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Automation services: Heaven or headache?

By John C. Pfeiffer

In recent months, two consulting firms have pointed to opportunities for system integrators in an area previously the sole aegis of in-house automation professionals.

Their reports projected untapped opportunities for system integrators in the U.S. industrial control equipment and systems service market to reach \$99 billion in 2005, calling "service" the "fastest growing segment of the automation market today."

These studies observed the vast pools of engineering expertise that used to exist at major user companies have shrunk to critically low levels, "forcing these businesses to look outside for the automation services required throughout the lifecycle of a plant."

While this business opportunity might sound like "heaven" to system integrators, for many manufacturers it has all the trappings of a huge "headache."

These companies must now embark on a search to find, evaluate, select, and work with a system integrator.

The selection of a system integrator is one of the most critical decisions that occurs during the course of a project. Companies offering systems and software expertise have sprouted like dandelions, offering expertise for a variety of industrial applications and processes. Often, however, their process knowledge was not up to par with their knowledge of system hardware and software. That whole endeavor requires manufacturers do their homework before selecting a system integrator.

The following is a simple compilation of practical guidelines and questions for the integrator that a manufacturer should consider before deciding on a system integrator.

Guidelines:

1. Choose an established system integrator and check the company's references.
2. Choose a system integrator that has a defined and well-established project implementation methodology.
3. Choose a system integrator that is a registered engineering firm.
4. Choose a system integrator dedicated to making its solutions work perfectly for your application. If you have worked with a system integrator that has stuck with a difficult application, regardless of financial consequences to them, hire them again.
5. Check that the system integrator has the right technology alliances. Strong alliances with



hardware and software vendors give the integrator and their clients added support.

6. Insist on independence from hardware or software sales income. An integrator that manufactures the hardware and software may lack impartiality.

7. Be sure the integrator can do the whole system job. One company should be responsible for control hardware, application software, control strategy, panels, PLCs or DCS, factory acceptance tests, field instrument calibration, startup, training, and documentation.

Questions:

1. What amount of experience do you have with my industry and processes?
2. What amount of experience do you have with the hardware and software we use, or with the systems we plan to use?
3. How does your company handle multiple projects? Who do you have on the "bench" for backup?
4. Is your staff comprised of hardware, software, and task specialists, or does your company cross-train engineers?
5. Which engineer(s) would get the assignment if the project were to begin today? Does your company use a team approach? Does it have outstanding commitments, which may interfere with your project schedule?
6. Will you provide software source listings and programs? Will we have the capability to make modifications in-house?
7. Are samples of documentation packages the integrator has done available?
8. Are specific references available?
9. Does the system integrator have prior application software experience at the required level? To what extent does the integrator test software before installation?
10. Once the field narrows to two, ask to have your company's project engineers visit the system integrator's offices and meet the project engineer most likely to get the assignment. Since they will be working very closely together, does good chemistry exist?

There's no guarantee that following these guidelines or asking these questions will lead to a successful project. But not taking these steps could lead to taking aspirins.

Behind the byline

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