Assessment of the Use of Artificial Intelligence to Support Public Services: Methodology and Roadmap

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Abstract: To assess the social and economic impacts of Artificial Intelligence on public services, a methodology using a public value perspective was developed. This workshop aims to validate this methodology as well as to develop a roadmap for implementation of this methodology, including the identification of opportunities, threats, enablers and barriers.

Keywords: Artificial Intelligence, Public Services, Public Value, Impact Assessment, Roadmap.

1. Introduction

Several recent studies have mapped the use of Artificial Intelligence (AI) in public service delivery (e.g. Misuraca, Noordt & Boukli, 2020; Veenstra, Grommé & Djafari, forthcoming). However, little is known yet what the impact, both social and economic, is of the use of AI on public services. Therefore, an impact assessment methodology is currently being developed to assess such impacts. It proposes a number of clusters of impact factors based on a public value approach, including effectiveness, efficiency, openness, outcomes and social value, ethical behaviour and professionalism, and trust (Faulkner & Kaufman, 2018; Twizeyimana & Andersson, 2019).

The assessment methodology is accompanied by the development of a roadmap for implementation including opportunities, threats, enablers, and barriers. The methodology and the roadmap need validation by experts from the field of Digital Government to ensure that the approach combines scientific grounding and practical applicability. Furthermore, the topic of the

impact of AI on public services is still emerging and requires a broad discussion with experts on how this emerging technology will create impact and value for the public sector.

2. Objectives of the Workshop

The objectives of the workshop are to engage the audience in a discussion on the social and economic impact of AI on public services, to validate the proposed impact assessment methodology, and to identify opportunities, threats, enablers and barriers to develop a roadmap for the implementation of this methodology.

3. Workshop Structure

The online workshop will last for 90 minutes. After an introduction to the study, the concept methodology to assess the impact of AI to support public services will be presented (15 mins). The remainder of the first part of the workshop will be dedicated to discussing and validating the proposed assessment methodology along the main impact factor clusters that were identified (30 mins). Depending on the number of participants, parallel groups are formed to discuss the various clusters, supported by an online whiteboard application.

After a short break, the second part of the workshop (45 mins) consists of a co-creation session to provide input for the development of a roadmap for implementation of the assessment methodology. The workshop will identify and rank opportunities, threats, key enablers and barriers. Again, depending on the number of participants, parallel groups are formed to allow for more in-depth discussion and ranking. The workshop, thereby, proposes an interactive session, discussing the impact and value of AI on public services.

References

Faulkner, N., & Kaufman, S. (2018). Avoiding theoretical stagnation: a systematic review and framework for measuring public value. Australian Journal of Public Administration 77(1), 69-86.

Misuraca, G., Noordt, C. van, & Boukli, A. (2020). The Use of AI in Public Services: Results from a Preliminary Mapping Across the EU. Proceedings of ICEGOV2020, April 1-3, 2020, Athens, Greece.

Twezeyimana, J.D., & Andersson, A. (2019). The public value of E-Government - A literature review. Government Information Quarterly 36(2), 167-178.

Veenstra, A.F.E. van, Grommé, F. & Djafari, S. (forthcoming). The Use of Public Sector Data Analytics in The Netherlands. Transformative Government: People, Process and Policy.

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