

A few of the more generic lessons - more detail in document

Learn your lessons as you go along - not afterwards!

Need to react to changing circumstances:

- User requirements
- Technology changes
- Funding constraints
- Successes & failures

Lessons:

- Metrics & Milestones cannot be set in stone - need continuous monitoring & revision
- Whole project cannot be specified at the start (and written on JeS!)
- Project managers need flexibility
- Collaboration meetings and face to face management meetings vital

“Collective Agility”

Particle Physicists could not have build a Grid for the LHC

Computer Scientists could not have build a Grid for the LHC

You need a mixture of skills + pragmatism

You need properly funded academic oversight

You need close engagement with the users/experiments

You need professionals for dissemination, outreach, graphic design etc (= money)

You need the best people and you need to keep them (= continuity of contracts)

The key organisational practices in GridPP identified by PEGASUS are:

- Draw upon past experience to handle new tasks; **Senior academics bought out**
- Continuous reflection and learning; **Face to face meetings, targeted reviews**
- Extensive communications within and between different groups, with an emphasis on face-to-face informal communication; **Sufficient travel money**
- Work with power users; cultivate user communities; **High level user involvement, funding of experiment posts**
- Project leader articulates clear vision and shared goals; **Project Leader bought out**
- Use high level milestones and deliverables to create momentum, but be ready to change them; **Flexible Project Map, sensible Oversight Committee**
- Share knowledge by mailing lists, wiki, blogs, etc; **Funding for website/webmaster etc**
- Cultivate community bonding and shared identity; **Face to face meetings (=travel money)**
- Develop trust, loyalty and mutual support; **Face to face meetings**
- Motivate and rely on good people; **Long term contracts renewed early enough**
- Maintain high level of transparency within the project; **Publicly available minutes/documents etc**
- Allow mistakes and unsuccessful explorations; **Flexibility to redeploy money/people**
- Allow parallel solutions to compete **Sufficient resources**



Experiments' resource requirements

or



Shifting sands ready to catch the unwary

A beer named after them

Serious point:

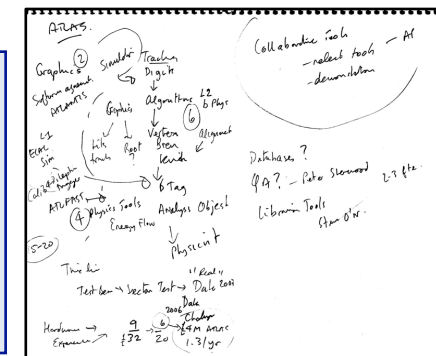
(It's this one)

Discussions in the pub after meetings help foster:

Requires:

- Face to face meetings
- Time
- Travel money

- Collaboration
- Community
- Consensus
- Cooperation
- Trust



1st version of the ATLAS e-Science project - 18 March 2003, Euston Flyer Pub, London