

## UN launches first of its kind 'privacy lab' to unlock benefits of international data sharing

- Experts from national statistical offices, private sector and academia launch service to enable the use of privacy enhancing technologies (PETs).
- Secure data sharing could unlock nearly \$3T of annual GDP over the next 20 years, according to research.
- Crucial national policy decisions could benefit from data provided by partner countries, but international data sharing is almost non-existent due to privacy concerns.
- Pilot project with UK, US, Netherlands and Italy will demonstrate shared sensitive data can be analysed in a privacy-compliant and ethical way.

**Dubai, UAE; London, UK. 25<sup>th</sup> January 2022.** The UN Committee of Experts on Big Data and Data Science for Official Statistics has announced the launch of a pilot programme, to make international data sharing more secure by using Privacy Enhancing Technologies (PETs).

Announced today at Dubai Expo 2020, the 'UN PET Lab' is running a pilot program with four National Statistical Offices (NSOs). These comprise the US Census Bureau, Statistics Netherlands, the Italian National Institute of Statistics and the UK's Office for National Statistics. The lab will demonstrate that PETs can make fully compliant data sharing and data insights between organizations possible for the first time, utilizing publicly available trade data from UN Comtrade.

PETs help data providers and data users to safely share information by using encryption and protocols that allow someone to produce useful output data without "seeing" the input data. They also typically ensure that data will be protected throughout its lifecycle, and that outputs cannot be used to 'reverse engineer' the original data.

Decisions made by governments on crucial policy issues such as the economy, environment, and healthcare could benefit from data provided by other countries. For example, training shared AI and statistical models to learn from sensitive medical cases from hospitals; or extracting key insights on the performance of an economy or the behaviours of its citizens from census data. Research indicates that [up to \\$3T of global GDP](#) could be unlocked by increased international data sharing.

However, strict privacy regulations such as GDPR, in combination with an absence of trusted PET technology, currently limits governments and institutions' ability to share valuable information. McKinsey estimates that only 1% of the world's data is currently being used for analytics and collaborative purposes. Concerns over data breaches are also playing their part, with the cost of a breach \$4.24m on average, and cybercrime having increased by 600% in the Covid pandemic.

The PET Lab will see statistical organizations collaborate with technology providers who offer PET technologies. Irish start-up [Oblivious Software Limited](#), and privacy-focused open-source community [OpenMined](#) have already come on board to enable safe experimentation with PETs and remove the barriers to practical implementation. The Lab expects new users and providers to join in due course.

### **Ron Jarmin, deputy director of the US Census Bureau, said:**

"An accurate portrait of the economy continues to be vital to provide critical statistics on the health and performance of economies. The current methods for collecting and disseminating statistical information are not sustainable. We realize the importance of Privacy Enhancing Technologies as critical to how we deliver on our mission. We're investing today in practical ways to test these emerging technologies because we believe they provide a vision for how we might continue to serve the public with timely, reliable data that preserves privacy and trust."

### **Dr Jack Fitzsimons, founder of Oblivious, added:**

“When you send data to a server (or person for that matter), there is well-established technology to make sure it lands at the right place. However, until now you’ve basically had no guarantee about how your data is actually used and if it’s kept within its original scope.

“The work that the PET Lab is undertaking will be incredibly useful for international collaborations, and alleviate red flags for projects which may otherwise be impossible due to concerns over the handling of sensitive data.”

The PET Lab’s first use case will see NSOs share data relating to the import and export of certain commodities recorded between their own country and all of the other countries in the group. Each pair of countries will then use PETs to discreetly check whether the amount of their bilateral trade corresponds or not. The learning exercise will use pre-approved, publicly available data and will aim to ‘iron out’ any technical, security, or bureaucratic challenges.

**Stefan Schweinfest, Director of the UN Statistics Division commented:**

“Senior leaders are now talking about Privacy Enhancing Technologies to enable cross-border and cross-sector collaboration to solve shared challenges. At the same time, PETs will protect shared values such as privacy, accountability, and transparency. This is an important moment for PETs to help improve official statistics, and support democratic societies, honouring citizens’ entitlement to trusted public information.”

**Bert Kroese, Deputy Director-General and CIO of Statistics Netherlands added:**

“The pandemic has shown how important it is that governments have access to reliable data to make informed policy decisions. National Statistical Offices have the obligation and a long history in protecting privacy while enabling access to useful insight. PETs are promising ways to provide additional privacy protection while still allowing useful and important analyses on new data sources.”

**Tom Smith, Director of the UK Data Science Campus at the Office for National Statistics concluded:**

“We are delighted to be involved in the UN Privacy Enhancing Technologies Lab, and excited by the opportunity to explore how data science techniques can further strengthen the privacy of our input data sources and published outputs. With the PET Lab, we will explore how multiple organisations, such as statistics offices, can carry out ‘federated analysis’ across their data sources while retaining confidentiality of those sources. And building on the statistical community’s long experience of disclosure control, we will explore sharing the outputs of analysis and computation, while securing the original data against ‘reverse engineering’.”

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**NOTES TO EDITORS:**

**About the PET Lab**

The announcement of the PET Lab is taking place at Dubai Expo 2020, during a week of events hosted by the Dubai Federal Competitiveness and Statistics Centre and the UN’s BigData Working Group.

The UN PET Lab is running a Privacy Enhancing Technology pilot program across 4 participating National Statistical Offices; US Census Bureau, Statistics Netherlands, ISTAT of Italy, and the Office for National statistics of the UK.

Each participating NSO sets aside cloud compute infrastructure for the purpose of piloting various PETs across a suite of use cases. The first use case has been an International Trade use case using publicly available trade data (from UN Comtrade data) as a learning exercise.

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