English summary: the Swedish Authority for Privacy Protection, IMY, finishes its second regulatory sandbox pilot

- **Complex societal challenges require innovative solutions.** Sweden faces major societal challenges, including climate change and demographic change, where new and existing technologies will often be seen as key tools to meet these challenges. Artificial intelligence (AI), Internet of Things (IoT) and other innovative technologies provide new tools to contribute to safety, health, welfare and growth.

- **The pace of technology development challenges society’s way of working.** To deal with the pace problem between rapid, technological development and slow-moving regulatory processes, the use of regulatory sandboxes can be an important approach. There is no generally accepted definition of what this working method constitutes, but the core is that innovators and, for example, supervisory authorities work together to interpret and apply regulatory frameworks to innovative products and services. The regulatory sandboxes aim to increase legal certainty, foster innovation and facilitate, for example, start-ups and small businesses.

- **During the summer and autumn of 2023, the Swedish Authority for Privacy Protection (IMY) has conducted its second pilot within its regulatory sandbox.** With regulatory sandbox, IMY refers to in-depth guidance on how the data protection framework should be interpreted and applied. Characteristic of the working method is that IMY, together with the project participants, identifies the legal issues on which the guidance should focus. Guidance is then given orally on several occasions over a few months in the form of workshops or other dialogue-based forms. The work results in a public report where reasoning and assessments are summarised to enable learning for a broader audience.

- **The project “Safety Measurement in Public Environments Using IoT Technology” is IMY’s second pilot.** The participants in this project have been the Traffic Office in the City of Stockholm (Sw. Trafikkontoret i Stockholms stad), Internet of Things Sweden and Kista Science City AB. The project is about the Traffic Office’s wish to use LiDAR sensors to collect data, in a more uniform and systematized way, on the proportion of women, men, and children who visit a public square. Safety surveys show that women avoid places they experience as unsafe. Hence, the hypothesis is that places where women and children visit are perceived safer than others. By obtaining a representative overview of which groups are visiting a particular location, the Traffic Office can plan and take security-enhancing measures to promote women and children if they are
underrepresented at the site.

- **LiDAR sensors are a form of IoT technology.** A LiDAR sensor sends out infrared laser pulses to measure the distance to an object and then creates a three-dimensional point map. The more light points that hit an object within the sensor’s catchment area, the more detailed point clouds can be obtained regarding that object. Within the framework of the pilot, the output generated by a LiDAR sensor is intended to be input to an AI algorithm. This algorithm should then be able to classify whether an individual, who is within the LiDAR sensor’s catchment area, is a woman, a man, or a child.

- **The guidance in the pilot project has focused on two legal issues.** In addition to these two questions, there are other legal issues that need to be considered, but which have not been analysed within this project.

- **Question 1. Can data collected via LiDAR sensors constitute personal data processing under the General Data Protection Regulation (GDPR)?** IMY finds that it is highly probable that there are identifiers in the output generated by a LiDAR sensor and that this data could constitute personal data under the GDPR. IMY further finds that the process that occurs when a LiDAR sensor generates output typically constitutes a processing under the GDPR. Similarly, it is highly likely that personal data processing occurs when the AI algorithm performs calculations based on the LiDAR sensor’s output.

- **Question 2. How do LiDAR sensors relate to the Swedish Camera Surveillance Act (Sw. kamerabevakningslagen)?** IMY finds that LiDAR sensors are typically covered by the term “other optical-electronic instruments” under the Swedish Camera Surveillance Act. It is highly probable that it may be possible to distinguish and identify individuals based on, for example, body movements, body constitution, and clothing in the output generated by a LiDAR sensor. Thus, if surveillance is carried out in a public place and the operator is an authority, it is likely that there would be such a repeated surveillance of individuals that falls within the scope of the Swedish Camera Surveillance Act. IMY has concluded that the use of LiDAR sensors for the purpose relevant to the project is not necessarily a purpose that could be specifically considered under the relevant act when assessing the surveillance interest. However, IMY has found that the technology can help limit privacy intrusion, especially when compared to traditional surveillance cameras.

- **IMY has now completed two pilots within its regulatory sandbox and has decided to make this working method a permanent part of the authority’s operations.** During 2024, IMY will carry out new projects in both spring and autumn. Experience shows that this working method is rewarding for both innovators and supervisory authorities, but also for society at large, as it can promote the development of new technology while contributing to ensuring data protection. Many public organisations have contacted IMY to learn more about the regulatory sandbox. IMY has also collaborated and shared experiences with other data protection authorities in Europe. The upcoming AI Act will require EU member states to establish regulatory sandboxes for AI and IMY is expected to be involved as national data protection authority. Despite differences in regulation, IMY’s experience will be valuable.
• Cross-functional work is essential to successfully drive innovation while ensuring a high level of data protection. Based on the pilot project, IMY makes some general reflections on the cross-functional approach needed in innovation processes. An important experience is that, in order to make relevant legal assessments, a relatively deep understanding of the technology is required. To possess pedagogical skills are therefore necessary for both technicians and lawyers. Different structures and tools can facilitate building a common understanding in the team. It can also be helpful to continuously go back to, and if necessary revise, the legal issues being investigated.