Making Liveable relations with AI and the Cloud

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The two energy crises of the digital industries
Crisis 1: Burning past planetary life for crunching data
Crisis 2: An electricity crisis

A.I. Could Soon Need as Much Electricity as an Entire Country

Behind the scenes, the technology relies on thousands of specialized computer chips.

Energy emergency? Critical power challenges takes center stage at DCD>Connect | London

Preview the agenda topics for 2024

Marc Garet, CEO of DigitalBridge, dominated headlines last week as he warned that data centers will run out of power in the next two years. But to many, this sentiment will come as no surprise: the hunger for more power has reached a new extreme with the explosion of AI.

That's why critical power will take center stage at DCD>Connect | London, as power demands, grid instability, and sustainability pressures go head-to-head across Europe and beyond.

Get up to speed on the conversation ahead of the event this September 17-18.

- Meng's Mark Zuckerberg says energy constraints are holding back AI data center buildout.
  “We would probably build-out bigger clusters than we currently can if we could get the energy to do it”

- AWS restricts data center access in Ireland amid power concerns - report
  But elsewhere in Ireland, new developments continue.

- UK data center power demand to jump six-fold in ten years, National Grid CEO warns
  Says AI and 5G will put intense strain on grid.

- Emissions reporting scheme for European data centers approved
  Scheme is part of the European Energy Efficiency Directive (EED).

Soaring demand for AI could see the technology consume enough energy to power a small country
Some imagined solutions to these crises

European database on data-centres

Commission takes first step towards establishing an EU-wide scheme for rating sustainability of data centres
Some imagined solutions to these crises

Data giants turning to renewables via building own power plants.

Amazon's solar project in South Africa supplies clean, renewable power to AWS data centers and supports economic opportunities for local women and businesses.
Over 7 GW of renewable energy

Map by Google: https://sustainability.google
Plugging data centers to “green” grids
Using computer-generated heat for public heating

Photo: Pipes for data center district heating in Stockholm. Fair use.
edge?
Do these imaginaries solve the crises?
New logics, conflicts and inequalities
Megabytes vs Megawatts
Understanding Infrastructural Frictions between Data Centers and Energy Grids for Sustainable Digitalization
1. Carbon (-free?) Coloniality
Björkvattnet (Birch Water) wind plant in Jämtland county, Sweden
Locating wind for Google (in a place where it does not blow)

Map: model of wind speed in Sweden; Institute for Geosciences, Uppsala University
Vertical energy politics

Photos: 220m tall wind turbine producing electricity for Google in Ragunda municipality, Sweden and a map of the wind park. Author: Julia Velkova
Jijnjevaerie Sami village
Reindeer herding lands
"We are too a native population here".

"The group deciding the area of the wind park were guys with cardigans. I have not clue who they were.

Those who wanted to build came - people in suits, in a truck. It will be a great development, they said. He stands and speaks, and people listen and say, aaaah, ooooh."
New landscapes: acoustic, terrestrial, human-plant-animal relations, mediated by Google wind farm

Drawing of a local activist
Politics of colonially enacted via energy, maps, court disputes and losses
2. Infrastructural gentrification
Microsoft opens its sustainable datacenter region in Sweden, creating new opportunities for a cloud-first Sweden

STOCKHOLM, Nov. 16, 2021 - Today, Microsoft announced the launch of its newest sustainable datacenter region in Sweden, with presence in Sala, Södermanland and Gotland. Microsoft's new world class datacenters in Sweden are open for business with Microsoft Azure and Microsoft 365, providing companies and organizations with the ability to run their digital businesses at scale while minimizing their environmental impact. The datacenter region brings the best of Microsoft's sustainability investments, powered by renewable energy, up to 100% carbon-free energy and supporting innovation for future operations, underscoring Microsoft's ongoing leadership for help create long-term opportunities across both commercial and public sectors.
Infrastructure gentrification

EirGrid says no new applications for data centers in Dublin until 2028 - report

No national moratorium, but a de facto one in Dublin?

January 22, 2022 by Dan Smith / Comment

Ireland’s state-owned electric power transmission operator EirGrid has said it will no longer accept applications for new data centers in Dublin.

Irish press including RTS and the Business Post are reporting that EirGrid has confirmed that it will not connect new data centers in Dublin for the foreseeable future and possibly until 2028. Data center applications already in the pipeline will be progressed.

It said the greater Dublin area is constrained and any new data center applications will only be considered for other parts of the country on a case-by-case basis.

New connections to the grid will be evaluated using the assessment criteria set out by the Commission for Regulation of Utilities (CRU) and available capacity.

Data centers in Ireland have come under close scrutiny in recent months as politicians and environmental groups question their energy demand with the country’s environmental goals. EirGrid noted that EirGrid has issued seven amber alerts in a recent 12-month period warning of issues with energy supply.

Dutch call a halt to new massive data centres, while rules are worked out

February 10, 2023

The interior of a server farm. Photo: Depositphotos.com

The Dutch government has imposed a six-month moratorium on the building of new data centers until regulations are in place to ensure that they are energy-efficient and do not contribute to climate change. The move comes amid growing concerns about the environmental impact of data centers, which are responsible for a significant amount of energy consumption.
Crack(s)

“Cracks are material events that emerge as the result of force contradictions... They progress along paths of least resistance, exploiting and tearing through different material substances where the cohesive forces of aggregate matter are at their weakest. Cracks can move slowly, linger for years in a state of potentiality, or accelerate and tear a building apart when force contradictions can no longer be absorbed” (Eyal Weizman 2019, *Forensic Architecture*, p. 53)
Where are we heading with “Sustainable” ICT? What are we actually sustaining? And what is being destroyed? Who is being displaced?

Big Tech actors and the data center industry create UNLIVEABLE FUTURES, DISMANTLING PUBLIC VALUES — all through sustainability projects.
Towards Liveable futures with the digital industries
HOW to make liveable relations with digital infrastructure

- What would a digital future that sets as a goal to proliferate and sustain reindeer herding and indigenous people lifestyles unchanged look like?

- What would a digital future that begins with care for public, shared, equitable infrastructure looks like?

- The digital in the 1990s was built around the today utopian idea of serving the common good. How can the idea of commons be rehabilitated? We need to sustain infrastructure commons, land commons, energy commons from the insatiable appetite of the digital industry.
1. Priorities - develop rigorous and equitable principles regarding how much public infrastructure capacity can be allocated to different actors in society. And question the need to datafy and digitalise so intensely.

2. Values and Principles of Publicness

3. Data centers should be regulated as infrastructure to introduce obligations.

Not against digitalisation but what form digitalisation can take.