
Problem Demarcation
A small example

Why “problem demarcation” ?

1. Best serve your client’s interest
   - Establish what is your client’s *real* problem
2. Be efficient
   - Look only into issues that matter
   - In adequate detail
3. Be accountable for your findings
   - Make clear what you *decide* to ignore
   - Reflect on how this limits your conclusions

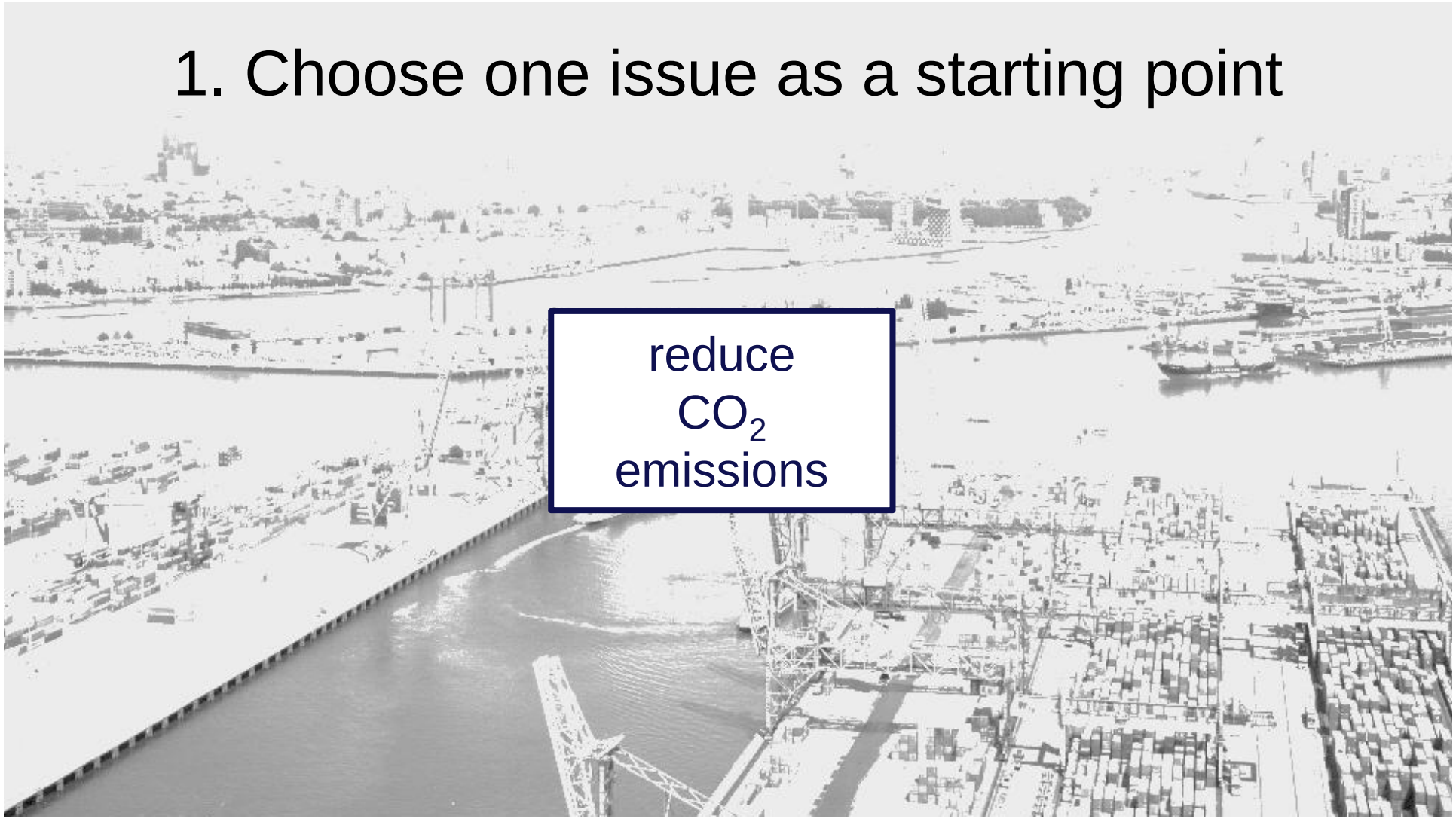
Problem demarcation

How to proceed?

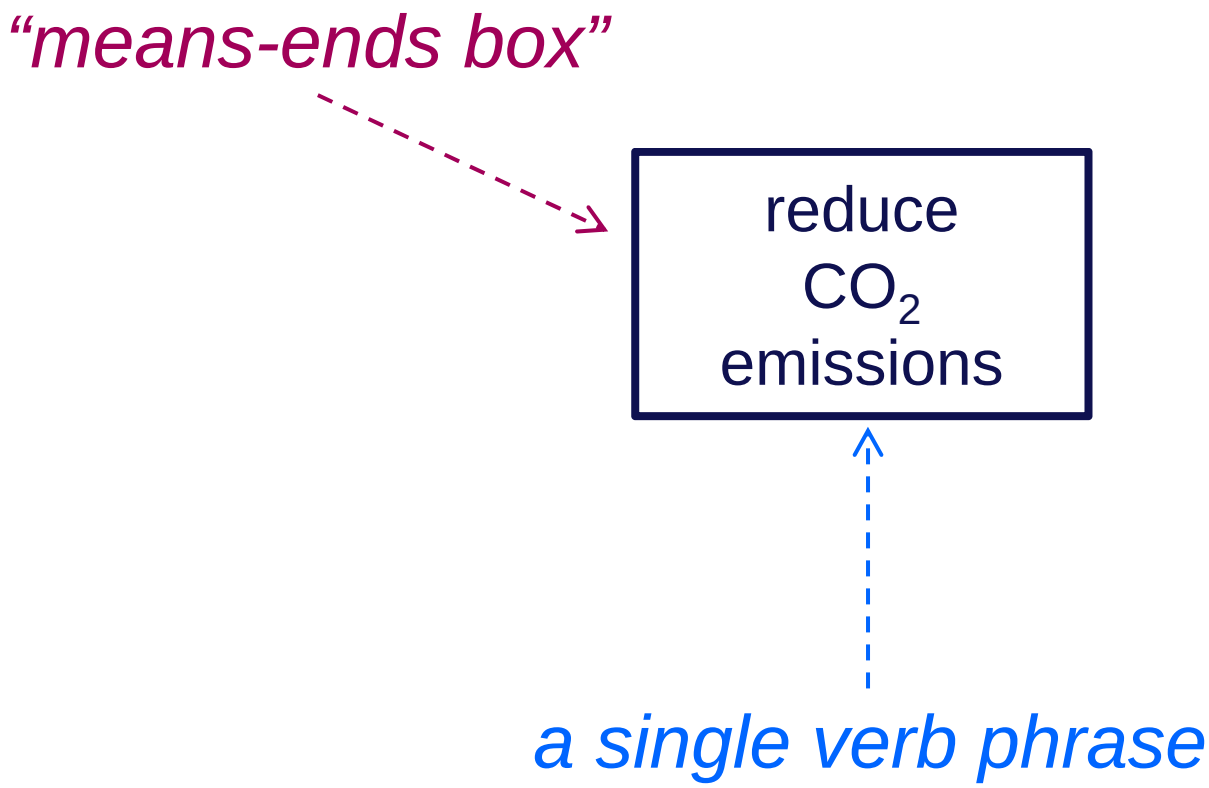
1. Starting point
2. Means-ends analysis
3. Several problem statements
4. Objectives trees + System boundaries
5. Compare & Choose

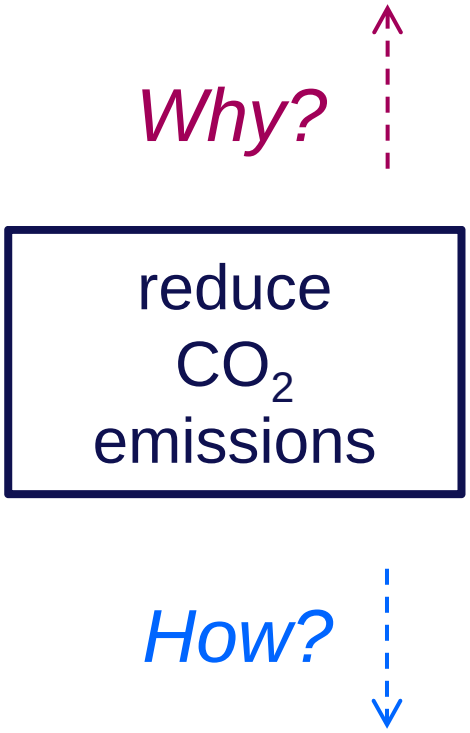
1. Choose one issue as a starting point

1. Choose one issue as a starting point

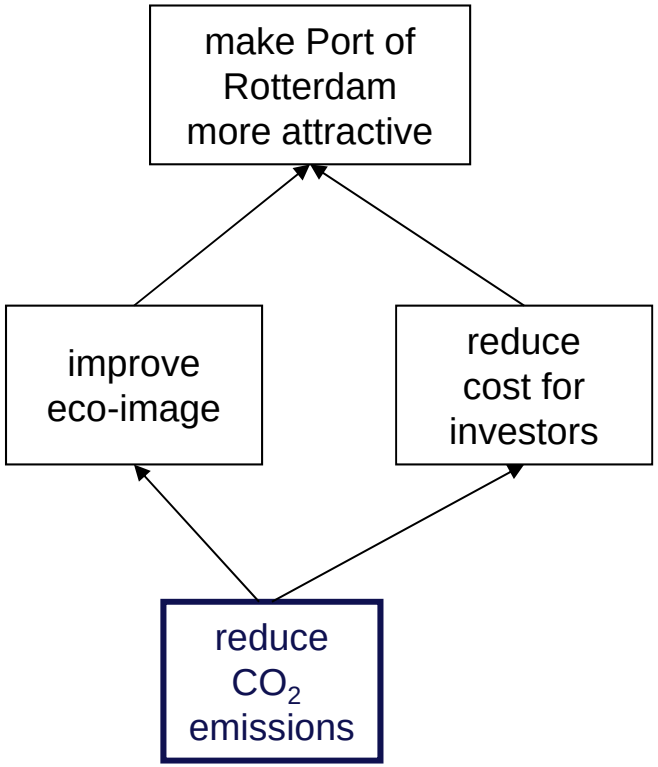


2. Perform a means-ends analysis

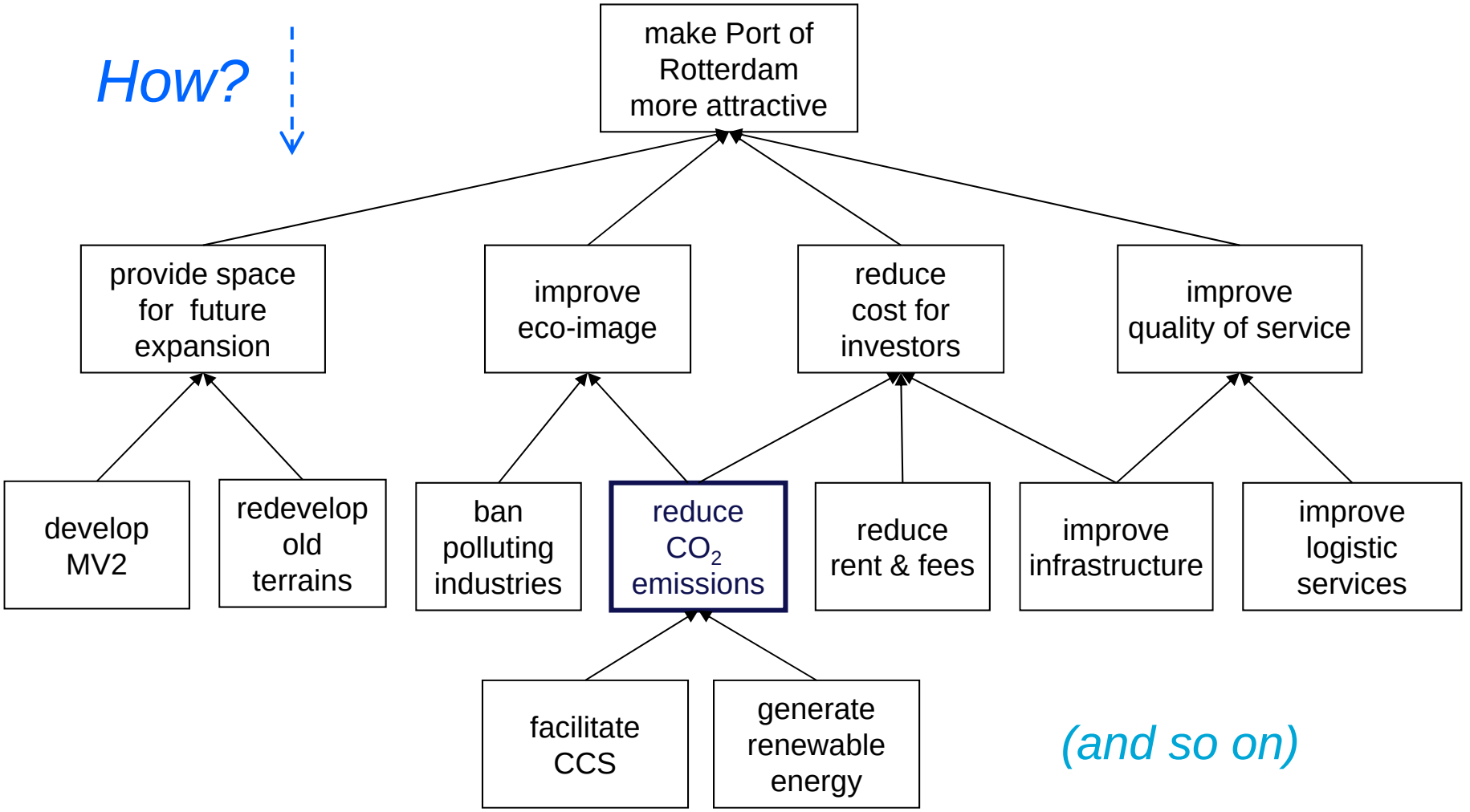



Why?
reduce
CO_2
emissions
How?

How?


make Port of Rotterdam more attractive
improve eco-image
reduce cost for investors
reduce CO_2 emissions

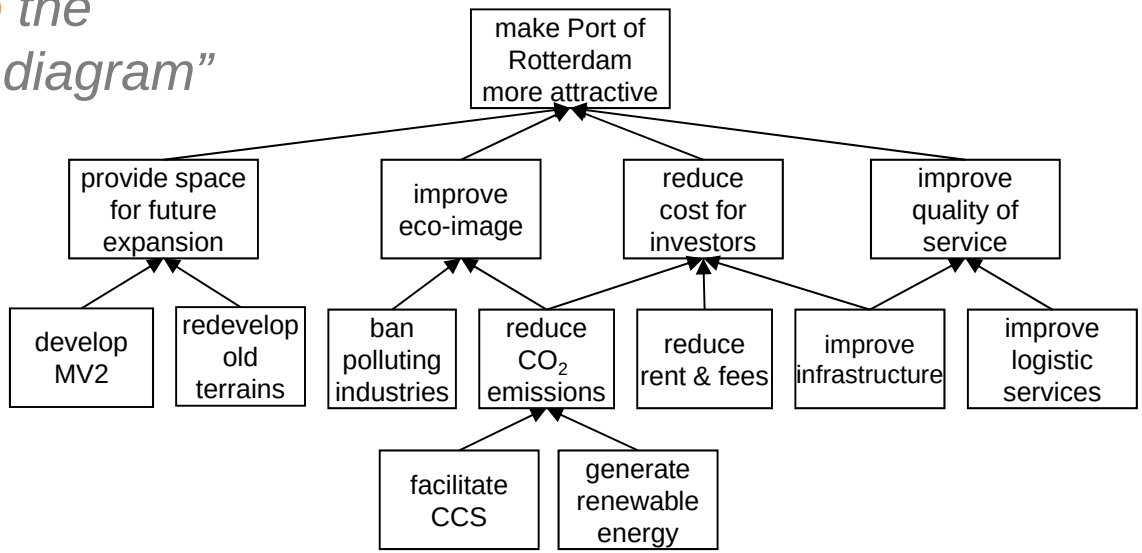
Why?

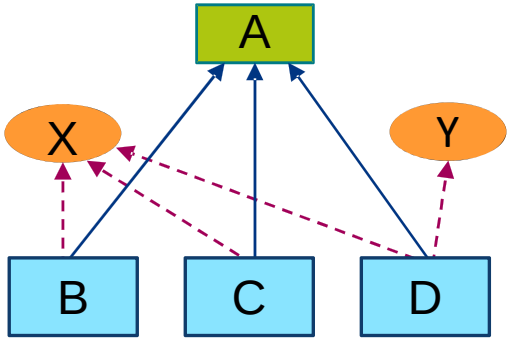

How?
make Port of Rotterdam more attractive
provide space for future expansion
improve eco-image
reduce cost for investors
improve quality of service
develop MV2
redevelop old terrains
ban polluting industries
reduce CO_2 emissions
reduce rent & fees
improve infrastructure
improve logistic services
facilitate CCS
generate renewable energy
(and so on)

Checking your means-ends analysis

1. Causality
   - Does a means really help achieve the end?
2. Ownership
   - Does your client really have the means?
3. Completeness
   - Are all relevant issues included?

*now **use** the*
“means-ends diagram”



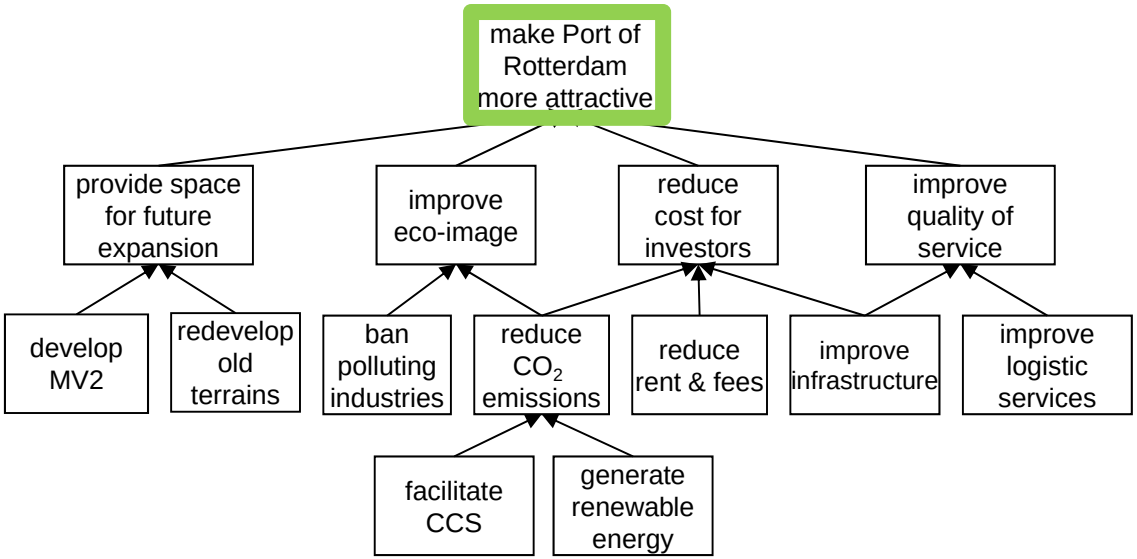


(1) “focal objective” + means to reach it

(2) undesirable side effects of means

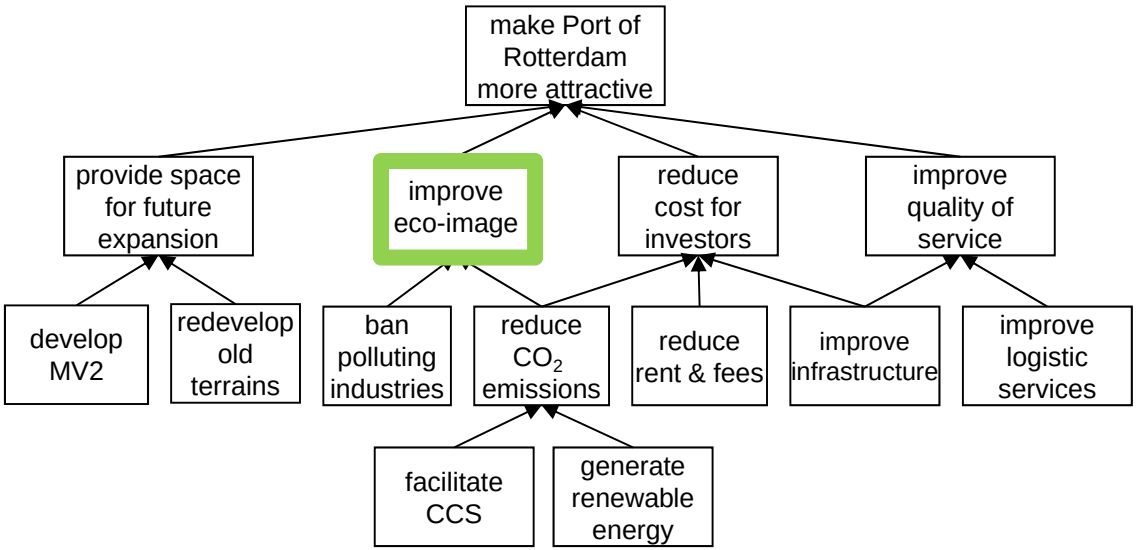
(3) problem statement:

“How can the client achieve A without (too much) X or Y ?”



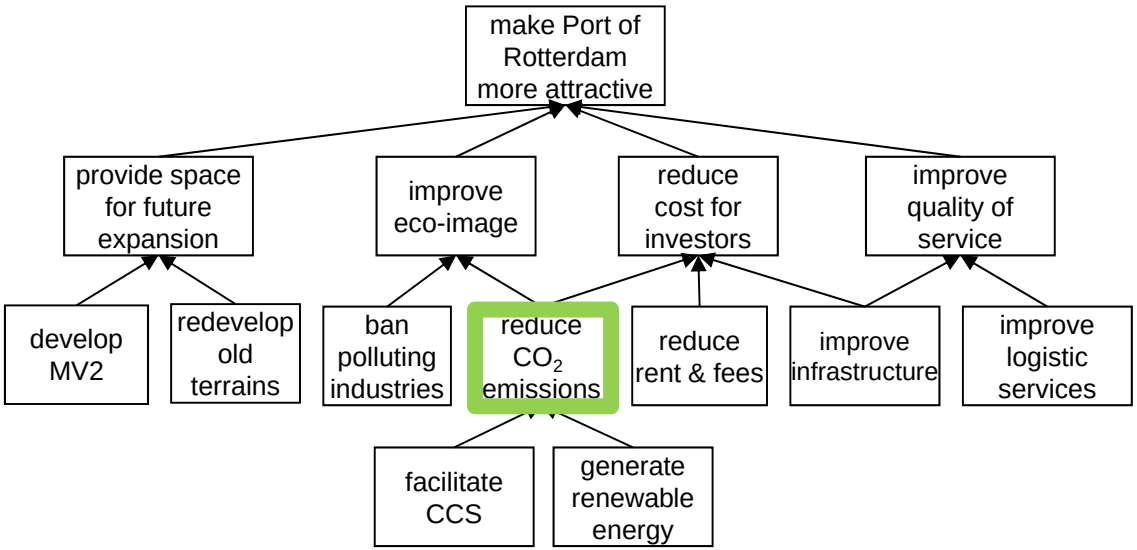
How can the PoR *make itself more attractive* without...

going bankrupt, or *breaking the law* ?



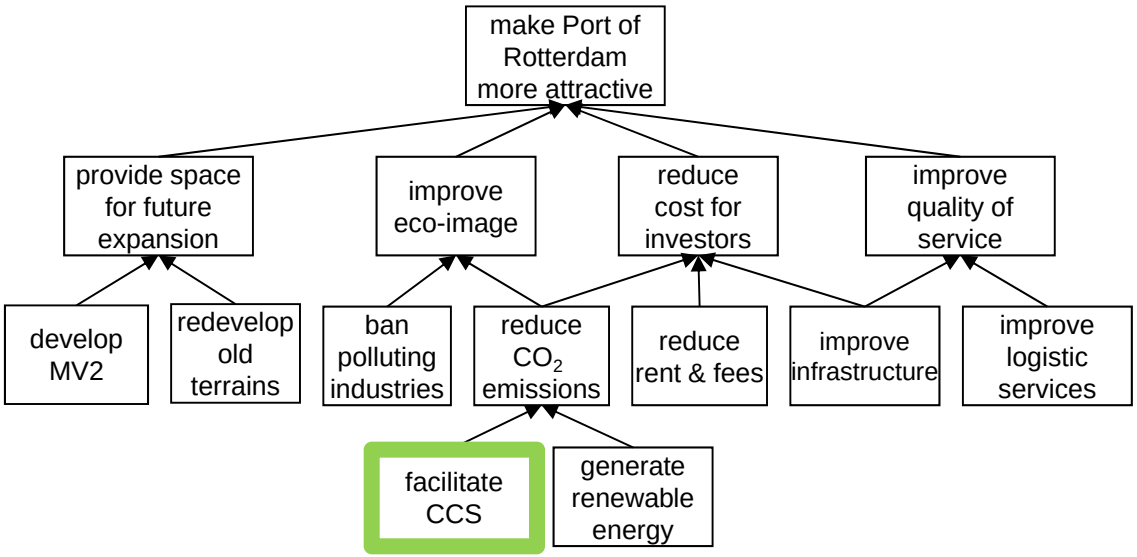
How can the PoR *improve its "green" image* without...

reducing the variety of its port industries,
increasing the cost for companies, or
incurring losses ?

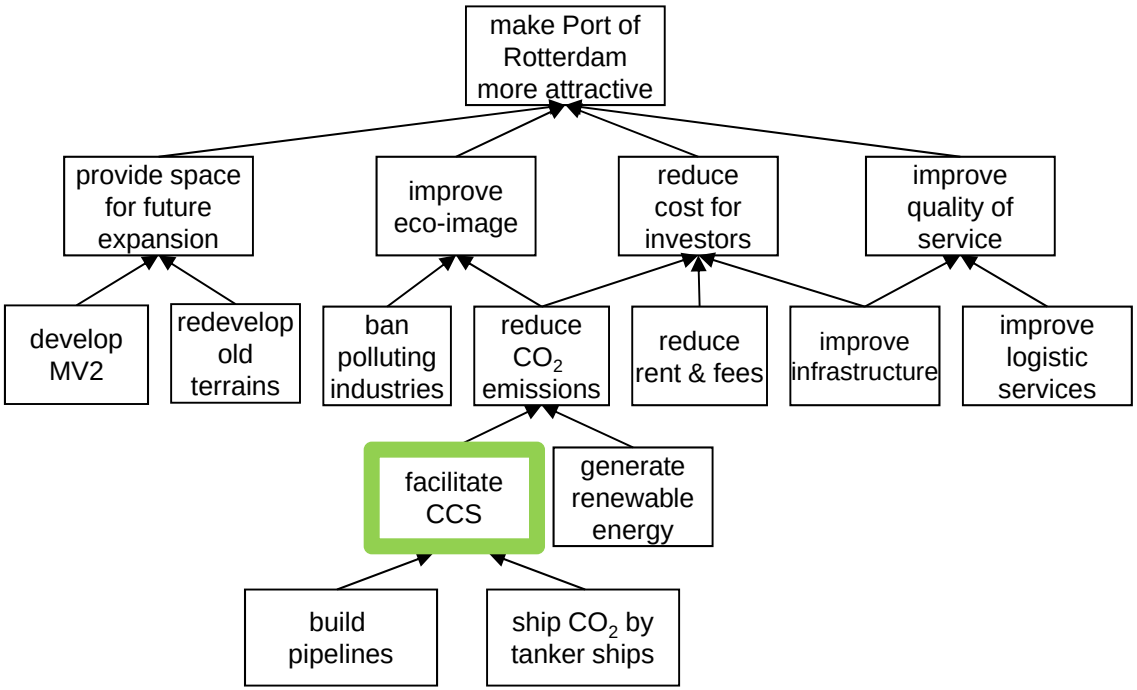


How can the PoR *reduce its CO_2 emissions* without...

increasing costs for companies,
losing public support, or
decreasing the security of supply of energy ?

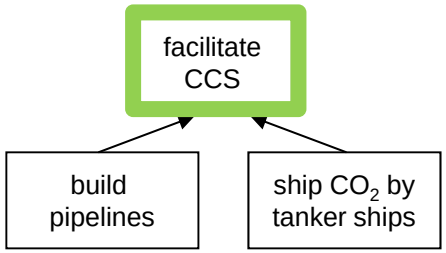


How can the PoR *facilitate carbon capture and storage* without...



How can the PoR *facilitate carbon capture and storage* without...

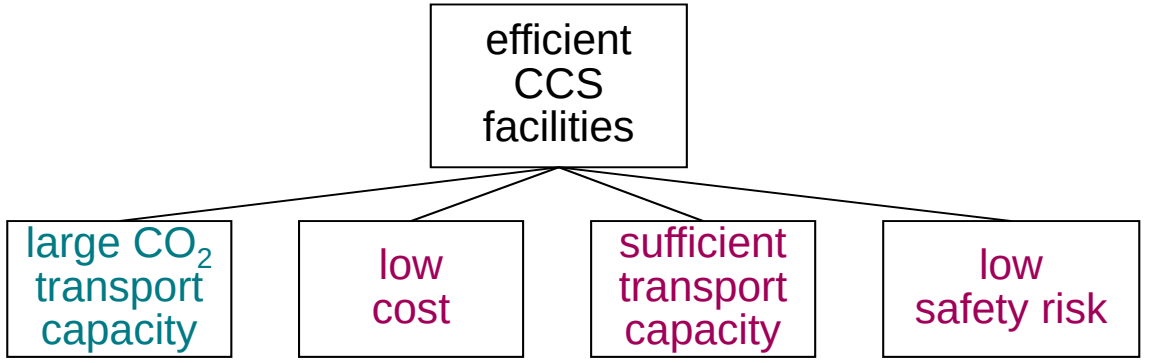
incurring losses,
demand exceeding capacity, or
increasing risk of incidents ?



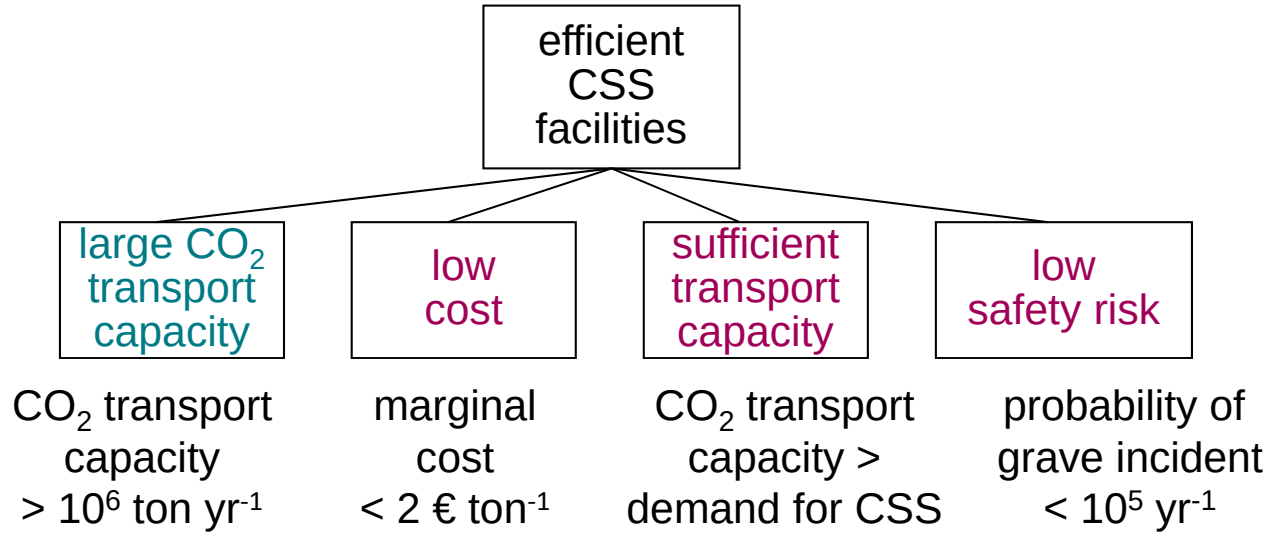
How can the PoR *facilitate CCS* without...

incurring losses,
demand exceeding capacity, or
increasing risk of incidents ?

Objectives:



Objectives tree → criteria




Problem Demarcation
It’s not childs’s play