



## The Design Journal

An International Journal for All Aspects of Design

ISSN: 1460-6925 (Print) 1756-3062 (Online) Journal homepage: <http://www.tandfonline.com/loi/rfdj20>

# Creating a Tool for Measuring the Social Value of Design

Jea Hoo Na, Youngok Choi, Andrew Walters, Busayawan Lam & Stephen Green

To cite this article: Jea Hoo Na, Youngok Choi, Andrew Walters, Busayawan Lam & Stephen Green (2017) Creating a Tool for Measuring the Social Value of Design, The Design Journal, 20:sup1, S1662-S1672, DOI: [10.1080/14606925.2017.1352689](https://doi.org/10.1080/14606925.2017.1352689)

To link to this article: <https://doi.org/10.1080/14606925.2017.1352689>



© 2017 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group



Published online: 06 Sep 2017.



Submit your article to this journal [↗](#)



Article views: 434



View Crossmark data [↗](#)

# Creating a Tool for Measuring the Social Value of Design

Jea Hoo Na<sup>a\*</sup>, Youngok Choi<sup>a</sup>, Andrew Walters<sup>b</sup>, Busayawan Lam<sup>a</sup>, Stephen Green<sup>c</sup>

<sup>a</sup>College of Engineering, Design and Physical Sciences, Brunel University London, UK

<sup>b</sup>PDR, Cardiff Metropolitan University, UK

<sup>c</sup>Dyson School of Design Engineering, Imperial College London, UK

\*Corresponding author e-mail: jeafoona@gmail.com

**Abstract:** Social value has been measured for many years predominantly for values created by NGOs, social enterprises, social ventures, and social programmes. However, because 'value' is a highly subjective concept that often has 'soft' outcomes, it is challenging to find a measurement tool which satisfies all parties involved in social value creation, especially in the commercial sector. In this complex environment, a viable means of measuring the social value of design will enable organisations to use design more effectively to increase their societal contribution and competitiveness. This research aims to identify key considerations to produce a guideline which can be used to create desirable tools for measuring social value of design, by conducting in-depth interviews with companies and two workshops with postgraduate students and professionals from a range of backgrounds. It is recommended that the tool should have three levels: (i) an overview with a qualitative approach, (ii) a financial level with a quantitative approach, and (iii) a balanced level with both a qualitative and a quantitative approach.

**Keywords:** Social Value of Design, Social Value Measurement Tool

## 1. Introduction

As consumers become increasingly aware of the social implications of their purchases, indicating that social values positively influence purchasing behaviours (Weber, 2008, EY, 2013), leading businesses place greater importance on social value (Porter and Kramer, 2011). However, the complex subjective nature of 'social value' - including varying perspectives on what is socially valuable, which inevitably change markedly according to individual circumstances and beliefs - makes it challenging to define the term and identify where companies should focus their efforts. There are, predictably, perennially conflicting 'for' and 'against' arguments about which products, services and brands should be regarded as having high social value. Design can address users' increased needs, albeit personal and subjective, to provide a competitive advantage for businesses by creating socially responsible products (Jelsma, 2006) and, furthermore, as a strategic tool to encourage triple bottom-line improvement (Joziassse and Selders, 2009, Lockwood, 2011). In this complex environment, a

viable measurement of the social value of design will enable organisations to use design more effectively to increase their societal contributions and competitiveness. However, the question remains: would a tool to measure social value be used in the real world? A similar situation occurs in the measuring of the value of design, and many researches provide tools to measure the value of design and design performance in companies (Cooper and Press, 1995, DC, 1999, Oliver, 2002, Moultrie et al., 2006), but they remain underused in the company environment, especially in SMEs (Zec, 2011). It is therefore important to understand how such a measurement tool should be created, to ensure its viability in a commercial environment.

Social value has been measured for many years using measures which are predominantly for values created by NGOs, social enterprise, social ventures, and social programmes. However, because 'value' is highly subjective and often has 'soft' outcomes, it is difficult to find a generalised measurement tool to satisfy all parties involved in social value creation, especially in the commercial sector (Mulgan, 2010, Wood and Leighton, 2010). This is more apparent with measuring social values of design, where design itself can be also difficult to define and measure (Hertenstein and Platt, 2001). The exploratory research presented here addresses these issues by identifying key considerations to produce a desirable tools for measuring social value of design. The research will utilise (i) a literature review to understand the meaning of social value and its relationship to design, (ii) five in-depth exploratory interviews with socially aware SMEs to better understand the meaning of social value in a business context, and (iii) two workshops with postgraduate students and professionals in various fields - including design, branding, sociology and business administration - to identify the use and usefulness of current business and social value measurement tools in order to pinpoint best practice of current tools used by companies. Using this data, the paper recommends a guideline for initiating the creation of a tool for measuring the social value of design to maximise its adoption in the commercial environment.

## 2. Background

### 2.1 Social value and the measurement

Many studies already describe the meaning of 'value.' According to Zeithaml (1988), value in a commercial sense is the overall appreciation of products or services, for which customers make appropriate payments. It can be divided more broadly into emotional, social and functional value (Sweeney and Soutar, 2001). The concept of social value is, more specifically, what social enterprise and organisations give back in return, where success is not just defined as 'shipping a lot of units' but gauging whether they have improved life, made no impact, or made it worse (Hunter, 2014). Social value is more elusive than economic value, as there are no objective means to measure its outcome, since its impact varies according to audience and context. The many definitions of 'good' social value can make it difficult to construct a comprehensive framework in which the meaning of social value can be firmly planted. Mumford and Gustafson (1988) describe the relationship or interaction of a community's individuals (i.e. society), whereas HMRC (2010) expands the reach of social value to include an organisation's environmental impact.

The emphasis of social value is much more apparent in Non-Governmental Organisations (NGOs) and Not-for-Profit Organisations (NPOs) where measuring social impact and value plays a much more prominent role as they rarely have tangible products and profit-based financial outcomes, compared to commercial companies which sell products or services. In the commercial sector, it is less common to consider social issues from a value perspective. However, global companies including GE, Google,

IBM and Unilever have recently adopted the concept of 'shared value', demonstrating that social value opportunities can enhance a company's economic value (Porter and Kramer, 2011).

This research also investigated the social impact measurement tools currently in use. As already mentioned, the complexity of determining the elements of social value make it difficult to achieve objective measurements which can be adopted by businesses. However, with the development of Social Return of Investment (SROI), attempts are now underway to measure the economic indicators of social value. Nef (2008) reviewed twenty-two tools to create a comprehensive chart of different tools and their functions. A measurement tool's reliability appears to be of greatest concern because according to Mulgan, "Social value is not an objective fact. Instead, it emerges from the interaction of supply and demand, and therefore may change across time, people, places, and situations" (Mulgan, 2010, p41).

## 2.2 Design and social value

Papanek states that "Much recent design has satisfied only evanescent wants and desires, while the genuine needs of man have often been neglected" (Papanek, 1985, p.15). The design discipline has subsequently placed greater emphasis on the expanding role of design, not merely as an object creating activity but as an essential process for innovation and creativity (von Stamm, 2008). The principle of design - described as 'design thinking' (Martin, 2009) - is now taught in business schools to encourage future business leaders to think creatively during their company life. The expansion of design has also changed the perception of 'design influence' in businesses. Joziassse and Selders (2009) describe comprehensive areas where design adds value, mostly in the areas of profit, brand equity and innovation. However, as added value in creating change, design is described as a provider of social value by reducing environmental degeneration and providing more user-centred solutions for social issues such as ageing and literacy. Similarly, using the Balanced Score Card model for design, Mozota (2006) describes how design creates 'value for society' and 'socially responsible enterprise' as part of four 'powers of design' which can lead to an organisation's financial success.

In more business-oriented literatures, the use of the term 'Triple Bottom Line' (TBL) - also known as the three pillars - includes added value for corporations in both environmental and social value and the more traditional economic value (Elkington, 2004). While the influence of design was thought hitherto to be mostly on the economic pillar, design's ability to influence change in society is now also regarded as important, as interest increases in the social impact of corporations (Jelsma, 2006). Lockwood describes this phenomenon: "Design has more potential to lead change, enable innovation, influence customer experience and add value to the triple bottom line than any other business function" (Lockwood, 2011, p244). Furthermore, the principle of 'design thinking' is now widely employed by many NGOs to influence and accelerate changes in society (Smithsonian, 2013). The relationship between design firms and NGOs is described by the Smithsonian Institution, demonstrating how design can create social values, including as a part of the goods production process (discipline-based design, i.e. product design, engineering design, graphic design etc.,) and as a strategic tool to influence business management. The broader elements of design have been studied (Na et al., 2016) and used to construct an audit tool for companies (Moultrie et al., 2006). However, as the social values of design can have many interpretations, especially to what extent design influences the creation of social value, a measurement tool is therefore required to provide an objective evaluation of the social value of design.

### 3. Methodology

The research comprised three phases. In the first phase, the main task was to understand the context of social value through literature reviews of journal papers, books, mass media and websites of relevant organisations. The second phase further explored the current issues of social values in the commercial sector by conducting an in-depth interview with managing directors of SMEs. The final research phase identified the practical implications of measuring the social value of design by running two workshops, to explore the issues identified from the first two research phases.

Due to the exploratory nature and the project time constraints it was decided that, a purposive sampling approach would be appropriate for the in-depth interviews. Drawing on the co-investigator's experiences working with companies, five interview participants were selected who were likely to either have considered social impact, or have opinions on design's contribution to social impact as a result of their business operations. The interviews each covered four themes: what is social value? communicating societal impact; business activities which consider social impact; and feedback on societal impact. The interviews were analysed using content analysis to identify the specific issues raised in accordance with the interview themes. The result was further analysed to construct an overarching theme in order to better understand the perception of social values in the commercial sector.

The purpose of the first workshop (Workshop One) was to (i) explore the relationship between social and commercial values, and between social value and level of design intervention, (ii) investigate the knowledge and utilisation of measurement tools in commercial and social contexts, and (iii) evaluate and finalise the operation and analysis methods for the final workshop (Workshop Two). The twenty-three participants, selected for their personal and academic interest in social value, included postgraduate students, predominantly from design-related courses at Brunel University London (Design Strategy and Innovation, Design and Branding Strategy, and Integrated Product Design) and at Cardiff Metropolitan University (Advanced Product Design).

The second workshop (Workshop Two) was conducted to (i) explore the use and usefulness of measurement tools in commercial and social contexts, and (ii) investigate the elements of a measurement tool which could successfully measure social values of design. Although the activities of the Workshop Two were similar to those from Workshop One, they were modified and improved after intensive analysis of Workshop One to ensure their relevance to the overall research aim and suitability for the professional participants attending the workshop. The nineteen participants included design and brand professionals, design support organisations (The Design Council, British Industrial Design Association (BIDA) and Design Management Europe (DME)) and various businesses.

The three main activities comprised (i) mapping social values of design to investigate elements of design influences on social value creation, (ii) the use and usefulness of assessment and measurement tools to identify issues with current tools, and (iii) measuring social values of design to construct criteria for creating and utilising the social value of design measurement tool. The participants were grouped and each group included a facilitator and a research assistant. The facilitator ensured a constructive balanced discussion while the research assistant observed and recorded the group discussion. Subsequent presentations after each discussion were recorded, and content and thematic analysis methods were used to critically extract the main points to determine the participants' opinions. Outcomes were discussed with the project's core team members, identifying key ideas and issues fulfilling the workshops' purposes.

## 4. Findings and discussion

### 4.1 Social value for companies

In-depth interviews with the five SMEs provided practical perspectives on the meaning of social value in commercial context. Of the companies interviewed, three saw their social impact primarily as being a result of the products they produce (impact on users) and two primarily through benefits to the local economy (impact on employees and the supply chain). While company owners were acutely aware of the jobs and income they provide to support themselves or employees, the main focus was the distribution, development and sales of their products and services. The companies which felt their impact was through the provision of products had clearer 'social values' embedded at the core of their business activities from the outset. One company had probably the most sophisticated understanding of social impact: it had been set up to create postural support products using design and engineering knowledge to significantly improve health benefits for its end-users. However, even with this mission as the driving factor for their existence, the company recognises that product development activities are expensive, requiring an accompanying focus on commercial viability.

All the businesses recognised their environmental impact. All had taken steps to make either their products or the packaging more 'eco-friendly' and were aware that this is a factor customers want and look upon favourably (apart from one company, where the driver is clinical need). In contrast, 'social values' were not understood with any consistency as a clear set of business-related actions – it was either a 'core value' set by the founders/leaders to have a wider 'social purpose' or it was understood as maintaining jobs for the immediate members of the team. The link between social value and design was evidently strong in the companies which wanted to provide some social purpose, because their products were regarded as the mechanism by which that purpose was achieved (use of a postural aid, playing with an educational game, or applying/consuming a 'healthy' alternative). Conversely, despite the other two companies viewing their social impact as being in a narrow sense based around the local economy, potentially wider social impacts resulted from their outputs (child safety and environmentally responsible products).

### 4.2 Business value measurement tools

To analyse the current use and usefulness of value measurement tools, twelve business tools were selected in the categories of (i) strategic business (Balanced Score Card, BCG Matrix, SWOT), (ii) quality/process/internal management (Performance Dashboard, Six Sigma, Return on Investment), (iii) business concept/model (Business Model Canvas, Customer Relationship Management, Lovemark), and (iv) input/research techniques (benchmarking, Interview/Observation, Survey/Omnibus Survey). The iterative selection process was employed where initial list of tools through a literature was made. A selection process through discussion with core team members identified the most appropriate tools for the workshops.

Workshop Two's second activity revealed that the SWOT and Interview/Observation were the tools most used by the majority of the professional participants (90%) followed by ROI, and Benchmarking (40% of participants had used the tools). The participants also chose SWOT as the preferred tool because of its ease of use, practicality, and its ability to obtain a holistic overview. Interview/Observation was the second most liked tool, mainly for its in-depth nature and practicality. Other comments included its ability to help find current problems, the cause of the problem and potential opportunities. ROI was chosen as most-liked tool for its practical in-depth nature. The participants also commented that it is an essential tool when a financial case has to be made. It is also the preferred persuasion tool for new products/businesses or continued investment. Benchmarking was

chosen for its ease of use, in-depth nature and practicality. Further comments included that it is good to measure success or failure, and its flexibility in different environments/ products/ services and different depths. Common themes of negative comments emerged about the tools: they are prone to manipulation, too superficial and/or too complex to use. All the positive and negative comments, including those already mentioned, were aggregated to provide an overview (see Table 1). The comments emphasise the importance of balance, which can be difficult to master, for example the tool should be in-depth yet simple to use. Recurring comments were also made about the need for objectivity. The future tool should therefore have a mechanism to prevent manipulation and maintain objectivity.

*Table 1. Aggregated positive and negative comments on business tools.*

<b>Positive Comments (number of mentions)</b>	<b>Negative Comments (number of mentions)</b>
Detailed - ranging level of depth (4)	Input can be subjective (8)
Simple and option for further analysis (3)	Lack of rigour/detail (4)
Flexibility - adoption in a range of situations (3)	Depends on financial data input only (3)
User-focused (2)	Too complex to apply consistently (3)
Performance review (1)	Too 'mechanical' (2)
Uses common language (1)	Lacks credibility & practicality (2)
Potential usage by a diverse group (1)	Difficult to value different factors (2)
Improving the work process (1)	Lack of overview of the situation (2)
Commercially persuasive (1)	Inflexible (1)

### 4.3 Social value measurements

Measurement tools in the social context were also studied but there was a limited number of tools to choose from compared to the business-oriented tools. Initial desk research was conducted for some social value measurement tools and their current issues. Due to the nature of the impact the tools have to measure, which is inherently soft and subjective, it is more difficult to judge output. The same selection process was used to choose the tools to be discussed in Workshop Two in the categories of (i) company reporting tools (SROI, Cost-Benefit Analysis, Key Social and Co-operative Performance Indicators-KSCPIs), (ii) award-based (iF Award, ARG (Re)Design Award), (iii) company specific tools (Coca-Cola (Demos) Measuring Up, NIKE environment design tool), and (iv) design-oriented tools (Storyboard/Impact Mapping, Triple Bottom Line by LiveWork).

Among the tools the professional participants selected in Workshop Two, Storyboard/Impact Mapping was the tool most used in a social context. Its ability to give a holistic overview and its ease of use were among the reasons why they use the tool. Furthermore, participants commented that it is a good tool for reflection and measuring progress. Conversely, the participants felt it was prone to manipulation and could lead to oversight. The iF award was the second most used tool despite only a quarter of the participants having used it, because of its practicality. Other comments included that it encouraged greater achievement. However, there were concerns about using the award as a measurement tool because it can be biased. Social impact tools were less familiar than business measurement tools, and participants made more comments about the objectivity and quality of input than about other aspects of using the tools. However, unlike the business performance measurement which mainly relies on hard data (i.e. financial sales figures, profit margins etc.), social

impact measurement is much 'softer'. Further comments in Table 2 show different considerations which must be taken into account when constructing a social value measurement tool.

Table 2. Aggregated positive and negative comments on social tools.

<b>Positive Comments (number of mentions)</b>	<b>Negative Comments (number of mentions)</b>
Help making decisions on social spend (3)	Complicated to use and apply (6)
Effective (financial) social impact (3)	Subjective (biased input) (5)
Aligned with corporate goal (2)	Prone to manipulation (2)
Holistic overview (2)	Low reputation & awareness (2)
In-depth analysis (detailed) (1)	Limited area of measurement (2)
Encouraging social awareness (1)	Lack of consideration of long-term impact (1)
Encourages a multidisciplinary approach (1)	Lack of trust (1)

#### 4.4 Creating a tool to measure the social value of design

The third activity of Workshop Two was a series of questions about a possible tool to measure the social values of design. Each question comprised a set of example answers, derived from Workshop One, and participants were asked to vote (three votes per participant) for their most likely answers. The number of votes was then used to rank the answers according to what the participants felt most appropriate. The questions were designed to answer key questions about creating a measurement tool for the social value of design: (i) How would the tool measure design input? (ii) Who would have to buy into the tool for it to be a success? (iii) What form would inputs and outputs to the tool take? and (iv) The desirability of the tool, and pros and cons.

In response to the question about measuring design input, the participants selected the 'level of design intervention' as the most appropriate input to measure (15 out of 57 votes). The participants suggested that design's intervention at all levels of business could be useful in determining how the social value of design impacts society. 'Spend on design/design person-hours on project' was chosen as the second most appropriate with eleven votes, because it is quantifiable, unlike the previous design input. While this has been an attractive proposition for businesses to assess design input, this method does not account for the quality of design. One participant commented that a designer could spend only a few hours with considerable impact in terms of output quality. The quality of design outcome is much more difficult to measure, especially for social value, as impact is also elusive to measure. The participants' third choice - the 'internal assessment of design quality' (nine votes) - had a similar argument about the pitfall already mentioned, that it is difficult to quantify the quality, depending on who assesses design quality in a company.

Professional participants from different backgrounds shared the view, in response to the question about buy-in targets, that the tool must be taken up by 'businesses' to be successful (seventeen votes). This was followed, predictably, by 'designer/design managers', with thirteen votes, because businesses have to see a value in accepting the tool to be used to measure the social value of design. Designers/design managers are likely to have a greater understanding of the extent to which design can influence the creation of social value through products, services and brands. It is also interesting to see a relatively low vote for the Governmental Organisation and regulatory body, and the NGOs. Subjectivity was deemed very important so it was expected that the separate body (a regulatory body or NGOs) would provide that subjectivity. However, most participants said better adoption can be achieved by having buy-in by the actual users of the tool.



The question about the inputs and outputs of the tool, Benchmarking and measurable social targets were among the most popular with nineteen and eighteen votes respectively, because they are measurable, comparative, easy to understand and evidence-based. As previously discussed, the measurement of design input may also change according to different interpretations, so benchmarking can provide an agreeable measurement. It is also interesting to note that members of the public (eight votes), experts (seven votes), and in-house opinions (two votes) came lower in the ranking as the participants saw the opinions as subjective and ambiguous. However, public opinion topped the opinion ranking as the participants felt the user’s opinion is most important.

## 5. Recommendations

The results of the research phases were aggregated to create a recommendation for formulating a social value of design measurement tool (see Figure 1). It is recommended that prior to creating the tool some preparations be completed, identifying (i) the social value of design element (intervention) , (ii) the stakeholder and beneficiary, (iii) the social value opportunity, and (iv) the level of social commitment (social target). The most difficult part is identifying the social value of design elements. It was discussed extensively in the workshops that such a measuring tool must convince the designers, management and other users of the tool. Both stakeholder and beneficiary must be identified in order to measure the outcome reliably, in relation to the impact of the social project. The social value opportunity should be identified to better understand the measurement context. Another recurrent point raised during the workshops was the importance of the commitment and the target of the social project, in order to identify which levels the tool could measure.

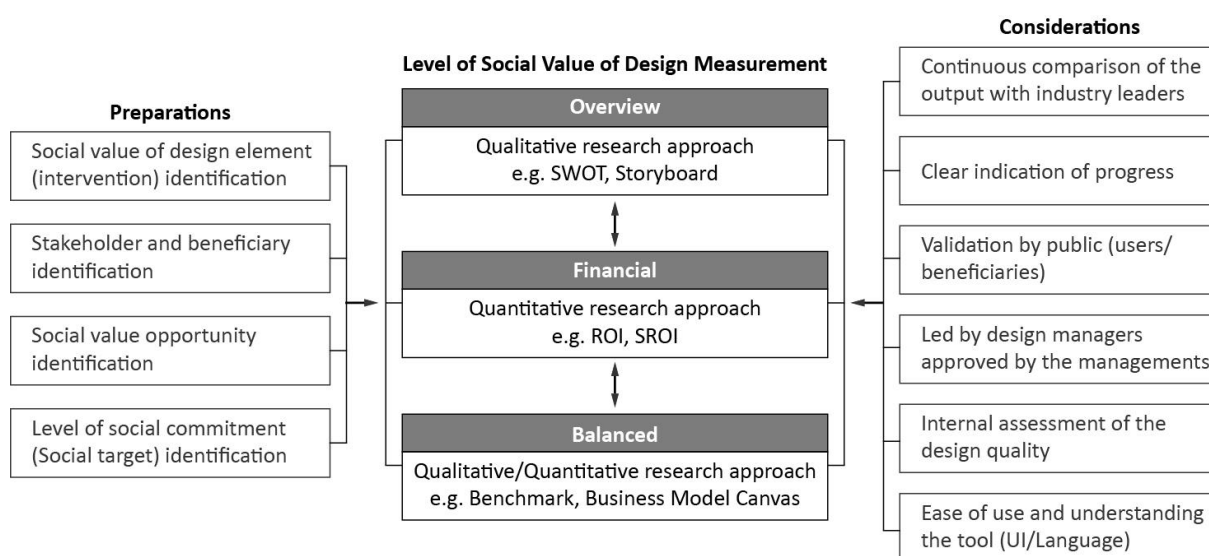


Figure 1. Recommended guideline for creating a tool to measure the social value of design which include preparations required, measurement levels of the tool, and considerations to increase the tool’s desirability.

In order to create a tool that includes many benefits of currently available business and social tools, a system of measurement options are recommended, as there are advantages and disadvantages at each stage. The levels identified include: (i) an overview with a qualitative approach, (ii) financial with a quantitative approach, and (iii) balanced with both a qualitative and a quantitative approach. These options should provide the tool with flexibility, depending on the purpose of the project. The overview level will provide a holistic perspective on the social value of design similar to that of SWOT and Storyboard. The financial level is important in giving management a fuller picture of the financial implications of design-led social projects, similar to SROI. Finally, the balanced level will provide more

in-depth measurements of the social value of design, but will be time and resource intensive if it is to be fully comprehensive.

The workshop results were further analysed to identify considerations for creating the measurement tools which will increase its desirability. Features would include: (i) continuous comparison of output with competitors/industry leaders, (ii) clear indications of progress, (iii) validation by public (users/beneficiaries), (iv) led by design managers and approved by management, (v) internal assessment of design quality, (vi) ease of use and understanding of the tool (UI/Language). The output comparison was thought by the participants to add to the objectivity of the measurement. The professionals in the workshop identified that public validation - rather than that of external or internal experts – would probably ensure measurement reliability, and strongly agreed that success would depend on management buy-in. The difficulty of measuring design quality was mentioned several times during discussions, but most participants agreed that quality should be measured internally. Finally, the tool's ease of use was repeatedly emphasised as an important aspect which will increase its usability by people from a range of fields of expertise.

## 6. Conclusion

This exploratory research identifies key considerations to create desirable tools for measuring social value of design. The recommendations are derived from series of research studies including, in-depth interviews to understand the meaning of social value in commercial sector, and workshops with students and professionals to identify the use and usefulness of currently available business and social value measurement tools. The result suggests that balancing the advantages and disadvantages of current tools is difficult to master – indicating that a newly developed tool should be in-depth yet simple to use. Another recurring comment was that such a tool should be objective: a key aspect of the tool's objectivity is the indicators it will measure. Further research is therefore recommended to identify these elements of social value of design and an objective method of measuring the indicators, in order to create a reliable and desirable measurement tool which can be used to identify and improve design influences on creating social value.

## References

- Cooper, R., & Press, M. (1995). *The Design Agenda: A Guide to Successful Design Management*. Chichester: John Wiley and Sons.
- DC. (1999). *The Bigger Picture: Design Atlas*. London: Design Council.
- Elkington, J. (2004). Enter the Triple Bottom Line. In A. Henriques & J. Richardson (Eds.), *The triple bottom line, does it all add up? : assessing the sustainability of business and CSR* (pp. 1-16). London: Earthscan.
- EY. (2013). 2013 Six growing trends in corporate sustainability: Ernst & Young.
- Hertenstein, J. H., & Platt, M. B. (2001). Valuing design: Enhancing corporate performance through design effectiveness. *Design Management Journal*, 12(3), 10-19.
- HMRC. (2010). *HMRC Sustainable Procurement Strategy: HM Revenue and Customs*.
- Hunter, M. (2014). Social enterprise is good for design. Retrieved 9th March, 2014, from <http://www.designcouncil.org.uk/news-opinion/social-enterprise-good-design>
- Jelsma, J. (2006). Designing 'moralized' products. In P.-P. Verbeek & A. Slob (Eds.), *User Behavior and Technology Development: Shaping Sustainable Relations Between Consumers and Technol* (pp. 221-231). Dordrecht: Springer Netherlands.

- Joziase, F., & Selders, T. (2009). The Next Phase: Laying Bare the Contributions of Design. *Design Management Review*, 20(2), 28-36.
- Lockwood, T. (2011). A study on the value and applications of integrated design management. In R. Cooper, S. Junginger, & T. Lockwood (Eds.), *The Handbook of Design Management* (pp. 244-259). Oxford: BERG.
- Martin, R. (2009). *The Design of Business: Why Design Thinking is the Next Competitive Advantage*. Boston: Harvard Business Press.
- Moultrie, J., Clarkson, P. J., & Probert, D. (2006). A tool to evaluate design performance in SMEs. *International Journal of Productivity and Performance Management*, 55(3/4), 184-216.
- Mozota, B. B. d. (2006). The Four Powers of Design: A Value Model in Design Management. *Design Management Review*, 17(2), 44-53.
- Mulgan, G. (2010). Measuring social value. *Stanford Social Innovation Review*, 8(3), 38-43.
- Mumford, M. D., & Gustafson, S. B. (1988). Creativity syndrome: Integration, application, and innovation. *Psychological Bulletin*, 103(1), 27-43.
- Na, J., Choi, Y., & Harrison, D. (2016). Beyond Design for Manufacture: A Design Innovation Framework. *Design Management Review*, 27(3), 34-40.
- Nef. (2008). Investing for Social Value. Social Audit Network: nef consulting.
- Oliver, N. (2002). Performance measurement and benchmarking. In M. Bruce & J. Bessant (Eds.), *Design in Business: Strategic Innovation Through Design* (pp. 213-236). Harlow: Pearson Education.
- Papanek, V. (1985). *Design for the Resal World: Human ecology and social change* (2nd Ed ed.). London: Thames & Hudson.
- Porter, M. E., & Kramer, M. R. (2011). The Big Idea: Creating Shared Value (Vol. 89, pp. 63-70). Boston: Harvard Business Review.
- Smithsonian. (2013). Design and Social Impact: A cross-sectional agenda for design education, research, and practice: Smithsonian Institution
- Sweeney, J. C., & Soutar, G. N. (2001). Consumer perceived value: The development of a multiple item scale. *Journal of Retailing*, 77(2), 203-220.
- von Stamm, B. (2008). *Managing Innovation, Design and Creativity* (2nd ed. ed.). Chichester: John Wiley & Sons Ltd.
- Weber, M. (2008). The business case for corporate social responsibility: A company-level measurement approach for CSR. *European Management Journal*, 26(4), 247-261.
- Wood, C., & Lighton, D. (2010). Measuring Social Value: The gap between policy and practice: Demos.
- Zec, P. (2011). Design Value. *Design Management Review*, 22(2), 36-42.
- Zeithaml, V. A. (1988). Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Sythesis of Evidence. *Journal of Marketing*, 52(3), 2-22.

About the Authors:

**Dr Jea Hoo Na** is a design researcher with background in design strategy and innovation, industrial design and mechanical engineering. He has extensive experience in both commercial and academic projects in design innovation, user insights and social design.

**Dr Youngok Choi** has been involved in many design research projects including Design Policy and Strategy at both national and organisational levels, Social Innovation, Social Value of Design, Design for the Public sector especially Education and Health, and Inclusive Development.

**Professor Andrew Walters** is a Director of Research at PDR, Cardiff Metropolitan University. He is interested in user-led design methods as a means to solve complex societal and industrial problems. He has worked on projects with businesses, governments and charities.

**Dr Busayawam Lam** is a senior lecturer and a director of design strategy programmes at Brunel University. She has extensive experience in conducting design research and recommending strategic directions for various organisations. Her research interests include co-design and community-led design.

**Dr Stephen Green** is a Senior Teaching Fellow in the Dyson School of Design Engineering, Imperial College London and elected Board Member of the British Industrial Design Association. Previously Director of teaching & Learning, Brunel University and a Client Director at Fitch.

**Acknowledgements:** The work in this paper is funded by Arts and Humanities Research Council (AHRC). The authors gratefully acknowledge the co-operation of the DME (Design Management Europe), BIDA (British Industrial Design Association), PDR (International Centre for Design & Research) and DesignPlus in sharing their knowledge and disseminating the knowledge created by this project, and the contribution of all the project workshop participants and interviewees.