

PLC Modernization Program

Legacy PLC Risks

Industry estimates are that \$22 billion of control system platforms in North America are nearing the end of their useful lives. In most cases, these systems are more than 20 years old. These obsolete controllers continue to be the heart of production and water/wastewater treatment processes across the country. You undoubtedly already understand the added costs associated with maintaining these old platform, the difficulty and costs associated with finding spare parts, the lack of manufacturer support, as well as the risks presented by a catastrophic failure. These are real risks that speak to the potential benefits associated with current, well supported control systems. These old platforms are also lacking in security capabilities so critical in today's hacker-ridden environment.

Though the risks are compelling, many users struggle with justifying modernization projects. That is where we add value to the process. We provide users with an end-to-end migration program that is optimized to deliver maximum value, mitigate risk to the production schedule, and prevent budget overruns.

End of Life



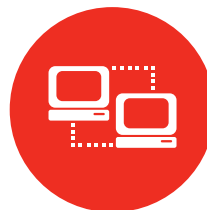
- Active: Most current offering within a product category
- Active Mature: Product is fully supported, but a newer product family exists. Gain value by migrating.
- End of Life: Discontinued date announced—execute migration projects and last-time buys. Product generally orderable until actual discontinued date.
- Discontinued: Product no longer manufactured or procured. Repair and remanufacturing services may be available.



Reliability



Security



Communication



Performance

Path to Modernization: Site Assessment > Scope & Estimate > Finalization

Step 1: Modernization Assessment

Site assessment with a migration engineer

Deliverables:

- Report Categorizing the observed risks and level of complexity (defined below) associated with modernization
- A FEED+ (in-depth engineering and design study) fixed price proposal depending on complexity level

Complexity Level 1 – Single PLCs	\$800.00
Complexity Level 2 – Up to 5 remote I/Os	\$1,200.00
Complexity Level 3 – Network PLC with HMI	\$1,600.00

Mileage exceeding 200 miles will be charged at a rate of \$1/mile.



Step 2: Scope and Estimate

Review scope and estimate with the customer and execute the FEED+

Deliverables:

- FEED+ study execution
- Cost justification factors defined
- Appropriation worthy **guaranteed maximum price** for turnkey modernization that includes:
 - o Summary of modernization goals assembled from user stakeholders
 - o Detailed scope of work
 - o Single line architecture drawings
 - o I/O, field device and field wiring strategy is defined
 - o Network strategy (if necessary)
 - o BOM
 - o Installation plan/cutover schedule
 - o Commissioning schedule
 - o Summary justification based on the “cost of doing nothing”



Step 3: Finalization

Review scope and estimate with the customer and execute the FEED+

Deliverables:

- Revere engineer meeting with the customer
 - o Review the FEED+
 - o Explanation of justification, cost control, and schedule requirements
 - o User-stakeholder goal review
- Purchase order is issued
- Project kick-off