

Value Toolkit Overview

Construction
Innovation Hub

V2.0 September 2022



Table of Contents

Foreword	3
Executive Summary	4
The Value Toolkit: Overview	6
The Value Toolkit: Process	10
Phase 1: Need	13
Phase 2: Optioneering	16
Phase 3: Design	19
Phase 4: Delivery	22
Phase 5: Operation	25
Delivering Success	27
Contributors	28

Foreword

Informed, value-based decisions support better outcomes from the investment we make in the built environment. Such decisions go beyond simply controlling cost during construction or ensuring that projects are completed on time. Value also encapsulates wider, whole-life considerations: how does it support our net zero ambitions, will it improve the experience of users, will it improve productivity of industry, how can this project support greater social impact, and what is its impact on biodiversity?

The Value Toolkit empowers clients and policy makers to work with their supply chains to make informed, value-based decisions, driving better social, economic, and environmental outcomes. It sets out a series of integrated activities – supported by tools, resources, and guidance – undertaken by a client over the lifecycle of a project or programme to drive better outcomes from the investment in new schools, hospitals, real-estate, utility and transport networks, and more.

Historically, many decisions in the construction sector were made through the lens of cost, with lowest initial price and risk-transfer having a higher priority than outcomes for operators, users, the environment, and, of course, for everyone in society.

Government, clients, and the industry all agree that a different approach is needed. An approach that reflects a shared ambition for a built environment that delivers more – one that provides a springboard for economic growth, enhances communities, and sustains the environment.

An approach that enables a mature, aligned, and productive relationship with the supply chain, unlocking industry to innovate and develop world-leading practices that deliver value in design, delivery, and operation.

The Value Toolkit encapsulates this new approach. It is a suite of tools, processes, and guidance that will empower clients and policy makers to make smarter, more informed, decisions.

Government and private sector clients achieve greater value, certainty, and performance from their investment. Industry can innovate and invest to become more productive, sustainable, and profitable. And society is rewarded with a high-quality, high-performing, and safe built environment that works not just for users, but also enables the delivery of broader social and environmental benefits.



Rory Kennedy

Director of Capital,
Department for Education

Executive Summary

The Value Toolkit will empower clients and policy makers to work with their supply chains to make informed, value-based decisions that drive better social, economic, and environmental outcomes.

This overview document describes the key activities and outputs within the Value Toolkit and how these integrate to support key decisions that – at every stage of the investment lifecycle – allow clients and the market to work together to target, measure and deliver improvements in value.

It enables policy objectives to be delivered more effectively, supports industry to offer greater value to their clients, and enables projects and programmes to deliver better outcomes through how they are designed, delivered, and operated.

The Value Toolkit brings together two integrated streams:

- Value Definition and Measurement
- Client Approach

Value Definition and Measurement

The Value Definition and Measurement process helps clients to articulate what is important to them - their core values and drivers. From this is produced a unique Value Profile for a project or programme. It enables clients to define what success looks like - both the Metrics that should be used to measure successful outcomes and the acceptable Performance Ranges of those outcomes. Bringing together disparate success factors into a Value Scorecard helps to embed value priorities into decision making, enabling clients to compare very different options and exercise informed choice in deciding how to proceed with a project or programme.

This stream establishes a reference point for value-based decision making across the asset lifecycle and signposts to the market the relative importance of different aspects of value in future decisions. The Value Profile helps clients to demonstrate alignment with national, organisational, and regional policies and priorities, translating these into measurable outcomes that can be achieved through a specific project or programme.

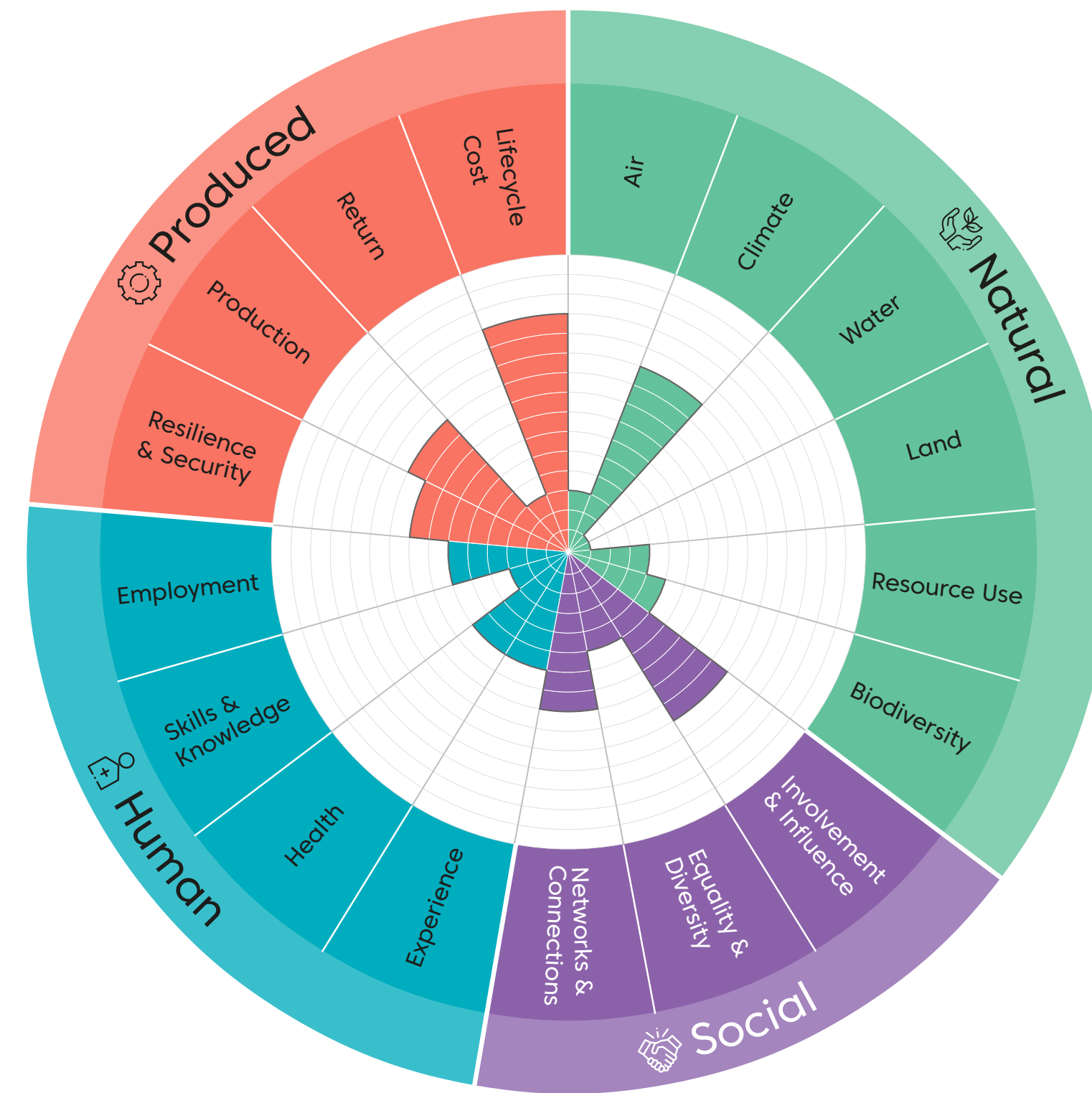


Figure 1: Example Value Profile

Client Approach

The Client Approach stream identifies activities that will help clients ensure their core values are achieved throughout the project or programme. These activities fall into three broad groups:

1. Commercial: Such as selecting a Delivery Model and building a Commercial Strategy that best fits the Value Profile. It focuses on how clients can work with the market to deliver value and address risks. It determines how to embed, enhance, and protect the Value Profile within the contractual and procurement processes to maximise the chance of value being delivered.

2. Risk: Helping clients to identify and manage risk throughout the project. The Value Toolkit provides guidance to assist clients in moving from conventional risk transfer methods towards active and risk management approaches, mitigating and assigning risk in the most appropriate way.

3. Appointments: Helping clients build a team of highly motivated individuals and organisations that will deliver all phases of a project – from the validation of the business case through to the operation of the asset.

Business Case Development

On the Integrated Process, the steps of the HM Treasury (HMT) business case process have been mapped. This is to provide reference points on how and when the Value Toolkit process aligns and can support the development of business cases. We have used the HMT Green Book process to show this signposting, but other business case processes may be similar.

The Value Toolkit: Overview

Purpose

The Value Toolkit will drive better social, environmental, and economic outcomes during both the delivery and operation of built assets.

It provides a way of defining and measuring value – as opposed to cost – which can be applied consistently throughout a project or programme lifecycle, from early business cases through to use of an asset. But change will not be delivered by a process alone. The Value Toolkit also enables clients to understand the role they should play in realising their desired outcomes.

The Value Toolkit sets out a series of integrated activities which support value-based decision making. It gives policy makers and budget holders a deep understanding of value and so enables them to make meaningful value choices and trade-offs. Within each of the two streams of the Value Toolkit, there are activities, deliverables, and decision points. These are not isolated streams, but involve interaction, iteration and continuous review.

The principle of value-based decision making is already used in both Government and private sector investment policy. HM Treasury's Green Book and private sector ESG investment criteria encourage this approach. But implementation often lacks consistency and there is a gap between policy and performance. The Value Toolkit fills this gap by providing a process which shows how to make and implement value-based decisions.

The Value Toolkit guides and prompts decision making. The maximum benefit will be derived by using the Value Toolkit as a supporting tool for workshops and meetings and as a mechanism for recording, justifying, and embedding key decisions. The Value Toolkit is not something that should be used by one party in isolation of the rest. It promotes collaboration, challenge and transparent decision making and should be used by all parties involved in a project or programme.

Using the Value Toolkit will increase the likelihood that the final built asset will deliver the client's desired outcomes and will give the client the ability to measure achievement of those outcomes. It can be used for new-build projects or programmes across all sectors of construction, but also provides a framework for identifying and planning interventions throughout the life of an asset.

The use of the Value Toolkit will strengthen the early phases of a project or programme. It demands considerable rigour in defining the outcomes to be delivered and understanding the client's approach to project delivery and risk, which will take time. But this will be more than offset by efficiencies realised in the design and delivery stages – ultimately leading to a better overall solution.

“The Value Toolkit is a powerful tool to use following the initiation of a programme or project. It supports the optimisation of design, delivery, and operation in the built environment, adhering to clear, high-level objectives. It should of course be used alongside HM Treasury's Green Book, Business Case guidance and the Treasury Approvals Process for the appraisal and approval of public spending proposals, none of which it supersedes. It could be particularly useful in both development and delivery workshops, to help translate high level economic, environmental, and social objectives into key areas of focus for design and delivery.”

HM Treasury, June 2022

The Four Capitals Approach

The Value Toolkit uses the capitals approach as a way of defining value. Whilst the capitals approach may be new for a construction audience, it is familiar to a corporate audience – where many construction-related decisions are made. It also aligns with HM Treasury’s Green Book, against which public sector investment decisions are made.

There is an international movement towards a capitals approach for managing impacts and dependencies. The definitions in the Four Capitals Approach have been agreed upon following extensive consultation and engagement with UK and International governments, investors, businesses, academia, and society.

The Four Capitals Approach used in the Value Toolkit has been developed by the Capitals Coalition and defines a capital as any resource or asset that stores or provides value to people.

The capitals approach reflects how a project or programme may have an impact on a capital, and how it may depend on a capital. For example, a project may have an impact on biodiversity and may depend on the availability of local labour. This contextualises how projects and programmes relate to the capitals and illustrates the business case for protecting and investing in them.

All capitals are interrelated, forming part of a wider system. Their effective consideration requires an integrated approach to their assessment and embedment into decision making – the approach provided by the Value Toolkit.



Figure 2: Four Capitals Approach

Project and Value Context

To apply the Value Toolkit effectively, there is a need to understand the principle of outcomes in both the traditional project context and the broader context set out under the Four Capitals approach.

PROJECT CONTEXT

The project context relates to the overarching aims and activities undertaken to meet a need identified by the client. In traditional construction projects, this is often described as “scope, time, quality, and cost”, but this misses the key question of why the project is needed. Within the Value Toolkit, we identify Mission – which gives this context for the project.

- **Mission:** the overall aim to meet a need, often but not always by building something (for example, the need to meet the rising demand for primary school places).

VALUE CONTEXT

Within the Value Toolkit, the broader value context is also considered. Value is created by delivering outcomes and these outcomes are categorised in two ways, Core Outcomes and Value Outcomes. Collectively these are the Strategic Objectives for the project or programme.

- **Core Outcomes:** are those areas of value that are critical to the successful achievement of the Mission. For instance, improving the educational attainment of pupils in a new school; and
- **Value Outcomes:** are those areas of value that are critical for the short, medium, and long-term priorities of the client that can be leveraged through the delivery of the Mission. For instance, delivering net-zero carbon by 2030, or creating long-term employment opportunities for the community. Value Outcomes are described more fully within the Value Definition Framework.

RELATIONSHIP BETWEEN CONTEXTS

The key distinction between these two categories is that Core Outcomes are critical to the success of the project as defined in the Mission. Delivery of the Value Outcomes is equally critical, but they are not part of the Mission, in that you do not build a new school to deliver net-zero, for example. The relationship between these elements is illustrated in Figure 3.

The Value Toolkit is focused on the achievement of these Core and Value Outcomes, it supplements all the other processes required to design and deliver an asset to meet the client’s requirements.

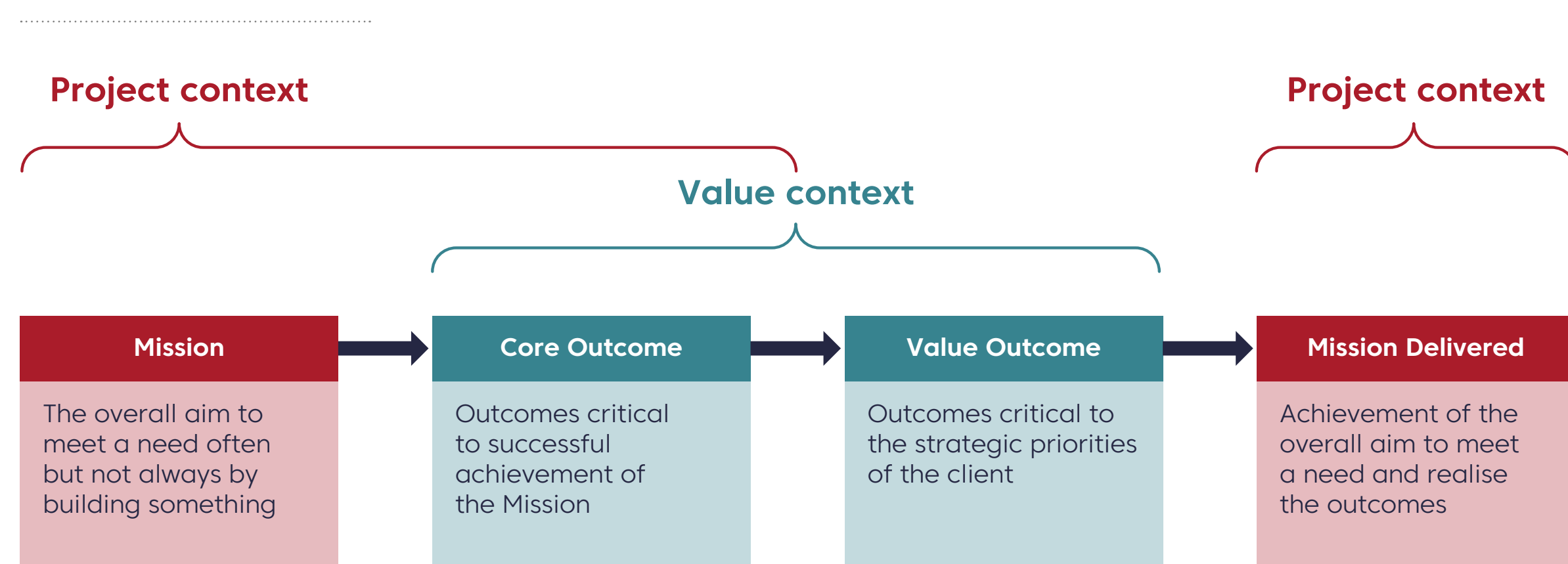


Figure 3: Project and Value Contexts

MEASURING VALUE

Measurement of value is based on whether both the Core and Value Outcomes have been achieved. The most direct and definitive way is to measure the impact delivered. However, this can often only be done at the end of a project or programme, by looking back and reviewing what has been achieved.

The purpose of the Value Toolkit is to enable better decision making throughout the investment and project lifecycle. This means that forecasting and measuring value throughout the project or programme during the Need, Optioneering, Design, and Delivery phases is as critical as measuring the total value created once an asset is in operation. There is too often a chasm between Strategic Objectives and value measurement, which must be addressed to maximise impact and for our decisions to be truly value-based.

Measurement of value for each phase of the project lifecycle will differ, firstly as not every Outcome Driver will be able to be progressed at each phase and secondly because at the earliest stages of a project, it may only be possible to create high-level forecasts of inputs and outputs.

This is where the whole Value Toolkit and the capitals approach to accounting for value helps. It can be described through an input, output, outcome, and impact flow as illustrated in Figure 4. Some examples of measures at each of these stages are given in Table 1.

STAGE	DESCRIPTION	
Input	The resources used to undertake activities	The time and resources to deliver training during construction of the school; or the investment in habitat planting
Output	The product or service that are created, or the by-products or waste from a process	Number of hours of training delivered and number of participants involved in the training; or 1.5 hectares of land planted with diverse species
Outcome	The positive or negative change in state or condition of the capital due to project activities	Improved skills and knowledge of the individuals who took part; or improvement in biodiversity
Impact	The positive or negative things that happen as a result of the outcome being achieved	Increase of workers' income through access to more skilled positions; or health benefits from recreation in green areas

Table 1: Examples of measures for input, output, outcome and impact

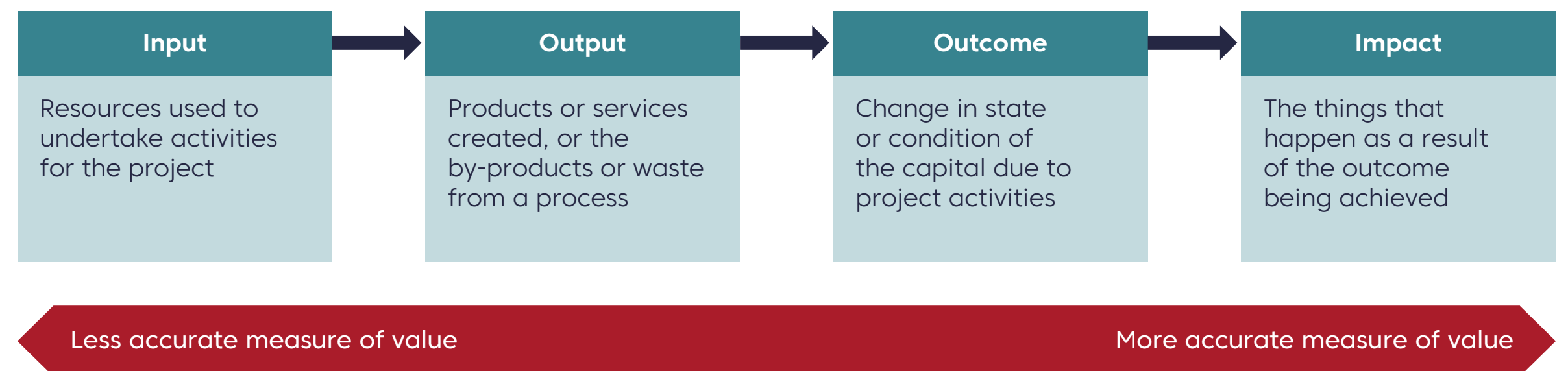


Figure 4: The input, output, outcome, impact flow

The Value Toolkit: Process

An Integrated Approach

By considering clients' approach to both value and risk as a project or programme develops, the Value Toolkit's two integrated streams provide a transparent and rigorous process which will lead to better informed decisions being made more quickly.

The Value Toolkit starts with the assumption that value can be defined, but also that it is fluid and can be either created or destroyed. Therefore, while the Value Toolkit provides guidance on how value can be defined and measured, it is neutral on what value means for any project or programme. Instead, it provides a robust framework within which clients can explore their required outcomes.

The Value Toolkit process has five distinct phases:

- **Need**
- **Concept Design Optioneering**
- **Detailed Design**
- **Delivery**
- **Operation**

These are the key phases in the process of defining and delivering value and whilst they can easily be aligned to the delivery of a construction project, they are designed to be generic terms that can be applied to any intervention in the built environment, whether that be construction of a new asset, operation / repair / maintenance of an existing one, or development of a product or service.

The diagram on the following page demonstrates how the Value Toolkit phases map onto different project overlays.

A new standard from British Standards Institution, [BS Flex 390 Built environment – Value-based decision making – Specification](#) has been published that sets out the requirements for undertaking value-based decision making. The Value Toolkit sets out the detailed processes and tools for each phase aimed at helping the client make more informed, value-based decisions. The process is supported by a dedicated web application for recording decisions and producing the Value Profile and Value Scorecards. A detailed version of this Integrated Process can be found on the [Value Toolkit website](#).

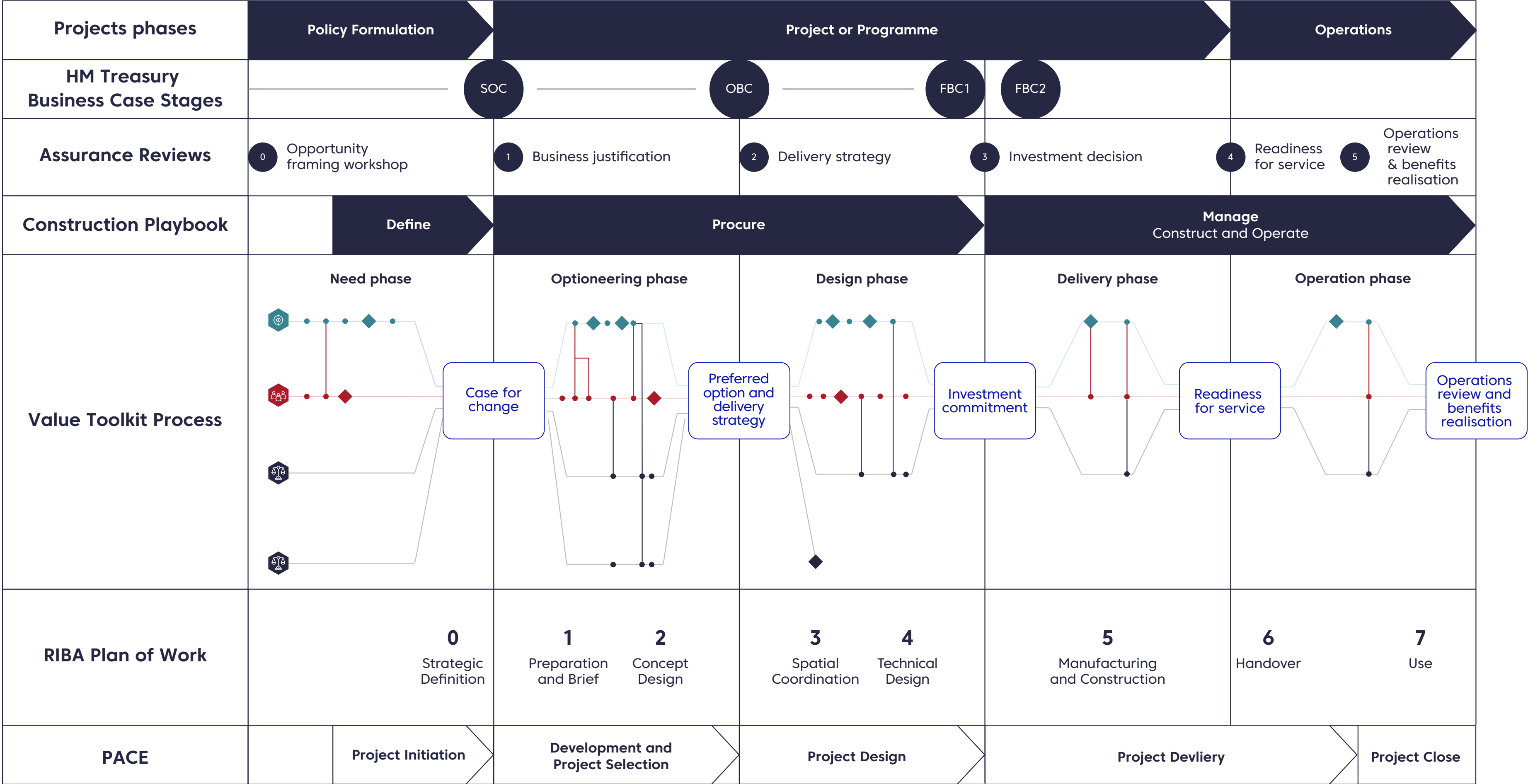


Figure 5: Value Toolkit: Alignment with other processes (indicative only)

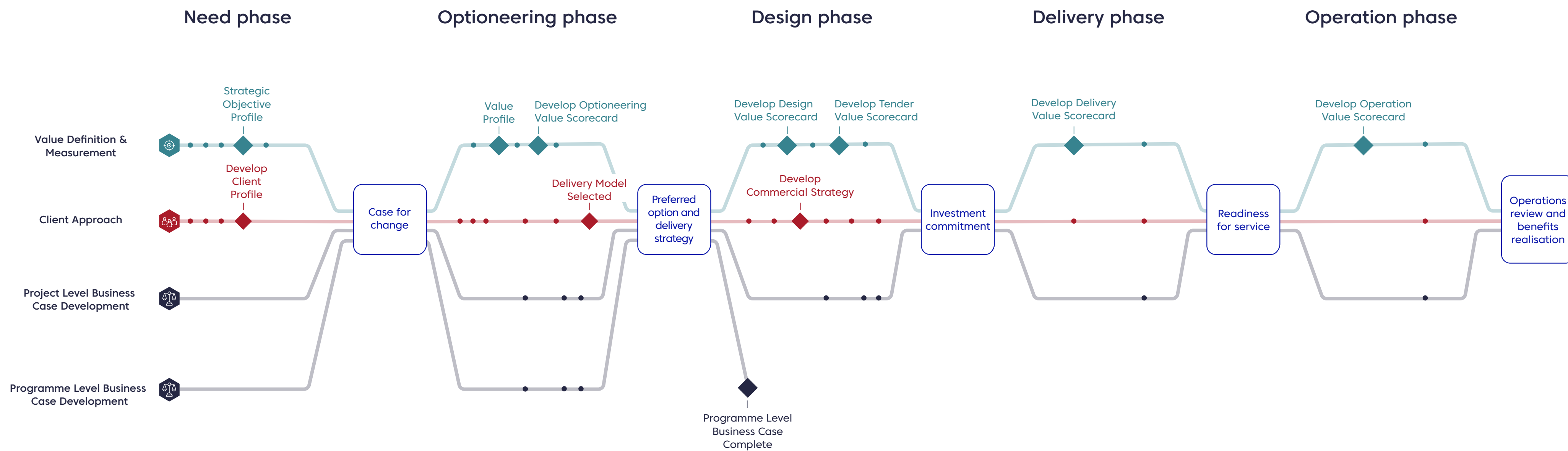


Figure 6: Value Toolkit Integrated Process (outline only).
 A fully detailed version of this process is [available here](#)

The following sections provide an outline of the purpose, activities, and key outputs for each stage.

Phase 1: Need

Purpose

The Need phase defines the problem that needs to be solved or goals that need to be achieved. It includes consideration of whether any intervention is required or whether a 'do nothing' option is the right conclusion at this stage.

Key Deliverables

◆ Strategic Objective Profile

◆ Client Profile

Key Decision

The Need phase answers the question, 'Is there a case for change?' At the end of this phase, the final task for the client and the Strategic Team will be to review the Strategic Objective Profile and confirm that a case has been made to start developing solutions.

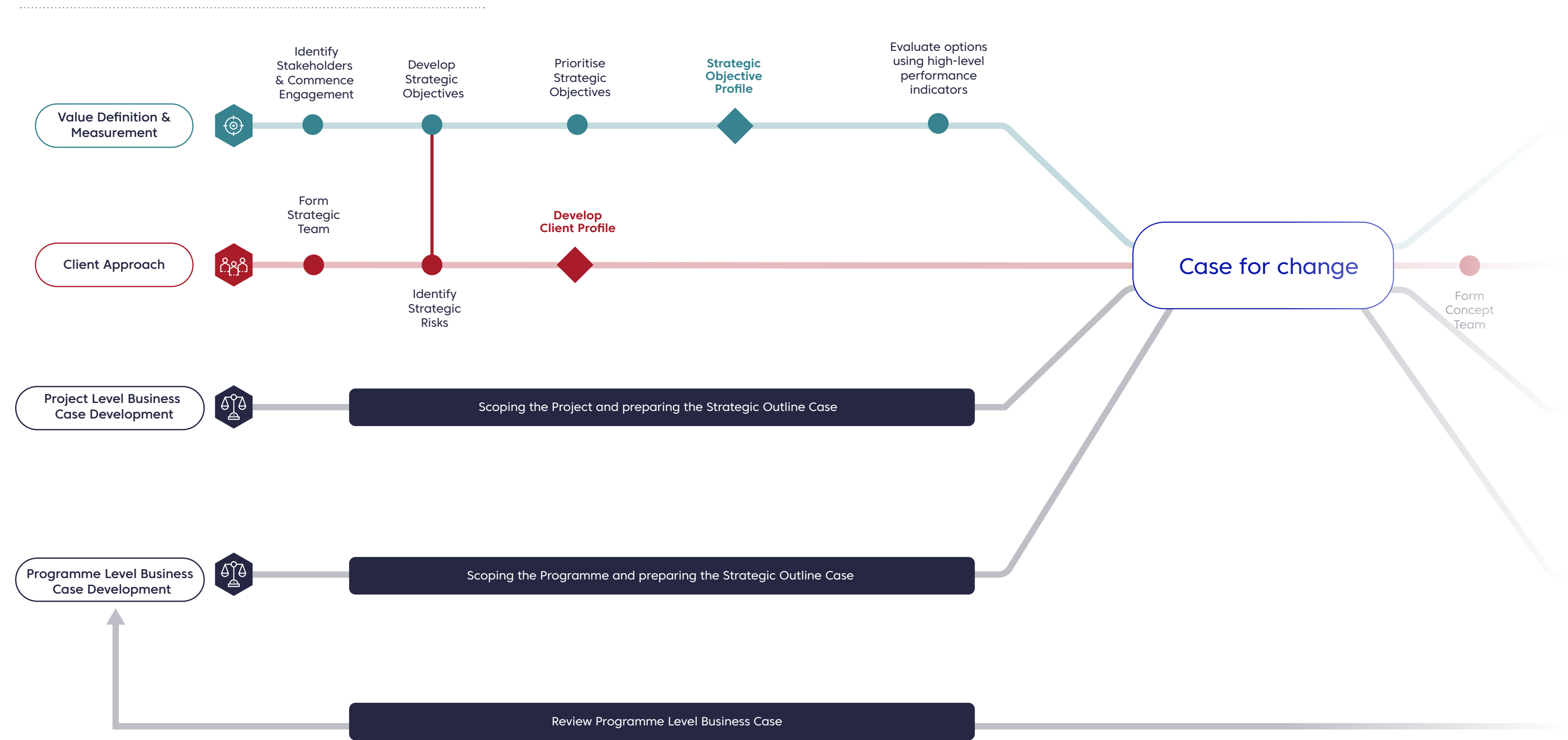


Figure 7: Value Toolkit Integrated Process - Need
The full version of this process is [available here](#)

Strategic Team

The Strategic Team should be established at the earliest stage possible to own the implementation and governance of the Value Toolkit process and delivery of the Strategic Objectives to ensure project or programme success. It should be a rounded team combining a mix of client sponsors, their in-house experts, and external advisors. The team should also include a Value Toolkit Facilitator, an individual qualified to own and manage the Value Toolkit process.

Strategic Objective Profile

In the Need phase, a unique Strategic Objective Profile for a project or programme is created. This profile records the Strategic Objectives of the client and the wider stakeholders and establishes a reference point for value-based decision making. It is also an early signpost to the market of the basis on which decisions will be made.

An essential first step in creating the Strategic Objective Profile is stakeholder engagement. Engagement with wide-ranging stakeholders, from internal client departments to end-users and community groups, will enable the Strategic Team to identify the Strategic Objectives. These include the Core and Value Outcomes that shape the outcomes the project or programme must deliver.

Embedded in the Value Toolkit is a Value Definition Framework, which helps clients to organise their Strategic Objectives and to articulate their desired outcomes. The Value Definition Framework is based on the Four Capitals Approach and sets out 17 value categories relevant to the built environment.

The Strategic Objectives are objectively prioritised and combined by value category to generate a visual representation in the Strategic Objective Profile.

[Hub to send updated link - as this link is faulty](#)

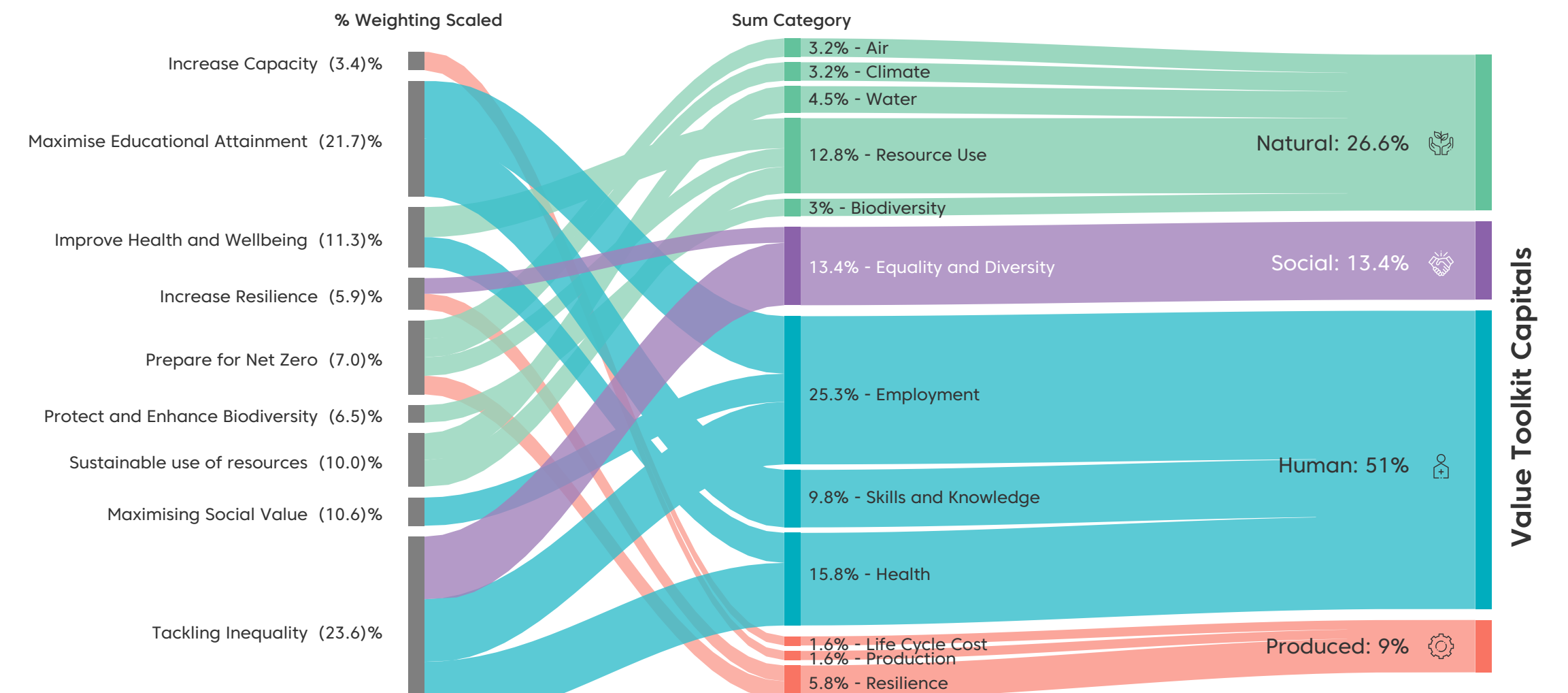


Figure 8: Example Strategic Objective Profile

Client Profile

While the Strategic Objectives are being developed, the Strategic Team will map the client's current characteristics and its potential project deliverability environment to produce the Client Profile. This demonstrates where a client is best placed to take on roles and responsibilities and where these should be avoided.

This mapping captures the purpose, values, and plans of the client organisation and how the client interacts with the external environment. They are considered in the context of the project or programme and capture the things that are important to the client, the technical complexity of the project or programme, and its corporate importance.

They also capture how, historically, the client has approached projects and programmes of work. This tests how the client will approach current and future projects and programmes. It also examines the resourcing model and leadership style.

Strategic Risks

Once the Strategic Objectives have been identified the Strategic Team will identify the strategic risks that may impact on the successful delivery of the Strategic Objective Profile.

The Value Toolkit guides clients to consider risk in terms of the four capitals, which leads to a broader, more holistic approach to risk than the traditional time, quality, and cost perspective.

High level performance indicators

As the Strategic Objective Profile develops, the Strategic Team may wish to set some high-level performance indicators against the Strategic Objectives to support the evaluation of options, against the Strategic Objective Profile. More detailed Metrics and Performance Ranges will be developed through the Concept Design Optioneering and Detailed Design phases.

The development of the Strategic Objective Profile along with consideration of Client Profile and risk will contribute to the development of the strategic outline case in the business case process.

Phase 2: Concept Design Optioneering

Purpose

The Concept Design Optioneering phase considers alternative options that address the need. Outline designs are created, compared, and evaluated against the Value Profile. A recommendation is made on the preferred option.

Key Deliverables

-  Value Profile
-  Optioneering Value Scorecard
-  Delivery Model

Key Decision

The Concept Design Optioneering phase answers the question, 'What is the preferred option?' At the end of this phase, the client sponsor and the Strategic Team must confirm the scope of the option to be taken forward and the Delivery Model.

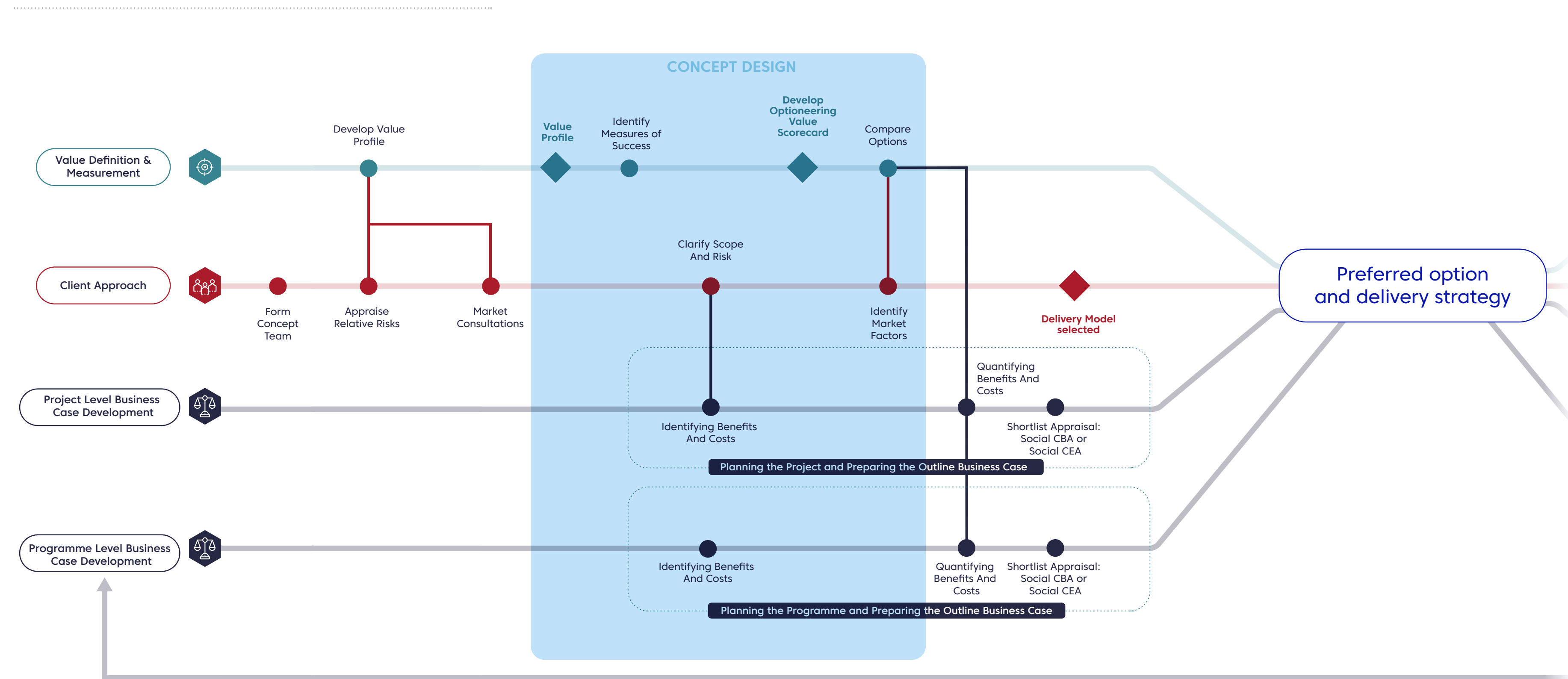


Figure 9: Value Toolkit Integrated Process - Optioneering
The full version of this process is [available here](#)

Concept Team

In the Concept Design Optioneering phase, the Strategic Team continues to direct the project or programme but will need to form a much wider team – the Concept Team – who understand what the Strategic Objectives mean, how they interrelate, and have the capability to develop suitable concept solutions. The size and extent of the Concept Team will be determined by the nature, scale, and complexity of the project or programme.

Value Profile

The Strategic Team will translate the Strategic Objectives into project or programme specific Outcome Drivers. These are SMART statements that translate the Strategic Objectives into actions and priorities that can be embedded within the scope of the project or programme and will help to achieve the Strategic Objectives.

Once developed, the Outcome Drivers are rated for their scale of influence to deliver the Strategic Objectives. These prioritisations are rationalised and combined by value category to generate a visual representation in the Value Profile.

Measures of Success

After the creation of the Value Profile, focus is moved to how the Outcome Drivers can be measured. The first step is for the client and Strategic Team to identify their Measures of Success - these are the Metrics and Performance Ranges that will demonstrate that the Outcome Drivers have been achieved.

A Metrics Library is provided to support selection of suitable Metrics for each Outcome Driver contained within the client's Value Profile. The measurement of performance within the Value Toolkit can be aligned with existing measurement activities already undertaken by the client (for example [BREEAM](#) and [National TOMS – Social Value Portal](#)), with the ability to combine multiple methodologies while identifying any measurement gaps to be addressed.

Optioneering Value Scorecard

For each key decision in the lifecycle, a Value Scorecard is created to articulate how value can be measured at that point. The first of these will be an Optioneering Value Scorecard.

In creating a Value Scorecard each Outcome Driver should be considered as to whether its achievement can be progressed at this stage; if it cannot be progressed then it should be excluded from this Value Scorecard.

For each Outcome Driver within the Value Scorecard, the team must then consider whether the Metric used in the Measures of Success can be forecast or measured at this stage. If not, then a proxy Metric should be identified to enable forecasting or measurement. Performance Ranges, incorporating Minimum, Target, and Maximum Performance levels should be agreed with the client. The real-world Metrics, Performance Ranges & Targets are converted into a points-based index, which allows the comparison of different options.

The Value Scorecard is used by the Concept Team to iteratively test and evaluate different solutions against the Target and against each other, eventually narrowing these down to a single preferred option.

Once the concept design is completed and the options compared in the Value Scorecard, the outcomes of the comparison can be incorporated into the process of quantifying costs and benefits, to feed into the shortlist appraisal and outline business case.

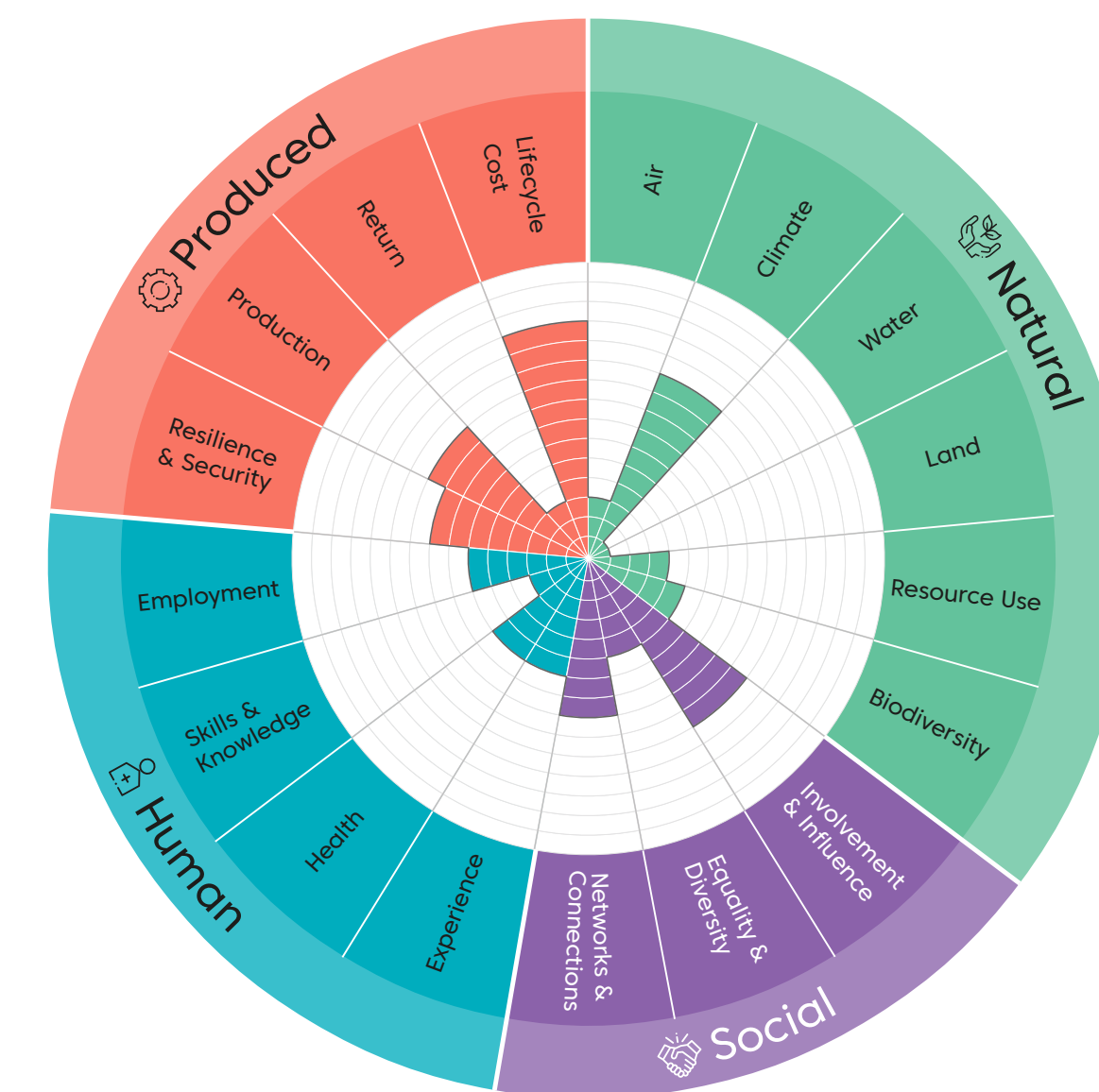


Figure 1: Example Value Profile

Market Consultation

The Strategic Team will carry out market consultation in this phase. This enables the team to test if the market can deliver the desired outcomes, evaluate market constraints or innovations. It will also feed into consideration of potential risks from a market perspective, for example, market appetite or availability of competent Delivery Organisations, buildability and materials availability.

Engagement with the market will enable the Strategic Team to test the risk associated with delivering the Value Profile from a wider market capacity and capability point of view.

Delivery Model

The market consultation will also help to identify the market factors which will influence the selection of the Delivery Model. The Strategic Team will consider how the market dynamics may shape and inform the solution options and influence the risk assessment.

STRATEGIC APPROACH	COMMON FEATURES
1: Transactional “I know my requirement, who can best deliver it?”	Traditional approach in which the industry is engaged to provide a standard service, with competition at procurement
2: Hands-on leadership “Given the complexity I’ll need to watch over this closely.”	Complexity of work and stakeholder environment in which the client needs greater control. Certainty of outcome and stakeholder management are more important than lowest cost
3: Product mindset “I need lots of these and need them to get better, greener and faster.”	Learning the lessons of repeatability from manufacturing, often with extensive use of digital design and Design for Manufacture and Assembly. Should lead to progressive improvement and efficiency. Viability depends on a visible pipeline of repeatable products
4: Hands-off design “I need to solve this problem, and I am willing to allow significant flexibility as to the solution.”	The client is clear on the outcome and agnostic as to the solution (which may not even require a physical structure). Open to innovation and amenable to using technology to solve the problem instead
5. Trusted helper “I need help, come and perform for me without me having to tell you how that needs to be done.”	The client is focused on its core business and requires competent suppliers (often in a safety critical environment) that may know the client’s operating procedures or technical challenges better than the client. There is close proximity between client and market, and workloads may fluctuate

Table 2: Delivery Models (Adapted from the Construction Playbook⁴)

Appraising Risk

In parallel to other activities, the Concept Team will use their expertise to help identify and scope risks to the project or programme in each of the different solution options.

The Strategic Team will work with the client to establish and assess the nature and potential impact of the identified risks and develop a risk management approach for the project or programme. The client’s appetite for risk and the risk management strategy are captured in the risk assessment.

The Strategic Team can now make a recommendation on the optimal Delivery Model for the project or programme based on a thorough understanding of:

- The Value Profile;
- The Client Profile;
- The risk assessment;
- Feedback from the market; and
- The solution options.

⁴<https://www.gov.uk/government/publications/the-construction-playbook>

Phase 3: Detailed Design

Purpose

The Design phase develops the selected solution in enough detail to allow Delivery Organisation(s) to be procured; this may be concept or full detailed design, depending on the Delivery Model selected.

Key Deliverables

-  Design Value Scorecard
-  Commercial Strategy
-  Tender Value Scorecard

Key Decision

The Design phase answers the question 'What is the preferred option for delivery?' At the end of this phase, the final task for the client and the Strategic Team will be to confirm the preferred option for the delivery of the project or programme.

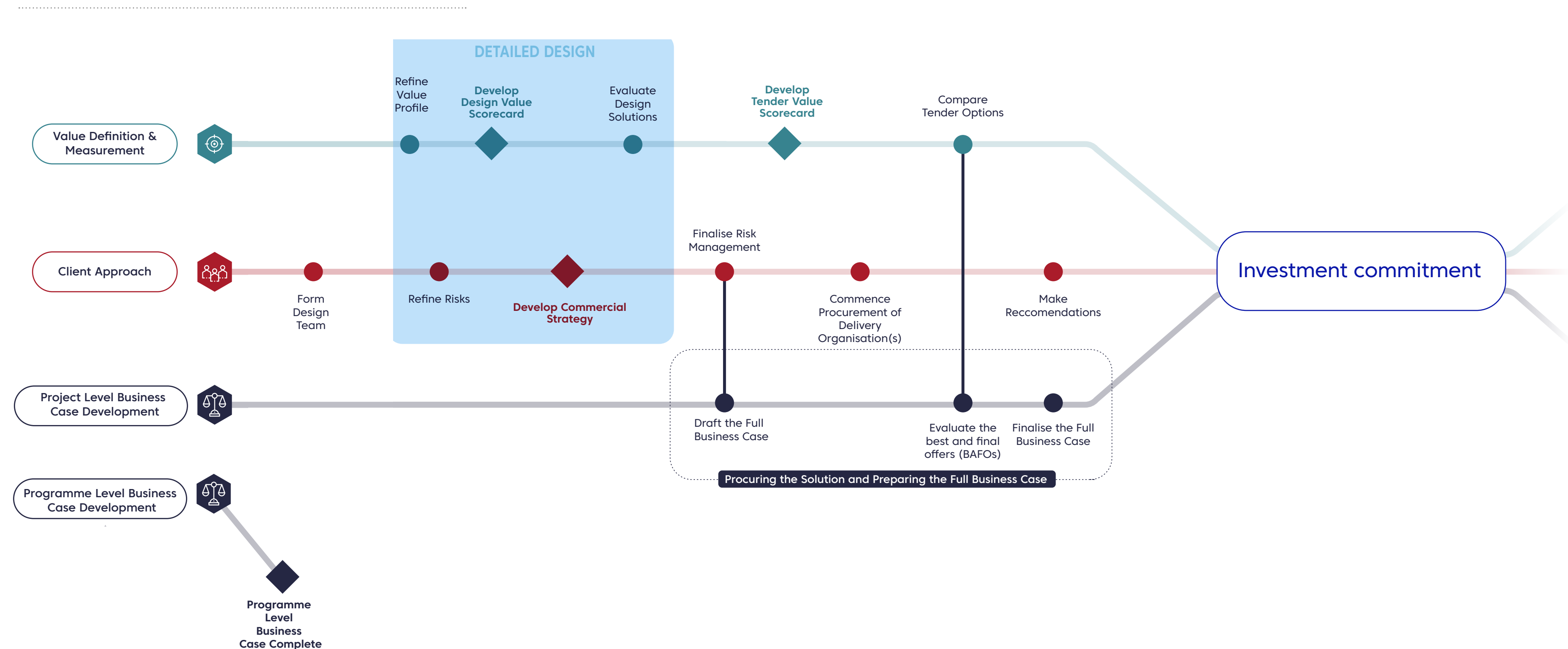


Figure 10: Value Toolkit Integrated Process - Design
The full version of this process is [available here](#)

Design Team

In the Design phase, the Strategic Team will manage the process of selecting and appointing the Design Team, with the extent of their role being determined by the Delivery Model selected. Whilst it is not shown on the Integrated Process, it is recommended that a Value Scorecard is developed for the selection process.

The Value Profile is a key factor in shaping the Design Team. The Design Team must be made up of individuals and companies that understand what the outcomes mean and how they interrelate; having the capability to develop solutions which will deliver the desired outcomes. The Design Team will include experts across the value categories, and is likely to include designers, cost-managers, social value practitioners, and environmental specialists.

The role of the Design Team is to use their expertise in the value categories to develop the design solution to the stage where there is sufficient information available to commence procurement of Delivery Organisation(s). The Design Team will also use their expertise to help refine the Value Profile and project risk management and to contribute to the design of the Commercial Strategy.

Refine the Value Profile

The Strategic Team should now refine the Value Profile to ensure alignment with the chosen solution, selected Delivery Model, and risk management.

In addition to reviewing the Outcome Drivers the review should also include the activities undertaken in the Need phase including stakeholder engagement, and development of Strategic Objectives. This may take place many months or even years after the initial Value Profile was agreed. By this stage in the project or programme, the Stakeholder Engagement may be considerably wider than in the earlier phases. The purpose of this review is to sense-check the Value Profile, not to reset the entire process.

Design Value Scorecard

Following the review, a Design Value Scorecard should be developed, following the process outlined in the Optioneering phase.

Having refined the Value Profile for the chosen solution, the Strategic Team, with support from the Design Team, will create the Design Value Scorecard using the process outlined in the Optioneering phase.

As the design development progresses, the Design Team must evaluate the design solution(s) against the Design Value Scorecard, to demonstrate that the desired value is being optimised during the Design phase.

Tender Value Scorecard

As the Design phase draws to a close, the Strategic Team must develop the Tender Value Scorecard to identify all the Outcome Drivers that tenderers will be required to either influence or demonstrate their performance against. Once this Tender Value Scorecard has been finalised it should be frozen to enable the procurement process for the Delivery phase to commence.

Using the Tender Value Scorecard, the procurement team can clearly communicate the performance requirements that must be met by potential Delivery Organisations and how actual performance will be monitored (with the Commercial Strategy establishing how this will be reflected in contracts). The Tender Value Scorecard is then used to compare the different tender options and to determine which offer delivers best value for the client.

Commercial Strategy

The Commercial Strategy sets out how the solution will be bought and delivered, how and when Delivery Organisation(s) will be paid, and the contractual agreements underpinning this. The Commercial Strategy will consider how disparate and parallel activities come together and how interfaces are to be dealt with.

With the scope and the Delivery Model fixed and the Value Profile and Value Scorecard frozen, the Strategic Team can finalise the Commercial Strategy, including delivery packages, reward & incentivisation models, and the contract strategy. At this stage, the Strategic Team may need to be augmented with specialist legal and procurement advice – the procurement team.

Procuring the Delivery Organisation(s)

The procurement team will take each package to the market in accordance with the client's procurement policy, for example, through existing frameworks, through an advertised competitive tender, or through a negotiated process. Following the assessment of potential Delivery Organisation(s) offers or tenders against the Tender Value Scorecard, the procurement team will make a recommendation and feed it into the development of the full business case.

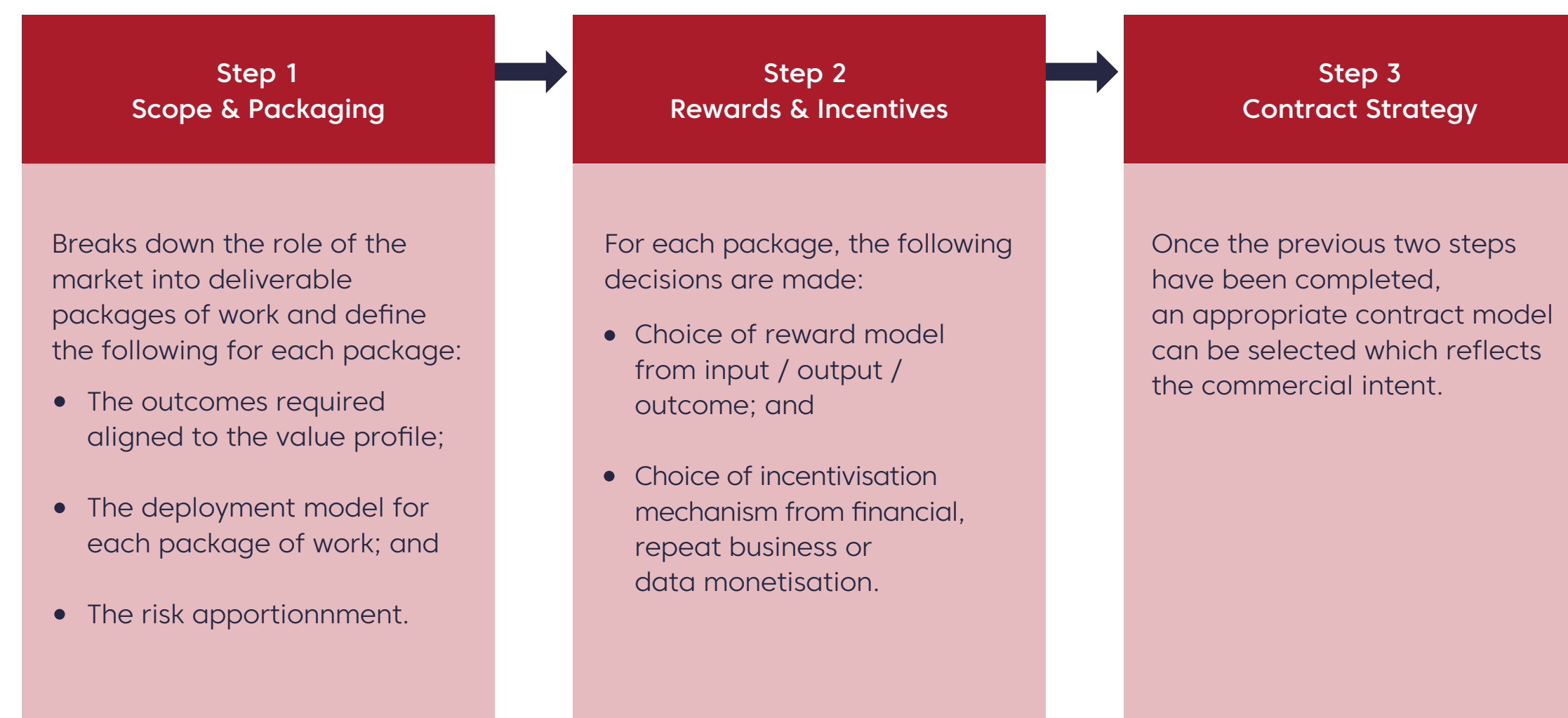


Figure 11: Designing the Commercial Strategy

Finalising Risk Management

With the solution confirmed, and the Delivery Model, scope & packaging agreed upon the Strategic Team should re-visit and refine the project risks.

Once the design solution has been developed (to the extent required by the Delivery Model), and the Value Profile and Value Scorecard have been frozen, the Strategic Team must overlay the project risks with the Commercial Strategy to finalise the risk management process. This will demonstrate to the client that all identified risks are allocated, that they will be managed in a way that is acceptable, and that this is reflected in the contractual arrangements.

Phase 4: Delivery

Purpose

The Delivery phase commences when the contract is awarded and the solution delivered, including any further design work. Throughout this phase, progress is monitored; both to record outcomes realised in delivery and to refine predicted outcomes relating to operation.

Key Deliverable

 Delivery Value Scorecard

Key Decision

As well as measuring and monitoring value through delivery, this phase ultimately answers the question 'Has the value been delivered?'. At the end of the Delivery phase, the Strategic Team will confirm to the client that the outcomes have been achieved. This will give the client a picture of the efficacy of the solution and the Delivery Organisation(s) at that moment in time. This may be the basis for triggering contractual incentivisation mechanisms, although these may extend well into the Operation phase.

The value at handover will give the client a datum against which ongoing operational performance can be measured, and an opportunity to apply learning from one project into subsequent projects.

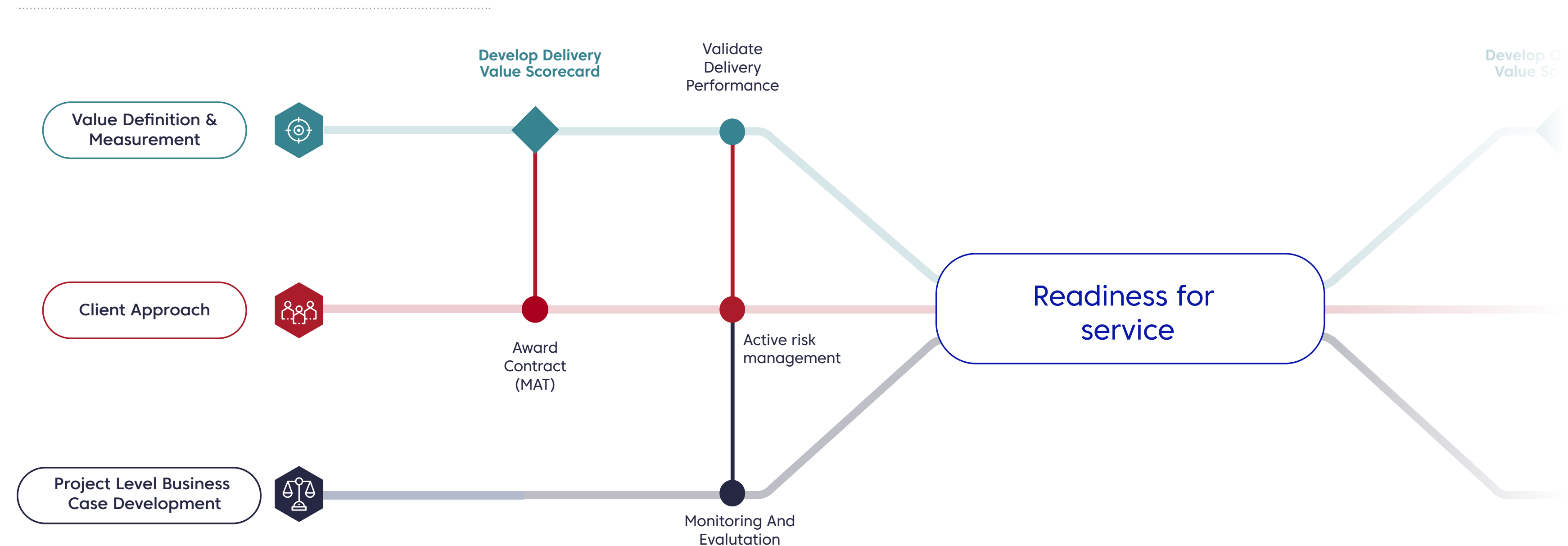


Figure 12: Value Toolkit Integrated Process - Delivery
The full version of this process is [available here](#)

Contract Award and Delivery

Before anything can be delivered, the Delivery Organisation(s) must be formally engaged. The client must award the contract to the successful organisation(s) and notify unsuccessful organisations, in accordance with the process set out in the tender invitation.

Following the award, the client and the Delivery Organisation(s) will execute the contract.

The client's primary role throughout the Delivery phase is to manage stakeholders, both external to and within their own organisation, and to allow sufficient space for the Delivery Organisation(s) to deliver the solution.

Once the client has committed to awarding the contract to a Delivery Organisation(s), there will be a change in the dynamic of the project or programme, and it is important that the client is prepared for this. Prior to award of contract, the client is integral to the development of the Value Profile, the project or programme scope, and the solution. Following execution of the contract, the client's ability to further influence the solution or the delivery of the solution is much more limited.

As the Delivery phase progresses, the client's attention should turn to the Operation phase; how and when the asset will be handed over to the client (or their operations organisation) and the preparation that is required to achieve operational readiness. This may require very close integration with the delivery team (for example, adopting a soft-landing approach), or see the client having limited involvement (for example, where a design, build and operate model is used).

Active Risk Management

Throughout the preceding phases, risk is identified, evaluated, and apportioned, and a risk management plan put in place. But much of this work is theoretical – in preparation for the Delivery and Operation phases. It is during these later phases that risks are likely to surface and a very active approach should be taken to the coordination of risk activities across all parties.

The Strategic Team will use the Value Toolkit to promote active risk management. This approach encourages the client and Delivery Organisation(s) to share knowledge and risk awareness with a focus on the prevention and mitigation of risk, not apportionment of blame.

Prior to the appointment of the Delivery Organisation(s) some level of solution design will have been undertaken and may continue after they have been appointed. The extent of this design and where the responsibility lies will vary depending on the Delivery Model, but important knowledge will be lost, and time wasted if there is not comprehensive design integration between the two areas of design responsibility.

Delivery Value Scorecard

The Value Toolkit supports the Strategic Team in assessing and recording the actual performance of the Delivery Organisation(s) compared to the performance set out in the contract.

During the Delivery phase, the performance of the Delivery Organisation(s) will be monitored using the Delivery Value Scorecard. This should be identical to the Tender Value Scorecard, but the Target values in the Performance Ranges should mirror those set out in the Delivery Organisation(s) tender. This includes direct measurement of outcomes realised in the Delivery phase (for example, local air quality, apprentices employed). Depending on the form of contract, it can also include prediction or projection of performance for outcomes associated with the Operation phase (for example, operational energy, indoor air quality). This model can also be used to monitor performance of designers.

Regular joint validation exercises with the Delivery Organisation(s) will allow them to take any necessary corrective action and will also allow any contractual incentivisation mechanisms to be applied.



Figure 13: Comparison of actual vs. target performance

Review Value Profile

The Value Toolkit recognises that the actual outcomes realised may not always reflect those intended. To address this, the Value Profile is reviewed during the Delivery phase to reflect any additional or unintended outcomes. For some value categories, particularly those in the social and human capital, it is not possible to fully predict the changes stakeholders will experience. The Outcome Statements may need to evolve through the project or programme lifecycle, informed by feedback from stakeholders.

Phase 5: Operation

Purpose

The Operation phase is when the solution is in use, both during and beyond the contract period.

Key Deliverable

◆ Operation Value Scorecard

Key Decision

The Operation phase poses the question 'Does the solution meet the need and are the benefits being realised?'. Changing demands will often lead the client to review their asset. This may lead to further interventions or the end of the functional life of the asset (for example, upgrades, maintenance, change of use, etc.). Each new intervention should be taken through the Value Toolkit phases, which will determine the preferred viable option.

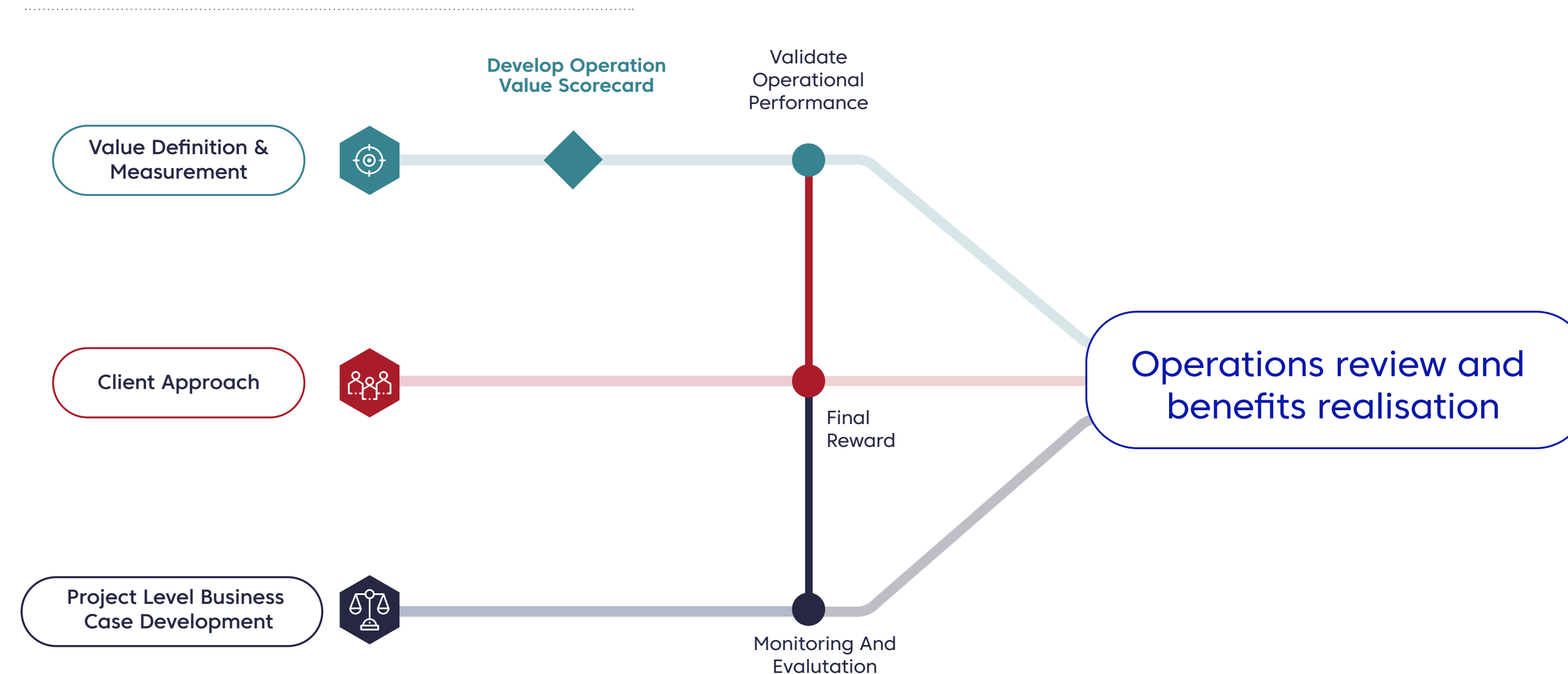


Figure 14: Value Toolkit Integrated Process - Operation
The full version of this process is [available here](#)

Risk Close Out

As the asset moves into operation, the client must not lose sight of those risks identified during the Delivery phase and must ensure risks are closed out. At this stage, the client may have moved into using an operations organisation; it is important to ensure no loss of knowledge that would allow risks to be overlooked. The close-out of risks may also be part of the Delivery Organisation(s) incentivisation structure.

Throughout the Operation phase, the operations organisation will be responsible for the ongoing implementation of the Value Toolkit and should use it to monitor performance. For end users, the wider community and other stakeholders, project or programme success is often defined by the very early stages of asset operation. A well-orchestrated handover from Delivery Organisation(s) to operations organisation is essential to maintain stakeholder confidence. The client and the operations organisation must commit sufficient resources to deliver the operational readiness plan, which may involve a staged opening of an asset or facility.

Final Reward

The Delivery Organisation(s), and potentially the designers, will continue to have contractual obligations into the Operation phase. At the end of the contract period, the performance achieved will be recorded against each Outcome Driver using the Delivery Value Scorecard. This review will validate the operational performance achieved by the Delivery Organisation(s). At the end of the Delivery Organisation(s) contract period, the Value Profile and Value Scorecard should be reviewed to reflect the lessons learned to date.

The reward for the Delivery Organisation(s) is linked to the achievement of the Delivery Value Scorecard at the end of the contract period. The nature of this reward – which may include incentivisation payments for enhanced performance or penalties for substandard performance – is defined as part of the Commercial Strategy and set out in the contract. At the end of the contract period the Strategic Team will recommend to the client the final reward to be made to the Delivery Organisation(s).

This may be a financial reward, but performance could also be rewarded through repeat business or a greater share of a framework.

Operation Value Scorecard

Final performance from the Delivery phase will help inform the development of the Operation Value Scorecard against which performance will be monitored throughout the Operation phase to demonstrate whether the benefits are being realised. Depending on the nature of the project or programme, this may need to run for several years to ensure that all Outcome Drivers can be measured.

Critically, over time, the Value Toolkit will drive the collection of predicted and actual performance data from a range of project types, clients and sectors against a consistent performance framework (i.e. the Value Definition Framework). This will in turn drive increasingly quicker, data-driven decisions.

Delivering Success

The Value Toolkit process demands a change of approach from clients and the wider construction industry.

It provides an opportunity to replace behaviours and approaches that have traditionally held back the delivery of value, including: reward systems focussed on short-term financial reward, tendency towards known solutions, unwillingness or lack of confidence to embrace new ways of thinking or a supply chain that lacks or overstates its capability or capacity to participate.

Following the Value Toolkit process will be a big step forwards, but over and above this, the following factors are critical for successful delivery of the desired outcomes:

COMMITMENT

- Client commitment from the beginning, including motivated people at all levels to make it work and not let it be undermined;
- Allow enough time at the outset of the project or programme – more haste, less speed; and
- Push the boundaries – use incentivisation and reward to change the way things are done, but beware perverse incentives that undermine the outcomes.

UNDERSTANDING

- Clients – understand yourself, your objectives, and your attitude toward and ability to manage risk;
- Take time to understand wider capitals and why they are important:
 - Natural capital, social capital and human capital work in much the same way as traditional capital – if we invest in them, they create value; if we degrade them, we limit their value;
 - A capitals approach moves beyond considering only how we impact on the capitals to also highlighting how we depend on them; and
 - This shift in mindset contextualises our relationships with the capitals and helps to illustrate a clear business case for their protection and investment in their health and resilience.

CULTURE

- Avoid a blame culture – allocate and own risks in order to manage them better;
- Be open minded at all stages – for example, don't undertake optioneering without being open to alternatives;
- Higher aspirations – seek to achieve outcomes other than on time and budget; and
- The Value Toolkit complements good project management, but is not a substitute for it.

BEHAVIOURS

- Change mindset – consider what is possible, not what is 'normally' done;
- See what the market can offer – be open minded to different delivery models and innovative approaches;
- Humility rather than hubris – listen and strive for better;
- Have the right people in the room – including highly engaged individuals and organisations who will own and drive the Value Toolkit process. The right people will be different at different stages for different parts of the process;
- A team that respects each other; and
- Good facilitation skills in the team – the best solutions may need to be drawn out from multiple stakeholders.

Contributors (1 of 2)

We are proud that the Value Toolkit is built on the strong foundations set by industry pioneers to whom we remain very grateful.

We want to take this opportunity to thank all those who have helped to shape the Value Toolkit. We are grateful for the generous contributions of the many individuals and organisations that have shared knowledge, developed ideas, and built consensus on a direction of travel to better outcomes. Over 200 experts across government and industry have been part of the Value Toolkit development.

The Strategy Board for strategic guidance and support:

Rory Kennedy, Department of Education (Chair)
Hannah Vickers, Association for Consultancy and Engineering
Stephen Marcos Jones, Association for Consultancy and Engineering
Gillian Charlesworth, BRE
Alasdair Reisner, Civil Engineering Contractors Association
Alison Nicholl, Constructing Excellence
Huda As'ad, Infrastructure Projects Authority
Will Varah, Infrastructure Projects Authority
Neil Rawlinson, Manufacturing Technology Centre
Ann Bentley, Rider Levett Bucknall and Construction Leadership Council

On behalf of Construction Innovation Hub:

Keith Waller
Ron Lang
Ellie Jenkins
Ruth Day
Ian Nicholson

The Core Development Team and Technical Advisory Group for driving the Value Toolkit forward:

Akerlof
Arcadis
Arup
Atkins
BRE
Capitals Coalition
Chartered Institute of Building
Gardiner & Theobald
Hoare Lea
Royal Institute of British Architects
Royal Institution of Chartered Surveyors
Rider Levett Bucknall
Ryder Architecture
Scottish Futures Trust
Social Value UK
Tony Gee and Partners
Trowers & Hamblins
Turner & Townsend
UK Green Building Council
University of Salford
WSP UK

Contributors (2 of 2)

We are proud that the Value Toolkit is built on the strong foundations set by industry pioneers to whom we remain very grateful.

We want to take this opportunity to thank all those who have helped to shape the Value Toolkit. We are grateful for the generous contributions of the many individuals and organisations that have shared knowledge, developed ideas, and built consensus on a direction of travel to better outcomes. Over 200 experts across government and industry have been part of the Value Toolkit development.

Contributing Partners for their guidance, thoughts, and detailed input, including:

Acivico Group	Morgan Sindall
Action Sustainability	Mott Macdonald
AECOM	National Association of Construction Frameworks
Amco Giffen	NEPO
Building Services Research and Information Association	North West Construction Hub
Burroughs	NPC Foundation
CHY Consultancy	One Beyond
Costain	RealWorth
Crofton Consulting	R&W Ltd
Currie & Brown	SCAPE
Digital Outlook	Seerbridge
Dynamic Knowledge	Skanska
East Riding of Yorkshire	Social Profit Calculator
Engie	Social Value Solutions
Envoy Partnership	Southern Construction Framework
Faithful & Gould	Stantec
Gleeds	Targeting Zero
Hawkins Brown	Taylor Woodrow
Leonie Gombrich	The Crown Estate
Low Carbon Journey	Vinci Facilities
Kings College London	Waterman Group
Mace Group	Willmott Dixon
Mears Group	YORhub

In addition, we would like to add special thanks to:

- **Our Client Advisory Group;**
- **The individuals and organisations that participated in our market engagement sessions with Constructing Excellence; and**
- **The individuals and organisations that participated in the pilot testing phase.**

Your support has been gratefully received.

#ValueToolkit
constructioninnovationhub.org.uk

The Construction Innovation Hub is funded by UK Research and Innovation through the Industrial Strategy Challenge Fund



The Construction Innovation Hub is a consortium between

