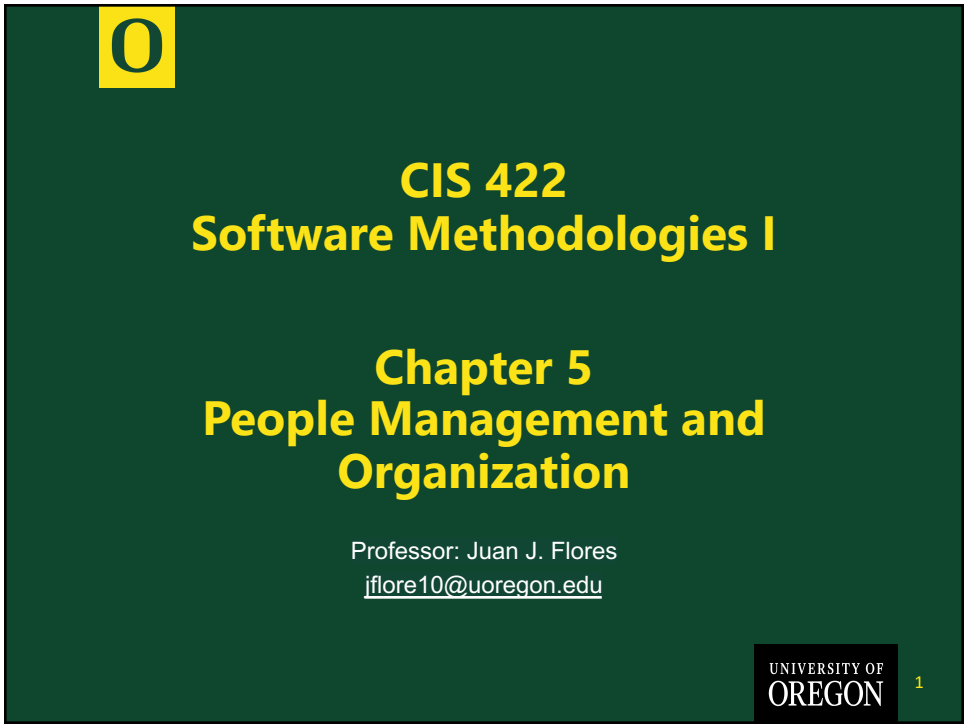
CIS 422
Software Methodologies I
Chapter 5
People Management and Organization
Professor: Juan J. Flores
jflore10@uoregon.edu
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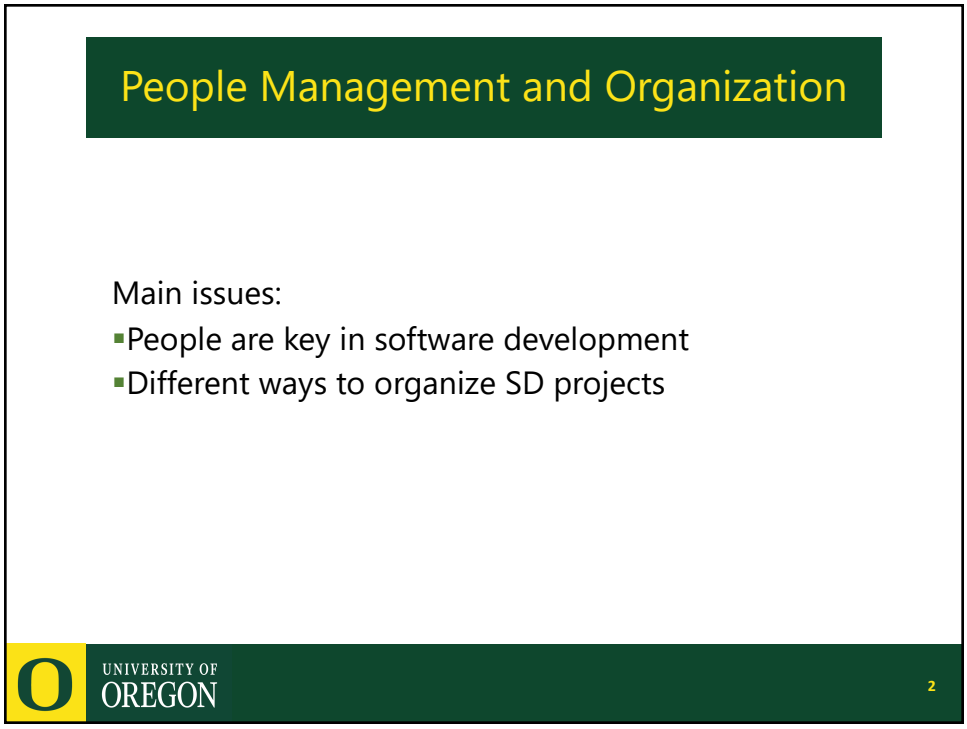
People Management and Organization
Main issues:
People are key in software development
Different ways to organize SD projects
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People management

- People have different goals
- People and productivity ~ delivered functionality / time
- Group processes
- Coordination of work
- Importance of informal communication
  - Grows exponentially – not! It is combinatorial
- Cultural and sociological concerns

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Mintzberg's coordination mechanisms

- Simple: direct supervision
- Machine bureaucracy: standardization of work processes
- Divisionalized form: standardization of work products
- Professional bureaucracy: standardization of worker skills
- Adhocracy: mutual adjustment

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External and Internal forces

- Example context: a complex software development project in a new, not yet explored area, within a government agency
- External force: the bureaucratic context is likely to want to push a bureaucratic type of organization, with bosses, and hierarchical decision procedures
- Internal force: the project really requires a more democratic, consensus-based type of organization

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Reddin's management styles

relation directedness	task directedness: low	task directedness: high
low	Separation (hierarchical)	Commitment (under pressure)
high	Relation (motivated, coordinated and trained)	Integration (result is uncertain)

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Team Organization

- Hierarchical organization
- Matrix organization
- Chief programmer team
- SWAT team
- Agile team/Extreme Programming (XP)
- Open Source Develoment

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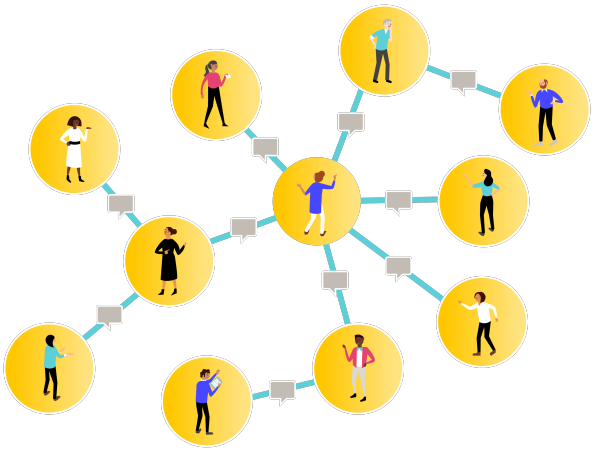
Hierarchical team



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Hierarchical team

- bottom: we have severe troubles in implementing module X;
- level 1: there are some problems with module X;
- level 2: progress is steady, I do not foresee any real problems;
- top: everything proceeds according to our plan.

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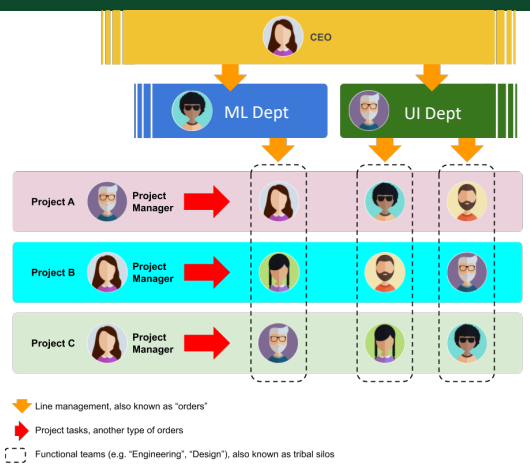
Matrix organization



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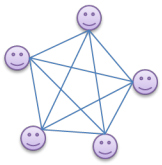
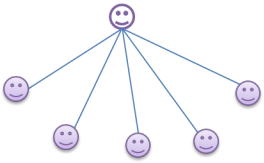
Chief programmer team

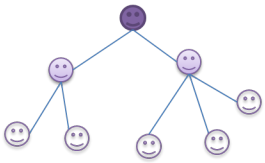
Democracy



Chief Programmer



Hierarchical



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Skilled Worker with Advanced Tools

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Agile team

- A lot in common with iterative development
- People work in pairs without a hierarchy
- Needs more-skilled people
- No plan, no life-jacket

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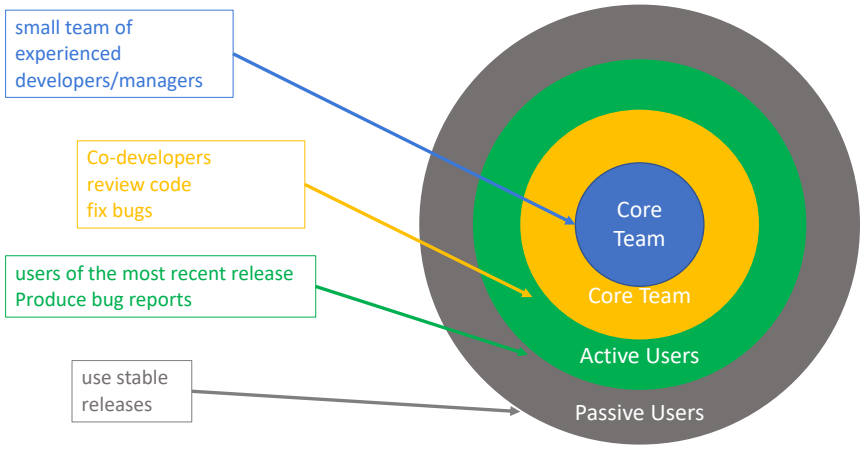
Open Source Software Development



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Some general rules

- Use fewer, and better, people
- Fit tasks to people
- Help people to get the most out of themselves
- Look for a well-balanced team
- If someone doesn't fit the team: remove him

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Summary

- Software is written by humans
- Coordination issues/management styles
- Common team organizations in software development:
  - Hierarchical team
  - Matrix organization
  - Agile team
  - Open source development

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