



EigenVentures



MARKET FORMING INTERVENTIONS FOR LOW-CARBON AND RESOURCE EFFICIENT INNOVATIONS

MFI Toolkit

MAY 2026



Department for
Energy Security
& Net Zero

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Overview: MFI Toolkit Approach

This Market Forming Interventions (MFI) Toolkit outlines the process used to 1) identify and prioritise innovation(s) that would benefit from an MFI 2) match specific MFIs types to address innovation demand-side barriers 3) design an MFI concept for implementation.*

Definitions

- 1. Innovation Type:** a new or significantly improved product or service that addresses user problems in a novel way.
- 2. Innovation Demand Barriers:** obstacles that prevent new products or services from being adopted.
- 3. Market Forming Intervention (MFI):** Measure(s) that seek to accelerate the adoption of replacement or disruptive innovations.
- 4. MFI Enabling Factor:** a standard, policy, financial or business factor necessary for an MFI to be successful.

Categories of Demand Barriers

Innovation adoption barriers have been categorised into the following:

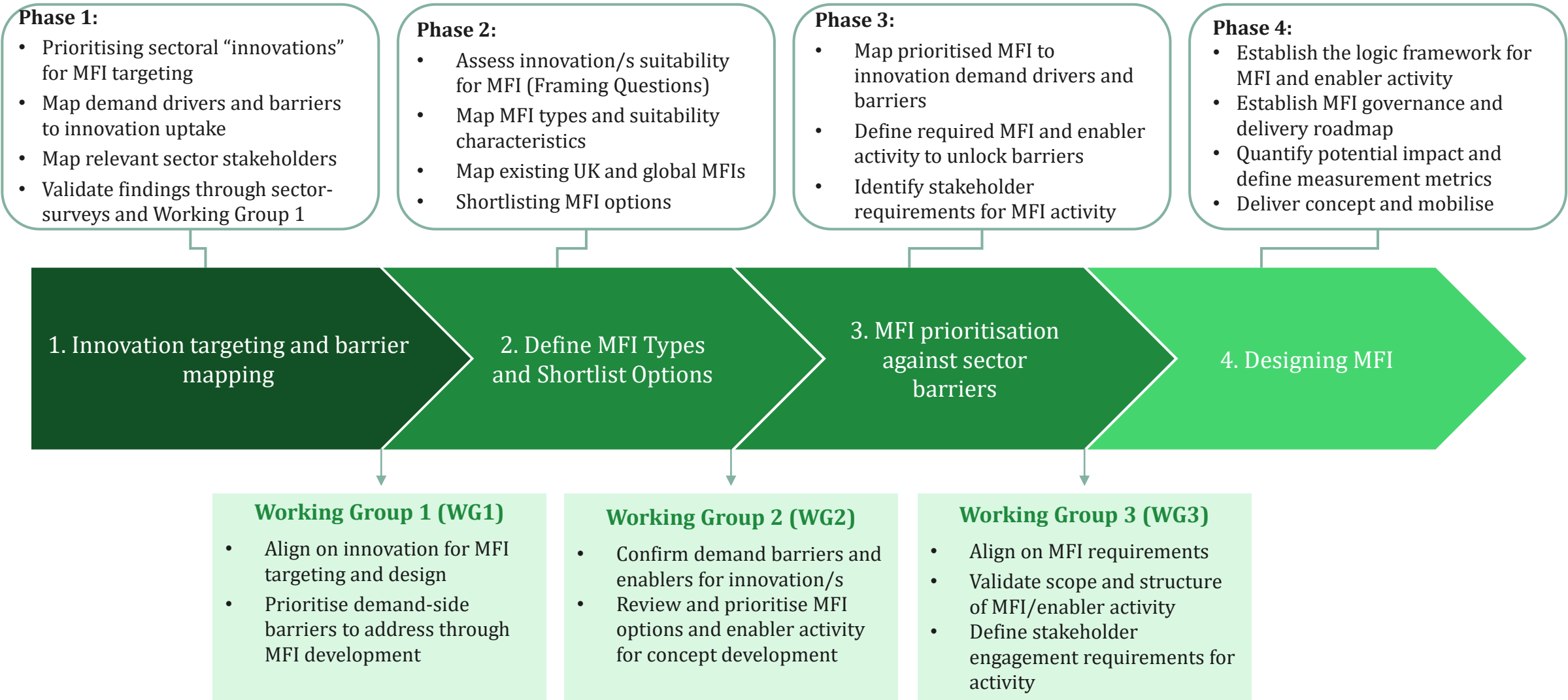
- 1. Standards:** inability to describe in quantifiable and verifiable terms the innovation.
- 2. Value Perception:** Lack of regulation/policy incentives; too high price premium; lack of quantifiable non-financial benefits.
- 3. Demand Delivery Ecosystem:** Lack of necessary physical/technology infrastructure.
- 4. Disincentives:** Existing regulation, concerns on technology lock-in.

Categories of MFIs

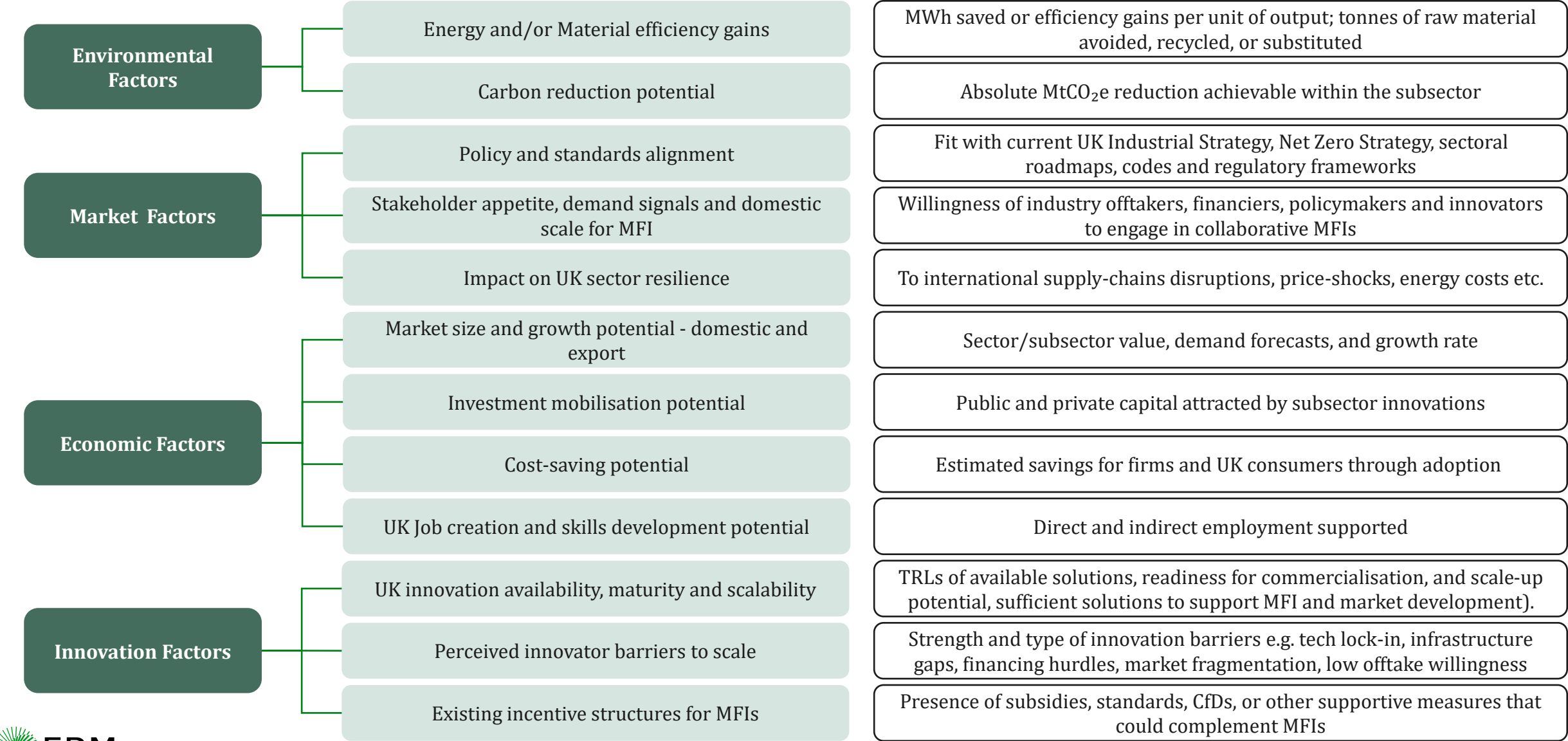
The 13 specific MFI types have been categorised into the following:

- 1. Regulation & Lower Cost:** Encourage adoption of desired solutions by lowering costs or penalising status quo options.
- 2. Demand Aggregation:** Consolidate buyers to create predictable demand, reduce market uncertainty, and enable scaling.
- 3. Direct Financial Support:** Reduce upfront costs and risks through different financial mechanisms.
- 4. Price Support:** Provide predictable revenue or bridge cost gaps between new and incumbent solutions.

The MFI Toolkit: a four-phase approach is used to select priority innovation areas for MFI/enabling activity concept design

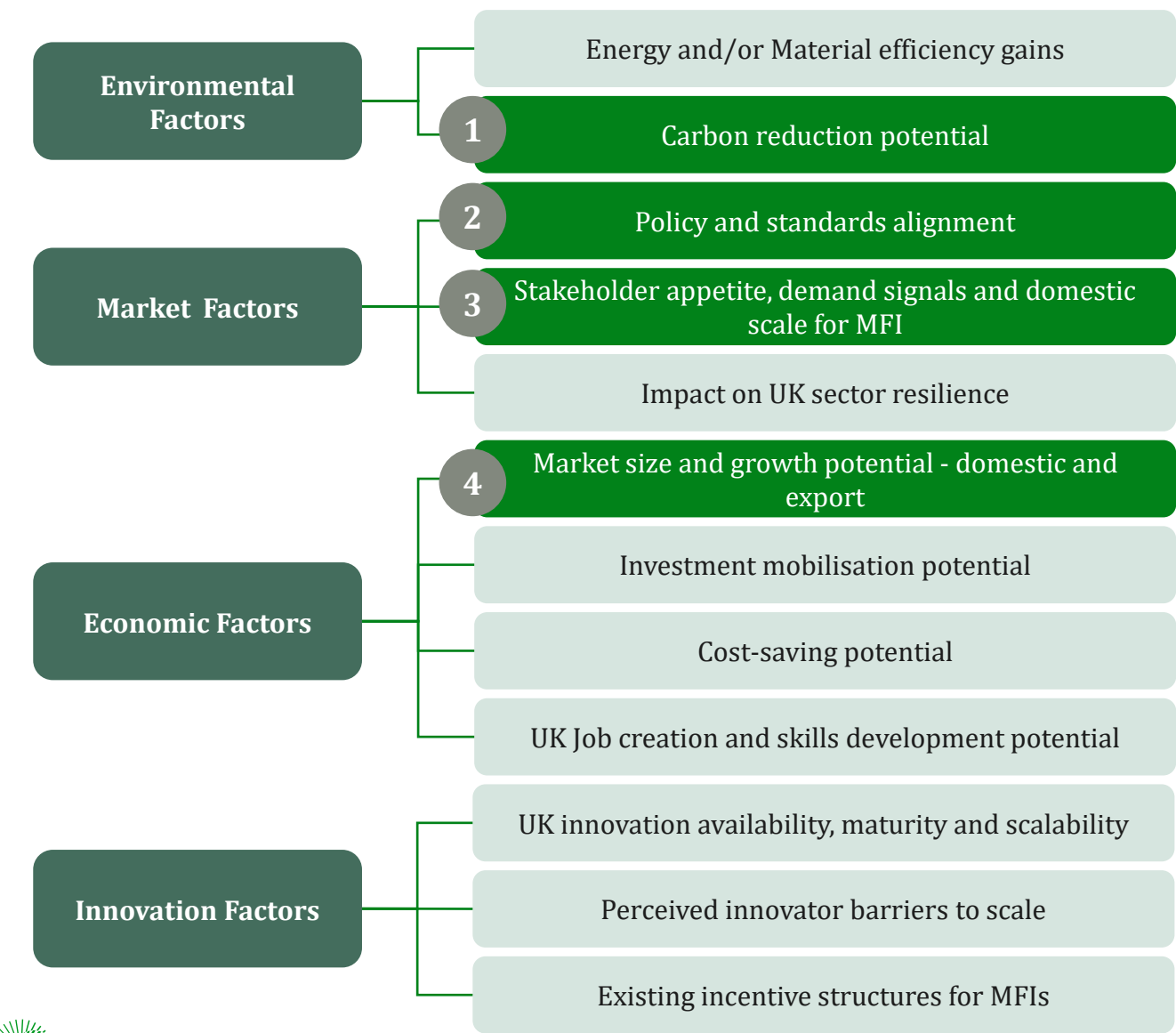


Phase 1 (1/2): Innovations are first prioritised for MFI targeting using set evaluation criteria of a structured Prioritisation Framework*



***Note:** While many of these criteria will be relevant for any MFI design, criteria should be tailored to the specific objectives of MFI development

Phase 1 (2/2): This should consider key non-negotiables for final prioritisation of targeted innovation to be supported



Rationale for non-negotiables*

- 1** The **carbon reduction** achievable through adoption of the innovation must be able to deliver substantive impact on carbon reporting metrics and enable offtakers to meet current or future reporting standards within the next 2–5 years.
- 2** The innovation should be aligned with the **UK government Industrial Strategy, Sectoral Roadmaps and spending priorities**, for MFIs to be implementable within the next 2-5 years.
- 3** There is both a **strong local industry appetite** and an **urgent need for adoption** of the innovation within the next 2–5 years, driven by supportive interventions, evolving policy mandates, competitive pressures, and market disruptions.
- 4** There should be a **sufficient domestic and export market size, or growth opportunity** to justify the establishment of an MFI.

Phase 2 (1/2): **Framing Questions** are then used to assess the suitability and nature of prioritised innovation types for MFI development

Framing Questions		
Type of innovation	Product or process? Does a definition of what "it" is exist, (preferably in the form of a standard with certification scheme)?	Prioritise innovations that have an agreed upon standard and associated certification scheme.
Maturity	If product, what Technology Readiness Level (TRL)? If process, how long in existence?	There are MFIs best suited for early-stage innovations (TRL 6 or below) and later stage (TRL 6 and above). Segment innovations into early or late stage.
Substitution/Disrupter	Is the innovation replacing something already there (i.e. "green" steel) or is it disrupter (brand new with no existing demand)?	Majority of govt. MFIs have been utilised to support replacement innovations. Prioritise replacement innovations.
User	Are users UK, international or both? Can you list specific companies who are users or who benefit directly?	Leverage existing user base for feedback via industry workshops.
Motivation & Need	Why are the users adopting this product/process? What need of theirs is it meeting?	Prioritise innovations that meet user motivations and needs. Understanding motivations of current users assists in understanding barriers to adoption of replacement innovations.
Existing policy/regulatory impact	Are there regulations and/or policies that support or detract from this product or process? Intentionally or unintentionally?	Understand the policy landscape to identify existing policies to leverage and ones that serve as disincentive.
Risk	How is the risk of the product/process covered, i.e. grants, subsidies, insurance?	Prioritise innovations where there are existing mechanisms to mitigate the adoption risk.

Phase 2 (2/2): Suitability of different MFI Types are then assessed and prioritised

There are **13 MFI types** to stimulate the demand for ***substitution (replacement)*** and/or ***disruptive*** innovations. Key to identifying the most suitable MFI for a specific innovation is understanding the innovation's existing demand barriers. When potential MFIs have been linked to an innovation, one should consider:

- Are there any necessary enabling factors that will influence the potential success of the MFI?
- Do the demand barriers benefit from a govt. sponsored MFI or is the private sector capable of addressing these?

MFI Category	MFI Type	Description
Regulation and Lower Cost	1. Regulations and/or Policy requirements	Legal requirements compelling market behaviour
	2. Government (National/Local) Subsidies	Govt. monies to support R&D, production, and/or deployment that usually do not have to be repaid
	3. Government (National/Local) Tax Incentives	Tax credits or reliefs that lower cost
	4. Government (National/Local) Tax Disincentives	Taxes or levies on existing activity to shift market demand to alternative
Demand Aggregation	5. Buyers Clubs (Aggregated Demand)	Aggregation of buyers behind one contract to increase demand for product/service
	6. Public Procurement (Framework/Bulk Procurement)	Government's use of preferences and/or award weighting within its own procurements
	7. Double-sided Auction	Intermediary signs a long-term offtake agreement with supplier and resells, via auctions, to buyers with govt funds used to cover gap between supplier and buyer price.
	8. Offtake Agreements	Long-term contract guaranteeing purchase of supplier's future output
	9. Advanced Market Commitments	Specific type of offtake agreement for products in prototype/demo stage
Direct Financial Support	10. Blended Finance (Philanthropy/Public/Private Funding)	Combining concessional (public & philanthropy) funds with private funds to reduce risk
	11. Prizes/challenges (private or public sector to fund or procure new materials/products)	Public call for innovations to solve industry challenges, potentially combined with grant offer
	12. Support for solution Guarantees and Insurance	Instruments to mitigate performance or credit risk
Price Support	13. Contract for Difference (or other Price Support Mechanisms)	Guarantees price and revenue per unit by covering the difference between market and strike price (or within a range e.g. cap-and-floor)

Phase 3 (1/5): MFIs are prioritised based on their suitability to address sector-specific demand-side barriers to scaling innovations

There are innovation adoption barriers for demand, supply or both. This Toolkit is focussed on identifying demand-side barriers, including *enabling factors*, which are barriers that, if not addressed, greatly decrease the likelihood of an MFI's success. One of the most common enabling factor barriers is the lack of standards, since they are essential to defining what is being demanded.

Standards	Value perception	Demand delivery ecosystem	Disincentives
Lack of accepted standard differentiating the innovation from existing product/process. Includes standards covering production processes and safety considerations.	Policies/Regulations: lack of regulations or policy requirements for innovation Price competitiveness: innovation priced higher than existing product/process with no quantifiable alternative business benefit. Competition between existing recycled vs. potential repair/reuse/remanufacture financial gains. Non-financial benefits: lack of accepted mechanism to account for benefits (carbon reduction, book & claim).	Infrastructure (including technology and/or material dependencies): lack of physical infrastructure to acquire, store, utilise and/or dispose of innovation (disposal particularly relevant when required). Inability to access technologies and/or material inputs needed for production/use/disposal of innovation. Volume and timing: inability to address risk associated with guaranteed volume and timing of delivery.	Policies/Regulations: existing policies that hinder the demand; frequently unintended. Innovation cycle: concerns about technology lock-in (e.g. methanol/ammonia for maritime shipping) and changes in recycling infrastructure investment (e.g. silicon-based or thin-film-based solar panels)

Phase 3 (2/5): An MFI Suitability Matrix can be used to help identify under which circumstances different types of MFI are best applied

MFI Category: Regulation and Lower Cost

Category	Market-Forming Intervention	Description	When most suitable	When less suitable
Regulation and Lower Cost	Regulations and/or Policy Requirements	Legal requirements compelling market behaviour	Best once <u>credible alternatives are available, but adoption needs rapid scaling</u> . Creates assured demand, levels the playing field, and drives widespread industry compliance.	Less suitable for <u>early-stage technologies that cannot yet meet regulatory requirements</u> , or for solutions still under R&D.
	Government (National/Local) Subsidies/Loans	Govt. monies to support R&D, production, and/or deployment that usually do not have to be repaid	Best for early- to mid-stage technologies where cost is the dominant barrier. Highly <u>suitable when capital intensity is high, first-of-a-kind facilities are needed, or production costs are significantly above incumbent benchmarks</u> . Effective at accelerating adoption and de-risking scale-up.	Less suitable for <u>mature, commercially competitive solutions where costs are already comparable to incumbents</u> , as subsidies may distort market pricing and reduce incentives for efficiency.
	Government (National/Local) Tax Incentives	Tax credits or reliefs that lower cost	Most suitable when technologies are <u>technically proven but not yet cost-competitive</u> . Works well <u>where tax relief can close a moderate cost gap and stimulate adoption without requiring direct subsidies</u> . Encourages corporate investment in low-carbon upgrades and innovation.	Less suitable for <u>very early-stage prototypes lacking revenue or profitability</u> , as tax incentives require a tax liability to benefit from.
	Government (National/Local) Tax Disincentives	Taxes or levies on existing activity to shift market demand to alternative	Best for shifting demand away from incumbents once <u>viable alternatives exist</u> . Suitable <u>when behavioural change is needed across large markets</u> and when cost penalties can make low-carbon options comparatively more attractive.	Less suitable <u>when low-carbon alternatives are not commercially available</u> , as disincentives could lead to unintended cost or supply issues without feasible substitutes.

Phase 3 (3/5): An MFI Suitability Matrix can be used to help identify under which circumstances different types of MFI are best applied

MFI Category: Demand Aggregation

Category	Market-Forming Intervention	Description	When most suitable	When less suitable
Demand Aggregation	Buyers Clubs (Aggregated Demand) ¹	Aggregation of buyers behind one contract to increase demand for product/service	Best <u>where fragmented demand prevents suppliers from investing in new capacity</u> . Creates a strong, credible, bankable demand signal needed to unlock financing and scale early-commercial low-carbon products.	Less suitable <u>when demand is already sufficient, or the market is highly concentrated</u> , as aggregation adds complexity without additional benefit.
	Public Procurement (Framework/Bulk Procurement)	Governments use of preferences and/or award weighting within its own procurements	Most effective <u>when early market demand is insufficient to justify investment</u> . Suitable when public sector volume can anchor supply, build confidence for private buyers, and normalise emerging low-carbon solutions.	Less suitable for <u>immature technologies not yet compliant with procurement requirements</u> , or in markets where <u>public demand is too small</u> to influence private adoption.
	Double Auctions / Competitive Bidding Mechanisms	Intermediary signs a long-term offtake agreement with supplier and resells, via auctions, to buyers with govt funds used to cover gap between supplier and buyer price.	Best for early-mid stage <u>technologies with variable availability and price premiums</u> . Works when performance specifications are clear and price competition can drive down subsidy needs over time.	Less suitable for <u>early-stage or prototype technologies lacking sufficient capacity or performance certainty</u> to bid competitively.
	Purchase Agreements (PPAs / Offtake Agreements)	Long-term contract guaranteeing purchase of supplier’s future output	Best for mid-late stage technologies <u>where the main barrier is immediate availability and supply manufacturing investments</u> . Provides supply side the bankability needed for financing production capabilities.	Less suitable for <u>very early-stage prototypes or high-risk pilots</u> , as buyers may not commit without performance or supply certainty.
	Advance Market Commitments (Prototype/Demo Stage)	Specific type of offtake agreement for products in prototype/demo stage	Best for <u>prototype or demonstration technologies that need assurance of future demand</u> . Reduces market uncertainty and incentivises developers to invest in commercial readiness and certification.	Less suitable for <u>mature technologies already commercially proven</u> , as AMCs provide limited additional value.

[1] See an overview of buyers clubs from Mission Possible Partnership - [Link](#)

Phase 3 (4/5): An MFI Suitability Matrix can be used to help identify under which circumstances different types of MFI are best applied

MFI Category: Financial Support

Category	Market-Forming Intervention	Description	When most suitable	When less suitable
Direct Financial Support	Blended Finance (Philanthropy/Public/Private Funding) ¹	Combining concessional (public & philanthropy) funds with private funds to reduce risk	Optimal for <u>high-risk, capital-intensive, or first-commercial deployments</u> . Suitable when private finance is reluctant due to technology, commercial, or scale-up risk. Unlocks private investment and accelerates demonstration-to-commercial transition.	Less suitable for <u>low-risk, mature projects that can be financed commercially</u> , as blending may be unnecessary and administratively complex.
	Prizes/challenges (private or public sector to fund or procure new materials/products)	Public call for innovations to solve industry challenges, potentially combined with grant offer	Best for early <u>R&D or prototype phases where market pathways are unclear</u> . Stimulates high-risk, high-reward innovation and draws talent/ideas into new solution areas. Effective where conventional funding mechanisms are too risk-averse.	Less suitable for <u>technologies that are commercially ready, as prizes do not provide sufficient scale</u> or market demand.
	Support for solution Guarantees and Insurance	Instruments to mitigate performance or credit risk	Best where the <u>key barrier is investor or lender risk perception, not technical viability</u> . Supports capital access for new low-carbon production capacity and reduces the risk premium associated with unproven technologies or business models.	Less suitable for <u>low-risk, mature technologies</u> where traditional finance is sufficient; adds unnecessary cost and complexity.

Phase 3 (5/5): An MFI Suitability Matrix can be used to help identify under which circumstances different types of MFI are best applied

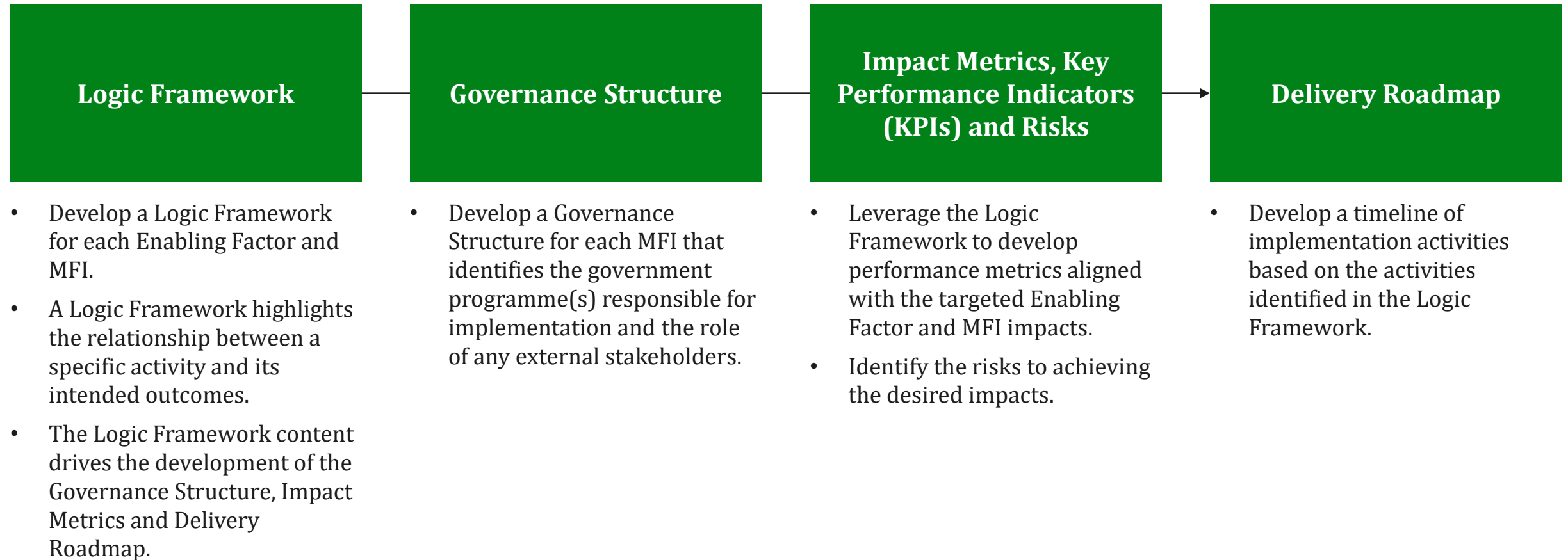
MFI Category: Price Support

Category	Market-Forming Intervention	Description / Mechanism	When most suitable	When less suitable
Price Support	Contract for Difference (or other Price Support Mechanisms) ¹	Guarantees price and revenue per unit by covering the difference between market and strike price (or within a range e.g. cap-and-floor)	Most effective <u>where operating costs for products remain structurally higher than incumbents</u> . Provides predictable revenue streams that enable investment and accelerate commercial deployment.	Less suitable for <u>low-cost mature solutions</u> , as guaranteed <u>price support may distort competition</u> and reduce incentive for efficiency improvements.

[1] See an overview of energy CfDs- [Link](#)

Phase 4: MFI selection and concept design should be done in collaboration with key industry stakeholders

A Logic Framework is a recommended tool to guide concept design for the defined MFI and associated enabling activity and supports successful MFI implementation. The following model for designing an MFI and associated enabling measures can be followed:



Thank you

If further information is required, please contact:

Richard Platt: richard.platt@erm.com

Anisha Harris: anisha.harris@erm.com