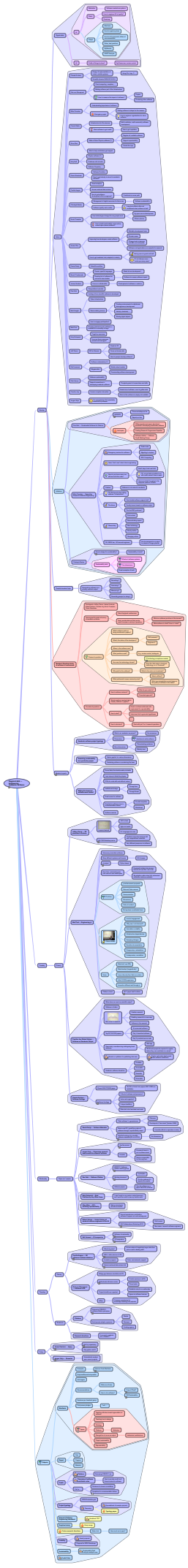


/ Dagstuhl EAS — Engineering Academic Software

http://www.dagstuhl.de/en/program/calendar/semhp/?semnr=16252

/ Dagstuhl EAS — Engineering Academic Software / Monday / Initiatives / Dan Katz — Sustainable Software for Science / WSSSPE

http://wssspe.researchcomputing.org.uk/

/ Dagstuhl EAS — Engineering Academic Software / Monday / Initiatives / Christoph Becker / How to design for sustainability?

http://sustainabilitydesign.org

/ Dagstuhl EAS — Engin… / Monday / Breakout: Empirical … / Research questions / How was the technolo… / Cf technology accept…

https://en.m.wikipedia.org/wiki/Technology_acceptance_model

/ Dagstuhl EAS — Engineering Academic Software / Monday / Breakout reports

https://goo.gl/4HZg4K

/ Dagstuhl EAS — Engineering Academic Software / Tuesday / Plenary / Jeffrey Carver — SE practices in Science / SE-CSE Workshop series

http://SE4Science.org

/ Dagstuhl EAS — Engineering Academic Software / Tuesday / Plenary / Matt Turk — Engineering yt / yt project

http://yt-project.org/

/ Dagstuhl EAS — Engin… / Tuesday / Plenary / Matt Turk — Engineer… / Citation is hard / 2011 paper had 6 aut…

https://scholar.google.com/citations?view_op=view_citation&hl=en&user=QTmv2p0AAAAJ&cstart=20&pagesize=80&sortby=pubdate&citation_for_view=QTmv2p0AAAAJ:9yKSN-GCB0IC

/ Dagstuhl EAS — Engineeri… / Tuesday / Plenary / Caroline Jay, Robert Hai… / Zenodo is a platform for…

http://zenodo.org

/ Dagstuhl EAS — Engin… / Tuesday / Plenary / Caroline Jay, Robert… / Zenodo is a platform… / Docker automates dep…

https://en.m.wikipedia.org/wiki/Docker_(software)

/ Dagstuhl EAS — Engineering Academic Software / Tuesday / Plenary / Claude Kirchner — Software Heritage / Software Heritage

http://www.softwareheritage.org

/ Dagstuhl EAS — Engineeri… / Wednesday / "Open mic" session / Daniel Garijo — Software… / OntoSoft ontology for sc…

http://ontosoft.org/ontology/software/

/ Dagstuhl EAS — Engineeri… / Wednesday / "Open mic" session / Jurgen Vinju — Organisin… / Use the source

https://github.com/usethesource

/ Dagstuhl EAS — Engineeri… / Wednesday / "Open mic" session / Dan Katz — Software Cita… / FORCE11 Software Citatio…

https://www.force11.org/group/software-citation-working-group

/ Dagstuhl EAS — Engineering Academic Software / Wednesday / "Open mic" session / Dan Katz — Software Citation / Working document

https://www.force11.org/software-citation-principles

/ Dagstuhl EAS — Engineeri… / Wednesday / "Open mic" session / Robert Haines — A short … / SSI Collaborations Works…

http://software.ac.uk/cw12

/ Dagstuhl EAS — Engineering Academic Software / Wednesday / "Open mic" session / Ralf Lämmel — 101companies / Software chrestomathy

http://softlang.uni-koblenz.de/chrestomathy/

/ Dagstuhl EAS — Engineering Academic Software / Wednesday / "Open mic" session / Ralf Lämmel — 101companies / 101companies

http://101companies.org/

/ Dagstuhl EAS — Engineering Academic Software / Thursday / Plenary / Cecilia Aragon — UE eScience Institute Initiatives

http://escience.washington.edu/

/ Dagstuhl EAS — Engineeri… / Thursday / Plenary / Cecilia Aragon — UE eSci… / MSc in data science at U…

http://www.datasciencemasters.uw.edu/

/ Dagstuhl EAS — Engineeri… / Thursday / Plenary / Cecilia Aragon — UE eSci… / Human-centered data scie…

https://depts.washington.edu/hdsl/

/ Dagstuhl EAS — Engineeri… / Thursday / Plenary / Rob van Nieuwpoort — eSc… / Netherlands eScience cen…

https://www.esciencecenter.nl/

/ Dagstuhl EAS — Engineering Academic Software / Thursday / Breakouts / Citations / Reviewing FORCE11 software citation principles

https://www.force11.org/software-citation-principles

/ Dagstuhl EAS — Engineering Academic Software / Friday / James Howison — depsy

http://depsy.org

/ Dagstuhl EAS — Engineering Academic Software / Friday / James Howison — depsy / Built by impactstory

https://impactstory.org/

/ Dagstuhl EAS — Engineering Academic Software / Friday / Jurgen Vinju — Ossmeter

http://www.ossmeter.org/

/ Dagstuhl EAS — Engineering Academic Software / Outputs / Manifesto / Examples / Science Code Manifesto

http://sciencecodemanifesto.org/

/ Dagstuhl EAS — Engineering Academic Software / Outputs / Manifesto / Recommendations / How to cite software? / Project CRediT

https://orcid.org/blog/2015/08/11/contributor-recognition-update-orcid-project-credit-and-contributorship-badges

/ Dagstuhl EAS — Engineering Academic Software / Outputs / Manifesto / Recommendations / How to cite software? / SW Sustainability

http://www.software.ac.uk/how-cite-and-describe-software?mpw

/ Dagstuhl EAS — Engineering Academic Software / Outputs / Manifesto / Topics

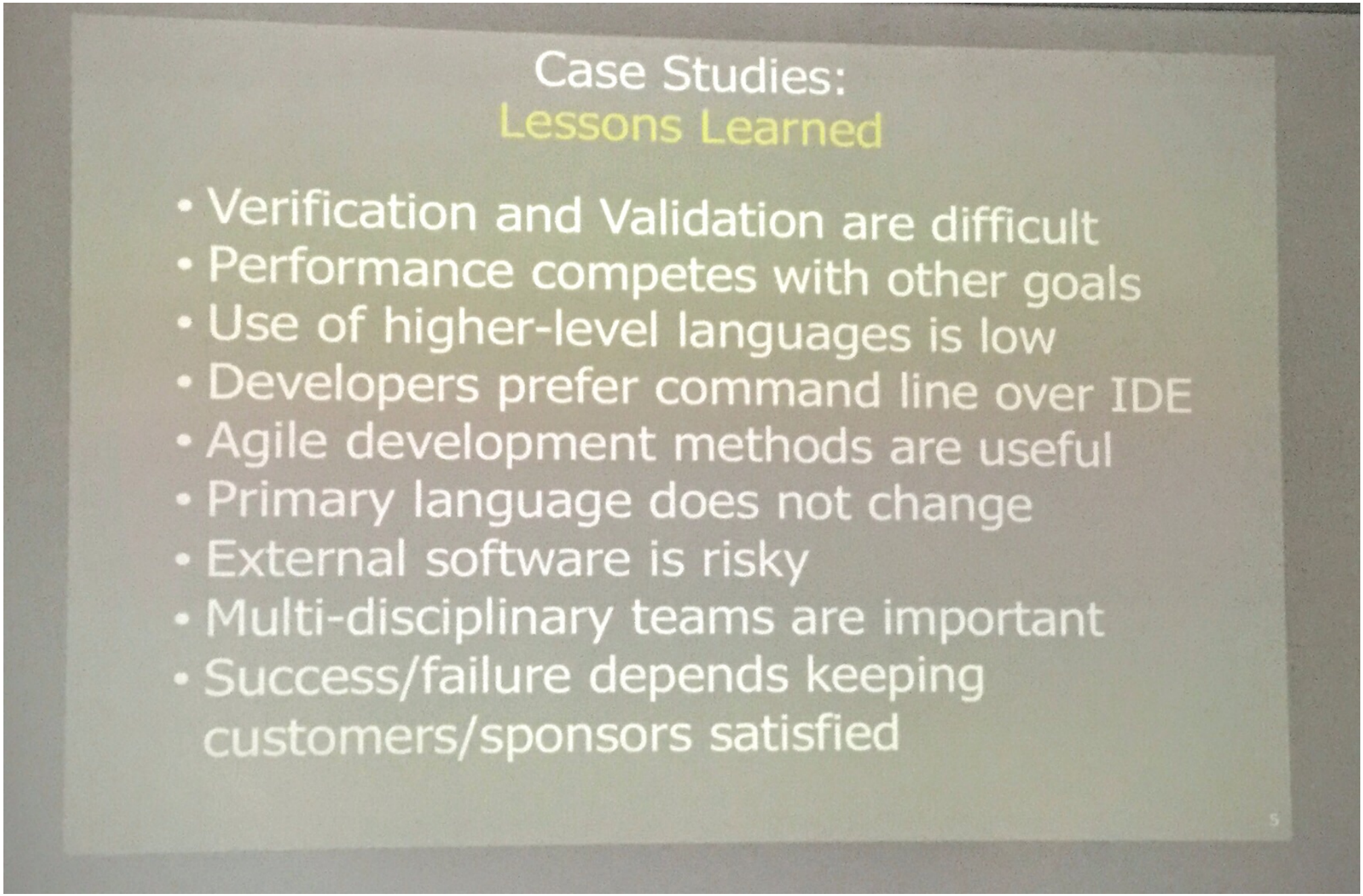
Try to come up with pithy statements on each. Narrow down to ~5 items.

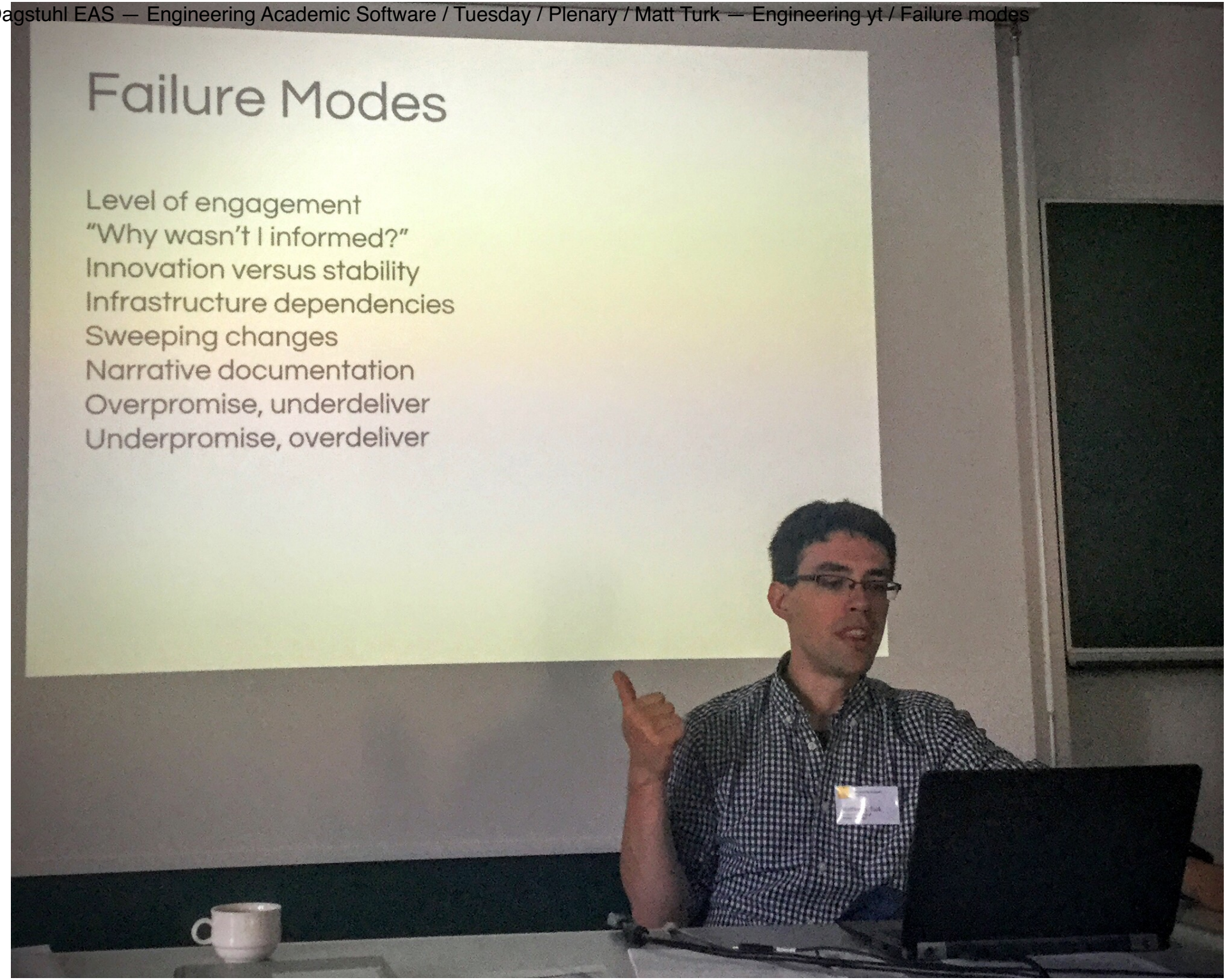
/ Dagstuhl EAS — Engineering Academic Software / Outputs / Credit / Citations

Dan

/ Dagstuhl EAS — Engineering Academic Software / Outputs / Credit / Call for ... / Templates for recommendation letters

James


Case Studies:
Lessons Learned
• Verification and Validation are difficult
• Performance competes with other goals
• Use of higher-level languages is low
• Developers prefer command line over IDE
• Agile development methods are useful
• Primary language does not change
• External software is risky
• Multi-disciplinary teams are important
• Success/failure depends keeping customers/sponsors satisfied
5


Failure Modes
Level of engagement
"Why wasn't I informed?"
Innovation versus stability
Infrastructure dependencies
Sweeping changes
Narrative documentation
Overpromise, underdeliver
Underpromise, overdeliver

Software is…

…a tool to
enable research

…the research

Upfront — *Developed* — Continuously

Retrospectively — *Becomes an output* — Continuously