

Assessing the State of the Practice for Domain X

Introductory Meeting

Dr. Spencer Smith, Dr. Jacques Carette,
Olu Owojaiye, Peter Michalski, Ao Dong

Faculty of Engineering, McMaster University

January 17, 2021



Interactions with Domain Experts

- Introductory Meeting
- Measuring
- Concluding Meeting

About this Meeting

- Introductory Meeting
 - ▶ Overall Objective
 - ▶ Research Proposal
 - ▶ Research Questions
 - ▶ Vetting the List of Candidate Software
 - ▶ Publication
 - ▶ Schedule & Team
 - ▶ Introducing the Next Steps
- Measuring
- Concluding Meeting

Overall Objective

“What is needed to produce {software + artifacts} sustainably?”

Objectives And Research Questions

- Definitions
 - ▶ software
 - ▶ artifacts
 - ▶ {software + artifacts} - softifacts
 - ▶ sustainable softifacts
- What softifacts, in addition to the code, are needed?
- What software engineering principles, processes and methodologies should be employed?

Research Proposal

Research Proposal

- State of the Practice
 - ▶ Domain analysis
 - ▶ Software list
 - ▶ Measurement template
 - ▶ Usability Tests
 - ▶ Modifiability Experiment
 - ▶ AHP
- Impact of MDE on the Sustainability of SCS

Research Questions

Objectives And Research Questions

- To investigate
 - ▶ knowledge
 - ▶ principles, processes and methodologies
 - ▶ software qualities
 - ▶ the necessary investment of time and energy
- What are the “pain points” for developers working on SCS projects?
- What aspects of the existing processes, methodologies and tools do they consider could potentially be improved?

Vetting the List of Candidate Software

Medical Imaging Software List

Task:

- What do you think of the list of the selected software?
- Is there any software you would like to remove from or add to the list?

Publication

- Where should we publish this paper?
- Who are our targeted readers?

Schedule & Team

- Project timeline
- Schedule for concluding meeting
- ... extra members from your team, each working ... hours per week for ... weeks.
- Any other experts?

Introducing the Next Steps

- Introductory Meeting
- Measuring
 - ▶ Vetting the Domain Analysis
 - ▶ Measurement Template
 - ▶ Survey for Short List Projects
 - ▶ Usability Tests
 - ▶ Modifiability Experiment
- Concluding Meeting
 - ▶ First AHP Ranking
 - ▶ Final AHP Ranking