Department for Science, Innovation & Technology

Evaluation of the Regulators' Pioneer Fund (Round 3) – Final Report

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Glossary of key terms and acronyms

Table 1: Glossary of key terms and acronyms

Acronym/Term	Meaning
AI	Artificial Intelligence.
Baseline interviews	Start of project interviews with project leads for RPF3 awarded projects.
Care Quality Commission (CQC)	The Care Quality Commission is the independent regulator of health and adult social care in England. Its primary role is to ensure the quality and safety of care provided in various settings, including hospitals, care homes, and independent providers.
Compliance	Regulatory compliance is the process of adhering to laws, regulations, standards, and other rules set by governments and regulatory bodies.
Contribution Analysis (CA)	Contribution analysis is an approach used to assess whether and how an intervention contributed to observed outcomes. It examines the causal links between activities and results, considering other influencing factors, to build a credible explanation of the intervention's role in achieving change. As part of this process, evaluators often develop contribution statements-clear summaries that describe the intervention's specific role in producing the observed outcomes.
Delivery to intention	Whether projects were able to deliver their activities as they originally intended in their proposal.
Department for Business, Energy and Industrial Strategy (BEIS)	BEIS (Department for Business, Energy & Industrial Strategy) was a UK government department responsible for business, energy, science, innovation, and climate change until it was split up in February 2023, being replaced by the Department for Business and Trade (DBT), the Department for Energy Security and Net Zero (DESNZ), and the Department for Science, Innovation and Technology (DSIT).
Department for Science, Innovation and Technology (DSIT)	A UK government department established in February 2023. Its main goals are to drive economic growth through science and technology, use AI and digital technology to improve government services, and empower citizens.

Endline interviews	End of project interviews with project leads for RPF3 awarded projects.
Engagement	Engagement refers to the interaction between organisations (regulatory authorities, industry, wider stakeholders, etc.). Engagement can vary in two ways: 'breadth' means talking to more or different types of organisations, while 'depth' means having more detailed conversations or working more closely together.
Environment Agency (EA)	The Environment Agency is a non-departmental public body established in 1996 in the UK, responsible for protecting and enhancing the environment. Its key roles include enforcing environmental regulations, managing waste, preventing water pollution, and overseeing river management initiatives.
Fragmented regulatory environment	Where compliance processes are split between multiple regulators. This fragmentation can be a substantial burden on time and resources for innovators, first requiring identification of the right regulators, and then separate application processes for each.
Health and Safety Executive (HSE)	The Health and Safety Executive is a British public body responsible for the encouragement, regulation, and enforcement of workplace health, safety, and welfare.
Impact categories	The broad types of RPF impacts captured by the Theory of Change.
Information Commissioner's Office (ICO)	The Information Commissioner's Office is a UK government regulator responsible for upholding information rights and data privacy.
Innovation	An innovation is the implementation of a new or significantly improved product (good or service), process, marketing method, or organizational method in business practice, workplace organization, or external relations. To qualify as an innovation, the change must be new or significantly improved for the firm.
Innovators	Innovators take part in activities to create or put into use new or improved products or business processes.
Learning-by-doing	Learning-by-doing is the process in which people and organisations gain knowledge and skills through direct experience and participation in implementation. This is otherwise known as 'tacit knowledge'.

Medicines and Healthcare products Regulatory Agency (MHRA)	The Medicines and Healthcare products Regulatory Agency is an executive agency of the UK government. Its primary role is to regulate medicines, medical devices, and blood components to ensure they are safe, effective, and of high quality.
National Institute for Biological Standards and Control (NISBC)	The National Institute for Biological Standards and Control is a government agency in the UK that plays a crucial role in ensuring the quality of biological medicines and diagnostics.
Office for Nuclear Regulation (ONR)	The Office for Nuclear Regulation is the independent nuclear regulator in the UK. Its mission is to protect society by securing safe nuclear operations and it regulates nuclear safety, security and conventional health and safety at the nuclear sites in Great Britain.
Outcome-based regulation	Outcome-based regulation (OBR) is a regulatory approach that focuses on achieving predefined outcomes rather than dictating specific processes or technologies to meet these outcomes. Instead of prescriptive regulation, OBR allows companies the autonomy to determine the most efficient and effective methods to meet the desired regulatory outcomes. This approach is generally perceived to be more flexible and enabling than rules-based regulation which is more prescriptive in how organisations meet compliance.
Programme's risk tolerance	Before the RPF, regulators struggled to justify funding experimental projects because the outcomes were uncertain. The RPF changed this by actively encouraging higher-risk projects, recognising that taking calculated risks could lead to significant future benefits.
Proof of Concept (PoC)	Evidence, typically from an experiment or pilot project, which demonstrates that a design concept, business proposal etc. is feasible.
Regulatory authorities	Regulators and Local Authorities
Regulatory gaps	Regulatory gaps are areas where existing laws, rules, or oversight mechanisms are missing, unclear, outdated, or insufficient to address current risks, behaviours, or technologies. Regulatory gaps often emerge when new technologies advance faster than regulators can develop measures to ensure safety without slowing innovation.

Regulatory solutions	Regulatory solutions are processes and procedures deployed to close regulatory gaps, reduce risks, and ensure effective oversight
Remit	The areas that the regulatory authorities have jurisdiction over and a statutory duty to. For regulators this would be their sector(s) and for local authorities it would be their region of governance.
Research and Development (R&D)	Work directed towards the innovation, introduction and improvement of products and processes.
The Regulatory Innovation Office (RIO)	The Regulatory Innovation Office (RIO)[1], part of the Department for Science, Innovation and Technology (DSIT)
Sandboxing	Building and testing innovation concepts and solutions in a controlled, simulated scenario without risk to operations. Within this report, we refer to regulatory sandboxes which is defined in Chapter 1.
Small and Medium-sized Enterprises (SMEs)	Business with between 1-250 employees.
Theory of Change (ToC)	A Theory of Change is a framework that outlines how and why a desired change is expected to happen in a particular context. It describes the positive change sought, the activities required to achieve that change, and the outcomes that are anticipated as a result of those activities. Essentially, it serves as a roadmap for understanding the connections between actions and their intended impacts.

[1] Game-changing tech to reach the public faster as dedicated new unit launched to curb red tape - GOV.UK

Executive summary

About the RPF

The Regulators' Pioneer Fund (RPF) was first established in 2018 by the Better Regulation Executive (BRE) in the Department for Business, Energy and Industrial Strategy (BEIS) and now is being delivered by the Regulatory Innovation Office (RIO) in the Department for Science, Innovation and Technology (DSIT). The programme supports UK regulators and local authorities to adopt new and experimental regulatory approaches which seek to remove barriers to innovation and help businesses get their innovative products and services to market faster.

Since 2018, there have been three rounds of RPF funding, providing £10m to 14 projects in its first round, £3.7m to 21 projects in its second, and £12m to 24 projects in its current third round.

About the evaluation

This is the final evaluation report for the third round of the Regulators' Pioneer Fund (RPF3), which addressed three key questions: 1) The impact of RPF3 and the longer-term effects of earlier rounds; 2) The lessons learned about programme and project delivery 3) What government and wider stakeholders can take from the programme's overall approach and outcomes. Insights were drawn from 99 qualitative activities, including interviews with leads from all 24 RPF3 projects, businesses, benefiting regulators, programme staff, an innovation expert, RPF1 project leads, and regulators that did not participate in RPF3.

A Theory of Change (ToC), developed in collaboration with the RPF team, guided the assessment of the programme's outcomes and impacts by setting out how the RPF is expected to work and what it aims to achieve. Using a Contribution Analysis approach, six 'contribution claims' were then developed from the ToC to assess how the programme contributed to its intended outcomes. The outcomes identified across these claims were:

1. RPF creates a culture of enabling innovation within regulatory authorities, who following the programme see innovation as part of their role.
2. RPF increases the capability of regulatory authorities to enable innovation and support compliance.
3. Regulatory authorities establish processes of working together and collaborating during project delivery, which leads to greater capacity to tackle regulatory issues into the future.
4. RPF projects produce innovative regulatory solutions that influence other regulatory authorities to explore new approaches to regulation.
5. RPF encourages greater engagement between regulatory authorities and innovators through the project activities and the regulatory solutions they create. This allows for

a better understanding of the relationship between regulation and innovation by both regulatory authorities and industry.

6. The RPF creates an improved regulatory environment that fosters innovation and supports compliance. Regulatory authorities support innovators with the development of their ideas, increasing confidence for investors who have greater incentive to invest in the UK and reducing risks for consumers who are more likely to adopt innovations.

Overall, the evaluation found that the programme continued to play an important role in supporting innovation within regulatory authorities. It strengthened collaboration between regulators and industry, enabled the development of innovative regulatory approaches, and contributed to a more supportive regulatory environment. Although evidence of wider systemic change is still developing, early signs indicate progress towards longer-term impacts, including increased investor confidence and improved consumer protection.

The following sections expand on these insights, outlining how the RPF3 programme was delivered, what worked well, what could be improved, and the outcomes and emerging impacts observed.

What can be learned about the process of applying for, setting up and delivering the fund and innovative projects?

Insights on fund entry, setup, and delivery should be viewed in relation to two key factors. Firstly, the programme has evolved since 2018, with changes such as a longer application window and the option for short- and long-term projects. Project leads valued this flexibility, as it was better suited to the varied timeframes of each project. Secondly, suggestions for improving setup and delivery need to be seen within the programme's constraints, including government governance processes, grant-funding rules, open-competition requirements, and limited resources. These factors limit the ability to change aspects such as financial-year spending, arrears-based payments, and the support offered to projects

Turning to applicants' experiences, the RPF3 application process was supported by well-received pre-application programme activities – such as stakeholder events, Q&A sessions, and a networking hub – that applicants found played a useful role in helping them shape their proposals. The extended submission window, compared to previous rounds, allowed broader stakeholder engagement and stronger applications. While experienced applicants found the process clearer and more manageable, some first-time applicants faced challenges with the application form language and the submission timeframe, particularly during the summer period.

Suggestions for improving future application rounds included introducing a pre-assessment stage to help applicants to understand whether their ideas needed further development prior to

applying, offering mentoring from programme staff and sharing examples of previously successful RPF applications. Some unselected applicants also requested more detailed feedback and scoring transparency to better prepare for future rounds.

After funding notifications in November 2022, selected RPF3 projects entered a setup phase: five weeks for short-term projects, and up to ten months for long-term ones that opted to start preparatory work before funding was released. This phase included recruitment, procurement, and stakeholder engagement. The potentially longer lead-in time for long-term projects allowed for better setup preparation, but it also created challenges such as staff turnover, loss of stakeholder engagement, and difficulties in forecasting budgets. In contrast, the short setup window for short-term projects – especially over the Christmas period – created time pressures that hindered recruitment and partnership building, leading to calls for longer setup periods in future rounds.

Projects that navigated setup successfully often did so through preparatory work – such as stakeholder engagement and contractor discussions – even before official funding confirmation. However, early recruitment was financially challenging for some, particularly local authorities, unless they received pre-project funding. Delays also arose from navigating unfamiliar or rigid internal recruitment processes, leading some projects to rely on existing relationships or internal hires to expedite onboarding.

Delivery experiences across the programme were primarily shaped by four factors: the support provided by the RPF, effective project co-ordination, the strength of partnership working, and the ability to navigate governance processes effectively.

RPF support played a central role in helping them deliver on time and within scope. Monthly check-ins between RPF staff and project leads were particularly valued for their focus on identifying and resolving emerging challenges early. This regular engagement helped maintain project momentum and provided a space for troubleshooting and learning. The programme's flexibility – especially in adapting to different spend profiles in exceptional circumstances – was also crucial, allowing projects to adjust plans with minimal delivery compromises. Additionally, the RPF's role in connecting projects to each other and to wider government expertise helped accelerate learning and foster a sense of community across the programme.

Effective project coordination complemented RPF support in enabling timely delivery. Smaller projects often relied on agile working methods, requiring teams to be flexible and responsive in managing limited resources and tight timelines. In contrast, larger projects faced the added complexity of coordinating across multiple teams or organisations, which demanded more structured collaboration approaches, as discussed further below.

Strong and productive working relationships were also central to successful delivery, with projects typically engaging three distinct groups: regulatory partners, contractors, and external stakeholders.

1. Partners, typically other regulators, supported larger projects with resources and expertise. Strong partnerships relied on regular communication, senior buy-in, and managing organisational differences.

2. Contractors delivered specific technical or operational tasks. While prior relationships eased onboarding, it was essential for projects to actively manage contractors through clear communication, progress tracking, and early issue resolution.
3. External stakeholders, including industry representatives, helped shape project direction. Effective engagement required early involvement, clear communication, and trust built through respect for commercial sensitivities and inclusive dialogue.

Finally, governance procedures at programme, project, and wider government levels presented both challenges and opportunities. At the programme level, some projects struggled to align financial years and forecast spend, though RPF staff helped mitigate this through its flexibility in supporting revised planning under exceptional circumstances. At the project level, organisational changes – such as restructuring or shifting priorities – sometimes threatened continuity, but RPF funding often provided a financial buffer to protect resources. At the broader level, navigating government processes, such as securing approvals for digital innovations, delayed delivery but also helped refine project approaches.

Did the RPF achieve it's set outcomes and impacts?

The programme aimed to deliver three broad outcomes: fostering a culture of innovation within regulatory organisations, strengthening collaboration between regulators and industry, and contributing to an innovation-enabling regulatory environment. The evaluation found evidence of short- and medium-term progress across all three areas, with indications of how these may support longer term change.

There was strong evidence that the RPF helped regulatory authorities become more willing and able to support innovation by funding projects that tested new approaches to regulatory challenges. However, this cultural shift was typically concentrated within project teams, with limited signs of wider organisational change.

Funded projects also promoted collaboration between regulatory authorities, encouraging more joined-up approaches to emerging regulatory issues. While these partnerships were effective within projects, there was limited evidence that they influenced the practices of regulators beyond the immediate project.

The programme also supported engagement between regulators and industry, with moderate evidence emerging that projects involved innovators in shaping regulatory solutions. This was most effective where businesses had sustained and meaningful contact with regulators throughout the project delivery period.

Finally, while the RPF set out to foster a more innovation-enabling regulatory environment, evidence of this longer-term outcome is still emerging. This is expected given the time required for systemic change, but encouraging early signs indicate that progress here is underway.

In understanding outcomes, project leads consistently reported that RPF funding was the critical enabler of outcomes, as it allowed them to pursue regulatory innovations beyond their core activities. They highlighted the importance of a dedicated innovation fund in providing resources and low-risk conditions for experimentation. Central to this was the RPF's flexibility,

which supported iterative learning and development during delivery, rather than rigid adherence to predefined outcomes.

Beyond the immediate outcomes, the evaluation also examined potential longer-term impacts. Although evidence of these impacts was limited – particularly in relation to government priorities such as net zero – there were signs that projects could help advance these objectives. For example, the RPF supported the deployment of low-carbon technologies to drive progress toward net zero and worked to reduce barriers and operating costs for businesses, contributing to efforts to lower the cost of living. Furthermore, the evidence suggests the programme could play an important role in fostering future investment and accelerating innovation diffusion by promoting a more integrated and enabling regulatory environment – reducing investor uncertainty while safeguarding consumer safety.

1. Introduction

This final report assesses the Regulators' Pioneer Fund (RPF or programme) success in supporting regulators and local authorities ('regulatory authorities') to create a regulatory environment that encourages business innovation and investment, whilst protecting consumers and the environment. Based on an evaluation of all 24 third round RPF projects, and a sample from earlier rounds, the report assesses how the programme and its projects were implemented, whether intended outcomes were achieved, and the programme's contribution to these outcomes.

Background to the RPF

Policy context

Since 2021, the UK has faced notable changes, challenges and opportunities. It has exited the EU and is recovering from a global pandemic which has impacted society and the economy, public services, research and private industry.

The previous Industrial Strategy[2] for the economy, released in 2017 to boost productivity and earning power in the UK, has now evolved into a Plan for Growth[3], which expands the government's priorities to include accelerating progress in both existing and emerging industries. Investing in innovation was designated and still remains at the heart of the Plan for Growth.

Innovation-friendly regulation can play a critical role in encouraging and translating Research and Development (R&D) investment into real-world, marketable products and services that could, in the future, be scaled across domestic and international markets to the advantage of the UK economy. The 2019 report, Regulation for the Fourth Industrial Revolution[4], set out the Government's plan to maintain the UK's world-leading regulatory system in this period of rapid technological change. This approach has since been developed further in the 2025 Industrial Strategy, which places renewed emphasis on regulatory reform as a driver of innovation and growth. The updated strategy highlights the importance of streamlining regulation and reducing administrative burdens to support investment and ensure the UK's regulatory environment remains responsive to technological advances.

In 2022, the government announced a Pro-innovation Regulation of Technologies Review, led by the Government's Chief Scientific Advisor, to advise on how the UK can better regulate emerging technologies. This has led to the publication of six reports making recommendations for critical technology sectors and addressing cross-cutting barriers to innovation[5]. One of these reports, the Cross-Cutting and Growth Duty Recommendations, examined system-wide

[2] https://www.gov.uk/government/publications/industrial-strategy-building-a-britain-fit-for-the-future
[3] https://www.gov.uk/government/publications/build-back-better-our-plan-for-growth
[4] https://www.gov.uk/government/publications/regulation-for-the-fourth-industrial-revolution/regulation-for-the-fourth-industrial-revolution
[5] https://www.gov.uk/government/collections/pro-innovation-regulation-of-technologies-review

enablers for pro-innovation regulation and made several proposals to strengthen regulatory agility. A key focus was the Regulators' Pioneer Fund (RPF). The report recommended that government should commit to continuing the RPF into the next Spending Review period to provide a sustainable funding base. It also advised reforming the funding model to make the RPF more agile and responsive, moving away from a single annual competition window to allow multiple funding opportunities throughout the year. Finally, the report highlighted the need for the RPF to support regulators in trialling innovative approaches such as regulatory sandboxes and transformative projects that help businesses bring new technologies to market. These changes aim to position the RPF as a flexible and impactful tool for driving pro-innovation regulation, ensuring that regulation acts as an enabler of growth rather than a barrier.

In 2023, the government published the UK Science and Technology Framework, setting out ten key actions to make the UK a Science and Technology superpower by 2030, which included encouraging a regulatory environment that supports innovation. This framework remains in place under the current government and was refreshed in 2025. The update retains the ambition and the ten critical levers but shifts the framework from a fixed 2030 action plan to a cross-government policy tool. It now focuses on embedding science and technology priorities across government missions and industrial strategy, while continuing to emphasise regulatory reform and innovation.

The Regulatory Innovation Office (RIO), established within the Department for Science, Innovation and Technology (DSIT), is a key government lever for transforming regulatory innovation and positioning the UK as the best place in the world to innovate and commercialise new technologies. RIO works with businesses, regulators, and departments to unlock regulatory barriers, reduce red tape, and accelerate the safe introduction of game-changing technologies. By supporting regulatory reform initiatives, the RIO helps ensure the UK's regulatory system is pro-innovation, responsive to emerging opportunities, and maintains high standards of public safety.

The RPF

Within this policy context, the RPF initiative was set up by the Better Regulation Executive (BRE) in the Department for Business, Energy and Industrial Strategy (BEIS), and is now being delivered by the RIO within DSIT. The RPF supports UK regulators and local authorities to adopt new and experimental regulatory approaches which seek to remove barriers to innovation and help businesses get their innovative products and services to market faster. It enables regulators and local authorities to act with impact to respond to innovation and grasp emerging opportunities, thus supporting the growth and productivity of the UK economy. The RPF provides seed funding and a supportive environment for regulators and local authorities to prioritise innovation. It allows them to undertake ambitious, collaborative projects in a low-risk setting, enabling exploration, testing and refinement of regulatory approaches.

There have so far been two previous rounds of the RPF. RPF round 1 (RPF1) started in October 2018 and awarded up to £10m to 14 regulator-led projects. RPF round 2 (RPF2) was set up in 2021, allocating up to £3.7m to 21 regulator and local authority led projects. The third

round (RPF3) allocated up to £12 million across 15 long-term (12-18 months) and nine short-term (8 months) projects to regulators and LAs to help businesses bring innovative products and services to market, allocating up to £1 million per project[6].

Since 2018, the programme's design and operational processes have evolved through stakeholder feedback and evaluation insights, optimising programme delivery and project outcomes. These changes included the programme allowing for different project lengths (8 months and 12-18 months), providing the option of pre-funding for recruitment activities, and offering a longer application window.

However, the programme faced limits on the changes it could make because of the government governance processes it operates within, the rules around grant funding and fair competition, and constraints on resources and budgets. For example, some of the financial terms and conditions of the programme could not be changed, such as financial year expenditure and payment to projects in arrears.

RPF3 projects

The RPF3 invested up to £12 million in 24 regulator and local authority led projects (2022). The projects represented a diverse range of sectors, including transport, health, environment, information and data, energy, drones and autonomous vehicles, finance, legal, health and safety, food safety and housing. Although varied, they can be grouped into three broad types of innovation: advice provision, proof of concept development, and curation and dissemination of good practice.

- 'Advice provision' refers to projects that have developed guidance for both regulators and innovators that allow them to regulate or develop innovative products and services. These projects also helped develop or deliver advice for businesses to support them to navigate uncertainties around regulatory compliance and how different regulatory requirements interact.
- 'Proof of concept' projects were concerned with testing new innovative solutions or frameworks within their regulatory authority to understand whether they can be implemented in real-life.
- Finally, projects that focused on 'curating and disseminating good practice' were involved in capturing and disseminating examples of high-quality innovation and sharing learning with their sector.

Projects used different approaches to explore their regulatory innovations, discussed later in this report and in the separate, accompanying case study report. These approaches included sandboxing. Sandboxing involves building and testing innovations in a controlled, simulated scenario without the risks associated with real-world experimentation. Whilst sandboxing has

[6] https://www.gov.uk/government/publications/apply-for-the-regulators-pioneer-fund-round-3/regulators-pioneer-fund-competition-brief-for-funding-round-3

many applications, this report focuses on regulatory sandboxing – the exploration and testing of regulatory practices in several ways.

Short-term projects

The nine short-term projects involved seven regulators and two local authorities, collectively referred to as 'regulatory authorities' in this report. Figure 1 summarises each project; a more comprehensive description of each project is provided in the technical report.

Figure 1: Short-term projects

Long-term projects

The fifteen longer-term RPF3 projects involved eight regulators and five LAs. Figure 2 summarises each project (further details can again be found in the technical report).

Figure 2: Long-term projects

Evaluation approach

Aims and objectives

In 2022, the National Centre for Social Research (NatCen) was commissioned by BEIS to carry out a three-year evaluation of the RPF3 programme. The evaluation was later managed by DSIT following government departmental changes. The evaluation assessed the programme's success in supporting regulators and LAs to adopt new and experimental approaches to regulation, which can support businesses to innovate. The evaluation was guided by three research questions:

- What impact has the RPF programme had? Although the focus was on RPF3 projects, RPF1 and 2 were also included to understand the longer-term impact of the programme.
- What are the key programme and project delivery lessons?
- What can government and wider stakeholders learn from the programme?

These research questions informed the four evaluation objectives:

- Assessing whether RPF3 has delivered against its intended goals – understanding the outcomes achieved by RPF3 projects and the longer-term impacts of projects funded in previous rounds.
- Identifying programme delivery learning – understanding enablers and barriers to the programme and project delivery at three levels:
    - Programme entry: exploring how the RPF application process supports applicants and the challenges it presents.
    - Programme support: exploring how the programme is managed by the RIO team.
    - Programme delivery and outcomes: understanding the factors affecting the delivery of the programme and its projects.
- Disseminating learning across government and beyond – for example, sharing good practice on how to support innovation.
- Supporting projects to manage risks and maximise outcomes during delivery – projects were encouraged to anticipate risks and track mitigation measures by completing a monthly monitoring form as part of the evaluation.

RPF3 Theory of Change

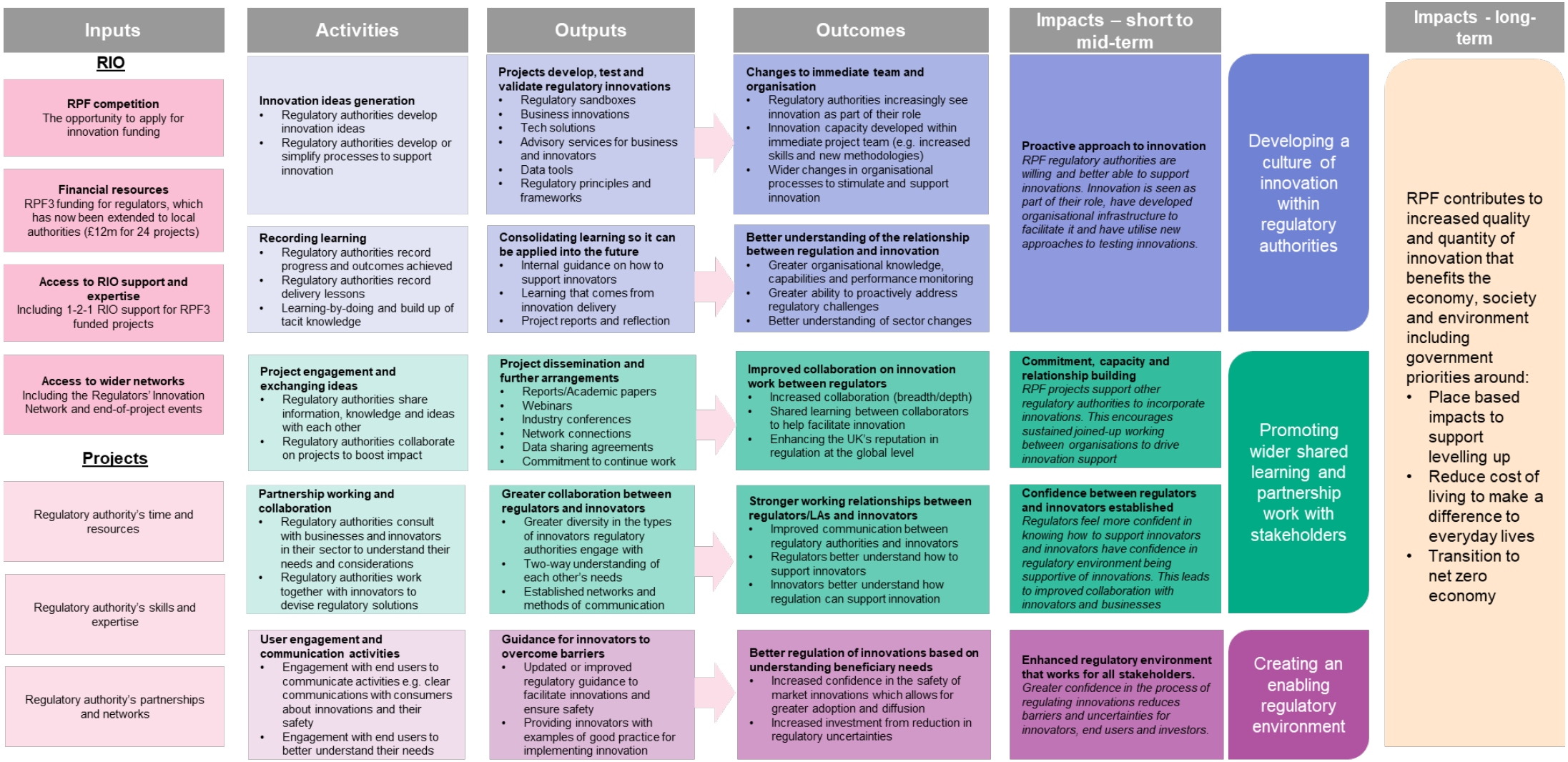
The evaluation built on the initial Theory of Change (ToC) developed by the programme staff and other stakeholders. The ToC was informed by learnings from previous rounds and further refined through additional scoping work with programme staff during this round.

The ToC outlines how the programme is expected to work, and how the range of funded projects across the three rounds contribute to the RPF's overall aims (see Figure 3). It organises these aims into key short-and-medium-term programme impacts and groups these into three categories, which were developed through the initial scoping work with programme staff:

- Developing a culture of innovation within regulators and LAs involved in the programme.
- Promoting wider shared learning and partnership work among stakeholders.
- Creating an enabling regulatory environment – facilitating an environment that supports both regulatory and industry stakeholders in bringing in new, innovative products, services and processes to benefit consumers and businesses whilst ensuring safety.

Collectively, these impact categories reflect the RPF's overall goal of building regulatory authorities' commitment and capacity to support innovation. It aims to do this by funding innovation enabling projects, promoting shared learning between stakeholders and a mutual understanding of innovators' and regulators' needs, and boosting consumer and business confidence in the regulatory frameworks for innovations.

Figure 3: Theory of Change



Contribution Analysis approach

A Contribution Analysis (CA) approach was used to systematically understand the extent to which the programme has contributed to outcomes. CA does this by rigorously testing the understanding of how the programme works (presented in the ToC), through an iterative process of evidence collection and analysis[7]. CA also allows for the examination of alternative explanations to outcomes and dependencies (including external barriers and enablers) to build a robust narrative for whether the outcomes were achieved and how the programme contributed to them.

The information given in the ToC are then presented in written form as 'contribution claims' for each outcome area (listed below). These claims are testable conjectures that describe an outcome, what the programme inputs are that are relevant for that outcome and the series of steps or 'mechanisms of change' that are needed to get there. More detail about the contribution analysis approach can be found in the technical appendix.

The outcomes stated across the contribution claims for the RPF programme were:

- RPF creates a culture of enabling innovation within regulatory authorities, who following the programme see innovation as part of their role.
- RPF increases the capability of regulatory authorities to enable innovation and support compliance.
- Regulatory authorities establish processes of working together and collaborating during project delivery which leads to greater capacity to tackle regulatory issues into the future.
- RPF projects produce innovative regulatory solutions that influence other regulatory authorities to explore new approaches to regulation.
- RPF encourages greater engagement between regulatory authorities and innovators through the project activities and the regulatory solutions they create. This allows for a better understanding of the relationship between regulation and innovation by both regulatory authorities and industry.
- The RPF creates an improved regulatory environment that fosters innovation and supports compliance. Regulatory authorities support innovators with the development of their ideas, increasing confidence for investors who have greater incentive to invest in the UK and reducing risks for consumers who are more likely to adopt innovations.

[7] Befani, B. & Mayne, J., 2014. Process Tracing and Contribution Analysis: A Combined Approach to Generative Causal Inference for Impact Evaluation. IDS Bulletin, 45(6), pp. 17-36.

The Qualitative data collection

The process, outcome and impact questions were addressed by the evaluation using qualitative data collection encounters. This involved 99 data collection encounters in total, largely with staff leading on the RPF3 projects ('project leads') and programme staff. The evaluation also explored barriers to programme entry through interviews with regulatory authorities that either had not applied for RPF3 funding or had applied but were not selected. Finally, the evaluation team also interviewed an independent expert on regulation and technology to bring in an external perspective on the RPF3 impact.

The data collection encounters focused on:

- Applying for RPF3 funding.
- Support received by RPF3 projects from the programme during delivery.
- Experiences of delivering the project and the outcomes achieved.
- The longer-term impacts achieved by projects from other RPF rounds.
- Understanding factors influencing whether outcomes and impacts were achieved, including the contribution of factors external to the programme.

Table 2 below provides an overview of the qualitative fieldwork against these four types, which includes qualitative monitoring data that projects submitted monthly. A full methodological summary for each data collection encounter is provided in the technical appendix.

Table 2: Data collection groups

Focus	Coverage	Participant groups	Approach	Number of data collections
Programme entry	Understanding how the RPF eligibility and application process can enable or hinder regulatory authorities from applying or succeeding in their applications, and what can be done to better facilitate access	Unselected applicants and non-applicants	Interviews	6
Programme support	Understanding programme staff experiences delivering and managing the programme, including supporting projects	Programme staff	Interviews	3
		Observations of the Regulators' Innovation Network	Observations	2
Programme delivery and outcomes	Understanding project delivery experiences, outcomes, and the role of the RPF3 and other explanations for achieving intended outcomes	All RPF3 project leads at both the start ('baseline') and end of projects ('endline')	Interviews	48
		12 RPF3 project leads as case studies	Interviews	12 projects, 12 beneficiaries
		All RPF3 projects completed monthly monitoring progress reports to provide an early understanding of outcomes, achievements, learning, as well as risk and mitigation measures	Monitoring data	8, and 18 reports for each project – collected monthly (dependent on whether it is short or long-term)
		All RPF3 projects completed end of project reports highlighting their key activities, outcomes and lessons learned	End of project reports	24
		An independent innovation expert from the Regulatory Horizons Council	Interview	1
Longer-term impacts	Understanding longer term and sustained impacts from projects involved in previous rounds of the RPF	RPF1 and RPF2 projects	Interviews	10 projects, 5 beneficiaries

Interpreting insights

A key strength of the study's approach was its use of a developed ToC to test contribution statements that were central to how the programme worked, while still allowing flexibility in the qualitative encounters to capture insights outside of this framework. The approach also provided a comprehensive view of programme issues and achievements by gathering perspectives from diverse stakeholders; as noted earlier, these ranged from programme and project staff to an independent expert on technology and regulation.

However, certain perspectives were underrepresented, which limited the extent that the evaluation could comment on two key issues. There were limitations in understanding why some regulatory authorities had never applied for RPF funding because it was challenging to recruit these authorities, who were so disengaged from the programme.

Similarly, the evidence on long-term impact needs to be read with caution for three reasons:

- It was too early to observe the longer-term impacts of RPF3 projects during the evaluation.
- Although the evaluation focused on previous RPF1 and RPF2 projects, engagement was lower than anticipated for legacy projects due to staff turnover and changes in role.
- The evaluation was able to include a limited set of perspectives from wider stakeholders – such as external experts in the innovation and regulation space, innovators and those who could benefit from regulatory change. This reflects the evaluation scope, which prioritised engagement with programme staff and projects, as well as the limited availability and willingness of wider stakeholders to participate. This limits what the evaluation can say from these stakeholders' viewpoints and means the findings may lean more toward the programme's internal perspective. However, some of these perspectives were represented in the deep dive case studies with 12 RPF3 projects, published alongside this report. The risk of self-report bias and the mitigations built into the evaluation design are further discussed in the accompanying Technical Report.

When interpreting the insights and accompanying recommendations, it is useful to consider the wider context in which the RPF programme operates, which includes:

- The wider policy and regulatory landscape, such as the 2024 national election or policy changes in a specific sector.
- Government processes which guide the RPF programme and projects, such as timelines, budget and spending conditions.
- The context in which regulatory authorities operate, including regulators often lacking experience applying for government funding and working outside core activities or the financial constraints faced by local authorities at the time of the evaluation.

Report overview

The report is structured around the process, outcome and impact learning from the evaluation:

- Chapters 2. Fund entry and setup and 3 focus on the process evaluation questions by exploring regulatory authorities' experiences of applying for, setting up and delivering projects.
- Chapters 4 and 5 focus on insights around the outcomes and impacts of the programme, as well as the extent to which the programme contributed to these.
- Chapter 6 brings together the key conclusions and recommendations from the report.

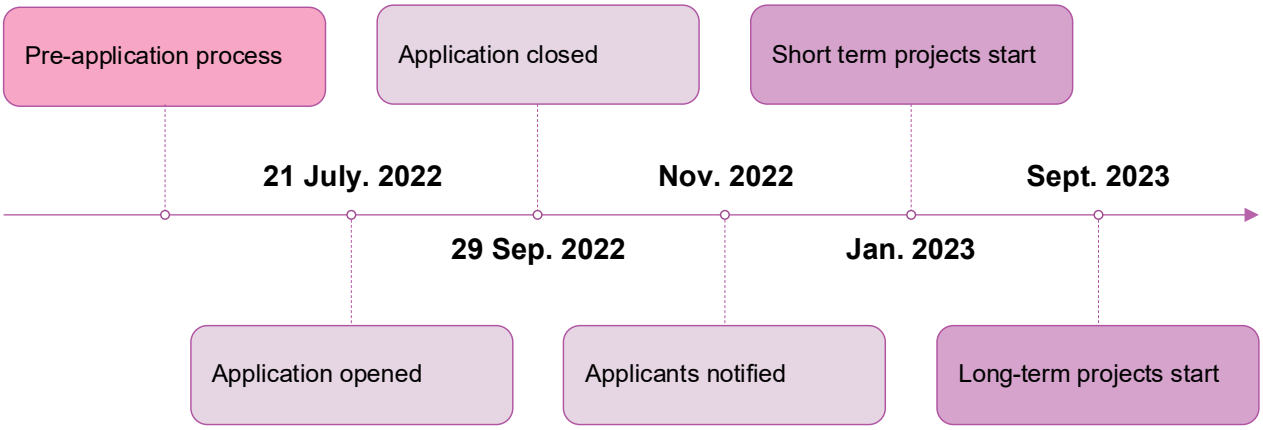
2. Fund entry and setup

This chapter explores why regulatory authorities applied for RPF funding, their experience of the application process, and the setup time between the award and commencement of the projects. This chapter draws on interviews with unselected and non-applicants, programme strategic and operational staff, and both baseline and endline interviews with RPF3 projects. As will be discussed, having previous RPF experience made the application and setup stages easier for project leads.

Application experiences

The application journey involved three stages: the pre-application process, application process, and application outcomes. Regulatory authorities' experiences of these stages and the lessons learned will be discussed in the following sections.

Figure 4: RPF competition timeline



Pre-application process

Motivations for applying

Applicants initially sought funding for their project out of a commitment to create a regulatory environment supportive of innovation without compromising compliance. This was driven by the intention to align regulatory activities with broader UK government priorities, such as net zero or emerging technologies (e.g. hydrogen), and/or sector specific goals, such as encouraging the use of Unmanned Aerial Vehicles (UAV) for logistics.

In this context, regulatory authorities' saw RPF as a good funding opportunity because of the uniqueness of its conditions, their previous experience of applying and the project timeframes it offered.

Project leads said that the RPF was unique for two reasons. Firstly, there was no other comparable funding that allowed regulators to exclusively focus on innovation. Secondly, the RPF provided a flexible environment for regulators to innovate by, for example, allowing them to adjust their project goals to reflect delivery learning. This was particularly welcomed by projects at the early stages of development as a unique opportunity to experiment and refine their ideas.

Having previous RPF experience encouraged project leads to apply, particularly if their previous application and project outcomes had been successful. As will be discussed, the familiarity with the process made it easier for them to apply and previous success helped build confidence in securing funding again. Even project leads who had not applied before were encouraged to do so after hearing about the success of previous RPF1 and RPF2 projects.

The RPF offering both short (8 month) and long-term (12-18 month) funding also attracted projects with different goals, which will be discussed further in Chapter 3.

While the evaluation insights are based on a limited number of interviews with non-applicants and should be interpreted with caution, the decision not to apply for RPF3 funding was not a reflection on the fund itself but was driven by three factors. Firstly, regulatory authorities were focused on other critical work and lacked the time and capacity to prepare an application or plan a project. Secondly, non-applicants with existing funding streams felt there was less need to seek additional support. Lastly, risk-averse regulatory authorities believed that the potential risks of undertaking an innovative project outweighed the benefits.

Pre-application support

In the months leading up to the application process, RPF provided various forms of planned pre-application support for applicants:

- **Awareness raising activities** – including several stakeholder events held ahead of the RPF3 competition, allowing both previous RPF recipients and potential new applicants to discuss project options for the upcoming round. RPF also presented on the RPF3 at the Regulators Innovation Network (RIN) – an informal network of UK regulators interested in innovation and technology. They also sent information to regulators on the RIN email list.
- **Guidance and clarification** – Programme staff also delivered Question and Answer (Q&A) and Frequently Asked Questions (FAQs) sessions to answer questions from potential applicants. Two virtual sessions were delivered between August and September 2022. A FAQs document was also circulated.
- **Peer collaboration and networking** – Programme staff setup a Networking and Information Hub to provide information about the application process and allow potential applications to collaborate.

The RPF team also provided other ad-hoc support such as responding to queries by email and telephone.

Project leads valued the pre-application support as an opportunity to strengthen their RPF3 applications. The Q&A sessions were particularly useful as project leads were able to ask programme staff questions to learn more about RPF3 and the application process. The chance to hear other applicants' questions also helped to stimulate thinking about ideas for their own project which they may not have previously considered.

> *"It's helpful because partly you can dial in and you can listen to other people's questions, too, so even if you haven't got that far through your application process, it prompts some of the things to think about." (*Curating and Disseminating Good Practice project, short-term project lead)

Application process

The RPF invited applications from projects that were able to demonstrate improvements in their sectors, foster partnerships and collaboration among regulators, and address at least one of the previous government's priority areas:

- Helping the country move to a net zero economy.
- Supporting place-based innovations.
- Reducing the cost of living and making an impact and difference to the everyday lives of people and businesses.

Project leads had from July to September 2022 to submit their full application.

Applicants' experience of the application process was explored in interviews with both unselected applicants and RPF3 project leads. Participants identified two important aspects of the application process: timeframe and the application form.

Timeframe

Project leads had mixed views on how long they had to complete the application and when this period fell. The programme had extended the competition timeframe within the limits of government guidelines and financial processes, drawing on learning from previous RPF rounds. Those with previous RPF experience viewed the timeframe positively, appreciating the additional time given to prepare their application compared to earlier rounds. Their positive reflections may also be linked to needing less time to understand and complete the application due to previous experience.

However, other project leads felt the timeframe was shorter than ideal to secure partner and stakeholder buy-in or to bring in finance experts to review their planned activity costings. This issue was exacerbated by the application period falling over summer, when key staff needed to provide input or sign off were likely to be on leave.

The application form

The application form was split into three sections:

- **Application details** – the first part included a project summary and public description whilst highlighting how the proposed project reflected the purpose of the RPF programme, and the real world impacts it sought to achieve.
- **Application questions –** the second part included six independently scored questions, each with a 300-word limit. These included the rationale of the project, alignment with organisation and government priorities, team and resources, governance and delivery, added value, and value for money.
- **Project financial information** - in the third section, projects were required to provide a monthly breakdown of anticipated costs over the project duration.

Project leads discussed both the content and the format of the form, and how it could be improved further.

In terms of the content, those with previous RPF experience were generally more confident about the application process, understanding why the questions were being asked and clear about the information they needed to provide.

> *"I think it helped us having gone through the process recently before. The process hadn't changed majorly. The key questions and the justifications and the case that we needed to make, we understood how that worked from the other project. The fact that we were confident was because we were successful with the other bid, we kind of knew what we needed to get across"* (Curating and Disseminating Good Practice project, short-term project lead).

However, first-time applicants found the language in the form too technical and so sometimes needed input from external experts. Although applicants were not clear about which aspects they found technical, one project lead gave the example of needing to consult a company specialising in the aerospace field to help write the application and respond to technical questions. These applicants therefore suggested that the RPF provide additional support and reassurance for first-time applicants, including:

- **One-to-one mentoring support** – to help applicants better understand the application questions and what information to include. However, this suggestion will have resource implications for the programme and should be seen in the context of the individual support it already provides, such as the dedicated RPF email for projects to contact programme staff.

  > *"It was a hard experience to do. I didn't know if I was doing the right thing or giving the right information. I don't know how I would have improved. I don't know how I would have done things differently. If I had a mentor, I could have discussed it"* (Unselected applicant).

- **RPF sharing applications from funded applications** – to clarify the level of detail needed.
- **Introducing a pre-assessment stage** – such as an ideas pitch before projects submit a full application. This stage would have particularly helped unselected

projects understand where they needed to further develop their ideas prior to applying, thereby saving them effort and time on the application process.

Regarding the format, project leads had mixed views towards the 300-word limit for each question. Those who were in favour of the word-limit said it encouraged clear thinking, helping them succinctly summarise the key delivery aspects, outcomes and aims of the projects.

> *"The word count was good because it gave us space to say stuff, but also, we had to prioritise not going too, like, into detail, into the weeds of things. It was a good exercise to go through for ourselves about articulating the idea."* (Proof of Concept project, short-term project lead).

However, some project leads found the word count too constraining, especially those working in highly technical areas such as machine learning and artificial intelligence. They felt it limited their ability to fully explain their project, which could have led to lower scores for their application. For example, one project lead found it difficult to avoid jargon and felt they needed more words to explain concepts clearly to those without their regulatory background.

Application outcomes

Applicants discussed their application outcomes in relation the feedback they received and, in the case of unselected projects, what they would do next.

Feedback

Following an assessment of submitted proposals, an awarding panel made the final funding decision in November 2022. The RPF notified unselected applicants, explaining why their project was not selected (e.g. if it was out of scope) and provided feedback, including strengths of their application and suggestions for improvement.

Those with previous RPF experience welcomed the feedback. They did not receive it in previous rounds and felt it helped them explain to their organisation why their application was not selected. However, some unselected applicants – particularly those applying for the first time – wanted more detailed feedback, including:

- Discussions with programme staff to gain a clearer and more detailed insight into how to improve and develop their innovation ideas.
- Clearer written guidance on what their application lacked and how to strengthen it for future rounds of funding.

  "…being able to then have an addendum to respond to … some of the points that maybe were not included or were lacking in the thing [the application form], just to get a bit more clarification around being able to secure that funding from that pot, if possible. How many applications? We didn't know how many applications were made and how many were rejected, so where

you kind of stand on a scoring system. That was a bit closed from what - not as transparent on that side" (Unselected applicant).

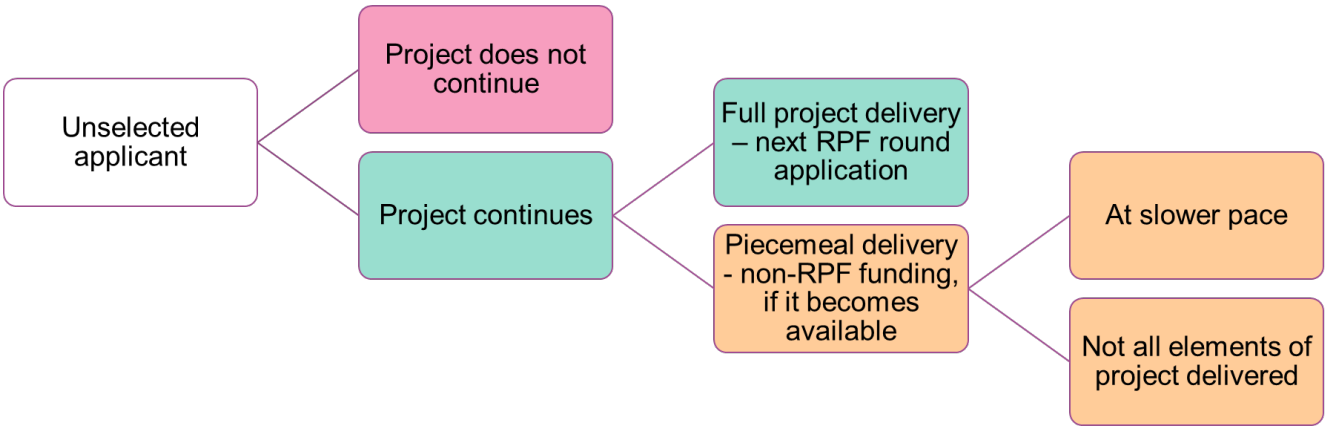
For context, the RPF published the list of selected projects along with a high-level overview of the assessment process and details on the number of applications received. Even so, unselected applicants recommended having more information on the scoring system and selected projects to help them improve their chances in future applications.

Outcomes

Although not all projects were selected, applicants still valued the application process as it gave them space to think through their ideas and a better understanding of how to take them forward in the future.

Where the RPF funding was not awarded, applicants varied in their intentions to take their innovation idea forward. Some unselected applicants lacked the funding to continue with their projects, as they did not want to apply for the next RPF round and could not fund it themselves or secure external funding. Those that intended to continue either wanted to improve their application for the next round of RPF funding or deliver their projects gradually and more slowly as other funding became available. Both cases highlight the importance of RPF funding in supporting regulatory authorities to innovate.

Figure 5: Outcomes for unselected applicants



Setup experiences

Selected projects then entered the setup stage, running from notification in November 2022 to the start of delivery – January 2023 for short-term projects, and October 2023 for long-term projects, which could use this full period for setup if they began preparatory work before

funding was released. Notably, this setup stage also overlapped with delivery for some projects.

The setup stage typically involved recruitment, procurement and onboarding staff, stakeholders and contractors. Project leads for both short and long-term projects reflected on the challenges of the setup timeframe and the importance of working on setup activities, such as recruitment and partnership development, as early as possible. Some of the setup challenges had an impact on project delivery and will be revisited in the next chapter.

Setup timeframe

Short-term projects had a five week-period between funding notification and the start of projects in January 2023. While shorter than the timeframe for the long-term projects, the programme extended short term projects from six to eight months compared to previous RPF rounds, based on learning from these previous rounds.

Despite these changes, some project leads found the 4-5-week setup period too short – especially as it fell over the Christmas period, when staff availability was limited and hiring tended to be more difficult. This led to challenges recruiting key staff, bringing in expertise and contractors and forming partnerships on time. Consequently, there were delays in getting some projects started, which sometimes compromised delivery (discussed in Chapter 3) and prompted project leads to wonder whether applying for a long-term project would have been more beneficial.

Following on from this, a key recommendation from project leads was to build in a longer setup time in future rounds, allowing short-term projects to complete these early tasks without affecting their delivery timeframe. However, this may not be feasible as the RPF operates within government timeframes and programme staff need sufficient time to process applications.

In contrast, long-term projects had an extended lead-in time of 10 months between funding notification and projects starting (October 2023). This contributed to the timely completion of the types of setup activities touched on earlier and outlined below, which in turn supported overall project delivery.

- **Building project teams** – by recruiting staff with the relevant expertise and skills.
- **Engaging stakeholders** – reaching out to these early, helping to raise awareness of the project and building engagement ahead of delivery.
- **Engaging contractors** – including getting written agreements signed off, such as a memorandum of understanding (MoU), to foster a shared understanding of the project aims, timeframe and deliverables.

However, a longer lead-in time presented three challenges. Firstly, some regulatory authorities were frustrated by the wait to begin, as they wanted to start right after funding was confirmed. Delays made it hard to keep senior leaders, external partners, and other stakeholders engaged because their focus often shifted to other priorities or changes. Secondly, some projects

experienced team changes, with key staff moving to other jobs during this time. This had implications for project delivery, discussed further in Chapter 3. Thirdly, forecasting costs for the year between the award and the project start was difficult. Some projects found that costs, like contractor rates, had increased by the time the project began, stretching their budgets.

> *"I guess, all I'd say on that is, obviously, a lot changes in 12 months. We put the funding application together, including a forecast budget for the project. Costs now are a lot different from what they were 12 months ago"* (Advice provision project, long-term project lead).

In response to this, project leads suggested that application forms allow greater flexibility, explicitly recognising that with an understanding that deliverables and costs may evolve during the setup period and throughout the project lifecycle- an approach already aligned with the programme's intent but not perhaps need clearer articulated in the forms.

Pre project activities and recruitment

Projects that successfully navigated the setup period often had to undertake essential setup activities early to ease the time pressure at the setup stage. Some authorities began setup activities even before receiving confirmation that their application was selected. Typically, these 'pre-project activities' involved having preliminary discussions with external stakeholders and potential contractors to:

- Refine innovation ideas.
- Identify key project relationships.
- Get partner and stakeholder buy-in to the project early.

These activities were important because they helped ease time pressures during the setup stage for selected projects- particularly for eight-month projects with a shorter four- to five-week setup period and for regulatory authorities that had faced setup challenges in previous RPF rounds. These experienced leads felt that the RPF did more in this round than in previous ones to actively encourage projects to have these relationships and resources ready before starting their project.

> *"You have to have all of those commercial things ready to switch on immediately, and I think that was becoming more and more recognised. People were informed better of that this time around than the previous time"* (Proof of Concept project, short-term project lead).

Once selected, recruiting staff for the project team was another key setup activity. This process typically needed to begin even before receiving RPF funding to ensure work could start promptly at the delivery stage- especially for short-term projects

However, projects needed financial means to begin recruitment activities early, which not all regulatory authorities had. Local authorities particularly struggled to financially conduct activities outside of their core work without funding. The programme sometimes provided early financial support by offering a portion of the funding upfront ('pre-project funding'), but not all

projects received this support. Applications for pre-project funding were assessed on a case-by-case basis where the circumstances of the project were considered and whether the provision of early funding was necessary. Without this funding, setup activities had to take place during the delivery phase, sometimes compromising the delivery timeframe (discussed further in Chapter 3).

An additional recruitment challenge was projects having to navigate their own or partners' recruitment processes. This delayed recruitment where partners had not worked together before and so they were not clear what these processes involved or how long they would take. Internal governance processes also made recruitment challenging, as job evaluation systems and wage structure guidelines sometimes capped salary bands, limiting the project's ability to attract skilled personnel. In such instances, project leads sometimes had to hire contractors, which took longer and added to the delays.

As a result of the recruitment delays, projects felt it was important to allocate more time and budget for recruitment activities.

Where pre-engagement activity or early recruitment work was not possible or limited, some projects accelerated the hiring of staff and appointing contractors by drawing on existing relationships during the setup period. This avoided the time-consuming process of issuing a 'cold tender' or navigating full procurement processes by using call-off contracts to appoint a contractor or hiring project staff internally.

Key learning

Application process

- Pre- application support was valued by project leads and helped strengthen their application.
- Although the application process had noticeably improved since the previous round, applicants with prior RPF experience were more familiar with it, while new applicants would have welcomed additional support. Project leads suggested measures such as mentoring, sharing examples, and introducing a pre-assessment stage to assist new applicants.
- Applicants had mixed views on the application timeframe, with experienced leads finding it manageable and others struggling due to summer leave and tight deadlines.
- Unselected projects would have liked more feedback and transparency with the scoring system.

Setup

- The setup period was particularly challenging for 8 month projects, who started earlier and so had a shorter lead-in time before delivery. They experienced challenges recruiting staff, bringing in expertise and forming partnerships in time.
- Pre-project activities were a key enabler during the setup phase. Projects that initiated stakeholder and contractor discussions before they were awarded funding were better positioned to meet tight delivery timeframes. Leveraging existing relationships or recruiting internally also helped accelerate setup activities and avoid delays.
- Once selected, early recruitment of project staff was also key in ensuring setup activities did not encroach on the delivery timeframe. However, this was delayed by projects not being able to access pre-project funding and to having to navigate their own or partners' recruitment processes.
- Long-term projects valued the extra time for setup activities, but this presented challenges where there was a loss of momentum for the project, and changes to project and partner staff and forecasted budgets due to inflation and rising costs.

3. Delivery experiences

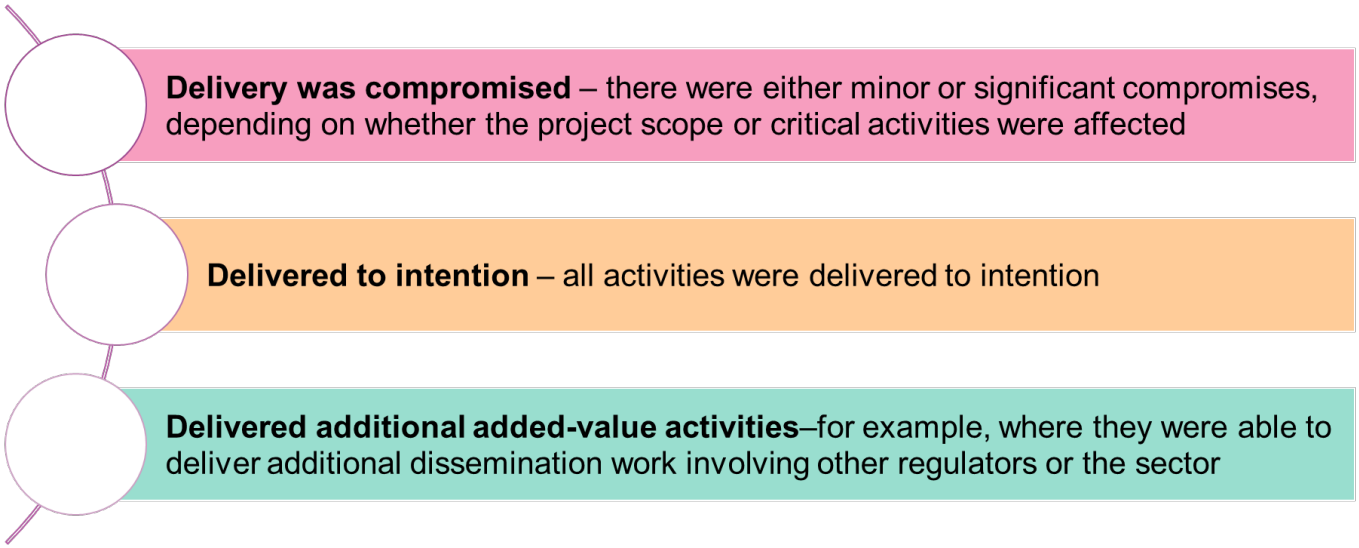
This chapter explores three key delivery experiences discussed by programme staff and RPF3 project leads in their endline interviews. These experiences focused on being able to deliver projects on time, working with delivery partners and stakeholders, and being able to navigate programme, governmental and project governance processes. Across these experiences, both programme staff and project leads identified a combination of factors that supported or hindered intended delivery activities. These related to the wider policy and regulatory landscape, the RPF programme, the regulatory authorities' internal organisational context and project level factors.

Delivery to intention

Projects delivered different activities based on their specific goals. These activities included developing ideas for an enabling regulatory environment, delivering on and testing these ideas (often in collaboration with others) and sharing project learning and outputs.

Projects differed in the extent to which they were able to deliver activities as they had originally intended ('delivery to intention'). There were three variations to this:

Figure 6: Delivery to intention



Generally, projects tended to deliver to intention with only minor compromises in delivery, which did not significantly affect project outputs and, therefore, outcomes. This is because these compromises usually related to non-critical activities that projects could work around, or to a single undelivered activity that was offset by the project delivering its other critical activities. For example, a project lead said that they had gained the learning they needed from delivering most of their sandboxes, despite being unable to deliver one of them.

However, there were also projects which had made more significant delivery compromises to their activities, which affected their scope. These included not delivering on numerous critical activities, changing the activity scope or not having the anticipated involvement of key stakeholders in these activities. These changes sometimes worked to the advantage of the project by helping it achieve more focused outcomes as a result of streamlining their goals and approaches. For example, a project team felt that narrowing the geographical scope of their modelling work to fit the RPF budget and timeframe allowed them to produce a more detailed proof of concept model that would have not been possible otherwise.

> *"It [limiting project scope] just enabled us…in the timescale we had probably created a better product than we would've done if we'd kept that wide scope. It would've been much more diluted and not had the kind of detailing, and I think by refining it we were just able to focus our attention and just go, 'Yes, it's not as big as we expected but this is the potential and you can build on it geographically …"* (Proof of Concept project, short-term project).

Exceptionally, significant compromises had effects on project outcomes that were harder for project leads to anticipate or more challenging to manage, as illustrated by the example of two projects. In the first example, a project was unable to consult the expected range of businesses and innovators to inform the development of a regulatory advice service. They nonetheless developed their service approach but were unsure whether it fully reflected the needs of a range of businesses and innovators. In the second example, a project had to significantly limit its testing of autonomous vehicles because the lead regulator did not approve their use in areas where other aircraft were flying.

There were also projects which overdelivered on their anticipated activities. This usually involved additional dissemination activities to share their project learning more widely in their sector or with other regulators, and developing their ideas beyond the feasibility stage. For example, a project worked with a contractor to establish the feasibility of data sharing to support joined-up work between regulators across sectors. The contractor then did additional proof-of-concept work on building an AI tool to allow regulators and others to interrogate the shared data, which went beyond the project's original scope.

Factors affecting delivery to intention

Project leads highlighted three requirements to delivering activities as they had originally intended: completing projects on time, productive partnerships with partner organisations, contractors and stakeholders, and being able to navigate programme, governmental and project governance processes.

Their ability to meet these delivery requirements was shaped by four influences, which were both internal and external to the programme and project:

- Wider policy and regulatory landscape.
- Programme level factors – particularly its support and funding conditions.

- Regulatory authority's organisational context.
- Project level factors – particularly the nature of the project and how it was managed.

The following sections will explore each delivery requirement in turn, exploring how the influences acted as barriers and enablers to delivery to identify key programme and project level learning. This includes revisiting the setup issues discussed earlier to understand their downstream effects on delivery.

Delivery conditions

Delivering on time

An important funding condition for projects was to deliver their activities within the 8 month or 12-18 month period. Project leads had mixed experiences of being able to deliver within this timeframe. They felt particularly comfortable delivering to time where they had been able to navigate the setup process quickly. This enabled them to have key delivery processes, staff and partnerships in place to begin delivery as early as possible.

As noted in Chapter 2. Fund entry and setup, project leads also reflected positively on the timeframe if it supported their innovation goals; there were two aspects to this. Firstly, whether the time period benefited their specific type of innovation. There were mixed views on this, with both shorter and longer-term projects feeling that their project duration supported specific approaches. For example, both types of projects found that their project length supported the use of sandboxes to test regulatory innovations. For 8-month projects, the shorter project duration allowed for the quick development cycle needed for sandboxes, whilst longer term projects felt that 12-18 months allowed for the development of more sandboxes and additional time to test these.

> *"Actually, the nature of a sandbox is that it should be sharp and short. It's supposed to be fail fast. It's supposed to be testing it. That's why we did the eight months."* (Curating and Disseminating Good Practice project, short-term project).

Secondly, project leads selected a specific time period for their project if it helped to support the delivery process. Some projects preferred the 8 month delivery period as it helped to sharpen organisational and partnership focus on the innovation. This was particularly the case where they thought any longer than 8 months could have resulted in projects being affected by staff turnover or stakeholders losing interest or motivation in being involved.

However, some project leads felt that the 8 month period limited their project scope or the partnerships and expertise they could bring into their innovation. Shorter term projects also experienced a steeper setup and delivery period, which was particularly problematic if they had experienced significant setup issues. Other reasons why the short delivery period was perceived to be an issue by project leads included:

- **Organisational changes** such as staff turnover and restructuring, leading to delays in being able to access internal expertise and staff time to input into the innovation.
- **Each stage of innovation activities taking longer than anticipated**.
- **The working practices of businesses, innovators, and other partners** unable to accommodate a fast delivery pace required for an 8 month project.

In contrast, longer-term projects opted for the 12-18 month period because they felt they needed more lead-in time to complete the setup activities and support their delivery. However, as noted in Chapter 2. Fund entry and setup, this was dependant on them having the resources, such as pre-project RPF funding, to work on these activities prior to the start of the study.

> *"… the actual project didn't start until - well, in the end it was October 2023. So, for me, that's probably the biggest factor in it being the success that it was, because it allowed us time to get through the governance process at local authority levels across [several] local authorities, which, notoriously, governance takes an awful lot of time to get things signed off."* (Advice provision project, long-term project).

Even then, some projects felt that the 12-18 month was not long enough to deliver key project activities if they had experienced setup delays or other challenges, such as partners not progressing activities as quickly as they needed to or staff turnover. The risk of key project and partner staff moving on was also higher for long-term projects because there was more time for personal and organisational situations to change. This sometimes led to the project vision needing to be re-established or disruptions in relationships between partner organisations. For example, one long-term project felt they had to do a lot of work to understand the nature of the project when key staff involved in the original application had left prior to the start.

Regardless of project length, there were two factors that supported projects to deliver to time: the support provided by the RPF and effective project management skills.

RPF support

The support provided by the programme was key to helping address delivery time issues. There were five aspects to this:

- Regular catchups between programme staff and project leads.
- Programme staff being flexible with project deadlines in exceptional circumstances.
- Whether projects found the programme monitoring process helpful.
- Programme support to share learning across projects to help accelerate project thinking.
- Projects being able to access other resources to support delivery through the programme.

In terms of regular catchups, each project had a dedicated programme staff member who caught-up with project leads monthly and was also available to field ad-hoc queries. Programme staff indicated that these catchups were typically 45 minutes in duration. Project leads generally found the support to be helpful and described programme staff as being approachable and interested in their regulatory innovation, which encouraged project leads to reach out for support.

In addition, project leads found the regular catch ups valuable because it helped to keep their project on track in several ways. Firstly, the catch ups were an opportunity for the project staff to revisit the scope of their project to check whether it was still realistic to deliver what they had originally intended or review resourcing implications of any changes in scope. Secondly, the meeting agenda was responsive to understanding and addressing the emerging issues faced by projects. Both project leads and programme staff felt this allowed issues to be identified and resolved quickly, such as timeframe and financial issues. However, in a few exceptional cases, project leads felt the catch-ups were less helpful because discussions focused narrowly on project updates rather than exploring challenges in delivering the innovation. One project lead reflected on their meetings not taking place at regular intervals.

> *"We had monthly catchups with DSIT to kind of discuss risk and issues and all the funding and everything…Anything that came up as a blocker… it seemed quite straightforward, and we generally got an answer fairly quickly so that we could then move on and carry on."* (Proof of Concept project, short-term project).

> *"I don't think we really received any [programme support] …We had monthly calls, but they were very much an update reporting call, and we had several instances of the person not attending…We just got on with it…The relationship was a funding transactional relationship. The support that there had been indications there might be at the beginning did not materialise."* (Curating and Disseminating Good Practice project, short-term project).

It is important to note that Fund staff have iteratively developed and refined their support offer through reviewing project feedback at each successive RPF round and will continue to improve their support processes where required.

As part of this support, projects leads reflected favourably on the flexibility of the programme in extending project timelines and financial spend (discussed later in the chapter) in exceptional circumstances. For example, a project that had experienced significant setup delays was able to extend the timeframe for their project slightly.

Project leads spoke positively about the RPF project's monitoring process. As mentioned in Chapter 1, each project had to fill out a short monthly form to update the programme on progress, challenges, mitigation measures, and learning. This form helped keep projects on track by encouraging regular discussions with staff and collaborators about delivery progress and challenges. Project leads also found the form easier to complete than in previous RPF rounds. However, some felt the form could be streamlined further, and longer-term projects suggested that filling it out quarterly would be more efficient than doing it monthly.

Project leads also felt that their project delivery was accelerated where the RPF programme helped to share learning across projects. This included RPF staff sharing information about what other similar projects were doing during the regular catch ups, staff connecting projects with other RPF3 projects or projects from previous rounds and providing opportunities for formal networking events, such as the Regulators Innovation Network (RIN). However, some projects felt that there could have been more formal opportunities to meet and learn from other projects, such as more frequent RIN meetings and events where previous RPF projects could share their delivery learning.

> *"More opportunities for projects to come together [are needed] - but certainly some sort of gathering maybe midterm, to be able to give updates and see if there's any areas where projects maybe align. I think there were a few pieces of work that definitely [RPF support staff] was piecing together…[but] we never quite got there."* (Proof of Concept project, long-term)

Finally, project leads also appreciated the additional support the RPF provided to help projects access resources and expertise that they may not have otherwise been able to access to progress their regulatory innovation. For example, one project mentioned that the RPF team offered to connect them with a government analyst to support their work.

Project coordination

At a project level, strong coordination and leadership was reported by project leads as helping keep their regulatory innovation on track. For larger projects involving several regulators, project leads highlighted the importance of developing effective ways of working together to help coordinate delivery. These included clear channels of communication and having a dedicated project manager (discussed in the next section).

For smaller project teams, strong coordination involved having a clear schedule of activities or deliverables, and project staff having clear but sometimes interchangeable roles that helped to keep the project moving. Interchangeable roles were important as this reduced delivery delays as staff could work in parallel on activities and ensured that team absences did not lead to interruptions in delivery.

Regardless of size, projects also reflected on two measures to support the continuity of the project. These included having a clear understanding of the resources needed for each stage, which sometimes involved revisiting and revising what projects had estimated at the application stage. It also included having clear documentation in place about the project vision and goal in case there was staff turnover which, as noted, had the potential to lead to project delays.

Productive partnerships

Projects often worked with partners, contractors and a range of stakeholders to deliver key aspects of their project. The following sections detail their experiences of working in these partnerships.

Partners

Project partners were regulators, sometimes from different sectors, and local authorities involved in project delivery. These partnerships provided projects with a blend of knowledge, skills, expertise and staff capacity to deliver the regulatory innovation.

Effective communication was a key aspect of good partnership work, as it helped to keep partners on board, progress project activities in a joined-up way and helped partners feel a part of the project. An important aspect of good communication was partners feeling that they were treated by the project as equals, with their views valued and heard during partnerships conversations. Other good communication practices included:

- **Regular channels of communication –** between partners to discuss progress, issues, mitigations and to share knowledge and expertise. Examples included consortium working groups clustered around the project.
- **Opportunities outside of formal meetings** – to communicate with partners, such as through email and other virtual channels.
- **Tailoring the mode of meetings to optimise input form partners** – for example, some projects found that occasional face-to-face meetings were a valuable supplement to virtual meetings, as they enabled informal conversations between partners that helped build rapport and mutual understanding.

Investment and ownerships of the project among partners was strengthened when each had buy-in and support from their leadership teams. This buy-in allowed partners to prioritise the project and to access resources, such as staff, to contribute to the project. Leadership commitment to the project was encouraged by government input and the wider policy climate in the following ways:

- **Government interest in the project provided external validation** – for example, a local authority felt that having a government representative at meetings highlighted the project's importance and kept partners engaged.
- **Changes in government policy strengthened partnerships** – for instance, several recent changes to housing legislation encouraged local authorities to engage with a housing project so that they could upskill their staff to learn more about these changes.

In contrast, leadership buy-in was adversely affected by factors that compelled organisations to focus inwards, away from activities outside of their core work. As noted earlier, these included the factors below, which sometimes led to wider partners devolving ownership of the project to the lead applicant. When this happened, the lead regulatory authority found itself dedicating more of its resources and vision to the project than it had originally budgeted for.

- **Internal restructuring and organisational downsizing** – which led to organisations struggling to manage their core activities. This was sometimes compounded by partners losing or having their government funding reduced when, for example, government priorities had changed after the national election.

- **Turnover of key staff –** the turnover of key staff that championed the project, especially in smaller partner organisations, sometimes led to partners losing interest in the project or made coordination difficult without a single point of contact in that organisation.
- **Organisational priorities shifting –** because of a focus on other emerging projects in their organisation. This sometimes led to organisations deprioritising the project in various ways, including only assigning junior staff to attend partnership meetings, limiting their organisational input into the project.

Different working styles among partners also affected relationships. Firstly, as noted in Chapter 2. Fund entry and setup, varying complexity in procurement and recruitment processes between partners could delay the project's start. Secondly, perceptions of risk varied between organisations, which influenced their engagement. For example, one project reported that their main regulator viewed their framework for testing autonomous vehicles more through a lens of safety and risk rather than enabling innovation. Thirdly, partners differed in how quickly they completed administrative and project tasks, with one project lead spending considerable time chasing partners for key deliverables.

Given the different working styles, larger projects sometimes felt they benefited from having a dedicated project manager. This was either an internal team member or an external contractor that had the time to manage the programme administration and, importantly, liaise with the different regulatory partners to keep the project to time and budget.

> *"I would certainly say that being able to bring in a specialist project manager...Just someone to be slightly removed from the detail, just to be able to drive the project along, supporting on our engagement with procurement…funding and the budgeting and all that sort of thing. I think that was quite key to the success of the project."* (Proof of Concept project, long-term project)

Contractors

External contractors were essential for some projects to deliver their activities to intention. These contractors, often private firms or academics, provided the project with the necessary expertise, industry connections, and independence to engage stakeholders. This allowed projects to deliver key activities such as conducting research, developing and testing regulatory innovations, and facilitating consultations with industry experts and international regulators.

Where relationships worked well, project leads felt they could trust contractors to deliver activities to time and scope for a range of reasons. These included contractors prioritising and being interested in the innovation, having a clear understanding of what needed to be delivered (signing a Memorandum of Understanding to confirm this further reassured project leads) and being able to communicate delivery progress effectively.

Good working partnerships were sometimes a result of previous relationships between parties. Regulators worked well with contractors that they had used before because they had developed a shared understanding of how they would work together effectively. Similarly,

projects with multiple contractors reported seamless delivery where these contractors had worked together previously. This is because contractors already came into the project with aligned working practices and there were no competitive tensions as they were comfortable working together.

> *"They [the two contractors] didn't need to do that bonding and understand well how do you work. There was no tension. They were just a seamless team the two of them."* (Curating and Disseminating Good Practice project, long-term project)

Where relationships were not working as well with contractors, project leads reported three level of challenges based on their implication for project delivery. At the lowest level of impact, there were differences in working styles between the project team and contractor that were eventually resolved with limited impact on the project. These included:

- **Initial uncertainties about whether projects would be delivered to time and scope because of a lack of progress updates from the contractor** – this was particularly an issue for short-term projects, who had a more constrained timeframe to deliver their projects. For example, a project lead described their contractor's working and communication style as "laid back", whilst another said they were uncertain how the project was progressing because their contractor did not check-in regularly.
- **Contractors sometimes worked in a fast-paced way, which did not always mirror how regulatory authorities worked** – for example, a project lead reported that their contractor worked in 'sprints', or short bursts of work, which meant that the consortium of regulatory authorities delivering the project were sometimes asked to make decisions in an unreasonably short period of time.

At a higher level of impact, project leads felt that the quality of contractors' work adversely affected the project's resources, timing of activities, or deliverables, as outlined below. Where these issues could not be resolved, delivery was either compromised or projects replaced contractors mid-delivery.

- **Project staff resources** – project staff had to cost for more of their time and effort when contractors' written outputs, such as innovation plans, were not well thought out.
- **Timing of activities** – the time spent by projects dealing with the poor quality of contractor work led to delivery delays. For example, the launch of a sandbox was delayed because project staff had to support a contractor to develop their safety case for this trial.
- **Nature of activities** – in some cases, contractors failed to deliver fully, affecting project outputs. This was the case in the project mentioned earlier, which aimed to consult various industry experts to create an advisory service but could not do so because the contractor lacked the necessary industry connections.

The most significant impact on delivery occurred when contractors failed to complete key project activities. This typically happened because they either lacked the necessary capacity, or the project activities were no longer financially possible for them to deliver on. For example, a contractor tasked with developing and testing an innovation failed to deliver because they

lacked the organisational capacity as their firm was undergoing significant staffing changes. Similarly, a contractor had originally committed to delivering a drone sandbox for a long-term project but had to pull out because it was no longer financially profitable for them to take part in the project.

Project practices to effectively manage contractors were a key factor in helping to mitigate some of these challenges. Practices spanned the project life cycle; as noted, beginning with drawing on trusted contractors or having formal agreements in place to ensure new contractors were clear about the requirements. Once projects were underway, good project management practices included project leads proactively identifying issues as early as possible by chasing contractors for updates, monitoring their work closely and, where regulators were working in partnership, having a single point of contact to liaise with the contractor to avoid confusion.

Despite these practices, some projects felt that there was learning for them around selecting the right contractors in future projects. These included looking beyond their existing contractor frameworks and having more robust recruitment processes in place to ensure they had the expertise and industry connections needed for the project. For example, one project said they would ask contractors provide more robust evidence of their industry credentials and connections in the future.

Wider stakeholders

In addition to delivery partners, projects also consulted a range of external stakeholders to help shape their project focus and contribute to project outputs during delivery. They included innovation experts, businesses and other regulators that would be affected by the regulatory innovation or guidelines being developed. Stakeholders were seen to be important in ensuring regulatory innovation was relevant and useful to their sector(s) and to support its adoption by achieving buy-in from key players.

Having the right stakeholders involved was important in developing regulatory innovations. This rested on rested on projects being able to identify the most relevant stakeholders. Although projects sometimes identified stakeholders through desk-based research, such as online searches, more effective ways to do this was through capitalising on their established relationships before the projects had started or accessing them through key gatekeepers, such as external contractors. However, a key barrier was when projects lacked the time at the setup stage to identify relevant relationships or gatekeepers, or where contractors did not have the required sector connections.

Once identified, stakeholder engagement was helped if they saw the need for regulatory innovation. For example, if they felt current regulations were stifling innovation in their sector or were “passionate” about the project’s focus on improving issues, such as climate change.

> *“It was very easy [to engage stakeholders] because they are incredibly frustrated people who want to be able to test and develop their products and … their innovations in [the] UK. As we said earlier, a lot of them were having to go abroad ...”* (Proof of Concept project, long-term project)

As with delivery partners, the meaningful engagement of stakeholders during delivery was also important in helping projects to shape their innovations. Project leads optimised input by ensuring stakeholders felt listened to and promoted open discussion at stakeholder events. For example, a project found that one way to encourage open discission was to avoid any commercially sensitive discussions during consultation workshops. This allowed all participants to contribute openly without concerns of divulging sensitive information.

A key engagement barrier was stakeholders having insufficient time to contribute to consultations and other events. This issue was compounded by activities taking place during busy periods or periods of leave, such as over summer, or stakeholders unable to attend face-to-face events because these required a greater time commitment. For example, one project reported boosting their stakeholder involvement by offering virtual meetings.

Another barrier was the reluctance of key stakeholders, such as businesses, to shape a regulation as they did not want the associated responsibility of doing so.

> *"…what I would usually find is that they [some external stakeholders] had nothing to say [on regulation around an innovation]. I find that generally when it comes to these kind of things, people tend to complain, but then when you give them the opportunity, they don't have much to say. For me, it was very weird to discover that. I feel there is a fear of responsibility."* (Advice Provision project, short-term project)

Navigating programme, governmental and organisational governance processes

Delivery also hinged on the ability of projects to navigate governance processes at the programme, organisational and wider government level.

Aligning internal financial governance processes with programme requirements

Project leads discussed their experience of meeting the RPF's requirement of aligning project spending with the programme's financial year and ensuring financial spend was sufficiently evidenced, discussed in turn below.

As noted in Chapter 1, the RPF operated within wider governmental financial year constraints, which meant that the earliest the RPF3 competition could be launched was summer 2023. These constraints, coupled with evaluation insights from previous RPF rounds pointing to projects needing more time between being awarded funding and delivery, meant that short-term projects could begin delivery in January 2023 and long-term in September 2023, at the earliest.

Although projects were informed about the funding period in the competition brief, some faced challenges because it did not align with their financial year, which typically ran from April to March. Project leads found it difficult to get approval for activities that spanned different financial years because regulatory authorities were reluctant to make financial decisions that did not match their financial calendar, causing delays in starting projects. This issue was compounded by the programme providing funding monthly in arrears rather than as a lump

sum. As a result, authorities could not set aside all the RPF funding at once to manage it across different financial years.

> *"It [difficulty] was moving some of the budget around between the different financial years. 'You have to spend all that money that you've said for that period of time by then.' That was done, and then we managed to negotiate that it moved…"* (Advice Provision project, short-term project)

Secondly, project leads had to forecast their monthly expenditure, which was challenging because their projects moved quickly and costs were not always "straightforward", like fixed staff costs. This raised concerns that if their forecasts were incorrect, they wouldn't be able to carry money over to the next financial year.

> *"Because the forecasting had to…be within that month and we had to then go back to RPF to ask for permission to move some of the… surplus…to make sure we didn't lose anything between March and April. So, it just doesn't align very nicely in terms of that...and…allowing for contingency and…moving the forecasting around when it's something that is hard to forecast for. If it's staff planning, if it's capital, if it's fixed finance, it's much easier to forecast for. But when it's a moving feast, that is really difficult…" (Advice Provision project, short-term project)*

This issue was addressed by the programme's flexibility, with programme staff reviewing requests to adjust project spending when it affected delivery. Additionally, careful budget planning by project managers at each stage helped keep project finances on track.

> *"…we did actually manage to negotiate to carry a little bit of funding over. I can't remember how much… I must say, RPF were supportive and were helpful through this. It wasn't a huge barrier to us, but it was something that we had to be aware of."* (Demonstration project, short-term project)

> *"… we [programme staff] have had projects come to us to say 'Look, because of delays, or whatever, or because things have moved on since we sent the application in, our spend profile doesn't fit anymore. Are we able to change it for these reasons?...where possible - in fact I think in all cases - we have been able to approve that, so hopefully, that has helped."* (Programme staff interview)

As noted in Chapter 2. Fund entry and setup, longer-term projects faced the additional challenge of accurately forecasting costs in the year between the award and the project start. This was resolved by working with programme staff to revise cost predictions and making adjustments to fit the budget, such as hiring lower-grade project management staff.

Other examples of the programme's financial flexibility included allowing projects to shift funding around to support delivery. This included agreeing for:

- **Funding to be distributed differently among consortiums partners than previously agreed** – to support regulatory authorities that had underestimated delivery costs.

- **Financial underspend to be used for additional project outputs –** for example, a regulatory authority that successfully delivered its project but had a small amount of underspend was allowed to use this to fund a workshop to publicise and discuss their regulatory innovation with a wider range of partners. While the competition brief did outline the guidance, some project leads felt that the programme could have been clearer from the outset about how to use any underspent funds and the process required to obtain approval.

As part of the government's scrutiny of financial spend across all its programmes, all projects had to complete key financial information, particularly monthly financial spend reports. Given that many of the regulatory authorities had not applied for external funding before, they valued the clear RPF guidance on completing the forms and felt reassured by RPF staff that they would come back to projects if information had not been completed accurately.

> *"Actually, I think, probably, maybe actually it's less about the instructions, it's more about the reassurance that, 'Fill it in and if you don't get it right, don't panic. It's not the end of the world, I'll come straight back to you.' Which they always did, so we never had anything that was an issue."* (Curating and Disseminating project, long-term project)

While some projects found the form straightforward and even considered using it as a template for future projects to help track expenditure, others found it too burdensome to complete. They reported spending a significant amount of time each month finely balancing their budget, accounting for small spending differences, and chasing busy senior staff for form sign-offs. They felt that the RPF could be more outcome-focused, trusting that projects would have internal auditing processes in place to ensure appropriate spending to achieve outcomes.

> *"…we have a system in place to make sure that we use our finances wisely and fairly…The RPF3, you have to provide that monthly certificate of the financial person to be accountable…I think that asking for every single receipt was overly admin burdensome. It would take me a whole day and at my level of role for what the [regulatory authority] pay me, it was not the best use of my time. I think it would be nice maybe for future, RPF… [to require that] we just give the financial summary, and they accept that – given that trust."* (Curating and Disseminating Practice project, long-term project)

Navigating internal organisational processes and change

Managing internal organisational processes was also an important consideration for projects.

Projects often needed help from different internal teams, such as experts from other departments, governance bodies, and publicity teams. However, these teams had other priorities, which sometimes meant they could not fully support the project. For example, one project struggled with promoting its regulatory advice service externally because the internal communications and marketing team had to prioritise other organisational activities.

> *“I think my learning from this is to anyone future doing a project, never assume that just because you're internal, things are going to be really easy and straightforward.”* (Curating and Disseminating project, long-term project)

As noted earlier, another significant issue that projects encountered was managing organisational change after receiving RPF funding. Project activities, and sometimes the project team itself, were affected by internal organisational restructuring or financial shocks. In situations where organisations had undergone restructuring, having ringfenced RPF funding helped protect project -staff and enabled the project to continue.

> *“I think it's a brilliant project because we got the funding from an external body to allow us the space and the time to do this and because it was funded it meant that there was nobody internally going, 'Well, we need to save some resource' or anything like that that they sometimes do.”* (Proof of Concept project, long-term project)

However, even RPF could not support project continuation when regulatory authorities faced critical financial challenges. This was particularly the case for local authorities facing financial bankruptcy, which led to key project staff being made redundant and the organisational constraining its activities to core duties.

> *“Effectively, [local authority] went bankrupt, obviously, at the start of this [project]. That had a knock-on effect in terms of they lost/made redundant a number of what turned out to be key individuals in the delivery of doing a project like this, so one…” (*Proof of Concept project, long-term project)

Wider governmental processes

In addition to RPF processes, the nature of some of the projects meant that they also had to go through additional government processes outside of the RPF to set up their regulatory innovations.

Although these processes sometimes improved the innovation, they also added pressure to tight timelines, even for longer projects. For example, one project had to obtain government approval for its digital innovation to ensure public money was spent wisely and met government priorities. This added time pressure, but the project felt it helped improve key features, including accessibility.

In addition, the processes sometimes meant that an important aspect of a project could not be delivered. For example, a project could not set up a chargeable advice service because of government subsidy control considerations, which guard against a publicly funded activity conferring an unfair advantage over any potential private sector activity.

Key learning

Delivering projects to time

- Project leads emphasised the need for the programme to offer funding for both short-term and long-term projects. This helped to accommodate the varying time requirements for different types of regulatory innovations and to support delivery processes, such as maintaining partner focus.
- RPF support was key to projects delivering to time and scope. In particular, the monthly catch ups between RPF staff and projects were helpful in keeping projects on track because they focused on identifying, understanding, and resolving emerging project challenges. In addition, the need for the programme to be flexible in addressing key project challenges, such as navigating different spend profiles, was highlighted as important.
- It was also clear that the RPF can play an important role in accelerating project learning by connecting projects to other RPF projects and wider government experts.
- Effective project coordination was also key to timely delivery. Smaller projects needed to work agilely to manage their workload, while larger projects had to develop ways of collaborating, discussed below).

Productive partnerships

- Projects usually worked with a ranger of stakeholders to deliver their project, including contractors, regulatory partners and stakeholders.
- Partners were typically other regulatory authorities. Successful collaborations were characterised by regular formal and informal communication, senior leadership support across partnerships, and the ability to manage different working styles. Having a dedicated project manager to lead partner liaison and project administration was helpful in managing these different approaches effectively.
- Existing relationships with contractors supported good working partnerships, but proactive contractor management remained important regardless of prior familiarity. Key good contractor management practices included project leads identifying issues early, monitoring contractors' progress and work closely and having clear communication channels with contractors.
- In addition to delivery partners, projects also consulted a wide range of external stakeholders to shape their project. Having the right stakeholders on board was important and, once on board, projects needed to support them to contribute meaningfully to project discussions. This was often done by ensuring stakeholders felt listened to and that commercial confidentiality was respected during meetings.

Navigating programme, project and wider governance

- Projects had to navigate governance processes at different levels, including at programme, project and wider levels.
- At a programme level, some projects struggled with aligning the programme's financial year with that of their regulatory authority, as well as accurately forecasting their monthly or annual spend. This was partly mitigated by programme staff being flexible if these issues affected project delivery. For example, RPF staff reviewed spend profiles and working with projects to revise cost predictions.
- At a project level, a key challenge was organisational change after RPF funding had been awarded. Financial challenges and organisational restructuring could shift organisational priorities away from the project; however, having RPF funding sometimes helped provide a financial ringfence to protect project resources, such as staff, and the organisational focus.
- At a broader level, projects also had to navigate wider governmental processes to set up their regulatory innovations, such as obtaining approval to use public monies for digital innovations. Although this caused delays in project start times, projects were able to benefit from these processes by using them to refine and enhance their regulatory innovations.

4. Assessment of the claims

This chapter describes and explains how the contribution claims have been assessed for their strength. It begins by outlining the terms and concepts necessary to understand the assessments and then assesses each claim in turn.

Each claim will be assessed using the following consistent format:

- State the contribution claim.
- Explain the 'contribution narrative', which gives a more detailed description of the chains of events within the claim, adding nuance and further information.
- Assess the claims against the three criteria of plausibility, completeness and strength of evidence (see below) and a justification for the assessment.
- Understand the 'dependencies' of the claim. These are factors that influence whether or to what extent the outcomes are realised (more detail below).

Contribution Analysis

As mentioned in the Introduction chapter, Contribution Analysis (CA) uses a multi-step approach to build and test the programme theory (see technical appendix). The concluding step in this approach is to develop the final versions of the contribution claims and assess them against the evidence collected throughout the study. These claims are hypotheses about how change is expected to occur (mechanisms of change) and the role of the programme and other factors in contributing to this. The claims are then tested against the evidence gathered during the evaluation.

This chapter provides a full explanation of the claims and their assessment against the evaluation evidence using plausibility, completeness, and strength of evidence criteria (see below for definitions). This analysis draws final conclusions about how the RPF programme generated outcomes and impacts. In the subsequent chapter we synthesise the findings from these assessments to answer the evaluation questions.

A key component of CA is understanding there are any alternative explanations for the outcomes, which this evaluation considers through the *Completeness* criterion (see below). While the evaluation team could have tried to identify these during the scoping phase, this would have been difficult due to the programme's diverse approaches and industries. Given this complexity, the best way to identify these alternatives was to ask interview participants directly whether there were other factors, beyond the RPF programme, which might have contributed to the outcomes. Any implicit suggestions of alternative explanations were also recorded. This chapter will describe each of the claims in turn, providing a full explanation of the causal narrative and an assessment of their robustness. This robustness is derived from how well the claim holds against each of the tests described below.

Table 3: Claims assessments criteria

	Description	Considerations
Plausibility	Whether the claim provides a clear, coherent and logical explanation of the causal narrative.	Does the claim make sense? Are we sure the programme activities are causing these effects? Is the explanation temporally consistent?
Completeness	Whether the causal narrative has sufficient detail, reflects all the evidence observed and provides the entire explanation for the outcomes described.	Are there any missing details that would explain the causal pathway? Is there any evidence not accounted for in the claim that would support it? Are there any alternative explanations to the outcomes being realised (beyond the scope of the intervention)?
Strength of evidence	The extent to which evidence either supports or contradicts the claim, how many sources of evidence provide an explanation and the ability of the different evidence sources to speak to the reality of what is happening.	To what extent does the evidence confirm or contradict the claim? How many sources of evidence were there? Were all the relevant people or groups able to provide evidence?

A five-point scoring system, ranging from very weak to very strong, was used to assess the evidence for or against the claims for each of the three criteria. We developed scoring rubrics (descriptive scales), incorporating components from Aston and Apgar (2023)[8]. For a full description of the rubrics and their application, see the technical report.

The key advantages of using rubrics to score the three criteria are that they provide a rigorous, transparent and systematic way of assessing the claims.

- **Rigour:** is achieved through a systematic examination of both the credibility (plausibility) and robustness (completeness and strength of evidence) of the evidence in relation to each claim. The aim is to assess the 'probative value', that is, to determine how strongly the evidence supports or challenges the explanation

[8] Aston, T. & Apgar, M. (2023) *Quality of Evidence Rubrics for Single Cases*. London: Evaluation Capacity Development Forum. Available at: https://evaluation.org.uk/wp-content/uploads/2024/09/Quality-of-Evidence-Rubrics-2.0-Final.pdf (Accessed: 15 October 2025).

provided by the contribution claim, and to what extent it enhances or weakens the overall argument.

- **Transparency:** is ensured by maintaining a clear trail linking empirical evidence to assessment scores enabling external stakeholders to scrutinize and verify the evaluation process.
- **Consistency:** is achieved by applying a systematic process to the consideration and assessment of evidence, ensuring that each claim is evaluated using the same standards.

Finally, we provide a description of dependencies for the claim. Dependencies are factors that can influence whether or to what extent the contribution claims are realised. These include:

- **Enablers**: factors that would enhance the extent to which the outcomes are realised.
- **Barriers**: factors that limit the extent to which outcomes are realised.
- **Assumptions**: conditions that are taken to be true if the outcomes are to be realised as the claim describes.

All dependencies given throughout this chapter are those identified during the data collection of the evaluation, primarily through project interviews.

Interpreting the contribution claims

Summarising the intervention into short claims necessitated the use of broad and aggregate terms. Although these statements are designed to be understood in isolation, it is recommended that they be read alongside their full narrative for a complete understanding. This narrative sets out the context in which the programme operates, illustrating how programme inputs (such as resources and funding) act as catalysts for change. It then explains the causal mechanism, describing the sequence of events triggered by these inputs and that ultimately led to the intended outcomes. Specific terms are used to succinctly represent various elements of complex events and causal relationships, as providing detailed explanations for each within the contribution claims would be impractical. Many terms used throughout the contribution claims are defined in the glossary at the beginning of this report.

Summary of contribution claim assessments

Table 4 summarises the assessment scores for each contribution statement; these will be discussed in detail in the sections to follow.

Table 4: Summary of claims assessments

Contribution Claims	Plausibility	Completeness	Strength of evidence
Claim 1: creating a culture of enabling innovation	Very strong	Strong	Strong
Claim 2: increased capability to support innovation	Very strong	Strong	Strong
Claim 3a: *collaboration* between regulatory authorities	Very strong	Very strong	Strong
Claim 3b: *influencing* other regulatory authorities	Moderate	Weak	Weak
Claim 4: engagement with industry	Strong	Strong	Moderate
Claim 5: creating an enabling regulatory environment	Strong	Moderate	Weak

Contribution claim 1: creating a culture of innovation

Outcome: RPF creates a culture of enabling innovation within regulatory authorities, who following the programme see innovation as part of their role.

Input: The programme's funding provides the justification within the authority to pursue innovative solutions to regulatory gaps. The programme's tolerance for risk makes it unique and enables experimental methods and new ways of working to create regulatory solutions.

Mechanism: Projects introduce new ways of working to develop regulatory solutions. These insights show how new methods can address regulatory gaps, instilling confidence in authorities to adopt innovative approaches.

Contribution narrative

The programme Theory of Change explains how creating a culture of innovation is divided into two key areas: willingness and attitudes (represented in Claim 1) and capability (represented in Claim 2).

The RPF programme fosters a culture of innovation within regulatory authorities, encouraging them to view innovation as a crucial aspect of their role. Typically, regulatory authorities are more risk-averse, and for good reason. They must implement the law effectively, facing serious penalties if they fail to do so. They act as brokers between policymakers and industry, needing to understand technologies and translate this knowledge into public policy and legal requirements. As new technologies emerge, regulators ensure their safe deployment in UK markets, protecting consumers and the public.

Balancing the risks of new technologies with their economic potential is challenging for regulatory authorities. They must understand these risks and navigate uncertainties, often erring on the side of caution in order to meet statutory duties around safety. This caution can hinder innovation, particularly in sectors where established technologies and regulatory processes are critical for safety, such as nuclear and aviation.

Funding models can limit regulatory authorities' ability to overcome systemic issues and experiment with new methods of assessing innovations. Their statutory obligation to ensure safety means there is less funding for developing new regulatory solutions, especially given the risks that experimental work might not yield operational solutions. For example, revenue from selling licences to operate certain technologies funds compliance checks for those technologies.

The RPF programme addresses these barriers by providing grant funding with three key characteristics. Firstly, the grant incurs no direct cost to the regulatory authority. Secondly, the

programme's competitive nature and high regard ensure support from management and senior leaders, who accept the opportunity costs. Being awarded the funding suggests the government are backing the proposed solution and see it as a priority to address. Thirdly, the funding's high-risk tolerance means DSIT accepts that a fully operational regulatory solution may not result by the end of the funding period.

Over the duration of RPF projects, teams developed new ways of working and approaching regulatory issues. Seeing these solutions move from paper to practice reduces uncertainties and risks associated with full implementation. This gives senior leadership confidence in how these new approaches can improve their remit, enhancing their understanding of their role in fostering innovation.

> *"I think the shift in culture or interest was very noticeable when we started to show the tool because you can talk about it in theory till the cows come home, but it was when we started demonstrating it to the senior management team across the [regulator] and suddenly that was a real wow moment."* (Proof of Concept project, long-term project lead)

Assessment of Claim 1

Plausibility: very strong

The claim was found to be strongly plausible because it directly addresses the barriers to cultural change. These barriers often arise from a lack of resources to test and demonstrate new ways of working are possible. By reducing uncertainties and allowing real-life demonstrations, senior leadership within regulatory authorities became more open to continuing the regulatory solutions developed under the RPF programme and reconsidering their attitudes towards risk in these areas.

Completeness: strong

This assessment was scored as strong because it reflected all observed evidence and there were no alternate explanations. The scoring was limited by a lack of detail on how senior leadership's observation of validated new ways of working translated into broader organisational cultural change. While the evidence often indicated that such shifts occurred, it did not clearly explain how decision makers reassessed their existing attitudes toward risk or determined where a revised approach was seen to be warranted.

Strength of evidence: strong

The strength of evidence was strong because there was substantial confirmatory evidence[9] of a shift in culture. This evidence often indicated the continuation of the regulatory solution funded by the RPF programme. This continuity was seen as a shift in culture, given the limitations faced by regulatory authorities, such as funding constraints and a primary focus on ensuring safety. The new solution would only be continued if the authorities saw value in it. Funding for the continuation came either from within the regulatory authority itself or from

[9] Strong confirmatory evidence refers to evidence that gives strong support to the contribution claim. There is a clear link between how it supports the claim and has low probability of having an alternative explanation.

sources other than RPF. Other examples of strong confirmatory evidence for cultural change, though less common, included innovation becoming an explicit strategic aim for the regulatory authority and changes to the authority's remit as a direct result of work under the RPF project. These instances were observed in projects that had received previous rounds of RPF funding, allowing more time for these broader changes to take effect.

Two factors weakened the strength of evidence for this assessment:

- **The extent of cultural change across the entire regulatory authority** – the evidence was less convincing regarding whether cultural change extended beyond the immediate teams that received RPF funding. In some cases, new approaches to regulation and risk were introduced, but interviews with businesses indicated that these changes were limited to the RPF teams and did not reach other parts of the regulatory authority, such as those responsible for compliance checks.
- **The lack of input from some priority groups** – only project leads were consulted, excluding the views of senior leadership within the regulatory authorities.

Dependencies

Enablers

- The authority's remit demand new solutions. This can be influenced by changes in policy or legislation, new strategic pushes from the government, or broader technological developments. For example, the rapid development and integration of artificial intelligence into the economy have significantly increased demand for understanding its impacts.
- The applicability and relevance of the project's output to current work. Newly developed solutions face a critical period post-project, during which they must be adopted by teams within the authority and continue to be implemented. If authority leaders and staff see the new solutions as valuable and applicable for their work, this can help secure commitment to their further development and implementation.

Barriers

- Capacity to continue the regulatory solution once the RPF funding has stopped. This capacity depends on the availability of funding, whether the necessary skills remain within the authority after short-term staff contracts expire, and whether external funding sources are accessible.
- The willingness of other regulatory authorities, not included in the programme, to integrate a new solution. Some projects in RPF3 produced regulatory outputs and solutions intended for adoption by other authorities. However, if these other authorities lack the capacity or willingness to try new ways of working, the solutions will be seen as impractical.

Assumptions

- Regulatory authorities would require sufficient stability in their organisational structures to implement new approaches in their work. When authorities undergo significant organisational change, priorities may shift to more short-term and immediate issues, hindering the creation of new ways of working.
- Beneficiaries, such as businesses engaging with a new regulatory service, would need to value the service enough to continue using it in the future. Solutions reliant on data inputs would need to have continual access to that data in order for the regulatory solution to continue to work.

Contribution claim 2: increased capability to enable innovation and support compliance

Claim overview

Outcome: RPF increases the capability of regulatory authorities to enable innovation and support compliance.

Input: RPF allows regulatory authorities to explore new regulatory approaches in their remit. It does so by giving authorities the funds to develop new solutions in a low-risk context.

Mechanism: Organisational knowledge is generated from the 'learning-by-doing' process during project activities, onboarding new expertise via new staff or organisation partnerships and knowledge-sharing with other regulatory stakeholders. These learnings of how new regulatory solutions can be applied are disseminated within the regulatory authority. Organisational infrastructure (such as teams and working groups) are continued after the project to drive enabling innovation.

Contribution narrative

This claim primarily addresses how the learning and insights generated through the RPF3 funded projects improve the regulatory authority's' ability to support innovation and compliance. Although the inputs and mechanisms share similarities with Claim 1, willingness does not always translate into the capability to support innovation.

In the context of this claim, capability encompasses staff skills and knowledge, organisational procedures for processing queries and testing innovation compliance, and the structure of the organisation, including dedicated technology teams or steering groups. These capabilities are directly linked to project activities, though their nature can vary from project to project. For example, projects developing new approaches to regulatory policy (e.g. through building new compliance frameworks) may establish new teams to have oversight on this work or use pre-existing teams (including some established in previous RPF rounds).

The context for capability building originates from an identified need at the application stage of the programme. RPF3 project applications often refer to previous research or strategic policy that identifies a regulatory gap needing to be addressed, typically where conventional methods or processes are inadequate. New ways of working are required to better support businesses with compliance or provide suitable guidance on rapidly developing emerging technologies. As noted in the contribution narrative for Claim 1, regulatory authorities face barriers to undertaking this type of work due to resource constraints and uncertainties about whether they will produce operational outputs.

Organisation capability within authority teams was built primarily through three key methods: engaging external stakeholders (including other regulatory authorities), onboarding new staff or partnering with other organisations for the project, and learning-by-doing. Many projects included a scoping phase involving desk research and interviews to understand similar work done elsewhere or to identify scenarios to test. The claim suggests the insights gained throughout the project would then be disseminated within the regulatory authority, thereby increasing its capability to enable innovation and support compliance.

> *"I think being able to trial this, in this safe environment, with RPF funding, has accelerated [the regulatory authority's] consideration of this area as a form of intervention [and] engaging with their duty-holders. [Without] RPF funding, we wouldn't be exploring sandboxes currently. We'd probably be waiting for others to do it [and] look at what they did. So, I think it's accelerated [the regulatory authority's] thinking in this area… We are already starting to think about other sandboxes that we could run."*
> (Proof of Concept project, short-term project lead*)*

Assessment of Claim 2

Plausibility: very strong

The claim gives a thorough account of how the increased capability provided by project leads was a direct result of the activities funded by the RPF programme. There is clear logic and coherence to the chain of events that lead from the activities and the different ways of learning into an improved ability to regulate.

Completeness: strong

Overall, the claim is well-detailed and covers all areas of how regulatory authorities increased their capabilities over the duration of the project. There are no alternative explanations that fall outside of the RPF programme, although some regulatory authorities with a legacy of RPF funding could attribute a proportion of their increased capabilities to work under previous funding rounds.

However, there was less evidence on how knowledge was disseminated within the regulatory authority and how this led to increased capability throughout the organisation, or whether it remained within the team (and staff) who delivered the project. Project leads mentioned knowledge dissemination through presentations to different groups or individuals within their organisation, but how this information would be applied in their future work was often less clear at the time interviews were conducted.

The evidence suggests that regulatory authorities are now better equipped to handle innovation and compliance, but not necessarily yet fully capable to do so. Some projects are still in early stages, so it will take time and more resources before these solutions are fully in place.

Strength of evidence: strong

There was strong evidence to suggest that regulatory authorities have increased capabilities because of their project work. Across all projects, there was at least strong evidence of significant learning, including the validation of proof-of-concepts. However, the evidence was stronger for six cases where regulatory solutions enabling innovation and supporting compliance were being fully deployed.

Organisational change was more commonly observed in authorities who had received previous rounds of funding. There are two likely reasons for this. First, these projects have had more time for their solutions to be developed and deployed. Second, as projects from previous funding rounds were under no obligation to take part in this evaluation, there may be an element of selection bias where the more successful projects were more likely to participate.

While the main priority groups (project leads, delivery partners, and some beneficiaries) were consulted during this research, some groups were still missing. Interviews were conducted with businesses directly involved in the RPF projects, but firms outside of these projects were not interviewed. As a result, we do not yet understand how these fully deployed solutions are working for companies that did not participate in their development.

Dependencies

Enablers

- High demand for the regulatory solution from industry. High demand creates an incentive for the regulatory authority to continue developing and improving their solutions to enable innovation and compliance. Factors affecting this demand stem from external pressures on businesses who then need to dedicate more time and resource to addressing those pressures, which reduce their time to focus on meeting compliance. This in turn increases the need for compliance support for businesses. Shocks are a key external factor and include the Covid-19 pandemic, Britain's exit from the EU, uncertainties around increasing energy prices resulting from the war in Ukraine, and changes in legislation.

Barriers

- External shocks and pressures (listed above) prevent businesses from engaging with regulatory activities, thereby risking the quality and effectiveness of the solutions.
- The ability for data sharing to occur between regulatory authorities; not being able to share information restricts their ability to learn and gain insights into their remit. A reduction in these insights means compliance support provided by authorities may be less relevant and effective.

- Not attracting and retaining talent within regulatory authorities as they compete with the private sector. This hinders their ability to keep up with the pace of addressing technological developments.

Assumptions

- The learning gained from the programme activities is relevant and sufficient for the solutions to be developed.
- The information is disseminated to decision-makers within the organisation, and it retains its accuracy (being lost in translation) and relevance as it is shared throughout the organisation.

Contribution claim 3a: collaboration between regulatory authorities

Claim overview

Outcome: Regulatory authorities establish processes of working together and collaborating during project delivery which leads to greater capacity to tackle regulatory issues into the future.

Input: Within a fragmented regulatory environment, the RPF provides opportunities such as forums and network for regulatory authorities to interact, discuss challenges and align goals.

Mechanism: RPF projects establish channels of communication with other authorities to bring together people and organisations, allowing them to share information and ideas. This process forms working relationships between organisations and encourages joint regulatory solutions. These solutions enable strategic alignment between the authorities, bringing them closer together and supports commitment for future collaboration.

Contribution narrative

During evidence collection, it became clear that interactions between regulatory authorities had two distinct effects, leading to Claim 3 being divided into two parts. First, it fostered cooperation between the authorities (Claim 3a). Second, the RPF-funded projects influenced other authorities external to the project to reconsider their regulatory approaches (Claim 3b).

Claim 3a describes how the RPF programme provides an opportunity for regulatory authorities to collaborate and address the fragmented regulatory environment, offering resources to develop solutions. A review into Pro-innovation Regulation of Technologies[10] presented to the

[10] Pro-innovation_Regulation_of_Technologies_Review_-_Digital_Technologies_report.pdf

government by Sir Patrick Vallance in 2023 found that the regulatory environment in the UK is fragmented and requires further cooperation[11]. A fragmented regulatory environment causes issues for Small and Medium-sized Enterprises (SMEs), which have limited capacity, often struggle to navigate the regulatory landscape and understand what issues fall within each authority's remit, especially when queries are cross-cutting between authorities. The report goes on to suggest that one of the projects funded in RPF3 directly addresses this issue.

The RPF supports networking opportunities for regulatory authorities by serving as a hub for knowledge sharing in three ways. Firstly, programme events such as the RIN and closing events bring together individuals from recipient authorities to discuss ideas and work through solutions collaboratively. Observations at these events revealed instances where authorities, who had not previously collaborated, engaged in discussions about shared challenges. Secondly, the RPF team facilitated informal introductions after the events for organisations to continue their discussions. Thirdly, RPF staff shared insights from other regulatory authorities they had worked with- authorities that faced similar challenges- during their regular catch-up sessions with project leads.

Connections between regulatory authorities were both formal and informal. Informally, collaborating through the RPF programme allowed authorities to establish points of contact and channels of communication with each other for informal engagement. This can include simply knowing who to reach out to for a query and feeling comfortable enough to do so. More formal instances include having data-sharing agreements and secure data transfer systems that enable these organisations to share information. It is important to note that there are different levels of collaboration, ranging from infrequent and ad-hoc contact between individuals to full organisational strategic alignment. All levels of collaboration were evidenced in the claim assessment and indicates where it has led to increased capability for the respective authorities.

This collaboration supported the authorities to work together and develop regulatory solutions. All authorities involved in the collaboration find value in the solution developed and apply it in their work. Those involved then begin to discuss other areas where they can collaborate to address challenges, leading to a commitment to further collaboration and a greater capability to address issues in the future.

> *"We wouldn't have got together to talk about the things that we did in the way that we did without the project. The project opened a lot of doors for the […] regulators to have to come together and deliver something and talk about things that we would ordinarily do probably by email... I think that's the beauty of it is we've worked through an awful lot of issues, challenges, problems and come up with opportunities in a very short space of time."* (Proof of Concept project, long-term project lead)

[11] Pro-innovation_Regulation_of_Technologies_Review_-_Digital_Technologies_report.pdf

Assessment of Claim 3a

Plausibility: very strong

The claim provides a robust and logical narrative from inputs through to outcome of how collaboration between regulatory authorities leads to increased capability. The claim begins with the fragmented regulatory context and describes the various ways the programme brings authorities together. There is then a clear explanation of how the bringing together of authorities can enhance the capabilities of the respective organisations.

Completeness: very strong

The claim is well detailed at each step and encompasses all the relevant observed evidence. No alternative explanations were identified during the evidence collection.

Strength of evidence: strong

There was strong evidence to support the claim that the programme enables collaboration between regulatory authorities. Some degree of collaboration between regulatory authorities occurred across many of the projects, with strong confirmatory evidence in four cases. This evidence includes the continuation of collaborative regulatory solutions involving multiple authorities beyond the RPF timeline and additional funding committed by other regulatory authorities (outside of those involved in the application to RPF) to develop the solutions. These commitments demonstrated the authorities' dedication to work together into the future to overcome regulatory challenges.

Partially contradictory evidence to the claim only appeared in specific cases where local authorities looked to conduct trials of autonomous vehicles. In each case, the local authorities could not deploy their vehicles as intended due to the trials not meeting the regulatory compliance of the sector's regulator. There was no suggestion that the regulators were being non-cooperative, and indeed the local authorities understood that the regulators have a duty to uphold compliance. However, it is conceivable that further or earlier cooperation between the local authorities and the regulators could have led to the projects being implemented as intended from the outset or the original project design being altered to meet compliance.

Evidence from a regulation expert suggests that if regulatory authorities are to overcome challenges in enabling innovation, there needs to be more cooperation within the sector (and its respective supply chains) than across sectors. The evidence from within the programme suggests that RPF has enabled authorities to collaborate both within and across their remits, with the former supporting improvements in specific regulatory processes and the latter supporting broader approaches and methods of innovating. This outcome of influencing other regulators is explored further in Claim 3b.

One notable event that has occurred after the data collection period concluded was the announcement of the merging of the water regulators[12]. Ofwat, the Environment Agency and the Drinking Water Inspectorate received RPF funding in the second and third rounds, with both projects focusing on closer integration of data and information. Many factors are involved

[12] Ofwat to be abolished in biggest overhaul of water since privatisation - GOV.UK

with mergers of organisations, even beyond regulatory matters, although an inference could be made that the work under the RPF may have contributed to this. Until further evidence collection is done on this topic however, this cannot be confirmed.

Dependencies

Enablers

- Government priorities and legislation demand solutions like those funded under the RPF. For example, when new legislation increases the cost of non-compliance or changes compliance requirements, businesses may need support through new regulatory solutions to adapt to these changes
- The prestige of the RPF programme attracted interest and collaboration from other regulators to want to collaborate with the authority leading the application or project.
- Pre-project engagement with other regulators helped lay the groundwork for collaboration, allowing goals and approaches to be aligned ahead of the project.

Barriers

- Regulatory authorities lacking the capacity to engage in collaborative activities as they often fall outside of their statutory remit.
- Staff turnover in organisations disrupted established relationships between regulatory authorities.

Assumptions

- The time and resources invested into collaboration by regulatory authorities is perceived to be approximately greater or equal to the value of they receive from it.
- The information shared between authorities is pertinent and applicable to the work of all participating organisations.
- Authorities seeking to collaborate are provided with sufficient lead-in time and have the required capacity before the application stage, to enable them to identify and plan the most effective ways to work together on significant issues.

Contribution claim 3b: influencing other regulatory authorities

Claim overview

Outcome: RPF projects produce innovative regulatory solutions that influence other regulatory authorities to explore new approaches to regulation.

Input: RPF project dissemination work from completed projects showcases new regulatory solutions.

Mechanism: These new methods and solutions inspire other UK regulatory authorities to try new regulatory approaches and demonstrate the UK's role as a thought leader at the global level. International regulatory authorities have a *desire* to work with their UK counterparts to improve their regulatory work and align their practices.

Contribution narrative

Claim 3b explains how the programme influenced other UK authorities to try new approaches to innovation and encouraged international regulators in the same sector to align their practices with those of the UK. This claim highlights the lasting impact of RPF projects on the regulatory landscape.

Influencing other regulatory authorities began after the first round of RPF had finished and the outputs were finalised. From there, projects disseminated their work, showcasing the solutions and how they addressed challenges faced by the authority. Other authorities would then reflect on those solutions and explore how they could be applied in their remit.

- For UK authorities with different remits, this involved applying new ways of working (such as sandboxing) to tackle issues.
- For international regulators, this involved reflecting on the guidance or regulatory frameworks produced under RPF that apply to their sectors. If these guidance documents or frameworks addressed challenges that existing methods could not, it was in the interest of international regulators to adopt this guidance within their own remits rather than invest resources in developing separate solutions.

The claim suggests that as this influence continues, it establishes the UK's reputation as a thought leader in the regulatory areas where RPF-developed solutions operate. If the UK addresses regulatory challenges more quickly than other regions and those solutions are valued, it would bring benefits like increased investment and facilitated innovation. Although these impacts are not covered by this claim, they are detailed in Claim 5, which explains how the RPF's enabling regulatory environment can lead to greater investment and support for innovations.

"We are being regarded as world thought leaders, and people are looking up at us about these kind of innovative approaches. I think that's something big, particularly for an evolving, innovative, and still developing field." (Curating and disseminating good practice */ Advice provision* project, short-term project lead).

Assessment of Claim 3b

Plausibility: moderate

The claim is clear, logical and coherent, suggesting a plausible link between project output dissemination and the UK influencing global regulatory policy. The outcomes can feasibly be derived from the inputs and mechanisms that precede it.

Completeness: weak

The claim misses significant details that explain the causal pathway. Whether and how project dissemination leads to influencing other regulatory activities is not clear. In instances where this outcome was reported, mechanisms were not explained, and available evidence did not sufficiently address these gaps.

No alternative explanations were observed, but this was due to an absence of evidence rather than evidence of absence. For example, it is conceivable that international regulators may have already been looking to revise their compliance frameworks based on other work in their remit, and RPF outputs may have provided only a modest contribution to any changes made.

Strength of evidence: weak

Evidence for this claim was relatively limited and unrepresentative. While there was evidence (including two pieces of strongly confirmatory evidence) for the outcomes and significant evidence for dissemination, there was insufficient evidence for the mechanism of the claim. Where there was evidence, this suggested:

- Some RPF3 project applications referred to outputs from other regulatory authorities in previous RPF funding rounds as the source of inspiration for exploring those methods in their work. Evidence from previous RPF rounds also indicated that their outputs were influencing international regulatory policy in their respective remits, signalling that this work had an influencing effect, but the extent of this influence was undetermined.
- Numerous RPF3 projects referred to collaborating with other international regulators to devise novel solutions. While this somewhat supports the claim by indicating that UK regulators are involved in the formation of global regulatory policy, it is not sufficient in itself to suggest that the UK is acting as a thought leader on the global stage in these areas.

The evaluation would have benefited from further evidence from members of international regulatory bodies or experts with these remits to determine the extent to which and how the work funded by RPF played a role in shaping global policy.

Dependencies

Enablers

- There is an increasing demand for greater cross-border regulatory alignment as rapidly developing technologies spread across countries faster than regulators can cooperate.

Barriers

- It was suggested that if the UK continues to claim world-leading expertise in fields where international stakeholders do not share this view, the UK's overall credibility could be undermined. This, in turn, may prevent the UK from receiving recognition in fields where it genuinely demonstrates global leadership.

Assumptions

- For the UK to collaborate with and influence international regulators, those regulators have to have the capacity and processes in place to allow for deeper integration.
- Regulatory outputs produced under the RPF are suitable for the culture, environment and economy of international regulators.
- In order for influencing to take place, the claim assumes that regulatory authorities (who received RPF funding) are able to develop, operationalise and showcase the solutions before other authorities.

Contribution claim 4: engagement with industry

Claim overview

Outcome: RPF encourages greater engagement between regulatory authorities and innovators through the project activities and the regulatory solutions they create. This allows for a better understanding of the relationship between regulation and innovation by both regulatory authorities and industry.

Input: The RPF program fosters an environment where regulatory authorities and innovators can collaborate to develop regulatory solutions that are more outcome focused.

Mechanism: Innovators gain more frequent and in-depth access to regulatory authorities, leading to increased exposure and a more balanced, collaborative relationship. This improved dynamic promotes open communication, helping both sides better understand each other's needs and responsibilities, providing innovators with more timely and targeted support and authorities with more information on how to update their guidance.

Contribution narrative

Multiple sources of evidence from the evaluation suggested that regulatory authorities can be perceived as barriers to innovation, with communication being one-sided and favouring the authorities. Some innovators reported long waits for vague guidance or being directed to compliance criteria that did not fit their ideas. There was a perceived lack of constructive feedback or engagement to help innovators achieve compliance or explore alternative solutions.

The RPF programme was able to bring together regulatory authorities and industry to work in a more collaborative and balanced way. These groups were brought together in an outcome-based setting that supported businesses with their innovations or compliance efforts. Increased exposure between the organisations led to more extensive and open communication, fostering a more balanced and collaborative dynamic. This process enabled a greater understanding between authorities and industry of each other's needs and abilities to address challenges, identify hindrances to innovation, and provide innovators with more timely and targeted support.

The RPF therefore provides a setting and reason for regulatory authorities and industry to work together more closely, creating a better understanding of the relationship between regulation and innovation. There were varying degrees of 'breadth' and 'depth' of engagement with industry. Sandboxing processes allowed more in-depth collaboration between industry and regulators, affording regulators the opportunities to work closer with SMEs. This closer working with SMEs is particularly important as they are underrepresented in regulatory engagement

due to having less capacity for this type of work. Other projects that aimed to form guidance and frameworks often reached across different industry stakeholders to inform how they could develop and shape their regulatory outputs.

> *"It's been great to get alongside [businesses] and work through those processes to put something in place that will help to appease industry and help them to move forward as well. So, I think yes, it's much more strengthened our relationship and helped us to understand their situation as well."* (Proof of Concept project, long-term project lead).

Assessment of Claim 4

Plausibility: strong

The claim has a clear and logical explanation of how the RPF programme brings together different groups into a setting that would drive the outcome stated. The claim signposts each component throughout the mechanism without any significant gaps in explanation.

Completeness: strong

The claim is well-detailed and accounts for the full narrative within the evidence. It does not address non-innovation work because the focus is on how the RPF overcomes challenges related to compliance during the innovation process. This is because the focus is on how RPF overcomes particular challenges related to meeting compliance during the innovation process. Issues relating to supporting businesses not engaged in innovation work can often rely on more established guidance, making the context of their relationship with the regulatory authority different.

The main factor preventing the rating from being very strong is the lack of detailed observation on how these balanced communication dynamics led to a better understanding of each other's needs and responsibilities.

Strength of evidence: moderate

While there was strong evidence from regulatory authority sources and some industry sources for this claim, there was insufficient coverage from the industry side for it to be rated as strong. Future evaluations may wish to interview more industry stakeholders to obtain a more complete picture of the regulator-industry relationship.

Nevertheless, several pieces of strongly confirmatory evidence were observed, particularly relating to regulators being invited to speak at events they had not previously attended, receiving strong industry engagement at their own events, being awarded industry accolades, and industry utilising the regulatory solutions produced under the RPF programme.

Dependencies

Enablers

- Greater industry demand for regulatory solutions and involvement is driven by innovators wanting to improve the regulatory compliance process where they see it as a barrier to themselves and the industry.
- The project having suitable personnel who can coordinate activities between industry and the regulatory authority helped ensure a balanced way of working. Additionally, involving industry experts with the projects was key as they were able to provide more information on their fields, strengthening the knowledge sharing aspect of the relationship and providing a stronger account of the industry landscape.
- The prestige of the programme (due to its competitive nature) has meant industry are more likely to want to engage in projects and inputting into the development of the regulatory solutions.

Barriers

- Businesses sometimes face capacity constraints that prevent them from engaging with RPF activities. SMEs face greater constraints than larger businesses. This risks RPF projects including unrepresentative businesses, making the regulatory solutions less relevant and appropriate.

Assumptions

- Firms find enough value in interacting with the regulator, whether through advancing their innovations or navigating compliance, to continue their engagement.

Contribution claim 5: creating an enabling regulatory environment

Claim

Outcome: The RPF creates an improved regulatory environment that fosters innovation and supports compliance. Regulatory authorities support innovators with the development of their ideas, increasing confidence for investors who have greater incentive to invest in the UK and reducing risks for consumers who are more likely to adopt innovations.

Input: RPF recipients have a stronger culture of innovation; greater capabilities to deliver innovations within their organisations and sector; and greater collaboration between themselves and innovators.

Mechanism: Regulatory authorities have greater strategic focus on facilitating outcomes in their remits whilst ensuring safety. New compliance criteria are flexible so that they are relevant and effective over time and greater engagement from regulatory authorities means regulation is clearer. This creates more timely responses to queries and fewer barriers to developing and commercialising innovations.

Contribution narrative

This claim is the culmination of the others, combining their mechanisms and outcomes as the inputs for this claim. Claim 5 looks further into the longer term and examines the implications for a more collaborative and culturally innovative regulatory environment.

A stronger culture of innovation leads to a continuous greater focus on outcome-based regulatory principles, with flexible compliance guidelines that can be iterated upon. This ensures policies remain relevant and effective as new technologies emerge, providing more timely and relevant query responses for innovators during innovation development, reducing the cost of compliance and ensuring safety within UK markets. Improved safety of innovations means consumers are more likely to adopt them, leading to their diffusion within the UK economy.

Additionally, greater collaboration between authorities themselves and with industry leads to improved access to a wide range of industry stakeholders. This makes regulation clearer and more accessible, reducing barriers to developing and scaling innovations. The UK regulatory environment is seen as enabling to industry, reducing risks for investors that investments may be hindered by regulatory matters, thereby increasing investment into innovation development and scale-ups.

As a result of these two pathways, the UK will have a regulatory environment that strongly enables innovation. With investors having more incentive to invest in innovation development and consumers more willing to adopt them, this creates a robust innovation pipeline for the UK economy.

> *"I think it has given people the space to challenge where we're not doing that as well as we could… I think that probably existed before but was a little bit unstructured… we [were] very prescriptive [and would] go down through a tick sheet and that'd be us, [whereas now we are] thinking about what your risks are and how you can address those risks,"* (Proof of Concept project, short-term project lead)

> *"So, it should inform better decision-making because ultimately you can access data much more quickly, so depending on whether you're an investor, a bank or making lending decisions, you can cover much more of the market than you probably could have done doing it manually. So, it should encourage investment into UK businesses because the data is just much more accessible. If you're a bank looking to lend you can very quickly see the companies that you're willing to lend to or whatever it is or make comparisons with their peers when they're applying for lending or whatever it is. It just makes accessibility to the data much quicker and much easier to analyse and therefore make better, more informed and potentially quicker decisions."* (Proof of Concept project, long-term project lead)

Assessment of Claim 5

Plausibility: strong

The claim gives a strong explanation of how the medium-term outcomes of the project translate into longer-term impacts. The steps are logical and feasible throughout the causal chain. Although the mechanism element draws on some of the same factors as the mechanisms in Claim's 1-4, Claim 5 is longer-term and speaks to the sustained impact of these factors (such as the impacts of having embedded outcomes-based regulation principles) and so is still temporally consistent with Claims 1-4.

Completeness: moderate

The claim is well-detailed and reflects the narrative derived from the available evidence, showing strong completeness. However, due to numerous alternative explanations for an enabling regulatory environment, this claim is rated as moderate.

The longer-term nature of the impacts for this claim means that the outcomes are broader and the programme has less direct effect on them. Understanding changes in the regulatory environment therefore requires close consideration of factors beyond the RPF, such as government policies, geopolitical changes, economic trends, and technological advancements.

A significant alternative explanation is that industry standards in the early stages of product development may be more important than regulation. Industry standards, with their expert knowledge, often serve as the compliance benchmark until around Technology Readiness

Level (TRL) 6[13], the prototype demonstration stage. At this point, regulatory policies become more prominent for compliance testing.

Strength of evidence: weak

Evidence for this claim is currently limited and from too few sources. Not enough time has passed for these outcomes to be realised and evidence to be collected on them. This does not mean the outcome will not be realised or that the RPF will not contribute to it; rather, there is an absence of evidence, not evidence of absence. To understand these longer-term impacts, this claim will need to be assessed over future years with evidence gathered from a wider range of stakeholders than in this study. These include private equity investors, innovation bodies, consumer representatives, and business representatives.

However, there were a few cases of private companies established as a direct result of activities under RPF. Some had gone through regulatory sandboxes, while others were spin-offs from academic institutions. At this moment in time, it is unclear how many (or more likely, if any) companies have been established as an indirect result of the outputs produced under RPF activities.

Dependencies

Enablers

- Government and industry demand for regulatory methods that enable innovation and compliance. This will give support for new approaches and provide tolerance for any risks that may be associated.

Barriers

- Countries with fewer and less robust regulation processes could attract investment in the shorter term (‘race to the bottom’).
- Hesitation of people and organisations around emerging technologies due to fears it would lead to detrimental effects such as job losses.

Assumptions

- The UK continues to have a successful early innovation environment (UK as an ‘ideas factory’) which creates a pipeline of diverse innovations to commercialise and scale up.

[13] Eligibility of technology readiness levels (TRL) – UKRI

Key learning

Cultural change

- The RPF programme promotes innovation within regulatory authorities by providing grant funding, helping to overcome risk-averseness and funding constraints.
- It encourages the development and testing of new regulatory approaches, validates new ways of working and enhances capabilities through increased skills and knowledge.
- While cultural change is supported by evidence, it primarily occurs within specific teams, and further work and funding are needed to support widespread adoption and full operationalisation of new solutions.

Collaboration

- The programme promotes cooperation by giving opportunities for authorities to come together to devise cross-regulatory solutions, whilst also establishing points of contact and communication channels. These channels lead to closer working and further collaborative efforts.
- Whilst interviewees suggested that solutions funded by RPF go on to influence other regulatory authorities at home and abroad, the evidence to support these is weak. Some RPF solutions were perceived to be having an impact at the global level, but the extent to which and how this has occurred could not be determined within this study.
- There is moderate evidence to suggest RPF helps establish a more collaborative working relationship between regulatory authorities and industry. This was strongest when businesses had prolonged exposure to regulators during processes such as sandboxing trials.

Enabling regulatory environment

- The RPF programme works by fostering a culture of innovation and collaboration within regulatory authorities, leading to flexible, outcome-based regulatory principles and improved access to industry stakeholders. This enhances safety and adoption of innovations, and attracts investment into UK innovation development and scale-ups.
- While the long-term impact of creating an enabling regulatory environment is plausible and logically explained, not enough time has elapsed for outcomes to be realised, and so evidence is currently limited. Numerous alternative factors such as government policy, industry standards, and macroeconomic trends need to be considered for a comprehensive assessment of RPF's contribution.

5. Synthesis of findings

This chapter synthesises insights from the previous chapter to address the evaluation questions on how the RPF programme has generated outcomes and impacts. More specifically, the impact evaluation questions (IEQs) sought to understand:

1. What impact has the RPF3 programme had?
2. What outcomes have been achieved, *for who, how and why*?
3. *How far can it be evidenced* that the Fund contributed to the realisation of these outcomes?
4. How can we *monitor and track the longer-term outcomes/impacts* of the RPF as a whole?
5. What have we observed in the *maturity of RPF1 & RPF2 outcomes*?
6. What do projects aim to achieve *after they have finished* their projects?
7. What are the anticipated longer-term impacts of RPF 3 projects, including anticipated impacts on *businesses, consumers and on Government priorities* (Net Zero, cost of living, place-based innovation?)

Contribution analysis answered these questions through the assessment of the key contribution claims discussed in the previous chapter. This allowed for the examination of the chain of events linking RPF activities to outcomes, whilst also considering external influences and dependencies. This approach was complimented by traditional qualitative thematic analysis, which explored whether different groups, such as types of projects, experienced these causal pathways and outcomes differently.

The chapter answers the questions around outcomes and impact in three sections. Firstly, it summarises the impact of the funding, including any differences between groups. Secondly, it provides considerations needed for evidencing for future outcomes. Thirdly, it describes the impact of the RPF programme on the UK economy, including its effects on consumers, businesses, and government priorities at the time of the programme's commissioning.

What impact has the fund had?

According to the programme's theory of change (see Chapter 1), there were three key outcome areas: instilling cultural change, fostering collaboration and engagement, and creating an enabling regulatory environment. The six contribution statements presented in the previous chapter explain how these outcomes were achieved and the extent to which they can be evidenced. This section discusses the degree to which the outcomes have been realised (IEQ1) and identifies the groups for whom these outcomes have been achieved (IEQ2).

Evidence is strongest for the outcomes around instilling a culture of innovation and collaboration between regulatory authorities. As noted in the previous chapter, there is a robust

and coherent narrative of how the RPF generates outcomes in these areas. There is moderate evidence on how RPF creates stronger collaboration between regulatory authorities and industry, and weak evidence at the time of the research for RPF influencing other authorities and creating an enabling regulatory environment. This weak assessment rating was because of an 'absence of evidence' either overall or for groups, rather than an 'evidence of absence'. For the final claim, insufficient time has elapsed for this outcome to be realised so it has not been observed – rather than contradictory evidence being found.

Table 5: Revisiting the claims assessments

Contribution Claims	Plausibility	Completeness	Strength of evidence
Claim 1: creating a culture of enabling innovation	Very strong	Strong	Strong
Claim 2: increased capability to support innovation	Very strong	Strong	Strong
Claim 3a: *collaboration* between regulatory authorities	Very strong	Very strong	Strong
Claim 3b: *influencing* other regulatory authorities	Moderate	Weak	Weak
Claim 4: engagement with industry	Strong	Strong	Moderate
Claim 5: creating an enabling regulatory environment	Strong	Moderate	Weak

Instilling a culture of innovation

A culture of innovation is defined as the willingness and capability to facilitate innovation within a regulatory authority's remit. Willingness refers to the appetite for developing new ways of working, despite uncertainties about implementing the outputs. Capability relates to the organisational structure and processes that support these new ways of working, whether through new teams, strategic focus, or implementing new technologies.

Changes in culture necessitate behavioural changes, particularly among senior leadership within organisations. The conditions of capability, opportunity, and motivation must be in place and sustained. The aforementioned description addresses motivation (willingness) and

capabilities, but the availability of future opportunities for regulatory authorities to continue with their regulatory solutions remains a critical factor if changes are to be sustained. If an authority decides to self-fund the continuation or further development of a solution, it is seen as a strong indicator of cultural change, given that many authorities are constrained by resources, and allocating funding to these solutions signifies a significant commitment.

Evidence suggests that the programme has helped regulatory authorities to develop a greater culture of innovation. At the time of writing, approximately half of the RPF3 projects reported having secured additional funding to continue their regulatory solutions. Specifically, six projects indicated they would be self-funding, five secured funding from other sources (primarily government departments), and one project planned to fund its initiative by charging users for services.

Furthermore, evidence from the RPF1 and RPF2 rounds, which have had more time for cultural changes to embed, demonstrates more systemic culture change within organisations. Projects, particularly those under RPF1, have shown changes to organisational structure (e.g., the establishment of innovation hubs) and strategic direction (e.g., innovation becoming a strategic objective of the authority).

It is important to note that continuing to fund a regulatory solution does not necessarily mean that a culture of enabling innovation has been achieved throughout the regulatory authority. However, it does indicate that critical first steps are being taken to progress this change and ensure the longevity of new solutions and new ways of working are sustained within the organisation. More time is needed to fully assess the extent of wider cultural change outside RPF project areas. Nonetheless, greater evidence of structural change can be observed from the earlier RPF rounds.

Collaboration between regulatory authorities and with industry

There was strong evidence to suggest that the RPF programme has successfully brought together regulation and innovation stakeholders in a constructive setting to enhance the regulatory environment. The most significant improvements were seen in the interactions among regulatory authorities, while the results of interactions between authorities and innovators were more mixed.

Between other regulatory authorities

Collaboration between regulatory authorities has led to more integrated ways of working, such as improved triaging of queries for innovators, enhanced knowledge sharing, and resource commitments from other regulatory bodies for solution development. As outlined in the previous chapter, the levels of collaboration varied widely. Almost all projects engaged positively with another regulatory body to some extent.

Projects that focused primarily on developing integrated ways of working between regulators were often successful. Commitments to future collaborative working were demonstrated through the continuation of regulatory solutions that included multiple authorities and additional

funding committed by other regulatory authorities (outside of those involved in the application to RPF).

Significant collaboration between authorities also emerged as a by-product of projects that had not explicitly aimed to develop joined-up ways of working. This often occurred during scoping, when projects reached out to other regulators who had implemented similar approaches or consulted international regulators to explore how RPF work could build on existing initiatives.

Between regulatory authorities and industry

Evidence of collaboration between regulatory authorities and industry was more mixed. RPF projects challenged the historical perception of regulators dismissing innovations without a two-way discourse with industry. Instead, authorities created environments where they could work alongside industry to facilitate innovation and understand how to make compliance benchmarks more flexible. On the other hand, some evidence suggested that there was no significant change in engagement when innovators interacted with teams within the regulator authority that were not involved in the RPF project.

Innovators who engaged more deeply with authorities, particularly through sandboxing processes, reported a highly positive experience. They gained valuable insights into product development and compliance while collaborating with the authorities. This approach also provided close support to small innovative businesses that might not have otherwise received regulator engagement. However, only selected businesses could access such support, limiting its coverage across the sector.

Conversely, other projects focused on creating regulatory solutions designed to reach a broader range of businesses. Authorities that concentrated on forming guidance reached out to different innovators to understand where the regulatory gaps were and how compliance could be achieved more flexibly.

Creating an enabling regulatory environment

Not enough time had elapsed at the time of writing to determine whether systemic change had occurred. However, improvements in capacity, willingness and collaboration suggests that the development of a culture of innovation and collaborative relationships between regulatory authorities and innovators are beginning to materialise within the regulatory environment and will likely instigate systemic change in the regulatory environment. For this to occur, regulatory solutions developed under the RPF would need continued development and integration into day-to-day usage, authorities would need to see innovation facilitation as part of their role and collaboration between organisations would need to be sufficient enough to overcome turnover in staff who have the strong network connections.

Difference in outcomes between groups

IEQ2 examines whether there are differences in outcomes among various groups. The evaluation explored variations across projects based on the type of regulatory authority involved (Regulator or Local Authority), the type of project (advice provision, proof-of-concept,

or creating and disseminating guidance - see Chapter 1 for descriptions of these categories), and project length (8 month project or 12-18 month project).

The analysis and a consultation with the RPF team revealed only a small number of differences in outcomes among these groups. There were no significant differences in outcomes by project category or project length, and only minor differences in outcomes by regulatory authority. Any observed differences were tendencies rather than definitive distinctions and should be considered with extra caution given the relatively small sample size of projects involved.

The differences in outcomes are outlined below:

- **Regulators were marginally more likely to secure further funding after the project concluded.** Although the reasons for this have not been fully determined, evidence suggests it is most likely due to local authorities reporting greater financial constraints in their operations than regulators (though regulators reported these constraints too).
- **Regulators focused on strengthening regulations and systems, while local authorities worked on improving service delivery and operations.** This can be explained by regulators having more responsibility over the technical regulatory aspects of technology compliance, whereas local authorities are responsible for how those technologies are deployed in their area.
- **The ability of some local authorities to achieve their intended outcomes was dependent on whether their test operations would pass regulatory compliance.** For example, local authority projects that aimed to deploy autonomous vehicles were restricted by regulatory compliance for the respective industry. As a result, projects were redesigned to illustrate autonomous vehicle use cases or consider alternative deployment strategies for these technologies.

Evidencing future outcomes

This section aims to answer IEQs 3-6, which examine the sustainability of the outcomes and impacts of the RPF programme and how they can be understood.

When considering evidence for impact, the timeframe in which the outcome is assessed is crucial. Although ToC describes outputs, outcomes, and impacts as discrete moments in a programme’s lifecycle, they are a continuous development of events. What might be considered an outcome in a short-term timeframe would be seen as a necessary condition (or intermediary outcome) for an outcome in a longer-term timeframe.

The longer the timeframe of the outcome, the less influence the RPF programme is likely to have over that outcome. The 'sphere of influence' of the programme, defined as its ability to directly influence events, diminishes the further into the future that is examined. This is because other factors come into play and can influence events instead. While the RPF programme has a strong influence on the activities and outputs in the short term, this influence

diminishes in the medium term and becomes marginal (and harder to determine) in the long term. However, this does not mean signs of influence cannot be explored.

The most significant determinant of whether outcomes and impacts were achieved is whether the regulatory solution produced under RPF3 received further funding after the project finishes. This ensures that resources can be deployed to ensure the solution can be continually developed and operationalised by the regulatory authority and continue to influence wider ways of working within the organisation. These regulatory outputs, similar to commercial innovations, face the "Valley of Death" when it comes to scale-up investment[,]. This refers to the likely outcome of start-up businesses unable to attract funding during the transition from research and development to the commercialisation of new products and services. Almost all of the RPF solutions were in their early stages of development at the time of evaluation, and those involved (who often refer to RPF as seed funding to develop new regulatory innovations) stated that further investment would be needed for them to scale up and become operational.

Drawing on findings from previous funding rounds provides insights into how longer-term outcomes can be realised. During this evaluation, RPF1 projects had begun to exhibit structural changes in their organisations and had established more integrated ways of working with other regulatory authorities than those who received RPF funding in later rounds, indicating that outcomes were indeed becoming sustained for those early projects we were able to speak with. Evidence from interviews suggested these outcomes were as a direct result of the RPF funding. Identifying future RPF impact from outside the organisations undergoing change will depend on observing major events that signal shifts in culture or collaboration. Many smaller but essential steps that drive these changes may indicate emerging impact, but they are unlikely to be visible without information sharing or public reporting. Publicly observable signals might include announcements of structural reforms, new funding commitments, or major integration projects linked to the regulatory solution developed under the RPF. In contrast, insights from consultations or senior leadership discussions about transformation are rarely made public, making them difficult to detect externally. As a result, further research will likely be needed to piece together these developments, given the limited information available publicly.

Addressing government priorities

IEQ7 examines how the RPF programme impacts consumers, businesses and government priorities during the life of this evaluation. These priorities are:

- Net Zero agenda
- Cost of living
- Place-based innovation

The long-term nature of these priorities makes it difficult at the time of writing to determine what impact of the RPF programme will have on them; however, based on the evidence collected over the course of this evaluation from interviews and documentation review, it is clearer *how* RPF might contribute to these agendas.

The RPF programme contributed to the three government priorities through different means. Projects aligned with the Net Zero agenda primarily focused on supporting the deployment of low carbon technologies. These were primarily focused on the transport, energy and manufacturing sectors. Projects aligned with supporting cost of living often did so by reducing the cost of businesses to operate. This could be through supporting the development of technologies or processes that reduce the costs of navigating compliance, logistic operations or resolution disputes. By reducing these costs, this makes these businesses more attractive to invest in (see below). Finally, projects that supported place-based innovation did so by enabling businesses and the workforce in the local areas. This was done by reducing health inequalities and supporting businesses to deliver on compliance, thereby reducing the barriers to entry in the local market.

The RPF programme has also contributed to economic growth by having a small but meaningful impact on the entire regulatory landscape. Meanwhile, regulation has a moderate impact on the UK economy when considering all other factors. It does so in three ways:

- Regulatory requirements that enable innovation to develop safely, helping ensure consumers will adopt the innovations, making them commercially viable.
- An enabling regulatory environment can increase investment by reducing the uncertainties in returns for investors.
- Making compliance easier to meet for businesses means they can commit more time and resources to other matters such as research and development.

The role of investment was summarised by an expert regulation policy stakeholder, who suggested:

> *"Investment is about a lot more than regulation, but the regulation stops everything else from happening."* (Innovation expert from the Regulatory Horizons Council)

Regulation sets the parameters for which products, services, and processes can be circulated within the economy. Solutions developed under the RPF programme explore how the boundaries of technological development can be broadened without compromising consumer safety. Investors are more likely to invest in UK innovation development if regulators are seen to facilitate innovation within their remit, allowing technologies to scale and become operational. If such an environment can be established then it is likely to increasingly drive technologies that can facilitate greater carbon reduction, regional investment, and reduce operational costs.

Safer markets mean that innovations are more likely to be adopted by consumers and diffused within the economy. If consumers are assured that emerging technologies are safe and well-regulated, they are more likely to purchase and use them. This is particularly important in the early stages of development when innovators are commercialising their products and seeking returns on their investments.

The RPF programme also ensures consumer and end user safety in the UK by making compliance more accessible to businesses which, in turn, reduces their costs of meeting compliance and decreasing the likelihood of fines for non-compliance. There are examples outlined in the case studies (see accompanying case studies, published alongside this report) where these regulatory solutions are already being deployed and benefiting businesses.

A more integrated regulatory system also increases the likelihood of unicorn companies emerging in the UK. Unicorn companies are defined as start-up firms who have achieved rapid growth in valuation ($1bn USD) whilst remaining in private ownership. These companies are seen as optimal investments for angel investors who would see significant returns if the company was to float on the stock exchange. The generation of unicorn companies often signals a strong innovation system that fosters the development of ideas and allows them to grow and scale rapidly.

Unicorns depend on technologies being applicable to other markets and expand rapidly. To expand into other markets with minimal friction requires regulatory systems to be joined up, enabling rapid growth in new areas. This ability to move across regulatory remits is also significant as what remit within which an innovation sits can significantly shape its development. Evidence suggests that activities under the RPF programme are supporting a more integrated regulatory environment, thereby enabling the likelihood of this type of success for companies. However, more time is needed for these solutions and cultural changes to evolve.

Signs of early promise

Whilst it is important to understand many benefits of the RPF programme will not be realised for years to come, significant benefits can already be identified. The RPF programme has made important contributions to the regulatory policy and business sphere over its duration. The evaluation has seen evidence for businesses navigating compliance more effectively from improved triage processes, clearer guidance and more enabling approaches from authorities, leading to cost savings and faster development of innovations.

Regulatory authorities have updated their policies to be more relevant and applicable to their stakeholders and new regulatory tools have been deployed across finance, law, information security, health, hospitality and more to support innovators. Research and development has led to increased organisation capabilities and cases of spin-out companies being established.

Key learning

The RPF3 programme has produced a variety of regulatory solutions that are improving the culture of innovation (capability and willingness), fostering collaboration among regulatory authorities and industry, and showing early signs of creating a more enabling regulatory environment.

There do not appear to be any significant differences in outcomes between different regulatory groups. The only observed differences were that regulators were marginally more likely than local authorities to secure further funding after the project concluded, regulators tended to focus on strengthening regulations and systems, while local authorities worked on improving service delivery and operations. Additionally, some local authorities faced barriers getting their test operations to pass regulatory compliance.

This evaluation has evidenced short-term and some medium-term outcomes, but long-term impacts could yet be evidenced. For regulatory authorities, the most likely indicators of these outcomes would be major organisational structural changes, funding commitments, and deeper integration between organisations, all in the respective areas where the regulatory solutions were developed. For broader impacts to the economy and UK, there would be an increase in the number of innovations and businesses becoming established in the market, greater investment into early-stage innovation development, the scaling-up of emerging technologies and reduced resources incurred by businesses to meet compliance criteria.

Although the impact of RPF3 on long-term government agendas cannot be determined at this stage, the evaluation results can infer the likely effects the programme will have on investment and innovation diffusion. A more integrated and enabling regulatory environment supports investment by reducing uncertainties for investors while ensuring safe products that consumers will adopt.

6. Conclusion

This chapter summarises the key lessons learned from delivering regulatory innovation projects and insights on the extent to which the RPF3 programme delivered against its goals.

Understanding lessons learned from delivering regulatory innovation projects

The following sections cover setup and delivery learning, each beginning with a summary of programme learning and recommendations from project leads.

These recommendations should be seen in relation to two contextual factors. Firstly, the programme's design and delivery have been refined since the first round in 2018, based on learning from previous evaluations. This has already led to important changes to the programme, including funding projects of different lengths and giving applicants more time to apply.

Secondly, project leads' suggestions for improving setup and delivery processes need to be considered within the context of the governmental governance framework under which the programme operates. This includes criteria around grant funding and open, fair competition, as well as the resourcing and budget constraints the programme faces. These considerations limit the changes the programme can make to some of its components, such as financial year expenditure and payments to projects in arrears, and the type of support it can provide to projects.

Fund entry and setup

***Learning and recommendations:* Fund entry and setup**

- ***The RPF is still seen to be a unique funding opportunity*** *– that provides regulatory authorities with sizeable funding to prioritise regulatory innovations.*
- ***The application process had improved since previous rounds, but additional programme support was needed for new applicants*** *– to help them navigate the application process and assess their initial ideas before submission. Project leads suggested different ways to deliver this support, including: an information sheet detailing the application process (e.g. timings, whether they could apply for pre-project funding etc…); a pre-assessment process to discuss their ideas with the programme team; RPF staff mentoring new applicants; and an opportunity to learn from previous successful and unsuccessful RPF applications.*

- ***Unselected projects also wanted more feedback on their application from the programme team*** *- to help strengthen their project for future funding. They suggested approaches such as an opportunity to discuss their application with programme staff and more detailed written feedback.*
- ***Projects often had to find ways of easing the time pressures at the setup stage*** *- - this typically involved laying the groundwork for their ideas and delivery partnership in place even before they were selected. Once selected, this also involved getting project staff recruitment underway quickly, but this requires RPF to release pre-project funding early.*

Regulatory authorities that applied for RPF funding were motivated by a commitment to create a regulatory environment that was supportive of innovation without compromising compliance. In this context, the RPF was seen to be a unique funding opportunity because of an absence of any alternative, sizeable and dedicated source of funding to support projects to work on regulatory innovations. Regulatory authorities were also encouraged to apply for RPF3 because they were familiar with the application process, having applied for previous rounds. Additionally, those who had been successful in these previous rounds felt reasonably confident about their chances of securing RPF3 funding.

Whilst RPF3 project leads noted that the application process had improved since previous rounds, new applicants would have liked more support to understand the application process and whether their innovation was on the right track prior to applying. This included, for example, a pre-application assessment with programme staff to screen initial ideas, helping projects decide whether to apply for this round or develop their ideas for future rounds. In addition, unselected applicants asked for more specific feedback on improving their application and clarity on the scoring system to feel more confident about reapplying.

The setup stage was crucial for RPF3 projects as it affected their ability to deliver effectively, particularly if setup activities spilled over into the delivery phase. This was especially a risk for 8 month projects, who had a shorter setup period because they started earlier than long-term projects.

It was therefore important for projects to begin setup activities early, which involved them sometimes undertaking pre-project activities, such as setting up partnerships, even before receiving confirmation that their application was selected. Once selected, projects also got ahead of the curve by recruiting staff for their team even before their project had formally started and they had received RPF funding. The RPF provided a portion of the project funding upfront for these recruitment activities to some projects, but project leads felt this support should have been extended more widely. However, while the competition brief did state that pre-start funding could be requested, it also noted that such requests would be assessed on a case-by-case basis and granted only where clearly justified.

Although 12-18 month projects had a longer setup period, this timeframe could still be constraining if they faced lengthy procurement processes or if setup activities had to be delayed until they received RPF funding at the start of the project. Additionally, long-term

projects sometimes struggled to maintain momentum while waiting to start, due to staff changes or shifting priorities and interest from partners.

Previous RPF experience was an advantage in the setup process. Those that had applied for the RPF before faced fewer challenges at this stage because they knew which setup tasks needed to be completed to facilitate a smooth project delivery process.

Delivery

***Learning and recommendations:* Delivery**

- ***Project leads valued funding for both short- and long-term projects*** *– as this supports different regulatory innovations and delivery processes.*
- ***Programme support during delivery was valued by project leads*** *– as this was instrumental in supporting projects to deliver to time and scope. Project leads particularly stressed the importance of the regular catch ups with programme staff and the programme's flexibility to address project delivery issues.*
- ***Project leads also wanted more opportunities to connect with other projects*** *– as this helped to accelerate learning and collaboration. In particular, the opportunity to meet and learn about other projects through networks and forums provided by the programme, such as the RIN.*
- ***Timely delivery also required effective project coordination*** *– what constituted good practice differed between larger projects involving other regulators and smaller, single regulator projects.*
- ***Projects also need to effectively manage regulatory partners and private contractors*** *– this includes, for example, setting up clear communication channels between working parties and monitoring contractors work closely.*

Project leads supported the programme's decision to fund both short- and long-term projects, as it accommodated the different timelines needed for various regulatory innovations and delivery processes. For example, 8 month project funding supported innovations that benefited from a focused delivery period, such as sandboxes, and helped projects focus thinking, resources, and partnerships on these innovations. Conversely, 12-18 month projects allowed projects to expand the scope of their work and also provided a longer setup period for projects to get off the ground.

Regardless of the length, an important funding condition was for projects to deliver to time and scope. Project leads felt that the programme supported them to do this in three ways. Firstly, regular catch ups with programme staff allowed for the early identification, understanding, and resolution of project challenges. The approachability and engagement of programme staff were crucial to this process. Secondly, project leads also appreciated the flexibility of the programme in addressing key project challenges, such as extending project timelines in exceptional circumstances – particularly where projects had experienced significant setup delays. Thirdly,

the programme played a role in accelerating project learning by connecting projects, sharing learning from other projects during the regular catch ups and signposting projects to wider governmental expertise. However, some project leads felt that there here could have been more opportunities to meet and learn from other projects, such as more frequent RIN meetings

Project leads also pointed to the importance of effective project coordination in helping deliver projects to time and scope. For larger projects involving several regulators, this involved having clear channels of communication between partners, senior leadership buy-in across regulators and a dedicated project manager that had the time to manage programme administration and liaise with partners. For smaller projects, strong coordination involved having a clear schedule of activities or deliverables, and project staff having clear but sometimes interchangeable roles that helped to keep the project moving.

In addition to partners, it was also important for projects to manage contractors effectively, as they were often key to delivery of some of the innovations. Although pre-existing relationships with contractors supported good working partnerships, all projects needed to proactively manage contractors regardless of prior familiarity. Key practices which enabled good contractor management included having clear communication channels with contractors, monitoring contractors' progress and deliverables closely and project leads identifying issues early.

Projects had to navigate governance processes at various levels during delivery. At the programme level, some projects struggled with aligning the programme's financial year with that of their regulatory authority and accurately forecasting their monthly or annual spend. This issue was partly mitigated by programme staff, who were flexible when these problems affected project delivery. For example, RPF staff reviewed spend profiles and worked with projects to revise cost predictions.

At the project level, a key challenge was organisational change after RPF funding had been awarded. Financial challenges and organisational restructuring could shift priorities away from the project. However, having RPF funding sometimes helped by providing a financial ring-fence to protect project resources, such as staff, and maintain organisational focus.

Project outcomes and impacts

***Key findings:* outcomes and impacts**

- ***RPF supported regulatory authorities to have a stronger culture of enabling innovation*** *– teams who received RPF funding become more willing and able to support innovations within their remit. However, there was less evidence to indicate whether this led to organisation wide changes in attitudes towards innovation enabling regulation.*
- ***RPF led to greater collaboration between regulatory authorities*** *– there was strong evidence that the programme encouraged cooperation between regulators,*

standards bodies and local authorities. There was some, but limited, evidence that regulatory solutions developed under the RPF went on to influence international regulatory policy.

- ***There was moderate evidence that RPF facilitated greater collaboration between regulatory authorities and industry*** *– the programme provided more engagement opportunities for regulatory authorities and industry during the development regulatory solutions.*
- ***It is still too early to comment on whether RPF has created a more enabling regulatory environment*** *– however there have been promising early signs as evidence for some intermediary outcomes necessary for this have been realised.*
- ***Similarly, it is also too early to comment on whether the RPF programme has had an effect on the long-term government priorities*** *– not enough time has passed to suggest whether or how the programme has contributed to the Net Zero, Place-based investment and Cost of Living agendas.*
- ***To address key evidence gaps, future research should examine the experience of wider stakeholders impacted by RPF projects*** *– this includes innovators not involved in RPF, investors, international regulators, industry leaders, and senior leaders within recipient organisations. These perspectives would provide greater clarity on how RPF projects influence culture, collaboration, and the creation of a more enabling regulatory environment. Further research should also examine recipients from previous rounds to understand how longer-term outcomes emerge. For example, annual surveys on the activities and results of RPF-developed solutions could provide valuable insights. RIO could use RPF events, such as RIN meetings, to encourage authorities to conduct these surveys*

Achieved outcomes

The programme sought to achieve three broad types of outcomes: instilling a culture of enabling innovation within organisations, fostering collaboration and engagement between regulators and industry, and creating an innovation enabling regulatory environment. The evaluation was able to evidence short- and medium-term changes across these outcomes and suggest how these would go on to affect long-term outcomes.

In terms of a culture of innovation, there was strong evidence that the RPF helped regulatory authorities become more willing and able to support innovations by funding projects that introduced new approaches to regulatory issues. However, this cultural change tended to be localised within project teams, with limited evidence to indicate that it translated into an organisational wide change.

There was also strong evidence that funded projects promoted collaboration between regulatory authorities, helping them to develop a joined-up approach to address regulatory

issues emerging from industry innovations in the future. Nevertheless, there was only limited evidence to suggest that projects went on to influence the practices of other regulators outside of the immediate project partnerships.

The programme sought to support regulatory authorities to engage with industry and innovators to inform the development of regulatory solutions. There was moderate evidence to suggest that projects did this; the evidence for this was strongest where businesses had frequent and prolonged contact with regulators during project delivery.

Finally, the RPF programme aimed to promote an innovation-enabling regulatory environment through a culmination of the above outcomes. However, the evidence for this is weak as not enough time had elapsed to determine whether this long-term outcome has been realised.

Understanding outcomes

Project leads felt that the RPF funding was the exclusive reason why outcomes were achieved because it made it possible for them to work on regulatory innovations outside of their other core activities. As noted, project leads underlined how a dedicated innovation fund, is important in providing the resources needed to prioritise innovations and the low-risk funding conditions to innovate. Key to these conditions was the RPF's flexibility to support projects to learn as they deliver, as opposed to being too narrowly tied to achieving stated project outcomes.

There were no significant differences in outcomes between different types of regulatory authorities. However, whilst regulators tended to focus on strengthening regulations and systems, local authorities worked on improving service delivery and operations.

As also noted, the evidence was weakest for long-term impacts, including for long-term government priority areas. The evaluation evidence suggests, however, that the programme could contribute to an increase in future investment and innovation diffusion by promoting a more integrated and enabling regulatory environment. This environment could encourage investment by reducing uncertainties for investors, while ensuring that consumers adopt safe products.

Going Forward (reflections and next steps from the programme team in RIO)

The RPF continues to evolve, actively learning from each funding round and adapting to the changing needs of regulators, innovators, and industry. Now as part of the RIO, the RPF is positioned at the heart of the UK's efforts to foster a more agile, collaborative, and innovation-friendly regulatory environment.

Insights and lessons from the RPF3 evaluation are already being taken forward into the ongoing RPF4 and AI Capability Fund rounds, ensuring that new funding opportunities build on what works and address identified challenges. These learnings will also inform the design and delivery of future rounds, with a focus on scaling successful models, enhancing support for applicants, and leveraging digital tools to streamline processes.

By maintaining a commitment to continuous improvement and close engagement with stakeholders, the RIO aims to ensure that the UK remains a global leader in regulatory innovation-supporting economic growth, public benefit, and the rapid adoption of transformative technologies.

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