P25
BEST PRACTICE

PROCURING YOUR P25 SYSTEM

tait
communications

Who should read these guides?

If you are a Public Safety official who is responsible for, or involved in, procuring a new communication system, this guide (and the others in the series) is written for you. You may be new to the position, or focused on other disciplines, such as IT. Or you may be new to P25. We assume that you have an understanding of Land Mobile Radio, but not necessarily in-depth knowledge.

We also assume that your interest is pragmatic; you want to make sure you procure and/or manage your radio system to meet the needs of your first responders and public service providers in a fiscally-responsible way. Becoming an expert on all related topics is not your objective.

We hope these guides will benefit you and your wider Public Safety Communications community by presenting you with a range of P25 topics so you can more effectively engage in the process.

The decision to adopt the digital open standards-based P25 platform offers Public Safety agencies many benefits, but it also raises a lot of questions. There are many common questions - and there a lot of agencies who have already tackled them, who are happy to share their experiences.

Tait is sponsoring an on-going project, to discuss these topics and put forward some answers.

Over a series of intensive round-table sessions, our participants discussed their own experiences and challenges, generously sharing their frustrations and triumphs. Together with Tait expert advice, these guides include their many valuable insights, based on their hands-on experience working through typical P25 project challenges.

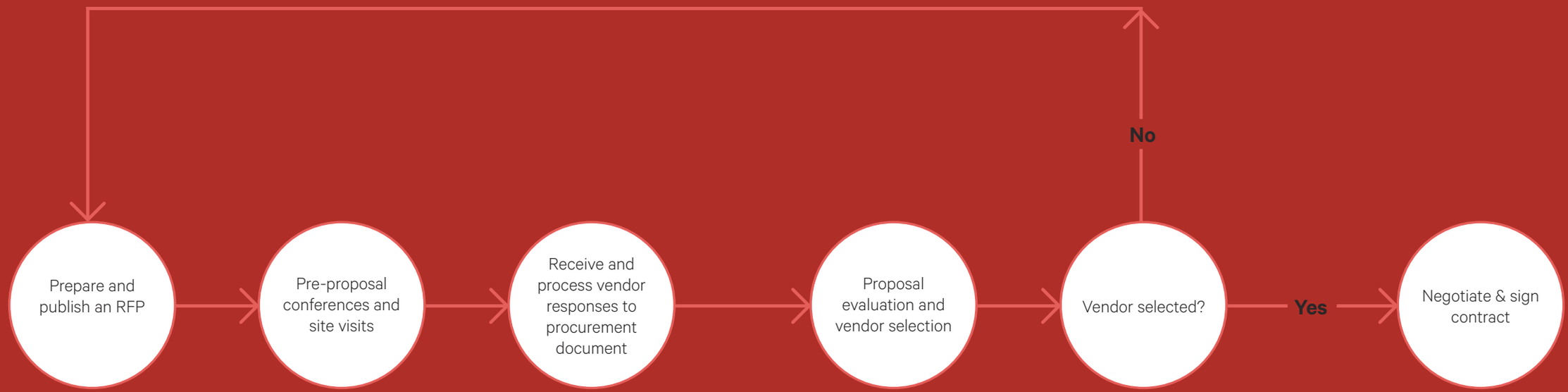
Learn more and subscribe to future guides at
www.p25bestpractice.com

PROCURING YOUR P25 SYSTEM

- Where can you turn for advice on the procurement process?
- What are the advantages of working with a consultant?
- Should you consider sole sourcing from your current vendor?
- What should be included in your RFP?
- How should you evaluate vendor proposals?

CONTENTS

PROCURING - OVERVIEW



DEFINING THE PROCUREMENT PROCESS

What is the best way to procure your new system? P25 system buyers face several choices. Let's look at some of these, to explain the potential impact of your decisions.

Open competitive process

Another question is whether to use an open competitive process or to negotiate directly with a favorite vendor.

As discussed throughout these guides, all evidence suggests that an open, competitive process will result in savings in great majority of circumstances.

RFI, RFP, RFB or RFQ

After deciding to pursue an open competitive process, the next question is which form it should take.

Beware: these terms may have slightly different definitions and significantly different commercial and legal implications in your environment. We provide our definitions not as the only correct interpretation, but to explain the different concepts.

RFI (Request for Information)	
Some agencies require any vendor competing for their business participate in an RFI first. Typically used early in the process to narrow down technology choices, it is often short on detail and conducted during the technology evaluation stage, long before final specifications are released. RFI may include a request for budgetary pricing.	There are two reasons for using an RFI: • if you suspect technologies other than P25 may be right for your needs, • you need detailed information about available solutions. A qualified consultant will be able to provide the same information, saving significant time and, quite often, money.
RFB/RFQ – Request for Bid/Quote	
Typically used when specifications are so detailed that the issuing agency is confident the outcome can be decided solely on price, RFB/RFQ leaves little or no room for exceptions (non-compliant responses). This process requires significant work in preparing the procurement document, with no room for alternative interpretations of the requirements. At the same time the specifications must ensure that no qualified vendors are excluded due to obscure or proprietary requirements. System design must be nearly 100% complete and included in the document.	Use only when you know exactly what you want and when you are confident your procurement document has captured your requirements with great accuracy and detail.
RFP Request for Proposal	
The most common of the three procurement processes, it provides a high level of system design detail, but leaves room for vendors' creativity. It requires less work up front, but makes the evaluation of responses more difficult, as proposals are more likely to be dissimilar and the decision not based solely on price. It provides the buyer some flexibility in evaluating and selecting the vendor, but evaluation is more complicated and there is greater potential for protests.	Use this approach, but define your evaluation criteria clearly for internal purposes before the document is released.

“EVEN IF YOU KNOW EXACTLY WHAT YOU WANT TO BUY, THE COMPETITIVE PROCESS WILL SAVE YOU SIGNIFICANT AMOUNTS OF MONEY.”

Purchase subscriber units with the system?

One of the first questions is whether to buy the system together with the subscriber equipment or have two separate competitive processes. There are pros and cons for both of the approaches.

On one hand it is comforting for the buyer to give total responsibility to one vendor. On the other hand, the list of user equipment vendors is much longer than the list of network vendors, so the increased competition among subscriber radio vendors can yield significant (30-40% observed on average) cost savings.

Whichever way you go, make sure from the very beginning that the entire process is challenge-proof: fair, transparent, clean and clearly defined. Failure to do so can lead to cancelling the entire process, loss of time and money.as well as major embarrassment.

"Radios offered now may be obsolete by the time the system is implemented. Place a separate order close to implementation."

FINANCING

Equally important, although in a different decision making category is the form of purchase you choose; capital purchase, lease, or long-term managed services contract? While none of these approaches is entirely new, vendors are offering additional flexibility so this decision deserves your careful consideration.

Capital purchase

Pay for the system up-front, typically in implementation milestone-based instalments. Negotiate post-implementation maintenance separately. You own the equipment.

Lease

Make pre-agreed periodic instalment payments. Lease terms will typically include some maintenance and may include upgrades. You will not build equity in the equipment. This approach is typically selected for financial reasons, the level of commitment is similar to capital purchase and breaking the lease is very difficult.

Long-term Managed Services Contract

Make pre-agreed periodic instalment payments. You may be building equity in the equipment and own it at the end of the term, depending on your contract. The contract should include maintenance and upgrades. The main advantage of this approach is handing over the responsibility for maintaining the system, in some cases including all hardware and software upgrades, to the vendor.

FINALIZING TECHNICAL AND PROJECT SPECIFICATIONS

RFP / RFQ	
Consultant • Technical • Logistics • Project	**Customer** • Commercial • Legal

Producing a successful RFP/RFB requires a high level of expertise and experience in technical, logistical, commercial and legal areas. Again, the experience of a consultant is invaluable here. A consultant can overlay your specific requirements with her/his standard procurement document templates to cover the first two topics (technical and logistical). They will then merge it with your organization's standard procurement documents, covering the commercial and legal requirements in a way that is tried and tested.

The final documents should be carefully and critically reviewed by an internal RFP review team, to ensure that all contents are relevant, reflect your organization's needs and do not contain any errors.

Technical specifications for P25 systems are typically extensive documents - often more than 200 pages - and they are often used as templates for new projects. This can sometimes transfer errors and inapplicable requirements from previous documents so thorough proofreading and editing is essential.

"AVOID BRAND-SPECIFIC TERMS IN THE PROCUREMENT DOCUMENTS"

PREPARE YOUR RFP

The most commonly-selected procurement process in Public Safety communications system purchases is the Request for Proposal (RFP).

There are no commonly recognised, unbiased, detailed templates in circulation, but the following pages show a sample high-level table of contents for a new system purchase RFP.

You can use it as a checklist to test your RFP for completeness.

Format and contents

Explain your requirements and expectations explicitly regarding the format and contents of proposals. The more uniform the format of the responses, the easier it will be for you to evaluate them. However, even if you succeed in making them relatively consistent, you can expect the responses to be voluminous, requiring a lot of labor to assess.

Special attention should be paid to pricing sheets. Spell out very clearly up front how you want the vendors to present pricing information. If vendors have the freedom to present discounts, software options, license fees in any way they choose, you will find that the pricing information is very difficult to analyze and compare.

1. INTRODUCTION

- Background, definitions, objectives of the project
- Tentative schedule
- General (commercial and legal) information for offerors
- Contract terms and conditions
- Proposal contents, submission and evaluation

2. BACKGROUND AND GENERAL DESCRIPTION OF WORK

- Scope of work
- Current communications system environment
- Partcipating entities
- Available frequencies and licensing information
- System functional objectives
- Available sites
- Major system components
- Services to be provided by the successful supplier
- Services to be provided by the issuer

3. GENERAL SYSTEM REQUIREMENTS

- P25 conformance
- Coverage
- Capacity
- Interoperability
- Resilience
- Security
- Core and optional technical/operational network features

4. RADIO SYSTEM INFRASTRUCTURE REQUIREMENTS

- Network and site control
- Network management
- Repeaters
- Expansion and migration capabilities

5. DISPATCH CONSOLE REQUIREMENTS

- Interface to voice radio system
- Dispatch console features and performance requirements
- Dispatch console configuration and interface requirements
- Logging recorder
- Dispatch console furniture

6. BACKBONE TRANSMISSION SYSTEM REQUIREMENTS

- Technology
- Architecture
- Capacity
- Reliability
- Management and functionality
- Interfaces

7. SUBSCRIBER RADIO EQUIPMENT

- Mobiles
- Portables
- Desktop stations

8. REDUNDANCY AND BACKUP CONSIDERATIONS

- Infrastructure requirements
- Interconnection links
- Physical security at network sites

9. COMMUNICATION SITE FACILITIES/SITE IMPROVEMENTS

- Existing facility upgrades
- New sites requirements
- Equipment shelter specifications
- Tower specifications
- Generator specifications
- Uninterruptible power supply (ups) specifications

10. SYSTEM ACCEPTANCE TESTING

- Factory acceptance testing
- Field acceptance testing
- Backhaul tests
- Rf coverage acceptance test plan
- Xx-day reliability performance test
- As-built documentation

11. SYSTEM SHIPPING AND INSTALLATION

- Shipping
- Radio system shelter/equipment room
- Backhaul
- Dispatch consoles
- Mobile and control station radios
- Removal of old equipment

12. OPERATIONAL, TECHNICAL AND USER TRAINING

- Radio system operational training
- Radio system maintenance training
- Radio system management training
- User training
- Backhaul system training

13. SYSTEM PERFORMANCE GUARANTEES

- Equipment and software
- Subsystems
- Rf coverage

14. WARRANTY MAINTENANCE AND SYSTEM SUPPORT

- System software and hardware warranty
- Equipment support
- Spare parts inventory
- Warranty maintenance performance levels
- Test equipment

15. DETAILED PRICING INSTRUCTIONS AND TEMPLATES

"Avoid doing anything hinting at bias in your process. Ensure no individual controls or has undue influence over the process."

DISTRIBUTING YOUR RFP

Most government entities rely on their own websites for distribution of procurement documents. There are several on-line service providers that scan local government websites daily for new opportunities then notify their subscribers. Most qualified vendors subscribe to these services, so publishing your RFP on your city/county/state website is entirely adequate.

However, you can also ensure that all qualified vendors are aware of your opportunity, by contacting them directly, or ask your consultant to do it for you. Your peers are a good source of information about suppliers of P25 equipment. Another source is Project 25 Technology Interest Group (PTIG) http://www.project25.org/membership/membership-directory

Response time

Allow your vendors enough time to respond to the RFP. You want to make sure the proposals are of high quality – that takes time. Be aware also that a very short response time is often interpreted by vendors as a sign of bias towards the incumbent supplier and may persuade potential bidders to abstain.

In short, anything less than 30 days for even the simplest projects is unadvisable. Depending on the complexity of the project, 60-120 days is recommended in most cases.

"ESTABLISH A CODE OF CONDUCT FOR YOUR STAKEHOLDERS."

RECEIVING PROPOSALS

RFPs provide vendors with some degree of freedom in proposing solutions. Consequently, your evaluation process must be more elaborate than for a RFB/RFQ (Request For Bid/Quote): a simple determination of compliance/eligibility followed by choosing the lowest price.

Evaluating responses to RFP requires you to establish additional criteria and rules to score them. Before publishing the RFP you should define

- ☑ the members of your evaluation team,
- ☑ the rules for communicating between your entity and the vendors,
- ☑ evaluation criteria.

The evaluation criteria is your tool to be used for your advantage. It has two purposes:

- to communicate your high level priorities to the vendors,
- to enable fair and efficient evaluation.

The evaluation criteria should be worked out in detail internally so that your organizations' priorities are well understood and agreed by everyone on the evaluation team, making the process as smooth and non-controversial as possible.

The criteria should, however, be communicated only on high level externally. Providing all the mechanics of evaluation to the vendors may lock you into buying a sub-optimal solution, as they will naturally focus on meeting your criteria, rather than proposing the most effective solution.

Picking your team

Your evaluation team should include a broad cross-section of all stakeholders, although it is not necessary to include representatives from each of the stakeholder groups.

You should also involve objective experts: a consultant will bring experience and objectivity, your peers from neighboring counties or state organizations understand your challenges from a different perspective. You need to decide whether to give them any votes, but their opinions and comments will be invaluable.

Rules of engagement

The rules of communication with the vendors must be simple but strictly enforced, to make the procurement process as transparent and fair as possible. Failure to do so may lead to your decision being successfully challenged, resulting in significant loss of time and money - not to mention embarrassment. Your RFP should include a clause defining a single point of contact. This will usually be someone in your Purchasing department as they are familiar with procurement rules.

You should also state that all communications will be shared with all competitors, and clarify unequivocally that any attempts to approach your organization other than via the designated point of contact will result in the offending vendor being eliminated from further proceedings.

PRE-PROPOSAL ENGAGEMENT

It is recommended to hold mandatory pre-proposal conference and site visits for the prospective suppliers within two or three weeks after issuing the RFP.

The pre-proposal conference is your opportunity to reinforce the most important messages in the RFP document itself, to explain your evaluation criteria, and to meet the potential proposers. For the vendors, it is an opportunity to evaluate their suitability to the project and to ask additional questions.

Site Visits

Site visits are a crucial part of the process. Typically, the pre-proposal conference is followed up immediately by site visits. When you grant the vendors access to all your relevant sites and allow them time to gather quality information, you put the onus for accurate system design on them.

The site visit also gives them an opportunity to evaluate potential reuses of infrastructure elements, lowering your overall project cost.

Make sure you remove all obstacles to gathering the necessary information – provide local transportation, do not rush anyone, provide answers to all questions posed during the visits in writing to all of the competitors.

Some vendors prefer to bring large teams to the site visits. This is undesirable, because it complicates your logistics and requires that you provide more team members to accompany them. As a result, it is difficult to maintain consistency of information to other vendors. Consider limiting the number of team members per vendor to no more than two or three people.

Q&A

Regardless how diligent your team might be in preparing the RFP, some additional questions and requests for clarifications are inevitable. During the prescribed period between the release of the RFP and Q&A cut-off date your designated point of contact should receive all questions in writing, acknowledge them and forward to the competent party in your team.

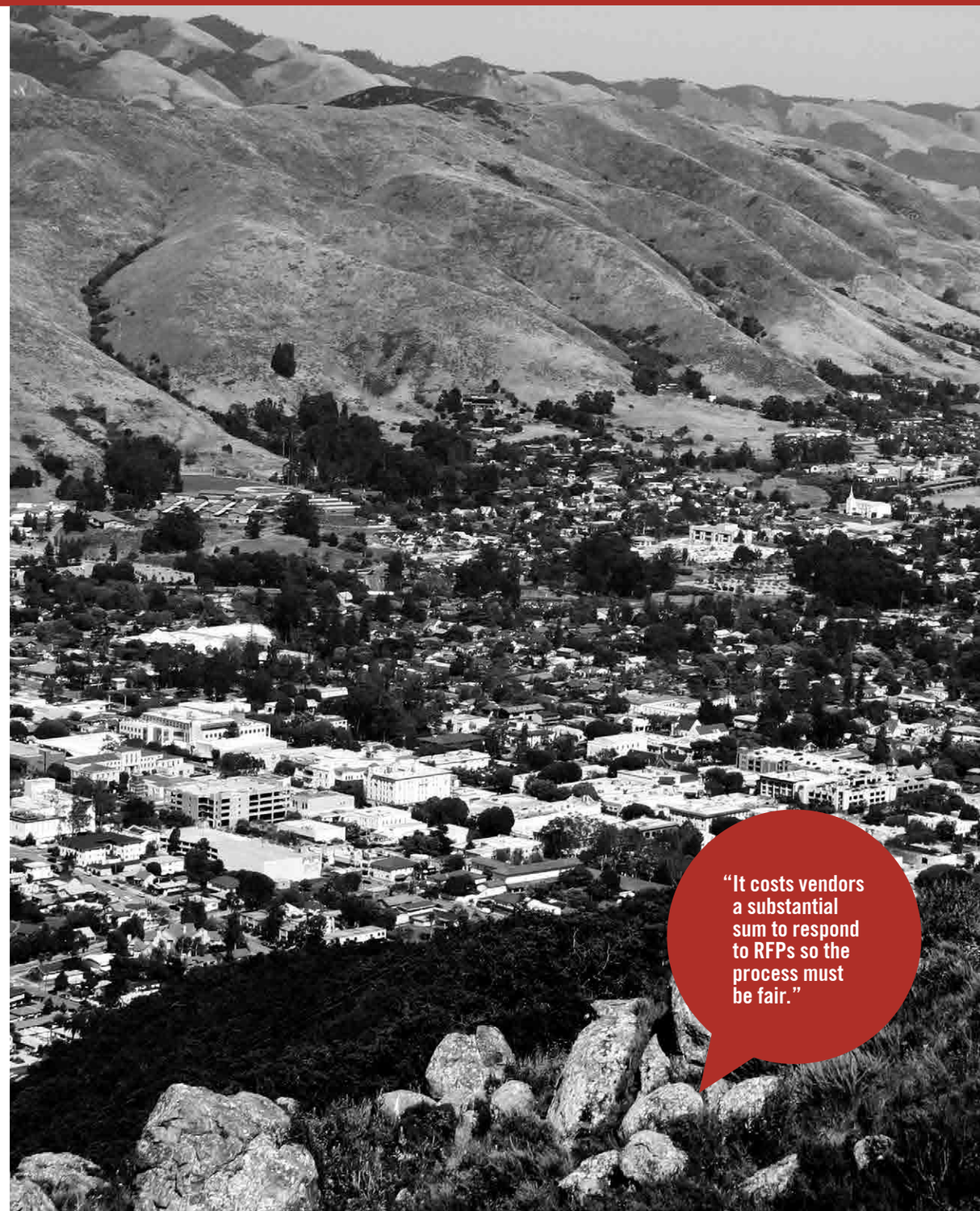
Responses should be either simultaneously sent to all designated vendor points of contact by e-mail or posted on line. Establish the cut-off date for the questions and answers two to three weeks before the proposal due date, so that the vendors can lock and finalize their designs and proposals in a timely manner.

Coping with large number of questions from multiple vendors on larger projects can become a challenge. Some agencies attempt to organize the responses so that they are grouped according to specific topics and sections of the RFP.

This can quickly become overwhelming, so it is best to keep it simple and answer the questions roughly in the order in which they were asked.

The Q&A sometimes become official appendices to the RFP - in other cases they remain as e-mails or free-flow web postings. Whatever form you choose, the written answers to vendors' questions are part of the official record and become de facto part of the RFP, superseding any earlier statements.

So it is important to clarify that any verbal information provided by your team to the vendors is not relevant or binding, unless captured and officially provided in writing to all competitors.



RECEIVING AND PROCESSING VENDORS' RESPONSES

Your RFP should describe in strict terms the format in which the proposal is to be provided, the ways it can be delivered and the deadline. Be very strict about compliance to these formal requirements. Allowing a vendor to use a different format or to be late may jeopardize the entire process and force you to repeat it.

Many bid issuers still ask for large numbers of hard copies. As the proposals are often very large, it is both expensive to the vendors and impractical for the evaluators. It is better to have limited (one or two) hard copies and a larger number of soft copies, most conveniently on password-protected USB flash drives.

For RFBs and RFQs, where price is the only evaluation criteria for compliant proposals, it is customary to open the bids in public and announce the quotes immediately. There is no need to do so for RFPs since price is just one of the criteria and these are typically very large documents, making public opening of the proposals impractical.

It is a common courtesy to let all of the vendors know who else is competing for your business, but this is not essential or mandatory.

"Always contact the references provided by the vendors. Do not assume they will be biased towards their current supplier."

PROPOSAL EVALUATION AND VENDOR SELECTION

Proposal evaluation is always, implicitly or explicitly, a two-step process. In the first step you need to establish proposals' compliance with basic requirements and, thus, eligibility for full technical, commercial and financial evaluation.

Compliance

You may have already listed all "must comply" criteria in the RFP. These could be technical, commercial, legal or financial. Even if they were not explicitly listed, a typical RFP will give you leeway to exclude vendors who do not comply with the most important of your requirements. For example:

- Unacceptable level of technical non-compliance
- Proposed technology not compliant with P25 standard
- Proposed user equipment lacks CAP compliance certificate
- Proposed technology has not yet been commercially deployed
- Non-compliance with commercial terms and conditions such as payment terms or non-performance penalties
- Poor customer service references

Make sure that any decision to exclude a vendor from further evaluation is justified, and solidly and thoroughly documented. Exclusion is likely to be protested, either formally or informally.

Evaluation

Some entities split proposals to evaluate:

- by cost,
- by all other criteria,

then compare. This may not work well in complex system RFPs as the proposals are likely to be significantly different in scope, performance and functionality. So normalizing the proposed price may be very difficult for anyone but subject matter experts.

Any significant opportunity is likely to attract between three and five competing vendors each with proposals of 1,000 to 2,000 pages. This creates a challenge in terms of processing such a massive amount of information. The work has to be divided and allocated.

You can do this in three ways:

1. You can assign the work by proposal - one member of your team is responsible for evaluating Proposal A, one for Proposal B, one for Proposal C. But that often creates lack of balance between different evaluators and you may end up evaluating the evaluators rather than the proposals.
2. You can assign more than one person to each proposal. This will partly remedy the problem, but assumes you have sufficient number of competent evaluators.

3. A better way is to assign a specific topic or topics - preferably corresponding to your evaluation criteria - to each of the team members and ask them to provide detailed comparisons of each proposal on their allocated topic. This may be coverage design, system resiliency, pricing for example. This may still be difficult, but fairer and more manageable, as any differences between evaluators will be applied across all competitors.

Wherever possible, involve a consultant in this process. Being familiar with the standard proposal documentation, she/he can process the material much faster and ensure that individual evaluators' oversights, mistakes or biases are corrected.

Evaluation criteria

It is also important to agree in advance on how to evaluate categories that are not easily quantified - such as system resiliency - or that can be quantified in multiple subcategories. For example, when evaluating pricing, are you looking at the total initial investment? Total costs over 5, 10, 15 years? Or maybe you want to evaluate the proposed costs of infrastructure, maintenance services, licensing and subscriber units separately? These decisions need to be made before evaluation begins and should reflect your organization's prioritized needs.

Weighting the criteria

The evaluation criteria should be very well defined for internal purposes. It is good practice to assign weights to specific criteria.

The figures below are an example only. Your weightings may differ significantly.

Coverage	50%
Functionality/reliability	30%
Price	10%
Local support	5%
Misc.	5%
Total	**100%**

Unfortunately, this definition is not sufficient in practice. You should also agree in advance how the points should be assigned in each category. For example, it is rarely sufficient to simply rank the proposals by price and assign the points by place – 1st 100 points, 2nd 80 points, 3rd 60 points, because the price differentials are never evenly spread.

Your evaluators should write reports on their areas of responsibility and present them to the team so their conclusions are well understood and can be queried. The team's meetings should be recorded.

If the winning vendor cannot be clearly selected by proposal evaluations alone, you may consider creating a short list and asking for vendor presentations to clarify any outstanding questions. Occasionally, it may be necessary to go back to the drawing board, issue a new RFP and repeat the entire process. The best way to avoid this risk is to write a good, clear, detailed RFP document and keep the entire process fair and transparent.

The process should be designed so that the outcome of the evaluation can be summarized in a simple table, clearly identifying the winner. For example:

	Functionality 30%	Coverage 50%	Price 10%	Support 5%	Misc 5%	Total
Competitor A	20	10	5	8	3	46
Competitor B	18	17	3	12	1	51
Competitor C	14	22	8	10	2	**56 - winner**
Competitor D	17	16	10	10	1	54

The selection process outcome should not be communicated to the vendor community until it is approved by the authorized officials.

CONTRACT NEGOTIATIONS AND SIGNING

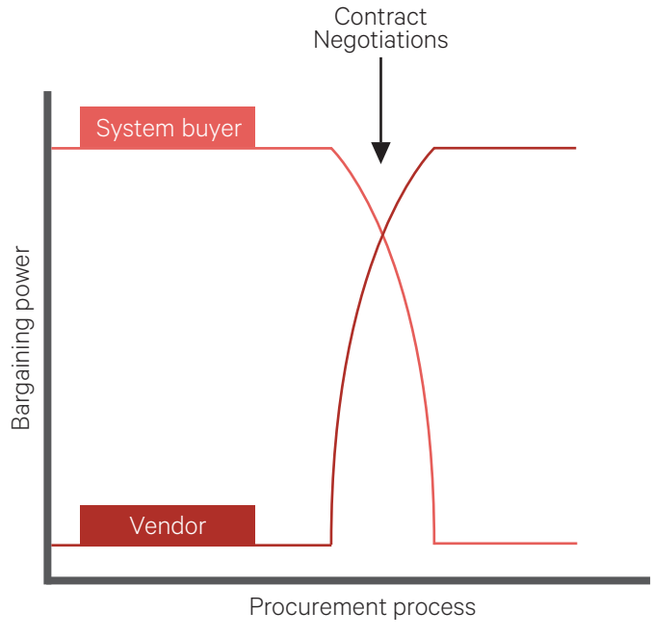
The roles and responsibilities (chief negotiator, technical expert, commercial expert, legal expert etc.) within your negotiating team should be well understood, defined, and clearly communicated. This will help to achieve a successful outcome quickly and efficiently.

Having an experienced negotiator on your team is very important. No matter how knowledgeable you are, the people sitting across the negotiating table from you are probably negotiating contracts routinely, and will have specific and extensive experience in this area.

If you have skilled professionals in your purchasing department, make them your chief negotiators, but many agencies choose to give that role to an experienced consultant with a proven track record.

It is equally important to set the negotiation objectives up front. At the beginning of the process you have tremendous power. Indeed, you can probably make the selected vendor give up more than they would like to. This will feel like a win, but may create some internal pressures within the vendor organization to recover the margins via shortcuts/change orders and have a negative impact on the project later. Be fair and aim for a win-win outcome of the negotiations.

Keep in mind that once the contract is signed, your negotiating power will decrease drastically. The diagram shows how bargaining power shifts throughout the procurement process.



Instead of squeezing every penny out of the vendor, focus on producing the most comprehensive contract document. Any discrepancies and gaps from the proposal documents need to be remedied now. Pay particular attention to items such as completeness of pricing, integrity of acceptance test documents, project timeline, maintenance agreement and payment terms.

Payment schedule

Be realistic about how much you need to pay up-front. The vendor needs to make a sizeable initial investment in production and third party purchases. 10-15% is the norm. Other payments should be tied to clearly defined project milestones. The most common ones are:

- ☑ Final Design Review
- ☑ Factory Acceptance Test
- ☑ Equipment shipments
- ☑ Training
- ☑ Field Acceptance Tests (functional and coverage)
- ☑ Burn-in

Try to retain a reasonable, yet significant amount until final system acceptance. Fifteen percent is typical.

"Avoid overlap between warranty and maintenance agreement cover."

INSIGHTS

All quote bubbles are direct insights from the industry participants at the Tait P25 round table discussions. To find out who the participants were, visit **www.p25bestpractice.com**

"Sales guys will tell you anything. You need an enforceable guarantee."

"Approach negotiation with give and take, and be prepared to compromise so everybody wins."

"Establish a code of conduct for your stakeholders."

"Other agencies and consultants may have warnings to share about contract "gotchas"."

"Avoid being adversarial – evaluation is a team effort requiring a positive working environment."

"Consider scheduling interviews ("orals") with each vendor."

"An independent voice: engage a consultant to assist evaluation and navigate complexities, deal with vendors more easily and with less emotion."

"Read details of maintenance agreements carefully! The elements that most commonly fail are often excluded and only those that rarely fail are included."

"Critical for procurement: experts on team, plus a lawyer, plus an accountant."

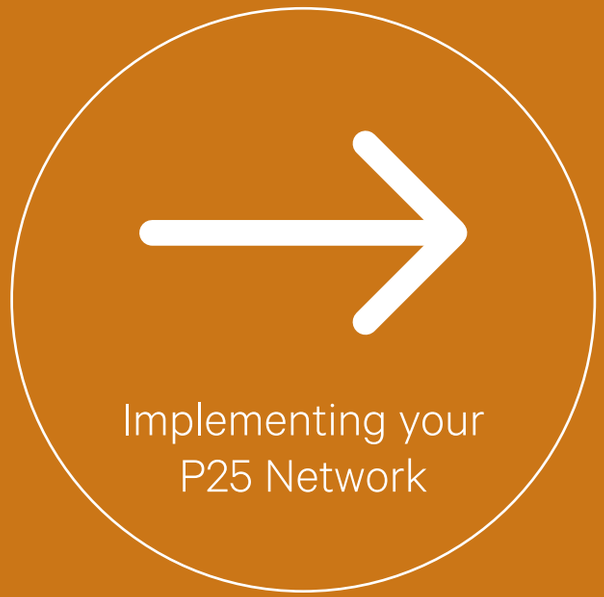
"Research and homework cannot be overstated."

"Vendor evaluation should be like electing the Pope: everyone is in the room but no one talks about it outside until it is decided."

Your project is now ready to become a reality, as the contract you previously negotiated is put in place. As well as installing your sites and equipment, testing, and implementing the final cutover, you must now prepare your organization for the changes, to be sure you maximize your investment.

For information and best-practice advice about the implementing phase of your project, see “Implementing your P25 System” available now at....

www.p25bestpractice.com



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