

FINAL DRAFT

A Living North Sea Fund exploring the options

Close-out report of the LiNSI Fund Workstream
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1. Introduction

1a. Aim

1b. Case for a fund



Explore options to utilise potential cost savings that improve the North Sea region

1. Supply side

Give insight into possible supply of capital from decommissioning cost savings

2. Demand side

Explore demand for capital in North Sea region

3. Financial engineering

Research possible financial engineering mechanisms that relate to the structure of both supply and demand for capital within the LiNSI context

4. Governance

Explore governance options

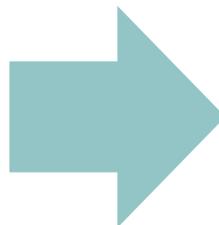
Rather than answer “What options are available for a small, medium or large size fund?” we show what influences cost saving potential and what options are available to spend this money

There is a case for a North Sea fund

1. There is a need to improve the current ecological state of the North Sea.
(Based on Phase 1 report LNS128. North Sea Ecosystem)
 - It is not too late to act
 - It is not expected that government policies alone will 'do the job'.
2. Economic well-being of population surrounding the North Sea depends on a healthy marine ecosystem that is used in a sustainable way.
3. There is a need to restore the relationship between the North Sea and the general public.
4. There is an opportunity for an ambitious fund that redirects financial flows:
 - Cross-boundary. Dedicated to the North Sea: money is used where it is most effective
 - Enables ambitious, high-risk projects: measures that cannot be afforded by other funding mechanisms
 - Long-term focus
 - Innovative - not hindered by restrictions imposed by current rules and regulations

Case for a fund

1. Improve ecological state
2. Improve well-being of population
3. Restore relationship with the general public
4. Opportunity for ambitious programme:
 - Innovative
 - Large impact
 - Cross boundary
 - Higher risk
 - Long-term focus



What do stakeholders want?

- Sufficiently additional?
- In line with own vision and ambition?
- Can it persuade my members/shareholders/the general public?



Purpose, aim and objectives of a North Sea programme

As formulated in LNSF290 Draft framework for a North Sea fund

Purpose and aim

- The **purpose** of the Living North Sea Programme is to improve the North Sea ecosystem.
- Its **aim** is to promote a system of adaptive management of protection and sustainability measures moving towards a healthy North Sea ecosystem in 2050.

Objectives

1. Protecting vulnerable key habitats and species
2. Restoring active habitats
3. Achieving sustainable use by promoting and facilitating a transition to a 'net positive' benefit of all users
4. Filling knowledge gaps by researching and monitoring ecosystem behaviour.

Seeking synergies between different objectives, where possible. Improving the knowledge base by coupling research programs to concrete projects

2. Decommissioning cost savings

- 2a. Update overall cost savings
- 2b. Split between governments and operators
- 2c. Possible finance flow



Details

- New database contains 20 more platforms in our category of interest
- 12 of these are located on the British continental shelf
- All other details of the calculation – as described in LNSF297 were kept unchanged *

Implications for scenario estimates

- Baseline: £10.0 → £11.0 (billion cost estimates)
- Space Economy Min: £ 4.1 → £ 4.2 (billion cost saved)
- Space Economy Max: £ 9.7 → £10.7 (billion cost saved)
- Ecology: £10.0 → £11.0 (billion cost saved)
- Innovation: £ 8.1 → £ 8.7 (billion cost saved)

* Note: The estimated cost per per weight (£ 6256 / tonne) was not updated. The recent OGUK decommissioning insight (2013) estimates costs of £5700 per tonne for jacket removal in the southern north sea (SNS) and £4300 in central and northern North Sea (CNS/NNS). However these numbers do not reflect the full cost savings from leaving a jacket in place, which include onshore disposal and project management.

Cost savings calculation

- Main driver for decom cost savings is weight.
- Assume £6265 per ton (jacket removal, onshore disposal and project management)
- Values in 2010 currency. All cost saving estimates are based on figures with a $\pm 40\%$ uncertainty. In addition systematic errors might apply
- Based on OGUK (2012); Current decommissioning technology
- Cost for removal to reef is 86% of removal to shore
- Partial removal is to -55 m (IMO regulations)
- Partial removal cost is proportional to fraction removed

Scenario assumptions

Baseline (cost estimate £11.0 billion):

- Includes only current production platforms
- All possible derogations are granted
- No bottlenecks for equipment, staff or demolition yards

Space and economy (cost savings £4.2 – 10.7 billion):

- In the minimum cost saving variant, the IMO guideline to cut-off all structure to 55 m below sea level, is applied to all structures
- In the maximum cost saving variant, only structures within 2 nautical miles of an IMO shipping lane are removed

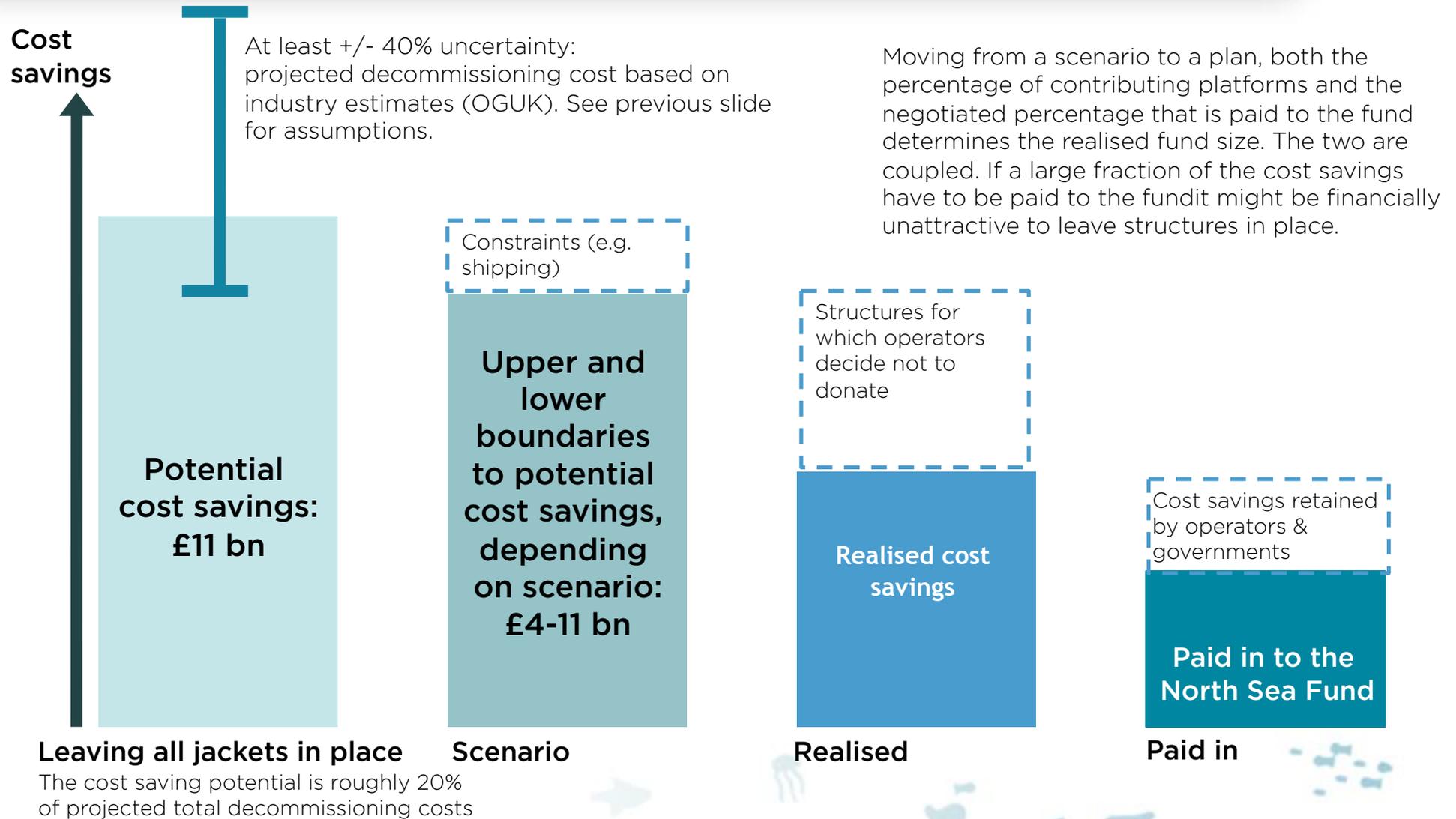
Ecology (cost savings £11.0 billion):

- The artificial hard substrate of platforms has a positive impact on marine ecosystems
- There are no locations, where leaving in place a steel substructure has a negative impact on the ecosystem

Innovation (cost savings £8.7 billion):

- Platforms can be reused for sustainable, innovative purposes. We assume this is possible for all structures in the CNS and SNS.
- Such experiments require grouping (reefing). Optimum locations are generally close to the coasts.
- For the NNS towing to reef is assumed to be less optimal than leaving in place from both a cost and biodiversity perspective.

Not all *potential* cost savings will be donated to a North Sea Fund



Moving from a scenario to a plan, both the percentage of contributing platforms and the negotiated percentage that is paid to the fund determines the realised fund size. The two are coupled. If a large fraction of the cost savings have to be paid to the fund it might be financially unattractive to leave structures in place.

- In the Gulf of Mexico (GOM), in total, approximately 10% of structures is donated to the Rigs-to-Reef programme.
- Whether a structure is donated depends strongly on water depth (see table)
- Applying the same donation ratio by depth to the North Sea platforms would see a much higher proportion of structures donated as a greater proportion of structures are in deeper waters. We would see (see next slide for calculation)
 - 42% of structures reefed
 - 75% of weight reefed
- In the GOM each donated structure, 50% of the cost savings is paid to a fund. Originally, cost savings were independently assessed. Currently, they are negotiated.
- In the **hypothetical case** that the same conditions would apply in the North Sea, under the baseline and ecology scenarios, the fund would realize $75\% * 50\% = 38\%$ of the potential cost savings: $38\% * \text{£11 billion} = \text{£4.1 billion}$

Reefing statistics for the GOM

Water depth (m)	Platforms removed	Fraction reefed
< 30	2501	2%
30-60	582	38%
60-90	177	77%
>90	35	>90%

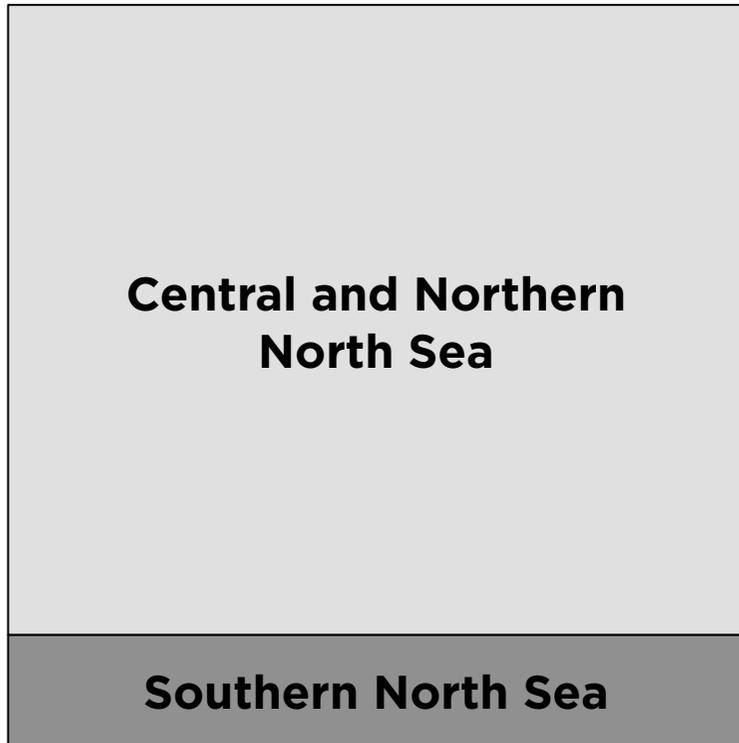
Note that the California R2R programme proposes a 60-80% donation to a fund - depending on the timing of the commitment. To date, however, no structures have been reefed.

Reefing fraction in the North Sea based on GOM data

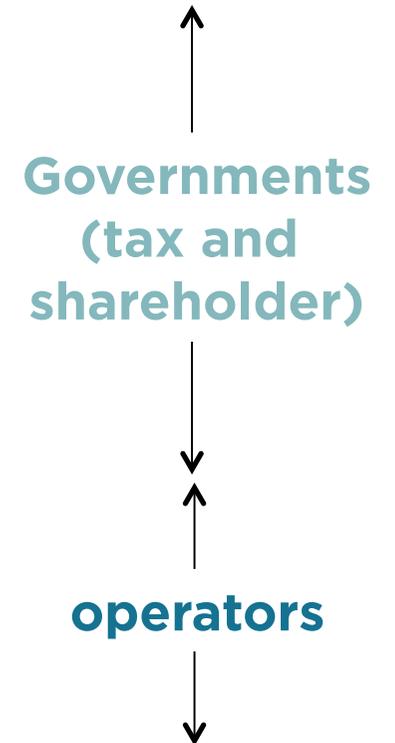
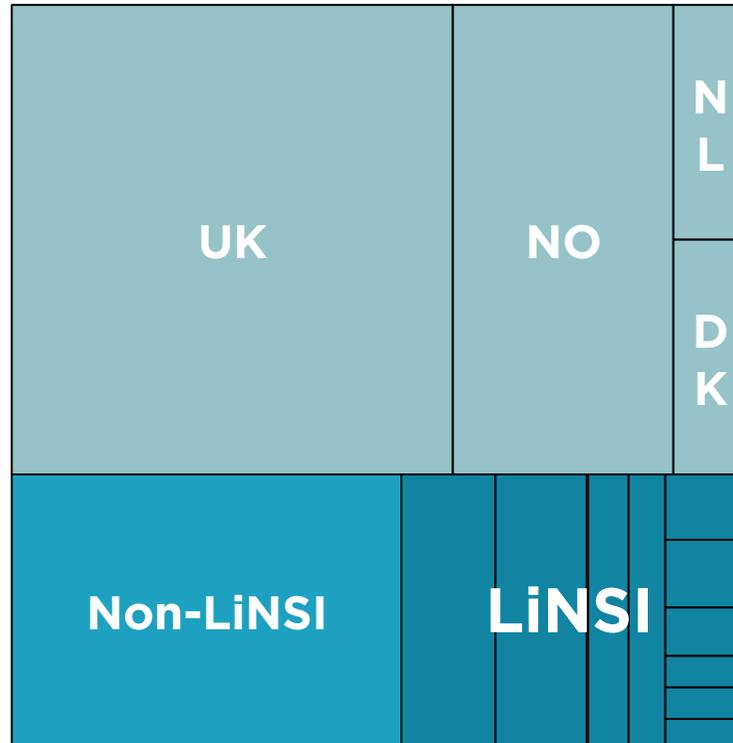
WD (m)	GOM fraction donated	#structures (NS)	total weight (ton)	donated structures (NS)	donated weight (NS)
<30	2%	140	112502	3	2250
30-60	38%	206	244813	78	93029
60-90	77%	68	319319	52	245876
>90	90%	88	1076153	79	968538
total		502	1752787	213	1309692
fraction reefed				42%	75%

Potential cost savings break down

Regional



Stakeholders



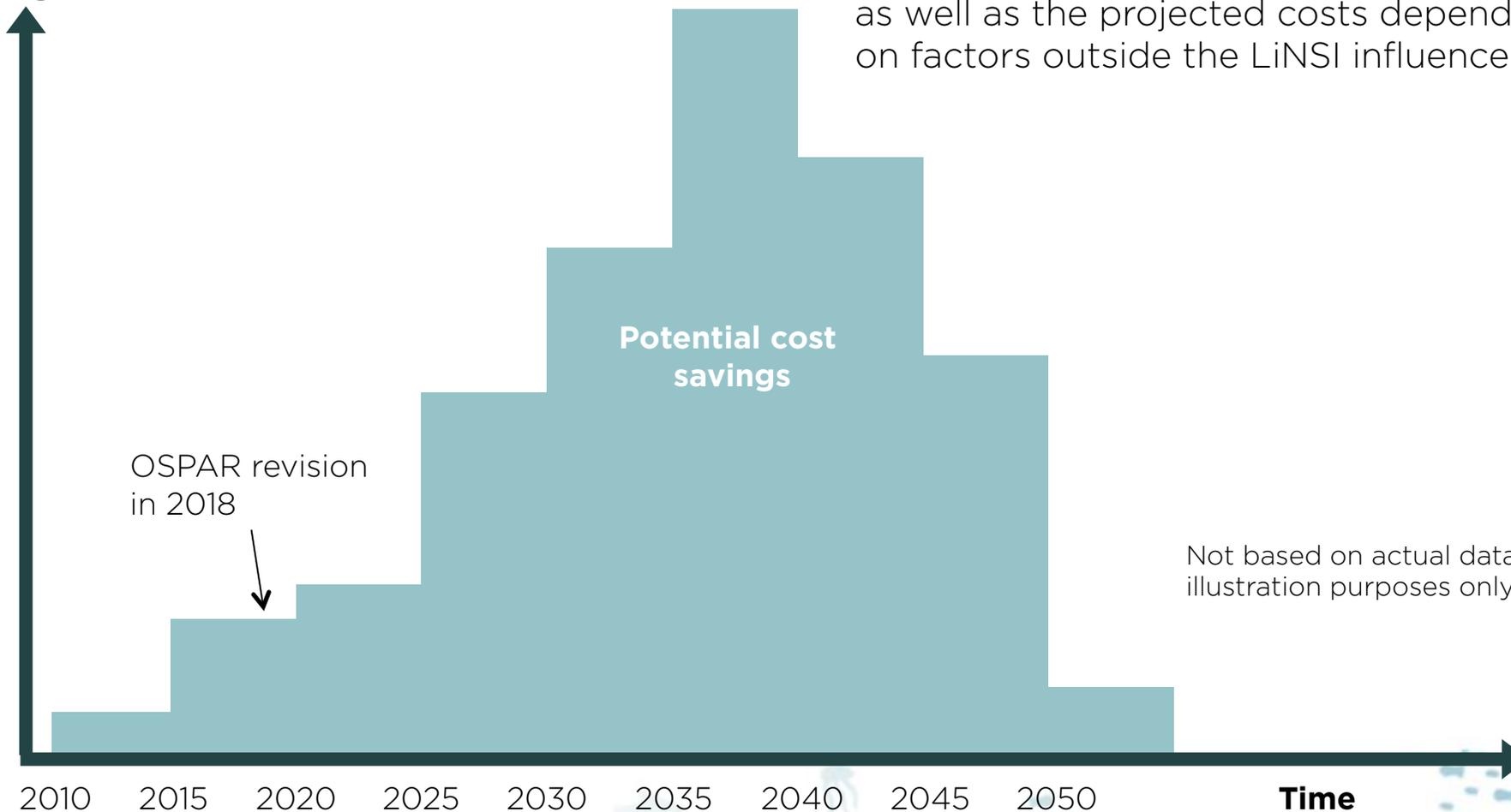
Area corresponds to potential cost savings

Assumptions in government share cost savings: UK (60%); NO (80%); NL (50%); DK (60%)

Actual shares depend on detailed tax analysis (outside scope of this phase)

The timing of potential cost savings depends on expected decommissioning activities

Cost savings



Under a pay-as-you go regime build-up of a fund is slow

Cost savings

For North Sea Fund capital supply is not only a matter of **how much**, but also of **when**

OSPAR revision in 2018

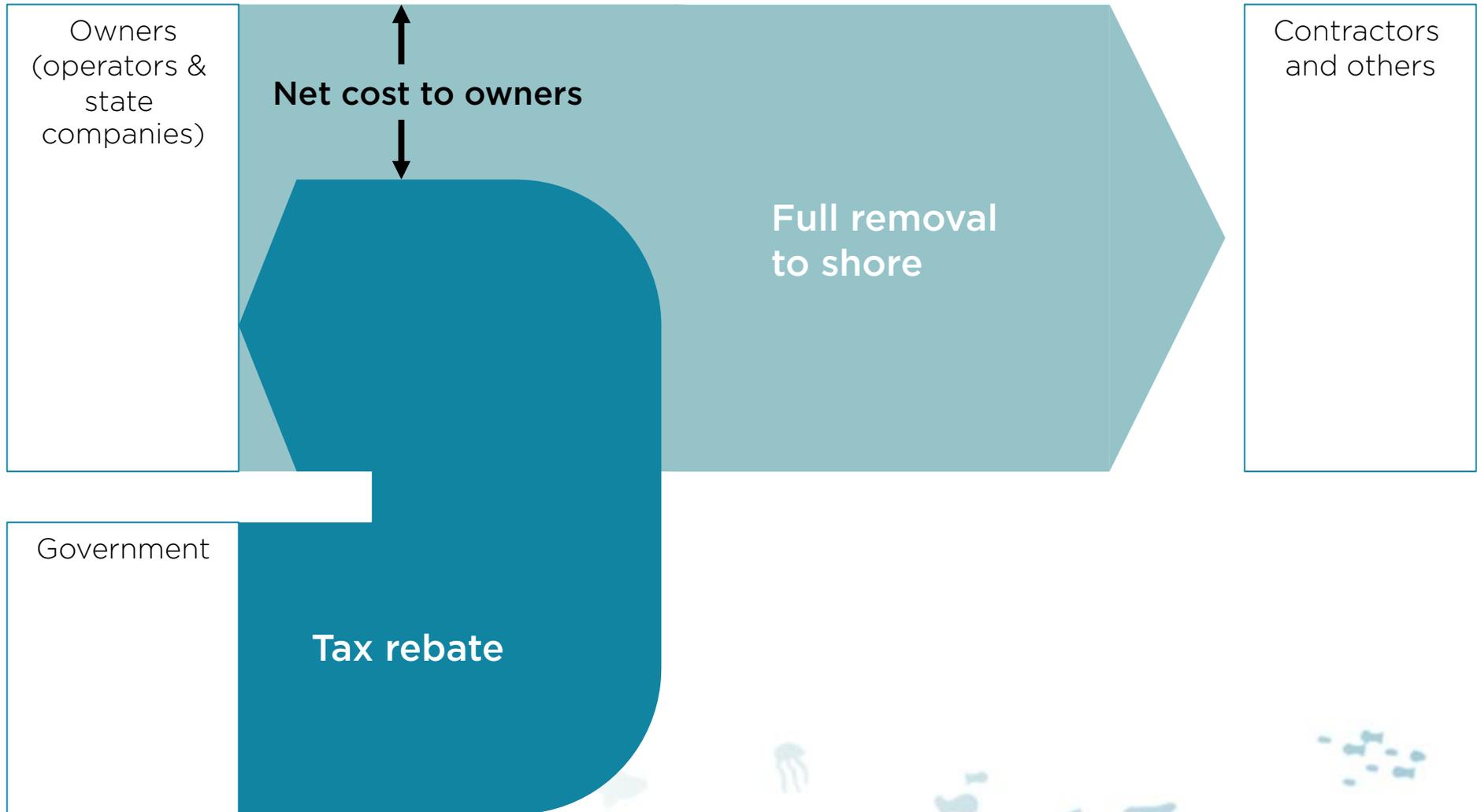
Potential cost savings

Payments to the fund under a pay as you save model

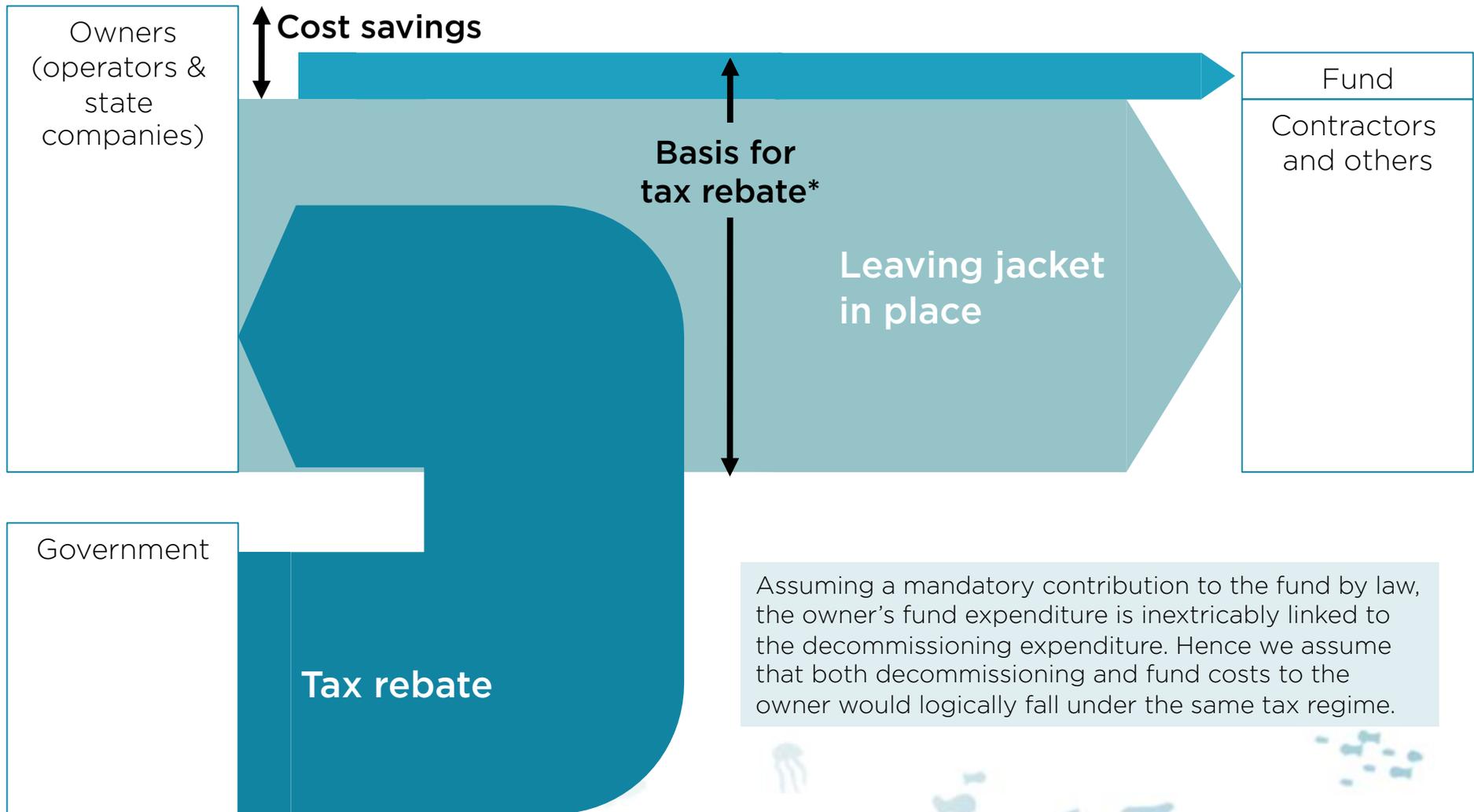
Not based on actual data, for illustration purposes only

2010 2015 2020 2025 2030 2035 2040 2045 2050 **Time**

Flow of money for a single structure



Proposed flow of money for a single structure, leaving jacket in place



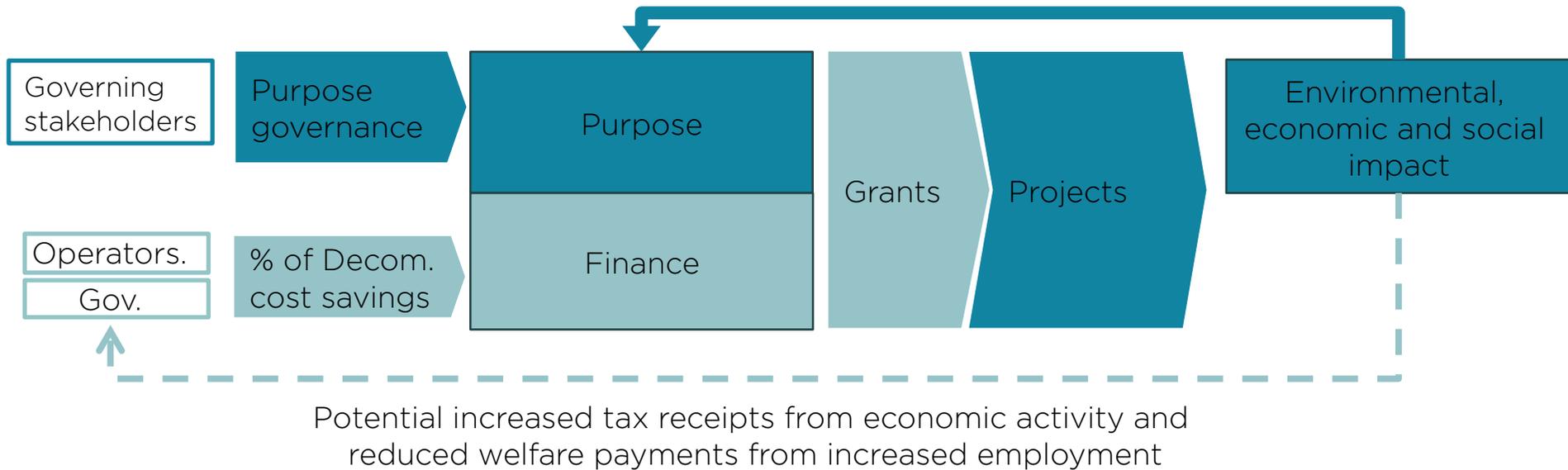
A numerical example of fund contribution and net cost savings

Assumptions		Cost
Fund contribution: $x\% = 50\%$		Indexed to cost savings = 100
Tax rate: $y\% = 60\%$		
Leave jacket in place as proportion of full removal cost: $z\% = 80\%$		
A	Decommissioning cost for full removal	500
B	Decommissioning cost for leave jacket in place: $B = (z\% * A)$	400
C	Cost saving: $C = A - B$	100
D	Contribution to fund: $D = x\% * C$	50
E	Tax rebate for full removal: $E = y\% * A$	300
F	Tax rebate for leave in place: $F = y\% * (B + D)$	270
G	Net cost savings government: $G = E - F = y\% * (C - D)$	30
H	Net cost to owner for full removal: $H = A - E$	200
I	Net cost to owner for leave in place: $I = B + D - F$	180
J	Net cost savings to owner: $J = H - I = (100-y)\% * (C-D)$	20

Scheme of a programmatic fund: not for return

- Programme content**
- Cash flows**

Monitoring & evaluation

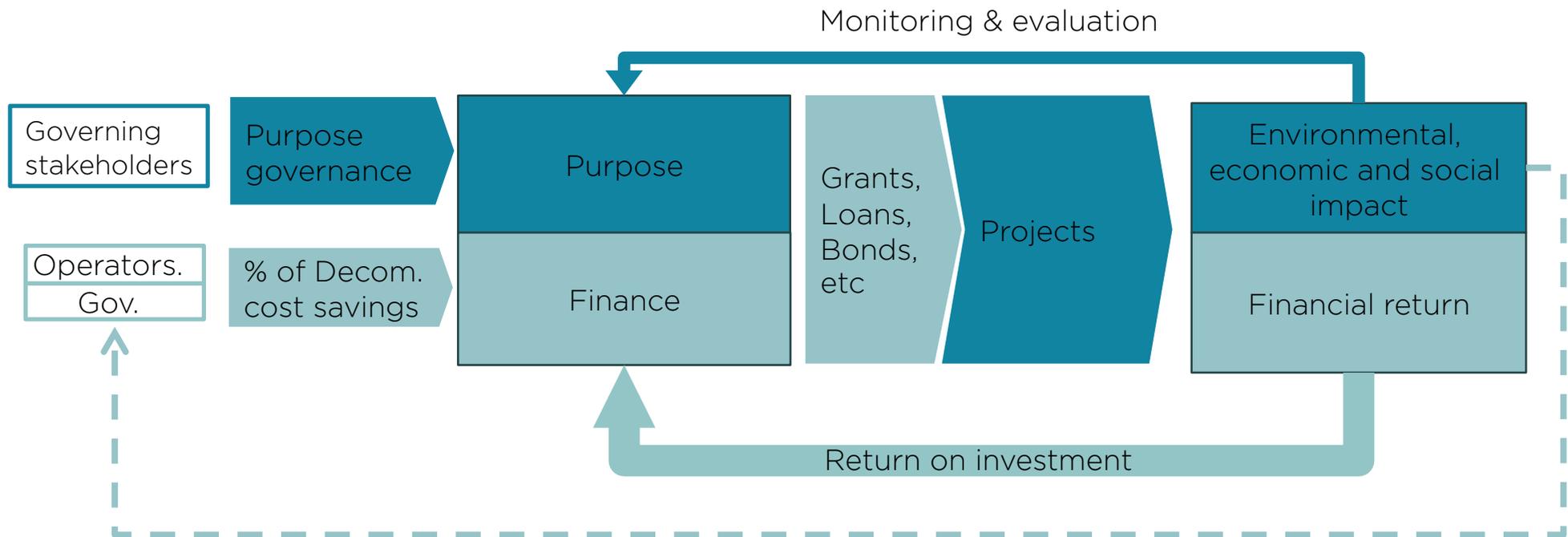


Scheme of a programmatic fund: Return seeking (1) - revolving

- Programme content**
- Cash flows**

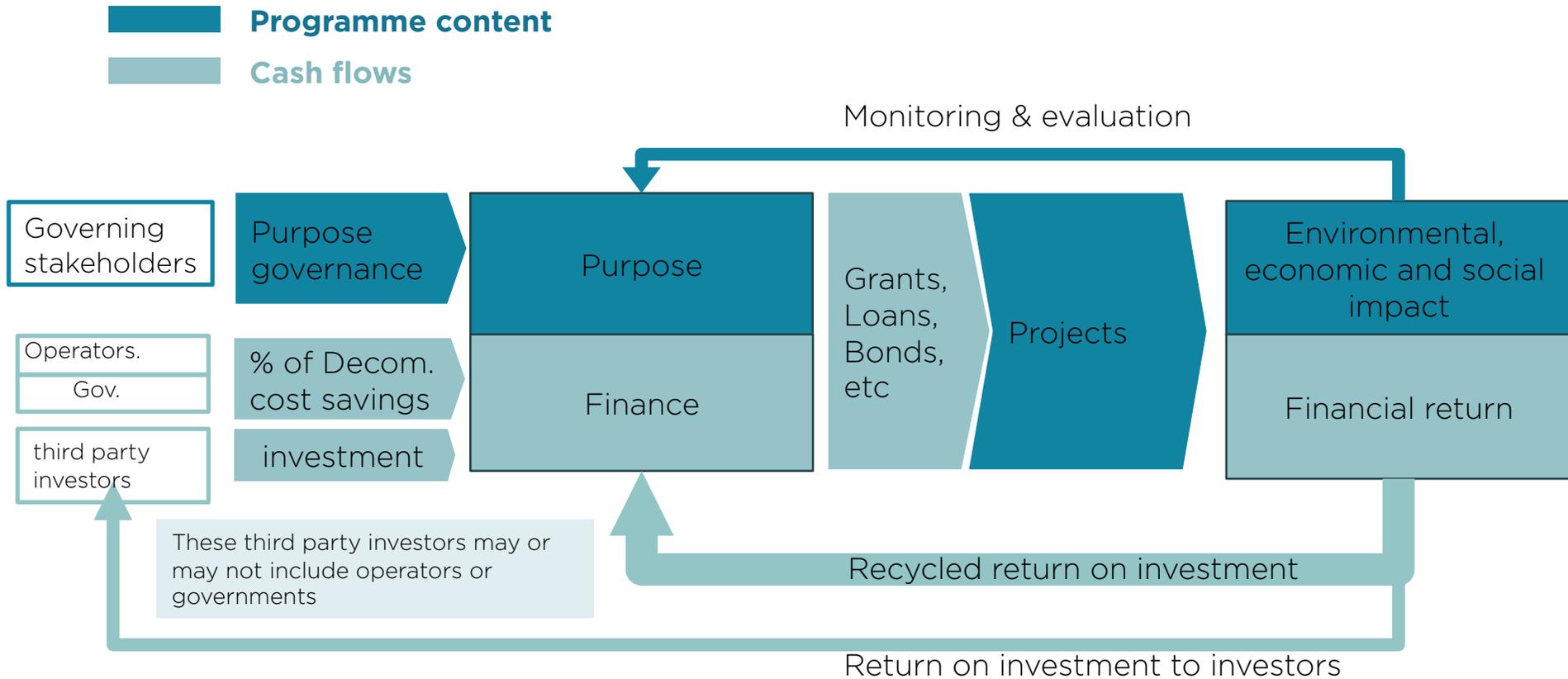
In a revolving fund, dividends feed back into the fund:

- Secures long-term financing
- Can smooth out variability of income from pay-as-you go decom cost savings



Potential increased tax receipts from economic activity and reduced welfare payments from increased employment

Scheme of a programmatic fund: Return seeking (2) – revolving including 3rd party investors (see next slide)



* A return seeking fund could attract third party investors. Different investors will require different types of impact and financial returns and risks to make investments. This is described in more detail in section 3.

* Increased tax returns from governments from increased economic activity is also relevant to this structure but are not shown

3. Understanding what the role of a North Sea Fund could be

- 3a. Setting the scope of the purpose and ways of operating for the fund
- 3b. Exploring the potential functions and sectors of the fund including the demand for capital
- 3c. Exploring the potential for impact investment



Section introduction: Understanding what the role of a North Sea Fund could be

- The demand for capital depends on the scope of the purpose of the fund.
- This section of the slide deck explores the factors and decision points that make up the scope of purpose
- This follows the following logical flow:
 1. **Scope of the purpose of the fund** (e.g. does it cover structure liabilities or do these lie with other parties)
 2. **Demand for capital (investment universe)** - What is the demand for capital within the north sea region for these activities?
 3. **Further considerations** - What other financial considerations should be taken into account when building the fund proposition?

Demand for capital: main categories

Related
to man-made
structures

Liability Coverage

Other unavoidable costs
related to reefing and
leaving in place (e.g.
administration, monitoring)

Artificial reef

Innovative ecological reuse
programme

Unrelated
to man-made structures

**Social and environmental
programme**

(Clean up polluted seabeds,
remove toxic dumps/wrecks,
coastal community projects,
oyster beds, etc)

Impact investments

A general programme to
promote sustainable use
in the North Sea region
(marine protein,
renewable energy, clean
shipping, etc)

Not-for-return

Return seeking

1. Liability (included here but not necessarily covered by the fund)

- Limited liability, e.g. coverage of risks to fishing vessels and equipment from snagging
- Above limited liability - high costs from escape of unknown contaminants

2. Unavoidable cost

Determines the minimum fund size

- Maintenance of left in place structures
- Monitoring
- Navigational aids
- Compensation for loss of fishing grounds (optional)

3. Artificial reef

An innovative ecological reuse programme linked to donated structures

a. Non-return seeking

- Research
- Education and awareness
- Enhancement/restoration of surrounding habitat
- Assigning and enforcing an exclusion zone around the structures
- Bird island

Related
to man-made
structures

Unrelated
to man-made
structures

1	2		
	3a	3b	

Not-for-
return

Return-
seeking

b. Return seeking:

Commercial re-use of structures

- mariculture
- energy-related
- Tourism (e.g. diving, sports fishery)

Demand for capital: artificial reef programme of arbitrary size

- This Investment universe is linked to the ecological reuse of structures that are donated to the programme
- Aim is to enhance the ecological value of platform structures
- In addition, the structures can serve as a nucleus for both nature conservation and commercial projects
- The demand of capital can be as large as stakeholders deem necessary or see fit
- Note that the option to designate MPAs around reefed structures is primarily a policy decision. Financial requirement to do this are expected to be relatively small.



Comparison with the Louisiana Artificial reef programme

- A total of \$41 million donated for 295 platform components (up to 2010)
- Established 65 offshore artificial reef sites
- Uses a base of \$25 million, adjusted annually by the consumer price index
- funds in excess of the anticipated operating expenditures are available for potential research and habitat projects. (\$3.9 million in 2011)
- Apart from research, the fund financed the creation of 30 inshore reefs.

4. Social and environmental programme

- Public awareness campaigns
- Clean up shipwrecks [F]
- Remove toxic dumps
- Clean up litter [F]
- Coastal community projects
- Oyster beds [F]
- Research
- Marine reserves [F]
- Introducing rays/sharks

Related
to man-made
structures

Unrelated
to man-made
structures

4	5

Not-for-
return

Return-
seeking

5. Impact investment programme

A general programme to promote sustainable use in the North Sea region

- Energy - renewable generation and network infrastructure
- Sustainable marine protein [F]
- Clean shipping
- Ports
- Recreation and tourism
- Multiple use in wind farms [F]
- Carbon capture & Storage

[F] indicates that a factsheet is available

Demand for capital: North Sea. Structural and Impact investment

Demand size and timing (upfront investments) differ considerably per type of measure/project

Structural investments

- Aim to protect North Sea species and protect/restore habitats
- Grant based
- More ambitious than current policies (MSFD)
- Priorities can be in line with Blue Vision, other visions and adapted over time through the governance process

Impact investment

- Aim to promote sustainable use with investments that the fund managers expect to generate financial returns on investment to the fund
- Investments in different sectors and projects and enterprises will have different risks, returns and scales. The fund manager in association with the governance stakeholders will set out investment policies that manage financial risks and returns from impact investments
- Possibility for a revolving fund to secure long term cash flow
- Option to attract 3rd-party investors

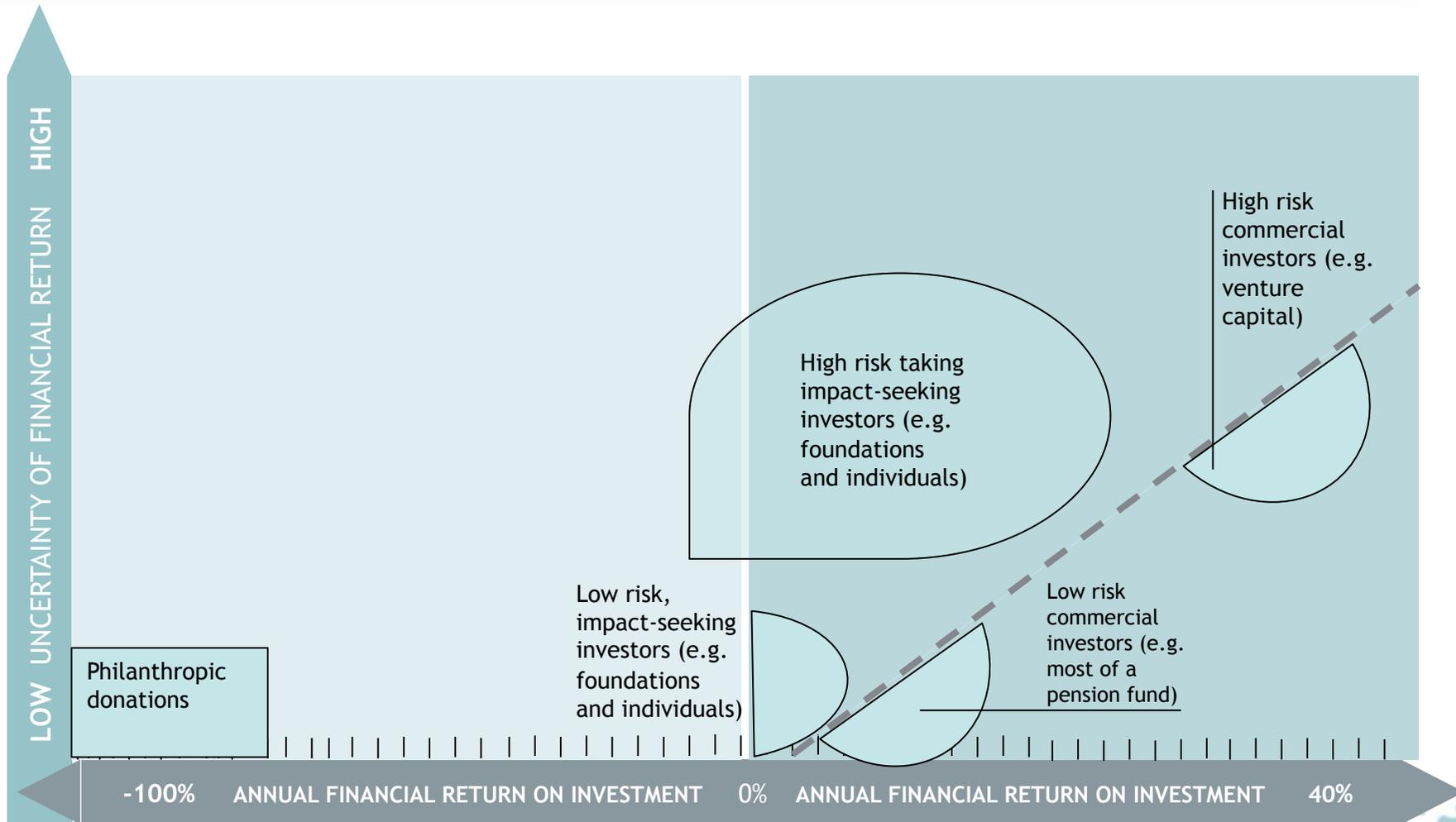
Mapping the risk and return of investors and impact investment opportunities in the North Sea region

- The following three slides map the types of investors in terms of their appetite for financial risk and acceptable expected financial returns on investments to take on these risks.
- Some investors will accept the risk that some of their investments will lose value in the expectation that on average these types of investment will generate higher returns. This is known as the 'risk premium'. Such investments include venture capital into high growth potential but high failure rate technology development companies.
- Most commercially invested capital is required to be in low risk assets so that it is highly certain to be available to withdraw when required. Such investments in assets like government bonds make up the majority of pension and insurance funds.
- New types of investors, called impact investors, are prepared to take on more risk for the same return (or less return for the same risk) as commercial investors because they expect these investments to create positive impacts socially, environmentally and/or economically
- The first slide maps commercial and impact investors. It also compares these on the same framework to philanthropists that donate money to projects and organisations that they believe will also create impact. The difference is that they know for certain that they will not have any financial return from that investment.
- The second slide shows where areas proposed as potential sectors to invest in with a North Sea Fund impact investment programme could lie in this framework. This is highly indicative and generalised. These sectors could have a broader range of placements than shown; they could be in the wrong part of the framework and the risk and return will depend on other factors such as the stage of a project invested in and the type of financial asset (e.g. debt or equity assets).
- In making investment decisions the fund would need to appraise each sector and each project and enterprise in detail
- **This should not be used for investment decision making and is not investment advice!**

Potential Third Party investors in a North Sea Fund and their current activities within impact investments

Investor	Level of involvement in impact investments	Examples of impact 'funds' that have these investors	Minimum investment amount
Governmental and multilateral finance institutions (MFIs) (e.g. World Bank)	High - they have pioneered sectors like microfinance.. Austerity could reduce available capital for long term impact investments from national governments, less so from MFIs	UN Green Climate Fund European Bank of Reconstruction and Development UK Green Investment Bank	£100k grants £1 million investment
Individual investors (crowd funding)	Medium - high interest but have been restrained by lack of awareness and regulation. This is changing and interest and activity is growing rapidly	Abundance Generation for renewable energy projects in the UK Triodos Renewables Crowd Cube projects	£5+
Trusts and foundation investors	High - some pioneering ones have played a similar and more flexible role to governments. But some are not ready to move from a grant-based impact model yet.	Esmee Fairburn Foundation in Community Generation Fund; Big Lottery Fund in Social Impact Bonds	£100k+
Private banks / family offices	High - high net worth individuals are driving change in private banks and family office wealth trusts to impact investment. They play a similar role to trusts and foundations.	Many impact investments including microfinance facilities, social housing projects	£50k
Commercial institutional	Medium - they have bought large issues of bonds that are backed by national governments or commercial banks and so meet their risk-return requirements. These are in reality not motivated by impact though. Little impact-driven investment though due to their fiduciary responsibility to maximise financial return and manage risk for clients	IFFim immunisation bonds; many Green Bonds by World Bank; APG investment in forestry protection	£2 million
Commercial public banks	Medium - several commercial banks have issued green and climate bonds (including many from Scandinavia). Little impact-driven investment though due to their fiduciary responsibility to maximise financial return and manage risk for clients	Goldman Sachs investment into New York social impact bonds	Depends on asset

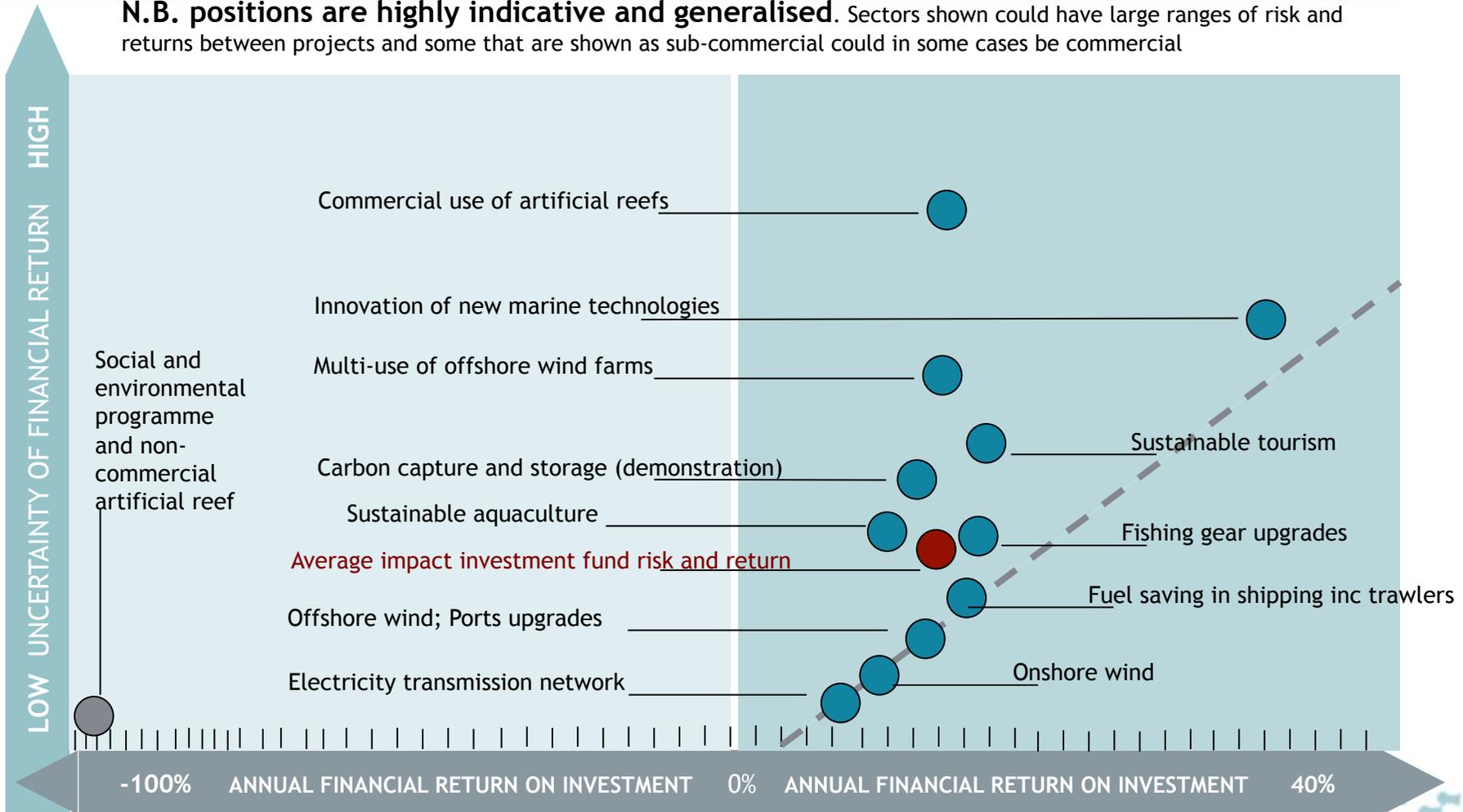
Risk and return profiling of impact-seeking and commercial investors' appetites for risk and return



--- Commercial investment market benchmark

Indicative risk and return performances of potential North Sea impact investment programme areas

N.B. positions are highly indicative and generalised. Sectors shown could have large ranges of risk and returns between projects and some that are shown as sub-commercial could in some cases be commercial

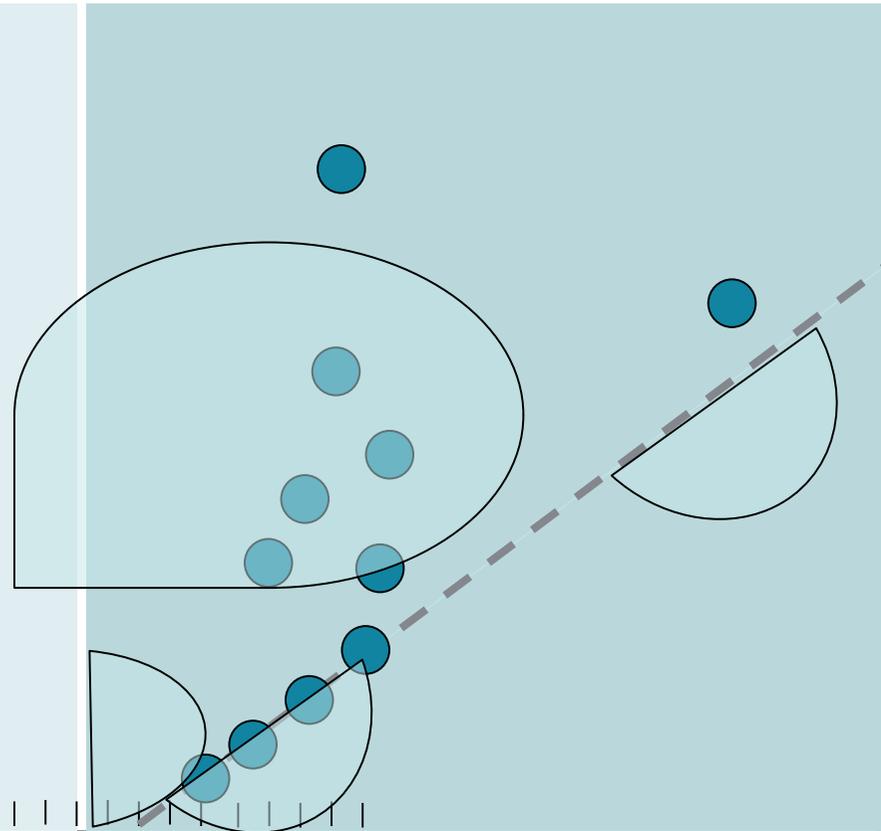
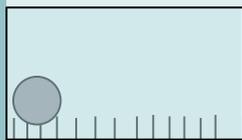


Indicative risk and return performances of potential North Sea impact investment programme areas

LOW UNCERTAINTY OF FINANCIAL RETURN HIGH

Usually, in creating an investment fund the investments need to be matched to the risk and return profiles of investors whether commercial, impact or both. However, if money is paid into the fund by platform owners the fund can manage this money for the purpose of impact rather than investors' financial demands.

This is not the case though if the fund, a sub-fund, was open for investment by 3rd party investors who are seeking a return on investment. In this case the fund would need to match the risk and return profile of these investors. This initial indicative assessment shows that there would be a good financial match between the investment sectors identified in the North Sea region and investor market segments.



-100%

ANNUAL FINANCIAL RETURN ON INVESTMENT

0%

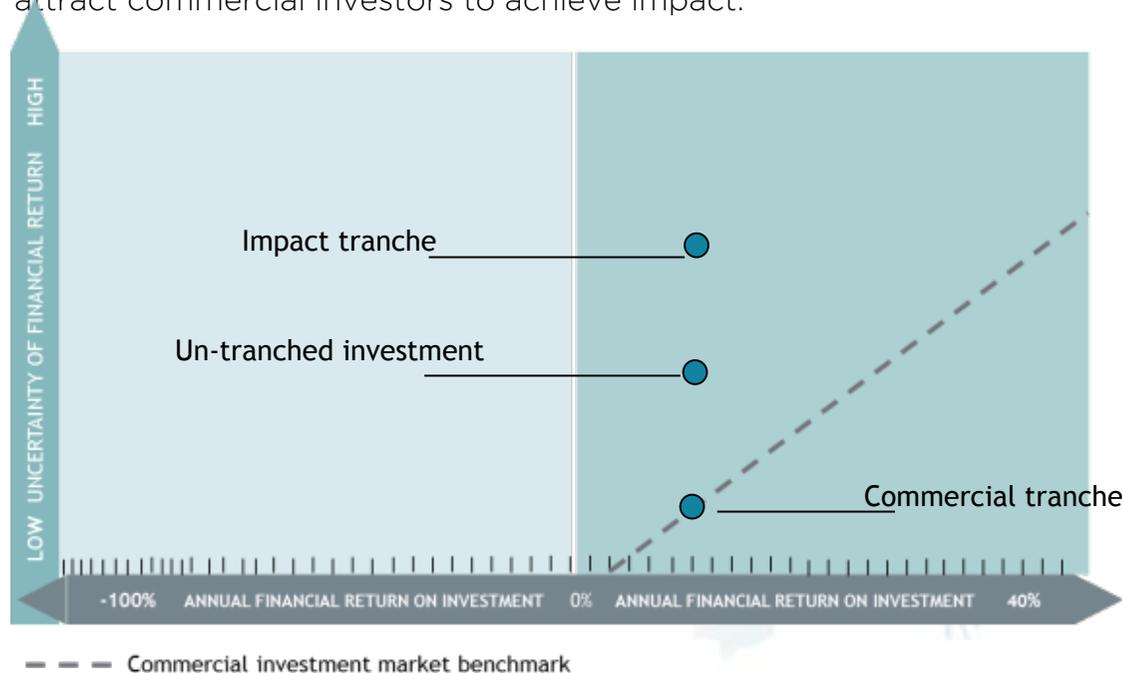
ANNUAL FINANCIAL RETURN ON INVESTMENT

40%

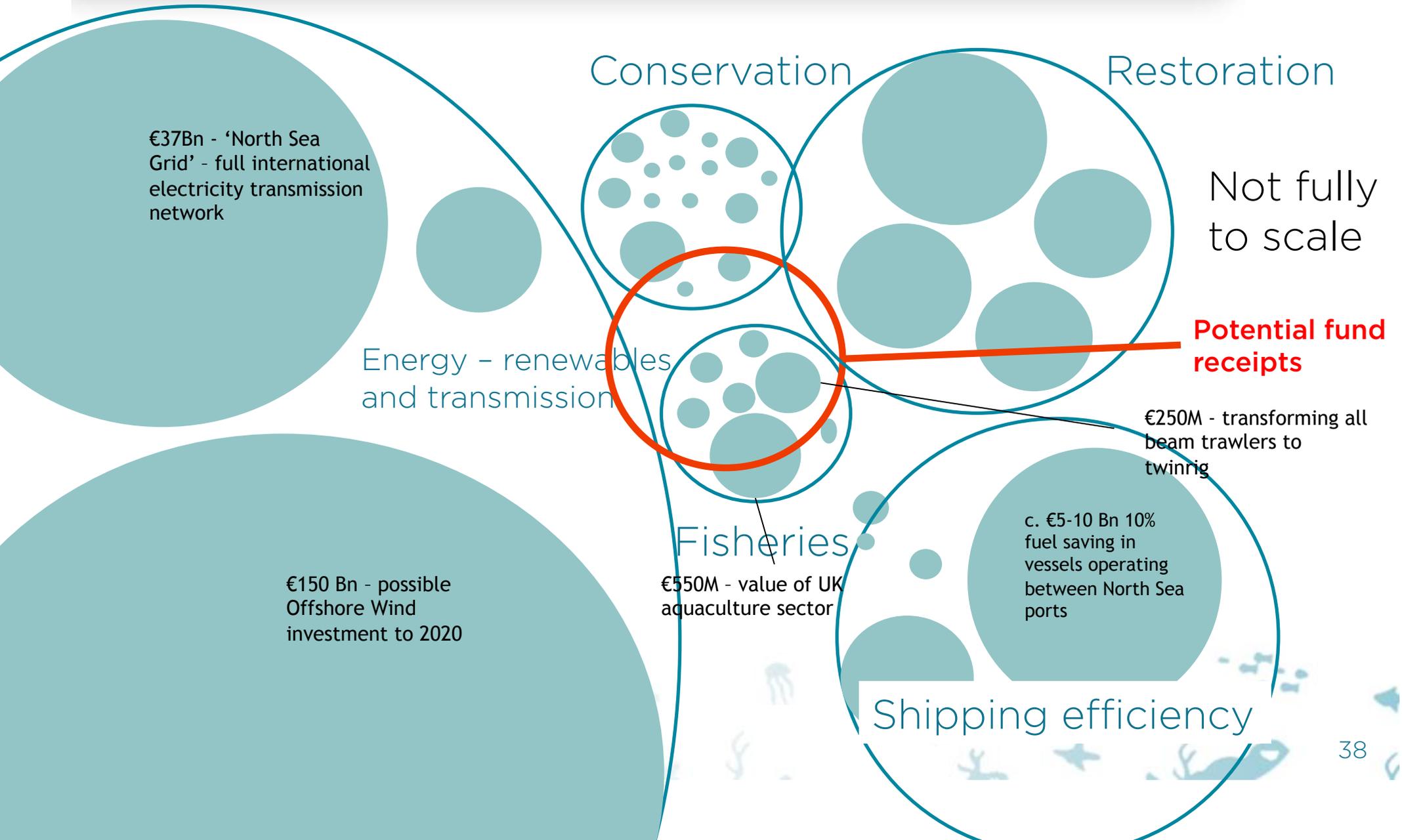
--- Commercial investment market benchmark

Structuring with 'tranching' to increase fund scale and impact

- Existing impact investment funds have used tranching of the fund to raise larger amounts of finance and achieve greater impact. This technique could be of use to the North Sea Fund to attract commercial investors to invest in projects that are not of themselves investable by commercial investors.
- Tranching involves taking one investment opportunity and using financial legal instruments to 'artificially' create two or more investment assets with different returns and risks, each of these is one 'tranche'. Tranching has been used in microfinance funds to make a fund attractive to commercial investors. This is done by impact investors taking on greater risk for the same return in one tranche, making the other tranche less risky for the same return. This can make a non-commercial investment opportunity available to commercial investors, increasing the amount of capital available. Depending on the size of a North Sea Fund, this approach may not be necessary, as it may not need to attract commercial investors to achieve impact.



Comparing the possible fund size to potential scales of demand for capital



Conclusions from investment universes

- Plenty of oppornities in identified sectors for a fund
- Order of magnitude differences between sectors
- Project sizes vary considerably in size, timing and impact
- More detailed analysis needed in phase 2B



4. Relating decommissioning to fund

- 4a. Decommissioning process and decision making
- 4b. Exploring conflicts between stakeholders
- 4c. Exploring financial engineering and regime options to maximise fund impact potential



- This section relates the physical processes that a platform would undergo during its lifetime including potential decommissioning routes and the fund.
- It describes the factors in the decision making process and ownership of the structure that create uncertainty for the fund managers in terms of amounts, timings and lead times on payments to the fund.
- It assesses these uncertainties and suggests ways to maximise the impact of the fund through changes to the interaction process between owners and the fund and financial engineering solutions that can change the nature of flows of monies to the fund.
- From section 2 we know that the nature of payments has two main criteria:
 1. How much for each structure?
 - Whether the jacket is left in place, reefed or taken to shore
 - What the resultant cost savings are, if any
 - The proportion of cost savings paid to the fund
 2. When the payment is made and how much notice the fund manager has before the payment is made. This is explored in more detail on the next slide.

Factors of fund inflow timing and notice of payment uncertainty

Factors related to the start and finish timing of the physical structure processes

A - operating phase length

B - decom start and finish timing



Platform life cycle

Operating

Decom

Donate and manage

Factors related to when decisions and payments are made

C - Decom start (and finish) time made known to the fund

D - pay in or not pay in decision made known to the fund

E - Timing of payment to the fund



Time after platform begin operating (years)

5

10

15

20

25

30

These factors create uncertainty for the fund about how much money the fund will receive, when it will receive it and how much notice of the payment it will have

Analysis of impact of payment to fund variables to fund performance

Factor	Best for fund	Best for platform owner	Assumptions
Time before decommissioning that decision to commence decommissioning is made known to the fund	Long	No relevance	
Time before decommissioning that decision to pay in is made	Long	Short	- That the amount paid is not time dependent, ie there is no 'discount' for early payment
Time between decision to pay to fund and payment	Short	Long	- That the amount paid is not time dependent, ie there is no 'discount' for early payment
Time before decommissioning that payment is made	Early	Pay as you go	- That the amount paid is not time dependent, ie there is no 'discount' for early payment

Funding models: analysis of conflicts and synergies between platform owners and fund stakeholders

- This shows that there is a conflict between owners and the fund stakeholders. The fund has greatest impact when it has:
 - As large sums as possible
 - Paid in as early as possible
 - With as long a notice period as possible
- We have presumed that the platform owners wants flexibility over the options for operating and decommissioning the fund including - redevelopment, timing of decommissioning and options. They also want to reduce the amount they pay into the fund.
- If this is true, there are conflicts in the funding model except both parties will want to have high cost savings.
- The next slides propose the pay as you go regime and a pay early regime in terms an individual structure. Not included in this analysis that could be considered in 2B is how collections of platforms by region or operator, or the whole of the North Sea could be negotiated in rounds with the fund to give the highest level of certainty to the fund and owners.

The following slides give potential funding models that respond to these conflicts

Pay as you go scenario for a single structure

Factors related to the start and finish timing of the physical structure processes

A - operating phase length

B - decom start and finish timing



Platform life cycle

Operating

Decom

Donate and manage

Factors related to when decisions and payments are made



Time after platform begin operating (years)

5

10

15

20

25

30

In this scenario, the decision to decommission, the decision to pay in or not and the payment to the fund are made sequentially. This minimises the notice that the fund has of payment and delays payment until after decommissioning is complete.

Decide and pay early scenario for a single structure

Factors related to the start and finish timing of the physical structure processes

A - operating phase length

B - decom start and finish timing



Platform life cycle

Operating

Decom

Donate and manage

Factors related to when decisions and payments are made

C - Decom start (and finish) time made known to the fund

D - pay in or not pay in decision made known to the fund

E - Timing of (discounted) payment to the fund



Time after platform begin operating (years)

5

10

15

20

25

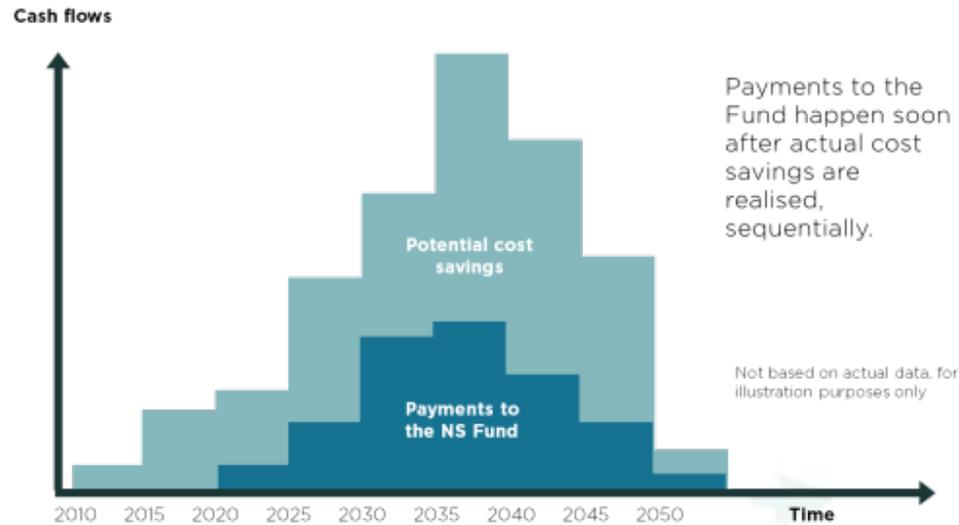
30

In this scenario, the decision to pay in to the fund and the payment to the fund are made early. This maximises the notice that the fund has of payment and means that the fund is paid earlier and so available to deploy. However, to decide and pay early we expect that the operators will have a discount on the expected cost savings so the amount will be lower than in the pay as you go scenario.

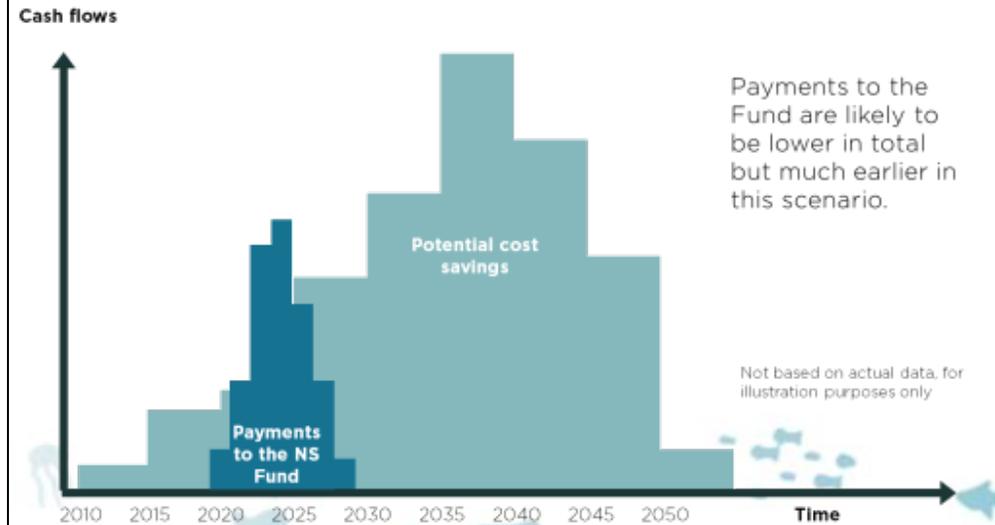
Variation: Decide early but pay as you go - A variation of this could be that the decision to pay in is made early but the payment is made at the time of decommissioning. This would give the fund certainty that the platform would result in a payment but a delay and uncertainty on the amount and timing of the payment into the fund. This is similar to the system used in California. Here, Operators that commit themselves to the artificial reef programme at an early stage, contribute about 60% of the estimated cost savings to reef fund. If they make the decision and donate at the moment of decommissioning, then they contribute about 80% of the estimated cost savings.

Effect of decision and payment regimes on the fund from all structures

Pay as you go – the amount of money paid to the fund is maximised but the timing is less certain and the payments are more spread in time and later



Decide early, pay early – the amount of money paid to the fund is lower as the ‘operator fee’ is discounted, but the timing is more certain, the fund is filled many years earlier and more rapidly.



Financial engineering: Variations to the models

Variations with the owners

- **Contingent loans-to-fees** The early payment could be in the form of a loan rather than a fee. This loan would turn into a fee if leave in place /reefing decommissioning occurs later. This would make the funds available to impact invest early. However they could only be in low risk investments that could be divested in order to pay back if required. This flexibility may provide the incentive for increased early payments with a lower discount rate needed, increasing the total amount in the fund.
- **'Option fees'** there are various ways that structure owners and the fund could have greater certainty on cash flow if pay in is the chosen route through the sale of options to structure owners. These would fix or give the price of paying in a 'cap and floor' in exchange for an upfront fee that is non-returnable.

Varying the negotiation regime

- Collections of platforms by region or operator, or the whole of the North Sea could be negotiated in rounds with the fund to give the highest level of certainty to the fund and owners.
- This could be auction-based to ascertain the true market price

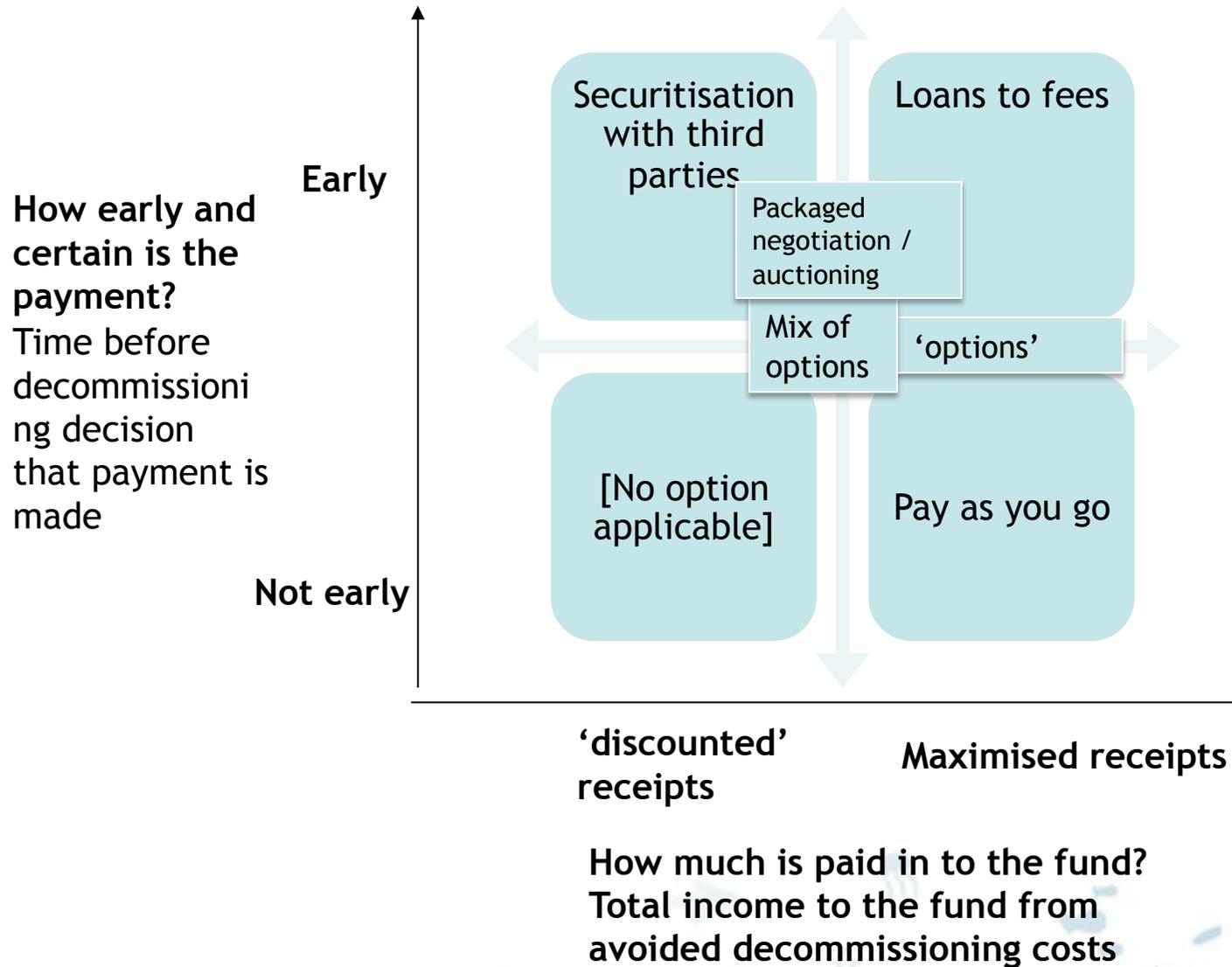
Involving third party investors

- **Platform by platform securities** - Third party investors could buy the rights to any future payments from each structure at any time before the decommissioning decision through negotiation with the fund manager. The financier would take on the risk that the owner decides not to pay into the fund. This risk, together with other risks and the time until payment, would mean that the income from the rights sale would be at a significant discount to actual the pay in cost.
- **packaged securities** - financiers buy the rights to potential income from all or packages of platforms in one contract with the fund. This is similar to the model used by the UN Immunisation programme which issued bonds to investors to gather upfront cash in exchange for future government aid payments to it. The difference in this model is that pay in fees are uncertain in amount and timing whereas aid pledges were known in amount and timing so this is higher risk and may not appeal to the same institutional investors.

Mixed to add flexibility

it is possible to put together a regime with one or more of these options or others that could allow for further flexibility of certainty and cash flow. E.g. a proportion of platform rights could be securitised, whilst others work on a pay as you go basis.

Mapping where these models sit on a timing and amount



Summary
there are several financial instruments that could be used to shift payments earlier and give platform owners. A downside to adding complexities such as options and securitisation is the professional and banking costs. We recommend that further investigation and appraisal is made of options especially the discount rate that would be required for owners to decide and/or pay early. .

Areas for further investigation

1. Ways to independently forecast the costs of decommissioning in advance to aid negotiations
2. Required discount rates for early decisions and early payments. This could involve engagement with stakeholders in the Californian regime
3. More detailed assessment of the uncertainty in structure lifecycles and decision making
4. The pros and cons of different financial engineering and decision making regimes
5. More detailed consideration of interactions with governance considerations
6. Case studies from parallel industries or other oil and gas activities

5. Governance

- 5a. Proposed fund structure
- 5b. General governance considerations for LiNSI
- 5c. Mapping relevant case studies
- 5d. Areas for further investigation



Intro: Main dependencies in setting up a governance structure

Legend

- Under stakeholder influence through negotiation
- Not or partly under stakeholder influence

Potential cost savings

Decom timing

Fund contributions

Participating structures

Financial engineering



Available capital
at any given time



Investment programme



Governance of the fund

The programme

- Could involve national or international projects
- Could be return-seeking, non-return seeking or a combination
- Fund large or small projects or a combination

The governance structure

- Should respect stakeholder interests in representation
- Must be suitable to the programme's scope
- Needs to be effective in achieving the programme's objectives

Note that ownership and control of the fund is partly negotiated and partly dependent on investment scope & programme purpose

Fund structure: single fund vs. group fund

- For a fund with a limited programmatic scope, such as the R2R programmes in the US, a single fund would be appropriate
- For a fund with a more broad range of objectives, a group fund is suggested from which several “special purpose funds” could be initiated for various purposes (habitat restoration, impact investment in marine protein, etc.)

Living North Sea Fund

*Special
purpose
fund*

*special
purpose
fund*

*special
purpose
fund*

*special
purpose
fund*

Considerations for LiNS: single territory versus multi-national

- Given the involvement of all North Sea countries in decommissioning, the fund will always need an international body
- The type of involvement from the international body depends on the programme:
 - For a programme that relates mostly to investments in individual territories, a shallow international involvement – i.e. advisory role – appears more suited. E.g. to explore opportunities for international investments.
 - For a clear transboundary programme a deeper involvement – i.e. controlling role – is more suitable
- Examples of typical single territory projects: artificial reefs, wind farms, aquaculture, pilot projects, (local) research, most conservation projects, coastal community projects
- Examples of typical multi-national projects: infrastructural, fisheries, shipping, North Sea-wide ecosystem management

Considerations for LiNSI: ownership and control

- We discern two main categories of funds: government-controlled and stakeholder controlled.
- In the latter case it could be either under the control of companies, NGOs or a combination
- Government controlled: for an effective fund, the control over the fund needs to be at arms length of political control in order to avoid the spending of funds for other than the intended use.
- For an effective non-government controlled fund, conflicts of interest between stakeholders must be avoided.
- Another viable option would be a governance structure that is part government and part stakeholder controlled.

Fund examples in the main categories

Non-Government control

e.g. Company control or NGO control

<p>California Morro Bay buy-out of fisheries by NGO</p> <p>U.K. Fisheries OFFSHORE OIL and GAS Legacy Trust Fund Ltd</p>	<p>Shell Foundation [F]</p> <p>Albert Heijn Foundation</p> <p><i>A fact sheet is available for examples with [F]</i></p>
<p>Dutch Wadden Fund [F]</p> <p>USA GOM R2R [F]</p> <p>UK Green Investment bank</p> <p>USA California R2R [F]</p>	<p>Green Climate Foundation [F]</p> <p>UN Common fund for commodities</p> <p>International Oil Pollution Compensation Funds</p>

Single territory investments

Multi-National investments

Areas for further investigation: can we optimise the conditions for a design process?

- How much certainty over cost savings is needed?
 - What is the minimum size for a meaningful proposition
- What is the design starting point?
 - A programme (based on key features)
 - Or: representation in controlling and advisory bodies
- Who takes the lead in designing a proposition:
 - NGO lead or operator lead
 - Independent Committee
 - Other?
- Who decides in the end on the proposition
 - bottom line: host governments
 - Represented in OSPAR