Focus group 4 - Software workshop 16 Jan 2017

Problem(s) that the group wants to solve:

Rewarding good software management

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Quick wins:

Long-term solution(s):

Official software management plan and policies by funders
Summary:

Software management

- What is **good software management**: version control, branches (master and features), testing, maintenance/legacy,
- Also applicable to **workflow**
- Group level, institute level, **policy**
- Requires time, without funding

- **Software management plan - in data management plan?**
  - Down to individuals, developers
  - Personal responsibility, with documentation,
  - Policy within a collaboration
  - Balance between continuity and new tools

**Rewarding**

- Rewarding more than enforcing
- If you do it, impact in number of papers
- One of the official outputs is software, and software maintenance
- Maintenance: valued internally and externally
- %age of data management
- Funders explicitly expecting some budget for software management/development
- Data/software requirements in grant, but also demonstrate
- We want reward rather than more pressure on programmers
- **Outputs**: data and software, linked to ORCID
  - FORCE11: data/software citation - [https://www.force11.org/software-citation-principles](https://www.force11.org/software-citation-principles)
  - Zenodo for github repo DOI
  - Career advancement: github profile, reward open development
  - Software engineer as authors: how much contribution to be added
  - Beyond authorship: contributions in software project (open/github)
  - Re-use of software is important, and attractive for funders
  - Publish your software/data management plan - example [https://doi.org/10.3897/rio.3.e11624](https://doi.org/10.3897/rio.3.e11624)
- Community is not enough. Caring about software is crucial, but not relevant (yet) when competing for academic jobs - academic credit is still very narrow.
- **How can we drive change faster?**

**Who rewards:**

- **Institutional** level: symplectic for software
- Github awards, or similar ranking
- Github (et al) profiles
- Not only at individual level, group-level, wider collaboration
- **Funders**
  - **Team leaders**: driving force behind rewarding
  - Software champions alongside data champions
- Getting *community-level recognition* - independent of institution of particular job role
- RSE **fellowships**, need more examples
- MRC has similar funding opportunities - skills shortages - bioinformatician fellowship