

## **RFP Preparation Guide for Two-Way Radio Planning Services**

This guide describes Utility Telecom’s recommendations on the basic elements that should be included in a “Request For Proposal (RFP) for Two-way Radio System Planning and Design Services”. It is structured to provide the user with relevant information about the prospective service provider and to provide the service provider (consulting firm, engineering company, or any solutions provider) with adequate information about the project. This enables the service providers to better estimate the costs of services desired and submit a better quality bid.

These recommendations are a result of Utility Telecom’s years of experience preparing strategic plans, radio systems plans, engineering and design of radio systems, and FCC licensing services. We know from experience that the amount of time, effort, and level of detail spent in developing the RFP will reflect directly on the quality, quantity, and trust-worthiness of the bid responses.

This information is provided as a value-added service by Utility Telecom and may be used in full or in part by our Clients.

### **1.0 Background and General Information**

This section provides general information on your company, the RFP itself and the project(s) it is associated with, its purpose, and any particular instructions to the bidders for submitting their RFP response including any documents and information that should be included in the response. Include any financial, purchasing, legal, operational, and safety clauses that your company requires here or in section 9.

Key dates and essential requirements for the RFP should be identified and clearly marked in this section.

### **2.0 Statement of the Problem and Opportunities**

Provide information on your company size, business, business units and subsidiaries, if appropriate, and organization. What does your company do and how are the two-way radio system(s) used today? Briefly discuss the history and development of the existing system. Describe the main focus of the study and identify any system(s) or sub-system(s) ‘riding’ on the existing system. For example, if this is a plan for a wide-area voice radio system, describe both the existing voice facilities and the other system(s), e.g. low-speed radio data, telemetry, or paging, that use the existing two-way radio system.

Discuss the existing radio infrastructure and identify known problems and limitations. Include in your discussion information on the following items as appropriate:

- RF band and channel(s) in use
- Existing radio sites
- Dispatch locations
- Any telemetry, paging, and/or data over radio application(s)

- Telephone interconnect
- Leased telephone circuit(s)
- Approximate number of base, repeater, mobile, and portable units
- Who maintains the existing system
- Interference, adjacent channel or co-channel problems, if known
- Coverage problems, congestion, and any other problems

General system drawings and maps are always useful and should be shared with the bidders. The more relevant information you can provide, the better a bidder can estimate the effort and resources required to complete your project.

### 3.0 Scope of Work

In this section, list the systems and/or issues that you would like the service provider to investigate as well as those that will not be included. Provide information about the complexity (or simplicity) of the study and who will be the audience for the final report.

Is this for strategic planning only? Do you want the study to include an RFP for equipment procurement (usually a separate part of the study)? Do you want to include licensing work or does your company perform that function internally?

Ask for specific information on the methodology that the consultant will use. Have them detail the steps and the checks and balances that will be used throughout the project. Can they visit your sites, what kind of access, security and safety issues need to be addressed?

Figure 1 details Utility Telecom's methodology and including the checks and balances that we have built into the process. Note that our approach encourages an on-site, interactive, and flexible process that we have used with our Clients with much success time and time again. Watch for consulting firms that want to make one trip on-site, meet with you once or twice, and then weeks later submit a final product.

Keep in mind that a good planning process must be linked to your corporation's goals and objectives. Interactively working with you allows the service provider's team(s) to learn more about your corporation, culture, and resources. This interaction inherently enables maximum use of existing resources. For example, upgrading a radio system oftentimes involves the reuse of existing buildings, towers, sites, etc. The service provider not only needs to know about these resources but must have enough detail information about the resources to ascertain its reusability for the planned system.

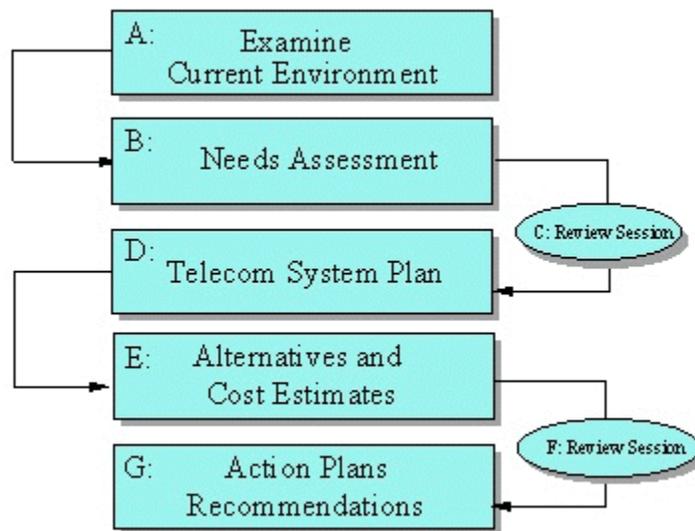


Figure 1: Developing a Radio System Plan

#### A. Examine Current Environment

Determine how the service provider will develop an accurate overview of the existing radio system, assets, existing conditions and operating practices.

For example, Utility Telecom might propose to investigate the following:

- System overview (maps, diagrams and service territory)
- Existing sites
- Existing radio and communication system assets (owned or leased)
- Existing dispatch and control centers
- Existing leased services for voice and data
- FCC licenses
- Existing radio system inventory (equipment types, remotes, functionality, loading analysis)
- Coverage areas and coverage problems
- Existing offices, plants and expansion/consolidation plans
- Operating and dispatch practices
- Documentation
- Existing maintenance, site leases and operating expenses
- Problems and concerns

#### B. Needs Assessment

Ask the service provider how they would determine the "Needs" of your company relative to the system and services being studied.

For example, Utility Telecom would propose to evaluate the ‘Needs’ and the ‘Wants’ that drive your radio system requirements. We would examine and prioritize these needs into a specification that details the system performance for a wide range of existing and anticipated needs. With your input, we will define the reliability, availability and coverage requirements of the radio system and can also recommend mobile data, signaling, interconnect and other enhanced services a radio infrastructure might provide.

We will quantify where redundant equipment is necessary and develop a list of standard choices for vendor equipment that is compatible with your needs. This list will also help you evaluate future vendor products for compatibility and usefulness in the system.

We will then recommend a strategy to maximize the use of your existing equipment, reducing the cost of replacement hardware while at the same time weighing how this will interface with new strategies and equipment that meet your longer-term vision.

We will also quantify your assumptions on how you want to do business in light of the internal and external factors that impact your telecom system. For example, do you want to resell any of your two-way radio services or is this strictly a system for internal use?

Utility Telecom’s radio needs analysis typically includes an evaluation of:

- Geographic locations of facilities
- Availability of spectrum in your locations
- 37dbu, 39dbu or other coverage prediction maps
- Coverage using portables, mobiles, in-building coverage, etc. as needed
- FCC licensing and narrow-banding issues
- Voice (and data where appropriate) throughput analysis with growth projections
- Reliability, availability, environmental equipment requirements
- Types of radio equipment, conventional, trunking, narrowband, etc.
- Radio and control system interface and dispatching requirements
- Future role of the radio system and how it fits with your company’s vision, mission and future plans
- Maintenance practices and objectives
- Use of telephone company and other common carrier services
- Vendor/bidding/sourcing criteria
- Budget constraints or other constraints and considerations

### C. Review Session(s)

Ask the service provider how they will keep you up-to-date on their progress throughout the study. It is essential for you to not only manage the service provider’s performance but also to find a way to create an interactive dialog. Keep in mind that

you will learn a lot from the service provider about what other companies in similar situations are doing. Utility Telecom would propose to do this through the use of formal review sessions and a "hands-on" approach to working with your team. Utility Telecom's review sessions agenda include:

- Summary descriptions of current environment and radio system objectives
- Review and validation of "must have" objectives
- Review and validation of "wants" and ranking criteria
- Review and approval of our documentation format

#### D. Develop a Long Range Wireless Strategy

Ask the service provider to detail what will be included in the Radio System Strategic Plan. You may ask them to discuss the following items in their final report:

- Statement of assumptions
- FCC regulatory environment
- Why specific frequency bands were chosen
- A high level system design and explanation
- Details of any new sites required
- Explanation of radio coverage maps
- Radio system hardware, design, operation and growth strategies (short term and long term)
- Use of mobile data, signaling, paging, interconnect and other enhanced functions on the radio system
- Reliability, availability, environmental requirements
- Maintenance practices
- Lease vs. own strategy
- Use of telco, microwave and other common carrier services (as appropriate)
- Vendor and procurement guides
- Specific constraints and objectives that you have identified

#### E. Implementation Alternatives and Cost Estimates

Ask the service provider about their steps in evaluating alternative approaches to system design and how they will evaluate inappropriate alternatives.

Utility Telecom examines a list of alternative approaches in sufficient detail to support selection of the preferred approach. These alternatives are developed in the context of the long-range wireless strategy developed in the previous step.

Our typical approach to system design includes, among other things:

- System Description (type of radios, RF power, antenna systems, frequencies) and modes of operation (conventional, trunking, narrowband, digital /analog, voting required, etc.)
- Required radio sites
- Propagation and coverage analysis for each radio site, frequencies and associated links (as appropriate)
- Composite radio coverage area analysis
- Interconnection and dispatch operations
- Equipment required and cost estimates
- Estimated installation and operating costs

## F. Review Session

Utility Telecom strongly advocates the important for the Client to get a good and realistic feeling for what will be in the final report before the final product is produced. We believe that this is the Client's true litmus test to make sure the service provider properly and adequately understood the requirements set forth. We recommend that you ask the service provider to explain how the final report and the conclusions contained therein will meet with your management's concurrence and potential approval.

Utility Telecom consistently accomplishes this through a second formal review session. In this review session, we will cover important issues including:

- Summary and detail descriptions of design alternatives from step E
- Applying ranking criteria developed in steps B and C to alternatives
- Interacting with the Client's staff to select system(s) and indicate preferences from the list of alternatives
- Developing system descriptions
- Obtaining approval of documentation and report format

## G. Action Plan and Recommendations

Finally, ask the service provider to detail how they will develop and document the final system design plans with sufficient detail to support implementation costs and plan schedules for all hardware, licensing, permitting, installation and user training.

Utility Telecom includes detailed recommendations and outlines the rationale, cost/benefit, and the operational as well as the organizational needs that justify the recommended radio system plan. We purposely package these information, which supports and fulfills the objectives and strategies detailed in the long-range wireless strategy, to help you "sell" your project to all levels of management. Typically, we will make recommendations in the following areas:

- The radio system architecture

- Expansion and/or additional uses of the system
- Capital budgets required to accomplish the goals
- New projects for the current year with the associated budget(s) and schedule(s)
- Recommendations on existing projects and other work in progress
- Anticipated growth and how the new/upgraded system will evolve
- Operations and maintenance policies for the new/upgraded radio system

#### 4.0 Deliverables

Specifically state the deliverables that you require of the study. This should include details such as the number and type (hard or soft) of copies you require of the final report, if you require special presentation(s) of the report, and if basic introductory training seminars for key management personnel are necessary.

In a study of this type, Utility Telecom’s main deliverable would be a formal report documenting the long-range wireless system strategic plan and other key recommendations and findings. We usually follow this with a formal presentation to the Client’s management and staff, including a discussion of the next steps required to implement the plan.

#### 5.0 Schedule

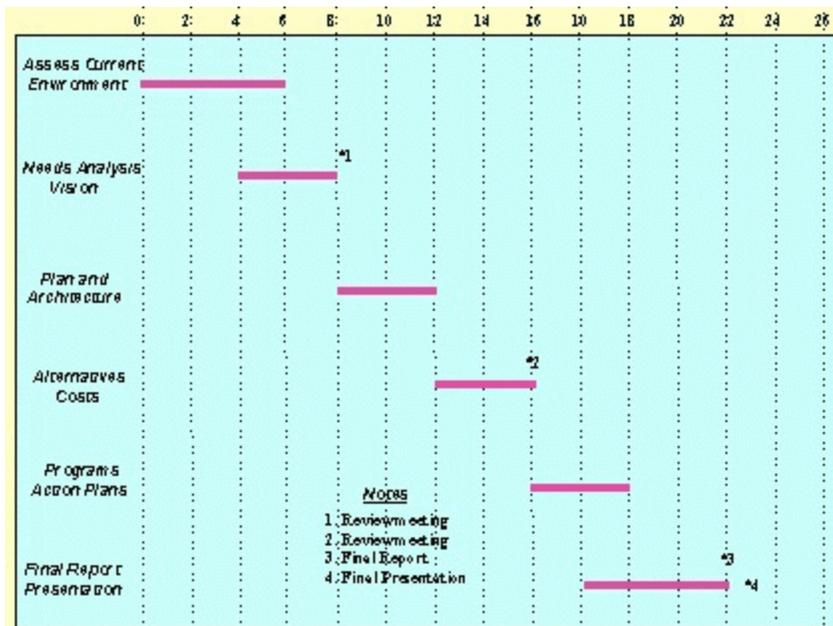


Figure 2: Typical Phases and Schedule

Ask the service provider to give you a preliminary schedule for the development of the radio system plan and include key dates for review meetings and required deliverables.

Depending on the size of the project, a comprehensive radio system planning process may take anywhere from 2 to 6 months to complete. A detailed preliminary schedule should be presented when a formal proposal is submitted.

## 6.0 Staffing

Inquire about the service provider's staffing strategy for this project and ask them to include resumes of the personnel to be assigned to the project. Ask for the percentage of time each individual proposed will work on the project.

The intent here is to get some form of assurance that the personnel with the talent and skills needed for the project do get assigned to your project. Some service providers may actually have staff with impressive qualifications but at times assign less experienced personnel to do the work after award of the project.

Ask the service provider to designate one person as your single point of contact and insist, if you must, that this be one of their more experienced personnel.

## 7.0 Fees and Expenses

Finally, ask the service provide to submit a firm price quotation for the work proposed (less any travel expenses). This should include a payment schedule for their fees. For example, 20% upon execution of a contract, 20 % after the first milestone, 20 % after the second milestone, etc. Also, ask for an estimate on the number of man-hours that they anticipate necessary to complete the plan. Asking the service provider for estimated man-hours gives you a feel for how much homework they have done regarding your project and gives you an idea of the overall effort.

Ask for an hourly rate for other related services beyond those contained in the quotation/bid. For example, what would it cost for an additional presentation to one of your business units and what terms of payment would apply?

We typically do not recommend travel costs to be included in the fixed bid price. We suggest that regular "economy or coach class" travel and associated rental car, lodging, and meal expenses associated with the project be billed back to the Client at cost. Our experience indicates this works best for the Client and the service provider. Asking the service provider to bid a fixed price for all travel expenditures is asking the service provider to gamble on what the travel costs are going to be. Usually, the service provider has to use a high estimate to make certain their costs are covered. Note that this practice encourages the service provider to stay in their office (to minimize travel cost overruns) rather than get out in the field and view your sites, talk to your radio system users, and interact with you as much as practical.

## 8.0 Other Information

Utility Telecom recommends that there be a section where the prospective service provider can explain why they feel they are qualified to perform the study. Ask them for references on similar studies and their experience with similar projects. Have them describe the experience they have with the different technologies involved (e.g.: different frequency bands, voting, trunking, new narrow band digital equipment, antenna systems, mobile data, paging, control center and dispatch operations, using leased carrier services, etc.). Include any other requirements that you feel are necessary.

## 9.0 Contract Documents

Specify any special insurance, liability or purchasing requirements of your firm. Include a sample of the anticipated contract that will be executed or ask the consultant to provide you with one.

The secret to Utility Telecom's success is our firm belief and passion for establishing "Shared Expectations" with each and every Client. The more information, both technically and organizationally, that we share with our Client, the better the business relationship, effectiveness, and the final product become.

## 10.0 Bid Evaluation

If possible, describe your bid evaluation process including any special constraints or concerns that may need to be addressed. If you are using an external resource as part of your evaluation team, can/will you share this information with the bidders? Again, the more relevant information that you can share with the bidders, the better the responses will be.

## 11.0 Schedule and Contacts

Include your desired schedule, deadline dates, submittal procedures and contacts (telephone, fax and email) for inquiries. Re-iterate how many copies you want of the proposal and the mailing address where it is to be sent. Include a FedEx address in addition to a post office box.

Allow at least a four-week period for the bidders to respond to your inquiry. This gives the bidders' team adequate time to address questions, review your system information, ask questions, and prepare a good and responsive proposal.