Basics of Scrum

Thomas Schwarz, SJ

What is Scrum

- Agile Software Development Framework / Philosophy
  - Agile:
    - Reactive to results and changes in demand
  - Divides development into sprints
    - At the end of each sprint, the project is in a usable state

Scrum and Data Science

- Data Science gathers data and provides insights

  - The data gathering / cleaning results in a software product

    - E.g. a database and an update mechanism for data gathering

  - The analysis part results in a paper product

- Both can be done using Scrum

Scrum Roles

- Product Owner:

  - Represents the stake holder

  - Single authority to decides on features and functionality

  - Maintains and communicates a clear vision

    - Prioritizes work

    - Needs to be very responsive

Scrum Roles

- Scrum master

  - Helps everyone understand and embrace Scrum values

  - Is NOT a manager

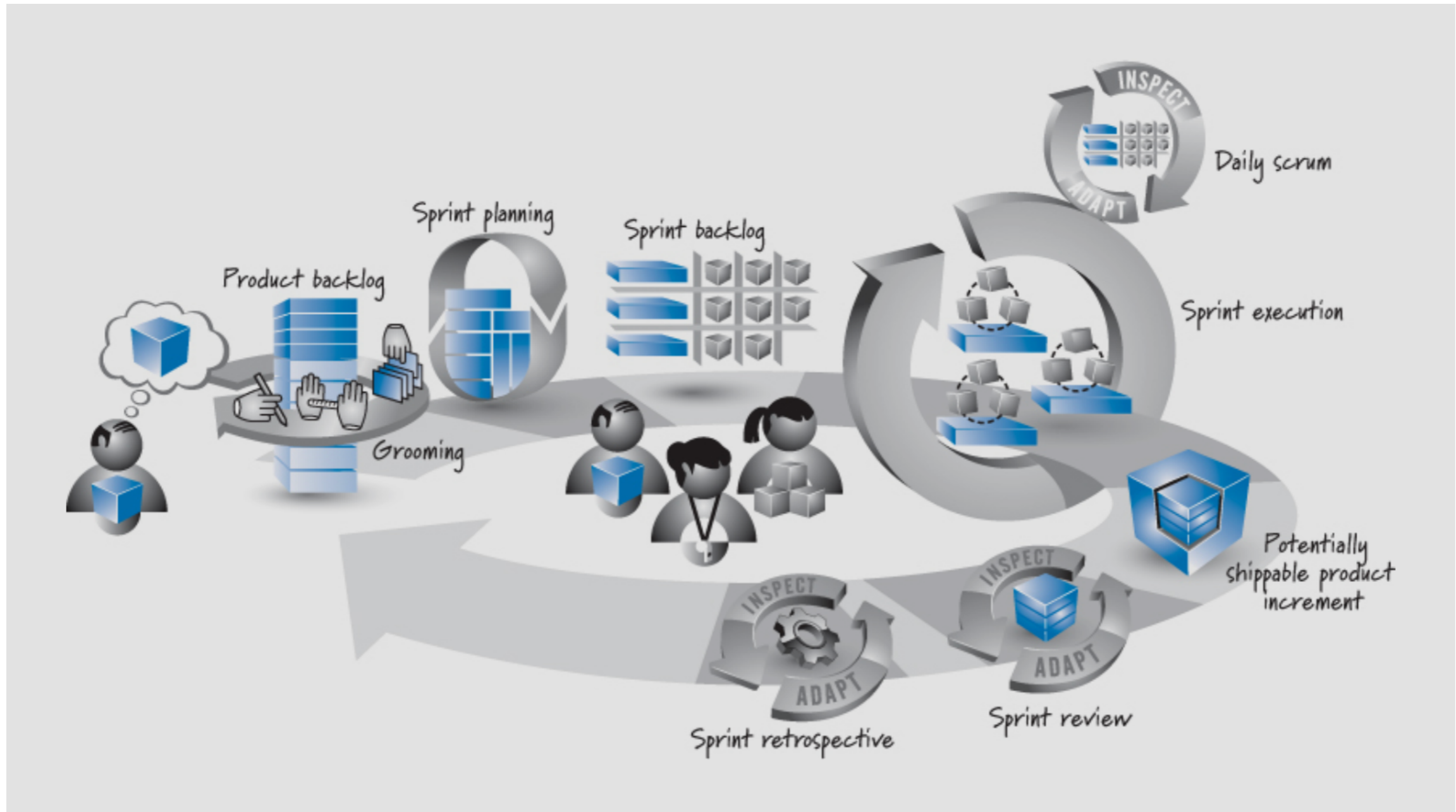   - but responsible for removing impediments to team productivity

Scrum Roles

- Development Team

  - Self-organizes to accomplish goal set up by product owner

Scrum Activities

- Break team efforts into sprints

  - one to two weeks in normal software development

Scrum Activities

Scrum Activities

- Product owner has a vision of what to create

  - Grooming: break down into a set of features

  - Product backlog:

    - Current features

  - Sprint backlog

    - Features to be implemented during the sprint

    - Sprint planning is the process of feature selection

    - Result is a forecast or commitment

Scrum Activities

- Sprint backlog

  - Developed by development team

  - Detailed tasks:

    - Design, build, integrate, test selected subset of features

Scrum Activities

- Sprint retrospective:

    - Scrum team inspects the product built in the sprint

    - Scrum team inspects Scrum process

Scrum Activities

- Product backlog:

  - Undergoes a process:

    - prioritization / ordering

    - estimation

    - creation and refining

Scrum Activities

- Sprints are up to a month long

- **Each sprint creates something tangible**

- Sprints have fixed beginning and end times

Scrum Activities

- Product owner, scrum master, and developers have a sprint planning meeting

- Agree on sprint goal

Scrum Activities

- Daily Scrum:

  - Each day of spring, at the same time, development team holds a 15 minute meeting: daily scrum

  - A standup meeting to ensure it is short

  - Each team member states:

    - What did I accomplish

    - What do I plan to work on

    - What are the obstacles, impediments

- Purpose is about inspection, synchronization, and adaptive daily planning

Scrum Activities