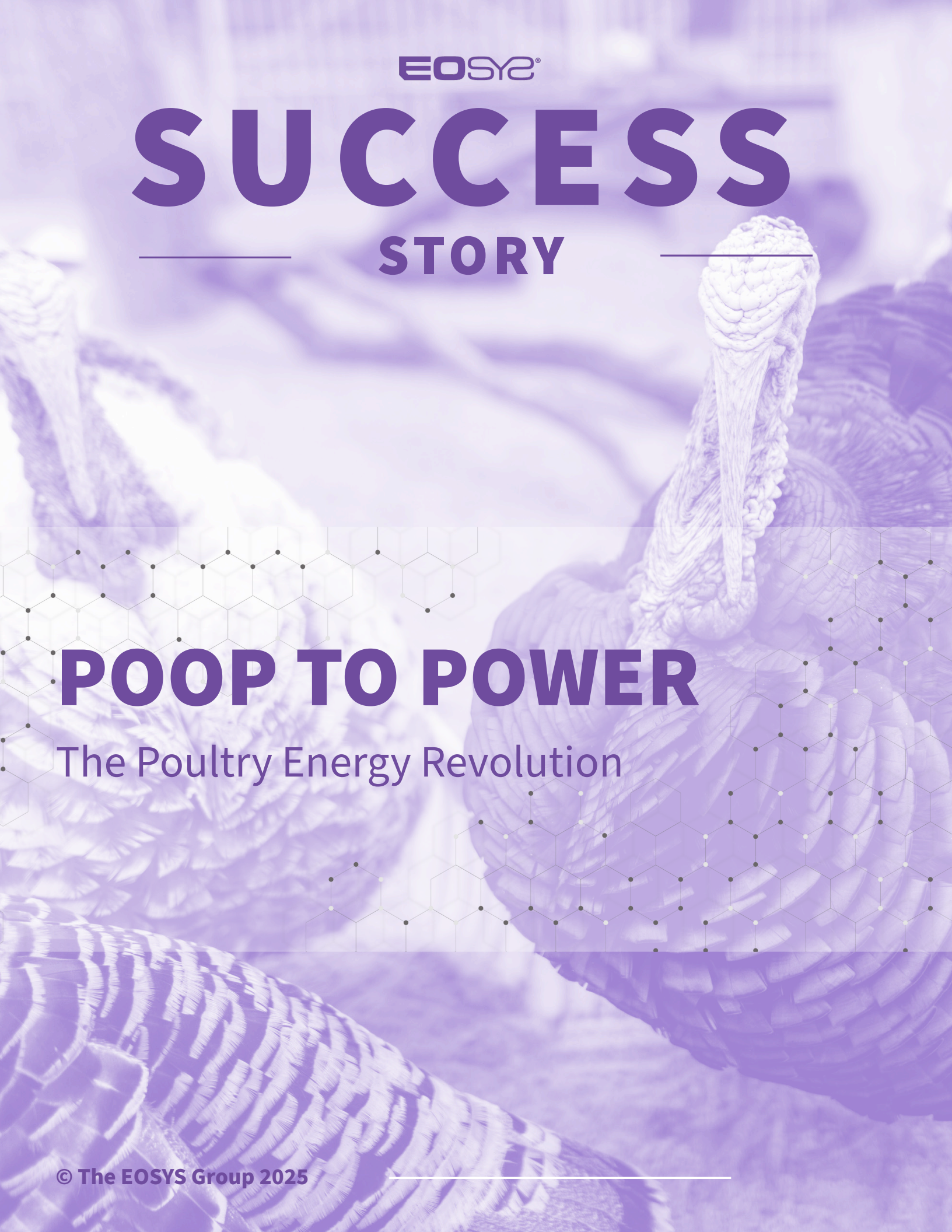
EOSYS®

# SUCCESS STORY



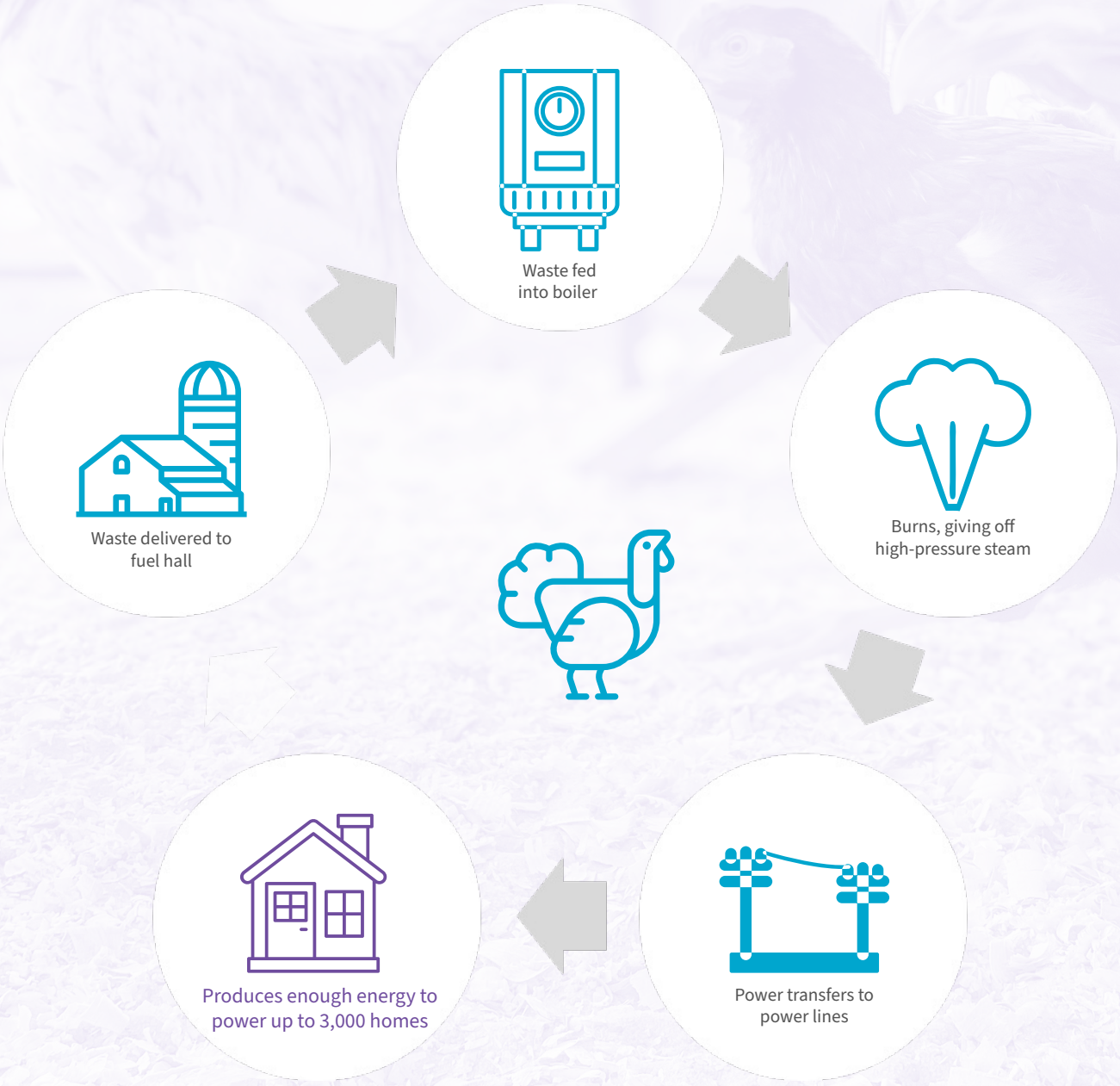
# POOP TO POWER

## The Poultry Energy Revolution

# SITUATION

Carolina Poultry Power's poultry plants collect waste from local farmers within a 50-mile radius. This waste is conveyed from the fuel house to the boiler, where it is burned to produce high-pressure steam. The steam drives a 2.0 MW (NET) to grid turbine, generating power for the local community.

**This revolutionary project transforms turkey and chicken waste into renewable, sustainable clean energy.**



## OBJECTIVE

Our client, Wellons, sought to automate the process for this renewable, sustainable clean energy source.

## APPROACH

- **Integrated OEM applications** (baghouse, turbine, soot blowers) into DCS to have a centralized view of the plant and alarms
- **Reverse engineered** an AVEVA InTouch application (urea injection) to convert it to FactoryTalk View for installation in DCS screens
- **Configured Modbus communications** to monitor GE Multilin Power Quality Meter, air compressors, and ID fan Multilin 869 Motor Protection System
- **Upgraded from PlantPAx** version 4 to 5 mid-project using Rockwell's migration tools
- **Installed virtual machines** on a Stratus ztC Edge 250i, providing high reliability and the option for future hardware redundancy

> *"This also helps **solve a major problem** for waste disposal because the plants are fueled by poultry litter."*
>
> *-Wellons*

# SOLUTIONS

> *"We're **displacing standard power** from petroleum-based or carbon-based power."*
> -Carolina Poultry Power

## Leveraging PlantPAx 5.0

We implemented PlantPAx 5.0 as a cornerstone of our solution; primarily because it enabled the plant to move away from a very customized and difficult to manage PLC platform to a more template-based solution.

We took advantage of new features with the library and alarms embedded in the controller. It was highly efficient due to the simplicity of the Control Strategies templates; and easy to use once installed. PlantPAx was selected for it's scalability, ease of training new E&I personnel, and easy troubleshooting.

## Layering on Stratus ztC Edge 250i

Additionally, we recommended and utilized a Stratus ztC Edge 250i for this application due to the ease of installation and high availability it provides after installing redundant hardware.

# RESULTS

**Significant Sustainability Improvements**
This solution resulted in significant improvements in overall sustainability and increased energy efficiency.

- ✓ Waste reduction from farms
- ✓ Created new clean, renewable energy source
- ✓ Carbon reduction - reducing footprint by moving away from natural gas, coal, and oil
- ✓ Reducing waste by selling spent fuel back to farms as fertilizer
- ✓ Producing enough energy to power 2,000-3,000 homes

Carolina Poultry Power (CPP) and Wellons are **revolutionizing the way poultry plants operate**; with a renewable, sustainable clean energy source that solves waste disposal issues, creates local jobs, and reduces dependence on traditional power grids.

# ABOUT EOSYS

## Leader in Process Industry Systems Integration

For over 30 years, EOSYS has been providing custom industrial integration solutions to the Process industry.

With thousands of system integration projects completed since 1991, EOSYS is trusted by Fortune 500 companies and major industrials across the United States.

Control Engineering 2023 System Integrator of the Year — Plant Engineering

PLATINUM System Integrator — A ROCKWELL AUTOMATION PARTNER

Stratus System Integrator ENDORSED

TOP WORK PLACES 2019-2024 — Tennessean. — EOSYS is a 2024 Top Workplace! 6 Years Running

# ABOUT WELLONS

## Alternative Energy Project Developer Specializing in Single Source Solutions for Industrial Biomass Steam Systems

Wellons is an alternative energy project developer specializing in biomass steam and co-generation projects for industrial manufacturers that have historically relied upon green house gas emitting fossil fuels. Wellons often partners with Carolina Poultry Power, a renewable energy developer, to provide crucial equipment and expertise for the construction of biomass power plants.

WELLONS