

Solutions

Chapter 5: Understanding project management

Activity: Projects must meet the needs of the users, page 69

Project managers, system designers and programmers must place the requirements of users as of greatest importance in project development. They must survey users carefully and understand their needs as the project is for them, not the designer.

However, many users are unable to express their needs clearly. They may not have the correct technical language to be precise enough. They may think they have stated a need clearly but the person hearing them may interpret it differently. Also, many users will give an incomplete list of needs or will assume that others know many of the needs already. This can be because they use the existing system daily and it is so familiar to them they no longer question it. When the final product is delivered; however, they see immediately what its failings are. A working prototype can reveal these missing needs early in development. One of the greatest challenges for systems analysts is to find ways to discover all the real needs of users.

Knowledge probe: Problems in project management, pages 70–1

- 1 Each person in a project team for a large project sees it from their own viewpoint. If the user's needs are not completely understood and met by the team, then the product will reflect their views and not those of the user.

Frame 1: the user may not be able to express their needs accurately.

Frame 2: the project leader may not interpret the user's words correctly. Perhaps the terms the user used had a different meaning for the leader.

Frame 3: the analyst will try to design a solution that works, though it may not be practical.

Frame 4: the programmer writes code that fulfils written requirements they are given. Perhaps movement of the swing was not included by the analyst!

Frame 5: the business consultant will try to impress business customers!

Frame 6: documentation is often the least popular activity for students too!

Frame 7: the operations team installs the project. Often attempts are made here to save money!

Frame 8: unforeseen costs can arise in a project at any time.

Frame 9: many companies are focused on making a sale and delivering the product but a user must continue to live with the product and ongoing support will be important to them.

Frame 10: Moral: users must be clear, analysts must probe and understand, prototypes are important, everyone must be ethical and honest and user's needs should be at the top of the list!

- 2** The project team should:
- listen carefully to users
 - build and test a prototype with users
 - continue to support users after project is complete and continue to improve it by repeating the design cycle.

Review, page 73

Identify

1

- Write a task statement
- Identify users or audience
- Identify user needs
- Break down the problem
- Develop a timeline
- List resources
- Social, legal and ethical issues
- Assign team roles

2

- Generate ideas: mind maps, discussions
- Develop prototypes
- Draw IPO charts
- Draw flowcharts and write algorithms
- Develop a user interface
- Checking with users

3 Building or coding the product.

4

- Testing the result
- Evaluating against task statement
- Suggested improvements considered

Analyse

5 Projects are designed for users, not for the developers! Users are the developers' clients. Effective communication with users is the most important skill in project management.

Identifying users' needs is one of the first activities in project development and users should be in ongoing communication with the development team. Project management involves the skills of collaborating and communicating with others to determine their needs. Often users are poor at explaining their needs or even at identifying them clearly. This can involve verbal, written and graphical (e.g. sketches, storyboards, mind maps) communication among the project team, between them and with users.

Developers often produce prototypes to show users the direction a solution is taking and to help them clarify if it is likely to meet users' needs.

- 6** Ethical considerations are relevant at each of the four stages of project development. The defining stage requires that a proposal is ethical in its aims, ethical issues are relevant to the designing and implementing stages as, for example, materials need to be sourced ethically, and any evaluation should include consideration of ethical issues.

Investigate

- 7** Rather than the traditional sequential four-step project development cycle, agile development uses many short development cycles often called sprints, which focus on continual improvement of a product. Rather than entire teams having to meet regularly, smaller groups can meet more often to address changing user requirements and problems as they arise. An emphasis is placed on producing a working product rather than on careful documentation and on addressing issues as they arise rather than fully planning the process in advance.