



HARVESTING THE PORT

*Strategies to transform
urban industrial ports
into sustainable urban
environments*

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Jos de Krieger



INTRODUCTION



RESEARCH & DESIGN Q



HYPOTHESIS & ANTITHESIS



HOW TO PROCEED

PROBLEMS & POTENTIALS

SUB QUESTIONS

FINDINGS



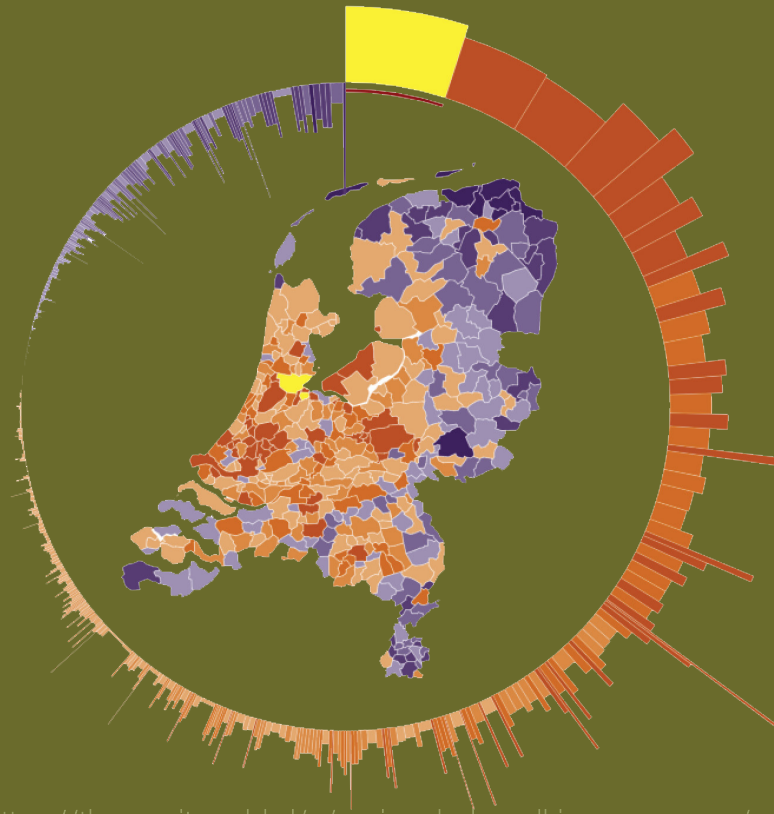


INTRODUCTION

1. Introduction



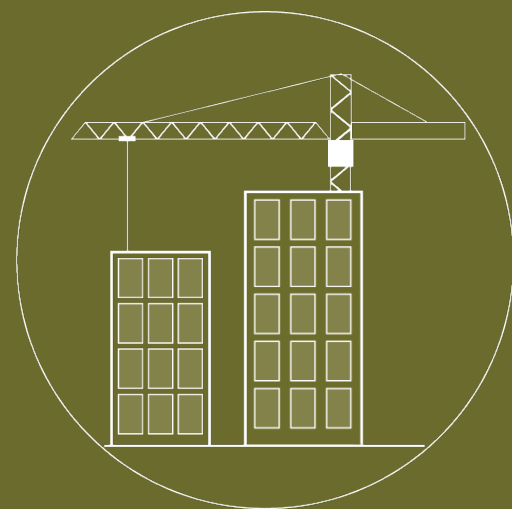
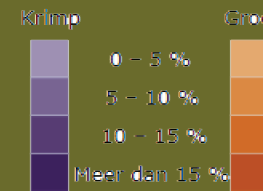
URBANISATION



<https://themasites.pbl.nl/o/regionale-bevolkingsprognose/>

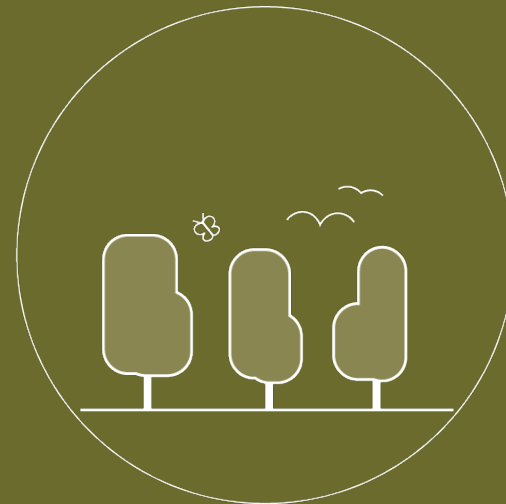
REGIONAL POPULATION GROWTH 2018-2050

AMSTERDAM INCREASE OF 23%



BUILDING DEMAND

+



DEMAND FOR NATURE

+



SURROUNDED BY VALUABLE NATURE

=

WHERE CAN WE BUILD?

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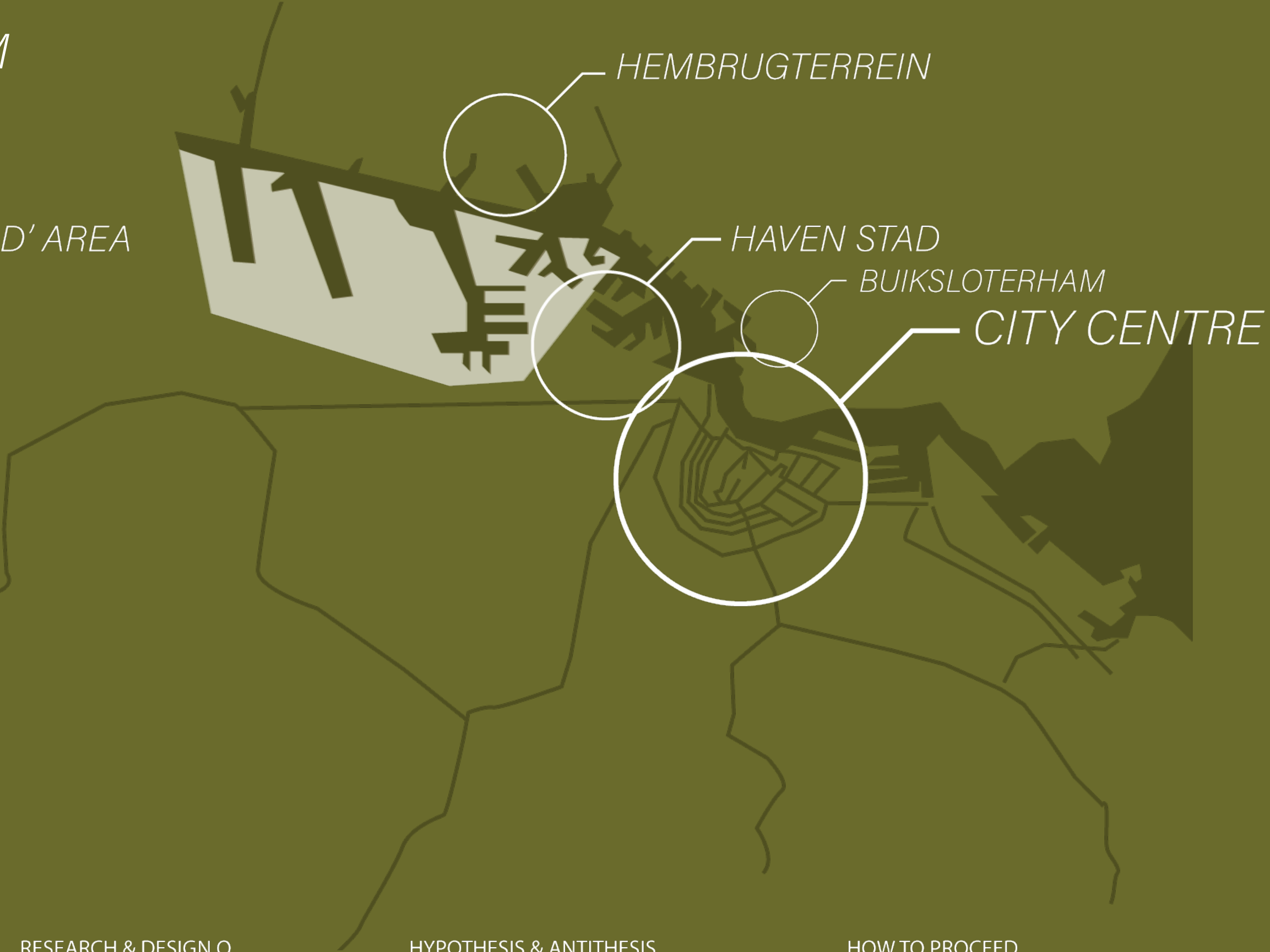
*PROBLEMS &
POTENTIALS*

2. Problems & Potentials

WEST PORT AMSTERDAM



'DEAD' AREA



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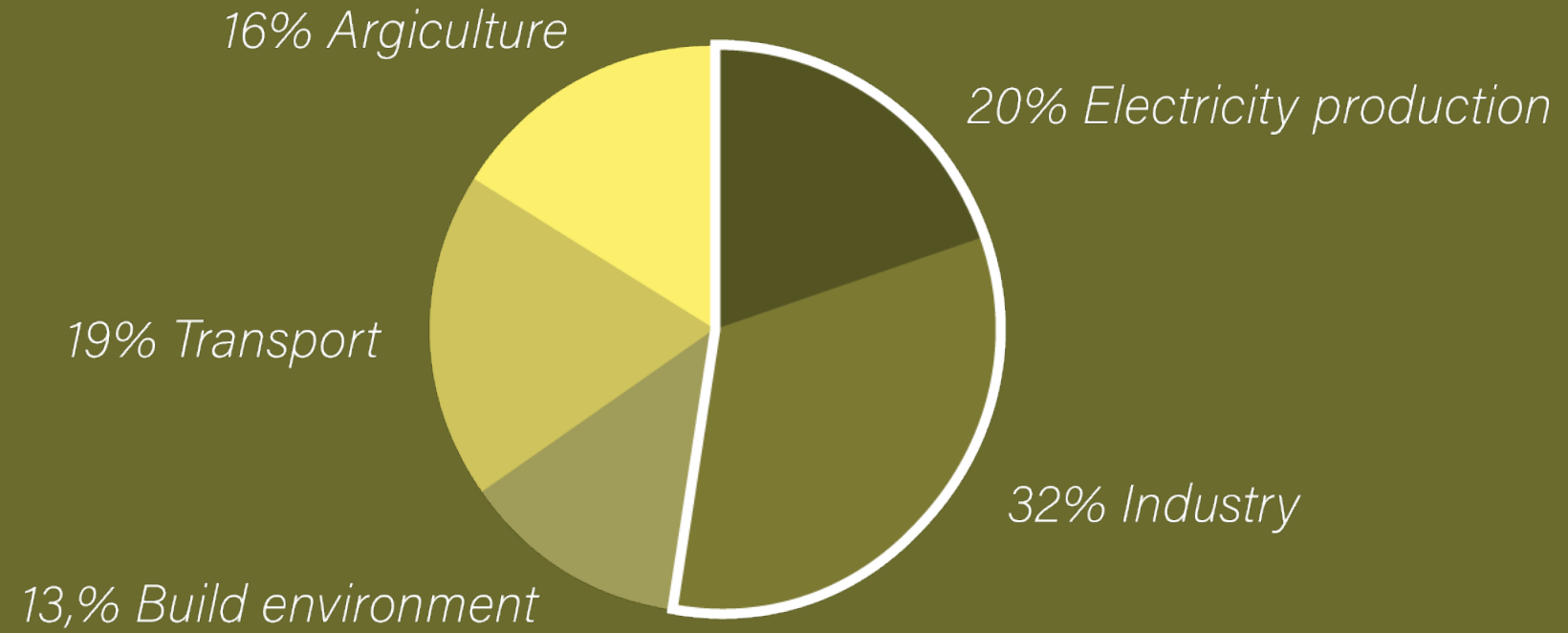
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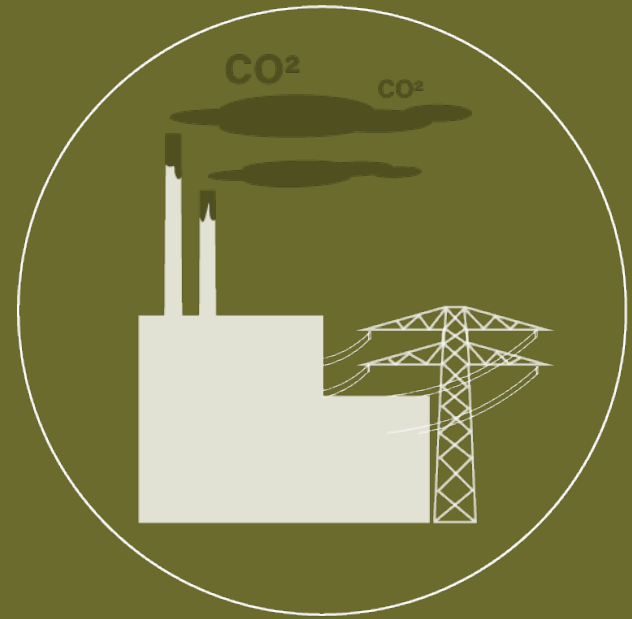
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2. Problems & Potentials



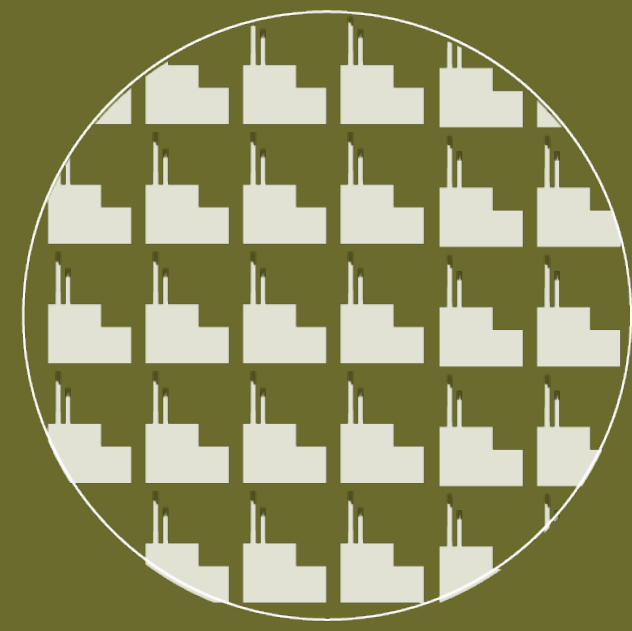
CO₂ EMISSIONS PER SECTOR 2020
<http://www.emissieregistratie.nl/erpubliek/erpub/international/broeikasgassen.aspx>



USE OF FINITE RESOURCES



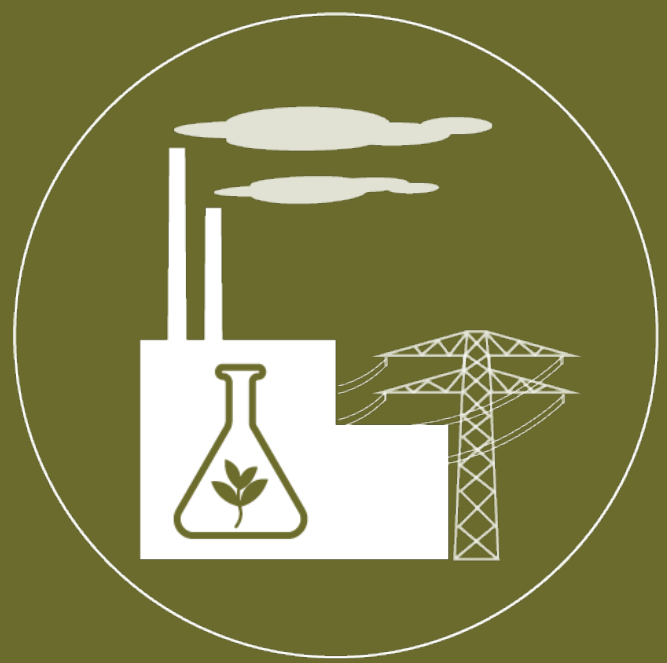
CONTAMINATION



MONO FUNCTIONALITY



2. Problems & Potentials



NEW SUSTAINABLE ALTERNATIVES



GREEN ENERGY SOURCES



HIGH LEVEL WASTE RECYCLING



STAKEHOLDERS WITH SUSTAINABLE GOALS

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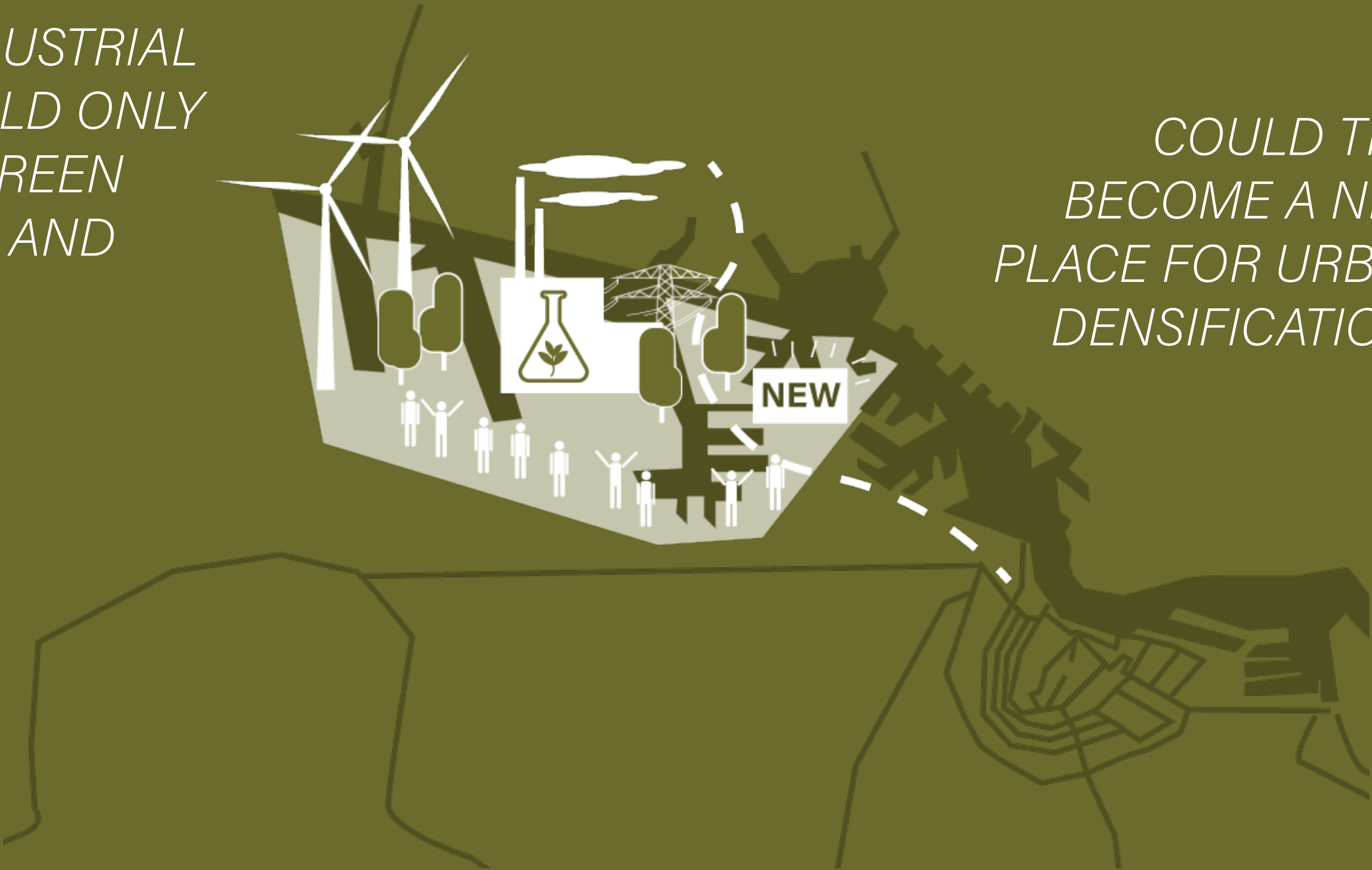
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2. Problems & Potentials

WHAT IF INDUSTRIAL AREAS WOULD ONLY PRODUCE GREEN ENERGY, AIR AND WATER?

COULD THIS BECOME A NEW PLACE FOR URBAN DENSIFICATION?



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*DESIGN &
RESEARCH
QUESTION*

3. Research & Design question

Overall design question

“How can the West Port of Amsterdam be transformed into a place that allows for both sustainable urban densification and sustainable industrial activities in 2050?”

Thematic Research Question

“How can interventions in flows that are available in the industrial program between now and 2050 contribute to making the West Port of Amsterdam more sustainable and how can these interventions be integrated in architectural design?”

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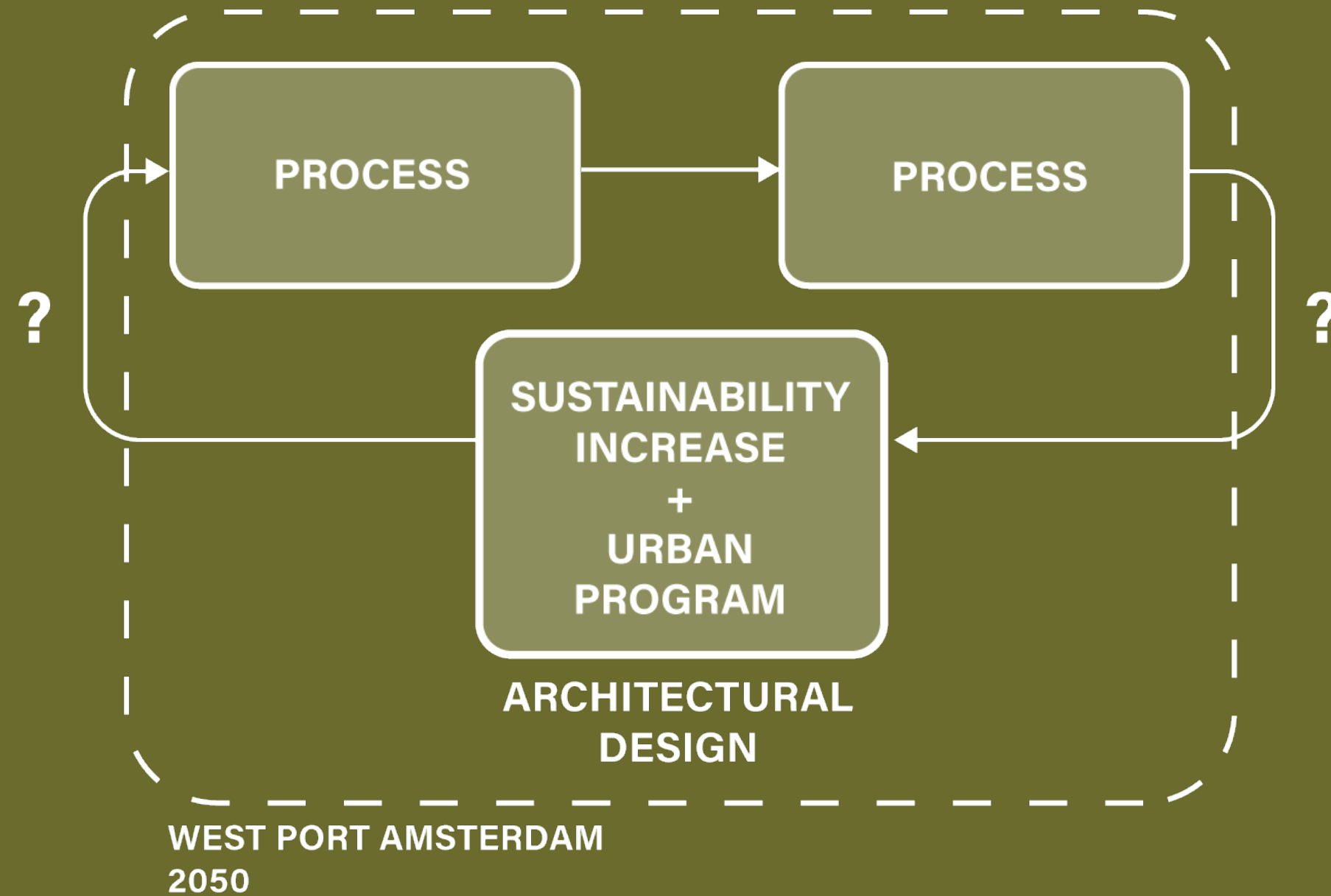
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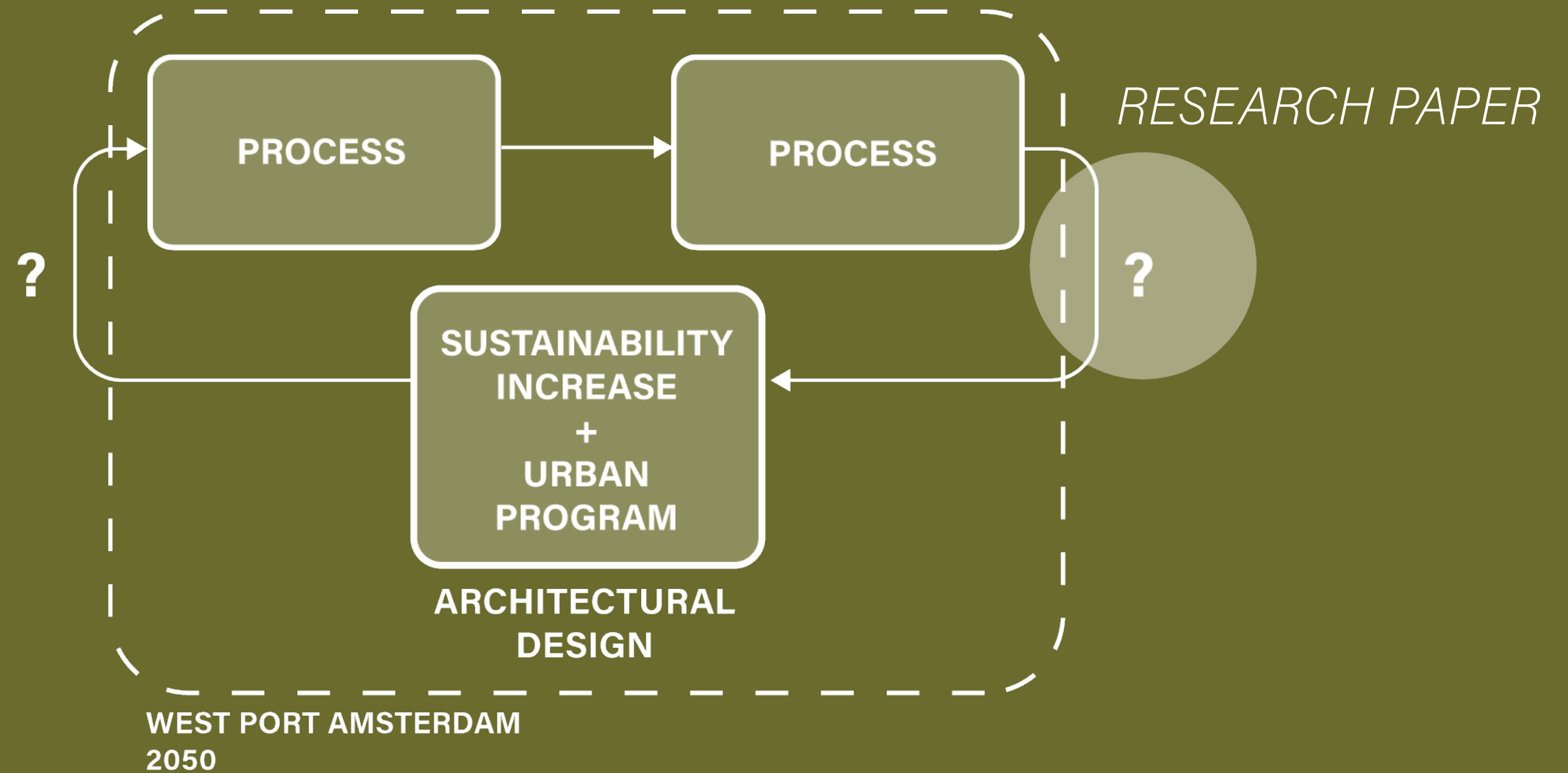
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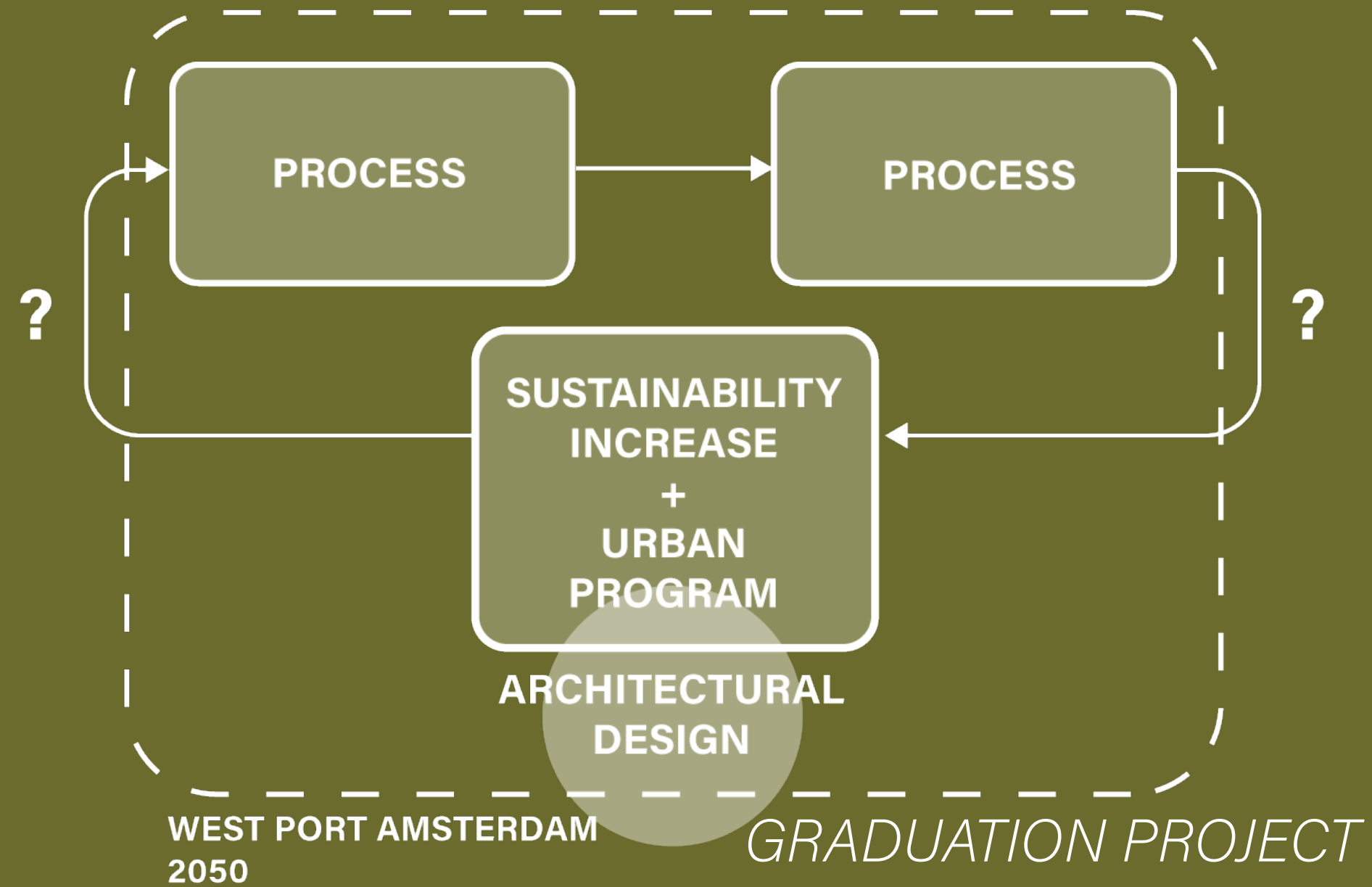
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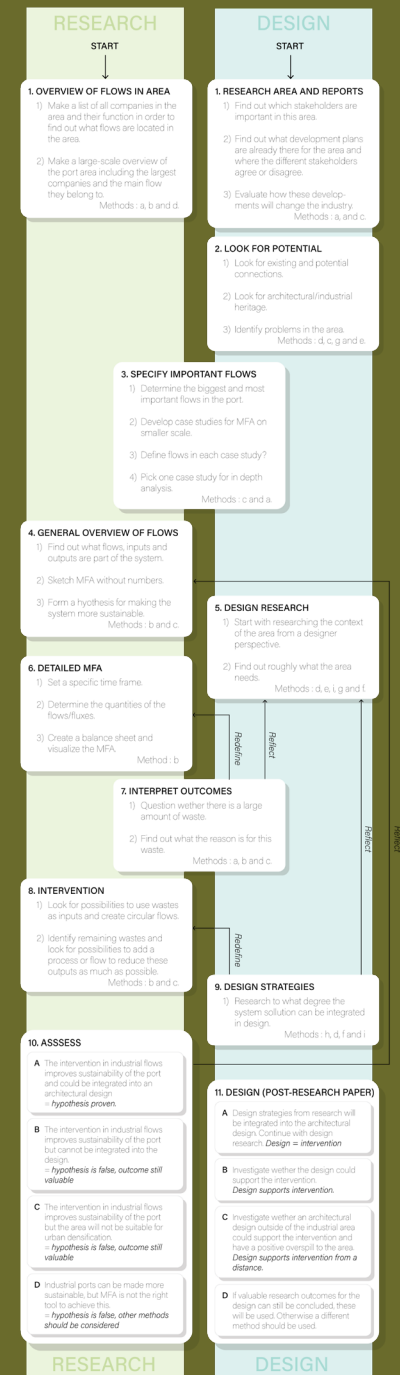
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3. Research & Design question

1. Which developments and transitions are influencing the area (including the flows) now and in the future? (Reports and policies)
2. Which flows are and will be there? (Large scale MFA)
3. Which systems are relevant to zoom in to based on sub question 1? (Options)
4. What flows and processes are part of this system? (Small-scale in-depth MFA)
5. How can an intervention in this system increase sustainability?
6. How can this intervention be translated into an architectural design? (Strategies)
7. What is the impact on the small and large scale?



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*HYPOTHESIS
& ANTITHESIS*

4. Hypothesis & Antithesis

OPTIONS:

- A. Everything as expected.
- B. Flows \neq Design.
- C. Industrial activity \neq Urban life.
- D. MFA \neq Goals.

10. ASSESS

- A** The intervention in industrial flows improves sustainability of the port and could be integrated into an architectural design
= *hypothesis proven.*
- B** The intervention in industrial flows improves sustainability of the port but cannot be integrated into the design.
= *hypothesis is false, outcome still valuable*
- C** The intervention in industrial flows improves sustainability of the port but the area will not be suitable for urban densification.
= *hypothesis is false, outcome still valuable*
- D** Industrial ports can be made more sustainable, but MFA is not the right tool to achieve this.
= *hypothesis is false, other methods should be considered*

RESEARCH

11. DESIGN (POST-RESEARCH PAPER)

- A** Design strategies from research will be integrated into the architectural design. Continue with design research. *Design = intervention*
- B** Investigate whether the design could support the intervention.
Design supports intervention.
- C** Investigate whether an architectural design outside of the industrial area could support the intervention and have a positive overspill to the area.
Design supports intervention from a distance.
- D** If valuable research outcomes for the design can still be concluded, these will be used. Otherwise a different method should be used.

DESIGN

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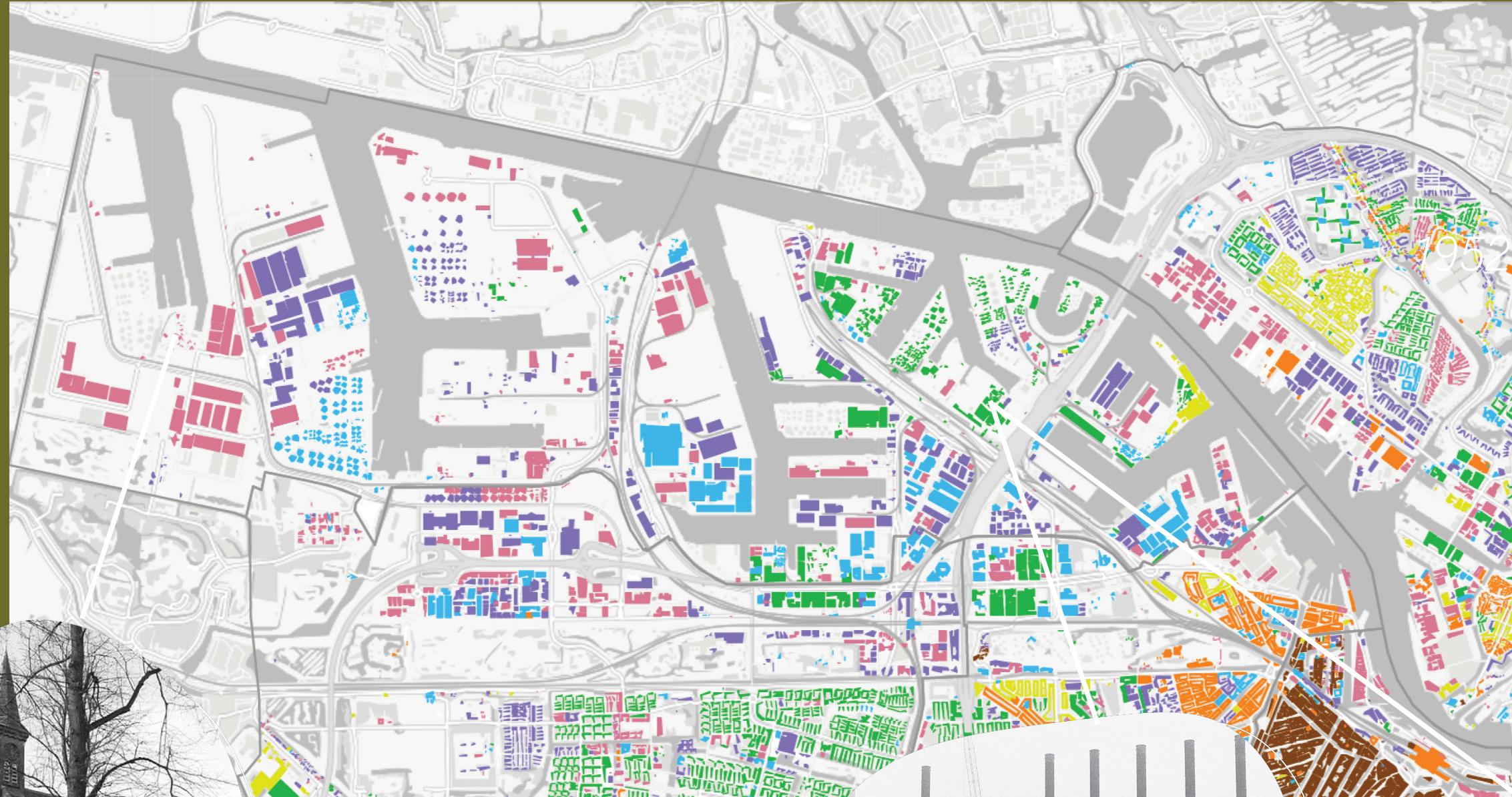
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*FIRST
FINDINGS*

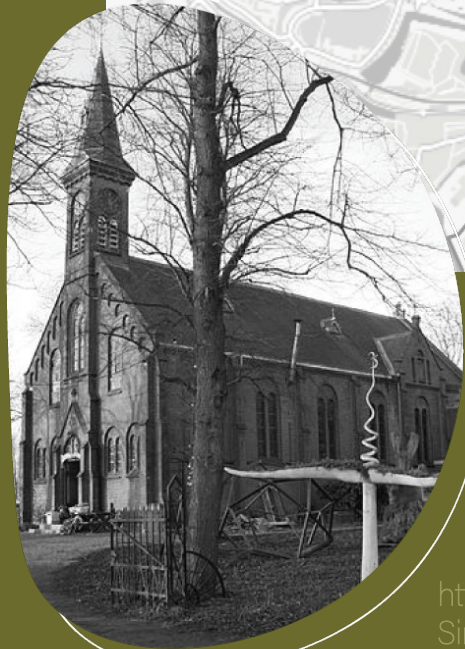
5. First findings | History



GROWTH OF AMSTERDAM
SINCE 1850

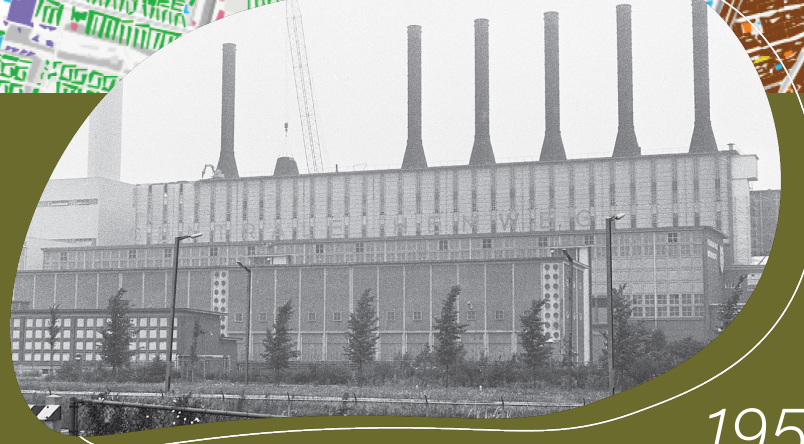
- Before 1860
- 1860-1919
- 1920-1939
- 1940-1969
- 1970-1985
- 1986-2001
- After 2001

<https://maps.amsterdam.nl/bouwjaar/?LANG=nl>



1892

[https://nl.wikipedia.org/wiki/Sint-Gertrudiskerk_\(Ruigoord\)](https://nl.wikipedia.org/wiki/Sint-Gertrudiskerk_(Ruigoord))



1952

https://www.wikiwand.com/nl/Centrale_Hemweg



1994

<https://www.dewestkrant.nl/kolen/centrale-mogelijk-dicht-845/>

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5. First findings | Now

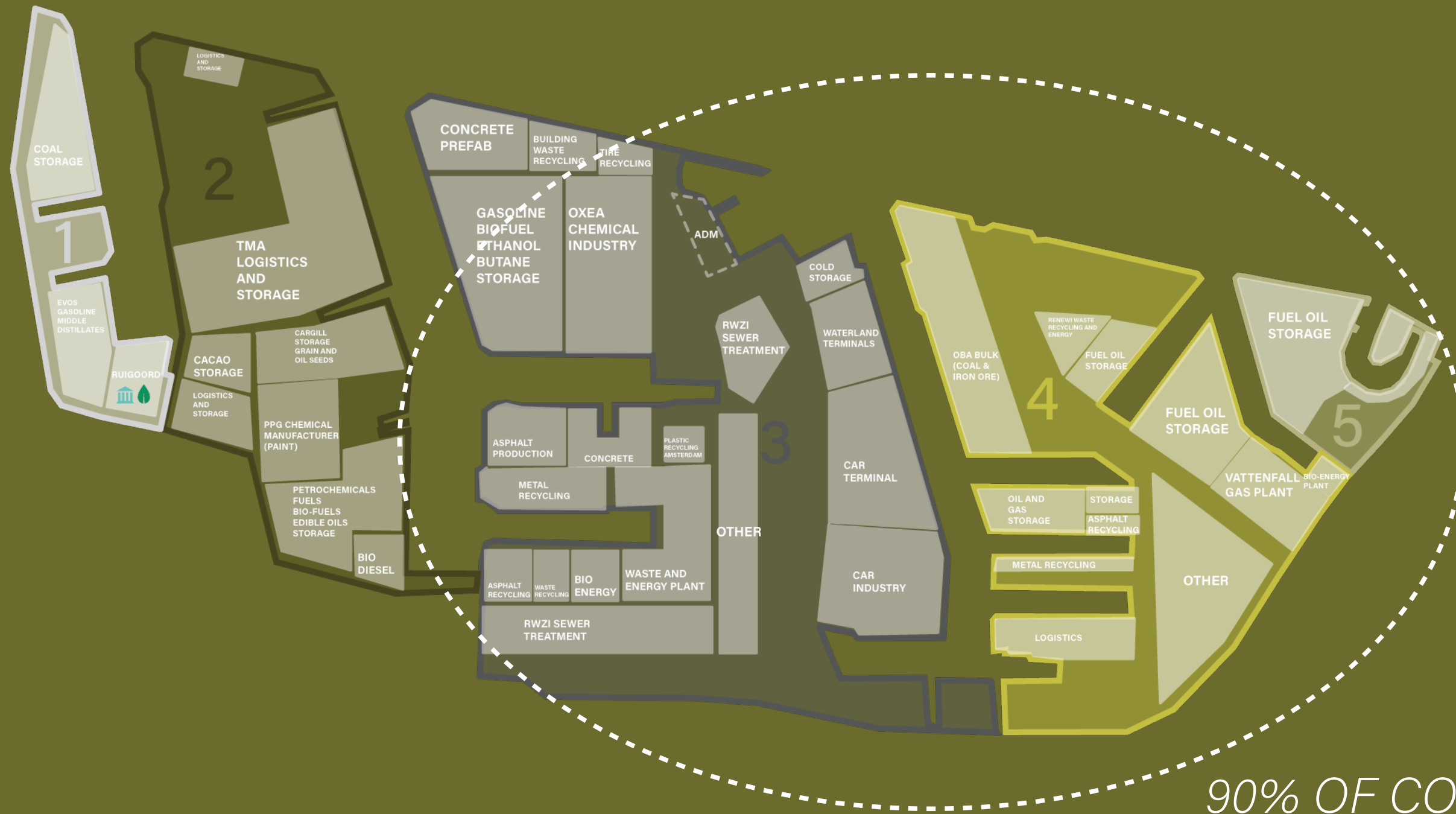
AFRIKAHAVEN

AMERIKAHAVEN

WESTHAVEN

JAN VAN RIEBEECKHAVEN

PETROLEUMHAVEN



90% OF COMPANIES

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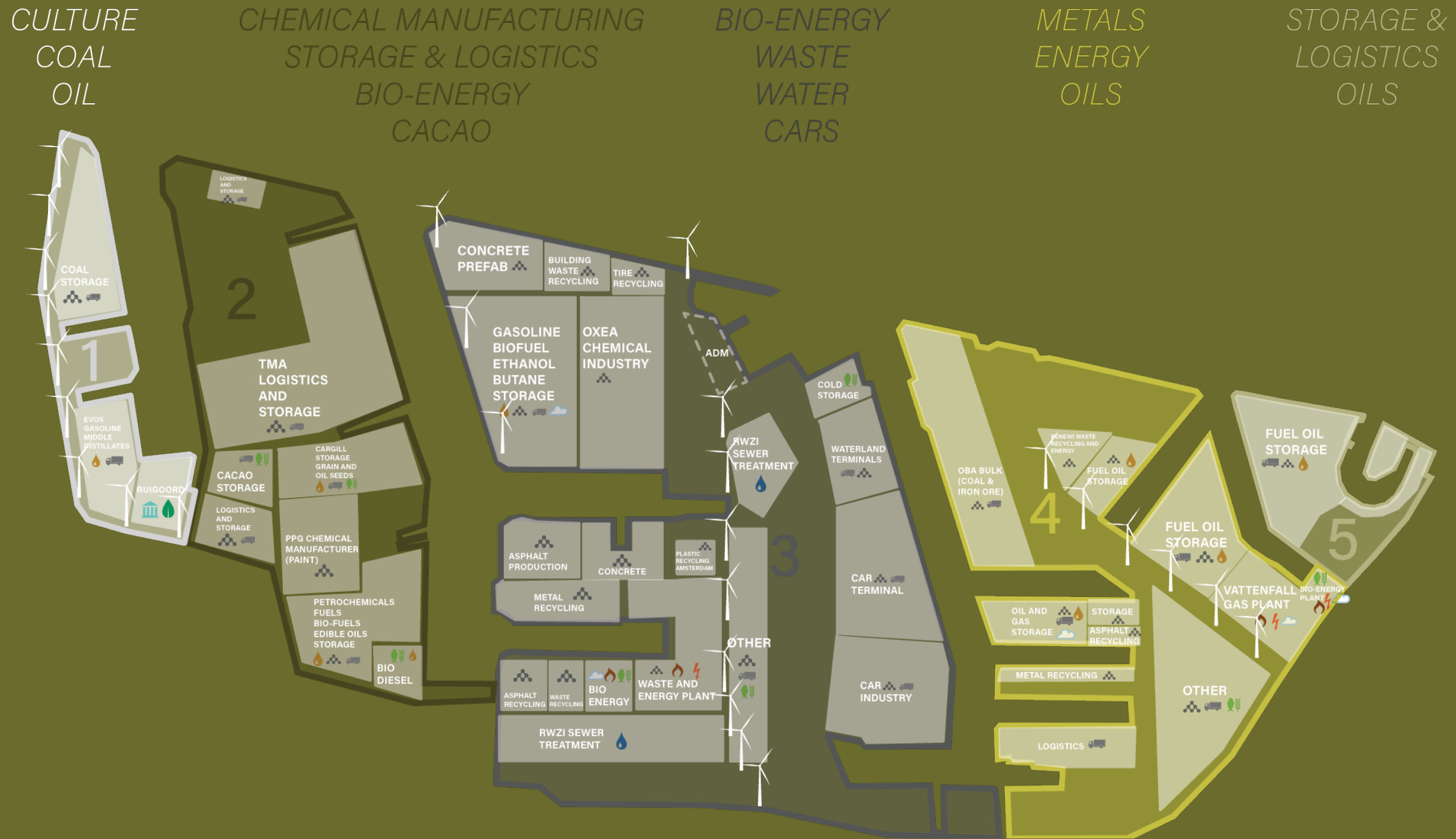
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5. First findings | Near future

AFRIKAHAVEN

AMERIKAHAVEN

WESTHAVEN

JAN VAN RIEBEECKHAVEN

PETROLEUMHAVEN



Based on *Omgevingsvisie Amsterdam 2050*
Retrieved 2021 Oct

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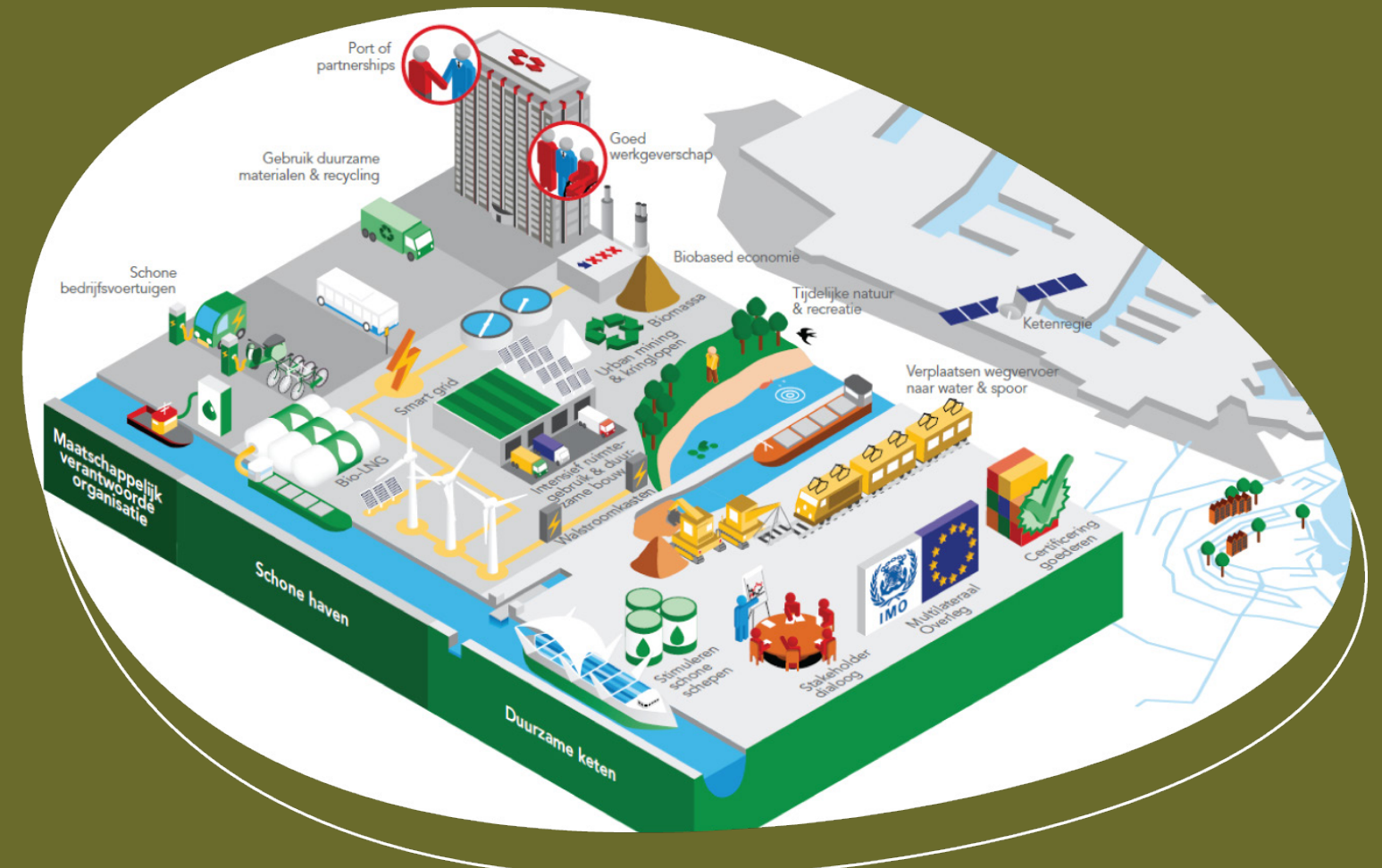
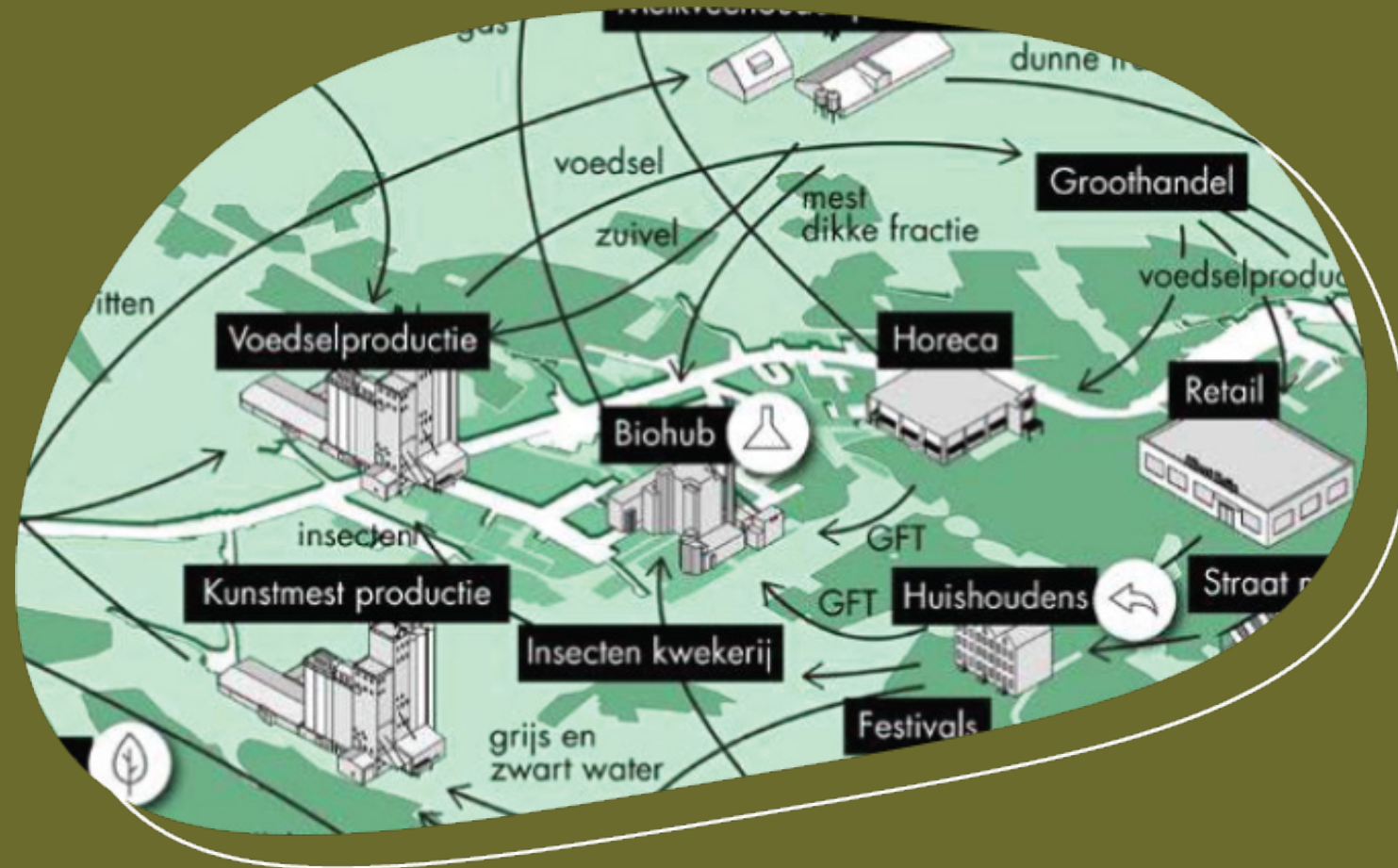
FINDINGS

5. First findings | Future

VISION CITY OF AMSTERDAM 2050

- Biobased energy
- 3D printing
- Urban mining
- Demountability
- Biobased products

<https://openresearch.amsterdam/nl/page/32754/amsterdam-circulair-rapport-visie-en-routekaart>



VISION PORT OF AMSTERDAM 2030

- Biobased economy
- Clean shipping
- Sustainable materials & recycling
- Temporary nature & recreation
- Urban mining & cycles

<https://www.portofamsterdam.com/nl/over-port-amsterdam/missie-en-visie/visie-2030>

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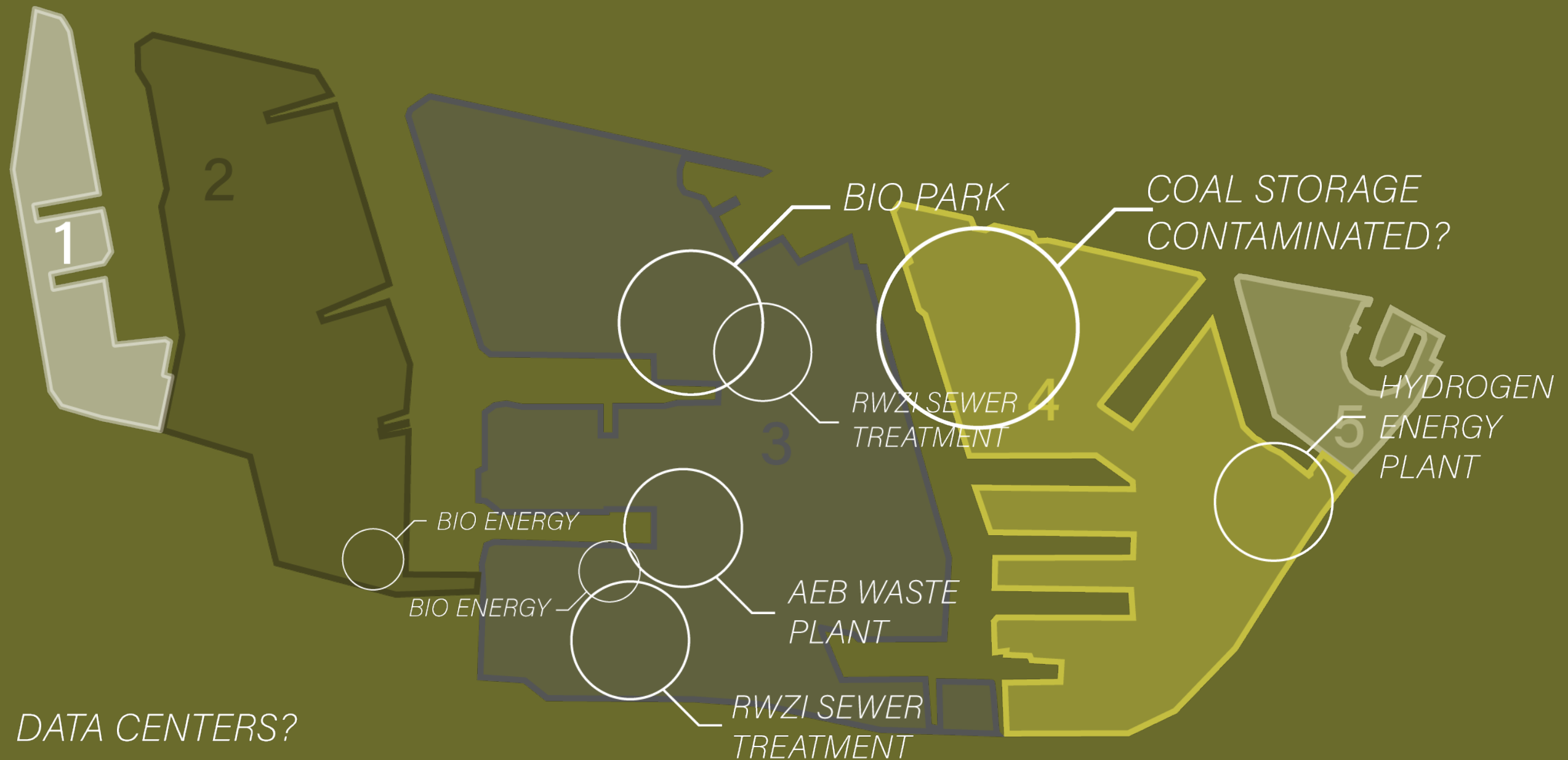
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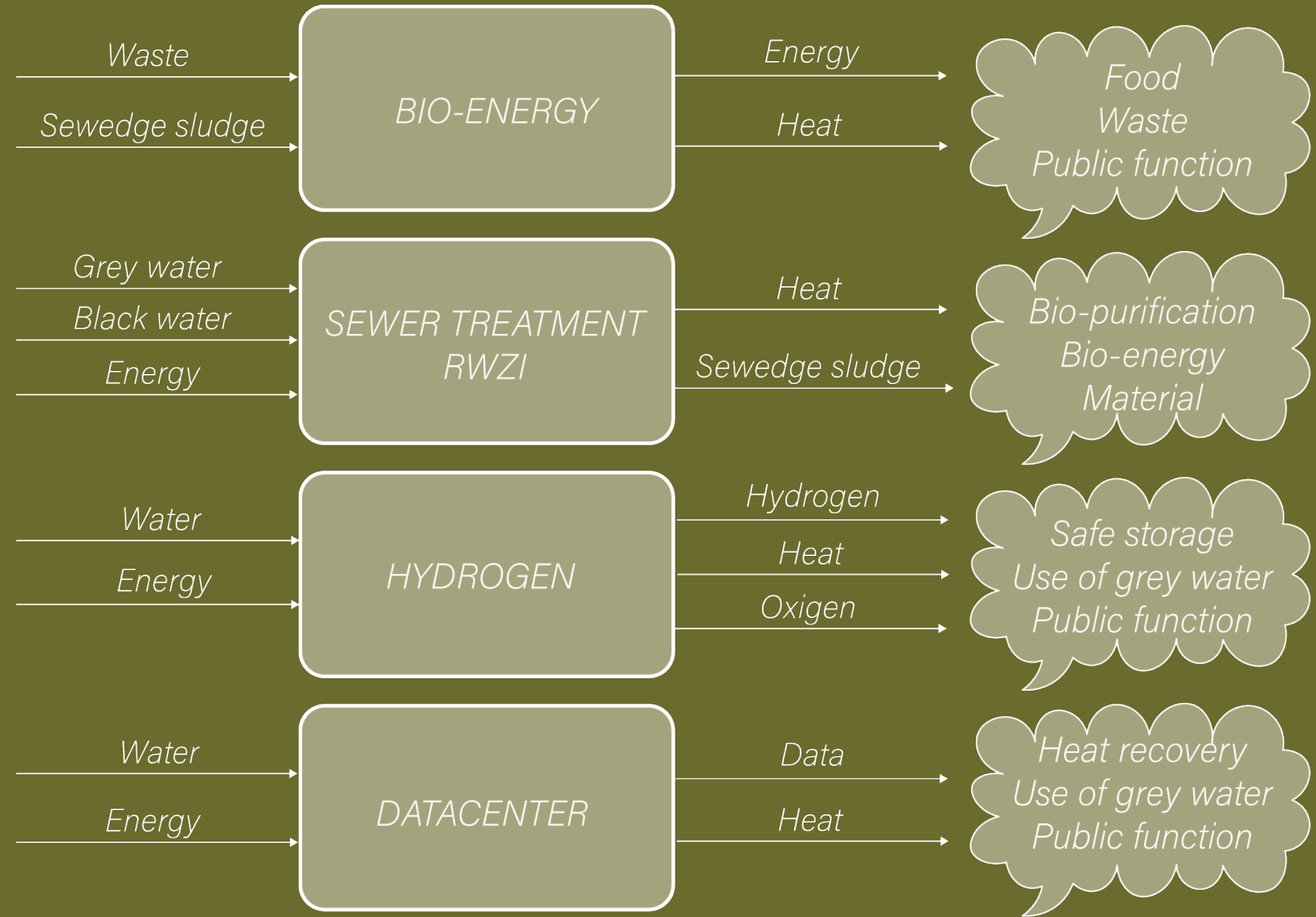
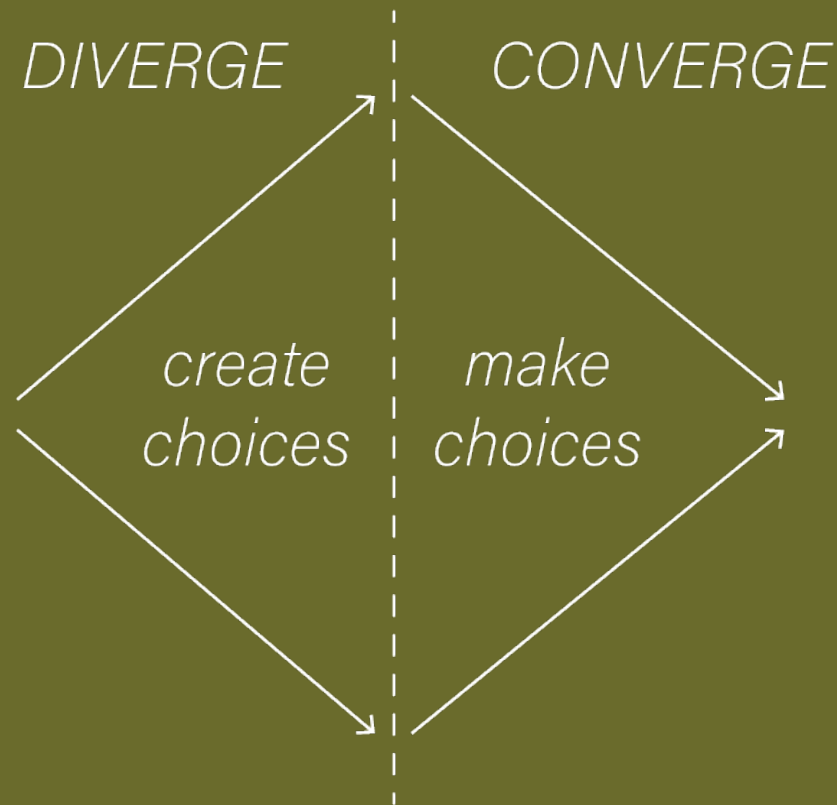
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*HOW TO
PROCEED*

6. How to proceed

Choose a topic for deeper analysis.



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6. How to proceed

NABASCO® 8010

Facade from sewage sludge

Own photograph, Dutch Design Week 2021



INTERESTING INTERSECTION

Omgevingsvisie Amsterdam 2050, Retrieved Oct 2021



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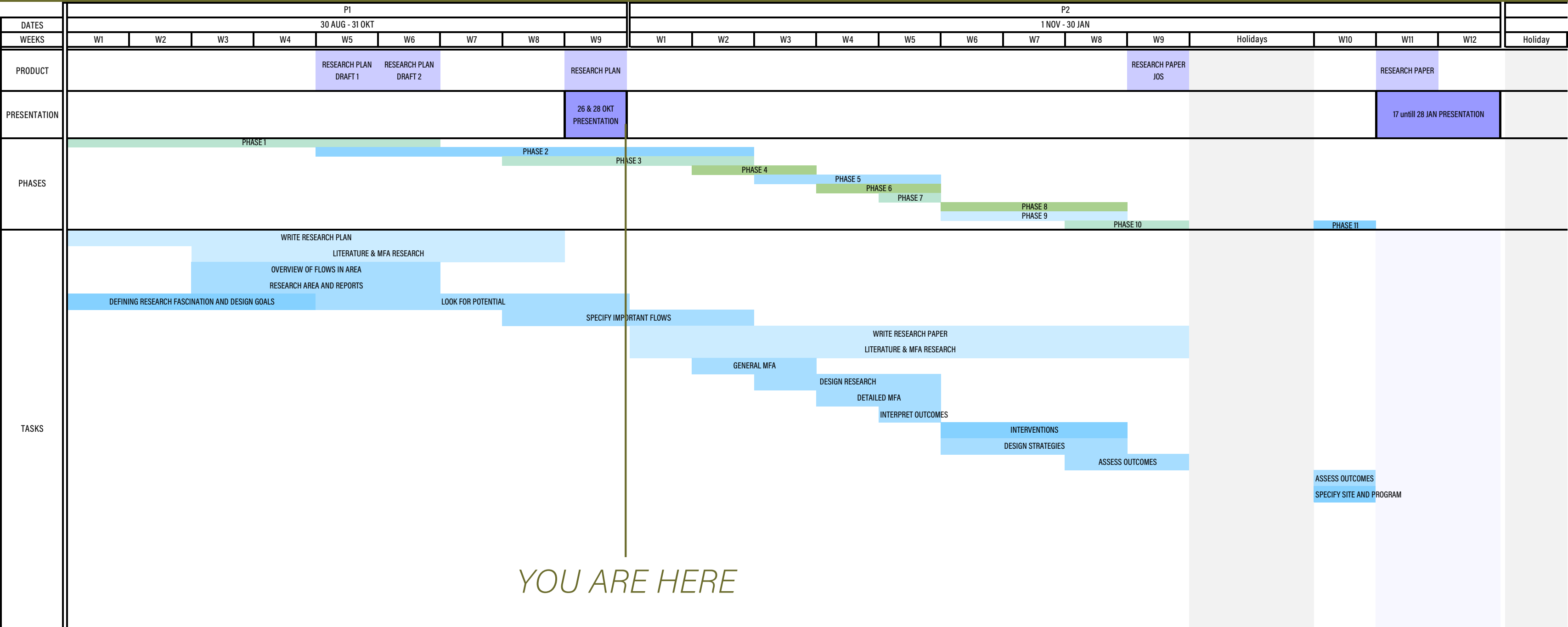
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YOU ARE HERE

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VACANT GATEHOUSE
PETROLEUMHAVEN

*Own photograph
September 2021*

