Gamification and social dynamics behind corporate cycling campaigns

Alexandra Millonig a, Matthias Wunsch a, Agnieszka Stibe b, Stefan Seer a, Chengzhen Dai b, Katja Schechtner b, Ryan C.C. Chin b
aAustrian Institute of Technology, Vienna, Austria  bMIT 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 BIKE CAMPAIGNS
• Gamification (application of game design elements and game principles in non-game contexts, e.g. high scores, team challenges) provokes behaviour and attitude 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 cycling behaviour has already been documented in several studies (> increased cycling behaviour in roughly ½ 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)

Participations
14 companies (headcounts from 17 to about 10,000)

Communication
Website with online registration and standings, email reminders, ‘stat of the week’, display of results on public screens in companies

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

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

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

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.

References

Acknowledgement
The authors gratefully acknowledge Kent Larson (MIT Media Lab) and Hannah Revolution (Trinity College Dublin) for their contributions to the research and their help in conducting the presented study.