



# Gamification and social dynamics behind corporate cycling campaigns

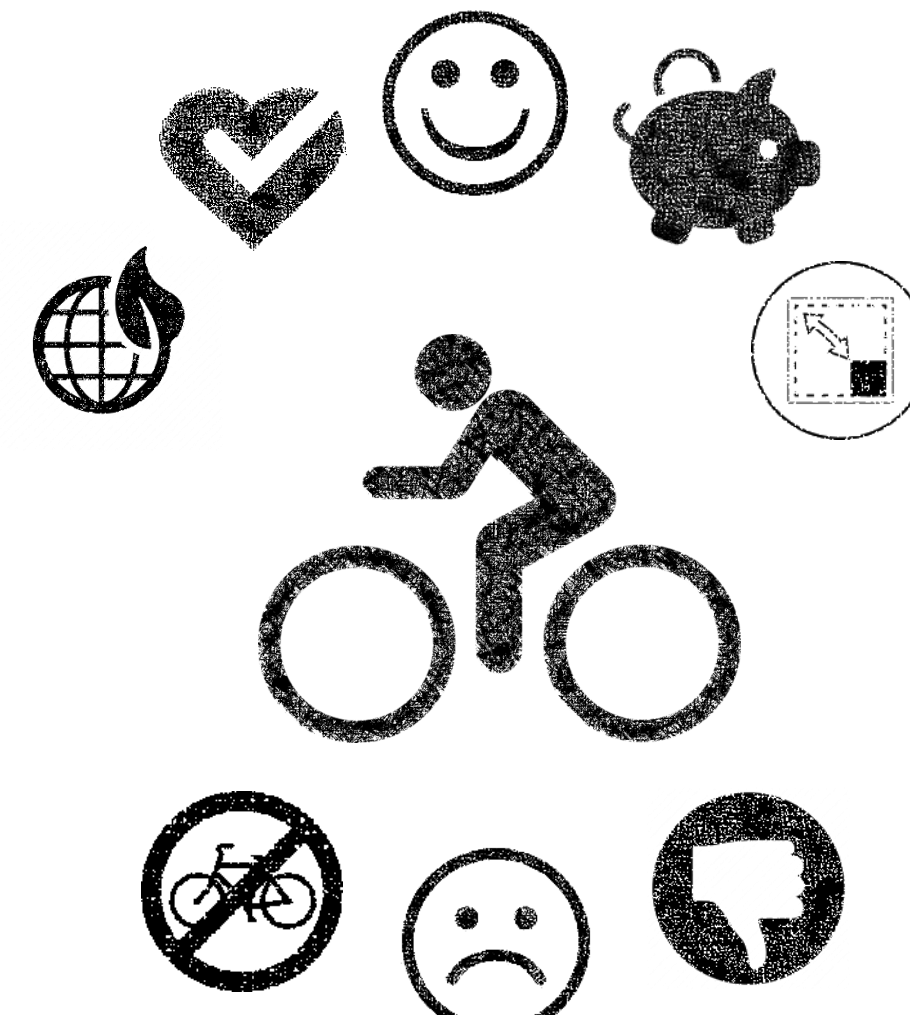
Alexandra Millonig<sup>a</sup>, Matthias Wunsch<sup>a</sup>, Agnis Stibe<sup>b</sup>, Stefan Seer<sup>a</sup>, Chengzhen Dai<sup>b</sup>, Katja Schechtner<sup>b</sup>, Ryan C.C. Chin<sup>b</sup>  
<sup>a</sup>Austrian Institute of Technology, Vienna, Austria <sup>b</sup>MIT Media Lab, Cambridge, MA, USA

## WHY WE SHOULD BIKE MORE...

- Cycling needs significantly **less resources** than motorised transport [1]
- Cycling provides major **health and financial benefits** [2]
- Cycling requires **little space** (esp. In comparison to cars) [3]

## ... AND WHY WE DON'T

- **Actual barriers** (limited access to bikes, limited biking infrastructure)
- **Perceived barriers** (negative image, danger, inconvenience) [4]



## GAMIFICATION IN BIKING CAMPAIGNS

- **Gamification** (application of game-design elements and game principles in non-game contexts, e.g. high scores, team challenges) **provokes behaviour and aptitude change** in the area of mobility behaviour [5,6,7]
- **Bike promoting initiatives** increasingly utilise this effect (using e.g. competitions, lotteries, team experience or awards). [8,9]
- **Impact** on biking behaviour has already been documented in several studies (→ increased biking behaviour in roughly ¼ of participants after the intervention) [8,10], but **factors and dynamics leading to this effect** are still **hardly examined**. [11]

### Hypotheses:

1. Competition and cooperation (as **social influence strategies**) drive people to engage in activities.
2. Decision makers within companies will **use or create strategies** to motivate their employees to join and compete for a victory.
3. Biking as a form of commuting becomes a **conversation topic**, people start considering biking and eventually are doing so.

## STUDY DESIGN

**Set-up**

6 weeks bike commuting challenge (Sept / Oct 2015)

**Participants**

14 companies (headcounts from 17 to about 10,000) in greater Boston area, MA

**Challenges**

Weekly and total comparison of results in 3 categories:

- Bikers: share of active bikers per company
- Distance: average and total biking distance within a company
- Enthusiasm: relative change of active bikers within a company

No tangible incentives, winning companies received a trophy

### Evaluation methods

- Pre- and post-intervention online surveys for participating employees (standardised questionnaires)
- Analysis of reported biking mileage
- Qualitative telephone interviews with company representatives



## RESULTS

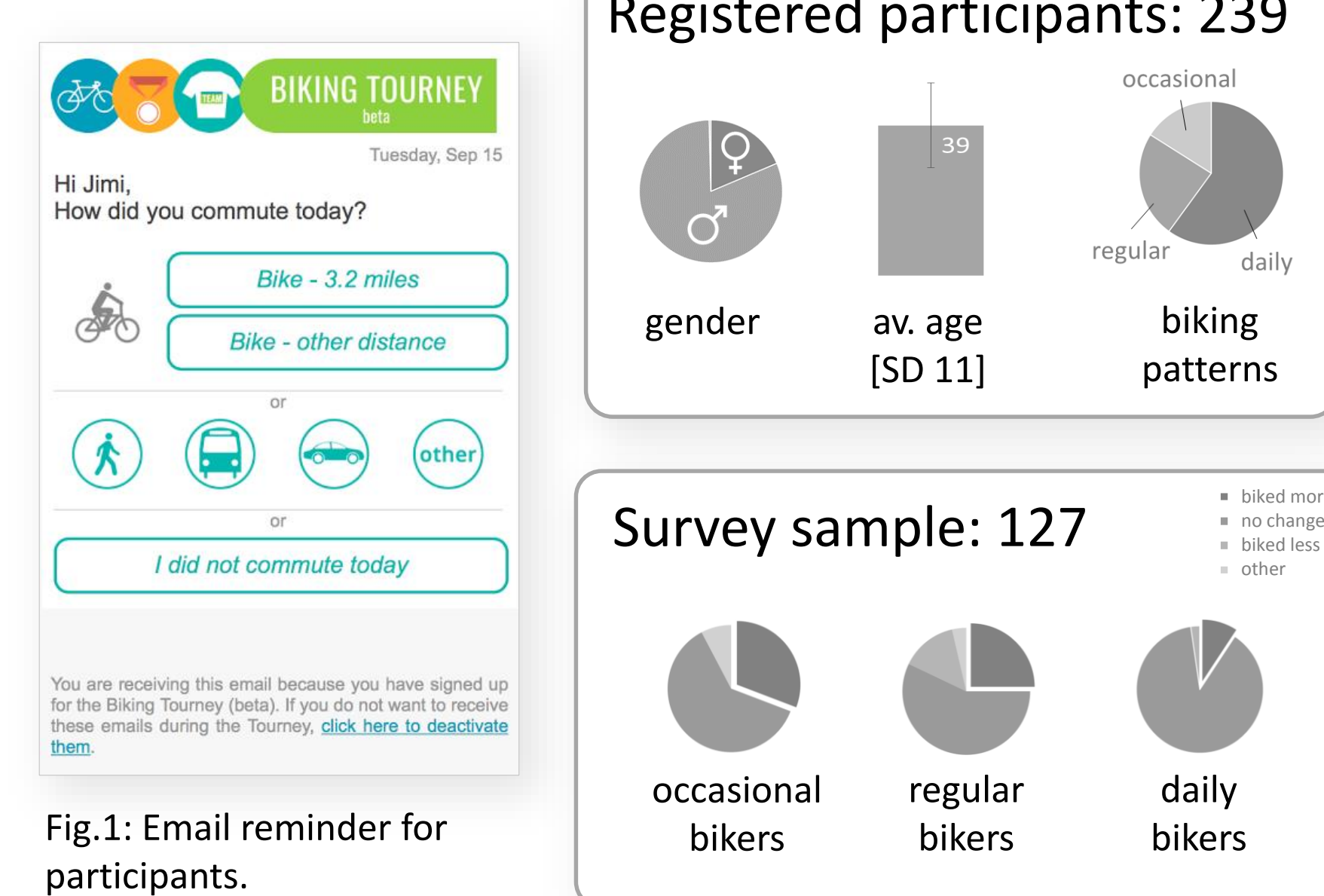
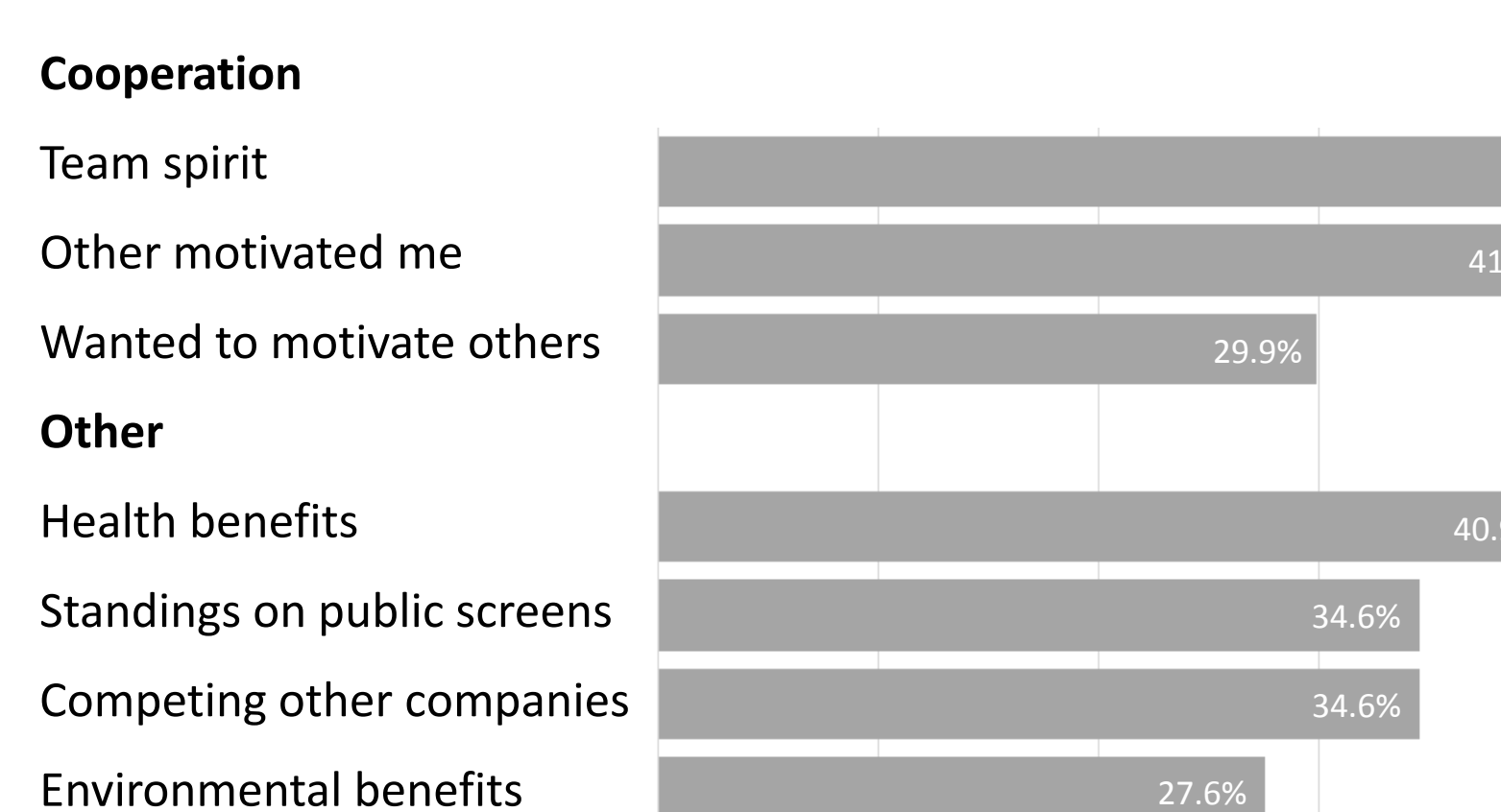


Fig.1: Email reminder for participants.

### Participants' motivations



### Companies' motivations

- **Fun:** do something 'cool', friendly competition with other companies
- **Team:** team building, identity, networking
- **Higher goal:** foster sustainable transport
- **Bike enthusiasm:** high share of biking employees
- **Traffic, trauma':** decrease annoying motorised traffic

**Strategies:** email reminders, mailing lists, private social media page on internal network, face-to-face interactions

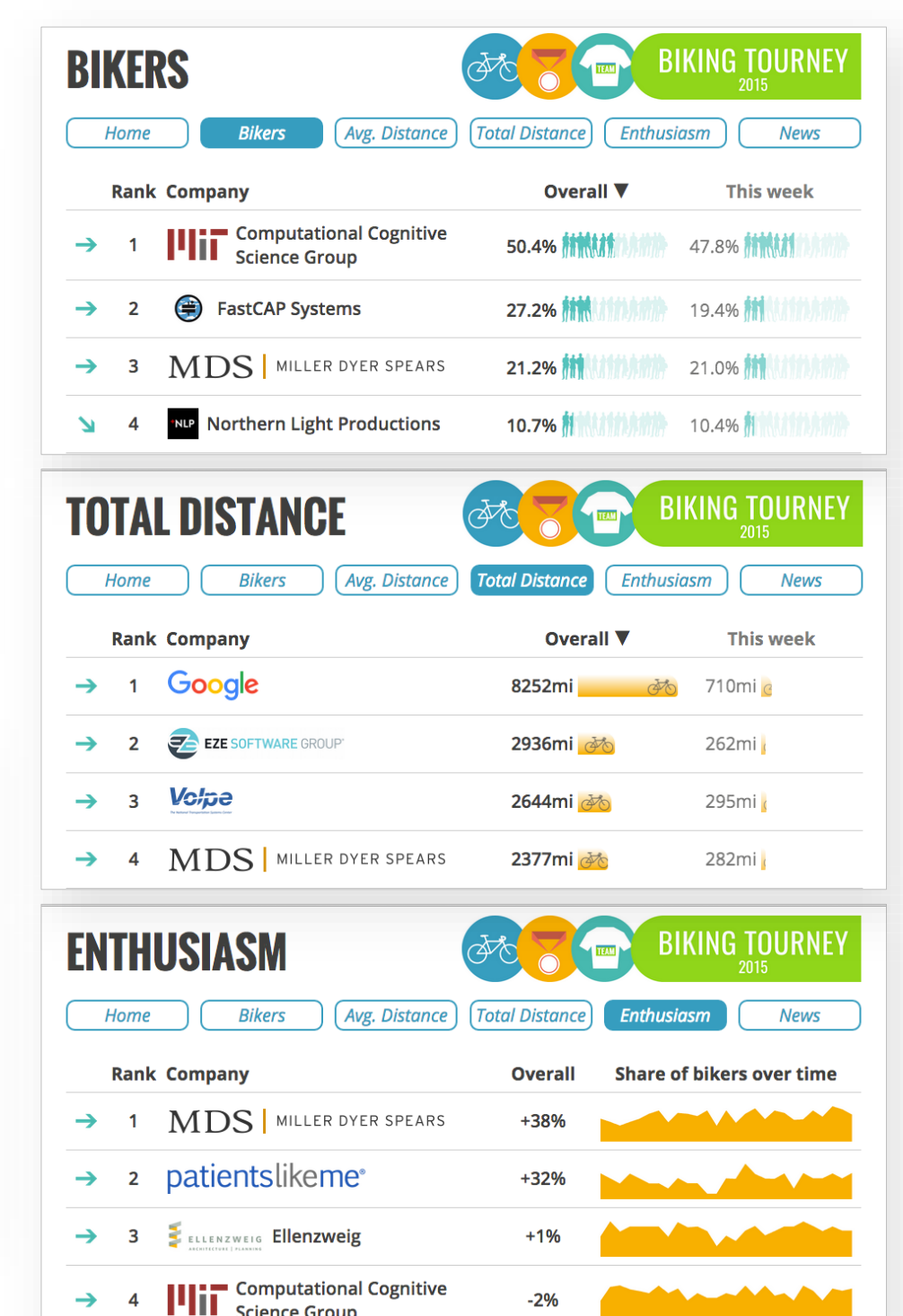


Fig.2: Screenshots showing the rankings for bikers, total distance and enthusiasm.

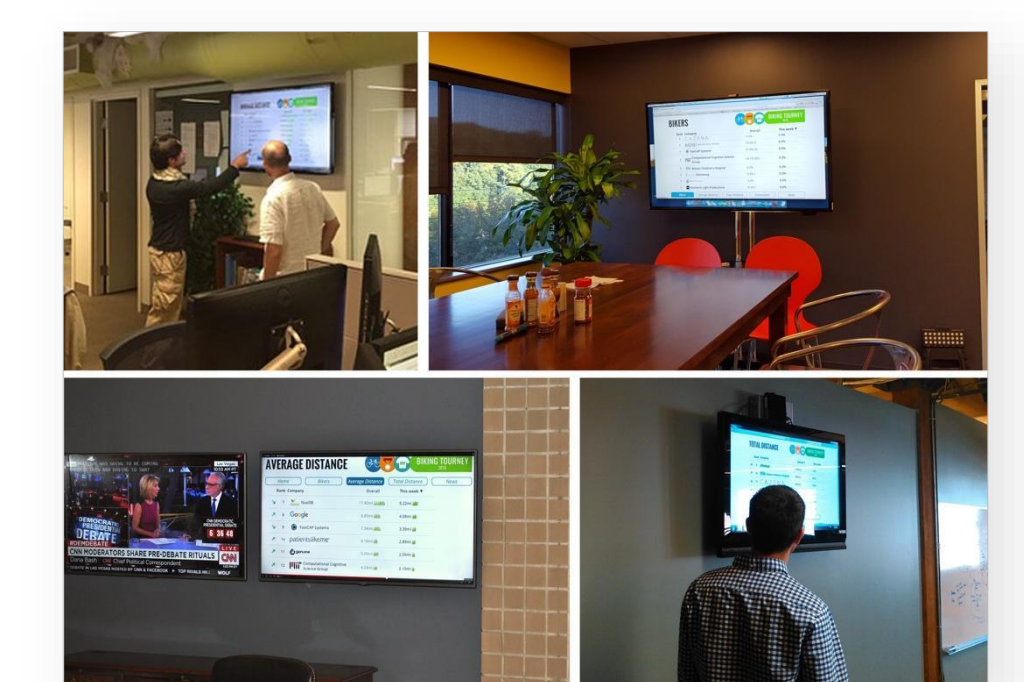


Fig.3: Public displays with the tourney rankings in the participating companies.

## CONCLUSIONS AND OUTLOOK

- **Cooperation and competition** were the strongest motivational factors for participants
- Companies used different **strategies** to motivate employees, in particular towards the end of the tourney
- **Public screens** and **online communication tools** supported the conversation and persuasion process

Currently the tourney design is prepared for implementation in other regions; adaptations (e.g. addressing other forms of communities) are planned.

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