



**K. J. Somaiya College of Engineering, Mumbai-77**  
(Autonomous College Affiliated to University of Mumbai)

**A1 Batch:**

**Group members:**

**Aakash Saroop - 1911001**

**Rushabh Gandhi - 1911012**

**Pathik Ghugare - 1911014**

**Title: Writing Request for Proposal**

**Objective:** To write Request for Proposal

**Expected Outcome of Experiment:**

Course Outcome	After successful completion of this experiment a student will
CO 5	Understand the selection of the most appropriate people for the project

**Books/ Journals/ Websites referred:**

1. *Bob Hughes, Mike cotterell, Rajib Mall "Software Project Management", fifth Edition, Tata McGraw Hill, Special Indian Edition*
2. *Royce, "Software Project Management", Pearson Education, 1999.*
3. *Project Management Institute: "A Guide to the Project Management Body of Knowledge (PMBOK Guide)" 5<sup>th</sup> Edition Project Management Institute.*
4. *John Nicholas, Herman Steyn, "Project Management for Business Engineering and Technology" 4th Edition.*

**Pre Lab/ Prior Concepts:**

**New Concepts to be learned:**

- 4 Phases of Software Project
- Triple Constraints of a Project
- Process of Initiation of a Project



**K. J. Somaiya College of Engineering, Mumbai-77**  
(Autonomous College Affiliated to University of Mumbai)

○ Need for General Template of Request for Proposal

Every project is part of an attempt to solve a problem. The first step in solving a problem is recognition and acceptance that it exists. After that, the person or group facing the problem—the customer and users—seek out someone who can help. The steps taken after that—soliciting people to do the work, evaluating their proposals, and reaching an agreement are all part of the procurement management process. If the customer organization has an internal group capable of solving the problem, it turns the problem over to them. If not, it looks for an outsider to handle the problem, possibly by sending out to contractors a formal request for help called a request for proposal or RFP . Each contractor examines the customer’s problem, objectives, and requirements as stated in the RFP and determines the technical and economic feasibility of undertaking the project. If the contractor decides to respond to the request, it presents the customer a proposed solution (system concept) in a formal proposal or letter of interest . The customer then examines the proposal—or in the case where several contractors responded, all the proposals—and makes a choice. The result is a formal agreement between the chosen contractor and the customer. But most ideas or potential systems never get past Phase

Various Activities Carried out are **Initial Investigation** which focuses on the elements of the problem, including:

- The environment.
- The needs, symptoms, problem definition, and objectives.
- Preliminary alternative solutions and where possible the estimated costs, benefits, strengths, and weaknesses of each.
- Affected individuals and organizations.

To approve the concept for further study, the customer must be convinced that:

- The need is real and funding is available to support it.
- The idea has sufficient priority in relation to opportunities presented by other ideas.
- The idea has particular value in terms of, for example, applying new technology, enhancing reputation, increasing market share, or raising profits.
- The idea is consistent with the goals and resources of the organization.

Preparing **Request for Proposal** The **RFP**—request for proposal (or request for bid , request for quotation , invitation to bid , or similar term) is notification that a customer is interested in hiring a contractor. The dual purpose of the RFP is to outline the user ’ s idea (problem, need, etc.) and to solicit suggestions (proposals) for solutions—usually with the intent of awarding a contract for the best one. RFPs are sent to contractors on the user ’ s bidders list .

The likelihood of winning and undertaking a project depends on a number of factors:



**K. J. Somaiya College of Engineering, Mumbai-77**  
(Autonomous College Affiliated to University of Mumbai)

- Have competitors gotten a head start?
- Does the contractor have sufficient money, facilities, and resources to invest in the project?
- Will performance on the project be good for (or damaging to) the contractor's reputation?
- Other factors similar to the criteria employed by the customer in the initial investigation.

Format of Request for Proposal

## **An E-voting System**

### **Section 1:**

#### **Introduction:**

The Government of India, or simply the Centre, is the chief administrative authority of the Republic of India. The National Constitution names the government as the federal executive, legislative and judicial authority. However, the term is usually used to refer to the executive branch. The current president Droupadi Murmu acts as the head of state and is the highest figure of nominal executive authority, but it is the prime minister Narendra Modi who is the head of the government. The seat of the government is located in New Delhi, the capital of India.

India has a quasi-federal form of government, called "union" or "central" government, with elected officials at the union, state and local levels. India is currently the largest democracy in the world, with around 900 million eligible voters, as of 2019.

The total estimated cost of Lok Sabha elections in India is Rs 50,000 crore (\$7 billion), according to the New Delhi-based Centre for Media Studies. About \$6.5 billion was spent during the U.S. presidential and congressional races in 2016, according to OpenSecrets.org, which tracks money in American politics. The CMS projection marks a 40 percent jump from the \$5 billion estimated to have been spent during India's 2014 parliamentary vote. And it amounts to roughly \$8 spent per voter in a country where about 60 percent of the population lives on around \$3 a day.

### **Section 2:**

#### **Statement of Work:**

Mention what is expected from the project

System must provide secure online election for India with approximately 130 crore population with the following operable capability:

1. The e-Voting system, to be called Votebox, shall have the potential to handle a large number of voters accessing their ballots simultaneously.
2. The Votebox system and its instructions will be available in different regional languages as India has diversity in languages, it would help to ease out the process.



**K. J. Somaiya College of Engineering, Mumbai-77**  
(Autonomous College Affiliated to University of Mumbai)

3. The Votebox system shall provide centralized, secured hardware servers for the elections as well as firewalls and other security methods. Security would be at highest priority as the voting system should not be tampered and the results need to be accurate. Special provision should be provided to verify voter's identification information.
4. The system shall generate unique individual passcodes to be used by voters to access his or her ballot.
5. The system shall also provide backup and recovery procedures so the data is not lost or manipulated.
6. The system being offered shall be compatible with all major internet browsers and on smartphones, tablets and other common digital devices that have internet access.
7. After getting the data with full verification then comes the portal for accepting votes. As we have securely verified the citizen, the vote casted on the day of voting should also be verified by the system. (Live Face recognition, biometric system etc).
8. The system must support data integration that is pre-formatted Upload: it will accept a secure pre-formatted upload with user IDs and associated data that will designate the ballots a user can use for voting. A well-defined method for uploading and updating data must be provided by the vendor.
9. Just like the elections are divided statewise, further divided district wise. So the system should also develop a system which operates in a similar way as well..
10. There will be the provision to allocate specific time slots to the voters to cast their vote. So, there would be limited users casting the vote which will result in less load on servers that will help the process to be smoother and secure.
11. There should be necessary assistance provided for using the system such as a telephone assist from a technically trained individual or a chatbot.
12. The Contractor will be responsible for providing User Training, User Manuals for all types of users (Voters, Administrator, etc) and Technical Documents.
13. System will be tested by e-Voting and physical votes. The output of the voting (e-Voting & physical votes) should be exactly matched at each round. Data entry of the physical votes is the responsibility of the Contractor.
14. Contractor should set up voting ballots in remote areas where people don't have access to E-Voting devices
15. The System should pass OWASP Top10 security check certificate to stop hacking attempts before going LIVE. Managing security of the new system from all types of external attacks (like hacking, SQL Injection, Denial of Service Attack etc.).
16. Contractor will have sole responsibility for developing fair and transparent voting system and have the capability to provide the following reports throughout the voting window and once the voting window closes:
  - a. Voter turnout and results by ballot
  - b. Results of election: combining online as well as votes casted on remote voting desk.
17. The system should be integrated with the Aadhar portal for citizenship verification.



**K. J. Somaiya College of Engineering, Mumbai-77**  
(Autonomous College Affiliated to University of Mumbai)

18. The system should not be accessible at any location outside India.
19. To ensure privacy when casting the vote, the system should ensure that only one person is present in the field of view of the camera of the device accessing the system.
20. In case the face linked to the Aadhar card does not match with the face present in the photo captured when casting the vote, the user should be flagged as an imposter.

**Exclusion:**

Data of citizens of India will be provided by the Government of India. Places for data centers will be provided by the Government. Registration of candidates standing for election won't be provided by the Votebox system.

**Scheduled delivery date**

The Votebox system should go live on or before January 20, 2023. All necessary software(portal), hardware(servers,etc) , documents(user manual,guides, help videos) should be supplied and completed on the same date.

**Subcontractor**

The contractor can assign subcontractors to other organisations with only prior written consent approved by the Government of India.

**Cost & Contract**

The Government of India is ready to spend in contract for Votebox system maximum Rs.200 Cr. The cost for Hardware, software and service after deployment is to be included.

**Section 3:**

**Proposal Table of Content**

- Cover sheet
- Executive summary
- Statement of Work
  - Background statement of need
  - Technical approach and distinguishing features
  - Project plan and schedule
- Budget and price
- Project organization and management plan
- Prior experience and key personnel
- Attachments
  - Signed statement of confidentiality



**K. J. Somaiya College of Engineering, Mumbai-77**  
(Autonomous College Affiliated to University of Mumbai)

- Letters of commitment for work contracted to third parties.

**Section 4:**

**Proposal Submittal & Deadlines**

**Submittal**

Contractor will submit two (2) copies of the completed proposal along with all confidential information to:

A. Election Commission of India  
Nirvachan Sadan,  
Ashoka Road,  
New Delhi 110001.

B. Ministry of Electronics and Information Technology (Government of India)  
Electronics Niketan, 6, CGO Complex,  
Lodhi Road, New Delhi - 110003

**Deadline**

Proposal must be received at Election Commission of India (New Delhi) by EOD October 20, 2022.

**Section 5:**

**Selection Date & Criteria**

**Selection and award date**

September 30, 2022

**Selection criteria**

Completed proposals received by the deadline will be evaluated by the following criteria:

1. Technical ability:

- (a) Ability of system to meet performance requirements within limitations of existing facility, standards, and codes.
- (b) User friendliness of the system with respect to operation, reliability, and maintenance.
- (c) Use of state-of-the-art technology to ensure system remains current into the next decade.
- (d) System support services during contract period and available afterward.

2. Contractor's bid price.



**K. J. Somaiya College of Engineering, Mumbai-77**  
(Autonomous College Affiliated to University of Mumbai)

3. Contractor experience and qualifications.
4. Project management and project plan.
5. During the process of evaluation of the technical proposal, the contractor might be required to make a presentation on its Proposal covering Experience/Technical Proposal including Understanding about the project, Implementation Methodology, time Scheduling etc. In case presentation is required, the date and time of the presentation / interactions will be intimated individually to the contractor's organization.

**Selection 6:**

**Technical Information**

**Confidentiality**

The system acknowledges that all the material and information which has and will come into its possession or knowledge will be held in strictest confidence and should make sure that the information is only given to appropriate employees who require it and not to any third party.

**Supporting Technical Data**

1. Technical Data(Confidential Data)
2. Technical performance requirements for online voting system are as follows:
  - Error Tracking
  - Encryption of data
  - Support maintenance and guidelines for use.
  - More security provided to help e-voting results to be accurate.

**Post Lab Activities (with reference to your Project):**

1. What are the different phases through which Project Development passes?





**K. J. Somaiya College of Engineering, Mumbai-77**  
(Autonomous College Affiliated to University of Mumbai)

1) Project development is a 4-step framework designed to complete project successfully from start to finish.

The different stages of project development are as follows.

a) Project Initiation stage:-

- i) This stage is when we meet clients & stakeholders to understand their goals, motivation & hope for the project.
- ii) For e-voting system, the initiation phase would be understanding of the issues with offline voting system & need for online voting system.

b) Project Planning stage:-

- i) It is the stage when we create a comprehensive project plan which involves translating proposal into tasks & scheduling in a roadmap documenting processes and short term goals.
- ii) Eg:- For evolving system a cost estimation is to be done for nationwide implementation of the said system.





**K. J. Somaiya College of Engineering, Mumbai-77**  
(Autonomous College Affiliated to University of Mumbai)

### ii) Project execution Phase:-

- i) It is stage when we truly start executing the project, where we carry out activities we mapped out in planning stage.
- ii) For voting system, the government will keep a track of project status from the contractor and regular meetings will be held discussing the project process, issues and solutions.

### iii) Project closure phase:-

- i) The online voting system is formally implemented across the country. It includes series of task such as installation of product, relieving resources, reward, recognition to team member and formal termination.

2. Difference between Software Development & Software Project Management.



**K. J. Somaiya College of Engineering, Mumbai-77**  
(Autonomous College Affiliated to University of Mumbai)

2) Software Development Management	Software Project Management
① It is a recurring cycle of planning, scheduling, testing, deploying and supporting new versions of corporate IT system.	It is a proper way of planning and leading software projects.
② It is to ensure that applications meet internal & external stakeholder needs, in terms of reliability, maintainability and compliance.	It is strongly influenced by changing requirements during the execution of project.
③ Designing the software architecture, software.	Preparing plans to accomplish the work that needs to be done to meet those requirements. Estimating cost, effort, duration, resources required for the project.
④ Converting complex logic/algorithm to code.	Managing all the above aspects to take the project to conclusion.
⑤ Testing and debugging software.	

3. Explain briefly the difference between a Project and Operations.





**K. J. Somaiya College of Engineering, Mumbai-77**  
(Autonomous College Affiliated to University of Mumbai)

3) <u>Projects</u>	<u>Operations</u>
<p>① Projects are temporary.</p> <p>② Projects are specific tasks that have a beginning and end such as working on developing a new product.</p> <p>③ Project is given a budget within which the task needs to be carried out.</p> <p>④ Developing a product is to meet specific requirements in a project.</p> <p>⑤ e.g. e-voting system</p>	<p>Operations are ongoing</p> <p>Operations are repetitive activities in any organization such as accounting, finance or production</p> <p>Operations are carried out in a manner so as to generate maximum profits.</p> <p>Using a particular service is an example of an operation.</p> <p>eg. security required for e-voting system.</p>

4. Justify the various sections of RFP.



**K. J. Somaiya College of Engineering, Mumbai-77**  
(Autonomous College Affiliated to University of Mumbai)

4 Justify the various sections of RFP

ANS

- i) Background : This section helps us in giving an overview of what exactly are the requirements and what the company is all about
- ii) Statement of work : It briefs the work that has to be done by the contractor which includes various points in the detail which are exclusions, delivery date and cost
- iii) Proposal table of content : This explains the general map of the proposal and its formats attached as annexure
- iv) Proposal submittal and deadlines : This section provides the details of the deadlines to submit the contract along with the address of the company
- v) Selection date and criteria : This section mentions the approval date among the various trends for the prospect. It also explains how the selection criterion would be applied in approval process.
- vi) Technical information : This section mentions some confidentiality points & technical specifications for the period.