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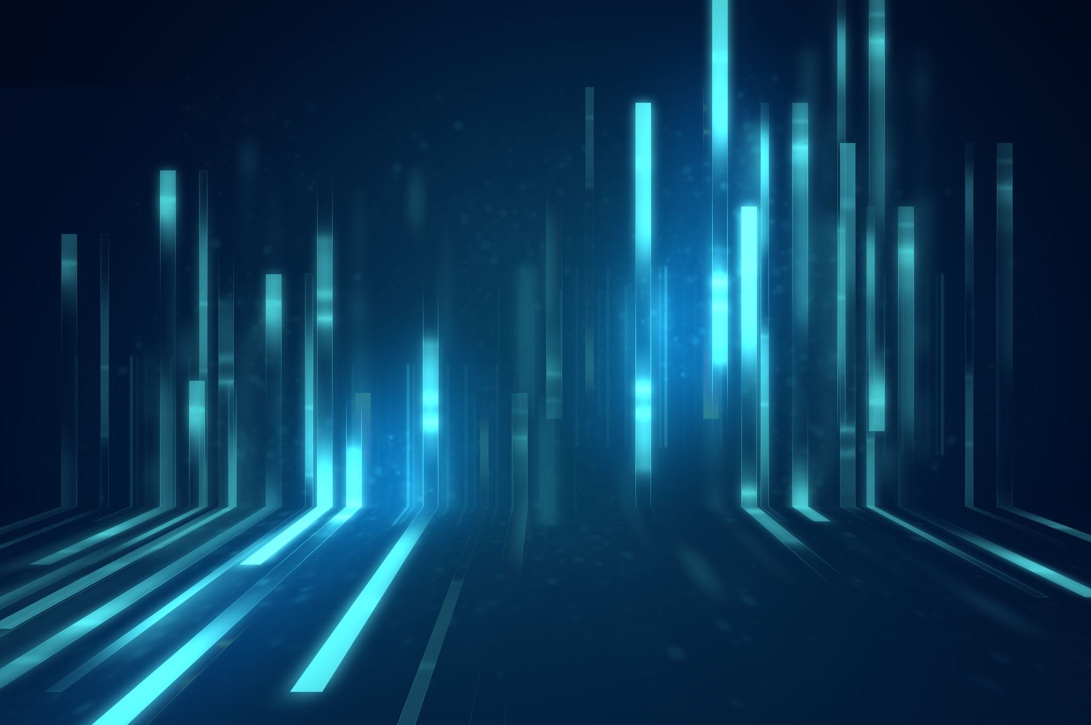
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Transparency

Expert

Module 2

**Transparency in the Public Sector**



# Introduction

In this module, we will discuss requirements for the application of transparency principles and methods in technologies developed for the public sector.

1. The UK Algorithmic Transparency Standard (ATS)
2. Use of AI by law enforcement agencies: the ROXANE case study

b. Crisis management domain: STAMINA case study. Transparency and explainability of social media listening tool for supporting pandemic preparednes

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**Pre-reading**

* A short blog about how governments can use social media to support their public services and policy

Beveridge, Claire and Tran, Tony (2022). Social Media in Government: Benefits, Challenges, and Tactics. Hootsuite. https://blog.hootsuite.com/social-media-government/

* Lessons from public sector use of AI

Desouza, Kevin, Krishnamurthy, Rashmi, and Dawson, Gregory (2017). Learning from public sector experimentation with artificial intelligence. Brookings Techtank

<https://www.brookings.edu/blog/techtank/2017/06/23/learning-from-public-sector-experimentation-with-artificial-intelligence>

* Trade-off, trust, and AI in public sector:

Dhasarathy, Anusha, Jain Sahil, and Khan Naufal (2020) When governments turn to AI: Algorithms, trade-offs, and trust. McKinsey. <https://www.mckinsey.com/industries/public-and-social-sector/our-insights/when-governments-turn-to-ai-algorithms-trade-offs-and-trust>

* A quick primer on algorithmic transparency and its connection to accountability, especially for the public sector.

Kossow, Niklas, Windwehr, Svea, and Jenkins, Matthew (2021) Algorithmic transparency and accountability. Transparency International. <https://knowledgehub.transparency.org/assets/uploads/kproducts/Algorithmic-Transparency_2021.pdf>

**Reading (train the trainer)**

The readings below offer a snapshot of the kinds of questions and societal challenges that drive the need for and function of transparency in the public sector. Taking note of what and how they describe that implications emerge will support your ability to engage in the module activity and follow up assessments.

An analysis of the ethical considerations of analysing social media with AI for the analysis, prediction, and surveillance of the COVID-19 pandemic, in particular the respect for persons, beneficence, and justice. It discusses the lack of guidelines for engaging in such analysis, considering errors and bias in the often opaque AI, and declaring and accepting responsibility.

Flores, L., Young, S.D. Ethical Considerations in the Application of Artificial Intelligence to Monitor Social Media for COVID-19 Data. *Minds & Machines* 32, 759–768 (2022). [https://doi.org/10.1007/s11023-022-09610-0](https://trilateralcloud.sharepoint.com/:p:/r/sites/sociotechteam/Shared%20Documents/UK%20Algorithmic%20Transparency%20Standard/ATS.pptx)

Presenting a prototype of a bias assessment tool for open data for public sector use, this article discusses how bias and representativeness of data can have ethical impacts. In doing so, it articulates many challenges that are unique to the public sector around over and under-representation, public sector data gathering practices, and the implications of these for decision-making.

Narayanan, Ajjit and MacDonald, Graham (2019). Toward an Open Data Bias Assessment Tool: Measuring Bias in Open Spatial Data. Urban Institute. <https://www.urban.org/sites/default/files/publication/99844/toward_an_open_data_bias_assessment_tool_0.pdf>

This paper discusses the connection between uncertainty and transparency in algorithms. It outlines the need and challenges of communicating uncertainty, how this relates to fairness in outcomes, trustworthiness of results, and accountability in decision-making.

Umang Bhatt, et al. 2021. Uncertainty as a Form of Transparency: Measuring, Communicating, and Using Uncertainty. In Proceedings of the 2021 AAAI/ACM Conference on AI, Ethics, and Society (AIES '21). Association for Computing Machinery, New York, NY, USA, 401–413. [https://doi.org/10.1145/3461702.3462571](https://www.brookings.edu/blog/techtank/2017/06/23/learning-from-public-sector-experimentation-with-artificial-intelligence/)

**Current Affairs/Opinion**

* Gordon, Cindy (2022) Data Governance For AI Readiness In The Public Sector Is Critical. Forbes. <https://www.forbes.com/sites/cindygordon/2022/11/29/data-governance-for-ai-readiness-in-the-public-sector-is-critical/?sh=37e27b0b78a7>
* Powell, Alvin (2022). Using AI as a pandemic crystal ball. The Harvard Gazette. [https://news.harvard.edu/gazette/story/2022/08/using-ai-to-predict-covid-surges/](https://knowledgehub.transparency.org/assets/uploads/kproducts/Algorithmic-Transparency_2021.pdf)

**AI in public sector, ranging from current guidance to critical assessments**

* Equality and Human Rights Commission (2022) Artificial intelligence in public services. [https://www.equalityhumanrights.com/en/advice-and-guidance/artificial-intelligence-public-services](https://link.springer.com/article/10.1007/s44163-022-00018-4)
* UK Government (2020) A guide to using artificial intelligence in the public sector. <https://www.gov.uk/government/publications/a-guide-to-using-artificial-intelligence-in-the-public-sector>
* Berryhill, J., et al. (2019), "Hello, World: Artificial intelligence and its use in the public sector", OECD Working Papers on Public Governance, No. 36, OECD Publishing, Paris, <https://doi.org/10.1787/726fd39d-en>

**Applied guidelines for supporting ethics, including explainability, transparency, and accountability, in technology:**

* Vallor, Shannon, Brian Green, and Irina Raicu (2018). Ethic​s in​ Technology Practice​.The Markkula Center for Applied Ethics at Santa Clara University. [https://www.scu.edu/media/ethics-center/technology-ethics/BestPracticesinTechFinal.pdf](https://doi.org/10.1007/s11023-022-09610-0)

**A short blog about how bias in AI and in society meet:**

* Powles, Julia and Nissenbaum, Helen (2018). The Seductive Diversion of ‘Solving’ Bias in Artificial Intelligence. Medium. [https://onezero.medium.com/the-seductive-diversion-of-solving-bias-in-artificial-intelligence-890df5e5ef53](https://ijoc.org/index.php/ijoc/article/view/2830)

**Algorithmic transparency in different public services/technology, in particular how it can be done and the impacts of if it is not done.**

* Brauneis, R. and Goodman, E. (2018). Algorithmic Transparency for the Smart City. *Yale Journal of Law & Technology*, 20: 103-176. [https://yjolt.org/sites/default/files/20\_yale\_j.\_l.\_tech.\_103.pdf](https://doi.org/10.1145/3461702.3462571)
* Council of Europe. 2019. Declaration by the Committee of Ministers on the manipulative capabilities of algorithmic processes’. Adopted by the Committee of Ministers on 13 February 2019 at the 1337th meeting of the Ministers' Deputies). <https://search.coe.int/cm/pages/result_details.aspx?ObjectId=090000168092dd4b>

**Algorithms as tools that can be used for or against social justice,** the results of which rely on transparency. Many of these articles point to the unspoken power of opacity as well as the injustices that can come when an algorithm takes on different starting points and assumptions than the user. Many studies have already been done in the criminal justice system’s use of AI, to conflicting results. Reading these can raise awareness (and build discussion points) of the various aspects that are required to achieve transparency, as well as offer concrete examples of the implications when transparency does not exist.

* Beer, D. (2017). The social power of algorithms, *Information, Communication & Society,* 20(1): 1–13. <http://www.tandfonline.com/doi/full/10.1080/1369118X.2016.1216147?src=recsys>
* Corbett-Davies, S., Pierson, E., Feller, A. and Goel, S. (2016). A computer program used for bail and sentencing decisions was labelled biased against blacks. It’s actually not that clear. The Washington Post, October 17, 2016. [https://www.washingtonpost.com/news/monkey-cage/wp/2016/10/17/can-an-algorithm-be-racist-our-analysis-is-more-cautious-than-propublicas/](https://doi.org/10.1787/726fd39d-en)
* The Law Society of England and Wales (2019, June 4). Algorithm use in the criminal justice system. Retrieved from [https://www.lawsociety.org.uk/support-services/research-trends/algorithm-use-in-the-criminal-justice-system-report/](https://www.scu.edu/media/ethics-center/technology-ethics/BestPracticesinTechFinal.pdf)

**How the same data has various meanings for different actors, an important consideration for transparency when codifying those meanings into algorithms**

* Fiore-Gartland, B. and Neff, G. (2015) Communication, mediation, and the expectations of data: Data valences across health and wellness communities. *International Journal of Communication*, 9, 19. [https://ijoc.org/index.php/ijoc/article/view/2830](https://www.equalityhumanrights.com/en/advice-and-guidance/artificial-intelligence-public-services)
* Neff, G., Tanweer, A., Fiore-Gartland, B., and Osburn, L. (2017) Critique and contribute: A practice-based framework for improving critical data studies and data science. *Big Data*, 5, 2, 85-97.[https://pubmed.ncbi.nlm.nih.gov/28632445/](https://www.washingtonpost.com/news/monkey-cage/wp/2016/10/17/can-an-algorithm-be-racist-our-analysis-is-more-cautious-than-propublicas/)

**Additional points to consider about social media, ethics, in crisis management**

* Stefano Morelli, Veronica Pazzi, Olga Nardini, Sara Bonati (2021) Exploring the impacts of social media and crowdsourcing on disaster resilience, Framing Disaster Risk Perception and Vulnerability in Social Media Communication: A Literature Review, Sustainability 14, no. 15: 9148. [https://doi.org/10.3390/su14159148](https://news.harvard.edu/gazette/story/2022/08/using-ai-to-predict-covid-surges/)
* Lanfranchi, Vitaveska (2017). Machine Learning and Social Media in Crisis Management: Agility vs Ethics. ISCRAM 2016 proceedings. [http://idl.iscram.org/files/vitaveskalanfranchi/2017/2016\_VitaveskaLanfranchi2017.pdf](https://onezero.medium.com/the-seductive-diversion-of-solving-bias-in-artificial-intelligence-890df5e5ef53)

**Ethics of public engagement during the COVID-19 pandemic**

* Webb, Jamies (2021) Pandemic Public Engagement: an Ethical Analysis. Rapid Ethics Review. UK Pandemic Ethics Accelerator.[https://ukpandemicethics.org/wp-content/uploads/2021/09/Pandemic-Public-Engagement-An-Ethical-Analysis.pdf](https://yjolt.org/sites/default/files/20_yale_j._l._tech._103.pdf)
* do Carmo Barriga, Antónia, Martins, Ana Filipa, Simões, Maria João, and Faustino, Délcio (2020) The COVID-19 pandemic: Yet another catalyst for governmental mass surveillance?, Social Sciences & Humanities Open, Volume 2, Issue 1. <https://doi.org/10.1016/j.ssaho.2020.100096>

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**Self-assessment pass/fail questions**

1) Why is communicating uncertainty to the public important?

a) To support public trust

b) To avoid liability in the case of error

c) You shouldn’t communicate uncertainty to the public

2) Why is it important to communicate uncertainty to the public and decision-makers differently?

a) Each need to understand different aspects of the AI insights

b) Decision-makers require more complexity

c) Uncertainty is not taught in schools

d) Communicating uncertainty is often a challenge to power

3) What do you need to know about a population when using social media for insight?

a) How often they use social media (daily, weekly, monthly, etc)

b) Demographic details (age, gender, race, sex, etc)

c) How the data within relates to the broader social picture

d) A and B

e) B and C

f) All of the above

4) How is AI use in public sector unique to other sectors?

a) Wanted data is not always available or able to be found elsewhere

b) If used incorrectly, the public can be negatively impacted

c) Public agencies do not always have the resources for training or system enhancements

d) All of the above

5) Why does under and over representation of certain communities in data matter?

a) The AI cannot draw insights

b) Trends will be incorrectly identified

c) Biases can be amplified in how community data are collected

6) What is a proxy?

a) Replacement data

b) Data that indirectly stands in for missing data

c) Available data

7) Why do public actors need to understand the limits and boundaries of an algorithm?

a) To match the insights provided with their communities and decisions

b) To make build their definitions into the algorithm

c) To override how the algorithm works to fit their local needs

8) How can uncertainty result in biased public sector decisions?

a) By leaving groups out of the discussion or public planning processes

b) By making public crisis communication unclear for some demographics

c) By create a false sense of completeness in evidence for a decision that affects the public

**Answers**

Qs 1) a, 2) a, 3) e, 4) d, 5) c, 6) b, 7) a, 8) c Qs