

Viable Cities

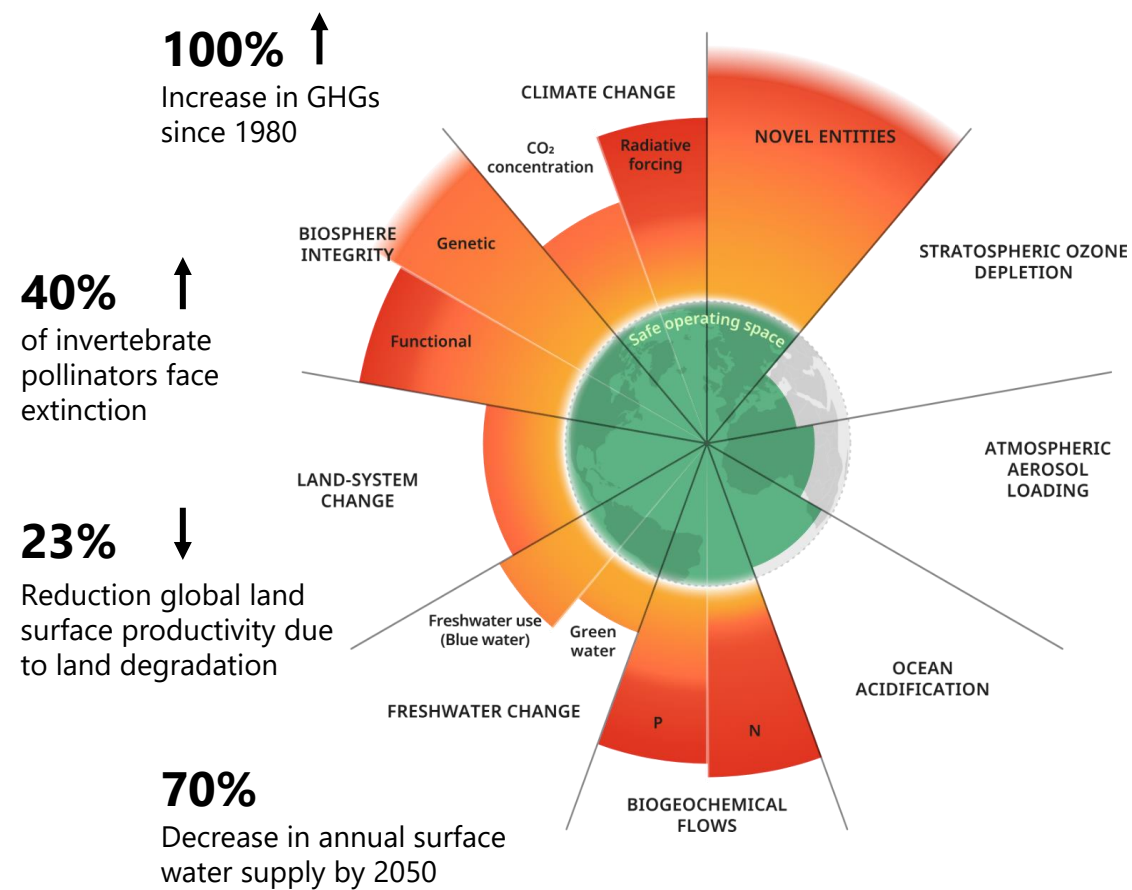
Natural carbon sinks as credible environmental compensation

Proposal to collaborate



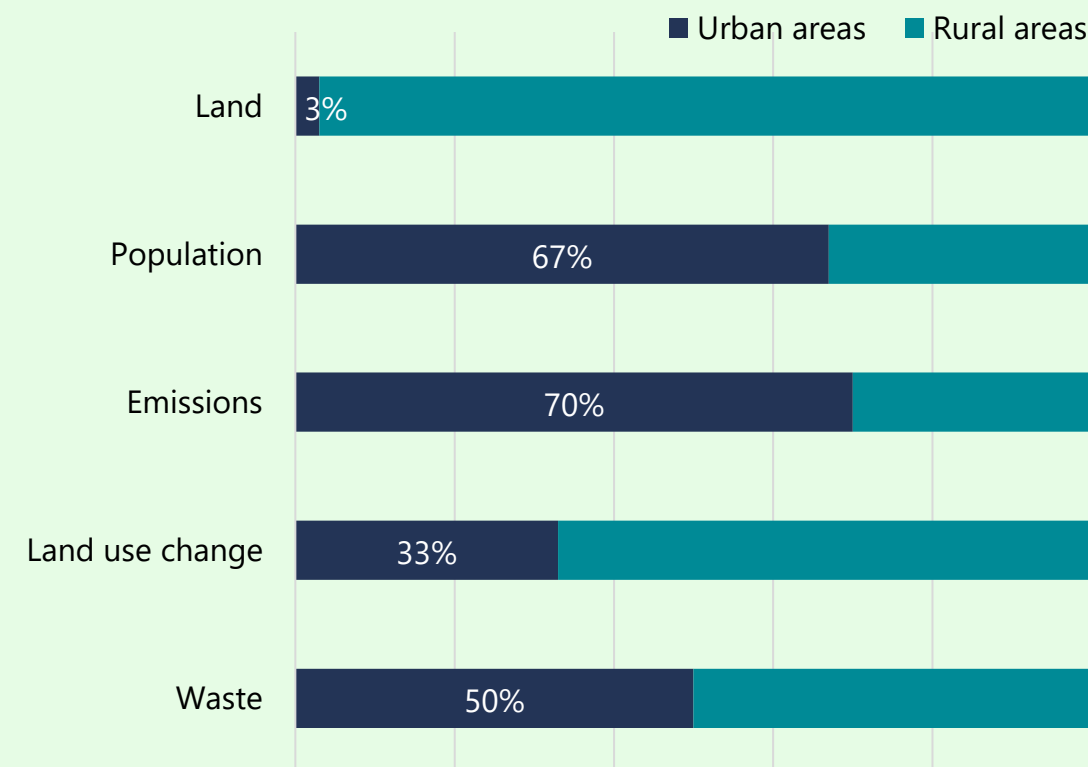
We have already crossed most of the planet's boundaries...

Planetary boundaries status 2023, indexed



... with urban civilisation as the hotspot

Urban impact on nature, % of total



Why is compensation important now?

Creating natural carbon sinks locally can come with major additional benefits:¹



- Proven increase in **public satisfaction and cohesion**



- Significant reduction of **premature deaths** e.g. through enhanced microclimate or reduced particulate matter concentration



- Save costs by **preventing climate related damages** e.g. from flooding (~5x the investment costs)

Compensation requires learning/tailoring for implementation



- Building trust in projects and methodologies



- Evaluating potential to scale up as implementation takes time



- Identifying funding opportunities

¹: (Rojas-Rueda D, Nieuwenhuijsen M, Gascon M, Perez-Leon D, Mudu P. (2019): Green spaces and mortality: a systematic review and meta-analysis of cohort studies); (Global Commission on Adaptation (2019): Adapt now: a global call for leadership on climate resilience); (Naturkapital Deutschland – TEEB DE (Hrsg.) (2016): Ökosystemleistungen in der Stadt. Gesundheit schützen.)

Problem: Most common carbon credits are highly questionable – compensation projects and developers must be thoroughly assessed



Most projects/developers are questionable in terms of

- additionality
- effectiveness
- burden-shifting
- offsetting estimations

Solution: We offer compensation services based on a credible and proven offsetting methodology...

Typical offsetting methodology

Output-based:

1 t CO₂eq emitted is offsetted by
1 t CO₂eq sequestered (or avoided)



High variability and incentive for overestimation for avoidance and sequestration scenarios



Highly sensitive to global differences in price level leading to incentive to buy credit in the global south



Our offsetting methodology

Input-based:

1 EUR environmental cost¹ caused by
1 tCO₂eq emitted is offsetted by
1 EUR invested in nature restoration



Scientific acceptance as it reflects true costs and limits manipulation



Bias towards local restoration where damages occur

Advantages



Pricing based on inputs not output limits overestimation and caps margins

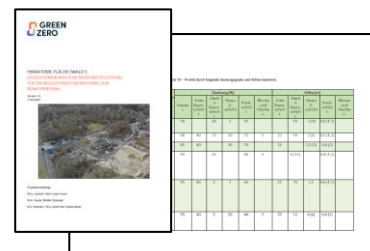
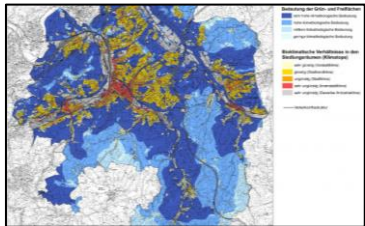


Business case independent from geography - thus, applicable onshore and with various ownership models

Solution: ... in the form of local restoration projects ideally tailored to your city's needs



- Assessment of compensation needs and timing
- Analysis of city's plans for urban and nature development
- Evaluation of restoration potential on city territory and surrounding environment
- Alignment with climate adaptation plans
- Assessment of inherited contamination
- Mgmt. of legal and financial transaction
- In depth cartography of site
- Detailed assessment of flora and fauna
- Mgmt. of authorities
- Evaluation of funding options
- Development of restoration target picture
- Development of project plan and cost estimation
- Identification, selection and mgmt. of restoration partners
- Continuous evaluation and mgmt. of cultivation work
- Continuous monitoring of ecosystem indicators



Advantages

- ✓ Holistic restoration covering all environmental aspects (incl. carbon, biodiversity, water, air, etc.) avoids burden-shifting and meets further regulations (e.g. EU nature restoration law)
- ✓ Additionality guaranteed as new ecosystem value is created
- ✓ Proven methodology across all land use cases
- ✓ Independently validated and monitored/verified

We have applied this in all types of land use cases...

EXCERPT



Andreashof

Agriculture, 150ha, 2023



Zeche Ewald

Former industrial site, 10ha, 2021



Dalma

Calamity forest, 30ha, 2022



Shipyard harbour

Urban site, 2ha, 2024

... with tangible and transparent results

Baseline (acquisition in 2021)

- Heavily degraded former industrial site
- Surface largely sealed, dilapidated buildings
- Numerous invasive species, monocultural forest

Restoration activities

- Unsealing of areas, demolition of buildings
- Rededication of the "shaft" and creation of further special biotopes
- Sowing of regional, diverse crops, restructuring of the forest
- Ongoing management of the biotopes

Results

- Environmental value created worth ~ 150.000 EUR p.a. equivalent to offset 1.150 tCO₂eq
- Increased ecosystem resilience, water absorption and retention, soil fertility
- Establishment of more than 10 red list species on the property, overall strong increase in biodiversity

Cities and major corporations trust in our approach and services

Mission City Aachen



Climate City Contract

"If calculations by the Federal Environment Agency are used to determine the environmental costs per ton of CO₂ emitted, [...] this results in a total compensation amount of €49 million per year. [...] the offsetting is to be carried out in cooperation with GREENZERO Group."

Consortium between city and 5 CCC premium partners formed, restoration process with first pilot site of 10ha worth ~ **3.000 tCO₂eq** identified

Urban° Ruhrort (Duisburg)



Sören Link, mayor city of Duisburg

"The initiative for this ambitious intergenerational project is therefore a prime example of how companies take responsibility in their immediate environment. "

Environmentally neutral by 2029, need for urban sequestration/offsetting of ~100.000 tCO₂eq in the end, so far restoration worth **5.000 tCO₂eq** initiated

dm drogerie markt



Kerstin Erbe, EVP and CPO dm

"Acting environmentally responsible" with GREENZERO is THE opportunity to take responsibility in a pioneering way. Our customers confirm this with their purchase decision.

~150ha p.a. former industrial sites restored and permanently in conservation worth **~40.000 tCO₂eq**

Get in touch if...



... you are looking for an assessment of your city's compensation potential through natural carbon sinks



... you want to learn how compensation can become a positive business case for your city's development



... you are looking for highly credible environmental offsets



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*Series entrepreneur,
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macroeconomics*



Thomas Schmidt
CEO
*Former CEO of Franz
Haniel & Cie and CWS,
various board positions
in societal foundations*



Henning Stemmer
CSO
*x-PWC with 10+ years
experience in mgmt.
consulting and urban
development*



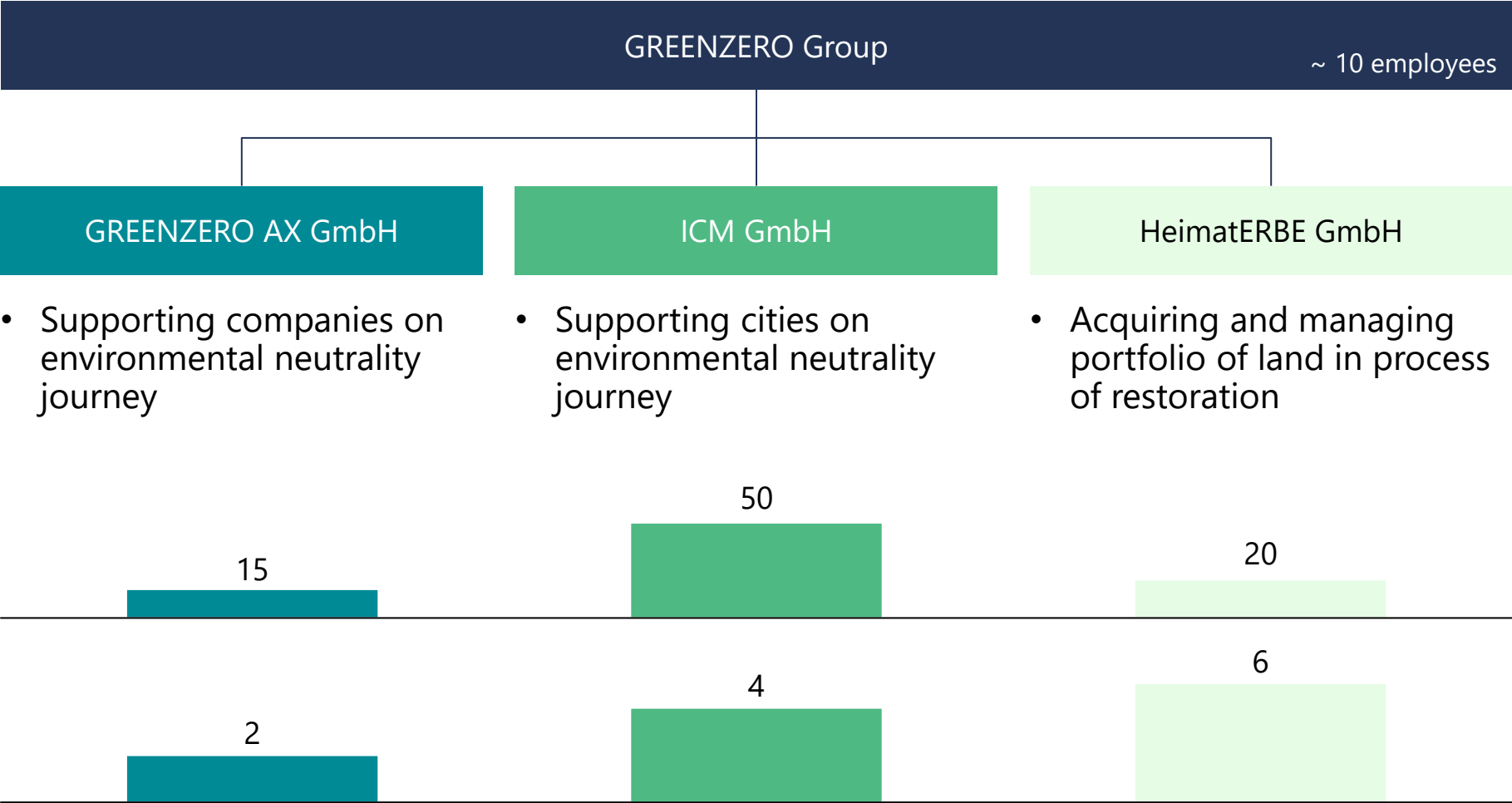
Danny Püschel
COO
*15+ years in LCA
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Calvin Schmäler
**CFO & head of business
development**
*x-McKinsey with 10+
years in mgmt.
consulting and
operations, M.Sc. Ind.
Eng.*

Company Structure

By end of 2024



Employees,
no.,
approx.

Revenue,
mEUR,
approx.