DR. JAN BIESER is a senior researcher and speaker at the Gottlieb Duttweiler Institute. In his research, he examines the opportunities and risks of digitalisation for society and the environment. He is also a postdoctoral researcher and lecturer at University of Zurich, and a fellow of the World Economic Forum's Global Future Council on Cities of Tomorrow.

Curriculum Vitae

Before joining the GDI, Jan Bieser conducted research on digitalization and sustainable development as a doctoral and postdoctoral researcher at the Department of Informatics at University of Zurich, and at the Department of Sustainable Development, Environmental Science and Engineering at KTH Royal Institute of Technology in Stockholm. At both institutions, he was also an adjunct lecturer in digitalisation and sustainable development, and in business informatics. As a fellow of the World Economic Forum's Global Future Council on Cities of Tomorrow, he works with representatives of cities, the private sector and international organisations to explore how digital technologies can make cities more sustainable and equitable. As a member of the Digital Society Initiative of University of Zurich he explores ways for creating digital and sustainable mobility and accessibility solutions. He led various research collaborations on environmental impacts of digital technologies in collaboration with Swisscom, Swisscleantech, WWF and Bitkom, and was the lead author of the first sustainability report of the University of Zurich. Previously, Jan Bieser worked as a sustainability manager at the University of Zurich and as an IT and sustainability consultant at IBM and Deutsche Telekom.

Presentation Topics

- How to shape a sustainable digital future
- Digitalization and climate protection: Friend or foe?
- The future of mobility is digital! Can it be sustainable as well?
- Sustainable in the home office: Why flexible work benefits people and the environment
- Connected, smart, and sustainable? Can the Internet of Things help protect the environment?
- Next generation mobile networks (5G): Opportunity for climate protection?

Reports

- J. Bieser, M. Höjer (2021): The digitalization of passenger transport: Technologies, applications and implications for greenhouse gas emissions. KTH Royal Institute of Technology. Stockholm, Sweden. ↗ Publication
- J. Bieser, B. Salieri, R. Hischier, L. Hilty (2021): Next generation mobile networks: Problem or opportunity for climate protection? University of Zurich, Empa, Swisscom, Swisscleantech. Zurich, Switzerland. ↗ Publication
- J. Bieser, R. Hintemann, S. Beucker, S. Schramm, L. Hilty (2020): Klimaschutz durch digitale Technologien – Chancen und Risiken. Bitkom, Borderstep Institut für Innovation und Nachhaltigkeit, Universität Zürich. Berlin, Deutschland. ↗ Publication
- Itten et al. (2020): Digital transformation – life cycle assessment of digital services, multifunctional devices and cloud computing. International Journal of Life Cycle Assessment. Zurich, Switzerland. ↗ Publication
- Höjer et al. (2019): Digitalize for the environment: A guide for municipalities and companies wanting to explore and realize the potential of digitalization for environmental protection. KTH Royal Institute of Technology. Stockholm, Sweden. ↗ Publication
- J. Bieser, L. Warland, L. Hilty (2019): Nachhaltigkeitsbericht 2018. Universität Zürich. Zürich, Schweiz. ↗ Publication
- J. Bieser, L. Hilty (2019): Kurzstudie zum Elektrizitätsbedarf von Rechenzentren in der Schweiz. Swisscom, Universität Zürich. Zürich, Schweiz.
- J. Bieser, L. Hilty (2017): Chancen und Risiken der Digitalisierung für den Klimaschutz in der Schweiz. Swisscom, WWF Schweiz, Universität Zürich. Zürich, Schweiz. ↗ Publication

Peer-Reviewed Publications

- J. Bieser, M. Höjer, A. Kramers, L. Hilty (2021): A framework for assessing the energy impacts of telecommuting based on time-use data. Travel Behaviour and Society, 27, 107-116. ↗ Publication
- J. Bieser, M. Höjer (2021): A framework for assessing impacts of information and communication technology on passenger transport and greenhouse gas emissions. 35th International Conference on Environmental Informatics (EnviroInfo 2021). Berlin, Germany. ↗ Publication
- J. Bieser, B. Vaddadi, A. Kramers, M. Höjer, L. Hilty (2021): Impacts of telecommuting on time use and travel: A case study of a neighborhood telecommuting center in Stockholm. Travel Behaviour and Society, 23, 157-165. ↗ Publication
- J. Bieser, L. Burkhalter, L. Hilty, B. Fuchs, Y. Blumer (2021): Lifetime extension of mobile Internet-enabled devices: Measures, challenges and environmental implications. 4th Conference on Product Lifetimes and the Environment (PLATE 2021). Limerick, Ireland. ↗ Publication
- J. Bieser, V. Coroamă (2020): Direkte und indirekte Umwelteffekte der Informations- und Kommunikationstechnologie. SustainabilityManagementForum, NachhaltigkeitsManagementForum, 2020, 29, 1-11. ↗ Publication
- J. Bieser, L. Hilty (2020): Conceptualizing the impact of information and communication technology on individual time and energy use. Telematics and Informatics, 49, 101375. ↗ Publication
- B. Vaddadi, J. Bieser, J. Pohl, A. Kramers (2020): Towards a conceptual framework of direct and indirect environmental effects of co-working. 7th International Conference on ICT for Sustainability (ICT4S 2020). Bristol, UK. ↗ Publication
- M. Jattke, J. Bieser, Y. Blumer, R. Itten, M. Stucki (2020): Environmental implications of service life extension of mobile devices. Electronics Goes Green 2020+. Berlin, Germany. ↗ Publication
- J. Bieser, D. Haas, L. Hilty (2019): VETUS – Visual exploration of time-use data to support environmental assessment of lifestyles. 6th International Conference on ICT for Sustainability (ICT4S 2019). Lappeenranta, Finland. ↗ Publication
- J. Bieser, L. Hilty (2018): Assessing indirect environmental effects of information and communication technology (ICT): A systematic literature review. Sustainability, 10(8), 2662. ↗ Publication
- J. Bieser, L. Hilty (2018): Indirect effects of the digital transformation on environmental sustainability: Methodological challenges in assessing the greenhouse gas abatement potential of ICT. 5th International Conference on ICT for Sustainability (ICT4S 2018). Toronto, Canada. ↗ Publication
- J. Bieser, L. Hilty (2018): An approach to assess indirect environmental effects of digitalization based on a time-use perspective. 32nd International Conference on Environmental Informatics (EnviroInfo 2018). Garching, Germany. ↗ Publication

Dissertation

- J. Bieser (2020): A time-use approach to assess indirect environmental effects of information and communication technology: Time rebound effects of telecommuting. PhD Dissertation. University of Zurich. ↗ Publication

Academic Teaching

- Business Informatics, University of Zurich
- Digitalization and Sustainable Development, University of Zurich
- The Digitalization of Mobility, University of Zurich
- Sustainable Development ICT and Innovation, KTH Royal Institute of Technology Stockholm
- Sustainable Development for Computer Science and Engineering, KTH Royal Institute of Technology Stockholm

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Conference and Workshop Presentations (selection)

- Internet of things and climate protection. IoT for Climate. Swico, Swiss Engineering, Swissmem, Swisscleantech, Swisscom, 2021. ↗ Event
- Opportunities and risks of digitalization for climate protection: The case of mobile networks. Swedish 6G Workshop. Chalmers University of Technology, Ericsson, Qamcom, IEEE Sweden, VTS, Wireless World Research Forum, 2021. ↗ Event
- Next generation mobile networks (5G): problem or opportunity for climate protection? European 5G Conference 2021. Forum Europe, 2021. ↗ Event ↗ Video
- Home Office: Chancen und Risiken für den Klimaschutz. Business Lunch der Klimaplattform der Wirtschaft Zürich, 2021. ↗ Event ↗ Video
- Opportunities and risks of digitalization for environmental protection. Sustainable Next Generation Internet Webinar. Digital for Planet, 2021. ↗ Event ↗ Video
- 5G-Netze: Chancen und Risiken für den Klimaschutz. 67. Lunch Forum. Asut, 2021. ↗ Slides
- Chancen und Risiken der Digitalisierung für den Klimaschutz. Winterkongress Digitale Gesellschaft, 2021. ↗ Event ↗ Video
- Chancen und Risiken der Digitalisierung für den Umweltschutz. Die digitale Welt nachhaltig gestalten. Berner Fachhochschule, Stiftung Mercator Schweiz, Bundesamt für Umwelt, Foraus, 2020. ↗ Event ↗ Video
- Environmental impacts of co-working. RemoteCon. EPFL Lausanne, 2020. ↗ Event ↗ Video
- Visual exploration of time use data to support environmental assessment of lifestyles. 41st International Association for Time Use Research Conference. American University. Washington D.C., USA, 2019.
- Chancen und Risiken der Digitalisierung für den Klimaschutz. Präsentation. Effizienz in Serverräumen und Rechenzentren. Asut, EnergieSchweiz. Bern, Schweiz, 2018. ↗ Slides
- Sichere Digitalisierung: Ökonomisch, sozial und ökologisch verantwortlich. Swiss Green Economy Symposium 2018. Winterthur, Schweiz. ↗ Event
- Digitalisierung und Klimaschutz. Swiss Green Economy Symposium 2017. Winterthur, Schweiz. ↗ Event

Media Coverage (selection)

Jan Bieser's research and work has been featured in ↗ NZZ am Sonntag, ↗ Netzwoche, ↗ SRF Radio, ↗ SIX Magazin and ↗ more.

Contact

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