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Business School

Organisational practices and grand challenges:

The case of large digital firms

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WHY THIS PAPER?

- Firms' environmental behaviour (PhD)
- ICT & the environment (EcoInfo book, Rebound effects)
- IMT researchers & students…
- Steffen & Rockstrom
- Gail Whiteman

University of Sussex Business School
SPRU - Science Policy Research Unit

ICT Innovations for Sustainability pp 435-448 | Cite as

Rebound Effects and ICT: A Review of the Literature

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Crutzen, PaulJ; Steffen, Will	2003	How Long Have We Been in the Anthropocene Era?	Climatic Change
Rockstrom, Johan; Steffen, Will; Noone, Kevin; ...	2009	A safe operating space for humanity	Nature
Steffen Roth	2009	New for whom? Initial images from the social dimension of innovation	International Journal of In...
Frondel, Manuel; Lohmann, Steffen	2011	The European Commission's light bulb decree: Another costly regulation?	Energy Policy
Wirth, Steffen; Markard, Jochen	2011	Context matters: How existing sectors and competing technologies affect the ...	Technological Forecasting...
Steffen, Will; Stafford Smith, Mark	2013	Planetary boundaries, equity and global sustainability: why wealthy countries ...	Current Opinion in Enviro...
Steffen, Will; Richardson, Katherine; Rockström,...	2015	Planetary boundaries: Guiding human development on a changing planet	Science


JOURNAL OF MANAGEMENT STUDIES
Journal of Management Studies 50:2 March 2013
doi: 10.1111/j.1467-6486.2012.01073.x

Planetary Boundaries: Ecological Foundations for Corporate Sustainability

Gail Whiteman, Brian Walker and Paolo Perego

PLANETARY BOUNDARIES & BUSINESS?

© Academy of Management Journal
2017, Vol. 60, No. 5, 1633–1661.
https://doi.org/10.5465/amj.2015.0718

AN INCONVENIENT TRUTH: HOW ORGANIZATIONS TRANSLATE CLIMATE CHANGE INTO BUSINESS AS USUAL

CHRISTOPHER WRIGHT
University of Sydney

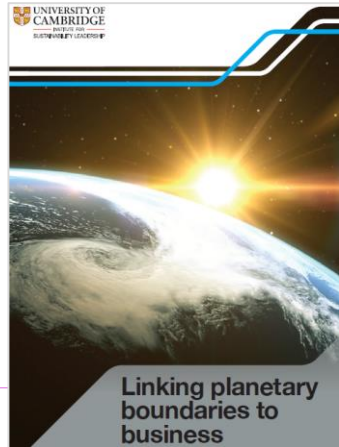
DANIEL NYBERG
University of Newcastle

"corporate actions often regress to a business-as-usual approach"

"business leadership on climate change alone is insufficient"

"corporations are particularly ill-suited to address climate change, since their short-term objectives and reliance on growth and political interventions inflate the superwickedness of the issue"

- 'Kering report' University of Cambridge Institute for Sustainability Leadership
  https://www.kering.com/en/news/linking-planetary-boundaries-to-business

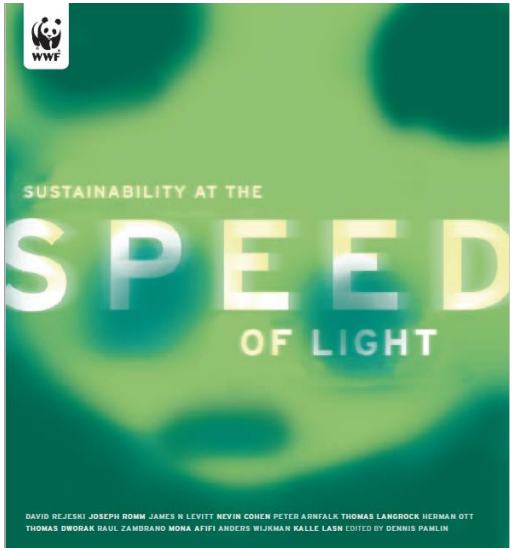


PLANETARY BOUNDARIES & DIGITAL FIRMS?

- ICT & saving the planet…

- … but: complex technologies, globalised value chain, heavy environmental footprint (energy, REEs, H_2O, WEEE, etc.), limited material substitutability, obsolescence-driven design practices, …

- Bright & dark face



WWF (2002), http://assets.panda.org/downloads/wwf_ic_1.pdf

Hilty, LM	2008	Information technology and sustainability: Essa...	
Hilty, Lorenz; Aebischer, Bernard	2015	ICT for Sustainability: An Emerging Research Field	ICT Innovations for Sustainability
Hilty, Lorenz; Köhler, Andreas; Schéele, Fabian; ...	2006	Rebound effects of progress in information tech...	Poiesis & Praxis
Hilty, Lorenz M.	2002	Sustainable development and information tech...	Environmental Impact Assessm...
Hilty, Lorenz M.; Arnfalk, Peter; Erdmann, Loren...	2006	The relevance of information and communicati...	Environmental Modelling & So...
Hilty, Lorenz M.; Som, Claudia; Köhler, Andreas	2004	Assessing the Human, Social, and Environment...	Human and Ecological Risk Ass...

PLANETARY BOUNDARIES & DIGITAL FIRMS

- **Aim of the paper**: find out (1) whether they are concerned & (2) what they do (exploratory descriptive study, early stage paper), **worth pursuing?**

- **Method & data**: analysis of the CSR reports of 16 largest digital firms using SDGs & GRI.

- **Results**:

(1) are digital firms concerned with PBs?

… & with grand challenges?

PLANETARY BOUNDARIES & DIGITAL FIRMS

Results: (2) What do digital firms do about PBs?

- **Core PBs**: SDG 13 ++; biosphere integrity: much less… (SDGs 6, 14, 15)
- Heterogeneous behaviours (SDGs addressed –breadth of actions, tools used –depth of actions)
- Classic CSR-type integration of external stakeholders (absence of non-humans)
- 6 categories of ecological practices: impact assessment, goal commitment, monitoring, resource saving, product design, emissions reduction.
- Limits: Decoupling potential? Robustness? Reliability of CSR reports?

ECOLOGICAL PRACTICES TO ADDRESS GRAND CHALLENGES (1/2)

A mix of symbolic & more substantive practices…

Heterogeneous practices (in terms of SDGs addressed & ambition)

- **Assessing impacts**: Check the availability of water resources when opening a new facility.
- **Committing**: Use labels; Sign charters; Net reduction of 70% of GHG emissions during products' manufacturing phase (in 2020 compared to 2008); Integrate climate issue at the heart of the business model.
- **Monitoring**: Water consumption; GHG emissions across the entire lifecycle of products; Use a third party (EcoVadis) to evaluate the ecological performances of its suppliers.

ECOLOGICAL PRACTICES TO ADDRESS GRAND CHALLENGES (2/2)

A mix of symbolic & more substantive practices…

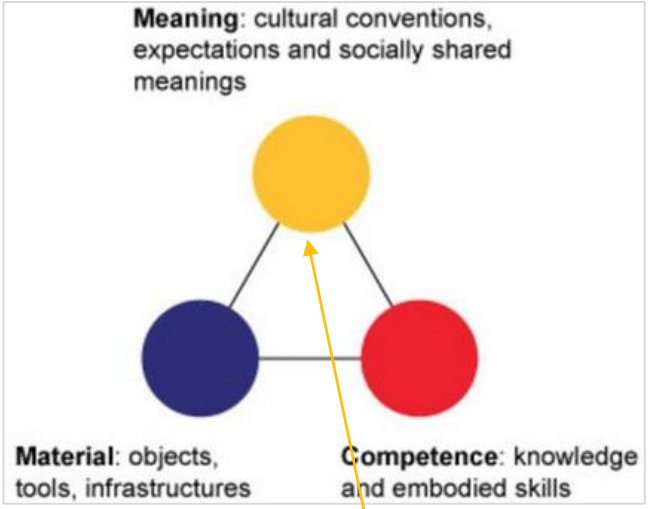
Heterogeneous practices (in terms of SDGs addressed & ambition)

- **Resource saving**: Implement circular economy practices & PSS BM (REs!); Join WWF's initiative "Climate Savers"; Reduce the energy intensity of activities by 50% per byte of traffic.

- **Emissions reduction**: Become a carbon neutral company; Reduce by 75% GHG emissions generated by the energy consumption of sold products (compared to 2014); Create an in-house carbon tax to generate revenues that will finance green investments.

- **Energy supply**: Increase the use of renewables; 100% renewable electricity by 2020.

WHAT'S NEXT?



- Drop it?
- Possible questions:
  - ✓ Heterogeneous problem framings?
  - ✓ Are there specific PB-practices?
  - ✓ Delaying commitments? Conflicting logics?
  - ✓ Are digital firms locked-in? => rigid routines? unlocking practices?
  - ✓ Contradicting practices? (e.g. recycling vs. obsolescence design)
  - ✓ Timescale mismatch? Value-laden issues (cf. "climate gate" & remarks made on Thursday by A. Hoffman)?
  - ✓ Representations: capacity to think within a safe operating space? (E. Shove's *Meaning*)

- **What's next? Industry-fun ok into the black box of specific firms in order to b PB practices.**

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Thank you.

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