**Requirement**

A requirement is:

A condition or capability needed by a stakeholder to solve a problem or achieve an objective.

A condition or capability that must be met or possessed by a solution or solution component to satisfy a contract, standard, specification, or other formally imposed

documents.

A documented representation of a condition or capability as in (1) or (2).”

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| **Requirement Quality** | **Examples Of Bad requirements** | **Examples of good requirements** |
| Atomic | Students will be able to enroll to undergraduate courses and post-graduate courses. | Students will be able to enroll to undergraduate courses.  Students will be able to enroll post graduate courses. |
| Uniquely Identified | 1-Students will be able to enroll to under graduate courses. 1-Students will be able to enroll to post graduate courses | 1 Course Enrollment 1.1 - Students will be able to enroll to under graduate courses. 1.2 - Students will be able to enroll to post graduate courses. |
| Complete | A professor user will log into the system by providing his username, password and other relavant information | A professor user will login into the system by providing his username, password and deparment code. |
| Consistent and Unambiguous | A student will have either under graduate courses or post graduate courses but not both courses. Some courses will open to both to under graduate and post graduate students. | A student will have either under graduate courses or post grduate courses but not both. |
| Traceble | Maintain student information.. Mapped to BRD req ID? | Maintain student information.. Mapped to BRD req ID 4.1. |
| Prioritized | Register Student - Priority 1 Maintain Student information - Priority 1 Enroll courses - Priority 1 View Report Card - Priority 1 | Register Student - Priority 1 Maintain Student information - Priority 2 Enroll courses - Priority 1 View Report Card - Priority 3 |
| Testable | Each page of the system will load in an acceptable time frame. | Register Student and enroll courses pages of the system will load within 5 seconds. |

|  |  |
| --- | --- |
| **Removing Negation from Requirements**  **Bad Example** | **Good Example** |
| All users with three or more accounts should not be migrated. | The system shall migrate only users having fewer than three accounts. |
| The registration process will default to International English and will not present a localized experience until country and language are selected. | The registration process shall default to International English. After the user selects the country and language, the registration process shall present a localized experience. |
| A domain name cannot be transferred to another registrar during the registration grace period. | The domain administrator may transfer a domain name to another registrar only after the registration grace period. |
| The PC administrator will not have the ability to change the FZL-Web user. | Only the system administrator shall be able to change the FZL-Web user |

**Requirement Gathering Vs Elicitation**

**Gathering**

"Gathering" assumes that the requirements already exist and are ready for documentation or review and forwarding to developers. Business analysts who "gather requirements" are recording existing requirements.

**Elicitation**

"Elicitation" means gathering and understanding information, information that has to be analyzed to produce the requirements. Business analysts who elicit information are using their analytical skills to define a solution and requirements to solve the expressed business problem.

**Requirement Elicitation Techniques**

1: One-on-one interviews

The most common technique for gathering requirements is to sit down with the clients and ask them what they need. The discussion should be planned out ahead of time based on the type of requirements you're looking for. There are many good ways to plan the interview, but generally you want to ask open-ended questions to get the interviewee to start talking and then ask probing questions to uncover requirements.

2: Group interviews

Group interviews are similar to the one-on-one interview, except that more than one person is being interviewed -- usually two to four. These interviews work well when everyone is at the same level or has the same role. Group interviews require more preparation and more formality to get the information you want from all the participants. You can uncover a richer set of requirements in a shorter period of time if you can keep the group focused.

3: Facilitated sessions

In a facilitated session, you bring a larger group (five or more) together for a common purpose. In this case, you are trying to gather a set of common requirements from the group in a faster manner than if you were to interview each of them separately.

4: Joint application development (JAD)

JAD sessions are similar to general facilitated sessions. However, the group typically stays in the session until the session objectives are completed. For a requirements JAD session, the participants stay in session until a complete set of requirements is documented and agreed to.

5: Questionnaires

Questionnaires are much more informal, and they are good tools to gather requirements from stakeholders in remote locations or those who will have only minor input into the overall requirements. Questionnaires can also be used when you have to gather input from dozens, hundreds, or thousands of people.

6: Prototyping

Prototyping is a relatively modern technique for gathering requirements. In this approach, you gather preliminary requirements that you use to build an initial version of the solution -- a prototype. You show this to the client, who then gives you additional requirements. You change the application and cycle around with the client again. This repetitive process continues until the product meets the critical mass of business needs or for an agreed number of iterations.

7: Use cases

Use cases are basically stories that describe how discrete processes work. The stories include people (actors) and describe how the solution works from a user perspective. Use cases may be easier for the users to articulate, although the use cases may need to be distilled later into the more specific detailed requirements.

8: Following people around

This technique is especially helpful when gathering information on current processes. You may find, for instance, that some people have their work routine down to such a habit that they have a hard time explaining what they do or why. You may need to watch them perform their job before you can understand the entire picture. In some cases, you might also want to participate in the actual work process to get a hands-on feel for how the business function works today.

9: Request for proposals (RFPs)

If you are a vendor, you may receive requirements through an RFP. This list of requirements is there for you to compare against your own capabilities to determine how close a match you are to the client's needs.

10: Brainstorming

On some projects, the requirements are not "uncovered" as much as they are "discovered." In other words, the solution is brand new and needs to be created as a set of ideas that people can agree to. In this type of project, simple brainstorming may be the starting point. The appropriate subject matter experts get into a room and start creatively brainstorming what the solution might look like. After all the ideas are generated, the participants prioritize the ones they think are the best for this solution. The resulting consensus of best ideas is used for the initial requirements.

**5W1H**

One of the most universally used tools for information gathering, analysis, organization and presentation is the 5W1H framework.  
  
This method is used across a range of professions, from process analysts to quality engineers to journalists, to understand and explain virtually any problem or issue. The same method can be used to organize the writing of reports, articles, white papers, and even whole books.  
This approach seeks to answer six basic questions in gathering information about nearly any subject: Who, What, When, Where, Why, and How. Sometimes, depending on the context, a second "H" might be used: How Much.  
  
In journalism, news story writing requires that the questions to be answered take a basic form:

* Who is it about?
* What is it about?
* When did it happen?
* Where did it happen?
* Why did it happen?
* How did it happen?

**How to Create an Agenda: Step by Step**

Creating an effective agenda is one of the most important elements for a productive meeting. Here are some reasons why the meeting agenda is so important.

The Agenda

communicates important information such as:

1. topics for discussion

2. presenter or discussion leader for each topic

3. time allotment for each topic

provides an outline for the meeting (how long to spend on which topics)

can be used as a checklist to ensure that all information is covered

lets participants know what will be discussed if it's distributed before the meeting. This gives them an opportunity to come to the meeting prepared for the upcoming discussions or decisions.

provides a focus for the meeting (the objective of the meeting must be clearly stated in the agenda)

How to Create an Effective Agenda

You're responsible for planning your project meeting this month. Arrggh!! What to do? Now you understand how important an agenda is to the effectiveness of the meeting, but don't know how to create one. Breathe easy! All you have to do is follow the steps outlined below.

1. Send an e-mail stating there will be a meeting, the goal of the meeting as well as the administrative details such as when and where it will be. Ask those invited to accept or decline the meeting. Make it clear that once they have accepted the meeting, they are expected to attend.

2. Ask participants requesting an agenda item to contact you no less than two days before the meeting with their request and the amount of time they will need to present it.

3. Once all of the agenda requests have been submitted to you, summarize them in a table format with the headings Agenda Item, Presenter and Time. It's your responsibility to ensure that each agenda item is directly related to the goals of this particular meeting. If an inappropriate request is made, suggest that person send an e-mail or memo instead or recommend that this agenda item be discussed in another meeting. Also, you must be realistic in the amount of time you allocate to each presenter. Don't cram an unrealistic number of agenda items into an hour meeting. When people accept an hour meeting, they expect to be finished in an hour. When meetings go over time, people generally tend to get uneasy. It's better to schedule 50 minutes of discussion into an hour time slot. This way you have 10 minutes to spare and if you get done a little early, people will be pleased.

4. Send the agenda to all the meeting participants the day before the meeting with a reminder of the meeting goals, location, time and duration. At this time, ask the presenters if they are happy with the order in which they will be speaking and the amount of time they have been allocated.

5. Of course, the most important part of creating an effective agenda is to follow it during the meeting!

**Meeting Minutes:**

Whether you’ve been tasked with taking notes for a committee or you’ve been appointed Secretary to the Board of your organization, preparing meeting minutes doesn’t have to be an arduous task. Here are some tips and ideas that will help you get started with writing and preparing effective meeting minutes.

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What’s involved with meeting minutes?

There are essentially five steps involved with meeting minutes:

1. Pre-Planning

2. Record taking - at the meeting

3. Minutes writing or transcribing

4. Distributing or sharing of meeting minutes

5. Filing or storage of minutes for future reference

1. Pre-Planning

A well-planned meeting helps ensure effective meeting minutes. If the Chair and the Secretary or minutes-taker work together to ensure the agenda and meeting are well thought out, it makes minute taking much easier. For example, depending on the meeting structure and the tools you use, the minutes-taker could work with the Chair to create a document format that works as an agenda and minutes outline as well.

2. Record taking - at the meeting

• Date and time of the meeting

• Names of the meeting participants and those unable to attend (e.g., “regrets”)

• Acceptance or corrections/amendments to previous meeting minutes

Decisions made about each agenda item, for example:

a. Actions taken or agreed to be taken

b. Next steps

c. Voting outcomes – e.g., (if necessary, details regarding who made motions; who seconded and approved or via show of hands, etc.)

d. Motions taken or rejected

e. Items to be held over

f. New business

g. Next meeting date and time

3. Minutes writing or transcribing

Once the meeting is over, it’s time to pull together your notes and write the minutes. Here are some tips that might help:

• Try to write the minutes as soon after the meeting as possible while everything is fresh in your mind.

• Review your outline and if necessary, add additional notes or clarify points raised. Also check to ensure all decisions, actions and motions are clearly noted.

• Check for sufficient detail:

o include a short statement of each action taken by the board and a brief explanation of the rationale for the decision

o when there is extensive deliberation before passing a motion, summarize the major arguments

• Edit to ensure brevity and clarity, so the minutes are easy to read

• What NOT TO INCLUDE:

o Be objective.

o Write in the same tense throughout

o Avoid using people’s names except for motions or seconds. This is a business document, not about who said what.

o Avoid inflammatory or personal observations. The fewer adjectives or adverbs you use, the better.

o If you need to refer to other documents, attach them in an appendix or indicate where they may be found. Don’t rewrite their intent or try to summarize them.

4. Distributing or sharing of meeting minutes

As the official “minutes-taker”, your role may include dissemination of the minutes. However, before you share these, be sure that the Chair has reviewed and either revised and/or approved the minutes for circulation.

5. Filing or storage of minutes for future reference

Most committees and Boards review and either approve or amend the minutes at the beginning of the subsequent meeting. Once you’ve made any required revisions, the minutes will then need to be stored for future reference.

**Why Prioritization is needed?**

Large software systems have a few hundred to thousands of requirements. Neither are all requirements equal nor do the implementation teams have resources to implement all the documented requirements. There are several constraints such as limited resources, budgetary constraints, time crunch, feasibility, etc., which brings in the need to prioritize requirements.

**MoSCoW**

The MoSCoW technique is used by analysts and stakeholders for prioritizing requirements in a collaborative fashion. Using a Human Resources System as an example, here’s an explanation of the MoSCoW Technique:

**MUST (M)**

Defines a requirement that has to be satisfied for the final solution to be acceptable e.g. The HR system “must” store employee leave history.

**SHOULD (S)**

This is a high-priority requirement that should be included if possible, within the delivery time frame. Workarounds may be available for such requirements and they are not usually considered as time-critical or must-haves. e.g. The HR system “should” allow printing of leave letters.

**COULD (C)**

This is a desirable or nice-to-have requirement (time and resources permitting) but the solution will still be accepted if the functionality is not included e.g. The HR system “could” send out notifications on pending leave dates.

**WON’T or WOULD (W)**

This represents a requirement that stakeholders want to have, but have agreed will not be implemented in the current version of the system. That is, they have decided it will be postponed till the next round of developments e.g. The HR system “won’t” support remote access but may do so in the next release.

You'll notice that the HR system features have been discussed in a decreasing order of priority - from what we must have, to what we should have, could have and won't have in that order.

**Practical Application**

This technique is best used when the BA has gathered all existing solution requirements.

1. Assemble all stakeholders – Each stakeholder, with help from the BA, is responsible for assigning priorities to the requirements that fall under their purview
2. All Requirements may be listed on a flip chart and prioritized by assigning categories to each [(M, S, C or W).](http://businessanalystlearnings.com/s/Screen-Shot-2013-03-05-at-41321-PM.png)
3. If there are multiple stakeholders with different opinions on what category to assign to a requirement, voting can be used to reach consensus.
4. Present categorized requirements in a readable format
5. The requirements should be reviewed throughout the project as stakeholder needs may evolve with time.

The BABOK Guide provides 8 criteria to be used for assigning priorities to requirements. They are:

* **Business Value:** Which requirement provides the most business value? The more business value a requirement will deliver, the greater the priority stakeholders may choose to assign to it.
* **Business or Technical Risk:** Some requirements pose a significant risk of project failure if not implemented successfully. The analyst may assign a high priority to this category of requirements so that if the project does fail, the least amount of effort would have been spent.
* **Implementation Difficulty:** Which requirements are the easiest to implement? Straightforward requirements may lead to quick-wins and provide an opportunity for the project team to familiarize themselves with other elements of the project before taking on more complex requirements for implementation.
* **Likelihood of Success:**Which requirements can provide quick-wins and increase the probability of project acceptance? If the objective of the project is to demonstrate value as quickly as possible and quell negative chatter, requirements that have a higher probability of success would be given high priority.
* **Regulatory Compliance:** Which requirements are necessary for policy and regulation adherence? These requirements are non-negotiable and usually have to be implemented within a set period of time, causing them to take precedence over stakeholder requirements in some cases.
* **Relationship to other requirements:** Which requirements support other high-value business requirements? Such requirements may be assigned a high priority because of their link to important requirements.
* **Urgency:**Which requirements have a high degree of urgency? Most stakeholders tend to place a high priority on requirements needed like yesterday
* **Stakeholder Agreement:**Requirements on which stakeholders disagree should be postponed or assigned a low priority until consensus can be reached on their usefulness.