9 Principles for Successful Software Management

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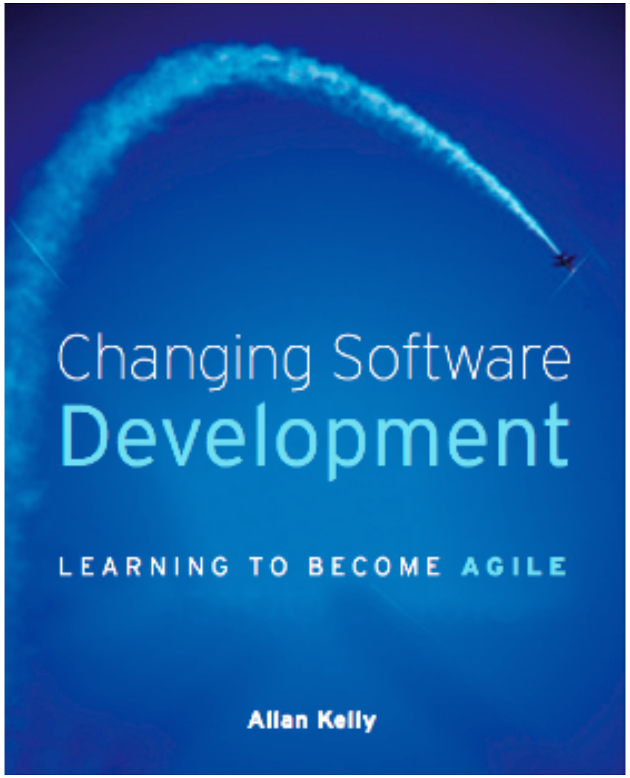
- Author: *Changing Software Development,* 2008
- I help companies do software development better
  - Process, Practice
  - Agile Methods
  - Product Management
  - Training, Coaching, Managing



Q: What is the secret of successful software development?

A: Someone has to give a damn

(Someone who actually understands development)

Companies appoint managers to be that person

Why are managers important?

- Bad management destroys projects
- Bad management theory destroys companies
- Done badly management is worse than nothing

Fred Brooks said

“Some readers have found it curious that *The Mythical Man Month* devotes most of the essays to the managerial aspects of software engineering, rather than the many technical issues. This bias ... sprang from [my] conviction that the quality of the people on a project, and their organization and management, are much more important factors in the success than are the tools they use or the technical approaches they take.”

Frederick P. Brooks, The Mythical Man Month 1995

Managers before Coders

- Managers start architecture by deciding:
  - How many developers?
  - Which roles will be staffed? DBA? Tester?
  - Which technologies?
- Conway's Law
  - Architecture is a copy of organization
- So does software architecture mean anything?
  - Architect the organization not the code
  - Create an environment for developers to do **good** work

Managers are architects

0. You need a management philosophy

- Managers make thousands of small decisions every day. Need:
  - Consistency
  - Drive towards target
  - Make them quickly
- You need a
  - Philosophy
  - A value system
- Here help you
  - towards better software management

1. Know your Customer

- Name your customer
  - A customer (singular: individual, organization)
  - A market (many customers)
- What is the problem you are trying to solve?
  - Understand the problem
  - Understand it in depth
- Identify the core 20%
  - Less is more
- Solve it completely

Know your Customer:
It is a full time job

- **Developers don't know best**
- Use a:
  - Product Manager: software vendor
  - Business Analyst: bespoke/internal development
- Get out there
  - Talk to customers
    - What are they trying to do?
  - Know your competitors

Know your Customer: Prioritisation

- Always too much work
  - Seek out the most valuable
- Absolute prioritisation

~~MoSCoW rules~~

Business: Pay your taxes

1

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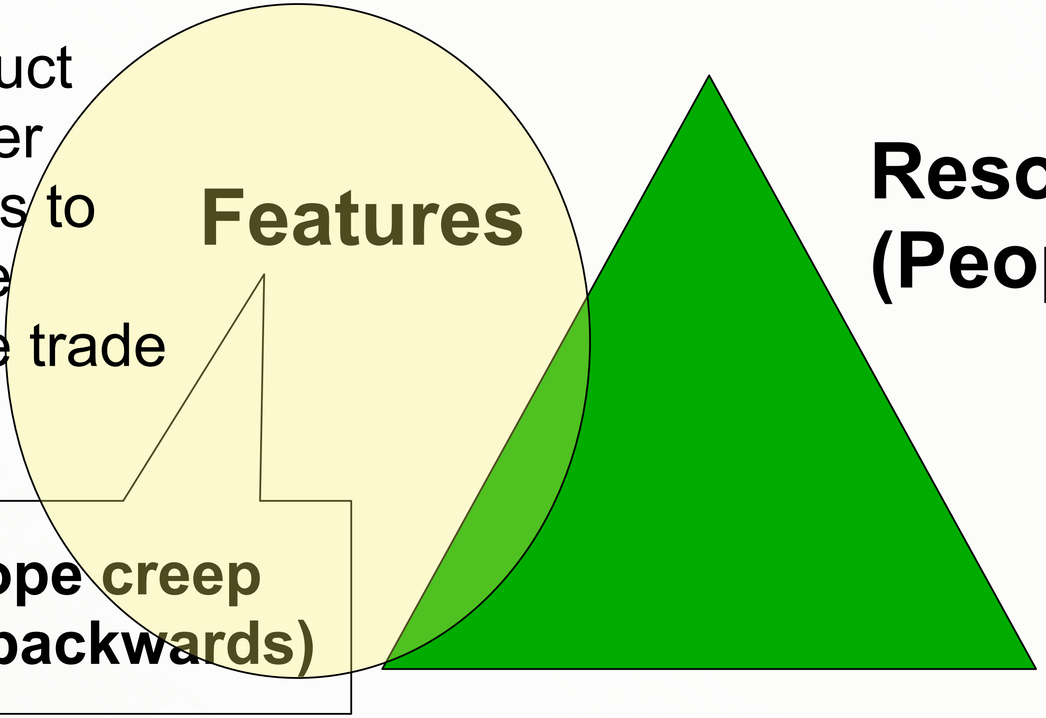
2. Features - Resources - Time

Product Owner needs to make these trade offs



Scope creep (run backwards)

Fixed in the short run (Brooks Law)

Time boxed

Dynamics of Software Development, Jim McCarthy, 1995

Managing the FRT triangle

Do not overfill
- ends in a tears

- Business voice is more important than ever
- Project Management role is changing

3. Quality is Free

Philip Crosby
1980

- Poor quality costs:
  - Testing
  - Disruption
  - Meetings - Arguments
  - Rework
  - Unhappy customers
- No excuse for
  - Gold plating
  - Reusable code
  - Fancy code

>

Cost of doing it right

And it makes for happier people

- People like doing good work
- Doing shoddy work makes them unhappy

Intermission

Q: How much time would you save if....

- You had no bugs to fix?
- You only had 20% as many features to implement?

$ Bugs are expensive to fix

So don't write them

Simple really

Just say No to Bugs

4. Management by Routine

- Simplify management
  - Make it routine
- People like routine
  - Makes life predictable
- If you can’t keep to a routine you have a problem
  - Fix that problem

5. Stay Connected

- Problem: The Gap between workers and managers
- Go see the problem yourself, speak to the people who do the work
  - Gemba: the place of truth (work)
  - Genchi / Gembutsu: go see for yourself
  - Trust your people
  - They know the answers
  - (If not why did you hire them?)
  - (Why do you still employ them?)

Mind the Gap

6. Risk Management by doing

- Profit is the return to risk
  - Remove the risk, remove the profit
- Inaction carries risk too
  - Competitors win sales
  - Staff do their own thing
- Solution: Fail
  - Fail fast
  - Fail cheap
  - Learn from failure
  - Roll back

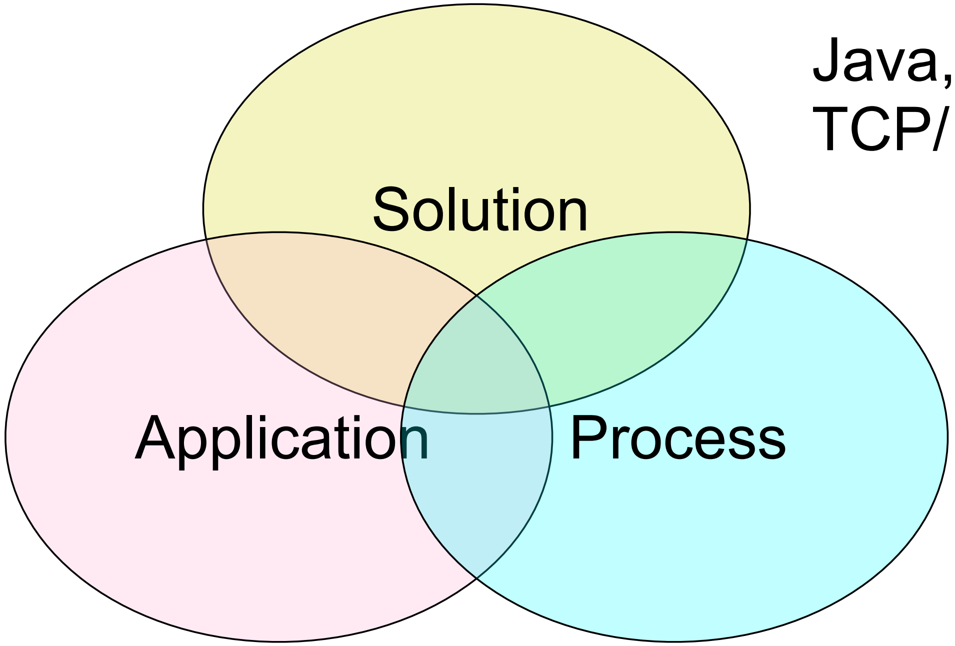
7. Continuous Improvement

- Not just a cliché - it means something!
- Not a project, a way of life
- Repeated incremental improvements

What have you improved this week?

Continuous improvement in 3 domains

Work to improve in each domain

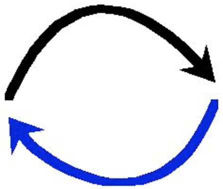


Java, C++, Unix, TCP/IP, ….

Oil production, banking, media, …

RUP, Scrum, ….

How we do things around here



Improvement

Learn from what you do

Act on it

Continuous

Keep doing it

Again and again

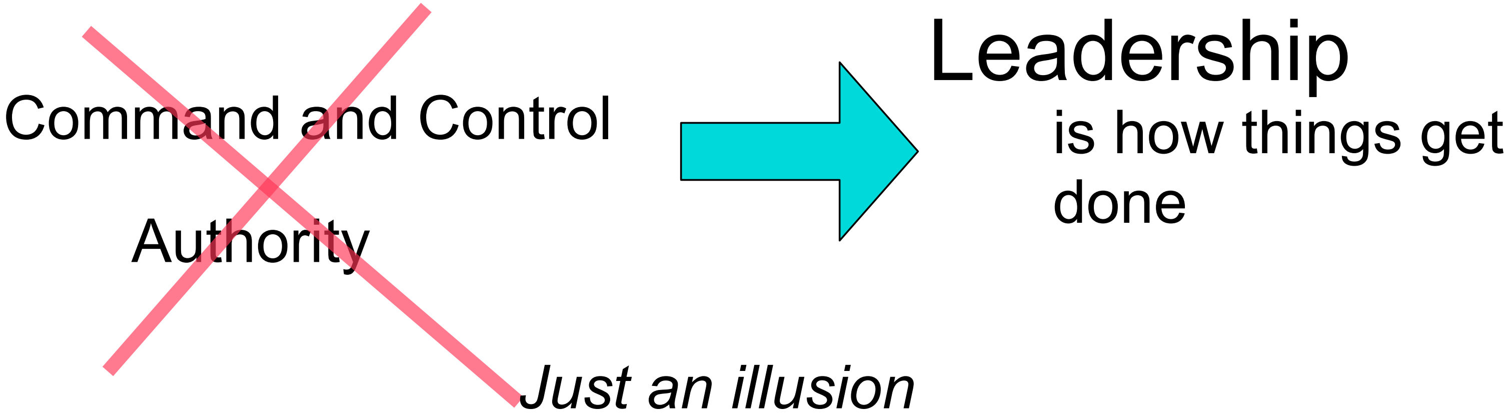
(Not a project, not a fad, not a one off)

Knowledge = Learning + Action

8. Trust & Honesty

Trust & Honesty are the basis of power

.... without them all is lost



~~Command and Control~~

~~Authority~~

Leadership

is how things get done

Just an illusion

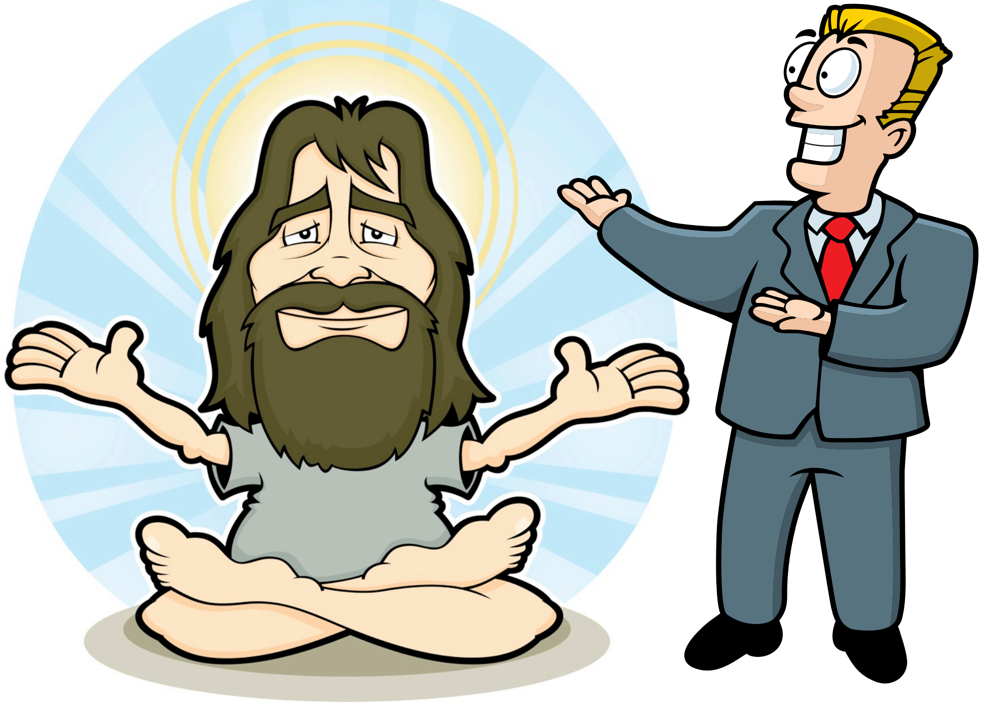
Organization gives Managers LEGITIMACY
- to ask questions
- to put things in order

Fall (and rise?) of Trust

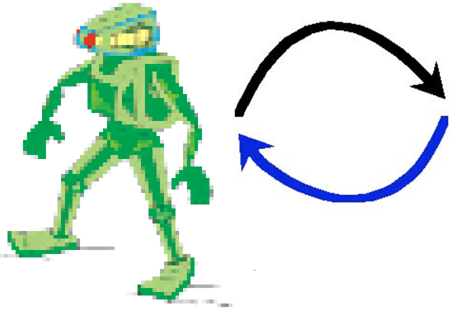
- Trust breakdown all too common
  - Developers <-> Manager
  - IT <-> Business
- Rebuild trust
  - Quality: No more bugs
  - Routine: Regular releases, regular reports
  - Prioritisation: Respond
- Restore trust to opens doors
  - New options become possible

9. It’s the People, Stupid

- People are not plug compatible
- Good people
  - Build or buy?
- Steady growth
  - Individuals & Teams



Finally...
Manager are not Aliens



- Have you asked your manager:
  - What are their concerns?
  - What are the problems they see?
  - What are they doing to achieve it?
  - What is their philosophy?
- Talk to your managers
  - Listen to what they say

Or did you just assume you know?

Successful management

0. Need a management philosophy

1. Know your customer

2. Features - Resources -Time

3. Quality is free

4. Management by Routine

5. Stay Connected

6. Risk Management by doing

7. Continuous improvement

8. Trust & Honesty

9. It’s the People, Stupid

Thank you!

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