

European Alliance for Innovation

Smart Life Summit

24–26 October 2023 / Bratislava / Slovakia

100+
High-level
speakers

20+
Countries

300+
Hours of content
and networking

Areas of Interest

-  Artificial Intelligence
-  Health
-  Energy
-  Security
-  Mobility
-  Sustainability
-  Bright Young Minds

Pieter Van Gorp

8-year Evaluation of GameBus: Status quo in Aiming for an Open Access Platform to Prototype and Test Digital Health Apps



According to Toli and Murtagh^[1], smart cities are about urban transformations aimed at achieving a more environmentally sustainable city with a higher quality of life, offering opportunities for economic growth for all of its citizens, but with respect to the particularities of each locality and its existing inhabitants. Changes to urban infrastructure can already promote environmental sustainability as well as improve the well-being of citizens: for example, providing more urban green and more options for active transportation can be very helpful. However, the ultimate success depends directly on the behavior of urban inhabitants. A variety of technologies has emerged for promoting behavior change in the context of environmental sustainability and health, but the scientific evidence on the optimal use of such technologies remains too meager. In this keynote of the SmartCity360 Health Track, I will focus on our experiences related to the theory and data-enabled promotion of healthy behaviors.

In particular, I will talk about GameBus, a web platform for increasing the rigor of gamified health

experiments in living lab settings. I will clarify the scientific design rationale of this platform and provide an 8-year evaluation of its performance. GameBus has already supported a large variety of studies on gamified health promotion, leading to a promising data set for analyzing the impact of specific gamification techniques in specific contexts. While various articles on such studies have been published, along with data sets, I will share novel information to enable other scholars to scale up such efforts, building on a recent publication at the 2023 edition of the SIGCHI symposium on Engineering Interactive Computing Systems^[2]. I will also reflect critically on the role we have taken as a knowledge institute. For that, I will clarify the way we are collaborating with governmental and industrial partners and I will provoke discussion on alternative means of collaboration. This will serve as input to the panel discussion further down the Smart Life Summit conference program.

[1] Toli AM and Murtagh N (2020) The Concept of Sustainability in Smart City Definitions. *Front. Built Environ.* 6:77. doi: 10.3389/fbuil.2020.00077

[2] Pieter Van Gorp and Raoul Nuijten (2023) 8-year Evaluation of GameBus: Status quo in Aiming for an Open Access Platform to Prototype and Test Digital Health Apps. *Proc. ACM Hum.-Comput. Interact.* 7, EICS, Article 171 (June 2023), 24 pages. <https://doi.org/10.1145/3593223>