Sprint-Driven Development: Agile Methodologies in a Distributed Open Source Project (PyPy)

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http://pypy.org/
http://codespeak.net/pypy

PyPy: project facts

- A F/OSS community within the Python community (350 subscribers,150 000 LOC)
- A consortium of 12 partners managing a fixed prize contract with the European Union
- 3 objectives – mainly to produce a fast and flexible Python implementation written in Python

What is a sprint?

- Originated from the Zope Corporation during the development of Zope 3 (2001)
- A multiday session of intense development
- Ca 2-5 days long
- No more than 10 people
- Using aspects of XP
- 1 role: the coach

PyPy and sprints

- PyPy started with a one week long sprint (Feb 2003)
- The project sprinted 6 times in various places in Europe before receiving funding – evolving and growing the community around PyPy
- “cheap laptops and low-fare airlines”

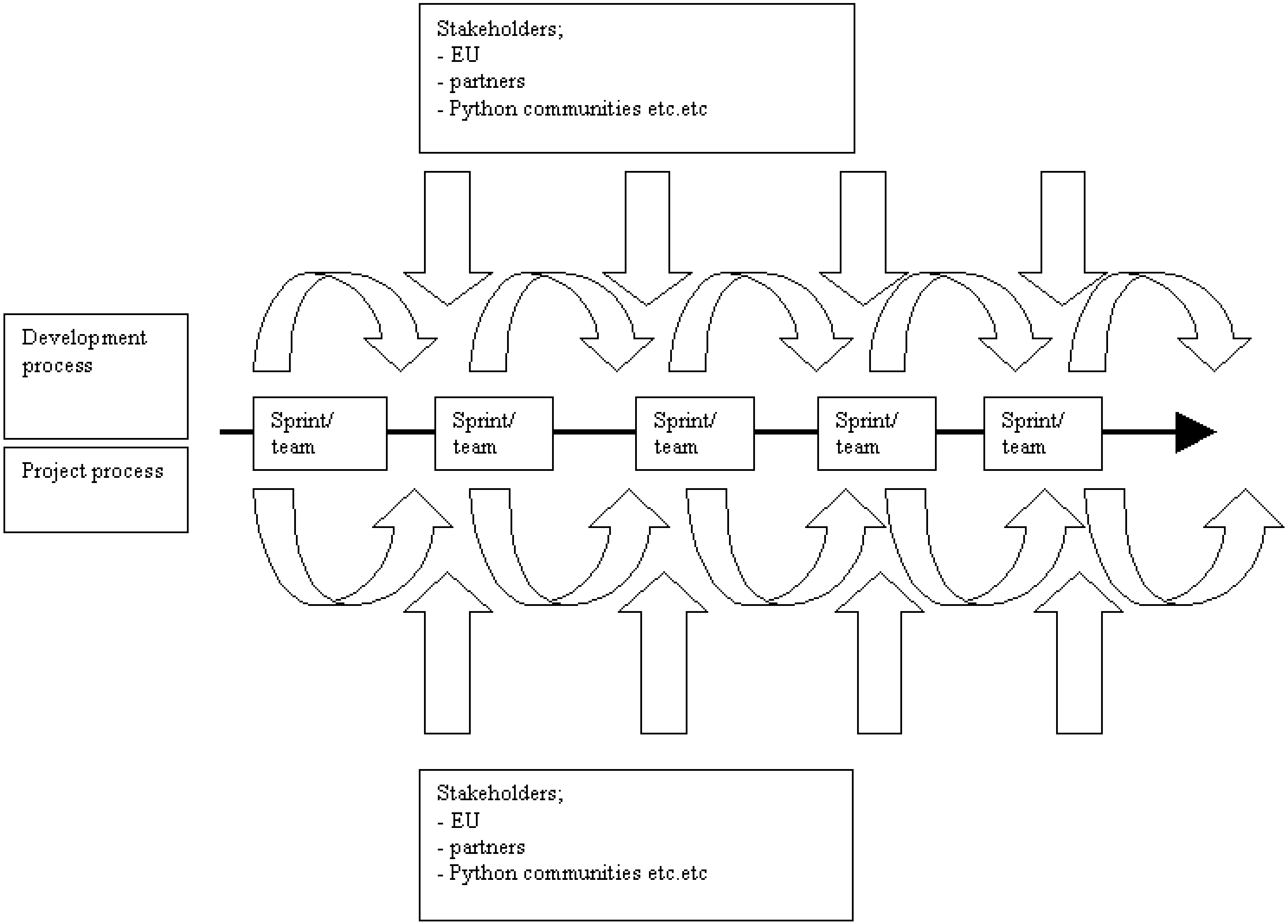
PyPy and sprints

- The development process of PyPy (dispersed as well as co-located during sprints) require:
  - Source code management/version control
  - Test-driven development/automated test framework
  - Coding style guide and documentation
- This quality assures the work as well as allows for open sprints – anyone can participate

What is Sprint-Driven Development? I

- The funding allowed for a more systematic approach – sprint driven development
- The funded PyPy project budgeted for 14 sprints during 2 years
- Also a sprint budget to finance people from the community to participate
- The project and the core group sprints every 6-8th week of the project for 7 days

What is Sprint-Driven Development? II



Stakeholders;
- EU
- partners
- Python communities etc.etc

Development process

Project process

Stakeholders;
- EU
- partners
- Python communities etc.etc

What is Sprint-Driven Development? III

- Different forms of sprints evolved
- Open sprints:
  - Arranged in connection to conferences
  - Open for all – focus on dissemination
- Closed sprints:
  - Only for people with experience in PyPy development
  - Usually arranged close to larger releases

How is it done? I

- Preparation – ca 1 month before:
  - Rough goals are identified
  - Logistics, infrastructure and venue information is documented
  - A sprint announcement is sent out to various community mailing-lists
  - People announce participation (interest)

How is it done? II

- Procedure – during the sprint:
  - Introduction – start up planning session (matching goals with interest – pairing people)
  - Tutorials, mentoring, group discussions
  - Daily planning sessions – tracking work, re-pairing (documented)
  - Some non-coding work (consortium management)

How is it done? III

- Procedure – during the sprint:
  - 7 days with one break day (social activities)
  - A closure session is done – planning work until next sprint (and rough goals), summarizing results
  - A sprint report is sent out to various community mailing-lists
  - Logistics and venue is sorted out for upcoming sprint

Why Sprint-Driven Development?

- Makes distributed development more efficient
- Increased productivity
- Exchanging information/thoughts and ideas
- Increased cohesion among developers
- Dissemination
- Learning

Again – why Sprint-Driven Development?

- Established practice in the Python community, in project as well as companies
- Accelerated, self-organized in its nature due to the minimalistic approach – developed by developers for developers
- A decisive effect on evolving and growing Open Source communities (Zope3, PyPy, Plone etc)

Conclusion