

Frequently Asked Questions

What's up (and down) with the green and digital transition?

Green and Chrome
Supremacy FAQ
v.0.1

The Infrastructural Rehearsals Collective

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What's up (and down) with the green and digital transition?

The *Green and Chrome Supremacy: FAQ* reports from the ongoing thinking of the Infrastructural Rehearsals collective, shared often and early. In conversation with many others, this FAQ makes space for imagining those transitions we urgently need, away from those we certainly don't need nor want. We feel our possibilities for directing energies towards a differently organized eco-social transition are limited by the way the green transition circulates at the moment. In this FAQ, we therefore think out loud about why and how the coupling of digital and green transition contributes to this limitation. We don't think that the transition we need requires further industrial digitization and instead of a universalized green, we might want to go for many exuberant, vernacular and renegotiable shades of gray.

In order to make space for the transitions we need, we propose to do some spellbreaking as the conversation about how to respond to climate collapse is currently hijacked by Big Tech, Big Agro and Big Oil. Together (no surprises), they distract us with pyrotechnic techno-solutionist disruptive pathways, extremely risky tests that seem to be all about keeping in place business as usual.

The work that feeds into this FAQ is attuned to a long tail of struggles and research paths that might fall within something that could be termed as anti-colonial antifa trans*feminist queer abolitionist technosciences. The fundamental connective tissue for such struggles is the aim to resist technosciences as knowledge production siloes that feed the capitalist machinery, but rather identify forms of engagement that evade

mandatory expertise, reject the prioritization of technically savvy voices, stay curious about the nuances of sociotechnical schemes of relation, are imaginative regarding methods for observing, describing, intervening and ending (infra)structural violence. We are collectively committed to a mode of mutual aid that rejects solutionism, the reproduction of technoscientific hegemonies and the authoritarian continuation of deadly schemes of conservative innovation for technically mediated lives.

This FAQ is certainly not about mastery of knowledge or a transfer of expertise about the digital and green transition. It is also not a closed statement nor a rigid positionality. It is an attempt to keep gaining collective courage to step through the mirage of these shiny promises and to unfold an abolitionist perspective on the green and digital conundrum.

The Infrastructural Rehearsals Collective, June 2025

Green techno-solutionism

Q: What's up with the green and digital transition?

State and Corporate Actors, as well as cultural institutions, might describe the green and digital twin transition as the twinning of addressing sustainable frameworks for societal resilience to climate collapse. Smart grids managed by AI, Big Tech companies innovating renewables, digital water management, carbon removal, geoengineering, batteries, low energy chips might all be the poster tech of the digital and green transition. However, this over-solutionist activity is exacerbating the issues. Greenwashing is not a new phenomena but now after decades of corporate fraud, the green and digital transition is a new twist, one which proposes its own data analytics to evaluate and certify itself. Thirsty and resource heavy, ongoingness of colonial violence its background.

In this FAQ we offer a different definition of this: the green and chrome transition¹ is part of white supremacist activity to try to keep business as usual going through making huge amounts of profit from experiments on people, ecosystems and the earth at large. The green and digital transition is one of the key material and symbolic infrastructures of racial capitalism; it is extraction reproducing itself. Under the guise of transition, forest monitoring doubles up as border securitization; wind powered data centres divert more and more money into the cloud companies investments; AI managing smart city grids make it possible to

1. <https://editorialconcreta.org/en/concreta-journal/concreta-23/entreactofacing-the-spectral-sacrifice-zone-jose-iglesias-garcia-arenal/>

power cloud services over kitchens; fruit pickers rights become Uberfied; blood carbon becomes readily certified.

The green and digital transition (as bureaucracy and market as well as narrative) depletes grounded transitions and limits any imagination for a transition away from fossil fuel racial capitalism. Fossil fuel capitalism busts open planetary boundaries, showing that the twin transitions are actually functioning as its extension, often appearing as proposals which contradict each other.

Q: What's up with the coupling of the green and digital transition(s)?

In the socio-economical fortified context of Europe, in the midst of a changing world order in which logistically-optimised and externalised production schemes, power distribution and infrastructural standards are unset, shapeshifting and uncertain, there is a concerted effort going on combining administrative measures with financial and industrial capital incentives to set the path for addressing the poly-crisis infused by climate collapse in particular ways. The twin transition is a strategic public-private invention -aligned with the logics of venture capital manoeuvres- which proposes steps towards an infrastructurally-informed world-setting in which climate can and will be technically managed.

The concept of the Twin transition is a clever ouroboros which proposes to deal with the harms produced by techno-solutionist logic, through a technological solutionist logic. The concept is an attempt to tightly couple digital technologies to the climate crisis mitigation, using the myth of dematerialization that we all know is not true, but easy to fall for. The transformation of all lively processes into digital operations then starts to equal a green transition and vice versa; in the concept of the twin transitions it is sometimes hard to tell which transition is supposed to do what. The issue with twinning transitions is that all imaginaries for otherwise addressing the climate crisis are backgrounded. How to keep the earthdamaging implications of heightened digitisation present while changing your electric bike on solar energy?

The twin transitions is also an effort to design, produce and circulate the tale that at least there is a “robust” systematic approach to climate collapse ready for the population to cohabit with. It is important, nevertheless, to highlight that the narrative of the so-called twin transitions is a path-making operation on a massive scale. It is not a description, but rather an instituted wishful thinking for some (remember: in Fortress Europe your violence is full of good intentions), and a strategy for making profit out of the end of many worlds for others.

It is a proposition imposed with heavy means, for a supposition to be deeply installed across contemporary populations in the form of trust, inevitability, faith and what not.

(aka gaslighting, baby)

Q: What is Net Zero? And how is it different from the digital and green transition?

Net zero sets a future target at a specified date when human caused greenhouse emissions will be counterbalanced by natural or enhanced carbon sequestration. It is a particular climate modelling approach that counts on gradual transition rather than radical transformation. Net zero (which perhaps could rather be called “towards net zero”) became the dominant framework for climate action through intense negotiations between industrial partners and civil society, followed by regulation, numerous policy frameworks and voluntary action. It was also/even adopted by some militant sectors. As a result, a carbon credit market has been created to allow companies, countries and organizations to trade by offsetting residual emissions by buying and selling carbon credits. While having created a recognizable and acceptable target for supposedly driving emissions down, and apart from the evident accentuation of colonial logics dragged by this marketing “compensation” scheme, the issue with Net Zero is that it is an approach which does little towards environmental justice. It counts with (and celebrates) continued growth, rather than cutting emissions towards ‘real zero’; and carbon credits

have become a financial asset like any other. This created opportunities for delayed greenhouse effect emission reduction, financial speculation (venture capital) and land grabbing. In this sense, we can totally affirm that Net Zero is accomplice of the ongoing multilateral ecocide.

Reducing the complexity of climate change to a simplified calculation of carbon emission first, and then to develop tools for measuring and trading those emissions is a core logic necessary for the digital and green transition to work. Even when Net Zero seems to be less of a conversation at the moment, the framework both requires and drives a datafied perspective on climate, which then necessitates further digitisation and makes the logic of green transition as a cloudified, techno-solutionist practice the obvious (and almost mandatory) pathway.

Q: Do we need a green transition, and if yes, should it be digital?

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Digital infrastructure (Cloud, Big Tech)

Q: Isn't The Cloud contributing towards Net Zero?

The promise of Net Zero has become a seductive argument for organisations to move to The Cloud, especially now they are increasingly asked to prove how they are reducing carbon emissions. Computation is always resource intensive, but The Cloud promises to do more with less environmental impact. The Cloud actually goes towards more compute, never less. In line with that, Big Tech proposes that the only way to address climate urgencies is through scaling up in order to increase efficiency, and thus actually drives further depletion and extraction.

We do want public institutions and collectives to be accountable and to actively transform themselves. And we also need accountable solidarity infrastructures to support each other to make small, local changes with real possibilities for transformation also on a global scale. Relying on privatised Big Tech to provide solutions to carbon emissions won't work.

One issue seems to be that self-hosted projects or local service providers do not have the capacity, training or resources to measure and deliver the required analytics with equal authority. But we think they do have the capacity to develop more intelligent modes of dealing with computing within limits, rather than banking on the promises of Net Zero.

Through focusing on administrative and quantified solutions, the work of coming to terms with the possibility of climate collapse, and the feelings of grief and desperation that might be necessary to transform our

actions, are minimized. This dynamic undermines transnational solidarity and the understanding of the need for interlinked struggles.

(from Trans* Feminist Counter Cloud Action FAQ,
<https://titipi.org/pub/FAQ.pdf>)

Q: Can AI help the climate?

If you pay attention to the conversations that combine “AI” and “climate”, often the question will be asked as ‘How AI could help the climate’, assuming that AI is a) and operable pre-existing and defined object/tool, and b) here to stay. And then: why not, its tool superpowers should be tasked with solving the problems we have not been able to deal with otherwise.

First of all, the deployment of AI itself is unsustainable as it requires gigantic amounts of clean water, extraction of minerals, electricity in order to run. That needs to be joined by a baseline of precarious labour that sits of racial capitalist structururations. When promises of optimization-by-AI are made, remember that reliance on AI today means without exception, more AI in the future. Second, AI is promiscuous - the logics by which the climate models function, are being trained on the battlefield (I know I, know) and feed into and are fed by daily usage, like asking ChatGPT for relationship advice. It is these logics that wreck the earth.

The deplaced high-octane knowledge practice of AI is a distraction from the work of solidarity, building communities, confronting loss and endings that is in front of us.

Global supply chain, production and empire

Q: How is the green and digital transition part of the long history of empire?

“At the same time, eurocentric hegemony acts as a foreclosure of alternative ways of being and thinking to manage or tweak existing economic models, but never to openly contest them, under two circumstances. The first is when the cheapness of resource inputs for economic expansion is viewed as aspirational under the oft-claimed guise of “efficiency improvements.” The second is when ecological breakdown is recast as risk prevention (e.g. Scoones & Stirling, 2020, pp. 1-30) and perceived as a threat to the security of continuing an “imperial mode of living” (Brand & Wissen, 2017).”

“On the one hand, the EU attempts to cement itself as the world’s climate leader. On the other hand, the EU willingly fails to seriously confront its own imperialistic institutional and economic baggage that deeply circumvents truly sovereign political projects the world over. By replicating its stance as global leader, colonial legacies and debates on climate/ecological debt and historical reparations are conveniently silenced.”

“The European colonial and capitalist empire pushed a cultural and socio-economic shift that replicated universal truths about human-nature relations, whereby production systems centered on primitive accumulation and the exploitation for mass commodity production

(Federici, 2014; Mies, 2001). To this end, the independence of former colonies to the European powers meant very little in terms of continuing the siphoning of wealth, labour, and knowledge from resource frontiers to be accumulated in European and North American urban centers (Ferdinand, 2019; Ndlovu-Gatsheni, 2021). It is this continuation of unequal exchange that severs the regenerative capacities of the planet and exacerbates ecological disorder (Hornborg, 2009).”

The “Greening” of Empire: The European Green Deal as the EU first agenda.

Q: What is green mining? Is it actually possible?

No. “Usually we focus on better mining governance in places where mining happens: Chile, Peru, Colombia. But those governments and communities are not solely responsible for creating better supply chains if there aren’t changes in the Global North. Rather than asking governments of peripheral states to govern the mining rush better, what if we have a less resource-intensive energy transition in the Global North and other places where the minerals go? We need a combined strategy to move away from resource-intensive energy systems and transportation systems, from individual electric vehicles to electrified mass transit, for example. A public pathway approach, as Lala mentioned, can be applied to the built environment, technologies and infrastructures of the energy transition.”²

Q: Is it possible to make a clean chip?

No. As we addressed previously, “green” mining is not possible, since there is no ethical or environmentally friendly way under the current global capitalist system to extract the rare earth elements needed to produce the renewable technologies and infrastructures powering the green and digital transition. Producing complex and resource hungry technologies such as semiconductors, also known as microchips, are then

2. <https://www.tni.org/en/article/green-industrial-policy>

no exception, and made even “dirtier” through the vast networks of exploitation needed in their fabless production.

There have been recent efforts by collectives such as STOpmicro in Grenoble, France, who attempted to do the meticulous work of mapping the global supply chain of microelectronics in relation to the local companies Soitec and STMicroelectronics, when their expansion was being sold as a process of “onshoring” chip production while bringing jobs to the region. In order to challenge this false claim, as they already knew “a semiconductor megafab is not a shoe factory,” they went to Fairphone to see how the company tracks and maps their own supply chain in an effort to make a smartphone that is more “fair” in terms of working conditions, and the environmental, social, and ecological impacts through all parts of the production process.³ Fairphone revealed that it is only possible for them, to map %%% of the resources and labor used, due to the complexity of the global supply chains today. “Semiconductor multinationals themselves no longer know their own value chains beyond their immediate suppliers, and replenishing them is a titanic task. For example, since 2018, semiconductor manufacturer Intel (a three times bigger player than STMicroelectronics (8) has been seeking to rebuild its cobalt supply chain. In 2023, after six years of effort, the industry managed to trace only 61% of the volume of minerals (9). The complexity of the value chain is the issue. Florence Palpacuer, an expert on 10 global value chains (10), explains that modern capitalism is today “a heart-to-heart” that subcontracts, relocates, and optimizes everything that can be financially. The microelectronics industry, because of its ultimate complexity (11), is a paradigmatic of this global madness.”⁴

Q: And what about clean batteries?

No. After Swedish renewable battery company Northvolt went bankrupt in March, the dream of Europe leading the the green transition by way of increased battery production for electric vehicles (EVs), is slipping

3. <https://www.fairphone.com/>

4. <https://stopmicro38.noblogs.org/post/2024/11/01/ce-que-signifie-relocaliser/>

further away.⁵

There are some interesting experiments with salt batteries, like the one installed at Domaine Public in Brussels. Domaine Public is a local internet provider who uses a salt battery to store solar energy to power on-site back-up servers. Apart from replacing lithium by more readily available salt, it seems the life-span of such batteries is much longer than the lithium ones. Right now, start-up costs are also a hurdle for wide adoption and salt batteries need a lot of space so they are not useable for electric bikes and cars for example (which might be a feature). But mining salt is not without impact either, and the environmental impact of the materials and (micro)electronics needed to make this technology function, is not clear. Also here, the challenge is how to use these technologies without slipping into more uptime, more data, and the endless demand for increased computational power.

Clean batteries are also a recurrent topic in the latest FOSDEM editions, an annual software engineering conference that takes place in Brussels. FOSDEM has had tracks that directly respond to the energy transition through open source approaches. In 2025, batteries were called “a bottleneck in the energy transition.”^{6 7}

5. <https://www.politico.eu/article/eu-battery-industry-independence-northvolt-bankruptcy-sweden/>

6. <https://fosdem.org/2025/schedule/event/fosdem-2025-6003-flow-battery-research-collective-building-an-open-source-battery-for-stationary-storage/>

7. <https://northvolt.com/products/cells/sodium-ion/>

Kaleidoscopic portals (other practices, community propositions, interventions)

Q: Are you optimistic about the Green Transition?

No, and to answer we would like to share the words of Leanne Betasamosake Simpson in *Rehearsals for Living* (pg. 176): “We both know hope is a luxury; my ancestors have taught me that. My people got up and worked really hard all day with or without hope. My ancestors didn’t need hope to build resistance, to build Nishnaabeg life and imaginings beyond regulation. Our movements and mobilizations do not have the privilege of resting upon a fleeting emotion. The absence of hope is a beautiful catalyst. Tenacity, persistence, stubbornness, rage, resentment, pessimism and despair are all motivators. So are joy, love, attachment, care, truth, optimism, respect and reciprocity. So is the delicious soup in which all those exist at once. The tentacles of racial capitalism do not get to demand hope or optimism, or celebrate rage and pessimism or consume our trauma and tragedy, or transform me into “uplift”—what Saidiya Hartman calls “a translation of Black suffering into white pedagogy.”

Q: Why many exuberant, vernacular and renegotiable grays?

We are interested in the potential of widening a political aesthetics in response to the conundrum of moving towards the transition we need: vocabularies, representation, performative engagement, relational practices, etc. that propose ways of doing exuberant otherwise. Reminder: Degrowth doesn't mean scarcity, abolition doesn't mean absence - it means presence, abundance, flamboyance and sabrosura!

Q: Are there other infrastructural imaginaries for responding to climate collapse?

There is a bunch of contemporary and historical initiatives around, but they often do not get the same airplay as sucking carbon out of the air with giant fans might get. None of these community proposals offers a perfect solution, each of them has their own issues, however they point towards possible openings of doing computing from a place of responsabilisation towards the climate polycrisis. Some of the examples you could have a look at are permacomputing⁸, practices gathered by the Damaged Earth Catalog⁹, repair cafes¹⁰, or even the socio-ecological transition project of Gustavo Petro's government in Colombia¹¹.

These practices consider questions of regeneration, resilience, reuse, repurpose within computing.

8. <https://permacomputing.net>

9. <https://damaged.bleu255.com/>

10. <https://www.repaircafe.org/en/>

11. <https://rosalux.es/2024/09/el-proyecto-de-transicion-socioecologica-del-gobierno-de-gustavo-petro-en-colombia/>

Q: How to walk down the street without involving a multinational corporation (and look good doin' it)?

One example of everyday dependency on Big Tech is using g\$gle maps for getting around. This could be a place to start when we want to experiment with changing how we relate to and use cloud based tools in our daily lives. The title of this question is taken from a conversation that emerged on the permacomputing public forum where people shared stories and experiences of how they refused this tool went¹² .

Another account of such everyday refusal is Luiza's No Google navigation experiment:

"Asking for directions from strangers offered, perhaps, some of the most interesting dimensions of this experiment; for instance, the surprise expressed by the cashier at a small family-run food store when Luiza asked for directions on how to walk to a relatively distant park to meet Ailie and Femke. The cashier was struck by both Luiza's insistence to walk, and the refusal to use Google Maps. The cashier knew it was a relatively straightforward path, but wasn't absolutely sure. She asked a colleague to explain directions, who said he also wasn't sure. Ultimately, she ended up looking for the directions on her own phone, on Google Maps." (The No Google navigation experiment, Luiza Prado in: Spellbreak Training: a peer-to-peer cloud divestment network¹³)

What would it mean to search for a multinational mining company headquarters without using g\$gle maps? Or a walking tour of data centers without connecting to them from our pockets?

12. <https://bbs.permacomputing.net/thread/4/%5bshow%5d-how-to-walk-down-the-street-without-involving-a-multinational-corporation-%28and-look-good-doin%27-it%29-4/>

13. https://itipi.org/wiki/index.php/Spellbreak_training

Q: Is a port a portal? Is it linear? Where does it lead?

Yes, it is a small reprieve. Often the grand narratives of the green and digital transition imagine sparkling futures of total ease and comfort in our optimized lives. Yet this promise of fluidity is out of joint regarding the physical limits of the planet, the pre-designed inertia of de-politicization regarding material conditions of possibility for communities to try otherwise, the lack of sharpness of shared vocabularies to address complexity, the erasure of genealogies of infrastructure-related struggles... and so forth.

Instead of imaginaries of augmented reality devices showing real-time pollution data, Big Data informed farming, or gamified electricity usage, what other spacetimes of possibility can be called forth that are already here, latent, lingering, or flourishing? Portals, or what Mikhail Bakhtin would call chronotopes, are ruptures that remake the fabric between one world and another.

Colophon

This first version of the Digital and Green Supremacy FAQ was collated by the Infrastructural Rehearsals Collective in July 2025. We make proposals and interventions that challenge top-down hegemonic approaches from green-washing tech capitalists to state-sponsored initiatives. As academics, artists, designers, researchers, activists, organizers and cultural workers we bring our experiences from different fields of knowledge, practices and terrains (Barcelona, Basel, Brussels, Glasgow, London, and Rotterdam).

The FAQ combines insights from the Trans*Feminist Counter Cloud Action FAQ with other networked efforts: The Institute for Technology in the Public Interest (TITIPI), Regenerative Energy Communities, The Underground Division, Cell for Digital Discomfort, Groundings, Infra-Resistance, 2dh5, StopMicro and elsewhere.

Fonts by BBB -- Insolente¹⁴ and B.S.¹⁵ ; laid out with wiki-to-pdf¹⁶ .

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14. <https://typotheque.genderfluid.space/fr/fontes/insolent-e>

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16. <http://Wiki-to-pdf-manual>