



Digitizing Energy Efficiency in Buildings

Berlin, December 5, 2019

DENEFF is the German network of leading companies in the fields of building and industrial energy efficiency.

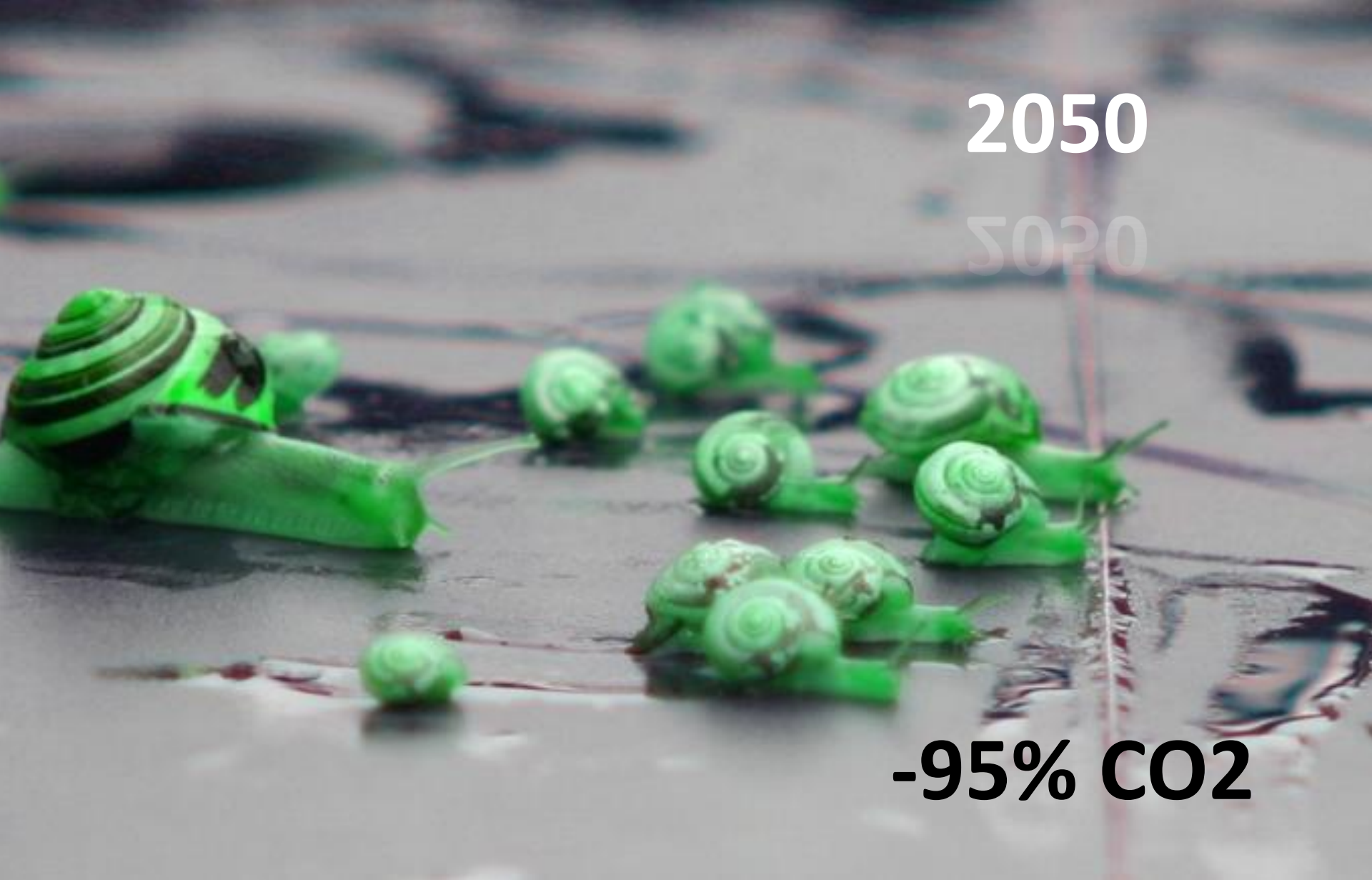


Why does the German building sector need a digital revolution? The slow crawl towards carbon neutrality ...

2050

50%

-95% CO₂

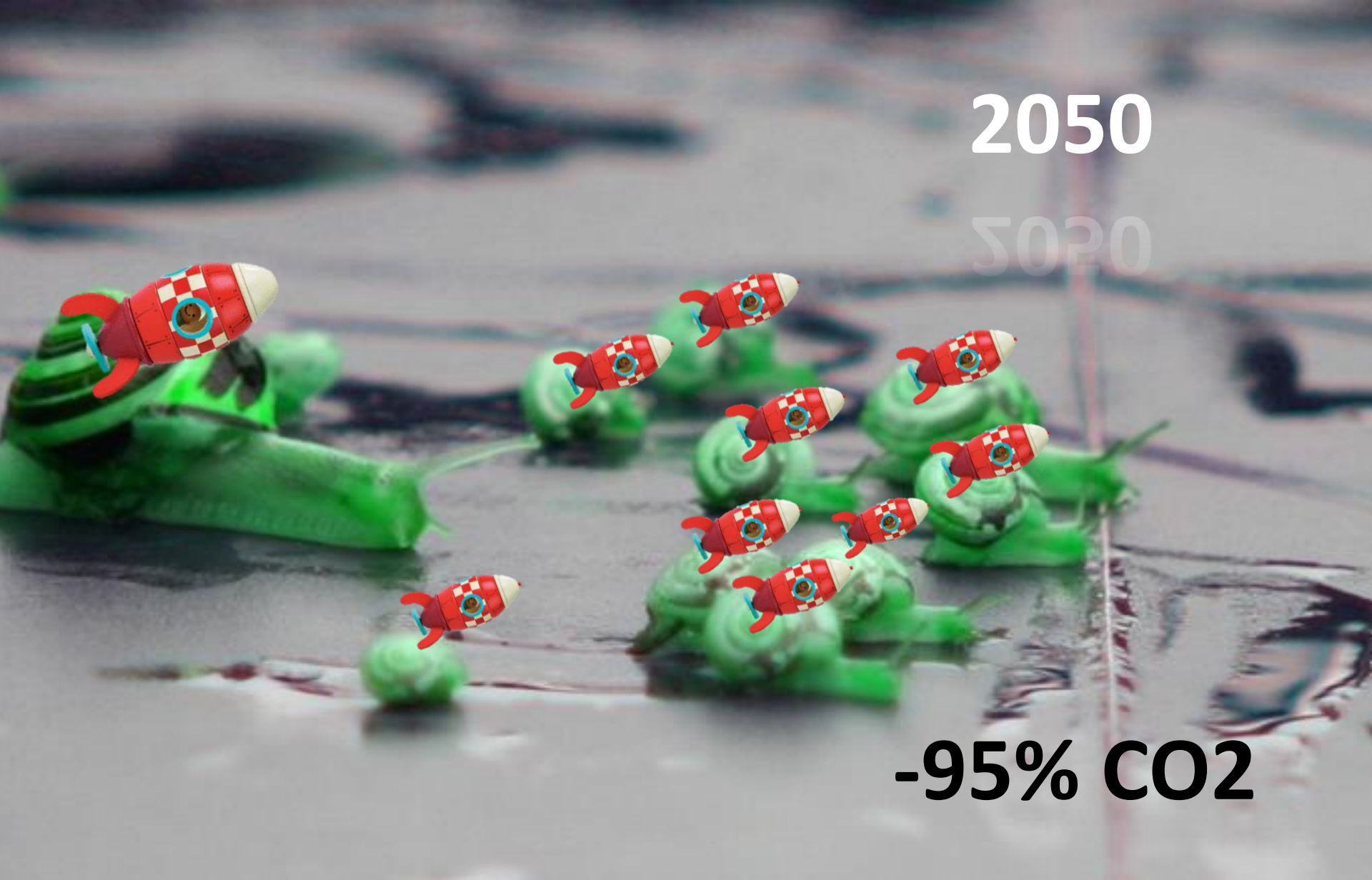


Digital solutions for future-proof buildings + enablers for lower transaction costs, business models & real performance

2050

5020

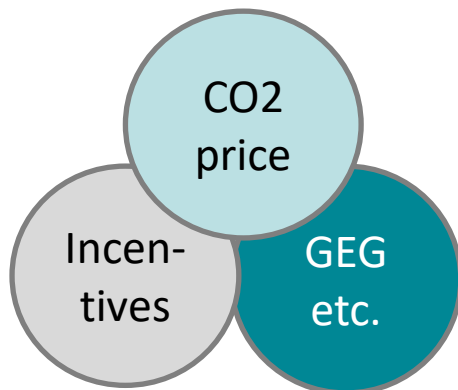
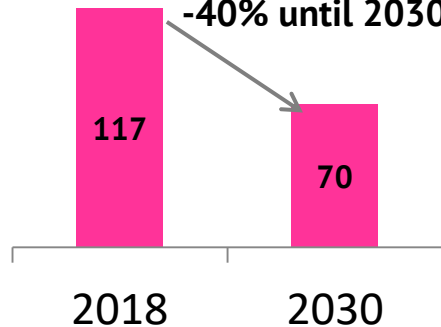
-95% CO₂



Market Framework: Regulation density concerning building climate performance is increasing.

German Climate Protection Law (incl. monitoring)

Building sector emissions target: -40% until 2030



EU Level

Governance non-ETS (threat of penalties)

Efficiency Directive (EED)

Buildings Dir. (EPBD)

Renewables Dir. (RED)

Reporting requirements

Market Drivers: Regulation and incentives stimulate demand for digital energy solutions in buildings



Digitization requirements

- Mandatory energy audits for non-SMEs
- Smart Meter Rollout
- Monitoring & automation retrofit requirements for large commercial buildings (EPBD, by 2025)
- Efficiency measurement standards for HVAC (EffSTRA)
- EV charging retrofit requirements

Other sticks and carrots

- At least 20% grants or tax benefits for HEMS/BEMS and building renovation measures from 2020 (tbc)
- Energy Savings Meter scheme
- Smart heating grids 4.0 program
- CO2 price 10-35 EUR until 2025, then cap-and-trade
- EU Smart Readiness Indicator (tbd)



Market Trends and Opportunities: digital solutions for transparency and better processes

Smart home:

- Comfort
- Energy savings and transparency
- On-site RES use and integration

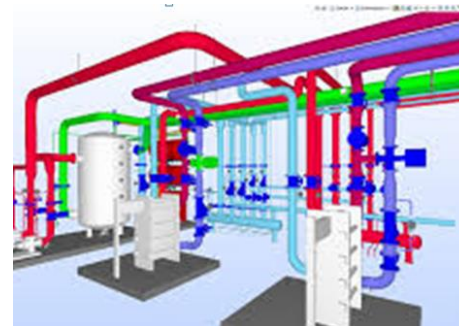


Building lifecycle:

- Sector under-digitized: catch-up growth
- BIM still in infancy
- AI planning tools, 3D scans promising
- Industrialized retrofits beginning now
- ESCO models, performance guarantees needed more often

Commercial buildings:

- BACS well-established, but systematic EMS or sub-metering not standard yet
- Property companies and CREM: Increasing pressure to address new risks/opportunities
- Little transparency and benchmarking



Want to discuss more opportunities? Contact us and/or join the biggest EE network in Germany



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