# Trouble in Paradise: The Open Source Project PyPy, EU-funding and Agile Practices

Beatrice Düring (bea@changemaker.nu)

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

# PyPy: the facts about the case

- 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

# Influencing factors of the project process

- The Python F/OSS community climate (distributed and dispersed development)
- Agile practices (sprint-driven development, communication and development infrastructure)
- EU-requirements for managing a fixed prize contract within a consortium structure

# Influencing factors: the F/OSS Python community

- F/OSS Python nature of teams: self-organized, intensely collaborative...but also distributed and dispersed
- Communication climate: open and transparent (because it is most efficient...)
- Created by an infrastructure of version control, automated test frameworks, mailing-lists (and archives!), IRC-channels, web and wiki

# Influencing factors: agile practices

*Agile teams are characterized by self-organization and intense collaboration, within and across organizational boundaries*

(Cockburn, Highsmith, 2001)

# Influencing factors: agile practices

- “Sprints” evolved from XP practices within the Python community 2001 (Zope 3)
- Started as a 2-3 day co-located, intense coding session in order to support building a community
- Main benefits: support for evolving a community, live training session, facilitates decision making, creating cohesion

# Influencing factors: agile practices

- PyPy started with a one week sprint in 2003
- EU-funding allowed the project to adopt sprint-driven development, sprinting every six weeks
- Sprinting in different locations helped evolve the community
- Sprints in PyPy are 7 days long, involving daily planning sessions and pair-programming

# Influencing factors: agile practices

- The typical infrastructure in a distributed F/OSS project fits the agile approach
- Infrastructure and sprints were not enough – we added “sync-meetings”
- Every week on a fixed time, IRC-session of 30 minutes, open for all developers,
- Fixed format: LAST, NEXT, BLOCKERS

# Influencing factors: EU-funding

- Work was structured into 14 work-packages and 58 deliverables
- 14 sprints during the 2 years process was budgeted for
- Created a management team and a technical board in order to maintain as much developer-driven structure as possible
- After the first year the management team was re-organized into a more flexible structure

# Influencing factors: EU-funding

- The same infrastructure was applied to manage the consortium level work as was used for producing code
- The same guiding principles of open and transparent communication and self-organizing was applied for the consortium work
- Main consortium activities: planning, tracking, contract amendments, sprint organizing and documentation is mainly developer driven

# Conclusion: the People Factor

*Agile processes are designed to capitalize on each individual and each team´s unique strengths*

(Cockburn, Highsmith, 2001)

- Are we too caught up in following processes, agile or plan-driven?
- What supporting practices (technical, methodological) does <u>your</u> team need?

# Conclusion: the People Factor

- Although it seemed as trouble in paradise it was possible to:
  - Build a minimalistic and efficient process
  - While still managing to fit it within the frames of the influencing factors: F/OSS Python community, agile practices and EU-funding
  - All thanks to our CRACK performers