Understanding the social impact of hyperfast broadband

A whitepaper exploring the measuring and development of social value in housing associations & local authorities.

Prepared by Hyperoptic with HACT (Housing Associations’ Charitable Trust) & Simetrica-Jacobs
At Hyperoptic we are acutely aware of the benefits that hyperfast broadband brings to the communities we work in. Since the company was founded in 2011, we have put those in social housing at the front and centre of our plans.

Dana Tobak CBE, CEO of Hyperoptic
Introduction
Dana Tobak CBE, CEO of Hyperoptic

At Hyperoptic, we’re acutely aware of the benefits that hyperfast broadband brings to the communities we work in. Since the very beginning, we’ve been putting those in social housing at the forefront and centre of our plans. As the UK’s largest residential gigabit broadband provider, we’re working ‘hand in glove’ with over 230 housing organisations – including developers, property management companies, social housing providers and councils – to provide residents with hyperfast broadband.

Our partnership with the Housing Associations’ Charitable Trust (HACT) is a perfect example of this. We’re working with HACT and social value specialist Simetrica-Jacobs to understand the social impact of hyperfast broadband and the importance of digital skills within our communities. While most of us understand the huge benefits of both, we’re now looking to put numbers and hard data against them – allowing the decision-makers within local government and housing associations to easily decide where investment priorities should lie.

Many local authorities, social housing organisations, central government and devolved governments across the UK have already embraced and embedded social value into their work. Lots of procurement exercises now include social value weightings in their tender documents. Using the Digital Connectivity Social Value Calculator, so that local authorities can objectively design projects and services. This is partly thanks to the Public Services (Social Value) Act 2012, known as the ‘Social Value Act’, which requires companies to assess the social, economic and environmental impacts of a prospective project.

Additionally, the UK government set up the ‘What Works Centre for Wellbeing’ in 2014 to look at the impacts of policies and projects on wellbeing. With backing by the UK government, as well as guidance on measuring social value from the HM Treasury Green Book (2018) and the OECD (2018), the importance of social impact has become much more recognised in recent years.

Nevertheless, creating and maintaining impacts on social value is complex and can be achieved in different ways. Impacts themselves will always be dependent on an individual’s particular circumstances. This complexity can sometimes make the social value of prospective projects difficult to objectively articulate, compare, monitor, evaluate and prioritise.

For us at Hyperoptic, getting precise insight into the social value we can deliver is crucial to understanding the impact we can make – and are already making – through our provision of hyperfast broadband and our activities in the social housing space. This requires taking efforts to put hard data and numbers against the benefits of accessing hyperfast broadband and improving digital skills.

Social value: understanding a complex issue

Social value is a broad concept and can be difficult to define. Through their Social Value Act (discussed below), the UK government regards social value in connection to public services as the economic, social and environmental wellbeing that a service creates.

At Hyperoptic, we believe that to define social value is to focus on identifying and measuring the social (or ‘wellbeing’) impacts of a project. Historically, economic impacts have been given priority over social impacts. However, in recent years, social impacts have become more of a factor when business and government evaluate projects and services. This is partly thanks to the Public Services (Social Value) Act 2012, known as the ‘Social Value Act’, which requires companies to assess the social, economic and environmental impacts of a prospective project.

Assigning numbers to this is Simetrica-Jacobs, the leaders in social value analysis, wellbeing research and econometrics. They provide cutting-edge research and advice at the highest level of scientific rigour to governments, international organisations, and the private and not-for-profit sectors. They’ve used independent data from organisations such as the Office of National Statistics (ONS) and OFCOM to help shape their data modelling.

Using the Digital Connectivity Social Value Calculator, we’ve made it super easy for local authorities and housing associations to create a social value forecast by simply providing information about their community. In doing so, we hope to break new ground in understanding, communicating and delivering social value in relation to high-speed broadband and digital skills. Please read on to learn more.

“we hope to break new ground in understanding, communicating and delivering social value in relation to high-speed broadband and digital skills”
Hyperoptic’s approach to social value

Our approach to social value is inspired by the impact of our activities on individuals. Our social value offering sits across four pillars:
1. affordable and accessible products
2. digital inclusion
3. complimentary connections for the community
4. employment opportunities

These pillars all entail specific activities that we will conduct for local communities as part of our social value offering (and which we will explore in more detail in the next section).

**Working Towards a Theory of Change**

Our social value offer is driven by a Theory of Change (seen in Figure 1), which links our social value activities across the four pillars with specific outcomes and impacts. By identifying the eventual impacts of our activities, we come closer to allowing the social value we create to be measured more tangibly.

This Theory of Change also allows us to keep the person firmly at the centre of our social value approach, ensuring our measurements reflect the change we want to see in terms of impacts made on individuals. We’re particularly focussed on helping those people who are currently least able to access the opportunities that high-speed broadband offers.

Our approach draws on our key organisational strengths, with insight from our partners and our understanding of the changes needed in the communities we serve. It’s designed to gain insights into how we can positively impact as many people as possible with the resources available.

We recognise the complexity of objectively articulating and evaluating social value but believe our social value offer is easy to apply and understand. Overall, our approach to social value is designed to help ensure we’re adopting the best practice possible by:
- working towards our Theory of Change;
- using the most robust evidence available at all stages of a project.

---

**Hyperoptic’s approach to social value**

<table>
<thead>
<tr>
<th>Activities</th>
<th>Outcomes</th>
<th>Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital training</td>
<td>Improving computer skills</td>
<td>Wellbeing impact of having adequate computer skills</td>
</tr>
<tr>
<td>Employment opportunities</td>
<td>Local employment</td>
<td>Wellbeing impact of having employment training</td>
</tr>
<tr>
<td>Connections for community hubs</td>
<td>Social cohesion</td>
<td>Wellbeing impact of feeling you belong in a neighbourhood</td>
</tr>
<tr>
<td>Core connections</td>
<td>Increased accessibility to superfast/hyperfast broadband</td>
<td>Wellbeing and economic impact of superfast/hyperfast broadband</td>
</tr>
<tr>
<td>Affordable connection</td>
<td>E-health services</td>
<td>Time savings from fewer physical GP visits</td>
</tr>
<tr>
<td>Subsidised connections</td>
<td>Teleworking</td>
<td>Lower environmental damage as a result of teleworking</td>
</tr>
<tr>
<td>Complimentary connection</td>
<td></td>
<td>Time and financial savings from teleworking</td>
</tr>
<tr>
<td>Connections for community hubs</td>
<td></td>
<td>Economic transfer from subsidised connections</td>
</tr>
</tbody>
</table>

**Figure 1: A Theory of Change for Hyperoptic’s social value offering**
How hyperfast broadband develops social value

We’ve established that, alongside our core offering of a hyperfast broadband product, there are four pillars through which we create social value at Hyperoptic: affordable connections, digital inclusion, complimentary connections and employment opportunities.

As part of our Theory of Change, we’ve identified a set of social and economic impacts that each of these pillars can deliver. These impacts have been given a monetary value, where possible, thanks to a review of academic and grey literature, and our own previous research.

The evidence of the social value impacts for each of the four pillars are summarised as follows:

The impacts of making hyperfast broadband affordable and accessible

Here we investigate how a hyperfast broadband connection might affect individuals’ social and economic wellbeing. There’s a lot of evidence to show the positive impacts being connected to superfast and hyperfast broadband has on residents’ wellbeing and it includes the following:

1. Social impact of accessing broadband

In a recent study assessing the impact superfast broadband has on wellbeing, Simetrica-Jacobs found that having access to superfast broadband was associated with an increase in wellbeing worth £222.25 per household per year1. The study found that this wellbeing increase could occur through a number of channels, such as:

• Greater educational opportunities – enhancing internet access provides a wider range of educational opportunities to users and broadband with a higher bandwidth allows users to access this information with less disruption. For example, the recent proliferation of massive open online courses (MOOCs) has partly been unlocked by wider access to fast broadband.

• Greater entertainment options – this channel has become increasingly prevalent in recent years with the increase of online streaming services.

• Reduced isolation and loneliness – access to the internet allows socially isolated individuals to more easily connect with others.

• Improved access to the community – the internet provides a place where residents can easily contact one another, potentially fostering a greater sense of community.

• Increased choice in consumption and lower prices – greater choice through online shopping websites, often coupled with lower prices than on the high street.

• Increased leisure time – information about leisure activities and services is readily available online.

2. Economic impact of accessing e-health services

The provision of e-health services enabled by high-speed broadband include online doctor consultations2 and the ability to order prescriptions online3. These services reduce travel time to medical surgeries and pharmacies4. One study estimates that 5% of GP appointments were replaced with teleconsulting, each user would save 3.3 hours per year that they could spend on activities holding greater personal value5. The economic value of this saved time can be calculated using the standard methodology employed by government departments to assign a value to time, based on the concept of opportunity cost.

3. Economic and environmental impact of teleworking

Teleworking offers similar time-saving opportunities by allowing teleworkers to substitute travelling for more fulfilling activities6. Fewer commutes also leads to a reduction in travel costs for users7, though such reductions are somewhat counterbalanced by resulting increases in home energy bills8.

Teleworking offers similar time-saving opportunities by allowing teleworkers to substitute travelling for more fulfilling activities. Fewer commutes also leads to a reduction in travel costs for users, though such reductions are somewhat counterbalanced by resulting increases in home energy bills.

Teleworking offers similar time-saving opportunities by allowing teleworkers to substitute travelling for more fulfilling activities. Fewer commutes also leads to a reduction in travel costs for users, though such reductions are somewhat counterbalanced by resulting increases in home energy bills.

4. Economic transfer of providing subsidised connections

When a subsidised (either affordable or complimentary) connection is provided, there’s an economic transfer from Hyperoptic to disadvantaged households. This allows users to receive the benefits of connectivity without the associated cost. In some instances, we note that Hyperoptic is unique in allowing local authorities to distribute affordable-connection vouchers, ensuring discounts reach individuals who would benefit most from them.

1. We are not considering the economic impacts on home-based businesses at this stage, due to a lack of existing evidence on how broadband provision in social housing impacts this specific form of use.


3. To adapt this value to estimating the wellbeing impact of going from superfast to hyperfast broadband, we assume a diminishing return to speed motivated by the literature.

4. Superfast broadband was defined as having a download speed of at least 24Mbit/s, hence the £222.25 figure is the wellbeing uplift from having superfast broadband compared to having broadband with download speed less than 24Mbit/s.

5. A study by Juniper Research for O2 suggested 5G would enable computations to save place on mobile devices.

6. A small review of the e-prescription literature can be found in Polya’s insight (2005).


8. Juniper Research, 2016, p.8


10. The Carbon Trust estimated commuters could save £500 a year from fewer commutes (Carbon Trust, 2014).

11. Teleworking can result in a higher home energy bill because rooms are heated that would not have been had the teleworker not worked from home. These are statutory rules on how to calculate rebound effects. However, the literature tends to generally find that employees consume less energy at home than at work (Carbon Trust, 2014, p.5).

12. A literature review by Cairns et al. (2004), published by the Department for Transport, found a 48-77% reduction in commuting (or mileage travelled by teleworkers when rebound effects were excluded). When rebound effects were included, this fell to 11-19% (p.258). When rebound effects were included, this fell to 11-19% (p.258).

13. The Smith Institute (2008) says that the literature finds that rebound effects outweigh the environmental benefit of teleworking were from the late 1980s and early 1990s, and that their finding was due to “distinctive circumstances of these periods, such as uncrowded roads and very cheap fuel” (p.88). They conclude by saying that these findings are “exaggerated and are mostly not supported by the evidence” (p.88).
The impacts of digital inclusion training

Digital Foundation Skills and Essential Digital Skills (EDS) enable access and use of basic communication tools, such as email and social media, and the use of the internet more generally. Digital training is essential to improving these skills and must be constantly renewed, reviewed and refreshed.

The wellbeing impacts of improving digital skills have been evidenced. An improvement in EDS is associated with an increase in wellbeing in excess of £1,000 per year\(^1\). At Hyperoptic, we have key insights into the digital world and works with partners to ensure the right skills are provided to the right people. By training social housing residents, we can increase the average wellbeing of each trained person by an amount similar to the figure above. Gaining digital skills may also increase the likelihood of becoming employed\(^2\).

Another crucial element of our digital inclusion pillar is access to Digital Unite’s Digital Champion Network, which will support the training of trusted intermediaries who can then help others in the community develop their digital skills. The wellbeing impact of training a Digital Champion is even greater than that of training a resident, because Digital Champions can use their training to teach others.

An improvement in EDS is associated with an increase in wellbeing in excess of £1,000 per year\(^3\).

2. A House of Commons report estimated that almost 90% of new jobs require digital skills to some degree (House of Commons, 2016, p.3).

Expert opinion – Richard Denyer-Bewick, Managing Director, Citizens Online

When considering the social value of digital inclusion and its impact on wellbeing, we need to consider what the building blocks of digital inclusion actually are:

1. Connection to the internet
2. Access to an internet-enabled device (desktop/laptop computer, tablet, phone or Smart TV)
3. Skills to be able to work a device (Essential Digital Skills)
4. Confidence, motivation and trust to be able to use the skills and the device

These are the building blocks of inclusion. When they’re in place, a connected internet user may achieve the benefits of being online. This results in improved digital and financial capability and, ultimately, improved wellbeing. Hyperoptic’s Theory of Change supports the idea of offering Core and Complimentary Connections to people in their homes and through community hubs. It also supports the delivery of training and support both to individuals and Digital Champions, actively achieving three of the above points.

Having a Digital Champion programme that supports the training of trusted intermediaries, who can then help others in the community, is an excellent and proven way of building digital capacity and capability within organisations and communities, thus generating further social value – not only from the end learner, but also through the improved skills of the Digital Champion.

Having a range of different types of people to support in a community is good practice. Digital Champions can be broadly classified into three categories:

- Professional Digital Champions (employed to be a Digital Champion)
- Embedded Digital Champions (employed in other customer facing roles)
- Volunteer Digital Champions (providing digital help in a voluntary capacity)

On average, Digital Champions across the three categories each help around 10 people a week with their Essential Digital Skills. However, Embedded Digital Champions on average help three times more people than Volunteers, and tend to deliver very brief interventions that help people get connected and use devices. A single Digital Champion could help up to nearly 25 people a day or nearly 70 people a week.

The social return on investment in Digital Inclusion Training through the use of Digital Champions is around £3.70 for every £1 invested.
The impacts of connections for community hubs

Community hubs are centres where people meet as a community, seek advice and help, and access services. At Hyperoptic, we understand that community hubs act as a lifeline for many people and contribute to a sense of belonging. Introducing high-speed internet connections and training to these hubs offers a further reason for people to participate in the community.

We believe community hubs are essential to delivering and developing digital inclusion across all sections of society. The impact of this can be seen below:

1. Impact of social cohesion on wellbeing

Community hubs and public spaces bring people together and have the potential to increase residents’ sense of belonging to their communities and social cohesion\(^{16}\). According to Fone et al. (2014), this reduces the rate of mental health problems in the community, suggesting that residents will have a higher wellbeing. We expect the increased facilities offered by a community hub with a complimentary connection will attract new visitors who, should they become regular visitors, may benefit from a greater sense of belonging.

2. Economic transfer of connecting community hubs

As with subsidised connections to households, when a community hub is offered a complimentary connection, there is an economic transfer from Hyperoptic to the local community. We absorb a cost that would otherwise be the responsibility of the local community, which should be recognised as a positive economic impact.

The above impacts show that there is a clear wellbeing benefit from supporting community hubs, but it cannot be delivered without strong partnership.

The impacts of employment opportunities

Employment and digital connectivity are strongly interlinked in the modern world. Research commissioned by the UK government’s Department for Digital, Culture, Media and Sport (DCMS) has found that at least 82% of online advertised job openings across the UK require digital skills\(^ {17} \).

At Hyperoptic, we believe that our social value offer can impact wellbeing by providing both access to broadband and to in-person employment resources.

1. Wellbeing impact of broadband provision

Many job advertisements are posted exclusively online via job search sites, professional networking platforms, or employer websites. Improving internet access and speed creates opportunities for people to apply for jobs online that they might not have discovered otherwise. Hyperoptic vacancies, for example, can be advertised on community job sites. Broadband provision also gives people the means to access skills training, assessments, and other online resources that can increase the likelihood of finding employment.

2. Wellbeing impact of employment training

As part of our employment opportunities pillar, we will deliver employability workshops in local communities. This includes CV workshops, recruitment fairs and assessment days. Employment training develops skills that increase the likelihood of becoming employed, such as interview skills. As part of the HACT Social Value Bank, Simetrica-Jacobs calculated the wellbeing uplift experienced by individuals who receive employment training to be £807.13, using the wellbeing valuation methodology.

We’ve detailed the impacts that our social value offer can make across these four pillars. Now, let’s consider how these impacts can be measured more precisely on both a portfolio and individual project level.

---

\(^{16}\) Joseph Rowntree Foundation, 2007, p.5

Calculating social value

Our social value offer at Hyperoptic is based firmly in good practice, is evidence-driven, and is transferable to the communities where we operate. It’s an approach which will help us review, articulate and improve our social impact now and in the future.

We’ve embodied this approach to social value through our Digital Connectivity Social Value Calculator. The calculator identifies key areas where we can make a difference. It uses the most up-to-date research available to show how our work across the four social value pillars impacts personal wellbeing and the public purse.

Why calculate social value?
Objectives and benefits

Social value calculators are a key tool to show how, what and where social value is being created. They can be used by local authorities and social housing organisations to forecast, monitor, appraise and evaluate social value impacts. This incorporates being used to:

- help design and score social value tender criteria
- provide objective information
- demonstrate the relative value of different interventions
- model different scenarios
- evaluate and monitor progress

In short, they turn theory into practical insights.

That’s why we have pioneered the creation of a bespoke Digital Connectivity Social Value Calculator. This calculator allows anyone to see how, where and what social value is being created through digital connections in their community.

The Digital Connectivity Social Value Calculator has several objectives:

- Ensure we achieve the outcomes we expect through our Theory of Change
- Help decision-makers and inform policy
- Improve our impact and identify where we can make the biggest difference
- Reassure customers, partner organisations and communities that we are a socially, as well as business-driven, organisation
- Provide a template to help others maximise social impact through high-speed broadband and digital skills
- Model social value scenarios in project appraisals to help decision-makers maximise social value outcomes
We’re proud to launch the Digital Connectivity Social Value Calculator, giving local authorities, housing associations and others an early opportunity to try it for themselves.

By sharing some information about your community, we’ll be able to provide you with the actual figures of the increased wellbeing value that our broadband infrastructure could deliver.

We’ll be building on this further as our offering adapts, to meet the evolving needs of Local Authorities and Housing Associations. This will include further research to:

- understand the impact of hyperfast connections in greater detail
- understand and incorporate the social value of our infrastructure in enabling smart cities/neighborhoods that are ready for the expansion of the IoT (Internet of Things)
- understand the value of our unique approach to targeting vouchers (e.g. through a comparative study of the approach’s outcomes versus the industry standard)

Most of all, we’re looking forward to using the information we gather to improve the impact we make and ensure we make the most positive, well-informed social contribution possible. In the meantime, we’d love to hear your thoughts. Please visit hyperoptic.com/property to get in touch and continue the conversation.

The Hyperoptic Digital Connectivity Social Value Calculator

Easy to measure and understand

Our Digital Connectivity Social Value Calculator is designed to make calculating the wellbeing and economic value that digital connectivity provides less complex—both on a portfolio and individual project level.

It’s a bespoke tool that lists the potential outcomes of a prospective digital connectivity project. These outcomes all relate to the rollout of hyperfast broadband and our four pillars (affordable connections, digital inclusion, complimentary connections and employment opportunities). The outcomes are linked with monetary values that have been derived from academic and government research.

Using the calculator requires sharing some information about your community and its connections, and inputting data on the intended outcomes of a project (for example, inputting the number of households that will go from a slow connection to a hyperfast connection). The calculator will then provide an estimate of the social value that will be created.

Ensuring best practice calculations

To ensure the robustness of each social value calculation, we employ several best-practice methodologies as recommended by HM Treasury:

- **Time horizon**—as some social impacts are felt for longer periods, we assume a five-year horizon in most instances. This is a conservative figure which assumes that after five years, the impact of an outcome will dissipate completely.
- **Discounted rate**—the social value generated after the first year is discounted using the HM Treasury Green Book recommended discount rate of 3.5%.
- **Deadweight figures**—we apply deadweights to each outcome to account for the fact that a certain proportion of the impact would have been realised with an alternate supplier. The deadweights are adapted from the Housing & Community Agency’s Additionality guide, which supplies deadweight figures broken down by different types of intervention.
- **Scaling**—where appropriate, the values calculated are scaled to approximate the proportion of individuals who will benefit from an activity’s impact(s).

---

18. Affordable and complimentary connections are given a lower deadweight of zero as it is assumed that individuals would have been unable to obtain a superfast or hyperfast connection under an alternate supplier.

19. For example, if after Hyperoptic provided a library with a broadband connection their visitor numbers increased by 100, we cannot say that Hyperoptic caused visitor numbers to increase by 100. This is because it is likely that some of the 100 new visitors were planning on visiting the library anyway, regardless of whether Hyperoptic provided a broadband connection or not.

Closing Comments
James Williams – Head of Social Impact, HACT

Hyperoptic is rightly proud to launch the Social Value Calculator and provide local authorities, Housing Associations and others with an early opportunity to try it for themselves.

The completion of this white paper and the digital social value calculator is just the beginning of Hyperoptic’s social impact journey. HACT have been delighted to be involved in this collaboration with Hyperoptic and Simetrica-Jacobs. We feel confident that Hyperoptic now has a Digital Social Value Calculator supported by a Theory of Change, which will both help to understand the social value of high speed broadband and, crucially, improve social outcomes in areas of disadvantage.

HACT is excited to see how the Digital Social Value Calculator is utilised in the coming months and years, and in particular how the learnings gathered can be practically applied to new projects and initiatives. Hyperoptic are now able and well equipped to identify clearly what works, to inform good practice both with the wider practitioner community and with local and national stakeholders.

When reflecting on our collaboration, HACT feels that it’s important not to understate the potential practical impact or lose our momentum. This collaboration was so much more than the production of a Digital Social Value Calculator. It was a relationship-driven co-production process, which involved from the outset numerous stakeholders and a broad range of Hyperoptic staff.

Our relationship-driven approach was crucial and helped us to link Hyperoptic’s social value pillars with a Theory of Change, and produce a resource which:

- Clearly and objectively communicates social and economic impact
- Drives improved social outcomes
- Captures information and good practice in real time
- Specifically and thematically identifies what drives impact
- Will influence internal decisions by providing a social value-driven perspective
- Continually re-frames the message internally and externally that high speed broadband improves lives
- Connects strategic social value aims with practical information and outcomes

HACT are optimistic that we’ll deepen, build on and improve our collaboration to further refine this work in the future. We’ve only started our journey to demonstrate how high-speed broadband can help us to respond to future social challenges. However, it’s a journey we’re looking forward to making together.

James Williams – Head of Social Impact, HACT

References


