University of Salford
MANCHESTER

Agile Methods Security by Software Development Companies in Nigeria

Initial Interview Guide

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Interview Guide

Introduction

The aim of this research is to help practitioners make better use of agile methods to create secure applications by building a conceptual framework to be adopted in the software industry. The study will examine practitioner perceptions of the impact of security on software quality and productivity in some selected companies in Nigeria. The study will further explore how security influences the development of high-quality agile software.

I would like to ask you some questions about your experience of security engineering while using agile software development methods. Additionally, I would like to know your perception of security integration into normal agile processes. I will be interviewing a cross section of practitioners ranging from technical (software developers, security specialists, systems analyst, business analyst) to non-technical (decision maker/managers, project managers) to understand different business context.

PART I – Agile Methods Adoption

1. Please describe your experience of using agile software development methods in your current job role?
2. Can you describe the roles that make up your project team?
3. What strategies are adopted by your team to meet customer requirements?
   a. (Probing) Do you experience the problem of tasks coming along outside the normal sprint planning process?
4. How do you communicate and coordinate job tasks with your team?
   a. Within your organization
   b. Across multiple organizations, countries, and cultures
5. (Open-Ended) What problems have you faced working with your team members in your current job?
   a. (Probing) How have you been able to overcome the challenges?
   b. (Probing) What lessons were learnt?

PART II – Security Practices in Agile Software Development

1. Please describe how you do security requirements gathering?

2. How do you consider security issues during the design stage of software development?

3. Please describe the software security testing methods adopted in your organization?

4. How do you build security into deployment processes?

5. How you ensure adherence to the 2019 NDPR Act in your agile software development activities?

6. (Open-Ended) Does your company face any security resource constraints during agile software development activities?

PART III - Personal Details

1. What is your educational level and professional background?

2. What is your current job title?

3. How many people are in the current projects you are handling?

4. How long have you been working at the current company?

5. How long have you been working in the software industry?

Implication of Regulatory Policy for Building Secure Agile Software in Nigeria

Reviewed Interview Guide

April 2021

Abdulhamid Aliyu Ardo, Julian Bass & Tarek Gaber

Interview Guide

Introduction

The aim of this research is to help practitioners make better use of agile methods to create secure applications by building a conceptual framework to be adopted in the software industry. The study will examine practitioner perceptions of the impact of NDPR policy and its challenges on the security of agile software in some selected companies in Nigeria. The study will further explore how security influences the development of high-quality agile software.

I would like to ask you some questions about your security practices while developing agile software. Additionally, I would like to know your perception of the NDPR policy on software development activities. I will be interviewing a cross section of practitioners ranging from technical (software developers, security specialists, systems analyst, business analyst) to non-technical (decision maker/managers, project managers) to understand different business context.

PART I – Security Practices in Agile Software Development

1. Please can you describe your job role?

2. Please describe how you do security requirements gathering?

   a. (Probing) How are security requirements discussed and disseminated within your organization?

   b. How is security involved at the requirements gathering stage?

3. How do you consider security issues during the design stage of software development? a. (Probing) – Software, Hardware, Network, Storage?

4. Please describe the collaboration practices that you use in your organization to handle security?

  a. (Probing) Who is responsible for handling security audits in your current company?

5. Please describe the software security testing methods adopted in your organization?

   a. (Probing) How do you manage security vulnerability testing activities within your organization?

   b. Does your organization use security tools for the following:

      i. Vulnerability checks

      ii. Software testing

6. How do you build security into deployment processes?

    a. (Probing) How does security impacts the CI/CD pipeline processes?

    b. Do Security Deployment tools fit into your deployment processes?

7. Would you say your organization has a security culture?

    a. (Probing) Please can you describe how the security culture is built or developed in your organization?

8. (Open-Ended) Does your company face any security challenges during software development?

    a. (Probing) How often do you give security trainings to your staff?

PART II – NDPR Adherence During Secure Software Development

1. What strategies has your organization adopted to ensure adherence to the NDPR act for developing secure agile software?

    a. (Probing) How do you ensure data collected for developing secure agile software are not identifiable as prescribed in sections 1.2 – 1.3 of the NDPR Act?

2. Would you describe the NDPR Act as being helpful in your agile software development activities? In what ways?

    a. (Probing) What aspects the NDPR Act do you find most important for securing your software?

3. What techniques do you use for identifying potential gaps and weaknesses in your organization as prescribed in article 4.1(5) of the NDPR Act?

4. Please describe how you prevent against breaches as prescribed in Article 2.6 (Information Security Architecture Improvement) of the NDPR Act?

    a. (Probing) Do you have a mechanism of notifying NITDA of breaches within 72 hours of becoming aware of it?

5. Do you encounter any challenges while adhering to the NDPR Act during software development?

Closing Question - Is there anything else you think is relevant that has been missed?

PART III - Personal Details

1. What is your educational level and professional background?

2. What is your current job title?

3. How many people are in the current projects you are handling?

4. How long have you been working at the current company?

5. How long have you been working in the software industry?

TABLE 1: Participants' & Organizations Description

Participant Code	Job title	Experience in Agile (Years)	Interview Date	Interview Location	Business Type	Organization
ESSco1_DE	DevOps Engineer	9	07/02/2021	Abuja	Educational Software Solutions	Medium-sized
ESSco1_PROJ-MGR	Product Manager	16	07/02/2021	Abuja	Educational Software Solutions	Medium-sized
ESSco1_SSE1	Senior Software Engineer	9	14/02/2021	Abuja	Educational Software Solutions	Medium-sized
ESSco1_BEE	Back-End Engineer	9	22/02/2021	Abuja	Educational Software Solutions	Medium-sized
ESSco1_PROD-MGR	Product Manager	13	02/03/2021	Online	Educational Software Solutions	Medium-sized
ITSERVco2_SE1	Software Developer	6	05/03/2021	Abuja	IT Services & Consulting	Small
ITSERVco3_QAA	Quality Assurance Analyst	8	17/04/2021	Lagos	IT Services & Consulting	Small
HSCco1_SSE2	Senior Software Engineer	8	18/04/2021	Lagos	Healthcare Services Company	Large
ITSERVco1_STP-MGR	Security Technical Program Manager	9	11/05/2021	Online	IT Service Management Company	Large
FSSco1_SDE1	Senior DevOps Engineer	11	17/05/2021	Lagos	Financial Solutions & Services	Medium-sized
FSSco1_FLM	Frontline Manager	11	20/05/2021	Online	Financial Solutions & Services	Medium-sized
ESSco1_PROD-MGR	Project Manager	11	13/06/2021	Abuja	Educational Software Solutions	Medium-sized
DSco1_SETL1	Software Security Team Lead	10	25/06/2021	Online	Digital Solutions	Medium-sized
ESSco1_CTO1	Chief Technology Officer	24	01/07/2021	Abuja	Educational Software Solutions	Medium-sized
MFGco1_ITA	Manager, Internal IT Audit & Operational Risk	17	04/07/2021	Lagos	Manufacturing	Large