Managerial Issues

Managerial activities are as important as the technical activities for the success of a software product. Managers control the resources and the environment in which technical activities occur. Managers also have the responsibility for ensuring that software products are delivered on time and within cost estimates and that products exhibit the functional and quality attributes desired by the customer. Other management responsibilities include developing business plans, recruiting the customers, developing marketing strategies and recruiting and training employees.

Some of the management problems that are to be solved are listed below:

1. Planning for software engineering projects.
2. Procedures and techniques for the selection of project managers are poor.
3. The accountability of many software engineering projects is poor leaving some question as to who is responsible for various project functions.
4. The ability to accurately estimate the resources required to accomplish a software development project is poor.
5. Success criterion for software development projects is frequently inappropriate. This results in software products that are unreliable difficult to use and difficult to maintain.
6. Decision rules to aid in selecting the proper organizational structure are not available.
7. Decision rules to aid in selecting the correct management techniques for software engineering projects are not available.
8. Procedures methods and techniques for designing a project control system that will enable project managers to successful control their project are not readily available.
9. Procedures, techniques, strategies and aids that will provide visibility of progress to the project manager are not available.
10. Standards and techniques for measuring the quality of performance and the quality of production expected from programmers and data processing analysts are not available.

Some of the methods mentioned for solving these problems are:

1. Educate and train top management project managers and software developers.
2. Enforce the use of standards, procedures and documentation.
3. Analyze data from prior software projects to determine effective methods.
4. Define objectives in terms of quality desired.
5. Define quality in terms of deliverable.
6. Establish success priority criteria.
7. Allow for contingencies.
8. Develop truthful, accurate cost and schedule estimates that are accepted by management and customer and manage to them.
9. Select project managers based on ability to manage software projects rather than on technical ability or availability.
10. Make specific work assignments to software developers and apply job performance standards.