



People Management

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Peculiarities

SPM has some peculiarities making it particularly difficult:

- The product is intangible
- No standard software processes
- Large software projects are one-off projects
- All activities are strongly dependent on people qualities

The 4 “P”s on which SPM is based are: **People, Product, Process, Project**
Roger Pressman

Bad PM is the main cause of failure for software projects

Research subject: individual and organizational behavior asks for social science research methods

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People working in a software organization are its **greatest assets**.

Project Managers are then responsible for getting returns from this asset. A PM uses people to solve technical and non-technical problems, and they have to **motivate** people in their team, **plan** and **organize** their work, **ensure** the work is done properly.

Bad people management is the most
common reason of project failures

Four main concerns for People Management: staff recruitment, staff development, staff motivation, well-being of staff members

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Four main concerns for People Management: **staff recruitment**, **staff development**, **staff motivation**, **well-being of staff members**

PM: a very short background

Taylor attempted to analyze the most productive way of doing manual tasks. Three basic objectives:

- to select the best people for the job
- to instruct them in the best method
- to give incentives in the form of higher wages to the best workers

Staff is motivated by financial related aspects

PM: a very short background

McGregor disagreed with Taylor proposal and introduced a more articulated view named **Theory X and Theory Y**.

Theory X:

- the average human has an innate dislike to work
- there is a need therefore for coercion, direction and control
- people tend to avoid responsibility

Theory Y:

- work is as natural as rest or play
- external control and coercion are not the only ways of bringing about effort directed towards an organization's ends
- commitment to objectives is a function of the rewards associated with their achievement
- the average human can learn to accept and further seek responsibility
- the capacity to exercise imagination and other creative qualities is widely distributed

How does the team react when is “left alone”?

Selecting staff

PM that have to **establish a team** have limited resources

Three different information sources are generally used

- CV
- Interviews
- Recommendations

New dimensions in particular for ICT people:

The World Wide Web (Social, Code Repositories, Professional networks . . .)

General considerations:

- Constrained and limited availability of internal staff
- Some skills are not highly common
- Junior team members are normally more enthusiastic in learning new things
- The most technically proficient person is not always the right choice

Defining different paths for “techies” and managers

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Recruitment process

- Create a job specification
- Create a Job holder profile
- Obtain applicants
- Examine CVs
- Interviews – assess different qualities and judge separately
- Other procedures, possibly medical examination could even be needed

The recruitment process is costly so you should profit of the “self-elimination” effect providing enough details

Recruitment process relevant factors

In staffing a team some factors have to be generally considered:

- Application domain experience
- Platform experience
- Programming language experience
- Problem solving ability
- Educational background
- Communication ability
- Adaptability
- Attitude
- Personality

Motivating people

People are motivated by satisfying their needs

Maslow's hierarchy provide a structured organization of typical human individual needs:

- **Physiological needs:** not a PM task
- **Safety needs:** not a PM task
- **Social needs:** give time and space to meet each other or organize events (in particular with distributed teams)
- **Esteem needs:** recognize achievements
- **Self-realization needs:** assign challenging but possible tasks, and define a personal development plan

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Motivating people

Vroom and colleagues identified three main influences for motivation:

- **expectancy**: the belief that working harder will lead to a better performance
- **instrumentality**: the belief that better performance will be rewarded
- **perceived value**: of the resulting reward

Oldham and Hackman suggest that satisfaction that a job give is base don five factors:

- **skill variety**
- **task identity**
- **task significance**
- **autonomy**
- **feedback**

Don't forget that **stress** work against you. **Hours worked, Role ambiguity, Role conflict**

People attitudes and motivation

Bass and Duntenam classified professionals motivations in three categories:

- **Task-oriented**: motivated by the work itself
- **Self-oriented**: motivated by personal success and recognition
- **Interaction-oriented**: motivated by pleasure of working with other people

If you want to be a bit better then the others, then **compete**. if you want to be better by far then **cooperate**

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Forming groups

Group composition

you should create mixed groups (task, self, interaction) and appoint a **group leader** for each of them that somehow **monitor** and **report** progress made by the group to the general PM. **Leaders** have to be accepted by the team.

Other important aspects to consider:

- problem complexity
- dimension of the resulting software
- duration of the team
- modularity
- required reliability
- constrained and relevance of deadlines

Forming groups

In a study conducted by Belbin the author reached the conclusion that a team needs people with different attitude that he characterized as:

- The chair
- The plant
- The monitor-evaluator
- The shaper
- The team worker
- The resource investigator
- The completer-finisher
- The company worker

On the base of the grouped people a decision making process has to be figured:

- structured: precise rules and roles
- unstructured: asks for creative and motivated people in the team

PM qualities

A PM is a person able to:

- motivate people
- organize work
- conceive new idea and bring innovation
- have managerial skills
- “perceive people”

Leadership styles

- directive autocrat
- permissive autocrat
- directive democrat
- permissive democrat

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Critical Factors

A PM has to act respecting some basic principles:

- **Consistency**: all fairly treated
- **Respect**: people are different
- **Inclusion**: everyone can have brilliant ideas
- **Honesty and being humble**: Superman is just a comic book!

Aim is not to be a good person but a good PM

Communications and Organizations

- **Group communications:** good communication is essential between members. Some factors make it more complex:
 - size
 - structure
 - composition
 - physical work environment
- **Group organization:** people should be allocated so that their competences are favored. Old style organizational strategies does not seem to be much effective – **chief programmer**

Cohesiveness

Group cohesiveness

Members should feel that the group is more important than the individual. Team members trust each other and no individualist

- *group quality standard can be established easily*
- *members work closely together - learn together*
- *members can get to know each other's work*
- *Ego-less programming can be practiced*

Favor cohesiveness through: **naming, social activities, and gaming**. Do not hide information to group members

Working environments

Studies have identified some important psychological aspects to take into account organizing the working space of programmers:

- Privacy
- Outside awareness
- Personalizations

Areas with different destinations should be available

P-CMM

People Capability Maturity Model

Framework to assess and improve the way in which an organization manages its human assets

- it introduces 5 levels to classify people management practices within an organization

Resources

Study material can be found here:



Bob Hughes and Mike Cotterell

Software Project Management, 5th Ed.

McGraw-Hill, 2009

- Chapter 11 - Managing People in Software Environment
- Chapter 12 - Working in Teams



Roger Pressman and Bruce Maxim

Software Engineering a Practitioner's Approach 8th Ed.

McGraw-Hill 2015.

- Chapter 31 - Project Management Concepts



Ian Sommerville

Software Engineering 10th Ed.

Addison Wesley 2016.

- Chapter 22 - Managing People