ERILLISVERKOT

Artificial intelligence strategy

January 2020

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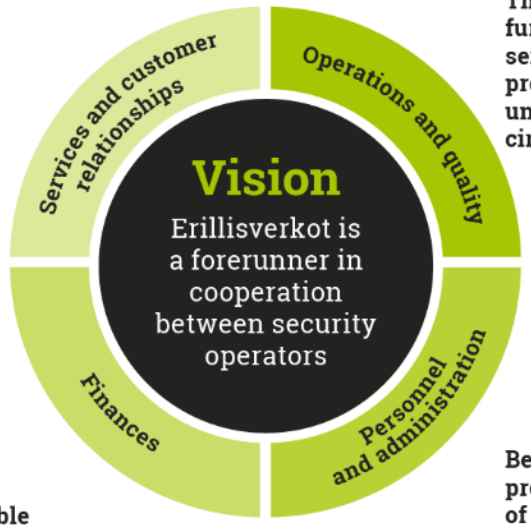
Builder of a safe society

Strategy

The best solutions for critical operations and security cooperation

The most functional service production under all circumstances



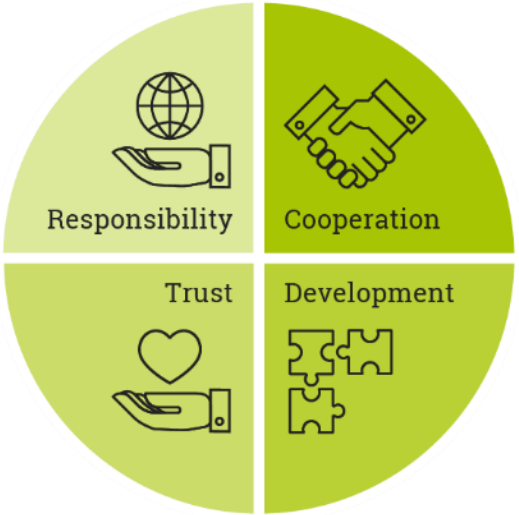
Efficient, transparent and predictable

Best providers of security

Mission

We enable secure critical operations and communications

Values



Opportunities provided by artificial intelligence

How the customers of Erillisverkot can benefit from artificial intelligence

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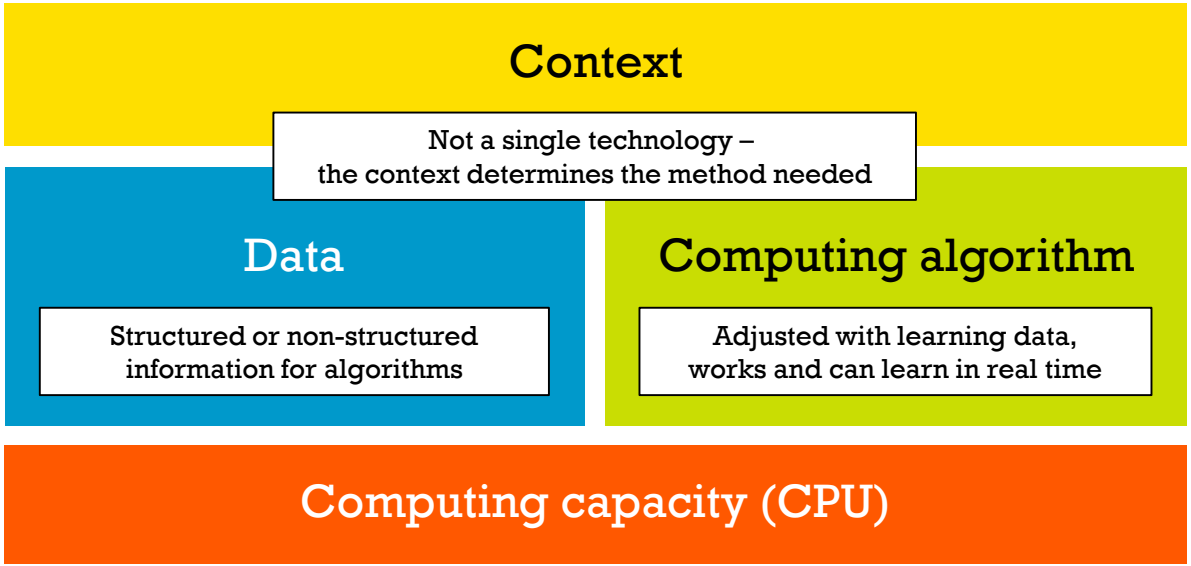
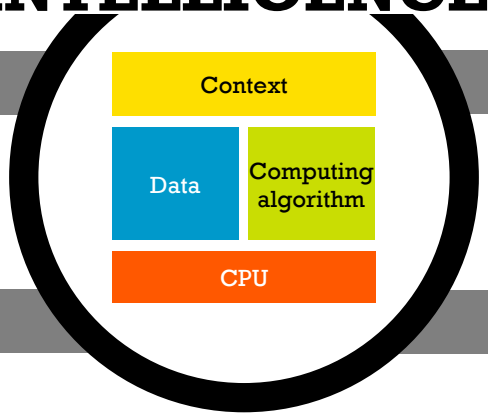
Artificial intelligence

A common term for systems simulating intelligent operations



Applications for artificial intelligence in the operating environment of Erillisverkot's customers

ARTIFICIAL INTELLIGENCE



Machine learning

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

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 Erillisverkot's 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.

What the customers of Erillisverkot need

A summary of customer needs and challenges discussed during the interview round

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Objectives of Erillisverkot's customers in utilising artificial intelligence

> Reducing manual tasks.

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

> The real work is about acting, not recording.

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

> 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.

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

Main goals of the AI applications of Erillisverkot

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

Challenges for Erillisverkot's customers 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].

Erillisverkot is required to provide

- 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 customers

Use of artificial intelligence in Erillisverkot

Strategic intent and upper-level roadmap

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Data flow of the use of artificial intelligence and the role of Erillisverkot

A Source of information	Held by Erillisverkot's customer or customer's partner
B Filtering of information	Close to source of information
C Transfer of information	**Core expertise and service by Erillisverkot**
D Storage of information	**Core expertise and service by Erillisverkot**
E Use of information and artificial intelligence	Erillisverkot's service, based on the Erillisverkot's data storage solution

First three phases of information flow

A

Source of information

- Location of information generation (camera, sensor) or storage (database, registry, internet, closed network)
- The source information can be: structured/non-structured, input by human/generated by sensors, slow/fast, regular/asynchronous, owned by Erillisverkot customers/external, classified/public

B

Filtering of information

- Goal 1: To reduce the volume of information transferred: aggregation, filtering
- Goal 2: Prevent unnecessary transfer of confidential information (masking, anonymisation)

C

Transfer of information

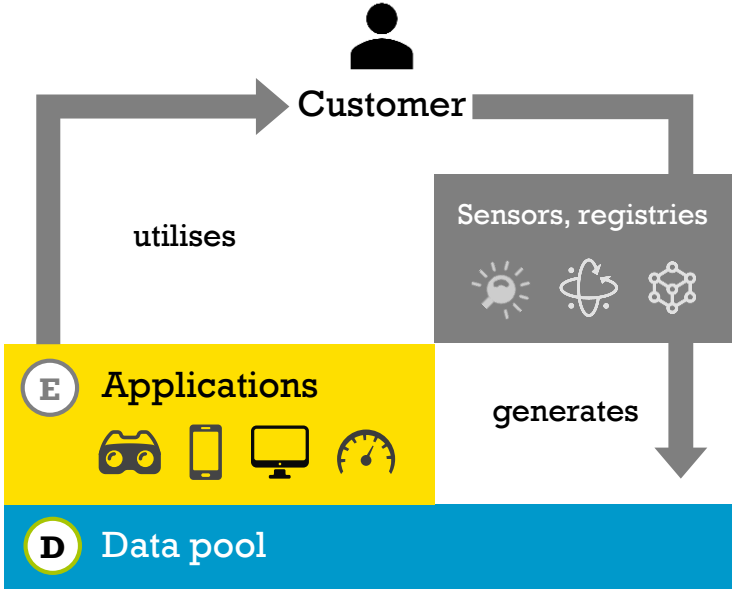
- Transfer of information from the source to Erillisverkot using high-availability mobile Virve 2.0 service, landline solutions or public information networks

Storage of information

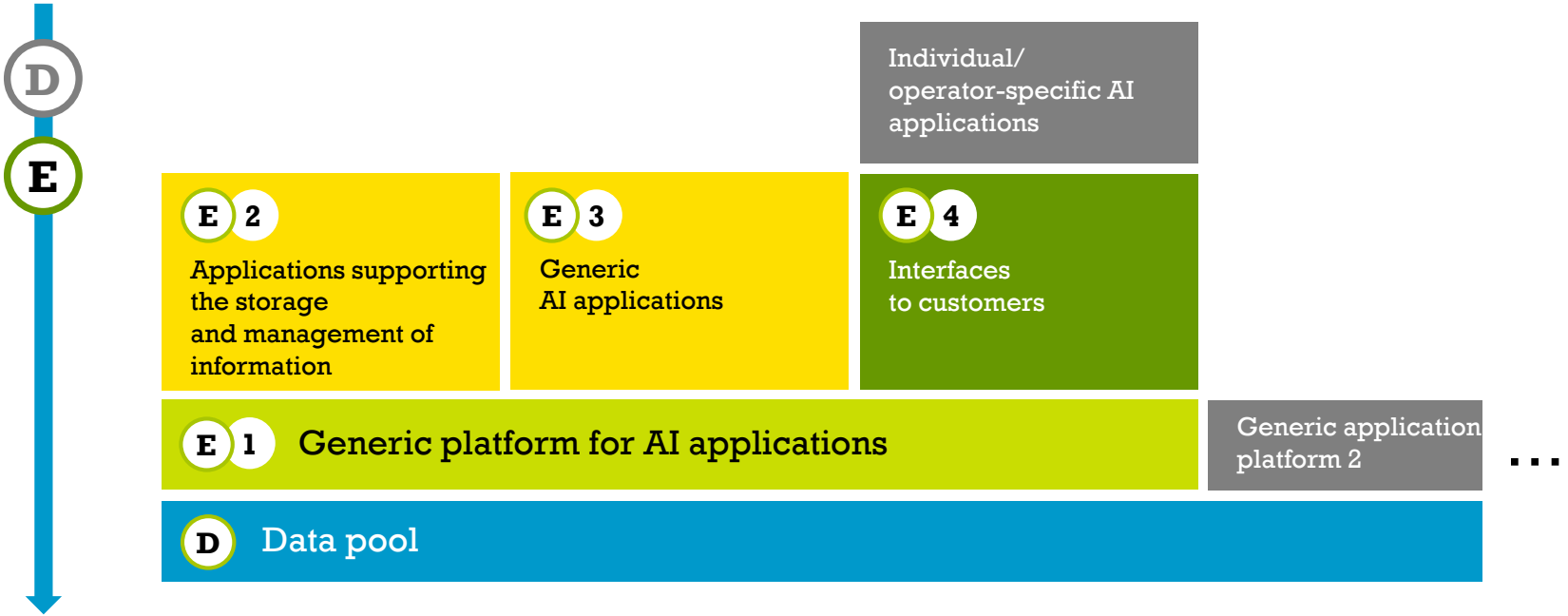
A joint data pool for the customer organisations is a critical starting point for the use of AI by Erillisverkot.

Data pool: method of storing raw data, regardless of its type

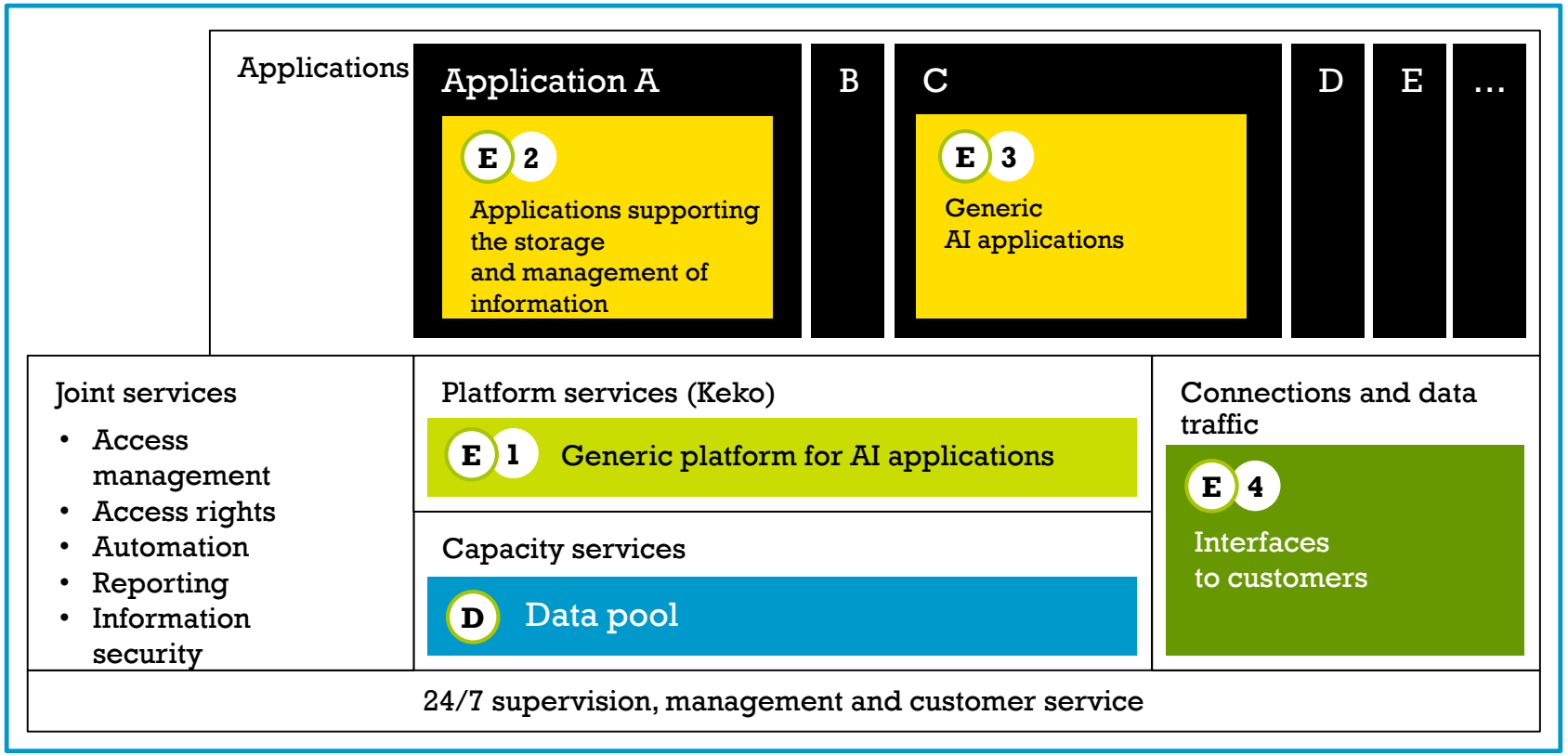
- Facilitates secure and closed processing of customer-specific data
- Facilitates joint use between all Erillisverkot's customers and merging and enriching of different users' data



Use of data and phasing of implementation in Erillisverkot

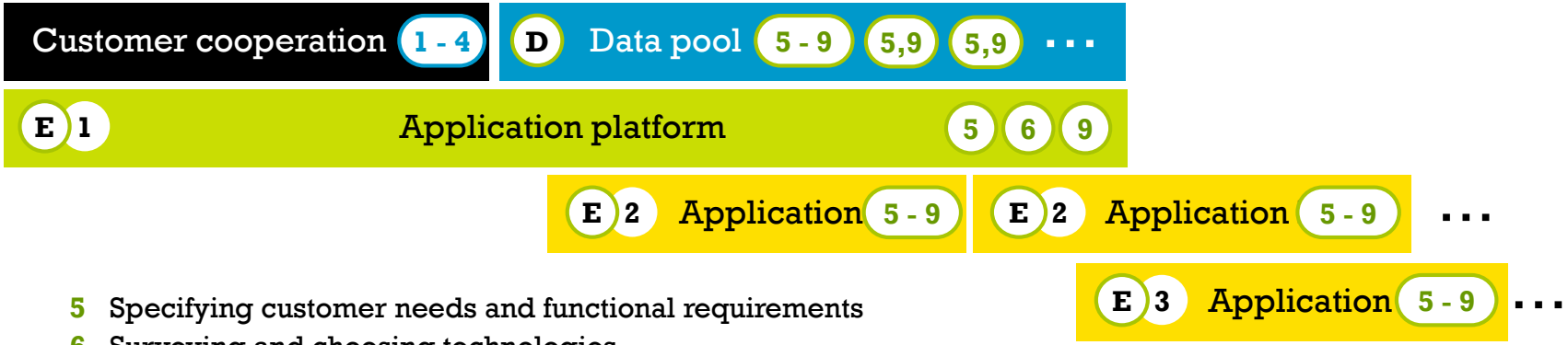


Artificial intelligence as part of the Erillisverkot's service architecture



Implementation roadmap

1. Creating a cooperation model with the customers
2. Rules for the use of data: securing, sharing, anonymisation
3. Selecting the first use cases and application design
4. Identifying and increasing or acquiring the required competencies



5. Specifying customer needs and functional requirements
6. Surveying and choosing technologies
7. Creating the partner network(s)
8. Describing the management model and roles
9. Designing and implementing the information, system and technology architecture

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Thank You!

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