

Software Development Teams



Good team quote #1:

Talent wins games, but teamwork and intelligence wins championships.

Michael Jordan

Readings

- “*Rapid Development*”, Chapters 12, 13
Steve McConnell
- “*Pragmatic Programmer*”, Chapter 8, Hunt and Thomas

Outline

- Why do we need teams?
- What is a high performance team?
- How are high performance teams formed?
- What are some common team models?



First, what is a team?

How does a **team** differ from a **group**?

A **group** is a collection of individuals with a common interest

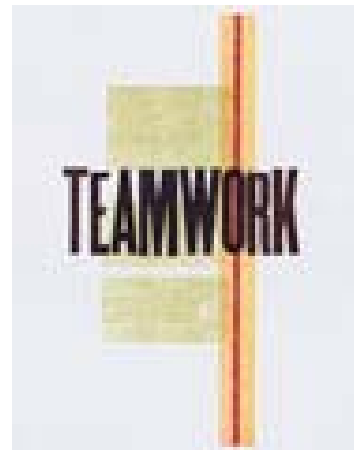
whereas

A **team** is a cohesive coalition of individuals working together towards a common goal

Another nice definition

A team is a set of people with **complementary skills** who are committed to a **common purpose**, **performance goals**, and **approach** for which they hold themselves **mutually accountable**

Katzenbach and Smith



There is no “I” in “TEAMWORK”

Why do we need teams?

Over to you again... can you all come up with ≥ 3 reasons?

- Enables more to be achieved in the time available
- Provides different skillsets
- Provides different ideas
- Moral support!
- Synergy ... the sum of the whole is more than that of the parts
- Checks and balances
-

What is a high performance team?

Breakout session!

With your group, brainstorm:

- Characteristics/actions that will make *your* team successful
- How you will know if you achieved this success

Be ready to share your top 3 thoughts with the class

Spring 2006 Ideas

- Competence
- Trust
- Leadership
- Communication
- Organization – well defined roles
- Motivation
- Responsibility
- Common goals, common investment
- Cooperation
- Measure through productivity, quality, customer satisfaction
- Pooling resources/skills
- Everyone has a voice
- **Recognized, rewarded**

Characteristics of a HPTeam

The team has:

- A shared elevating vision or goal
- A sense of team identity
- A results-driven structure
- Competent team members
- A commitment to the team
 - willing to make personal sacrifices
- Mutual trust
 - what happens if trust is broken?
- Interdependence among members
- Effective communication
 - keep members on the same page
 - the bad as well as the good
- A sense of autonomy
- A sense of empowerment
- A high level of enjoyment

How do we establish a HPTeam?

Typically teams go through 4 stages:

1. **Forming**

- Exploration period, cautious and guarded, exploring boundaries

2. **Storming**

- Deals with issues of power, control, leadership

3. **Norming**

- Establish cohesiveness among team members
- Appreciate differences, trust begins to evolve

4. **Performing**

- Full functioning of team
- Leadership is participative and shared
- Sense of identity and high level of work accomplishment



How can we start “performing” faster?

- Forming stage

- Clarify team’s purpose and goals
- Clarify responsibility of each member
- Validate skills each team member brings
- Identify communication methods

- Storming

- Establish norms of discussions
- Model openness in resolving conflict
- Ensure everyone participates on all key issues

- Norming

- Let members take on more responsibility as productivity increases
- Chart progress! Reward successes!
- Reduce meeting time as things become smooth

Check out Rapid Development p295 –
Guidelines for team members and leaders

Good team quote #2

We must all hang together or assuredly, we shall all hang separately.

Ben Franklin

Good team quote #3

If a team is to reach its potential, each member must be willing to subordinate his personal goals to the good of the team.

Bud Wilkinson

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- Why do we need teams?
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- What are some common team models?



Common team models

Which are you familiar with?

Some typical models

Can you think of +/- of each of these?

- **Business Team**
 - Peer group headed by technical lead
- **Chief Programmer Team**
 - Brooks' surgical team - surgeon plus support
- **Skunkworks team**
 - Creativity with free reign
- **SWAT team**
 - Skilled With Advanced Tools – tackle tough problems
- **Feature team, search-and-rescue-team, ...**

Typically teams include:

- Several “developers” in a broad sense
- A person with lead developer/architect responsibilities
- A person with functional management responsibilities
- A person with project management responsibilities

Do you know the difference in responsibilities?

Common to all HPteam models

Results Driven Structure



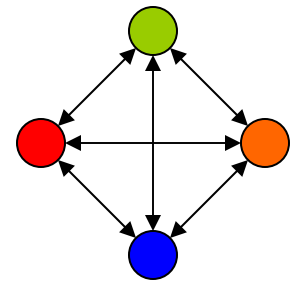
- Clear roles and responsibilities
 - Each person knows and is accountable for their work
- Monitor individual performance
 - Who is doing what, are we getting the work done?
 - Tip: Be responsible!
- Effective communication system
 - Available, credible, tracking of issues, decisions
- Fact based decisions
 - Focus on the facts, not the politics, personalities, ...

More on communication

Do not underestimate the power of communication!

Communication requirements increase with increasing numbers of people

- everybody to everybody $\rightarrow \frac{n(n-1)}{2}$
- even just somebody to everybody $\xrightarrow{2} n-1$



Every effort at communication is a chance for miscommunication

The need for hard discussions may come up in your team.

CSE We'll talk more about these later.

Departing question...

Pragmatic Programmer Tip:
Organize Around Functionality, Not Job
Functions

Do you agree?

Dilbert and a new team member

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