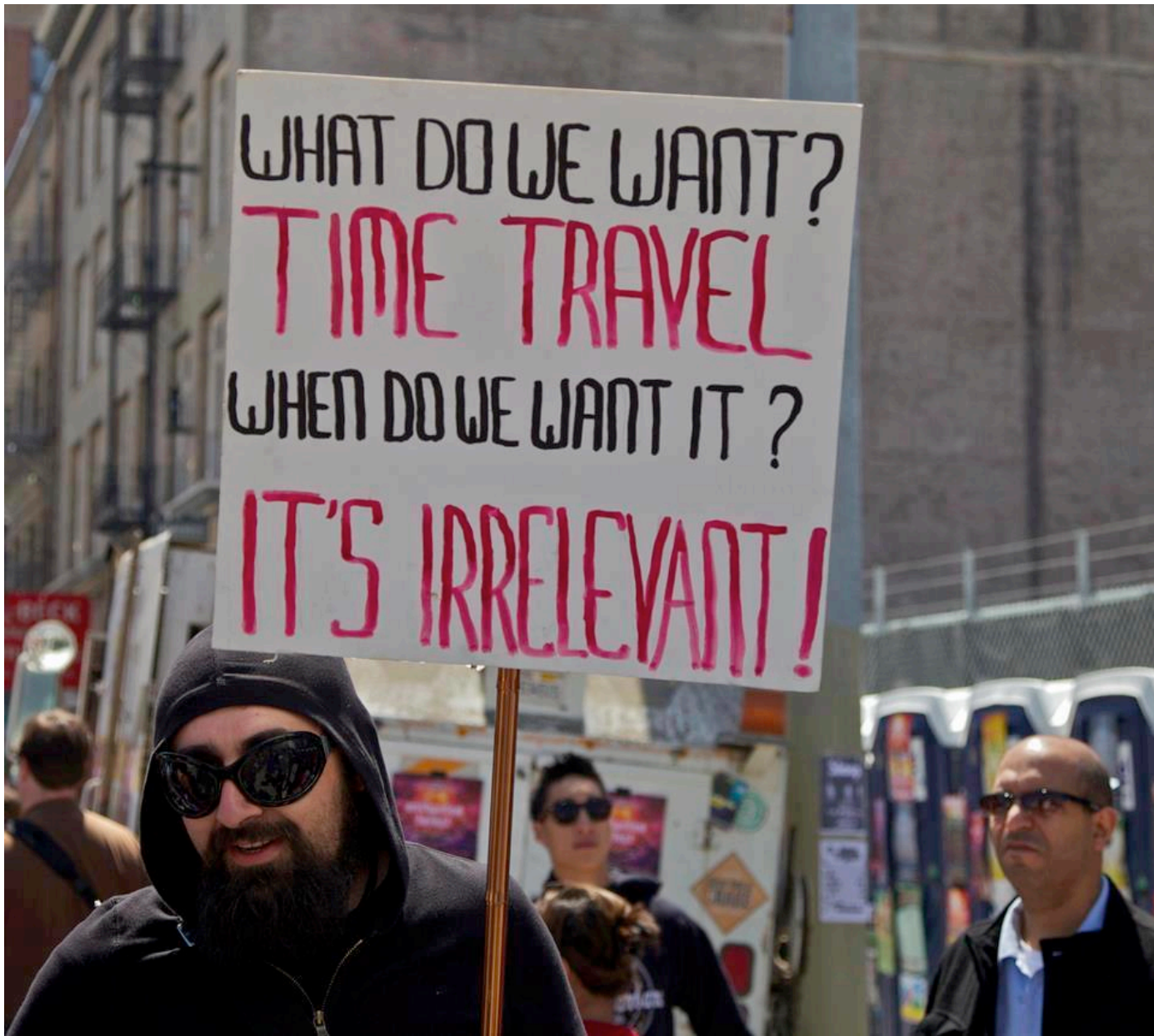




CSSE 372 Software Project Management: Anatomy of a Software Project

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WHAT DO WE WANT?
TIME TRAVEL
WHEN DO WE WANT IT?
IT'S IRRELEVANT!

Rewarding Contributions

■ Fairness Principle

- Reward extraordinary contributions
- Discourage freeloading

■ Mechanism: Performance Evaluations

	Fred	Dino	BamB
Fred	8 10	8	8
Dino	8	9	8
BamBam	7	10	8
Individual Avg.	7.67	9	8
Team Avg.	8.22	8.22	8.22
Raw Weight	93%	109%	97%
Clamped Weight	93%	105%	100%

Late Work

- Legitimate reasons for late work,
 - Must be acknowledged before due date

- Late buffer of 3 assignments
 - Can spend 1 on any non-project assignment
 - Can earn 1 per assignment (>24 hours)
 - Use survey on ANGEL before the assignment deadline to spend/earn late days



Deadlines

- Deadlines temperamental beasts,
... you hug one too close and it's liable bite you!

Objectives: Fundamental Elements

Identify fundamental elements of Software Project Management

- Determine stakeholders/clients and their project commitments
- Outline the purpose, goals, and objectives of a software project
- Define software project resource availability
- Outline the concept of project scope
- Describe the five key management activities



Anatomy of a Project

- A Client/Customer
- Goal-Oriented Plan
- Practices and Processes
- Project Team
- Resources
- Commitment



ADAM.

Clients and Stakeholders

- Stakeholders have interest, influence, or investment, but typically convey only buy in
- A client is a stakeholder with the authority to make commitments and decisions regarding the project and product to be delivered
- Need to manage customer relationships, engagement, value proposition, and buy in

A project without a client is already in trouble

Avoid Chimpy Project Management



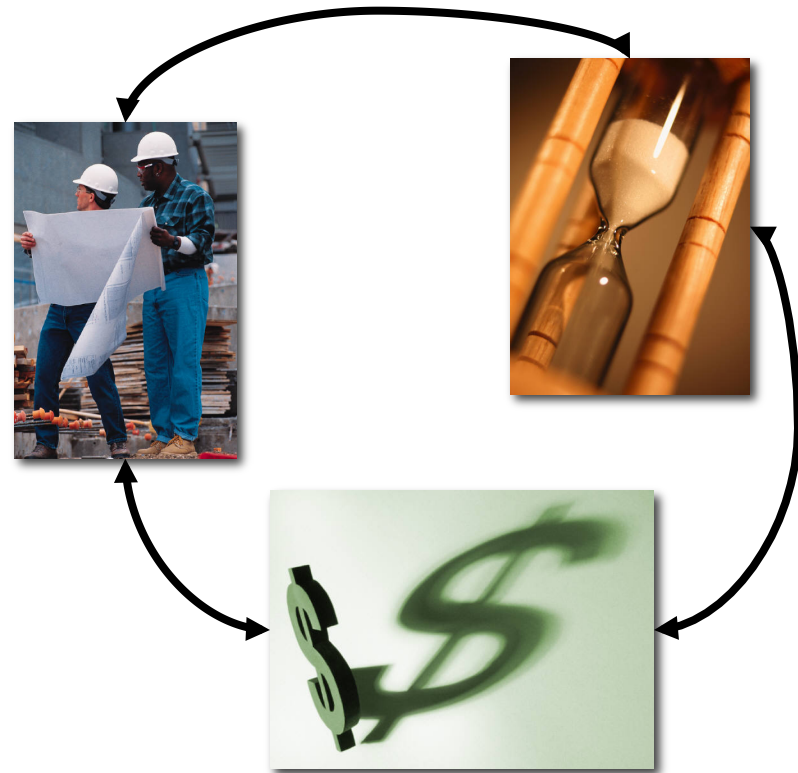
Resources reflect Project Parameters

- **Good, Fast, Cheap - Pick any 2...**

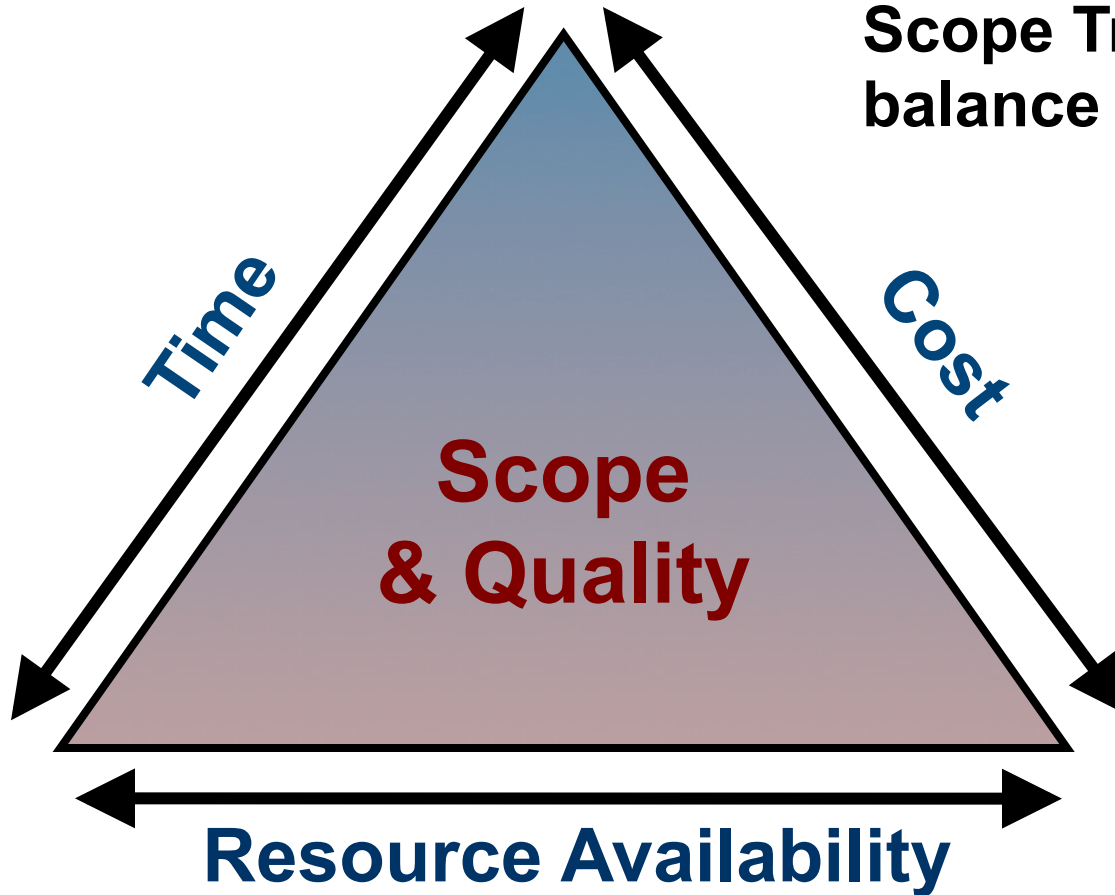
- Quality
- Calendar time
- Cost

- **But, there are more...**

- Scope
- Resources
 - People, time, facilities...
- Resource Availability



Understanding the Scope Triangle



Scope Triangle is a system in balance used for:

- Problem escalation strategy
- Structuring Project Impact Statement

Source: Robert Wysocki EPM Text

Software Projects can get Creepy

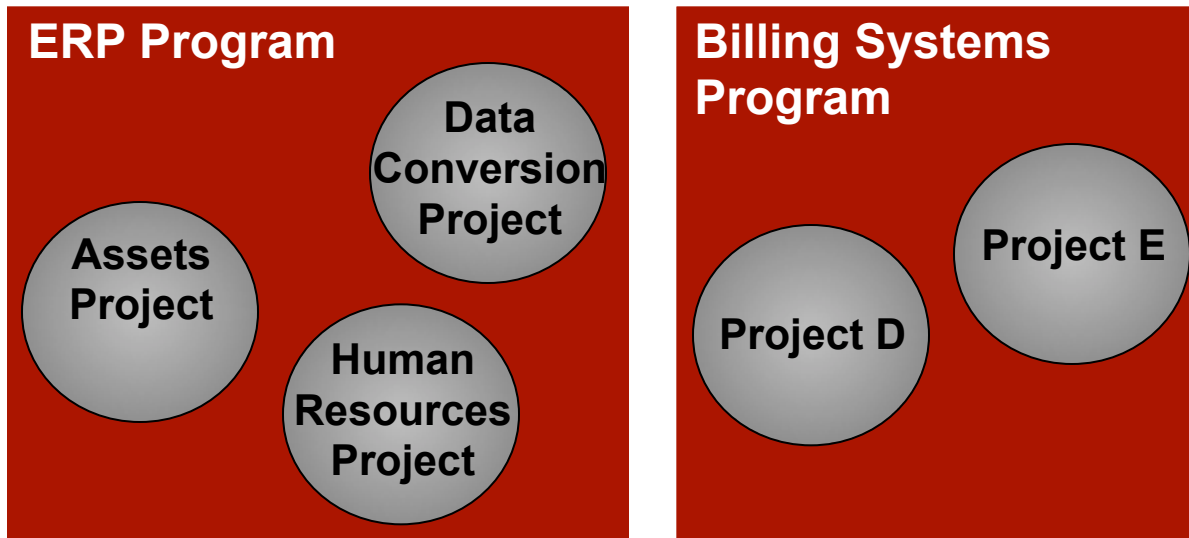
- **Scope Creep**
- **Attitude Creep**
 - Hope -> Despair
- **Effort Creep**
 - 40 hrs -> 80 hrs per week
- **Feature Creep**
 - Gold plating
 - Customer discovery



The Creeps

What is a Program?

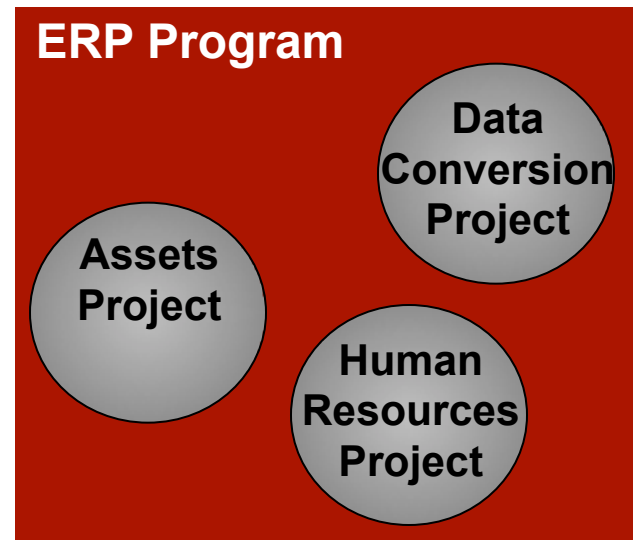
A “program” is a collection of projects that share a common goal or purpose.



In some ways, one organization’s program is another’s project.

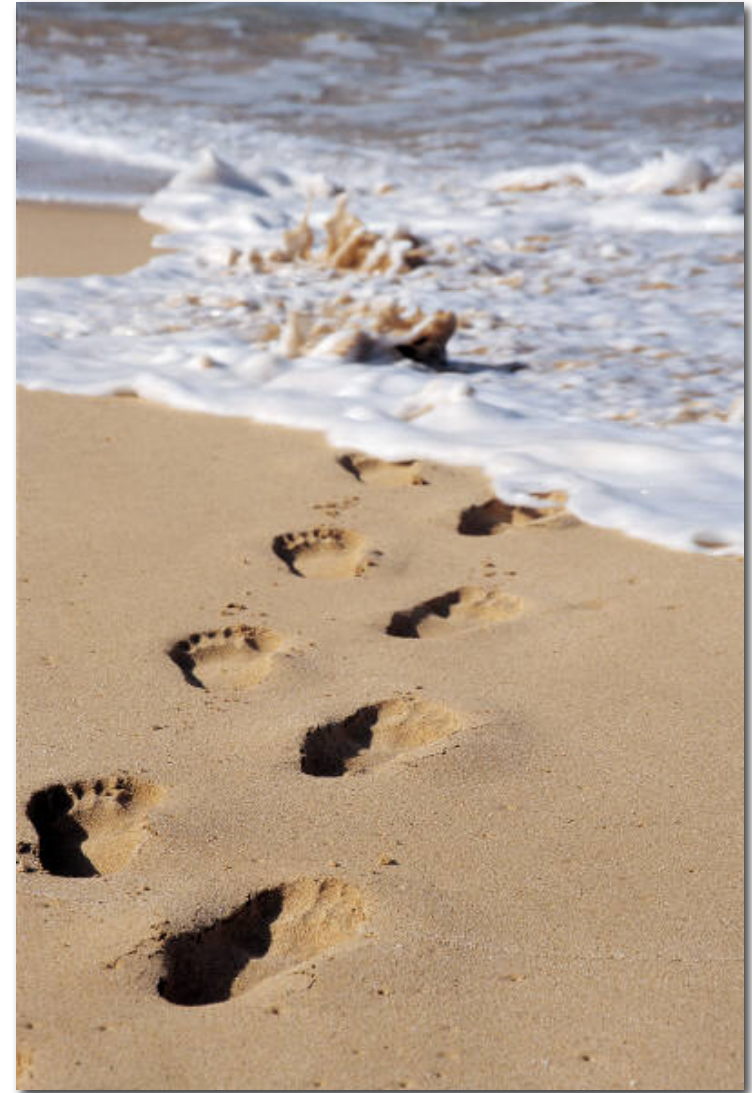
**“Program” is to “project” as
_____ is to _____?**

- Think for 15 seconds...
- Turn to a neighbor and discuss it for a minute

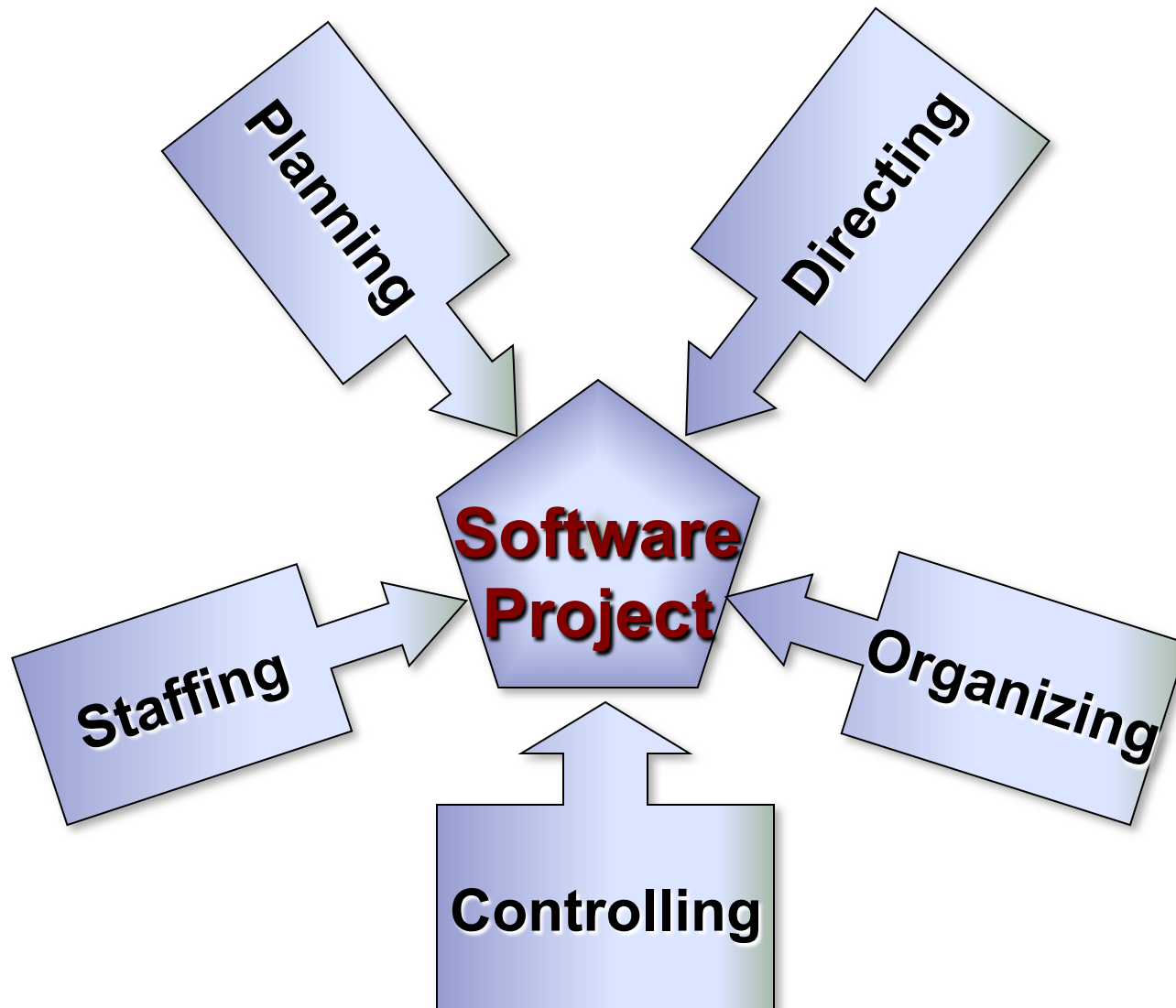


Semi-Formal Definition

Project Management – “... a system of procedures, practices, technologies, and know-how that provide the planning, organizing, staffing, directing, and controlling necessary to successfully manage an engineering project.” [Thayer 1987]



Classic Management Activities



Exercise on Management Activities

- Break up into teams of 4-5

- Team A: Planning
- Team B: Directing
- Team C: Organizing
- Team D: Controlling
- Team E: Staffing

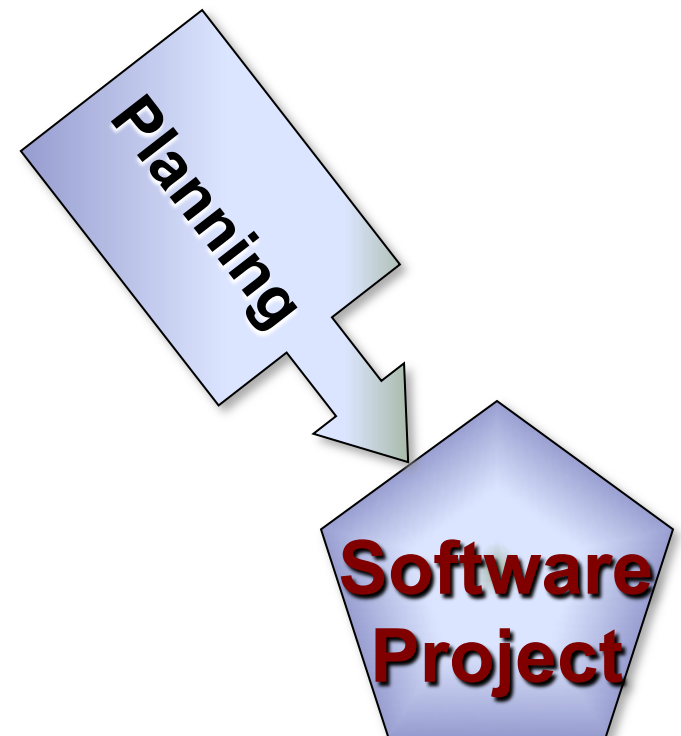


- Discuss the key activities in your team's management area and come up with a list of 5 things it involves

Planning

Predetermining a course of action for accomplishing organizational objectives.

- Set goals and objectives**
- Develop strategies**
- ...**



Directing

Creating an atmosphere that will assist and motivate people to achieve desired results.

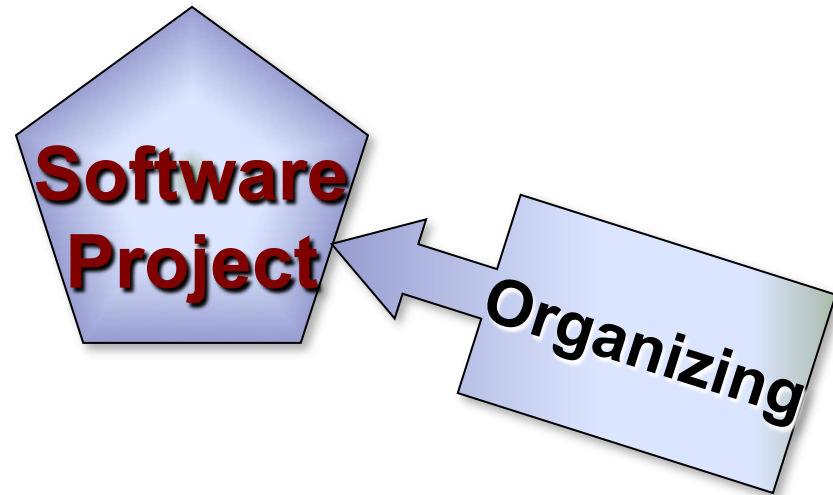
- Provide leadership
- Supervise personnel
- ...



Organizing

Arranging and relating work for accomplishment of objectives and the granting of responsibility and authority to obtain those objectives.

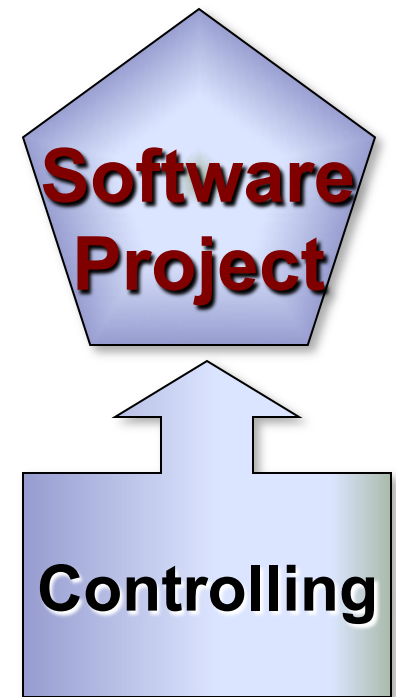
- Identify and group required tasks
- Select and establish organizational structures
- ...



Controlling

Measuring and correcting performance of activities toward objectives according to plan.

- Develop standards of performance
- Establish monitoring and reporting systems
- ...



It's all about controlling resources 😊

IN ONLY ONE WEEK
MY PROJECT TEAM
HAS CREATED A TIME
LINE AND IDENTIFIED
THE RESOURCES WE
NEED.



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NEXT WEEK, WE
PLAN TO REVISE
THE TIME LINE AND
RE-EXAMINE OUR
RESOURCE NEEDS.



GOOD
WORK.

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THERE MUST
BE A THOUSAND
WAYS TO SAY I
HAVEN'T DONE
ANYTHING.

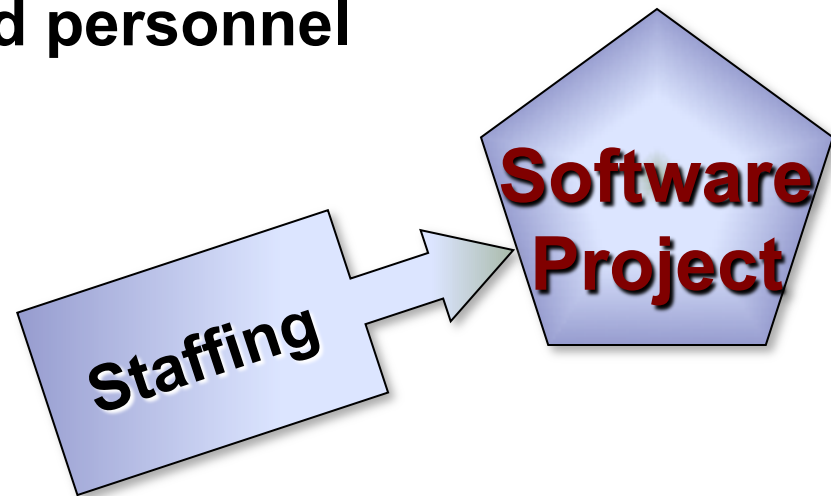


WAIT...

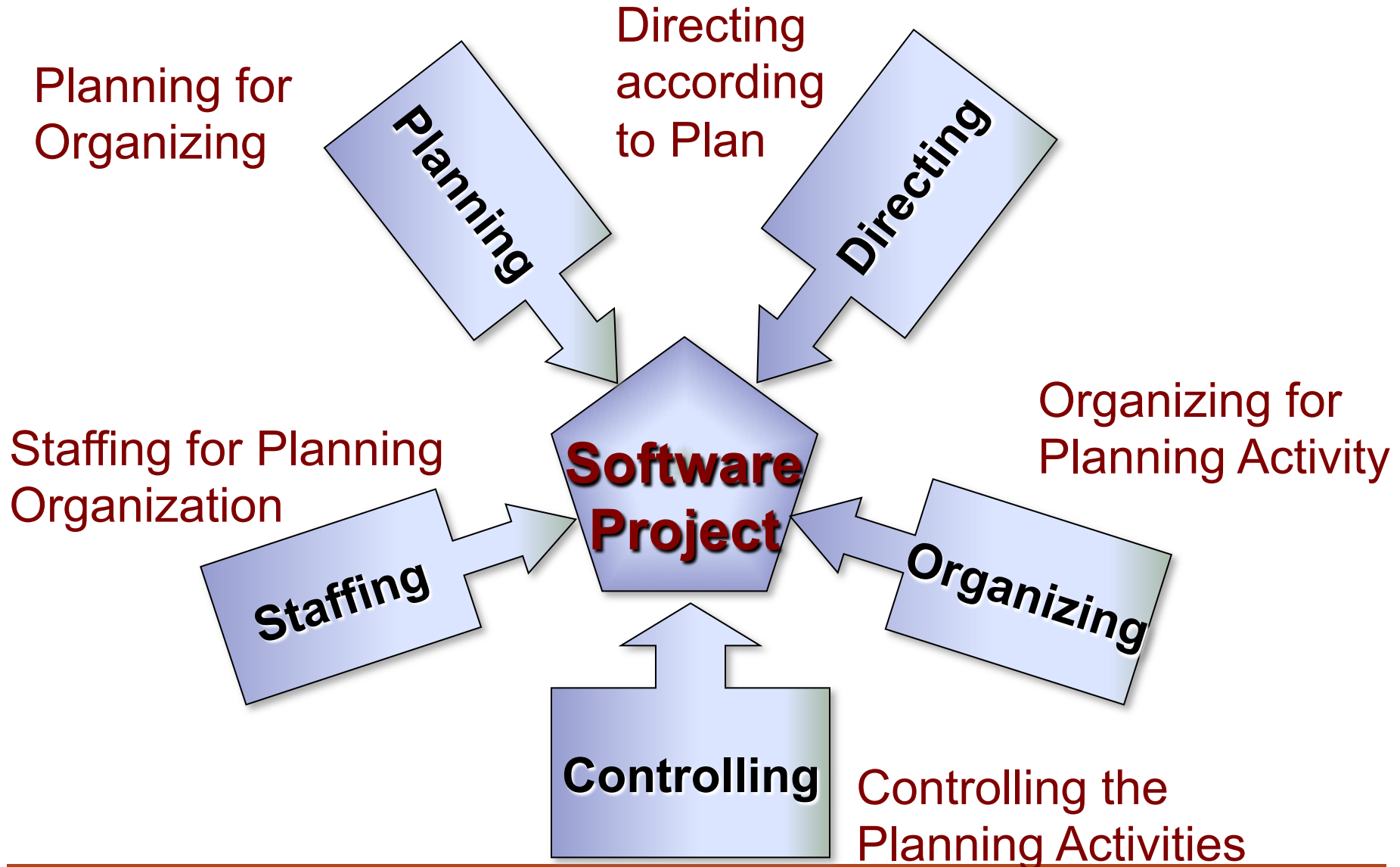
Staffing

Selecting and training people for positions in the organization.

- Fill organizational positions
- Assimilate newly assigned personnel
- ...



Separate but Dependent Functions



Another Popular Project Management Definition

Project management is a method and set of techniques based on accepted principles of management used for planning, estimating, and controlling work activities to reach a desired result on time, within budget and according to specification. *(PMBOK)*



THIS IS MY WEEKEND FACE

Homework and Reading Reminders

- **Read Course Text for next class**
 - EPIC Software Project Failures Site
<http://stackoverflow.com/questions/1040338/what-are-the-worst-software-project-failures-ever>
 - SW Project Failures paper by Robert Charette
- **Complete CSSE 372 Student Survey on Angel**
 - Lessons/Surveys/CSSE_372_Student_Survey
 - Quiz grade
 - Due Today by 5:00pm
- **Complete Homework 1 – Preliminary Task Schedule for your Classes this term**
 - Due 5:00pm Tuesday, September 4th