DIAMONDS4IF

DISCOVERY, IDENTIFICATION, APPLICATION, AND MONITORING OF DEVELOPED SOLUTIONS FOR INNOVATION FUND

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D4.1 – REPORT ON CONCLUSIONS FROM CAPACITY AND VIABILITY CHECKS

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LIST OF ABBREVIATIONS

Abbreviation	Description
CAPEX	Capital Expenditure
CINEA	European Climate, Infrastructure and Environment Executive Agency
CO_2	Carbon dioxide
CSA	Coordination and Support Action
EC	European Commission
ETS	Emissions Trading System
EU	European Union
FOAK	First-of-a-kind
GHG	Greenhouse Gas
H2020	Horizon 2020
IF	Innovation Fund
KPI	Key Performance Indicator
LoI	Letter of Intent
OPEX	Operational Expenditure
PNO	PNO Consultants GmbH
PV	Photovoltaics
R&D	Research and Development
R&I	Research and Innovation
SME	Small and medium-sized enterprise
TRL	Technology Readiness Level
VC	Viability Check
WP	Work Package

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1 INTRODUCTION

PROJECT SUMMARY AND OBJECTIVES

DIAMONDS4IF aims to support Horizon 2020 (H2020) beneficiary companies in further developing their projects and applying to the ETS Innovation Fund (IF), helping them overcome barriers in transforming R&D (Research and Development) results into viable business ventures.

Work Packages (3 &) 4 (WP4) aim to assess the organisational capacity for the most relevant candidates selected in WP1 and WP2, and to develop a support service including setting up the Innovation Fund teams, assessing the project viability and developing helpful tools, templates and guidelines.

Overall aim, is to decide for at least 5 Innovation Fund applications within the project duration, including detailed plans for scalability, commercialisation and financial models ready for the submission.

PURPOSE OF THIS DOCUMENT

This report presents the aggregated and anonymised results, conclusions and lessons learnt from the various Viability Check (VC) carried out throughout the DIAMONDS4IF project (Task 4.2 - Assessing the viability of the project ideas).

DIAMONDS4IF assessed the organisational capacity and project viability of about 45 selected Innovation Fund candidates, with a particular focus in the renewable energy sector and related industrial deployment cases. Across the checks, the main recurring barriers were not limited to technical readiness. They also concerned GHG calculation logic, relevant cost and funding-gap assumptions, organisational readiness, financial credibility, project timing, and the challenge of translating R&I results into credible and bankable Innovation Fund applications.

The document is intended to inform both policymakers and project developers by highlighting concrete barriers and providing evidence-based recommendations for improving access to the Innovation Fund.

The Viability Check is a key element of the Innovation Pipeline, supporting both the identification of promising project ideas and the selection of those with the highest potential for further development and application to the Innovation Fund; it represents the first step towards a Go/No-Go decision.

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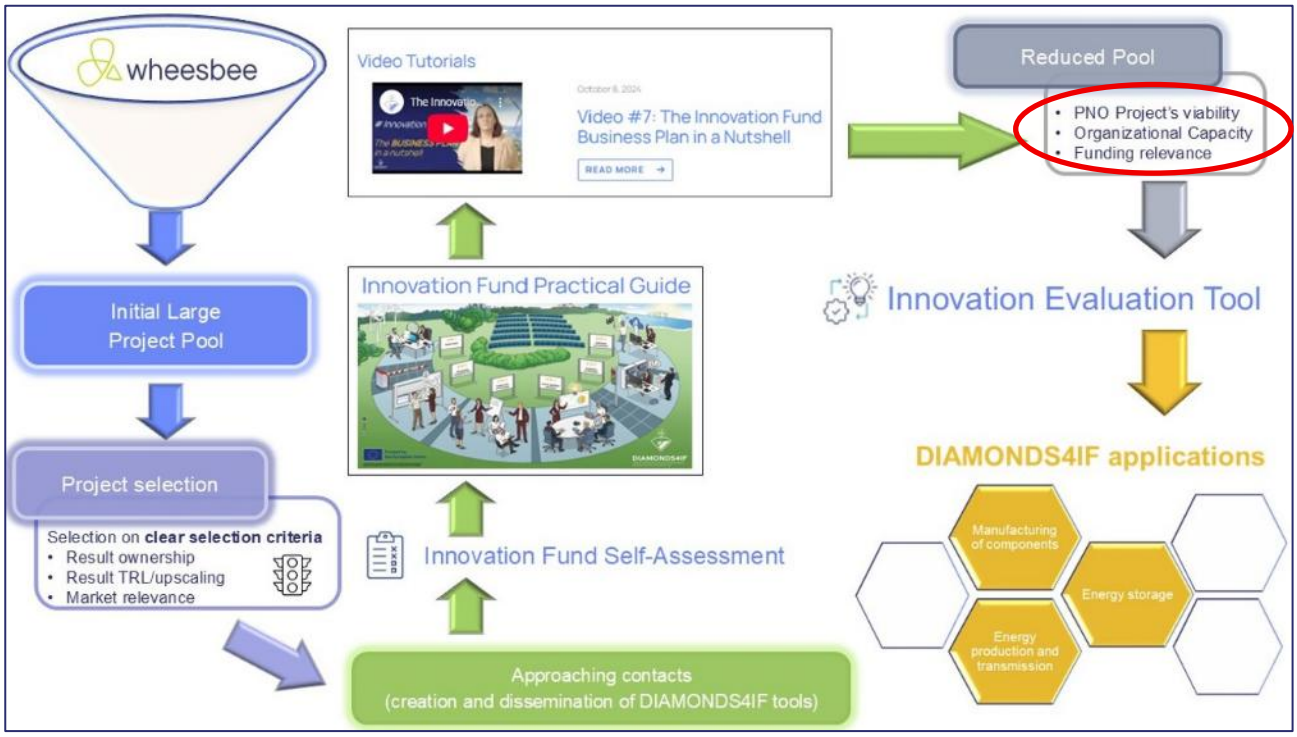

Figure 1: DIAMONDS4IF Innovation Pipeline: Role of the Viability Check in the selection process for potential IF applicants

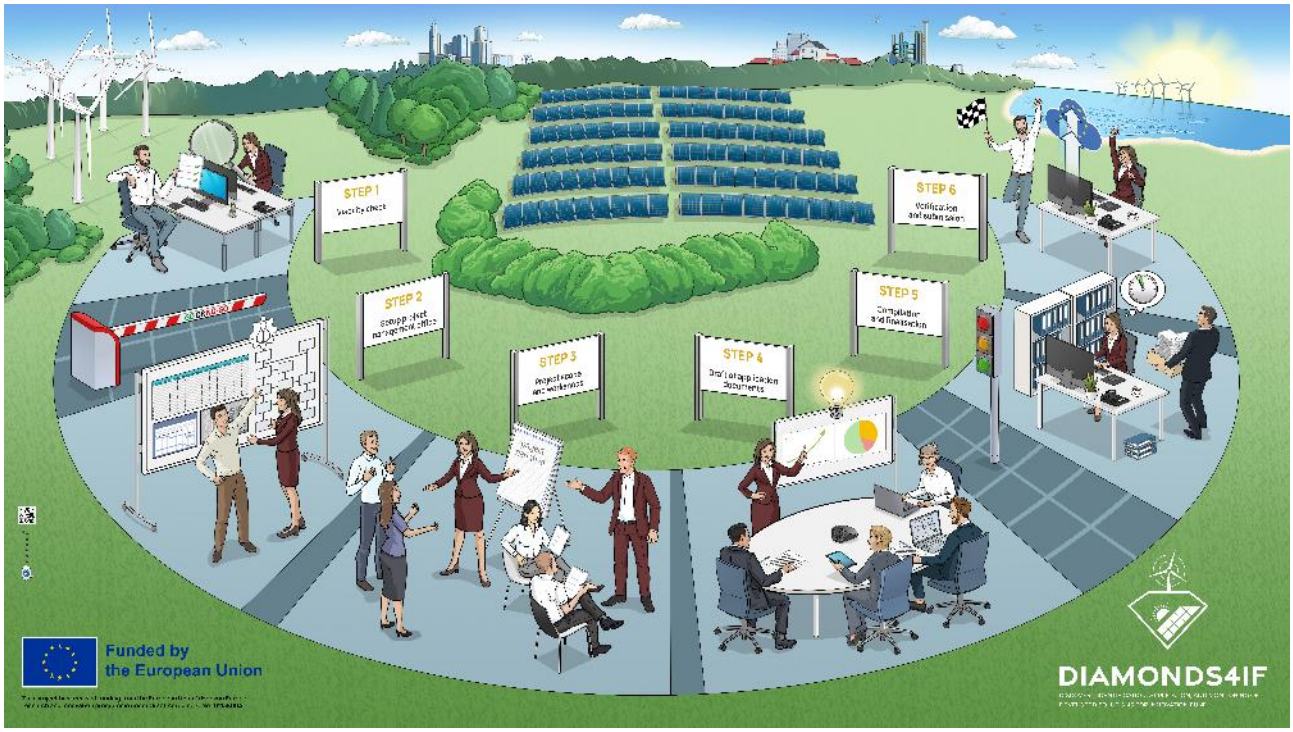

Figure 2: The application process for the Innovation Fund. © PNO Consultants GmbH, 2026

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Figure 3: Details: the viability check helps to determine whether or not to proceed to the next stage of the IF application process. © PNO Consultants GmbH, 2026

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2 RECURRING CHALLENGES FOR RENEWABLE ENERGY PROJECTS IN THE INNOVATION FUND

Over the course of DIAMONDS4IF, we held personal meetings with about 45 projects ("Reduced Pool", see Figure 1). The figure below illustrates shortly the results of the selection process used to find out possible candidates.

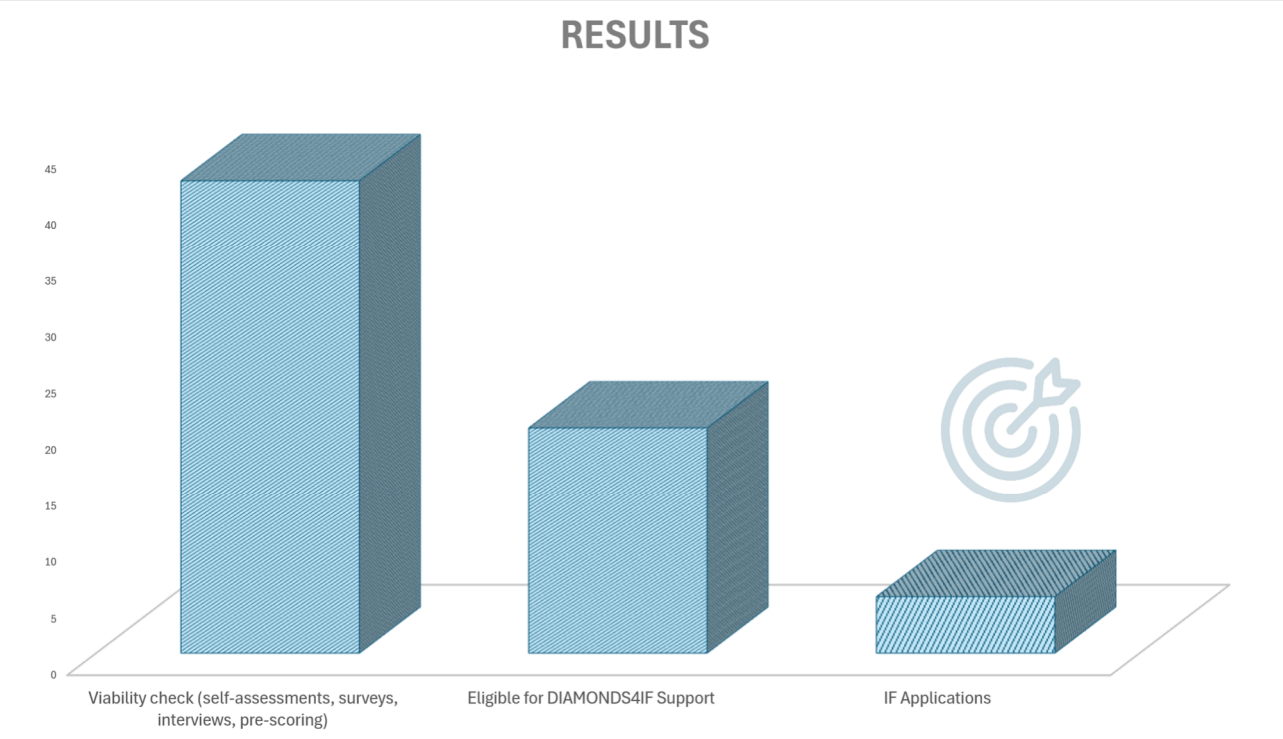

Figure 4: Results emerged from the selection of a shortlist of high-potential projects following viability checks.

Of the nearly 45 potential applicants that underwent viability checks, only a small part could ultimately be considered within the scope of DIAMONDS4IF. In line with the objectives of this EU-funded project, support is only be provided to organisations that had previously participated in Horizon 2020 projects and are active in the renewable energy sector. Across this pool of assessed projects, we identified a series of recurring challenges, which are summarised in the following paragraphs.

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2.1 Challenges in the pre-application phase

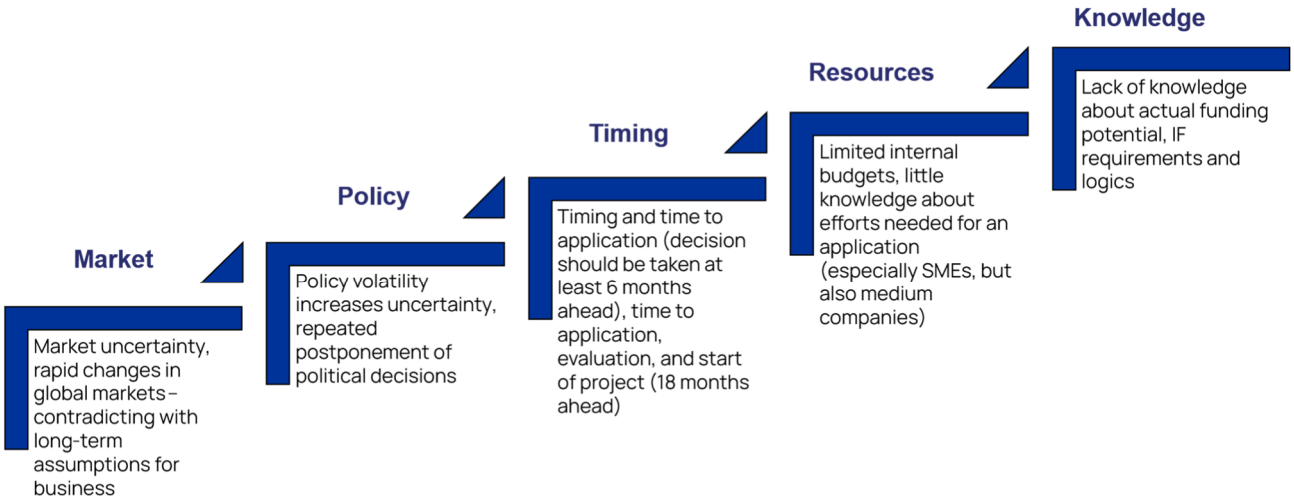

Figure 5: Innovation Fund challenges: Pre-application phase

As illustrated in Figure 5, several barriers already emerge in the pre-application phase of the Innovation Fund process.

Market conditions for renewable energy projects have become significantly more difficult, increasing pressure on project economics and making companies more risk-averse when additional innovation-related risks are involved. This affects in particular, first-of-a-kind (FOAK) projects, whose transition from pilot stage to large-scale deployment remains especially challenging. As also reflected in the figure, timing constraints, limited internal capacity to mobilise the necessary resources – especially for SMEs – and a lack of knowledge of Innovation Fund requirements further reduce applicants' ability to move forward.

At the same time, EU renewable energy operators face **growing competitive pressure from projects supported by foreign capital, notably from China and the United States**, which further complicates investment decisions despite the EU's objective of strengthening energy autonomy and industrial competitiveness.

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2.2 Challenges in the proposal preparation phase

Figure 6: Innovation Fund challenges: Proposal preparation phase

As shown in Figure 6, the **proposal preparation phase of the Innovation Fund is often experienced as highly demanding** in terms of time, resources and internal coordination. Applicants are required to assemble extensive technical, financial and administrative information within a process that is perceived as complex and relatively rigid. Several applicants reported that the process is repetitive and time-consuming, with excessive manual replication of data across templates, annexes and portals, creating inefficiencies and frustration. In addition, pre-defined templates and reporting structures are often perceived as too rigid, making it difficult to reflect project-specific realities within standardised formats.

A further challenge is the **lack of internal resources to manage the application process**: strong timing, fast decision-making and a dedicated team are needed, but many project owners, especially SMEs and other organisations with limited internal capacity or insufficient familiarity with Innovation Fund requirements – are not structured to handle the required workload. Preparing a competitive proposal therefore requires significant personnel and financial investment, which can limit accessibility for smaller companies without dedicated teams or external consultants.

The viability checks therefore suggest that, beyond project quality alone, the ability to manage the application process itself is a major factor influencing readiness (capability check).

Some evaluation criteria are also perceived as particularly demanding or insufficiently clear, especially in relation to GHG cost-efficiency, scalability and replicability, and the level of financial maturity expected from innovative projects. The following paragraph takes a closer look at the selection criteria that applicants found most challenging in practice.

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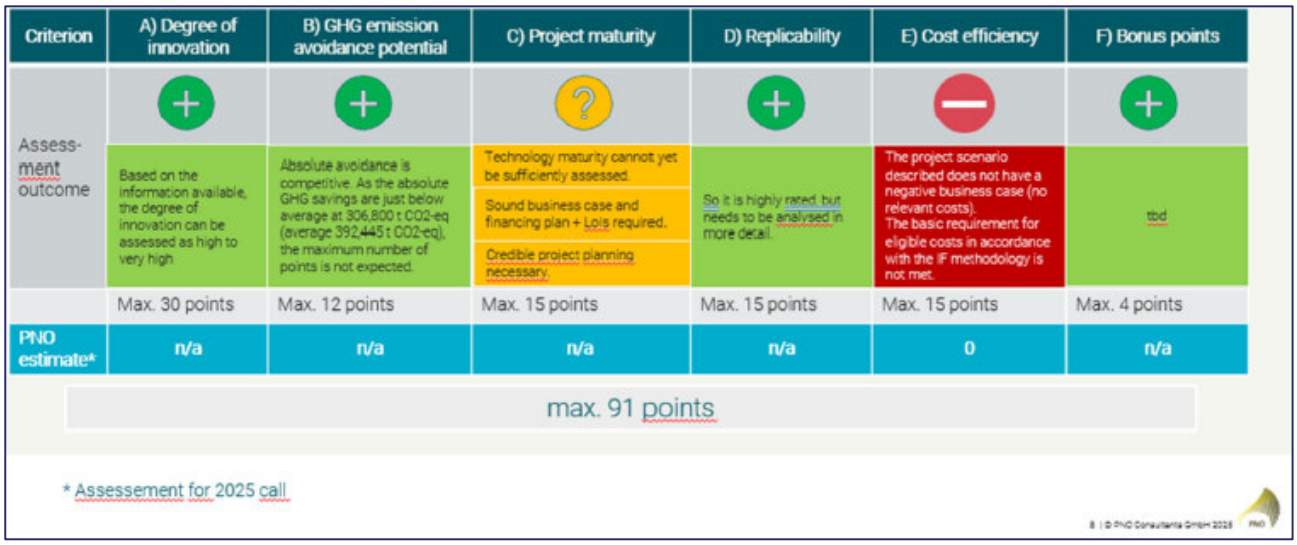
2.3 Key challenges related to the award criteria



Criterion	A) Degree of innovation	B) GHG emission avoidance potential	C) Project maturity	D) Replicability	E) Cost efficiency	F) Bonus points
Assess-ment outcome	Based on the information available, the degree of innovation can be assessed as high to very high	Absolute avoidance is competitive. As the absolute GHG savings are just below average at 306,800 t CO2-eq (average 392,445 t CO2-eq), the maximum number of points is not expected.	Technology maturity cannot yet be sufficiently assessed. Sound business case and financing plan + LoIs required. Credible project planning necessary.	So it is highly rated, but needs to be analysed in more detail.	The project scenario described does not have a negative business case (no relevant costs). The basic requirement for eligible costs in accordance with the IF methodology is not met.	tbd
	Max. 30 points	Max. 12 points	Max. 15 points	Max. 15 points	Max. 15 points	Max. 4 points
PNO estimate*	n/a	n/a	n/a	n/a	0	n/a

max. 91 points

* Assessement for 2025 call

Figure 7: Initial PNO Assessment. Example from a viability check

During the viability checks, PNO assessed each project's potential against all Innovation Fund award criteria. As illustrated in the following figure, financial maturity emerged as the most critical bottleneck, with 32% of the proposals reviewed in the referenced dataset being rejected under this criterion.

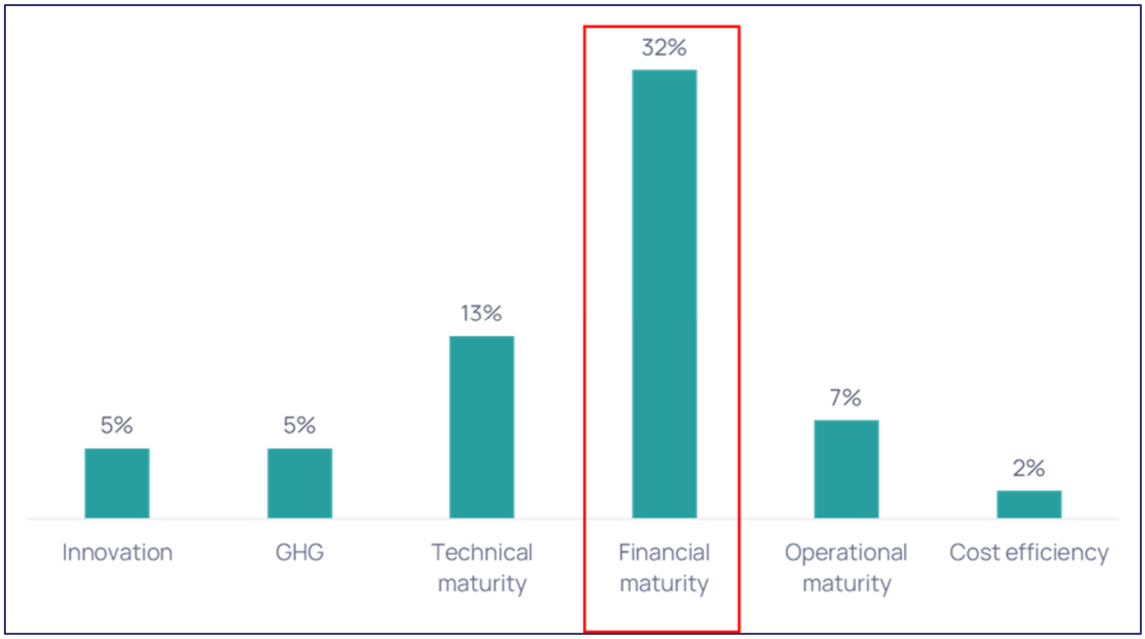


Figure 8: Failure rate by award criterion: 92 of 291 proposals that passed Admissibility & Eligibility criteria, failed on Financial Maturity. Source: CINEA (Innovation Fund Info Day)

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2.3.1 Financial maturity and long-term business viability

Financial maturity proved to be one of the most critical elements of the viability checks.

A project may be technically innovative and aligned with the Innovation Fund objectives, but it can only be considered application-ready if it is supported by a credible business plan, a consistent financial model, clear CAPEX and OPEX assumptions, realistic revenue projections, and a well-documented funding strategy.

The main challenges identified among the project's idea assessed by DIAMONDS4IF experts, were the calculation of Relevant Costs and the related funding gap, the alignment between the Business Plan, Financial Information File and financial model, and the lack of strong evidence from investors, lenders, shareholders, suppliers or off takers.

In order to demonstrate that the proposed renewable energy technology will be deployed in CO_2-saving applications, long-term off-take agreements or equivalent deployment commitments from relevant stakeholders in the renewable energy sector must be secured before project construction can start. At the application stage, Letters of Interest (LoI) from such stakeholders, expressing their interest in purchasing, deploying or otherwise taking up the technology and/or its outputs, will be required. Without a secured off-take or deployment commitment from renewable energy stakeholders, the project will not be eligible for IF support. A LoI is never binding but should nevertheless be specific.

Several applicants also underestimated the importance of pre-financing, as Innovation Fund grants are generally paid against milestones and do not remove the need for upfront financial capacity. Securing the necessary economic resources (a credible financing plan) is of course, the first and most important prerequisite for this criterion.

Overall, the checks showed that financial maturity is not only about having a positive business case, but about proving that the project can realistically reach financial close, absorb market and cost risks, and be implemented without relying solely on the grant.

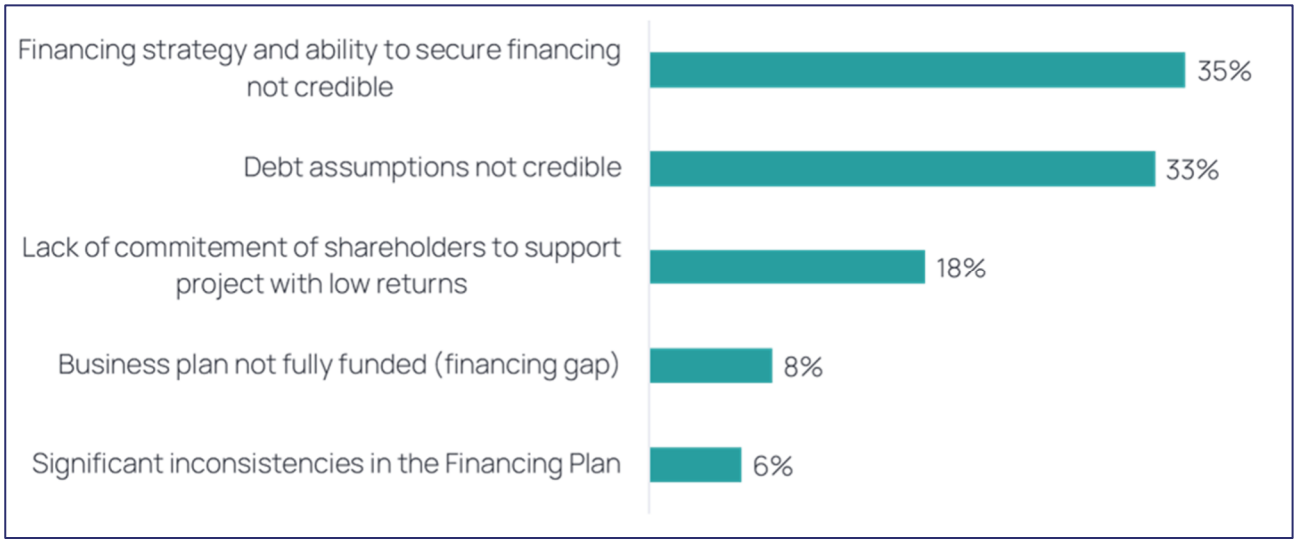

Figure 9: Main issues with the Financing Plan. Source: CINEA (Innovation Fund Info Day)

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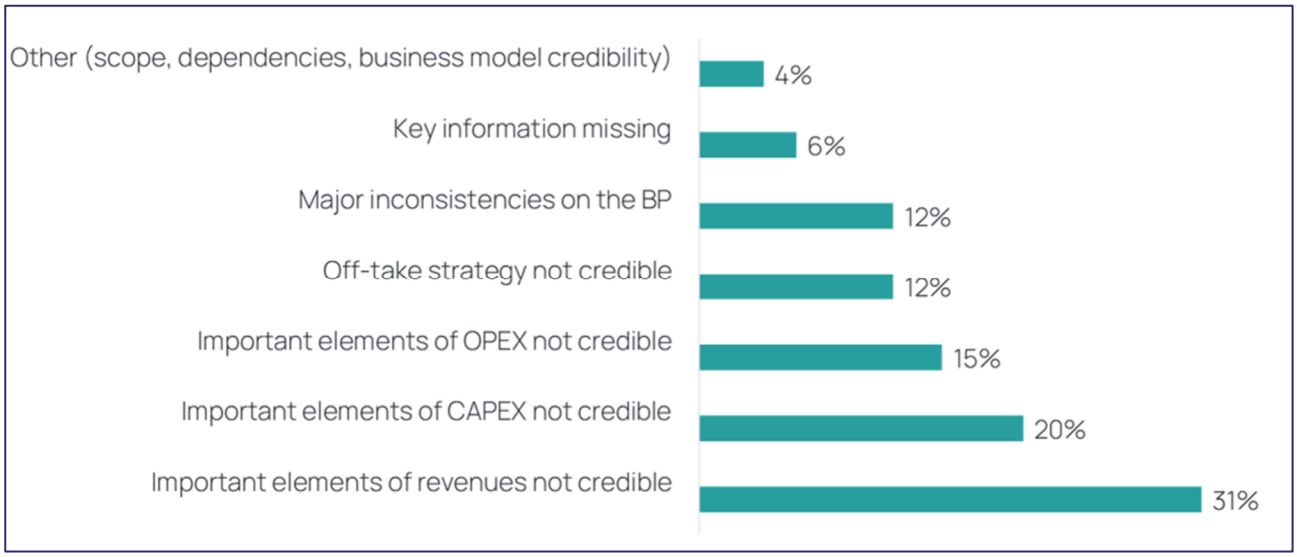

Figure 10: Main issues with the Business Plan. Source: CINEA (Innovation Fund Info Day)

2.3.2 Technical and operational project maturity

To start an Innovation Fund application, a project must already show a sufficient level of technical, financial, operational and organisational maturity. Applicants need a solid business plan, a feasibility study for a large-scale project, a detailed financial plan, and clear information on the project site, permitting status and implementation schedule. Without this basis, the application process becomes inefficient, and the proposal cannot address the Innovation Fund award criteria with the required level of detail.

One example of technical maturity, where the TRL is not sufficient to substantiate the step from R&D to pilot investment level without a high investment that still does not qualify for a business case was among the projects assessed. The project aims to support renewable energy production and introduces a highly innovative approach. The topic is high-temperature geothermal applications, including advanced drilling techniques, materials able to withstand extreme operating conditions, and improved safety protocols. These developments could benefit not only super-hot geothermal projects, but also conventional geothermal energy, mining and storage operations and subsurface engineering in general across Europe. However, the project did not match the specific requirements and objectives of the Innovation Fund. The IF primarily supports **mature deployment projects that can move towards large-scale implementation and demonstrate clear greenhouse gas emission avoidance, cost efficiency, scalability and financial readiness**. In this case, the initiative showed strong innovation potential, but it still functioned more as an enabling research and technology platform than as an Innovation Fund-ready deployment project.

The assessment highlights also an important **gap** in the current innovation support landscape. Initiatives of this type can develop technologies with broad industrial value (here: e.g. high-performance sensors, improved borehole drilling systems and materials for extreme environments). The results could increase the cost-efficiency, safety and reliability of geothermal projects across different geological conditions and make renewable energy solutions more scalable. Funding schemes that better support enabling platforms would strengthen Europe's energy transition, create cross-sectoral benefits, and reinforce industrial competitiveness and resilience in resource and energy management.

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Later-stage programmes such as the EU Innovation Fund are essential for supporting industrial deployment, but their current design is not always well suited to innovations that are still transitioning **from prototype to full-scale application**. In particular, many promising innovations, especially in the renewable energy sector, remain at TRL 6–7 and have not yet reached the level of deployment readiness required to demonstrate direct and quantifiable CO_2 savings at industrial scale. As a result, they risk falling into a "valley of death" between successful R&I development and bankable commercial deployment.

2.3.3 GHG emission avoidance potential

GHG emission avoidance is one of the key mandatory elements of the Innovation Fund evaluation.

It is assessed through both relative GHG emission avoidance, compared against a reference scenario, and absolute GHG emission avoidance realised during project operation.

A key objective of the Innovation Fund is to fund projects that are capable of realizing significant GHG (predominately CO_2) emission savings within the near future. The amount of funding received will be directly proportional to the verified GHG savings achieved. Therefore, the credibility, scale and measurability of the expected GHG impact are central to both eligibility and competitiveness.

For many renewable energy projects, however, this criterion remains difficult to meet in practice. As currently designed, the methodology can be too restrictive for parts of the renewable energy sector, where important innovations often generate indirect or system-level GHG benefits rather than immediate and directly attributable emission reductions.

Many (manufacturing) projects in the renewable energy sector are innovative and valuable; however, the methodology restriction to their share in future energy generation substation per cost shares of CAPEX in the energy generation unit is a limiting condition.

In practice, this means that expected emission savings must be translated into verifiable operational outcomes over several years. Projects that cannot clearly demonstrate this link may remain innovative and strategically relevant but still struggle to fit the Innovation Fund logic.

Some viability checks also showed that this has direct implications for competitiveness. In one assessed case, the project's assumptions pointed to a funding need of around EUR 100 million, yet the estimated volume of CO_2 avoided would have justified only a much lower level of support (approximately 30 million €). Although the project might have been comparatively better positioned under a Pilot Call (which has a lower entry threshold for CO_2 avoidance), the maximum grant size available (max. 40 million €) there would still not have matched its investment needs. This illustrates a structural mismatch that some renewable energy projects face between capital intensity, expected GHG performance and the available funding framework.

Taking into consideration e.g. the offshore wind sector, there are many other strong (breakthrough) innovations (e.g.: vibro-piling, new design of connectors etc.) not able to fulfil the obligatory criterium of direct CO_2-savings. These innovations may be essential for scaling renewable energy deployment, but their contribution to decarbonisation is often indirect, distributed across the value chain, or only visible at system level. As a result, even high-impact technologies can appear weak under the current GHG assessment logic. For capital-intensive renewable energy projects, this creates a significant disadvantage, especially in a context of deteriorating European market conditions and growing international competition.

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This challenge is particularly relevant for innovative renewable energy technologies that require high upfront investment but cannot demonstrate a level of directly attributable GHG savings that matches the Innovation Fund's eligibility logic. The issue is even more pronounced in manufacturing-related projects, where a new technology may improve only one part of the value chain and therefore account for only a limited share of the verifiable emission reductions.

2.3.4 Innovation fit under the Innovation Fund

The viability checks also showed that "innovation" under the Innovation Fund is not assessed in the same way as innovation under research and innovation programmes.

In many cases, project promoters described innovation mainly in scientific, technical or engineering terms, without sufficiently demonstrating how the proposed solution goes **beyond the current state of the art at industrial scale** or how it compares with existing and already funded deployment projects.

Under the Innovation Fund, innovation is not only about novelty. It must be framed in relation to large-scale deployment, practical applicability, system impact and the ability to generate a meaningful step change compared with conventional solutions. This creates a particular challenge for projects emerging from Horizon 2020 or Horizon Europe, where innovation is often understood primarily in terms of technological advancement, proof of concept or research excellence.

The checks therefore suggest that one of the recurring barriers for applicants is the difficulty of translating a strong R&I narrative into an Innovation Fund narrative. In practice, this means showing not only that a technology is new, but that it is sufficiently mature, differentiated, scalable and relevant in the context of industrial decarbonisation and market deployment.

This is particularly relevant in sectors such as offshore wind and renewable energy manufacturing, where innovation may lie in components, installation methods, interfaces or supporting technologies that are highly valuable for deployment, but not always easy to present as stand-alone breakthroughs under the Innovation Fund logic.

2.3.5 Relevant costs

The calculation of Relevant Costs is a core element of the Innovation Fund assessment, as it determines whether a project can demonstrate a **funding gap** and therefore justify public support. In simple terms, Relevant Costs correspond to the additional investment and operating costs linked to the innovative project, minus the expected operating revenues and benefits generated over time. The calculation is based on a net present value approach, meaning that future costs, revenues and benefits are discounted over a defined reference period, which typically covers the implementation phase and the first ten years of operation.

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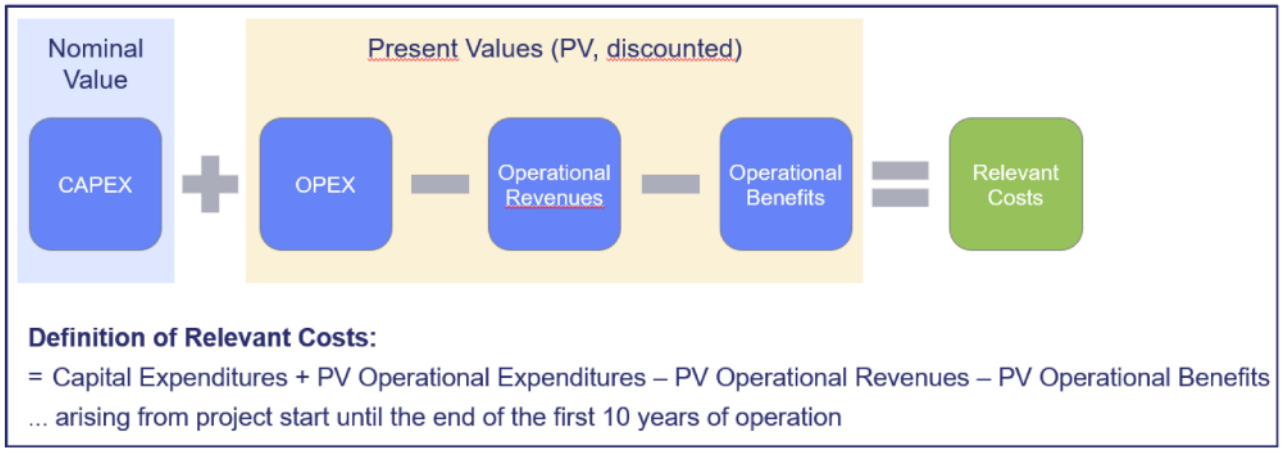

Figure 11: Definition of Relevant Costs

A project can only be considered eligible under this logic if **Relevant Costs are greater than zero**, meaning that the project's costs exceed its expected revenues and benefits and a funding gap can be demonstrated. If the calculation results in zero or negative Relevant Costs, the project is considered unable to justify Innovation Fund support, as no funding gap exists under the methodology.

The viability checks showed that this criterion is often difficult for applicants to interpret and apply correctly. Challenges frequently arise in defining the appropriate **project boundaries**, identifying which costs can be credibly attributed to the innovative part of the investment, and estimating future revenues and operational benefits in a realistic and consistent way. These assumptions have a direct impact not only on eligibility, but also on the amount of support that can be justified.

This creates a structural tension for some renewable energy and industrial projects.

On the one hand, public support is still needed to **de-risk** the transition gap and the deployment of the project, enabling investment at scale. On the other hand, if expected revenues or benefits are too high in relation to the eligible costs, the calculated funding gap becomes too small to justify substantial support. In practice, this means that a project may be technically strong, strategically relevant and investment-intensive, yet still appear weak under the Innovation Fund logic because it is considered too economically attractive.

The checks therefore suggest that early assessment of Relevant Costs and funding-gap assumptions is essential. Clarifying project boundaries, cost attribution and revenue logic at an early stage can help applicants understand whether their project is truly suited to the Innovation Fund or whether a different funding instrument may be more appropriate.

2.3.6 Organisational and managerial readiness

The viability checks also confirmed that organisational and managerial readiness is a recurring barrier for many potential applicants.

Even where the technological concept is strong, project owners often face a limited time window to decide whether and when to move from a Horizon-funded project towards an Innovation Fund application. In some cases, this creates a risk of delay, loss of momentum or even technology obsolescence.

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This challenge is compounded by the long development timelines typically associated with complex and capital-intensive renewable energy projects. Moving from R&I results to a bankable and application-ready deployment project often requires additional technical validation, internal alignment, external partnerships and strategic decision-making, all of which take time and organisational capacity.

The checks also showed that many project owners – especially SMEs – are not structured to manage the workload required for an Innovation Fund application. Preparing a credible proposal requires dedicated internal resources, coordination across technical, financial and managerial functions, and the ability to take timely decisions under pressure. Where this internal capacity is missing, even promising projects may struggle to progress towards application readiness.

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3 CONCLUSIONS AND LESSONS LEARNED

3.1 For Innovation Fund applicants

The viability checks confirmed that readiness for the Innovation Fund depends not only on technological strength, but also on financial credibility, organisational capacity, timing, data availability and the ability to position a project convincingly against the Fund's award criteria.

Projects do not fail because they lack innovation; they fail because that innovation has not yet been translated into a credible, scalable and investment-ready project within the timeframe required by the Innovation Fund.

The recurring challenges identified in this report therefore point to a broader lesson: early and structured readiness checks are essential to avoid weak applications, support better go/no-go decisions, define project boundaries as early as possible, and enable more strategic decisions on whether and how to further develop project ideas towards an Innovation Fund application. In this context, the DIAMONDS4IF support and the tools developed under the project play an important role in helping applicants navigate this complex pathway and assess their readiness on a more informed and evidence-based basis.

Table 1 summarises the recurring readiness gaps identified through the DIAMONDS4IF viability checks and translates them into practical recommendations for potential Innovation Fund applicants. It is intended to support early reflection on project fit, critical gaps and the actions needed before entering the full Innovation Fund application process.

Overall, the viability checks show that readiness for the Innovation Fund is not determined by technological quality alone. A competitive project must also be financially credible, clearly scoped, measurable in terms of GHG impact, supported by robust evidence, and backed by an internal team able to manage the application process effectively.

In this context the DIAMONDS4IF tools – including the Interactive Map[1], the Innovation Fund Self-Assessment[2], the Video Tutorials[3], the Innovation Fund Guidelines[4], the Innovation Fund Practical Guide[5], the Viability Check, the workshop materials and the gap-analysis approach – can help potential applicants structure this complex pathway and make an evidence-based Go/No-Go decision before investing substantial resources in proposal preparation.

More broadly, the value of the DIAMONDS4IF approach lies not only in strengthening potential applications, but also in helping project promoters define project boundaries early, identify critical gaps, avoid misdirected effort, and make more strategic decisions on whether to proceed, postpone or redirect their project development pathway.

[1] DIAMONDS4IF Interactive map: Interactive map - Diamonds4if

[2] The Innovation Fund Self-Assessment: Toolbox - Diamonds4if

[3] The Video Tutorials: Toolbox - Diamonds4if

[4] The Innovation Fund Guidelines: Toolbox - Diamonds4if

[5] The Innovation Fund Practical Guide: Innovation Fund Practical Guide - Diamonds4if

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Applicant readiness area	Typical gap observed during viability checks	Recommended action for potential applicants
Call fit and Go/No-Go decision	Projects are often broadly aligned with decarbonisation objectives but do not yet fit the specific Innovation Fund logic, call scope, expected maturity level, GHG methodology or grant-size rationale. Some projects are promising, but not yet ready for an IF application.	Carry out an early Innovation Fund call-fit and readiness screening before starting full proposal preparation. Use the DIAMONDS4IF tools and viability check approach to decide whether to proceed, postpone, reshape the project or redirect it to a more suitable funding instrument.
Financial credibility	Projects show strong technology but weak evidence of bankability, inconsistent business and financial documentation, and limited proof of investor or off-taker commitment. **Common gaps** include unclear funding-gap logic, weak alignment between the Business Plan, Financial Information File and internal financial model, unsupported debt/equity assumptions.	Test the funding-gap logic early, align the business plan with the financial model, and strengthen the quality and specificity of external commitment evidence. Check whether the project can credibly reach financial close and explain why public funding is needed despite private investment.
Project maturity and timing	Several projects are still between R&I results, pilot validation and industrial deployment. They may have promising technology but insufficient evidence on site readiness, permitting, procurement, construction schedule, value-chain availability or operational planning , and struggle to fit the timing and maturity expectations of the Innovation Fund.	Treat maturity as more than TRL. Before applying, verify whether the project is technically, financially, operationally and organisationally ready for deployment. Use a structured readiness check to identify missing evidence and decide whether additional validation or a later call would be more appropriate.
GHG emission avoidance logic	Some projects enable decarbonisation but struggle to **demonstrate direct** & **measurable GHG savings** under the Innovation Fund methodology. This is particularly difficult for enabling technologies in the renewable energy sector, including components, digital tools, manufacturing steps and system-level innovations. Result: technically valuable, but not IF eligible	Screen GHG logic at an early stage, before investing in a full application. Clarify project boundaries, reference scenario, eligible outputs and emission-saving pathway. Where the IF methodology cannot capture the project's impact, consider adapting the project scope or exploring complementary funding instruments.

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Applicant readiness area	Typical gap observed during viability checks	Recommended action for potential applicants
Innovation fit	Applicants often describe innovation in scientific or engineering terms, but do not sufficiently explain the industrial comparator, **state of the art**, deployment relevance, scalability or step change compared with existing and already funded solutions.	Translate the R&I narrative into an **Innovation Fund narrative**. Focus on industrial deployment, market relevance, EU added value, scalability and comparison with the state of the art. Innovation Fund innovation is not about novelty alone, it is about system impact, comparators, and industrial leap.
Relevant Costs and cost efficiency	Applicants struggle to define project boundaries and funding-gap assumptions, and some projects appear too economically attractive to justify meaningful support.	Check Relevant Costs early, refine cost attribution and revenue logic, and verify whether the project is genuinely suited to the IF methodology, before preparing the full proposal. Use the DIAMONDS4IF support to test whether the project should be strategically redirected to a more suitable funding instrument.
Evidence and stakeholder commitment	Evidence is sometimes too generic. Letters of support may express interest but do not demonstrate concrete market uptake, financing progress, off-take readiness, supply-chain commitment or shareholder support.	Build an evidence map early. Identify which claims require support from investors, lenders, shareholders, suppliers, off-takers, permitting authorities or strategic partners. Avoid generic “comfort letters”; request specific Letters of Intent that reflect realistic commitment, conditionality and project relevance.
Organisational readiness and data ownership	Many applicants, especially SMEs, underestimate the internal workload, coordination effort and speed of decision-making needed to prepare a competitive application. Technical, financial, GHG, legal, procurement and business teams may work with different assumptions, leading to inconsistent documents and slow decision-making.	Clarify internal roles, secure dedicated resources early, and treat the application as a cross-functional process requiring strong ownership and coordination. Use the DIAMONDS4IF support, team-structure template and gap-analysis tools to organise responsibilities and reduce internal overload.

Table 1: Recurring Innovation Fund readiness challenges and recommended actions for potential applicants

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3.2 Conclusions in relation to the call objectives and EU Funding Landscape

The findings from the capacity and viability checks confirm that the DIAMONDS4IF approach is strongly aligned with the objectives of the HORIZON-CL5-2023-D2-01-07 Coordination and Support Action, which aims to bridge the gap between Horizon 2020 research results and large-scale deployment through the Innovation Fund.

DIAMONDS4IF directly contributes to this objective by:

- Establishing a structured innovation pipeline that identifies, filters and develops promising projects towards deployment readiness
- Providing tools, methodologies and capacity-building measures that enable project promoters to assess readiness and make informed Go/No-Go decisions
- Supporting the development of Innovation Fund-ready proposals, including financial, technical and organisational strengthening of candidate projects

At the same time, the results clearly demonstrate that the transition from R&I to deployment is not a linear progression. Instead, it is characterised by structural gaps between:

- R&I excellence and deployment-level maturity,
- innovation value and Innovation Fund-specific evaluation logic,
- technological readiness and financial bankability.

These gaps confirm the relevance of CSAs such as DIAMONDS4IF as intermediate enablers within the EU innovation ecosystem.

3.2.1 Systemic barriers

The viability checks highlight that many challenges are not project-specific but systemic across the EU innovation landscape:

- **Mismatch between R&I outputs and deployment requirements**: Many Horizon-funded projects remain at TRL 6–7 and struggle to meet the Innovation Fund's requirements for large-scale, bankable deployment projects
- **Structural limitations of evaluation criteria**: The Innovation Fund logic, particularly regarding GHG quantification and funding-gap methodology, can disadvantage enabling technologies, system-level innovations and capital-intensive renewable energy projects with indirect emission impacts
- **Financial maturity as the dominant bottleneck**: Financial credibility, rather than technological innovation, remains the primary reason for project failure
- **Limited organisational capacity of applicants**: Especially SMEs face constraints in managing the complexity, timing and resource intensity of Innovation Fund applications

These findings confirm that the "valley of death" between R&I and deployment persists and is not sufficiently addressed by existing funding instruments alone.

3.2.2 Strategic Implications for EU Funding Design

Based on these observations, the DIAMONDS4IF results underline several strategic implications for the design and interaction of EU funding programmes:

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- **Need for strong continuity between funding instruments**: While Horizon Europe supports innovation development and the Innovation Fund supports deployment, there remains a structural gap for projects transitioning between these stages
- **Importance of early-stage assessments**: Systematic viability checks should be embedded more broadly in EU funding pathways to improve project selection quality, efficient allocation of public funding, and success rates of large-scale applications
- **Need to better accommodate indirect and system-level innovation impacts**: Current methodologies (particularly for GHG accounting and cost-efficiency) may undervalue innovations crucial for scaling renewable energy systems and industrial decarbonisation

3.2.3 High-level strategic recommendations

Building on the empirical evidence from the viability checks, the following high-level recommendations can be derived:

1. **Strengthen the "bridge" between R&I and deployment instruments**

Develop complementary funding or support schemes targeting TRL 6–8 projects that are too mature for R&I funding but not yet ready for Innovation Fund deployment

2. **Promote systematic readiness assessment frameworks**

Integrate structured capacity and viability checks as a standard step in EU innovation pipelines to reduce failed applications and support evidence-based investment decisions

3. **Enhance flexibility of Innovation Fund evaluation logic**

Consider adaptations to better account for: indirect GHG reduction contributions, system-level innovations and enabling technologies within complex value chains

4. **Strengthen support for financial structuring and bankability**

Complement technical support with dedicated financial advisory, access to investors and financial institutions, and standardised approaches for funding-gap calculation and business modelling

5. **Expand capacity-building for applicants**

Particularly for SMEs, continue to invest in tools, templates and training and cross-functional team development.

DIAMONDS4IF demonstrates that targeted readiness assessment, structured support and early strategic decision-making are key enablers for turning promising R&I results into scalable, investment-ready climate solutions.

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4 LIST OF REFERENCES

- DIAMONDS4IF Website, Homepage - Diamonds4if
- DIAMONDS4IF YouTube Channel, “Innovation Fund DIAMONDS”, www.youtube.com/@DIAMONDS4IF
- Typeform: Link to the Self-Assessment, Innovation Fund Self-Assessment (typeform.com)
- DIAMONDS4IF Interactive map: Interactive map - Diamonds4if
- The Innovation Fund Self-Assessment: Toolbox - Diamonds4if
- The Video Tutorials: Toolbox - Diamonds4if
- The Innovation Fund Guidelines: Toolbox - Diamonds4if
- The Innovation Fund Practical Guide: Innovation Fund Practical Guide - Diamonds4if

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