

# Borderlines for Smart Police Work

Jörn von Lucke

Am Seemooser Horn 20, D-88045 Friedrichshafen, Germany, joern.vonlucke@zu.de

*Abstract: Smart objects, cyber-physical systems and applications based on artificial intelligence open new possibilities for police forces. The Internet of Things, the Internet of Services and the Tactile Internet will substantially change police work and have disruptive effects. This may enrich and improve the work of the police and other law enforcement agencies. But smart policing could massively interfere with the previously respected privacy of citizens through smart surveillance. This raises today essential questions about borderlines for smart police work.*

*Keywords: Smart Police, Smart Policing, Smart Surveillance, Smart Government, IoT*

## 1. Smart Objects and Cyber-Physical Systems change the Police Work

Digital transformation poses great changes and challenges for the state, for society and for police authorities. With the Internet of Things, the Internet of Services and the Tactile Internet, the police work is facing more disruptive changes. Smart objects and cyber-physical systems (CPS) continuously generate smart data and feed smart data platforms in the background. Applications based on artificial intelligence (AI) are also suitable for the analysis of this smart data, e.g. to be able to act almost in real time. Security policy makers expect that the police may use these modern technologies to do their police work in an efficient way. The first sketches, experiences and implementations of smart policing and smart surveillance are already available. The United Arab Emirates, Singapore and the People's Republic of China are all expecting a greatly improved national security from a smart police force. This is causing a great deal of irritation. Therefore, it is necessary to reflect on how smart police work may really become and where are the borderlines.

## 2. Smart Police Work

The understanding of smart police works varies in research and practice. Fritz (2020, pp.34-35) understands “smart police work” as those processes in connection with police work and the handling of tasks that can be managed with the help of intelligently networked information and communication technologies and the analysis of big amounts of data. Smart watches, police smartphones, body cams and other wearables for police officers can help with location services, tracking and internal communication in the field. The development of smart police glasses or smart police helmets would further improve the situation awareness for the operational forces. They show the police officers visually understandable additional information about the risk situation and

operations on the integrated display. This can be supplemented by sensor-supported decision analyses. But these smart objects and CPS will not only support police officers in providing information and analysis. They will also be able to automate and control police tasks and take people out of decision-making processes. Police reports could be enhanced by the automated analysis of smart data sets. Security cockpits benefit from the ongoing generation of smart data by sensors and cameras in the respective area of operation, which they process promptly and automatically for mission overview and planning. A team led by Enrico di Bella (2014, p. 212) has put together the components and requirements for smart security systems of the future. The elements of a "smart security system" would include access to relevant administrative databases and registers (crime records, socio demographic statistics, economic data, urban data, maps and geo-information systems), sensor networks, crowdsourcing apps and websites to integrate the population via social media, crime maps, trend visualization, a security dashboard and further modules for data integration and data analysis to improve "security intelligence". But with the installation of such an infrastructure, the path to a smart surveillance of the population would already be largely mastered.

### 3. Borderlines for Smart Police Work

The variety and quality of sensors and smart surveillance camera systems have increased significantly in recent years. Faces can now clearly be recognized and people can be identified even over long distances. AI-based video recognition systems are already available which can be used by the police to recognize deposited faces in a large crowd, to analyze people's behavior and to provide people with attributes such as age, sex, hair length and clothing. These services are suitable for quickly finding confused seniors, runaway children or criminals and capable of learning. Police authorities worldwide are interested in such systems. It makes sense to discuss them in order to understand them, determine their intended use, assess their quality and ethically reflect on application scenarios before an introduction. If this results in the full surveillance of all the citizens, existing borderlines for the police forces within the society are crossed. Unfortunately, the public's trust in the work of the police authorities can easily be lost through over-smart technologies.

#### References

- di Bella, E; Odone, F.; Corsi, M.; Sillitti, A.; Breu, R. (2014). Smart Security - Integrated Systems for Security Policies in Urban Environments. In: R.P. Dameri & C. Rosenthal-Sabroux (Eds.): Smart City - Progress in IS (pp. 192-220). Cham: Springer.
- Fritz, S. (2020). Big Data - Smart Government - Smart Policing - Perspektiven einer Smarten Polizeiarbeit. Friedrichshafen: The Open Government Institute.

#### About the Author

*Jörn von Lucke*

Jörn von Lucke is Director of The Open Government Institute and Professor for public sector informatics and business informatics at the Zeppelin University in Friedrichshafen, Germany.