that is either frustrating or boring, placing it well along the negative axes of experiencing flow [46].

Since being a refugee is about moving from one place to the next an interesting *movement mechanisms* was needed, and especially one supporting the game world fiction and aligned with player choices in relation to formal game elements. Drafting movement mechanisms carry an inherent danger of diluting the game world fiction by reducing it to a game that would just as well have fitted a scenario of backpacking through Europe. To avoid this pitfall we had to underscore game world fiction in every aspect of the game. Correlating formal game elements and movement mechanisms with the terminology of the game world fiction. Such correlation increased symmetry between expression of the game world and real life events.

In the *Refugee Game* we established symmetry between specific game elements such as player cards and game world fiction to place emphasis on player choice. A player could be dealt an *equipment card* giving them wealth (enabling payment of human smugglers) or an *action card* allowing them to move on contact with helpful volunteer groups instead of waiting for the right dice roll (border control). Equipment and action cards are impacted either positively or negatively at the beginning for each turn by *global event cards* (managed by the companion app). Global event cards reversing equipment and action card values underscored the changes that refugees' experiences. Furthermore some countries are more or less hostile towards refugees, making them either easier or harder pass through (e.g. lower/higher risks of *detours/being discovered*, and *being deported*). All this mirrors the current state among European countries – and at the same time highlights player choices by intensifying uncertainty and fun, since player choices are an important part of playing games. The framework involves meaningful player

choices to balance unpredictability and control. Game states change, and the player navigates with a sensation of influencing the current, but also of influencing subsequent game states. The adaptive framework therefore places importance on an oscillation between players feeling more or less in control of actions and their consequences, yet still facing an unpredictable next turn.

4 Conclusion

In this article we have proposed an adaptive design framework approach of turning real life events into board games. The design framework is distilled from a game design process executed using agile development methods. This allowed for rapid iterations, evaluations, redesign and further testing without starting from scratch. Using prototypes as a communication tool, both internally in the team and externally with testers, made it possible to show and explain our ideas and test them before prematurely discarding them. By conducting ethnographic field research [47] and interviewing volunteers, we made sure that portrayed game world events came as close to the real-life refugee scenario as possible.

We found that game designing based on the refugees' expanded stories constricted the game design process. It was necessary to separate the particular refugee storyline from the general situation or context. Converting the general aspects of a situation established the first layer of our proposed design framework, namely to turn real life events into a game. We have termed it 'game world fiction'. The second layer involves determining how and which real life aspects to select and convert to the game. We found that this is best done using formal game elements. The third layer concerns mechanisms, especially movement dynamics through the game space, while the fourth layer highlights player choices in relation to game world fiction, formal game elements and movement mechanisms, all in place to promote a desired player experience.

Together these four interrelated layers establish a design framework of turning. It is not restricted to the particular case of adapting the Syrian refugee crisis to a game. Instead, we believe, it can act as a generic design framework for turning any real life event into an entertaining and thought-provoking game.

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