The Small Business Research Initiative (SBRI) Healthcare programme

An evaluation of programme activities, outcomes and impacts

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This study explores the contribution of the Small Business Research Initiative (SBRI) Healthcare programme to innovation in the NHS (National Health Service). It was commissioned by the UK Department of Health Policy Research Programme. It is related to a wider, two-year study of innovation in the NHS being conducted by RAND Europe and the University of Manchester, but represents a discrete stream of work.

In this report, we introduce the background and context for the SBRI Healthcare study (Chapter 1), describe the interview and survey methods used (Chapter 2), and discuss the main results (Chapter 3) and conclusions (Chapter 4). The accompanying appendices provide further details on the methods and results from the interviews and surveys conducted.

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Executive Summary

Background

The Small Business Research Initiative (SBRI) Healthcare programme has been funded by NHS England since 2013 to address unmet needs in the NHS and promote economic growth in the UK by providing support to small companies developing relevant new products and services. It started in 2008 (initially run by the Department of Health and Strategic Health Authorities with support from the Technology Strategy Board) and runs themed competitions, normally two per year, that are focused on addressing healthcare needs that have been identified on the basis of consultations with NHS staff and other stakeholders.

Its Phase 1 awards, worth up to £100,000 and lasting six months, provide support for companies to demonstrate the technical feasibility of their ideas. If the feasibility testing in Phase 1 is successful, companies can then bid for Phase 2 awards, worth up to £1 million over 12 months, which enable them to develop and evaluate prototypes of their innovation. A small number of Phase 3 awards, also of up to £1 million each, have been made to further advance some innovations. Over the last three years (2013/2014—2015/2016) the SBRI Healthcare programme has awarded an average of £17.5 million per year of funding to support small businesses in the UK.

Aims of the study

This evaluation reviewed the aims and activities of the SBRI Healthcare scheme, and explored the outcomes and impacts of the programme and the challenges and opportunities it faces. We draw practical insights on how the SBRI Healthcare programme is contributing to the innovation process, its outcomes and its impacts, and how it could be supported in the future.

Methods

The evaluation is based primarily on evidence gathered during May to November 2016 through a series of surveys and interviews:

1 The Technology Strategy Board is now named Innovate UK.
2 All participants were invited to be part of the study by email and informed of the purpose of their participation and of the study, and how the information they provide would be used. Survey respondents were informed that
<table>
<thead>
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<th>Method</th>
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<td>Representatives of NHS Academic Health Science Networks (AHSNs), the healthcare and technology industry, innovation networking organisations, and the SBRI Healthcare programme delivery team.</td>
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<td>Survey of unsuccessful applicants</td>
<td>Representatives of organisations that applied unsuccessfully for SBRI Healthcare funding during 2009–2015. (177 responses from 173 businesses, 22% response rate)</td>
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There are three main caveats associated with this evaluation. First, the survey data gathered are self-reported. It is beyond the scope of the study to independently validate the reported progress and other information provided by the respondents. There is no reason to assume that inaccurate information was provided. Second, although we have tried to assess the unique character of the SBRI Healthcare programme and its added value, we cannot observe the counterfactual, namely, what would have happened in the absence of the SBRI Healthcare programme. To mitigate this inability, we gathered responses not only from businesses that have been supported by SBRI Healthcare but also from companies that applied but were not awarded support. While not completely comparable to the group of successful applicants, this group provided useful insights. Third, caution must be exercised in the generalisation of the findings. The surveys of successful and unsuccessful applicants had response rates of 45 per cent and 22 per cent, respectively, and it cannot necessarily be assumed that findings based on the responses obtained can be generalised beyond the sample.

Nevertheless, by triangulating the findings from the different, complementary, strands of the study – the series of interviews and the two surveys – we have been able to identify consistent and important insights.

**Results: Key messages**

*The role of the programme and its place in the funding landscape*

- Interviewees and survey respondents recognised that the SBRI Healthcare programme aims to support small innovative companies in the UK to address NHS needs, with applicant companies citing their need for funding and a fit with the themes of the calls as their main motivations for applying.
• The programme effectively targets small businesses: the majority of applicants are companies with fewer than 10 employees. The fact that SBRI Healthcare support offers full funding was identified by several interviewees (both awardees and other stakeholders) as a particularly attractive feature.

• Some businesses expressed a desire for SBRI Healthcare to do more to support them in helping their product to be taken up by the NHS, but this is seen by the SBRI Healthcare team as being predominantly the role of the Academic Health Science Networks (AHSNs), which help to lead SBRI Healthcare calls and support companies in their region.

Programme processes

• Overall, the SBRI Healthcare programme is seen to run well by most interviewees and awardees who responded to our survey to run well, and in particular in terms of effective processes for identifying and articulating healthcare needs and a reasonable administrative burden.

• While 74 per cent of successful applicant respondents to our surveys agreed that the application and selection process was fair, only 20 per cent of unsuccessful applicants agreed with that view (although another 40 per cent of unsuccessful applicants neither agreed nor disagreed). Some concerns were raised by unsuccessful applicants about the level of technical expertise demonstrated by the review panels when assessing proposed technologies and about the quality of the feedback provided; only 28 per cent of unsuccessful applicants who responded to our survey agreed that the feedback they had received was helpful.

• Over 90 per cent of successful applicants, and even 69 per cent of unsuccessful applicants, who responded to our surveys said that they would apply to another SBRI Healthcare competition in future. We see this as a vote of some confidence from the small businesses that have been in contact with the programme.

Outcomes and impacts

• Health Enterprise East (HEE), which is subcontracted by the Eastern AHSN to manage the SBRI Healthcare programme, reports from its own April/May 2016 survey of supported businesses\(^3\) that SBRI Healthcare funding enabled the 68 companies who responded to the survey to hire 181 full-time equivalent (FTE) staff and to retain another 275 FTE posts. In 2015, those 68 companies had in 2015, subsequent to receiving the SBRI Healthcare award, obtained a total of £36.7 million of additional investment funding from other sources.

\(^3\) The survey aimed to include all competition winners, from the launch of the first competition in 2009 through to (and including) SBRI 9, in spring 2015. There were 122 awards during that period. As some companies received multiple awards or ceased to exist (due to mergers, etc.), the total of number of individual companies invited to participate was 99.
• According to companies awarded SBRI Healthcare support who replied to our survey, awards are valuable not only for the funding they bring but also for the associated kudos (77 per cent found this helpful) and because the Phase 1 awards are accompanied by useful health economics analysis (72 per cent of awardees responding considered this helpful).
• Given the early-stage of development of most innovations supported by SBRI Healthcare, it is uncertain how many will reach the market. But among the respondents to our own survey of successful applicants, more than one quarter report product sales to date. These are still modest, totalling £4 million of sales so far (of which £3 million was in the NHS) by 13 of the 45 companies who responded to the survey.
• Although study participants felt that it was still too early to identify impacts on patients and the NHS, a range of expected impacts were reported by awardees, including potential NHS cost savings in the tens of millions.
• As more of the supported innovations reach the NHS market over the coming years, it will be desirable to monitor their impacts on patients and NHS costs in practice.

Challenges and opportunities for the future

• SBRI Healthcare awardees report facing obstacles to uptake of their products, including resistance to innovation within the NHS, complex and bureaucratic procurement systems and a shortage of resources to complete development and obtain regulatory approval.
• Involving clinicians in the development of innovations, and running local pilots using them, were highlighted by interviewees as helpful in promoting uptake of innovations.

Conclusions

Taken overall, our survey and interview findings show that the SBRI Healthcare programme is providing effective support for small companies to develop innovations that address NHS needs. The programme has a number of strengths, including low administrative burdens for applicants and awardees, effective processes for identifying and articulating needs, and a beneficial provision of health economics support in Phase 1.

Addressing NHS needs, however, entails going beyond innovation development to include uptake and use of the innovations. This step constitutes a fundamental challenge and will require collaboration with other innovation programmes at regional and national levels. Part of this could usefully include:

• Ensuring that the AHSNs are well informed about who the SBRI Healthcare-supported companies are in their region and the stage of development of their innovations;
• Ensuring there is clear guidance for the AHSNs about how they could support SBRI-supported companies in their region. This could include brokering contacts with NHS procurement staff but will require careful coordination with both AHSNs and other regional and national initiatives;
• Providing networking opportunities for companies to learn from one another about how to commercialise their innovations in the NHS; and
• Exploring opportunities to engage with other national and regional funding programmes (e.g. National Institute for Health Research (NIHR) Inventions for Innovation, NHS Innovation Accelerator (NIA), Clinical Entrepreneurs programme, Innovate UK Funding, and AHSN seed funds), as well as with the evolving national policy environment and initiatives, such as the Accelerated Access Partnership and the Transformative Innovation designations proposed in the 2016 report on the Accelerated Access Review, and the Innovation Tariff announced and implemented in 2016 by NHS England.

Successful innovation happens when combinations of things come together. There is no single ‘magic ingredient’. We know from prior research and our ongoing wider study on innovation in the NHS, that many elements need to work in combination to ensure receptive places for innovation: innovation skills, capabilities and leadership; networks and relationships that connect the innovation pathway; incentives and accountabilities in the system that reward managed risk taking, long-term approaches and service transformation; appropriate financial resources, commissioning and procurement environments and associated governance and regulation; engagement with patients and communities who can demand innovation; and, critically, an appropriate information and evidence environment on which to make sound decisions – locally, regionally and nationally.

Nevertheless, the SBRI Healthcare programme performs a valuable role for the NHS in the early-stage innovation funding landscape. Going forward it will be important to consider how best to coordinate the SBRI Healthcare programme with wider policy developments (including the Accelerated Access Review) and initiatives to progress the adoption, diffusion and scale-up in the NHS of the innovations it supports.
Acknowledgements

We would like to thank the Department of Health Policy Research Programme for funding this project, as well as the Office of for Life Sciences and NHS England for their assistance in defining the scope and aims of this work. We are also grateful to the SBRI Healthcare team, including Karen Livingstone, Anne Blackwood, Joop Tanis and Clare Beddoes, who collectively provided background information about the programme as well as helping us administer the surveys, providing data from their prior surveys, and providing useful advice about survey design and interviewee selection.

We appreciate the diligence and helpfulness our quality assurance reviewers, Advait Deshpande and Catriona Manville of RAND Europe.

Finally, we are very grateful to all the interviewees who generously gave up their time to speak with us, and to the survey respondents who took the time to respond to our questions.
**Abbreviations and Acronyms**

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<th>Description</th>
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<td>A&amp;E</td>
<td>accident and emergency</td>
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<td>AHSN</td>
<td>Academic Health Science Network</td>
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<td>CCG</td>
<td>clinical commissioning group</td>
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<td>FTE</td>
<td>full-time equivalent</td>
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<td>HEE</td>
<td>Health Enterprise East</td>
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<td>NHS</td>
<td>National Health Service</td>
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<tr>
<td>NIA</td>
<td>NHS Innovation Accelerator</td>
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<td>NIHR</td>
<td>National Institute for Health Research</td>
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<td>OHE</td>
<td>Office of Health Economics</td>
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<td>SBRI</td>
<td>Small Business Research Initiative</td>
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<td>SME</td>
<td>small or medium-sized enterprise</td>
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<td>UKTI</td>
<td>UK Trade and Investment</td>
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1. Introduction

Background and context

The Small Business Research Initiative (SBRI) Healthcare programme has been funded by NHS England since 2013 to address unmet needs in the NHS (National Health Service) and promote economic growth in the UK by providing support to companies developing relevant new products and services. Based originally on the US Small Business Innovation Research programme, SBRI Healthcare is one of a number of UK SBRI programmes. Their aims are twofold: to promote innovation and the growth of innovative companies while simultaneously obtaining solutions for challenges faced by public sector organisations – challenges for which solutions are not yet available. Government departments, agencies and other public sector bodies then act as the lead customer for the products developed.

The SBRI Healthcare process, illustrated in Figure 1, begins with the identification, by Academic Health Science Networks (AHSNs) working with the NHS, of unmet needs in the NHS. In each call (otherwise known as ‘competition’), companies are invited to propose innovative solutions to address the specific unmet needs described in that call. The calls are based around finding solutions to address these needs, but do not specify how they should be addressed. As an example, in 2015, the competitions were run under each of two broad themes: ‘Older people with multiple morbidities’ and ‘Reducing pressure on urgent and emergency care’. The former aimed to address needs and challenges, including reducing harm from falls, preventing and managing incontinence, and detecting frailty and helping frail patients cope with everyday activities.

The SBRI Healthcare programme currently offers the award in two phases: Phase 1 and Phase 2. In Phase 1, companies can be awarded up to £100,000 in funding for up to six months to demonstrate the technical feasibility of their ideas. In Phase 2, companies that have completed Phase 1 can be awarded up to £1 million over 12 months to develop and evaluate prototypes of their innovation. Exceptionally, eight awards of so-called ‘Phase 3’ funding were made in FY 2013/2014, with the aim of accelerating the adoption of products from Phase 2 by providing companies with an opportunity to validate their products.

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4 Connell (2014)
5 Innovate UK (2014)
6 SBRI Healthcare (2016)
7 SBRI Healthcare (2015)
in the NHS setting. The level and duration of funding were the same as for Phase 2. There have been no further Phase 3 awards since then.

Figure 1. Flow chart showing the SBRI Healthcare process, from problem identification to product commercialisation.

SBRI Healthcare award applications are reviewed by a panel of individuals with clinical, business and technical expertise. Applications are assessed across a range of criteria related to three main areas: (i) fit with the specified clinical need, (ii) whether the technology is deliverable, and (iii) business viability (including the skills of the company’s team, and knowledge of the NHS market).

The first SBRI Healthcare call ran in 2009 and was initially coordinated by the Technology Strategy Board (now Innovate UK). Since 2013, the programme has been managed by the Eastern AHSN with support from the Eastern Innovation Hub Health Enterprise East (HEE), which is subcontracted to deal with administration, including contracts and payments. The 15 AHSNs across England take turns leading specific calls. The AHSN responsible for running each call works with clinicians in its network and other NHS staff to identify and then specify and articulate these needs. They also have a role to play in assisting SBRI Healthcare-supported companies that are either located in their region or have been funded through the call led by that AHSN. A Management Board oversees the SBRI Healthcare programme. It is made

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8 SBRI Healthcare (2014)
up of representatives from the AHSNs (rotating groups of seven AHSN representatives have seats on the Board), industry, the Department of Health, Innovate UK and NHS England.

An impact evaluation carried out by the Office of Health Economics (OHE) for HEE in 2014 found that at that point the programme had led to the creation of at least 89 full-time equivalent (FTE) jobs in companies and had enabled funded companies to obtain a further £6.3 million in additional investment from other sources, corresponding to an additional £0.42 invested per £1 invested in the SBRI Healthcare programme. The SBRI Healthcare team at HEE undertook a survey in April/May 2016 to update some of the data in the OHE 2014 report. The HEE survey aimed to include all competition winners, from the launch of the first competition, SBRI 1, in 2009, through to (and including) the SBRI 9 competition, in spring 2015. A total of 99 individual companies were invited to participate. The survey found that the number of jobs created had doubled to 181 FTE, and that the level of additional investments was also growing, reaching £36.7 million in 2015, corresponding to an additional £0.86 invested per £1 invested in the SBRI Healthcare programme.

Aims of the study

The present report describes results of an independent evaluation of the programme by RAND Europe. The evaluation, conducted from May to November 2016, explored the contribution of the SBRI Healthcare programme to innovation in the NHS on the basis of evidence gathered through surveys of companies that had applied for SBRI Healthcare funding (including both those that had been unsuccessful and those that had been successful in doing so) and interviews (with SBRI Healthcare Management Board members and others familiar with the programme, and with SBRI Healthcare awardees). We aim to draw practical insights on how the SBRI Healthcare programme is contributing to the innovation process, its outcomes and its impacts, and how it could be supported in the future to ensure maximum benefit.

In the text that follows, we present a brief overview of the methods used (Chapter 2), then describe and discuss the main results emerging from across the surveys and interviews (Chapter 3), and finally present conclusions (Chapter 4). Four appendices accompany the report, detailing the methods and results from (i) the interviews with SBRI Healthcare programme Management Board members and other stakeholders who are familiar with the programme, (ii) the survey of companies that applied unsuccessfully for SBRI Healthcare awards, and (iii) the survey of companies that have received SBRI Healthcare funding; and detailing the methods for (iv) the interviews with SBRI Healthcare award recipients.

9 OHE Consulting (2014)
10 Although there were 122 awards during that period, the number of invited companies is lower because some companies received multiple awards or ceased to exist (due to mergers, etc.).
11 Health Enterprise East (HEE) (2016)
2. Methods

The data that informs this evaluation were gathered through two sets of semi-structured interviews and two online surveys of companies. Table 1 shows an overview of these methods, and further details are provided in the appendices, which also present detailed results, for the telephone interviews with stakeholders and for both surveys. Results from the interviews with funding recipients are included in the main report, which presents an overview, cross-analysis and discussion of the findings from across all surveys and interviews.

Table 1. Summary of methods

<table>
<thead>
<tr>
<th>Method</th>
<th>Number of participants/responses</th>
<th>Dates</th>
<th>Participant profile</th>
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<tbody>
<tr>
<td>Telephone interviews with stakeholders</td>
<td>16</td>
<td>22/6/2016 – 12/8/2016</td>
<td>Representatives of AHSNs, the healthcare and technology industry, innovation networking organisations, and the SBRI Healthcare programme delivery team. Half (8) were current members of the SBRI Healthcare Management Board.</td>
</tr>
<tr>
<td>Survey of successful applicants*</td>
<td>45 (of 99 organisations)</td>
<td>12/10/2016 – 9/11/2016</td>
<td>Representatives of organisations that were awarded SBRI Healthcare funding during 2009–2015. 33% had held Phase 1 awards only, 56% also had Phase 2, and 11% had reached Phase 3.</td>
</tr>
<tr>
<td>Telephone interviews with funding recipients</td>
<td>5</td>
<td>17/11/2016 – 23/11/2016</td>
<td>Representatives of companies that were awarded SBRI Healthcare funding and responded to the survey of successful applicants.</td>
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* The companies that have been awarded SBRI Healthcare funding were also surveyed by the SBRI Healthcare programme team at HEE in April/May 2016. To reduce the burden on respondents, the SBRI Healthcare team at HEE shared data from that survey with the evaluation study team, and our company survey of successful applicants only asked questions not covered by the HEE survey.

A profile of the respondents to both surveys, by type of innovation proposed, is shown in Figure 2.
For both surveys, prospective respondents were invited to participate in the survey by email and informed of the purpose of the survey and the overall study, and how the information they provided would be used. They were informed that confidentiality and anonymity would be respected and that their responses would only be seen by the research team.

For the interviews, prospective participants were invited by email and provided with information about the purpose of the interview and the study, and how the data gathered would be used. Prior to the interview, interviewees were sent a link to an online consent form which asked the prospective interviewees whether they agree that: they were fully informed about the study, they understand they are free to withdraw at any time (up until the findings have been published), they consent to having their interview be audio-recorded, and they consent to being quoted anonymously. Further details about the interview methods are available in Appendices B and D.

The study was approved by the ethics committee at University of Manchester.

Caveats and limitations

There are a number of caveats associated with this evaluation.

First, the survey data gathered are self-reported. It is beyond the scope of the study to independently validate the reported progress and other information provided by the respondents. There is no reason to assume that inaccurate information was provided.

Second, although we have tried to assess the unique character of the SBRI Healthcare programme and its added value, we cannot observe the counterfactual, namely, what would have happened in the absence of the SBRI Healthcare programme. To mitigate this inability, we gathered responses not only from businesses that have been supported by SBRI Healthcare but also from companies that applied but were not awarded support. While not completely comparable to the group of successful applicants, this group provided useful insights.
Third, caution must be exercised in the generalisation of the findings. The surveys of unsuccessful and successful applicants had response rates of 22 per cent and 45 per cent, respectively (Table 1), and it cannot necessarily be assumed that findings based on the responses obtained can be generalised beyond the sample.

Nevertheless, by triangulating the findings from the different, complementary strands of the study – the series of interviews and the two surveys – we have been able to identify consistent and important insights.
This chapter brings together overall findings, themes and analysis from across the interviews and surveys. It covers evidence gathered about the following:

- What the SBRI Healthcare programme does and how it fits in to the wider funding landscape for health-related innovation in the UK
- Programme processes, including views from participants and others about how the programme functions
- The range of outcomes and impacts generated by the programme and its awardees, as well as a discussion of barriers and enablers to achieving impact
- The challenges and opportunities for the future based on the comments of interviewees and survey respondents

The SBRI Healthcare programme: its activities and place in the funding landscape

Information gathered from stakeholders interviewed and applicants surveyed indicates that they share a consistent understanding that the purpose and aims of SBRI Healthcare are to provide support to small innovative companies to address healthcare needs. They also recognised that the programme takes a demand-led approach, and some saw this as a distinctive feature. The programme appears to be well suited to small businesses, for which it provides an important source of support. There were questions raised, however, about whether SBRI Healthcare should be doing more to help companies sell their products to the NHS.

The SBRI Healthcare programme aims were seen to be supporting small innovative companies and addressing NHS needs through a demand-led approach

The stakeholders we interviewed perceived the SBRI Healthcare programme as having two broad aims: to identify and articulate NHS needs (n=10)\textsuperscript{12} and to fund companies to develop innovations that address those needs (n=7).\textsuperscript{13} When asked about overall strengths of the SBRI Healthcare programme, interviewees

\textsuperscript{12} sbri103, sbri105, sbri106, sbri107, sbri109, sbri110, sbri113, sbri114, sbri115, sbri116

\textsuperscript{13} sbri101, sbri102, sbri103, sbri106, sbri113, sbri114, sbri115
highlighted the same two areas: the articulation and identification of unmet needs (n=6)\textsuperscript{14} and the fact that the programme provides needed funding for companies (n=3).\textsuperscript{15}

Consistent with this understanding, according to the surveys, the most common motivations for applicants to apply were a need for funding\textsuperscript{16} and because their idea fit the theme of the call (Figure 3).\textsuperscript{17} The reasons for applying were much the same for both recipients and non-recipients of SBRI Healthcare support (Figure 3). In line with the perceptions of the stakeholders interviewed, respondents to the survey for SBRI Healthcare award recipients made comments indicating that they generally saw the programme as focused on addressing unmet needs of innovative companies (by supporting early-stage ideas and small or medium-sized enterprises (SMEs), as well as the NHS and patients.

Figure 3. Responses from successful and unsuccessful applicants on the most common reasons for applying to SBRI Healthcare (n=45 successful; 173 unsuccessful)\textsuperscript{18}

Considering how the SBRI Healthcare programme fits in to the wider health innovation landscape in the UK, several interviewees saw SBRI Healthcare as being different from other programmes designed to support health-related innovation and several cited its demand-led approach as the main characteristic that sets it apart (n=5).\textsuperscript{19} As one said:

*There are a plethora of schemes that directly incentivise the supply end of innovation… but that is usually less likely to meet the requirements than demand-led innovation.* (sbri110)

\textsuperscript{14} sbri102, sbri107, sbri108, sbri109, sbri113, sbri114

\textsuperscript{15} sbri102, sbri104, sbri108

\textsuperscript{16} 87 per cent of successful applicant and 88 per cent of unsuccessful applicant respondents gave this answer.

\textsuperscript{17} 74 per cent of successful applicant and 75 per cent of unsuccessful applicant respondents gave this answer.

\textsuperscript{18} Multiple responses allowed; therefore total is not 100 per cent.

\textsuperscript{19} sbri101, sbri103, sbri109, sbri110, sbri115
One interviewee disagreed, however, arguing that defining needs and seeking to go beyond a “technology push” approach does not set it apart from other programmes supporting SMEs to do NHS-relevant research.

Views differed on the role that SBRI Healthcare should play in supporting companies across the innovation pathway, especially in terms of the commissioning and procurement process. SBRI Healthcare aims to address NHS needs. The issue of NHS adoption of SBRI Healthcare-supported products was widely discussed by interviewees and survey respondents and was seen as a significant challenge. Asked about how the impacts and successes of the SBRI Healthcare programme should be measured, the stakeholders interviewed discussed the need to look at adoption and spread through e.g. products entering the market and the number of sales contracts (n=5), and whether the adoption and benefits had come through as anticipated (n=2).

Several stakeholder interviewees explained that supporting adoption by the NHS was outside the programme remit. A few said that the responsibility of SBRI Healthcare was not to make sure that adoption happens, but to ensure that connections are in place to enable it, with e.g. the National Innovation Accelerator (NIA), National Institute for Health Research (NIHR) and business support organisations (n=4). On the other hand, one stakeholder interviewee said that SBRI Healthcare programme only adds value to the health innovation landscape if it goes beyond business support to actually get innovations adopted in the NHS.

There was a range of views from SBRI Healthcare awardees about the extent to which they had received support with commercialising their innovation. Of the award recipients who responded to the survey, 37 per cent said they had received no help from the programme in accessing NHS customers, and another 12 per cent said the assistance of that kind that they had received was unhelpful; only 32 per cent of the respondents reported that they had received assistance accessing NHS customers and had found it helpful. Two of the five awardees interviewed expressed frustration that the programme fell short of their expectations when it came to helping them access and engage with procurement in the NHS and a third interviewee felt that SBRI Healthcare could provide more support in this area. One said that the

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20 Small enterprises were defined as those with fewer than 50 employees; medium enterprises, as those with 50-250 employees.
21 sbri112
22 sbri101, sbri102, sbri105, sbri107, sbri108
23 sbri102, sbri108
24 One interviewee (sbri112) disagreed, saying the SBRI is about addressing the adoption problem in the NHS, not about supporting SMEs.
25 sbri103, sbri109, sbri114, sbri116
26 sbri112
27 sbri117, sbri121
28 sbri118
programme’s assistance with facilitating introductions to NHS procurement consisted of an introduction to a clinician, which was something s/he could have easily done unaided, adding:

*It’s ok to say this is a development contract… but in terms of facilitating commercial introductions to the NHS, I don’t think that is accurate marketing.*

S/he added that “for all intents and purposes, [the programme] operates like a grant”, and suggested that SBRI Healthcare engage more with efforts to facilitate commercial introductions or help awardees become familiar with how NHS procurement works. On the other hand, another awardee reported that SBRI Healthcare had provided a useful contact with central NHS procurement staff (averting the need to make contacts with local bodies).

Eleven stakeholder interviewees pointed to the AHSNs as bearing more responsibility than the SBRI Healthcare programme for ensuring adoption. Interviewees involved in running the SBRI Healthcare programme explained that the programme lacks the resources and contacts necessary to support the adoption of products and services across regions nationwide, and thought that the AHSNs might help to fill this need. But two stakeholder interviewees said that AHSNs’ resources are also too limited to do all that is necessary in this area. One suggested that the AHSNs should be held more accountable for making sure adoption happens. An AHSN representative suggested the AHSNs should be kept more informed about the companies being supported by SBRI Healthcare and should be encouraged to work with their networks (of NHS, academic, third sector and industry organisations, and local authorities) to give feedback to SBRI Healthcare-supported companies throughout the product development process. S/he explained that this would keep the idea of the NHS as customer central to the process all the way through, rather than just at the start and at the end.

The programme is tailored to small, early-stage businesses and adds value by providing full funding, but some challenges were identified regarding timelines and expectations for delivery. While the SBRI Healthcare programme is open to all companies, it is designed to meet the needs of SMEs and early-stage businesses. Evidence from this evaluation indicates that the programme does appeal to and suit small, early-stage businesses. The majority of respondents to the surveys (both successful and unsuccessful applicants) were microenterprises (defined here as companies with fewer than 10 employees), and the majority of companies in both groups of respondents had existed for five years or

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29 sbri117
30 sbri119
31 sbri101, sbri102, sbri103, sbri104, sbri106, sbri107, sbri110, sbri113, sbri114, sbri115, sbri116
32 sbri104, sbri105
33 sbri114
34 SBRI Healthcare (2016)
35 Among respondents, 80 per cent of successful and 78 per cent of unsuccessful applicants were microenterprises.
Both stakeholders interviewed (n=5) and survey respondents who were successful applicants saw SBRI Healthcare as providing a pathway for those early-stage innovations and small companies to get off the ground, and one survey respondent stated that the programme fills an important gap in the funding landscape by supporting SMEs.

Five stakeholder interviewees said there is a shortage of early-stage biomedical innovation funding, while two commented that there are many schemes in this space. Survey results support the idea that applicants can also access other funding sources, but that SBRI Healthcare funding has been important to them. Among unsuccessful applicants, 55 per cent of them went on to develop their ideas without support from SBRI Healthcare and obtained funding through various means. However, among those that did not go on to develop their ideas, 92 per cent (72 out of 78) cited a lack of R&D funding as the main reason. Similarly, among the successful applicants, 52 per cent (51 respondents, or 23 out of 44) reported that they probably or definitely would not have undertaken the SBRI Healthcare-funded project if they had not received that funding.

Asked what would have happened if they had not succeeded in obtaining the SBRI Healthcare funding, four of the five SBRI Healthcare awardees who were interviewed said they would probably still have advanced but that the process would have been much slower or a little bit slower. One explained that s/he would have had to pull resources from elsewhere in their company, slowing down progress in other areas; another said that their technology has applications in different sectors and so they could find other funding sources. A third said that, without the award, “I don’t think we would have got anywhere. We wouldn’t have the resource to deliver what we have delivered”.

Interviewees (stakeholders and awardees) provided further insights on how SBRI Healthcare meets the needs of small and early-stage businesses. Eight of them commented that it is valuable especially because it offers 100 per cent funding, whereas other programmes offer loans or smaller grants, or only partially cover development costs. Three added that small companies in particular need access to full funding.

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36 68 per cent of successful and 66 per cent of unsuccessful applicant companies had existed for five years or less.
37 Four awardees survey respondents commented on this, as did five stakeholders interviewed: sbri102, sbri103, sbri104, sbri113, sbri116.
38 sbri101, sbri102, sbri112, sbri113, sbri114
39 sbri108, sbri110
40 Indeed, 30 of them (32 per cent of those that continued work on their innovation) developed a prototype, and 21 respondents (22 per cent) launched their product onto the market. Comparisons against successful applicants must be made with caution because some of the unsuccessful applicants surveyed reported having more mature ideas than their successful counterparts at the time of application.
41 sbri117, sbri118, sbri119
42 sbri121
43 sbri117,
44 sbri120
45 sbri101, sbri102, sbri103, sbri106, sbri113, sbri114, sbri115, sbri120
because they struggle to cover other costs.\textsuperscript{46} Survey results also support this view; 93 per cent of successful applicant respondents (40 out of 43) considered that the funding they received from SBRI Healthcare had helped their project. One respondent noted that SBRI Healthcare funding had enabled their small company to bring together a group of collaborators to work on product development in a way that SMEs are usually not able to do.

There was a range of views about the suitability of payments/expenses and associated timelines to small companies with early-stage innovations. One successful applicant who was interviewed stressed how it was very helpful that, for accounting purposes, the funding was treated as revenue rather than grant income. However, two awardee respondents expressed concerns about expenses associated with SBRI Healthcare funding, with one citing the need to pay VAT on the award and the other pointing out that NHS bodies engaged by their project charge for their research costs. Moreover, while one respondent highlighted the value to SMEs of upfront payment from SBRI Healthcare, three reported significant delays in contracting or payment of funds to successful applicants. Respondents also generally considered timelines for the completion of projects to be extremely challenging. While three respondents argued that tight timelines encouraged focus and productivity, another two said that they were too tight, particularly for Phase 2 projects. One respondent asserted that challenging timelines make SBRI Healthcare projects more suited to more established innovations rather than those at the very earliest stages of development.

Programme processes

Overall, the SBRI Healthcare programme is well regarded. It is seen by most stakeholder interviewees and awardees to run well, with effective processes for identifying and articulating healthcare needs and without posing too great an administrative burden on applicants and awardees. However, some applicants (both successful and unsuccessful) described reviews and feedback they had received on their applications as being of a low quality.

The SBRI Healthcare programme is generally viewed as well run

Generally, stakeholder interviewees felt the programme was well run and managed with good organisation, processes and staff continuity (n=6).\textsuperscript{47} They highlighted the programme’s general governance and way of working as an overall strength (n=5).\textsuperscript{48} Over 90 per cent of successful applicants (and 69 per cent of unsuccessful applicants) would apply to another SBRI Healthcare competition in the future (Figure 4). Some unsuccessful applicants were notably positive about the value and contribution of support from SBRI Healthcare, saying, for example:

\begin{itemize}
\item \textsuperscript{46} sbri102, sbri103, sbri113
\item \textsuperscript{47} sbri101, sbri102, sbri104, sbri109, sbri110, sbri114
\item \textsuperscript{48} sbri102, sbri103, sbri109, sbri108, sbri109, sbri110
\end{itemize}
Of all the things that we applied for, SBRI Healthcare was by far the best. It was professional, well organised, light touch, non-bureaucratic and sensible. Would definitely apply again.

Our experience of the SBRI Healthcare processes has been excellent, and this is the best programme we have ever engaged in.

Figure 4. Responses from successful and unsuccessful applicants on whether they would apply to SBRI Healthcare in the future (n=43 successful; 160 unsuccessful)

<table>
<thead>
<tr>
<th>RECIPENTS</th>
<th>YES</th>
<th>91%</th>
<th>NO</th>
<th>9%</th>
</tr>
</thead>
<tbody>
<tr>
<td>NON-RECIPIENTS</td>
<td>YES</td>
<td>69%</td>
<td>31%</td>
<td>NO</td>
</tr>
</tbody>
</table>

Respondents to the survey of awardees generally felt that monitoring was appropriately light touch for SMEs and that the quarterly reviews were a useful exercise. However, 2 out of 45 respondents to the survey of award recipients felt that reporting was overly burdensome or not useful. One respondent argued that the end-of-phase reports and quarterly reports could be streamlined, and another argued that financial reporting requirements were difficult to meet within a university setting.

In terms of other areas, two respondents who had received funding also reported that communication between programme staff and projects was poor and that not enough feedback was provided to their project team. Finally, two respondents said that some of the people overseeing SBRI Healthcare projects did not have a detailed understanding of the technology being developed or experience of conducting R&D projects.

The AHSNs lead calls and support local companies; the nature and appropriateness of their support was reported to be variable but improving

AHSNs are responsible for running calls and working with companies in their region that receive SBRI Healthcare support. As part of these responsibilities, an important task of the AHSNs is the identification and articulation of needs. One member of the SBRI Healthcare board explained that the 15 AHSNs across England cooperate to decide challenges they will address and which AHSN will lead in developing each challenge. AHSNs also offer clinics to help companies prepare for the competition; an interviewee said that some provide more support than others.49 According to the awardee survey, 44 per cent of successful applicants consulted their local AHSN while preparing their application and 57 per cent reported receiving support in the form of links to their local AHSN.

49 sbri116
Several interviewees who discussed the nature and quality of support offered to companies by the AHSNs through SBRI Healthcare expressed the view that there was some variability in how engaged and effective the different AHSNs were \( (n=6) \) \(^{50}\) but that progress is being made. An AHSN representative reported that, compared with when they first started, \(^{51}\) the AHSNs are now better placed to identify challenge areas because they are in ongoing contact with their networks, gathering evidence about areas where there are needs. Others said:

> There are active discussions about what works best and what can be improved… I don’t think those conversations happened a couple of years ago. It is mostly because AHSNs are taking more ownership of that. \( \text{(sбри104)} \)

> England is quite diverse and complicated in terms of admin and governance systems. The AHSNs provide a pretty good channel to local or regional clinical networks – they don’t do it evenly but there are some good things going on. \( \text{(sбри107)} \)

> Some of the AHSNs are very proactive about asking what companies are located in their area…. They’ll help promote those companies, and work alongside them to make sure they understand procurement routes and clinical trials…. The AHSNs’ role is very much about opening doors, helping understanding, really supporting the companies. \( \text{(sбри113)} \)

> We’ve seen a growing and rich engagement with AHSNs. That relationship is very solid now. \( \text{(sбри116)} \)

Two stakeholder interviewees stressed that there was good emphasis on regional spread and avoiding undue focus on eastern England (the home region of HEE and Eastern AHSN, which manage SBRI Healthcare) and London (a traditional focus of research and innovation activity). \(^{52}\) Some commented that this was achieved through collaboration among AHSNs. One AHSN representative said: “I think Eastern [AHSN] do a very good job with the centralised function and they’re very equitable in all the AHSNs getting a chance to either lead or deputy on the call”, but added that having more chances for multiple AHSNs to collaborate on a call would help ensure it becomes a “profile project” across more regions. Still, one awardee said in an interview that there appeared to be some confusion about which AHSN they should interact with – their local one or the one that administered the programme. \(^{53}\) Another reported being instructed to only work with one AHSN and its contacts despite the company having contacts elsewhere and that AHSN being, according to the interviewee, less well prepared to provide support. \(^{54}\)

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\(^{50}\) sbри104, sbри106, sbри107, sbри113, sbри115, sbри116 \\
\(^{51}\) The AHSNs were established in 2013. \\
\(^{52}\) sbри108, sbри110 \\
\(^{53}\) sbри117 \\
\(^{54}\) sbри121
The process by which SBRI Healthcare identifies and articulates needs was generally seen as effective, with scope for improvement identified in terms of clarity about the use of evidence and the process for theme selection.

SBRI Healthcare’s approach to identifying needs and articulating them to innovators was seen by the majority of consultees as effective and helpful in efforts to make the NHS more open to innovation and to the industries that could provide it. Two survey respondents who had received SBRI Healthcare funding commented that the programme effectively targets specific healthcare needs by identifying emerging challenges for the NHS, but stakeholder interviewees also recognised that effectively identifying and articulating needs is challenging; three noted that it is an ongoing area of focus for the SBRI Healthcare programme team. In particular, striking the right balance between keeping some breadth (to avoid deterring relevant applicants and not being too prescriptive) and being precise (to make clear what is wanted) was said to be difficult.

Comments made by stakeholders interviewed indicated there was a lack of clarity about the AHSN-led process for developing specific calls. While there was recognition that evidence informed the identification of needs for calls, there was less consistency in views on the quality of this evidence. For example, one interviewee believed that assessments on the existence of market gaps were not underpinned by systematic reviews, horizon scanning or detailed needs assessments, while another said that market analysis was part of the process. Six stakeholders also highlighted a lack of clarity about the factors that influence the selection of themes under which those calls are developed. Factors that were seen to influence theme selection included which AHSN is leading the call, suggestions from NHS leadership, and the national clinical priorities set out in the Five-Year Forward View. Together, these responses point to a need for more awareness raising, transparency and communication about the processes for selecting themes and identifying specific needs within them.

The briefing documents were seen to be concise and focused by the vast majority of successful applicants surveyed (91 per cent). Two interviewees also commented on the usefulness of the ‘what if’ questions in the guidance, which are a way to present different scenarios of the types of improvements that could be achieved through the call, providing further clarity about the specification.

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55 sbri101, sbri102, sbri116
56 sbri102, sbri105, sbri113, sbri114, sbri115
57 sbri101
58 sbri116
59 sbri101, sbri103, sbri106, sbri107, sbri109, sbri112.
60 NHS England (2014)
61 sbri114, sbri115
The application and selection processes were generally considered fit for purpose and not overly burdensome, though there was scope for improvement identified in the quality of reviews and feedback provided.

Overall, evidence indicated that the application process was straightforward with clear requirements and steps for innovators to complete (91 per cent of successful applicants surveyed agreed with this statement) and easy (68 per cent of successful applicants surveyed agreed). The successful applicants interviewed supported this view, with four out of five reporting that the benefits obtained through the programme were proportionate to or outweighed the burden of application.62 One said “it would be hard to have a more streamlined process for the amount of resources.”63 However, a small number of interviewees and survey respondents felt that the online application and/or documentation could be simplified further,64 that the scale of support from during Phase 1 applications could be enhanced,65 and that it may be helpful to allow a few a bit more time from the call launch to the deadline.66

In preparing their applications, both successful and unsuccessful applicants took similar approaches in terms of who they consulted while developing their innovation idea. The majority of survey respondents from both groups indicated that they had consulted practising clinicians, academics/researchers, and patients or patient groups (Figure 5). Smaller proportions of respondents from each group had consulted with those responsible for NHS procurement decisions and charities. Among successful applicants who responded to the survey, 44 per cent (20 out of 45) had consulted their local AHSN.

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62 sbri117, sbri118, sbri119, sbri120
63 sbri117
64 Two respondents to the survey for successful applicants and two stakeholder interviewees: sbri101, sbri104.
65 One respondent to the survey for successful applicants.
66 One respondent to the survey for successful applicants and two stakeholder interviewees: sbri105, sbri115.
The majority of stakeholder interviewees who were familiar with the selection process said it was appropriate and effective overall. Successful and unsuccessful applicants also viewed the programme positively overall, with the majority of both groups saying they would apply again (Figure 4). In contrast to successful applicants, a large proportion of unsuccessful applicants (37 per cent) disagreed that the selection process was fair (Figure 6), but this is not unexpected; prior work has shown that unsuccessful applicants judge selection processes less favourably than successful applicants.

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67 Multiple responses allowed; therefore total is not 100 per cent.
68 sbri101, sbri109, sbri110, sbri113, sbri114
69 91 per cent of successful applicants (39 out of 43) stated that they would apply to another SBRI Healthcare competition in the future, while the remaining 4 respondents stated that they would not. Among unsuccessful applicants, 69 per cent would apply again and 31 per cent would not.
70 Among successful applicant respondents, 75 per cent agreed that the process was fair, with only 7 per cent (3 respondents) disagreeing (19 per cent neither agreed nor disagreed). Among unsuccessful applicants, 20 per cent agreed the process was fair, with 37 per cent disagreeing (42 per cent neither agreed nor disagreed).
71 Hülsheger and Anderson (2009)
A key concern raised by some companies surveyed related to the quality of the assessment and feedback received, including depth and breadth of feedback, and in some cases a lack of feedback. As one interviewee at a supported company put it: “The feedback gave us no indication of why we were rejected, which would have influenced any decision to move forward as would any help pointing us towards further options.”

Among successful applicant respondents, 68 per cent agreed that the feedback they received on their application was helpful, while 16 per cent disagreed (and the rest neither agreed nor disagreed) (Figure 6). However, all four of the successful applicants who said they would not apply again (all Phase 1 awardees) cited the review process for awards as one of the reasons for their response. Two stakeholder interviewees said feedback generally consists of comments on why the applicants were not successful and areas to improve.72

Other areas for improvement were also identified. Three successful applicants expressed concern that review panels may lack the technical expertise required to effectively select successful applications. Comments made in the survey for unsuccessful applicants covered improving the clarity of the selection criteria, and these applicants also raised questions about whether the expectations for applicants are realistic.

72 sbri113, sbri116
Outcomes and impacts

Overall, the main impacts identified by stakeholders interviewed were related to economics and additional funding. Impacts included job creation (identified by 6 interviewees)\(^{73}\) and the fact that supported businesses had success in obtaining follow-on funding (identified by 5 interviewees)\(^{74}\), two areas that were covered in the OHE (2014) report about the SBRI Healthcare programme\(^{75}\) and are reported on regularly by SBRI Healthcare programme management. Interviewees also highlighted the potential for impacts to be achieved through exports\(^{76}\) and, according to the results from the survey of awardees, 17 per cent of reported sales of SBRI Healthcare innovations have been to non-UK customers. The emphasis on jobs created and additional investment attracted is understandable given the early stage of most of the innovations supported by the programme and hence the small number of them that are yet being used by the NHS. Nine interviewees agreed it was too early to see impacts in the form of improved patient care\(^{77}\) and their statements are consistent with other evidence gathered for the evaluation.

Three of the stakeholder interviewees considered that the SBRI Healthcare programme’s impacts had been quite limited\(^{78}\), with one\(^{79}\) taking the view that the programme so far had no impact beyond providing a source of much-needed funding. The other two said that the programme is not set up for large-scale impact because the amount of funding it offers is relatively small and because wider system impact can only be achieved if the innovations are adopted at scale.

Unsuccessful applicants had more mature innovations at time of application; successful applicants were more likely to have proposed ideas they wanted to develop into a proof-of-concept, while unsuccessful applicants were more likely to have prototypes they wanted to trial.

In the paragraphs that follow, information on outputs and impacts from both successful and unsuccessful applicants is presented. While looking at the two groups’ outcomes and impacts can provide some insights about what the SBRI Healthcare programme has helped its awardees to achieve, it should be noted that the two groups of companies are not necessarily comparable. In particular, there was a difference in the maturity of applicants’ innovation ideas at time of application. More successful applicants than unsuccessful ones reported that their idea was in an early stage at the time of application. The percentage of successful applicant respondents who had a new idea they wanted to take to proof-of-concept stage was 42 per cent, compared with 26 per cent of unsuccessful applicants (Figure 7). Similar percentages of both groups wanted to develop a prototype based on a proof of concept, but considerably more unsuccessful

\(^{73}\) sbri104, sbri106, sbri109, sbri113, sbri114, sbri116
\(^{74}\) sbri104, sbri105, sbri109, sbri113, sbri114
\(^{75}\) OHE Consulting (2014)
\(^{76}\) sbri101, sbri104, sbri105, sbri109, sbri113
\(^{77}\) sbri101, sbri102, sbri103, sbri105, sbri106, sbri107, sbri113, sbri114, sbri115
\(^{78}\) sbri101, sbri108, sbri112
\(^{79}\) sbri112
applicants (35 per cent, compared with 20 per cent of successful applicants) had a prototype they wanted to trial.

**Figure 7. Responses from successful and unsuccessful applicants on the maturity of their idea at the time of applying to SBRI Healthcare (n=45 successful; 173 unsuccessful)**

This finding indicates that there may be a need to make it more explicit in guidance and other communications that the SBRI Healthcare programme intends to support early-stage ideas in Phase 1, not more developed ideas. Comments made by some of the unsuccessful applicants indicated that they were not clear about what stage of ideas is supported by the programme. For instance, one commented that there is a need for “more clarity on what the call is looking to fund, i.e. stage of development.” As another way to address this issue, the programme could expand its offering to companies that are in a more advanced stage.

**SBRI Healthcare support has enabled awardees to create jobs and secure further funding**

Since 2013, the SBRI Healthcare Programme has provided a total of £57 million in funding through 168 contracts. Most recently, in the 2015/2016 financial year, £17.5 million in funding was awarded – £2.3 million through 26 Phase 1 contracts and £15.2 million through 18 Phase 2 contracts.

The vast majority of awardee survey respondents (93 per cent) reported that the funding they received had helped their project. The award led to measurable outcomes for the companies, including job creation and success in obtaining additional funding or investment from other sources. The kudos associated with

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80 SBRI Healthcare (2016)
81 SBRI Healthcare (2016)
having the award and the health economics report – an analysis that is provided by SBRI Healthcare to all Phase 1 awardees – were both seen as particularly valuable.

The survey by HEE in April/May 2016 of companies in receipt of SBRI Healthcare awards from the programme’s launch, in 2009, through to 2015 asked for factual information on jobs created, investment funds raised, etc. The 68 companies that responded to the HEE survey reported that, as a result of the support from SBRI Healthcare, they had hired a total of 181 FTE staff (an average of nearly three per company) and had retained a further 237 FTE of existing posts. It should be noted that one company (initially a microenterprise) reported that they had hired 34 new employees and one other reported that they had hired 15. No other company reported hiring more than six employees.

The unsuccessful applicants that went on to develop their ideas further also created new employment opportunities. Seventy respondents (80 per cent of 88 unsuccessful applicants that went on to develop their ideas and answered the question in our survey) reported hiring or retaining at least 0.5 FTE employees as a result of developing their ideas further (Figure 8). Based on our survey data from the companies that were unsuccessful in seeking SBRI Healthcare awards, the lower bound for the estimated number of jobs created would be more than 181 FTE (or a mean of more than 2 FTE per organisation).

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**Figure 8. Responses from successful and unsuccessful applicants on new employment opportunities created (full-time equivalent) from SBRI Healthcare-supported innovations (n=33 successful; 88 unsuccessful)**

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Awardees reported that the SBRI Healthcare award came with a reputational benefit, helping them to secure further external funding.

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82 HEE (2016)
Six stakeholders interviewed discussed how the programme is useful because it represents an endorsement of innovations and a 'badge' that can help companies secure further funding. As one said, "The SBRI for some of them feels a bit like a badge showing [they]... are good guys who have been funded by the NHS." This view was supported by the finding from the survey of successful applicants that 'kudos' associated with SBRI Healthcare funding was the most helpful benefit of the award (aside from the funding itself), particularly for companies in Phases 2 and 3. Seventy-seven per cent of survey respondents reported that the kudos had been helpful. One awardee explained in an interview that it was helpful to be able to say that they were a company that had been funded by the NHS to develop a product that meets a specific NHS need, because otherwise NHS staff would likely be more resistant to their potentially disruptive innovation. Two others said that having the SBRI Healthcare 'badge' helped make them more attractive to investors; one explained that it showed that their device was the kind of thing the NHS was interested in. Another survey respondent stated that the fact that a company holds SBRI Healthcare funding makes clinicians more willing to engage with a commercial organisation.

Of the organisations that received SBRI Healthcare awards and responded to the HEE survey in April/May 2016, just under one third had secured additional co-funding on top of their SBRI Healthcare award. The same proportion of the smaller number of awardee respondents who completed our survey in October/November 2016 reported receiving additional external funding, and that amounted to at least (based on the lower estimates provided by respondents) £8.2 million. Co-funding was estimated at over £650,000 for Phase 1 companies, over £6.7 million for Phase 2 companies, and over £800,000 for Phase 3 companies. This translated to a mean value of over £270,000 of co-funding per Phase 2 company, compared with over £160,000 per Phase 3 company and over £46,000 per Phase 1 company.

The most common source these organisations received funding from was downstream private equity (obtained by 34 per cent of respondents to this question in our survey of awardees, or 15 out of 44), followed by government R&D grants (27 per cent, or 12 out of 44) and loans (also 27 per cent, or 12 out of 44) (Figure 9). The top three sources of government R&D grants for SBRI Healthcare awardees were Innovate UK Smart grants (obtained by 3 respondents), EU funding through FP7 or Horizon 2020 (3 respondents) and funding from the UK Biomedical Catalyst (2 respondents) (Figure 10).
Awardees that had reached Phase 3 were most likely to seek additional funding (60 per cent, or 3 out of 5 did so), followed by those in Phase 2 (32 per cent, or 8 out of 25) and those in Phase 1 (13 per cent, or 2 out of 16). The types of funding they sought varied according to their award phase. Phase 1 awardees

89 Multiple responses allowed; therefore total is not 100 per cent.
90 Multiple responses allowed; therefore total is not 100 per cent.
mainly obtained funding from private investment and government R&D grants; Phase 2 awardees obtained funding from both of those sources as well as from public sector R&D contracts and sales and licensing; Phase 3 awardees reported receiving funding from all sources except private investment. These findings as well as findings from the HEE survey and from interviews with SBRI Healthcare awardees support the ideas that organisations do not need additional external financing while they have the SBRI award and that they tend to wait until their innovation is more developed before obtaining additional funding.

Successful and unsuccessful applicants obtained additional funding through similar sources, but the unsuccessful applicants were more likely to obtain public sector R&D contracts

Overall, companies that received SBRI Healthcare funding accessed similar sources of additional funding as did companies that had applied unsuccessfully to the programme and still gone on to develop their ideas (Figure 11). For both groups, the most common source was private equity, and this was followed by government R&D grants and then loans. Next for the unsuccessful applicants came public sector R&D contracts, which were obtained by 23 per cent of the companies that had gone on to develop their ideas, compared with just 9 per cent of successful applicants. The finding that successful applicants were less likely to obtain public sector R&D contracts is consistent with the observation that some of the unsuccessful applicants had more developed ideas at the time of application, compared with successful applicants. For those respondents who received government grants, the most common ones received were Innovate UK Smart grants, followed by NIHR’s Invention for Innovation programme (shortened to i4i), the biomedical catalyst in the UK, and EU funding through FP7 or Horizon 2020.

Apart from funding, the most common sources of government support used by SBRI Healthcare awardees were R&D tax credits (obtained by 70 per cent of respondents, or 30 out of 43) (Figure 15). Next, reported by 57 per cent of respondents (25 out of 43), were links to the company’s local AHSN (included in ‘Other’ in Figure 15). Twenty-eight per cent of respondents (12 out of 45) reported that they had not received any government support, while smaller numbers (less than 15 per cent for each type of support) said they had accessed other forms of support, such as business incubator or accelerator programmes, innovation vouchers, or support from knowledge transfer partnerships. Unsuccessful applicants reported obtaining similar forms of non-financial government support, with R&D tax credits and innovation vouchers being most common (received by 37 per cent and 17 per cent, respectively, of the 95 respondents who developed their ideas further).
The health economics support provided by SBRI Healthcare was highly valued, but experience of other potential forms of support, such as brokering access to prospective NHS clients and other investors, varied

Interviewees involved in running the programme highlighted the health economics support provided to each company in Phase 1 as being particularly useful. This was confirmed in the awardee survey, which showed that 70 per cent of respondents found the health economics report helpful.

Three of the five SBRI Healthcare awardees interviewed said that the health economics reports had been extremely helpful. One said it was “a very useful springboard to engaging some of the clinicians… and the purchasing people within the NHS”. Another, who had also obtained more detailed health economics analysis on their her/his own, said that the SBRI Healthcare report had been valuable for a few reasons: First, it was prepared by someone who had a background in NHS procurement and it alerted the company to important practical issues relevant to the NHS context that a health economist without

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91 Multiple responses allowed; therefore total is not 100 per cent.

92 As the interviewees explained, a health economist spends one day on each company, writing a short report and helping them think through the cost effectiveness case for their product.

93 sbri117, sbri120, sbri121

94 sbri120

95 sbri117
NHS procurement experience would likely not have covered and that the company had not previously understood. Second, it was documented in a useful, brief and clear format that could be shown to prospective investors. The interviewee said: “A succinct report from NHS England that was independently commissioned for our technology and is very readable – that was much more palatable to potential investors”. This interviewee felt that it would have been difficult to obtain such a report at their stage of development without being involved in the SBRI Healthcare programme.

Five stakeholders interviewed perceived that the SBRI Healthcare programme was providing a range of other additional forms of support to awardees, but evidence from the awardee survey indicated that experience with these forms of support benefits was not widespread. The interviewees discussed how feedback in the form of advice about building a clinical evidence base and helping companies to navigate the NHS is given at different stages throughout the programme and through quarterly company reviews, along with support in the form of introductions to investors and others, and help with linking to further support when the SBRI Healthcare award ends. About 70 per cent of awardee respondents found the quarterly reviews helpful and 32 per cent said that SBRI Healthcare had been helpful in brokering access to potential NHS clients. A quarter of respondents said they had received helpful business-related support and advice through the programme, and only 7 per cent reported that they had been helped to connect with potential investors. Indeed, one of the reasons that the 4 successful applicants who said they would not apply again to the SBRI Healthcare programme (all Phase 1 awardees) gave was a lack of support from SBRI Healthcare at key stages in an innovation’s development. These responses contrast with one stakeholder interviewee’s statement that “the biggest value of the SBRI programme is not the money itself, it’s being able to engage with the system – with the NHS, with clinicians – and work alongside them to develop solutions”.

A small number of awardee respondents (no more than 12 per cent, or 5 respondents, depending on the type of support) felt that some aspects of the programme had been actively unhelpful. One respondent asserted that SBRI Healthcare had “dictated who in the network we should work with” rather than allowing the company to pursue its own leads. However, for most potential types of support (all except for the funding itself and the kudos associated with having received an award), the majority of respondents who had received SBRI Healthcare awards reported that they had not received the support mentioned or that it had been neither helpful nor unhelpful.

Stakeholders interviewed also discussed companies’ need for support to get their innovation adopted by the NHS, saying that this includes advice and insight into NHS processes, financing and culture (n=5):

The best sort of support is clarity for people from the industry who might have an incomplete view of how the NHS works – they are very likely to produce a product.

96 sbri104, sbri107, sbri108, sbri113, sbri116
97 sbri113
98 The other types of support listed were business case support and business advice, brokering networks and access to potential NHS clients, and brokering networks and access to potential investors/funders.
99 sbri101, sbri103, sbri106, sbri110, sbri113
which is incompatible with the processes, financing and culture of the NHS.
(sbri103)

Three stakeholder interviewees said there should be more support to give companies insight and links to
the NHS and that AHSNs can help with this,\textsuperscript{100} and one believed that only some AHSNs are currently
providing this help.\textsuperscript{101} Another said that some AHSNs wrongly believe that if they are involved in the
assessment process, then it would be a conflict of interest to give companies further support.\textsuperscript{102}

Awardees reported £4 million in total sales

Stakeholders reported in interviews that the SBRI Healthcare programme had a healthy pipeline of
products coming through,\textsuperscript{103} and this statement is backed up by evidence gathered in the surveys. More
than one quarter of SBRI Healthcare awardees (13 companies) reported making sales totalling £4 million,
according to the survey, although one company accounts for more than a third of those total sales.
However, it is difficult to determine to what extent this is attributable to the SBRI Healthcare programme
because awardees also received support from other sources.

The survey results indicate that 33 per cent of the unsuccessful applicants who went on to develop their
innovation (29 companies) had sales. The reported sales by this group amounted to about £4 million,
which is a similar figure to that reported by the successful applicants, which constitutes a smaller group of
companies. However, the two groups are not necessarily comparable, so one must be cautious in making
comparisons between them.

Over £3 million of the £4 million of sales reported by SBRI Healthcare-supported companies were made
to the NHS. Fourteen per cent of sales were to international customers outside the EU, 7 per cent to non-
NHS UK customers and 3 per cent to non-UK EU customers. Seven out of 13 sales-generating
companies had made sales totalling between £100,000 and £499,999. The remaining six companies were
spread equally between the £1–£49,999, £50,000–£99,999 and £500,000+ categories. A single company
(with a Phase 3 award for an IT innovation) accounted for 37 per cent of the total sales reported by the
awardees who responded to the survey. As mentioned above, about one third of respondents to the survey
for awardees had secured additional co-funding on top of their SBRI Healthcare award, so it is difficult to
determine to what extent this success can be attributed to the SBRI Healthcare award.

Sales trends varied across different types of innovation. IT platforms and eHealth/mHealth\textsuperscript{104} solutions
were the type of innovation most likely to generate sales, with 67 per cent (8 respondents) of awardees in
this category making sales, compared with only 14 per cent (3 respondents) of medical device companies.

\textsuperscript{100} sbri103, sbri106, sbri113
\textsuperscript{101} sbri113
\textsuperscript{102} sbri103
\textsuperscript{103} sbri109, sbri114, sbri116
\textsuperscript{104} ‘eHealth’ refers to the use of information and communication technologies for health care. ‘mHealth’ refers to
the use of mobile phones and other wireless devices for health care.
As a result, IT innovations generated 65 per cent of all sales despite representing just 26 per cent of respondents. Medical devices accounted for 24 per cent of sales and 48 per cent of respondents. However, the client base for medical devices was more diverse than that for IT innovations. NHS sales represented 32 per cent of the total sales revenue generated by medical devices, with the remainder consisting of sales to international customers (56 per cent), non-NHS UK customers (10 per cent) and non-UK EU customers (2 per cent). In contrast, the NHS accounted for 92 per cent of sales generated by IT innovations. Diagnostic innovations did not generate any sales, and other types of innovation accounted for 11 per cent of sales and 11 per cent of respondents.

Phase 2 and 3 companies were equally likely to have generated sales, with 40 per cent in each phase (10 respondents and 2 respondents, respectively) reporting sales. However, the value of Phase 3 companies’ sales tended to be greater, totalling £1.9 million to Phase 2 companies’ £1.7 million. As a result, Phase 3 companies represented 11 per cent of respondents but accounted for 47 per cent of total sales, while Phase 2 companies represented 54 per cent of companies and accounted for 40 per cent of sales. Only 1 of the 16 Phase 1 respondents had generated sales. Given that Phase 1 innovations are the least advanced in development, it is not surprising that they were less likely to report sales.

Aside from sales, other types of commercial activity were also generated by SBRI Healthcare-supported innovations. This mostly related to licences for the production or distribution of their innovations. Among the 35 respondents, licensing agreements had been finalised or were being negotiated by 43 per cent (15 respondents), marketing or distribution agreements by the same number, and manufacturing agreements by 34 per cent (12 respondents).

Unsuccessful applicants who developed their ideas also reported about £4 million in sales

Some of the unsuccessful applicants that went on to develop their ideas further also generated new sales from their innovations. Twenty-nine respondents (33 per cent of the 88 applicants that went on to develop their ideas and provided sales data) reported achieving sales, ranging from less than £100,000 to more than £1 million, with 24 of them reporting sales of £500,000 or less. Based on the survey data, the lower bound for the total sales generated would be £4 million overall. While this overall figure is similar to that for successful applicants, it should be noted that (i) it represents total sales from a larger group (there were 29 unsuccessful applicant respondents reporting sales, compared with 13 successful applicant respondents) and (ii) as mentioned earlier, the two groups are not necessarily comparable because there were differences in e.g. the maturity of their innovations at time of application.

SBRI Healthcare awardees have potential to generate substantial impacts on the NHS, but these will take time to materialise and will depend on other factors

As it is still rather early to expect SBRI Healthcare innovations to be generating significant impact on the NHS, the study has focused on early indicators of success, such as job creation and sales. Awardees were

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105 HEE (2016)
also asked, however, about wider impacts their innovations could bring about – either expected or achieved. According to the survey results, most positive impacts of SBRI Healthcare-supported innovations were on treatments and their delivery, on patient and carer experience, or on savings of NHS costs. Eighty-six per cent (38 out of 44 awardee respondents) stated that their innovation had generated or would generate net cost savings for the NHS. Fifteen of these respondents also provided estimates of expected cost savings per annum as part of the earlier HEE survey. Of those 15, most expected their innovation to generate annual cost savings to the NHS in the tens of millions of pounds.106

Data on potential savings for the NHS were also gathered in the 2014 OHE impact evaluation and 2016 HEE survey, both of which used the health economics reports prepared for the SBRI-funded companies. The OHE evaluation reported that SBRI funded innovations were expected to benefit between 6,300 and 11.2 million patients per technology per year and generate potential savings to the NHS of £7.2-171 million per technology.107 According to the 2016 HEE report, the average annual potential savings to the NHS or local authorities was £16 million per company for the SBRI 7 programme and £21 million per company in SBRI 8.108

The next most frequently mentioned benefits were improved patient or carer experience (37 respondents, or 84 per cent) and improved patient outcomes and/or recovery rates (35 respondents, or 80 per cent). Nearly half of innovations (20 respondents, or 45 per cent) had already led to or were expected to lead to reductions in the duration of existing treatments, and a slightly smaller number (19 respondents, or 43 per cent) to increased compliance or adherence to existing treatments. Of the 34 respondents to the HEE survey who also responded to our survey of awardees, 25 provided an estimate of the number of UK patients expected to benefit from their innovation. Of those 25, 17 expected their innovation to benefit more than 100,000 patients in the UK, including 8 that expected to benefit more than a million patients.109

Nearly one quarter of SBRI Healthcare awardee respondents to our survey (10 out of 44) identified other potential benefits. Most related to the efficiency of the NHS, and these included increased productivity of healthcare professionals and data-driven improvements to management processes, as well as reductions in admission and readmission rates, accident and emergency (A&E) attendances and unnecessary follow-up appointments. Respondents also identified achieved or expected improvements in access to diagnosis and treatment, and one stated that their innovation had the potential to generate major international sales.

While data was not gathered on the extent to which impacts have occurred, nine interviewees commented that it would take time because products are just starting to come through the SBRI Healthcare pipeline and will face barriers to NHS adoption.110

106 HEE (2016)
107 OHE (2014)
108 HEE (2016)
109 HEE (2016)
110 sbri101, sbri102, sbri103, sbri105, sbri106, sbri107, sbri113, sbri114, sbri115
Some stakeholders suggested that SBRI Healthcare may be helping to improve NHS-industry links

The general view was that the challenges to innovation in the NHS are a systemic problem that the SBRI Healthcare programme cannot overcome on its own. However, an idea raised by stakeholders interviewed was that the SBRI Healthcare programme could be helping to bring about culture change by encouraging more openness to changes in the approach to clinical problem solving and by building a dialogue between the NHS and industry:

There’s really something about engaging the NHS in a dialogue around innovation and using that to drive improvements.… Identifying needs and communicating them to industry is not something the NHS has ever had a mechanism for.… To address falls they’ll tender for a pendant alarm because they know it exists. What they don’t do is tender for stuff that they don’t know exists. (sbri113)

There should be a greater emphasis on whether it’s led to the engagement of clinical teams reasseessing their present practice and ability to change. That seems to be forgotten about and seems to be a really important positive aspect of what’s happening here. (sbri110)

A view expressed by six stakeholder interviewees was that the SBRI Healthcare programme, through identifying and articulating NHS needs to industry, creates an important direct link between industry and the NHS as a customer, and that it is a useful process for the NHS to engage in via the AHSNs and clinicians. Stakeholder interviewees explained that the programme may help to demonstrate NHS commitment to working with industry, stimulate the market and provide the NHS with access to industry support to help it in meeting its challenges. This view was also held by some awardees: two respondents commented that the SBRI approach enables the programme to meet the needs of patients, including groups of patients that do not tend to be the focus of funded innovation. Two others said that SBRI Healthcare encourages innovators to meet those needs by articulating them in the form of clear challenges. One stakeholder interviewee commented that the programme helps address the challenge that the customer, the NHS, operates through many different points of accountability. Others described

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111 sbri107, sbri110, sbri113, sbri116
112 sbri102, sbri105, sbri106, sbri107, sbri109, sbri113
113 sbri1106
114 sbri101, sbri103, sbri107, sbri109, sbri110
115 sbri110
116 sbri107
how it involves co-development of technology\textsuperscript{117} and enables companies to assess the suitability of their innovation for the NHS market before further development.\textsuperscript{118}

Challenges and opportunities for the future

In this section, we look in more detail at the specific barriers faced by SBRI Healthcare-supported companies attempting to sell innovative products to the NHS and at enablers they have identified. We also explore specific suggestions that interviewees and survey respondents have made about how the SBRI Healthcare programme could be improved.

Resistance to innovation within the NHS is seen as an obstacle to uptake of SBRI Healthcare-supported products

Many stakeholder interviewees discussed the challenges with bringing innovation into the NHS,\textsuperscript{119} and respondents to the survey for successful applicants provided further details about the challenges they had experienced. Two interviewees said, for instance:

\begin{quote}
A lot of companies have come out of the process still needing more handholding to get them further along… Looking at the NHS as a customer as a whole, some fundamental, systemic changes need to happen to bring innovation in so it’s not technology pushing at a closed door… you’ve already got it slightly open with SBRI, but more work needs to be done to open it wider. (sbri115)
\end{quote}

\begin{quote}
The issue of procurement and adoption in the NHS… it is a nightmare, and it’s not getting any easier with the NHS deficit. (sbri114)
\end{quote}

The complexity of the NHS as a customer was also identified by stakeholder interviewees as a challenge, and as an area where companies need support.\textsuperscript{120} They said that challenges can come from companies not understanding the NHS procurement process\textsuperscript{121} as well as from individuals within Trusts and Clinical Commissioning Groups (CCGs) not knowing what SBRI Healthcare is and what it entails.\textsuperscript{122}

Survey respondents who had received SBRI Healthcare awards identified a range of barriers to uptake of their innovations by the NHS; these were consistent with, and also went beyond, those mentioned by interviewees. The barriers described by awardees spanned issues with the product or project approval

\begin{flushleft}
\textsuperscript{117} sbri116
\textsuperscript{118} sbri104, sbri109
\textsuperscript{119} This issue was discussed in most interviews, and especially by sbri101, sbri102, sbri107, sbri114 and sbri115.
\textsuperscript{120} sbri102, sbri103, sbri113
\textsuperscript{121} sbri102, sbri103, sbri113
\textsuperscript{122} sbri115
\end{flushleft}
processes, NHS procurement processes, and clinical factors. Although two respondents stated that they had not experienced any significant barriers, most reported at least one.

The most common barrier, and the only one identified by a majority of respondents to the survey for successful applicants, was a perceived resistance to innovation within the NHS. Fifty-seven per cent (25 respondents) stated that the adoption of their product had been hindered by a lack of motivation and accountability for innovation uptake within the NHS, combined with inertia and resistance to change.

Some interviewees (both awardees and stakeholders) linked this resistance to a lack of resources in the NHS to procure new products, even if there is evidence suggesting the product would lead to long-term savings. One described the situation in this way:

> With the increasing bombardment rate from an older population and increased morbidity and funding pressure, how do you think about innovation and adoption and do you think about it at all? Do you have any control of innovation and adoption, or are you told to carry on what you're doing because it's cheapest in the short term? (sbri107)

Related to this, respondents also identified clinical barriers to uptake in the NHS, including difficulty integrating their innovation with existing practices (mentioned by 8 respondents, or 18 per cent) and a shortage among NHS staff of the skills required for uptake of their innovation (7 respondents, or 16 per cent). One respondent expanded on the latter point, stating that NHS staff are too busy to develop new skills and integrate new ways of working.

**NHS procurement processes pose difficulties, especially to small companies**

Regarding other factors internal to the NHS, 25 per cent of respondents to the survey for successful applicants cited challenging procurement processes, and 23 per cent highlighted the difficulty of reaching the relevant customers for their product.

Some respondents described how the level of bureaucracy in the NHS supply chain means that the process favours large companies at the expense of the type funded by SBRI Healthcare. One awardee said in an interview that the procurement process in the NHS is difficult because it can take two to three years: “For a small company, it’s much easier for us to focus on faster adopting markets.... You need a standing sales staff to drive a three-year sale process.”123 This company had achieved sales of its device in the UK that were charity funded, allowing them to avoid the NHS procurement process; they also planned to focus on selling to the Netherlands and Germany.

Two other awardees interviewed, who had also developed devices, emphasised that the decentralised procurement process in the NHS creates a significant barrier, especially for small companies, because it means they must engage directly with multiple Trusts. As one explained, instead of having “10 representatives of all Trusts, they had 250 representatives of individual Trusts to sell to”.124

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123 sbri117
124 sbri119
company had found it useful to work with a sales organisation that has existing relationships in the relevant parts of the NHS.¹²⁵

A lack of resources to complete development and obtain regulatory approval is another challenge

Respondents to the survey for successful applicants also faced challenges in getting their product ready to sell to the NHS. The main barrier at this stage was a lack of resources to develop the innovation to the point of market readiness, which was mentioned by 30 per cent (13 respondents) of companies that had obtained SBRI Healthcare funding. Smaller numbers of respondents also reported difficulties in obtaining regulatory approval of their product (mentioned by 8 respondents, or 18 per cent) and technical issues with the product itself (6 respondents, or 14 per cent). One respondent added that the complexity and cost of generating clinical data had been a barrier to their company. Another noted that a particular issue in the UK is poor performance on clinical trial recruitment, which makes it difficult to run trials there, in their home market.

Different types of innovations encounter different types of challenges

Perceptions of barriers to uptake varied according to the type of innovation respondents were seeking to introduce to the NHS. Resistance to IT innovation appeared particularly acute, although the results from the survey of successful applicants indicated that IT innovations were more likely to generate sales. According to the survey for successful applicants, 83 per cent (10 respondents) of companies with IT innovations identified resistance to change within the NHS as a barrier to them, compared with 45 per cent (9 respondents) of medical device companies and only 29 per cent (2 respondents) of diagnostics companies. Nearly half of unsuccessful applicants (47 per cent) had proposed IT innovations and 28 per cent had proposed devices. In contrast, successful applicants were more likely to have proposed devices (47 per cent had done so) than IT innovations (27 per cent had done so). It is, however, difficult to draw conclusions based on the evidence available about why IT innovations were more likely to be unsuccessful in the SBRI competition but more likely to generate sales, as compared to other types of innovation.

In addition, diagnostics companies cited difficulties in getting their product ready for market more often than did medical device or IT developers. Whereas resistance to innovation was the most frequently mentioned barrier to medical devices and IT innovations, companies with diagnostic innovations viewed a lack of resources for product development as the biggest obstacle to their product’s uptake. This barrier was highlighted by 57 per cent (4 respondents) of diagnostics companies, compared with 25 per cent (5 respondents) in medical devices and 17 per cent (2 respondents) in IT. Moreover, diagnostics companies mentioned technical issues with the product and regulatory challenges more frequently than did companies with medical devices or IT innovations (it should be noted that regulatory approval is less

¹²⁵ sbri120
relevant to IT). This may be due to the fact that diagnostics innovations were generally at an earlier stage in their development than other types – none of the 13 respondents who had launched products onto the market were from companies developing diagnostics.

Clinician involvement and local pilots help promote uptake of innovations

In terms of factors facilitating NHS uptake of their innovation, respondents to the survey for SBRI Healthcare-supported companies most frequently highlighted measures taken to ensure a well-adapted and demonstrably effective product. Seventy-seven per cent of companies (33 respondents) reported that the involvement of clinicians in product development had been a key enabling factor, and 60 per cent (26 respondents) cited local pilots of their product as an important step towards its uptake. One respondent specifically mentioned engagement with nurses as an important step. A smaller number (8 respondents, or 19 per cent) also mentioned the involvement of patient representatives during product development. Other facilitators of uptake, such as awareness-raising activities, were mentioned less frequently. The frequency with which particular enablers of uptake were mentioned varied across innovation types. Although engaging clinicians was the most mentioned enabler overall, companies with IT innovations placed more emphasis on local pilots of their technology. Eighty-three per cent (10 respondents) of those companies identified local pilots as a key enabler of their innovation’s uptake, compared with 71 per cent (5 respondents) of diagnostics companies and 57 per cent (12 respondents) of medical device companies. Respondents with IT innovations also mentioned awareness raising with NHS commissioners much more frequently than did those with other types of innovation.

Suggestions offered by interviewees and survey respondents for ways to improve the SBRI Healthcare programme

The individuals who were consulted for this evaluation often offered suggestions of ways the SBRI Healthcare programme could address challenges that they had identified. These suggestions are set out below and organised by category: (i) programme scope and (ii) ways that SBRI Healthcare could usefully link with other programmes that support health innovation in the UK. (Suggestions for improvements to the application and selection processes were also made, but these have already been discussed earlier in the report.)

Programme scope and supporting adoption of innovations

Respondents who had been successful applicants called for greater support for companies in commercialising their innovation. Specifically, seven respondents stated that Phase 1 and 2 support did not produce a clear pathway to NHS uptake of their innovation, with one arguing that SBRI Healthcare should provide more active support in linking awardees to potential customers in the NHS. In response to these concerns, four respondents called for Phase 3 funding to be made available to support the commercialisation and translation into practice of SBRI Healthcare-supported innovations. Additional suggestions put forward for facilitating NHS uptake of innovations included funding fewer projects but
following them all the way through to commercialisation and sharing ownership of the innovations with NHS England.

Further suggestions made by four interviewees focused on addressing NHS resource constraints. One was that resources could be put towards freeing up the time of NHS staff so they can look at adopting products. A stakeholder and an awardee discussed how there may be a need to provide resources enabling the NHS to actually purchase products. As one said: “You’ve got to incentivise all sides of the party, otherwise you do just have technology push.”

The awardee proposed that there might be “partnered applications” involving the industry partner and their local trust, with the industry partner receiving money to develop the product and the Trust to purchase it: “If we were able to apply with a partner so they can purchase the device for early adoption or training or early clinical trials, that would be vastly more efficient for commercial translation.” This awardee, who had made early sales of their device through charities in the UK, suggested emulating the approach the charities take when they provide funding that enables new products to be adopted in specific regions. Related to this idea, one stakeholder interviewee said it may be helpful for SBRI Healthcare to look at accessing other funding sources, e.g. in the charitable sector. Another suggested having a larger business act as an intermediary to provide a small business’s solution to the NHS.

Another awardee suggested ways that SBRI Healthcare could do more to help companies find paying customers in the NHS. These included arranging events to bring companies together, where they can share experiences and learn from one another how to reach NHS customers, and making sure they can provide companies with “NHS contacts at the frontline who have the openness and time to consider new offers” and who could actually buy a service if it met their needs.

Finally, two stakeholder interviewees suggested that more could be done to engage innovative sectors that are not already highly engaged in healthcare: “Targeting sectors where there may be companies with technologies used in other fields which could be applied in health to bring new market entrants... we would like to do more of that.”

**Linking with other health innovation programmes in the UK**

Complementarities between the SBRI Healthcare programme and other health innovation initiatives were mentioned by several stakeholder interviewees. Three of them commented that there is now a good opportunity for joined-up thinking with other programmes, such as the NIA, which was seen as a promising next step for SBRI Healthcare products to feed into, although the NIA initiative is still growing.
and developing.134 ‘Test Beds’ and ‘Vanguards’ were also mentioned as programmes that are becoming engaged with the SBRI Healthcare programme,135 but one stakeholder interviewee observed that the fact that these are not available in all regions creates limitations.136

Two interviewees suggested there could be more interaction with other innovation funders, such as NIHR and the Catapult centres.137 Another interviewee observed that the NIHR Healthcare Technology Cooperatives (HTCs) also identify problems and seek industry input in solving them, but added that the HTCs remain involved in supporting companies over a longer period than the SBRI Healthcare programme does, and that this longer-term approach to support may be preferable.138

An AHSN representative suggested the AHSNs should be kept more informed about the companies being supported and encouraged to work with their networks (of NHS, academic, third sector and industry organisations, and local authorities) to give feedback to SBRI Healthcare-funded companies throughout the product development process, as this would keep the idea of the NHS as customer central to the process all the way through, rather than just at the start and the end.
4. Conclusions

Taken overall, our surveys and interview findings show that the SBRI Healthcare programme is providing effective support for small companies to develop innovations that address NHS needs. SBRI Healthcare was widely seen as being distinctive from other programmes that support health innovations because it takes an NHS demand-led approach, identifying and articulating unmet needs in the NHS, and because it provides funding for small companies with early-stage innovations to address those needs.

The programme is for the most part viewed positively, not only by stakeholders and recipients of SBRI Healthcare awards, but also by a high proportion of the applicants who responded to our survey of companies that applied for support but did not receive it: 69 per cent of unsuccessful applicants stated that, despite having been unsuccessful in the past, they would nevertheless apply to another SBRI Healthcare call. We would interpret that as a vote of some confidence in the programme. The benefits of the scheme to recipients of support evidently go beyond the money awarded: the kudos from being an SBRI Healthcare awardee and the health economics analytical support provided by the programme during Phase 1 are particularly valued.

While all aspects of the programme, from the identification and articulation of needs to the application and selection process and onwards, were viewed favourably overall by interviewees and survey respondents, some criticisms were also voiced. For example, with regards to the review process and feedback received by applicants, some survey respondents, including awardees, raised questions about whether some review panels had adequate technical expertise and had fully engaged with or understood the applications they reviewed. Unsuccessful applicants in particular reported that the feedback they received did not, in their view, sufficiently explain why they had been unsuccessful.

Data gathered by the programme team at HEE and our own research for this evaluation indicate that outcomes for the supported companies are occurring in the form of job creation, follow-on investment from other sources and sales – mainly to the NHS but also exports. Unsuccessful applicants that nevertheless went on to develop their ideas without SBRI Healthcare support also achieved outcomes in the form of jobs created, follow-on funding and sales. However, it was observed that unsuccessful applicants had, at the time they applied to SBRI Healthcare, had more advanced innovations overall than was the case for the successful applicants, suggesting that the two groups of applicants may not be completely comparable.

It is still too early to identify impacts from most of the SBRI Healthcare-funded innovations on patients and the NHS. Future monitoring is needed of the extent to which such benefits are realised in practice, but awardees reported substantial expected impacts of those kinds. Potential cost savings from use of their innovation were estimated by some awardees to be in the tens of millions of pounds. If realised, they
would more than surpass investments made in the SBRI Healthcare programme. Other frequently mentioned benefits that were expected were improved patient or carer experience, and improved patient outcomes and/or recovery rates.

Addressing NHS needs entails going beyond innovation development to include uptake and use of the innovations. This step constitutes a fundamental challenge and will require collaboration with other innovation programmes at regional and national levels. Part of this could usefully include:

- Ensuring that the AHSNs are well informed about who the SBRI Healthcare-supported companies are in their region and the stage of development of their innovations;
- Ensuring there is clear guidance for the AHSNs about how they could support SBRI-supported companies in their region. This could include brokering contacts with NHS procurement staff but will require careful coordination with both AHSNs and other regional and national initiatives;
- Providing networking opportunities for companies to learn from one another about how to commercialise their innovations in the NHS; and
- Exploring opportunities to engage with other national and regional funding programmes (e.g. NIHR Inventions for Innovation, NHS Innovation Accelerator, Clinical Entrepreneurs programme, Innovate UK Funding, and AHSN seed funds), as well as with the evolving national policy environment and initiatives, such as the Accelerated Access Partnership and the Transformative Innovation designations proposed by the Accelerated Access Review, and the Innovation Tariff announced and implemented in 2016 by NHS England.

Successful innovation happens when combinations of things come together. There is no single ‘magic ingredient’. We know from prior research and our ongoing wider study on innovation in the NHS that many elements need to work in combination to ensure receptive places for innovation: innovation skills, capabilities and leadership; networks and relationships that connect the innovation pathway; incentives and accountabilities in the system that reward managed risk taking, long-term approaches and service transformation; appropriate financial resources, commissioning and procurement environments and associated governance and regulation; engagement with patients and communities who can demand innovation; and, critically, an appropriate information and evidence environment on which to make sound decisions – locally, regionally and nationally.

Our study shows SBRI Healthcare performing a valuable role in the early-stage innovation funding landscape. As it evolves, it will be important to reflect on how SBRI Healthcare can most effectively be coordinated with other funders and policy initiatives, to collectively support the progression of promising innovations across the entire health innovation pathway; and how innovators funded by the SBRI Healthcare programme can best be embedded within networks and communities of practice. Such engagement needs to occur within a context that more explicitly recognises how procurement and

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139 AAR (2016)
140 NHS England (2016)
commissioning can support innovation, and that recognises the wider context of organisational, cultural
and behavioural levers for innovation in the healthcare system.


Appendices
Appendix A. Report on survey of companies that applied unsuccessfully for SBRI Healthcare support

A1. Introduction and method

The survey was distributed by email in June 2016 to 783 organisations\textsuperscript{141} that had applied to the SBRI Healthcare scheme (Phase 1 funding) between 2009 and 2015 and were not awarded funding on at least one occasion (some organisations have applied more than once, that is, in response to more than one SBRI Healthcare competition). Survey recipients were informed of the purpose of the study, how the information they provided would be used, and that all individual responses would be kept confidential and would only be visible to members of the RAND Europe team.

We received 177 responses (each of which corresponded to a specific application made to SBRI Healthcare), and they were from 173 out of the 783 organisations that made at least one unsuccessful application for SBRI Healthcare funding between 2009 and 2015, a response rate of 22 per cent. The response rate in this online survey is similar to but slightly lower than in a previous survey of unsuccessful SBRI Healthcare applicants undertaken for SBRI Healthcare by the Office of Health Economics (OHE) in 2014, which had a response rate of 25 per cent (134/544). The detailed profile of respondents is provided in the final subsection of this summary.

The online survey was hosted on the SurveyMonkey platform. Before its release to all applicant organisations, the survey had been piloted with a sample of test users. It was open for a period of four weeks in June 2016. During this process, two reminders were sent to organisations, at the points where there were two weeks remaining and one week remaining.

A2. Profile of respondents

We received responses from 173 out of 783 organisations that made at least one unsuccessful application for SBRI Healthcare funding between 2009 and 2015, a response rate of 22 per cent. Our survey had more responses from organisations that had applied to SBRI Healthcare more recently. Thirty-five per cent of the applicants (60 respondents) had applied to SBRI Healthcare in 2015, 37 per cent (64 respondents) in 2014, 16

\textsuperscript{141} This includes private sector businesses and non-profit organisations, public sector organisations, researchers and universities.
per cent (28 respondents) in 2013, and the remaining 12 per cent (21 respondents) in the years between 2009 and 2012. The response rate in this online survey is similar to but slightly lower than in a previous survey of unsuccessful SBRI Healthcare applicants undertaken for SBRI Healthcare by the Office of Health Economics (OHE) in 2014, which had a response rate of 25 per cent (134/544). The detailed profile of respondents is provided in the final subsection of this summary. Eight respondents did not specify the type of their innovation.

Nearly half of respondents (47 per cent, or 81 respondents) represented organisations developing IT platforms or software-based eHealth/mHealth solutions. Nearly one third of respondents (28 per cent, or 53 respondents) proposed medical devices, and 11 per cent (19 respondents) proposed a diagnostic. Fewer than one in ten respondents (9 per cent, or 16 respondents) provided other solutions than the stated categories.

**Figure 12. Responses from unsuccessful applicants on the type of ideas for which they sought support from SBRI Healthcare (n=173)**

The majority of our respondents (77 per cent, or 134 respondents) had so far submitted only one application to SBRI Healthcare and had not attempted yet to reapply to other SBRI Healthcare competitions. Ten per cent (18 respondents) of respondents applied to two competitions, and about 12 per cent (21 respondents) applied to three and more competitions.

Regarding the size of applicant organisations, the majority of our responses (78 per cent, or 135 respondents) came from micro-sized organisations (fewer than 10 employees), corresponding to the general profile of SBRI Healthcare applicants. Fourteen per cent of applicants (25 respondents) were from small-sized companies (10–50 employees), 2 per cent (3 respondents) were from medium-sized organisations (50–250 employees), and 6 per cent (10 respondents) were from large-sized organisations (250+ employers). The large organisations were mainly universities and public sector organisations.
At the time of their application to SBRI Healthcare, 80 per cent of applicants (139 respondents) were from organisations younger than ten years. Ten per cent (17 respondents) were in the pre-start-up stage, 20 per cent (35 respondents) were in start-ups that had been operating for 1 year, 36 per cent (63 respondents) were from established organisations in operation between 1 and 5 years, with the remaining 14 per cent of organisations (24 respondents) established between 5 and 10 years.

The mean annual turnover of applicants (excluding university and public sector applicants) was £873,988 at the time of applying. The majority (56 per cent, or 62 respondents) had an estimated turnover of less than £250,000.
Figure 15. Estimated annual turnover of respondent organisations at the time of applying (n=112)

A3. The SBRI Healthcare application and selection process

The selection process is generally perceived as robust, but there are concerns about the quality of feedback and the expectations of assessors.

Respondents were generally positive about the clarity and feasibility of what was required of them during the application process. The majority of respondents agreed that the briefing document was clear, and that the requirements at each step of the application process were clear. When asked whether the process was easy, more respondents agreed (44 per cent, or 72 respondents) than disagreed (29 per cent, or 47 respondents). However, respondents were less positive about SBRI Healthcare’s role in the process. Only 28 per cent (46 respondents) agreed that they had received helpful feedback on their application, and only 20 per cent (33 respondents) agreed that the selection process was fair. On the statement that the selection process was fair, 42 per cent (69 respondents) stated that they neither agreed nor disagreed.

Figure 16. Responses from unsuccessful applicants on the SBRI Healthcare application and selection process (n=163)
Most unsuccessful applicants had consulted external stakeholders in developing their innovation, including practising clinicians, researchers and patients or patient groups, but not NHS procurement representatives.

It was common for applicants to involve external stakeholders in the idea development process. Almost nine in ten respondents (86 per cent, or 149 respondents) involved clinicians in their idea development, seven in ten (69 per cent, or 120 respondents) involved academics/researchers, and just over half (53 per cent, or 91 respondents) said they had involved patients or patient groups. Fewer than one in three applicants (29 per cent, or 50 respondents) consulted with those in the NHS responsible for procurement or purchasing decisions, suggesting that, while the applications are often validated – or even co-produced – with clinicians, the majority of applicants did not have first-hand knowledge of the market potential to purchase the developed idea.

Figure 17. Responses from unsuccessful applicants which external stakeholders were involved in their application to SBRI Healthcare (n=173)\(^{142}\)

A4. Reasons for applying to SBRI Healthcare

The main motivations for applying to SBRI Healthcare were a need for financial support, a fit with the particular competition call, and an expectation of gaining better access to potential NHS customers.

The majority of organisations applied to the scheme because they needed funding to develop their innovation (88 per cent, or 153 respondents) or because their idea fitted the theme of the particular competition call (74 per cent, or 128 respondents). For almost half of the ultimately unsuccessful applicants (45 per cent, or 77 respondents), better access to NHS customers was one of the reasons for applying to SBRI Healthcare. Only 21 per cent of organisations (37 respondents) applied to SBRI Healthcare as a result of the perceived lack of other funding sources for their ideas at the time when they wanted to develop their innovation further. Twenty-one per cent of organisations (36 respondents) felt that their idea was likely to receive funding. Finally, kudos associated with receiving SBRI Healthcare

\(^{142}\) Multiple responses allowed; therefore total is not 100 per cent.
funding was one of the reasons for applying to the scheme for only about 13 per cent of applicants (23 respondents).

**Figure 18. Responses from unsuccessful applicants on the most common reasons for applying to SBRI Healthcare (n=173)**

The maturity of innovations varied at the time of applying to SBRI Healthcare, with over two-thirds of ideas being at least at the proof-of-concept stage.

When asked about the stage of development of their idea at the time of applying to SBRI Healthcare, the responses varied considerably: some were early-stage ideas, while others were ready to be prototyped, trialled or even commercialised. Fewer than one third (26 per cent, or 45 respondents) of non-recipients applied with a new idea they wanted to develop into a proof-of-concept stage. Thirty-five per cent of applicants (60 respondents) had a ready technology/product proof-of-concept that the applicants wanted to prototype with the support from SBRI Healthcare. About 1 in 10 (20 respondents) respondents had already completed feasibility/pilot/pivotal trials at the time of applying for support of their idea to SBRI Healthcare. The fact that only about one in four ideas (28 per cent, or 48 respondents) were at an early stage of development suggests that many applications may have been unsuccessful because the projects were too far advanced, that is, too close to the market, to be eligible for the support of SBRI Healthcare. SBRI Healthcare Phase 1 and 2 contracts are intended to fund projects ‘showing technical feasibility of the proposed concept’ and ‘development and evaluation of prototypes from the more promising technologies in Phase 1’, respectively.

The survey responses also suggest that half of the applicants looking for late-stage funding to trial and/or commercialise their products applied because they hoped that SBRI Healthcare would provide them with better access to NHS customers.

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143 Multiple responses allowed; therefore total is not 100 per cent.
More than half of unsuccessful applicant organisations went on to develop their ideas without support from SBRI Healthcare, with one in five having since launched their products to the market.

More than half of the respondents (55 per cent, or 95 respondents) went on to develop their innovations further, even though they did not receive the support they had sought from SBRI Healthcare. Ten per cent (nine respondents) of those who continued to develop their innovation have developed their idea to the stage when they can assess the commercial viability of their product. Fourteen per cent (13 respondents) developed a technical proof-of-concept. Thirty-two per cent of the applicants that went on to develop their idea (30 respondents) have developed a basic prototype or demonstration unit, and 22 per cent of applicants (21 respondents) have completed feasibility/pilot or pivotal trials. More than one in five respondents (22 per cent, or 21 respondents) have already launched their product onto the market.

Despite a relatively high number of applicants who have achieved progress in developing their ideas further, the responses have to be interpreted cautiously given that many of the respondents applied to SBRI Healthcare with ideas that were more mature than the ideas that are awarded support from the SBRI Healthcare programme.
Among the organisations that did not continue to develop their ideas, the most common reason was a lack of R&D funding

We asked the organisations that stated that they did not continue the development of their ideas about the reasons for not doing so. More than nine in ten respondents (92 per cent, or 72 respondents) from this group stated that a lack of R&D funding support was one of their reasons for not starting or continuing their innovation development. Thirteen per cent of applicants (10 respondents) stated that they did not identify the routes to sell the product to the NHS market, and 9 per cent (7 respondents) mentioned a lack of proof-of-market. Ten per cent (eight respondents) cited other factors, mainly internal reasons, such as changes in key personnel.
A5. Alternative sources of support for unsuccessful applicants

The most common means of financing the development of innovations was through downstream private investment or public R&D grants.

In the following set of questions, we examined how the 55 per cent of unsuccessful applicants who continued to develop their innovation financed their work.

Among the 88 respondents that answered the question, the most frequent source of funding was private equity investment, which was received by 40 per cent of them, or 35 respondents. Although obtaining downstream private equity financing was the most common way to fund R&D of their ideas, the information from respondents suggests that non-SBRI public financing has also played an important role in helping companies develop their ideas further. Thirty-three per cent of those who answered (29 respondents) received government R&D grants, and 22 per cent (20 respondents) received public sector R&D contracts (including NHS contracts). Three of those respondents had contracts valued between £50,000 and 100,000 and 10 had contracts valued between £100,000 and 500,000; a further 5 respondents had contracts worth over £500,000.

There were also 18 respondents (21 per cent of those that answered) for whom sale or licensing of the technology under development helped them to finance their product. In addition, for four respondents (5 per cent), the sale or merger of their company provided them with the funding to develop their ideas further.

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144 Multiple responses allowed; therefore total is not 100 per cent.
More than half of organisations that have developed their ideas further have applied to other sources of government funding

More than half (57 per cent, or 52 respondents) of organisations that have developed their ideas further have applied for other government-funded R&D support, while the remaining 43 per cent (40 respondents) did not seek public R&D funding to develop their ideas further. Twenty-nine per cent of applicants (27 respondents) also applied for Innovate UK-funded Smart funding to support their idea, and more than half of these organisations (15 respondents) were successful in receiving funding from Smart. Organisations also applied to the EU-funded programmes FP7 and Horizon 2020 (15 per cent, or 14 respondents), the NIHR-funded Inventions for Innovation (i4i) programme (11 per cent, or 10 respondents), the Innovate UK/Medical Research Council-funded Biomedical Catalyst (11 per cent, or 10 respondents), and the Department of Health/Wellcome Trust Health Innovation Challenge Fund (10 per cent, or 9 respondents).

Twenty per cent of respondents applied for other sources of public sources, which included Invest Northern Ireland, the European Regional Development Fund, NHS England-provided support from the National Innovation Accelerator and NHS Test Beds, and others.

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145 Multiple responses allowed; therefore total is not 100 per cent.
Figure 24. Number of respondents who applied for and were awarded the following public R&D sources (n=92)

More than half of organisations that have developed their ideas further have received other (non-grant) forms of public support during their project, most commonly R&D tax credits and innovation vouchers.

Among the 55 per cent of organisations (95 respondents) that developed their ideas despite not receiving SBRI Healthcare support, more than half (59 per cent, or 56 respondents) received other (non-grant) forms of public support for their ideas. The largest number (37 per cent, or 35 respondents) received R&D tax credits, and 17 per cent (16 respondents) received Innovate UK-funded Innovation Vouchers. Other applicants stated that they had received support from business incubators or accelerators (14 per cent, or 13 respondents), Knowledge Transfer Network (9 per cent, or 9 respondents), Catapult centres (5 per cent, or 5 respondents), or technical transfer support (5 per cent, or 5 respondents). Five per cent of applicants (five respondents) claimed to have received other forms of support which included, for example, business advice from the European Regional Development Fund’s Growth Hub or Medilink.
A6. Project outcomes and uptake of innovations

One third of the organisations that continued to develop their innovations have generated new sales, estimated to be in the range £4 million to £11 million.

Among organisations that went on to develop their products without the support of SBRI Healthcare, two thirds of those that responded (67 per cent, or 59 out of 88 respondents) have not yet achieved any sales from their ideas, although most of this group (42 respondents) said sales are expected. Eleven per cent of organisations (10 respondents) generated sales between £100,000 and £500,000, 5 per cent (4 respondents) generated sales between £500,000 and £1,000,000, and a single organisation made sales over £1,000,000. The total amount of sales income from the respondent organisations was estimated to be between £4 million and £11 million.\textsuperscript{147}

There were 8 respondents that claimed to have generated sales from their innovation but did not state that their innovation had been fully launched onto the market. Most of those innovations were in the late stages of technology development, having completed a full prototype or completing pilot or pivotal trials.

\textsuperscript{146} Multiple responses allowed; therefore total is not 100 per cent.

\textsuperscript{147} To estimate the range of sales income, we considered the lowest and highest value in the responses. For example, for responses of ‘£100,000—£500,000’, we assumed the respondents generated income of £100,000 in order to estimate the lowest value, and £500,000 to estimate the highest value. Overall, the resulting estimate is a range of £4,140,000–11,400,000.
Figure 26. Responses from unsuccessful applicants on sales growth from their ideas (n=88; respondents that went on to develop their ideas further)

About 40 per cent of all unsuccessful applicants created new employment opportunities as a result of developing their innovations.

Eighty per cent of responding organisations (70 respondents) that went on to develop their ideas further have hired or retained at least 0.5 full-time equivalent (FTE) employees as a result of developing their ideas further. Seventeen per cent (15 respondents) claimed to have created 0.5–1 FTE, and 23 per cent (20 respondents) created 1.5–2.5 FTE. Twenty-five per cent (22 respondents) claimed to have created 3–5 FTE, and 15 per cent (13 respondents) said they have created more than 5 FTE. It is estimated that, for our sample of respondents, applicant organisations have hired or retained at least 181 FTE.

Figure 27. Responses from unsuccessful applicants on new employment opportunities created (full-time equivalent) from their ideas (n=88; respondents that went on to develop their ideas)
A7. Overall views on the SBRI Healthcare programme

More than two-thirds of unsuccessful applicants said they would apply to another SBRI Healthcare competition in the future, suggesting a positive attitude towards the SBRI Healthcare processes overall.

When asked whether they would apply to another SBRI Healthcare competition in the future, more than two-thirds (69 per cent) of unsuccessful applicants said that they would, with only 31 per cent of applicants saying that they would not. The responses suggest that the overall experience of applicants was at least tolerable, even though they were not awarded the support from SBRI Healthcare.

Figure 28. Responses from unsuccessful applicants on whether they would apply to SBRI Healthcare in the future (n=160)

The unsuccessful applicants also answered an open-ended question on their experience with the application and selection processes underpinning SBRI Healthcare, and offered their suggestions for future SBRI Healthcare competitions. Comments mostly concerned the selection processes, particularly:

(i) the quality of feedback provided,
(ii) the expectations of assessors,
(iii) the transparency of the selection process, and
(iv) the lack of clarity and information on what kind of ideas would be supported by SBRI Healthcare.

There are concerns about the quality of feedback to unsuccessful applicants

A high number of applicants reported negative experiences with the quality of feedback provided on their applications. Some respondents felt that the assessors did not have adequate knowledge or skills to assess their applications and did not understand their proposed solutions. As one of the respondents noted: “the feedback was unconvincing and did not provide sufficient explanation why we were not successful”. Another expressed it as “evaluators failed to understand what was being proposed”. Some applicants were also concerned about the format of the application. They found it difficult to communicate the technical concept and commercial proposition within the 250 word maximum allowed in the application form. The concern was that the lack of space to communicate their proposed ideas clearly led to their applications having been perceived as “shallow”.

Others mentioned that the feedback was unusually short and “vague” and that it would have benefited from more detail. For example, some respondents noted that “assessors don’t seem to have competence/time to really get under the skin of projects at an early stage, as the system stands.” This could be mitigated, for example, by providing more detailed feedback on the applications. As one respondent noted, this feedback would help unsuccessful applicants reconsider the development of their idea. As suggested by one respondent, “feedback provided on how to improve future applications was really helpful, but could have been elaborated on further”. There were also a number of unsuccessful applicants who stated that they had received no feedback, despite requesting it. Among other comments were:
A few sentences of vague feedback from assessors who clearly miss key points that were written in the proposal is much less useful, both to the applicant and to SBRI itself.

The feedback gave us no indication of why we were rejected, which would have influenced any decision to move forward, as would any help pointing us towards further options.

Transparency of the selection criteria, process and results of competitions

The respondents also commented on the issues around transparency of the selection process. A number of respondents seemed to be unclear about the stage of development of ideas for which SBRI Healthcare support is provided. As pointed out by one respondent: “More clarity [is needed] on what the call is looking to fund, i.e. stages of development”. This suggests that SBRI Healthcare might need to improve its communication to prospective applicants, ensuring that prospective applicants understand that SBRI Healthcare provides funding for early-stage product development.

A number of comments were related to the need for transparency of the selection criteria and process behind SBRI Healthcare. For example, one respondent mentioned that “it would have been helpful to know why others failed.” As suggested by another unsuccessful applicant, “SBRI should publish examples of winning submissions with sensitive data redacted to act as a guide to those making submissions”.

There are concerns about the expectations of assessors

One respondent expressed concerns that, for applicants at the feasibility stages of idea development, it is too early to have existing relationships with the NHS at the procurement level. Another said that it might be unrealistic to expect “detailed costing of commercialisation” at the proof of concept stage.

Three applicants expressed concerns about the thematic focus of the competition calls, particularly with the way briefings were written. Another respondent mentioned that, by setting out a very specific challenge call, SBRI Healthcare might indirectly favour “incremental innovation”.

There are many positive views about the support of SBRI Healthcare

Despite concerns with the quality of feedback and selection processes, four applicants were very positive about the value and contribution of support from SBRI Healthcare. For example, it was said that:

Of all the things that we applied for, SBRI Healthcare was by far the best. It was professional, well organised, light touch, non-bureaucratic and sensible. Would definitely apply again.

Our experience of the SBRI Healthcare processes has been excellent and this is the best programme we have ever engaged in.
Survey protocol: unsuccessful applicants
1. Introduction

Please help us by spending less than 5 minutes on answering some questions about your experience with the SBRI Healthcare programme. Your feedback is very important and will help inform the future of SBRI Healthcare.

RAND Europe, an independent not-for-profit public policy research institute, and the University of Manchester have been commissioned by the Department of Health to undertake an evaluation of innovation in the NHS. The overall study includes an evaluation by RAND Europe of the SBRI Healthcare programme. The evaluation aims to examine the outputs and the impacts of the programme in light of its goals, and to learn about associated enablers and challenges to encouraging the uptake of innovative products and services by the NHS. This will help inform the future implementation of the SBRI Healthcare programme.

As part of the SBRI Healthcare evaluation, we are conducting this survey of applicants who applied for SBRI awards but did not receive them, at least on one occasion. The survey asks about your application, the consequences of not on that occasion receiving SBRI Healthcare support, and any reflections on ways in which the SBRI Healthcare programme could be strengthened in future.

The questionnaire takes less than 5 minutes to complete. No preparation is required and most answers are in the form of multiple choice selection. The survey deadline is midnight on Wednesday 22 June 2016.

Confidentiality and anonymity will be respected throughout. Only the members of the external evaluation team will see any individual responses. All answers will be aggregated into a database for further analysis. It will not be possible to identify individuals/companies in the findings that will be presented from the survey.

If you have any questions about the contents of this survey or the wider evaluation, please do not hesitate to contact the research team on sbri@rand.org or 01223 273866.
2. Please tell us about your application for an SBRI Healthcare award

** 1. Which of the following best describes the type of innovation you applied to an SBRI Healthcare award for? (Please select one option only)

- [ ] Diagnostic
- [ ] Medical device
- [ ] IT platform or eHealth/mHealth solution
- [ ] Other

Other (please specify):

** 2. Which of the following options best describes your innovation at the time you applied for an SBRI Healthcare award? (Please select one option only)

- [ ] A new idea we wanted to develop into a proof-of-concept stage
- [ ] A technology/product proof-of-concept we wanted to prototype
- [ ] A prototype we wanted to trial
- [ ] Completed feasibility/pilot trials and we wanted to move into pivotal trials
- [ ] Completed pivotal trials and we wanted to commercialise (i.e. into approval, manufacturing, marketing, distribution)

** 3. Which were the three most important reasons in your decision to apply for an SBRI Healthcare award? (Please select up to three options)

- [ ] Need for funding to develop product/technology
- [ ] Fit with the theme of the SBRI Healthcare competition
- [ ] Anticipating better access to potential NHS clients
- [ ] Perception of few or no alternative sources of funding for our type of innovation
- [ ] Kudos associated with receiving SBRI Healthcare award
- [ ] Perceived likelihood of success
4. Did you consult with any of the following external stakeholders during the application process?
(Please select all that apply)

- [ ] Patients or patient groups
- [ ] Charities
- [ ] Practising clinicians
- [ ] Academics/researchers
- [ ] Those responsible for NHS procurement decisions
- [ ] Other

Other (please specify):
3. Please tell us a little about what has happened subsequently

* 5. Did you go on to develop your idea/product after your application to SBRI Healthcare? (Please select one choice only)
   - [ ] Yes
   - [ ] No, but our organisation continues to operate
   - [ ] No, and our organisation has stopped operations
4. Please tell us a little about what has happened subsequently

* 5. What are the most important reasons why you did not go on to develop your idea? (Please select all that apply)

- [ ] Lack of R&D funding to develop the idea further
- [ ] Reassessment of the expected return on investment on our idea
- [ ] Lack of proof of market (i.e. not assessed commercial viability of the new product)
- [ ] No identified routes to sell the product to the NHS market
- [ ] Other (please specify)


5. Please tell us a bit about what has happened subsequently

7. What stage of development has your idea reached since your application to SBRI Healthcare? (Please select one option only)

- Proof-of-market achieved (i.e. assessed commercial viability of the idea)
- Technical proof-of-concept achieved
- Basic product prototype/demonstration unit completed
- Feasibility/efficacy trials completed
- Pivotal trials completed
- Launched onto the market
6. Please tell us a bit about what has happened subsequently

**8. Have you applied to any of the following public funding for your idea? (Please select all that apply)**

- [ ] NIHR Inventions for Innovation programme
- [ ] Department of Health/Wellcome Trust Health Innovation Challenge
- [ ] Innovate UK - SMART
- [ ] Innovate UK/Medical Research Council - Biomedical Catalyst funding
- [ ] EU Horizon 2020/FP7
- [ ] Other SBRI competitions (other than SBRI Healthcare)
- [ ] Other public sources (please specify)
- [ ] We haven't applied to any other public funding for this idea

Other public sources (please specify)

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**9. Have you been successful in obtaining funds from any of the following public or private sources for your idea? (Please select all that apply)**

- [ ] NIHR Inventions for Innovation programme
- [ ] Department of Health/Wellcome Trust Health Innovation Challenge
- [ ] Innovate UK - SMART
- [ ] Innovate UK/Medical Research Council - Biomedical Catalyst
- [ ] EU FP7/Horizon 2020
- [ ] Other SBRI competitions (i.e. other than SBRI Healthcare)
- [ ] Other (please specify)

Other (please specify)
* 10. Has your company received any of the following forms of government support during this project? (Please select all that apply)

- R&D tax credits
- Innovation Vouchers
- Support from Catapult Centres
- Support from Knowledge Transfer Partnerships
- Access to business incubators/accelerators
- Technical transfer and/or business development services
- We haven't received any other financial or non-financial governmental support during this project
- Other (please specify)
7. Please tell us a bit about what has happened subsequently

**11. How have you funded your project? (Please select one option per row)**

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<tr>
<th>Option</th>
<th>£0</th>
<th>£1 - £44,999</th>
<th>£50,000 - £99,999</th>
<th>£100,000 - £499,999</th>
<th>£500,000 +</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government R&amp;D grants</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Public sector R&amp;D contracts (incl. NHS contracts)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Loans</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Downstream private equity (e.g. angel investment or VC)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Sale/licensing of the technology under development</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Sale or merger of the company</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

**12. What total sales revenues has your innovation generated to date? (Please select one choice only)**

- No sales to date, and sales are not expected
- No sales to date, but sales are expected
- Less than £100,000
- £100,000 - £500,000
- £500,000 - £1,000,000
- More than £1,000,000

**13. How many employees (whole time equivalents, to the nearest 0.5) have you hired or retained as a result of developing your innovation? (Please select one choice only)**

- 0
- 0.5 to 1
- 1.5 to 2.5
- 3 to 5
- More than 5
8. Please give us your views on improving the SBRI Healthcare process

14. Would you apply for another SBRI Healthcare competition in the future? (Please select one option only)
   - Yes
   - No

15. To what extent do you agree with the following statements about the application and selection process for an SBRI Healthcare award? (Please select one option per row)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The briefing document was clearly written and challenges to be answered were concise and focused, providing clear guidance on what our technology would fit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The steps and requirements of the application process were clear</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Applying for the SBRI Healthcare award was easy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The feedback on the application was helpful</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The selection process was fair</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

16. Please provide any comments that would help improve the process for future SBRI Healthcare competitions. E.g. what were the key positives and negatives of the competition in terms of the application process, speed of response and feedback?

Thank you for your time. Your views and feedback are very important and will inform the future implementation of SBRI Healthcare programme.
Appendix B. Report on SBRI Healthcare programme stakeholder interviews

B1. Introduction

One source of information for this evaluation was interviews with individuals who are not applicants for SBRI Healthcare awards or recipients of them, but who are involved in the programme in some other way or are knowledgeable about it – through involvement in another UK innovation programme or industry association, for example, or as part of the SBRI Healthcare management team. This appendix describes the interview method and findings for those interviews.

B2. Method

During the period 22 June to 12 August 2016, we interviewed 16 individuals, of whom half (eight) were current members of the SBRI Healthcare management board (including two individuals directly involved in running the SBRI Healthcare programme). As detailed in Table 2, the interviewees were affiliated variously with AHSNs, the healthcare technology industry, public bodies and government departments supporting innovation, and with other innovation support programmes. Interviewees were selected to achieve representation across different types of stakeholders and with the aim of gathering views from individuals with knowledge of the SBRI Healthcare programme and how it works.\(^\text{148}\) Eight interviewees had some knowledge of, and were asked to discuss, the programme’s selection process.

\(^{148}\) The interviewees did appear to be familiar with the programme, with the exception of one industry representative, who agreed to the interview and had knowledge of the UK healthcare innovation landscape but very little knowledge specifically of the SBRI Healthcare programme. The study team had difficulty finding an industry representative who knew about the programme (other than as an applicant for support from it) and was willing to be interviewed, but was not on the programme’s board. This issue is partly mitigated through our having conducted separate interviews with recipients of support under the programme.
Table 2. Profile of the 16 individuals interviewed

<table>
<thead>
<tr>
<th>Interviewees’ professional background, role and involvement with the SBRI Healthcare programme*</th>
<th>Number interviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHSN representatives</td>
<td>5</td>
</tr>
<tr>
<td>Healthcare and technology industry representatives</td>
<td>3</td>
</tr>
<tr>
<td>Representatives of innovation networking organisations and programmes (Medilink and Knowledge Transfer Networks)</td>
<td>2</td>
</tr>
<tr>
<td>Representatives of UK public bodies and government departments (Innovate UK, NHS England, the Scottish Government, the Department of Health and the NIHR)</td>
<td>5</td>
</tr>
<tr>
<td>Current members of SBRI Healthcare management board</td>
<td>8</td>
</tr>
<tr>
<td>SBRI Healthcare programme delivery team</td>
<td>2</td>
</tr>
<tr>
<td>Familiar with and was asked about the SBRI Healthcare award selection process</td>
<td>9</td>
</tr>
</tbody>
</table>

* Interviewees may be in more than one category.

Interviews were semi-structured, following the protocol that is reproduced at the end of this Appendix, and they covered the following broad topic areas:
- The role of the SBRI Healthcare programme in supporting innovation
- Governance and administration of the programme
- Programme impacts
- Selection process (for those familiar with it)

Analysis: A researcher (either the interviewer or, in some cases, a second researcher)\(^{149}\) took partial notes during the interview and then, after the interview, completed the notes and transcribed notable quotes by referring back to the audio recording. The notes were then transferred to an Excel spreadsheet, with one row for each interviewee, and one column for each question or part of a question. The first step of the analysis consisted of assessing the different types of response obtained for each question or subquestion. An internal workshop was held among the three researchers involved in carrying out the interviews to discuss and identify the main messages and themes that were emerging from the first stage of the analysis. After the workshop, the interview data were cross-analysed to bring together relevant responses under each theme from across questions. The results of the cross-analysis are presented in this appendix.

Invitations: Interviewees were invited to the interview via email by a member of the research team using the template reproduced at the end of this Appendix, and including the participant information sheet (also reproduced at the end of this Appendix). The information sheet describes the purpose of the project and the interview, and how the data gathered would be used.

\(^{149}\)AS, CL and JS conducted these interviews and/or took notes.
**How conducted:** All interviews were carried out by telephone and lasted 30–50 minutes. In each interview, there was one lead interviewer. In most interviews, a second researcher took notes and, occasionally, asked follow-up questions. Interviews were audio recorded, with the recordings stored securely and destroyed at the completion of the study.

**Confidentiality and consent:** Prior to the interview, interviewees were sent a link to an online consent form which asked the following questions and requested a yes or no answer:

1. I confirm that I have read the attached information sheet on the above project and have had the opportunity to consider the information and ask questions and had these answered satisfactorily.
2. I understand that my participation in the study is voluntary and that I am free to withdraw at any time without giving a reason and without detriment to me. If I withdraw from the study all of my data will be deleted. I understand that it will no longer be possible to withdraw my data from the study after findings have been published.
3. I understand that the interviews will be audio-recorded.
4. I agree to the use of anonymous quotes.

This information was reviewed at the start of the interview. Some interviewees did not fill in the form prior to the interview, and they were asked to provide oral consent and submit the form at completion of the interview. All but three interviewees filled in the consent form. Three gave oral consent but did not fill in the online consent form. After a post-interviewer email reminder, they were sent one final email stating that the answers to all the questions would be assumed to be ‘yes’ unless they replied with other information within two weeks.

To respect confidentiality, interviewee comments are reported with either a reference to the interviewee code or a mention of the interviewee’s role (when particularly relevant for context), but never both.

**B3. Findings**

**B3.1. The SBRI Healthcare programme in the wider landscape**

Interviewees were asked what they thought the aims of the SBRI Healthcare programme are, and how the programme fits in to the wider healthcare innovation landscape in the UK. They were also asked about how the SBRI Healthcare programme interacts with the NHS, and a lot of discussion focused on the role of the AHSNs in supporting both the programme and the companies involved.

**B3.1.1. The SBRI Healthcare programme aims to support demand-led innovation in the health sector by providing flexible funding to companies**
The stakeholders interviewed perceived the SBRI Healthcare programme as having two broad aims: (i) to identify and articulate needs of the NHS and (ii) to fund companies to develop innovations that address those needs. One interviewee described the wider SBRI approach in this way:

SBRI is about government departments identifying what their needs are and then articulating them in the form of a competition with some funding attached for industry to respond so products have better chance of being adopted and procured. (sbri113)

When asked about overall strengths of the SBRI Healthcare programme, interviewees highlighted the same two areas: (i) the articulation of unmet needs and process for identifying them and (ii) the fact that the programme provides needed funding for companies. One interviewee explained:

It’s been very important to establish that the NHS needs innovation, and SBRI has shown this is a good way of doing it.... The precision [of the problem formulation] I think has been invaluable. (sbri107)

Interviewees said that an important aspect of what the SBRI Healthcare programme is trying to achieve is to focus on ‘market pull’, by supporting the development of products that address identified needs, rather than ‘technology push’, where technology is developed in the hope of there being a market for it. Four described the SBRI Healthcare programme as a form of procurement, or pre-commercial procurement. The majority of interviewees stressed that there are particular challenges in the health context because of difficulties they perceive in the adoption of innovation in the NHS.

B3.1.2. The NHS is perceived as a challenging environment for introducing innovation

Interviewees discussed the challenges with bringing innovation into the NHS. For instance:

A lot of companies have come out of the process still needing more handholding to get them further along.... Looking at the NHS as a customer as a whole, some fundamental, systemic changes need to happen to bring innovation in so it’s not technology pushing at a closed door... you’ve already got it slightly open with SBRI, but more work needs to be done to open it wider. (sbri115)

With the increasing bombardment rate from an older population and increased morbidity and funding pressure, how do you think about innovation and adoption and do you think about it at all? Do you have any control of innovation and

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150 sbri103, sbri105, sbri106, sbri107, sbri109, sbri110, sbri113, sbri114, sbri115, sbri116
151 sbri101, sbri102, sbri103, sbri106, sbri113, sbri114, sbri115
152 sbri102, sbri107, sbri108, sbri109, sbri113, sbri114
153 sbri102, sbri104, sbri108
154 One industry representative knew little specifically about the SBRI Healthcare programme (sbri111), but did discuss the challenges related to adoption of innovation in the NHS.
155 sbri105, sbri107, sbri109, sbri113
adoption, or are you told to carry on what you’re doing because it’s cheapest in the short term?\(^{(sbr107)}\)

The issue of procurement and adoption in the NHS… it is a nightmare, and it’s not getting any easier with the NHS deficit. \(^{(sbr114)}\)

The complexity of the NHS was also identified as a challenge, and an area where companies need support.\(^{(sbr102, sbr103, sbr113)}\) Challenges can come from companies not understanding the NHS procurement process\(^{(sbr102, sbr103, sbr113)}\) as well as from individuals within NHS Trusts and CCGs not knowing what the SBRI is and what it entails.\(^{(sbr115)}\)

B3.1.2. SBRI Healthcare has a distinct demand-led approach and complements other innovation programmes, with potential to work more with emerging NHS initiatives

Interviewees saw the SBRI Healthcare programme as being different from other programmes designed to support health-related innovation, and several said that its demand-led approach is the main characteristic that sets it apart.\(^{(sbr101, sbr103, sbr109, sbr110, sbr115)}\) As one said:

There are a plethora of schemes that directly incentivise the supply end of innovation… but that is usually less likely to meet the requirements than demand-led innovation. \(^{(sbr110)}\)

Other features identified as making the programme different from others were that it provides full funding\(^{(sbr101, sbr102, sbr103, sbr113, sbr114, sbr115)}\) and that it focuses on early-stage product development and/or early-stage businesses.\(^{(sbr102, sbr103, sbr104, sbr113, sbr115)}\) Six stakeholder interviewees commented that the SBRI Healthcare programme is valuable especially because of its full funding, whereas other programmes offer loans or smaller grants, or only partially cover development costs.\(^{(sbr102, sbr103, sbr106, sbr113, sbr114, sbr115)}\) They added that there is very little support in early-stage investment for health innovation\(^{(sbr101, sbr112, sbr113)}\) (and medtech in particular\(^{(sbr113)}\)), and that small companies in particular need access to full funding because they struggle to cover other costs.\(^{(sbr113)}\)

156 sbri102, sbri103, sbri113
157 sbri102, sbri103, sbri113
158 sbri115
159 sbri101, sbri103, sbri109, sbri110, sbri115
160 sbri101, sbri102, sbri103, sbri106, sbri113, sbri114, sbri115
161 sbri102, sbri103, sbri104, sbri113, sbri116
162 sbri102, sbri103, sbri106, sbri113, sbri114, sbri115
163 sbri101, sbri112, sbri113
164 sbri113
165 sbri102, sbri103, sbri113
One interviewee, however, explicitly said that SBRI Healthcare does not offer anything unique, arguing that most innovation programmes aim to define needs and do more than take a ‘technology push’ approach.\textsuperscript{166} This interviewee added that there are already programmes supporting SMEs doing NHS-relevant research. This interviewee believes that the purpose of the SBRI Healthcare programme was to go beyond business support to actually get innovations adopted in the NHS, arguing that it only adds value to the landscape if it is achieving this further step.

Although five interviewees\textsuperscript{167} indicated there is a shortage of early-stage biomedical innovation funding, interviewees also said there are many schemes in this space.\textsuperscript{168} Some\textsuperscript{169} said that this can be unhelpful and/or create confusion.

Other innovation programmes that were mentioned as being related or complementary to the SBRI Healthcare programme are listed in Table 3.

\textbf{Table 3. Innovation programmes interviewees described as being related to the SBRI Healthcare programme}

<table>
<thead>
<tr>
<th>Programme</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Biomedical Catalyst</td>
<td>This programme is funded by Innovate UK and the Medical Research Council.</td>
</tr>
<tr>
<td>Catapult centres</td>
<td>Innovate UK established and provides core funding for this set of centres aimed at supporting innovation in specific areas in the UK and promoting future economic growth. Medicine and Medicines Discovery.\textsuperscript{170}</td>
</tr>
<tr>
<td>Defence Science and Technology Laboratory (various calls and programmes)</td>
<td>Funding related to healthcare and defence may come through the Centre for Defence Enterprise or other mechanisms, and can support research in such areas as battlefields and armed forces care.</td>
</tr>
<tr>
<td>Innovate UK Smart grants</td>
<td>The Smart competition aims to help SMEs carry out R&amp;D by providing grants ranging from £25,000 to £250,000. It requires private match funding.\textsuperscript{171}</td>
</tr>
<tr>
<td>NHS Innovation Accelerator (NIA)</td>
<td>The NIA programme, launched by NHS England in January 2015, aims to help mature innovations be adopted across the NHS by encouraging cultural change and providing support to healthcare innovators in the form of training, mentorship and networking.\textsuperscript{172}</td>
</tr>
<tr>
<td>NHS Test Beds</td>
<td>First announced in January 2016, there are currently seven Test Beds. They are sites</td>
</tr>
</tbody>
</table>

\textsuperscript{166} sbri112
\textsuperscript{167} sbri101, sbri102, sbri112, sbri113, sbri114
\textsuperscript{168} sbri108, sbri110
\textsuperscript{169} sbri105, sbri108, sbri112, sbri115
\textsuperscript{170} Catapult (2016)
\textsuperscript{171} Innovate UK (2015).
\textsuperscript{172} NHS England (2015).
where digital devices, such as wearable monitors, and associated data analysis and
description models can be tested.  

NHS Vanguards

These 50 sites, set up in 2015, are where new care models are being tested.

NIHR Healthcare
Technology Co-operatives

These are centres working with industry to develop new medical devices, healthcare
technologies and other technology interventions that improve patient care and quality of
life. Two pilots funded in 2008, then eight more funded in 2013 (receiving about £800,000 each over 4 years), each focusing on specific themes, e.g. urinary
incontinence and renal technologies.

NIHR Invention for
Innovation (i4i)
programme

The i4i programme provides translational funding for early to late stage product
development with the aim of getting innovations to the stage where they can be
adopted by the NHS.

Other innovation support
(provided by the
Wellcome Trust and
research funding
charities)

Programmes include the Health Innovation Challenge Fund, supported by the
Department of Health and the Wellcome Trust to accelerate the development and uptake
of new technologies and interventions, and Cancer Research UK Drug Development
Projects, which support work on new cancer treatments, from preclinical development
through to early-phase patient trials.

Other SBRI programmes

These may be run by Innovate UK, UK government (or devolved administration)
departments and/or other public bodies.

R&D Tax Credits

R&D Tax Credits are a UK government scheme to encourage companies to invest in
R&D. They enable companies to receive tax relief or cash credits as a proportion of their
R&D expenditure.

Two interviewees suggested there could be more interaction with other innovation funders, such as the
NIHR and the Catapult centres. Another interviewee observed that the NIHR Healthcare Technology
Co-operatives (HTCs) also identify problems and seek industry input in solving them, but added that the
HTCs remain involved in supporting companies over a longer period than does the SBRI Healthcare
programme, and that this longer-term approach to support may be preferable.

Links with other, non-funding initiatives were also discussed. These included Medilink, which is
involved in running briefing events, and the Knowledge Transfer Network, which assists with
disseminating information about SBRI Healthcare programme calls and supporting applicants.

173 NHS England (2017a)
174 NHS England (2017b)
175 NIHR (2017)
176 Cancer Research UK (2017)
177 sbri103, sbri109
178 sbri107
179 sbri113, sbri114
180 sbri105
Interviewees had observed that SBRI Healthcare funding recipients go on to receive funding from various additional sources, including Innovate UK, i4i and Biomedical Catalyst funding,181 or to receive Venture Capital investment or be taken over by larger companies.182 As discussed below, many interviewees commented that receiving SBRI Healthcare funding acts as a valuable ‘badge’ that helps companies win further financing elsewhere for complementary support or downstream funding for later stages of development.

**SBRI Healthcare and other SBRI programmes**

The UK government runs other SBRI programmes in various sectors through Innovate UK. One interviewee said that there can be confusion if people assume that all SBRI competitions are part of the same programme, but said that overall the different programmes are compatible.183 Others commented that there was good knowledge exchange across SBRI programmes run in different sectors and by the devolved administrations,184 and that although connecting up programmes across sectors was a challenge, that aspect had improved.185 Several interviewees discussed the fact that Innovate UK had run a social care-related SBRI competition, with one saying: “It does seem remarkable you have this process going on and then you have SBRI social care by Innovate UK.”186 Some expressed concern that there had been a lack of coordination between Innovate UK and NHS England.187 One felt that such coordination had not been adequately addressed,188 but others189 said that coordination had improved and was now strong.

**The relationship of SBRI Healthcare to other NHS innovation initiatives**

Complementarities between the SBRI Healthcare programme and other NHS innovation initiatives were mentioned by several interviewees. Three commented that there is now a good opportunity for joined-up thinking with other programmes, such as the NIA, which was seen as a promising next step for SBRI Healthcare products to feed in to, although the NIA initiative is still growing and developing.190 Test Beds and Vanguards were also mentioned as programmes that are becoming

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181 sbri112, sbri113, sbri114  
182 sbri113  
183 sbri116  
184 sbri109, sbri110  
185 sbri105  
186 sbri101  
187 sbri101, sbri103, sbri106  
188 sbri103  
189 sbri102, sbri104, sbri109, sbri116  
190 sbri103, sbri104, sbri116
engaged with the SBRI Healthcare programme,\textsuperscript{191} but one interviewee observed that the fact that these are not available in all regions creates limitations.\textsuperscript{192}

B3.1.3. The programme was seen by most as being well run, with an effective structure involving the AHSNs

The SBRI Healthcare programme is administered by the Eastern AHSN with support from Health Enterprise East (HEE), which deals with administration, including contracts and payments. AHSNs take turns leading specific calls. Generally, interviewees felt that the programme was well run and managed, with good organisation, processes and staff continuity.\textsuperscript{193} Interviewees highlighted the programme’s general governance and way of working as an overall strength.\textsuperscript{194} Two interviewees stressed that there was good emphasis on regional spread and avoiding a focus on eastern England and London.\textsuperscript{195}

One interviewee, however, expressed concern that there was a lack of clarity about programme processes, such as the role of Innovate UK, and what they saw as insufficient consideration about application scoring and whether it makes sense to give 100 per cent funding. The interviewee said:

\begin{quote}
We have board meetings, but I think we have a problem with a governance process of the board agenda being controlled by the person who we should be holding to account. The inability to get into a proper discussion means that you have a self-certifying process. (sbri103)
\end{quote}

This interviewee also said that the board is too involved in operational management rather than a strategic review of programme processes.

\textit{Role of Innovate UK}

An Innovate UK representative sits on the SBRI Healthcare management board, and three interviewees – an Innovate UK representative and two individuals involved in running the SBRI Healthcare programme – mentioned that Innovate UK representatives have provided guidance and support related to the running of the SBRI Healthcare competition and have helped avoid duplication across programmes. Some interviewees felt that there had been duplication of programme coverage between SBRI Healthcare and Innovate UK in the past but that the situation had improved.

\textit{Role of NHS England}

NHS England has representation on the SBRI Healthcare management board (with finance and innovation representatives), and the SBRI Healthcare programme is accountable to NHS England, which funds it. Individuals from the SBRI Healthcare management board and NHS England confirmed that

\begin{flushleft}
\textsuperscript{191} sbri116
\textsuperscript{192} sbri101
\textsuperscript{193} sbri101, sbri102, sbri104, sbri109, sbri110, sbri114
\textsuperscript{194} sbri102, sbri103, sbri109, sbri108, sbri110
\textsuperscript{195} sbri108, sbri110
\end{flushleft}
they have quarterly performance management meetings. Interviewees added that NHS England, while not being directly involved in managing the programme, does have a role in setting direction and priorities, and in suggesting competition themes.\textsuperscript{196} Three interviewees mentioned there being significant turnover among the representatives of NHS England sitting on the SBRI Healthcare management board.\textsuperscript{197} Two said that this had been unhelpful and considered that the SBRI Healthcare programme needs a higher profile in NHS England,\textsuperscript{198} while the third explained that the turnover was due to changes in NHS England’s approach to innovation.

\textit{The relationship of SBRI Healthcare to AHSNs}

AHSN representatives sit on the SBRI Healthcare management board, and a member of the SBRI management team said that supporting the SBRI – through local and national activities – is part of the remit of AHSNs. Multiple interviewees described AHSNs as having a dual role: (i) at the start of a competition, they help to specify challenges by engaging with their local clinical networks and support HEE in marketing the competition, and (ii) as products are developed, they support companies that are either located in their area or have responded to a brief that the AHSN led on.\textsuperscript{199}

Of the 15 AHSNs, there are seven that have seats on the SBRI Healthcare management board, with the seats rotating every two years. A member of the SBRI Healthcare team said that the idea is that all AHSNs are represented through those who sit directly on the board, though one AHSN representative said that not being on the board meant s/he felt less well informed about what was going on. Another AHSN representative explained that all AHSNs sit on a high-level management panel and interact through that.

Comments were generally positive about collaboration among AHSNs. One AHSN representative commented: “I think Eastern do a very good job with the centralised function and they’re very equitable in all the AHSNs getting a chance to either lead or deputy on the call”, but added that having more chances for multiple AHSNs to collaborate on a call would help ensure it becomes a “profile project” across more regions. Another AHSN representative explained that the 15 AHSNs cooperate to decide challenges they will address and which AHSN will lead in developing each challenge.

Interviewees who discussed the performance of the AHSNs in supporting SBRI Healthcare generally expressed the view that there was some variability in how engaged and effective the different AHSNs were\textsuperscript{200} but that progress is being made:

\begin{quote}
There are active discussions about what works best and what can be improved… I don’t think those conversations happened a couple of years ago. It is mostly because AHSNs are taking more ownership of that. (sbri104)
\end{quote}

\textsuperscript{196} sbri106, sbri113, sbri114, sbri116
\textsuperscript{197} sbri102, sbri103, sbri108
\textsuperscript{198} sbri102, sbri103
\textsuperscript{199} sbri103, sbri104, sbri113, sbri116
\textsuperscript{200} sbri104, sbri106, sbri107, sbri113, sbri115, sbri116
England is quite diverse and complicated in terms of admin and governance systems. The AHSNs provide a pretty good channel to local or regional clinical networks – they don’t do it evenly, but there are some good things going on. (sbr107)

Some of the AHSNs are very proactive about asking what companies are located in their area…. They’ll help promote those companies, and work alongside them to make sure they understand procurement routes and clinical trials…. The AHSNs’ role is very much about opening doors, helping understanding, really supporting the companies. (sbr113)

We’ve seen a growing and rich engagement with AHSNs. That relationship is very solid now. (sbr116)

Unsurprisingly, given the challenges identified with the adoption of innovations in the NHS, the issue of adoption of SBRI Healthcare products was discussed in all interviews. Several interviewees said that supporting adoption was outside the remit of SBRI Healthcare, despite it being a part of what SBRI Healthcare is aiming to achieve. A few said that the responsibility of SBRI Healthcare was not to make sure that adoption happens, but to ensure connections are in place to enable it, with e.g. the NIAs, the NIHR and business support organisations. Eleven interviewees pointed to the AHSNs as having more responsibility for ensuring adoption:

The SBRI team aim to help uptake through the AHSNs as much as they can, [but] it’s really more of an AHSN job. (sbr102)

Interviewees involved in running the SBRI Healthcare programme explained that the programme lacks the resources and contacts necessary to support the adoption of products and services across regions nationwide, and they thought that the AHSNs could fill this need. But two interviewees said that the AHSNs’ resources are also too limited to do what is necessary in this area. One interviewee suggested that the AHSNs should be held more accountable for making sure adoption happens. An AHSN representative suggested that the AHSNs should be kept more informed about the companies being supported and be encouraged to work with their networks (of NHS, academic, third sector and industry organisations, and as well as local authorities) to give feedback to SBRI Healthcare-funded companies throughout the product development process, as this would keep the idea of the NHS as customer central to the process all the way through, rather than just at the start and the end.

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201 One interviewee (sbr112) disagreed, saying the SBRI is about addressing the adoption problem in the NHS, not about supporting SMEs.
202 sbr103, sbr109, sbr114, sbr116
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204 sbr104, sbr105
205 sbr114
B3.2. Programme processes

Interviewees were asked to discuss different aspects of the SBRI Healthcare programme’s processes, from the identification and articulation of healthcare needs through to applicant selection.

B3.2.1. A range of factors feed in to the identification and articulation of NHS needs for calls, and the process for selecting topics for calls appears unclear to some

The identification of needs to be addressed through the SBRI Healthcare competition was seen as a fundamental feature of the programme. As discussed later, both the process of identifying needs and the articulation of those needs to industry audiences were perceived as beneficial for helping the NHS become more open to innovation and to the industries that could provide it. However, it was clear that identifying and articulating those needs is an ongoing and important challenge; three interviewees noted that it is a focus of ongoing efforts in the SBRI Healthcare programme.

Striking the right balance between keeping some breadth (to avoid deterring relevant applicants and not being too prescriptive) and being precise (to make clear what is wanted) is difficult. As one interviewee said: “The downside of any SBRI [Healthcare call] is the same really as the upside, which is it’s very focused on a specific need.” SBRI Healthcare team members reported that work is ongoing to improve this aspect of the programme, saying:

[Defining the question] is an area that we’re always looking at because in essence that’s your starting point. If you don’t get that right, then you won’t get the solutions you seek.

Regarding the process whereby broad themes are developed into specific calls, generally it was understood that AHSNs do this using feedback from their networks. As an example, an SBRI Healthcare team member explained that for a recent call on reducing pressure on urgent and emergency care, the lead AHSN ran workshops with operations directors within hospitals and A&E leads to identify ‘pinch points’ within the system and to then try to ‘drill down’ further to specific areas that may have poor outcomes or be costly. An AHSN representative said that, compared with when they first started, the AHSNs are now better-placed to identify challenge areas because they are in ongoing contact with their networks, gathering evidence about areas where there are needs.

Views were mixed and in some cases contradictory, however, about how well the approach works for identifying areas of need. One stakeholder said that a lot of research went into the identification of problems, though others had criticisms. One interviewee considered that although calls had been

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206 sbri103, sbri105, sbri106, sbri107, sbri109, sbri110, sbri113, sbri114, sbri115, sbri116
207 sbri101, sbri102, sbri116
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209 sbri114
210 sbri102, sbri103, sbri104, sbri106, sbri108, sbri113, sbri114, sbri115, sbri116
211 sbri104
backed by evidence, they may have been picked without a lot of careful consideration. 212 Another 213 said it is unclear whether there is a true market gap because there are no systematic reviews, horizon scanning or detailed needs assessments done. This interviewee felt that the process was weak due to a lack of rigorous market analysis, which meant that technology gaps were not properly identified and resulted in solutions not finding buyers, though another interviewee explicitly said that market analysis was part of the process. 214 One interviewee commented that there had previously been some duplication across competitions, particularly related to digital apps for managing long-term conditions.215

In terms of selecting broad themes of focus, interviewees’ comments indicated that there may be a lack of clarity about the process for doing this. Some interviewees said the process was not clear 216 or ‘ad hoc’, 217 or that they simply did not know what it was. 218 Others 219 mentioned a wide range of factors as influencing theme selection, including which AHSN will lead, which topics have recently been funded, suggestions from NHS leadership, and political factors, such as the national clinical priorities set out in the Five-Year Forward View. 220

Regarding the actual description of challenges, two interviewees mentioned the inclusion of ‘what if’ questions in the guidance, which are a way to present different scenarios of the types of improvements that could be achieved through the call. They said this approach was a useful way to provide further clarity about the specification, especially for applicants who might be somewhat unfamiliar with the language of the call. 221

Finally, one interviewee suggested there could beneficially be more interaction before challenges are defined with external partners, e.g. digital manufacturers and businesses outside the traditional medtech and pharma sectors. 222

B3.2.2. Overall, the majority of interviewees said the process of selecting award recipients was appropriate and effective

Nine interviewees who were familiar with the company selection process were asked about how well it works, what tends to set successful applicants apart, and what sort of feedback is given. 223 The majority of

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212 sbri115
213 sbri101
214 sbri116
215 sbri102
216 sbri103, sbri109
217 sbri101
218 sbri106, sbri107, sbri112
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221 sbri114, sbri115
222 sbri110
comments were positive, though suggestions were made about areas for improvement. The majority of interviewees said the process was appropriate and effective overall.224

Applications

Awareness about the programme was seen to be good on the basis of good turnout at briefing events225 and the fact the programme is promoted by multiple organisations.226 But two interviewees227 suggested that more could be done to engage innovative sectors that are not already highly engaged in healthcare: “Targeting sectors where there may be companies with technologies used in other fields which could be applied in health to bring new market entrants... we would like to do more of that.”228 Some AHSNs offer clinics to help companies prepare for the competition, with some providing more support than others.229

Views about the level of burden on companies that is imposed by the application process were mixed. Two interviewees said the online application is generally straightforward,230 but one noted that it takes considerable time to prepare an application.231 One said that the programme’s quick turnaround on applications is good, but two suggested companies might benefit from having more time to prepare – either through allowing a few more weeks from the launch of the opportunity to the deadline, or through pre-launch announcements.232 Another interviewee commented that it is risky to apply to the SBRI Healthcare programme because it has an award rate below 10 per cent and a much more complex process than, for example, business angel investment.233

Assessment process

SBRI Healthcare award applications are reviewed by a panel of individuals with clinical, business and technical expertise. A range of comments were made regarding the assessment process, including some about the type of people doing the assessing. Two interviewees said that there could be more input from front-line health and social care staff.234 One AHSN representative plans to involve patient representatives and had found that members of the care profession provided very useful insights. However, s/he said it

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226 sbri113
227 sbri110, sbri113
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230 sbri104, sbri115
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232 sbri105, sbri115
233 sbri101
234 sbri110, sbri115
would be good to reduce or better manage the burdens placed on clinician evaluators, e.g. by ensuring they only review information relevant to their expertise and giving them more advance notice about what they will be asked to do.

One interviewee expressed concern that the scoring process had not been reviewed, so it was not clear if it was the most effective approach. But another interviewee commented that there is a good independent assessment against pre-set criteria, and useful flexibility enabling the selection panel to give special consideration to applications that were interesting in some way but didn’t score highly.

One suggestion related to modernising the process so that assessors interact more with applicants, perhaps through use of multimedia tools:

> We've got a 1925 process of assessing someone, like an exam from the days of yon, and that's probably not the optimal way of capturing the sort of expertise we're after.

(sbri110)

**Assessment criteria**

Interviewees said that applications are assessed according to three main criteria: (i) fit with the specified clinical need, (ii) whether the technology is deliverable, and (iii) business viability (including the skills of the company’s team, and knowledge of the NHS market and how to position the product for this market). Interviewees stressed that all three of these areas need to be strong in order for a bid to be successful, but some identified areas they felt tended to be weaker across applicants. The most common response was an underdeveloped commercial proposition, lacking detail about how much the customer might pay, the route to market, associated health economics and consideration of whether the technology would fit in to clinical workflows.

Another common issue, interviewees said, was the proposed technology fitting poorly with the call, e.g. attempts to ‘shoehorn in’ a solution designed for another use or not offering a major improvement on what is currently done. Finally, one interviewee discussed applicants that do not have a “genuine partnership” but are just “looking for money”. Regarding Phase 2 applications, one interviewee said that some people underestimate what they will achieve in Phase 1, and then propose to do work under Phase 2 that was meant to be done already, and that this is looked upon unfavourably.

**Feedback to applicants**

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236 sbri110
237 sbri104, sbri109, sbri113, sbri116.
238 sbri104, sbri110, sbri113, sbri114, sbri116
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240 sbri114
241 sbri115
An interviewee involved in running the SBRI Healthcare programme said that feedback to unsuccessful applicants is usually only two to three paragraphs, and interviewees said it generally consists of comments on why the applicants were not successful and areas to improve. They said some people are happy with the feedback while others feel it is inadequate, or disagree with it. Two interviewees, however, described the feedback given as “detailed” and “superb”, with one adding that such feedback would be expensive to obtain commercially.

With regard to feedback for successful applicants, members of the SBRI Healthcare management team said the panel’s suggestions might cover amendments to the development plan, deliverables and milestones, or the addition of an advisory board. One interviewee suggested that more effort should be made to ensure that market access learning accumulated over the past few years is fed back in to the programme.

B3.3. Outcomes and impacts

Overall, several interviewees identified positive impacts of the programme in the form of job creation and follow-on funding for companies, but many agreed it was too early to see impacts in the form of improved patient care.

Three interviewees considered that the SBRI Healthcare programme’s impacts had been quite limited. Two observed that the programme is not set up for large-scale impact because the amount of funding it offers is relatively small and because wider system impact can only be achieved if the innovations are adopted at scale. A third took the view that the programme has no impact beyond providing a source of much-needed funding.

B3.2.3. The SBRI Healthcare ‘badge’ helps companies secure further funding, but companies need more help to get their products used by the NHS

Asked what non-financial benefits the SBRI Healthcare programme provides to funding recipients, six interviewees discussed how the programme is useful because it represents an endorsement of innovations and a ‘badge’ that can help companies secure further funding: “The SBRI for some of them feels a bit like a badge showing [they]... are good guys who have been funded by the NHS.”
They also discussed companies’ need for support to get their innovation adopted by the NHS, saying this includes advice and insight into NHS processes, financing and culture. 251

*The best sort of support is clarity for people from the industry who might have an incomplete view of how the NHS works — they are very likely to produce a product which is incompatible with the processes, financing and culture of the NHS.* (sbri103)

*If... you're getting feedback from end users that what you've got is going to work, that opens you up to investment, and that’s hugely beneficial.* (sbri110)

*Some companies say the biggest value of the SBRI programme is not the money itself; it’s being able to engage with the system — with the NHS, with clinicians — and work alongside them to develop solutions.* (sbri113)

Multiple interviewees discussed how feedback in the form of advice about building a clinical evidence base and helping companies to navigate the NHS is given at different stages throughout the programme and through quarterly company reviews, along with support in the form of introductions to investors and others, and help with linking to further support when the SBRI Healthcare award ends. 252 But three interviewees said there should be more support to give companies insight and links to the NHS and that AHSNs can help with this, 253 and one said that only some AHSNs are currently providing this help. 254 Another said that some AHSNs wrongly believe that if they are involved in the assessment process, then it would be a conflict of interest to give companies further support. 255

Regarding other non-financial benefits provided by SBRI Healthcare, one interviewee noted that the case studies presented on the SBRI Healthcare website are valuable for marketing. 256 Interviewees involved in running the programme also highlighted the health economics support provided to each company in Phase 1. 257

### B3.3.2. Impacts on the NHS have not yet been felt, but economic and financial impacts include job creation and success in obtaining follow-on funding

The impacts that the SBRI Healthcare programme might bring about in the form of more effective and efficient patient care, will take time to be felt, according to nine interviewees. They said it was too early to see these impacts because products are just starting to come through the SBRI Healthcare pipeline and

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251 sbri101, sbri103, sbri106, sbri110, sbri113  
252 sbri104, sbri107, sbri108, sbri113, sbri116  
253 sbri103, sbri106, sbri113  
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255 sbri103  
256 sbri115  
257 As the interviewees explained, a health economist spends one day on each company, writing a short report and helping them think through the cost effectiveness case for their product.
will face barriers to NHS adoption.\textsuperscript{258} One interviewee from the SBRI Healthcare team noted that the average medical device takes five to seven years to reach market, which means that most companies supported by the programme will not yet have got that far.

Some interviewees said the SBRI Healthcare programme had a healthy pipeline of products coming through.\textsuperscript{259} One commented:

\begin{quote}
[Private investors] tell me the SBRI programme has a much higher success rate in terms of getting products onto the market than other programmes. (sbri116)
\end{quote}

According to a member of the SBRI Healthcare team, of the companies that had been funded as at summer 2016, a significant proportion either have their products on the market or should be going to market within the next one to two years.\textsuperscript{260} As examples of innovations being produced, interviewees highlighted specific products, including: a device for treating diabetic retinopathy,\textsuperscript{261} cancer diagnostic tools,\textsuperscript{262} and a device for making insoles to prevent diabetic foot ulcers.\textsuperscript{263}

Overall, the main impacts identified by interviewees were both related to economics and funding. They were job creation\textsuperscript{264} and the fact that supported businesses had success in obtaining follow-on funding,\textsuperscript{265} two areas that were covered in an independent report about the SBRI published in 2014\textsuperscript{266} and are reported on regularly by SBRI Healthcare programme management. Interviewees also highlighted the potential for impacts to be achieved through export.\textsuperscript{267} One said the UK government’s Trade and Industry and the Office for Life Sciences could help in that process.\textsuperscript{268} According to a member of the SBRI team, just over half of the SBRI products that had reached market were being exported.

\textit{Challenges and suggestions for change}

Interviewees discussed the challenges associated with introducing innovation into the NHS, as discussed above, and four interviewees said there is a need for the SBRI Healthcare programme to do more to

\textsuperscript{258} sbri101, sbri102, sbri103, sbri105, sbri106, sbri107, sbri113, sbri114, sbri115
\textsuperscript{259} sbri109, sbri114, sbri116
\textsuperscript{260} According to an internal report prepared for the SBRI Healthcare programme Management Board (HEE 2016), there have been 122 competition winners since the programme began in 2009. There were 99 SBRI-funded companies surveyed in 2016. Among the 68 that responded, 17 had begun to market their products and a further 34 expected to do so within the next two years.
\textsuperscript{261} sbri102, sbri106, sbri107, sbri108
\textsuperscript{262} sbri108
\textsuperscript{263} sbri110
\textsuperscript{264} sbri104, sbri106, sbri109, sbri113, sbri114, sbri116
\textsuperscript{265} sbri104, sbri105, sbri109, sbri113, sbri114
\textsuperscript{266} OHE Consulting (2014)
\textsuperscript{267} sbri101, sbri104, sbri105, sbri109, sbri113
\textsuperscript{268} sbri105
address these challenges. Three interviewees suggested funding be put towards promoting uptake, perhaps to free up the time of NHS staff so they can look at adopting products. One explained:

You’ve got to incentivise all sides of the party, otherwise you do just have technology push. Maybe you have a local clinician saying ‘this is bloody great and I’ve helped refine it’, but outside that it’s plain old technology push. (sbri112)

SBRI Healthcare team members said that adoption is not really part of the programme brief, but they do recognise its importance and are working on it from multiple angles. These include: encouraging AHSNs to engage more locally to support companies and promote adoption; working with NIHR to improve support for the clinical trial process; engaging with UK Trade and Investment to help companies reach international markets; and talking to investors about leveraging additional funding for later-stage companies. In terms of additional funding, one interviewee said it may be helpful for SBRI Healthcare to look at accessing other funding sources, e.g. in the charitable sector.

Five interviewees felt that the budget available to the programme was too low, and two suggested thinking about offering different levels of support. One, who said it’s important to avoid “getting stuck… without thinking about what we could do differently”, suggested distributing funding based more on need, i.e. different levels of funding and different durations. A second interviewee said:

There is a value in being an intelligent lead customer even on an unfunded SBRI.… The lowest cost intervention would be just to give insight. We don’t know how successful it is because we’ve never run that sort of process – we’ve always said there must be money, but I think there could be other ways in between, degrees of funding. (sbri103)

Having a larger business act as an intermediary to provide a small business’s solution to the NHS was also suggested:

A lot of companies who apply to the SBRIIs are not likely to commercialise their product directly to us because they can’t afford the regulation, insurance, and 24/7 support at the scale we need, so they’re looking to work with a larger business who can provide the service or solution to us. (sbri110)

Changes in culture and relationships
The general view was that the challenges to innovation in the NHS are a systemic problem that the SBRI Healthcare programme cannot overcome on its own. However, an idea raised was that the SBRI Healthcare programme could be helping to bring about culture change by encouraging more openness to

269 sbri109, sbri110, sbri112, sbri113
270 sbri102, sbri105, sbri112
271 sbri116
272 sbri102, sbri104, sbri105, sbri108, sbri116
273 sbri104
changes in the approach to clinical problem solving and by building a dialogue between the NHS and industry: 274

*There's really something about engaging the NHS in a dialogue around innovation and using that to drive improvements…. Identifying needs and communicating them to industry is not something the NHS has ever had a mechanism for…. To address falls they'll tender for a pendant alarm because they know it exists. What they don’t do is tender for stuff that they don’t know exists.* (sbri113)

*There should be a greater emphasis on whether it’s led to the engagement of clinical teams reassessing their present practice and ability to change. That seems to be forgotten about and seems to be a really important positive aspect of what’s happening here.* (sbri110)

A view expressed by five interviewees was that the SBRI Healthcare programme, through identifying and articulating NHS needs to industry, creates an important direct link between industry and the NHS as a customer and that it is a useful process for the NHS to engage in via the AHSNs and clinicians. 275 Interviewees explained that the programme may help to demonstrate NHS commitment to working with industry, 276 stimulate the market 277 and provide the NHS with access to industry support to help it meet its challenges. 278 One interviewee commented that the programme helps address the challenge that the customer – the NHS – operates through many different points of accountability. 279 Others described how it involves co-development of technology 280 and enables companies to assess the suitability of their innovation for the NHS market before further development. 281

**B3.3.3. It will be important to monitor products’ uptake by, and impact on, the NHS**

Interviewees were asked about how the impacts and successes of the SBRI Healthcare programme should be measured. They discussed the need to look at adoption and spread through e.g. products entering the market and the number of sales contracts, 282 and whether the adoption and benefits had come through as anticipated. 283

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274 sbri107, sbri110, sbri113, sbri116
275 sbri102, sbri105, sbri106, sbri107, sbri109, sbri113
276 sbri1106
277 sbri101, sbri103, sbri107, sbri109, sbri110
278 sbri110
279 sbri107
280 sbri116
281 sbri104, sbri109
282 sbri101, sbri102, sbri105, sbri107, sbri108
283 sbri102, sbri108
A feature of the NHS seems to be that… if one part of the NHS decides to procure something and it’s regarded as effective, it doesn’t necessarily mean other parts of the NHS will be persuaded. There need to be some ex post measurements down the line about whether the benefits and take-up worked as thought. (sbri102)

One interviewee stressed that price is also important “to ensure the taxpayer wasn’t ripped off.” Also raised were the need to look at: actual patient benefit (which may already be assessed in part by trials), the extent to which identified challenges are being addressed, the extent to which inefficiencies are being reduced, and whether there are changes happening in how adoption happens in the NHS and in innovation culture. Interviewees explained:

The more objective view of how successful or impactful a process is would be to look at if it was a clear enough challenge statement in the first place, how much of that challenge has now been addressed or is likely to be in the next three to five years, and [with] what proportion of market share. (sbri103)

Just to [focus on] the economic impact... is a bit too blunt. I think the value to health and social care delivery, in terms of how they’re changing culturally, opening up to new ideas, is really vital, and the SBRI programme is facilitating a lot of that. That should have a lot more amplification. (sbri110)

In terms of what is currently done, multiple interviewees, including members of the SBRI team, commented that the programme has made use of recommendations made in the report prepared for SBRI Healthcare by the OHE in 2014, and they said that they also gather anecdotal evidence through the interactions they have with companies two to three times per year. They said they currently gather data through quarterly reports submitted by companies and a survey run approximately once per year that covers job creation, additional funding obtained, knowledge and IP (intellectual property) creation, revenue, etc. One interviewee said the SBRI Healthcare programme had generally made good use of data and metrics, and seemed to take very seriously the need to monitor their impact and whether money was spent wisely. (sbri112)
Interview protocol for SBRI Healthcare stakeholders (not funding applicants or recipients)

A. Introduction and background

1. Can you please briefly tell us about yourself (your current role and background) and how you have engaged with the SBRI Healthcare programme?

B. Role of SBRI Healthcare in supporting innovation in the NHS

2. Given your knowledge of the UK health innovation funding system, do you think SBRI Healthcare adds specific value to the innovation funding landscape in the UK and if so what type(s) of unique value?
   a. What do you see as its distinguishing features, if any?
   b. How does it complement other funding schemes that support health innovation in the UK?

3. Based on your experience, how does SBRI Healthcare interact with other key innovation institutions (i.e. not funding related necessarily but with the wider health innovation system)?
   a. What about with potential NHS organisations that could purchase SBRI-funded products, to help bring private sector innovation into the NHS?

4. In your opinion, what are the advantages and disadvantages of thematic focus of SBRI Healthcare?
   a. How does SBRI currently identify themes?

C. Governance and administration of SBRI Healthcare

5. What is the role of Innovate UK in the governance of SBRI Healthcare?
   a. What about NHS England?
   b. Who is SBRI Healthcare accountable to?

6. The SBRI scheme is administered by Eastern AHSN nationally but also has engagement with regional AHSNs who administer it locally. Based on your experience, how does this process work?
   a. What happens nationally and what happens regionally?
   b. What are the merits and limitations of such an approach, in your view?
7. What non-financial support does SBRI Healthcare provide to funding recipients and what is the value of such support?

D. Impacts of SBRI Healthcare programme

8. In your view, what are the key impacts that the SBRI scheme is having on the health system, wider society and economy in the UK?

9. What do you consider to be the main strengths of the SBRI Healthcare programme?

10. What about weaknesses? In what areas could the programme improve and what would it need to do so?

11. Related to this, is there anything you think SBRI Healthcare could do differently to further improve its role and impact?

12. How do you currently measure the effectiveness and impacts of SBRI Healthcare and what do you think should be the appropriate 'success criteria’ against which to assess the performance of SBRI Healthcare?

E. [For those familiar with this only] Selection processes of SBRI Healthcare

13. From your experience, what do you think about the overall appropriateness and effectiveness of the SBRI Healthcare application and selection process? How could the application and selection process be improved?

14. What are the key factors do you look for/consider when you assess candidates and innovations? How do you conduct this assessment?

15. In your opinion, what distinguishes successful applicants from the unsuccessful ones? Specifically, what do you find are the most common reasons for rejecting applications?

16. Do you provide feedback to successful and unsuccessful applicants? How detailed is the feedback and what areas does it focus on?
Dear [ ],

I am writing to you with regards to an independent evaluation of SBRI Healthcare programme that RAND Europe and the University of Manchester are conducting on behalf of the Department of Health. As part of this evaluation, we are conducting interviews with stakeholders who could give us valuable insights into the role of SBRI Healthcare in bringing business-led innovation to the NHS and its effectiveness in doing so. The attached document provides additional information about the evaluation and wider research study commissioned by the Department of Health.

Given your role as [ ], your views and experience would be extremely useful for the evaluation and we would therefore like to ask if you would be available for a phone interview? We anticipate an interview will last up to 45 minutes.

Please do let me know if you are available and interested to participate in the interview. We would be able to accommodate your availability over the coming weeks and provide additional information, should you have any questions.

I look forward to hearing from you.

Best wishes,

[ ]
Evaluation of Small Business Research Initiative (SBRI) Healthcare programme

Evaluation background and aims

The NHS is under pressure to meet the growing demand for healthcare services with limited resources. Innovation in the NHS has the potential to help respond to this challenge and to contribute to productivity gains, and the efficiency and effectiveness of the NHS. Commissioned by the Department of Health Policy Research Programme, RAND Europe and University of Manchester are conducting a two-year embedded evaluation of innovation in the NHS. We work with regional health economies and national stakeholders to help develop specific and actionable recommendations for the NHS, on how to better innovate to respond to demands for productivity and high quality care. We aim to identify ‘big ticket’ innovation issues and foster solutions across different aspects of healthcare pathways (e.g. primary, acute, community care); different types of innovations (drugs, devices and technologies, services) and different regions.

Part of this study includes research into the contribution of the SBRI Healthcare programme to innovation in the NHS. Given the important role that SBRI plays in the national innovation landscape, we aim to examine and learn from the impacts of SBRI awarded contracts at both the national and regional levels. We aim to draw practical and pragmatic lessons on how SBRI Healthcare is contributing to the innovation process, its outcomes and impacts and how it could be supported in the future to ensure maximum benefit. This would include examining the decision-making processes for SBRI investments, how they are monitored and evaluated, successes, challenges and opportunities for the future. We also revisit and reflect on the existing evidence-base about the health and economic value.

The research aims to examine the following key questions:

- How does SBRI Healthcare drive and contribute to innovation in the NHS?
- Is SBRI Healthcare making a difference to how private sector and SME innovation is embraced in NHS organisations?
- What are the SBRI decision making processes, outcomes of awarded contracts and impacts for innovation performance in the NHS?
- What are the key challenges to address and where do key opportunities for the future lie?

Request for an interview

As part of this process, we will be conducting interviews with past recipients of SBRI funding, wider innovation policy and innovation funding organisations, innovators in the medical technology space, and members of the SBRI coordinating committee and selection panel itself. We are specifically interested in learning about the factors that help maximise, or inhibit, the value of SBRI Healthcare to businesses and the NHS.
More specifically, the evaluation aims to better understand the role, impact and effectiveness of the SBRI Healthcare programme in supporting innovation in the healthcare system. Amongst other factors, this includes considering the impacts of SBRI contracts on businesses and wider society as well as the effectiveness of the processes underlying the delivery of the programme regionally and nationally (e.g. as they relate to the application and selection process, management of scheme, engagement with applicants and wider stakeholders).

Given your role and expertise in the innovation landscape, we would greatly value the opportunity to interview you to understand your perspectives on these issues and on the place of the SBRI Healthcare programme within the wider health innovation funding landscape in the United Kingdom. We hope that the opportunity to inform the future of the programme will be well-received. The interview would last 30–45 minutes and be conducted by telephone.

**Your participation and how confidentiality will be ensured**

Taking part in the interview is entirely voluntary and withdrawal is possible at any time without having to give a reason. Subject to your permission, the interview will be audio-recorded to facilitate internal analyses by the team. All information collected about you and your organisation during the course of the study will be kept strictly confidential. We are planning to transcribe the audio-recorded interviews but transcripts will be made available only to the investigators and will be kept in a secured file. You will be assigned a unique Study Identification Number (SID), which at the completion of the study will be de-linked from personal identifiers. Original recordings will be destroyed within six months of completion of the study.

Exerts from interview transcripts might be quoted in publications with no reference to your name, age, gender or organisation, unless you provide explicit permission to be associated with a quote. You will also have the option of not being quoted at all. Before the interview, we will ask you to read and complete an online consent form.

Should you have any questions about this evaluation please contact the RAND Europe research team on sbri@rand.org.

Project Leader: Dr Sonja Marjanovic, Research Leader, RAND Europe, sonja_marjanovic@rand.org
Evaluation of strategies for supporting innovation in the NHS to improve quality and efficiency

(SBRI Healthcare component of evaluation)

Participant Information Sheet

You are being invited to take part in a research study aimed at helping to improve the uptake and efficiency of innovation in the NHS. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Please ask if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for taking the time to read this.

What is the aim of the research?

The aim is to help improve the uptake and efficiency of innovation in the NHS.

Why have I been chosen?

We want to interview staff who are either NHS employees or are involved in innovation related activities linked to the NHS. You have been invited since you fall into this category.

What would I be asked to do if I took part?

If you agree to take part a member of the study team will interview you at your place of work. The interview will be digitally recorded and will last about 1 hour. We may also ask you to be interviewed again at a second interview about a year after the first one.

What happens to the data collected?

The interview audio files will be transcribed verbatim. The transcription of interviews will be conducted by an approved organisation based in the UK. The interviews will be analysed by the researchers to identify themes.

How is confidentiality maintained?

Any information you provide will be kept confidential. The information collected will be stored on a secure computer drive (digital) and in a locked cabinet (paper-based). It will be destroyed five years after the end of the study. Digital recordings of interviews will also be retained for this period on a secure computer drive. Any quotations from interviews used in any publications will be anonymised. We will use coded references to ensure that confidentiality is maintained.

What happens if I do not want to take part or if I change my mind?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time without giving a reason and without detriment to yourself. If you withdraw from the study we will delete all of your data. It will no longer be possible to withdraw from the study after we have published findings.

Will I be paid for participating in the research?

There is no payment for participating in the research.

Will the outcomes of the research be published?
We will produce interim reports and a final report of the results for the people who funded the study. We will also publish articles and papers about the study.

**Who is organising and funding the research?**

The research is organised by a team from the University of Manchester and RAND Europe. It is funded by the Department of Health.

**Who has reviewed the research project?**

The project has been reviewed by the Alliance Business School, University of Manchester and the Department of Health.

**What if something goes wrong?**

If you have concerns or complaints you should contact the lead researcher in the first instance. The contact details are at the bottom of this information sheet.

If there are any issues regarding this research that you would prefer not to discuss with members of the research team, please contact Fiona Devine, Dean of Manchester Business School [fiona.devine@mbs.ac.uk](mailto:fiona.devine@mbs.ac.uk) or by telephoning 0161 306 1322.

If there are any issues regarding this research that remain unresolved following the above procedures, please contact the Research Governance and Integrity Team by either writing to 'The Research Governance and Integrity Manager, Research Office, Christie Building, The University of Manchester, Oxford Road, Manchester M13 9PL', by emailing: [Research.complaints@manchester.ac.uk](mailto:Research.complaints@manchester.ac.uk), or by telephoning 0161 275 8093 or 275 2674

**Contact for further information**

Ruth McDonald, MBS, Booth Street West, M15 6PB

Email: [ruth.mcdonald@mbs.ac.uk](mailto:ruth.mcdonald@mbs.ac.uk)

Phone: 0161 306 3495

**This Project Has Been Approved by the Alliance Business School, University of Manchester**
Appendix C. Report on survey of companies that received SBRI Healthcare support

C1. Introduction and method

The survey was distributed in October 2016 by email to 99 individual organisations\(^{289}\) that received awards from SBRI Healthcare (Phase 1, 2 and 3 funding) between 2009 and 2015. These organisations were the same as those that had been sent an earlier survey conducted by Health Enterprise East (HEE) in April/May 2016. The HEE survey aimed to include all competition winners, from the launch of the first competition, SBRI 1, in 2009, through to and including the SBRI 9 competition, launched in spring 2015.\(^{290}\) The present survey is intended to complement rather than duplicate the findings of the HEE survey, not least to encourage a good response rate, and therefore certain questions that were covered by the HEE have been omitted in order reduce the burden on respondents. Using the same sample as the HEE survey makes it possible to use the data from that earlier survey to fill the gaps left by questions omitted from the current survey.

Survey recipients were informed of the purpose of the study, how the information they provided would be used, and that all individual responses would be kept confidential and would only be visible to members of the RAND Europe research team.

We received 45 responses, giving an overall response rate of 45 per cent. Breakdowns of the characteristics of these respondents, including phase of SBRI Healthcare award and type of innovation, are presented in the following section. A small number of respondents did not provide answers to all of the questions. Response rates quoted in the remainder of this Appendix refer to the percentages of those who answered the particular question. Of the 45 respondents overall, 34 had also responded to the April 2016 HEE survey. Each response corresponded to an individual SBRI Healthcare-supported project. Where respondents had received SBRI Healthcare funding for more than one project, they were asked to answer the questions from the perspective of the project that had reached the most advanced stage of development. The detailed profile of respondents is provided in the final subsection of this summary.

\(^{289}\) This includes private sector businesses and non-profit organisations, public sector organisations, researchers and universities.

\(^{290}\) While there were 122 awards during that period, the number of invited companies is lower because some companies received multiple awards or ceased to exist (due to mergers, etc.).
The online survey was hosted on the SurveyMonkey platform. Before its distribution, the survey had been piloted with a sample of test users. It was open for a period of four weeks in October and November of 2016. During this process, reminders were sent, with two weeks, one week and one day remaining.
C2. Profile of respondents

In this section we present the characteristics of the 45 companies that responded to the survey. Of those 45, 90 per cent received their SBRI Healthcare award for a project on a medical device (47 per cent, or 21 respondents), an IT platform or eHealth/mHealth solution (27 per cent, or 12 respondents), or a diagnostic (16 per cent, or 7 respondents). The remaining 5 projects were a mobile behaviour change app, a digital services platform for patient engagement and co-creation of care, a combination medical device eHealth platform, and a GPS location technology.

Figure 29. Responses from successful applicants on the type of ideas for which they sought support from SBRI Healthcare (n=45)

The majority of respondents (56 per cent, or 25 respondents) held Phase 2 awards, while 33 per cent (15 respondents) held Phase 1 awards and 11 per cent (5 respondents) held Phase 3 awards. Most (25 respondents, or 55 per cent) had received more than one SBRI Healthcare award. Of the 45 respondents, 20 had received only 1 grant, 20 received 2 grants, 3 received 3 grants, and single respondents had received 5 and 6 grants.

Figure 30. Phase of SBRI Healthcare award received by respondents (n=45)

With the exception of one university-owned organisation, all respondents were private companies, and all of those were small or microenterprises. A large majority (33 respondents, or 80 per cent) were microenterprises (fewer than 10 employees), and 8 were small enterprises (between 11 and 50 employees). The other respondent
was a large enterprise (more than 250 employees); there were no medium-sized enterprises (between 50 and 250 employees).

**Figure 31. Size distribution of respondent organisations (n=45)**

For the 32 non-university, non-public sector respondent organisations for which information on turnover was available, the mean estimated annual turnover was £446,000. Of those 32 companies, the majority (23 respondents, or 72 per cent) reported a turnover between £100,000 and £499,999, with only 6 per cent (2 respondents) reporting a turnover below £100,000. Twenty-two per cent (7 respondents) reported a turnover of £500,000 or more, of which 6 were estimated at more than £1 million.

**Figure 32. Estimated annual turnover of respondent companies (n=32)**

Forty-seven per cent (21 respondents) of companies had been operating for between 1 and 5 years. Five companies (11 per cent) had existed for 1 year or less, while 19 (42 per cent) had existed for 5 years or more.
C3. The SBRI Healthcare application and selection process

The application process and documentation were clear, and the selection process was considered fair.

More than two thirds of respondents either agreed or strongly agreed with a set of five positive statements about the SBRI Healthcare application and selection process. Respondents highlighted the clarity of the process: 91 per cent (39 respondents) agreed that the briefing document and challenges to be answered were concise and focused, and 93 per cent (40 respondents) agreed that the steps and requirements of the application process were clear. Only one respondent disagreed with each of these two statements. Respondents’ views on other elements of the application process, though broadly positive, were more mixed. Seventy per cent (30 respondents) agreed that the process was easy, with 14 per cent (6 respondents) disagreeing. Sixty-eight per cent (29 respondents) agreed that the feedback they received on their application was helpful, with 16 per cent (7 respondents) disagreeing. Regarding the selection of awardees, 74 per cent (32 respondents) agreed that the process was fair, with only 7 per cent (3 respondents) disagreeing.
Most successful applicants consulted clinicians, patients or researchers during the application process, particularly at Phase 3.

All respondents stated that they had engaged with at least one type of stakeholder while preparing their application. Three groups were consulted by more than half of respondents. These groups were practising clinicians (consulted by 36 respondents, or 80 per cent), academics and other researchers (33 respondents, or 73 per cent) and patients or patient groups (28 respondents, or 62 per cent). Smaller numbers consulted with their local Academic Health Science Network (consulted by 20 respondents, or 44 per cent) or those responsible for NHS procurement decisions (17 respondents, or 38 per cent). Only 24 per cent (11 respondents) consulted charities, while 11 per cent (5 respondents) engaged with other types of stakeholder during their application. NHS England, policymakers, technologists and engineers, other suppliers, and teachers were each mentioned by one respondent.

The proportion of respondents consulting with certain types of stakeholder differed across the three phases of the programme. Phase 3 awardees were more likely than Phase 1 or 2 awardees to consult each type of stakeholder, with the exception of local AHSNs. For example, all five Phase 3 respondents consulted practising clinicians during the application process, compared with 80 per cent of respondents across all phases. Similarly, 60 per cent (3 respondents) of Phase 3 companies consulted NHS procurement decision-makers, compared with 38 per cent across all phases.
Figure 35. Responses from successful applicants on which external stakeholders were involved in their application to SBRI Healthcare (n=45)\textsuperscript{291}

\textsuperscript{291} Multiple responses allowed; therefore total is not 100 per cent.
C4. Reasons for applying and additionality of SBRI Healthcare awards

The main motivations for applying to SBRI Healthcare were the need for funding and the relevance of applicants’ innovations to the scope of SBRI Healthcare competitions.

When asked about the three most important reasons for their decision to apply to SBRI Healthcare, 89 per cent (40 respondents) cited the need for funding to develop their innovation, and 73 per cent (33 respondents) stated that their innovation was a good fit for the theme of the relevant SBRI Healthcare competition. Other upfront considerations related to funding were less important: only 29 per cent (13 respondents) were motivated by a perceived lack of alternative sources of funding for their type of funding, and only 20 per cent (9 respondents) by the perceived likelihood of their application succeeding. Beyond funding, 44 per cent (20 respondents) were attracted by the prospect of access to potential NHS clients, and 16 per cent (7 respondents) by the kudos associated with SBRI Healthcare awards.

Figure 36. Responses from successful applicants on the most common reasons for applying to SBRI Healthcare (n=45)\textsuperscript{292}

The majority of innovation ideas funded by SBRI Healthcare were at an early (pre-trial) stage of development at the time of applying.

Most respondents indicated that their innovation was at an early stage at the time of their application to SBRI Healthcare. Nearly three quarters (73 per cent, or 33 respondents) had yet to develop a prototype, among whom 42 per cent (19 respondents) had been looking to take a new idea to a proof-of-concept stage and 31 per cent (14 respondents) to develop a prototype based on a proof of concept. A further 20

\textsuperscript{292} Multiple responses allowed; therefore total is not 100 per cent.
per cent (9 respondents) reported that they had been ready to conduct trials, with 11 per cent (5 respondents) having developed a prototype and 9 per cent (4 respondents) looking to move on to pivotal trials having completed feasibility or pilot trials. Only 3 respondents (7 per cent) had completed pivotal trials and wanted to commercialise their innovation when they applied to SBRI Healthcare. This suggests that successful applications generally conformed to the programme’s stated objectives of ‘showing technical feasibility of the proposed concept’ (Phase 1) and ‘development and evaluation of prototypes from the more promising technologies in Phase 1’ (Phase 2).

Figure 37. Responses from successful applicants on the maturity of their idea at the time of applying to SBRI Healthcare (n=45)

Most companies would not have gone ahead with their project without the SBRI Healthcare contract

The majority of award recipients (52 per cent, or 23 respondents) did not believe that their company would have undertaken the relevant project in the absence of the SBRI Healthcare award. Thirty-two per cent (14 respondents) stated that their project probably would not have gone ahead, and 20 per cent (9 respondents) stated that it definitely would not have gone ahead. Only 22 per cent (10 respondents) believed that their project would have gone ahead without an SBRI Healthcare award, while 25 per cent (11 respondents) believed that it may or may not have gone ahead.
C5. Support received during the SBRI Healthcare-supported project

Funding was the most valuable aspect of the SBRI Healthcare award, followed by health economic support.

Most forms of support provided to awardees by SBRI Healthcare were considered to be helpful. Above all, the vast majority of respondents (40 respondents, or 93 per cent) stated that the funding they received from SBRI Healthcare had helped their project. Support with health economics was also highly valued, with 72 per cent (31 respondents) stating that it was helpful, including 18 who considered it to be “very helpful”. Respondents also welcomed support related to project management. This included quarterly reviews of projects (considered helpful by 30 respondents, or 70 per cent), reporting (28 respondents, or 65 per cent) and the identification of project milestones and deliverables (25 respondents, or 59 per cent). Contract setting was the form of support considered least helpful by respondents. However, although only 42 per cent (18 respondents) stated that it was helpful, only 9 per cent (4 respondents) stated that it was unhelpful. The most frequent answer, given by 21 of the 43 respondents to this question, was that contract setting support was neither helpful nor unhelpful.
The kudos associated with SBRI Healthcare funding was the most significant additional benefit of the award, and support was more helpful in Phases 2 and 3.

Among the additional forms of support provided to awardees, the kudos associated with receiving SBRI Healthcare funding was second only to the funding itself in terms of the value placed on it by respondents. More than three quarters (33 respondents, or 77 per cent) stated that this had helped their project. Respondents’ views on other forms of support were significantly less positive. Only 33 per cent (14 respondents) stated that SBRI Healthcare had been helpful in brokering access to potential NHS clients, 7 per cent (3 respondents) that it had been helpful in brokering access to potential investors, and 26 per cent (11 respondents) that business-related support and advice from SBRI Healthcare had been helpful.

A small number (no more than 12 per cent, or 5 respondents, for any one type of support) felt that some aspects of the programme had been actively unhelpful. For example, one respondent asserted that SBRI Healthcare had “dictated who in the network we should work with” rather than allowing the company to pursue its own leads and had not helped to broker any new links. However, in each case, the most frequent response was that the type of support in question had not been provided, and the next most frequent response was that it had been neither helpful nor unhelpful.

The types of support received and the value placed on each type differed between phases of funding. Phase 2 and 3 awardees were more likely than Phase 1 awardees to receive each of the four types of support discussed above. Moreover, the value of support appears to increase as companies reach later phases as each type of support (among those who received it) was considered more helpful by Phase 2 awardees than Phase 1 awardees, and more helpful still by Phase 3 awardees. Between Phase 1 and Phase 3, among companies who received each type of support, the proportion reporting that it was helpful increased by between 33 per cent and 67 per cent for different types. This suggests that business support,
brokering networks and the kudos associated with SBRI funding are both more likely to be provided and more likely to be helpful to innovations at later stages in their development.

Figure 40. Responses from successful applicants on helpfulness of additional forms of SBRI Healthcare support during the project (n=43)

![Figure 40](image)

Most respondents had not applied for additional funding from other sources, although most Phase 3 respondents had done so

Overall, just under one third of successful applicants (14 respondents, or 32 per cent) had applied for additional funding for their innovation on top of their SBRI Healthcare award, with the proportion of awardees applying for other funding increasing with each phase of funding. Only 13 per cent (3 respondents) of Phase 1 awardees had applied for other funding; this rose to 32 per cent (8 respondents) in Phase 2 and 60 per cent (3 respondents) in Phase 3. Respondents’ answers to the HEE survey provide insight into their reasons for not applying for additional funding, including waiting until technology is more developed and not needing any additional external financing.293

Figure 41: Responses from successful applicants on whether they had applied for additional funding from other sources (n=44)

<table>
<thead>
<tr>
<th>YES</th>
<th>32%</th>
<th>68%</th>
<th>NO</th>
</tr>
</thead>
</table>

293 HEE (2016).
The most common source of co-funding was downstream private equity, followed by government R&D grants and loans.

A conservative estimate of the total value of co-funding received, based on the lower ends of the ranges of co-funding indicated by respondents, was in excess of £8.2 million. This was spread across 32 companies that received some form of co-funding, for a mean of over £250,000 in co-funding per company. Co-funding was estimated at over £650,000 across 8 Phase 1 companies, over £6.7 million across 21 Phase 2 companies and over £800,000 across 3 Phase 3 companies. This translated to a mean value of over £300,000 of co-funding per Phase 2 company, compared with over £250,000 per Phase 3 company and over £80,000 per Phase 1 company.

Downstream private equity was the most common source of additional funding across all phases of the programme, with 34 per cent (15 respondents) reporting that they had received this type of funding. The next most frequent sources of co-funding were government R&D grants (reported by 12 respondents, or 27 per cent) and loans (12 respondents, or 27 per cent). Smaller numbers of companies had co-funded through sales or licensing of their innovation (5 respondents, or 11 per cent) and public sector R&D contracts (4 respondents, or 9 per cent). Only one respondent (a Phase 2 company) had generated co-funding through the sale or merger of their company.

The role of different sources of co-funding varied across phases of the programme. In Phases 1 and 2, downstream private equity was the most common source, and it was received by 29 per cent (4 respondents) and 44 per cent (11 respondents) of companies, respectively. In Phase 3, the most common source of funding was government R&D grants, which were received by 40 per cent (2 respondents) of Phase 3 companies, compared with 32 per cent (8 respondents) of Phase 2 companies and 21 per cent (3 respondents) of Phase 1 companies. Public sector R&D contracts (which include NHS contracts) were more common in Phases 2 and 3, in which they were received by 12 per cent (3 respondents) and 20 per cent (1 respondent) of companies, respectively. As could be expected, no Phase 1 companies generated co-funding through sales or licensing of their innovation, whereas 16 per cent of Phase 2 companies (4 respondents) and 20 per cent of Phase 3 companies (1 respondent) did so.
More respondents applied for and received Innovate UK and the EU grants than any other type of additional public funding

The 29 per cent of SBRI Healthcare awardees (13 respondents) that applied for other public funding tended to apply to either Innovate UK or the EU. Fourteen per cent (6 respondents) of all respondents applied for Innovate UK Smart grants, and 9 per cent (4 respondents) applied to the Innovate UK/Medical Research Council Biomedical Catalyst. The next most common was EU funding through FP7 or Horizon 2020, which was sought by 9 per cent (4 respondents). These figures suggest that Innovate UK and the EU are perceived to be the funders whose support for innovation overlaps with the SBRI Healthcare programme to the greatest extent. This is reinforced by differing success rates across funders, which were also highest with the EU, at 75 per cent (3 out of 4 applicants), and Innovate UK, at 50 per cent (5 out of 10 applicants).

Other than the funders listed below, respondents reported applying to the US National Cancer Institute, the Wellcome Trust, the NIHR Invention for Innovation (i4i) scheme and an award from a local AHSN.

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294 Multiple responses allowed; therefore total is not 100 per cent.
The majority of companies have received other forms of government support during their project, most commonly R&D tax credits and links to AHSNs

In addition to public funding, respondents reported receiving a variety of other forms of government support for their project. The most common types of support by a wide margin were R&D tax credits (received by 30 respondents, or 70 per cent) or making use of links to the recipient’s local AHSN (25 respondents, or 58 per cent). The next most frequent response was that the project had not received any government support (12 respondents, or 28 per cent). A smaller number (6 respondents, or 14 per cent) had accessed business incubator or accelerator programmes, while the remaining types of support were received by less than 10 per cent of respondents. Beyond the types of support listed below, one respondent stated that they had received additional support from their local AHSN.

The type and frequency of government support received differed across the three phases of the programme. Phase 1 respondents were least likely to receive government support, with only 38 per cent (5 respondents) obtaining some form of support, compared with 88 per cent (22 respondents) in Phase 2 and 80 per cent (4 respondents) in Phase 3. While R&D tax credits and links with AHSNs were the most common type of support across all phases, the frequency with which both were received differed. Less than one third of Phase 1 respondents (4 respondents, or 31 per cent) obtained R&D tax credits, compared with 84 per cent (21 respondents) in Phase 2 and 80 per cent (4 respondents) in Phase 3. Only 31 per cent (4 respondents) of Phase 1 companies used links to AHSNs, whereas 68 per cent (17 respondents) of Phase 2 companies and 80 per cent (4 respondents) of Phase 3 companies did so.
Figure 44. Responses from successful applicants on other sources of public support during their SBRI Healthcare-supported project (n=43)

C6. Project outcomes and uptake of SBRI Healthcare-supported innovations

Although 30 per cent of respondents’ innovations had been launched onto the market, most had not yet completed trials

Thirty per cent (13 respondents) of companies reported that their SBRI Healthcare-supported innovation had been launched onto the market. However, only 20 per cent (9 respondents) had completed feasibility or pilot trials, and only 11 per cent (5 respondents) had completed pivotal trials. The fact that a higher number had been launched than had been trialled is most likely due to the majority of products launched onto the market being IT innovations, which do not go through the same process as diagnostics or medical devices. Sixty-seven per cent (8 respondents) of IT innovations had been launched onto the market, whereas only 10 per cent (2 respondents) of medical devices and no diagnostics had been launched.

Overall, IT innovations in general tended to have reached a more advanced stage of development than other types of innovation. For example, 67 per cent (8 respondents) of companies with IT innovations had developed a prototype, compared with 48 per cent (10 respondents) of those working on medical
devices and 29 per cent (2 respondents) of those working on diagnostics. Moreover, higher percentages of IT innovations had been through feasibility trials (58 per cent, compared with 5 per cent of medical devices and no diagnostics) and pivotal trials (25 per cent, compared with 14 per cent of diagnostics and no medical devices).

Figure 45. Responses from successful applicants on the stage of development reached by their SBRI Healthcare-supported innovation (n=44)

More than one third of respondents had generated new knowledge in the form of patents, trademarks or scientific publications

Of the 34 respondents who completed the HEE survey, 12 produced new knowledge, in the form of 13 patents, 5 trademarks and 8 academic publications. Eighteen per cent (6 respondents) had obtained patents based on their SBRI Healthcare-supported innovation, 12 per cent (4 respondents) had obtained trademarks and 15 per cent (5 respondents) had produced scientific publications.
SBRI Healthcare awards enabled companies, mainly microenterprises, to hire nearly 100 new employees

Among the 34 respondents that had also answered the HEE survey, 25 reported that their company had been able to hire at least one new employee as a result of their SBRI Healthcare award. A total of 98 new employees were hired, of whom 89 were hired by the 24 responding microenterprises (companies with fewer than 10 employees), meaning that the mean number of new people hired by microenterprises was nearly 4.296 It should be noted that one company (a microenterprise) reported that they had hired 34 new employees and one other reported that they had hired 15. No other company reported hiring more than six employees.

HEE (2016)

HEE (2016)
Estimated sales total over £4 million and were mainly to the NHS, with IT innovations generating more sales revenue than all other categories combined

More than one quarter of companies (13 respondents, or 29 per cent) reported sales resulting from their ideas, with a total value estimated at over £4 million. Over £3 million of sales were made to the NHS, accounting for 75 per cent of total sales. Fourteen per cent of sales were to non-EU international customers, 7 per cent to non-NHS UK customers and 3 per cent to non-UK EU customers. Seven out of 13 sales-generating companies had made sales totalling between £100,000 and £499,999. Four companies had made sales of less than £100,000, 1 had made sales between £500,000 and £1 million, and 1 had made sales worth over £1 million. A single company (with a Phase 3 award for an IT innovation) accounted for 37 per cent of total sales.

Sales trends varied across different types of innovation. IT platforms and eHealth/mHealth solutions were the type of innovation most likely to generate sales, with 67 per cent (8 respondents) of companies in this category making sales, compared with only 14 per cent (3 respondents) of medical device companies. As a result, IT innovations generated 65 per cent of all sales despite representing just 27 per cent of respondents. Medical devices accounted for 24 per cent of sales and 47 per cent of respondents. Diagnostic innovations did not generate any sales, and other types of innovation accounted for 11 per cent of sales and 11 per cent of respondents. However, the client base for medical devices was less diverse than for other IT innovations. NHS sales represented 32 per cent of the total sales revenue generated by medical devices, with the remainder consisting of sales to international customers (56 per cent), non-NHS UK customers (10 per cent) and non-UK EU customers (2 per cent). In contrast, the NHS accounted for 92 per cent of sales generated by IT innovations.

Phase 2 and 3 companies were equally likely to have generated sales, with 40 per cent in each phase (10 respondents and 2 respondents, respectively) reporting sales. However, the value of Phase 3 companies’ sales tended to be greater, totalling £1.9 million, to Phase 2 companies’ £1.7 million. As a result, Phase 3 companies represented 11 per cent of respondents but accounted for 47 per cent of total sales, while Phase 2 companies represented 54 per cent of companies and accounted for 40 per cent of sales. Only 1 of the 15 Phase 1 respondents had generated sales.

Figure 48. Responses from successful applicants on sales generated by their SBRI Healthcare-supported project (n=45)

<table>
<thead>
<tr>
<th>Category</th>
<th>Sales (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHS</td>
<td>£3,053,500</td>
</tr>
<tr>
<td>Exports to international customers</td>
<td>£608,000</td>
</tr>
<tr>
<td>Other UK customers</td>
<td>£276,000</td>
</tr>
<tr>
<td>Exports to EU customers</td>
<td>£138,000</td>
</tr>
</tbody>
</table>

Our respondents’ answers to the HEE survey provide details of other types of commercial activity generated by SBRI Healthcare-supported innovations. This mostly related to licences for the production
or distribution of their innovations. Among the 34 respondents, marketing or distribution agreements had been finalised or were being negotiated by 44 per cent (15 respondents), licensing agreements by 41 per cent (14 respondents), and manufacturing agreements by 35 per cent (12 respondents).297

The main benefits delivered or expected to be delivered by SBRI Healthcare-supported innovations were cost savings to the NHS, improved patient/carer experience and improved patient outcomes

According to respondents, most positive impacts (either achieved or expected) of SBRI Healthcare-supported innovations were on treatments and their delivery, on patient and carer experience, or on the NHS. Eighty-six per cent (38 respondents) stated that their innovation had generated or would generate net cost savings for the NHS. Fourteen of our respondents provided estimates of expected cost savings per annum as part of the HEE survey. Of those 14, most expected annual cost savings in the tens of millions.298

The next most frequently mentioned benefits were improved patient or carer experience (37 respondents, or 84 per cent) and improved patient outcomes and/or recovery rates (35 respondents, or 80 per cent). Nearly half of innovations (20 respondents, or 45 per cent) had led to or were expected to lead to reductions in the duration of existing treatments, and a slightly smaller number (19 respondents, or 43 per cent) to increased compliance or adherence to existing treatments. Of the 34 of our respondents that had answered the HEE survey, 25 provided an estimated number of UK patients expected to benefit from their innovation. Of those 25, 17 expected their innovation to benefit more than 100,000 patients in the UK, including 8 that expected to reach over a million patients.299

Nearly one quarter (10 respondents, or 23 per cent) identified other benefits. Most related to the efficiency of the NHS, and included increased productivity of healthcare professionals and data-driven improvements to management processes, as well as reductions in admission and readmission rates, A&E attendance and unnecessary follow-up appointments. Respondents also identified achieved or expected improvements in access to diagnosis and treatment, and one stated that their innovation had the potential to generate major international sales.

297 HEE (2016)
298 HEE (2016)
299 HEE (2016)
The most common barriers to uptake of SBRI Healthcare-supported innovations by the NHS were a lack of motivation and accountability for adopting innovation

Participants identified a range of barriers to NHS uptake, spanning issues with the product or project, approval processes, NHS procurement processes and clinical factors. Although two interviewees stated that they had not experienced any significant barriers, most reported at least one. The most common barrier, and the only one identified by a majority of respondents, was a reported resistance to innovation within the NHS. Fifty-seven per cent (25 respondents) stated that the adoption of their product had been hindered by a lack of motivation and accountability for innovation uptake within the NHS, combined with inertia and resistance to change.

Regarding other factors internal to the NHS, 25 per cent (11 respondents) cited challenging procurement processes and 23 per cent (10 respondents) highlighted the difficulty of reaching the relevant customers for their product. One respondent asserted that the NHS Supply Chain process favours large companies at the expense of the type funded by SBRI Healthcare. Respondents also identified clinical barriers to uptake, including difficulty integrating their innovation with existing practices (mentioned by 8 respondents, or 18 per cent) and a shortage among NHS staff of the skills required for uptake of their innovation (7 respondents, or 16 per cent). One respondent expanded on the latter point, stating that NHS staff are too busy to develop new skills and integrate new ways of working. Respondents also reported that their market is small due to a lack of available funds for innovation, with one respondent attributing this to cuts to the NHS budget.

Respondents also faced challenges in getting their product ready to sell to the NHS. The main barrier at this stage was a lack of resources to develop the innovation to the point of market readiness, which was

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300 Multiple responses allowed; therefore total is not 100 per cent.
mentioned by 30 per cent (13 respondents) of companies. Smaller numbers of respondents also reported difficulties in obtaining regulatory approval of their product (8 respondents, or 18 per cent) and technical issues with the product itself (6 respondents, or 14 per cent). One respondent added that the complexity and cost of generating clinical data had been a barrier to their company.

Perceptions of barriers to uptake varied according to the type of innovation respondents were seeking to introduce to the NHS. For example, 83 per cent (10 respondents) of companies with IT innovations identified resistance to change within the NHS as a barrier to them, compared with 45 per cent (9 respondents) of medical device companies and only 29 per cent (2 respondents) of diagnostics companies. This suggests that any resistance to adoption of innovation within the NHS may be particularly acute in relation to IT.

In addition, diagnostics companies cited difficulties in getting their product ready for market more often than did medical device or IT developers. Whereas the abovementioned resistance to innovation was the most frequently mentioned barrier to medical devices and IT innovations, companies with diagnostic innovations viewed a lack of resources for product development as the biggest obstacle to their product’s uptake. This barrier was highlighted by 57 per cent (4 respondents) of diagnostics companies, compared with 25 per cent (5 respondents) in of medical devices and 17 per cent (2 respondents) of IT companies. Moreover, diagnostics companies mentioned technical issues with the product and regulatory challenges more frequently than did companies with medical devices or IT innovations (it should be noted that regulatory approval is less relevant to IT). This may be due to the fact that diagnostics innovations were generally at an earlier stage in their development than other types – none of the 13 respondents who had launched products onto the market were from companies developing diagnostics.
The most common facilitators of uptake of SBRI Healthcare-supported innovations by the NHS were engaging within clinicians and conducting local pilots.

When asked to identify the three main factors facilitating NHS uptake of their innovation, respondents most frequently highlighted measures taken to ensure a well-adapted and demonstrably effective product. Seventy-seven per cent (33 respondents) of companies reported that the involvement of clinicians in product development had been a key enabling factor, and 60 per cent (26 respondents) cited local pilots of their product as an important step towards its uptake. One interviewee specifically mentioned engagement with nurses as an important step, while another stated that holding SBRI Healthcare funding makes clinicians more willing to engage with a commercial organisation. A smaller number (8 respondents, or 19 per cent) also mentioned the involvement of patient representatives during product development.

Other facilitators of uptake, such as awareness-raising activities, were mentioned less frequently. Although a significant number of companies (9 respondents, or 21 per cent) identified publications, such as peer-reviewed journal articles, as an enabler of uptake, fewer mentioned awareness-raising with NHS commissioners (6 respondents, or 14 per cent) or recommendations of their product from professional bodies (3 respondents, or 7 per cent). However, individual respondents did also mention engaging

\[^{301}\text{Multiple responses allowed; therefore total is not 100 per cent.}\]
clinicians as Key Opinions Leaders and seeking out potential “user champions” for the innovation. Policy was generally not viewed as an important enabler of uptake, with only 12 per cent (5 respondents) of companies mentioning guidelines from the National Institute for Health and Care Excellence (known as NICE) or other bodies. A further five respondents identified time spent developing an understanding of the NHS procurement process as a facilitator of their product’s uptake.

The frequency with which particular enablers of uptake were mentioned varied across innovation types. Although engaging clinicians was the most mentioned enabler overall, companies with IT innovations placed more emphasis on local pilots of their technology. Eighty-three per cent (10 respondents) of those companies identified local pilots as a key enabler of their innovation’s uptake, compared with 71 per cent (5 respondents) of diagnostics companies and 57 per cent (12 respondents) of medical device companies. Respondents with IT innovations also mentioned awareness raising with NHS commissioners much more frequently than did those with other types of innovation.

**Figure 51. Responses from successful applicants on facilitators of NHS uptake of their SBRI Healthcare-supported innovation (n=43)**

![Graph showing facilitators of NHS uptake](image)

**C7. Overall views on the SBRI Healthcare programme**

Over 90 per cent would apply to another SBRI Healthcare competition in the future, suggesting a positive attitude towards the programme overall

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302 Multiple responses allowed; therefore total is not 100 per cent.
Thirty-nine out of 43 respondents stated that they would apply for another SBRI Healthcare competition, while the remaining 4 stated that they would not. All of those who answered that they would not apply again were Phase 1 awardees. Reasons given included the review process for awards and a lack of support from SBRI Healthcare at key stages in an innovation’s development. These are explored in detail below, along with all respondents’ positive and negative comments on the programme and their suggestions for improvements.

**Figure 52. Responses from successful applicants on whether they would apply to SBRI Healthcare in the future (n=43)**

| YES | 91% | NO | 9% |

**SBRI Healthcare’s role in addressing unmet needs**

Respondents generally viewed SBRI Healthcare as a programme focused on addressing unmet needs of innovators, the NHS and patients. With regard to the needs of innovators, two respondents commented that SBRI Healthcare supports early-stage ideas that would not otherwise be funded. Moreover, one respondent stated that the programme fills an important gap in the funding landscape by supporting SMEs. Respondents saw SBRI Healthcare as providing a pathway for those early-stage innovations and small companies to get off the ground. First, four respondents welcomed the programme’s focus on developing commercially viable products by supporting them through proof-of-concept and prototyping stages, particularly for Phase 1 projects. Second, three interviews said that SBRI Healthcare’s support for innovations through those early phases of development makes those innovations “investable” for other funders, although one respondent urged the programme to be more active in helping to connect innovators to those funders. Finally, one interviewee stated that SBRI Healthcare funding had enabled their small company to bring together a group of collaborators to work on product development in a way that SMEs are usually not able to do.

On meeting the needs of the NHS, two respondents said that SBRI Healthcare effectively targets specific healthcare needs by effectively identifying emerging challenges for the NHS. Another two respondents argued that this approach enables the programme to meet the needs of patients, including groups of patients that do not tend to be the focus of funded innovation. Furthermore, two respondents said that SBRI Healthcare encourages innovators to meet those needs by articulating them in the form of clear challenges, although one respondent stated that the focus of the challenge they sought to address had changed without their knowledge between Phase 1 and Phase 2.

**The application and selection process for SBRI Healthcare awards**

Respondents gave mixed views on the application process, review arrangements and selection criteria for SBRI Healthcare awards. Three respondents stated that the application process is relatively simple and user-friendly and that the level of effort required of applicants was reasonable. One respondent said that these features are particularly important for SMEs. Another respondent asserted that the application
process produces projects with a strong focus on the challenge they are aiming to address. However, one applicant called for the online application documentation to be simplified, and another argued that the level of effort required of applicants is not commensurate with the success rates of applications to SBRI Healthcare. In addition, one respondent said that SBRI Healthcare did not provide sufficient support to them during their Phase 1 application.

Respondents also highlighted positive and negative features of the review process for applications. On the positive side, one interview reported that bringing applicants and reviewers together for interviews helps to foster a shared understanding of proposed projects. However, several respondents raised concerns about SBRI Healthcare review panels. One respondent suggested that review panels do not take into account all relevant information, reporting that the reviewers for their Phase 2 application did not consider the health economic data produced by their Phase 1 project. Moreover, three respondents questioned panel members’ willingness to engage in depth with applicants’ ideas. In addition, three respondents argued that review panels may lack the technical expertise required to effectively select successful applications. One asserted that a lack of technical expertise leads to inadequate scrutiny of the academic research underpinning some applications, which results in SBRI Healthcare funding projects that have little prospect of achieving their stated goals because they are based on flawed research. The other respondent said that the lack of technical expertise among reviewers makes it particularly difficult for platform technology innovations to get funding, and therefore a separate application process may be required for platform technologies. The same respondent suggested that technical experts external to SBRI Healthcare should be on the review panels and that more consideration should be given to clinical concerns and less to commercial ones.

On the selection process, two respondents said that the criteria against which applications are judged are transparent, but another respondent reported inconsistent reasoning for funding decisions. An additional point raised by one interviewee relates to eligibility criteria for applicant companies. The respondent stated that their application had to compete against proposals from much larger companies, and s/he argued for a separate application process for larger companies.

The structure and process of SBRI Healthcare awards

Respondents discussed the type of funding provided by SBRI Healthcare, the efficiency with which it is disbursed and the timelines associated with funds. Two respondents commented that SBRI Healthcare’s provision of 100 per cent funding for projects is particularly welcome for SMEs, while another respondent highlighted the value of non-dilutive funding as provided by the programme. However, two respondents expressed concerns about expenses associated with SBRI Healthcare funding, with one citing the need to pay VAT on the award and the other pointing out that NHS bodies engaged by their project charge for their research costs. Moreover, while one respondent highlighted the value to SMEs of upfront payment from SBRI Healthcare, three respondents reported significant delays in contracting or payment of funds to successful applicants.

Regarding timelines, two respondents reported that they had to start their project extremely quickly after being informed that their application was successful (immediately, according to one respondent) and that
this made the first few months of the project less productive. Furthermore, respondents generally considered timelines for the completion of projects to be extremely challenging. While three respondents argued that tight timelines encouraged focus and productivity, another two said that they were too tight, particularly for Phase 2 projects. One respondent asserted that challenging timelines make SBRI Healthcare projects more suited to more established innovations rather than those at the very earliest stages of development. The respondent stated that they had developed their idea in response to the SBRI Healthcare competition, and that this left them at a disadvantage when it came to completing their project on time.

The SBRI Healthcare project process

Respondents detailed their experiences of SBRI Healthcare’s monitoring and project management-related requirements, including reporting and deliverables. Respondents generally felt that monitoring was appropriately light-touch for SMEs and that quarterly reviews were a useful exercise. Moreover, one respondent stated that SBRI Healthcare provides a robust framework for deliverables, which helps projects to maintain their focus. However, one respondent argued that the end-of-phase reports and quarterly reports could be streamlined, and another argued that the financial reporting requirements are difficult to meet within a university setting. Two respondents also reported that communication between programme staff and projects was poor and that not enough feedback was provided to their project team. Finally, one respondent said that some of the people overseeing SBRI Healthcare projects did not have a sufficient understanding of the technology being developed, while another reported that HEE had “forced us to pursue unlikely outcomes”. This led one respondent to suggest that project oversight should have more involvement from people with experience of conducting R&D projects.

Additional support required for SBRI Healthcare projects

Respondents called for greater support for companies in commercialising their innovation. Specifically, seven respondents stated that Phase 1 and 2 projects did not produce a clear pathway to NHS uptake of their innovation, with one arguing that SBRI Healthcare should provide more active support in linking awardees to potential customers in the NHS. In response to these concerns, four respondents called for Phase 3 funding to be made available to support the commercialisation and translation into practice of SBRI Healthcare-supported innovations. Additional suggestions put forward for facilitating NHS uptake included funding fewer projects but following them all the way through to commercialisation, and sharing ownership of innovations with NHS England.
Survey protocol: successful applicants
Introduction

RAND Europe, a not-for-profit public policy research institute, and the University of Manchester have been commissioned by the Department of Health, in cooperation with NHS England and the Office of Life Sciences, to undertake an evaluation of innovation in the NHS. The overall study includes an evaluation by RAND Europe of the SBRI Healthcare programme. The evaluation aims to examine the outputs and the impacts of the programme in light of its goals, and to learn about associated enablers and challenges to encouraging the uptake of innovative products and services by the NHS. This will help inform the future implementation of the SBRI Healthcare programme.

If you have received awards from SBRI Healthcare for more than one innovation, please tell us about the innovation that has reached the most advanced stage of development.

Confidentiality and anonymity will be respected throughout. Only the members of the RAND Europe evaluation team will see any individual responses. All answers will be aggregated into a database for further analysis. It will not be possible to identify individuals/companies in the findings that will be presented from the survey.

If you have any questions about the contents of this survey or the wider evaluation, please do not hesitate to contact Jon Sussex or Calum MacLure on sbri@rand.org or 01223 353329.
Please tell us about your application for an SBRI Healthcare award

* 1. Please enter your full name below

   

* 2. Please enter the name of your company below

   

* 3. Please enter your email address below

   

* 4. Which of the following best describes the type of innovation you applied to an SBRI Healthcare award for? (Please select one option only)
   
   - Diagnostic
   - Medical device
   - IT platform or eHealth/health solution
   - Other (please specify)

* 5. Which of the following options best describes your innovation at the time you applied for an SBRI Healthcare award? (Please select one option only)
   
   - A new idea we wanted to develop into a proof-of-concept stage
   - A technology/product proof-of-concept we wanted to prototype
   - A prototype we wanted to trial
   - Completed feasibility/pilot trials and we wanted to move into pivotal trials
   - Completed pivotal trials and we wanted to commercialise (i.e., into approval, manufacturing, marketing, distribution)
6. Which were the three most important reasons in your decision to apply for an SBRI Healthcare award? (Please select up to three options)

☐ Need for funding to develop product/technology
☐ Fit with the theme of the SBRI Healthcare competition
☐ Anticipating better access to potential NHS clients
☐ Perception of few or no alternative sources of funding for our type of innovation
☐ Kudos associated with receiving SBRI Healthcare award
☐ Perceived likelihood of success

7. Did you consult with any of the following external stakeholders during the application process? (Please select all that apply)

☐ Patents or patient groups
☐ Charities
☐ Practising clinicians
☐ Academic/researchers
☐ Those responsible for NHS procurement decisions
☐ Local AHSN
☐ Other (please specify)
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Please tell us about your application for an SBRI Healthcare award</strong></td>
<td></td>
</tr>
<tr>
<td>8. In your opinion, would your company have undertaken this project anyway in the absence of the SBRI Healthcare contract? (Please select one choice only)</td>
<td>Yes and without any delay, Yes but after some delay, Maybe, Probably not, Definitely not</td>
</tr>
</tbody>
</table>
9. What is the current status of the innovation project for which you received an SBRI Healthcare award? (Please select one choice only)

- Project is ongoing but pre-commercial phase
- Project is ongoing and sales have commenced
- Project has been discontinued
- Project has been completed

Please tell us about how your project progressed after receiving the SBRI Healthcare award
Please tell us about how your project progressed after receiving the SBRI Healthcare award

10. **What stage of development has your idea reached since your application to SBRI Healthcare?** (Please select all that apply)

- [ ] Proof-of-market achieved (i.e., assessed commercial viability of the idea)
- [ ] Currently developing technical proof-of-concept
- [ ] Technical proof-of-concept achieved
- [ ] Basic product prototype/demonstration unit started
- [ ] Basic product prototype/demonstration unit completed
- [ ] Clinical and/or health economic evaluation of a full prototype/demonstration unit
- [ ] Feasibility/pilot efficacy trials started
- [ ] Feasibility/pilot efficacy trials completed
- [ ] Pivotal trials started
- [ ] Pivotal trials completed
- [ ] Received regulatory approval and currently commercialising the product
- [ ] Launched onto the market
11. In addition to your SBRI Healthcare contract, how have you co-funded your project? (Please select one option per row)

<table>
<thead>
<tr>
<th>Source of Funding</th>
<th>£0</th>
<th>£1 - £40,000</th>
<th>£50,000 - £99,999</th>
<th>£100,000 - £499,999</th>
<th>£500,000 +</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government R&amp;D grants</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Public sector R&amp;D contracts (incl. NHS contracts)</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Loans</td>
<td>☐</td>
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</tr>
<tr>
<td>Downstream private equity (e.g. angel investment or VC)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Sales/licensing of the technology under development</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>Sales/licensing of the company</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

12. Have you applied for or been awarded funding from any other source in addition to SBRI Healthcare?

- Yes
- No
13. Have you applied for or been awarded funding for your idea from any of the following sources? (Please select all that apply)

<table>
<thead>
<tr>
<th>Source</th>
<th>Applied</th>
<th>Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIHR Innovations for Innovation programme</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Department of HealthWellcome Trust Health Innovation Challenge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovate UK - SMART</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovate UK/Medical Research Council - Biomedical Catalyst</td>
<td></td>
<td></td>
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<tr>
<td>EU FP7/Horizon 2020</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other SBRI competitions (i.e. other than SBRI Healthcare)</td>
<td></td>
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</tr>
</tbody>
</table>

If you have applied for funding for your idea from any other sources, please specify which sources and whether you were awarded the funding.


14. Has your company received any of the following forms of government support during this project? (Please select all that apply)

- [ ] R&D tax credits
- [ ] Innovation Vouchers
- [ ] Support from Catapult Centres
- [ ] Support from Knowledge Transfer Partnerships
- [ ] Access to business incubators/accelerators
- [ ] Technical transfer and/or business development services
- [ ] Brokering links with networks supporting downstream development, commercialisation or uptake
- [ ] Link with local AH/HSN
- [ ] We haven’t received any other financial or non-financial governmental support during this project
- [ ] Other (please specify)
Please tell us about the outputs from your SBRI Healthcare-funded innovation to date

15. If your SBRI Healthcare-funded innovation has been launched on the market, please tell us what have been the approximate sales (£) it has generated from the following customers to date:

<table>
<thead>
<tr>
<th>Category</th>
<th>Sales (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHS</td>
<td></td>
</tr>
<tr>
<td>Other UK customers</td>
<td></td>
</tr>
<tr>
<td>Exports to EU customers</td>
<td></td>
</tr>
<tr>
<td>Exports to international customers</td>
<td></td>
</tr>
</tbody>
</table>
16. **What type of benefit(s) has your project delivered, or do you expect it will deliver, and to whom?**

(Please select all that apply)

- [ ] Improved patient outcomes and/or recovery rates
- [ ] Increased compliance and adherence to existing treatments
- [ ] Reduction in duration of existing treatments
- [ ] Improved patient/carer experience
- [ ] Net cost savings to the NHS
- [ ] Other (please specify)
Please give us your views on barriers to and enablers of NHS uptake of your product/service

The remaining questions are not specific to individual awards. For these questions, if you have received awards from SBRI Healthcare for more than one innovation, please consider ALL awards received when answering.

**17. What have you found to be the three greatest barriers to uptake by the NHS of your SBRI Healthcare-funded innovation(s)?** (Please select up to three most important barriers)

- [ ] Technical issues experienced with product/service
- [ ] Lack of resources for further development of product/technology meaning it can't reach market readiness
- [ ] Regulatory and clinical approval processes
- [ ] Lack of motivation and accountability for innovation uptake, combined with inertia/resistance to change
- [ ] Lack of skills and capacities for uptake (e.g. staff may require extra training to work with the new product/service)
- [ ] Difficult to reach relevant customers
- [ ] Difficult to integrate with current care pathways and infrastructures
- [ ] Procurement/ Tendering processes
- [ ] Other (please specify)

**18. What have you found to be the three greatest enablers of uptake by the NHS of your SBRI-funded innovation?** (Please select up to 3 enablers)

- [ ] Involvement of clinicians in the product/service development process
- [ ] Involvement of patient representatives in the product/service development process
- [ ] Dedicated time and resources to understanding NHS procurement processes
- [ ] Awareness raising with NHS commissioners
- [ ] Local pilots using the product/service
- [ ] Potential availability of policy/guidelines (e.g. NICE Guidance, including MedTech Innovation Briefings) on my type of product/technology
- [ ] Professional body recommendation
- [ ] External publication about the product/service (e.g. article in a journal)
- [ ] Other (please specify)
**Please give us your views on improving the SBRI Healthcare process**

**19. To what extent do you agree with the following statements about the application and selection process for an SBRI Healthcare award?** (Please select one option per row)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The briefing document was clearly written and challenging to be answered</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>being concise and focused, providing clear guidance on where our technology would fit</td>
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<tr>
<td>The steps and requirements of the application process were clear</td>
<td>☐</td>
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<tr>
<td>Applying for the SBRI Healthcare award was easy</td>
<td>☐</td>
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<tr>
<td>The feedback on the application was helpful</td>
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<tr>
<td>The selection process fair</td>
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</tbody>
</table>

**20. How helpful or otherwise did you find the following types of support offered by SBRI Healthcare during the course of your project?** (Please select one option in each row)

<table>
<thead>
<tr>
<th>Support Type</th>
<th>Very unhelpful</th>
<th>Unhelpful</th>
<th>Neither helpful nor unhelpful</th>
<th>Helpful</th>
<th>Very helpful</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBRI Healthcare funding</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<td>Contract setting</td>
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<tr>
<td>Identifying maintenance/deliverables</td>
<td>☐</td>
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<tr>
<td>Quarterly review</td>
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<tr>
<td>Reporting</td>
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<tr>
<td>Health economics</td>
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</tbody>
</table>
2.1. How helpful or otherwise were any additional types of support offered by SBRI Healthcare during the course of your project? (Please select one option in each row)

<table>
<thead>
<tr>
<th>Support Type</th>
<th>Very unhelpful</th>
<th>Unhelpful</th>
<th>Neither helpful nor unhelpful</th>
<th>Helpful</th>
<th>Very helpful</th>
<th>Not applicable (did not receive this type of support)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business case support and business advice</td>
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<tr>
<td>Brokering networks and access to potential NHS clients</td>
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</tr>
<tr>
<td>Brokering networks and access to potential investors/funders</td>
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<tr>
<td>Rates associated with SBRI Healthcare funding</td>
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<tr>
<td>Other (please specify)</td>
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<tr>
<td>Please give us your views on improving the SBRI Healthcare process</td>
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<td>---------------------------------------------------------------</td>
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</tbody>
</table>

* 22. **Would you apply for another SBRI Healthcare competition in the future?** (Please select one option only)
  - [ ] Yes
  - [ ] No

If 'No', please specify why not: [ ]
<table>
<thead>
<tr>
<th>Please give us your views on improving the SBRI Healthcare process</th>
</tr>
</thead>
<tbody>
<tr>
<td>23. Please provide details of any positive aspects of the process of SBRI Healthcare competitions.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>24. Please provide details of any negative aspects of the process of SBRI Healthcare competitions.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>25. Please use this space for any additional comments you may have on the process of SBRI Healthcare competitions.</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Thank you for your time. Your views are important and will inform the future implementation of the SBRI Healthcare programme.
Appendix D. Detailed methods for interviews with SBRI Healthcare award recipients

During the period 17–23 November, we interviewed five individuals who were representatives of companies that were awarded SBRI Healthcare funding and had responded to the survey. The purpose of these interviews was to gather further contextual information about the reasons for their responses, as such information would aid in the interpretation of the findings from the survey for SBRI funding recipients, as well as other evidence gathered.

This set of interviews was intended to complement the survey data rather than provide a means to obtain a ‘representative sample’ from across all companies. We sought to select a sample with diverse experiences and views, and we used the following sampling approach (making use of the companies’ responses to the survey):

1. Two companies were selected for whom SBRI was not the only help they had sought/obtained (with the rationale that they could shed light on the relative role, additionality, and pros and cons of SBRI Healthcare funding compared with the other sources of funding).

2. Three companies were selected that represented different levels of success in developing their product/service and reaching the market (with the rationale that they would discuss the role that the SBRI funding played in diverse scenarios). Within this group, the breakdown was:
   - One company that has taken a product to market,
   - One company that had not reached market and reported mainly positive experiences with the SBRI Healthcare programme, and
   - One company that had not reached market and reported more negative experiences with the SBRI Healthcare programme.

Interviews were semi-structured and built on the interviewee’s survey response, following the protocol reproduced at the end of this Appendix. They covered the following broad topic areas:

- Proposal application and selection process
- Project benefits and evidence obtained to support that
- Outcome of the funded project/idea – and how far SBRI Healthcare helped along the way
**Analysis:** The interviewer took partial notes during the interview and then, after the interview, completed the notes and transcribed notable quotes by referring back to the audio recording. These notes and quotes were then reviewed by the study team, and useful comments and contextual information were included in the main report.

**Invitations:** Interviewees were invited to the interview via email by a member of the research team using the template reproduced at the end of this Appendix, and including the participant information sheet (in Appendix B). The information sheet describes the purpose of the project and interview, and how the data gathered would be used.

**How conducted:** All interviews were carried out by telephone and lasted 30–45 minutes. In each interview, there was one lead interviewer. In most interviews, a second researcher took notes and, occasionally, asked follow-up questions. Interviews were audio recorded.

**Confidentiality and consent:** Prior to the interview, interviewees were sent a link to an online consent form which asked the following questions and requested a yes or no answer:

1. I confirm that I have read the attached information sheet on the above project and have had the opportunity to consider the information and ask questions and had these answered satisfactorily.
2. I understand that my participation in the study is voluntary and that I am free to withdraw at any time without giving a reason and without detriment to me. If I withdraw from the study all of my data will be deleted. I understand that it will no longer be possible to withdraw my data from the study after findings have been published.
3. I understand that the interviews will be audio-recorded.
4. I agree to the use of anonymous quotes.

This information was reviewed at the start of the interview. Some interviewees did not fill in the form prior to the interview, and they were asked to provide oral consent and submit the form at completion of the interview. All interviewees either filled in the consent form or gave oral consent (or both), but some did not fill in the online consent form after one or two post-interview reminders having been sent. They were sent one final email stating that the answers to all the questions would be assumed to be ‘yes’ unless they replied with other information within two weeks.

To respect confidentiality, interviewee comments are reported with a reference to the interviewee code.

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303CL, CM and JS conducted these interviews.
Interview protocol for SBRI Healthcare funding recipients

A. Introduction and background

1. [See Survey Q4 (type of innovation) and Q5 (stage of development when they applied).] Can you please briefly tell us about yourself, your company and the innovation that was the focus of your survey response:
   a. What is your current role?
   b. For how long have you been with your company?
   c. How has your company engaged with the SBRI Healthcare programme? (What funding have you received? Which call(s) did you respond to? Have you applied for funding and not received it?)
   d. Would you briefly describe/explain the innovation that you were referring to in your survey response?
      [Describe to the interviewee what we know from their survey response, about the stage the innovation is at, any sales there have been, the types of benefits it is expected to bring to the NHS and patients]

B. Proposal application and selection process

2. How much time/effort/expense was involved for your company in preparing the proposal and going through the selection process?
   a. Do you think this was an acceptable amount of time/effort/expense (considering the benefits you got from it, and/or compared with other sources of support)?

3. [Refer to survey q19] Overall what do you think worked well in the process, from the first moments when you were getting information about the call and the topic to address and how to apply, through to the end of the selection process?
   a. Did anything not work well?

4. [Refer to survey q7] You said in your answer to survey Q7 that you consulted with XX during the application process – how important were these interactions and why, what impact did they have?

5. Did you receive any feedback from the SBRI Healthcare programme team or selection panel during the selection process?
   a. How detailed was the feedback and what areas did it focus on?
   b. How useful was it and why?

6. In your view, how could the application and selection process be improved?
   [Refer to any relevant comments in answer to survey Qs23-25]
C. **Project benefits**

7. In your answer to survey Q16, you said that your project had, or would lead to, benefits of the kind XX. Could you say more about that?
   a. What are the benefits and for whom?
   b. Have they already materialised or are they expected in the future?
   c. What evidence do you have about these benefits (or potential benefits)? Is there documentation about them that a 3rd party (e.g. DH, NHS England) could see?

D. **Outcome of project/idea – and how far did SBRI Healthcare help along the way?**

8. [see survey q9-10] You said that your project is currently XX stage and your product is now in YY stage.
   a. How far would you have got by now, do you think, in the absence of the SBRI Healthcare award? Could you explain why you think that?
   b. What did SBRI funding enable you to do in terms of movement along the innovation pathway?

9. [If product has been launched onto market – see survey q15] In the survey, you indicated your product has been launched onto market and you provided some sales figures. [see survey q16] You also mentioned some barriers and enablers of NHS uptake of your product.
   a. Could you say more about the main challenges you encountered and successes you had in the process of getting to market?
   b. [if they have exported] How did the process compare for the UK vs external markets?
   c. Did the SBRI Healthcare programme help in any way with linking to the NHS or anything else? If so, how?
   d. What about AHSNs?
   e. Do you expect to expand sales to the NHS, and to other markets, in the coming years? What main factors will affect the extent and rate of expansion?
   f. Do you feel the SBRI programme could or should be doing more to help address the barriers you have encountered? What specifically could it do?

9. [If product has NOT YET been launched onto market – see survey q15] In the survey, you indicated your product has not yet gone to market. [see also survey q17-18 on barriers/enablers]
   a. Are there any particular challenges you are facing?
   b. What about factors that you think will help you go to market?
   c. What future plans do you have – e.g. do you plan to try to get the product taken up by the NHS or export it?
   d. Has the SBRI Healthcare programme been helping in any way with linking to the NHS or anything else?
   e. What about AHSNs?
   f. Do you feel the SBRI programme could or should be doing more to help address the barriers you have encountered? What specifically could it do?
10. [see survey q20] The SBRI Healthcare award comes with funding and some other forms of support and feedback, such as a health economics report and quarterly review. In the survey, you said that XX were helpful and YY were not helpful. Could you say a little more about the reasons for this?

11. [see survey q21] We also asked in the survey about other types of support you may have received. You indicated that XX were helpful and YY were not. Could you say more about the reasons for this?

12. [if not already discussed above] Have you interacted with any Academic Health Science Networks?
   a. How?
   b. Was it helpful?
   c. Was this interaction linked to your SBRI Healthcare award?

13. Overall, aside from funding, what type of support would you most like to receive from the SBRI Healthcare programme going forward?
   a. Imagine the SBRI Healthcare programme hadn’t offered any funding, but had provided only the other forms of support you received, how helpful would that have been?

14. [See survey q11-14] You said that you had XXX [other forms of funding and support].
   a. Why was this additional support necessary?
   b. Did SBRI Healthcare help or hinder you in obtaining this funding/support? How?
   c. What was the relative value or importance of the SBRI Healthcare funding and support compared with these other sources?

E. Final questions/comments

15. More generally, do you have any thoughts on how the programme could further improve in the future?

16. You said in your response to survey Q22 that you would/would not apply again for the SBRI programme and [if relevant] gave the following reason(s) why not: XXX.
   a. Could you say more about the reasons?
   b. Is there anything you would like to change (with SBRI Healthcare or with your approach) if you were to apply again?

17. [Picking up explicitly on any comments given in survey questions 20, 21, 22] Anything else to add?
Dear [],

Thank you very much for completing the survey we recently ran for our evaluation of the Small Business Research Initiative (SBRI) Healthcare programme. Your views and experience are extremely valuable for the evaluation, and my colleagues and I are grateful for your support.

We are also conducting follow-up interviews with a select group of survey respondents, and I would like to invite you to participate. In this follow-up interview, we would ask you to provide some further details about your survey responses and about your experience with the SBRI Healthcare programme.

The interview would be by telephone and we anticipate it will last 30–45 minutes. We would be able to accommodate your availability over the coming weeks. Could you please let me know whether or not you are available and interested in being interviewed?

I would be happy to provide additional information, should you have any questions. The attached document also provides further details about your participation and the project, which we (RAND Europe) and the University of Manchester are conducting on behalf of the Department of Health.

Thank you again, and I look forward to hearing from you.

Best wishes,

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