Digital ethics:
making border automation work

The world is how we shape it

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Meeting the challenges ahead

These are challenging times for today's hard pressed worldwide immigration authorities. The global pandemic has and will continue to transform travel and revolutionise the ways we all work, study and rest. Today more than ever, organisations and individuals rely on a wealth of automated technologies to manage key aspects of their lives.

Immigration and border officials need to ensure they make the most of these complex advances and take steps to avoid the many pitfalls of introducing new technology at pace. Not only do they need to ensure they boost productivity and effectiveness, they must also handle data carefully to protect privacy and ensure they don't breach ethical guidelines. This is particularly relevant when making immigration related decisions, such as deciding a visa and admitting passengers across a border. This will become increasingly relevant as global passenger numbers in the UK are expected to continue to increase, despite the impact of covid, from 146.3m in 2019 to 219.6m in 2030[1], putting further strain on border and immigration authorities.

So what can immigration authorities do to meet this increased demand whilst making the border experience as pleasant as possible for the majority of no or low-risk passengers?

Source 1- https://www.gov.uk/government/statistics/immigration-statistics-year-ending-december-2019/how-many-people-come-to-the-uk-each-year-including-visitors

Automation is increasingly prevalent in all aspects of our lives and can transform border and immigration decision making processes to the benefit of all. However, organisations must address the major ethical issues the use of automation technology raises. Whilst some organisations aim to do what is necessary to create fair, trusted, high performing and sustainable solutions that work, effectively incorporating functional ethics into automated systems is far less common and means many risks of automation are still present.

Sopra Steria's approach to Digital Ethics is changing that.

Assisted automation – flexible, scalable, sustainable and affordable

When done right, assisted automation - the application of Robotics, Process Automation, Artificial Intelligence and Machine Learning to support human decision making – can transform services and increase safety. In the same way that financial services use automation to assess an applicant's suitability for a mortgage, immigration authorities will use automation to provide decision makers with the tools and information needed to help them assess who can enter and remain in a country.

But introducing automation solutions badly can and occasionally does lead to *'unintended outcomes'*. Examples include the systematisation of social biases – ingraining prejudice and discrimination into technology-enabled decision making – which leads to the unfair and continued stigmatisation of particular groups. Ignoring these outcomes mean that short-term productivity benefits are quickly outweighed by unforeseen ethical, operational and legal problems which only emerge post-implementation. This has been recognised and explored further in the recent Ethics, Transparency and Accountability Framework for Automated Decision-Making published by the UK government on the 13th May 2021[2].

This framework underpins the advantages of introducing an Ethics by Design approach from the outset, to mitigate these risks and enable the greater realisation of sustained benefits.

> *Government bodies increasingly rely on data to do their vital jobs. And 87% of consumers consider ethical use of their data to be important. But only 30% trust the government to treat their data this way. That is why an ethical approach to automation is so vital[3].*

Source 2- https://www.gov.uk/government/publications/ethics-transparency-and-accountability-framework-for-automated-decision-making

Source 3- https://theodi.org/article/nearly-9-in-10-people-think-its-important-that-organisations-use-personal-data-ethically/

Take an ethical approach to automation

At Sopra Steria, we use a suite of approaches within our Digital Ethics practice to ensure that automation solutions deliver maximum and sustainable benefits whilst avoiding the many the pitfalls that can be experienced if automotive technology is wrongly, or thoughtlessly deployed. We have identified five key ethical areas that should be considered right at the start.

Discrimination

Algorithms by, their nature, repeatedly use the same data to form decisions. Where this data includes protected characteristics (as defined by the Equalities Act), discrimination can occur at scale and, potentially, over a long period of time. Typical problems include making decisions based on broad-brush approaches to applicants such as country of origin or religion.

Discrimination can be avoided by the use of an algorithm audit and monitoring framework. An algorithm audit ensures that the data used do not inadvertently make cultural assumptions which could entail discriminatory decisions. An effective monitoring framework ensures that outcomes match a pre-defined expectation (such as similar ratios of total to successful applications across countries). Combined, they guard against the potential to embed discrimination into automated decision making.

Privacy and Data Protection

While it can be tempting for organisations to adopt a *"collect everything just in case"* **approach to data, this is becoming increasingly less palatable, contravenes widely-regarded and legally required principles of data minimisation and puts applicants' data at risk unnecessarily.**

To protect the privacy of applicants in a borders and immigration context, a minimum viable data model must be established. This sets out what data are required and for what purpose. It ensures that only data relevant to, for example a visa application, are collected. Using minimum viable data models ensures legal compliance and builds trust between an organisation and the applicant.

Transparency

Transparency and openness are key to building trusted relationships with users and to ensuring appropriate scrutiny of automation solutions. When government and organisations are not transparent the result is damaged public trust and increased applicant and business frustration with the system.

In an automation context, transparency can be achieved through a transparency audit and a transparency impact assessment. These practices help design a transparent decision-making system such that the data processed, how the data are weighted, and how decisions are reached is clearly communicated to applicants in a manner that they can understand. Transparency makes it more likely that any unintended consequences or unfair practices are identified as early as possible.

The right against being subject to purely automated decisions

Fully automated decision making is possible but not always appropriate or legal. There are two key pieces of legislation: the EU General Data Protection Regulation (GDPR), which introduced a right against being subject to purely automated decisions for significant decisions (Art. 22), and the 2018 UK Data Protection Act, which enshrines the right not to be subject to automated decision-making into UK law.

Border and immigration authorities will need to consider carefully the legal compliance aspects of any automated visa and permission decision-making process. This will be particularly relevant for automated travel authorisations where an applicant refused permission to travel must have recourse to a human decision-making process.
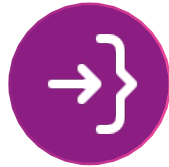
Displacement

Displacement concerns the impact on staff who may lose their jobs to the introduction of an automated system. It also considers human operated fallback mechanisms should the system underperform. Given the rapid expansion of applications, as well as the increasing field of relevant concern to include the ETA system in 2023, it is unlikely that an automated system will lead to redundancies. Rather, it should lead to a reduction in stress on case workers and a more accurate allocation of the correct case to the correct case worker or case team. Nonetheless, as the roles of automated systems expand, attention should be paid to the potential for such systems replacing case workers and a duty of care recognized to re-assign case workers as much as possible according to their needs.

Benefits of Ethics by Design

Audit frameworks (data and algorithm): protects against discrimination

Minimal viable data models: protect user data against unnecessary intrusion

Transparency audits: protect against hidden decision-making processes

Transparency impact assessments: identify potential risks (security, privacy, etc.) as systems are made more or less transparent

Legal compliance: ensure automated systems are legally compliant and subject to human oversight

A duty of care: taken to ensure case workers are not harmed through the introduction of new technology

Monitoring and evaluation assessments: identify real world outcomes against pre-defined expectations

Moving forward with ethical automation

We all know that future transformation starts and ends with data.

For border and immigration professionals, where millions of life changing decisions are made every year, automation presents a quicker and more accurate means to analyse that data and make the right decisions to protect public safety and provide excellent customer experience. But automation done badly will do more harm than good and further degrade public trust in governments ability to manage personal data.

Sopra Steria has a unique combination of 15 years of experience in Digital Ethics, 30 years' experience in borders and immigration and 20 years in automation. We have worked with private and public sector organisations in the UK and across Europe to help them make the most of the potential of automation solutions. And we passionately believe that a proactive and tangible application of digital ethics is the only way to harness the power of data and automation technologies in a sustainable way to the benefit of all.

More Information

Many organisations talk about the ethical implications of technology, few are taking action. Backed by research and industry-recognised standards, Sopra Steria's Digital Ethics experts help you to gain a better understanding of the ethical challenges your digital strategy, programme or project faces; uncover the practical changes you can make and develop the business case for change.

Our comprehensive understanding of technology, combined with our leadership in managing our business for economic, social and environmental sustainability, make us a natural partner to take action on Digital Ethics issues. We move the discussion from the philosophical to the practical, collaborating with a range of stakeholders and industry groups to shape a better future, while helping organisations navigate the challenges of Digital Ethics today, leading to better business outcomes now.

For more information about our Digital Ethics services please contact one of our specialists at the details below:

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Or you can visit us at: https://www.soprasteria.co.uk/capabilities/digital/digital-ethics

We look forward to working with you.

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