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September 2022

ISCF Next Generation Services Evaluation

Final Evaluation – Executive Summary

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NEXT GENERATION SERVICES

AI & Data for the insurance, accounting & legal services sectors

£20.3m Industrial Strategy Challenge Funds

59 unique participants firms
20 research organisations

½ unsuccessful applicants did not proceed with their projects

Collaborative R&D Projects

4 large + 29 small + 4 data access

£9.4m direct co-funding from participants

% Participants reporting **New knowledge / understanding** of the …

potential for applying AI solutions
94%

challenges & opportunities relating to AI&Data
97%

challenges & opportunities relating to sectors
86%

New products & services

84% developed / improved a new product / service

84% now offer products/services that rely on AI/data analytics solutions

20% of whom started doing so since the programme began

Increased employment per participant

3 FTE retained + 1.5 FTE created during project[A]

Average employment increased from 10 to 19 following the programme [M]

£546k

Additional project investment post-grant

per participant [A]

Up to £28m across all participants in total

2.4 new partnerships

with customers or end-users per participant [A]

↑**6x annual R&D expenditure**
£100k per yr to £605k per yr [M]

Increased external equity investments

22% Participating businesses secured at least one deal

vs

7% unsuccessful applicants

Deal Value increased from **£250k to £1m** [M] / yr

Research Projects

3 academic research projects to build knowledge about how to adopt AI in these sectors…

39 formal collaborations
½ collaborators from industry
+
numerous informal collaborations

£1.83m in-cash & in-kind contributions

Contributions to **policy** and **practice** in the **UK** and **Europe**

Platforms for **knowledge sharing** between participants

199+ engagement activities

87 publications

Training
750+ professionals trained through **new Masters courses & CPD modules**

New Mini-Centre for Doctoral Training in Industry and Commercial Property Insurance

36 firms engaged in AI Design Sprints

AI for Services Network

1,400 + Members

34 events

2,400+ attendees

75% identified new commercial leads

495 Introductions

15 Collaborations

A – Mean   M – Median

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Executive summary

This report presents the final impact evaluation as part of the evaluation of UKRI's Industrial Strategy Challenge Fund on Next Generation Services (ISCF NGS).

The scope of the evaluation is to assess the extent to which the programme, including the activities funded, is making or has made an impact against its aims. The evaluation tests the extent to which the programme has delivered the outcomes and impact anticipated and the extent to which these are attributable to ISCF funding. This report provides an assessment of the progress made at the end of the programme, based on evidence collected between January and July 2022.

The programme

ISCF NGS was a £20m pioneer investment aimed at supporting the UK's global leadership and competitiveness in service sectors (specifically, the insurance, legal and accounting sectors), by fostering the uptake of Artificial Intelligence (AI) and increasing levels of data and digitisation in the delivery of these services.

The ISCF NGS Challenge started in April 2018, with grants awarded from December 2018 and ran up to February 2022. Activities were delivered across five different strands, namely Collaborative R&D grants, Data Access grants, Research Programme grants, the AI for Services network (managed by the KTN), and the international activities strand. Collaborative R&D grants comprised the majority of the programme funding (64% of all grant funding).

The NGS Challenge spent a total of £22.0m as a whole, of which £20.3m was allocated as grant funding across 48 projects, with an additional £9.4m in direct co-funding from participants.[1] It involved 79 individual organisations in these grants, and regularly disseminated information to 1,300+ people through the AI for Services network. The programme participants included a balanced mix of companies, covering firms in the end-user sectors in scope (i.e., operating in the accounting, legal and insurance sectors) and on the supply side, comprising technology providers in software development, AI, and data companies. More than 20 academic institutions were involved across all strands.

Evaluation findings

This evaluation of the NGS programme demonstrates that the programme has achieved its objectives.

There is a growing opportunity and demand for AI and data driven methods within the professional services and whilst the deployment of these technologies could support transformative change, their adoption and deployment has been challenged by a range of factors. This includes the existing business models and practices in place, supporting access to sufficient quantities of quality data to support data driven methods and the knowledge and skills required to support the uptake of these technologies.

The NGS programme has helped to address these various challenges and this evaluation demonstrates that the programme has achieved or made substantial progress across all the main expected outcomes and impacts.

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1 This value excludes in-kind contributions and funding withdrawn as a result of project terminations.

The relatively small investment in the programme, especially relative to the size of the three service sectors in scope, has meant that results have mostly materialised at the level of those organisations directly participating in the programme. In addition however, the programme has supported the formation of a wider cohort of organisations within the end-user sectors working with and / or to deliver solutions to professional service companies.
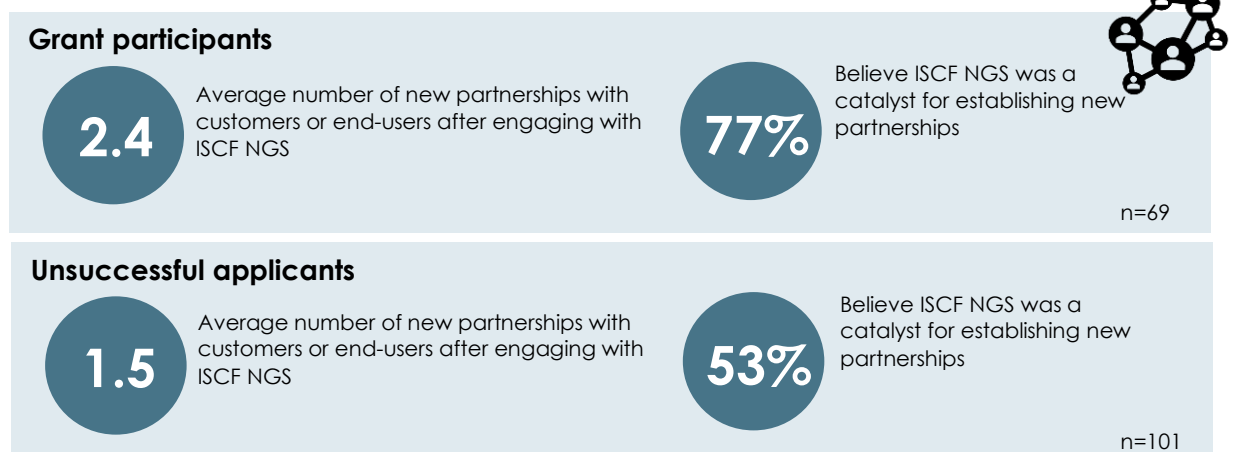
Engagement, partnerships and collaborations

The programme has supported a range of collaborations and partnerships and laid the foundation for further engagement. This included the formalisation of new collaborations and partnerships through collaborative projects, as well as providing the platforms for networking.

After engaging with the programme (at the proposal stage), both successful and unsuccessful applicants to the CR&D strands reported having established **new partnerships with customers and end-users** (with a slightly higher result for successful applicants). In fact, almost half of unsuccessful applicants stated that **the programme had been one of the main catalysts** for the establishment of these new relationships, and most of programme participants stated so. There is a strong expectation that these collaborations will continue, with 75% of participants agreeing they could see avenues for future collaboration with industry/academia due to the programme. Furthermore, 25% of participants and 23% of unsuccessful applicants indicate that these new partnerships and collaborations have resulted in access to further funding (beyond the ISCF NGS grant) to support their activities. At the close of their projects, 89% of participants reported they had developed or improved their collaboration and partnering skills due to the programme.

The **research projects reported 39 formal collaborations** and partnerships, most of which are with private organisations and has **leveraged £1.83m of cash and in-kind contributions**. The research projects also engaged with a wider cohort of organisations through a breadth of communication activities, so the true number of organisations engaged by the research projects is likely to be higher. The survey of a sample of these organisations indicates that the majority did not apply for the NGS programme, indicating the **research projects are extending the reach of the NGS programme beyond its core beneficiaries**. These partnerships and collaborations have then provided a platform for new and stronger connections between industry and academia.

The   programme's

Grant participants

2.4 Average number of new partnerships with customers or end-users after engaging with ISCF NGS

77% Believe ISCF NGS was a catalyst for establishing new partnerships

n=69

Unsuccessful applicants

1.5 Average number of new partnerships with customers or end-users after engaging with ISCF NGS

53% Believe ISCF NGS was a catalyst for establishing new partnerships

n=101

international activities have also supported the formation of new partnerships and collaborations. The Global Business Innovation Programme (GBIP) Singapore mission in 2019 was beneficial for participants to gain new contacts, with companies securing an average of 35 meetings per company. These new contacts were valuable for increasing their

understanding of the market in Singapore, and companies reported that around half of the meetings generated at least some interest and potential for future collaboration.

Finally, since its launch in May 2019, the **AI for Services network has delivered 34 events to over 2,452 attendees**, both in-person and online. Around half attendees reported securing new contacts or collaborations, either commercial leads or new partners for collaborative research as a result of attending these events.

Investment, funding and leverage

Overall, the levels of R&D investment in general for both participants and unsuccessful applicants has increased. On average, programme **participants' general R&D expenditure increased by over 5 times**, from £100k at the baseline to £605k (median). Unsuccessful applicants also experienced and increase in R&D expenditure from £76k prior to the programme to £110k in 2021/2022.

Whilst the service sectors are becoming more innovative in general, the **NGS participants have a stronger focus on AI/data.**

Following the ISCF NGS programme, participating firms are investing more in AI/data R&D with a focus on the service sectors. Before ISCF NGS, participating companies were active in R&D in the area of AI and data applications but to a small scale. On average, participating firms increased their levels of investment in AI/Data R&D from £99k at the baseline to £628k following the programme. This is substantially higher than the unsuccessful applications (£86k to £183k). This also holds true across the cohort of participating firms. Prior to the programme, a fifth of participants were not investing in AI/data R&D, and only a third were investing more than £100k. After the programme, just over half were investing more than £100k.
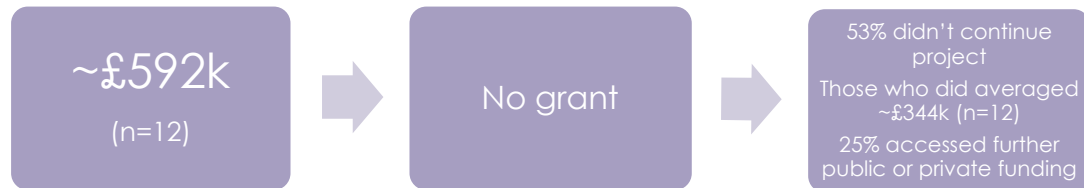
Programme participants have continued to invest in their projects and ideas after the end of their projects. Participants had invested an average of - £164k in their projects prior to the NGS programme and then a further ~£546k 'post grant' (mostly from internal resources but also from other private investments and access to further public funding outside of ISCF NGS). If this were to hold across the 52 unique participating businesses in the ISCF NGS programme, then the **total cumulative investment would equate to around £28m**.

By contrast, 53% of unsuccessful applicants did not carry on with their ideas/projects, and those who did invested less. Despite investing £592k prior to applying to NGS, those that continued invested less than programme participants (£334k on average). There are various possible reasons for this decreased investment: the proposed project proved not to be viable; securing funding was critical to the progression of the project and no other sources of funding were secured; or that unsuccessful companies subsequently re-directed their attention to other areas of the business. These results provide an indication of the net benefit (additionality) of the programme.

Grant participants (average investment at different stages)

Investment prior to grant application		Investment as part of grant commitments		Investment post-grant
~£164k (n=22)	→	~£116k (£9.6m total, n=83)	→	~£546k (n=22) 50% accessed further public funding

Unsuccessful applicants (average investment at different stages)

~£592k (n=12)	→	No grant	→	53% didn't continue project. Those who did averaged ~£344k (n=12). 25% accessed further public or private funding

The majority of programme participants (91%) believe that the NGS programme made the solutions developed more ready for further investment from the private sector. A fifth of participants also reported developing new fund-raising skills through their NGS project.

Compared to unsuccessful applicants, **participating businesses were more than three times more likely to have been identified on the Pitchbook database** which be interpreted as a positive signal of the strength of companies (50% of participants compared to 17% of unsuccessful applicants).

Participants have been more successful in securing external investment than unsuccessful applicants, despite a fall in the number of investment deals since 2018 due to the COVID-19 pandemic and retrenchment of the investment community. Relative to the entire pool of applicants to the programme, during the programme period, 22% of all participating businesses (base: 72) signed at least one deal compared to 7% of unsuccessful applicants (base:185).

In terms of the average number of deals per year between the baseline period (2013-2018) and the active ISCF NGS period (2019-2022) participants saw an increase from 8.5 on average per year to 12. By contrast, unsuccessful applicants stayed at the same levels and secured an average of 7.8 deals per year prior to the programme and 8.5 number of deals during the programme period.

The median **value of the external equity investments increased more significantly for participants, from £250k to £1m**, than unsuccessful applicants (£500k to £780k). Participating firms were also generating more inward investment from private funding sources on top of the grant funding through the ISCF than unsuccessful applicants.

New knowledge production and dissemination

The ISCF NGS programme aimed to promote the creation of new knowledge of practical usage for the sectors in scope. The evidence collected in this evaluation shows that **programme participants are creating new related knowledge**.

Academic researchers involved in the programme have produced a total of **101 academic publications**. 21 of these publications have come from research groups involved in the CR&D projects, and 87 publications emerging from the Research Projects, including journal articles, books and book chapters, policy briefings and consultancy reports. **Programme participants increased their publication of think pieces (including blogs)**, reporting an average of 9.7

outputs, up from 6.6 in a typical year prior to applying. For unsuccessful applicants, the number of think pieces published has decreased from 7.4 prior to the programme to 5.5 in the last year.

Research Projects delivered 199 engagement activities to disseminate the knowledge and insights gained, many of which include delivering presentations and webinars in collaboration with the AI for Services network. This demonstrates the added value of the AI for Services network in providing a valuable platform for disseminating learnings emerging from the programme.

Programme participants are producing more IP and exploitable trade secrets (i.e. confidential business information which provides a competitive edge) on average since joining the programme, reporting an increase from 1.0 to 2.2, whilst unsuccessful applicants reported a decrease from 1.6 at the point of applying to 0.8 in the past year.

Skills, capabilities, and attitudes towards AI

We have found evidence of **uptake of programme learning**. Participants believe they have gained increased skills and capabilities as a result of participating in ISCF NGS grants, with participation leading to a better understanding of the challenges, issues and potential of AI/data, as well as a better awareness of challenges and issues across different sectors. In addition, all participants reported developing new or improving their technical skills through their NGS project, with significant contributions to other organisational skills including problem solving, project management, strategic thinking, and business planning.

Members of the AI for Services network found value in being a member of the network, particularly with regards to understanding of commercial opportunities in applying AI&Data solutions, and in the approach to adopting these solutions.

Almost all participants in the CR&D projects reported **increased understanding of sector challenges and opportunities** (89%), of the challenges and opportunities **relating to AI&Data** (97%) and of the **potential for applying AI solutions in their sectors of activity** (94%).

89% Increased understanding of sector challenges and opportunities
(n=37)

97% Increased understanding of challenges and opportunities relating to AI & Data
(n=37)

94% A better understanding of the potential for applying AI solutions in their sectors of activity
(n=36)

The NGS programme also contributed to the development and production of wider training resources, including the development of a **new Masters degree and continuing professional development course** and a **new mini-centre for doctoral training**, as well as **training materials and guidance tools** to facilitate organisational change.

Innovations and new economic activity

The programme has enabled companies to develop new innovations and enabled the development of new economic activity with strong evidence for impacts to turnover expected in future.

The programme has actively supported the development of new products and solutions, with **84% of participants reporting a new or improved product or service**, and further 10% of participants expect this to happen in the future. On average, the NGS CR&D projects **progressed their project by 3 TRLs (median)** at project close, with all projects progressing by at least one TRL. Participants were also significantly more likely to have trialled or tested new business models participating in the NGS programme.

Both participants and unsuccessful applications reported **an increase in the proportion of their current products and services that made use of AI solutions**. The programme also supported increased adoption of these technologies, 62% of end-user participants (8 out of 13 respondents) state that participation has led to new or improved internal processes, and further 10% expect this to happen in the future.

Programme participants reported an **increase in the proportion of participants who offer products/services that rely on the use of AI/data analytics** solutions, increasing from 64% prior to the programme to 84%.

Six different spin outs and start-ups have already materialised and ten other organisations expect this to happen in the future.

Participants in the CR&D projects reported **increased employment** due to their NGS project, indicating they had retained an average of 3 FTE and created a further 1.5 FTE (median).

Participants estimated that the benefits from new products, services, or process supported by the **NGS programme would lead to an annual combined turnover of £84m** (~£1.9m average benefit and ~£450k median benefit per company) and that this positive effect will last 6 years on average. The **total commercial benefits expected to accrue over time is £719m** in total across the 44 companies who have provided subjective views on the future commercial potential of their innovations (£13m average benefit and £2.4m median benefit per company).