



Coordination of Development and Operations Activities in Agile Software Development

Semi-Structured Interview Guide

Background Notes

I want to ask you about your experience of agile practices and the coordination of work between development and operations in software development process. The research involves interviews with people doing a range of different roles and from different companies which may have contrasting strategies.

The purpose here is to try to understand the interactions and dependencies between software development and operations activities in organizations, so that we can try to learn for the future. This is being done as part of a PhD research in the University of Salford.

I want to ask you the following questions and tape record your answers.

Can I switch on the recorder?

Organisational structure and role Identification

Could you please describe your organisation and its structure?

Please describe your current job role?

Could you please describe the other roles involved in your software development process?

Please describe the position of your team in relation to other software development teams in your organisation.

DevOps implementation

What does DevOps mean to you?

What DevOps practices are involved in your software development process? Why have you chosen those practices?

Would you describe your DevOps implementation as successful? In what ways?

Have you adopted DevOps in the entire organisation?

How would you describe the effective use of resources in your DevOps journey?

How would you describe your DevOps culture?

Could you describe your tool suite from an interoperability point of view?

What forms of communication are used for your projects?

Please describe knowledge sharing processes in your organisation

What challenges have you encountered with DevOps practices?

Developers and Operations Coordination

Please describe a software development project you were involved in recently?

What was the scope of the project (Number of people? Duration?)

What was your role in the project?

Can you please describe the workflow from development to delivery of the project?

How were tasks assigned on the project? Who carries out the QA and security functions?

Please describe the software development tools used for the coordination of work on the project?

Probing Questions

Build tools

Automated testing tools

Automated deployment tools

Development Frameworks

Could you please describe typical causes of delay in your projects?

How was traceability handled on the project? What artefacts are involved in your projects?

What challenges did you face with the coordination of work on the project?

What do you think could have improved the coordination of work on the project?

- What organisational factors (such as staff skills and budget availability) affected the coordination of work on the project?
 - What infrastructure issues (such as hardware, operating systems and development/test platform availability) affected coordination of work on the project?
- How would you rate the project success (quality, development time, efficiency)?

If you could fix one thing about your current software development process, what would it be?

Software Development Process

Please describe the development process your organization or practice?

Probing Questions

Incremental development

Sprints/iterations

Daily Stand-ups
Product demonstrations
Retrospectives
Configuration management
CI/CD, Continuous Deployment

Code Deployment

Please describe your approach to code deployment.

Please describe the software technologies you use?

Probing Questions

RESTful APIs (web services)
Deployment environment (Cloud /On-prem)
Programming languages
Database Technologies
Legacy systems

Open-Ended Question

Is there anything else you think is relevant we have missed?

Is there anything else you think we should have asked?

Personal Details

What is your name?

What is your job title?

How long have you been working at your current organisation?

How long have you been working in the industry?

Do you know anyone else I could talk to about this study?

Can I talk to you again in a month's time?

Notes

1. The interview guide will need to be tailored to specific respondents. We do not need to ask someone who is not a developer about the build tools used in their projects. Instead we might want to ask about their involvement in automated deployment. Our approach is to develop a somewhat bespoke interview guide, depending upon the role of the interviewee.