

Table S1: Interview protocol to identify themes of DfSS for DF4D Projects.

Subjects	Questions
<p>Designers, project managers and technical staff.</p> <p><i>Project manager (CS1-01), Designer (CS1-02), Designer (CS1-03), Junior designer (CS1-04), Junior designer (CS1-05), Project lead and engineer at IIT-B (CS2-01), Physiotherapist at IIT-B (CS2-02), Designer at IIT-B (CS2-03), Junior designer at IIT-B (CS2-04), MakerSpace manager and designer (CS3-01), Lead designer at MakerSpace (CS3-02), Designer at MakerSpace (CS3-03)</i></p>	<ol style="list-style-type: none"> 1. Introducing the research, clarifying definitions and answering queries. <ol style="list-style-type: none"> 1.1 “My research is exploring how to Design for Social Sustainability. Sustainability is often described as a way to meet people’s needs now without compromising the ability of future generations to meet their needs. Normally people talk about sustainability in terms of economic, environmental and social sustainability. My research focuses on <i>social</i> sustainability. Social sustainability is needed to sustain positive change to address social needs like wellbeing, health and education. From now on, when I talk about sustainability I will be referring to social sustainability. Do you have any questions?” 2. Exploring DfSS for DF4D. During the interview, the interviewee’s responses are cross-checked against the themes found in literature. <ol style="list-style-type: none"> 2.1 What is a sustainable product? 2.2 What is not a sustainable product? 2.3 How do you make sure that the product you are designing is sustainable? 2.4 What are some of the potential barriers to sustainability? Why do these exist? 2.5 Do you think [DF4D product case study] will be sustainable in the future? Why? 2.6 What are some of the potential risks to the sustainability of [DF4D product case study]? Why do these exist? How could you overcome these? 3. Further discussion on DfSS for DF4D. Prompt interviewees to speak about themes found in literature which have not been mentioned already. <ol style="list-style-type: none"> 3.1 How important is [e.g. “a systemic approach”, “empowerment” etc.] to the sustainability of [DF4D product case study]?

Table S2: Interview protocol to gather actual data on DF4D Projects

Subjects	Questions
Designers, project managers and technical staff. <i>Project manager (CS1-01), Designer (CS1-02), Designer (CS1-03), Junior designer (CS1-04), Junior designer (CS1-05), Project lead and engineer at IIT-B (CS2-01), Physiotherapist at IIT-B (CS2-02), Designer at IIT-B (CS2-03), Junior designer at IIT-B (CS2-04), MakerSpace manager and designer (CS3-01), Lead designer at MakerSpace (CS3-02), Designer at MakerSpace (CS3-03)</i>	1. General information 1.1 Can you tell me about your role at [organisation]? 1.2 When did you start working at [organisation]? 1.3 What is your experience/ background working in this sector? 2. DF4D product case studies 2.1 Can you describe the problem you are trying to solve? 2.2 What is the problem with the existing product? 2.3 How does the digitally fabricated product solve this problem? 2.4 If at all, what would you like to change about the digitally fabricated product? 3. Design process 3.1 What is different about the design process in a DF4D project compared with a conventional humanitarian/ development project? 3.2 Can you describe the design process? Prompts: <ul style="list-style-type: none"> • How did the project start? • How do you select and prioritise projects? • How do you gather data and conduct user research? • What sort of interaction do you have with users and stakeholders during the design process? When do you interact with them? • During the concept development, what type of information do you use to inform the process? • How do you measure impact? What criteria do you use to evaluate the product is satisfactory? How do you collect this data? 4. Perceptions of digital fabrication 4.1 How does digital fabrication affect your work? 4.2 What are the advantages of using digital fabrication tools in the humanitarian/ development sector? 4.3 What are the disadvantages of using digital fabrication tools in the humanitarian/ development sector?
Partners. <i>CEO at RNCT (CS2-05), Prosthetist and Orthotist at RNCT (CS2-06), Production technician at RNCT (CS2-07), Production technicians at RNCT (CS2-08), Technical consultant at BMVSS (CS2-12), Prosthetist and Orthotist at BMVSS (CS2-13), Technician at Jaipur Foot (CS2-14), Project manager at BMVSS (CS2-15), Secretary at BMVSS (CS2-16), Project manager at KNH (CS3-04), Project administrator at KNH (CS3-05), Project data</i>	1. General information 1.1 Can you tell me about your role at [organisation]? 1.2 When did you start working at [organisation]? 1.3 What is your experience/ background working in this sector? 2. DF4D product case studies 2.1 What is the problem with the existing product? 2.2 How does [DF4D product case study] solve this problem? 2.3 Do you think [DF4D product case study] will be sustainable in the future? Why? 2.4 What are some of the potential risks to the sustainability of [DF4D product case study]? 2.5 If at all, what would you like to change about [DF4D product case study]? 3. Design process 3.1 Can you describe how you have participated in the design process? Prompt:

<p><i>manager at KNH (CS3-06), Biomedical engineer at KNH (CS3-08)</i></p>	<ul style="list-style-type: none"> • How has your participation influenced the product? <p>4. Perceptions of digital fabrication</p> <p>4.1 How does digital fabrication affect your work? (if applicable)</p> <p>4.2 What are the advantages of using digital fabrication tools in the humanitarian/ development sector?</p> <p>4.3 What are the disadvantages of using digital fabrication tools in the humanitarian/ development sector?</p>
<p>Users of DF4D products. <i>Beneficiary 1 at RNCT (CS2-09), Beneficiary 2 at RNCT (CS2-10), Deputy head nurse at KNH (CS3-07)</i></p>	<p>1. General information</p> <p>1.1. For practitioners, questions on role/ experience.</p> <p>1.2. For beneficiaries questions on age/ employment.</p> <p>2. DF4D product case studies</p> <p>2.1 How long have you been using the existing (non-DF4D) product for?</p> <p>2.2 What is the problem with the existing product?</p> <p>2.3 How does the digitally fabricated product solve this problem?</p> <p>2.4 If at all, what would you like to change about the digitally fabricated product?</p> <p>3. Design process</p> <p>3.1 Can you describe how you have participated in the design process?</p> <p>Prompt:</p> <ul style="list-style-type: none"> • How has your participation influenced the product?
<p>Users of alternative (non-DF4D) products. <i>Beneficiary 1 at BMVSS (CS2-17), Beneficiary 2 at BMVSS (CS2-18), Beneficiary 3 at BMVSS (CS2-19), Beneficiary 4 at BMVSS (CS2-20), Beneficiary 5 at BMVSS (CS2-21), Beneficiary 6 at BMVSS (CS2-22)</i></p>	<p>1. General information</p> <p>1.1. For beneficiaries questions on age/ employment.</p> <p>2. Alternatives to DF4D product case studies</p> <p>2.1. How long have you been using [the non-DF4D product] for?</p> <p>2.2. How does using this product affect your daily life?</p> <p>2.3. If at all, what problems do you find with the existing product?</p> <p>2.4. If at all, what would you like to change about this product?</p>