

Artificial Intelligence for Public Safety

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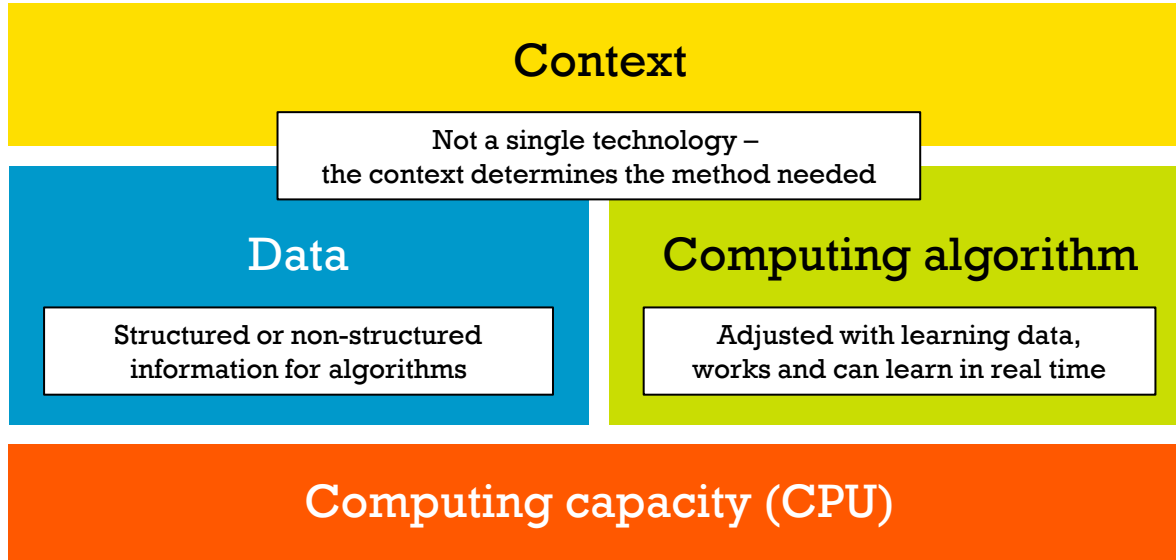


Artificial Intelligence

**“Intelligence demonstrated
by machines, in contrast to the natural
intelligence displayed by humans”**

Artificial Intelligence

A common term for systems simulating intelligent operations



Applications for Artificial Intelligence in the operating environment Public Safety

ARTIFICIAL INTELLIGENCE

Machine learning



- Forecasting resource needs
- Real-time situation picture
- Risk assessment
- Simulation of leadership task
- Forecasting the progress of the task

Context

Data

Computing algorithm

CPU

Autonomous devices

- Rescue robots
- Service robots
- Smart drones



Speech and text



- Speech to text
- Language recognition and translation
- Voice control
- Automatic classification of documents
- Automatic interpretation of content

Mechanical observation

- Character and face recognition
- Augmented/virtual reality
- Electronic nose
- Recognition of sound source



What will Artificial Intelligence bring to Public Safety customers in the 2020s?

”

A drone flying above a forest fire area records the progress of the fire. Real-time image analytics combined with weather, topographic and vegetation data guides extinguishing robots to the optimum location for the mission. Image analytics also act as the foundation for real-time situational awareness and forecasting how and in which direction the fire is spreading.

”

Virtual reality has replaced digital maps in presenting a real-time situation picture. The user can get to the middle of the situation in any virtualised location. This makes authentic exercises and simulations possible; for example, simulating the progress of a rescue mission in a specific building using different staffing and equipment options.

”

Keyboard is not very significant as the user interface of a computer. Information systems are controlled by voice and speech information, such as diverse entries during the mission, are recorded in a format that makes it easy to find. This data is analysed afterwards and utilised in developing operations. Real-time automated translation between languages makes smooth communication between the parties possible also in international missions.

Objectives of Public Safety in utilising Artificial Intelligence

” Reducing manual tasks.

” The real work is about acting,
not recording.

” The aim is to boost the efficiency of
the tools, methods and work both
administratively and operationally so
that people can spend their time on
the core activities.

” Computer to support
decision-making in difficult
or fast situations

” Aiming to get more out of the same
resources (investments, people).

” Artificial intelligence and digitalisation must
assist/carry out the most simple and time-
consuming tasks.

What are the main goals of the AI applications

- Supporting people's work and decision-making
- Releasing people's time from recurring and automated tasks to core activities

Challenges for Public Safety in utilising Artificial Intelligence

” Shortage of resources, no actual people specialising in data analytics.

” Development is carried out alongside other duties.

” Utilising artificial intelligence is not something that everyone can easily do, it requires additional resources.

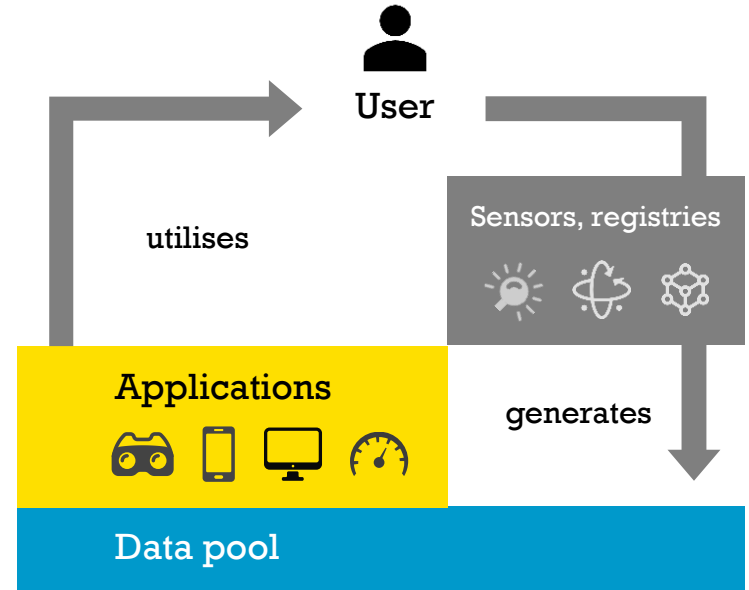
” Finding experts is challenging: they need to be trained in-house or recruited outside [the organisation].

What is required?

- Both readymade solutions and application platforms for utilising artificial intelligence
- Capability for utilising artificial intelligence and, in particular, ability to cooperate and share expertise in joint projects with users

Cycle of data

- User focused – the source and the end point of information
- The more you give the more you get
- Trust is everything – share your data
- Legislation and regulation – can you share?





Recommendations

- Be open and collaborate - maximize your data
- Survey your legislation - changes take time
- Get partners - form an ecosystem

Be brave, just do it!

Kiitos!

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