

Omni Instrumentation had humble beginnings back in 1986 as a new and different full service instrumentation and controls contractor in New Jersey. Our philosophy was simple, to provide solutions for our clients and have a company they could completely rely upon. Over the years Omni quickly gained ground building relationships working in refineries, pharmaceutical companies, chemical and sewage treatment plants, and mission-critical manufacturing facilities.

**C E L E B R A T I N G**  
**40** YEARS HELPING CUSTOMERS SUCCEED  
1986 - 2026

We always looked to create value by offering quality choices that better matched our clients' budgets and actual functional needs. We were always upfront about what was needed to make a system complete and functional, always taking a holistic approach—no surprises later on.

Our satisfied clients took Omni services to facilities throughout the East Coast, including Puerto Rico. We are proud to have participated in many ISPE Facility of the Year projects with the best team and technicians available, handling just about any client request.

### Expanding Our Services & Branding

As our instrumentation and controls company grew, many customers asked if we could provide other electrical contracting services like power distribution, lighting & controls, tele data, fire alarm systems, and other low-voltage solutions. Many clients wanted one-stop shopping - someone to coordinate it all and eliminate the finger-pointing. We knew that addressing our clients' needs was the right thing to do and the decision was made to expand our self-performed services to include electrical installations as well.

Expanding our services also allowed us to expand our footprint in the industry. In support of the growing pharmaceutical market in the region, we proudly opened a new office in Maryland in 2015, complementing our New Jersey headquarters to better serve clients throughout the Mid-Atlantic region.

Then in 2019, we updated our company name to Omni Instrumentation & Electrical Services, Inc. to highlight the inclusion of the electrical work we perform for our clients.

### 40 Years and Counting

We wanted to celebrate our 40 years with you our customers with a heart felt thank you for all of your support. As you can see, since our beginnings, Omni has always been about helping customers succeed. *Thank you again from everyone here at Omni!*

### Also In This Issue...

- Spreading Safety, One Worker at a Time
- Unique Project: Commissioning a High-Capacity Silo Storage Facility
- Data Centers Heating Cities



## Spreading Safety, One Worker at a Time

You can recognize a safety culture the minute you see it. When you arrive at a job site that's clean and organized, with safety signage and designated muster areas clearly marked, you know you're in the right place. A sign points to where daily safety training occurs and lists the scheduled time. The workers you observe are properly wearing their PPE—hard hats, safety glasses, high-visibility clothing, and gloves. You haven't even set foot on site yet, and it's already clear that safety is taken seriously here. You can take comfort in knowing that people are looking out for you as well. The bar has been raised, and safety just spread to you.

Safety becomes contagious when positive, safe behaviors and attitudes spread throughout a group, creating a self-sustaining culture where individuals influence others to adopt protective habits. Safety must be treated as a shared value, not just a set of rules. Employees influence each other more effectively than management does—when each worker influences at least one other, it's essential for spreading a safety culture.



In a contagious safety culture, people openly address safety concerns and make them public, reinforcing safe habits throughout the organization. A strong safety culture corrects hazards on the spot, further spreading safety-conscious behavior and attitudes. It promotes workers looking out for each other, identifying problems or risky behaviors before they can become safety issues.

Here's what this looks like in practice: You're not actively thinking about it, but another worker notices you're not tied off properly and mentions it. During a lockout/tagout procedure, a colleague reminds you to verify the equipment is off by testing it. A worker notices an opening or hole in the floor and immediately has it covered.

This is a safety culture that has spread organically. Omni places safety as our number one priority. We support our team and promote a safe environment through continuous safety training, toolbox talks, and active support from management. We take it seriously, and we always look to make safety contagious.

## Unique Project: Commissioning a High-Capacity Silo Storage Facility

Every once in a while, you get a project to work on that's out of the ordinary. As part of a larger project, our client asked us to get involved with four large 65' tall dry product storage Silos with 75' loading platform. The process moved dry product flakes at high velocity through 4" stainless piping using blowers and specialized control valves to move and deliver product. Each silo had three level transmitters to determine fill and each had a dust collector on top, allowing the silos to move filtered air and shakers down low to help drop and move product into a loading blower then into waiting tractor trailers sitting on a calibrated scale.

The silo and piping had a suppression system that would relieve and isolate a blast anomaly should it occur. The entire system was controlled by a central DCS system. Omni loop checked and tested all instruments, blowers, valves, shakers, motorized delivery chute, indicating lights, load cells and cctv cameras. Omni also assisted with the functional testing and successful commissioning. Ready for product use.





## Data Centers Heating Cities

In Mantsala, Finland, residents heat their homes with an unexpected source: waste energy from a nearby data center. For roughly a decade, the 75-megawatt facility has captured thermal energy from computer servers and channeled it to local households, currently warming the equivalent of 2,500 homes—about two-thirds of the town's heating needs. The concept emerged from engineer Ari Kurvi's work with Hewlett Packard in the 1980s. While managing hot server rooms during freezing Finnish winters, he recognized an obvious opportunity between the warmth inside and the cold outside.

The world's largest heat recovery project is now under construction near Helsinki. Microsoft's data center cluster will eventually supply heating to approximately 40% of Espoo—Finland's second-largest city—serving roughly 100,000 homes. The project has already enabled the closure of a local coal-fired heating plant. The technology works through district energy systems—networks of underground pipes that distribute centrally generated heat throughout communities. Moderately warm water from the data centers flows to a recovery facility equipped with heat pumps, which extract the thermal energy and superheat the water to 115°C for distribution through the municipal heating network.

Scandinavia offers ideal conditions for this technology. Cold climates allow data centers to cool with ambient air, reducing power consumption. Electricity comes predominantly from renewable sources—hydroelectric, wind, and nuclear—at rates roughly half those in other European markets. Most importantly, extensive existing district heating infrastructure provides ready-made distribution channels. Espoo Mayor Kai Mykkanen notes that producing emissions-free heat is typically harder than generating clean electricity, making this approach particularly valuable. European data centers are projected to generate at least 200 terawatt hours of recoverable heat annually by 2050—four times current levels.

Despite the promise, significant limitations exist. Data centers consume massive amounts of electricity, intensifying competition for power as industries electrify. In Ireland, data centers devour about 20% of national electricity, drawing criticism from officials concerned about their minimal employment compared to traditional factories. Geographic mismatches also create obstacles—district heating systems exist in urban centers where real estate is expensive, while data centers prefer remote locations. Environmental officials emphasize that heat recovery doesn't make data centers climate-positive—it simply reduces harm.

New regulations are driving broader implementation. Germany's efficiency law requires larger data centers opening in 2026 to use 10% of waste heat, increasing to 20% by 2028. The EU has set binding targets to reduce energy consumption by nearly 12% by decade's end. Stockholm-based Conapto, which opened a 20MW facility last year that heats 10,000 homes, won't build new facilities without the technology. As the technology matures, pioneer Ari Kurvi reflects on the persistence required to bring his vision to life, embodying the Finnish concept of "sisu": the determination to get something done. That stubbornness may be exactly what's needed to transform data centers from environmental liabilities into community assets—one warm home at a time.