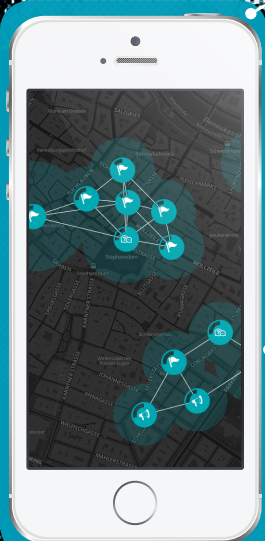
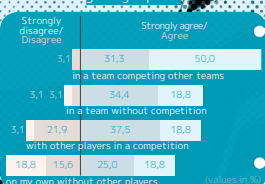


CIVIC ENGAGEMENT MEETS PERVASIVE GAMING

TOWARDS LONG-TERM MOBILE PARTICIPATION

An increasing number of smartphone applications to engage and involve citizens in urban government is available and enables mobile participation on-the-go. However, mobile participation apps are often restricted to pure one-way reporting of issues by citizens and thus more strategic long-term participation is not supported. We investigate the fusion with location-based games and uncover the main motivators for playing in a web survey and present the game concept Community Circles aiming for long-term participation.



Hi-fi prototype developed with the rapid-prototyping toolkit Processing

STUDYING PERVASIVE GAMING

33 responses (6 females) between 15 and 51 years (mean=29, median=30)

55% play for one to two hours per day
34% play less than one hour
7% between two to three hours

High impact on the daily routing:
94% play between their daily routines and willing to adapt their daily routes

87% play in spare time while only **26% allocate time**

Teamwork and competition are important aspects, as well as **exploration**

Players prefer **competitive team mode**

CATEGORIES

We found followings important aspects of playing, when asked for fascination, positive, negative and memorable experiences:

- Sociability**
Most prominent factor mentioned by 61%; players enjoy meeting others, feel bond to community and like team play
- Exploration**
City as playground is challenging and exciting, players engage more with their environment
- Activity**
Good reason to stay active and healthy, adventurous experience, satisfaction through leveling and organized missions
- Novelty**
New way of gaming is exciting and creates new challenges

CONCEPT

We introduce **Community Circles**, a location-based game:

- User-generated georeferenced **contributions**
- Each contribution has a certain **impact radius** derived from its activity and responses from others
- Contributions in range can form **communities**, which has positive influence on its contributions' ranges
- Dynamic network** of contributions where players are **required to actively engage**
- Goal is to grow community and keep it alive**

FEATURES

Based on the survey, we address following aspects in our game design:

- Social interaction**
Promoted through growing and shrinking impact of contributions by creating valuable contributions, discussing and crediting these; interaction is required between players
- Teamwork**
When creating contributions, other players nearby can be added as supporters and therefore a contribution has a higher impact
- Competition**
By building communities players can compare community attributes; rewards for contributions in another community
- Exploration**
Fostered by goal of growing communities and encouraging to explore surroundings; link into daily routines through meaningful notifications
- Challenges**
Contests by representatives or player initiated location-based polls

MOCKUPS & PROTOTYPE

- Low-fi paper prototypes**
General app behavior, map showing citizen contributions, creation and browsing of contributions, user profiles, rating/commenting, etc.
- Hi-fi interactive prototype**
Built to demonstrate game mechanics, explore dynamic of adding contributions, forming communities, influence of comments and votes; parameters, such as different visualizations, votes and comments count