

A close-up photograph of a person's right hand, wearing a light blue long-sleeved shirt with a gathered cuff, resting on a rough, grey, textured surface. The hand is positioned palm-down, with fingers slightly spread. The background is a dark blue fabric, possibly a skirt or dress, which is out of focus. The lighting is soft, creating a subtle shadow of the hand on the surface.

**RESHAPING THE PAST,
BUILDING THE FUTURE**

AGENDA

Introduction

Research objective

Research methods

Findings

Conclusion

Reflection

INTRODUCTION

PERSONAL MOTIVATION

*World shoots through 1.5 degrees;
unclear why 2024 was so hot –
NOS, 10th of January 2025*



INTRODUCTION

INTRODUCTION

ECONOMIC SIGNIFICANCE



INTRODUCTION

INCREASING SHIFT



INTRODUCTION

DIGITALISATION POTENTIAL



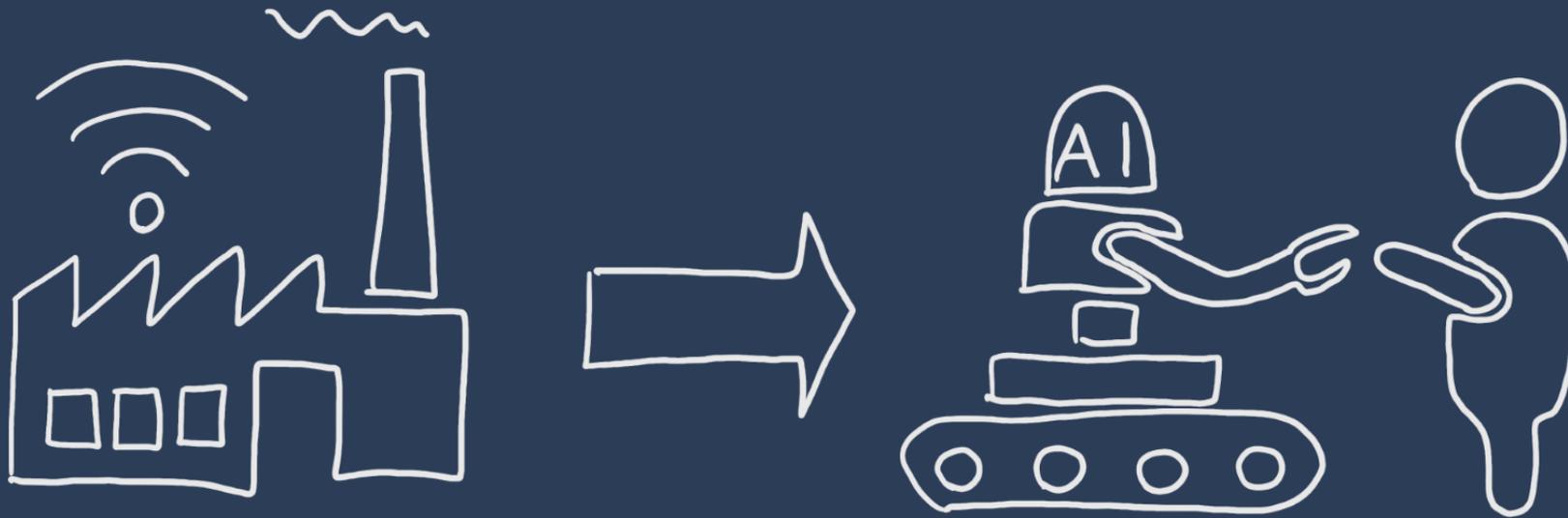
INTRODUCTION

CHALLENGES AMID BENEFITS



INTRODUCTION

INDUSTRY 4.0 AND 5.0



INTRODUCTION

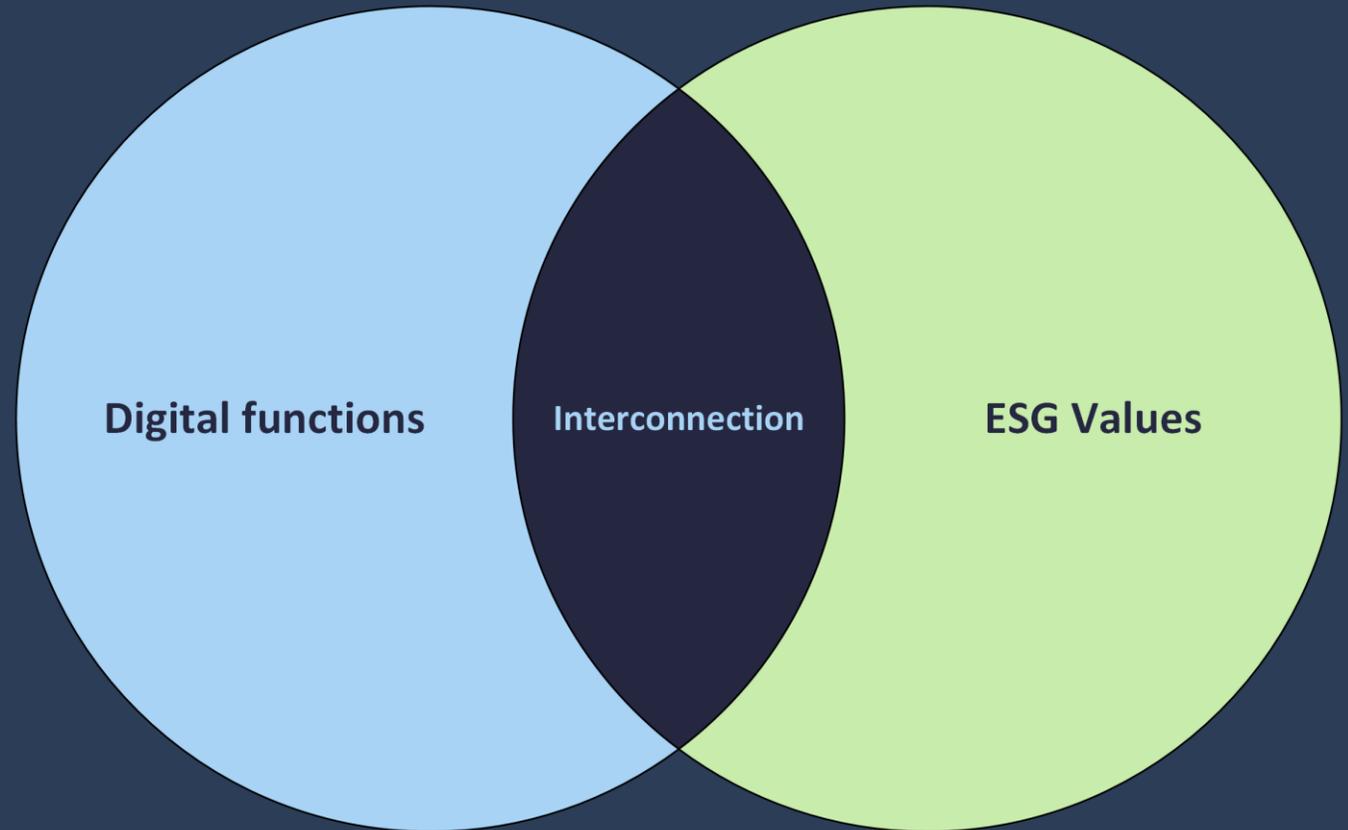
WORKFORCE



RESEARCH OBJECTIVE

RESEARCH OBJECTIVE

PROBLEM STATEMENT



RESEARCH OBJECTIVE

PROBLEM STATEMENT

Research problem

Research gap in the interconnection of ESG values and digital functions

Underlying cause

No academic consensus on ESG definition

Lack of interconnectedness

Undefined critical ESG value

Hypothesis for outcomes / conclusions

Academic backing

Position critical ESG values

Approach for enhanced interconnection

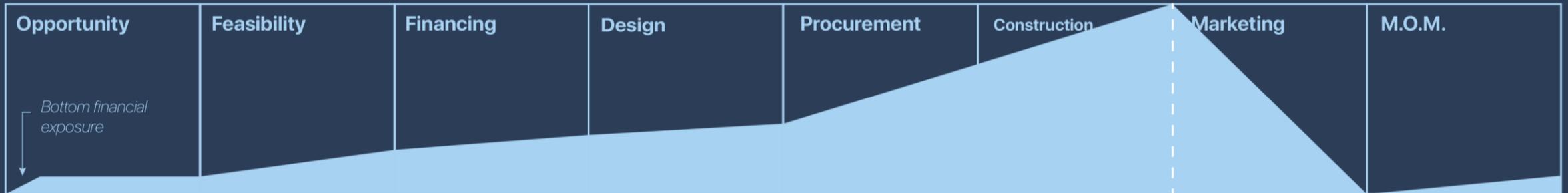
RESEARCH OBJECTIVE

RESEARCH CONTEXT

Early development stages

Early stage
Greater decision making

Late stage
Lesser decision making



Bottom financial exposure

Bottom financial exposure

Market risk
Competitor interest
Profit prediction

Site option negotiation
Financial projection
Planning negotiation

Grant uncertainty
Interest projection
Planning negotiation

Institutional risk
Conservation consents
Planning permission
Building regulations
Design team delay

Cash flow
Transactions
Contract form

Sub-contractor delays
Design changes
Site delays
Health & safety
Labour storage

Market changes
Adaption
Sales agreements

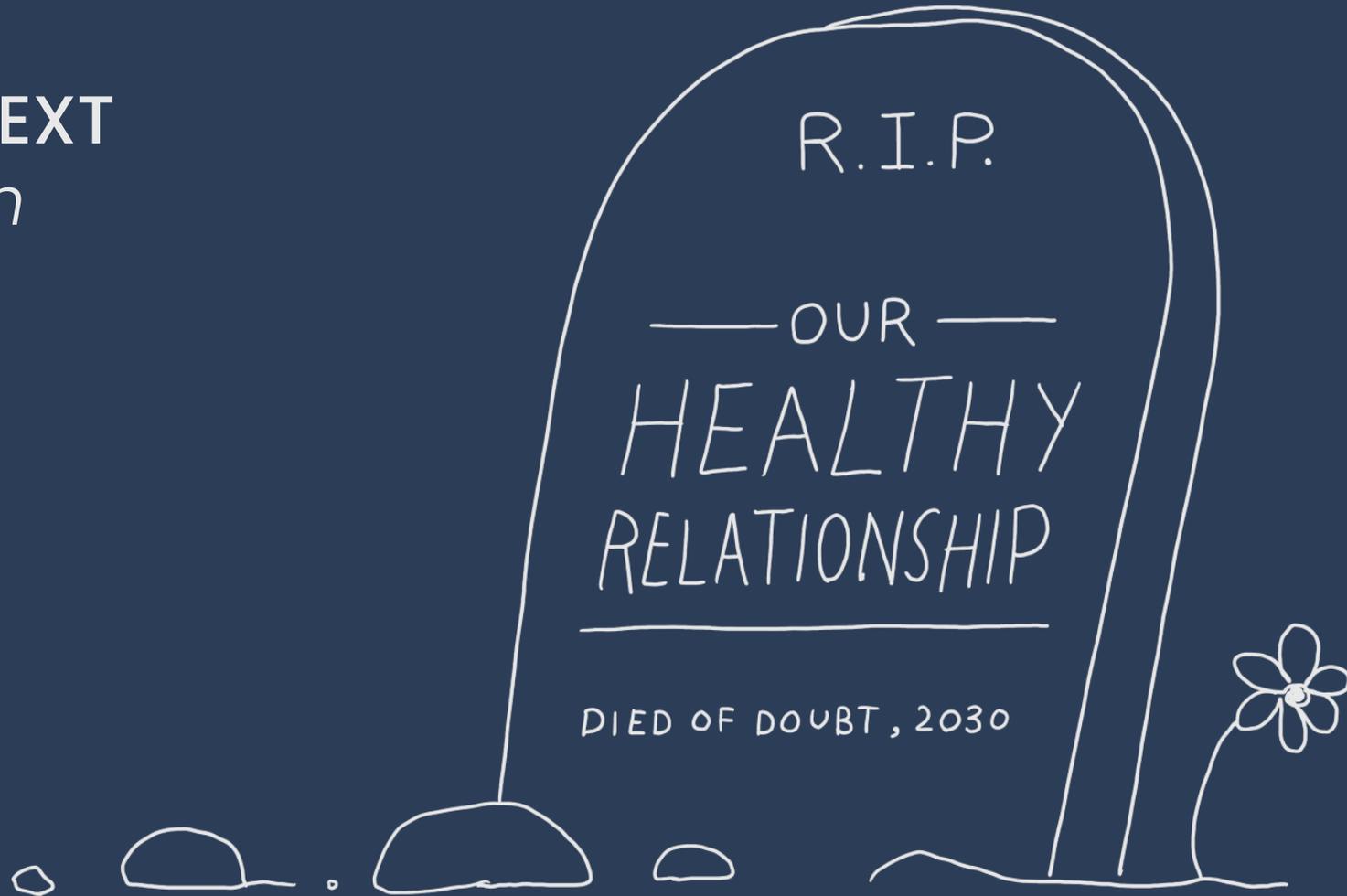
Building failure
Warranties
Follow-up



RESEARCH OBJECTIVE

RESEARCH CONTEXT

Real estate chain



RESEARCH METHODS

RESEARCH METHODS

ESG

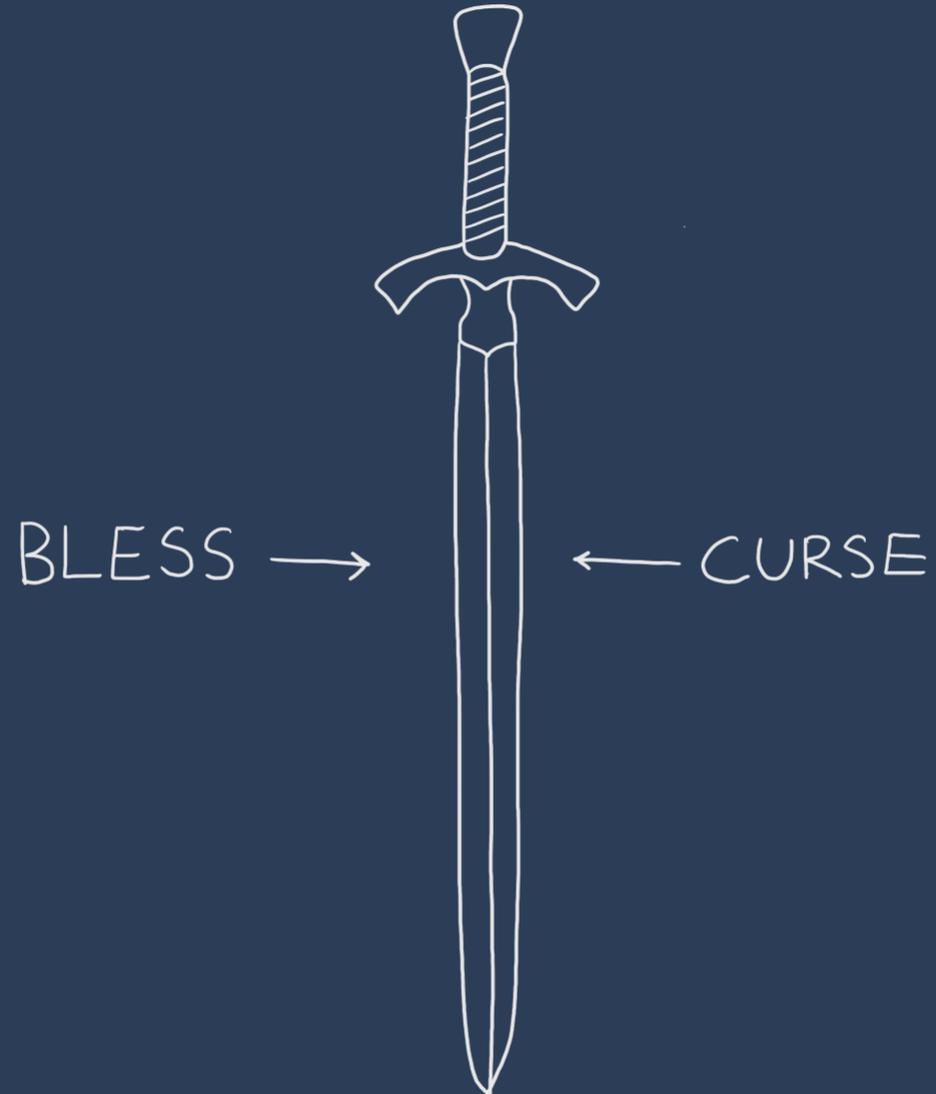
*A guiding compass with
Three distinct interconnected
needles*



RESEARCH METHODS

DIGITAL FUNCTIONS

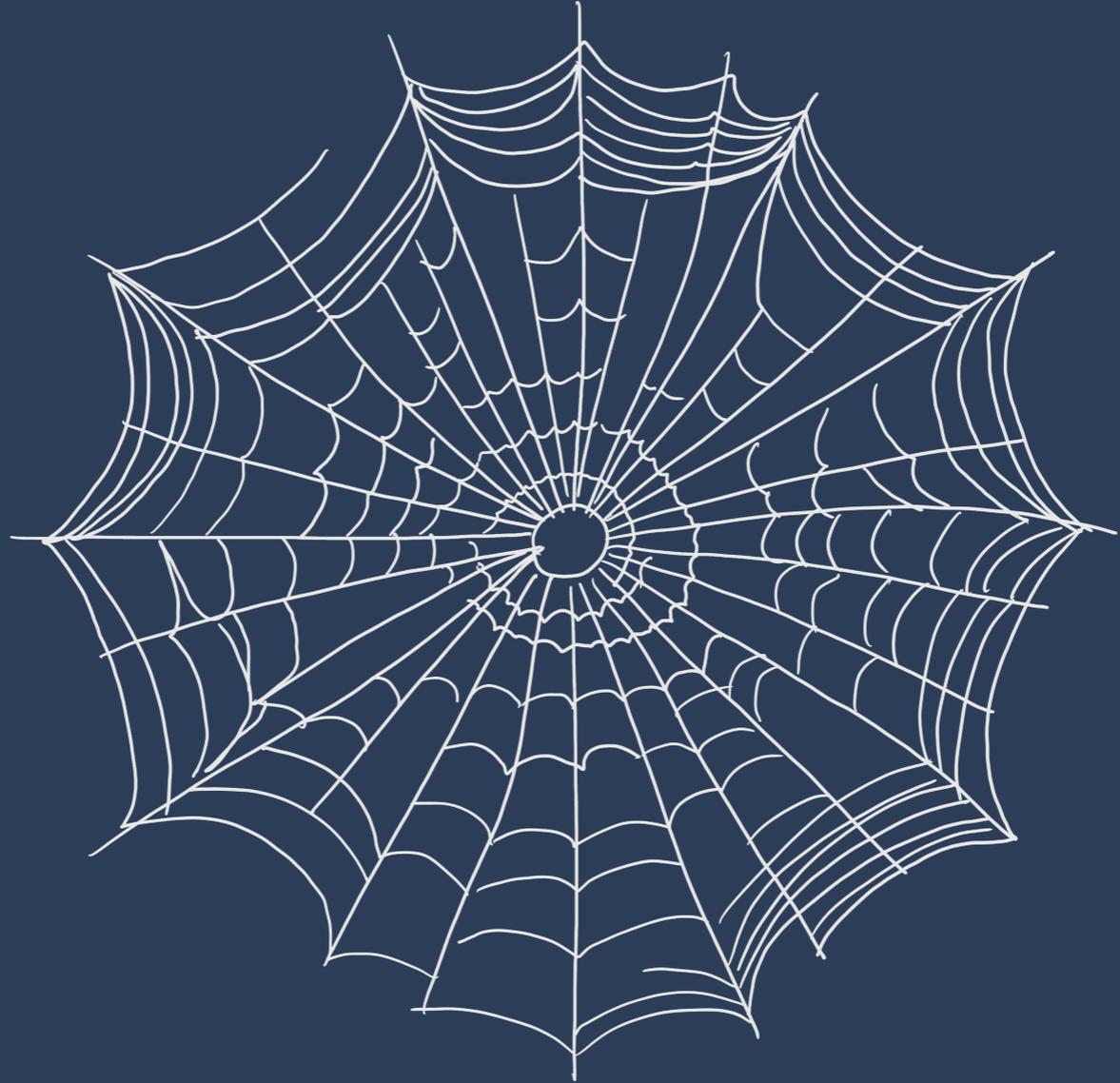
Double-edged sword



RESEARCH METHODS

INTERCONNECTION

Intricate web of a spider



RESEARCH METHODS

INTEGRATION

*Weaving a tapestry, where
Diverse thread are brought
Together to create a cohesive
design*



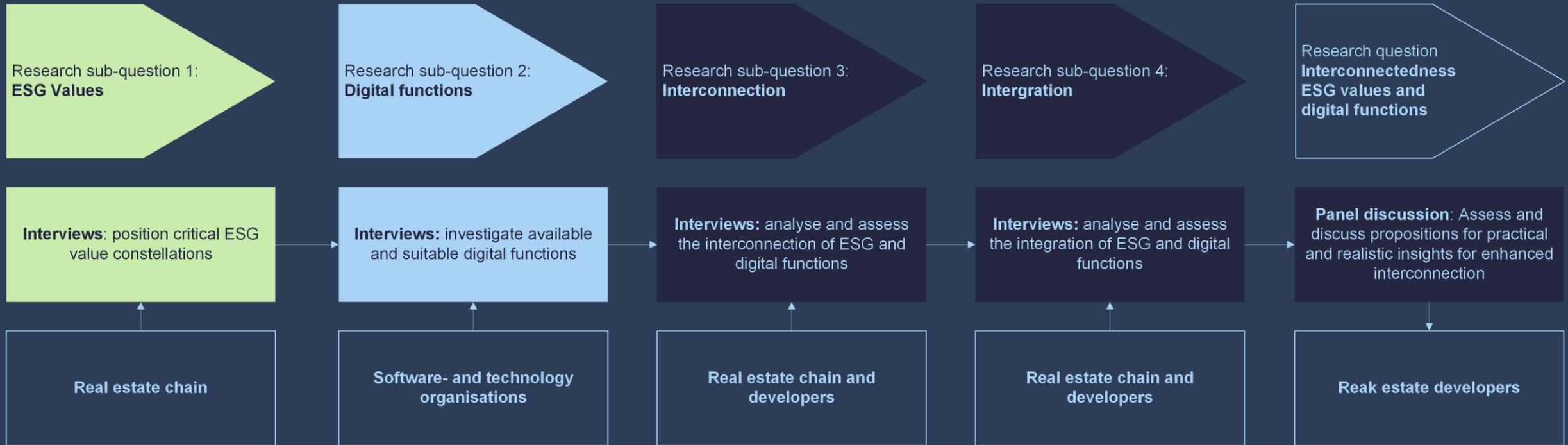
RESEARCH METHODS

LAWS AND REGULATIONS



RESEARCH METHODS

CONCEPTUAL FRAMEWORK



RESEARCH METHODS

RESEARCH QUESTIONS

1. WHICH CONSTELLATIONS OF ESG VALUES ARE PRIORITISED DURING THE STRATEGIC DEVELOPMENT STAGE?
2. WHAT DIGITAL FUNCTIONS ARE AVAILABLE AND SUITABLE DURING THE STRATEGIC DEVELOPMENT STAGE?
3. WHAT IS THE INTERCONNECTION BETWEEN ESG VALUES AND DIGITAL FUNCTIONS?
4. HOW CAN ESG VALUES AND DIGITAL FUNCTIONS BE INTEGRATED DURING THE STRATEGIC DEVELOPMENT STAGE?

HOW CAN THE INTERCONNECTION BETWEEN ESG VALUES AND DIGITAL FUNCTIONS BE ENHANCED ACROSS THE REAL ESTATE INDUSTRY CHAIN DURING THE STRATEGIC DEVELOPMENT STAGE?

RESEARCH METHODS

PARTICIPANTS

Organisations	Theme	Focus group
ABN-AMRO	ESG	Real estate banker
Altera	ESG	Real estate investor
De Alliantie	ESG	Social housing corporation
JAJO	ESG	Construction contractor
Schroders	ESG	Investment manager
Gemeente Amsterdam	ESG	Municipality
Gemeente Utrecht	ESG	Municipality
Boelens de Gruyter	ESG	Real estate developer
Boelens de Gruyter	ESG	C-level real estate developer
iqbi	Digital functions	Software and technology engineer
Next Sense	Digital functions	Software and technology engineer

FINDINGS

FINDINGS

FINDINGS

ESG VALUES

"It's about how that property is being used [...] –
Software and technology engineer

FINDINGS

ESG VALUES

“it is all about the use. I also think it is much more about which functions you put into your building, which is not only the best for the building but also best for the neighbourhood.

We must make more conscious choices about that.” – Real estate developer

FINDINGS

ESG VALUES



FINDINGS

E VALUE CONSTELLATIONS

1. Resource efficiency and circularity
2. Carbon management
3. Biodiversity and ecology
4. Water and sustainable infrastructure
5. Certification and global goals

FINDINGS

S VALUE CONSTELLATIONS

1. Human-centric experience (or biological fundamentals)
2. Equity and inclusion
3. Community and interaction
4. Work and employee satisfaction

FINDINGS

G VALUE CONSTELLATIONS

1. Accountability and transparency
2. Regulation and compliance
3. Organisational strategy and culture
4. Collaborative governance
5. Impact and proof
6. Ethics and integrity

FINDINGS

DIGITAL FUNCTIONS



FINDINGS

INTERCONNECTION



FINDINGS

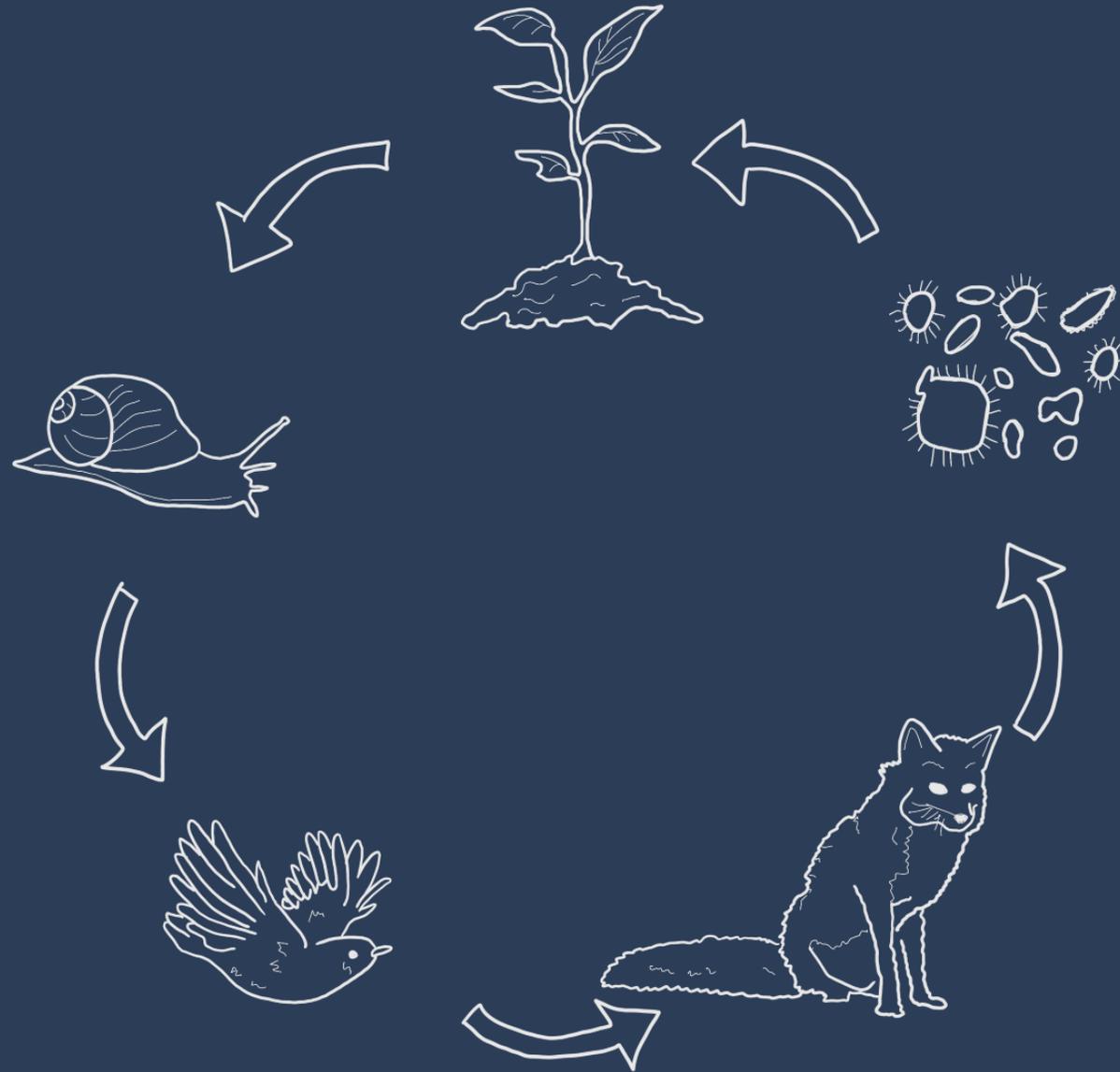
INTERCONNECTION

“If you start digitising, which is basically very manual now, all that, you get so much more insight. The effect is much better. You can much better, as you just said, put your resources somewhere.”

– investment manager

FINDINGS

INTEGRATION



CONCLUSION

INTERCONNECTION OF ESG VALUES AND DIGITAL FUNCTIONS



CONCLUSION

FRAMEWORK

REFLECTION

SO, IS IT A
DIGITAL BOOK
OR **PRINTED**
BOOK?

THANKS TO

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