



## *Using RFP methods when purchasing Automation and Control Systems.*

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### *Abstract:*

*-Today, competent owners may be effective at specifying hardware and software products; however, it is important to recognize that technology solutions involve high degrees of “professional services” which may have an even more significant impact on the overall effectiveness and value of the solution, regardless of the hardware and software platform selected.*

*-When purchasing a service or control system it is important to take into account the qualitative attributes of each potential provider and how well the solution will be implemented; this is impossible to account for in a low bid process.*

*-By allowing the provider to design an open system using the latest technology, the owner will be able to avoid using obsolete, hard to get, or proprietary items while lowering the total cost of ownership throughout the life of the system.*

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### **Introduction:**

RFP, or request for proposal, procurement methods have been gaining more and more favor in municipalities as the need to reform procurement has come to the forefront. With the arrival of the information age, traditional low bid purchasing methods are not able to keep pace with technology and evolving supply chains. When deciding on a vendor to provide services, technical products or a combination thereof, it is critical to take into account qualitative aspects, not just lowest price, to ensure the effectiveness of those solutions. While spec and low bid procurement might be effective for procurement of true “commoditized” offerings, technology-based solutions require a more qualitative approach in order to ensure a successful selection. These critical and qualitative attributes that must be examined will be discussed in this paper.

### **Leveraging Expertise/Relationships:**

In the past, when it was time to put together a bid package owners relied on their own knowledge of products to write their specifications. Today, competent owners may be effective at specifying hardware and software products; however, it is important to recognize that technology solutions involve high degrees of “professional services” which may have an even more significant impact on the overall effectiveness and value of the solution, regardless of the hardware and software platform selected. Evaluating bidders by using the request for proposal process allows the owner to decide on a solution provider based on unique attributes such as experience, technical proficiency, implementation and communication practices, which impact the provider’s ability to understand the owner’s needs and deliver the best solution. These solution providers can also help in deciding what the owner’s needs are. Providers with a great amount of



experience in a wide array of applications can provide a unique perspective. This can help to point the owner in a different direction or clarify the owner's vision of what needs to be done. These providers may also help with communicating and implementing best practices throughout companies or different government entities leading to standardization on products and/or processes which lead to savings in economies of scale, reduced training on multiple systems, and inventory consolidation. They may also be able to use techniques or solutions used in other industries of which the owner may be unaware.

### **Best Values:**

By going through the request for proposal process the owner is able to get a better perspective on who is designing and building a system that will dramatically affect their business. It is safe to assume that even with primary hardware and software specified, three (3) different solution providers will each provide significantly different solutions and owner experiences. When purchasing a service or control system it is important to take into account the qualitative attributes of each potential provider and how well the solution will be implemented. The low bid process cannot consider these factors. It is important to qualify the bidders to ensure that they are equipped with the necessary expertise and people to perform the work that is needed. It is typical in the request for proposal process to get an explanation of how the project will be managed, and the implementation practice that will be used. The owner will also be able to have a better idea of abilities and experiences of the actual people that will be designing and implementing the owner's systems. In the RFP process the owner can and often does receive resumes of the people working on their particular project and can see their past accomplishments and the relevance of their work history. In regard to technical or sensitive projects, it is also important to review how the system will function and evaluate the system's design. This way it is possible to identify any potential pitfalls or issues that may arise in each provider's proposal. This can be very valuable to ensure the owner is getting the proper system and in the desired time line. Since it is likely that the owner will not be knowledgeable in all aspects of the final design, it will be necessary to consider the type and quality of training and support that the vendor will provide after the sale. By discussing this point upfront the owner can be confident that they will receive the most comprehensive solution and will be assured of its effectiveness.

### **Flexibility:**

By resisting the urge to over specify and leveraging the expertise of the vendor, the owner will be sure to maximize the flexibility that a request for proposal procurement method can provide. Most owners today do not want to be locked into a proprietary design due to lack of flexibility and the increased cost of replacement parts. By allowing the provider to design an open system using the latest technology, the owner will be able to avoid using obsolete, hard to get, or proprietary items, lowering the total cost of ownership throughout the life of the system. Also by allowing the provider to utilize the



latest technology, there is the potential of more cost savings as newer products can do more with less. A more automated system requires less labor and allows the owner to refocus and better utilize the effort of their staff. Due to the fact that different types of projects require different levels of expertise, in using the RFP method it is easier for the owner to match the complexity of the project to the qualifications of the solution provider.

### **Case Study:**

To help demonstrate the real world effectiveness of the RFP process, a success story has been chosen to support these arguments. The case selected is a project that Edison Automation supplied so that the advantages of the RFP method can be presented using first hand knowledge.

#### *Project: City-Wide SCADA – Shreveport, LA*

In June 2001, The City of Shreveport, LA awarded Edison Automation a contract to upgrade the Supervisory Control and Data Acquisition (SCADA) system for the T.L. Amiss WTP and the water distribution remote sites. This became the first phase of a city-wide system that would later incorporate the Lucas WWTP, the North Regional WWTP, and the Wastewater Collection system feeding these two plants.

The project was awarded following a rigorous evaluated bid process. Key criteria included: provider's implementation (personnel and plan), compatibility with established design requirements, performance of proposed system, provider's experience and capacity, Fair share Program compliance, and cost which included both project cost and long-term support agreements. The selection process also included reference interviews and site visits.

After the award of the RFP for the SCADA project, which established the general design parameters for automation, Edison worked closely with the city and the consulting engineering community on numerous plants upgrades projects. A section of each project was dedicated for automation components and system integration. Each project had its own automation performance requirements, but the systems supplied were also required to integrate seamlessly into the city-wide SCADA project.

By using the RFP approach for an "umbrella" project, the City was able to establish an automation design standard and a critical partner. Funding established in other projects (from E&I budgets) provided incremental automation upgrades that expanded the original SCADA project. Working in this manner, the city was able to monitor and evaluate the performance of their automation partner and take advantage of E&I funding connected to other infrastructure improvement projects. By the end of 2005, they had a state-of-the art, city-wide SCADA network. Future utilization of this network may include



applications for meter reading, intelligent transportation systems and security at other city facilities.

When asked about the success of the project, Mike Strong, director of Operational Services of Shreveport, had this to say. “A major part of my plan to improve Operational Services was to take a new approach in automation of our water and sewer infrastructure.’ [The city] invested over \$10M in automation that is producing over \$5M per year in real cost savings.’ ‘Edison Automation is a valued partner in this ongoing pursuit.”

**Conclusion:**

A low bid environment does not take people, process, and culture into account when evaluating the procurement of an automation or control system. Products alone do not make a successful project or a satisfied customer. An experienced and “big picture” focused automation and control systems provider can provide a superior end result with average equipment whereas a weak integrator with the best equipment often produces a very poor end product.

**References:**

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**Prepared By:**

Sean Stewart

Edison Automation Inc.  
1800 Elm Hill Pike  
Nashville, TN 37210  
PH 615-256-2522  
Fax 615-256-1307  
sstewart@edisonautomation.com

