

## The Real Worth System Integrators Bring to Industrial Automation

Many organizations have advanced their digital transformations and optimized their operations with the help of system integrators (SIs). Realizing the substantial value that SI expertise and experience can bring, these same organizations have made good business decisions to use SIs to design, test, connect, implement, and upgrade their automation systems.

Organizations in industrial manufacturing and processes know they should embrace technology to operate in today's market and stay ahead of the competition. This reality usually means implementing automation technologies, but of course to do this, these organizations require a specific level of expertise and experience. Many times, though, organizations do not have the IT knowledge and skills for this task or if they do, their staff is spread too thinly working on other pressing issues to complete the necessary work. This is where system integrators can play a pivotal role.

## System Integrators Play a Pivotal Role in Digital Transformations

It takes years to develop the level of expertise and experience that system integrators possess. An organization that hires a system integrator is investing in these aspects, which have substantial importance and value in getting organizations onboarded and moving forward with their digital transformations. Five key areas where system integrators can play a pivotal role in this process are the following:

1. **Specialized expertise and experience:** Digital transformation encompasses a wide range of technologies which include the Internet of Things (IoT), data analytics, cloud computing, machine learning, and more. SIs specialize in these areas and not only possess in-depth knowledge of these technologies but also help to drive trends, best practices, and industry standards. Their expertise enables them to design, implement, and thus optimize complex digital solutions they can then tailor to the unique needs of any organization.
2. **Seamless integration of systems and technologies:** A huge challenge in digital transformation is the integration of disparate systems and technologies to create a unified central system of control. SIs excel in this area and can therefore bridge the gap between different data sources, software applications, and hardware components. They also have the technical know-how to connect to legacy systems with modern solutions, ensuring seamless data flow and interoperability.
3. **Customization and scalability:** Every organization has distinct requirements and digital transformation goals. SIs understand this and know the importance of customization and scalability of each project. In each project, they assess the organization's infrastructure and processes and take into consideration the organization's expectations and needs, including future needs. System integrators then implement solutions that align with the organization's objectives. They can design a system for scalability with the capacity to

grow and evolve with time thus ensuring long term success with digital transformation initiatives.

4. **Change management and risk mitigation:** Since digital transformation involves significant changes in technology, processes, and culture, this process can result in substantial disruption in operations and workflows which in turn can result in resistance among employees. SIs have experience in this area and can help with change management strategies. They can also help with the human element of digital transformation to increase user understanding of the technology's value to improve user adoption rates.
5. **Continuous innovation and futureproofing:** Technology is continuously evolving, and staying up to date is not only hard work but also crucial for success. Since SIs constantly monitor the technological landscapes, they can provide insights into emerging trends and opportunities. Most importantly, they can help organizations identify innovative and best-fit solutions that can drive efficiency and profit. Additionally, system integrators can ensure that systems are future-proofed, so organizations can more easily adopt evolving technologies to seamlessly advance.

Now that you know the value proposition of system integrators, let's look at an example of one such system integration firm: [Impact Automation and Controls](#) in Lewisville, Texas. Shane Stevens, owner of Impact Automation and Controls, is an [ICONICS](#) gold certified system integrator with more than 20 years of experience, primarily in water & wastewater and secondarily in buildings, and was the SI for the Lake Cities Municipality Utilities Authority case study that follows.

## **Case Study: Lake Cities Municipality Utilities Authority**

### **Project Summary**

[Lake Cities Municipal Utility Authority](#) is located in Lake Dallas, Texas and provides drinking water, fire protection, and pressure to the Shady Shores, Lake Dallas, and Hickory Creek areas (together known as the Tri-Cities). LCMUA operates 21 lift stations, 3 elevated storage tanks, 3 ground storage tanks, 10 pumps on the water side (with 3 altitude valves), and 46 sewer pumps on the wastewater side.

LCMUA had an aging infrastructure system that needed help from top to bottom. For example, a large portion of LCMUA's budget at the time was spent on callouts, false alarms, and failing equipment. Additionally, the pre-existing SCADA system was a combination of three competitor products, which ended up providing LCMUA personnel with three different sets of operating data. To better manage and maintain their facility, the organization prioritized its upgrade.

LCMUA needed a unified solution with a new HMI/SCADA that could handle Distributed Network Protocol (DNP3) communications and interface with existing Ovarro Connecting Technologies TBox combined PLC/RTU hardware installed at every lift station, pump station, and elevated storage tank in their system. To accommodate a lean and often remote workforce, they

needed a solution that could give them 24/7 operational visibility and send out alerts notifying personnel whenever the situation warranted, pulling their attention away from their daily duties to address larger, more serious issues.

To fulfill those requirements, LCMUA sought out solutions to replace the older SCADA system, to reduce the related costs, and to ultimately manage the facility more efficiently with a lean workforce. To tackle their challenges and achieve their goals, and since they did not have the expertise and experience to upgrade their system themselves, LCMUA chose to work with Impact Automation and Controls.

The system integrator worked with LCMUA to select the ICONICS automation software suite and deployed the following solutions:

- GENESIS64 web-based real-time HMI/SCADA suite with WebHMI
- MobileHMI data mobility software suite
- AlarmWorX64 Multimedia OPC alarm management software
- ReportWorX64 enterprise reporting, charting, and analysis software
- CFSWorX intelligent and reliable notifications software
- Hyper Historian high-speed, reliable, robust plant data historian.

Through the upgraded automation system, LCMUA saw immediate value.

### **Realized Real-Time Benefits Through an Upgraded System**

Lake Cities Municipal Utility Authority directly realized real-time benefits through the upgraded system that Impact Automation and Controls designed and implemented. The new HMI/SCADA system met quality and maintenance needs within the water and wastewater system without any of the previous issues or data discrepancies. GENESIS64 improved secure visualization of water and sewer levels and improved monitoring and control of potable water and wastewater, elevation, PSI, intrusion pumps, pump monitors/controls, pump failure status, and temperature. CFSWorX streamlined work empowering personnel to move past the break/fix model toward more proactive facilities and equipment management. WebHMI and MobileHMI provided crucial monitoring and control of connected systems from the field using personnel iPads through “Any Glass” (a user interface that delivers 2D and 3D real-time operational visualization and intelligent dashboards).

### **Top Visualization & Solid Alarming with Impressively Fast Response Times**

LCMUA now considers their visualization to be “top notch”, their alarming to be “solid”, and their data mobility to have an “impressively fast response time”, vastly improving on the previous system. After new ICONICS graphic displays and trends were in place, system integrator Impact Automation and Controls completed the system upgrade. With ICONICS CFSWorX™ alarms and notifications capabilities, including voice and text messages, LCMUA increased their team’s efficiency and collaboration and reduced downtime and costs. Rather than everyone

getting the same alarms all the time, managers can decide who gets what alarm and when, which is extremely important as operators are not always on shift. As a message comes in on their personal smartphones, with their devices in their hands, personnel can quickly switch over to the mobile app to see what is going on, acknowledge alarms, and make quick decisions to solve the problem as fast as possible.

### **Managing Resources According to Real-Time Data**

Managers can now spend their time more wisely, managing team resources according to real-time data, thereby optimizing efficiency, improving response times and reducing downtime. The new software also addresses challenges around efficient onboarding of new hires in combination with the aging workforce. With the improved ability to control and manage the facility, it is easier to transfer knowledge from the retiring personnel and attract new talent. Simply put, the team is better equipped to maintain the expertise needed to run the facility efficiently, even with a lean workforce. Mark DiCiaccio, Lake Cities Municipal Utility Authority Operations Manager had this to say, “CFSWorX has been great. With the previous application, we would constantly worry if the system was working. Before we would leave on Friday, we would always send a test alarm to make sure we would get alarms over the weekend. That is no longer the case. We have yet missed a single alarm since moving to CFSWorX.”

### **Investment in a System Integrator Paid Off**

With the help and expertise of Impact Automation and Controls, Lake Cities Municipal Utility Authority has experienced the substantial value of an upgraded automation system along with best-in-class automation technology. They anticipate expanding their remote worker support to further increase efficiency with more advanced capabilities such as worker location, push notifications, and priority calling. LCMUA made an investment to hire Impact Automation and Controls system integrator to upgrade their system and advise them on the latest automation technology. As a result, LCMUA improved operational efficiency and paved a path to better serving the Tri-Cities area. (For more on this case study, you can read ICONICS' [LCMUA success story](#) and view a [video with Shane](#) discussing his experience.)

### **Some Solid Advice from a System Integrator**

Clearly, system integrators can bring substantial value to the table to help organizations with their automation needs. If you are considering an automation system and/or hiring a system integrator, here is some solid advice from Shane Stevens:

When considering implementing an automation system or upgrading a legacy system, Shane recommends, “Be sure to plan thoroughly. Know the capabilities and limitations of the software package before you commit. A system integrator will help in advising and planning which will avoid headaches later on.” And when asked what suggestions he could offer organizations thinking of working with a system integrator, Shane added, “When working with a system integrator, the keys to a successful project are communication and project understanding. A

system integrator can develop the best system in the world, but if it doesn't do what the customer is expecting, then it's junk.”

### **Final Thoughts**

Given today's labor shortages and supply chain complexities, there is a tremendous demand for automation solutions/systems and experts that can advise on such technology and the design and implementation of these systems. It pays to leverage the expertise and specialized knowledge of system integrators. This way organizations can maximize their investments in new technologies and ensure smooth and successful digital transformations.

Interested in becoming an ICONICS system integration partner? Learn more at [iconics.com/SI](https://iconics.com/SI).