LEARNING FROM THE LABS

Volume 2: Evaluating effectiveness, lessons and reflections
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In early 2014, the Innovation Labs Initiative commissioned MindTech to carry out an evaluation of the digital products which were being developed as part of this programme.

Overall, the main aims of the Innovation Labs Initiative were to improve young people’s mental health through creating digital products and increase the third sector’s capacity to build digital products. In commissioning this evaluation, the Labs Initiative was interested in the effectiveness of individual digital products in terms of:

**User Value – Section 3**

- Do intended users engage with the product?
  - User value: engagement
- Why do users value the product?
  - User value: individual

**Intended Value – Section 4**

- Is the product achieving the intended outcomes?
- How does the product add value to existing services, products and sources of support?

**Social Value – Section 5**

- Is the product improving the mental wellbeing of the young people who use it?
THE INNOVATION LABS PRODUCTS

The seven projects are as follows:

**Doc Ready**
Helps young people feel more confident and get better results when they see their GP about a mental health issue. *Launched by Futuregov.*

**Find Get Give**
Support for young people to find mental health support in their area and give feedback on it. *Launched by Right Here Brighton & Hove.*

**Madly in Love**
Relationship and mental health advice for young people and their partners. *Launched by Youthnet.*

**Moodbug**
A tool for sharing how you feel with your close friends and letting them know when you’re thinking about them. *Launched by Mind Apples.*

**Well Informed**
The place to go to for the children and young people’s workforce to get instant, accurate support on youth mental health. *Launched by sixteen25.*

**In Hand**
A digital friend that provides young people with tools, advice and activities when their mental health is at risk. *Launched by FACT.*

**Headmeds**
Accessible, straight talking information on young people’s mental health medication. *Launched by Young Minds.*

You can read more about each project [here](#).
We adopted a mixed method observational approach to this evaluation which ran April 2014 – February 2015. We were interested to observe how and why people were choosing to engage with the digital products, their level of engagement and the nature of the (self-reported) impact on users’ mental wellbeing.

An initial stage was required to agree the methods for the evaluation and select the products for inclusion. We decided not to include Well Informed in the evaluation as the direct target audience was not young people. It was also apparent that the feedback function of Find Get Give would not be developed sufficiently within the time scale of this evaluation and it was therefore not appropriate to include.

The five remaining products (Doc Ready, In Hand, Head Meds, Madly in Love, Mood Bug) were the focus of the first level of the research which aimed to evaluate the digital products with regards to user value (engagement) and intended value.

Two products were selected for more detailed research to evaluate the individual user value and social value of these products. For this stage, we sought to identify the products that had the greatest potential to support individuals with their mental wellbeing and offered the best opportunity to assess this. Doc Ready and In Hand matched both of these criteria most closely and therefore these products were selected.

Following completion of all the data collection and during data analysis, we hosted a shared learning event with the product teams and funders of the Innovation Labs Initiative in January 2015. The aim of this event was to debate the emerging findings from the evaluation and focus on the issue of whether the Innovation Labs Initiative resulted in useful digital products.
Data analytics tools were used to build a picture of the number of users and the ways that users were engaging with the products. All project teams were collecting data via these tools (Google Analytics for HeadMeds, Madly in Love and Doc Ready, and Flurry for Moodbug and In Hand) and either gave us access to data directly, or in a form that we could analyse.

We took a number of measurements from these data over three specified time periods:

1. From the date of individual product launch until 31 October 2014
2. One significant month as selected by the project team
3. October 2014 as the most recent month we could include.

The measurements taken were:

- Overall number of visits/uses
- Bounce rate (the percentage of sessions in which the user left the website from the entrance page without interacting with the site)
- Return rates (proportion of single and multiple visits, or numbers of times used per week)
- Retention (proportion of users remaining after a specified number of weeks)
- Session duration (proportion of short and longer visits)
- Overall frequency of pages accessed (ordered by total number of visits)
- Time spent on pages
The social value of Doc Ready and In Hand were investigated through surveys and interviews with users of these two products. Our objectives were to provide insights into why users value the products and how they support their mental wellbeing.

A specific survey was developed for each product and these were embedded into the products so that users could see the feedback option was available while using them. When a user selected the feedback option they were taken directly to the survey questions, which were hosted on an external website. An incentive prize draw was offered, with three chances to win a £50 high street shopping voucher for each survey. The Innovation Labs website also had a page about the study throughout the survey period, with direct links to the online surveys. Both surveys opened on 22 August 2014, with the In Hand survey running for six weeks (closing on 6 October) and Doc Ready for just over 10 weeks (closing on 5 November 2014).

Once respondents had completed the survey they were invited to register their interest in taking part in a follow up interview by entering their email address. They were then contacted by one of the researchers and given more information about this part of the study. Those respondents who consented then took part in a phone or email interview at a later date.

The survey and interview questions were co-designed with young people who had been involved with the Innovation Labs project. Ethical approval to conduct this evaluation was given by the University of Nottingham, Faculty of Medicine and Health Research Ethics Committee.
Methods for assessing wellbeing outcomes

To make a reasonably confident assessment of how these products affected users’ mental wellbeing, we considered it was important to use an evidence-based measurement tool which had been shown to be valid and reliable. However, in this study, where a wide range of people would be accessing the publicly available websites and apps, we needed to account for a broad range of mental health experience in choosing the most relevant measure. Also, as we were collecting information at one time point only, we needed to decide how best to apply the measure for useful data.

After reviewing the range of possible measures, we selected the seven dimensions of mental wellbeing from the Short Warwick-Edinburgh Mental Wellbeing Scale (Stewart-Brown et al, 2009) and asked users whether they thought the digital products had helped them in any of these areas. During the co-design work with young people, one of these dimension was re-worded to make it more accessible (‘feel optimistic’ changed to ‘have a positive outlook’) and three other dimensions were selected to include in this part of the survey to reflect their interests and experiences (feel ready to talk to someone else; feel less stressed; feel more about to take control). Figure 1 sets out the question about helping with mental wellbeing as it appeared in the online survey.

Figure 1: Assessing mental wellbeing in the product user surveys
(Doc Ready example)
Survey response rates

To assess the response rate to the surveys, we calculated the number of sessions for each product during the survey period and also the number of clicks on the external survey website. As can be seen from Table 1, only a small proportion of total users completed the survey.

Table 1: Response rates to the Doc Ready and In Hand surveys

<table>
<thead>
<tr>
<th>Survey response rates</th>
<th>Doc Ready</th>
<th>In Hand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users during the survey</td>
<td>Over 5,000</td>
<td>Over 3,000</td>
</tr>
<tr>
<td>(total number of sessions)</td>
<td></td>
<td>iPhone – 1439</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Android – 1568</td>
</tr>
<tr>
<td>Clicks through to survey page</td>
<td>313</td>
<td>592</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iPhone (actual) – 287</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Android (estimated) – 305</td>
</tr>
<tr>
<td>Clicks to start the survey</td>
<td>167</td>
<td>234</td>
</tr>
<tr>
<td>Completed surveys submitted</td>
<td>56</td>
<td>131</td>
</tr>
<tr>
<td>Opted into interview</td>
<td>18</td>
<td>24</td>
</tr>
<tr>
<td>Completed the interview</td>
<td>5</td>
<td>8</td>
</tr>
</tbody>
</table>
In this section of the report, we present the findings relating to user value – both in relation to engagement with the products and how individual users valued the products.

3.1 DO INTENDED USERS ENGAGE WITH THE PRODUCT?

From the data analytics we can understand the numbers of people who use the products and the nature of their engagement (time, frequency, which functions etc.), however, this alone does not help us understand if those engaging with them are the ‘intended’ users. For this we needed to know something about who was using the products – therefore, we explored this in relation to Doc Ready and In Hand through the online surveys. It is also interesting to explore how users started their engagement with the products and again we can say something in relation to Doc Ready and In Hand about this.

Beginning to engage

By far the main way that users had discovered and begun to engage with Doc Ready and In Hand, was through digital social media channels, internet search engines and links from other websites (see table 2 below).

Only a small number of users had learnt about the products through health services, youth services or schools (professional recommendation). Given the teams developing these products were outside of the statutory health and education service, this is perhaps not surprising. Even when one partner was part of an NHS trust (In Hand), there seems to have been little penetration into NHS services. We discuss the implications of this further in Section 4.2.
Who is using the products?

The main target audience for the Innovation Labs Initiative was intended to be young people with experience of mental health problems (Boardwell and Roberson, 2014). Responses to the Doc Ready and In Hand surveys suggest that while most users of the digital products are young and report experience of mental health problems, other people are also accessing and using these products (see table 3). This is not surprising given that they are publicly and freely available. Once we realised that older people were a significant minority of those users responding to the survey, we sought to interview at least one user in the higher age groups for both In Hand and Doc Ready. And while different groups are in the minority, the survey results show that the products have similar utility for these different groups, with one notable exception.

There were no obvious trends between the younger (aged 16-25) and older (aged 26 years plus) survey respondents in how they reported the ways Doc Ready and In Hand helped with their mental wellbeing. Similarly, for In Hand there were no differences between those who reported they had experienced mental health problems and the other groups in relation to how they reported it helped with their mental wellbeing. However, for Doc Ready, there was a detectable difference – a higher proportion of those with mental health problems were more likely to report it had helped with their mental health, suggesting that those with experience of mental health problems got most out of using Doc Ready.

Table 2: How did you find out about Doc Ready and In Hand?

<table>
<thead>
<tr>
<th>Source</th>
<th>Doc Ready</th>
<th>In Hand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital social media</td>
<td>34%</td>
<td>50%</td>
</tr>
<tr>
<td>Internet search engines</td>
<td>5%</td>
<td>21%</td>
</tr>
<tr>
<td>Links from other websites</td>
<td>21%</td>
<td>12%</td>
</tr>
<tr>
<td>TV or radio</td>
<td>4%</td>
<td>5%</td>
</tr>
<tr>
<td>By recommendation (professional)</td>
<td>13%</td>
<td>11%</td>
</tr>
<tr>
<td>By recommendation (personal)</td>
<td>9%</td>
<td>0%</td>
</tr>
<tr>
<td>Involvement with the project</td>
<td>13%</td>
<td>2%</td>
</tr>
</tbody>
</table>

*Percentages do not total 100 due to rounding*
The interviewees in the older age groups reported that they found the tools to be suited to them and their needs. One In Hand user expressed surprise when she realised that the tool had been developed specifically for younger people and she wondered why only that age group was being targeted.

“It was a bit of a shock that it was aimed at a different age group – I’ve found it so much help and I know other people who have too…. I think even though it’s pointed at a younger age group, there was a question mark about why it wasn’t opened up to a wider age group”

– In Hand user 6

These findings show that while targeted at particular audiences, digital products will get used by other people. Therefore, it’s important to consider the implications or consequence of this during product development. As we discuss in Section 6, it’s important that no harm should arise from products being used in ways not originally intended.

Table 3: Age and mental health of the survey respondents

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Doc Ready</th>
<th>In Hand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-25 years</td>
<td>67%</td>
<td>76%</td>
</tr>
<tr>
<td>26-39 years</td>
<td>20%</td>
<td>13%</td>
</tr>
<tr>
<td>40-59 years</td>
<td>13%</td>
<td>11%</td>
</tr>
<tr>
<td>Experience of mental health problems?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>80%</td>
<td>60%</td>
</tr>
<tr>
<td>No</td>
<td>14%</td>
<td>20%</td>
</tr>
<tr>
<td>Not sure</td>
<td>4%</td>
<td>15%</td>
</tr>
<tr>
<td>Prefer not to say</td>
<td>2%</td>
<td>5%</td>
</tr>
</tbody>
</table>
To what extent are users engaging with the products?

The summary of how users engaged with each product is set out in the individual tables on pages 13 to 17. These tables describe the overall usage, level of engagement and the way in which users interact with each product (what they do with it). Overall a number of clear messages emerged from this analysis:

- Each product is building its audience – although the actual numbers vary across the five products, we can see that each product has, right from launch, reached people and continued to build its audience.

- We observed a clear effect of marketing - the teams primarily selected target months that related to marketing activity and in all cases an increase in usage can be seen at those times.

- It is important not to conflate usage with engagement – for each product we identified the time required for ‘meaningful engagement’, that is, the minimum time a user needs to spend on the site/app to have an interaction which relates to the purpose of the product (e.g. for Moodbug, this was the time required to complete a ‘mood share’) and in all cases those using the product meaningfully was a smaller proportion of the total users.

- Likewise, it is important to account for the ‘bounce rate’ when interpreting number of uses of websites. For two of the products (Madly in Love, Head Meds) 60-70% of users did not interact with the site before leaving, raising questions about whether they were engaging with the content. Whereas, for Doc Ready, a bounce rate of 2% was recorded, which is extraordinarily low. One interpretation is that almost all visits to the site were intentional, as there was some interaction.

- As might be expected, return rates were much higher for the mobile apps than websites.

- Anticipated popular topics may not be the most frequently accessed pages in practice.

- The ordering of content on pages might influence which content is selected, for example, items that appear at the top of the list, might be selected more frequently because of their position so may appear more useful than they actual are.
**Doc Ready** launched in September 2013 and the target month selected by the team was June 2014 as the tool featured on Reddit (a social news website) that month. Therefore, we analysed usage and engagement for September 2013 – October 2014 (13 months), June 2014 (1 month) and October 2014 (1 month).

### Users and sessions

In total for the 13 month period, there were 35,000 user sessions on **Doc Ready**. However, 27,000 of these are accounted for the target month (Reddit). In October 2014, there were 2,700 user sessions.

Bounce rates were low – around 2% overall and less than 1% for new users, suggesting that as most users interacted with the website, they arrived at it intentionally.

### Retention

The majority of sessions are by new users with around 16% users returning to the tool – this is consistent over the period and during June 2014. Around 10% of users have returned twice and 3% three times.

### Engagement

The minimum time for meaningful engagement agreed with the team was 60 seconds. A little over a quarter of user sessions (around 26%) lasted for 60 seconds or more and this is consistent across the whole period and including June 2014.

### Events/Behaviour

After the home page, the most frequently visited pages were 'build' checklist (also called picker), 'checklist' to review the built checklist, and the 'advice' page, in that order. Only around 3% of sessions included selection of 'see' checklist (also called the export page) where the user can choose to either print, download or email a version of their completed checklist.

It is useful to note that after the home page, the 'build', 'see' and the function on the 'checklist' page that allows the user to order their items were the top-rated sections of **Doc Ready** by respondents to the website survey.

It is possible to analyse which of the topics were selected most frequently, but caution is required because the most popular one ‘sleep’ is also the topic that appears at the top of the ‘build’ page (even if the user changes the layout of the items on it):

- Following 'sleep', the most frequently selected topics in descending order were: moods; feelings; worries; thoughts.
- The least frequently selected topics were: drink and drugs; memories; actions; appetite.

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What is meant by these terms are explained in section 2.1.
In Hand launched on 14 May 2014 and the target month selected by the team was the first month the app was publicly available as they were interested in the impact of their initial marketing campaign. Therefore, we analysed usage and engagement for May – October 2014 (6 months), 14 May – 13 June 2014 (1 month) and October 2014 (1 month).

The app is available on both iOS and Android platforms. The analytics data are reported for both of these combined, unless we detected a notable difference between platforms.

<table>
<thead>
<tr>
<th>Users and sessions</th>
<th>Since launch to the end of October 2014 (5 ½ months), there were around 5,600 new users of the app who engaged with over 22,000 individual sessions. iPhone users accounted for around 70% of users and sessions.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retention</td>
<td>While most sessions were from returning users (75%), there is considerable drop off of users over time. Around 16% of the users were still active after one week, 7% after 4 week and 2% after 20 weeks (although this is based on small number given the short time period since launch).</td>
</tr>
<tr>
<td>Engagement</td>
<td>Meaningful interactions with In Hand can be quick because the app has simple functions: meaningful engagement is possible in around 30 seconds. Overall, 60% of user sessions lasted over 30 seconds. The median length of session was 40 seconds. Average session length has reduced over the time period, possibly suggesting that people become adept at using it quickly.</td>
</tr>
<tr>
<td>Events/Behaviour</td>
<td>The most frequent top level menu selection was ‘So-so’, followed in descending order by ‘Not good’, ‘Great’ and ‘Awful’. For the iPhone users, we know that viewing quotes was by far the most frequent event – an event is recorded for each time a user reloads a quote (this data was not collected by Flurry for Android phone users). However, the extent to which this is the most popular event is difficult to conclude as viewing multiple images after selecting 'Great' is not recorded in the same way. It is also useful to note that, after the home screen, the quotes section was the most highly rated part of In Hand by respondents to the survey.</td>
</tr>
</tbody>
</table>
**Users and sessions**

HeadMeds launched at the end of March 2014 and the target month selected by the development team was September 2014 as this was when their target audience would be returning from summer holidays. Therefore, we analysed usage and engagement for three periods: April – October 2014 (7 months), September 2014 (1 month) and October 2014 (1 month).

Since 31 March 2014, there have been over 66,000 user sessions in total. Of these, around 13,000 were in September 2014 and around 20,000 in October 2014. User sessions have increased over time as the average per month preceding September was around 6,500.

The bounce rate of new and returning users and across the time periods ranged from 60–70%. This suggests that between 30–40% of total visitors landing on HeadMeds interact with the resource in some way.

**Retention**

85% of users are new users, with around 15% using HeadMeds more than once.

**Engagement**

In discussions with the team, we agreed two types of engagement are possible with HeadMeds – light engagers are those that skim to find a specific piece of information (10–60 seconds), while to engage more deeply with the content (search for medications, watch/read My Stories etc) will require a longer time, for example, 1 minute or more. The average session duration was 1.25 minutes for new users and 2.5 minutes for returning users. When we remove the ‘bounces’ from the overall number of visits (new and returning), we find that around 32% of users are light engagers and 68% engaged more meaningfully with the site’s content. However, it should be noted that some of the ‘bounces’ may also be light engagers if they land on the page which has the information they require.

**Events/Behaviour**

There are over 100 pages of web content on HeadMeds, therefore we took a pragmatic decision to look at the top 20 pages viewed as this forms the first page of the Google Analytics reports. The number of pages visits (after the home page) for the total period for the top 20 pages ranged from over 3,000 down to around 700. The patterns found in the total period were similar in the target months.

Thirteen of the top twenty pages visited were medication information pages – these included the 'Sex, drink, weight and everything else’ pages for seven medications, the ‘warnings and side effects’ for five medications and ‘use and action’ for one. Other pages in the top twenty were condition information for four different conditions and two personal stories.
**Madly in Love** launched on 12 February 2014 to coincide with St Valentine’s day and the development team chose the first month as their target month as the launch was supported by a Spotify playlist marketing campaign and competition.

Therefore, we analysed usage and engagement for the periods 12 February – 31 October 2014 (8½ months), 12 February – 11 March 2014 (1 month) and October 2014 (1 month).

<table>
<thead>
<tr>
<th>Users and sessions</th>
<th>There were 14,000 user sessions to the end of October, with 6,000 of these in the first month after launch, which compares to 1,500 in October 2014. The bounce rate of new and returning users and across the time periods ranged from 60 to 70%. Therefore, this suggests that around 30-40% of total visitors landing on <strong>Madly in Love</strong> interact with the resource.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retention</td>
<td>Most users are first time users (85%), with 15% returning at least once. However, if we adjust these numbers to take account of meaningful engagements with the site, the return rate can be estimated at 40%.</td>
</tr>
<tr>
<td>Engagement</td>
<td><strong>Madly in Love</strong> is a content rich website, therefore the level of meaningful engagement was agreed as at least one minute. Taking this approach, there have been around 3,000 users engaging with the site over the full period. Of these, 1,500 are one time users, 1,200 have visited twice and 300 three times.</td>
</tr>
<tr>
<td>Events/Behaviour</td>
<td>The Spotify playlist competition was by far the most popular aspect of <strong>Madly in Love</strong> and has resulted in the playlist section of the site visited 14 times more often than other sections. But this was only during the competition. By October 2014, most users are interested in the advice and shared experience features.</td>
</tr>
</tbody>
</table>
**Moodbug** launched in June 2014 and the month chosen by the development team was October 2014 as marketing activity took place. Therefore, we analysed usage and engagement for only two time periods for this tool: June – October 2014 (5 months) and October 2014 (1 month).

Flurry had not been set up to collect event data which would have recorded which pages of the app people visited and the actions they took while using it. Therefore, we are unable to report the events/behaviour data for **Moodbug**.

| Users and sessions | By 31 October 2014, there were 433 new users of Moodbug, of these 132 had joined in October 2014 showing the effect of marketing. They participated in nearly 4000 user sessions.  
The number of user sessions in October (around 1000) was slightly higher than the monthly average (around 850). |
|-------------------|--------------------------------------------------------------------------------------------------|
| Retention         | 89% of users are classed as ‘returning users’ as they launched more than one session of the app.  
Users active after one week = 16%  
Users active after 4 weeks = 8.5% |
| Engagement        | The minimum time for a meaningful engagement with **Moodbug** was designated at 30 seconds – this is how long it takes an experienced user to rate and share their mood. More than half of users (53%) used it for this long, with the average duration on the app being 35 seconds. |
3.2 WHY DO USERS VALUE THE PRODUCTS?

Insights were gained into why users valued Doc Ready and In Hand from the user surveys and interviews. In this section, we take each product in turn and report the findings that illuminate the elements of the products that users valued.

Doc Ready was valued by its users because of its core function – the ability to create and use a checklist when seeking help from a health professional for mental wellbeing support.

The vast majority of survey respondents were attracted to use the tool to get their thoughts organised for an appointment (91% of survey respondents rated this as important or very important). Other reasons rated highly were privacy (85%), and being able to find out about their rights (80%). Similarly, building, seeing and ordering the checklist pages were the top rated sections of Doc Ready (after the home page).

Prior to using Doc Ready, just over one third of users (36%) had done nothing to prepare for an appointment, while one third (34%) had thought about what they wanted to say and another third (32%) had written their thoughts down, suggesting that using Doc Ready prompted a change in practice for most individuals responding to the survey.

The interviewees valued the checklist and thought it could be used in a number of ways. The younger interviewees, in particular, thought they would give the list to their GP to read as they felt they may be unable to talk to them directly about how they were feeling. Others thought the value was in keeping them focused and not forgetting what they wanted to say. They felt this was especially important when feeling anxious, low or having muddled thoughts. However, the checklist was also valued as a tool to help the user feel in control of the appointment.
One interviewee had used the checklist on her phone, referring to it during an appointment. She said:

“I could check that I was saying everything... it was about me keeping myself on track and feeling in control of the appointment”
– Doc Ready user interview 4

The topic categories on the build the checklist page, not only enabled users to prepare a checklist, they also served other important functions. One interviewee found these gave reassurance that others were feeling similar things:

“like you know you’re not alone, there are others who have similar things”
– Doc Ready user interview 2

Others found that the topics helped them realise what was important to mention to the GP and that the way they were feeling warranted seeking help:

 “[it] made me realise certain things were worth mentioning that I previously might have put down to nothing of important i.e. insomnia”
– Doc Ready survey respondent

Overall, as the results indicate, survey respondents were very positive about Doc Ready, viewing it as a useful tool. This was confirmed across a number of different measures of satisfaction:

- Survey respondents gave Doc Ready an average global score of 8.09 out of 10
- 87% of respondents agreed (39%) or strongly agreed (48%) it was easy to use
- 80% of respondents said it had partly (9%) or completely (71%) met their needs
- Over half of respondents said they would use it again for getting ready to attend an appointment (56%) and preparing a checklist
Feedback from In Hand users via the survey suggested that while people valued the opportunity to think about their mental wellbeing, it was the ability to do this on their own personal mobile device (phone or tablet) that was important. For example, 86% of respondents thought ‘being able to use In Hand wherever I am, whatever I’m doing’ as important or very important. Similarly, ‘using my phone/tablet to manage things’ (79%) and ‘it is private and no-one else would see how I’m feeling’ (78%) were highly rated. This interest in using an app on their phone or tablet was also supported by the interviewees. They talked about In Hand being ‘discrete’, ‘private’ and ‘it doesn’t matter where you are’.

The interviewees elaborated on this theme, by describing the importance of the app being anonymous and non-judgemental. They liked that it wasn’t a person they were interacting with: it gave them the opportunity to think about how they were feeling without involving others, either personally or professionally:

“Sometimes, you don’t want to tell people that you’re feeling awful and you need help. And sometimes, you don’t want to tell people you are feeling great, because you have this label [depression] that [other people think] you’re never going to feel great.”
– In Hand user interview 7

“There’s no-one to trust on your app – it’s just asking you how you are feeling. There’s no come back or no-one’s going to say anything back”
– In Hand user interview 1

Feedback from the survey and user interviews showed that people were generally using In Hand in one of two ways – to either regularly assess how they were feeling or to use it to give them a boost when feeling low or anxious.
81% of survey respondents had said they had tried **In Hand** because they wanted to think about how they were feeling. In free text answers they described how they wanted to increase their awareness, understand their emotions and acknowledge how they were feeling. Interviewees described how they noticed that by doing this simple reflection regularly, they often realised that their mood may not be as low as they initially thought:

“Sometimes, I’ve looked at [In Hand] when I feel crap, but when you look at the options, it’s actually only ‘So-so’, so you feel better because you don’t actually feel awful. It’s really helpful having those options”
– **In Hand** user interview 1

Other survey respondents and interviewees described how they used **In Hand** to provide them with distraction and lift their mood at times when they felt low or anxious:

“I use it when I feel anxious and because it’s portable it’s quite useful as well... it’s for my anxious days... when I’m feeling ok, I’m not looking for distraction, I just want to get on with things as normal” – **In Hand** user interview 4

“I use it frequently when I want to feel better fast. The main menu is what I use the most. Usually I like to play music or call a friend when I’m having a bad day. It reminds me to do this” – **In Hand** user interview 5

Overall, as the results above indicate, survey respondents were very positive about **In Hand**, viewing it as a useful tool. This was confirmed across a number of different measures of satisfaction:

- Respondents gave **In Hand**, on average, 7.27 out of 10 on a global score.
- 92% of respondents agreed (27%) or strongly agreed (65%) it was easy to use.
- 68% of respondents said it had partly (33%) or completely (35%) met their needs.
- 65% of respondents said they would definitely use it again when they are not feeling good and 32% said they would definitely use it as part of their daily routine.
- 84% of respondents would recommend it to their family or friends.
3.3 CONCLUSIONS

In conclusion, the data relating to engagement and individual user value has identified a number of useful findings.

For Doc Ready and In Hand, we can see that:

- Users are engaging with the digital products through primarily digital means (social media, web searches and links from other web resources).
- They are being used predominantly by the intended audience – young people with experience of mental health problems, although other people are also finding them useful.
- Both products were rated highly on a range of different measures of satisfaction.
- Users reported value for the products relate to their defining characteristic:
  - For Doc Ready this relates to the checklist function.
  - For In Hand this relates to its format as a self-contained app.

We found that, at present, there is limited access to these products through statutory services, such as NHS, education and youth services. We explore this further in section 4.2 when we analyse the place these products occupy in the wider landscape of digital mental health for young people.

By analysing the analytics of the five products, we can see that they are all building their audiences and starting to demonstrate engagement. The extent of this varies across the five products and while we do not think there is value in comparing these numbers, it is clear, as we would expect, greater investment in marketing and audience engagement has resulted in greater usage. What is evident, is even though these products are all at very early stages – the versions they have released are considered to be first iterations (or Minimum Viable Products) – they have, in the main, achieved impressive levels of engagement in relatively short timescales. This is a real testament to the efforts and dedication of the product teams.
In this section, we present the analysis relating to the intended value of the digital products. This includes an assessment of emerging evidence of outcomes and how the products fit into the digital mental health landscape.

4.1 IS THE PRODUCT ACHIEVING THE INTENDED OUTCOMES?

In working across the five products included in this evaluation, we first need to state how differently the teams approached the development and production of the products and related this to specific outcomes for product end-users. We will say more about the implications of this later, but first it is useful to identify the two main factors that contributed to this variation.

First, there were a range of different types of organisations leading the product development. In Learning from the Labs (Boardwell and Roberson, 2014), it was identified that most of the organisations funded by the Labs were unfamiliar with processes around the development of social technology. It was also clear from our experience, that while third sector organisations provide valuable information, support services and strong engagement with their users, they do not always view these as programmes to bring about specific behaviour change. For example, in the team interviews, participants were able to clearly articulate what they had achieved during the project and measures of success, such as usage and brand reputation, even if they were less clear about the intended outcomes for end users of the products.

Second, while the individual products had been scoped out in the earlier Labs phase and set out in the detailed functional specifications used in the commissioning process, which were inclusive of anticipated outcomes for end users, the individual project teams had to ‘own’ their product and develop it in the direction suggested by their knowledge, expertise and development approaches the teams adopted.
As the interactive, Agile process expects, all products teams made some changes to the original vision for the product. These changes were in response to the views, needs and feedback received from the engagement work, with most teams describing the process as co-production (or co-creation) with young people. However, for some teams the distance travelled from the original specification to the end product was significant, meaning that the anticipated outcomes set out earlier were no longer relevant. When this occurred, it was not always the case that revised outcomes were clearly articulated or documented for the newly defined product.

The first factor had the largest influence on whether the teams were clear about the intended outcomes of their product and saw it as vehicle for behaviour change. But, for the evaluation of intended outcomes, we also needed to take into account the variation in the nature of the products and their purpose. Two of the products are content rich websites with a primary purpose of providing information and/or advice (HeadMeds, Madly in Love). Three of the products are digital applications designed to engage the user in specific activities, even if information and advice are also featured in the products (Doc Ready, In Hand, MoodBug). We suggest that, making the connection between the purpose of the product and behaviour change is more obvious for the digital apps, than it is for content rich websites.

Therefore, to make an assessment of the achievement of product outcomes, we were primarily led by the views about the purpose of the products and any intended outcomes articulated by project team members in their interviews. We have identified early indicators, from the range of data available to us, which begins to show potential to achieve purpose and intended outcomes. Given the user surveys and interviews with Doc Ready and In Hand, we have more robust data to report on these products.
Product purpose

To help young people feel more confident and get better results when they see their GP about a mental health issue.

Intended outcomes described by team members

- Encouraging young people to seek help for their mental health
- Learning how to prepare for GP appointments
- Increased confidence in the appointment
- Empower young people in the consultation process
- Improve outcomes from the consultation

Emerging evidence of outcome

In section 5, we describe how Doc Ready users have reported the ways in which the tool helps their mental wellbeing and in section 3.2 the different ways the checklist functions to support people preparing to seek help with regards to their mental wellbeing.

While these findings are tentative because the sample sizes were small and may not be representative, there are incidences of user reports where Doc Ready has supported:

- improved communication in GP consultations
- increased control for the young person
- reassurance and reduced isolation
- initiating help-seeking behaviour.
Product purpose

A digital friend that provides young people with tools, advice and activities when their mental health is at risk. Promotes awareness of mental wellbeing and could help in a moment of anxiety or low mood.

Intended outcomes described by team members

- Improved self-awareness of emotional wellbeing for young people

Emerging evidence of outcome

The detail from the user surveys and interviews provide in-depth insights about the experience of In Hand. In section 5, we describe how In Hand users have reported the ways in which the tool helps their mental wellbeing and identified that users have found In Hand to fulfil the two key purposes.

While these findings are tentative because the sample sizes are small and not necessarily representative, there is evidence to show that In Hand supports:

- mood/wellbeing awareness
- mood/wellbeing regulation.
Product purpose

Accessible straight talking information on young people’s mental health medication.

Intended outcomes described by team members

- Accessible information for young people
- Trusted information for young people
- Information young people want that they can’t access from other sources

Emerging evidence of outcome

A small number of users have provided some anecdotal evidence about Head Meds to Young Minds. These users valued the:

- Clear plain language
- Access to information they would not want to seek from a health professional
- Reassurance others had similar experiences and they are not alone.

Endorsement from Royal College of General Practitioners and College of Mental Health Pharmacists adds to credibility of the site and contributes to Head Meds being a trusted source of information. The information on Head Meds that may not be available from other sources, includes the implications of taking a medication for having sex, playing sport, or drinking alcohol. Analysis of behaviour flow (see section 3.1) shows that medication information, particularly the pages which give information about ‘sex, drink, weight and everything else’ are some of the most viewed pages, suggesting that by providing this information, not easily accessible from other sources, Head Meds is fulfilling a need for young people.
Product purpose

A tool for sharing how you feel with your close friends and letting them know when you’re thinking about them.

Intended outcomes described by team members

- Normalise conversation about mood in the general population
- Learning to describe mood in a consistent way

Emerging evidence of outcome

At the time of writing, there was limited evidence to report about Moodbug. This tool had been in use for a shortest time period and marketing activity to promote the tool did not start until the final month of the evaluation time period. We were unable to report on the ways in which users engaged with Moodbug as this data were not collected by the data analytics software, Flurry.

However, some early feedback from users, reported by the Mind Apples team, suggest that as well as sharing and starting conversations about mood, using Moodbug also helps users to learn about their own moods and raises self-awareness (Mind Apples team interview, 1 October 2014).
Product purpose

Relationship and mental health advice for young people and their partners.

Intended outcomes described by team members

- Help young people with mental health problems manage relationships
- Show young people with mental health problems there is the opportunity for healthy relationships

Emerging evidence of outcome

Analysis of behaviour flow of users of the site shows that while the playlist section is the most frequently visited pages overall, this was limited to the Spotify campaign only. By October 2014, users are mostly interested in the advice and shared experiences sections of the site. The amount of time users are spending on the site (on average) increased from February to October, suggesting that a greater proportion of the users are seeking information about mental health and relationships (see section 3.1 for more detail).

Madly in Love launched with a campaign on Spotify and a playlist competition. This was hugely successful in engaging large numbers of young people with the site (see section 3.1). The team behind Madly in Love at YouthNet were struck by the level of engagement with young men, a group traditionally hard to engage with issues around mental health and relationships, as described in their blog post from March 2014.

A key element of Madly in Love is for the site to contain user-generated content, specifically, stories around relationships and mental health. Since September 2014, this element of the site has been slowly growing, with more stories being submitted explained in their blog post in October 2014. It is also worth noting that users are submitting content that is closely matched to the purpose of the site (YouthNet team interview, December 2014).
Each of the five digital products has a specific role which is distinct from the others. Moreover, they were intended to offer something different from other available services or sources of support – this was set out in the functional specifications developed after the Labs process and to support the commissioning of the development teams. In all cases the need for the specific product was described as serving a different purpose than those already in existence. Most commonly, this was that the existing products were not designed specifically for young people. However, given the time since that market analysis and the fact that some of the products developed in different directions than first envisaged, it is worth looking again at where these five digital products fit. To do this, we reviewed relevant digital health registries and a map of digital assets for young people’s mental health.

Digital health registries

There are currently a number of websites that contain registries and reviews of digital products (from users or healthcare professionals) and this includes the NHS Apps library which contains a list of health apps and websites that have been deemed by NHS England as being clinically safe and relevant. At the time of writing, only one of the tools, Moodbug is listed on the NHS Apps Library.

We identified three other digital app registries to check for inclusion of any of the products or if products with similar functions were listed. These registries were Mindapps (mindapps.org), MyHealthApps (myhealthapps.net) and Beacon (beacon.anu.edu.au). No other Innovation Labs products were listed in any of these registries, apart from Moodbug on the NHS Apps Library as indicated above. Some other similar products were identified in these registries, but mostly they were not specific to mental health or were doing something similar in a different health area, for example, medication information about HIV drugs or a checklist for young people with endocrine disorders (a static checklist to print off and complete to show the doctor or nurse).
The way to achieve access on to these registries is not always clear or transparent. Nor is it quite clear yet what value being listed on these digital registries brings to digital products. We note that while MoodBug is the only product listed, it has seen the least uptake and reach at the time of writing, suggesting that featuring on the NHS Apps library is not necessarily an effective way to ‘market’ a product.

**Mapping digital assets for young people’s mental health**

A project funded by Greater Glasgow and Clyde NHS and undertaken by Young Scot, Mental Health Foundation Scotland and Glasgow Association for Mental Health in 2013-4 sought to identify and map current digital assets for young people’s mental health (Project 99). This project devised a useful typology for categorising digital assets based on two dimensions set out in the box below.

<table>
<thead>
<tr>
<th>SERVICES</th>
<th>USER GROUPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Health and mental health information</td>
<td>1. Young people in mental health services</td>
</tr>
<tr>
<td>1.1 Information providers</td>
<td>4. Young people exposed to mental health risks using technology to address it</td>
</tr>
<tr>
<td>1.2 Service directory</td>
<td>5. Young people with potentially damaging online behaviours</td>
</tr>
<tr>
<td>2. Service delivery</td>
<td>6. Young people engaging in mental health promoting activities using technologies</td>
</tr>
<tr>
<td>2.1 Technology to improve communication between young people and services</td>
<td></td>
</tr>
<tr>
<td>2.2 E-health services targeted at young people</td>
<td></td>
</tr>
<tr>
<td>2.3 Recovery and self-management</td>
<td></td>
</tr>
<tr>
<td>3.1 Communities of interest and peer support</td>
<td></td>
</tr>
<tr>
<td>3.2 Campaigning and engagement</td>
<td></td>
</tr>
<tr>
<td>3.3 Personal discovery / development</td>
<td></td>
</tr>
<tr>
<td>3.4 Storytelling and curation of experiences</td>
<td></td>
</tr>
</tbody>
</table>

These categories are not mutually exclusive as digital assets may fit into more than one service category and may also be targeted at more than one user group.
Where do the innovation labs products fit?

<table>
<thead>
<tr>
<th>Digital asset map category</th>
<th>Innovation Labs products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information providers</td>
<td>HeadMeds, Madly in Love</td>
</tr>
<tr>
<td>Technology to improve communication between young people and services</td>
<td>Doc Ready</td>
</tr>
<tr>
<td>Personal discovery / development</td>
<td>Moodbug, In Hand</td>
</tr>
<tr>
<td>Storytelling and curation of experiences</td>
<td>HeadMeds, Madly in Love</td>
</tr>
</tbody>
</table>

*Table 4: Categorisation of the Innovation Labs products*

The asset map revealed that the largest category of digital asset was 1.1 Information Providers with 17 different providers. Despite this, **HeadMeds** and **Madly in Love** were unique in focusing on the specific areas of interest.

Within category 3.3 Personal Discovery/Development, **Moodbug** was the only tool that is aimed at all the user groups, while again Madly in Love addressed a specific area of mental health. Whereas, **In Hand** was the only asset targeted exclusively to user group 6 (young people engaging in mental health promoting activities using technologies).

The storytelling and curation of experiences functions which developed during the production of **HeadMeds** and **Madly in Love** add to a small range of assets in this category and again have value because of their specific focus.

**Interaction with the NHS and other statutory services**

Most of the product teams saw the primary way that the products would interact with the NHS would be through signposting from clinical and other services to these products. However, the evidence we have from the survey and review of digital registries, suggests that there is little penetration of these products into statutory services. This reflects our experience in the mental health field locally and reports of the national picture (Mental Health Network, 2014).
There appear to be two key factors leading to this situation. First, health professionals report feeling under confident in using digital products in their practice and have concerns about whether those available through the main app stores are safe, reliable and low risk. From other research with clinicians and practitioners, we are aware that this under confidence can lead to inaction and reliance on traditional methods. Second, although there is scope for digital assets to span organisational boundaries, NHS trusts do not appear keen to take up innovations developed elsewhere. We are aware of examples where digital products developed and offered within one region of the NHS are not seen as appropriate for other regions, even when there is no barrier to uptake such as cost or formal commissioning.

In specific reference to the Innovation Labs products, even though the In Hand product team included a member with a clinical background and clear link to an NHS Trust, it seems this is not always enough to provide the level of confidence others need to support the tool. For example, we know that other NHS organisations are looking for further evidence of effectiveness before deciding to ‘recommend’ In Hand to their patients (personal communication, Midlands and Lancashire Commissioning Support Unit, 2015). Recognising these concerns has led to NHS England proposing a ‘kitemarking’ approach for digital products (National Information Board, 2014).
4.3 CONCLUSIONS

Given the nature of the Innovation Labs digital products and emerging evidence of meeting their purpose, they should be seen as useful products which add to the existing landscape of services, products and sources of support. They offer a range of different supports to young people which can augment the support, care and treatment available through mainstream health, youth and education services.

As the number and sophistication of digital products aimed at health and wellbeing increases, it is becoming increasingly important to find ways to identify the high quality apps and digital products and enable these to stand out in a crowded market place. We have specifically highlighted the role of review sites as these have the potential to become increasingly important in supporting the market for digital products. Currently, the vast majority of apps can only be downloaded via commercial app stores, and while they provide reviews of products, these are usually brief and the information cannot be guaranteed to be accurate and independent.

In fact, analysis of smoking cessation iPhone apps has shown that those most highly rated by users are less likely to be based on evidence-based approaches to stopping smoking (MindTech/mHealth Habitat workshop, March 2014). In the future organisations such as NHS, other healthcare providers and charities may wish to have their own repositories where they can make certain ‘approved’ digital products available to users. This has the potential to aid developers of high quality products who currently find it difficult to differentiate their products from the large number of poorly conceived or designed products.
In this section of the report, we present the data which explores the ways in which two of Innovation Labs products supported users with their mental wellbeing. For a fuller explanation of how we designed this part of the study, see section 2.

5.1 IS THE PRODUCT IMPROVING THE MENTAL WELLBEING OF THE YOUNG PEOPLE WHO USE IT?

In some ways, the responses across the two surveys were similar in that both tools appeared to help users with their mental wellbeing on most of the 10 dimensions we examined – over 50% of survey respondents in each study reported that the tools have helped them either a little bit or lot on 8 and 9 dimensions. However, there are important differences to note between the products about the specific dimensions of wellbeing that appeared to have been helped the most.
As shown in table 5, most survey respondents reported **Doc Ready** helped them on 9 of the dimensions of wellbeing. Whereas, only a minority (approximately 20%) reported that **Doc Ready** had helped them feel close to other people.

**Table 5: Wellbeing outcomes for Doc Ready**

<table>
<thead>
<tr>
<th>Mental wellbeing dimension</th>
<th>Percentage of users rating Doc Ready as helpful (n=44*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Think clearly #</td>
<td>82%</td>
</tr>
<tr>
<td>Ready to talk to someone else</td>
<td>82%</td>
</tr>
<tr>
<td>More able to take control</td>
<td>77%</td>
</tr>
<tr>
<td>Make my own mind up about things #</td>
<td>77%</td>
</tr>
<tr>
<td>Feel relaxed #</td>
<td>70%</td>
</tr>
<tr>
<td>Feel useful #</td>
<td>66%</td>
</tr>
<tr>
<td>Deal with problems well #</td>
<td>66%</td>
</tr>
<tr>
<td>Less stressed</td>
<td>66%</td>
</tr>
<tr>
<td>Have a positive outlook #</td>
<td>64%</td>
</tr>
<tr>
<td>Feel close to other people #</td>
<td>20%</td>
</tr>
</tbody>
</table>

# dimensions from SWEMWBS

* number of survey respondents who used **Doc Ready** at least once

It is also worth remembering that those people who reported experience of mental health problems, were more likely to report that **Doc Ready** had helped their mental wellbeing, suggesting that that those users with experience of mental health problems got more out of using the tool, than those that did not (see section 3.1).
As shown in table 6, most survey respondents reported **In Hand** helped them on 8 dimensions of wellbeing. Whereas, 50% or less thought it had helped them to feel ready to talk to someone else or close to other people.

**Table 6: Wellbeing outcomes for In Hand**

<table>
<thead>
<tr>
<th>Mental wellbeing dimension</th>
<th>Percentage of users rating In Hand as helpful (n = 108*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have a positive outlook #</td>
<td>82%</td>
</tr>
<tr>
<td>Less stressed</td>
<td>78%</td>
</tr>
<tr>
<td>Feel relaxed #</td>
<td>77%</td>
</tr>
<tr>
<td>Think clearly #</td>
<td>74%</td>
</tr>
<tr>
<td>More able to take control</td>
<td>70%</td>
</tr>
<tr>
<td>Make my own mind up about things #</td>
<td>63%</td>
</tr>
<tr>
<td>Deal with problems well #</td>
<td>61%</td>
</tr>
<tr>
<td>Feel useful #</td>
<td>59%</td>
</tr>
<tr>
<td>Ready to talk to someone else</td>
<td>51%</td>
</tr>
<tr>
<td>Feel close to other people #</td>
<td>40%</td>
</tr>
</tbody>
</table>

# dimensions from SWEMWBS

* number of survey respondents who used **In Hand** at least once
Overall, the respondents to the survey reported that the tools had helped them with their mental wellbeing. What we do not know from this analysis is the extent of that help. To understand that we would need to carry out a comparative analysis, over time and between groups. However, these encouraging findings illuminate the ways in which the tools can support people.

It can also be seen that the dimensions of wellbeing survey respondents report as being helped by the individual tools related closely to the specific functions of each tool. For Doc Ready this is about helping a user to gather their thoughts and feeling greater confidence in an appointment, while for In Hand it enabled strategies to manage feelings and emotions.

It is also important to be clear that, across all the factors where most people reported an impact on their mental health, the majority of these rated the impact to be ‘a little bit’, with a smaller proportion rating the impact as ‘a lot’. This finding supports the main purpose of the tools which are intended as simple tools with a specific, very focused purpose, rather than being higher intensity clinical or therapeutic interventions, where a greater effect would be expected.
This evaluation has found that simple digital products have a role within the landscape of mental wellbeing support and we have begun to show the type of value and effect they can have for those who use them. By taking the approach we did, we have started to identify useful emerging indicators of social impact, as suggested by the Nominet Trust (Sutch and Kirkland, 2014), which can be used before a formal evaluation of effectiveness is appropriate or possible.

For example, adapting evidence-based outcome measures can help to identify or confirm outcomes in the early stages. In particular, we have shown that In Hand and Doc Ready are being used by a relatively large number of people, many of whom report they are making a positive contribution to their mental wellbeing in the way that was envisaged by the development teams.

At the shared learning event in January 2015, we asked project teams to reflect on the emerging findings and how they thought this has been achieved. They attributed this positive outcome to the three different factors:

- The teams’ commitment to developing products that young people wanted
- Close involvement of young people throughout the development of the product
- The approach taken in the projects - being open with each other and communicating well, sharing responsibility for the end product and working hard to meet the project schedule.
However, caution is required when drawing broader conclusions from this evaluation. For most products, the emerging evidence is based on proxy measures, such as data analytics and anecdotal feedback. The detailed research, which provides more robust evidence, is applicable to the two products only and although it is useful that one is an app and one is a website, it is not possible to generalise across all apps and websites from these findings. Nor is it possible to generalise from the respondents of the survey to users of In Hand and Doc Ready in general: we are not able to assess how representative the survey sample is of the whole user population.

### 6.2 LESSONS FOR FUNDERS AND DEVELOPERS

From our experience of this evaluation, we make five specific recommendations to future funders and developers of digital products.

1. **Integrate evaluation from the start**

Having a focus on how outcomes from the products would be evaluated from the start of the process would have enabled an evaluation strategy to be integrated throughout the development process. For example, all of the projects undertook some kind of user testing on prototypes of the digital products. This was usually in a workshop setting and focused primarily on the design elements - ‘look and feel’ and usability.

While this is an important part of getting the product right, these opportunities could also be used for early testing of outcome and begin to demonstrate what effects the products have on small number of users. This early data can support the development of larger scale evaluations once the products are in use. Having evaluation in the developer’s mind from the start will also ensure that relevant data is captured through the analytics tools – digital provides huge advantages of automatic data capture, but this still requires careful thought up front to make this as useful as possible.

2. **Explore the harms, risks and unintended uses of the products**

The Innovation Lab products have a very low access threshold, are not intended to be clinical tools and their effect for individuals is assumed to be limited.
It can therefore be assumed that these products are not likely to cause any harmful effects in young people although we did not systematically assess such risks in this evaluation. Potential harms that could be posed by digital products include, for example, a potential deterioration of mental health, stigmatisation, a general disappointment due to mismatched expectations, or a failure to use more appropriate services in case of more severe mental health problems. It is important for future developers to purposefully explore the potential harms and risks and to make users aware of any, for example, through including a section within the product to inform and provide helpful advice in case any negative effects are experienced.

It is also likely that for any product there will be unintended uses; in this case it was that people were using the products who were outside the target age range, which was likely a positive unintended use. However, this does illustrate the need for developers to consider the range of possible ways that people may use their products and to monitor whether this is happening and address any risks that may result from this.

3. **Forward plan for using the data analytics**

It is important to note that to collect the data needed to obtain valuable insight, analytics tools have to be set up correctly at the beginning of a project. It is critical, therefore, that developers anticipate the data that will be required in order to decide which functions of these analytics tools will be needed. Some of the projects had not activated various parts of the analytics packages which meant that some data were not available. This has placed some limitations on what we can report about behaviour flow.

Also, it proved helpful to sample specific timepoints for the analytics data. This enabled us to manage the volume of data, but also enabled us to identify patterns of use, allowed consistency checks and detected changing patterns in how people engaged with the products.

4. **Adopt a model of evaluation which is matched to the product development stage**

We do not necessarily advocate that simple digital products need to be subject to rigorous outcome evaluation before they can be publicly launched (see section 6.4 for further discussion of research methods).
As indicated above, we do argue that testing in the early stage can begin to build an evidence base for products which can be used to promote confidence in a product as it progresses to the next development stages. The Nominet Trust’s guide to Lean Social Metrics (Sutch and Kirkland, 2014), sets out such an approach to integrated evaluation and looks to provide a good model for development teams to adopt.

5. Where appropriate, be clear about the theory of change from the outset

A key challenge in this evaluation has been identifying the intended outcome of individual products. While the products were not intended to be clinical or therapeutic interventions, the primary goal of the funders was products that would result in behaviours that would contribute towards improved mental wellbeing for young people. Some project teams saw their primary goal in a different way – focusing on the purpose of the product, rather than being explicit about the mechanism or theory of change was underpinning the approach. However, being able to demonstrate what effect a product has and early testing of outcome is essential to build confidence that the product is achieving what is intended.

6.3 Lessons for Evaluators

Our recommendations for evaluators are closely related to those for funders and developers.

1. Integrate evaluation from the start

On a practical level, we reflect that engagement with the project teams and scope for integrating data collection into the products would have been greatly enhanced if an evaluator had been part of the overall project team from an earlier stage. MindTech began working with the Innovation Labs Initiative as the main project was drawing to a close and had a tight timescale to complete our work. The final project board took place in April 2014, the month we started the evaluation and no more ‘get together’ days were planned for the project teams. Therefore, a good portion of our project time has been spent in building relationships with the project teams at the time when they were coming to the end of their projects and moving on to new activities.
2. **Explore the value of emerging indicators of potential social value**

In section 4, we attempted to show the how emerging evidence about the products is beginning to demonstrate how they are fulfilling their intended outcomes. These indicators include:

- Reviews and endorsements from professionals / experts in the field
- Data analytics, in particular behaviour flow to see how people are using the product
- Anecdotal evidence from users
- User feedback to identify the outcomes described by users
- Research to explore users’ experience of and the value they ascribe to the products.

We have not attempted to discuss the relative strengths of these emerging indicators, although user feedback from experience of using the products clearly gives more robust insights than other proxy measures. However, understanding more about how these emerging indicators relate to each other and predict the likelihood of strong social value would be useful.

3. **Learn from early indicators to maximise the value of user feedback**

Think carefully about the ordering of specific evaluation activities. Engaging with the data analytics at an early stage would have enabled us to explore emerging patterns and design questions around this to test out in the user surveys. This would enable better cross referencing of what people do (as shown by the analytics) and what they say (as explored in the user surveys). While we have learnt this lesson, we also note that the timing of the evaluation in relation to the launch of most of the products, meant that limited analytics data was available to us at an earlier stage.
6.4 REFLECTIONS ON THE RESEARCH APPROACH

1. **The approach to measuring impacts on mental wellbeing**

Using a validated tool in a different way than how it was designed gives rise to a number of limitations. The SWEMWBS was designed to measure mental wellbeing in the general population (Stewart-Brown et al, 2009) and has been shown to have utility in detecting changes over time. However, instead of using the tool as designed, we adopted the specific dimensions of wellbeing that had been tested and defined by the tool development process and asked different questions about them. Therefore, we are not able to compare our data to the normative data on population wellbeing. Neither are we able to say anything about the wellbeing status of the study sample or whether using the tool made a measurable/useful difference to their wellbeing.

However, the survey respondents have reported broadly that the tools helped, to some extent, with their mental wellbeing, suggesting they both have health value. Moreover, as the specific dimensions reported by respondents are different across the two surveys, the approach we adopted has shown a differentiation between the ways in which the tools support people. This provides some confidence in the validity of the method, although this has not been formally tested.

2. **Moving forward the debates about appropriate methods for ehealth and mhealth evaluation**

This evaluation took place at a time of debate about appropriate methods of evaluation for assessing the effectiveness of simple digital products such as those developed from the Innovation Labs Initiative. In mainstream health settings, the main focus on digital development is exploring how evidence-based interventions can be applied using digital technology. These approaches are likely to be complex, service type interventions that are well-suited to established methods of assessment such as randomised controlled trials and other comparative studies.

Outside of health services, a movement often referred to as 'tech for social good', is aiming to 'disrupt' the usual way of doing things and harness technology to do things that would not be possible otherwise (Murray, 2010). Until recently, most successful digital innovation has been seen in commercial sectors such as retail and banking.
Here, measures of success or outcome usually equate to how effective the website or app is in raising revenue, for example, conversion rates on retail websites or in-app purchases. This type of measure is not suited to assessing the effectiveness of technology aiming to achieve social good, where indicators of success will need to relate to how people behave. Moreover, much activity around ‘tech for social good’ is emerging from the voluntary/non-governmental sector, where established evaluation methods and outcome measures are more suited to the more large-scale programmes which aim to have wider effects on communities of people (Sutch and Kirkland, 2014). And the Labs Initiative has already identified that projects in the voluntary sector are often driven by ethics and values which are not always mendable to direct measures (Boardwell and Roberson, 2014).

The products developed as part of the Innovation Labs Initiative sit somewhere at the intersection of these developments and cultures of practice. Whereas, the lengthy assessment methods for health technologies are poorly suited to the rapidly developing digital technology sector, alternative methods lack credibility in the health sector where evidence of (cost)effectiveness is sought for purchasing and commissioning decisions.

The approach we took with this evaluation was designed to take elements from health technology assessment (evidence-based measures of outcome), but apply them in a way commensurate with the simplicity of the digital products and within the scope of the resources available. We choose user feedback through digital surveys and remote interviews for assessing mental wellbeing outcome as these enabled us to access the naturally occurring target population for these products. Other methods which may illuminate more detailed experience of using the products, such as those used in design research, would have yielded limited robust data on mental wellbeing outcomes. As always, we were required to make choices in how to proceed with this evaluation and have tried to be open about the strengths and limitations of these for future application.
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ACKNOWLEDGEMENTS

We would like to thank all the individuals who participated in or enabled us to carry out this evaluation – this includes all members of the project teams and especially Doc Ready and In Hand teams who put in significant effort to support the user surveys of their products. The Innovations Labs project board were very supportive during the set up phase of the evaluation, especially the young people. Thanks to members of the evaluation project advisory group for advice along the way, especially Billy Dann and Nissa Ramsay at Comic Relief, Joe Roberson at Working With Joe, Stephanie Lee, Mei Leng Yew and Katie Wilson.

Thanks the Kirsty Woods and Elena Heber for help with the market analysis and reviewing the app registries. We also owe Elena extra thanks for constructive feedback on the earlier drafts of this report.

Further information related to this evaluation is available from NIHR MindTech Healthcare Technology Cooperative on request (www.mindtech.org.uk).

The research reported in this paper was conducted by the NIHR MindTech Healthcare Technology Co-operative. The views represented are the views of the authors alone and do not necessarily represent the views of the Department of Health in England, NHS, or the National Institute for Health.