The Short Story

Ekkono means *cognition*, and that is what we add to IoT (Internet of Things). We make connected things smart by embedding advanced machine-learning at the edge – on the connected device. This empowers IoT to realize its true potential, where companies save and make money through predictive maintenance, automation and production optimization, and where products become self-learning and intuitive.

Ekkono's uniqueness, which is the result of seven years of research at the University of Borås, Sweden, is a lightweight machine-learning engine that can run on small hardware platforms. It runs closer to the data source, e.g. sensors, on the device, where it can see and process *all* data, in real-time, and take instant actions. This reduces network load, make things less dependent of connectivity, and improves data security. Ekkono's machine-learning at the edge is no replacement of existing analytics platforms, but feeds them with better and more relevant data.

IoT is the next big disruption on the Internet. Today we deploy billions of processors at the edge of the network, which introduces massive amounts of processing capacity. *Edge Computing* uses this new capacity, and it enables personalized intelligence for each individual device and its specific conditions.

IoT holds the promise of everything becoming smart – from homes to cars, robots, vending machines and cities. The reality is that most of them are just connected. Smartness is capped at uploading raw data to a big-data haystack and showing historical averages for the entire installed base. With Ekkono you can deliver on IoT's promise of making things smart. Smart IoT is central to a lot of companies' digital transformation. Ekkono enables these companies, in all industries, to improve their business and make more money.

The Product

Ekkono is an embedded edge machine-learning engine, purpose-built for IoT (Internet of Things). The unique design makes it resource efficient with an unusually small footprint. Still, Ekkono does not compromise on functionality:

• Predictive analytics
• Anomaly detection
• Attribution
• Simulation of alternative scenarios
• Guaranteed confidence calculations on predictions
• etc.

Ekkono is 100% software and totally platform-agnostic. It is designed for programmers and offers bindings to several programming languages (e.g. C, C# and Python). You need little to no data science background since it comes with tools that decorate data, select machine-learning technique, and optimize algorithms.

The use cases include predictive maintenance, self-healing of faults, alerts when a system deviates from normal behavior, scheduled rather than unscheduled maintenance, optimization of production and performance, more intuitive human-machine interaction, genuine personalization, and tailored recommendations.

This translates into money. Either by being one step ahead of an issue, or one step ahead of the competition:

• Less unscheduled downtime and maintenance
• Maximum performance through tailored optimization
• New business models and added-value services
• Lower communication cost
• Better use of available processing capacity
• Improved customer loyalty through stickiness