# Engagement Games

## a guide for designing games that facilitate real world action

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## a Guide for Designing Games that Facilitate Real-World Action

created by

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# Urban Risk

For the first time in history, the majority of the world's population lives in urban areas. This has created opportunities for economic growth and socialization, but it has also generated new and renewed threats, such as water shortages, disease, crime, rising food prices, house fires, and uncontrolled urbanization (migration from rural areas).

To increase the capacity to effectively prevent urban risk, aid organizations must seek to create informed and **engaged** citizens capable of learning about complex threats and taking action within their communities.

# What is Engagement?

The word "engagement" can mean many different things to those attempting to "engage" others in real-world situations. In humanitarian work, measuring engagement is often synonomous with measuring participation—the number of warm bodies in a room or the number of people who have received a particular message. But engagement is more than setting oneself up for an easy head count.

True engagement occurs when there is a dispositional shift in stakeholders--when they leave a situation with more trust, more knowledge, and an increased ability to understand and affect change.

**Meaningfully engaging a diverse group of people in serious, often complex situations, is not easy.**

This guide will lay out an engagement approach that can be adapted and utilized by the Red Cross for the following field objectives:

- **Engage People in Understanding and Addressing Risk**

- **Engage People in Community Vision, Cohesion, and Deliberation**

- **Engage People in Teambuilding and Skill and Knowledge Strengthening**

- **Engage People in Collective Processes of Transformation**

One proven way of engaging people in real-world issues and giving them the ability to take action is **creating a game.** But not just any kind of game...

# Engagement Games

Engagement Games are social systems that use play to engage people in real-world actions. Departing from traditional learning games such as UNICEF's *Riesgolandia*[1] (which aims to impart disaster preparedness knowledge onto individuals), or the Red Cross/Red Crescent's *Paying for Predictions*[2] (which conveys complex ideas abstracted from the location where gameplay takes place), **Engagement Games** move a step further by using game mechanics to scaffold play onto real-world processes, so that real action occurs while playing the game. Evidence suggests that fusing a sense of play onto serious processes—from community deliberations to volunteer preparedness—can result in increased participation and diversity, increased trust in the system and each other, and, most importantly, increased reflection and learning regarding the process and one's position in it.

[1] http://www.unicef.org/republicado-minicana/english/emergen-cies_12887.htm

[2] http://www.climatecen-tre.org/site/paying-for-predictions

interested in the research? check out the 'suggestions for further reading' section or visit: **engagementgamelab.org**

Engagement Games can result in better **action**, more **trust**, and **civic learning**

# What is a Game?

"Games are systems where players engage in artificial conflict, governed by rules, for which there is a knowable outcome."
       - Katie Salen and Eric Zimmerman, Rules of Play (2002)

A game is a system with:
- clear objectives
- clear rule set
- immediate feedback
- opportunities to fail safely
- ...room to play

**Games can be used to enhance learning, participation, and to encourage social action.**

# What Games Do

## Games are catalysts for the power and productivity of play

### Games focus attention

A game's structure and narrative allow content to unfold in a meaningful, cumulative fashion, while clear feedback and escalating challenges sustain attention over time

### Games induce systemic thinking

Game rules force players to navigate a complex system of risks and tradeoffs and can be used to mimic real-world complex systems, allowing players to intuit and internalize successful navigation strategies

Play creates opportunities for people to **reflect** upon their place in the larger community and **empathize** with other members

Play creates opportunities for **social control**, in which a group of people come together and work as a collective to govern themselves outside the dictates of an authoritarian figure

Play creates opportunities for **experiential learning**, in which one internalizes and applies what one has learned in order to progress

# Engagement Games add a unique element: real-world action

## The Explosion of Learning Games

Governments, aid organizations, corporations, and NGOs are increasingly understanding and weilding the engaging power of games and play. Many of the new creations are called Learning Games. Learning Games leverage game mechanics to impart knowledge and skill onto players, with the hope that the player will apply what they've learned at some point outside the game.

## The Explosion of Social Technologies

The Internet has been able to connect people throughout the world to services, information, and each other to a degree that has never before existed. With this and the rise of online social networks, a slew of new social behaviors emerge, and the tools for collaborative action have never been more attainable. As mobile penetration leapfrogs over other traditional telecommunications, the ability to digitally connect has touched all corners of the globe.

## Engagement Games emerge when you combine the best of learning games with social systems that can impact the world

# Designing Engagement Games

In designing an Engagement Game, the first step is identifying the problem and the broader real-world process

The next step is to identify the real-world actions the game can facilitate. These should include actions from three distinct actors.

## 1. Game designer/facilitator

how does the game better enable the organization or institution creating the game to take desired action?
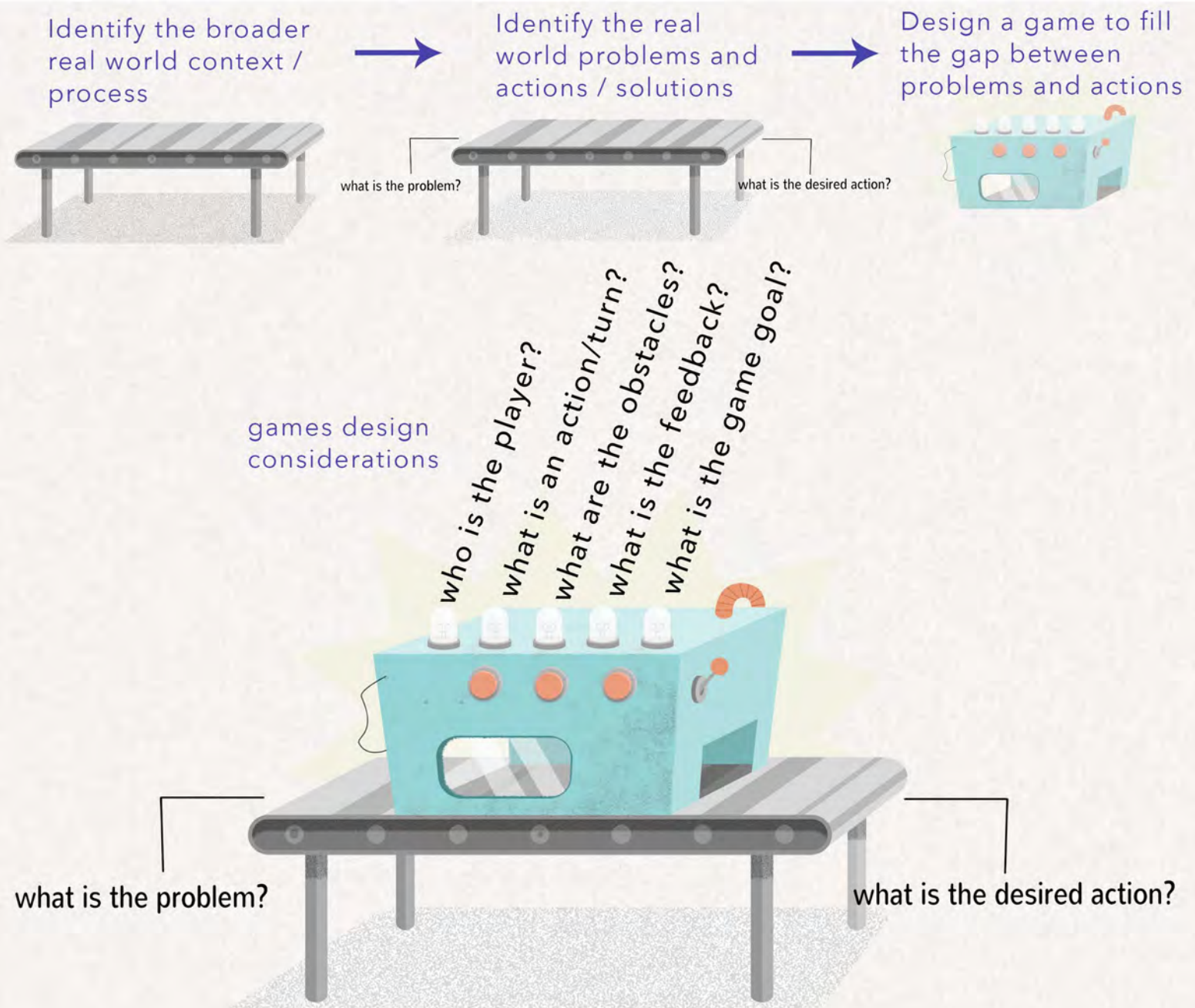
## 2. Player/citizen

how does the game enable an individual to take direct action in the real world?

## 3. Group or community

how does the game enable real world action or outcomes that could only occur when designer/facilitator and player/citizen come together in a shared process?

Once the real world issues and desired outcomes are identified, the game can be designed to achieve stated actions. Think of the game as a "box" sitting on top of a conveyor belt. The conveyor belt is the broader real world process and the box is an imaginary place, often called the magic circle, that enables play within a clearly demaracted ficitional context. The unique feature of Engagement Games is that the magic circle and the real world productively feed into each other.

# Designing Engagement Games

Identify the broader real world context / process

Identify the real world problems and actions / solutions

Design a game to fill the gap between problems and actions

what is the problem?

what is the desired action?

games design considerations

who is the player?

what is an action/turn?

what are the obstacles?

what is the feedback?

what is the game goal?

what is the problem?

what is the desired action?

# Engagement Games Making a Difference Now

**community planit**

Community PlanIt is a game for local planning. Through the game, citizens learn about the issues, deliberate with each other, and contribute input toward solutions.

**Real World Actions:**
1. Planners collect nuanced citizen data from larger and more diverse demographics
2. Citizens/Players can create, fund, rally for, and join local community causes
3. Democratic deliberation founded on a context of civic learning, social control, and trust

to learn more, go to:
**communityplanit.org**

**engagement game (n):**

1. The game itself is the real world process

2. Acts of play are the real world actions

Community PlanIt is made up of time-based missions containing challenges that range from taking photos of problem areas in one's community, voting on the most pressing problems, offering solutions and personal stories, to stepping in the shoes of someone else and investigating matters from their perspective.



Throughout the game, pesky villains called Crats hault your mission completion progress and quiz you on your knowledge of the community

The goal of the game is to earn coins by completing challenges, and pledging these coins on real-world, community-sourced causes. These range from organizing a neighborhood cleanup to buying art supplies for a teacher.  At the end of the game, the top three causes win real project funding. During the game, any player can propose their own local cause.
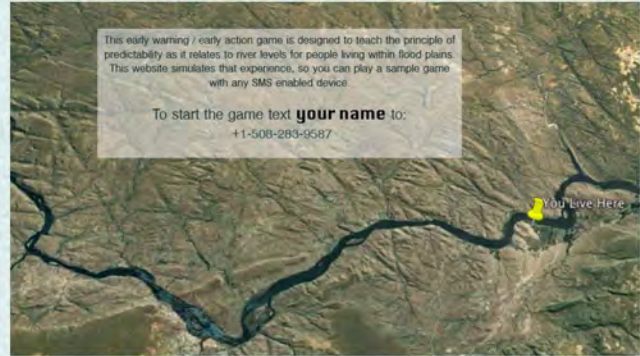


At the end of the online game, players come together at a face-to-face meeting with decision makers to discuss the results and next steps



People playing Community PlanIt in Detroit

# Engagement Games Making a Difference Now



This early warning / early action game is designed to teach the principle of predictability as it relates to river levels for people living within flood plains. This website simulates that experience, so you can play a sample game with any SMS enabled device.

To start the game text **your name** to:
+1-508-283-9587

You Live Here

## Nyami Nyami

**Nyami Nyami is an sms-based early warning / earlyaction game for understanding and predicting river levels along flood-prone areas of the Zambezi River**

**Real World Actions:**
1. Players learn that flooding can be accurately predicted by computer models, and that they can be used to evacuate in time
2. Scientists receive crowdsourced river level reporting to improve predictions
3. Trust is built between scientists and river residents
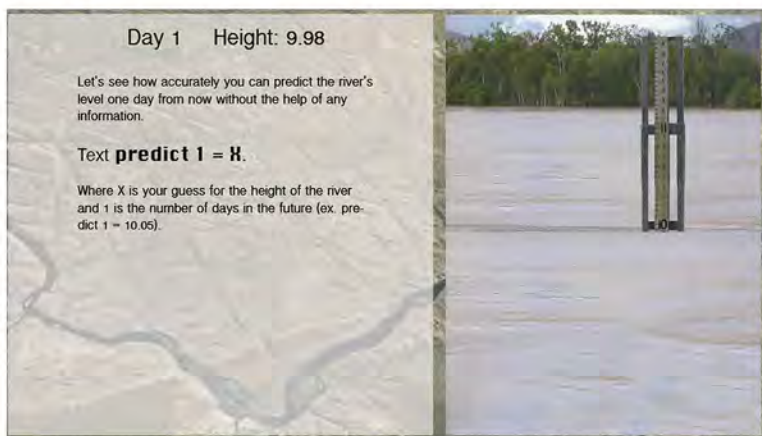
to learn more, go to:

http://nyaminyami.com.s3-website-us-east-1.amazonaws.com/
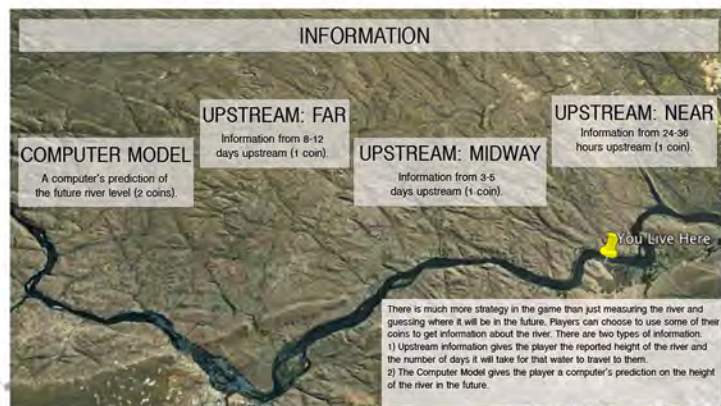
**engagement game (n):**

1. The game itself is the real world process

2. Acts of play are the real world actions

Nyami Nyami combines simple crowdsourcing mechanics with an exciting risk / reward-oriented predictive game engine, played over the ubiquitous SMS system available to anyone with cell phone access. At the end of each three-week play period, the top 10% of players earn real-world rewards (such as free phone cards).





Day 1     Height: 9.98

Let's see how accurately you can predict the river's level one day from now without the help of any information.

Text **predict 1 = X**.

Where X is your guess for the height of the river and 1 is the number of days in the future (ex. predict 1 = 10.05).

Players begin the game with a small bank of coins and a simple mission: earn as many coins as possible by reporting information and predicting future water levels. Players earn their base coins simply by reporting the current river level up to three times each day. Coins earned by reporting can be risked to predict what the water level will be one, two, or 10 days in the future at the same spot.



INFORMATION

COMPUTER MODEL
A computer's prediction of the future river level (2 coins).

UPSTREAM: FAR
Information from 8-12 days upstream (1 coin).

UPSTREAM: MIDWAY
Information from 3-5 days upstream (1 coin).

UPSTREAM: NEAR
Information from 24-36 hours upstream (1 coin).

You Live Here

Players can also spend their coins for information, giving them an edge in their predictions. For one coin, they can "buy" reporting information from communities upstream from them. When practiced, this technique will teach players that the water level upstream today predicts the local water level in the future. For two coins, players can buy the prediction of a sophisticated computer model, which takes into account all reports, plus weather predictions and information from other sources. While more expensive, the computer prediction is more accurate. Players who purchase it should gain a significant predictive edge, while learning to trust the modeling software for the future, when their lives and property may depend on it.



To start the game text **your name** to:
+1-508-283-9587

You Live Here

# Nyami Nyami

# Engagement Games Making a Difference Now

**CS**

*Civic Seed*

## Civic Seed is a social role-playing game that facilitates the relationship between volunteers and local community organizations

**Real World Actions:**
1. Players learn the skills necessary to be effective volunteers, and create civic resumes which they can use to apply to volunteer organizations, jobs, and schools.
2. Community organizations are able to choose from officially-certified volunteers, and learn about them before accepting
3. Community organizations and volunteers can work more effectively with populations in need

to learn more, go to:
**civicseed.org**

## engagement game (n):

1. The game itself is the real world process

2. Acts of play are the real world actions

Civic Seed is played in closed game sessions with about 20 students at a time; it can be run as part of a class in a single sitting or over the course of a week. Players can see and work with each other in the game. Each game session is monitored and facilitated by a teacher or supervisor.

Q: List what you believe are five of the most important aspects of your identity, that intersect to make up who you are.

Type your answer here...

your answer will be private by default. You can later choose to make it public to earn special seeds.

Back

The game is set in a magical garden world that has mysteriously lost its color. Players strive to help the their guide uncover the mysteries of the world by gathering skills for volunteering. Players explore the fantastic land, solve puzzles, and plant seeds to save the world. All the while, they are building a community service resume that can be shared with professors and community partners alike.

Instead of forcing content onto users and quizzing them after, Civic Seed creates a structure that compels players to actively seek out, reflect upon, and apply content and the new knowledge they have gained.

Civic Seed

# Applying Games to Urban Risk

1. Engage People in Understanding and Addressing Risk

2. Engage People in Community Vision, Cohesion, and Deliberation

3. Engage People in Teambuilding and Skill and Knowledge Strengthening

4. Engage People in Collective Processes of Transformation

In the context of urban risk there are four primary objectives that engagement games are particularly well suited to achieve. Engagement games are designed to teach and promote action simultaneously and can therefore address multiple aspects of humanitarian work. What follows are some examples of existing games that touch on these objectives along with some potential engaagement game approaches.

# Engaging People in Understanding and Addressing Risk

## Game Currently In Use

*Red Cross: Paying for Predictions*
(http://www.climatecentre.org/downloads/File/Games/Competition%20for%20Website.pdf)

Played in person with simple materials (dice and cups to represent random rainfall and beans to represent resources), Playing for Predictions asks its players to take on the role of Red Cross crisis managers in areas at risk of flood. Each round, players can choose to prepare for a flood by spending resources, or elect not to prepare and save their resources for later. If the dice (randomly) turn up a flood, players must spend four times the cost of preparing.

Additionally, at the start of the game players may participate in a bid for a forecasting tool that will tell them the result of one of the dice in advance, so they can make more informed decisions about when to prepare. The game requires players to make decisions about when to prepare against risk, and how much they're willing to pay for forecasting.

## Potential Engagement Game

*Build, Predict, Protect*

Played in teams on cell phones with SMS capability, this game teaches risk assessment by forcing players to decide whether to build victory points, protect those points from risk, or gather data to help make that decision. Each day, each player on a team can make one of three actions: Build, which adds minutes to a group pool, Protect, which shields a block of points from disaster, and Predict which gives information to the players about the likelihood of a disaster. At the end of a play period, the team(s) with the most banked minutes receive a phone card in the amount of the minutes saved by the group.

Players who coordinate their actions between team members by communicating and planning a strategy have an advantage in the game. For example, one person could pay for the forecast and tell it to the others, who then decide how many points to build, and how many to protect.

### Three benefits of this game:

1) Allows game designers to teach about risk management
2) Players build a communication network, and earn real-world resources that help them utilize it
3) Lines of communication open between game runners and citizens, and trust is built as game runners deliver the promised rewards.]

# Engaging People in Community Vision, Cohesion and Deliberation

## Game Currently In Use
*Before the Storm, AKA Early Action, Early Warning: The Game*
http://petlab.parsons.edu/newWeb/index.php?content=none&project=redcross

Various stakeholders in Senegal including average citizens, government officials, and climate scientists played this card game, which brought them together to share ideas about disaster preparedness. Various actions were written on cards. Players were given disaster scenarios, and then were asked to choose which cards and actions best suited the scenario. Some cards were blank, which allowed players to create their own actions. Over 300 cards were created, and the best ones were collected as a record for future use.

## Potential Engagement Game
*Fresh Thoughts*

This game connects players from all over a region and invites them to contribute ideas to a process. Every day, players receive a text from the system asking them a question such as "What would you do if you were told your town would flood tomorrow?" They text back a short answer to the system and earn points for that action. Then, at various times throughout the day, they are texted some responses from other players and given the opportunity to rate those ideas 1-5 via text. The highest-rated responses earn bonus points for the players who created them.

At the end of each play period, there is an in-person meeting where the best responses are discussed and potentially absorbed into an official preparedness plan. Each community can choose to spotlight the highest rated overall ideas, the ideas rated highest by their community, the highest rated ideas that originated in their community, or any combination to find solutions that work for them.

### Three benefits of this game:

1) Game-runners collect data about regional risk and knowledge penetration
2) Players earn credit for their ideas and gain access to the best ideas in the region, which they may choose to adopt
3) A consensus is built around various plans through game play, making it easier for everyone to deliberate and put thoughts into action during in-person meetings

# Engaging People in Team-Building and Skill and Knowledge Strengthening

## Game Currently In Use
*Upstream, Downstream*

The purpose of this game was to "promote, among vulnerable communities that share a river watershed, learning and dialogue about disaster risk, climate change and sound ecosystem management." Within the game players took on the roll of subsistence farmers. They were broken into two groups- those that lived upstream and those that lived downstream. The upstream group relied more on deforestation to earn points while those downstream relied on the planting of crops. Through game play, emergent behaviors were modeled. For example, "During play testing in the Nicaraguan village of Moropoto, players jointly came up with an innovative strategy to address changing risks: that downstream farmers would support their upstream neighbors (with loans after disasters and with subsidies to plant new trees in order to reduce risk of flood induced by deforestation) in what basically amounts to payment for ecosystem services- an environmental management approach that had not yet been introduced in the Moropoto area but was formulated independently by players."

## Potential Engagement Game
*Overflow*

Overflow is a cooperative engagement game that is implemented at the community level, but can also pit communities against one another. Each player community is given a special device-charging station, and each player is equipped with a buzzer device that will buzz at random times as long as they stay within a short distance of the charging station.

At random times throughout the week, the buzzers go off, imitating a disaster, and signaling to the players that they must be returned to the charging station within a certain number of minutes. If enough chargers are returned, the community wins the event. Otherwise, the community fails the event.

As an added layer of real-world engagement, a communication system is installed at the charger which updates players on weather conditions and flood warnings, and gives players tips about what to do in disaster situations. In the event of a real emergency, the system can be activated by the government, calling players to the station, where they'll receive official recommendation or instruction.

### Three benefits of this game:
1) Game runners create an easy way of communicating information to a large number of people
2) Players build an internal communication network and receive rewards for working together
3) As the game evolves, it becomes an early warning system for everyone in the region

# Engaging People in Collective Processes of Transformation

## Game Currently In Use
*The People Speak*
*(http://thepeoplespeak.org.uk/blog/2011/07/02/who-wants-to-be/)*

This game is a "game show in reverse." Players pay admission to the game, and all money is pooled into a common account. Through the course of a live game, players engage in a brainstorming session about how the money should be spent. Then, a series of live votes narrows the options down to one and the money is committed to that cause.

A host/facilitator guides the action and determines when votes occur, and helps players come to consensus.

## Potential Engagement Game
*Microcosm*

Microcosm is a project planning and execution game played in two ways by two distinct groups of stakeholders: local people in areas of high urban risk, and partnering organizations with humanitarian interest in the region. Locally based players meet together in person, form small teams, and then brainstorm ideas for projects to improve their communities and mitigate urban risk. By following a set of prompts, they create a proposal which appears on a website that anyone in the world can view. Adding updates to projects bumps them to the top of the web page, so players are encouraged to research and plan the project even before it receives funding.

At the same time, humanitarian organizations such as Red Cross / Red Crescent play the game from western countries, but in a different way. Anyone affiliated with a partnering organization can create an account with an official email address (ex. @redcross.org), that entitles them to view, discuss, and pledge fictional game money to projects. At the end of a play period, the projects with the most pledges receive real-world funding from the partner organizations. Local branches of the organizations receive the money and are empowered to carry out the projects.

Three benefits of this game:
1) Game runners learn what projects matter most to people in the communities they partner with
2) Players get to create, rally around, and secure funding for projects that impact them directly
3) The humanitarian system becomes more collaborative, as all projects are created by the people who benefit from them, and selected by the people who will fund them.

# Evaluation

Evaluation should be seen as central to the Engagement Game process. Measuring player learning and desired social actions is important for assuring quality game design and program delivery.

When identifying desired social outcomes, game designers / facilitators should establish a baseline of knowledge and participation to which to compare the post-game situation. Through the analysis of data generated in the game or external surveys and interviews, it is possible to learn how well the game has increased engagement in the stated game objective. Questions might include:

1. To what extent do players have greater understanding of urban risk?
2. Are people talking more about the issues and attempting to reach consensus on problems.
3. Is there more collaboration amongst disparate groups?
4. Are people sharing knowledge with each other to increase their capacity to act collectively?

This guide has aimed to introduce the general Engagement Game design approach to solving issues of urban risk. But there are so many more things happening with Engagement Games and so many more ideas to be had than this guide can fit.

Visit EngagementGameLab.org to see what the lab and others are doing with Engagement Games.

But the easiest way to learn more is to **create your own**.

Suggestions for Further Reading

**engagementgamelab.org/research**

**climatecentre.org/site/games-exercises**

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