Aihen.

Poultry Flock Management System

dots.

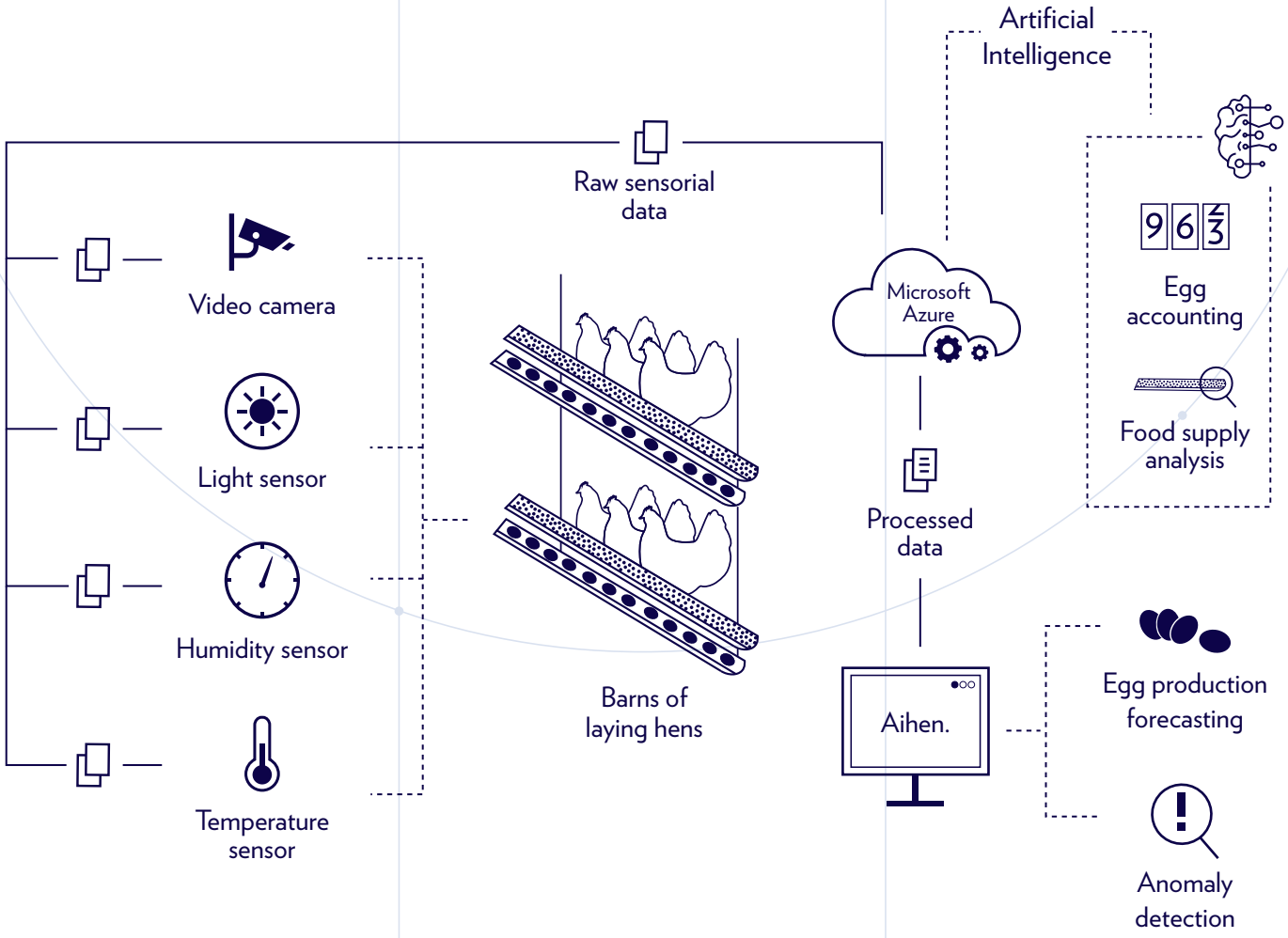
Agricultural development is one of the most powerful tools to end extreme poverty, boost shared prosperity and feed a projected 9.7 billion people by 2050. Currently, in Europe, 7.3% of all agricultural industry is based on egg and poultry farming. At the same time, it is known that the poultry flock management sector is not yet technically advanced and only a few organizations use any type of IT systems to manage and monitor their enterprises. It's time to make a change!

About AIHEN

AIHEN is the opposite of a Swiss knife: it is an industry-specific platform that ingests and processes data and automates business processes for egg producers. It puts all the production data at the fingertips of poultry experts and management wherever they are, at any time, in a manner specifically addressing the requirements of the poultry industry.

Built natively for cloud, AIHEN requires little upfront investment, allows fast implementation and provides maximum operational efficiency liberating egg producers from most laborious IT maintenance and operational tasks usually associated with running enterprise grade applications inhouse.

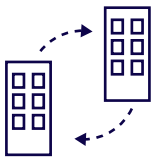
How does the System Work?



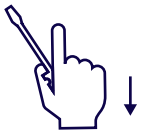
The core purpose of AIHEN is to gather data accumulated from various sensors, such as temperature, humidity, light and video camera, and to predict the production volume of laid eggs with the help of Microsoft Azure Cloud and AI, as well as to automatically detect anomalies in the feeding supply.

Where's the Catch?

There are many benefits to deploying and introducing IT systems into poultry flock management: some of these include a reduction in manual labor required to run a poultry enterprise; modernization of the gathering and retaining of data; introduction of better forecasting capabilities for the enterprises to achieve better organizational effectiveness, since the system is designed to help plan the expenditure and forecast the poultry produce in a certain period (e.g., in 6, 12, 18 months), this will allow building better collaboration between the enterprises on a national and regional level and open more opportunities for export competitiveness as well as enable avoiding overproduction in the market.



Better collaboration between enterprises

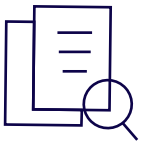


Reduction in manual labor

Data security

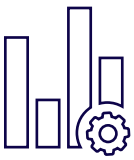
Forecasting capabilities

Improved productivity



High data availability, transparency and credibility

Overproduction risk reduction



Operational flexibility

Hen's well-being monitoring

Case Study

Implementing AIHEN into Balticovo egg-production process

In Europe, more than **11M** eggs are consumed every day.

Latvian farm Balticovo produces **12%** of that amount singlehandedly.

The Client

With more than 40 years of experience, A/S Balticovo is the most modern and major egg and egg product (cooked eggs, liquid and dry egg products, mayonnaise) producer in Northern Europe, and is among the top 10 leading egg production farms in the whole of EU. Balticovo focuses on products friendly to human health and is constantly developing by using the most advanced production technologies.

The Challenge

Poultry feed is the largest cost in the egg production process. The ability to predict any possible abnormalities in the total volume of egg production and the factors affecting it can prevent the causes of the adverse changes before they occur (e.g., appropriate veterinary intervention).

Moreover, the farming industry is affected by matters of animal welfare: society is becoming increasingly interested in hen feeding and the use of medication in farms. While modernizing their IT systems, Balticovo saw a possibility to improve their egg production operations and take the well-being of hens to the next level.

The aim of this solution was to create a technological basis for the framework used for the forecasting of egg production and early detection of anomalies, identifying the most influential indicators for pre-treatment, using Machine Vision.

The Solution

With that in mind, DOTS (previously, SQUALIO cloud consulting) developed and implemented a Microsoft Azure cloud and Artificial Intelligence-based, modular and unified system, as well as an IT platform for poultry flock management. The core purpose of AIHEN is to use data accumulated from various sensors, such as temperature, humidity, light and video cameras, and through Microsoft Azure Cloud to predict the production volume of laid eggs, as well as use Artificial Intelligence to automatically detect anomalies in the feeding supply - a tough challenge for human eyes only.

The Outcome

Microsoft's cloud-based solution allows Balticovo to achieve a higher level of modernization, better organizational efficiency and closer collaboration between the enterprises, thus providing more opportunities for export competitiveness and helping avoid overproduction in the market. AIHEN helps to monitor the productivity 24/7 and promptly respond to any deviations in the egg production process. It has been predicted to lead to a 2% decrease in the operational costs of Balticovo by the end of 2018.

> Thanks to a close collaboration between companies, we have gained a valuable resource to monitor the productivity 24/7 and promptly respond to any deviations in the egg production process. Due to the availability, transparency and credibility of historical data, Balticovo are able to further forecast the volume and sales of produced eggs, and plan the production in the long-run.
>
> **Solvita Gulbe**
> Balticovo Project Manager

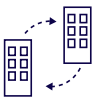
Poultry feed is the largest cost in the egg production process.

The farming industry is affected by matters of animal welfare.

AIHEN use accumulated data from various sensors and through Microsoft Azure Cloud predicts the production volume of laid eggs, and with the AI automatically detects anomalies in the feeding supply.

Higher modernization

Better organizational efficiency



Closer collaboration between the enterprises

24/7 monitoring of egg-production

Reduced risk of overproduction

About us

DOTS (previously, SQUALIO cloud consulting) is a software development company that has been operating for 20 years and combines innovative, dedicated and certified IT professionals with in-depth experience and knowledge, creating Artificial Intelligence solutions fit for any industry and any need. Thanks to our dedicated team we are able to provide the full life-cycle of an IT system from the first contact and design up to development, IT security testing, deployment and maintenance.

We cooperate closely with road administrations, border control, customs, police forces and administrations of various cities and municipalities.

DOTS (previously, SQUALIO cloud consulting) uses up-to-date and state-of-the-art technologies, bringing innovative solutions to specific business models.

Our technical specialists are highly qualified and certified, owning MCPD, MCSD, MCAD, MCTS, MCP, MCSA, ISTOB, CISSP, PRINCE2, ITIL, M_o_R, CISA, CEH etc.

We have extensive know-how in Microsoft Azure, AWS, .NET, MVC, ASP.NET, WindowsForms.NET, WCF, SOA, Java etc.

We are a Microsoft Gold partner and an active participant of the Co-Sell program.

What are we passionate about?

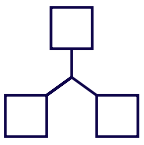
Transportation-related Solutions

Cloud Solutions

Machine Learning

Facial Recognition

IT Security Solutions



Base and Advanced Infrastructure Solutions

Our mission

Is to genuinely understand the clients' actual needs and provide the best technology solutions that help to meet their business goals.

Our vision

Is to become a trusted advisor, offering IT solutions with the highest added value to our clients.

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