

## Case Study

# Controls & IT Strategy Consulting Cargill Salt Company



### Overview

Working side-by-side for 12 years to successfully standardize networking, controls and software technologies, teams from Cargill Salt and TEC Systems engineering division (TEC Systems) have created and refined Cargill Salt's highly-efficient, streamlined production operations.

### Business / Technical Challenges

An astute Cargill Salt operations manager recognized that by using multiple independent control systems in Cargill Salt facilities, there was a real potential for the company to see higher implementation costs, the inability to share information efficiently between the company's plants and mines and a drain on personnel resources. To address this challenge, an automation team was created, consisting of representatives from all of the company's plants and mines. The team's mission was to select an integrator that could service the entire corporate division.

### Enter TEC Systems

Once selected for the project, TEC Systems hit the ground running. Working in tandem with Plant Operations and IT functions, it was determined that upgrading all plant networks to a standard Ethernet architecture was top priority – a farsighted decision given the timeframe in which it was made (1994).

### Planting the Technology Stake

As project requirements were identified, strategic planning was developed to address future technology needs in the context of the "big picture". In Phase 1, a streamlined production process across the business unit supporting a standardized technology backbone was developed. Phase 2 included selecting PLC hardware and HMI software. TEC spearheaded the initiative and recommended Rockwell PLCs and Intellution HMIs connected directly to the Ethernet backbone.

### Fast Forward 10 years

Never wavering on software, hardware, or architecture selection, the company has invested \$2M - \$3M annually on automation and project installation. Plant operations are streamlined and profitable.

"TEC Systems' mission is to become an indispensable partner by providing a wide array of value-added services," said Jim Pederson, TEC Systems President and Chief Operating Officer. "Through our business partnership with Cargill Salt, we look forward to providing the technical expertise and extraordinary service that the company expects of TEC Systems.

### About Cargill Salt

As the world's largest manufacturer of industrial salt products, Cargill Salt produces, packages and ships salts for agricultural, food, water conditioning industrial and packed ice control use. It produces more than 1,000 different salt products/package sizes and markets national and regional brands.

Cargill Salt is a division of Cargill, Inc., the largest privately-held company in the United States. Founded in 1865, the company is headquartered in Minneapolis, Minnesota.

### About TEC Systems

Headquartered in Wichita, Kansas, the TEC Systems Group has provided Fortune 500 industrial and commercial companies with electrical, engineering, automation and software services since 1984. Hallmarks of the company include a successful track record of outstanding service to clients throughout North America and beyond, as well as extraordinary long-term client relationships. Our first customer is still our customer today.

### Cargill Salt Results

- Control system utilization is a key component to making Cargill Salt the #1 salt producer worldwide
- Significant production gains
- IT & Operations working together
- Standardization – every plant is the same
- Standard controls, HMIs and Ethernet backbone
- Sharing of best practices across plants
- Ability to manage HMI (OS patching, security, license reconciliation and IP)
- Remote support of all PLC and HMI systems
- Ability to try new technologies at a low cost
- Great business efficiencies including reduced purchase costs

***A win-win for Cargill Salt and TEC Systems***