

# Why Do Programmers Do What They Do?

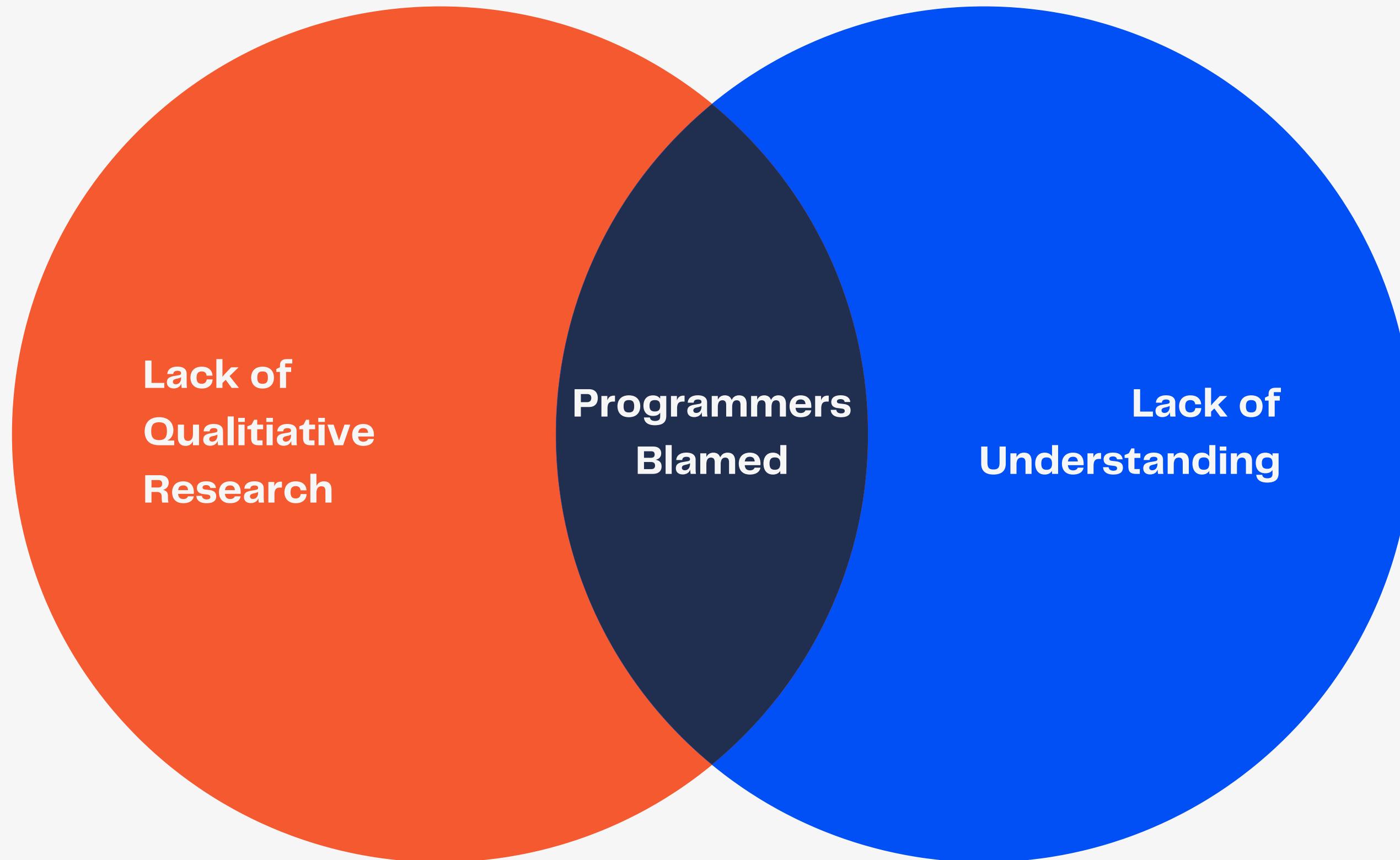
A Theory of Influences on Security  
Practices

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Supervisors: James Noble, Craig Anslow



# The Problem



# What is Security?

CONFIDENTIALITY

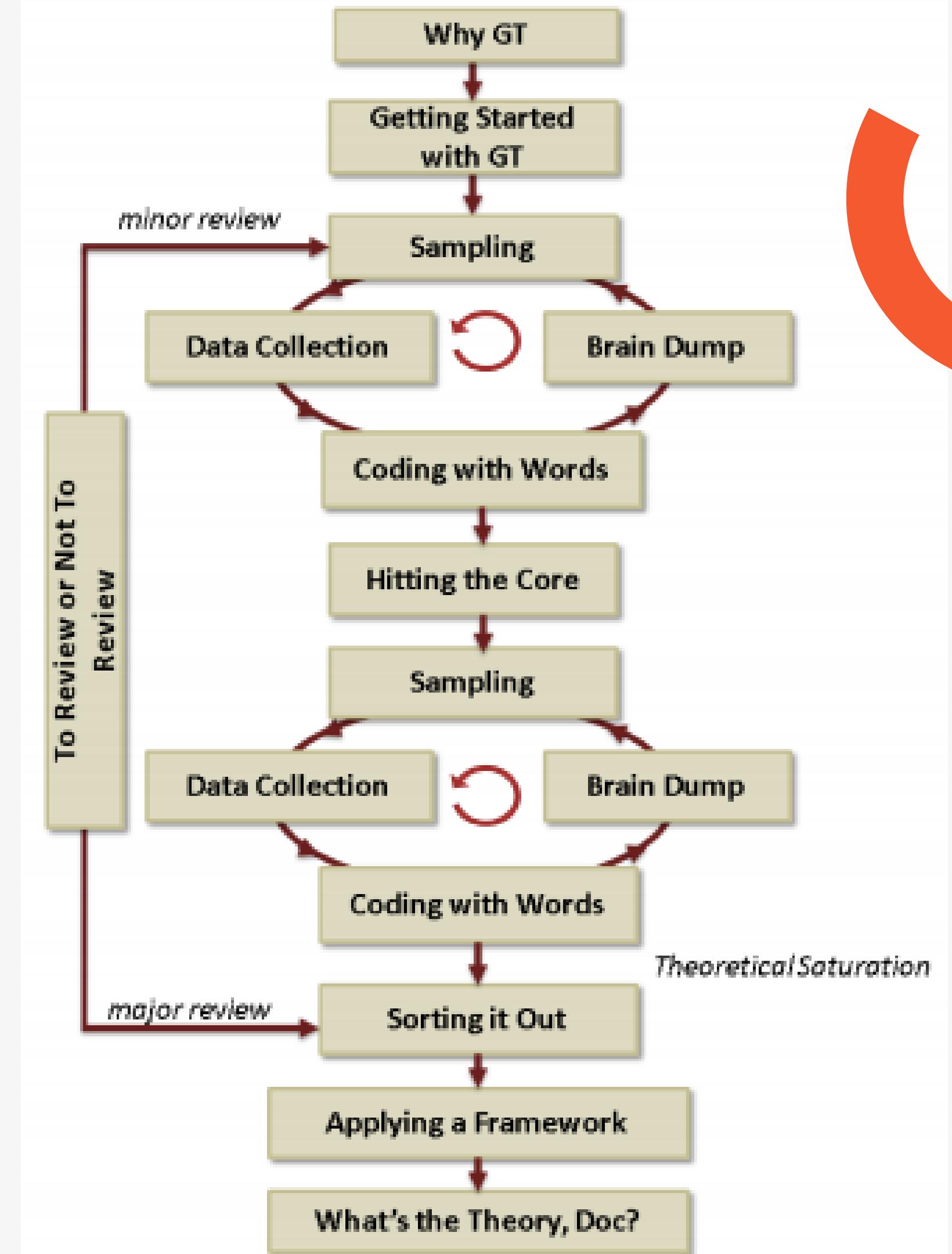


INTEGRITY

AVAILABILITY

# Methodology

## Grounded Theory



# Methodology

## Recruitment and Interviews

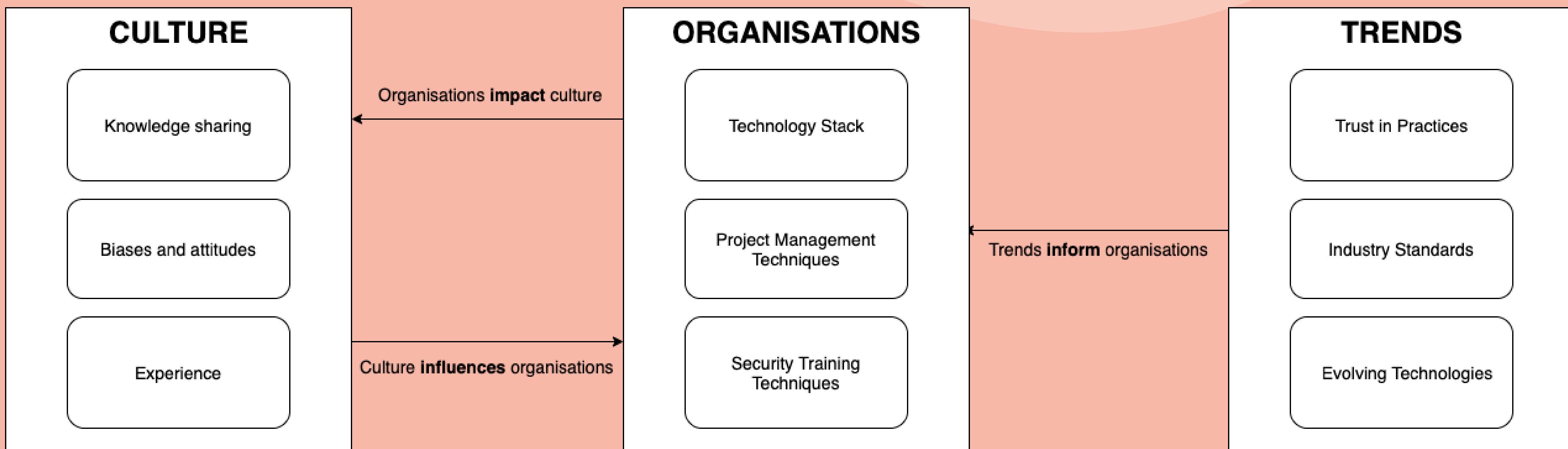


# Methodology

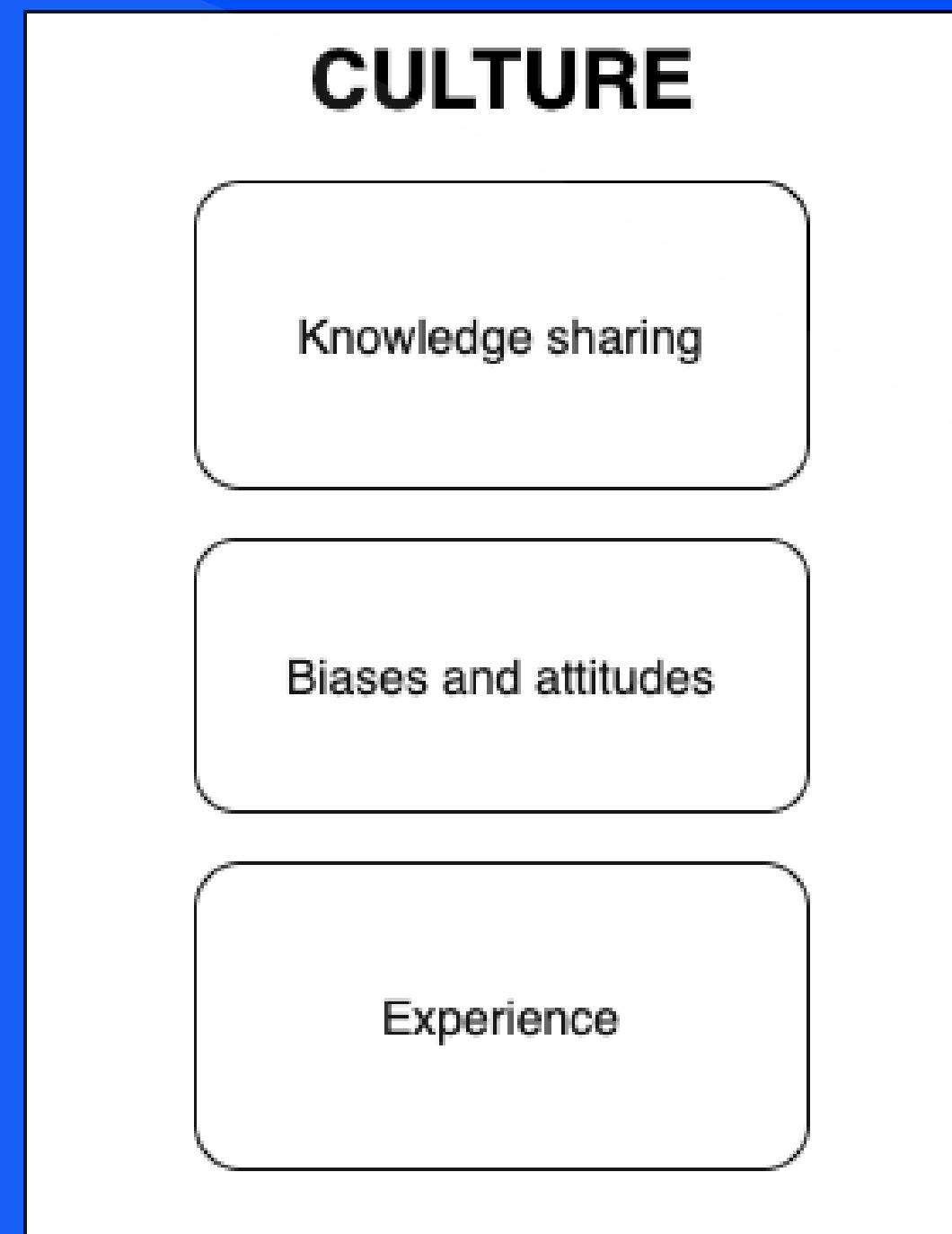
## Participant Summary

Alias	Role	Experience (Years)
P1	Enterprise Architect and Domain Lead	15+
P2	Principal Product Architect	15+
P3	Senior Security Architect	10-15
P4	Senior Software Engineer	15+
P5	Software Developer	<2
P6	Level 2 Security Analyst	2-5
P7	Site Reliability Engineer	<2
P8	DevOps Engineer	<2
P9	Portfolio Architect	10-15
P10	Full-stack Software Developer	2-5
P11	Cloud Engineer	2-5
P12	Consultant (Cloud Engineering)	2-5
P13	Development Manager and Technical Lead	10-15
P14	Senior Software Engineer	10-15
P15	Business Rule Consultant	15+

# The Emergent Theory



# The Emergent Theory



# The Emergent Theory

## ORGANISATIONS

Technology Stack

Project Management  
Techniques

Security Training  
Techniques

# The Emergent Theory

## TRENDS

Trust in Practices

Industry Standards

Evolving Technologies

# The Emergent Theory

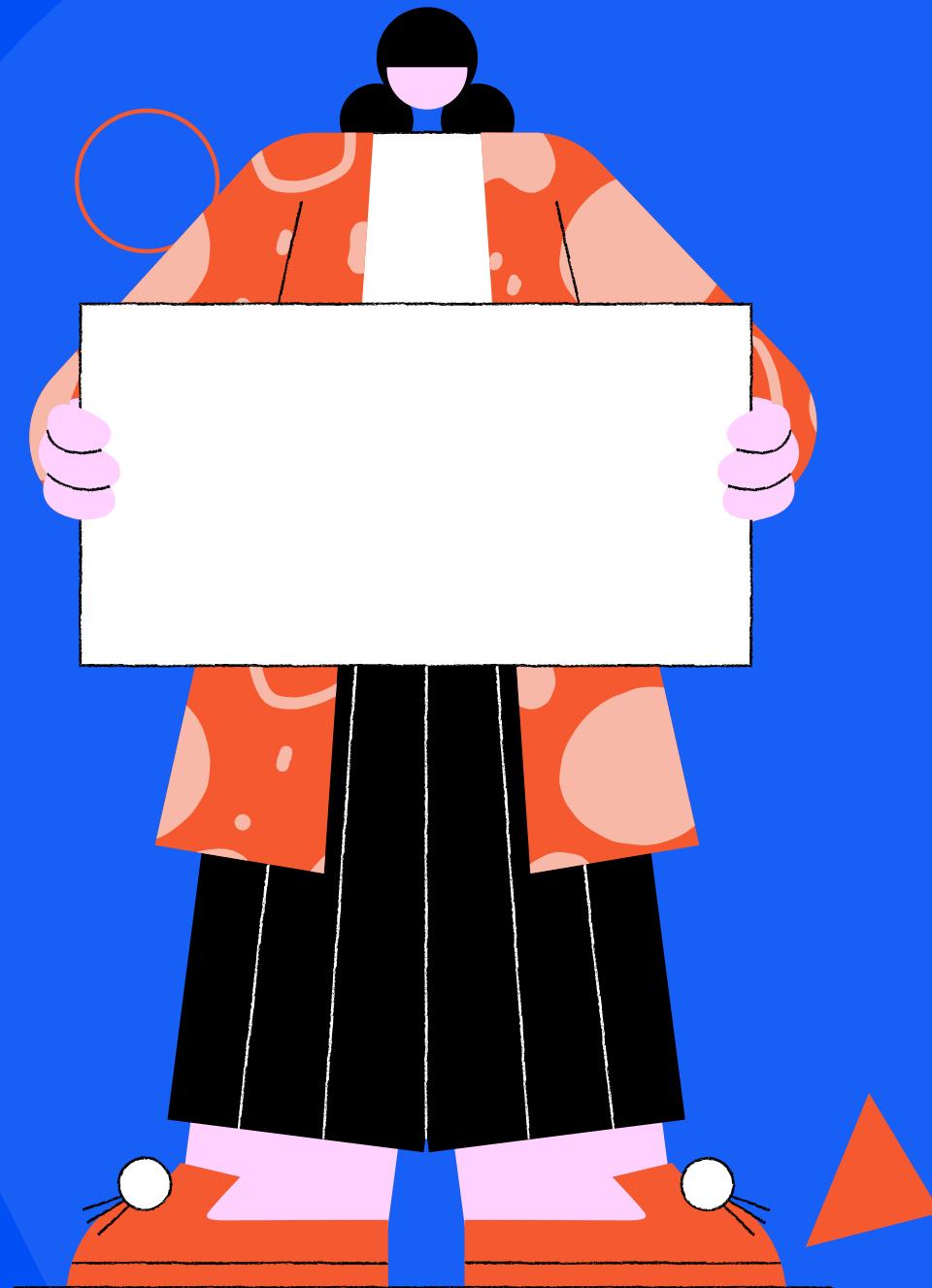
## The Relationships Between Categories



# Evaluation

Chosen Methodology

1. Ethnography
2. Phenomenology



# Evaluation

internal Methodology Processes

- 1.Recruitment
- 2.Data Collection



## FIT

"Fit refers to the emergence of conceptual codes and categories from the data rather than the use of preconceived codes or categories from extant theory"

01

## RELEVANCE

"Relevance refers to the theory's focus on a core concern or process that emerges in a substantive area. Its conceptual grounding in the data indicates the significance and relevance of this core concern or process thereby ensuring its

03

## WORK

"Work refers to the ability of the grounded theory to explain and interpret behaviour in a substantive area and to predict future behaviour."

02

## MODIFIABILITY

"Modifiability refers to the theory's ability to be continually modified as new data emerge to produce new categories, properties or dimensions of the theory. This living quality of grounded theory ensures its continuing relevance and value to the social world from which it has emerged."

04

# Implications for Practice

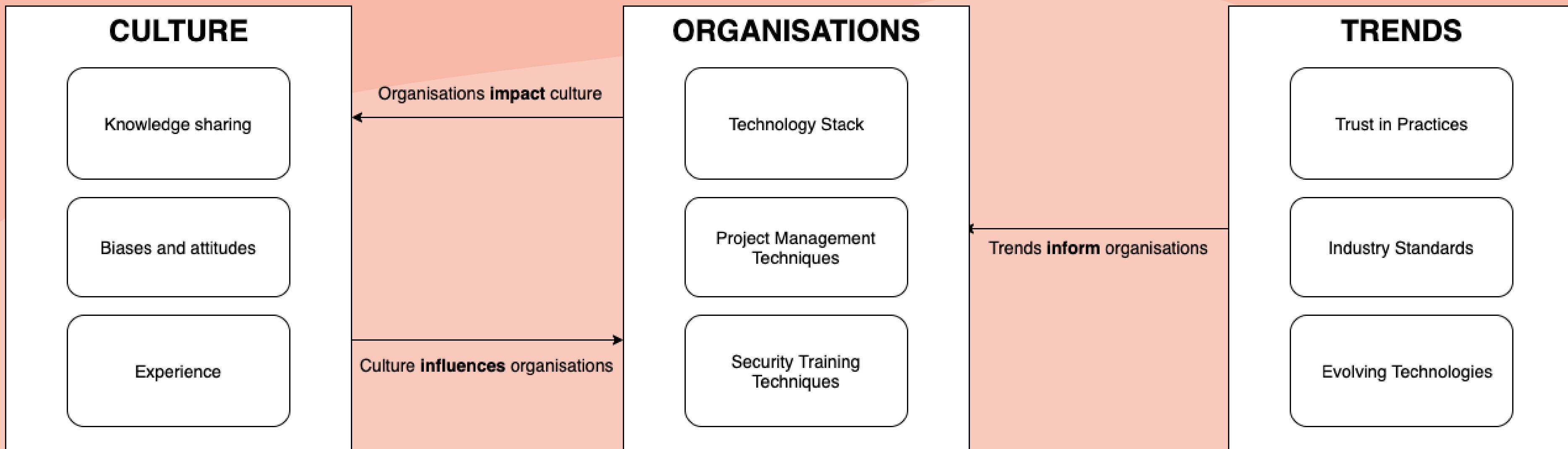
1. Corporate Hackathons
2. Active Technical Training
3. Explicitly define project management methodologies

# Limitations and Future Work

- Gender imbalance
- NDA's
- Narrowing scope
- A study on corporate Hackathons



# Security is growing space and support for programmers needs to match this



# Thank You!

Questions?

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