

My in 180 minutes: experimental protocol of a serious game aiming at the reduction of carbon footprint in Academia

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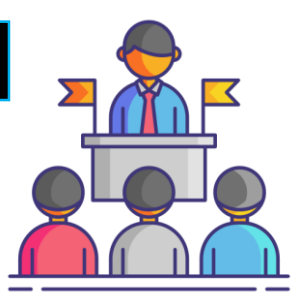
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1 Background

Conferences



Field missions



International collaborations



- Some **activities** in **academic culture** are often considered as a synonym of **academic success and recognition**¹




- BUT** they can be an important **source of greenhouse gases**²



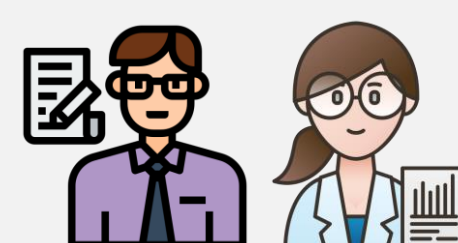
- Serious games** have been already used to promote attenuation and adaptation behaviours but, **seldom experimentally evaluated**³

2 Aims

- Evaluate the effectiveness of the serious game “My  in 180” in **carbon footprint reduction within academic actors**
- Investigate the **levers and obstacles** (e.g., institutional, financial, familiar, psychological) related to **carbon footprint reduction**.

3 Methodology

Goal



970 Individuals working in **French academic institutions**

Recruited through listing transmitted by Labo1point5 or by academic institutions, snowballing.

Inclusion in the study

Eligibility questionnaire

- Be over 18 years old
- Live/work in France
- Be affiliated in a French academic institution.

Allocation

Randomisation

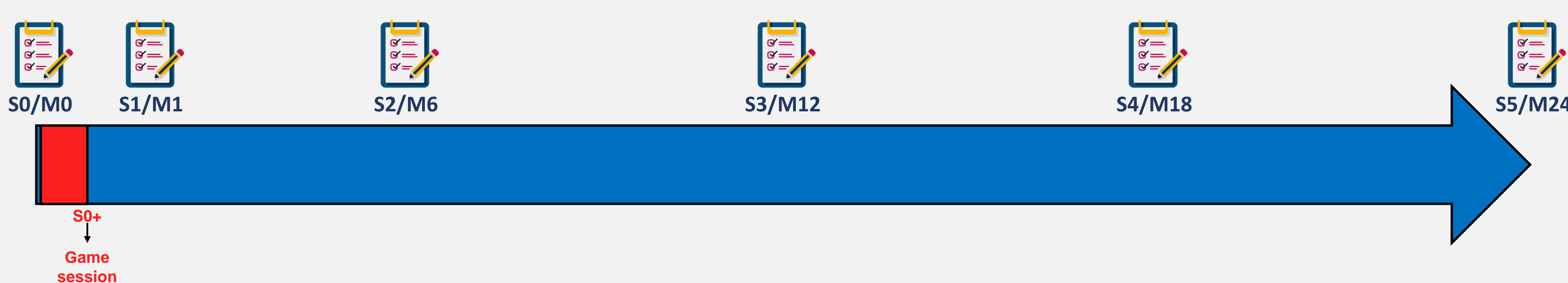
Experimental arm

Control arm

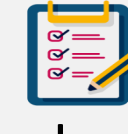
Intervention (2 weeks) and Follow-up (24 months)

- Awareness-raising documents
- Carbon footprint assessment
- Group game session: Take the role of a character from an academic institution and propose solutions to reduce your team's carbon footprint by 50%.

- Awareness-raising documents
- Carbon footprint assessment



Notes. S means a session of measurement, M means a month

 indicates a survey including questions about behaviours, psychological mechanisms, socioeconomic and institutional contexts.

4 Conclusions and Perspectives

- The present study will allow to assess **the effects of a serious game intervention vs. an awareness-raising intervention** on **carbon footprint reduction** among academic actors
- The present study will provide some insights about the **levers and obstacles** (e.g., **socioeconomic, institutional, psychological**) related to **carbon footprint reduction in academia**.
- A pilot study will start in January 2023** to test the feasibility of the recruitment and the implementation of the study.

References

¹ Berne, O., Agier, L., Hardy, A., Lellouch, E., Aumont, O., Mariette, J., & Ben-Ari, T. (2022). The carbon footprint of scientific visibility. *Environmental Research Letters*. <https://doi.org/10.1088/1748-9326/ac9b51>

² van Ewijk, S., & Hoekman, P. (2021). Emission reduction potentials for academic conference travel. *Journal of Industrial Ecology*, 25(3), 778–788. <https://doi.org/10.1111/jiec.13079>

³ Fernández Galeote, D., Rajanen, M., Rajanen, D., Legaki, N.-Z., Langley, D. J., & Hamari, J. (2021). Gamification for climate change engagement: Review of corpus and future agenda. *Environmental Research Letters*, 16(6), 063004. <https://doi.org/10.1088/1748-9326/abec05>

