

How to manage the risks for human rights in the digital transformation of tax authorities?

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Overview

- Analyzing potential human rights risks (UAntwerp)
- Human Rights Impact Assessment tool for digital activities (businesses and states) (Danish Human Rights Institute)

Digital transformation of tax authorities

Human rights risks

Prof. dr. Anne Van de Vijver
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Human rights risks

- **Tax audit selection risks** relate to
 - **Big data:** increased collection of (personal) (digital) data
 - Increased involvement of third parties
 - Online data = public data ?
 - **Data analytics and profiling:** increased (re)use of (personal) digital data
 - Focus on analyzing big data for fraud detection, using artificial intelligence

Big data

Big data refers to the exponential growth both in the availability and in the automated use of information: it refers to gigantic digital datasets held by corporations, governments and other large organisations, which are then extensively analysed (hence the name: analytics¹⁰⁰) using computer algorithms. Big data can be used to identify more general trends and correlations but it can also be processed in order to directly affect individuals.

Source: Data Protection Working Party, Opinion, article 29 00569/13EN WP 203 (2 Apr. 2013).

Data analytics and profiling

- **Algorithms:** cost reducing, huge capacity, speed, accuracy, consistency, however
 - (Accidental) correlation, no causation
 - Bias in training data is replicated, perpetuated and amplified
 - Automation bias: propensity to favor suggestions from automated decision-making systems
- Dutch childcare benefits scandal, Australian Robodebt case: stigmatization of vulnerable groups, families facing severe financial hardship, social tragedies, ...

=> Human rights !

Human rights

1. Respect for private life & protection of personal data

- Art. 8 ECHR, GDPR, art. 7 & 8 EU Charter
- Legal basis, legitimacy, necessity (less invasive measure available? proportional?), transparency
- Including public data
 - NL: Supreme Court, 24/2/2017: automated collection of photographs of police street cameras and automatic numberplate recognition
- Lack of transparency
 - NL: Court of Den Haag, 5/2/2020: no clear human intervention; black box problem; discriminatory effect; court orders termination of SyRi
(<https://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:RB-DHA:2020:1878>)

Human rights

2. Prohibition of discrimination

- Art. 14 ECHR, art. 1, Protocol 12 ECHR, art. 21 EU Charter, ...
- Less favorable treatment based on protected attributes (e.g., race, national or social origin, gender, religion, ...); (in)direct discrimination; (un)intentional
- ECHR, *Biao v Denmark*, 2016 : existing ties with another country = indirect discriminatory impact in breach of art. 14 on grounds of ethnic origin and nationality
- Predictive models with discriminatory indicators
 - NL: Court of Gelderland, 24/12/2020 & 13/4/2021: suspicion about indicators used: ethnicity, second nationality, non-Dutch family name and place of birth; indicators not known by tax official; historical bias; court orders tax authorities to provide more information

Human rights

3. Freedom of expression

- Art. 10 ECHR, art. 11 EU Charter
- ECHR, Delfi vs Estonia, 2015: user-generated expressive activity on the Internet provides an unprecedented platform for the exercise of freedom of expression
- Web scraping by tax authorities
 - FR: Constitutional court , decision no 2019-796 DC, 27/12/2019; CNIL (data protection authority), decision no. 2019-114 of 12/9/2019: data collection may have impact on behavior of Internet users who may no longer be able to express themselves freely on the Internet; experiment; extensive guarantees for human rights

Human rights

4. Fair trial

- Art. 6 ECHR, art. 47 EU Charter
- Right to access to a court; fairness of proceedings as a whole; right of defense and equality of arms
- Lack of transparency
 - NL: Supreme Court no. 17/01448, 17/8/2018: automated process for valuation of real estate; disclosure of data (*grondtafels*) and logic of automated process; without such transparency and accountability, there is a risk of an unequal litigation position for parties

Algorithmregister

Tool: algorithm registers of the cities of Amsterdam and Helsinki

- <https://algoritmeregister.amsterdam.nl/en/ai-register/>
- <https://ai.hel.fi/en/ai-register/>
- Information about
 - Use cases of algorithmic systems as part of city services
 - Data sets
 - Data processing
 - Non-discrimination
 - Human oversight
 - Risk management



The operational logic of the automatic data processing and reasoning performed by the system and the models used.

Model architecture

An algorithm has been developed that can find relationships and patterns in a large amount of information about illegal housing. The algorithm calculates which information can be associated with illegal housing and to what degree, and which information cannot. The algorithm does this by performing mathematical calculations according to the probability tree principle. A large number of probability calculations are performed by the algorithm, and an average is then taken. This average is used to generate the mathematical expectation of illegal holiday rental at an address. This expectation of illegal holiday rental at an address is only calculated by the algorithm when a new report is received for suspicion of illegal holiday rental at an address.

This type of algorithm is called a "random forest regression". To make sure employees understand the consideration that the algorithm is making, the "SHAP" method is used (SHapley Additive exPlanations: <https://github.com/slundberg/shap>). SHAP calculates, which features in the data have resulted in high or low suspicion of illegal housing. This ensures that an employee can always understand what the algorithm based its risk assessment on, so they can make a well-considered decision.

Content

Attachment

Description

 [Illegal holiday rental housing risk Architecture image](#)

<https://algoritmerregister.amsterdam.nl/en/illegal-holiday-rental-housing-risk/>

Human oversight

Show Less



Human oversight during the use of the service.

There is no automated decision-making. An investigation into a suspected illegal holiday rental is always the result of a report. This report is, for instance, submitted by a citizen or rental platform. The algorithm helps the employee of the department of Surveillance & Enforcement to prioritize the most probable cases from the workload so that they can select them for a field investigation. The algorithm facilitates a planner's specific consideration of starting a field investigation at an address. The employee is provided with a visualization that shows which data features play a key role in the "risk assessment" of the algorithm, and which don't. With this visualization, they can assess if they should follow the risk assessment of the algorithm or not.

The responsible supervisor and the project enforcer are the ones to determine if there is actually a case of illegal housing. They determine this by conducting preliminary research and field investigations. The case is then discussed intensively in a debriefing with the employees who partake in the decision-making process. The algorithm, therefore, has a significant influence on the planner, but it does not make independent decisions on whether or not illegal holiday rental is determined.

A work instruction has been drawn to prevent employees from having excessive confidence in the algorithm. In addition, the employees undergo training to recognize the opportunities and risks of using algorithms.

<https://algoritmeregister.amsterdam.nl/en/illegal-holiday-rental-housing-risk/>



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Human Rights Impact Assessment tool

1. What is a HRIA?
2. What our HRIA guidance offers
3. Relevance to tax authorities

Danish Institute for Human Rights

- Denmark's National Human Rights Institution
- Mandate to work internationally & with the private sector
- **Strategy for 2021-2024:**
Technology and human rights as a focus area



What is a HRIA?

A few points:

- A methodology used to assess the negative human rights impacts of a project, product or service
- An important tool in the toolbox, for ensuring human rights are protected
- Key tool in contexts of severe potential and/or actual impacts



THE DANISH
INSTITUTE FOR
HUMAN RIGHTS

GUIDANCE ON
HUMAN RIGHTS
IMPACT
ASSESSMENT
OF DIGITAL
ACTIVITIES

INTRODUCTION



What our new guidance offers

- A methodology and process
- Assists those involved in/commissioning HRIAs, providing **guidance and practical examples**
- Guidance tailored to the **realities of the digital solutions**

THE DANISH
INSTITUTE FOR
HUMAN RIGHTS

 **Antwerp Tax Academy**
University of Antwerp

DigiTax
Centre of Excellence



The guidance does not

- Provide in-depth guidance on overall 'human rights management'
- Focus on impacts linked to:
 - labour rights in the hardware supply chain,
 - impacts related to physical infrastructure, or
 - cumulative environmental or labour rights related impact



Key issues and themes

- 'Global' use vs. local rightsholder engagement
- Severity as the key for prioritization of mitigating measures
- Wide range of potential human rights impacts
- Highlighting cumulative impacts – how can your systems outputs impact other systems?
- Early assessments are essential!

Relevance to tax authorities



Building rights-respecting technology solutions

The full picture of human rights risks is essential to build tools that can offer the most positive impacts



Improving the practices of suppliers/developers

Use as a standard in conversations and contracts with suppliers of digital solutions



Internal capacity-building

Use the examples of impacts, types of involvement from the guidance, and your own HRIAs as capacity building material

Guidance

PROJECTS

Human rights impact assessment of digital activities



Developing practical guidance for businesses and states on how to conduct human rights impact assessment of digital activities.

<https://www.humanrights.dk/publications/human-rights-impact-assessment-digital-activities>