Unlocking Climate Capital: A Business Case Framework for Local Authority Net Zero Projects

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Introduction to the insight

Climate change is a global priority, and there is broad agreement on the need to reduce carbon emissions. The UK government is legally committed to reaching Net Zero by 2050[1].

To achieve this goal, capital-intensive initiatives must be financed. The funding gap to reach this Net Zero target is estimated to be £1 trillion[2]. Local authorities, which spent £113.5 billion in 2022/23, cannot shoulder this financial burden alone. Thus, local authorities tasked with managing limited resources to achieve their region's sustainability objectives need mechanisms to enable greater action.

Transactions with the private sector are an essential route to enabling delivery. Identifying realistic and possible options for "Whole System financing" and appraising them are critical in this context. However, there is currently no standardised approach to support an effective preparation for the Green Book option process which results in slightly different approaches for each local authority.

This creates inefficiency and duplicated efforts as each authority needs to spend time and resources on developing their own approach as well as refining and advancing the approach in use. The lack of a standardised approach can also lead to scalability challenges, knowledge silos, inconsistent quality of preparation and resource misallocation.

The goal of this insight is to provide a standardised approach and related tools to help local authorities prepare for the Green Book option process.
The insight aims to provide a detailed exploration of the necessary preparation processes, offering practical guidance as well as tools to support local authorities to engage internally and ensure that local authorities have the requisite information to undertake options appraisal.

Key facts: Why Net Zero Finance is necessary

2050

The UK governments have a legally-binding target to reach Net Zero by 2050. Net Zero targets include:

↓

Fully decarbonise the UK's power system by 2035[1]

Fully decarbonise the UK's power system by 2035[1]

75% reduction of emissions from public sector buildings by 2037[1]

$3.5 t

The cumulative global spending to reach Net Zero is estimated to be $275 trillion across 2021-2050, equivalent to a spending increase of $3.5 trillion per year[3]

£1 t

To meet its Net Zero targets by 2050, it is estimated that the UK needs more than £1 trillion additional investment[2]

As this investment gap is beyond the limits of public funding, it is crucial for local authorities to mobilise private investments and maximise impact with limited resources by appraising its option.

How to use this insight

This insight is structured in parts as shown on the graphic on the right-hand side. Following a "In Brief" chapter, which summarises the key takeaways, the remaining sections are as follows:

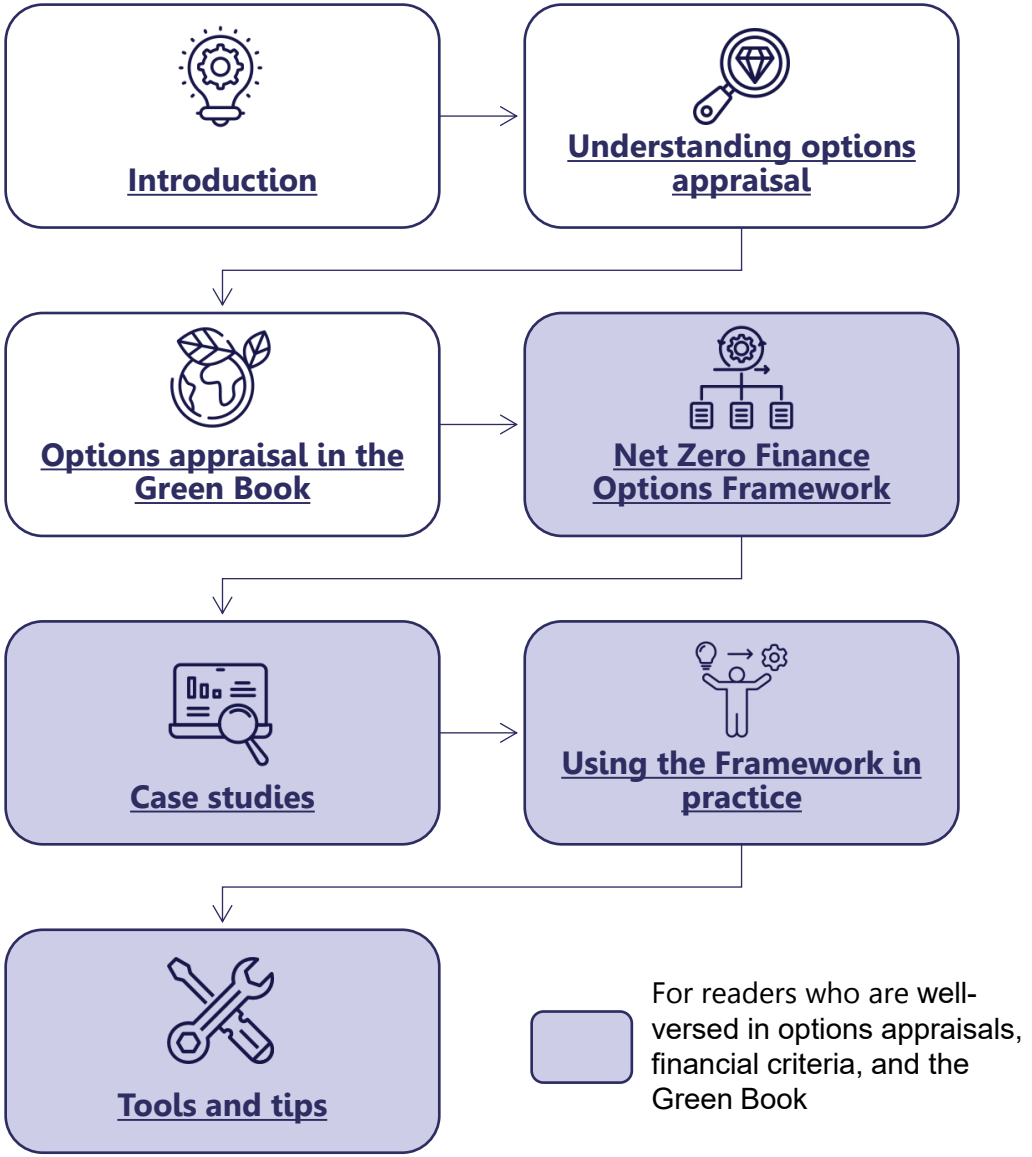
- Introduction
- Understanding options appraisal
- Options appraisal in the Green Book
- Net Zero Finance Options Framework
- Case studies
- Using the Framework in practice
- Tools and tips

To accommodate readers with varying levels of familiarity, we have included the first three chapters, which provide an introduction to options appraisals, financial criteria, and the Green Book.

For readers already well-versed in these topics, we recommend skipping directly to Chapter 5, which focuses on the Net Zero Finance Options Framework. This is also highlighted on the right graphic which outlines the structure of this insight.

We have aimed to make this report accessible to diverse range of readers, ensuring it does not rely on prior knowledge, and designed it as a document you can refer back to whenever needed.

Additionally, we have included practical tools and tips, such as workshop plans, to assist you in facilitating options appraisal and maximising their benefits.



Contents & Glossary

Acronym	Definition
APR	Annual Percentage Rate
BAU	Business as Usual
BCC	Bristol City Council
BCR	Benefit-Cost Ratio
CCC	Coventry City Council
CM	Commercial Model
CSF	Critical Success Factors
GMCA	Greater Manchester Combined Authority
HCC	Hampshire County Council
IRR	Internal Rate of Return
JV	Joint Venture
LA	Local Authority
LAEP	Local Area Energy Plan
MCDA	Multi-Criteria Decision Analysis
NPV	Net Present Value
NWF	National Wealth Fund
PI	Profitability Index
PV	Present Value
PWLB	Public Works Loan Board
ROI	Return on Investment
SPV	Special Purpose Vehicle
VfM	Value for Money

1. In brief

Chapter at a Glance:

This chapter summarises the key findings of this insight.

In brief (1/2)

Whole System Finance brings together different forms of capital to optimise financing costs or benefits across different organisational or inter-organisational silos to enable projects that might not go ahead if only considered in isolation.

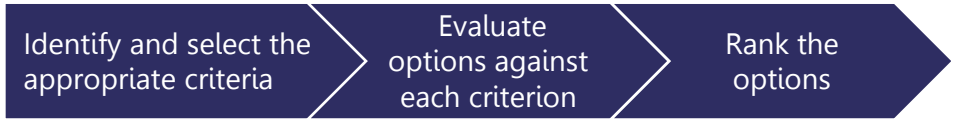
This is especially essential for capital-intensive programmes necessary for reaching Net Zero.

Examples of Whole System Net Zero Finance concepts

- Bundling
- Blended finance
- Revenue stacking

To unlock the potential of financing approaches available to them, local authorities need to understand their options and appraise them.

One common method utilised in options appraisal is the so-called Multi-Criteria Decision Analysis (MCDA). The simplified steps of MCDA are illustrated in the graphic below:



There are several financial metrics that are often used in MCDA to evaluate different alternatives:

Break-even point: The point at which total cost and total revenue are equal, meaning the point at which the investment is recovered.

Payback period: The amount of time an investment needs to reach the break-even point.

Present value (PV): The current value of a future sum of money or the investment amount needed today to earn a specific amount in the future.

Net present value (NPV): The PV of cash inflows, less the PV of cash outflows.

Return on investment (ROI): A measure of the amount of return on an investment, relative to the investment's cost. A positive ROI is better than a negative one.

Internal rate of return (IRR): The discount rate that makes the NPV of all cash flows equal to zero.

Benefit-cost ratio (BCR): An indicator showing the relationship between the relative costs and benefits of a proposed option, expressed in monetary or qualitative terms.

Another reason for local authorities to incorporate options appraisals is because they need to demonstrate compliance with the HM Treasury Green Book. This is a comprehensive guidance document issued by HM Treasury on how to appraise policies, programmes and projects. It introduces a structure to business case development, also known as the Five Case Model.

Key advantages of the Five Case Model:

- **Accountability:** Requires evidence and justification for every case
- **Clarity:** Simplifies complex projects for technical and non-technical audiences
- **Comparability:** Enhances comparability by ensuring the same structure
- **Adaptability:** Allows application across the board

In brief (2/2)

To prepare the business case according to the Green Book, HM Treasury's Guide to Developing the Programme Business Case recommends to apply the so-called "Options Framework" to help with generating and evaluating the alternatives on the long-list.

This insight introduces the Net Zero Finance Options Framework, which helps to translate the preparation for the Options Framework into a structured approach that is targeted towards Net Zero programmes.

The Net Zero Finance Options Framework aims to:

- Help local authorities gain clarity within an area where there is currently limited definition or guidance and be as prepared as possible to conduct an effective options appraisal
- Support the understanding of how limited local authority resources should be prioritised
- Help understand the complexity of the decision-making processes

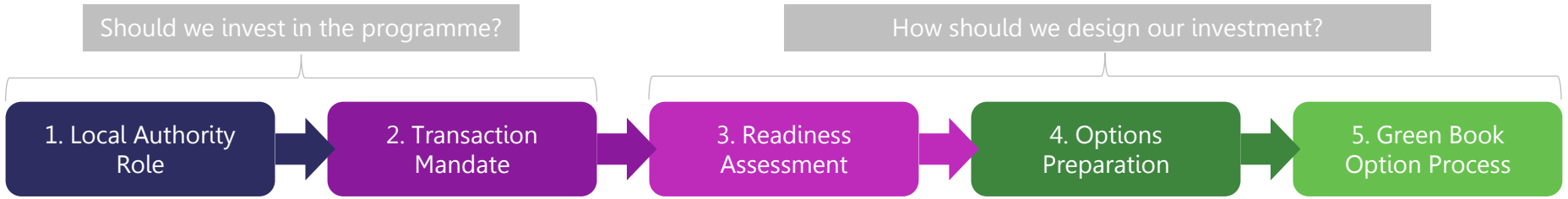
The Net Zero Finance Options Framework comprises five steps which are intended to guide a local authority through two key questions regarding their Net Zero programme: 1) Should we invest in the programme? And 2) if yes, how should we design the investment?

Adapting the Net Zero Finance Options Framework can lead to various benefits, including:

- **Value maximisation:** Ensures cost efficiency
- **Enhanced decision-making:** Improves understanding
- **Improved resilience:** Reduces funding risks
- **Stakeholder confidence promotion:** Builds trust

More potential benefits can be found in chapter 5 of the insight.

The graphic below shows the steps of the Net Zero Finance Options Framework. Each of the steps is explained and detailed in chapter 5. Moreover, this insight provides recommendations on how to use the Net Zero Finance Options Framework in practice and gives tools and tips for its application, such as suggested workshop structures.



2. Introduction

Chapter at a Glance:

This chapter explains the concept of Whole System Net Zero Finance and its importance in meeting Net Zero. It also gives examples to further embed its understanding.

What is Whole System Net Zero Finance?

Definition: Whole System

Whole System is an approach to management and analysis that considers the entire ecosystem rather than focusing on isolated elements such as individual transactions or segments.

A Whole System approach seeks to optimise the outcomes for the entire system which makes this perspective especially valuable in areas like public policy and sustainability. Applying a Whole System approach to Net Zero means adopting a holistic perspective by considering all interconnected systems that can contribute to greenhouse gas emissions, both directly and indirectly. Examples of such Whole System Net Zero approaches are Local Area Energy Plans (LAEP) as well as integrated urban planning that combines circular economy, renewable energy, and electric transportation to reduce carbon emissions[1].

In the case of Net Zero financing, a Whole System approach is a method of bringing together public and private organisations to provide efficient and effective financial solutions to the capital-intensive programmes which are necessary to combat climate change[2]. Whole System Finance also includes bringing together different forms of capital to optimise financing costs or bringing together benefits and costs across different organisational or inter-organisational silos to enable projects that might not go ahead if only considered in isolation.

Forms of Whole System Net Zero Finance

Uniting private and public sector funds

Combining different capital forms

Integrating benefits and cost across silos

Local authorities who have developed Whole System decarbonisation strategies, such as LAEPs, are often faced with the challenge presented by the transition cost estimates, which usually vastly exceed their access to capital.

Example: The table below demonstrates that the investment requirement of a LAEP is often highly capital-intensive. Given that the council cannot reallocate resources from statutory priorities, the entire annual transition cost is likely to represent a funding shortfall:

Local Authority (LA):	Greater Manchester Combined Authority	Peterborough City Council
Total transition cost identified within their LAEP	£64.4 bn[3]	£8.8 bn[4]
Net Zero target year*	2038[3]	2040[4]
Implied annual transition cost (investment gap)	£4 bn	£0.5 bn

Whole System Net Zero Finance plays a crucial role for local authorities to overcome this gap. Frameworks to develop Whole System Net Zero Finance options and evaluate them in an efficient manner are an important part of a local authority's journey to Net Zero, as whole System Finance can help local authorities maximise the capital available and, as a result, the scale of projects they can mobilise.

On the following page, the insight will introduce three examples of Whole System Net Zero Finance.

* Assumption: Begin of transition in 2022 (date of endorsement meeting[3,4])

Examples of Whole System Net Zero Finance concepts

Bundling

Bundling is the idea that different projects can be "bundled together" in such a way that returns from higher yielding projects can be captured and recycled to support investment in lower yielding projects. The Whole System idea here is that by bringing together higher yielding and lower yielding projects into a single investment opportunity the local authority can deliver across a greater number of projects, including those opportunities that might not be viable on a standalone basis.

Project 1 (P1)	
Revenue	£50 k
Cost	£10 k
Profit	£40 k

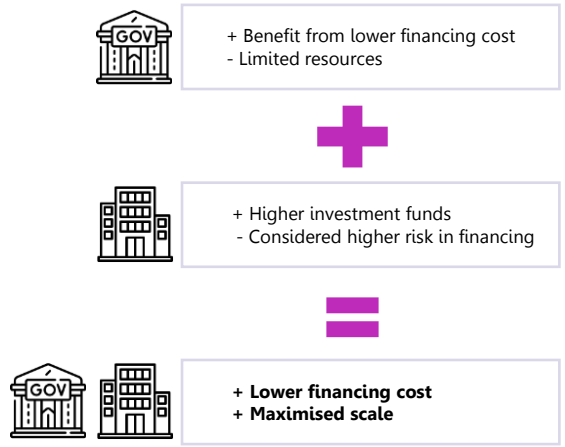
Project 2 (P2)	
Revenue	£30 k
Cost	£60 k
Profit	- £30 k

	Bundling		
Projects	P1	P2	Total
Revenue	£50 k	£30 k	**£80 k**
Cost	£10 k	£60 k	**£70 k**
Profit	£40 k	- £30 k	**£10 k**

Blended finance

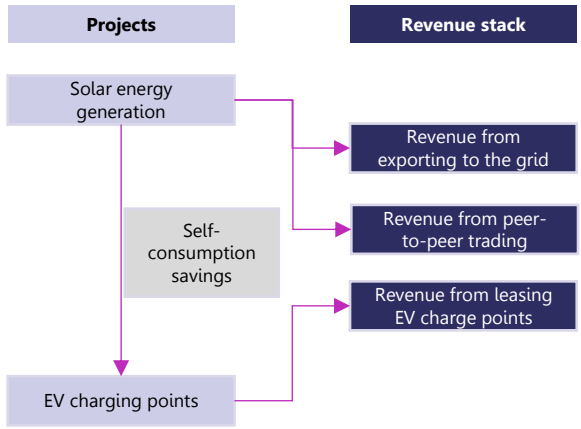
Because the public sector is often seen as having "sovereign-level" risk – a risk of default in line with that of the national government[5] – the sector benefits from the ability to secure finance at a lower cost than the private sector.

In the context of Net Zero, blended finance refers to the idea that public and private financing can be brought together to achieve an optimum balance where financing costs are minimised while scale is maximised, again enabling more projects to be delivered.



Revenue stacking

In the context of Net Zero finance, revenue stacking often refers to the concept that project outcomes can be enhanced by monetising benefits provided to different parts of the system. For example, returns on a retrofit project could be enhanced through the sale of offsets associated with the avoided emissions. Similarly, there is much optimism that other types of project benefits (e.g. health) could be monetised through greater integration between different parts of the system[6].



Key benefits of Whole System Net Zero Finance

As shown on the previous pages, Whole System Finance is a crucial concept to local authorities aiming to reach their Net Zero commitment. The graphic below summarises the key benefits of adopting a Whole System Finance approach in Net Zero:

Optimised resource allocation: Allocating resources across interconnected systems avoids silos and redundancies.

Cost efficiency and value maximisation: As seen in the "blended finance" example, Whole System Finance can reduce financing costs and increase scale.

Improved resilience: Considering different forms of capital and benefits and implications of public-private partnerships, can reduce risks.

Enhanced decision-making: Understanding the Whole System Finance options available enables local authorities to make better-informed decisions.

Improved stakeholder collaboration: This approach encourages collaboration among stakeholders by fostering partnerships and joint accountability.

To unlock the potential of financing approaches available to them, local authorities need to understand their options and appraise them. This is where options appraisals come into play.

Definition: Options appraisal

An **options appraisal** is a technique for reviewing options and analysing the costs, benefits and risks of each one[7].

In chapter 3, this insight will give a detailed introduction into options appraisal and set out why it is important that local authorities undertake it in the development of their Net Zero plans. Moreover, chapter 4 will also provide an overview of the options appraisal frameworks within the Five Case Model of the HM Treasury Green Book and Guide to Developing the Programme Business Case.

Because many local authorities are undertaking Local Area Energy Planning (LAEP) as the first step in progressing Whole System Net Zero plans, the following provides a brief definition and background information to LAEPs.

Definition: LAEP

Sets out the changes required to transition an area's energy system to Net Zero carbon emissions, over a specified timeframe.

This is achieved by exploring a range of technologies and scenarios through whole energy system modelling and analysis. By identifying the most cost-effective preferred pathway to Net Zero, additional benefits for the local area can be realised[8,9].

3. Understanding options appraisal

Chapter at a Glance:

This chapter introduces options appraisal and its importance as a financial technique. Moreover, it introduces one of the most commonly-used appraisal methods and financial metrics regularly applied within it.

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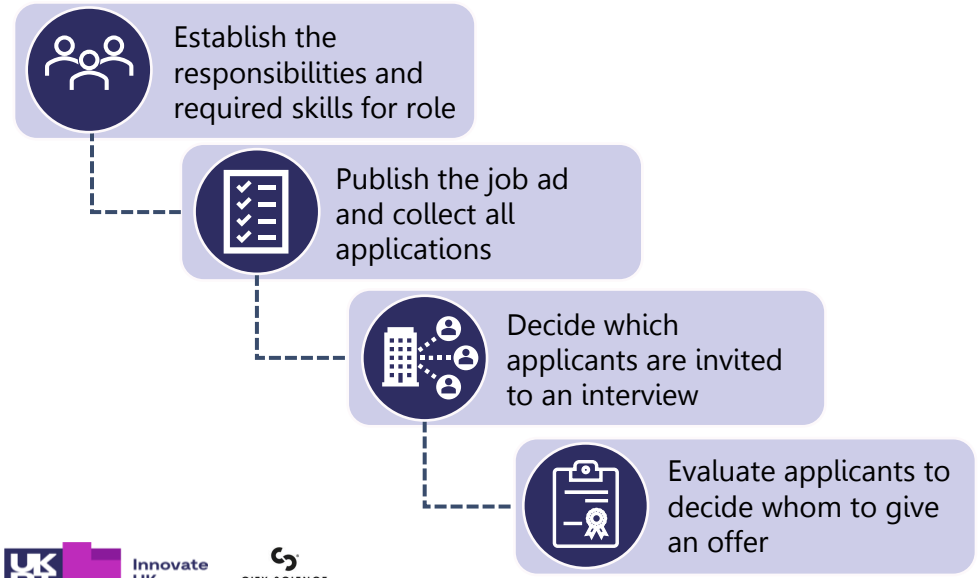
What is options appraisal and why is it essential?

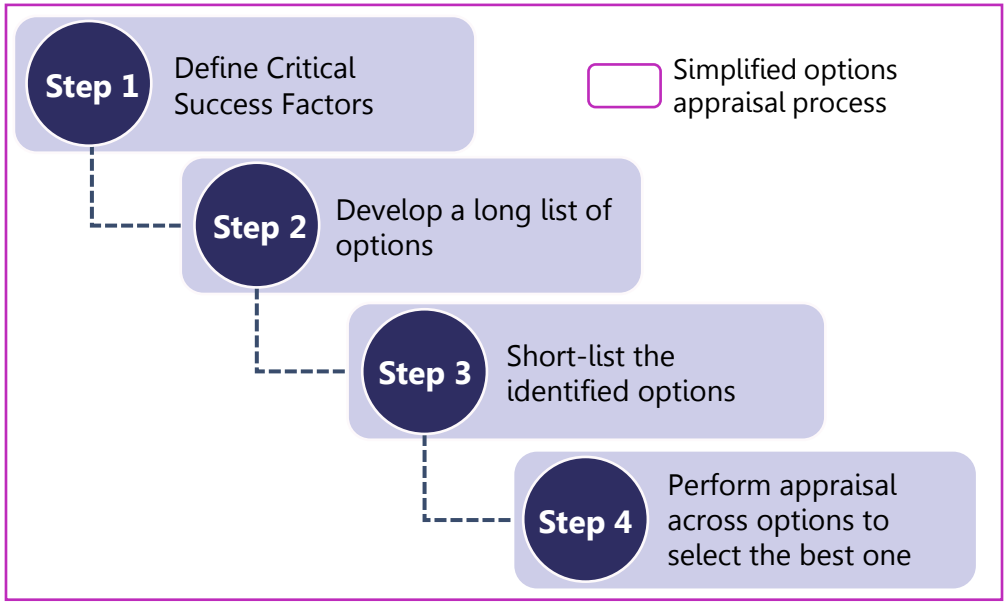
Options represent the different courses of action which a local government can consider in order to achieve its Net Zero objectives through capital investment. Each option refers to a different potential solution or approach – each with different costs, benefits and risks.

As introduced in the last chapter, options appraisal is a technique for reviewing options and analysing the costs, benefits and risks of each one, making it an essential financial technique. In generic financial training, students may be taught about investment appraisal generally or the "build or buy" decision as introductions to options appraisal. In practice, options appraisal is frequently and routinely used throughout decision-making. This is true both in the public and private sectors - in the public sector, the use of options appraisals is further cemented by the Green Book guidance. We will discuss options appraisal in the context of the Green Book in chapter 4.

First, let's understand how options appraisals are used in decision-making. Let's consider the example of filling a job role. Below we set out the steps you might follow to arrive at the best candidate:



Translating the process of deciding which candidate should receive the offer into a generic process, we arrive at the following:



In financial decision-making, options appraisal is a crucial technique as it helps to compare alternatives before committing resources. Utilising it capitalises on the following opportunities:

Key Benefits of options appraisal in financial decision-making:

Comprehensive view: Options appraisal encourages thorough research and analysis, addresses any existing data or knowledge gaps and helps the user arrive at more rational and objective choices.

Resource allocation optimisation: By evaluating trade-offs and comparing options, the appraisal process identifies the most efficient and value-generative alternative, thus allocating limited financial resources to where they can generate the maximum impact.

The importance of options appraisal and MCDA

Key Benefits of options appraisal in financial decision-making:

Objectivity: The options appraisal process standardises evaluation criteria and applies systematic assessment methods, helping the user to reduce the impact of personal biases and present a clear audit trail.

Stakeholder confidence promotion: The decision-maker can demonstrate that they systematically examined multiple alternatives, identifying potential pitfalls and challenges before committing resources, thus increasing confidence among wider stakeholders.

In summary, options appraisal enables informed and rational choices, balancing risks, costs, and potential benefits, or, as the Accounts Commission for Scotland – the executive non-departmental public body which holds councils and other local government bodies in Scotland to account and helps them improve[1] - puts it:

> **An options appraisal process is all about making well-informed decisions[2].**

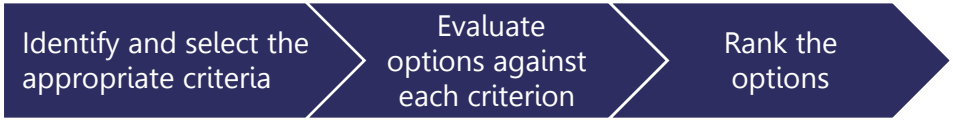
A common method utilised in options appraisal is the so-called **Multi-Criteria Decision Analysis (MCDA):**

Definition: MCDA

MCDA is a way of helping decision-makers rationally choose between multiple options. It is often used when there are a mix of criteria that cannot be obviously compared or where there are multiple stakeholder perspectives[3].

MCDA, also referred to as "Multi-Criteria Decision Making", is regarded as one of the most well-rounded methods of decision-making[4].

The simplified steps of MCDA are illustrated in the graphic below[3,4]:



In "Identify and select the appropriate criteria" phase, the problem is being structured. Without understanding the stakeholders and decision problem, it would be impossible to identify the right objectives and criteria. Criteria refer to the measures the decision-makers deem important in determining the most valuable choice.

In the next step, the options need to be evaluated against selected criteria. In the simplest MCDA approaches, criteria weightings are often used, and hence, this chapter places particular emphasis on this method.

By attaching weights to each criterion, often in percentages, the decision-maker quantifies the importance of each criterion. This step also invites the decision-maker to elicit the preferences of other stakeholders. Useful things to consider while determine the weights are:

- Is it a critical criteria or a nice-to have?
- Are the selected criteria on different scaling systems?

After identifying the appropriate criteria and their weights, MCDA utilises those metrics to rank the options. There are multiple ways of calculating the score for each option, ranging from simpler methods to complex utility functions. The following introduces a common method to rank the options:

Step 1: Normalise the values.

Step 2: Multiple values by weight and add the values of each criterion.

On the following page, we will use the example of purchasing furniture for an office to walk through a simple MCDA.

Example: The use of MCDA in the procurement of office furniture

Example: The decision maker is a procurement manager and the decision problem they face is from which supplier they should buy office furniture. The key stakeholders are the furniture users, the procurement manager's employer, and its finance department. Potential criteria to be considered could be the furniture's price, durability, colour, material, or size.

There are three suppliers that the procurement manager can choose from:

Supplier A:

Price - £500, furniture colour - brown

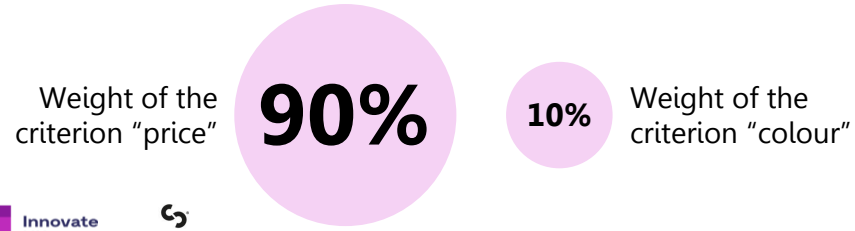
Supplier B:

Price - £100, furniture colour - brown

Supplier C:

Price - £300, furniture colour - white

Our procurement manager discusses the furniture purchase with all relevant stakeholders and decides to use price and colour as decision criteria. Due to budget constraints, the furniture price is critical and non-beneficial, meaning that a lower value is preferred over a high value[5]. Moreover, price uses a numeric scale, making it easier to assess than colour as the preference for brown or white furniture depends highly on the subjective opinion. The manager decides that the colour is more a nice-to-have and attaches to it the weight of 10%, while price gets a weight of 90%.



For numeric criteria, a method to normalise the values is to divide the value of the best option by each option value. In this the best price (£100) is divided by the other prices to arrive at normalised values.

	Best price of all options	Supplier price	Normalisation calculation	Normalised value
Supplier A	£100	£500	£100/£500 =	0.2
Supplier B	£100	£100	£100/£100 =	1
Supplier C	£100	£300	£100/£300 =	0.33

For a criterion like "colour", a method to normalise the values would be to convert the options into numbers so that the lowest ranked option corresponds to "1", and the highest ranked option corresponds to the total count of options. Then, divide these numbers by the total count of options. Let's assume the colour preference is white > brown, and we have only these two colour options, then the normalised values would be:

	Ranking of the option	Total number of options	Calculation	Normalised value
Supplier A	1 (worst)	2	1/2 =	0.5
Supplier B	1 (worst)	2	1/2 =	0.5
Supplier C	2 (best)	2	2/2=	1

As we can see in the above tables, the highest normalised value an option can receive is "1" while the number gets closer to zero the worse the option is in comparison to the best available one.

Example: MCDA in the procurement of office furniture - continued

Example - continued:

But how does the procurement now select between the different options? As we can see on the previous page, supplier B has the best price, but a lesser-desired colour than supplier C. Which one should the procurement manager choose? This is where the previously identified weights of each criterion comes into play.

Let's remind ourselves what the criteria weights and normalised values are for each supplier:

	Weight of "price"	Normalised value of "price"	Weight of "colour"	Normalised value of "colour"
Supplier A	90%	0.2	10%	0.5
Supplier B	90%	1	10%	0.5
Supplier C	90%	0.6	10%	1

Applying the in these weights with the normalised values results in:

	Weighted normalised value of "price"	Weighted normalised value of "colour"
Supplier A	90% * 0.2 = 0.18	10% * 0.5 = 0.05
Supplier B	90% * 1 = 0.9	10% * 0.5 = 0.05
Supplier C	90% * 0.6 = 0.54	10% * 1 = 0.1

The last step to arrive at a ranking of the three suppliers is to sum up the weighted normalised values for each criterion. Following this for our example produces this result:

Best option

Supplier A:

0.18 + 0.05 =0.23

Supplier B:

0.9 + 0.05 = **0.95**

Supplier C:

0.54 + 0.1 = 0.64

As we can see from the resulting values, supplier B is the best option in this MCDA with the chosen criteria and weights. The results might have been different if our procurement manager did not attach an as high weight to the criterion "price". This highlights the critical importance of selecting appropriate weights and dedicating time to this process.

It is important to note that normalisation is more important where there are multiple numeric criteria. Since this example only involves one numerical criterion – price –, the impact of the normalisation is limited. Furthermore, one must bear in mind that the normalisation will interact with the criteria weights. For instance, if we assume the prices of the three suppliers are £105, £100 and £102 – instead of the previous prices of £500, £100 and £300 –, the results would be different: Supplier C became the most attractive option now.

Supplier A:

0.85 + 0.05 =0.9

Supplier B:

0.9 + 0.05 = 0.95

Supplier C:

0.88 + 0.1 = **0.98**

Thus, additional iterations of the criteria weights may be required after the appraisal is completed to ensure that the normalised scores accurately reflect the intended importance of each criterion.

Commonly used financial criteria within MCDA (1/2)

Since MCDA is a commonly used method in decisions involving finance, let's outline some financial metrics that are often considered in MCDA to evaluate an option:

Break-even point[6]**:** The point at which total cost and total revenue are equal, meaning the point at which the investment is recovered.

Example: The investment cost of an option is £1,000. Thus, the break-even point is when the generated revenue reaches £1,000.

Payback period[7]**:** The amount of time an investment needs to reach the break-even point.

Example: The investment cost of an option is £1,000 and it generates £100 per year. It would take 10 years to recover the investment, and therefore, the payback period is 10 years.

Present value (PV)[8]**:** The current value of a future stream of payments or the investment amount needed today to earn a specific amount in the future.

The present value is based on the concept of time value of money.

Definition: Time value of money

Time value of value refers to the concept that money in the present is worth more than the same sum of money to be received in the future. This is true because money that you have right now can be invested and earn a return, thus creating a larger amount of money in the future[8].

To calculate PV, one discounts them by the assumed return that can be earned through investment. This rate is referred to as "discount rate".

Definition: Discount rate

A **discount rate** is the rate of return used to discount future payments back to their PV. The higher the discount rate, the higher are the risks associated with the payment. The risk-free rate is commonly considered to be equal to the interest paid on a government Treasury note, because that is the safest investment an investor can make[9,10].

Example: An option is expected to generate £1,000 five years from now. The risk-free rate is assumed to be 5%. This £1,000 would therefore be worth approximately £783 in the present time since:

$$PV = \frac{Future\ amount\ of\ money}{(1+r)^t} = \frac{£1{,}000}{(1+5\%)^5} = \frac{£1{,}000}{1.28} \approx 783.53$$

In this formula, *r* stands for discount rate and *t* represents the time in years until the future payment is received.

Note that we divide the future payment by 1 + 5% because this reflects how money would grow due to the rate of return: The investor would receive their original investment – which is represented by the 1 – and in additional their interest – which is 5% of the total. Thus, it is not enough to just divide the future payment through the discount rate. Dividing the future payment through the total growth over time – which translates to $(1 + r)^t$ in the formula – is referred to as "discounting".

Net present value (NPV) [11]**:** The PV of cash inflows, less the PV of cash outflows.

The NPV formula is: $\text{NPV} = \frac{Future\ amount\ of\ inflows}{(1+r)^t} - initial\ investment$

Like in the PV formula, *r* stands for discount rate and *t* represents the time in years until the future payment is received. To calculate the NPV with multiple years of inflows, discount each year's inflows separately and then sum them up. Afterwards, subtract the initial investment cost.

Commonly used financial criteria within MCDA (2/2)

Example: A project is forecasted to generate £1,000 each year for two years. However, the local authority would need £1,200 to set this project up. The discount rate is the risk-free rate of 5%.

$$\text{NPV} = \frac{£1{,}000}{(1+5\%)^1} + \frac{£1{,}000}{(1+5\%)^2} - £1{,}200 \approx £659.41$$

The NPV of this project is approximately £659, meaning that the difference between this option's inflows and outflows would be worth £659 in the present. If we would just add up the inflows and outflows without discounting, the result would be different, namely £800. However, a simple addition overestimates the true value of the future payments.

Another benefit of discounting is that using a discount rate allows one to incorporate risk-adjusted discount rates. This is especially helpful if the future inflows are uncertain – by using a higher discount rate, the PV reflects the risk of potentially not receiving the payment at all.

Moreover, NPV enables comparisons between different options by bringing options with different inflow patterns and durations to a common basis.

Due to its many benefits, NPV is one of the most popular financial metrics for investors[11].

Return on investment (ROI) [12]**:** A measure of the amount of return on an investment, relative to the investment's cost. A positive ROI is better than a negative one.

There are multiple ways to calculate the ROI, with the most commonly used being: $ROI = \frac{Net\ gain}{Cost\ of\ investment}$

Example: The local authority wants to purchase a property that is valued at £1 million. It forecasts that the same property could be sold for £3 million three years later. What is the expected ROI?

$$ROI = \frac{Net\ gain}{Cost\ of\ investment} = \frac{£3{,}000{,}000 - £1.000{,}000}{£1.000{,}000} = \frac{2}{1} = 2$$

The ROI on this property purchase is also 200% which makes it a very attractive investment.

It should be taken into account that a higher ROI number does not always mean that the option is better. Note that we did not consider the time value of money for the £3 million gained from the expected sale three years later. Since the ROI formula does not account for the time factor, a project completed in two years and another project finished in ten years can both yield the same ROI[12].

Another important point is that, since the formula is not fixed, it is essential to verify which costs were included in the calculation. In our example, the local authority may want to factor in additional costs such as maintenance, property taxes, and sales fees to ensure the ROI more accurately reflects the true value of the property purchase[12].

Internal rate of return (IRR)[13]**:** The discount rate that makes the NPV of all cash flows equal to zero.

Looking at the formula of NPV previously, the IRR is the discount rate that would set the entire equation to zero (NPV = 0).

Benefit-cost ratio (BCR)[14]**:** An indicator showing the relationship between the relative costs and benefits of a proposed option, expressed in monetary or qualitative terms.

If the BCR is greater than 1, the option is expected to be attractive, while a negative BCR would mean the costs outweigh the benefits. In the public sector this will include a valuation of social benefits.

If you want to learn more about business case calculation and financial modelling, please refer to the "Financing Local Net Zero Projects" report commissioned by Innovate UK.

4. Options appraisal in the Green Book

Chapter at a Glance:

This chapter provides a summary of why options appraisal is essential within the Green Book Business Case approach, the Five Case Model, and describes the option process and the Options Framework.

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Why the Five Case Model of the Green Book was needed

For important, material decisions, local authorities need to demonstrate compliance with the HM Treasury Green Book through the development and appraisal of options.

This chapter will summarise key information from the Green Book and HM Treasury's Guide to Developing the Programme Business Cases relating to the options appraisal process.

In the remainder of this insight, these two publications will be referred to as "the Green Book" and "the Guide" respectively.

Definition: Green Book

The Green Book is a comprehensive guidance document issued by HM Treasury on how to appraise policies, programmes and projects. It is a vital tool for policymakers and decision-makers across central government, local authorities and other public sector organisations[1].

The Green Book is designed to ensure that public funds are allocated and managed effectively and with the aim to deliver maximum value for money for taxpayers. To accomplish this, it advocates for a structured case to business case development, known as the Five Case Model. As a local authority, understanding and applying the Five Case Model of the Green Book is essential for crafting robust and defensible business case proposals.

Since the Green Book is the foundational document for appraisals in the public sector, it introduces the Five Case Model in a generic and widely-applicable form. In comparison, the Guide builds on the Green Book by giving practical guidance on the Five Case Model Framework within the context of applying the principles in the development of business cases for investment programmes[1,2].

Before the Five Case Model of the Green Book was introduced, the inconsistences in presented business cases impeded reviews and understanding. A good example of this problem was IT business cases: They were often filled with confusing technical jargon and very expensive, despite not being able to deliver on the promised results.

A HM Treasury reviewer decided to solve the problem by developing – with the support of Treasury – a template for IT business cases that would enable easier reviews. This template was soon adopted by virtually all government departments and eventually became the Five Case Model[3]. The model was able to prevail due to the numerous and significant advantages it brought with it.

Key advantages of the Five Case Model:

Adaptability: Allows application across the board

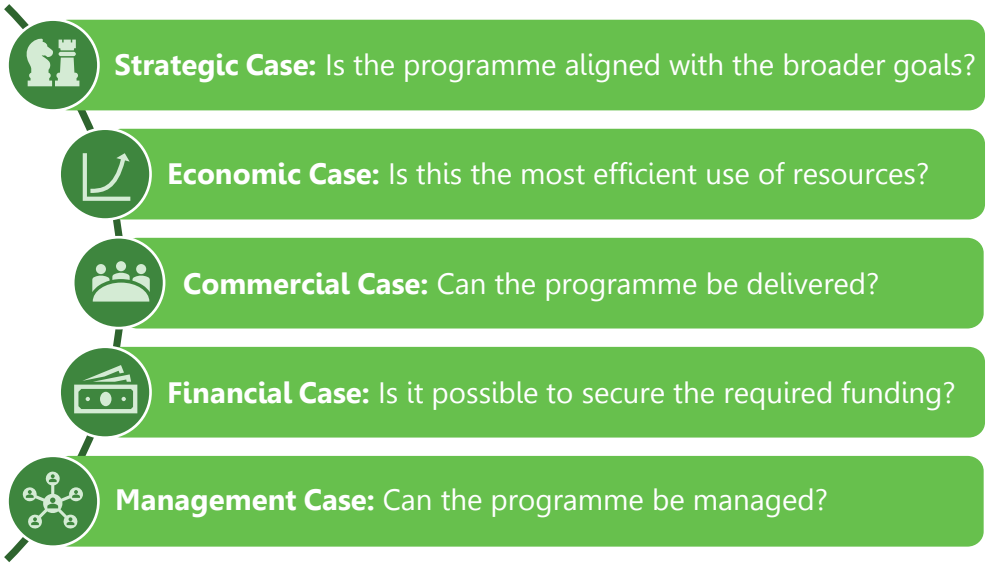
Accountability: Requires evidence and justification for every case

Clarity: Simplifies complex projects for technical and non-technical audiences

Comparability: : Enhances comparability by ensuring the same structure

Introducing the Five Case Model of the Green Book

The Five Case Model requires business cases to be assessed from five critical perspectives to be able to be considered for funding approval.



To receive funding for a programme as a government department or agency, one needs to submit a business case that clearly addresses and justifies each of the five cases[1].

Let's take a look at what purpose each case fulfils and what it could look like in practice:

The Strategic Case aims to establish the need for the programme and to show alignment of the local authority's – and the national government's – strategic objectives[1,2].

Example - LAEP: The strategic objective for the local authority and the national government is to be Net Zero by 2050. A Local Area Energy Plan (LAEP) presents a cost-optimal strategy for achieving a Net Zero energy system. Therefore, support of the LAEP is likely to be aligned to the local authority and government's strategic objectives.

The Economic Case ensures that the proposed solutions results in the best value for money or social value among all available and realistic options[1,2]. The economic case is the focus of this insight as the options appraisal process is part of this case. On the following pages, the insight will outline the option process within the context of the economic case. Moreover, the insight will introduce the Net Zero Finance Options Framework in chapter 5 which will be a helpful tool to local authorities that aim to evaluate their options.

Example - LAEP: To find the option with the best value for money, different options of LAEP delivery programmes need to be compared. The local authority follows the appraisal process outlined in the Guide.

The Commercial Case evaluates the programme's viability and assesses potential implications. Here, different potential commercial arrangements are compared to find the best match. Afterwards, if applicable, suitable suppliers or partners are selected[1,2].

Example - LAEP: The council considers two commercial models: a Joint Venture (JV) or delivering the LAEP with in-house skills and resources. After a thorough assessment, the local authority decides to proceed with the JV as this commercial model aligns better with the council's needs. The ideal JV partner is chosen next.

The Financial Case examines the financial feasibility of the programme. It looks at the cost associated with the options and evaluate the potential sources of funding within each option[1,2].

Example - LAEP: The cost of the LAEP must be within a local council's budget or otherwise fundable. The council deliberates over different funding sources.

And lastly, **the Management Case** must showcase that the programme can be successfully managed[1,2].

Example - LAEP: The LAEP programme needs to demonstrate clear plans, processes, and governance structure as well as the required expertise.

Options appraisal within the context of the Five Case Model

The Guide provides the option process to help prepare the economic case of the Five Case Model[2].

The process aims to support local authorities in considering a wider range of options to prevent premature commitment. Moreover, the thoroughness of the option process increases the likelihood of the programme being a success after gaining approval and it helps to identify the option that is the most efficient use of resources. Options appraisals also help to minimise waste, optimise outcomes and build public trust by fostering a consistent approach.

To sum up, options appraisals allow a local authority to arrive at a defensible answer to the questions that the economic case compels them to address. Therefore, it is critical that a local authority integrate the process into its application of the Five Case Model.

The graphic below outlines the steps of the option process according to the Green Book and the Guide. The process can be simplified into seven steps with the end goal of selecting the preferred option to move forward[1,2].

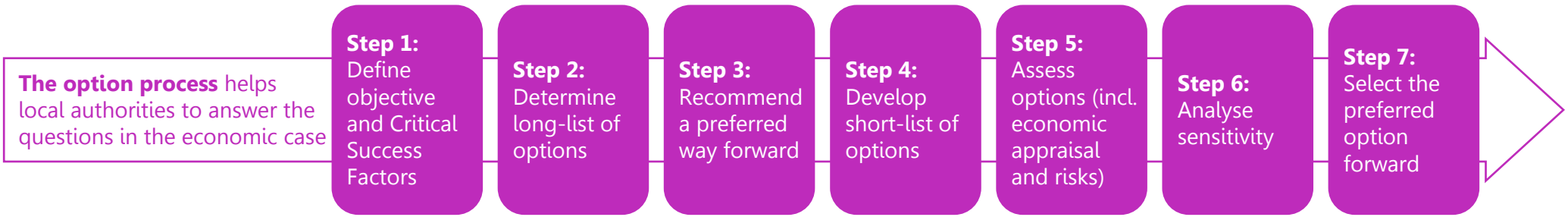
All options are evaluated based on their net benefit to society. While the Green Book emphasises monetising impacts wherever possible, it also explicitly encourages considerations of environmental and social impacts[1,2].

The four essential key principles behind the option process:

1. **Clear understanding:** Before thinking about potential solutions, the local authority always needs to have a clear and shared understanding of what exactly the challenge being faced is.
2. **Variety of options:** Next, it is important to truly have a broad range of options by taking a deep dive into all the various possible ways to address the challenge. This thinking time makes it much more likely that the decision will offer the best possible solution.
3. **Objectivity:** A local authority cannot opt for a solution simply because one has taken a liking to it; it must be justified through a rational and objective approach which can be explained clearly. The option process is vital for demonstrating that an objective approach was taken and clarifying "how" this was done.
4. **Best balance:** The fourth principle is the need to find the best balance of cost, benefit and risk. Without a thorough analysis of the interplay between each factor – the economics, qualitative benefit and risk – the selection of a viable solution will not be robust.

So, what does each step mean?

Let's look at each of the seven steps on the following pages.



The option process explained (1/3)

The option process is a fundamental element of the Five Case Model in the HM Treasury Green Book.

In the following pages, we will walk through each of the seven steps of the option process and introduce the Options Framework, which is a tool from the Guide to identify and filter options.

Step 1: Define objective and Critical Success Factors (CSFs)[1,2]

After defining an understood and shared objective, the local authority needs to establish CSFs to allow the options to be evaluated against. The selected CSFs need to be – as their name suggests – critical but inclusive enough to not eliminate important options prematurely. Factors which are nice-to-have should not be included in CSFs. The Guide suggests the following key CFSs to start the brainstorming process:

Step 2: Determine long-list of options[1,2]

As the second step, the goal is to generate as many diverse options as possible. The Guide specifically recommends to include innovative or unconventional solutions. At this stage, as the local authority, you should not worry about whether the generated options are realistically deliverable – these will be assessed in the following step. In step 2, it is crucial to generate a wide range of options to ensure that no beneficial option is missed.

The Guide introduces the so-called Options Framework which provides a structure to identify and filter a broad range of options and acts as the gateway from the strategic to the economic case.

Definition: The Options Framework

The Framework is recommended by the Green Book and provides a structured approach to identifying and filtering a broad range of options for delivering policies, strategies, programmes and projects[1,2].

The Options Framework has proven useful in ensuring the buy-in of senior management, stakeholders and customers by enabling local authorities to systematically generate and evaluate potential options across five key dimensions:

Scope

- The "what" in terms of the potential coverage of the programme
- Ranges from maintaining the status quo to transformational solutions

Service solution

- The "how" in terms of delivering the programme
- Needs to consider available technologies, existing best-practices and what the marketplace can deliver

The option process explained (2/3)

Service delivery

- The "who" in terms of delivering the programme
- Examines delivery models, e.g. in-house provision, outsourcing, partnership

Service implementation

- The "when" in terms of delivering the programme
- Considers the timeline and operational aspects of the implementation

Funding

- The "how" in terms of financing the programme
- Scans the sources of funding, e.g., public or private capital

Example: Business case for improving public transportation

1. Scope – options are on the spectrum of do-nothing to optimise current bus service (minimal) to building a new underground system (transformational).
2. Service solution – if the preferred solution is to build a new underground system, consider what available technology can be used. For example, can the subway be fully powered by renewable energy?
3. Service delivery – should the local authority, a private company or a public-private partnership operate the service?
4. Service implementation – start with implementing a pilot project or launching the full solution? What are the milestones?
5. Funding – will the service be funded through government budgets, private investments or a combination of both?

The Options Framework encourages creativity and reduces the risk of "tunnel vision" by ensuring that no viable solution is overlooked. Moreover, it aligns the options development process with the overarching goals by providing a basis for comparing options fairly and transparently. Applying the Options Framework should result in a one-page summary that marks the identified "preferred way forward" as the best alternative in each dimension and "discounted" for the worst identified alternatives, while every alternative in between gets to be "carried forward" into the next steps[1,2].

An exemplary one-page summary is shown in the screenshot below[2]:

Programme	Business As Usual (BAU)	Do Minimum	Intermediate Option	Intermediate Option	Do Maximum
1.Service scope – as outlined in strategic case	1.0 All Departments	1.1 **Dept A (Front Office)**	1.2. Dept A **plus** **Dept B and C**	1.3 Dept A, B, C **plus Dept D**	1.4 **All** Dept A, B, C, D plus **E**
	Carried forward	Carried forward	Preferred Way Forward	Carried forward	Discounted
2. Service Solution – in relation to the preferred scope	2.0 Current Services	2.1 Core: **Quality Management System (QMS) and training**	2.2 Core & Desirable plus: **New services and IT**	2.3 Core & Desirable plus: **Refurbished Office**	2.4 Core, Desirable & **New Offices**
	Carried forward	Carried forward	Carried forward	Preferred Way Forward	Discount
3. Service Delivery – in relation to preferred scope and solution	3.0 Current arrangements	3.1 In-house	3.2 Outsource	3.3 Mix in-house & Outsource	3.4 Strategic Partner
	Carried forward	Carried forward	Discount	Preferred Way Forward	Discount
4.Implementation – in relation to preferred scope, solution and method of service delivery	4.0 N/A	**4.1 First tranche** **Programme A** -QMS & training **Programme B** – refurbished offices & new IT **Second tranche** **Programme C** – new services 1 & 2 **Programme D** – new services 3 &4 **Phased 3 years**	**4.2 First tranche** **Programme A** – refurbish offices & new IT **Programme B** – QMS & training **Second tranche** **Programme C** – new services 2 & 4 **Programme D** – new services 1 & 3 **Phased 2 years**	**4.3 Single tranche** **Programme A** -QMS & training **Programme B** – refurbished offices & new IT **Second tranche** **Programme C** – new services 1, 2, 3 & 4 **Big bang 1 years**	
		Carried forward	Preferred Way Forward	Discount	
5.Funding – in relation to preferred scope, solution, method of service delivery and implementation	5.0 N/A	5.1.Public funding	5.2 Private finance	5.3 Mixed public & private	
		Carried forward	Discount	Preferred Way Forward	

The option process explained (3/3)

Step 3: Recommend the preferred way forward[1,2]

As the outcome of step 2, the local authority should have identified a "preferred way forward" in each dimension using the Options Framework.

The Guide only states to recommend a preferred way forward. It is important to note that this is not the final decision as that will ultimately be determined by the short-listing and options appraisal. The exact wording the Guide uses is the following:

> **Note:** the **preferred way forward** is NOT the **preferred option** at this stage. The preferred option is identified from the appraisal of the short-listed options[2].

This is slightly confusing, so we walk through this again: In step 2, the local authority recommends one preferred way forward that helps to build the short-list. However, the council needs to reappraise to arrive at the final decision, which is referred to as "preferred option" by the Guide. The reason for this is to arrive at a manageable number of options:

> The Programme Business Case should identify **a minimum of three to four** short-listed options **for further appraisal[2]**.

Besides the preferred way forward, which is the most preferred choice at this stage, the local authority can carry other preferred alternatives to the next step: the short-list. If there is capacity for the required evaluation, it would be beneficial to include 2-3 of these potentially preferred alternatives in the short-list.

Options that are fundamentally misaligned with strategic objectives, unfeasible, or impractical should be discounted at this stage.

Step 4: Develop short-list of options[1,2]

For each short-listed option, the local authority needs to describe the characteristics. The short-list of options must at least contain the following three options:

- **Business as Usual (BAU):** How would it look like if the local authority continues without any changes?
- **Doing the minimum:** What would be minimum efforts that is still a realistic way forward? This alternative acts as an additional benchmark to BAU in terms of justifying further intervention.
- **Preferred way forward** (as identified in step 3)

It is recommended to also include the alternative "doing the maximum" as it helps to establish the perspective.

Step 5: Assess options[1,2]

Using methodologies like MCDA, each short-listed option needs to be assessed against the CSFs. The local authority should undertake benefits appraisal as well as risk assessment and appraisal.

Step 6: Analyse sensitivities[1,2]

The Guide requires the sensitivity analysis to be done for at least the finally selected option. However, it is recommended to conduct a sensitivity analysis for all short-listed options as its outcome might influence the decision.

Step 7: Select the preferred option forward[1,2]

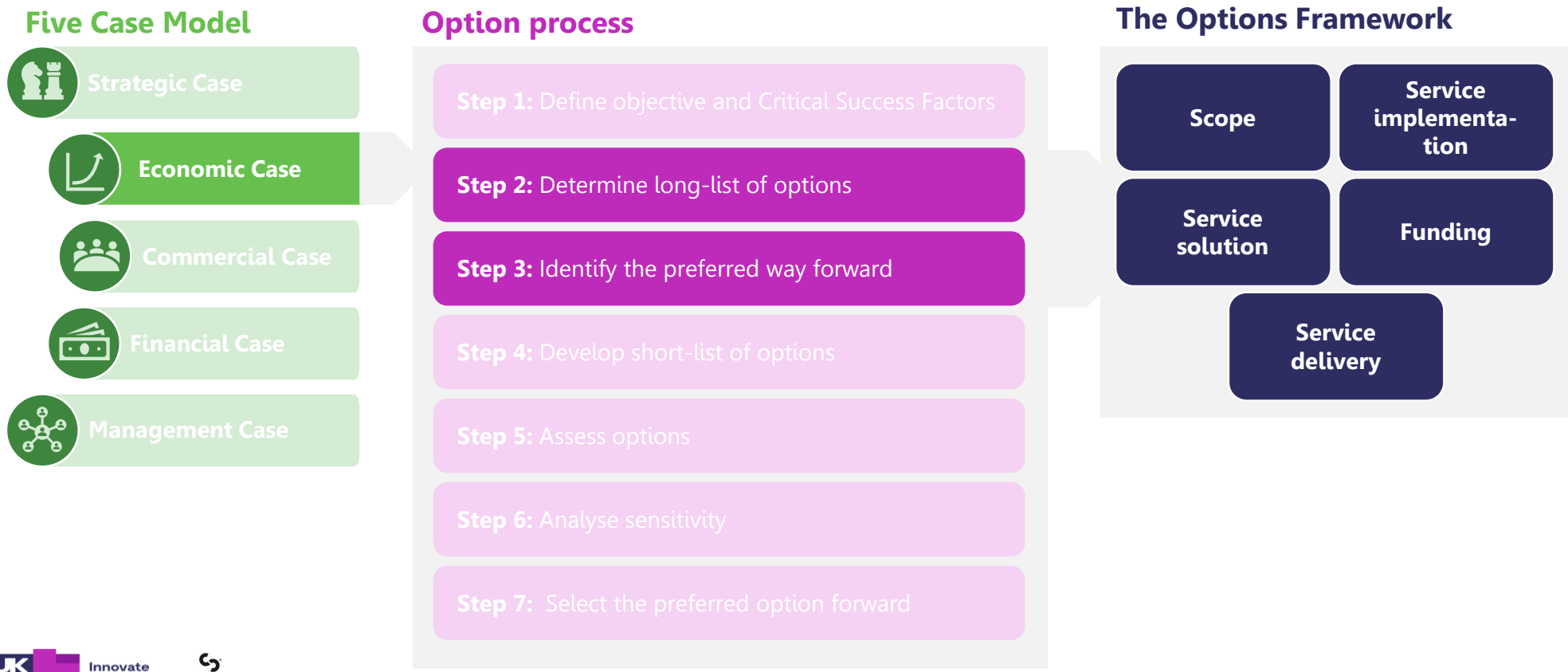
The "preferred option" is the one that delivers the best balance of benefits, cost, and risks while meeting the overarching objectives. Note again that the "preferred option" is the result of the appraisal of the short-list, while the "preferred way forward" is the outcome of the appraisal of the long-list. After reappraisal, the "preferred way forward" may become the "preferred option", but it does not necessarily have to.

How the concepts of the Green Book are aligned

In this section, we have introduced the Five Case Model, the option process and the Options Framework. Let's take a look at how these concepts are related to each other.

The graphic below illustrates the relationship between the concepts of the Green Book: The Five Case Model is the backbone of developing a programme business case according to the Green Book. According to the Guide, "The purpose of the economic case is to identify and appraise the options for the delivery of the programme and to recommend the option that is most likely to offer best Value for Money (VfM), or social value, to society, including wider social and environmental effects as well as economic value"[2]. To complete the economic case, the Guide suggest a seven-step approach to arrive at the preferred option forward. We refer to this approach in this insight as the "option process".

Two of the key steps in the option process is the generation and evaluation of the option long-list. This is where the Options Framework of the Green Book comes into play – it provides five key dimensions to help with the option generation and appraisal process.



5. Net Zero Finance Options Framework

Chapter at a Glance:

This chapter provides local authorities with a standardised framework to prepare effectively and gather the necessary information to undertake the Green Book option process.

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Net Zero Finance Options Framework: the importance of standardisation

As outlined in chapter 3, options appraisals help local authorities to make well-informed decisions. However, especially within Net Zero, it is even more critical to apply options appraisal as local authorities are faced with the challenge of balancing limited resources and urgent sustainability needs.

This chapter introduces the Net Zero Finance Options Framework which will be referred to as "the Framework" in this chapter for simplicity.

The Framework helps local authorities prepare effectively and gather the necessary information to undertake the Green Book option process. It complements, rather than replaces, the Green Book framework, ensuring authorities are well-prepared in advance.

The Net Zero Finance Options Framework aims to:

- Help local authorities gain clarity within an area where there is currently limited definition or guidance and be as prepared as possible to conduct an effective options appraisal
- Help to understand how limited local authority resources should be prioritised to help support the monumental task for Net Zero delivery, while recognising the limits of support that can be provided
- Help understand the complexity of the decision-making processes which if not fully understood might result in loss of control, private sector cherry-picking, poor value for money, or sub-optimal cost of capital

Summary of potential benefits of adopting the Framework:

- **Adaptability:** Allows application across the board
- **Objectivity:** Reduces personal bias
- **Accountability:** Requires evidence and justification for every case
- **Optimised resource allocation:** Evaluates trade-offs
- **Clarity:** Simplifies projects for audiences
- **Enhanced decision-making:** Improves understanding
- **Comparability:** Ensures the same structure
- **Stakeholder confidence promotion:** Builds trust
- **Value maximisation:** Ensures cost efficiency
- **Improved stakeholder collaboration**: Fosters partnerships
- **Improved resilience:** Reduces funding risks
- **Comprehensive view**: Encourages thorough research

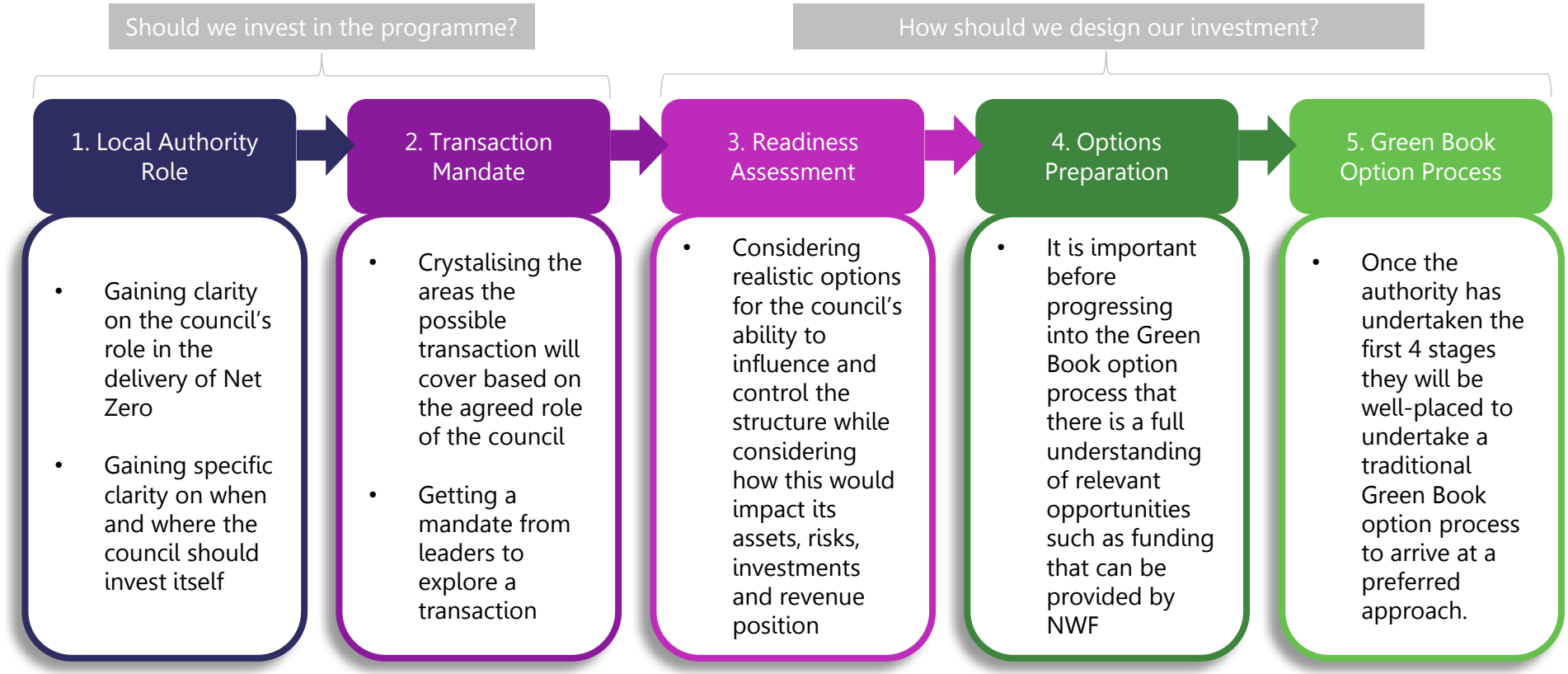
Introduction of Net Zero Finance Options Framework (1/3)

The Net Zero Finance Options Framework comprises five steps which are intended to guide a local authority through two key questions regarding their Net Zero programme: 1) Should we structure a transaction to enable investment in the programme? And 2) if yes, how should we design the funding approach?

Whilst shown as a sequential series of steps, there are important interactions between the stages, and they should not be treated in isolation - in particular, commercial models and funding options will depend closely on each other.

Step 1: Local Authority Role

There is no statutory requirement for local authorities to deliver Net Zero. As stated, the costs of delivering Net Zero vastly exceed Local authority resources. Many councils have declared ambitious climate targets, which, whilst aspirational, set an expectation for their level of involvement with coordinating, facilitating and even funding Net Zero activities. Gaining clarity on the council's role at the earliest opportunity can set the context for the downstream programme and financing development.



Introduction of Net Zero Finance Options Framework (2/3)

The council therefore needs a clear view on what its role should be in relation to the delivery Net Zero. This stage helps to achieve that.

This stage could be included as part of the process of Local Area Energy Planning or other equivalent Net Zero Planning activities.

Step 2: Transaction Mandate

In order to form any contractual relationship with the private sector, some kind of transaction will need to take place. This step is all about defining the aspiration of that transaction and obtaining a mandate to formally investigate it.

The local authority should crystalise the areas the possible transactions will cover, based on the agreed role of the council. The transaction might be limited by asset class or funds available and could include technology or investment size.

This step will ensure that the transaction receives the necessary mandate from leaders, avoiding situations where a programme is moved forward without a governance process or corporate sponsor.

Different transaction aspiration of a local authority could be:

- The council focusing efforts only on areas where it has direct control (e.g., its own estate)
- The council focusing its efforts only in areas where there is a market failure

Definition: Market failure

Market failure refers to a situation in which goods and services in the free market are inefficiently distributed or not provided in a way that is socially optimal. Thus, market failure without intervention can lead to outcomes where specific individuals or groups are worse off[1].

- The council limiting the scope based on a certain budgetary value
- The council focusing the scope on projects that have the highest level of financial viability

A business case for LAEP investment could include options that sought to bound the transaction aspiration as follows:

Option A – No Subsidy: This option sought to contain the transaction aspiration to only those investments with a positive commercial return.

Option B – Public Sector Control: This option sought to consider a transaction that only relates to assets and Net Zero activities within the scope of influence of the local authority.

Option C – A Specific Funding Envelope: This option sought to consider a transaction option with a fixed funding scope, within the realms of affordability for the council.

Step 3: Readiness Assessment

Having decided to develop a transaction and defining its aspiration, this stage aims to ensure that the local authority is sufficiently prepared and ready to consider what might be lost or gained through different approaches.

This will usually include detailed considerations of the benefits and risks of in-house delivery, establishing a new delivery vehicle or outsourcing different elements of delivery.

Councils often have multiple objectives to fulfil within a Net Zero delivery programme that should be made transparent to improve decision making.

Introduction of Net Zero Finance Options Framework (3/3)

In step 3, the local authority should consider:

- The assets and levers it has and the opportunities and influence these offer in developing a programme that meets the strategic objectives
- The degree of control it should aim to retain in order to deliver against its programme objectives
- The degree to which it wants to directly influence the use of returns from higher yielding investments to support lower yielding projects vs. being led by market-based approaches to investment
- The degree of innovation expected

As the first step to answer the "how", a local authority should consider realistic options for the council's ability to influence and control the structure while considering how this would impact its assets, risks, investments and revenue position. Helpful questions that guide this step are:

- What assets, powers and influence does the local authority have?
- What control does the local authority want to retain?
- What control is the local authority prepared to lose?

Step 4: Options Preparation

This step primarily involves understanding the relationship between potential commercial models and associated financing costs.

Accessing lower-cost capital can enhance the value and scope of a transaction. It is important for local authorities to recognise that borrowing from public sources, such as the National Wealth Fund, is often more cost-effective than alternative financing options. Thus, conversations with the National Wealth Fund and other potential public funders should be held in parallel with consideration of commercial options.

A clear understanding of available financing sources and their implications for subsequent decisions on commercial structures is critical to informed and effective options appraisal.

Definition: Equity investment

An equity investment is when an investor acquires shares in an organisation in return for the capital (cash or assets) they introduce - becoming a partial owner of that organisation. The investor's share of the organisation's profits and assets is determined by the proportion of shares they own.

Definition: Debt

Debt is usually money that is owed by the borrower to the lender. It must be repaid, often with interest, over a specific period. Debt can also be secured, meaning that the borrower has pledged something of value for the case they are not able to pay back[2].

Insight from the market

Our observation is that the decision-making process is often overly focused on the current level of internal capacity / capability.
While understandable given the pressures faced by local authorities, this can often limit the exploration of approaches which may deliver greater levels of social value in favour of alternatives.

Step 5: Green Book Option Process

After completing the four previous steps, the local authority is well-prepared for the traditional Green Book option process.

Why we need the Net Zero Finance Options Framework

The Net Zero Finance Options Framework does not aim to replace but instead to compliment the Options Framework approach of the Green Book. This page outlines some common challenges we have encountered in practice which ultimately led to the development of the Net Zero Finance Options Framework.

Challenges around local authority roles

Potential problems arising in practice may be:

- Climate teams and commercial teams may not be in direct, regular contact
- There may be mixed expectations about how easy it will be to get to Net Zero and the council's role within this
- A climate emergency is likely to have been declared but either pace of change is not sufficient, senior buy-in needs to be re-established, or greater levels of ambition need to be initially secured.

By establishing a clear role that the local authority wants to play, the risk of these challenges can be avoided or at least minimised.

Challenges around transaction mandate

Problems we often encounter in practice are:

- Programmes being moved forward with no corporate sponsor or no formal mandate or governance
- Climate officers may be uncertain as to when they should engage senior leaders – if they go with something too developed (or developed incorrectly) they may risk being accused of not engaging
- Transactions being discussed or progressed before the "roles" conversation has been adequately concluded

By ensuring that a programme gets formal buy-in and support, the "transpiration mandate" step helps mitigating potential future challenges.

Challenges around readiness assessment

This step is about ensuring that the local authorities do thorough research and making sure that they have sufficient understanding before they dive into the process of the Green Book's Options Framework. By doing so, they avoid problems such as the following:

- The appraisal process have been closed prematurely, e.g., the local authority has jumped into a deal with a supplier without considering alternatives
- Unrealistic expectations of what the private sector will be willing to concede / give or regarding the powers the council has
- Baseline information has not been consolidated, e.g., what assets does the council have? What leverage does the council have?

Challenges around options preparation

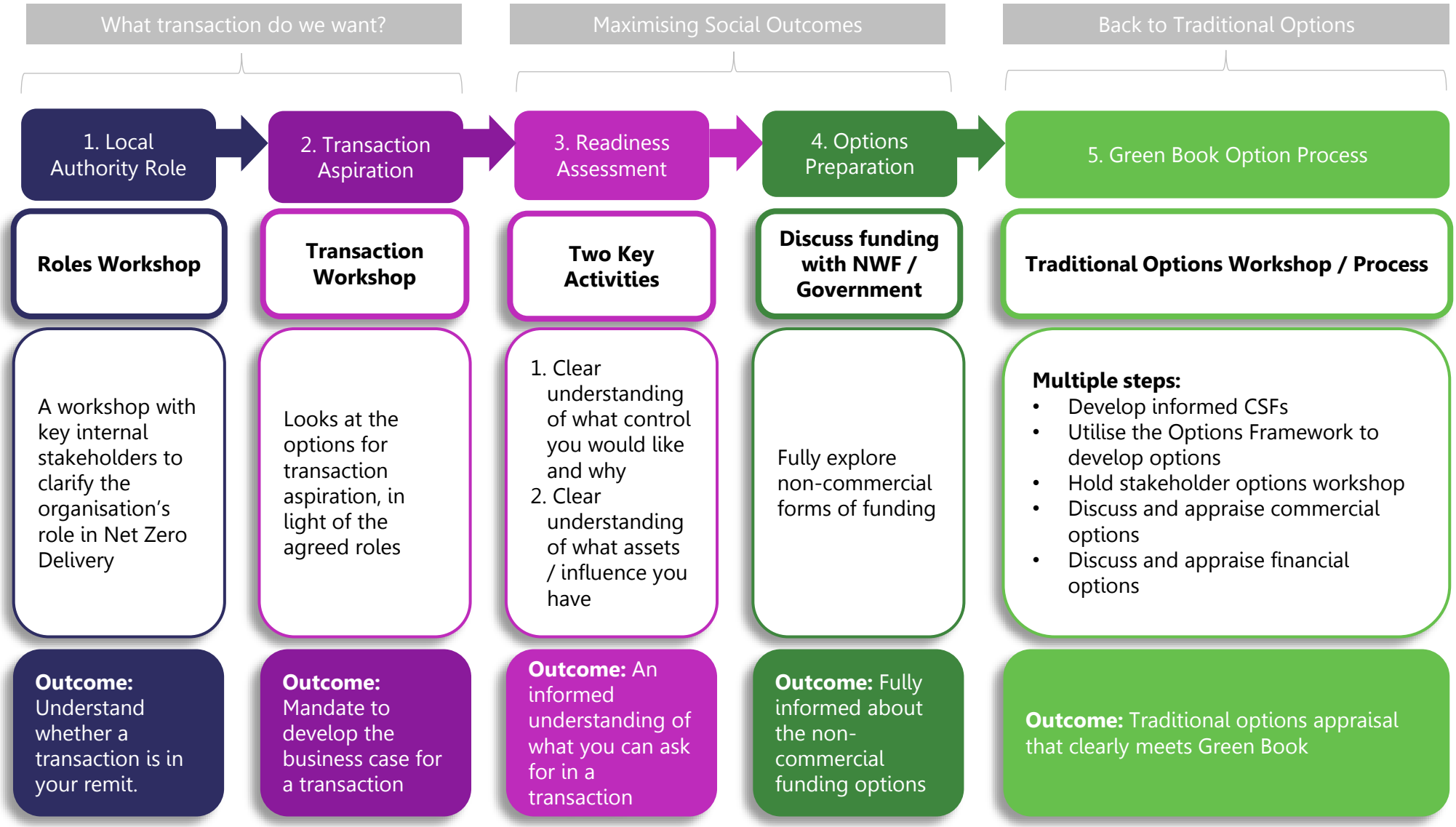
Challenges we have observed around this topic are:

- Authorities progressing with transactions before holding discussions with potential public funders
- Councils talking to the National Wealth Fund (NWF) to early (e.g., without a mandate or without baseline evidence)
- LAs trying to replicate a deal which may not be a good fit for them

This step helps to ensure there is a full understanding of what authorities can obtain from non-commercial funding sources before they start considering commercial ones and how the two might interact. While we strongly encourage an early conversation with NWF, it is important to note that their main offers are advisory services and best-practices sharing. NWF does not take over the commercial and financial structuring of local authority programmes.

After these additional steps, we hope that the local authority will be prepared to go back to the traditional options appraisal of the Green Book. The next page shows how our framework is applied in practice.

How to employ the Framework in practice



Deep dive – Step 1: Local authority role (1/3)

Local authorities need to determine their role in the delivery of Net Zero. This will help them determine where and how the council should invest themselves, how active they want to be in the decision making of infrastructure development, what skills are available within the council and what involvement they want to have in leading / managing the projects going forward. The consideration of control between the public and private sector is important to consider when determining what a just, yet viable transition is to look like.

The local authority must establish their role in the delivery of the regional decarbonisation approach and what the role of their members are within the delivery. One of the benefits of going through the Net Zero Finance Options Framework is to create clarity regarding the costs of the different potential roles.

Potential roles of the local government can be divided into three categories: Enable, Embed, Enact[7].

If you want to learn more about local authority roles in Net Zero, please refer to the "Enable, Embed, Enact: Maximising the Value of Local Net Zero Planning" report created for Innovate UK by Regen.

Category "Enable":

The role of the authority is primarily as an enabler. Delivery is external[7]. Exemplary roles could include:

Role as convenor

The local authority acts as a neutral facilitator and connector, using its position of influence and networks to bring together different stakeholders, organisations, and community groups to address the complex challenge of reaching Net Zero.

The role as a convenor emphasises the local authority's responsibility to align different interest and resources towards a common goal. The convening role is often the lowest cost option for local government, but even where costs are minimal it is important to recognise them within options appraisal.

Active coordination role

Acting as the active coordinator, the local authority is the central organiser of the programme, meaning that they steer the entire programme. The local authority's responsibility in this case includes but is not limited to aligning various stakeholders, facilitating collaboration and ensuring the programme meets its deadlines.

Project origination role

As the project originator, the local authority identifies and conceptualises the project. Project origination is about identifying and bringing forward potentially investible projects. These would then need to be developed towards investment.

Provider of assets / sites

Local authorities often own land or buildings that can act as anchor sites for key projects. They may own assets such as land that can be put into a specific investment vehicle. As the provider of assets or sites, the local authority can exercise influence on a programme by purposely enabling desired actions.

Active work with other investors, e.g., Pension Fund

By collaborating with other investors, the local authority can mobilise a larger pool of capital for Net Zero initiatives.

Deep dive – Step 1: Local authority role (2/3)

To be able to actively work with such investors, it is often crucial to demonstrate the investment opportunity of the programme and have the capacity to quantify the opportunity, as in particular private sector investors are focused on investment returns.

Category "Embed":

In this category, the responsibility and accountability rests with existing authority functions[7]. Exemplary roles could include:

Influence over supply chain

Through procurement, the local authority can encourage suppliers and contractors to align with Net Zero goals. This role showcases how the local authority can exercise influence through persuasion and purchasing decisions rather than through direct statutory powers.

Monitoring role

In the monitoring role, the local authority tracks the programme's progress towards the objectives outlined in the business case. This role can entail reporting the progress and performance of the programme to stakeholders, such as investors or the community.

Budgeting role

The local authority is responsible for tracking and controlling the budget in this role. The budgeting role can also include the local authority creating the budget by allocating funding and resources.

Category "Enact":

The local authority takes responsibility for developing detailed plans and has some deployment responsibility[7]. Exemplary roles could include:

Direct investment in own estate

In this role, the local authority may decide to invest directly within their own operations and assets. Therefore, they have the ability to affect outcomes and decisions and can exert impact.

Development of "whole-place" delivery models

The local authority can also decide to develop comprehensive models to decarbonisation which affect the entire area. By integrating various sectors such as energy, housing and transportation, the local authority reduces financial and operational silos and thus enables better investment opportunities, e.g., blended financing.

Development of JVs or Funds

Joint Ventures (JVs) or funds allow the local authority to pool resources with private and/or public sector partners. By enabling this financial method, the local authority shares risks and rewards with the partners which increases the feasibility of ambitious projects.

Investment readiness role

The local authority can ensure that their programme is investment ready by developing the required business case. This way, the local authority can attract external investments, e.g., through grants or private investors. To increase a programme's investment readiness, the local authority might also demonstrate potential revenue opportunities that arise through the programme.

Project development role

The project development role follows the project origination.

Deep dive – Step 1: Local authority role (3/3)

In this role, the local authority further refines the project by performing, for example, feasibility studies, creating detailed plans, and securing approvals. In this stage, the local authority might begin to engage relevant stakeholders.

Direct Investment in Specific Assets

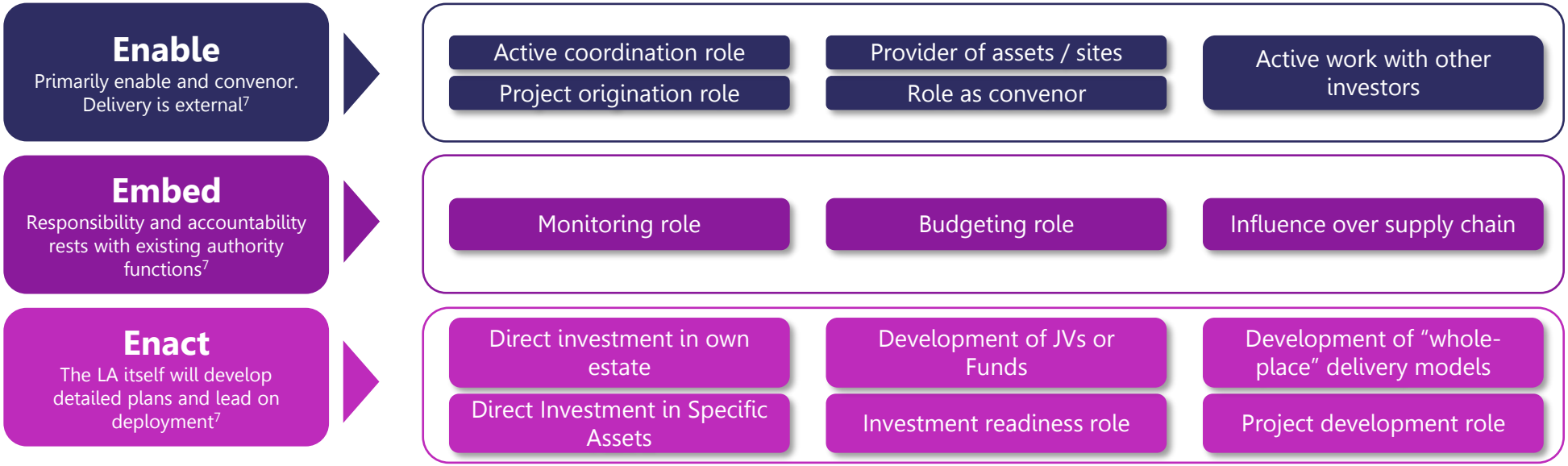
In a role as an investor / borrower, the local authority can decide to directly invest in a specific asset beyond their estate. Examples for such investments could be sustainable housing developments or specific low-carbon infrastructure. If the local authority uses a loan to invest in these assets, they will become a borrower.

Besides the categories already described, the local authority might engage in additional roles, such as in an advocacy role where they lobby for Net Zero beneficial policies or grants.

The graphic below summarises all three categories of potential roles for the local authority in delivering and financing Net Zero, including the exemplary roles in each category that have been explained in this deep dive.

It is also important to note that in going through the process, the local authority might identify that its role differs by technology type or whether it is focusing on its own estate or its regional activities. For example, the local authority might decide that within its own estates it should take the role of being an active investor, while adopting more of a convenor role within its wider region.

Similarly, the local authority might decide that it should take an active project development role within Heat Networks, where there are various options of support from national government, but adopt the role of convenor in areas such as solar and wind development, where the private sector might be expected to perform the bulk of the development work.



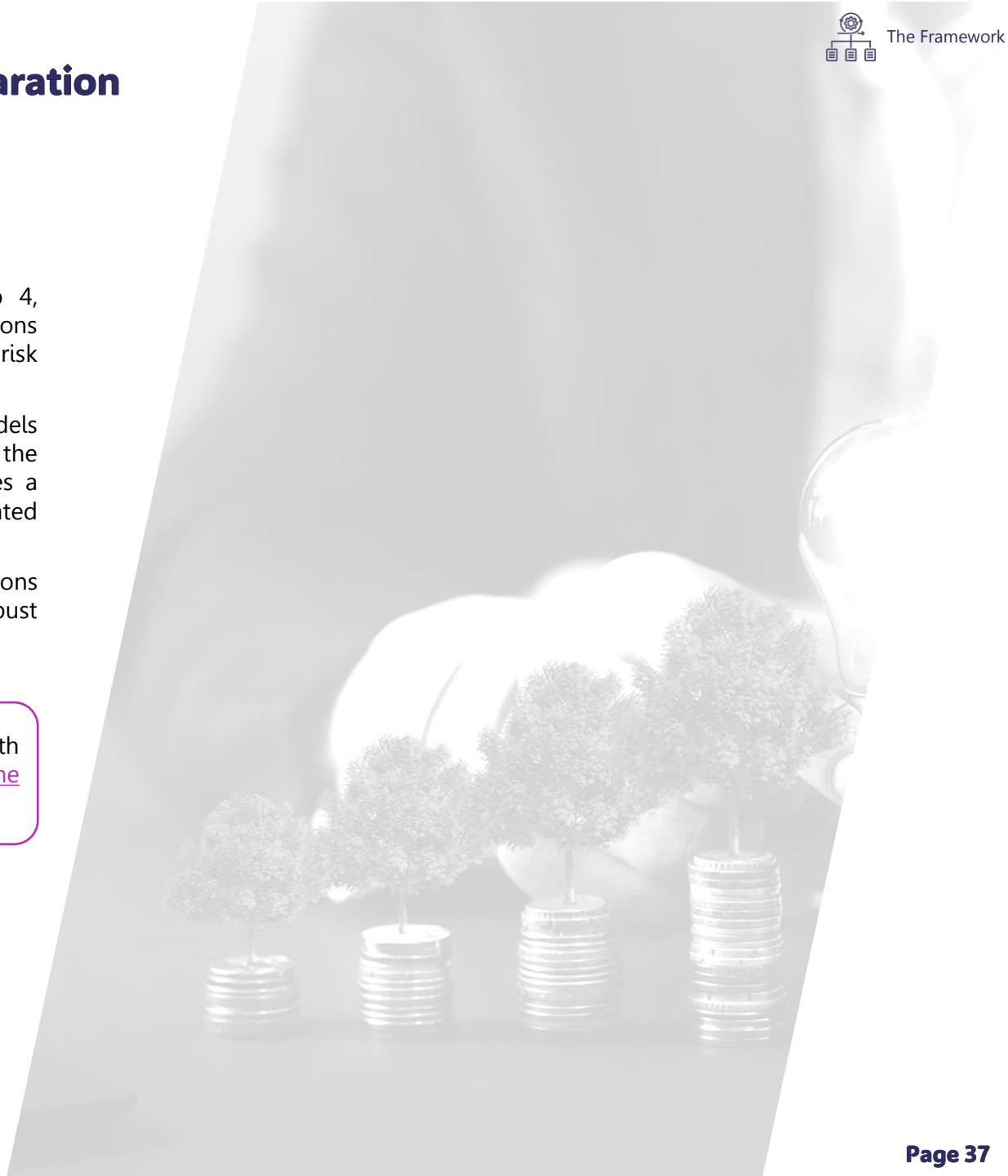
Deep dive – Step 4: Options Preparation

The following pages of the deep dive about step 4, Options Preparation, will explore funding considerations such as sources and costs of capital, revenue funding, risk allocation, and optimal capital structures.

In addition, an overview of common commercial models relevant to Net Zero projects is provided, outlining the models' key features, benefits, and risks. This includes a look at typical legal structures and capital flows associated with each model.

These elements are critical to address during the Options Preparation phase to ensure understanding and robust commercial planning prior to the Green Book process.

If you want to learn how commercial models align with LNZA partnership frameworks, please refer to the appendix.



Deep dive – Step 4: Funding options

Sources of capital

There are different sources of capital that can be relevant for a local authority on its journey to Net Zero. As a local authority, you have access to grants, the Public Works Loan Board (PWLB) and the National Wealth Fund where you can receive funding from the government.

The commercial model chosen affects the available sources of capital; for example, for joint ventures, the capital would stem from equity and debt. In this case, both the private and the public sector might lend to the JV.

Cost of capital and risk

The cost of capital depends on the form of capital and the perceived risk. In general finance, the cost of capital is divided into cost of equity and cost of debt[3].

The former is defined as the return an organisation, agency or company pays out to its equity investors. Since a local authority usually does not sell share in its estate, this form of cost is often less applicable. A situation where this might become relevant is if the local authority raises funds through a JV.

Cost of debt however becomes especially significant in the Net Zero context, as its initiatives are often capital-intensive and requires borrowing. The interest charged is a good indicator of the cost of debt.

Definition: Interest rates

Lenders often charge the borrower with a percentage of the loan amount. This cost of borrowing money is called interest rate[4]. Interest rates on a loan are often quoted as the annual percentage rate (APR)[5].

The interest rate heavily depends on the perceived risk of default of the borrower. As outlined in the introduction chapter, a local authority is seen as a very low risk borrower and can therefore benefit from lower interest rates than for example a business which may make collaboration between the public and the private sector beneficial from a financial perspective.

Revenue funding

It is important to note that all Net Zero activities have operating costs. This requires what a local authority would traditionally define as "revenue funding": funds to ensure that operational costs are covered.

There are several options available to generate revenue funding. Common ones for a programme include:

- Including the operating costs within the equity invested into the programme
- Revenue sources coming from the business model
- Allowing the programme to invoice the local authority for the operating cost

The most suitable option depends on the local authority, the selected commercial model and potential partners.

Optimal capital structure

The optimal capital structure is the best mix of debt and equity financing that maximizes a programme's value while minimizing its cost of capital[6]. Depending on the selected commercial model and the objectives of the local authority, the best capital structure might differ for each programme.

Therefore, it is vital for the local authority to assess and – if required – adapt the proportions in debt and equity.

As a rule of thumb, the optimal capital structure should result in a good mix of debt and equity because both forms of capital have their individual risks and benefits, and debt should be borrowed at the lowest possible interest rate.

Deep dive – Step 4: Commercial models: Benefits and risks

Commonly observed commercial models can be summarised into the following six models. Let's examine the benefits and drawbacks of each:

In-house delivery

The local authority retains full control over the delivery since only internal resources are used.

Benefits: Since no external legal entities are involved, there will not be any dependency on external partners. This can sometimes enable the local authority to more effectively guide the outcome toward desired objectives.

Drawbacks: Due to the high resource requirement, rapid scalability is often not possible. The local authority bears the full responsibility and thus, all operational risks.

Create new organisation

The local authority provides guidance and capital to a newly formed entity (e.g., Special Purpose Vehicle (SPV), investment fund).

Benefits: This model provides better risk protection for the local authority and gives it the opportunity to raise additional capital.

Drawbacks: A new organisation requires legal and regulatory setup which can be complex. There might be challenges in maintaining alignment between the new entity and the local authority.

Concession model / strategic delivery partner

The local authority grants a concession to a strategic partner which allows them to deliver and manage services under agreed terms.

Benefits: By bringing in a strategic partner, the local authority gains access to external expertise and reduces burden on its internal resources.

Drawbacks: The local authority depends heavily on the partner's performance since it only has limited control over daily operations which may result in misalignment of goals.

Joint Venture (JV)

The local authority forms a new legal entity with one or more partners.

Benefits: By sharing capital, risks and responsibilities, the local authority has access to broader expertise and resources which eases the facilitation of large-scale projects.

Drawbacks: The shared liabilities might complicate governance, risk management and decision-making. Moreover, conflicts might arise between the partners.

Outsourced model / consortium

The local authority outsources its needs to a consortium (group of suppliers) that collaborates to deliver the services.

Benefits: In this model, the local authority accesses a wide range of expertise while reducing burden on internal resources. This grants flexibility and scalability.

Drawbacks: The local authority is fully dependent on external providers. The consortium might lead to coordination challenges or variable quality of service.

Framework agreement

The local authority has flexibility in choosing suppliers to deliver services as needed under pre-agreed terms (framework).

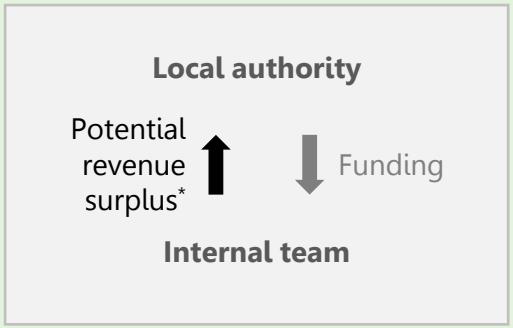
Benefits: Procurement lead times are shorter with easy access to pre-vetted suppliers, and competition boosts cost efficiency.

Drawbacks: Suppliers may not collaborate, making management complex. Service quality may vary, and there's an immediate dependency on external partners since components of delivery may be outsourced.

Deep dive – Step 4: Commercial models: Legal entities and flow of capital

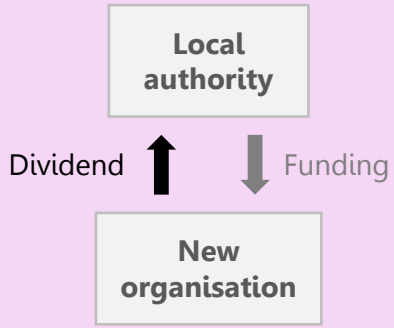
The graphics below show all legal entities involved and the flow of profit or funding between each entity in each commercial model:

In-house delivery

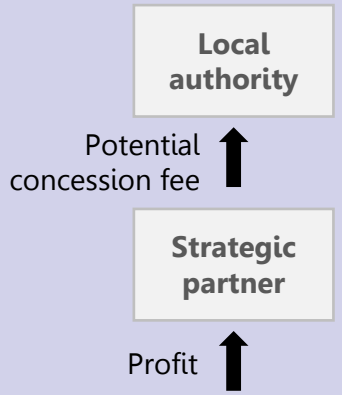


* If available, could be directed into other initiatives

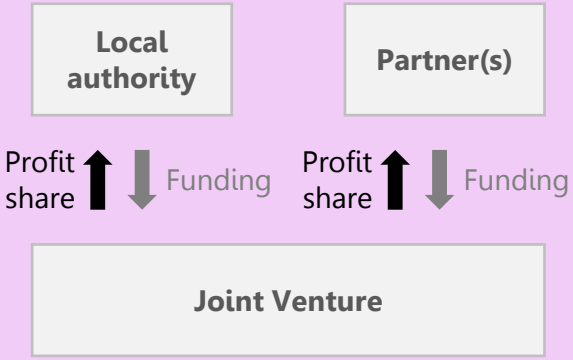
Create new organisation



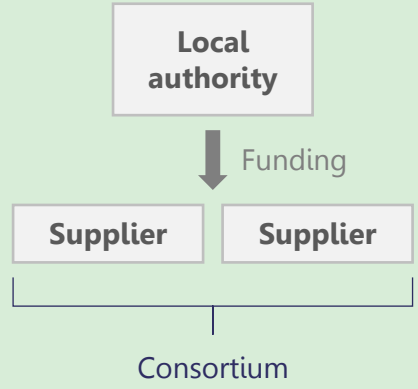
Concession model / strategic delivery partner



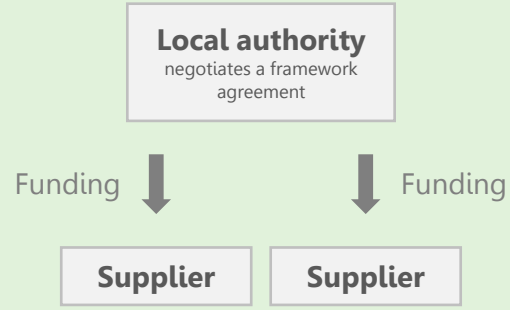
Joint Venture (JV)



Outsourced model / consortium



Framework agreement



Legal entity | Cash inflow | Cash outflow

6. Case studies

Chapter at a Glance:

This chapter is a collection of six case studies that we have observed in the market.

Case study: Hampshire County Council – Options for a retrofit scheme

It can be helpful to have examples of long-list options to help gain an understanding. Therefore, in the remainder of this chapter, we will look at several option lists for Net Zero programmes of local authorities.

In order to reach Net Zero by 2050, Hampshire County Council (HCC) explored options to set up a domestic retrofit scheme to support homeowners and landlords to improve the energy performance of homes and domestic properties across the county[1].

In the following, we will walk through the five steps of the Net Zero Finance Options Framework in this case study.

Local Authority Role

The business case published in 2023 by HCC suggested that the local authority plays the programme development role. As one of the next steps, HCC aims to conduct further market research and engage with potential stakeholders such as finance providers.

Transaction Aspiration

HCC aims to cover the retrofit for able-to-pay customers with this programme. The targeted retrofit completions per year is estimate to be approximately 3.7% of all homes. Additionally, HCC lays out the key services to be offered by the programme, such as advice, design and procurement.

Readiness Asessment

The 2023 business case records the conclusion of HCC on the degree of influence the council wants to retain as:

> "The programme also aims to grow a 'brand' for the venture to deliver retrofits in Hampshire, which would include but not exclusively involve the local authorities[1]."

From this statement, we can see that the council is prepared to give a share of control to a potential partner. This hypothesis is further supported if we also look at the commercial models that HCC evaluated, and which alternatives were eventually discounted.

Commercial Models

HCC considered six alternatives which can be mapped to the commercial models introduced in the Step 4 deep dive. The options were:

- **Option 1)** Transferable model: Bring existing model to Hampshire from elsewhere[1] → **Outsourced model / consortium**
- **Option 2)** Facilitate new organisation: Local Authorities could contribute to the scheme finance required and agree a stake in the surpluses generated[1] → **Joint Venture**
- **Option 3)** Create new organisation: The new organisation would be wholly owned[1] → **Create new organisation**
- **Option 4)** Procure concession contract: This option was introduced based on the fact that after consultations it was deemed that some kind of procurement was likely to be added to demonstrate due diligence[1] → **Concession model / strategic delivery partner**
- **Option 5)** Procurement then contract management: Procurement of an external organisation based on a clear specification[1] → **Framework agreement**
- **Option 6)** Deliver in-house: Recruit an in-house team, raise all of the money and deliver it internally[1] → **In-house delivery**

While all six commercial models were considered, HCC opted to only continue to explore option 1 and 2.

Financial Models

To fund the scheme, HCC explored two funding options. The first being a repayable loan, and the second being an up-front grant[1].

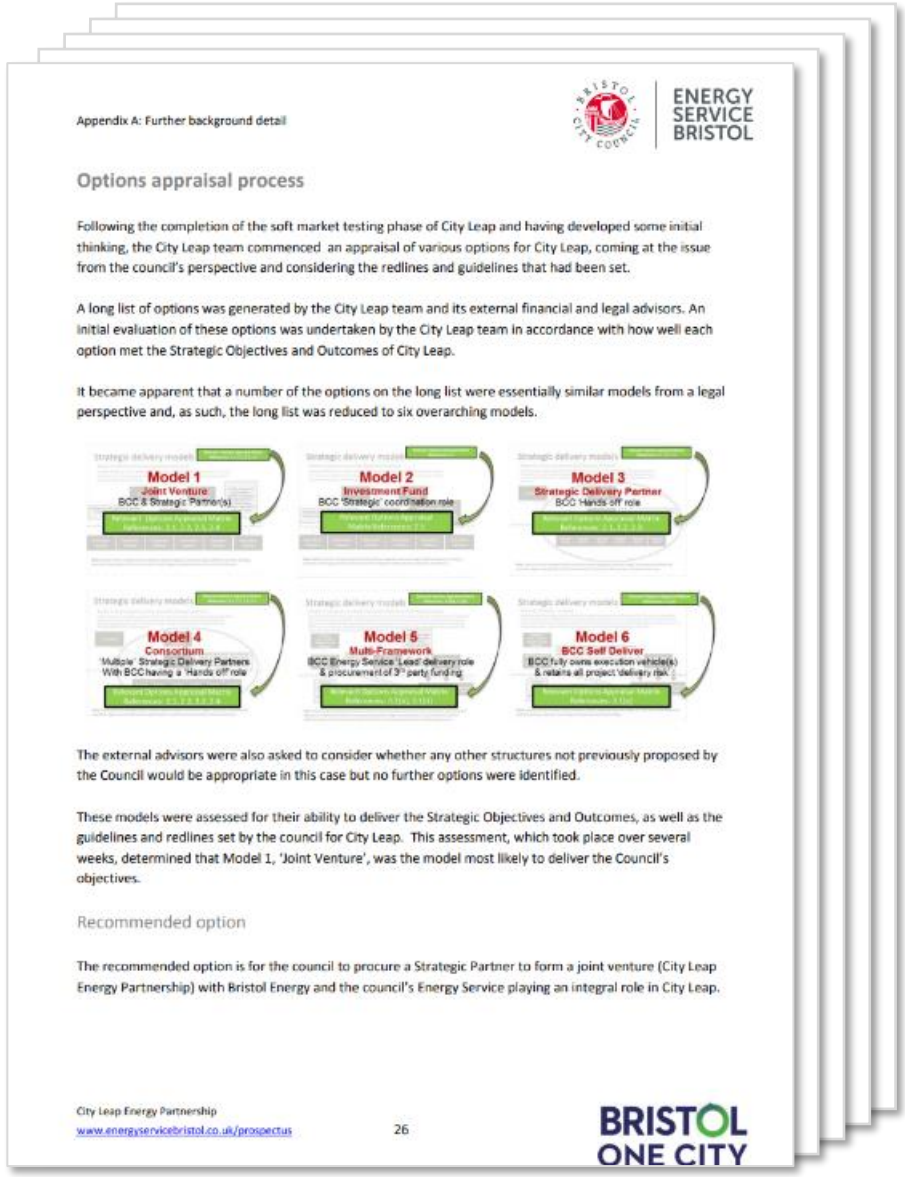
Case study: Bristol City Council – The six overarching commercial models

When Bristol City Council (BCC) prepared their business case for "City Leap", they considered six commercial models. City Leap aims to:

> build an interconnected, low carbon, smart energy system that delivers social, environmental and economic benefits [2].

To accomplish this goal, Bristol appraised several service delivery models. The table below describes how the final six alternatives aligns with the commercial models described in this insight.

Title of the model (BCC)[2]	BCC's description of the model[2]	Title of the model (Insight)
Joint Venture	BCC & Strategic Partner(s)	**Joint Venture**
Investment Fund	BCC "Strategic" coordination role"	**Create new organisation**
Strategic Delivery Partner	BCC "Hands off" role	**Concession model / strategic delivery partner**
Consortium	"Multiple" Strategic Delivery Partners with BCC having a "Hands off" role	**Outsourced model / consortium**
Multi-Framework	BCC Energy Service "Lead" delivery role & procurement of 3rd party funding	**Framework agreement**
BCC Self Deliver	BCC fully owns execution vehicle(s) & retains all project "delivery risk"	**In-house delivery**



Appendix A: Further background detail

ENERGY SERVICE BRISTOL

Options appraisal process

Following the completion of the soft market testing phase of City Leap and having developed some initial thinking, the City Leap team commenced an appraisal of various options for City Leap, coming at the issue from the council's perspective and considering the redlines and guidelines that had been set.

A long list of options was generated by the City Leap team and its external financial and legal advisors. An initial evaluation of these options was undertaken by the City Leap team in accordance with how well each option met the Strategic Objectives and Outcomes of City Leap.

It became apparent that a number of the options on the long list were essentially similar models from a legal perspective and, as such, the long list was reduced to six overarching models.

The external advisors were also asked to consider whether any other structures not previously proposed by the Council would be appropriate in this case but no further options were identified.

These models were assessed for their ability to deliver the Strategic Objectives and Outcomes, as well as the guidelines and redlines set by the council for City Leap. This assessment, which took place over several weeks, determined that Model 1, 'Joint Venture', was the model most likely to deliver the Council's objectives.

Recommended option

The recommended option is for the council to procure a Strategic Partner to form a joint venture (City Leap Energy Partnership) with Bristol Energy and the council's Energy Service playing an integral role in City Leap.

City Leap Energy Partnership
www.energyservicebristol.co.uk/prospectus
26
BRISTOL ONE CITY

Case studies: Local Area Energy Planning – The transaction aspiration

Greater Manchester Combined Authority

Aiming to achieve carbon neutrality by 2038, Greater Manchester Combined Authority (GMCA) has developed LAEPs for each of its ten districts. While developing these plans, GMCA looked at different ways to limit the transaction aspiration. The ways included[2]:

- Defining clear geographical boundaries
- Defining clear sectoral boundaries
- Defining different implementation phases
- Reducing dependencies on national or external energy markets by prioritising local energy generation, storage and distribution

GMCA's long list for the LAEP delivery contains the following options:

1. Business as Usual ('BAU')[3]
2. Select and deliver the asset classes or projects that have the highest commercial viability for the private sector[3]
3. Only deliver social housing retrofit and public sector decarbonisation[3]
4. Fund all asset classes until 2030[3]
5. Only the asset classes with carbon abatement impact prior to 2035[3]
6. All asset classes under GMCA control or influence to a maximum threshold[3]
7. Deliver in full all asset classes[3]

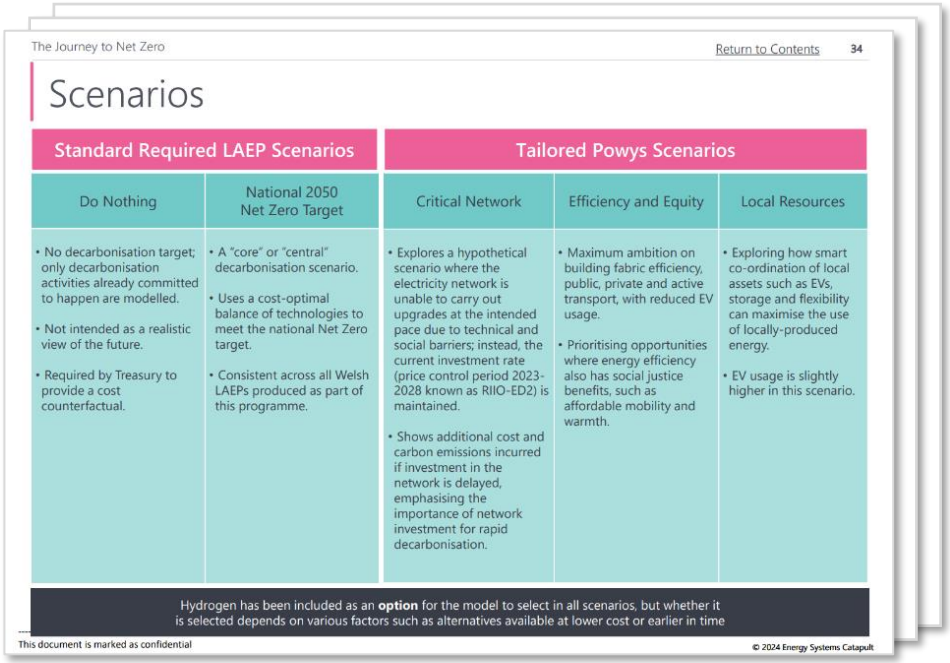
These differing options really question the transaction aspiration desired by the local authority, whether for example it sets out to fully deliver the Local Area Energy Plan or only deliver it partially.

County of Powys: Local Area Energy Plan

Another similar example of a local authority exploring its options for the transaction aspiration is the Local Area Energy Plan (LAEP) for the County of Powys, prepared by Energy Systems Catapult.

In the published report of 2024, it lays out the scenarios considered for the area to progress towards Net Zero. Potential alternatives include for example to prioritise "opportunities where energy efficiency also has social justice benefits, such as affordable mobility and warmth"[4].

Note that the options include the options "Do Nothing" and "National 2050 Net Zero Target" which responds to the minimum options required to be considered.



The Journey to Net Zero — Return to Contents 34

Scenarios

Standard Required LAEP Scenarios		Tailored Powys Scenarios		
Do Nothing	National 2050 Net Zero Target	Critical Network	Efficiency and Equity	Local Resources
• No decarbonisation target; only decarbonisation activities already committed to happen are modelled. • Not intended as a realistic view of the future. • Required by Treasury to provide a cost counterfactual.	• A "core" or "central" decarbonisation scenario. • Uses a cost-optimal balance of technologies to meet the national Net Zero target. • Consistent across all Welsh LAEPs produced as part of this programme.	• Explores a hypothetical scenario where the electricity network is unable to carry out upgrades at the intended pace due to technical and social barriers; instead, the current investment rate (price control period 2023-2028 known as RIIO-ED2) is maintained. • Shows additional cost and carbon emissions incurred if investment in the network is delayed, emphasising the importance of network investment for rapid decarbonisation.	• Maximum ambition on building fabric efficiency, public, private and active transport, with reduced EV usage. • Prioritising opportunities where energy efficiency also has social justice benefits, such as affordable mobility and warmth.	• Exploring how smart co-ordination of local assets such as EVs, storage and flexibility can maximise the use of locally-produced energy. • EV usage is slightly higher in this scenario.

Hydrogen has been included as an **option** for the model to select in all scenarios, but whether it is selected depends on various factors such as alternatives available at lower cost or earlier in time

This document is marked as confidential

Case studies: the local authority role

West of England Combined Authority

The West of England Combined Authority (WECA) faced the central problem of a funding gap – their available capital is far below the costs of decarbonising the authority's region.

To combat this, WECA aims to set up a £100 million fund that aims to target up to 30 investments over a 5-year deployment period where the invested projects and entities are required to align with Net Zero goals[5]. WECA needed to decide what degree of influence it would like to retain and what role they would like to play in the fund when it was faced with the question of whom to seek as the fund's investors. Eventually, the authority arrived at a longlist of nine options:

1. No investors[5]
2. Public bodies such as health, academic[5]
3. Charities, Trusts & Foundations[5]
4. Private equity and High Net Worth Individuals[5]
5. Large banks[5]
6. Private pension funds[5]
7. Public bodies (governmental)[5]
8. Private investment funds[5]
9. Combination of 3, 5, 6 and 7[5]

While option 1 would allow WECA to control the fund entirely, it was deemed not viable as this option would not result in enough capital[5]. Therefore, WECA opted for a combination of public and private funds to maintain the degree of influence and role they desired while raising enough capital for the fund.

Coventry City Council

To decarbonise the city through a wide range of environmental and social projects, Coventry City Council (CCC) is deliberating its role in its journey to Net Zero.

A report published in 2023 contains the following quote that describes the deliberations of the council:

> The Council has a critical role to play as a leader, asset owner and source of local knowledge, but doesn't have sufficient capital, resource, or expertise to deliver Net Zero in isolation[6].

Note that the role that the local authority wants to play ultimately also influences the commercial models that are suitable for the programme. In this case, since CCC does not aim to be the sole deliverer of the projects, commercial models that require intensive internal resources such as capital and human expertise like "in-house delivery" should not be considered.

In this case study, CCC eventually arrives at two options:

- Do nothing: This alternative would require the council to continue activities to achieve Net Zero itself[6]
- Entering a strategic energy partnership: The council would partner with a private sector company to deliver on decarbonisation[6]

Not surprisingly, the preferred option in the end is the strategic energy partnership since it allows the local authority to play its desired role in its Net Zero journey.

7. Using the Framework in practice

Chapter at a Glance:

This chapter brings together the concepts explained in this insight and provides recommendations on how to use the Framework in practice.

Using the Framework in practice

The Net Zero Finance Options Framework is focused on helping the local authority to prepare for the second and third step of the option process. In practice, the actual steps of the Framework might look closer to the graphic on the next page, which also outlines tools, techniques and recommendations for using the Framework.

Step 1: Define objective and Critical Success Factors

Step 2: Determine long-list of options

Step 3: Identify the preferred way forward

Step 4: Develop short-list of options

Step 5: Assess options

Step 6: Analyse sensitivity

Step 7: Select the preferred option forward

To complete the economic case, Critical Success Factors and commonly used financial criteria, which were explained in chapter 3, can be used within a MCDA to assess the short-list options. Another helpful technique is the SWOT analysis which assesses the strengths, weaknesses, opportunities and threats of each option[1]. In summary, cost-benefit analysis is central to the economic case.

Recommendations for adapting the Framework in practice:

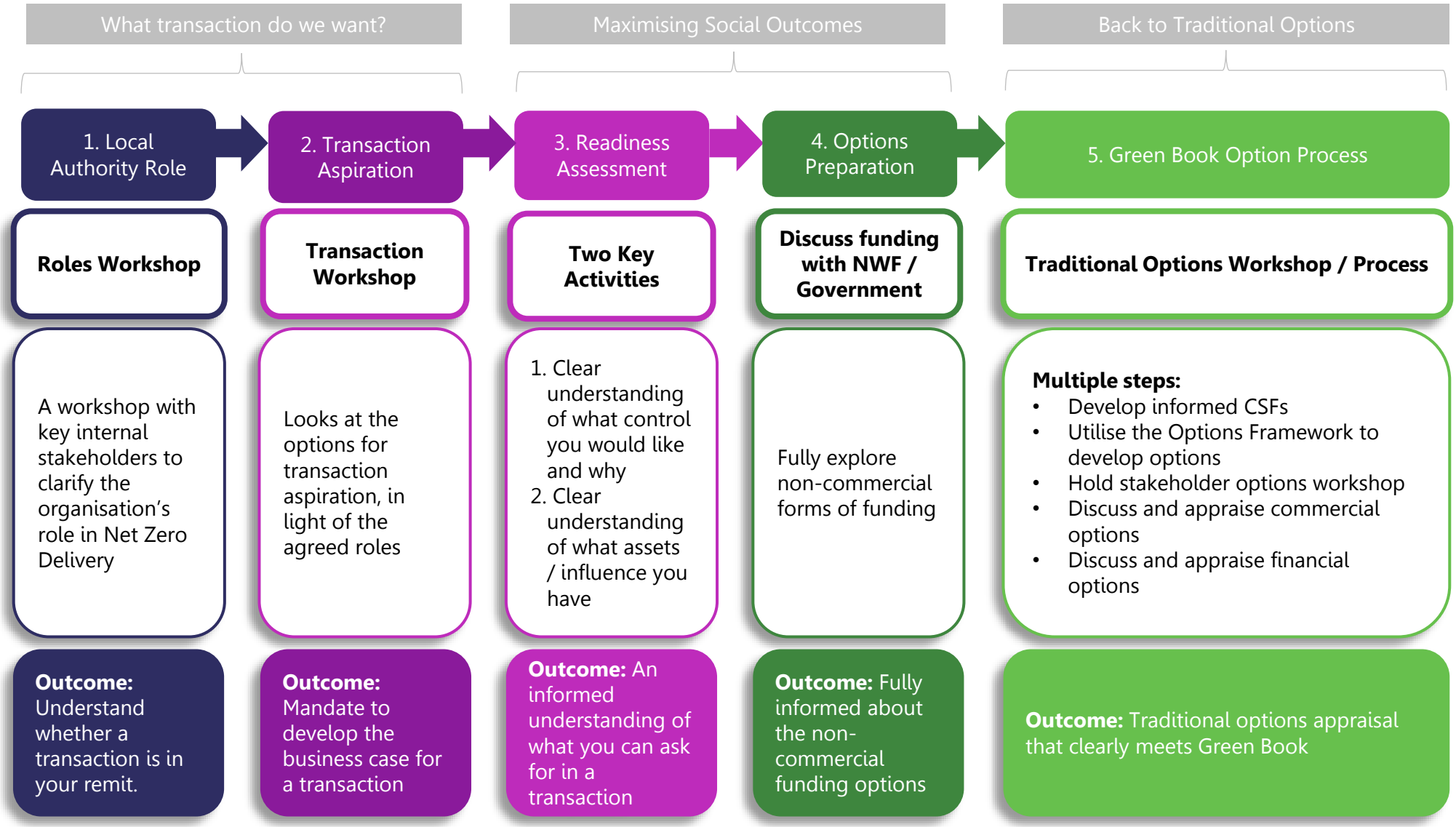
Understand the Framework:
Read this insight to understand the framework's key concepts, process and features. It is vital to understand the purpose of the framework.

Explore with a pilot:
Start with a pilot programme or a starter project if available or try the process of the framework on an example to get a feeling of how the process works before implementing it on large, complex and vital programmes.

Follow Best Practices:
Learn by examples and stick to the steps recommended by the framework. This insights provides tools and tips, including workshop plans, designed as best practices to help you succeed.

Adapt and optimise:
After integrating the framework into your processes and gaining experience in applying it, stay updated by adapting and optimising the framework based on your needs.

Tools, techniques and recommendations for using the Framework in practice



8. Tools and tips

Chapter at a Glance:

This chapter sets out tools and tips to facilitate the implementation and process.

Tools and tips for facilitating workshops

The Green Book recommends workshops to identify and appraise options.

One key factor that could determine the workshop's success is to select a good facilitator. The facilitator's role is to provide the workshop participants with the necessary framework and tools in order to tap into the team's potentials. In particular, the facilitator makes sure that the team is staying within the allocated time, maintains objectivity and helps the group to navigate complex discussions.

Another helpful tool to ensure the workshop leads to desired outcomes and provides the structure for the facilitator to follow is a workshop plan. The plan should include the workshop name, its purpose, and a breakdown of each workshop section with an estimated timeline. In the appendix, you can find an introduction to the workshops suggested by the Green Book to arrive at the preferred option and a collection of proposed flow for workshops, such as:

- Workshop to identify and agree the Critical Success Factors (CSF)
- Workshop to determine the role of the local authority

On the right side of this page, you can find a general structure for a workshop plan. In general, it is recommended to consider the following four areas in preparation for a successful workshop[1]:

Objectives: What are the purpose and the goals?

Format: Where and when will the workshop be held?

Participants: Who should participate?

Process: What is the agenda and are there rules to be followed?

Time	Agenda	Topics Covered
5 minutes	Introduction	• Understand who the attendees of the workshop are and their roles • Understand purpose of the workshop and ensure alignment on outcomes
10 minutes	Context	• Overview of context • High level overview of relevant literature / case studies
10 minutes	Discussion and brainstorming	• Facilitated discussions • Summary of generated insights
5 minutes	Next Steps	• Conclusion of the session • Next steps and potentially allocation of tasks

9. References

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Introduction to the insight

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Chapter 2: Introduction – continued

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Chapter 3: Understanding options appraisal

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Credits

This insight has been designed using resources (icons, pictures) from Flaticon.com and Shutterstock.

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Chapter 8: Tools and tips

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10. Appendix

Workshops in the Guide to Developing the Programme Business Case

The Green Book and the Guide recommends to conduct workshops to help identify and evaluate the options for the economic case[1,2]. The Guide outlines the objectives, key participants and the desired output of each workshop. For the first workshop aiming to identify and assess the long-listed options, the Guide's recommendation are as follows[2]:

Objectives

- Identify Critical Success Factors (CSF)
- Identify long-listed options and appraise them
- Identify potential cost, benefits and risks associated with the options which are carried forward

Key participants

- External stakeholders or commissioners
- Director of Finance
- Economic adviser
- Customer and/or user representatives
- Programme manager
- Facilitator

Outputs

- Appraisal of the long-list
- Short-listed options with preliminary assessment
- Information and data for appraisal of the short-listed option

Similarly, the objectives, participants and outputs suggested for the short-list workshop are[2]:

Objectives

- Validate the findings of cost benefit analysis/cost effectives analysis
- Appraise qualitative benefits and risks
- Identify preferred option for the programme that offers best social value

Key participants

- External stakeholders or commissioners
- Director of Finance
- Economic adviser
- Customer and/or user representatives
- Programme manager
- Facilitator

Outputs

- Identification of the preferred option for the delivery of the programme

In practice, it can be beneficial to divide the two workshops into several smaller sessions to keep them concise and effective. For example, the process of defining CSFs is critical and worthy of its own workshop. As helpful tools, a collection of workshop plans for the option process can be found on the following pages.

Workshop to identify and agree the Critical Success Factors (CSF)

Suggested workshop plan:

Time	Agenda	Topics Covered
15 minutes	Introduction	• Introduction of purpose of the workshop and participants • Explanation of CSF and their importance
20 minutes	Context of the programme	• Discussion of key objectives and priorities of the programme
45 minutes	Discussion and brainstorming	• Brainstorming of CSF in smaller break-outs • Consolidation of outcomes of discussions
60 minutes	CSF prioritisation	• Refinement of CSF • Ranking of CSF based on their alignment to the programme goals

Suggested workshop plan – continued:

Time	Agenda	Topics Covered
45 minutes	Definition of measurability	• Decision on how the top ranked CSF should be measured • Key question: What counts as success for this CSF? • Discussion on feasibility for tracking the selected CSF
20 minutes	Conclusion and next steps	• Summary of agreed CSF • Discussion of next steps (e.g., further workshops, assigning responsibilities for tracking / measuring the CSF) • Workshop feedback collection

Workshop to determine the role of the local authority

Suggested workshop plan:

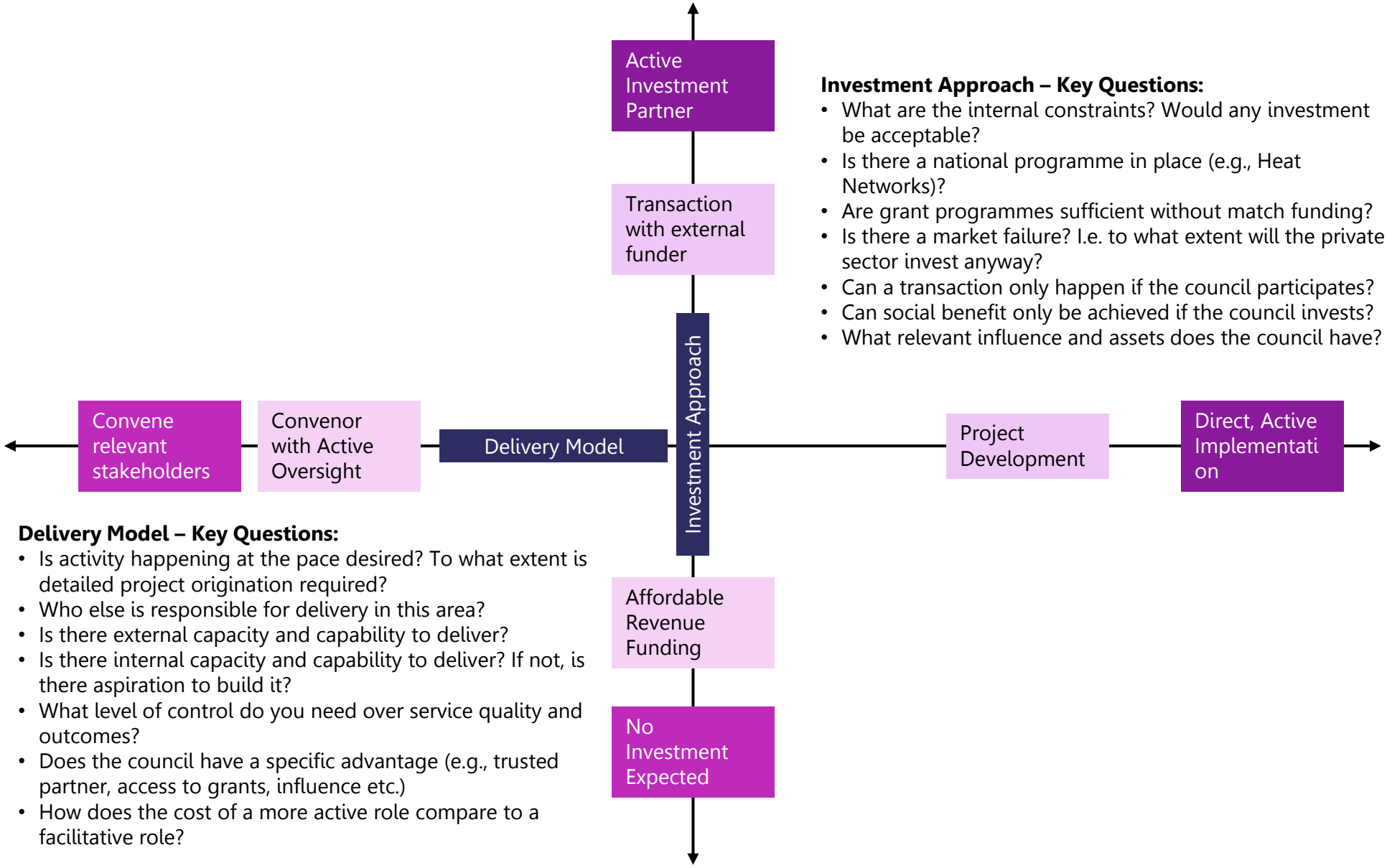
Time	Agenda	Topics Covered
15 minutes	Introduction	• Introduction of purpose of the workshop and participants • Overview of Net Zero and its importance
30 minutes	Introduction of different types of roles	• Overview of the goals of the to-be-discussed programme • Overview of the three role groups
20 minutes	Introduction of Delivery / Investment Axes	• Mapping of scope of influence through discussion • Key questions: Where are the areas where the local authority can make the most impact? Who are the key stakeholders that the authority can influence?

Suggested workshop plan – continued:

Time	Agenda	Topics Covered
10 minutes	Understanding of current perceptions	• Group sharing: "What's working well?" and "What's frustrating or unclear?" • Identify key patterns and outliers
30 minutes	Discussion of current state and future needs	• Overview of current situation • Future visioning with gap analysis • Identify focus areas to bridge gaps
20 minutes	Crystallisation of roles	• Recap of agreed key points • Clarify expectations
15 minutes	Conclusion and next steps	• Discuss potential next steps • Define "commitment statements" for follow-ups

A helpful workshop tool which has been tried and tested in practice follows on the next page.

Workshop to determine the role of the local authority: workshop tool



Investment Approach – Key Questions:

- What are the internal constraints? Would any investment be acceptable?
- Is there a national programme in place (e.g., Heat Networks)?
- Are grant programmes sufficient without match funding?
- Is there a market failure? I.e. to what extent will the private sector invest anyway?
- Can a transaction only happen if the council participates?
- Can social benefit only be achieved if the council invests?
- What relevant influence and assets does the council have?

Delivery Model – Key Questions:

- Is activity happening at the pace desired? To what extent is detailed project origination required?
- Who else is responsible for delivery in this area?
- Is there external capacity and capability to deliver?
- Is there internal capacity and capability to deliver? If not, is there aspiration to build it?
- What level of control do you need over service quality and outcomes?
- Does the council have a specific advantage (e.g., trusted partner, access to grants, influence etc.)
- How does the cost of a more active role compare to a facilitative role?

Solution design workshop

Suggested workshop plan:

Time	Agenda	Topics Covered
15 minutes	Introduction and objective	• Introduction of purpose of the workshop and participants • Overview of programme
30 minutes	Definition of needs and requirements	• List of relevant stakeholders • Discussion on needs, requirements and constrains from stakeholders
60 minutes	Solution generation	• Brainstorming of potential solutions in break-outs • Consolidation of outcomes of discussions and collaborative refinement

Suggested workshop plan – continued:

Time	Agenda	Topics Covered
45 minutes	Development of solution scenarios	• Assignment of solutions to small groups to add details to solution, e.g., operational steps, timeline, required resources
30 minutes	Prioritisation of solutions	• Presentation of detailed solutions to all participants • Applying scoring system to prioritise solutions • Refinement of top 1-2 solutions
25 minutes	Closing and feedback	• Summarise key points • Discussion of next steps (e.g., who is responsible to further analyse the solutions?) • Collect feedback

Multi-Criteria Decision Analysis Workshop for options

Suggested workshop plan for MCDA with criteria weights and normalisation:

Time	Agenda	Topics Covered
15 minutes	Introduction	• Introduction of purpose of the workshop and participants • Overview of MCDA process
20 minutes	Introduction of programme and options	• Overview of programme's goals and context • Development of understanding for the options to be evaluated
45 minutes	Evaluation criteria	• Discussions in break-outs to brainstorm evaluation criteria to be included in the MCDA • Consolidation of outcomes of discussions and agree on criteria to be used
30 minutes	Criteria weights	• Prioritisation of criteria and translating that to weights which adds up to 100%
60 minutes	Scoring options against criteria	• Collaborative assessment of each option • Normalisation of score to a zero to one scale
30 minutes	Score aggregation	• Calculate scores using pre-defined weights • Presentation of results and finalise decision
30 minutes	Conclusion and next steps	• Recap of decisions made • Determination of action items • Collection of feedback

How the commercial models are aligned with LNZA partnership frameworks

Recognizing the increasing pressure on public finances and the demand for innovative solutions, the Greater South East Net Zero Hub outlines six primary partnership frameworks. While these frameworks set up the relationship and how the partnership will function, commercial models outline how value will be created and shared in these partnerships – or in other words, how money flows in the relationship. The graphic below presents the partnership frameworks[3] and, where illustrative, identifies the commercial model (CM) commonly associated with each.

Framework: Wholly owned LA subsidiaries

The local authority (LA) creates a distinct legal entity to manage operations, maintaining full ownership and operational oversight[3].

Exemplary CM: Create new organisation

Framework: Hybrid models combining ownership and operations

Flexible models that integrate elements of both public and private sector participation to meet specific project needs[3].

Exemplary CM: Outsourced model / consortium

Framework: Full concession Joint Venture

A private entity assumes full responsibility for operations and capital investments while the local authority remains a service user. This minimizes the local authority's risk exposure[3].

Exemplary CM: Joint Venture (JV)

Exemplary CM: Concession model

Framework: LA as asset owner / operator with simple operations contracts

The local authority retains control of assets and contracts third-party operators for specific services, offering a balance between control and risk transfer[3].

Exemplary CM: Framework agreement*

Exemplary CM: In-house delivery

Framework: Public-Private Partnerships (PPPs)

A collaborative approach where risks, responsibilities, and rewards are shared between public and private sectors, typically involving long-term agreements[3].

Framework: Strategic partnerships

Specialized agreements with private firms to deliver specific outcomes like energy efficiency or heat network expansion[3].

Exemplary CM: Strategic delivery partner

If you want to learn more about investment partnerships in Net Zero, please refer to the Greater South East Net Zero Hub.

* Sometimes framework agreements are also referred to as a "procurement tool"

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