Software Productisation

IPAndemic
Dr. Vadim Zaytsev aka @grammarware, 26 March 2021
Introduction

• Vadim Zaytsev aka @grammarware (🔗)
  • research (🔗, 🔗, 🔗)
  • teaching (🔗)
  • industry (🔗, raincode LABS)
• Productisation experience:
  • HLASM, TIALAA, etc
  • AEC of ICSE, MoDELS, SLE
  • Best Artefact, Top Performer

Project vs Product

- Development cycle
- Make it work
- Zero to one customers
- Fixed features
- Single or no deadline
- Short-term team
- Contract-based income
- Akin to writing a paper

- Life cycle
- Make it right
- One to many customers
- Ongoing support
- Continuous delivery
- Long-term team
- Can be passive income
- Akin to getting a PhD
The Main Difference

- Projects are done when they are done
- You need to stand by your product
  - reliably
  - for years to come
  - offering support
- Not always desirable
Should Programs Be Reviewed by the Program Committee?
Artefact Evaluation

• Any part of the “paper” beyond the PDF

• Goals
  • packaging
  • archival
  • evaluation
  • replication

• Metagoals
  • reality check
  • archival
  • persistence
  • career
Types of Research Artefacts

- Motivation
- Hypothesis
- Executable model
- Checklist
- Bibliography
- Script
- Commentary
- Visualisation
- Data (raw or derived)
- Sampling
- Tutorial material
- Guidelines for the future
- Actual paper text
- Algorithm
- Program
- Proof

https://github.com/researchart/all/blob/master/ListOfArtifacts.md
Artefact Evaluation Process

• Read & follow submission guidelines
• Submit on time
• Kicking the tires
• Evaluation
  • Insightful (timely, smart)
  • Useful (purpose, effect)
  • Usable (understandable, available, installable)
• Notification & adding a badge

E.g., http://icsme2016.github.io/cfp/artifacts-track.html
Artefact Evaluation Levels

- Documented
- Consistent
- Complete
- Exercisable
Artefact Evaluation Levels

- Functional
- Exceeding expectations
- Facilitating
Artefact Evaluation Levels

- Functional
- Reusable
- Stored with a DOI
Artefact Evaluation Levels

- Functional
- Reusable
- Available
- Same results obtainable
Conclusion

- **Project ≠ Product**
- The future of *artefact evaluation*:
  - publishing without artefacts is outlawed
  - AEC influences PC
  - artefacts can be submitted independently
- [https://artifact-eval.org](https://artifact-eval.org)
- [https://github.com/csartifacts/resources](https://github.com/csartifacts/resources)
- Questions?