

Why Do Programmers Do What They Do?

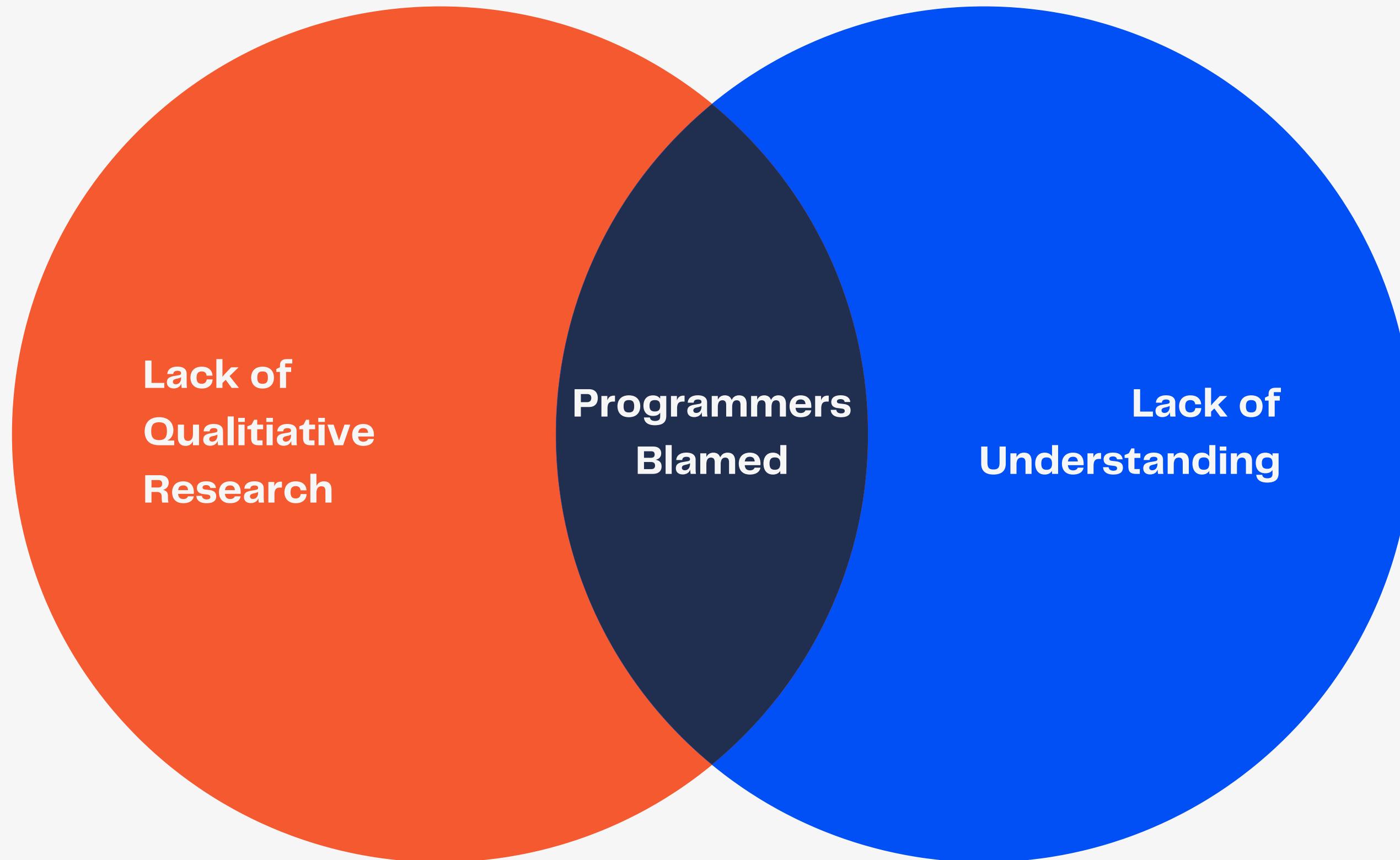
A Theory of Influences on Security
Practices

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Supervisors: James Noble, Craig Anslow



The Problem



What is Security?

CONFIDENTIALITY

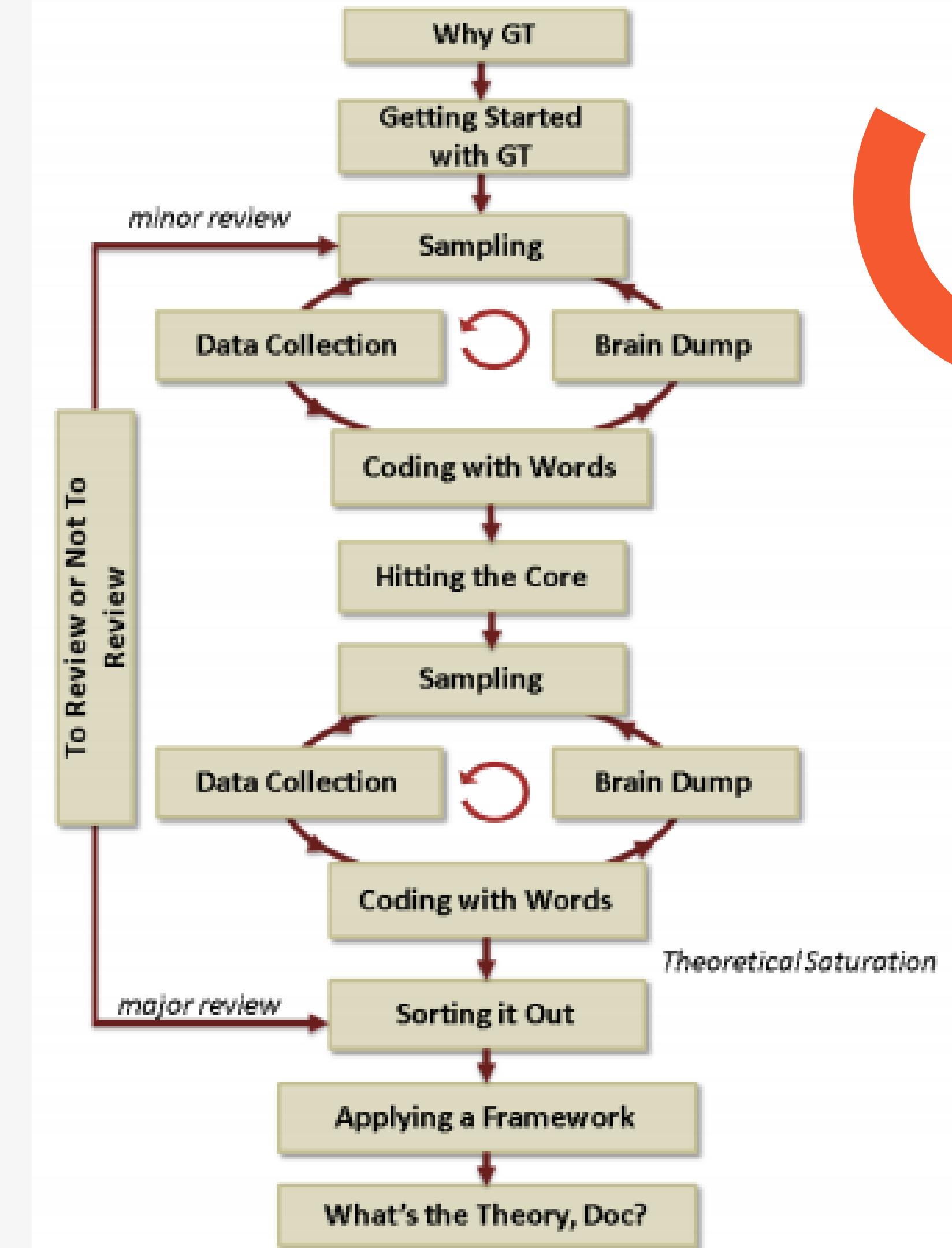


INTEGRITY

AVAILABILITY

Methodology

Grounded Theory



Methodology

Recruitment and Interviews

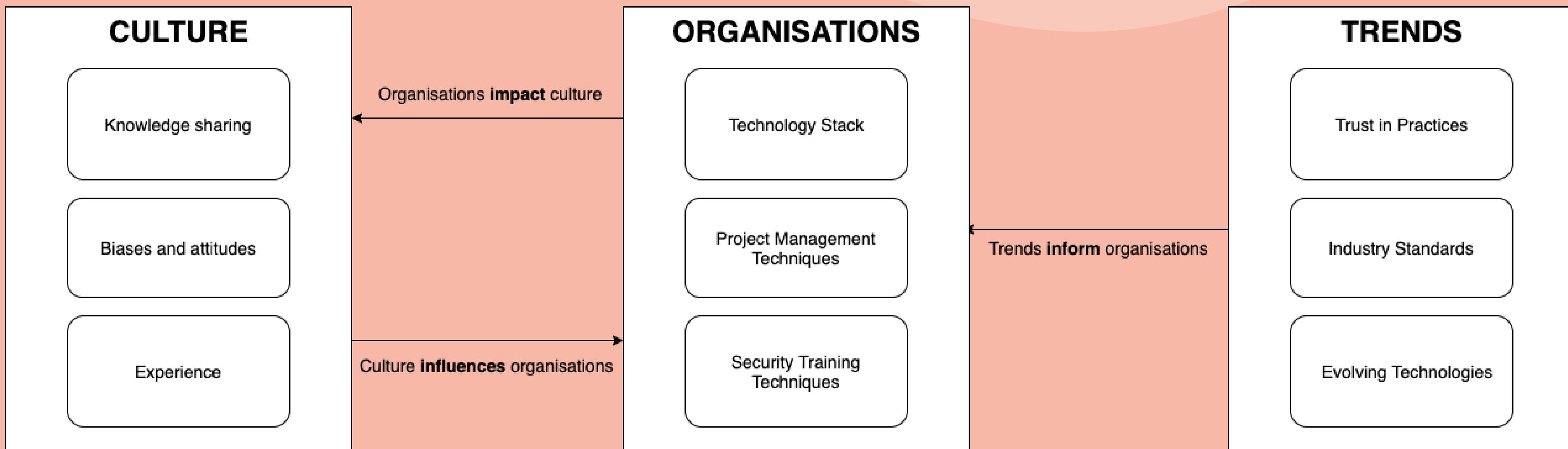


Methodology

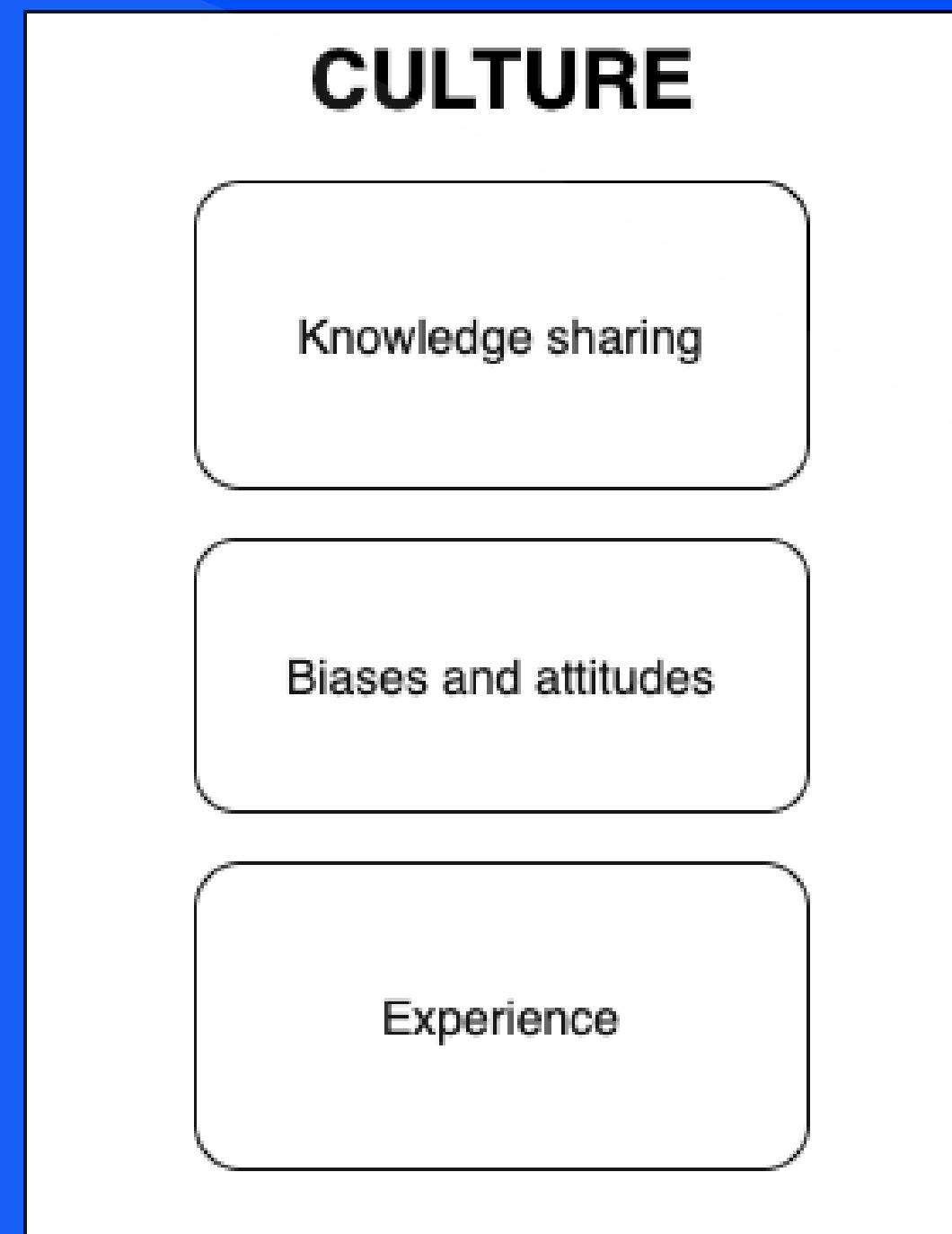
Participant Summary

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

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TRENDS

Trust in Practices

Industry Standards

Evolving Technologies

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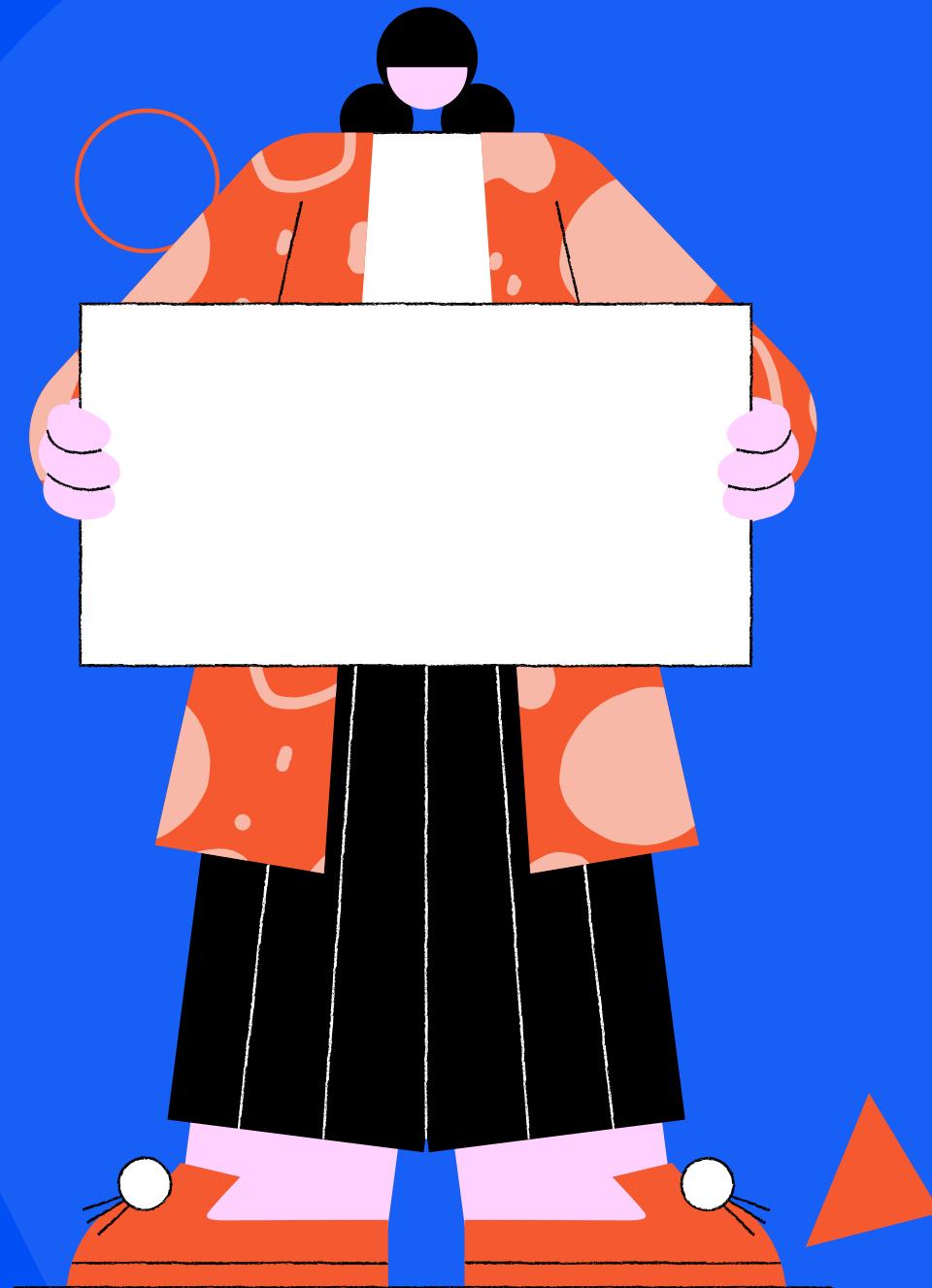
The Relationships Between Categories



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

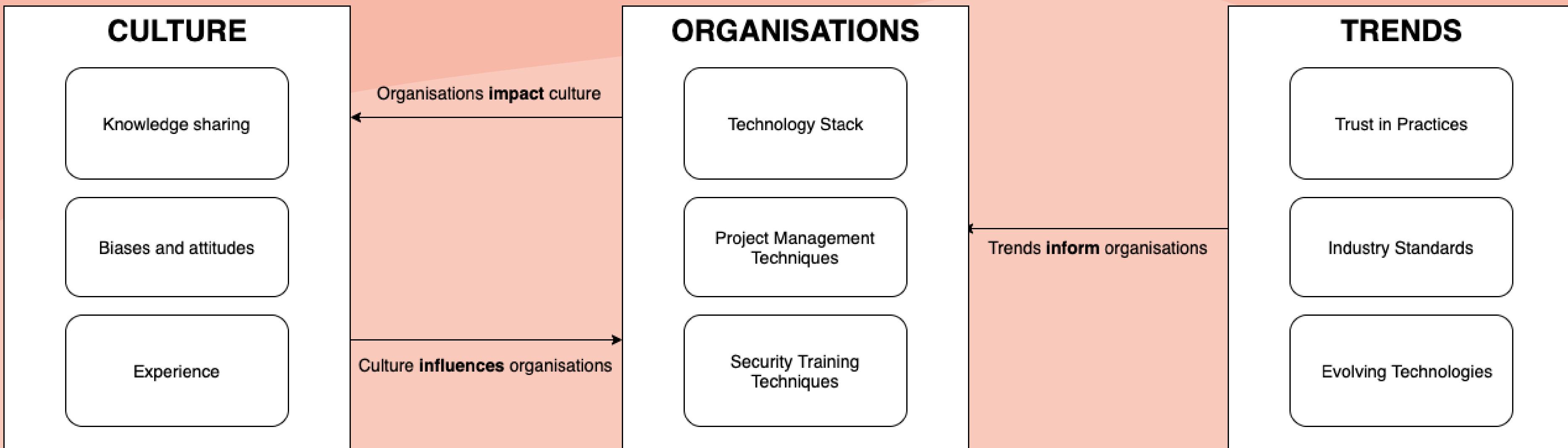
1. Corporate Hackathons
2. Active Technical Training
3. Explicitly define project management methodologies

Limitations and Future Work

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



Security is growing space and practices need to adapt in order to continue to support programmers



Thank You!

Questions?

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