Increasing Supply Chain Performance with Artificial Intelligence
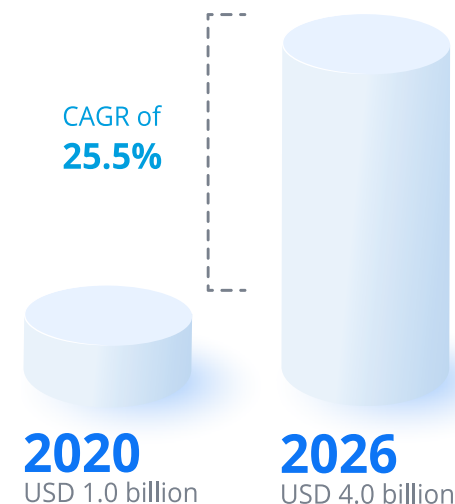
MTech Systems

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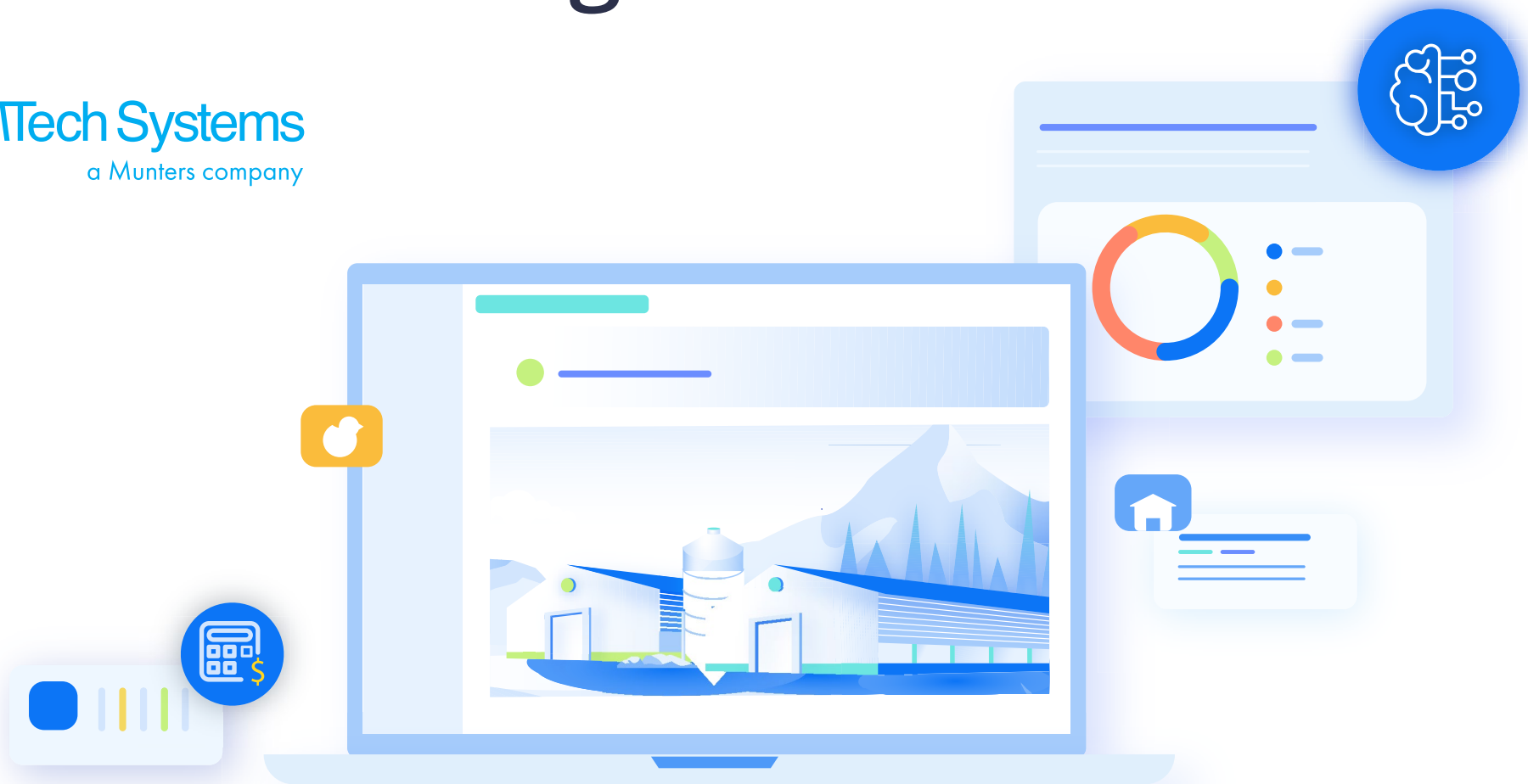
Agricultural industry expected growth

The overall AI in agriculture market is projected to grow from an estimated USD

"1.0 billion in 2020 to USD 4.0 billion by 2026, at a CAGR of 25.5% between 2020 and 2026."

| Markets and Markets

CAGR of **25.5%**

2020
USD 1.0 billion

2026
USD 4.0 billion

Competitive advantages of artificial intelligence

Producers need to be able to not only look at data in hindsight to find the answers they need but also, they need to rely on AI models to help them stay ahead of the game.
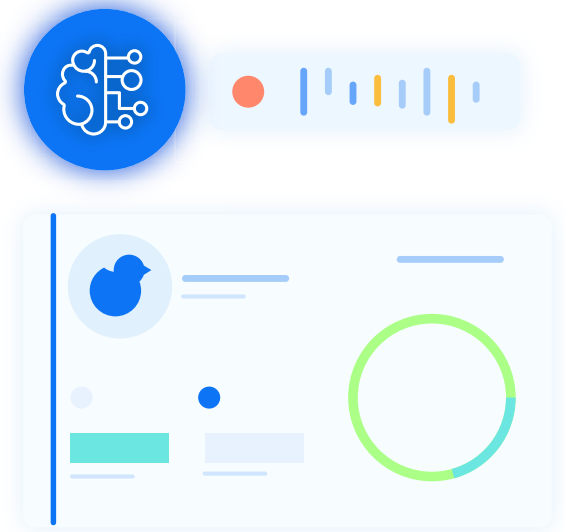
"Machine learning-enabled solutions are being significantly adopted by agricultural organizations and farmers worldwide to enhance their farm productivity and gain a competitive edge in business operations."

Artificial Intelligence in Agriculture Market Report

Smarter Business Decisions

The poultry industry can use artificial intelligence to process historical data and allow the models to utilize machine learning to project the most likely trends.

These tools can optimize performance by not only helping us understand where the problems are but also, they can tell us what we can do to fix them, so they do not become an issue moving forward.

Soon, many producers will be dependent upon AI to help them make the right decisions that help them grow their business. In addition, AI integrates with many different tools including IoT, that in turn, work together to maximize overall performance.

DATA SCIENCE AND ARTIFICIAL INTELLIGENCE AT WORK

AI's capability to work with data science to troubleshoot problems is impressive and can directly impact performance.

AI models interrogate performance data sets where multi-factorial issues are at play.

For example, the data science team at MTech worked with a company and found out the performance issue they were having traced all the way back to machines at the hatchery.

The AI models were able to crunch large amounts of data to find and fix the root issue.

GETTING RID OF THE COOKIE-CUTTER APPROACH

AI can help match nutrition optimization to each company's needs in terms of climate, housing, equipment, raw materials, and management capacity which helps companies to be more prescriptive at the most competitive price using their own resources.

Optimizing based on a company's individual constraints helps them find out faster what the most optimal way to operate is.
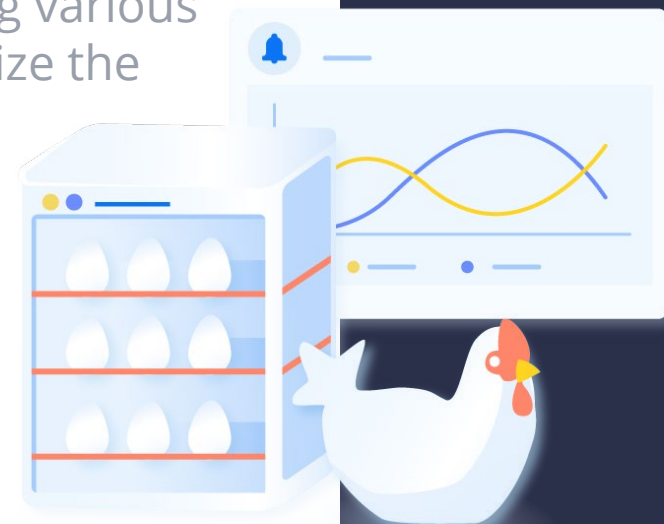
Artificial intelligence throughout the supply chain

What is possible?

IMPROVED SUPPLY CHAIN MANAGEMENT OPTIMIZATION

The industry wants to place breeder flocks to more closely match egg demand.

AI learns the patterns associated with placing various flocks at different farms and times to minimize the production variance to egg demand.

BETTER BREEDER & HATCHERY PROJECTIONS

Producers want to be able to predict the future to know how breeder flocks will perform as well as they are looking for ways to improve metrics like:

⚙️ % production

🥚 % hatchability

Artificial intelligence can be used to see if more breeder flocks need to be placed or if chicks will need to be either temporarily purchased or sold to cover shortages/excess production.

ENHANCED BROILER PROJECTIONS

We need improved accuracy with predicting broiler flock performance that will help businesses to determine the best days for the birds to be picked up at their target weight to allow for cut back on feed reclaim.

With the accurate weight predictions provided by artificial intelligence, producers can improve processing yield and reduce giveaway.

When the AI model is fed performance and consumption data up to a certain age, predictions about illness can be made to hopefully curb any harmful effects and minimize any birds lost to condemnation.

AI helps augment head, weight, FCR, and condemnation projections.
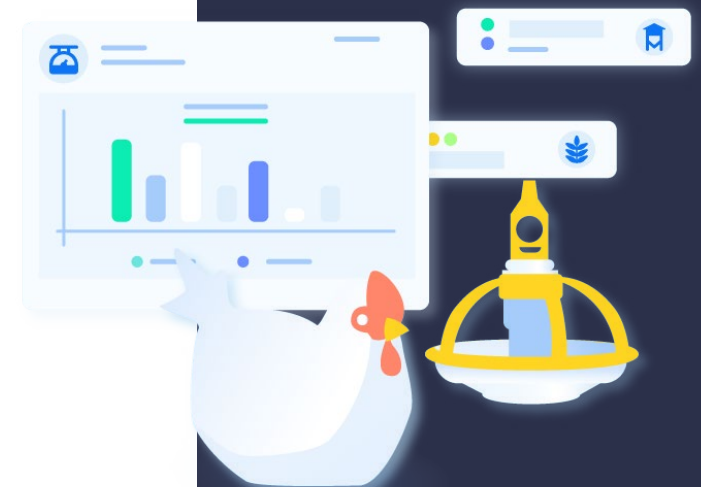
REFINED SCHEDULING

With improved projections across the supply, chain scheduling can be more precise.

The machine learning model can take in the projections and provide the best days to keep the plant in a steady state with enough head sold, while also meeting a more exact target weight.

PROCESSING PLANT OPTIMIZATION

Poultry plants need to always adjust their process and bird supply to meet the ever-increasing demand.

AI can help to **optimize profitability** while meeting contract demands and **minimizing waste** inside the processing plant.

What if you could have a schedule provided for your plant that gives the exact outputs of the products the plant should make each day?

With AI this is possible.

Artificial intelligence is not a future technology

AI is not some technology that's way off in the distant future.

Even though true it will always be advancing its capabilities, artificial intelligence is available now.

Many leading poultry companies are already using it to improve their performance and profit.

MTech Systems

a Munters company

MTech has been working with artificial intelligence to tailor models for the **poultry supply chain.**

Many of the examples given above are ways we have used or plan to use **AI** to optimize production.

READY TO SEE HOW AI CAN BENEFIT YOUR BUSINESS?

Schedule your demo today
mtech.software/experience-ai