

## Managing people working as individuals and in groups

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## People in the process

- People are an organisation's most important assets.
- The tasks of a manager are essentially people-oriented. Unless there is some understanding of people, management will be unsuccessful.
- Poor people management is an important contributor to project failure.

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## People management factors

- **Consistency**
  - Team members should all be treated in a comparable way without favourites or discrimination.
- **Respect**
  - Different team members have different skills and these differences should be respected.
- **Inclusion**
  - Involve all team members and make sure that people's views are considered.
- **Honesty**
  - You should always be honest about what is going well and what is going badly in a project.

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## Motivating people

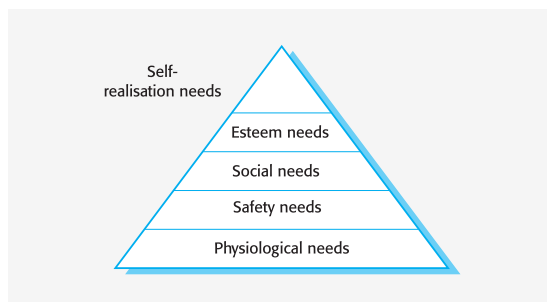
- An important role of a manager is to motivate the people working on a project.
- Motivation is a complex issue but it appears that there are different types of motivation based on:
  - **Basic needs**
    - E.g. food, sleep, etc.
  - **Personal needs**
    - E.g. respect, self-esteem.
  - **Social needs**
    - E.g. to be accepted as part of a group.

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## Human needs hierarchy



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## Need satisfaction

- **Social**
  - Provide communal facilities;
  - Allow informal communications.
- **Esteem**
  - Recognition of achievements;
  - Appropriate rewards.
- **Self-realization**
  - Training - people want to learn more;
  - Responsibility.

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## Personality types

- The needs hierarchy is almost certainly an over-simplification of motivation in practice.
- Motivation should also take into account different personality types:
  - **Task-oriented;**
  - **Self-oriented;**
  - **Interaction-oriented.**

## Personality types

- **Task-oriented**
  - The motivation for doing the work is the work itself;
- **Self-oriented**
  - The work is a means to an end which is the achievement of individual goals - e.g. to get rich, to play tennis, to travel etc.;
- **Interaction-oriented**
  - The principal motivation is the presence and actions of co-workers. People go to work because they like to go to work.

## Motivation balance

- Individual motivations are made up of elements of each class.
- The balance can change depending on personal circumstances and external events.
- However, people are not just motivated by personal factors but also by being part of a group and culture.
- People go to work because they are motivated by the people that they work with.

## Managing groups

- Most software engineering is a group activity
  - The development schedule for most non-trivial software projects is such that they cannot be completed by one person working alone.
- Group interaction is a key determinant of group performance.
- Flexibility in group composition is limited
  - Managers must do the best they can with available people.

## Factors influencing group working

- Group composition.
- Group cohesiveness.
- Group communications.
- Group organisation.

## Group composition

- Group composed of members who share the same motivation can be problematic
  - Task-oriented - everyone wants to do their own thing;
  - Self-oriented - everyone wants to be the boss;
  - Interaction-oriented - too much chatting, not enough work.
- An effective group has a balance of all types.
- This can be difficult to achieve software engineers are often task-oriented.
- Interaction-oriented people are very important as they can detect and defuse tensions that arise.

## Group leadership

- Leadership depends on respect not titular status.
- There may be both a technical and an administrative leader.
- Democratic leadership is more effective than autocratic leadership.

## Group cohesiveness

- In a cohesive group, members consider the group to be more important than any individual in it.
- The advantages of a cohesive group are:
  - Group quality standards can be developed;
  - Group members work closely together so inhibitions caused by ignorance are reduced;
  - Team members learn from each other and get to know each other's work;
  - Egoless programming where members strive to improve each other's programs can be practised.

## Developing cohesiveness

- Cohesiveness is influenced by factors such as the organisational culture and the personalities in the group.
- Cohesiveness can be encouraged through
  - Social events;
  - Developing a group identity and territory;
  - Explicit team-building activities.
- Openness with information is a simple way of ensuring all group members feel part of the group.

## Group loyalties

- Group members tend to be loyal to cohesive groups.
- 'Groupthink' is preservation of group irrespective of technical or organizational considerations.
- Management should act positively to avoid groupthink by forcing external involvement with each group.

## Group communications

- Good communications are essential for effective group working.
- Information must be exchanged on the status of work, design decisions and changes to previous decisions.
- Good communications also strengthens group cohesion as it promotes understanding.

## Group communications

- **Group size**
  - The larger the group, the harder it is for people to communicate with other group members.
- **Group structure**
  - Communication is better in informally structured groups than in hierarchically structured groups.
- **Group composition**
  - Communication is better when there are different personality types in a group and when groups are mixed rather than single sex.
- **The physical work environment**
  - Good workplace organisation can help encourage communications.

## Group organisation

- Small software engineering groups are usually organised informally without a rigid structure.
- For large projects, there may be a hierarchical structure where different groups are responsible for different sub-projects.

## Key points – 1

- Staff selection factors include education, domain experience, adaptability and personality.
- People are motivated by interaction, recognition and personal development.
- Software development groups should be small and cohesive. Leaders should be competent and should have administrative and technical support.

## Key points – 2

- Group communications are affected by status, group size, group organisation and the gender and personality composition of the group
- Working environments should include spaces for interaction and spaces for private working.
- The People Capability Maturity Model is a framework for improving the capabilities of staff in an organisation.