Mid-West/Great Lakes ARC/INFO User Conference

Contracting for Mapping

November 1999

ADGENDA

Introduction

Methods for Selecting a Contractor

Content of Request for Proposal

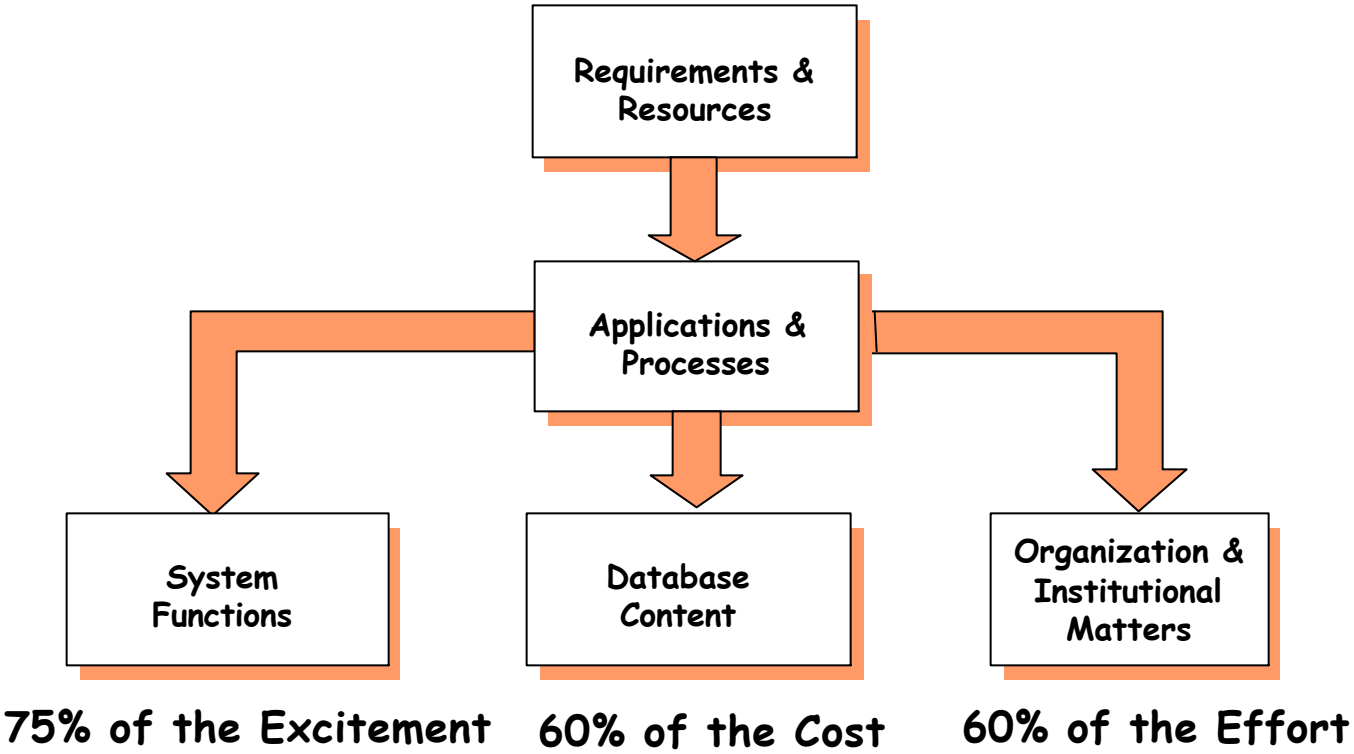
Selection Process

Questions

GIS Implementation Design

- Planning is a must
- Document what is currently available
- Catalog what is required
- Make recommendations for the future
- Insure capability between departments
- Develop Database Design
- Examine Software Solutions
- Analyze Qualified Conversion Services

Applications Drive the Design



Biggest Mistake

Just Do It

It works for Nike

But not for Data Conversion

Types of Contracts

- Manual to digital Conversion
- Migration/Translation
- Field Data Collect

Migration / Translation

- CAD based map using AutoCAD or Microstation.
- Graphics only
- No map projection or coordinate system
- Build a database that links graphics to attributes in real world coordinate system

Field Data Collection

- Lack of Maps and Records
- GPS and Field Computers
- Time
- Field Validation

Map Maintenance

- Completed the conversion process
- Problem
  - Too Much Work
  - Too Little Work
- Outsource the work
  - Maintenance
  - Map plotting
  - Distribution

Contracting Process

What is the process for contracting for mapping?

Step One - Identify the Problem

- Document with a clear statement
- Understanding is Critical

  All other decisions will be driven by the problem statement.

Step Two - Define the Solution

- How will things be different after the project is completed?
- Describe the new data.
- Describe the activities necessary to get there.

Step Three- Secure the Funding

- Estimate the Cost
  - The ultimate Catch-22
- Contact Mapping Contractors for Information
- Assure Valid Proposals

Methods for Contracting

- Bidding
- Benchmark
- Sole Source
- Request for Qualifications
- Request for Proposals

Bid

- Bidding rarely produces the best result.
- Requires very detailed specifications and scope of work.
- The low bid usually results from one of two realities.
  - The contractor does not understand the scope of work.
  - The contractor is trying to "buy" the job.

Benchmark

- Selected contractors perform a “pilot”
- Too expensive for either the contractor or organization.

Sole Source

- Avoid the time and expense of the RFP selection process
- Already have a working relationship
- Involve the contractor in the development of the specifications
- Involve the organization in the development of the scope of work / approach

Request for Qualifications

- Avoid the time and expense of the RFP selection process.
- Accepted throughout the industry as the best method for selecting professional services. (1988 - Brooks Act)
- Creates a team between the organization and the contractor.
- Request for Information (RFI) to identify potential contractors.

Request for Qualifications

- Develop a list of companies that may have the ability to do the proposed work.
- Evaluate and short list
- Interviews
  - Extensive interaction between all parties.
- Negotiate a contract
  - Involves the contractor and organization in defining the scope of work and specifications.

Request for Proposal

- Requires development of detailed specifications and scope of work
- Requires more time to prepare and evaluate
- Requires more time and expense for the potential contractors
- Tends to put the organization and the contractor in an adversarial relationship

Request for Proposal

- Terms and conditions
- Scope of work
- Specifications
- Evaluation criteria
- Cost of the project

Request for Proposal

- Submission Requirements
  - Company profile / experience
  - Resumes
  - References
  - Cost proposal
  - Proposal response forms

Request for Proposal

- Submission instructions
  - Define terms
  - Pre-proposal meeting
  - Source documents
  - Site Visit
  - Submission criteria

Request for Proposal

- Proposal Evaluation Criteria and Procedures
- Contract Award Procedure
- Project General Terms and Conditions
  - Conduct of Work
  - Contract Price
  - Time of Completion
  - Insurance

Request for Proposal

- Project General Terms and Conditions
  - Conduct of Work
  - Contract Price
  - Time of Completion
  - Insurance

Request for Proposal

- Project Technical Requirements
  - Project Overview
  - Mapping Specifications
  - Scope of Work
  - Schedule

Request for Proposal

- Project Phases
  - Project Initiation
  - Pilot Project
  - Production

Request for Proposal

- QA/QC procedures and criteria
- Personnel
- Project Deliverables
  - Procedures Manual
  - Field Data Collection
  - Digital feature and attribute data
- Project Management

Request for Proposal

- Source Materials
  - Maps
    - Paper
    - Digital raster
    - Digital vector
  - Tabular
    - Digital files
    - Paper files

Request for Proposal

- Exhibit A – Database Design
- Exhibit B – Cartographic Design
- Exhibit C – Source Documents

Proposal Submission

- Structure of the proposal
  - Forms
  - Table of contents
  - Sections

Proposal Submission

- Cover letter
- Scope of services.
- Quality Assurance/Quality Control
- Alternatives
- Schedule

Proposal Submission

- Production Capacity
- Resumes
- Project Price

General Terms & Conditions

- Change Orders
- Extra Work
- Performance
- Subcontractors
- Sample Contract
- Compliance with Laws and Regulations

General Terms & Conditions

- Damages
- Litigation
- Indemnification
- Insurance
  - Workman's compensation
  - Liability
  - Proof of insurance

General Terms & Conditions

- Permits and Licenses
- Termination and Default
- Delay
- Payment Method
- Disputes
- Taxes
- Confidential Information

Scope of Work

- What do you want the contractor to do?
- The scope of work will define what the contractor will and will not do.
- It will also define what the organization will and won't do.

Scope of Work

- Don't define HOW to do the work?

Scope of Work

- Management of the project
  - Prepare a Project Plan
  - Prepare a Procedures Manual
  - Submit Status reports
  - Attend coordination/PM meetings
- Work activities
  - Access to source documents
  - Build database
  - Translation of data to GIS format
  - Incremental deliveries
  - Delivery requirements

Technical Specifications

- Specifications need to be defined in terms of function or outcome.

Technical Specifications

- Features and Attributes
- Accuracy
  - Location
  - Currency
  - Completeness
- Format
  - Graphics
  - Database
  - Cartography/display
- Map projection/coordinate system

Technical Specifications

- Source Documents
  - Describe in detail what each source document contains.
  - Identify what source documents contain the information to convert.
  - Describe the quality of the source documents

Metrics

- What is the size of the project?
  - Describe how many units are to be converted
  - Describe the area
  - List the number of customers
  - Etc.

Delivery Requirements

- Incremental
- Define priority areas
- Format
- Acceptance procedure/criteria

Cost

- Unit
- Activity or task
- Setup
- Project Management

Evaluation Criteria

- Experience
- Approach
- Cost

Evaluation Criteria

- Project Approach (35%)
- Qualifications and experience (10%)
- References (20%)
- Schedule (10%)
- Experience with the organization's staff (5%)
- Overall cost (15%)
- Responsiveness (5%)

Project Management

- Two reasons projects fail
  - Lack of clear specifications
  - Scope creep

Project Considerations

- Planning is a must
- Convert only features you will maintain
- Problems will occur
- Train your users
- Show early success with a pilot area
- Share resources with other departments

Conclusions

- The best method for contractor selection is the Request for Qualifications.
- The goal is to create a team between you and the contractor.
- Keep everyone focused on the specifications.
- Have a plan for managing change.

Questions

Thank You for your Time