ETH zürich

Agile software development

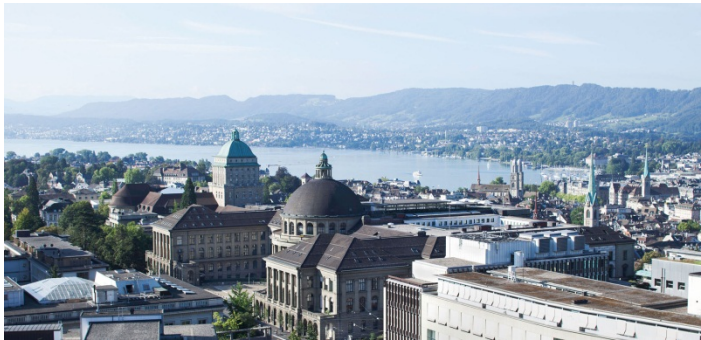
Bertrand Meyer

Part C: agile roles

1: Traditional manager roles

2: The three Scrum roles

3: Other agile roles



Traditional (non-agile) manager responsibilities

1. Define goals
2. Define deadlines
3. Assign tasks
4. Provide interface with higher management
5. Provide interface with customer
6. Validate requirements
7. Decide whether goals have been met
8. Enforce deadlines
9. Coach, mentor
10. Enforce rules and methodology

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Part C: Roles
1: Traditional manager roles

What we have seen:

Managers have many responsibilities,
from “Nanny” to “Guru”…
and the agile approach wants to change that!

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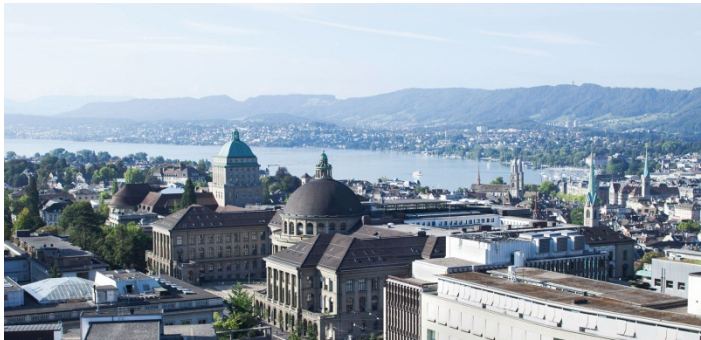

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Managerial roles in Scrum

In Scrum there is no “project manager” or “team leader”

The preceding tasks are split between:

- (Self-organizing) team
- Product owner
- Scrum Master

Team

Scrum

Source: Sutherland

The team:

- Is cross-functional
- Has 7+/- 2 members
- Selects iteration goal and work results
- Organizes itself and its work
- Can do everything within guidelines to reach goal
- Demos work results to product owner

Core participants and fellow travelers

Core participants are truly “committed” to the project

Fellow travelers are “involved”. They should stand on the side in discussions, giving their opinion if invited to do so

“Pigs” and “chickens”

Product owner

Scrum

Source: Sutherland

The product owner:

- Defines product features
- Decides on release date
- Decides on release content
- Responsible for product profitability (ROI)
- Prioritizes features according to market value
- Can change features and priority over 30 days
- Accepts or rejects work results

Scrum Master (coach)

Scrum

Source: Sutherland

The Scrum Master:

- Ensures that the team is functional and productive
- Enables cooperation across all roles & functions
- Shields team from external interferences
- Enforces process: daily meeting, planning & review meetings
- Removes **impediments**
- Normally, does no develop

Impediment

Anything that affects the velocity (progress) of the team
(in Lean terms: produces waste)

Examples:

- Hardware limitations
- Missing requirements (recall “waste” in Lean)
- Missing supporting software (from within the team, or outside of it)
- Management interference
- Bureaucratic delays

Scrum Master (coach)

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Source: Sutherland

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A view from India

Comment on Scrimshire article:

I have seen the trend that organizations look forward to hire people with technical skills. Specially in India, they do not consider Scrum Master as independent role but always club with developer (they call it technical scrum master).

No manager in strict Scrum

Team

Product owner

Scrum Master

If there is a manager…

Scrum

Source: Sutherland

Managers:

- Support team in its use of Scrum
- Contribute wisdom, expertise and assistance
- Do not "play nanny":
  - ~~"Assign tasks, get status reports, and other forms of micromanagement"~~
- Instead, "play guru":
  - Mentor, coach, devil's advocate, help remove impediments and solve problems
- May need to evolve their management style, e.g. use Socratic questioning to help team discover solutions (rather than imposing a solution)

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Part C: Roles
2: The three Scrum roles

What we have seen:

Scrum, and agile methods in general,
strongly curtail the traditional role of the manager,
and split it into three separate roles:
Team, Product Owner and Scrum Master

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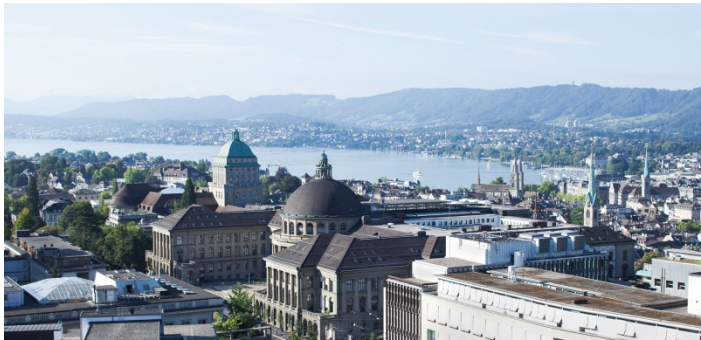

Expert user

Person with expert knowledge of the project area, who can answer questions and suggest solutions to problems

Should be actual user and not just a tester from the development team

Minimum of once a week, two-hour meeting with expert user, and ability to make phone calls

Customer

XP

Source: Chromatic 03

Customer responsibilities in XP:

- Trust developers' technical decisions, because developers understand technology
- Analyze risk correctly, weighing stories against each other
- Provide precise stories, enabling developers to produce comprehensive task cards and accurate estimates
- Choose stories with maximum value, scheduling the most valuable stories that could possibly fit in to next iteration
- Work within team, providing guidance and receiving feedback as quickly and accurately as possible

Developer

XP Scrum

Source: Chromatic 03

Main job: turn customer stories into working code.

Developer obligations:

- Know and understand technical issues
- Create and maintain the system as it evolves
- Answer: "*How will we implement it?*", "*How long will it take?*" & "*What are the risks?*"
- Work with customer to understand his stories
- From a story, decide implementation
- Estimate work for each story, based on implementation decisions & experience
- Identify features that depend on other features
- Identify risky features and report them to customer
- Follow team guidelines
- Implement only what is necessary
- Communicate constantly with customers

Developer Rights:

- Estimate own work
- Work sensible & predictable schedule, by scheduling only work that can be done
- Produce code that meets the customer's needs, by focusing on testing, refactoring, and customer communication
- Avoid need to make business decisions, by allowing the customer to make them

Tracker

XP Scrum

Source: Chromatic 03

Keeps track of the schedule

Most important metric

- Velocity: ratio of ideal time estimated for tasks to actual time spent implementing them

Other important data:

- Changes in velocity
- Amount of overtime worked
- Ratio of passing to failing tests

These numbers measure progress and the rate of progress and help determine if the project is on schedule for the iteration

To measure velocity within the iteration, every day or two, the tracker asks each developer how many tasks he has completed

Coach

XP

After: Chromatic 03

Optional role:

- Guides team
- Mentors team
- Leads by example
- Teaches when necessary
- May teach by doing
- May offer ideas to solve thorny problems
- May serve as intermediary with management

In Scrum: this role is mostly taken on by the ScrumMaster

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Part C: Roles
3: Other agile roles

What we have seen:

A variety of roles,

not identical to those of Scrum,

but replacing many of the traditional software development roles