

CS445 / ECE451 / CS645 / SE463
Software Requirements Specification & Analysis

Stakeholders



Stakeholders

- A **stakeholder** is anyone who has a **stake** in the ultimate success of the project.
- During problem identification, we want to consider **all** of the stakeholders.
 - But sometimes we have to make do with **proxies**



Owner/Client/Champion

The *owner/client* is the person paying for the software to be developed

- They are the ultimate stakeholder — almost always, the client has the last say in what the product does
- For “bespoke” or customized systems, the client is the person with the chequebook 😊
- For software for the mass market, the client may be the company developing the software
- For in-house software, the client is probably the manager of the product’s users
 - Since his/her employees will be the primary beneficiaries, it is reasonable for him/her to pay for the project
- Likely represented by a proxy

Customer

A customer is a person who buys software after it is developed; possibly a manager

- May be the same as the client
- May be the same as the user; other times, the customer is an office manager who buys software for his / her staff
 - For what requirements will he / she pay? Which are trivial or are excessive?
- Must be an active participant in the project (or have an active representative if there are many customers)
 - Sometimes a marketing person or experienced manager serves as a proxy

Users

Users (of both the current and future systems)

- Experts on the Work being performed
- Experts on the existing system (if one exists) — tell us which features to keep and which need improvements, or
- Experts on competitors' products — give suggestions about how to build a superior product.
- May have special needs or requirements to be satisfied, e.g., regarding usability, desired features.

User Classes

Different user classes may have special needs

- Quest developers expected UW's six Faculties to homogenize their policies and rules of academic standing and promotion
- iPhones performed worse for left-handed users
 - Used to drop signal when held in a left hand
 - In landscape mode, the side dock sits next to the home button
- Google's face recognition software initially recognized black men as gorillas
- Detail-oriented (DO) users vs. non-detail-oriented (NDO) users
 - DO users read the manual; NDO users explore and tinker
 - DO users are more likely (and NDO less likely) to make use of tutorials and tooltips
 - Risk-adverse users afraid to make a mistake; others will tinker

User Classes

Users can be categorized by their differences:

- Their access privilege or security levels (such as ordinary user, guest user, administrator)
- The tasks they perform during their business operations
- The features they use
- The frequency with which they use the product
- Their application domain experience and computer systems expertise
- The platforms they will be using (desktop PCs, laptop PCs, tablets, smartphones, specialized devices)
- Their native language
- Whether they will interact with the system directly or indirectly
- ➔ Disfavored users (who should not have access for legal, security, or safety reasons)
- ➔ Software agents, or bots

Domain Expert

Domain experts know the problem domain well

- Familiar with the problem that the software must solve.
e.g., financial experts for financial packages,
aeronautical engineers for aircraft navigation systems,
meteorologists for software that models the weather,
travel agents for travel industry, etc.
- ... and are familiar with typical users and their expectations
- ... and are familiar with typical deployment environments

Software Engineer

Software engineer == technology expert

- May include managers too
- Represents the rest of the development team (coders, testers)
- Ensures that the project is technically and economically feasible
- Estimates the cost and development time of the product
- Educates the customer about innovative hardware or software technologies, and recommends new functionality that takes advantage of these technologies

Other Stakeholders

Inspectors == experts on government and safety regulations

- Familiar with government and safety regulations relevant to project
e.g., safety inspectors, auditors, certification inspectors

Market researchers (distant proxy for own customer interviews)

- Experts who have conducted surveys to determine future trends and potential customers' needs.
- May assume the role of client, if the software is being developed for the mass market and there is no identifiable customer.

Lawyers

- Familiar with legal requirements
- Familiar with licensing, e.g., for use of open source components

Industry standards

Other Stakeholders

Experts on adjacent systems

- They know about the interfaces to adjacent systems, and any special demands for interfacing with the adjacent system.
- They need to be forewarned about the planned new system -- they could be affected by your work!
- They can help to improve your work, by enhancing the services they provide.

Negative stakeholder

- It is best to understand why they do not want the project to succeed
- They may simply have competing requirements that you'd be best off considering

Stakeholder Analysis Matrix

Stakeholder Analysis Matrix - www.tools4dev.org.



Stakeholder Analysis Matrix

Stakeholder Name	Contact Person <i>Phone, Email, Website, Address</i>	Impact <i>How much does the project impact them? (Low, Medium, High)</i>	Influence <i>How much influence do they have over the project? (Low, Medium, High)</i>	What is important to the stakeholder?	How could the stakeholder contribute to the project?	How could the stakeholder block the project?	Strategy for engaging the stakeholder
EXAMPLE <i>Nurses & Midwives Union</i>	<i>Carlos Davida cdavida@nu.org 0998 765 287</i>	<i>High</i>	<i>High</i>	<i>Maintaining working conditions for nurses</i>	<i>Agree for union members to implement the new reforms</i>	<i>Going on strike</i>	<i>Monthly round-table discussions</i>
Patient Advocacy Group	<i>Viki Chan vchan@pag.org 888 587 101</i>	<i>High</i>	<i>Medium</i>	<i>Maximising quality of care for patients</i>	<i>Communicate with other stakeholders to express their support for reforms</i>	<i>Making complaints about quality of service after the reports</i>	<i>Information and feedback meetings every 6 months</i>
Sunday Times Newspaper	<i>Jane Smith jsmith@stn.com 888 587 101</i>	<i>Low</i>	<i>High</i>	<i>Getting a good story</i>	<i>Print stories that support the new reforms</i>	<i>Printing stories that oppose the new reforms</i>	<i>Quarterly press meetings</i>

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<http://www.tools4dev.org/resources/stakeholder-analysis-matrix-template/>

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