


On the Possibilities of a Feminist Energy Analytics

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Engendering the Energy Transition Symposium - University of Twente
Enschede, The Netherlands, 24 November 2016

Sustainability conferences as energy exposition sites...



Note: Photo depicts the 2014 site in Portland, OR

procurement vs. sustainability officers vs. academics vs. students

Calculation services and data management



Energy products that create 'safe,' green campus spaces...for whom?



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Utility bill data



Building automation systems data



On-site generation systems data



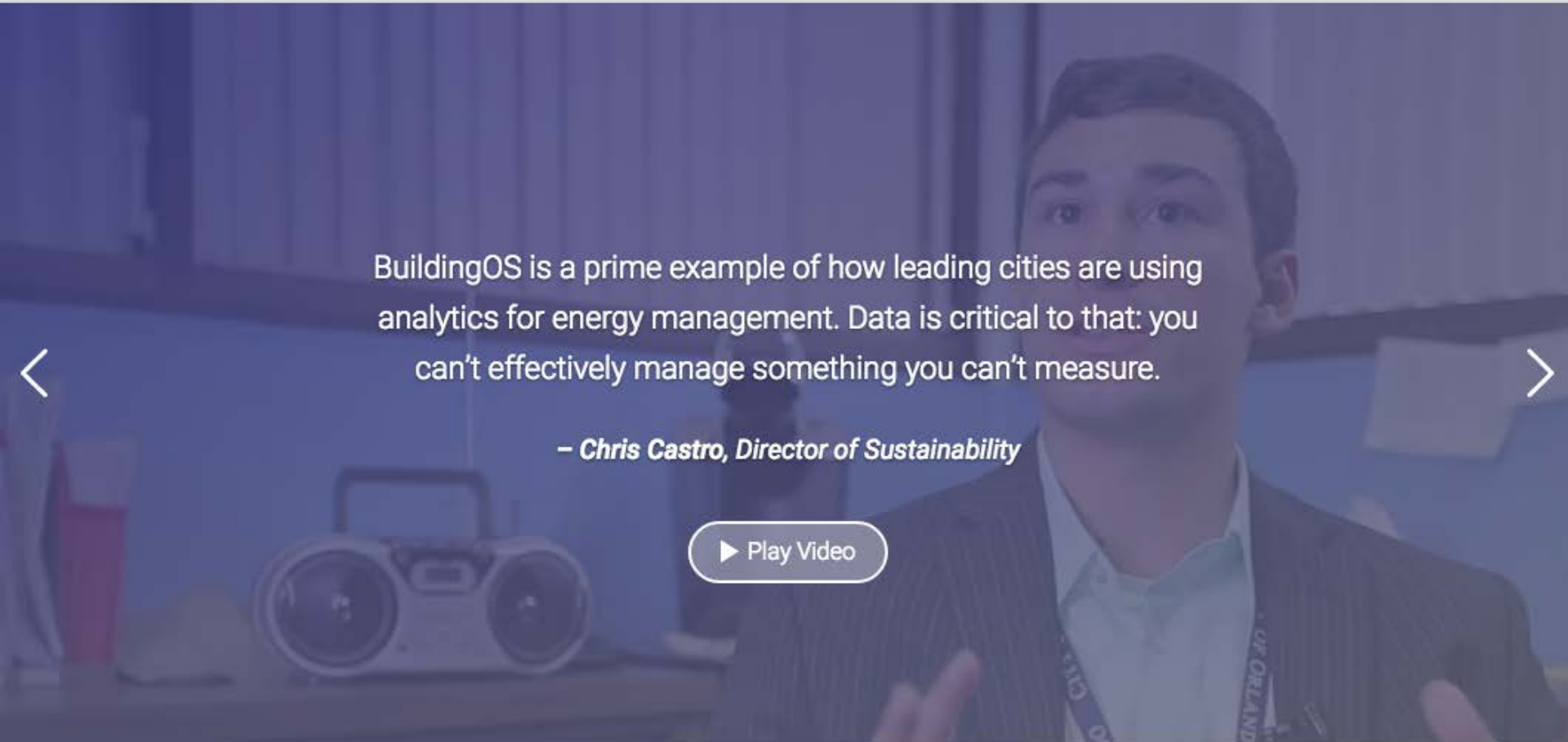
Smart meter data



Submetering data



Sensor data

The background of the hero section is a photograph of Chris Castro, Director of Sustainability, speaking. He is wearing a dark pinstriped suit jacket over a light blue shirt and a lanyard with a badge. The image is overlaid with a semi-transparent blue filter. On the left and right sides of the text area, there are white chevron arrows pointing outwards.

BuildingOS is a prime example of how leading cities are using analytics for energy management. Data is critical to that: you can't effectively manage something you can't measure.

– **Chris Castro**, *Director of Sustainability*

▶ Play Video

Research Questions

- 1) How do campus spaces serve as sites of enacting particular normalizing views of nature and what new political or green geographies follow from such views of nature?
- 2) In what ways do energy and other analytics services constrain and/or expand both the actual and the possible practices and discourses of sustainability and nature?
- 3) How do racialized, gendered and other intersectional dynamics shape campus techno-politics?



Institutions performing animal research must be prepared for a variety of unexpected crises, including:

- Disease outbreaks
- Breeding cessation
- Genetic contamination and drift
- Equipment failures
- Long term power failures
- Personnel and security issues
- Floods, fires and storms

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transparency and risk

Autocrats are also
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March 2015



A report by the National Association of Scholars

Rating systems



RATING SYSTEM DEVELOPMENT KICK-OFF



Centering undergraduates as critical researchers



Theorizing campus spaces as laboratories for energy innovation...

- campus* – a “latinism” initially used to describe the grounds of colonial Princeton University (previously the College of New Jersey)
- more refined and distinctive than merely ‘grounds’ or in the case of Harvard, a ‘yard’.

Turner, P.V. 1984. *Campus: An American Planning Tradition*. Cambridge, MA: MIT Press.



Theorizing the campus space...as object of expert planning

- 19th century... narrowly classic curriculum and religious orthodoxy led to riots and the deaths of multiple students and at least one college president
- architectural response was to build in a style called “collegiate gothic” to promote an institutional mythology of “age and permanence”

Memorial Hall, Harvard University



Pembroke, Bryn Mawr College



Theorizing the campus space...as object of expert planning

– the truly oldest buildings were in fact quite plain

Massachusetts Hall,
Harvard University



Turner, P.V. 1984. *Campus: An American Planning Tradition*. Cambridge, MA: MIT Press.

Theorizing the campus space...as _____?

- land grant institutions and their transformations?
- changes to university spaces under neoliberal logics?
- community, technical, religious, HSBCU, urban, rural, international satellite campus...?



Ball State University Greening of the Campus Conferences

Nuanced debate grounded in the working experiences of and experiments practiced by academics, facilities managers, sustainability officers and others... yet very few of the papers in these conferences posed critical questions about the “power relations, policies and commercial imperatives driving” the greening of higher-education spaces.

(see Freidberg 2014 regarding Life Cycle Analyses or LCAs, 179).

Narrating the Sustainable Campus



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supported resource and sensor types

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supported data formats, from BMS and submeter data to utility bills and manual data

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EP-311/313



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IP Sub Metering Appliance

FC

IP-SM-101

RoHS



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GREENEROPx

The Solution

GreenerU is committed to delivering lasting results for its clients. Even the best energy efficiency improvements require ongoing monitoring to ensure that optimal performance is maintained. GreenerOPx provides that service.

GreenerU begins by facilitating a dialogue with facilities managers and operators to identify key building automation system (BAS) signals and conditions to monitor. We prioritize equipment that is most closely related to building energy performance and sentinel signals, which can be indicative of problems requiring a more detailed analysis of specific systems. Once GreenerOPx is implemented, GreenerU works with facility staff to regularly monitor building performance and detect energy efficiency and process improvement opportunities which could include adjustments to technical settings and equipment or an overview of current operations procedures and culture norms.

The GreenerOPx tool integrates with all existing BAS vendors, usually without additional hardware or software, and maintains full compliance with university IT and security protocols. Data from existing BAS is automatically integrated and analyzed on regular intervals.



Promises of a Feminist Energy Analytics

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» MAY 2019 INNOVATION BUILDING (classrooms and offices)

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- » Meeting spaces for faculty-student interaction
- » Faculty labs that promote innovation and collaboration



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- » Fitness center and study/social lounges
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Feminist Challenges for Energy Analytics

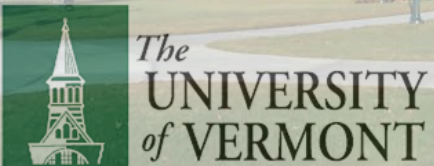


Thank You!

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