DCS Top 10

Essential Elements of a Successful Upgrade or Migration

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Need to upgrade your distributed control system (DCS) soon? Most companies do, so you're not alone. It's safe to say the thought usually inspires fear, uncertainty and doubt about how such a major project moves forward. **This Top 10 list will help replace fear with facts** as you consider an upgrade of your existing DCS, or a migration to a completely new platform.

01 Lifecycle Solution — *A DCS upgrade or migration should deliver value throughout its entire lifecycle.*

A successful migration project begins with strong front-end loading (FEL) that includes planning and budgeting with full lifecycle cost estimates. This best practice approach will help you implement your plan efficiently, locking in production gains through ongoing technical and operational services.

02 Solid Planning — *Collaboration and planning are key to capturing process knowledge.*

Involve your engineers, operators, IT personnel and maintenance technicians in the FEL planning efforts. With everyone working together, you can build your project plan based on the FEL process, which is a best practice approach that uses a drill-down effect for efficiency. The resulting cutover plan – moving from the old to new system – will minimize risk and maximize operational uptime.

03 Resource Availability — *Choose a platform-independent automation solutions partner who understands your people, process and technology.*

You need a strong, qualified team, and your chosen third-party partner should be composed of migration project veterans, able to sit down with you and bring their expertise and fresh ideas to the table. The right partner can help define your goals and be there at every stage. True collaboration ensures efficient communication and minimizes rework to keep you on time and on budget.

04 Funding — *Develop a phased approach to spread the capital investment over a period of years.*

Ask for budgetary estimates and total cost of operation (TCO) figures for different migration paths to get your funding approved and maximize ROI. Your trusted project partner will help you define the sequence of phases that best aligns with your facility's needs and requirements. Strong upfront planning and realistic budgeting is a best practice that leads to a successful migration project.

05 Buy-in — *Form strong partnerships with key internal stakeholders.*

It is critical to keep everyone actively participating and engaged in the project to ensure a strong sense of ownership going forward. Early buy-in from operators and maintenance technicians is critical because they will work with the new system every day. A team approach ensures a high level of success overall.

06 Objectivity — *Remove bias from the decision process.*

A new control system platform is a major investment and is critical to operations. It is extremely important to have objective and unbiased vendor comparisons when it comes to control system platform selection. Be sure to involve all key stakeholders in upfront discussions, vendor evaluations and project planning. It's the only effective way to consider all your options and make the best selection.

07 Leveraging the Legacy — *Preserve and leverage the positives of your legacy system.*

Your existing system has many elements worth saving that can be combined with the new technologies being implemented. Much of your intellectual property and process knowledge can be incorporated into the new platform. This can reduce development costs while adding all the operational and safety features of the new system.

08 System Integration — *The new or improved DCS must connect on many levels.*

An effective partner will help integrate your improved DCS with other third-party systems. Required for operating and managing the facility, these systems often get overlooked until later in a migration project, which can be costly. The same improvements in HMI graphics and alarms incorporated into the new DCS can be extended to the information coming through these interconnections, improving operational effectiveness.

09 Risk Mitigation — *Define your risks upfront, then eliminate them.*

A systematic analysis early in the planning process can identify potential risk areas upfront. You and your chosen third-party partner should consider safety, downtime, resource allocation, network traffic levels, data integrity, cyber security and other critical factors while there is still the greatest flexibility to deal with them.

10 Need-based Solution — *Don't assume you know the best approach for an upgrade or migration before you've studied the problem or potential roadblocks.*

Consider best practices from a variety of industries and all viable options possible. Most important, carefully choose a savvy partner able to utilize their experience and technical depth to help you sort through all those decisions. You'll get a custom-fit solution based on your needs, not the needs of the technology.

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