

## The city of Oslo uses research to strengthen societal security

Digital development is happening fast, and artificial intelligence has become part of our everyday lives. To ensure that technology does not overtake us, the public sector can use research, development and continuous learning.

Through research, the emergency services gained an understanding of how they could use mobile data to gain insight into people's behaviour in the city. This became important during the pandemic and the work on infection control measures. (Photo: Jonas Bendiksen)

"Society is changing, and technological development is moving fast. If we are to keep up with developments, it requires that we in the public sector constantly learn and develop. Research gives us more knowledge about and expertise on possible risks such as cybercrime, and as a knowledge-based sector, we must both refine the knowledge we have, but also develop new ones," says Osman Ibrahim, head of department at the emergency preparedness agency (Beredskapsetaten) in the city of Oslo.

Societal changes can change the risk landscape, which means that emergency preparedness systems must also evolve to remain relevant and effective. For example, new technologies such as artificial intelligence or climate change may require new approaches to emergency preparedness and crisis management.

### Crucial with the development of knowledge and expertise in the public sector

As a forward-looking agency, Beredskapsetaten in Oslo has embraced the need for continuous development, especially in new technologies such as artificial intelligence and mobile technology. While the agency's day-to-day work concerns operational operations and crisis management, research opens up opportunities for the development of new knowledge and risk understanding, and for improving society's preparedness.

By leveraging new knowledge and technology, it becomes easier for the city of Oslo to anticipate and manage potential new threats and risks, which is fundamental to building a safer and more resilient society.

The research projects in which the agency participates have received financial support from both the Research Council of Norway and Horizon Europe, the EU's framework programme for research and innovation. Osman encourages others in the public sector to use research in their work.

"With external funding, we can have dedicated resources working on research. Yes, it requires time and resources, but that is exactly what the external funding helps you with. We are too good at saying that we do not have time — but it is a matter of priorities," says Osman.

### From theory to practice: mobile data and pandemic management

The research has given the agency the opportunity to explore, test and contribute to the development of advanced technologies that use artificial intelligence and mobile technologies. This has resulted in efficient handling of civil protection and emergency preparedness tasks.

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The agency learns a lot in the research projects. In the event of incidents such as quick clay landslides, research contributes directly to societal safety, precisely because emergency preparedness is improved through the sharing of knowledge and insight between relevant actors. (Photo: James Fitzgerald/Unsplash)

An important project that started in 2015 illustrates the importance of research. By researching opportunities for the use of mobile data, the agency gained an understanding of how they could use mobile data to gain insight into people's behaviour in the city. This proved to be crucial during the pandemic, when the authorities needed to know which infection control measures were most necessary and effective.

This project shows the transition from research to something that is used in society, and the importance of research to open up new opportunities and solve major societal challenges," Osman explains.

### **Artificial intelligence in emergency preparedness**

In a recently completed EU project, the agency worked on using artificial intelligence in security systems. The aim was to learn to quickly recognise changes in risk, such as traffic movements within an area, and to develop the best methods for using artificial intelligence. In addition, they emphasized important topics such as privacy, training and improvement of work processes.

The agency emphasises the importance of keeping up with technological developments to prevent negative use, such as cybercrime.

"By continuously learning and developing knowledge, we ensure that the agency is prepared for future challenges. It becomes easier to anticipate and prevent new risks and vulnerabilities," Osman explains.

### **Concrete results, societal benefit and knowledge sharing**

The research projects have both provided new knowledge and access to a large network, several partners and meeting arenas. Here they share experiences and keep up to date on the latest developments across different disciplines and across national borders.

"We learn a lot, just by participating in projects. Projects that analyse the consequences of events such as quick clay landslides show how research directly contributes to societal safety. By strengthening knowledge and sharing insight with relevant actors, emergency preparedness is improved," says Osman.

### **Learning and development at a forward-looking agency**

Funding from external sources has made it possible for the agency to be forward-looking and systematically develop and use new knowledge. This is critical for keeping pace with societal changes, and for solving challenges in smarter ways.

Through its proactive approach to research and technological development, Beredskapsetaten in Oslo shows how public agencies can benefit from continuous learning and innovation. By staying ahead of technological trends and collaborating across disciplines, the agency strengthens its ability to protect and serve society more effectively.

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