

## Ch:6

### Human Aspects of Software Engineering.

The Psychology of software engineering :They suggest a set of "boundaries spanning roles" that allow members of a software team to effectively move across team boundaries. The following roles may be assigned explicitly or can evolve naturally. Ambassador- represents the team to outside constituencies with the intent of negotiating time and resources and gaining feedback from stakeholders. Scout- crosses the team's boundary to collect organizational information. Guard- protects access to the team's work products and other information artifacts. Sentry-controls the flow of information that stakeholders and others send to the team. Coordinator- focuses on communicating horizontally across the team and within the organization. Traits of Successful Software Engineers: Sense of individual responsibility, Acutely aware of the needs of team members and stakeholder, Brutally honest about design flaws and offers constructive criticism, Resilient under pressure, Heightened sense of fairness, Attention to detail, Pragmatic .describes a number of project factors that should be considered when planning the structure of software engineering teams: (1) difficulty of the problem to be solved, (2) "size" of the resultant program' (3) team lifetime), (4) degree to which the problem can be modularized, 5) required quality and reliability of the system to be built, (6) rigidity of the delivery date, and (7) degree of sociability (communication) required for the project. Organizational Paradigms : closed paradigm, random paradigm, open paradigm, synchronous paradigm . XP Team Values : Communication, Simplicity, Feedback, Courage, Respect . Impact of Social Media : Blogs, Microblogs, Targeted on-line forums, Social networking sites, Social book marking. Software Engineering using the Cloud: Benefits : Provides access to all software engineering work products. Removes device dependencies and available everywhere. Provides avenues for distributing and testing software. Allows software engineering information developed by one member to be available to all team members. Concerns : Dispersing cloud services outside the control of the software team may present reliability and security risks. Potential for interoperability problems becomes high with large number of services distributed on the cloud. Cloud services stress usability and performance which often conflicts with security, privacy, and reliability . Collaboration Tools : Namespace that allows secure, Calendar for coordinating project events, Templates that allow team members to create artifacts that have common look and feel, Metrics support to allow quantitative assessment of each team member's contributions, Communication analysis to track messages and isolates patterns that may imply issues to resolve, Artifact clustering showing work product dependencies. Team Decisions Making Complications : Problem complexity, Uncertainty and risk associated with the decision, Work associated with decision has unintended effect on another project object, Different views of the problem lead to different conclusions about the way forward, Global software teams face additional challenges associated with collaboration, coordination, and coordination difficulties. Generic Agile Teams: Stress individual competency coupled with group collaboration as critical success factors, People trump process and politics can trump people, Agile teams as self-organizing and have many structures: An adaptive team structure, Uses elements of Constantine's random, open, and synchronous structures, Significant autonomy. Planning is kept to a minimum and constrained only by business requirements and organizational standards.