

eCourse



INTEGRITY PROJECT

2021 International Integrity  
eSeminar

# Integrity in Artificial Intelligence

# Ethical issues in a digital government environment

**Digital government may benefit public governance, safeguard public interest and enhance trust in public institutions**

**Technology allows, for instance:**

- **More transparency in the decision-making process (citizens accede to large quantity of data about the activities of government and public bodies)**
- **Larger scrutiny and social control of public decisions and public officials (by media and citizens)**
- **Less degree of human intervention and subjectivity in processes and services provision (reducing manipulation, favouritism and corruption opportunities)**
- **More traceability and reduced manipulation of processes and registers (*blockchain*)**
- **More efficiency in public management and control (*use of tools for automated processing, data collection and analysis, robots and artificial intelligence*)**

# Ethical risks in digital government

- **What is ethical varies according to individuals, groups, religions and cultures. In a fast changing digital society, this leaves considerable room for interpretation**
- **In a digital transition context, the main challenge is placed at the individual level: the digital professionals will determine what is ethically correct** (importance of an ethical culture- values, knowledge and incentives)

# Ethical risks in digital government

**Ethical concerns in public management aim at safeguarding public interest, integrity of public officials and decision making, substantiation and transparency of decisions and respect for justice, equity and citizens' rights. The use of digital technology raises new risks in these fields, notably:**

- **Reliability and timeliness of data (including open data) and the interpretation and judgements made on the basis of that data**
- **Reliability of the systems that produce the information leading to decisions and the information that is disseminated and used (including for audit)**
- **Security of information systems and how they ensure authenticity**
- **Sufficiency and reliability of audit trails**

# Ethical risks in digital government

**Ethical concerns in public management aim at safeguarding public interest, integrity of public officials and decision making, substantiation and transparency of decisions and respect for justice, equity and citizens' rights. The use of digital technology raises new risks in these fields, notably:**

- **Transparency and scrutiny of the choices made by algorithms of machine learning and artificial intelligence**
- **In the absence of laws and regulations, the legitimacy of those choices and the technological work behind them**
- **Control on the consistency of algorithms with ethical principles and with the will of the society (which can change overtime)**
- **Dilution of the responsibility for management decisions**

# Ethical risks in digital government

**Ethical concerns in public management aim at safeguarding public interest, integrity of public officials and decision making, substantiation and transparency of decisions and respect for justice, equity and citizens' rights. The use of digital technology raises new risks in these fields, notably:**

- **Respect for privacy principles in the management, use, access, traffic and dissemination of data (e.g. monitor persons' movements, facial recognition applications, data analytics (e-mails))**
- **Responsible use of e-mail and social media**

# Ethical risks in digital government



The top five ethical | moral principles for digital transformation

# Ethical principles for digital transformation

- **Design for privacy, security and integrity** (organisations must use data in responsible and ethical ways; and that means not using it in ways that are considered intrusive, manipulative or disrespectful to others)
- **Trust the digital services and the data they are using** (Assuring data integrity must mean that organisations have a duty to ensure that the data they hold is subject to robust governance and audit procedures. Simply put, organisations must know that what was put there hasn't changed)
- **Beware of bias** (When there is bias in data there is a real risk that systems that consume this data will inherit that bias. Of particular concern must be the machine learning algorithms that are used to make millions of decisions every day. Warnings have already been aired regarding algorithmic bias, with experts suggesting that such bias is now pervasive in many industries/sectors, with little action being taken to identify or correct it)
- **Ensure there is accountability** (Inference models and algorithms are fundamental components within the burgeoning range of 'smart' digital services that provide an artificial intelligence and machine learning capability. Owing to their ability to combine social data with decision-making engines, concerns have grown about the extent to which clear accountability structures can be maintained)
- **Promote an ethical culture** (Value-driven organisations are those that actively demonstrate their values and use them to guide their behaviour, even doing so means making some difficult decisions)



# AUDITING INTEGRITY OF DIGITAL TRANSFORMATION

# Auditing the integrity of the digital transformation

- **Auditing integrity and security of information systems and respect for privacy of data**
- **Confirm whether data is subject to solid governance and audit procedures**
- **Audit the design and use of algorithms**
- **Determine accountability chains**
- **Audit the culture and systems to prevent ethical risks in digital processes**

# Auditing algorithms

- An algorithm is a set of rules that a computer automatically follows to make calculations that can solve problems or answer questions.
- **Netherlands Court of Audit:** conducted an audit into the government's use of algorithms. "*Understanding algorithms*"
- **Why?**  
The government is increasing the use of algorithms to increase the efficiency and effectiveness of its services. More so than traditional IT applications algorithms are also playing a more prominent role in automated decision-making that affect the public and businesses (social effects of algorithms). This leads to growing concerns about discrimination, privacy, transparency, accountability and the like.

# Auditing algorithms

## Audit questions

- For which activities and processes do central government and its associated organisations use algorithms, what types or categories of algorithms are there, and what are the risks and effects associated with the use of algorithms?
- How do central government and its associated organisations manage the operation and control the quality of algorithms?

**Selected algorithms were benchmarked against an audit framework, which included an ethical perspective**

