# Software Development Team

Ridi Ferdiana ridi@acm.org
Version 1.0.0

# Team Roles?

- Project Manager
- Developer / Programmer
- Architect / System Analyst
- Designer
- Tester
- Technical Writer

#### Developer as a key of Software Development

- Developer creates codes
- Codes construct a program
- Programs become a software
- Connected software becomes a system
- Connected system becomes a distributed system

# Developers problem



Lack of motivation



Not knowing where to start



Lacking tools



Convinced you don't have the time



Convinced you aren't smart enough



Worried your weaknesses will be exposed

# Types of Skill on Programmer

- T Skill
- Phi Skill
- Comb Shape Skill



# General Skills for Any Developer

- Software Design (SOLID)
- Knowing tools
  - Source Code Versioning
  - Automatic Build
  - Editors
- Server Configuration
- Database
- Refactoring
- Debugging
- Testing
- Networking

# Developer Metaphors

- Software Penmanship
- Software Farming
- Software Oyster Farming
- Software Construction



## A technology team effectiveness

Domain knowledge and experience

Experience as part of a team

Communications skills

Flexibility with respect to job assignments

Personality traits

# Developer Personality

### Focus of attention

- Introvert
- Extrovert

# Seeking of Information

- Sensing
- Intuitive

# Decision making

- Thinking
- Feeling

#### Relationship in the world

- Judging
- Perceiving

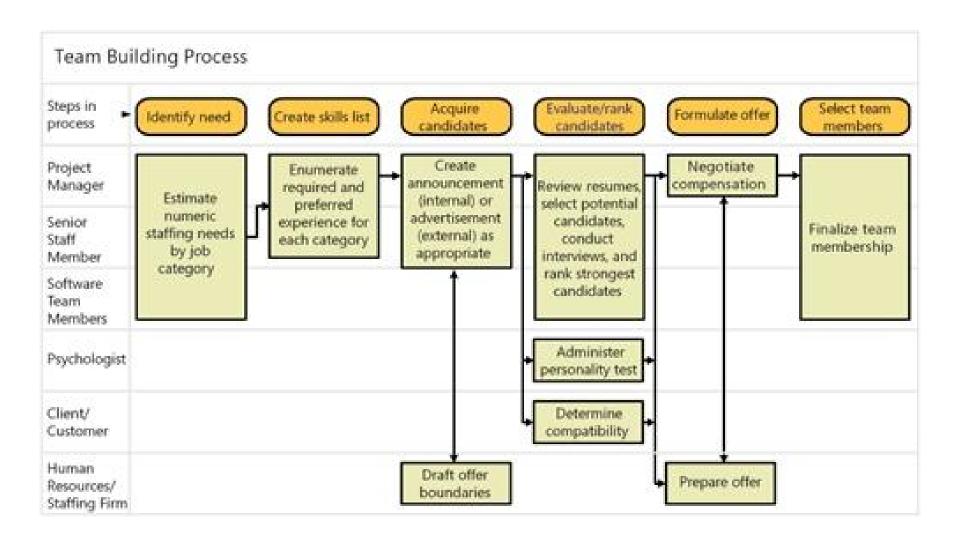
#### **Environment and Genetics**

# Developers Team Behavior

Trait	High Extreme	Low Extreme
Dominance	Fearlessly addresses problems directly	Addresses problems methodically, with a plan
Inducement	Outgoing, social, very persuasive	Cautious, reserved, focused on facts
Steadiness	Tends toward secure situations; needs to know boundaries, structured environment	Prefers lack of structure, undefined environment; wants complete freedom
Compliant	Abides by the rules set forth by others; aware of the consequences of ignoring the rules	Sets own rules; prefers "doing own thing"

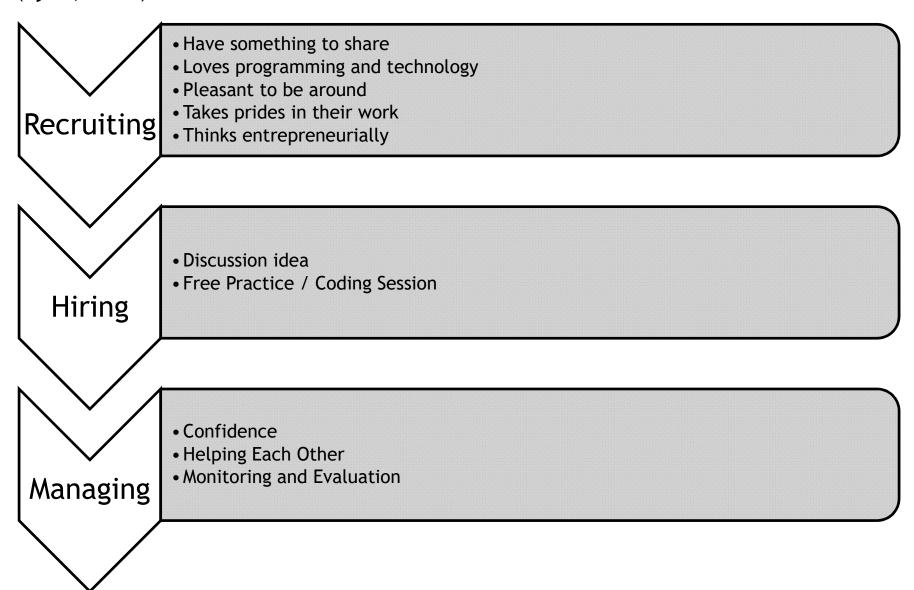
William Moulton (Moulton, 1928)

# Software Development Team



#### Composing Software Development Team

(Tyler, 2015)



## **Building Jell Team**

(Eckstein, 2013)

- Composing team model
  - Single Site Team
  - Multi Site Team
  - Dispersed Team

The best architectures, requirements, and designs emerge from self-organizing teams." (Agile Manifesto, 2000)

- Understanding Roles
  - Sharing the responsibility
- Ensuring Integrity
  - Trust and mutual respect
  - Communication media
  - Customer Communication Facilitator
  - Social Connections

# The function of Management

- Management role on software development
  - Program Manager
  - Product Manager
- Functions of Management
  - Planning
  - Scheduling
  - Controlling
  - Staffing
  - Motivating

# Key points

- Developer as a key of software development team
- Manager as a key of software development success
- Developer and Manager Skillsets
- Building a skilful and jell team.

#### References

- Allen, S. & Classon I. 2013. Learning To Program Being A Better Programmer. Pluralsight
- McConnell, S. 2004. Code Complete. Microsoft Press
- Peters, J. L & Peters J. 2008. Getting Results from Software Development Teams. Microsoft Press.
- Tyler, J. 2015. Building Great Software Engineering Teams: Recruiting, Hiring, and Managing Your Team from Startup to Success. Apress
- Eckstein, J. 2013. Agile Software Development with Distributed Teams: Staying Agile in a Global World. Addison-Wesley Professional.