

# HCI and UN's Sustainable Development Goals: Responsibilities, Barriers and Opportunities

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## ABSTRACT

Despite increasing interest, Sustainable HCI has been critiqued for doing too little, and perhaps also at times for doing the wrong things. Still, a field like Human-Computer Interaction should aim at being part of transforming our society into a more sustainable one. But how do we do that, and, what are we aiming for?

With this workshop, we propose that HCI should start working with the new global Sustainable Development Goals (SDG) that were formally adopted by the UN in September 2015. How can Sustainable HCI be inspired by, and contribute to these goals? What should we in the field of HCI do more of, and what should we perhaps do less of? In what areas should we form partnerships in order to reach the Sustainable Development Goals and with whom should we partner?

## Author Keywords

Sustainable HCI; Sustainability; Sustainable Development; Sustainable Interaction Design; Green IT; UN Sustainable Development Goals, SDG.

## ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

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## WORKSHOP DESCRIPTION

The field of HCI in general and the NordiCHI community in particular has for a long time been involved in social sustainability issues, for example through research on accessibility and work environments [2, 3]. Furthermore, an increasing number of HCI researchers engage in environmental sustainability within the sub-field of Sustainable HCI (S-HCI). S-HCI was established at NordiCHI at the previous, 7th conference [6].

Moreover, the design conference *From Business to Buttons*<sup>1</sup> chose sustainability as its main theme in 2016. However, despite the fact that the field is expanding, several researchers have asked if we do enough, and, if we do the right things [1, 4, 8]? It can be daunting for researchers to tackle global problems such as climate change, famine and biodiversity loss [7, 9], to name just a few of the large issues the world is and will continue to grapple with during the remainder of the 21st century. Still, also a field like Human-Computer Interaction should aim at being part of developing a sustainable society. But how do we do that, and, what are we aiming for?

In September 2015, the UN formally adopted a set of new global goals that were ushered in just as the previous Millennium Development Goals (2000-2015) were slated to “expire”. The new Sustainable Development Goals (SDG)<sup>2</sup> consist of 17 overarching goals and 169 targets, aiming at accomplishing sustainable development for people and the planet by 2030. The 17 goals are almost all-encompassing

<sup>1</sup> <http://frombusinessstobuttons.com/>

<sup>2</sup> <https://sustainabledevelopment.un.org/sdgs>

and the UN Secretary-General Ban Ki-moon<sup>3</sup> rallied for action with the following words:

*“We must engage all actors, as we did in shaping the Agenda. We must include parliaments and local governments, and work with cities and rural areas. We must rally businesses and entrepreneurs. We must involve civil society in defining and implementing policies – and give it the space to hold us to account. We must listen to scientists and academia. We will need to embrace a data revolution. Most important, we must set to work – now”*

In this workshop we will engage everyone who is interested in working towards a sustainable future in terms of, and with the UN SDGs as a starting point. How can Sustainable HCI be inspired by, and contribute to these goals? What should we in the field of HCI do more of, and what should we perhaps do less of? In what areas should we form partnerships in order to reach the Sustainable Development Goals? And with whom should we form these partnerships? The benefit of arranging the workshop is to develop a common vision of how to work with the SDGs, to collaboratively explore how we could contribute to the goals and to be inspired - by each other - in our research.

At the workshop, we will not be able to work in depth with all the 17 Sustainable Development Goals. We will instead work on a general level (encompassing all the 17 goals) as well as choose a limited number of goals to work with based on participants' current work. Participants will be asked to choose one or several SDGs and relate these to their own work (or to HCI research in general) in their position papers/workshop applications. Consequently, we will be able to, at the workshop, chose to work with the SDGs that most participants have found interesting (e.g. what do we do today, what could/should we do tomorrow, points of collaboration etc.). We might also choose some of the least popular SDGs and ask why we don't work with these goals, if we should work with them and if so, what we could/should do in these areas etc.

While the main aim of the workshop is to engage and enlarge the S-HCI (research) community, our goal is also engage representatives from “neighbouring research communities” (ICT for Development, Critical Design, Value-Sensitive Design etc.) as well as industry representatives (HCI practitioners and designers). As to outcomes of the workshop, we intend to plan the workshop with the aim of afterwards writing a summary paper. Our template is the 2014 CHI S-HCI workshop “What Have We Learned? A SIGCHI HCI & Sustainability Workshop” which later resulted in the paper “Next Steps for Sustainable HCI” [8]. We furthermore aim at strengthening the S-HCI community by publishing workshop results at the S-HCI knowledge base platform [5]. Finally, we believe

that one possible outcome of the workshop could be joint applications for research funding.

### Workshop format

The format of the workshop will be interactive and creative, letting the participants elaborate on and engage with the SDGs. Participants will be encouraged to read up on the SDGs before the workshop through a few select readings. Participants will also present pre-prepared Pecha Kucha presentations and from these we will pick up themes and SDGs to continue working with during the workshop. The workshop will also include semi-formal discussions about possible post-workshop collaborations and outcomes: writing a (summary) paper, research cooperation, organizing follow-up workshops/panel discussions etc.

### REFERENCES

1. Brynjarsdottir, H., Håkansson, M., Pierce, J., Baumer, E., DiSalvo, C., and Sengers, P. Sustainably unpersuaded: how persuasion narrows our vision of sustainability. In *Proc. CHI 2012*, ACM, (2012), 947-956.
2. Bødker, S. When second wave HCI meets third wave challenges. In *Proc. NordiCHI'06*, ACM, New York, NY, USA, (2006), 1-8.
3. Grudin, J. NordiCHI 2006: learning from a regional conference. *interactions*, 14, 3 (2007), 52-53.
4. Knowles, B., Blair, L., Walker, S., Coulton, P., Thomas, L., and Mullagh, L. Patterns of persuasion for sustainability, in *Proc. DIS'14*. 2014, ACM. p. 1035-1044.
5. Knowles, B. and Håkansson, M. A sustainable HCI knowledge base in progress. *interactions*, 23, 3 (2016), 74-76.
6. Pargman, D., Eriksson, E., Katzeff, C., Preist, C., Håkansson, M., and Knowles, B. *Is there a European strand of sustainable HCI?*, in *Proc. NordiCHI'14*, 2014, ACM. p. 809-812.
7. Raworth, K. A safe and just space for humanity: can we live within the doughnut. *Oxfam Policy and Practice: Climate Change and Resilience*, 8, 1 (2012), 1-26.
8. Silberman, M., Nathan, L., Knowles, B., Bendor, R., Clear, A., Håkansson, M., Dillahunt, T., and Mankoff, J. Next steps for sustainable HCI. *interactions*, 21, 5 (2014), 66-69.
9. Steffen, W., Richardson, K., Rockström, J., Cornell, S.E., Fetzer, I., Bennett, E.M., Biggs, R., Carpenter, S.R., de Vries, W., and de Wit, C.A. Planetary boundaries: Guiding human development on a changing planet. *Science*, 347, 6223 (2015), 1259855.

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<sup>3</sup><https://sustainabledevelopment.un.org/?page=view&nr=971&type=230&menu=2059#sthash.vMxUgBB0.dpuf>