

# Moving beyond financial value

How might we capture the social and environmental value of design?

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Mission Oriented Innovation Network  
(Institute for Innovation and Public Purpose) and Design Council, 2020



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# Foreword

In 2015 and 2018, Design Council pioneered research that produced ground-breaking evidence. We were able to measure and show the economic value of design. Our Design Economy report showed that design contributed £85.2bn Gross Value Added in 2016, 68% of which is produced by designers working outside of design agencies, such as automotive and aerospace). That equates to around 75% of the value of the banking and financial services industry. We followed this up with research into design skills, which we believe are not just held by designers. Our findings showed this totalled £209bn Gross Value Added, with people using design skills £10 an hour more productive than the UK average. Design Council's Designing Demand programme supported 5,000 businesses and showed that for every pound invested in design, businesses saw on average £20 return on revenue, £4 on profits and £5 on exports.

So the economic case for design is clear. We know that design also achieves social and environmental value. Bad design can increase inequalities and contribute to the climate crisis. But good design can improve people's health and wellbeing, and lead to a more sustainable, regenerative world. And design has other often invisible 'ripple effects', like creating new relationships, sparking new ways of framing challenges, and building confidence in participants, which all leads to further value. We, together with many individual designers and design firms, have been measuring these effects individually, and our task is now to develop a method to measure them collectively.

This is part of a wider movement of people and organisations who are radically reshaping how we think about value and growth. The Organisation for Economic Co-operation and Development (OECD) commissioned an advisory group to reconsider how we think about growth, with wellbeing more firmly at the centre. Its report, Beyond Growth: Towards a New Economic Approach, sets out a range of frameworks and policies needed to achieve this. Mariana Mazzucato is part of that advisory group and one of a new wave of economists, which according to Forbes includes Kate Raworth, Carlota Perez, Stephanie Kelton and Esther Duflo. Their work looks more holistically at value and argues that economic value needs to be balanced against planetary resources, which means that continuous growth (and an upward line on a chart) is not the goal.

The next version of the Design Economy report will measure the environmental, social and wider value of design. Based on our stakeholder engagement and user research, it will do so in a format that helps designers and commissioners take it and use it in their contexts. It will help them make the case for design and contribute their own impact to this collective understanding of value.

As a first step, we were lucky enough to work with three students from the Institute for Innovation and Public Purpose (IIPP) over the summer 2020 to start exploring what a methodology for measuring the social and environmental value should be. Guided by Sian Whyte, Qiuyu Chen, Patricia Ugboma and Jakob Kofler carried out research into the concept and practice of value measurement and the value of design. They conducted two experiments to see whether 'bottom up' methods of value measurement could be applied to design, and synthesised the insights into a series of recommendations for us to take forward and create a methodology for the Design Economy 2021 report.

Some of their key findings:

- There are trends towards a greater variety of ways of thinking about and measuring value, not least because value – by its definition – is highly subjective.
- There are no single, standardised measures for social or environmental value, but rather multiple frameworks and measurements for both.
- Social value is the degree of importance that people place on the degree of social change – or impact – they experience.
- Environmental value is currently best summarised by the Sustainable Development Goals (SDGs) which use proxies of environmental (and social) concerns and pro-environmental (and social) goals.
- There are many types of value measurement. Value can be measured quantitatively or qualitatively. The source of value can be threefold:
  - human opinion or preference
  - intrinsic value (e.g. either an objective measurement about a tangible thing or an expert opinion about an intangible thing)
  - the value of a relationships between humans or between humans and the environment.

And measurement can be deliberative (subjective) or instrumental (objective).

- There are various understandings of design from a noun – an artefact, an object – to a verb – e.g. a problem-solving process. And there are many design practices, from architecture to service design to fashion design. Design Council defines design as a skillset and a mindset.

- From experimenting with value-chain analysis and structured case study questionnaires, we found that both knowledge of design (plus its potential contribution) and further engagement with the designer is required to fully explore the value of design, the specific context and extent of attribution.
- There is a design-specific framework for measuring the social and environmental value of design. Given the diversity of design, general or standardised tools are not desirable or possible, without losing important information about specific context and contribution.

A methodology for measuring the social and environmental value of design should include qualitative and quantitative measures.

Potential routes include:

- developing a deliberative process to engage stakeholders in conceptualising social and environmental value
- putting a monetary value on social and environmental value (through a Social Cost Benefit Analysis approach), and combining this quantitative data set with qualitative case studies, which can be structured along impact pathways as well as allowing for looser ripple effects
- opening up this methodology/structured questionnaire for other designers to capture value and share their stories.

We now take this foundational thinking, experimentation and reflection and use it as the basis to design the methodology for the next Design Economy report.

We would like to thank Sian Whyte & Ambreen Shah (Design Council) and Rowan Conway (IIPP) for making this partnership possible, but mostly Qiuyu Chen, Patricia Ugboma and Jakob Kofler for putting in the hard work and serious thought to create this document and move our thinking forward.

# Rapid evidence review of ‘value’ and ‘value measurement’

## 1.1 Defining value

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### Definitions of value

Value as a concept has historically been defined differently by a variety of fields, such as philosophers, psychologists, political theorists, sociologists and economists (Bozeman, 2007, p. 113). Broadly speaking, a value is a complex and broad-based assessment of an object or set of objects (Bozeman, 2007, p.117). However, value is more often now associated with economic and financial evaluation.

From an economic point of view, value can be considered as derived from the production of goods and services (outputs); sharing across the economy (distribution), and reinvestment of the earnings (Mazzucato, 2018, p.6). That means value creation is about the interaction of different resources (human, physical and intangible) to produce outputs (Mazzucato, 2018, p.6).

When these outputs lead to outcomes that affect citizens, public value is said to be created. The term public value is said to have been coined by Harvard Professor, Mark H. Moore. Moore (1995) defines public value as the public sector acting in the best interest of the collective of citizens to result in aggregate change in the conditions of society.

Similarly, UCL Institute of Innovation and Public Purpose (IIPP) has an elaborate definition of public value. “Public value is value that is created collectively for a public purpose. This requires understanding of how public institutions can engage citizens in defining purpose (participatory structures), nurture organisational capabilities and capacity to shape new opportunities (organisational competencies); dynamically assess the value created (dynamic evaluation); and ensure that societal value is distributed equitably (inclusive growth).”

The IIPP definition highlights the fact that the process of public value creation is inclusive, collaborative and collective, as all the ecosystem participants, including government have vested interests in the outcomes. However, this definition does not clarify the element of subjectivity involved in assessing value created as well as in ensuring equitable distribution of societal value. We will visit this when we discuss measurement of value as we develop the best approach to evaluate the collective nature of value creation.

### The concept of social and environmental value

#### Social value

Social value as a concept has also been explored from different contexts. It is defined in various ways depending on the situation, the type of development or activity being proposed as well as the way society interacts with it (Greengage, 2017). Another key determinant for the conceptualisation of social and environmental value is the understanding of the source of value. We can identify three main sources of value can be identified across the variety of conceptualisations (Tadaki, Sinner & Chan, 2017).

- Humans as attributors of value
- The environment or social principles being intrinsically valuable;
- Values emerging from relationships between humans or humans and the environment.

Understanding the origin of value has a major impact on its conceptualisation, as well as how it is measured. We will come back to this issue and elaborate further on these three types of origin, showing their implications for the selection of suitable methods.

Social impact is the term used to describe the changes that happen to people, the community and the environment (Parrett, 2019). Essentially, social impact includes social, economic, environmental and wider community changes, which can be positive, negative, intended or unintended. These changes can also be in the short, medium or long term.

Social value is the measurement of the degree of importance that people place on the changes they experience in their lives (Social Value UK). Therefore, social value ought to be measured and accounted for from the perspective of the recipients of the outcome being affected by an organisation's actions.

In summary, the importance people place on various changes that impact their lives is its social value.

According to Social Value International (SVI), when analysing social value, we should consider seven main principles.

- Involve stakeholders
- Understand change
- Include only what is material
- Avoid the need to overclaim
- Value what matters
- Be transparent
- Verify the result

Social value has grown in significance to the extent that in 2012, the UK government enacted the Public Services Social Value Act. This resulted in social value being given consideration in the pre-procurement agenda of public sector clients. The Act essentially requires public authorities to think about how they can attain wider social, economic and environmental benefits when commissioning public services. But does the Act see economic, social and environmental value as being inherent in the products or services being delivered, or are these additional deliverables from the originally intended products and services?

Although the focus of the Social Value Act is mostly on procurement and government contracts, according to the Cabinet Review conducted in 2015, a good number of organisations support it. However, due to a varied understanding of the Act, the mode of application differs by sectors, agencies and locations (Public Health England & UCL Institute of Health Equity, 2015). This has led to inconsistency in defining social value and ambiguity around its application within a legal framework, as well as difficulty in its measurement (Social Value Act Review Report, 2015).

Nevertheless, the Act was originally intended to give social enterprises and charities an advantage in procurement processes (because of their perceived social good), where corporate entities could undercut on price. The assumption was that the way services could be delivered may lead to additional value social, and therefore should be taken into consideration during procurement. The Act has also been widely embraced by private sector organisations, as it has helped them redefine their corporate social responsibility to create social value (Seerbridge, 2020).

## **Environmental value**

Current understandings of environmental value are diverse and fragmented (Tadaki, Sinner and Chan, 2017). The difference has been reflected in the various preferences in development/conservation plans, environmental policy, and a lack of group consensus over landscape assessment (Kaltenborn and Bjerke, 2002).

Some equate environmental value with ecological services, which can be best understood by the beneficial ecological functions of natural environments, or, services that nature provides for people (Schroeder, 2011). However, critics argue that people also may value an environment, either as a whole or some part of it, for its own sake, even if it performs no services for them. Thus, equating environmental values with ecological services can be misleading.

Another point of entry is to look at different proxy attributes, which are indirect measures of an ultimate objective when that objective is difficult to measure (Fischer, Damodaran, Laskey and Lincoln, 1987, Keeney and Gregory, 2005). Environmental value can then be seen as a translation of the environmental concern, which is reflected in these proxy attributes, into pro-environmental behaviour (Eden, 1993; Harrison et al, 1996; Hinchliffe, 1996; Burgess et al., 1998), or has been seen as an increased awareness of the issues suggested by these proxy attributes (Blake, 1999). Most frequently mentioned attributes include pollution levels, water contamination, noise, geodiversity (valuing and conserving abiotic nature), biodiversity, conservation, and circular economy. To populate the proxy list, we can look at The

UN's Sustainable Development Goals (SDG). There are currently 93 environment-related indicators, ranging from 'Proportion of wastewater safely treated' to 'National recycling rate' (Hub, 2020). More can be extracted from the environmental-related SDG goals:

- **Goal11:** Make cities and human settlements inclusive, safe, resilient and sustainable
- **Goal12:** Ensure sustainable consumption and production patterns
- **Goal13:** Take urgent action to combat climate change and its impacts
- **Goal14:** Conserve and sustainably use the oceans, seas and marine resources for sustainable development
- **Goal15:** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

One recent scholarly works on environmental psychological perspective has argued that current practice and reference to 'environmental values' in the environmental research and management arena has been in a chaotic and unsustainable state. The chaos can be partly explained by the compounding factors of intrinsic value debate in environmental ethics, and controversies around representations of 'values' in environmental protection discourse (Reser and Bentupperbäumer, 2005). SDG, in building up a coherent narrative around the notion of environmental value, therefore acknowledged the strategic importance of achieving environmental goals and at the same time provide us a way of conceptualising environmental value.

Multiple overlaps between social value and environmental value exist and can be seen in the SDG, including both types. Both values are highly subjective concepts. It is challenging to find a measurement tool that satisfies all parties involved in both social and environmental value creation. For different stakeholders, such as environmentalists, activists, politicians and the public, the same notion of environmental and social values can mean different things and in different forms, from tangible products to cultural, aesthetic, and even spiritual values that are highly subjective (Shibusawa, Sakurai, Mizunoya and Uchida, 2016; Torkar and Krašovec, 2019).

Additionally, if we consider environmental problems as a subset of social problems, then social value may serve as an umbrella term that encompasses a broad concept by incorporating social, environmental and even economic value (Social value in commissioning and procurement – NCVO Knowhow, 2020). However, this could pose challenges for the classification of value, and therefore further challenges in analysing the value created by design in the following section.

For the clarity of this report, therefore, we rely on SDG as a principles-based framework for accounting for and creating a coherent narrative around the notion of environmental value. Social value in this report will be classified as a parallel concept to environmental value and will not be conceptualized in its broad sense.

## 1.2 Value measurement

Measurement as a practice does not necessarily have to be based on values. However, since the purpose of this report is to show how design creates social and environmental values, the following will examine potential tools to conduct such an assessment, looking at methods specifically used for these two value concepts.

### Trends in value measurement

The way values are measured has a substantial influence on how policy, businesses and the society as a whole is shaped. Values take the role of guiding principles according to which decisions are taken and legitimised. Currently, the predominant conceptualisation of value comes from the field of economics. It is measured in quantitative terms using a currency as denominator. The creation of value takes place when goods or services are exchanged for a higher price than its underlying costs (Mazzucato, 2018).

The rigid focus on one predominant value conceptualisation is increasingly put into question. The adverse consequences of the predominant economic value approach on the environment and societies are hardly neglectable. More and more academics but also politicians and civil society actors call for a more pluralistic approach in terms of values a society is striving for.

It is worthwhile to step back and identify the underlying three macro trends:

1. The first trend was already touched upon above and comprises **a more pluralistic value conceptualisation** (Mazzucato, 2018). This was already partly accounted for in established evaluation guidelines, like the Green and Magenta Book on evaluation by the UK Government (HM Treasury, 2018; HM Treasury, 2020). Even though these guidelines provide tools to measure social and environmental values, it is controversial whether they are able to appropriately measure them (Funtowicz & Ravetz, 1994).

2. The second trend is a **plurality of measurement tools**. Apart from different approaches to monetise value, there is an increasing consensus that many things are hard to put a price on. This is especially true for environmental values and social values (Kenter, et al., 2015). Thus, more and more evaluation guidelines like the Magenta and Green Book (HM Treasury, 2018; HM Treasury, 2020) propose using both qualitative and quantitative tools to account for value created more holistically. However, in practice decisions are still mostly informed by simplistic cost-benefit analysis often relying on weak assumptions (Funtowicz & Ravetz, 1994; Kenter et al., 2015).
3. The third trend in value measurement specifically addresses the **highly subjective nature of values**. To legitimise the more complex pluralistic value frameworks, new processes are needed that go beyond the standard political legitimisation of guiding principles. In more direct democratic participatory processes, citizens come together and find compromises on which values should be used to guide decision making. These processes allow social interactions, open dialogue and social learning. Therefore, the values framework coming out of this deliberative process typically experiences a broader buy-in by citizens compared to the individual preference surveys aggregated by experts (Kenter, et al., 2015).

These trends pose considerable challenges. As the perceptions of what we should value changes, also the tools to capture them have to be changed accordingly. In recent years there were many propositions of new pluralistic value frameworks like public value (Moore, 1995; Mazzucato & Ryan-Collins, 2019), social value (Kennedy, Fox & Osen, 1995; Kenter et al., 2015) and environmental value (Tadaki, Sinner & Chan, 2017).

However, due to the highly subjective nature of value and the array of new partly overlapping approaches to conceptualise and measure it, there is no consensus yet. So, while there is a clear demand of guiding markets, policies and organisations by a more holistic value framework, it is not clear how to find a consensus about the appropriate value framework (Tadaki, Sinner & Chan, 2017).

There is therefore still no gold standard in which values are important, how to legitimise them and how to best measure them. In the following, we provide an overview of some of the most prominent sets of values and how they are measured.

## Categorisation of measurement tools

The trend for a more holistic conception of value beyond just economic concerns led to the emergence of a plethora of new measurement frameworks, for example the Social Cost Benefit Analysis in the public sector, or approaches like the Nestlé & Valuing Nature project or BASF's Value-to-Society model in the private sector. In this section, we focus on assessment frameworks to capture social and environmental value created. We will discuss several ways to categorise the different approaches. Consecutively, some of the methods that are most promising for the social and environmental assessment of design will be analysed in-depth.

Measurement frameworks can be grossly differentiated in qualitative and quantitative approaches.

**Quantitative approaches** try to capture the social and environmental value created in numbers. This makes it easier to communicate and compare, but aggregating insights in numbers means some of the information gets lost along the way. Quantitative approaches can be further differentiated in monetary (comprises tools used to give things a value expressed in a specific currency) and non-monetary ones (captures value in metrics specific to the goal of the assessment).

Here we provide the most common approaches used to capture social and environmental value in both monetary and non-monetary terms (Tadaki, Sinner & Chan, 2017; Richards & Nicholls, 2015).

- **Non-monetary:** Life-cycle analysis, ecological footprint, structured surveys, score cards, multi-criteria analysis, QALY (for outcome of retaining and improving life), DALY (for outcome of retaining life), visual analogue scale, points-based and similar weightings, most significant change, rankings and weightings, capability approaches, choice modelling (contingent ranking and rating, and paired comparisons), deliberative multi-criteria analysis.
- **Monetary:** revealed preferences, cost-based approaches, stated preference (choice Experiments, including valuation game and auction game), benefit transfer, wellbeing valuation, hybrid stated preference/wellbeing valuation, deliberative monetary valuation (DMV).

**Qualitative approaches** are less comparable and often harder to aggregate. However, they can give a more comprehensive account to understand the value created. To assess social and environmental value, generic qualitative tools are applied and tailored to the specific context, such as questionnaire surveys, expert opinions, case studies, selected quotations, or expressions of emotional responses to changes in social/natural capital, interviews, and theory of change.

The overarching frameworks to capture social and environmental value, like Social Return on Investment (SROI) or Social Cost Benefit Analysis (SCBA), combine different sets of the above-mentioned methods for the assessment. This depends on their purpose, the organisation which conducts it and other context-related factors. To create a suitable framework to capture the social and environmental value of the design sector and design professionals, we introduce further categorisations of the same methods in the following. This should inform the decision on which of the methods is most suitable to Design Council's needs.

# Four examples of different measurement approaches

## Social Cost Benefit Analysis (SCBA)

The SCBA is one of the most common tools for a more holistic value measurement, including indicators for social and environmental factors. The aim is to assess costs of decisions, projects or initiatives not solely against their economic benefits but also accounting for social and environmental impact. Typically, the social and environmental indicators assessed are selected by the organisation itself depending on purpose and context. The framework uses solely quantitative monetary methods to assess value, typically comprising revealed preferences and stated preferences. These methods are used to give the social and environmental impact created a numerical value with a currency as denominator (Fujiwara & Campbell, 2011; Richards & Nicholls, 2015).

The methods used comprise revealed preference techniques which examine people's preferences for different goods or services through market production and consumption. From higher market prices, such as for a house in a non-polluted area and its identical counterpart in a polluted area, it can be inferred how much people would pay to satisfy their preference for a non-polluted living environment. The second method techniques typically used are stated preferences. In contrast to revealed preferences, stated preference techniques derive the monetary value by directly asking people for their willingness to pay for, for example, a house in a well-functioning social community rather than deriving the value from market prices.

## OECD Well-being evaluation

The OECD framework, just like most other well-being evaluation frameworks, emphasises a holistic approach that recognises the multiplicity of factors affecting the individual and society, and rejects sectoral divisions. It starts from the recognition that the economy-wide aggregate condition may be a poor reflection of both the progress of well-being and well-being for both individual and household (Measuring Well-being and Progress: Well-being Research - OECD, 2020). Therefore, OECD sets its focus on both current well-being and future well-being.

For current well-being, three distinct domains are considered – material conditions, quality of life and sustainability. Each has its relevant dimensions (Income and Wealth, Work and Job Quality, Housing, Health, Knowledge and Skills, Environmental Quality, Subjective Well-being, Safety, Work-life Balance, Social Connections, Civil Engagement). Having identified the key dimensions and domains, the focus then becomes 1) Measuring the average 2) Measuring inequalities between groups 3) Measuring inequalities between the top and bottom performer 4) Measuring Deprivation.

For future well-being, four key capital dimensions are isolated: natural capital, economic capital, human capital, social capital. This capital-centric approach lies on the assumption that well-being is generated from stocks of capital (or assets) and the ability of individuals and society to use these capitals (Hattam, Hooper and Papathanasopoulou, 2017). To measure this future well-being, four factors are measured (stocks, flows, risk factors, resilience).

Overall, the indicators used in the OECD framework comprise a mixture of objective and subjective aspects of well-being, reflecting individual capabilities as well as material outcomes. However, concentration is given to measuring well-being outcomes rather than well-being inputs due to the imperfect relationship between the two (i.e health expenditure may be a poor predictor of individual health status).

## JP Morgan & Social Mobility Foundation, Qualitative Impact Measurement approach

The Qualitative Impact Measurement approach developed by JP Morgan and Social Mobility Foundation (SMF) represents one of the private sector attempts to measure the impact of corporate social responsibility programmes\*.

Selected quotations and case studies are heavily used to demonstrate participants' opinions and emotions. Participants are asked to complete an evaluation form before they begin the programme and afterwards, detailing their thoughts about how they perceive themselves and their school, and what university education and career path they want to pursue in the future. They are also encouraged to complete a diary entry at the end of each day so that SMF can assess which activities, during work and in the evenings, are the most useful. The emotions and opinions are gathered through various proxy attributes, including expectations of the experience, changes in university choice, perception of career path, increase in confidence in the knowledge and understanding of the sector, as well as improvements in communication, interpersonal and networking skills. To measure the long-term impact of the programme, JP Morgan also partnered with the Institute of Fiscal Studies and tried to gather data on the education and employment outcomes of the participants. In terms of the spill over effect, the impact report looked at the programme's impact in encouraging other firms to take up similar corporate social responsibility activities, highlighting the holistic nature of the Qualitative Impact Measurement approach.

\*Aspiring Professionals Programme: A programme that aimed to provide high-achieving young people from low-income backgrounds with work placements, mentoring and skills development throughout their sixth form and university years.

## Impact Pathway

Impact Pathway allows organisations to extend value chain analysis of their business activities, which focus on input, activities and outputs, by incorporating measurement and valuation of outcomes and impacts (Greenstoneplus.com). These measurements of outcomes and impacts can be captured as economic, environmental and social values.

Therefore, the impact pathway identifies and documents the different component of each stage in the following order:

**Inputs:** Resources spent on activities

**Activities:** Actions or tasks to meet set objectives

**Outputs:** Products and services from activities

**Outcomes:** Changes to beneficiaries or the environment as a result of the activities

**Impacts:** Effects of the outcomes on society or the environment

This framework is explained using a case study of a programme to train youth on solar energy installations:

**Input:** Money and human resources invested in the programme

**Activities:** Volunteering and training of the youth; and investment in infrastructure

**Outputs:** The total number of youths trained in solar installations and infrastructure built

**Outcomes:** The total number of jobs created, skills improved, improved awareness of renewable energy

**Impacts:** Improvement in the community's well-being, lowering of unemployment, adoption of cleaner energy practice, and wider community improvement

This Impact Pathway framework can be adapted for design activities/roles. As it is an extension of the value chain analysis, the outcomes and impact of the design activity can be traced and evaluated using different valuation tools.

One of the key differentiating factors for different evaluation methods is their assumption concerning the source of the value. The methods can thereafter be differentiated in three categories (Tadaki, Sinner & Chan, 2017).

- Humans as source of value.
- Tangible and intangible things with intrinsic value.
- Value as relationships between humans or between humans and the environment.

Approaches which see the source of values in humans can be further differentiated in three categories.

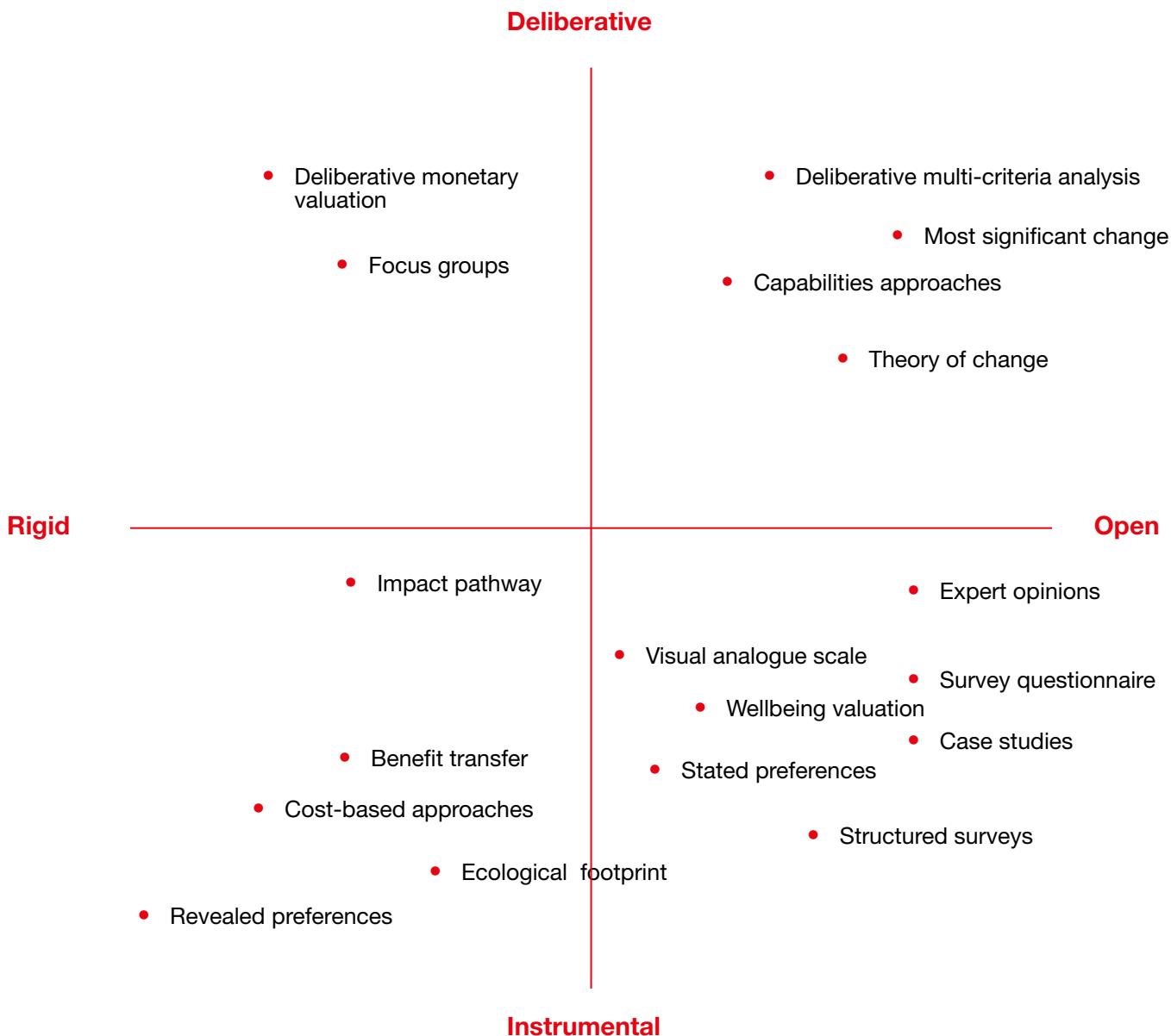
- Methods based on individual preferences which are aggregated.
- Methods based on deliberative choices on values derived through deliberative group processes.
- Methods that understand values as deriving from individual priorities which can be unveiled through specific surveys and interviews.

Methods that follow the assumption that tangible or intangible things can have intrinsic values propose that these values can be modelled as a function of its objectively measurable attributes (Tadaki, Sinner & Chan, 2017). For example, in environmental research, many measurement tools see a well-functioning ecosystem as intrinsically valuable. This implies that for the assessment it is not necessarily needed to ask individuals for their preferences on this ecosystem. The intrinsic value is assessed by an expert in the field.

The third category of approaches sees the source of values in relationships both between humans and between humans and the environment. They acknowledge that relationships can contribute to the pursuit of a “good life” beyond instrumental (economic or social) and intrinsic (ecological) conceptualisations of values. Meanings of relationships are not pre-boxed through an analytical framework. The emphasis is rather to understand the whole variety of meanings in a specific local or cultural context. To distil the variety of meanings, these approaches generally use open-ended qualitative methods, such as interviews and discourse analysis. They draw on a range of primary and secondary material, such as oral histories and documentary evidence (Tadaki, Sinner & Chan, 2017).

Another way to categorise value measurement tools is to differentiate instrumental and deliberative methods:

- **Instrumental methods** assume that values can be objectively measured, quantified and traded-off. Values are elicited by arithmetically aggregating individual values. Key considerations for the validity of the results are statistical concerns like sample size and representativeness across different demographic groups. Decision makers are not involved in gaining the evidence, they just use the output of the valuation process.
- In contrast, **deliberative methods** assume that values are highly subjective. Social values are formed through a structured process of communication, participation, social learning and negotiation. Scientists, among other experts, are often active participants in the deliberative process. Thus, values are seen as the outcome of an ongoing societal process. Extracting values for an assessment framework is seen as a political process. It is key whether relevant interests are represented within the process and whether the process is adequately managed. Decision makers are actively involved in the process by participating in or helping facilitate deliberations (Raymond, Kenter, Plieninger, Turner & Alexander, 2014).



**Graph 1:** Categorisation of measurement tools according to two dimensions: open vs. rigid, deliberate vs. instrumental

Furthermore, measurement tools can be compared in terms of their openness or rigidity. Whereas deliberative or relationship-based methods tend to be open and highly context dependent, instrumental and individual preference methods are based on statistical robustness. The latter are more rigid, typically assuming a narrower conceptualisation of values. This has implications for their adaptability as well as their ability to comprehensively capture value accounting for contextual and cultural factors. Furthermore, the openness or rigidity of methods has implications concerning their comparability. More open tools typically follow a qualitative approach that leads to data that is less easily comparable than more rigid approaches typically gathering quantitative data. Another consideration here is whether applied methods are able to capture solely pre-defined factors or whether they can also account for unintended outputs or outcomes. Due to the nature of design, the openness of the methods to capture unintended outcomes might be a key determinant for their viability (Drew, 2019).

Lastly, methods can also be categorised according to the point in time when value is assessed. Some methods allow us to measure value creation along the process, whereas others solely compare the initial with the end state. Moreover, tools differ in their ability to capture long-term outcomes or merely focus on the analysis of outputs at the end of a process following a defined period of time.

We have seen that there is a wide range of measurement tools available to capture the social and environmental value of design. Existing non-design specific frameworks consist of a mixture of these methods depending on the purpose of the assessment, the nature of what is being assessed and other contextual factors. Considering the nature of design and its diversity across different fields, a standardised tool applicable for all design disciplines is not possible without losing important information on the value created in the process.

As a starting point, a decision has to be made about how social and environmental value is conceptualised. This determines the selection of methods to capture them. Two key considerations here are:

- what is seen as the source of value.
- how far stakeholders or users should be engaged to legitimise the conceptualisation, considering the highly subjective nature of values and their measurement.

## 1.3 Initial conclusions

For the Design Economy report, we think that a mixture of both quantitative and qualitative approaches is the way forward to develop an assessment framework. Following the government guidelines in the Green and Magenta Book, an adaption of a social costbenefit analysis might be an option to quantify and monetise the social and environmental value created by design. This could build upon the existing work on job roles and their design intensity approach in the previous Design Economy reports. Therefore, evaluation experts are needed to monetise the social and environmental impact. Other potential quantitative approaches beyond the government guidelines are expert multi-criteria analysis or more deliberative methods, like deliberative monetary evaluation and deliberative multi-criteria analysis. In the long run, the creation of a quantitative dataset might be an option too.

In addition, qualitative approaches should be used to capture the value created by design more broadly. We think that a combination of case studies backed by interviews and an impact pathway method are most promising to capture value created by design. They are both more open methodologies which could be adapted to specific design fields. It would also be possible to use a more general form to broadly capture the value created across design fields. However, in this modification some information concerning field-specific insights on value creation might be lost. Both impact pathways and case studies can capture the value created along the process and are therefore dynamic. The former is more rigid in its structure, attributing outputs and outcomes to specific actions taken. In the long run, the analysed case studies could be used to build an impact library.

The self-assessment tool for designers could be based on an advanced form of the case study questionnaire we created for the interviews with the design associates. Through further iterations, we could ensure the questions can be easily understood by designers from different fields. This would constitute a tool for them to show their social and environmental impact created in a structured way. In developing the questionnaire further, different stakeholders could be involved to make it a deliberative process. This could in turn increase the buy-in by designers for the tools created. Furthermore, additional tools could be created like an easily usable multicriteria analysis to quantify some of the impact, or a simple version of an impact pathway making the impact attributable to specific actions. This would provide designers with a toolkit to show and communicate the impact they created.

The background features a large, solid red circle at the top right. Below it is a smaller, semi-transparent light red circle. A thick, solid red diagonal line runs from the bottom left towards the top right, intersecting the circles.

# Applying this to design

## 2.1 Defining design

Before thinking about developing methodologies of how to measure the social and environmental value of design, we need to consider what we mean by ‘design’ – and whether we are talking about the practice of design, its outputs, or the people that undertake design work. Without this consideration, we lack a basic unit that we can use to understand ‘design’ and go to look for evidence of its value and a common method.

However, defining design can be difficult because there is no single way of looking at design (Lawson and Dorst) as it exists on different levels. Instead there are different views of design as a method, process, product, problem-solving approach, form of creativity, and capability. This has resulted in design being classified in several ways over the years.

For Design Council, design is both a skillset and a mindset – a particular way of thinking about a problem, putting materials together to achieve a function, creating meaning that leads to new ideas. They use our head, heart and hand. The head enables us to frame the right questions, explore diverse types of knowledge and make a creative and daring leap to an answer. The heart tells us to empathise with the people who are affected, understanding what works for them while thinking about the collective impact on others and our planet, as well as building relationships with organisations and individuals that might be involved in future solutions. The hand puts our creativity into use, working with materials to bring ideas to life and manipulate them into prototypes and real life objects and digital products and systems.

Design Council has previously made a distinction when looking at the value of design, to look both at the value of those undertaking design in design roles (Design Economy 2015 and 2018) and where employees are using design skills in their work (Designing a Future Economy). It’s worthwhile when considering any new methodology on value whether we want to purely understand the value of people termed designers versus those using design in their approach.

There are also different types of design practice, including graphic, product, service, architecture, industrial, craft, and digital. They have different approaches and outputs, which could lead to different forms of value and necessitate different forms of measurement. Particularly for forms of design that do not result in a product, some of this value might also be less tangible, such as building relationships in the early stages of a design approach. Or the value might be unexpected (or a ripple effect from the original intention), such as where an idea or tool can be used or applied elsewhere. So much of the ‘invisible’ activity that sits around the design of a place, a service, a product (e.g. engagement, relationship building, capability building in others), can spark or invite further design and innovation (and value) (Drew, 2020).

Finally, linked to this is our understanding of where design is used within a process or organisation, which may have implications on the nature of value created and for whom. The Danish Design Ladder (Danish Design Centre, 2015) aims to illustrate the depth of use of design by companies, categorizing this into four steps.

- **Step 1: Non-Design**  
Design is an invisible part and user’s perspective is not considered.
- **Step 2: Design as Form-Giving**  
Used for styling final form-giving stage, whether in relation to product development or graphic design.
- **Step 3: Design as Process**  
Design is integrated at an early stage in the development process.
- **Step 4: Design as Strategy**  
Design process is incorporated into the entire company’s business areas and value chain.

Jones and Van Patter have added a further ‘step’ (although not to this framework), which they call Social Transformation design (Jones & Van Patter, 2009).

All these nuances of how we consider design impact on how a methodology can be developed.

## 2.2 Understanding the value of design

Previous efforts to try and think conceptually about the value of design have taken place in both private and public sectors. Most attempts, unsurprisingly, have tried to capture the economic value of design. We have already mentioned Design Council's Design Economy and Designing a Future Economy reports. McKinsey have also produced a report on the value of design in improving business performance, increasing revenue growth, and becoming more iterative (Sheppard, Sarrazin and Kouyoumjian, 2018).

More recent efforts, including this report, have recognised the importance of going beyond the mere economic value of design and start to see the more complete picture. This includes, for example, the value of participation in design research to the wellbeing of those involved (Knutz & Markussen, in Rodgers (eds) 2019).

According to The Montreal Design Declaration, which itself is a milestone "marking the launch of a global collaborative effort to utilise the potential of design for the benefit of all", the role of design is recognised as fundamental to creating and shaping the world around us, both now and in the future (The Montreal Design Declaration, 2017). According to the same Declaration, the value of design has been specified as follows.

- "the **application** of intent"
- "the **driver** of innovation and competition, growth and development, efficiency and prosperity"
- "the **agent** for sustainable solutions created for people and supporting the planet on which we rely"
- "the **vehicle** to express culture"
- "the **bridge** to human needs for technology"
- "the **facilitator** of change"
- "the **introduction** of intelligence to cities as a foundation for better communications, improved environments, enhanced quality of life and more prosperous local communities"
- "the **tool** that "addresses resiliency and manages risk through comprehensive research, robust methodology, prototyping and consideration of life-cycle consequences"

- "the **facilitator** of "development of SMEs in general and the creative industries in particular"

The value proposition of design can also be approached through the intrinsic/extrinsic dichotomy. For the intrinsic value of the design, some suggested that it can be best understood as the 'language media' of design or the modes of thought which relate particularly to design abilities (Cross, 1984). For the extrinsic value of the design, it can be best approached through Knutz and Markussen's infamous publication on The poetics of design fiction, where the value of the design is talked about as either 1) demand value (i.e. achieving goals for beneficiaries) 2) social value (the participatory process creating value for participants, which Design Council saw in its Transform Ageing programme) 3) research value (i.e. new insight for the system).

The dichotomy is important in that it allows us to pause and reflect on the assumption that design is always 'good' and therefore valuable. Whereas good design can be fundamental and critical in creating a world that is "environmentally sustainable, economically viable, socially equitable and culturally diverse", a bad design (or even design that is not good enough) can substantially create an impact opposed to what we desire in terms of broader social and environmental good.

One way to see how good design can create value is to look at the negative outcomes of bad design. One typical example is planned obsolescence. Originated from industrial sectors, planned obsolescence refers to the design of a product with an artificially limited useful life, so that it becomes obsolete (i.e. unfashionable, or no longer functional) after a certain period of time. In other words, it is the deliberate shortening of a product's lifespan to force consumers to purchase replacements. Continuously replacing products, rather than repairing them, creates more waste and pollution, uses more natural resources, and results in more consumer spending. Planned obsolescence can thus have a negative impact on the environment in aggregate.

## 2.3 Experimenting with applying this to design

As illustrated in the Categorization of Measurement Tools section, there are a fair amount of measurement tools available to capture the social and environmental value. However, considering the distinct nature of design and its diversity across different design disciplines, general measurement tools are not entirely applicable in measuring the value of design without losing important information on the value created in the process. In other words, no design-specific measurement framework currently exists.

We considered how we could develop ‘bottom-up’ approaches to measuring value. That meant thinking about where we believed value might take place in theory (value chain analysis) and observing where value was created in examples, then looking for commonalities. We approached this from two angles: value chain analysis of design roles and analysis of design-centric case studies.

### Value-Chain Analysis

In our 2018 report, there were 1.69 million people employed in design roles in the UK in 2016 and 23 Standard Occupational Classification (SOC) codes were published in our 2018 Design Economy report. The names of these design occupations were obtained and Porter’s (1985) value-chain framework was used to qualify the stage along the value-chain where these jobs were taking place. The value chain activities, according to Porter, are inbound logistics, operations, outbound logistics, marketing and sales, and service.

Afterwards, using the SOC codes, descriptions of each of the roles were obtained and potential recipients and outputs of their various activities were identified. Subsequently, assumptions were made about the likely intended outcomes as well as the unintended outcomes (spill overs/ripple effects). Also, assumptions were made regarding the potential social and environmental values created.

It was observed that these design roles were involved mostly in operations activities alone or accompanied with service activities. A good number of them were active in the service part, whilst a few actually took place across all aspects of the value chain.

The value chain analysis allowed the capturing of potential capabilities and location of the roles along the value chain. However, there were difficulties in identifying the specific contributions of design roles to social and environmental values without having prior knowledge of how design actively contributes to the outcomes.

Nevertheless, this methodology clearly identifies a path that can be explored to sensitise and enlighten those employed in these fields to consciously integrate the creation of social and environmental values into their design activities. This then led us to review actual documented design-centric case studies, with social and environmental impacts, to understand the roles played by design in creating value.

### Case Study Analysis of Design Projects

The second approach involved our analysis of various design-centric case studies. We examined the role design played in the outcomes and evaluated and classified these outcomes as social or environmental values.

14 case studies were retrieved from various Design Awards, from creative design, architecture design and policy design spaces. The case studies were then analysed and the outputs and outcomes were identified under social and environmental value. There were also assumptions made regarding the invisible/visible ripple effects/spill overs.

There were various observations from the analysis of these case studies. First, the exercise revealed that it was easier to classify components of design in physical build cases, and that was not the case for non-physical elements. Second, it was observed that it was difficult to distinguish between intended/planned outcome from ripple effects without further engagement with actual designers involved in the project. Finally, it was also difficult to directly associate design to the value created for non-physical designs without further engagement with the relevant designers.

Therefore, with the various challenges outlined in the case study analyses, there is a need to further clarify the specific roles and contributions of design to the outcomes of these projects. To this effect, we embarked on a call for evidence from designers and the interview questions have been prototyped and tested with four interviews conducted as a pilot. We have included summaries of the various case studies analysed.

In the absence of overarching measurement framework for design, there is, however, attempts in practice for the measurement. In this section, we detail four real-life examples where design has demonstrated substantiated social and/or environmental impact, to see how value of design has been captured and measured in practice. Depending on the purpose of the project, the sector in which the projects operates, the level of rigorousness needed and other context-related factors, we found a mix use of qualitative and quantitative measures across the four case studies mentioned above.

In a separate move, we have tried to map out the value of design that has been mentioned during the interview with people who have extensive knowledge and lived experience of the relevant case, which is further used to compare against the value that has been measured in practice. See Graph. 2.

We observe that, among all the values that have been mentioned, a considerable number of concepts were not measured in practice. For instance, new relationship and new knowledge has been classified as key impact across the examples. However, no measurement has been done in practice to capture this particular spill-over effect. It's the same for independence, which turned out to be crucial for both the vision-impaired population in the case of Wayfindr and older people in the case of Personal Alarm Watch. Yet, we see limited in trying to capture it in the current measurement.

The nature of these missing elements became more evident after we further clustered them into four different quadrants (See Graph. 3). The quadrants are divided by two dimensions. For the first dimension (quantitative to qualitative), it's about how quantifiable the value of design can be. The closer to the 'Quant', the easier it is to put a number (either it's number of people, the percentage of increase/decrease, or other) on the value of design. The second dimension is a combination of consideration on the tangibility and incidental-ness of the value. In other words, the boxes placed on the right are more intangible, more about process and acting more like added/ incident value of design compared to those on the left.\*

Through this map, we find that, apart from the bottom-left quadrant, it was not clear how the impact of design that sits in other quadrant are measured or if they measured at all in the four listed projects. This could be due to the fact that all four cases are still ongoing and therefore the full landscape of the long-term impact of projects can't not be captured instantly. How to tailor the design of measurement for each quadrant and in a timely manner, thus, warrants serious consideration in building a new measurement framework specific for design.

On reflection, we recognise that the expert testimony, or what interviewees claimed to be the value of design, may not equal the real value that has been created. How to substantiate what has been claimed by interviewees/designers and deal with the inherent bias needs to be done for a more robust value map.

\*Note: Current division is not a finite way to look at it as measurement can be both abstract and contextual.

### Case study: Wayfindr

**Measurement in this case:** In this project, measurement has been conducted since the very beginning to make the theory of change possible. In general, rigorous qualitative impact measurement has been done, with additional impact analysis being conducted independently by the charities who are involved. Multiple interviews have also been conducted along the process of pre, post and outside of trials. Well-being surveys are used both before and after using Warwick-Edinburgh Mental Well-being Scale (WEMWBS).

### Case study: Personal Alarm Watch

**Measurement in this case:** A mix of quantitative and qualitative measures has been used in measuring the impact of the product/service. The qualitative side is mostly done by gathering user stories. A specific framework used for measurement is the feedback survey. Questions in the feedback survey continue to change but the following are regularly used.

- Disappointedness scale (i.e. How would you feel if you could no longer use Personal Alarm Watch? – very disappointed, somewhat disappointed, not disappointed)
- What type of people do you think would benefit most from a Personal Alarm Watch?
- What is the main benefit you receive? (open-ended)
- How can we improve it?
- Net-Promoter Score

In general, these questions are focussed more around, 'Are Personal Alarm Watch actually delivering value to people?' and 'What can the team make better?'

In the future, the team may go back to the user-information log which is currently backed in monitoring team to look at things like how many times the watch has saved someone's life: 'This is an emergency and this is what happened.'

Further down the line, the founder has also acknowledged that they would look at a more rigorous approach, like a randomised control trial that would investigate reduced deterioration in health, increased activity and more independence. They may partner with academic institutions.

### Case study: Fab City

**Measurement in this case:** This particular project is ongoing.

### Case study: Uscreates (now FutureGov)

**Measurement in this case:** Statistics like a percentage decrease in homelessness have been captured. However, alternatives to typical static measurement hasn't been done. According to Cat Drew who lead the project, metrics like 'degree of improved confidence' will be taken into account if she can do it again.

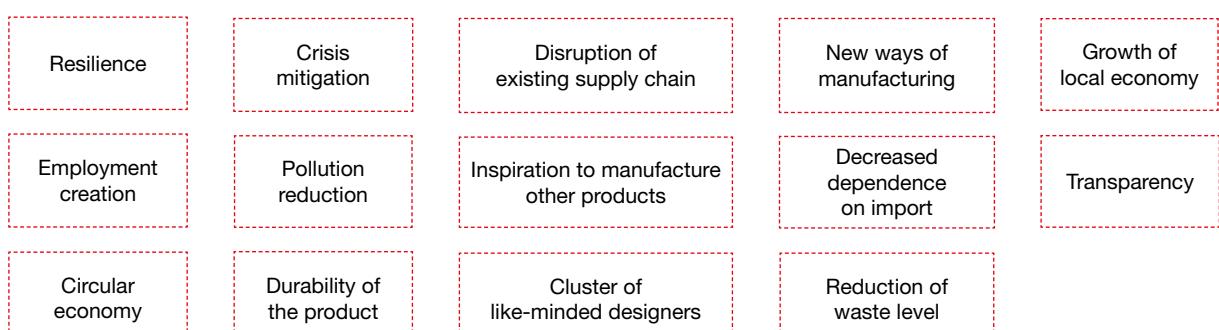
In conducting close examination on real-life examples, we see a range of measurement tools used: statistics documentation, well-being survey with a combination of Warwick-Edinburgh Mental Well-being Scale (WEMWBS), interviews conducted along the process of pre, post and outside of trials, feedback survey combined with indicators like Disappointed-ness scale as a reflective exercise to gather user stories and user experience, the more rigid RCT that would investigate reduced deterioration in health, increased activity and more independence.

## Value map from case studies

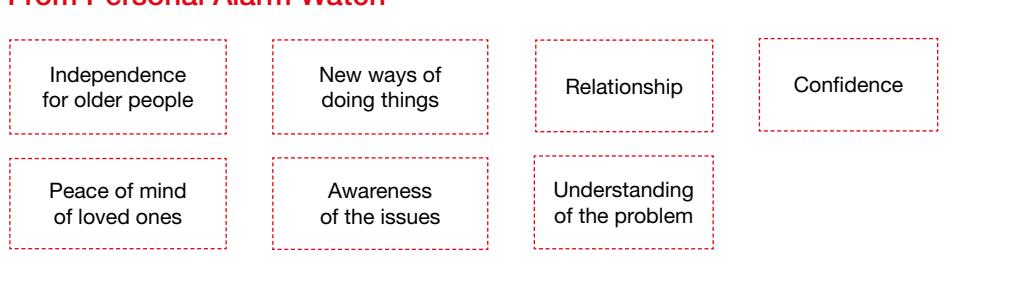
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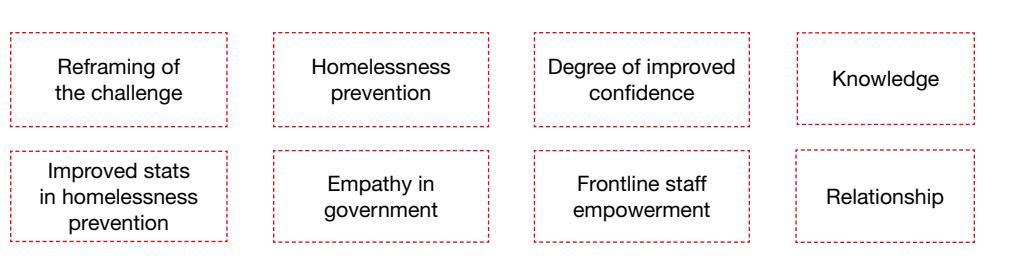
### From Fabcity



### From Personal Alarm Watch

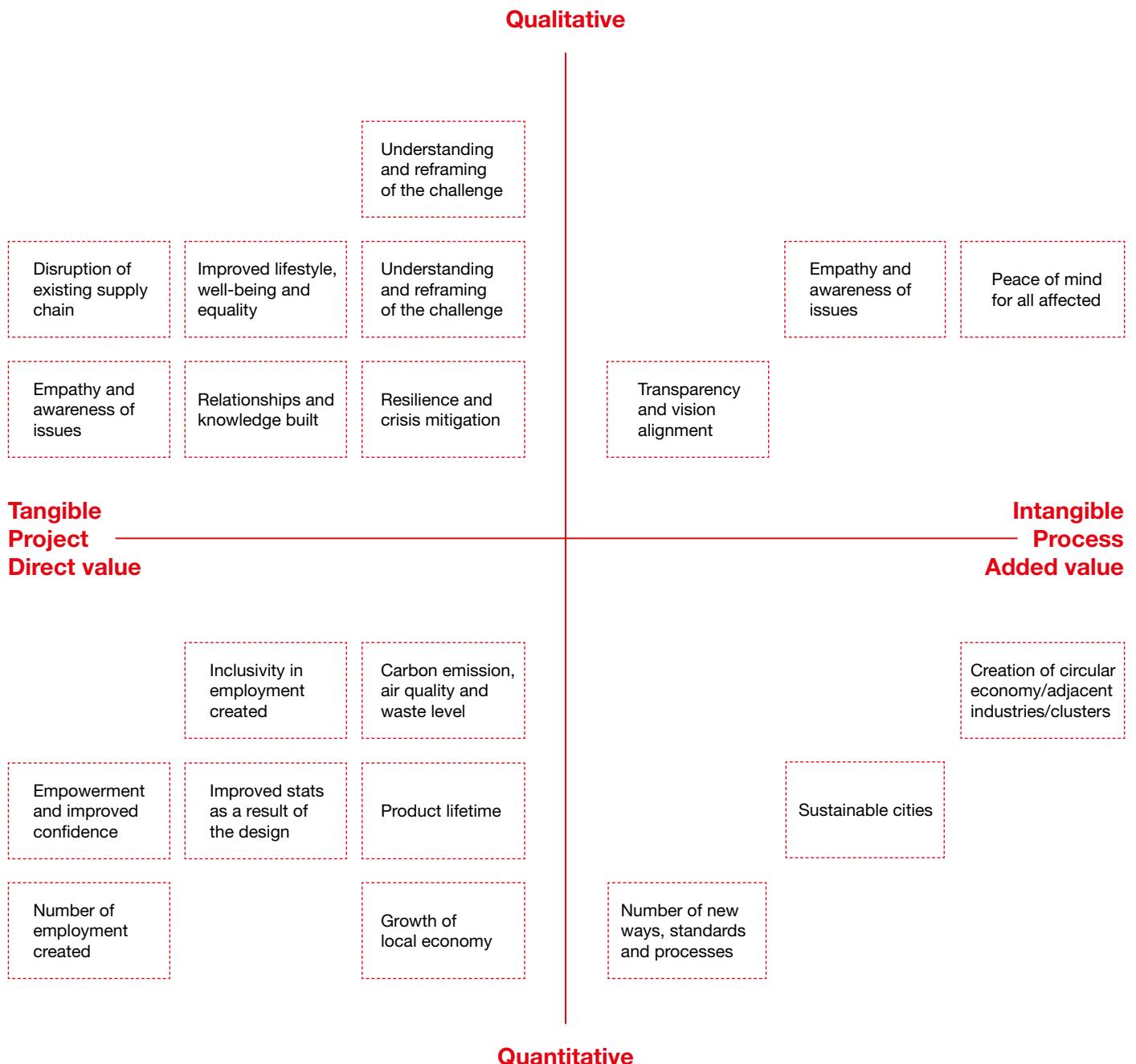


### From Uscreates



Graph 2: Value map from case study

## Value measuring and sensing of case studies



**Graph 3:** Value measuring and sensing of case studies

# Case study 1

## Bringing local stakeholders together to understand issues around homelessness and to design solutions to address them

**Designer:** Uscreates (now FutureGov)

**Client:** Local Government Association GA

**Where:** Newcastle and Lewisham (UK)

**When:** 2017

### What was the challenge?

There had been an increase in the number of people who were homeless, sleeping rough or in temporary accommodation over the years. The situation was projected to get worse and solutions were needed to reduce the homelessness figures. Design was employed as a problem-solving tool.

### What was the role for design?

A design approach was used to bring different stakeholders together to co-create, potentially including homeless people, frontline staff working with homeless people, designers and other community stakeholders.

The Double Diamond and the following principles of service design were used.

1. Gaining a deep human understanding to uncover the root causes of homelessness, as well as the emerging positive stories showing resilient individuals and family support available to homeless people.
2. Reframing challenges in order to tackle the problem differently and tenaciously.
3. Co-creation solutions were jointly developed.
4. Prototypes were developed and tested using an iterative process to ascertain what potentially could work and what wouldn't work.

### What were the 'a-ha' moments that design contributed to?

1. The design process identified and acknowledged the importance of bringing about different resilience factors through service (e.g. mindset, ability to stay with someone they know) for people who are homeless.

2. It validated the importance of having frontline staff to be part of the prototyping process to understand the rationales and come up with viable solutions using design thinking.

### What was the impact?

#### Impact on individual level

1. There was a decrease in the number of homeless people, e.g. in Lewisham there was a 44% increase in prevented homelessness cases and decrease in numbers of homeless people.
2. There was evidence of improved experience.

#### Impact on service level

1. Influence the spending of £40million in testing some of the prototypes.
2. Impact on how frontline staff delivered service as the training they received as part of the prototyping process has meant that they are able to adapt to different situations.

#### Impact on system level

By finding new ways of solving old problems, using new lenses to see underlying issues, and story sharing, homelessness issues has been framed to be more about prevention which has become embedded in the Law (Homelessness Reduction Act, 2017).

#### Impact on future/other design projects

Influence the spending of £40million in testing some of the prototypes.

1. Designers were empowered to do more and facilitate other projects.
2. People who got involved can build knowledge and bring design perspective into future conversation
3. Next project can be built on the relationship that has already formed
4. MHOG appreciates the importance of design by hiring two designers on their team.
5. In Hackney able to get people into more temporary accommodation.

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## Case study 2

### Empowering vision impaired people to travel independently through inclusive and accessible audio navigation

**Designer:** Wayfindr

**Client:** Ustwo, Royal Society for Blind Children, Transport for London

**Where:** London

**When:** Ongoing since 2015

#### What was the challenge?

London's public transport system can be confusing. Now imagine you have a vision impairment and you have to navigate in the jungle of stations, exits and routes to arrive at your desired destination. Wayfindr addresses this problem by aligning stakeholders and co-designed, inclusive and accessible audio navigation systems for vision-impaired people. This was done by a purely design-driven process, putting vision-impaired people in the centre, according to the principle: "Nothing for us without us".

#### What was the role for design?

This highly complex challenge was just to be tackled with design tools. The project was executed like a design process using several tools from different design fields.

1. User centred design: Solutions were developed around user needs, actively including them in the process.
2. Speculative design: Build, measure and learn from iterative testing, building prototypes of a potential solution and testing them directly with users.
3. Inclusive design: A community was built to test and co-develop solutions with users and as many stakeholders as possible were included.

#### What was the impact?

The open standard and open-source application for indoor navigation had a massive impact on vision-impaired people and the communities where they live.

**Impact on citizens:** The indoor navigation system empowered people to get out and about independently. This increased their confidence and stimulated their participation in society. It also increased their accessibility to the job market.

**Impact on community:** The project contributes to a more inclusive society with higher acceptance and sensibility for the needs of vision impaired people. Moreover, it allows more people to enter the work force and contribute their talents. The increased diversity of the workforce also stimulates innovation and leads to the foundation of new businesses.

#### Where there any unexpected results of the project brought about by design?

The process design led to two unexpected outcomes:

1. The strong focus on building a community brought all stakeholders in the field together. Whereas they competed for funding before, they were aligned through the community behind one vision and cooperate more than ever.
2. The strong network and relation-based approach led not just to achieving the initially set goal of creating an open standard for indoor navigation. Through various contacts made during the process the standard found its way to the United Nation Convention on the Rights of Persons which declared it to be the first international standard. This means that much of the software and hardware created for indoor navigation in the future will follow Wayfindr's standard. Therefore, people using indoor navigation systems will hear the same language which they understand independent of the service or hardware they use.

# Case study 3

## Disrupting the existing supply chain, which relied on importation from China, to locally manufacture protective face masks for frontline healthcare workers in the fight against COVID-19.

**Designer:** Fab City/Batch.Works

**Client:** National Health Service

**Where:** East London (UK)

**When:** 2020

### What was the challenge?

The onset of the COVID-19 outbreak resulted in supplies of protective face masks from China being interrupted, due to lockdown of Chinese factories. This meant that the urgent need for face masks for frontline health workers in the UK were not being met. Typically, face masks were made in China and it took a long time for orders to arrive in the UK. However, the crisis of supply of protective gear meant that a local solution was required.

### What was the role for design?

1. Distributive design was used. It allowed Batch.Works to download a digital file then, using their 3D printing technology, build a new design system for local manufacture of protective face masks.
2. Design was used in the design of the masks as well as for technical and aesthetic purposes to ensure that the masks were not only fit for purpose but looked good.
3. Design was used to make the masks re-usable, more comfortable and recyclable.
4. Design allowed the quick manufacturing of the masks in a more economically viable way.
5. Batch.Works is run and staffed by designers who work iteratively, using design, test and optimise steps to find ways to improve the processes and the system.
6. Design also facilitated the sourcing of materials locally. In this case, the main material used was corn starch.

### What were the 'a-ha' moments that design contributed to?

Distributive design was key in the COVID-19 crisis, as it allowed an alternative supply of protective face masks to be locally sourced. It disrupted the supply system and design became instrumental by enabling the local economy.

### What were or are the potential impacts?

The project is still in its early days, but there are already some impacts noted.

#### Individual level impact

1. There are more readily available protective face masks for healthcare workers.
2. Young product designers now realise that there are different ways of creating products to create new micro businesses.

#### Community level

1. Local employment is being enabled.
2. Less pollution from logistics as delivery is being done using cargo bikes instead of by trucks.
3. It has brought manufacturing into the city and community.

#### System

The face mask supply system was disrupted, and it reorganised itself to be resilient and resourceful. This will inspire other kinds of products to be made using the same type of system.

## What were the social or environmental impacts of the project attributed to design?

### Social

1. Materials used for manufacturing are sourced locally.
2. Batch.Works design process allows for transparency as it shows the people employed in the system. It also allows for a close relationship between the manufacturer and the consumer, the NHS.
3. It has also helped create a circular economy in that community.

### Environmental

1. There is less pollution as delivery is being done by cargo bikes instead of items being flown in from China and driven in trucks to locations.
2. The face masks are durable, which would result in the system being sustainable with less waste.

## Were there any unexpected results of the project brought about by design?

There are two main unintended results

1. A lot more people have been employed as demand grew, which was unintended.
2. Also, a community of like-minded designers has begun forming clusters around the factory – a mini design economy/ecosystem.





## Case study 4

### Accelerating housing delivery and creating a sustainable business model

**Designer/Client:** Design Council/ South Kesteven District Council

#### What was the challenge?

How to tackle the housing problem in South Kesteven District Council and to create a sustainable business model that could withstand increasing pressure on services and shrinking funding from central government to prevent people from being homeless?

#### What was the role for design?

1. Design Council's Design in the Public Sector Programme, delivered in partnership with the Local Government Association, was the vehicle through which they explored the problem.
2. Design process brought different participants to the table. Attendees included elected members, private landlords and developers.
3. The Double Diamond was used as a tool to view customer's perception and perspectives. It also helped challenge preconceived ideas of the housing challenge, and housing numbers to morph into place making, attracting families, economic development and business growth in the council.

#### What were the 'a-ha' moments that design contributed to?

Design thinking was used to completely rethink the way they were delivering housing and reframe the original housing challenge in the district.

#### What were or are the potential impacts?

##### Impact on individual level

1. Learnt design techniques for future application.
2. Customers found new council tax bill better understood. "A 90-year-old customer told us it was the first time in her life that she'd understood her council tax bill."

##### Impact on service level

1. They redesigned the council tax bill to provide more clarity for customers. The council sent out over 65,000 bills and the advice lines braced themselves for the usual deluge of calls from confused customers, but due to the new design this didn't happen. Call handlers reported a much lower volume of calls from people needing clarification about their council tax bill.
2. Design processes and methods learnt on the Design in the Public Sector Programme are now used in almost every project

##### Impact on system level

1. A new kind of dialogue was created, one which was inclusive and acknowledged the voices of everyone with a stake in the district's plans for housing.
2. Permanent cultural change – the Lightbox Programme. This is a platform to enable new ideas to be prototyped and tested in a safe environment. Successful prototypes will then be rolled out. Lightbox is now a functioning unit in the council. It has a small permanent staff, supplemented by talented secondees known as 'plug-ins' from the wider council.
3. To publicly embed the techniques, they transformed their annual all staff meeting from a format of presentations and slides to a session involving everyone using Design in the Public Sector techniques.

# Case study 5

## A better alternative to traditional pendant alarms that provides independence for product users and peace of mind for the user's families

**Designer:** Personal Alarm Watch

**Client:** Across UK

**When:** Ongoing since 2017

### What was the challenge?

Existing personal alarm watch is painful to use.

### What was the role for design?

1. By having the element of continued improvement (i.e. keep getting more and responding to feedback), we get closer to building the best possible products.
2. Design throughout the process has led the team to develop something that people actually want to use and actually love, which leads to a high level of engagement.
3. Design makes the product easier to differentiate from similar products: when people compare the product against other options, it's clear which one is better.
4. Design make the team further understand why they should fix the problem they are trying to fix.
5. Deliberate product design decision between 3–2 seconds for activation, so that it is easy to activate in emergency but not easy to activate by accident.
6. Design mindset and skillset were inherently baked into the process of developing the Personal Alarm Watch.
  - a. User-centered design: gather user feedback, then encourage user to give feedback, use that to develop, improve, test and eventually scale. The team has spoken to every single person/user to learn about their experience. If a new idea came up, the team spoke to users and asked what they thought about it and reflected the consultation in testing. A culture has been built where people are encouraged to speak up about the good or bad things in the prototype/products.

- b. Quick prototyping: even though hardware changes are much more infrequent, an extensive amount of service changes by fine-tuning little details has been done.

### What was the impact?

The overall output is saving more people's lives.

#### Impact on individual level

1. Benefit for the user: people reporting feeling more independent, confident, having their freedom, plus spouses able to work as their loved ones are now able to stay at home.
2. "This is the best thing I have ever bought."
3. People not dying as early.

#### Impact on product and service level

1. Deliver the service level way above the industry standard, which led to users and families having more confidence in the system.

#### Impact on system level

1. New way of doing things in an industry that hasn't changed for many years.
2. Reduced the need for higher level care or institutional care.
3. Potentially less intergeneration housing is needed.
4. Increased awareness of the emergency issue.

#### New relationship

1. With customers.
2. With public sector organisations, like Hackney Council

### **What were the ‘a ha’ moments that design contributed to?**

Realising the range limitation of the traditional alarm watch, which is a massive pain point in the user experience and makes people less active. We also learnt that installing the kit can be cumbersome and thought about how to better design the initial user experience. We realised the button on the watch should be on the front rather than on the side by considering emergency situations like stroke or when it's difficult to reach to the side.

### **Were there any unexpected results of the project brought about by design?**

- 1.** The Personal Alarm Watch itself is an unintended outcome, as initially the founder just wanted to do preventative healthcare or something good for the older generation. But by locating the fundamental importance of independence and emergency, the product focus became the watch.
- 2.** Another unintended outcome is realising how many people are willing to go through all the pain to cancel the bad design of alarm watch to get active.



# Recommendations

## 3.1 Recommendations

Measuring the social and environmental value of design is challenging. Both values, as well as design as such, lack a broad consensus on their definition. However, based on our research, we can identify pathways for the Design Council to develop a framework that captures the social and environmental value created by design. Our recommendations for are in three sections.

- Conceptualisation of values
- Viable methods for the Design Economy 2021 report
- Viable methods to create a self-assessment toolkit for designers.

### Conceptualisation of values

The trend in measuring of value created goes towards a more holistic conceptualisation of values. Whereas in the last decades the main focus was on the economic value created by organisations, sectors and industries, more and more people realise that a system using just economic value as a guiding principle does not lead to optimal and inclusive outcomes. Going beyond the consensus of economic value brings considerable challenges. Which values qualify as better guiding principles? How do we conceptualise and measure them? How do we find a consensus and ensure stakeholders buy-in?

As values are by nature highly subjective, we propose a deliberative process that includes all stakeholders to conceptualise social and environmental value for the design sector. The Design Council could use its expertise and tools to create a participatory design process bringing the system in the room (on- or offline) to set the guiding values for the design sector. This approach would ensure the buy in of all stakeholders involved and would legitimise the conceptualisation of social and environmental value for the design sector. Importantly, how these values are defined has major implications for the methodology used to assess them.

### Design Economy 2021

Due to the diverse nature of design, we think that its social and environmental value created cannot solely be captured by quantitative methods. We propose a combination of different qualitative and quantitative methods to ensure a holistic assessment. The trend of a more pluralistic value measurement led to the emergence of a range of frameworks to capture social and environmental value. However, after an in-depth examination of the existing frameworks, we think that none of them are fit for purpose to capture social and environmental value created by design. Therefore, we conducted an extensive landscape analysis of measurement tools. Building on this analysis, Design Council could create its own framework combining and adapting different tools to the complex value creation process of design. Since the conceptualisation of value and the way it is measured is highly subjective, we propose that a deliberative process might also, for the methods selection and adaption, be the most viable way forward. In the following, we summarise some key considerations that can be used to build a measurement framework in both a deliberative and non-deliberative way.

In terms of quantitative methods, a key decision to take is whether the framework should follow the government guidelines, or should it go beyond them. In case of the former, the set of potential methods is limited. The assessment could follow the Social Cost Benefit Analysis (SCBA) framework adapted to the needs of design. However, due to the limited methods available in the government guidelines concerning the assessment of social and environmental value, this approach could only account for a small part of the value created by design. Therefore, we propose to add additional quantitative tools in any case. Viable options are a deliberative multi-criteria analysis or a deliberative monetary valuation. Both tools are of a more open nature than the government's SCBA and could account more broadly for the value created by design, including different stakeholders in the process. However, the output would still be quantitative, making the assessment easy

to communicate and compare. Since the value creation process is highly diverse in different design disciplines, specific quantitative tools for different design fields might be needed.

To comprehensively capture the social and environmental value created by design, we recommend complementing quantitative methods with qualitative ones. The Design Economy Report could include case studies showing examples of how design creates social and environmental value. They could follow a similar format as the ones we created for the present report. Moreover, impact pathways, a more structured qualitative approach, could help to communicate the value created by design. The method tries to attribute the value created to the specific actions taken. This could offset part of the attribution contribution problem, which design often faces. Both methods also account for the ripple effect, another key feature of design that is challenging to capture.

## **Self-assessment toolkit for designers**

Designers should be empowered to communicate the value they create. Therefore, we propose the creation of a self-assessment framework. This could not only nudge designers to tell their stories, but provide them with tools to show and communicate the social and environmental impact of their work. As a first tool for this kit, we recommend to further iterate, test and develop the questionnaire created for the current project. Asking the right questions allows designers to reflect and communicate the value they created in a clear manner. The answers to this structured questionnaire could be used by designers themselves and compiled in an impact library. This library could constitute a major source of inspiration, as well as a major tool to prove how much value design can create. The questionnaire tool could be accompanied by additional easy-to-use methods for designers, like a simple form of an impact pathway or multi-criteria analysis. Furthermore, theory of change templates and other tools could be added to create a baseline from the start of the design project, making the intended value creation explicit from the

beginning. These methods, adapted to the needs of designers, would provide them with a powerful toolkit to communicate, show and reflect their value creation. Lastly, this would lead to an overall increased awareness of the key role design plays for a better environment and a better society.

## **Limitations and gaps of our work on which Design Council can further elaborate**

### **Negative Case Study**

In the ‘Value of Design’ section, we unpacked the assumption that design is inherently good. Through the concept of planned obsolescence, we illustrated the intrinsic capacity of design to serve as a source of negative destruction on both society and environments. However, naming one example of a specific design discipline (i.e. product design) is far from enough. More negative case studies backed with in-depth interviews and rigorous analysis need to be sourced to illustrate and understand 1) why even good design can create negative impact on society and environment, 2) why measuring the value of design is a question of whom, 3) difference and overlap between good/bad/better design.

### **Additional Tools for Designers**

To help designers better deliver the value of the design, we have recommended the iterative development of a questionnaire as a reflective exercise to nudge the storytelling process. However, it shouldn’t just be about the questionnaire. Quantifiable metrics that can make it easier for designers to identify the value of design along the process should also be designed. Further down the line, consideration may be also given to the timing of measurement. Tools to capture the baseline situations can be helpful for the more rigorous comparison and tracking of the value across the process. During our interviews, we found that only one case study (Wayfindr) said that they thought about the measurement at the start of the project. Can people begin with measurement in mind? What tools are there to reflect the theory of change? What are the considerations in designing baseline?

Should it be done according to the strategic theme of Design Council? These are the things not currently reflected in our work and worth thinking about in the future.

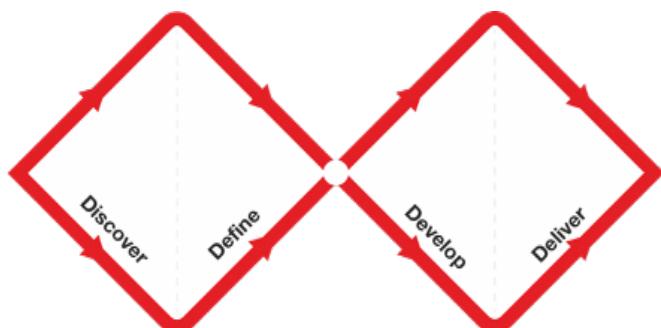
### **Links Value Chain Analysis to Strategic Themes**

Value Chain Analysis identifies a path that can be explored to sensitise and enlighten those employed in these fields to consciously integrate the creation of social and environmental values into their design activities. By having this conscious integration, it increases the chance of the extension of the boundaries of the value of design. Going forward, we think it might also be helpful in pushing this conscious integration to the direction of Design Council and reflect our three strategic themes.

### **Double Diamond (DD) Evaluation Tool**

Designers use various tools that can be adapted to capture the value created during the design process. One tool is the Design Council's Double Diamond (DD). The DD, though not a linear tool, can be used as a basic framework for capturing value in three phases:

- First diamond: Solely qualitative methods can be used to capture value created during the process of discovering and defining the problem.
- Second diamond: Qualitative and quantitative methods can be used to capture value created by developing and delivering solutions.
- Outside/Edge of the diamond: Qualitative approach to capture ripple effects on the peripheral of the design process



In the first diamond, during the discover and define stages, different key stakeholders, including users, come together to focus on designing for people's needs and wants. That produces valuable insights that help reframe the issues, develop a shared understanding and come up with the best design solution.

In the second diamond, ideas are reviewed through critical thinking and design and can be captured, prototyped and tested. That leads to quantitative information towards working out expected targets from the implementation of the design project. Here, assumptions can be tested, and projections can be made from the outcome of the piloting of the solutions.

Finally, the engagement process also leads to relationships being built and connections being made, which are of value and should be captured. These activities are said to take place around the DD and are mostly invisible. They also need to be captured by designers. When the Design Council put this question to 80 designers, some of the responses regarding the activities are as follows:

- Clarifying roles and responsibilities
- Implementation
- Equalizer
- Conflict management
- Building confidence
- Trust with client
- Building resilience
- Measuring what didn't happen
- Learning and onboarding
- Holistic leadership

It is recommended that the Double Diamond as a measurement tool be further developed, wireframed and prototyped through the lenses of designers to confirm its viability.

# Annexes

## Annex 1: Methodology

Our approach followed the Double Diamond model. In the first stage, we embarked on a discovery phase to familiarise ourselves with the subject by reading the Design Council's strategy and Design Economy publications. We also commenced desk-based research on different value paradigms, definitions of design, and trends and challenges in measuring and assessing value. As we progressed, we decided to note and draw up a list of what we called "tricky questions." This list continued to grow over the duration of the placement. We also conducted interviews with key internal stakeholders to understand their various roles in the Design Council, as well as their views on the social and environmental values of design.

Afterwards, using the 23 Standard Occupational Classification (SOC) roles published in our Design Economy 2018 report, we conducted a sectoral value chain analysis to identify potential social and environmental values created by these jobs. We attempted to identify the potential spill over/ripple effects from each category, and decided to rethink our methodology to analyse design-centric case studies.

In the define stage of our approach, we retrieved 14 case studies from various design awards, from creative design, architecture design and policy design, to analyse and identify the output/outcomes as well as to capture the social and environmental values created. Finding this to be a viable course of action, we further refined our case studies' selection through a call for case studies from designers via social media. We also co-developed questionnaires with the Chief Design Officer and Head of Research and Insight, which we sent out to the Design Council's Design Associate (DA) community for their completion. These two exercises gave rise to a total of 45 case studies.

The 45 case studies were summarised in an Excel spreadsheet. We also co-developed a set of interview questions, which were administered to the designers who were available to provide us with more insights into their various design projects. We had initially set out to interview 10 designers, but were only able to interview four who responded. The interviews were conducted, recorded and details of the responses captured on an Excel spreadsheet. Additionally, we co-developed a template that was used to summarise case studies by identifying the relevant challenges, the role design played in the project as well as the impact of design on the individual, community and system levels.

While the case studies were analysed, we began conducting research on academic and theoretical publications on valuation methodologies for social and environmental value towards arriving at possible approaches to adapt for design.

In the develop stage of the second diamond, we began synthesising the theoretical and case study insights for the valuation methodology development. This approach allowed us to validate the feasibility of the different theoretical frameworks. We also prototyped and tested the interview questions, and some questions were adjusted based on reactions from those people interviewed.

In the final deliver stage, we are planning to categorise the practical approaches based on the theoretical frameworks. This will create a solid base of decision-making on how the project could further develop for the measurement of social and environmental value in our Design Economy 2021 report, and more broadly.

## Annex 2: References

1. Bozeman, B. (2007) Public Values and Public Interest: Counterbalancing Economic Individualism. Georgetown University Press, Washington, D.C.
2. Cross, A., 1984. Towards an understanding of the intrinsic values of design education. *Design Studies*, 5(1), pp.31-39.
3. Danish Design Center (2015) The Design Ladder: Four steps of design use. [online] Available at: <https://danskdesigncenter.dk/en/design-ladder-four-steps-design-use> [Accessed 23 May 2020].
4. Design Council (2017) Designing a Future Economy: Developing Design Skills for Productivity and Innovation
5. Design Council (2018) The Design Economy 2018: The State of Design in the UK
6. DESIGN DECLARATION SUMMIT. 2017. The Montreal Design Declaration. [online] Available at: <<http://www.designdeclaration.org/declaration/>> [Accessed 1 June 2020].
7. Greenage (2017) What is ‘Social Value’ and How Can We Measure it? [online] Available at: <https://www.greengage-env.com/social-value-can-measure/> [Accessed 23 May 2020].
8. Drew, C. (2019) The ripple effect of a design workshop - and how to measure it? [online] Available at: <https://medium.com/design-council/the-ripple-effect-of-a-design-workshop-and-how-to-measure-it-8093972d21bc> [Accessed 23 May 2020].
9. Fischer, G., Damodaran, N., Laskey, K. and Lincoln, D., (1987) Preferences for Proxy Attributes. *Management Science*, 33(2), pp.198-214.
10. Funtowicz, S. O., & Ravetz, J. R. (1994). The worth of a songbird: ecological economics as a post-normal science. *Ecological Economics*, 10(3), 197-207.
11. Greenstoneplus.com (2020) Impact Reporting: The Business Response To Impact Measurement & Key Conclusions. [online] Available at: <https://www.greenstoneplus.com/blog/impact-reporting-part-3> [Accessed 5 June 2020].
12. HM Treasury. (2018). The Green Book: Central Government Guidance on Appraisal and Evaluation. [online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/685903/The\\_Green\\_Book.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/685903/The_Green_Book.pdf) [Accessed 5 June 2020].
13. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/685903/The\_Green\_Book.pdf [Accessed 5 June 2020].
14. HM Treasury. (2020). The Magenta Book: Central Government Guidance on Evaluation. [online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/879438/HMT\\_Magenta\\_Book.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/879438/HMT_Magenta_Book.pdf) [Accessed 5 June 2020].
15. Ho Tran, T. (2019) Speculative design: 3 examples of design fiction. Available at: <https://www.invisionapp.com/inside-design/speculative-design/> [Accessed 23 May 2020].
16. Kennedy, J. J., Fox, B. L., & Osen, T. D. (1995). Changing social values and images of public rangeland management. *Rangelands*, 127-132.
17. Kenter, J. O., O’Brien, L., Hockley, N., Ravenscroft, N., Fazey, I., Irvine, K. N., ... & Church, A. (2015). What are shared and social values of ecosystems? *Ecological Economics*, 111, 86-99.
18. Mazzucato, M. (2018). *The Value of Everything: Making and Taking in the Global Economy*. Penguin Press.
19. Mazzucato, M. and Ryan-Collins, J. (2019). Putting value creation back into ‘public value’: From market fixing to market shaping. UCL Institute for Innovation and Public Purpose, Working Paper Series (IIPP WP 2019-05). [online] Available at: <https://www.ucl.ac.uk/bartlett/public-purpose/wp2019-05> [Accessed 30 May 2020].
20. Moore, M. (1995) *Creating Public Value: Strategic Management in Government*. Harvard University Press.
21. Oecd.org. (2020) Measuring Well-Being And Progress: Well-Being Research - OECD. [online] Available at: <https://www.oecd.org/statistics/measuring-well-being-and-progress.htm> [Accessed 5 June 2020].

22. Papanek, V. (1970) Design for The Real World: Human Ecology and Social Change. [online] Available at: [https://monoskop.org/images/f/f8/Papanek\\_Victor\\_Design\\_for\\_the\\_Real\\_World.pdf](https://monoskop.org/images/f/f8/Papanek_Victor_Design_for_the_Real_World.pdf)
23. Parrett, E. (2019) Social impact. What is it? How do I measure it? [online] Available at: <https://www.goodfinance.org.uk/latest/post/blog/social-impact-what-it-how-do-i-measure-it#:~:text=Social%20impact%20is%20a%20term,1%2C710%2C000%2C000%20search%20results%20on%20Google.&text=And%20how%20can%20you%20make,%2C%20project%2C%20programme%20or%20policy>. [Accessed 5 June 2020].
24. Public Health England & UCL Institute of Health Equity, (2015) Local Action on Health Inequalities: Using the Social Value Act to Reduce Health Inequalities in England Through Action on the Social Determinants of Health. [online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/460699/1b\\_Social\\_value-Briefing.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/460699/1b_Social_value-Briefing.pdf) [Accessed 5 June 2020].
25. Raymond, C. M., Kenter, J. O., Plieninger, T., Turner, N. J., & Alexander, K. A. (2014). Comparing instrumental and deliberative paradigms underpinning the assessment of social values for cultural ecosystem services. Ecological Economics, 107, 145-156
26. Richards, A., & Nicholls, J. (2015). A Discussion Document on the Valuation of Social Outcomes. Social Value International. [online] Available at: <http://www.socialvalueuk.org/app/uploads/2017/09/Valuation-of-Social-Outcomes-pdf-1.pdf> [Accessed 5 June 2020].
27. Seerbridge, (2020) [online] Available at: <https://seerbridge.com/about/> [Accessed 23 May 2020].
28. Sheppard, B., Sarrazin, H. and Kouyoumjian, G., 2018. [online] Available at: <<https://www.mckinsey.com/business-functions/mckinsey-design/our-insights/the-business-value-of-design>> [Accessed 10 June 2020].
29. Simon, H. (1969) The Sciences of the Artificial. [online] Available at: [https://monoskop.org/images/9/9c/Simon\\_Herbert\\_A\\_The\\_Sciences\\_of\\_the\\_Artificial\\_3rd\\_ed.pdf](https://monoskop.org/images/9/9c/Simon_Herbert_A_The_Sciences_of_the_Artificial_3rd_ed.pdf). [Accessed 23 May 2020].
30. Social Value UK. [online] Available at: <http://www.socialvalueuk.org/what-is-social-value/the-principles-of-social-value/> [Accessed 23 May 2020].
31. Social Value Act (2012). [online] Available at: <http://www.legislation.gov.uk/ukpga/2012/3/enacted>.
32. Social Value Review Report (2015). [online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/403748/Social\\_Value\\_Act\\_review\\_report\\_150212.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/403748/Social_Value_Act_review_report_150212.pdf)
33. Tadaki, M., Sinner, J., & Chan, K. M. (2017). Making sense of environmental values: a typology of concepts. Ecology and Society, 22(1).
34. The British Road Sign Project [online] Available at: <http://www.britishroadsignproject.co.uk/jock-kinneir-margaret-calvert/> [Accessed 23 May 2020].
35. The Design Museum: What is Good Design? A Quick Look at Dieter Rams' Ten Principles. [online] Available at : <https://designmuseum.org/discover-design/all-stories/what-is-good-design-a-quick-look-at-dieter-rams-ten-principles> [Accessed 23 May 2020].
36. Thinknpsc.org. (2014) JP Morgan Impact Report. [online] Available at: <https://www.thinknpsc.org/wp-content/uploads/2018/07/JP-Morgan-Philanthropy-Impact-Report-2014.pdf> [Accessed 5 June 2020]
37. Drew, C. (2020) Mapping the Invisible in Anderson, M & van Dijk, G, Explorers: Thoughts on Mapping in Design Research, STBY.
38. Jones, P.H., & van Patter, G.K. (2009). Design 1.0, 2.0, 3.0, 4.0: The rise of visual sensemaking. New York: NextDesign Leadership Institute.

## About Design Council

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Design Council's mission is to make life better by design. We work with people to create better places, better products and better processes, all of which lead to better performance. We commission pioneering evidence-based research, develop ground-breaking programmes and deliver influencing and policy work to demonstrate the power of design and how it impacts three key areas of the economy: business innovation, places and public services. We bring together non-designers and designers – from grassroots to government – and share with them our design expertise to transform the way they work.

## About Institute for Innovation and Public Purpose

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The UCL Institute for Innovation and Public Purpose (IIPP) is changing how public value is imagined, practised and evaluated to tackle societal challenges. In order to address today's challenges, public and private organisations need to collaborate in new ways and become more purpose-driven. In this context, governments require different tools and capabilities to co-create and co-shape markets, not just fix market failures. IIPP's work is dedicated to this ambition of bringing revived notions of public value and public purpose to the centre of political economy and to concrete policy practice. Its work equips leaders to co-design growth that is innovation-led, sustainable and inclusive.



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