SOLITA

We are Solita

A Company Presentation

We create value from data in a connected world.

Our aim is lasting impact by:
- Utilizing data and IT
- Combining it with human insight
- Cooperating with our tech-partners

Growth per annum	Turnover in 2019	Founded in 1996 1000+ employees 6 countries 12 cities	94%
20%	108M		Of our clients recommend us

Our journey

From a small group of developers, into an international house of more than 1000 tech and design experts.

1996

2020

Finland
**Helsinki • Tampere
Lahti • Turku • Oulu**

Sweden
Stockholm • Gothenburg

Estonia
Tallinn

Denmark
Copenhagen

Germany
Munich • Berlin
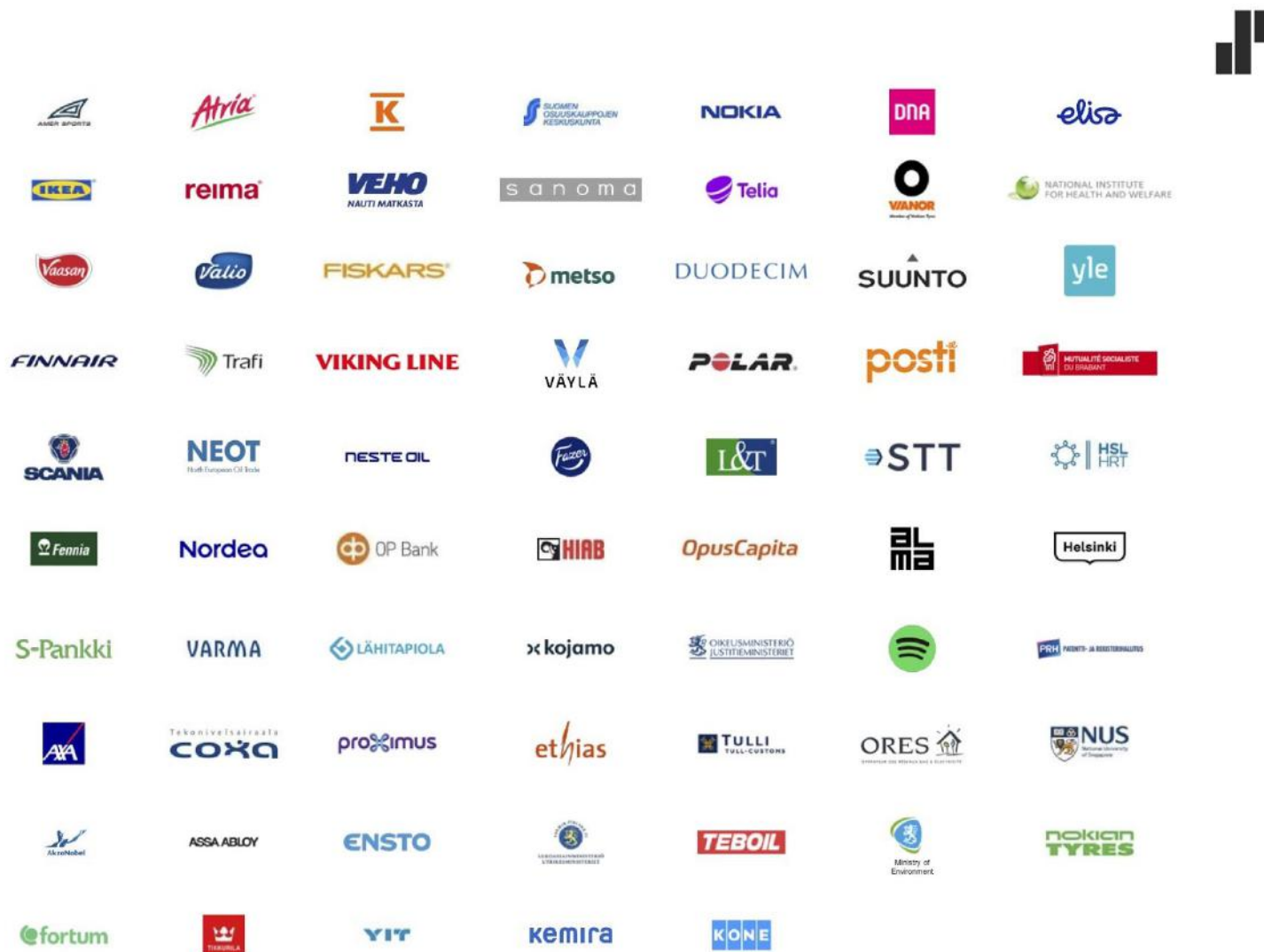
Belgium
Leuven

Some customers

- Industrials
- Retail and trade
- Telecom
- Banking, finance & Insurance
- Transport & Logistics
- Health & Wellness
- Public Services
- Media
- Services

Some of our technology partners

We have long-standing relations and a comprehensive array of certifications with best of breed vendors.

Offering

We identify and analyze your digital and data based opportunities.

We call it Business-Behavioral- and Service-design.

We build your Data and IT infrastructure so that you get to value as fast as possible.

We call it Data engineering and Systems integration.

When you need new services and applications that actually work we develop the software for it.
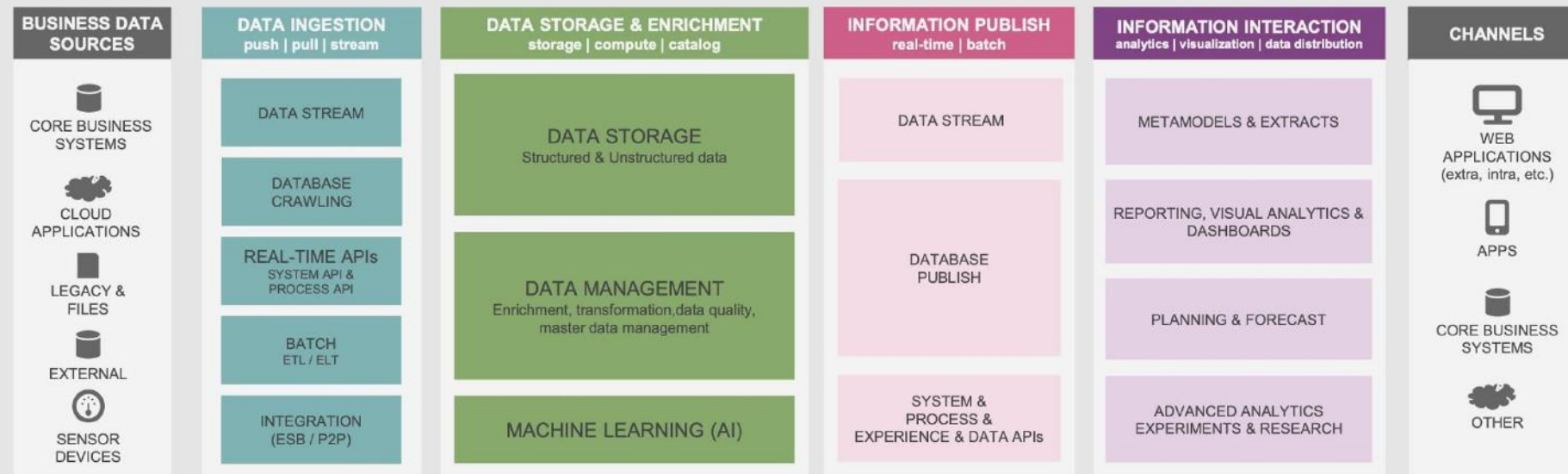
We call this service- and software-development.

We don't leave you before you have the required competence to maintain and iterate your solutions.

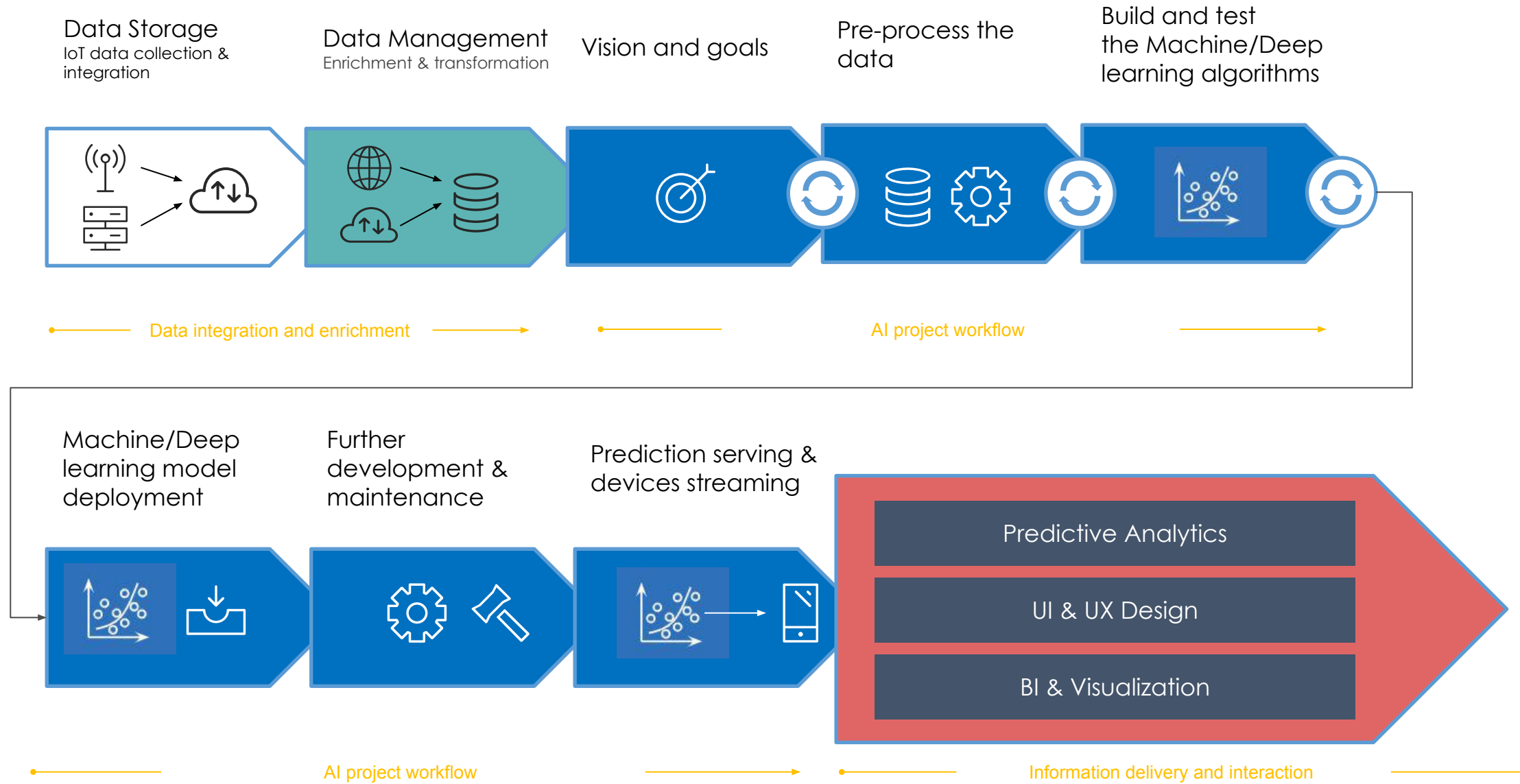We call this dev. and data ops and cloud services.

Scope of Data Services

BUSINESS DATA SOURCES	DATA INGESTION push | pull | stream	DATA STORAGE & ENRICHMENT storage | compute | catalog	INFORMATION PUBLISH real-time | batch	INFORMATION INTERACTION analytics | visualization | data distribution	CHANNELS
CORE BUSINESS SYSTEMS	DATA STREAM	DATA STORAGE Structured & Unstructured data	DATA STREAM	METAMODELS & EXTRACTS	WEB APPLICATIONS (extra, intra, etc.)
CLOUD APPLICATIONS	DATABASE CRAWLING		DATABASE PUBLISH	REPORTING, VISUAL ANALYTICS & DASHBOARDS	APPS
LEGACY & FILES	REAL-TIME APIs SYSTEM API & PROCESS API	DATA MANAGEMENT Enrichment, transformation, data quality, master data management		PLANNING & FORECAST	CORE BUSINESS SYSTEMS
EXTERNAL	BATCH ETL / ELT		SYSTEM & PROCESS & EXPERIENCE & DATA APIs	ADVANCED ANALYTICS EXPERIMENTS & RESEARCH	OTHER
SENSOR DEVICES	INTEGRATION (ESB / P2P)	MACHINE LEARNING (AI)			

AI Solution Implementation and Operation

Data Storage
IoT data collection & integration

Data Management
Enrichment & transformation

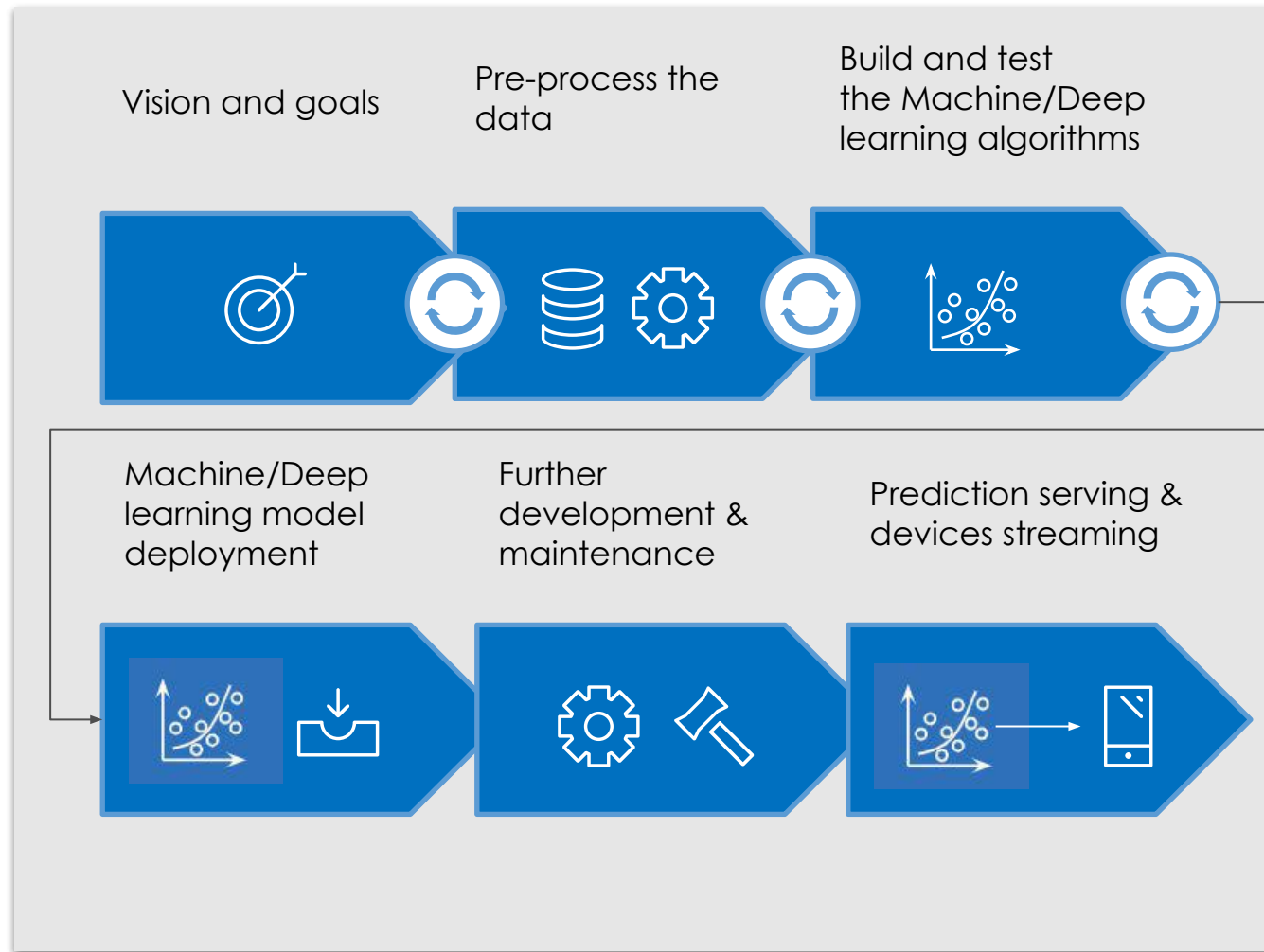**Vision and goals**

Pre-process the data

Build and test the Machine/Deep learning algorithms

Data integration and enrichment

AI project workflow

Machine/Deep learning model deployment

Further development & maintenance

Prediction serving & devices streaming

Predictive Analytics

UI & UX Design

BI & Visualization

AI project workflow

Information delivery and interaction

Solution Implementation and Operation

Data Storage
IoT data collection & integration

Data Management
Enrichment & transformation

Data Integration and Enrichment

Combining Terra Solutions' state-of-the-art IoT operations and cloud competence with Solita's data management expertise

- **Data Storage:** collecting IoT data and ingesting it to Cloud Platform is executed by Terra Solution
- **Data Management:** Advanced data transformation and enrichment with Solita's expertise according to the business needs

Solution implementation and operation

AI Project Workflow

Defining project scope, workflow, delivery and maintenance of the AI project.

- **Vision and goals:** Outline vision, define business needs and set goals for the AI project
- **Pre-Process the data:** Prepare the data for the next stage
- **Build and test algorithms:** Build the machine/deep learning algorithm, train and tune it, evaluate its efficiency
- **Deployment:** Deployment of the production-ready Machine/Deep learning model
- **Maintenance:** Further model improvements and maintenance as needed
- **Prediction serving & devices streaming:** Prepare and set up online/offline prediction architecture

Solution implementation and operation

Predictive Analytics

UI & UX Design

BI & Visualization

Information Delivery and Interaction

Subsequent services depending on the business needs and previously defined goals

- **Predictive Analytics:** Use previously derived predictions to analyze data and extract information to optimize the business and technical processes
- **UI & UX Design:** Develop and implement customer and project tailored User Interface to improve overall User Experience
- **BI & Visualization:** Visualize data and provide historical, current, and predictive views for reporting, process mining, and performance management

AI in waste manage-ment

MVP Project

4 month to deliver
including lead time
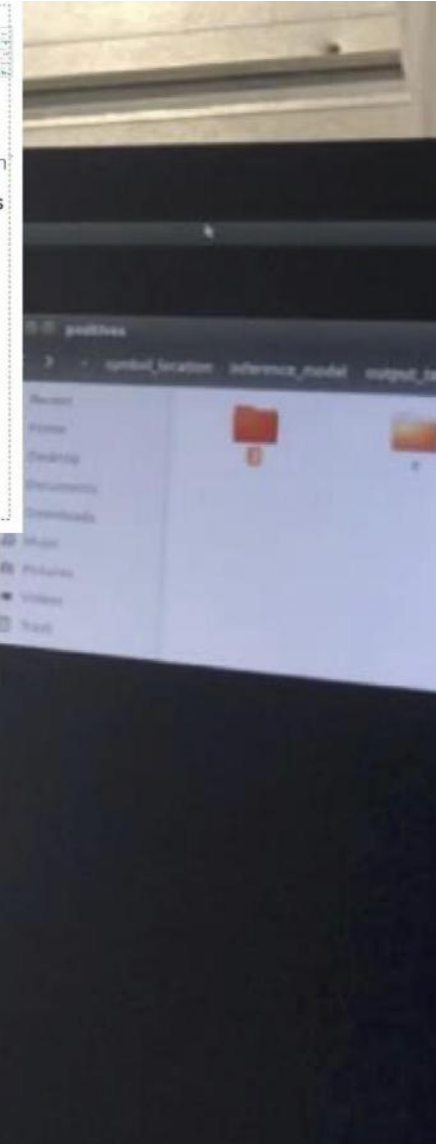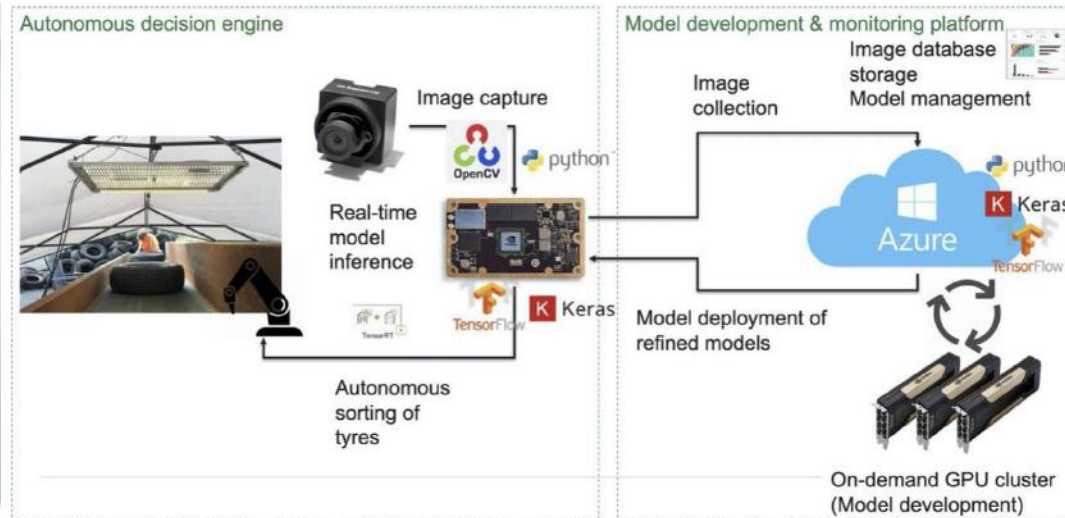
Image processing

AI

AI image processing

IMAGE CLASSIFICATION

IMAGE CLASSIFICATION + HEATMAP

OBJECT DETECTION

Image classification

PROS:
- lowest hardware requirements
- shortest training time
- shortest inference time

CONS:
- low explainability

Image classification + heatmap

PROS:
- lowest hardware requirements
- shortest training time
- shortest inference time
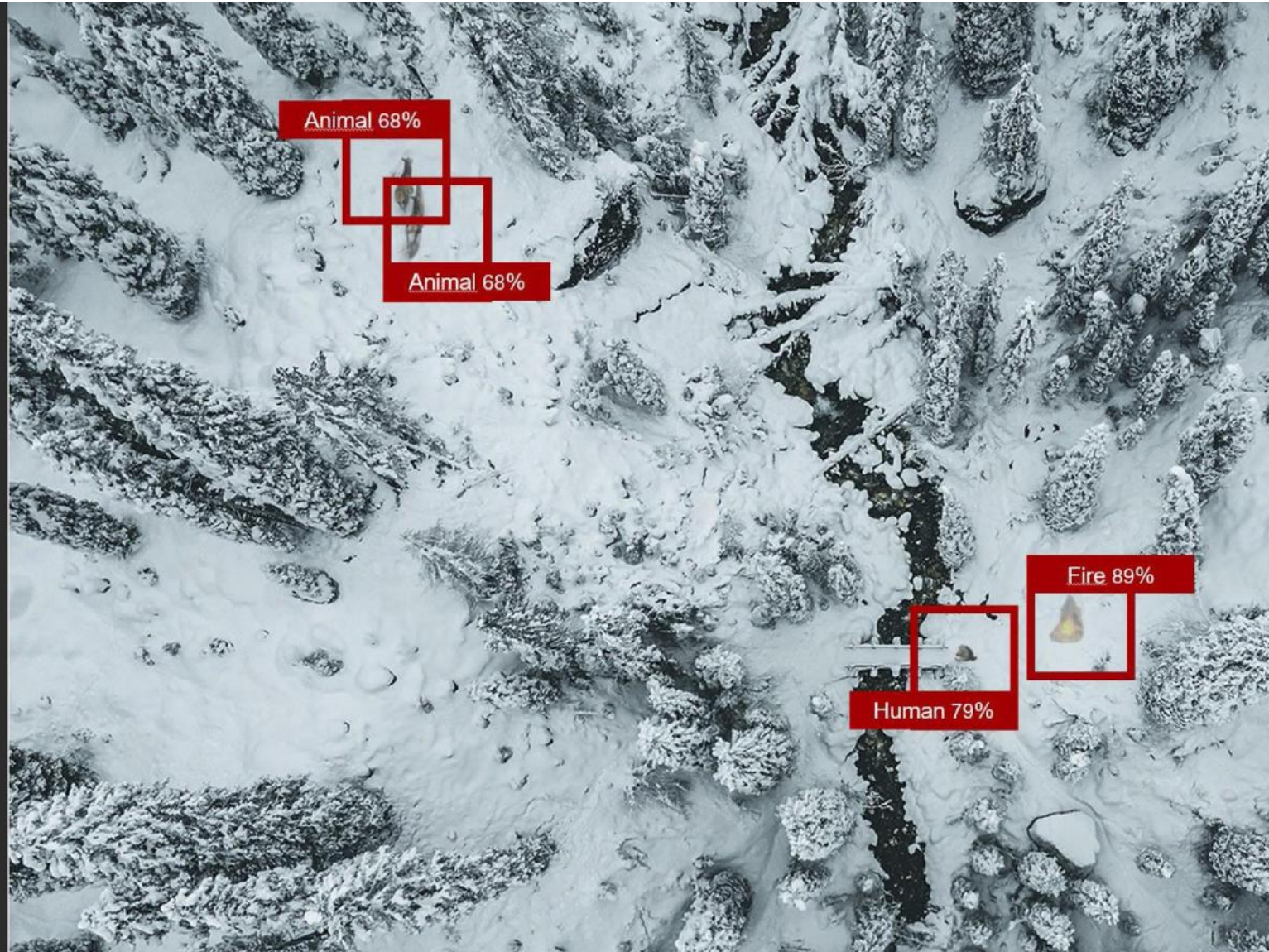- explainability

CONS:
- single class detection

Object detection

PROS:
- highest explainability
- multiple objects detection

CONS:

- manual object labeling
- higher hardware requirements (10x-20x Flops)

Animal 68%

Animal 68%

Fire 89%

Human 79%

Use case FINGRID
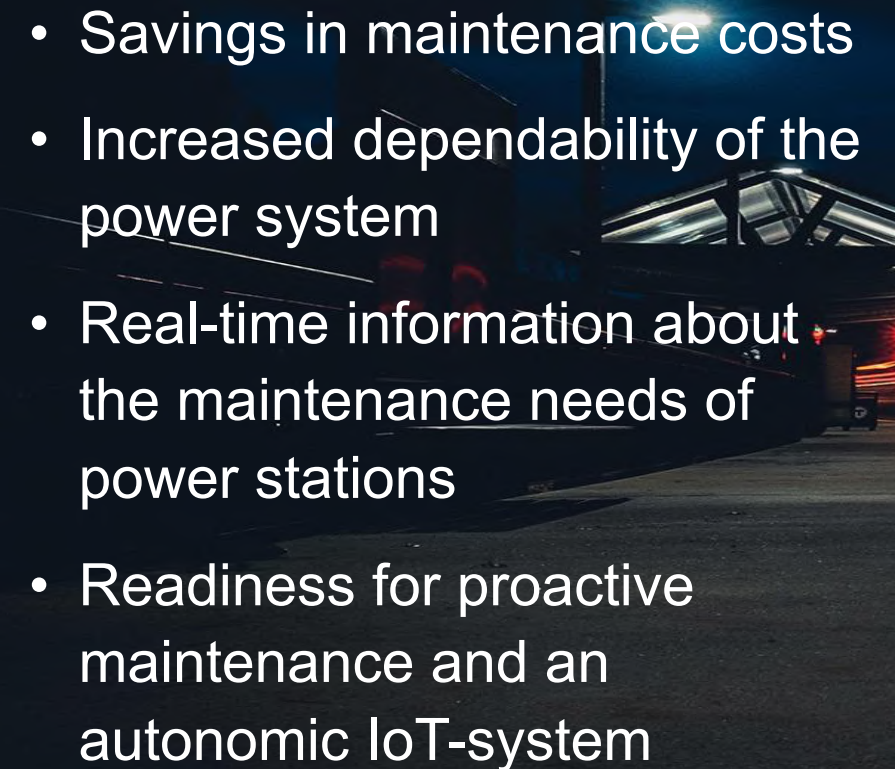
IoT platform boosts transmission system maintenance

Starting point

Fingrid, Finland's national transmission system operator, was facing a great technological leap. They aimed to modernize the maintenance of substations and enhance the reliability of the grid and the cost-effectiveness of maintenance. Upkeep this system has previously been based on fixed-term and reactive maintenance.

Solution

Solita met this challenge by creating a data platform, where the data collected by over 400 sensors installed in a single substation are mined and modeled using machine learning. The result is a real-time dashboard running on the Microsoft Azure platform, which displays the status of the substations and their devices to end-users, like Fingrid's maintenance specialists. The result is an even more robust electrical grid, data-driven maintenance and a foundation for predictive maintenance.

Results

- Savings in maintenance costs

- Increased dependability of the power system

- Real-time information about the maintenance needs of power stations

- Readiness for proactive maintenance and an autonomic IoT-system