Interactive Workshop on Data Protection Impact Assessment:

A Hands-On Tour of the GDPR’s Most Practical Tool

Case 2: Emotional Decoding for In-Store Advertising

A supermarket chain operating in an EU Member State revamps its in-store advertising system with a smart camera system operated by Echeloon, a company specialising in targeted advertising. Through a camera integrated into a screen displaying advertisements, the system recognises when and for how long a person looks at the screen, their sex (and what it presumes to be their gender), approximate age and worn attire. Furthermore, the system deduces the customer’s presumed emotional state (anger, happiness, anxiety, etc.) from their facial expression.

The data is then used to personalise advertisements to pre-defined groups of customers and their presumed interests and preferences. Additionally, the system can promote special offers to certain groups of customers or offer specific rebates to an individual customer.

Customers are informed about video surveillance at the entrance of the market where the terms and conditions are posted on signs. However, they contain no reference to the smart camera system. In a press release the chain stated that the system is operated exclusively by Echeloon and the supermarkets have no access to the data. It goes on to state that the system processes only encrypted data and any photos of customers are processed automatically and deleted once the data has been extracted, after approximately 150 milliseconds. Thus, no personal data were collected and there was no obligation to inform customers specifically.

Standard Data Protection Model

Protection Goals

![Data Protection Model Diagram]

*Data minimisation:* Data minimisation substantiates and operationalises the principle of necessity, which requires of any process as a whole as well as any of its steps not to collect, process and use more personal data than necessary for the achievement of the purpose of the processing. Data minimisation is to be taken into account proactively as an element of data protection-friendly design. Starting with the design of information technology by the manufacturer and its configuration and adaptation to the operating conditions, to its use in the core and auxiliary processes of the operation, for instance in the maintenance of the systems used; from the collection of personal data, through its processing and use, to its erasure or complete anonymization; throughout the entire life cycle of the data.
(1) **Availability:** personal data must be available and can be used properly in the intended process. Thus, the data must be accessible to authorised parties and the methods intended for their processing must be applied. This presupposes that the methods can deal with the available data formats. Availability comprises the ability to find specific data (e.g. by means of address directories, reference or file numbers), the ability of the employed technical systems to make data accessible to individuals in an adequate manner, and the possibility to interpret the content of the data (semantic ascertainability).

(2) **Integrity:** on the one hand, information technology processes and systems must continuously comply with the specifications that have been determined for the execution of their intended functions. On the other hand, integrity means that the data to be processed remain intact, complete, and up-to-date. Deviations from these properties must be excluded or at least ascertainable so that this can either be taken into consideration or the data can be corrected. If the protection goal integrity is understood as a form of accuracy within the meaning of Article 5 (1) (d) GDPR, this leads to the claim that there is sufficient congruency between the legal-normative requirement and common practice, both in terms of technical detail as well as in the broad context of the procedure and its overall purpose.

(3) **Confidentiality:** no person is allowed to access personal data without authorisation. A person is not only unauthorised when it is a third party external to the controller, regardless of whether they act with or without a criminal intent, but also employees of technical service providers who do not need access to personal data for the provision of the service, or persons in organisational units who are unrelated to the respective procedure or data subject.

(4) **Unlinkability:** data shall be processed and analysed only for the purpose for which they were collected. Data sets can in principle be processed for further purposes and can be combined with other, potentially publicly available data. Larger and more meaningful data sets also increase the potential for abuse, i.e. to use the data unlawfully, for purposes beyond the legal basis. Such further processing is lawful only in strictly defined circumstances. The GDPR only allows them to be used for archival purposes which are in the public interest, for scientific or historical research purposes or for statistical purposes, and explicitly calls for safeguards for the rights and freedoms of the data subjects. These safeguards are to be achieved through technical and organisational measures. In addition to measures of data minimisation and pseudonymization, other measures that allow the further processing to be separated from the source processing are also suitable, ensuring separation both on the organisational and on the system side. The database can, for example, be adapted to the new purpose by pseudonymization or reduction of data volume.

5) **Transparency:** the data subject as well as the system operators and the competent supervisory authorities must be able to understand, to a varying extent, which data are collected and processed for a particular purpose, which systems and processes are used for this purpose, where the data flow for which purpose, and who is legally responsible for the data and systems in the various phases of data processing. Transparency is necessary for the monitoring and control of data, processes, and systems from their origin to their erasure and is a prerequisite for lawful data processing. Informed consent, where it is necessary, can be given by data subjects only if these criteria are met. Transparency of the entire data processing operation and of the parties involved can help ensure that data subjects and supervisory authorities can identify deficiencies and, if necessary, demand appropriate procedural changes.

(6) **Intervenability:** data subjects are effectively granted their rights to notification, information, rectification, blocking and erasure at any time, and that the controller is obliged to implement the appropriate measures. For this purpose, controllers must be able to intervene in the processing of data throughout the process; from the collection to the erasure of the data.