

VONOVIA

Dekarbonisierungstool

Vonovia Lenders Forum

20. September 2023, Dr. Lars Dittmann



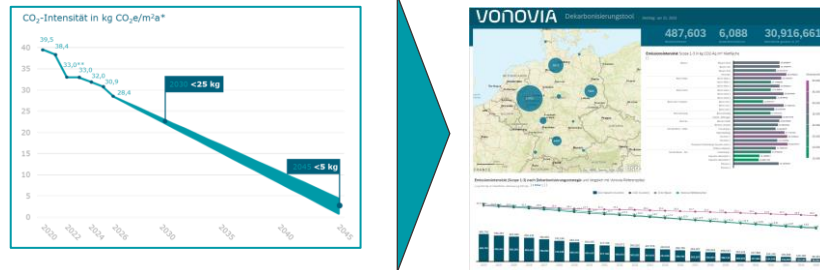
Vonovia Klimastrategie wird systematisch operationalisiert und in konkrete Maßnahmen überführt

Klimastrategie

Klimaschutz

- Dekarbonisierungsstrategie des Gebäudebestandes, um Klimaziele zu erreichen

Vonovia Dekarbonisierungstool (DKT)



Klimawandelanpassung

- Anpassungen der Gebäude, Quartiere und Wohnumfeld an Klimawandelfolgen

Vonovia Klimarisikotool (KRT)

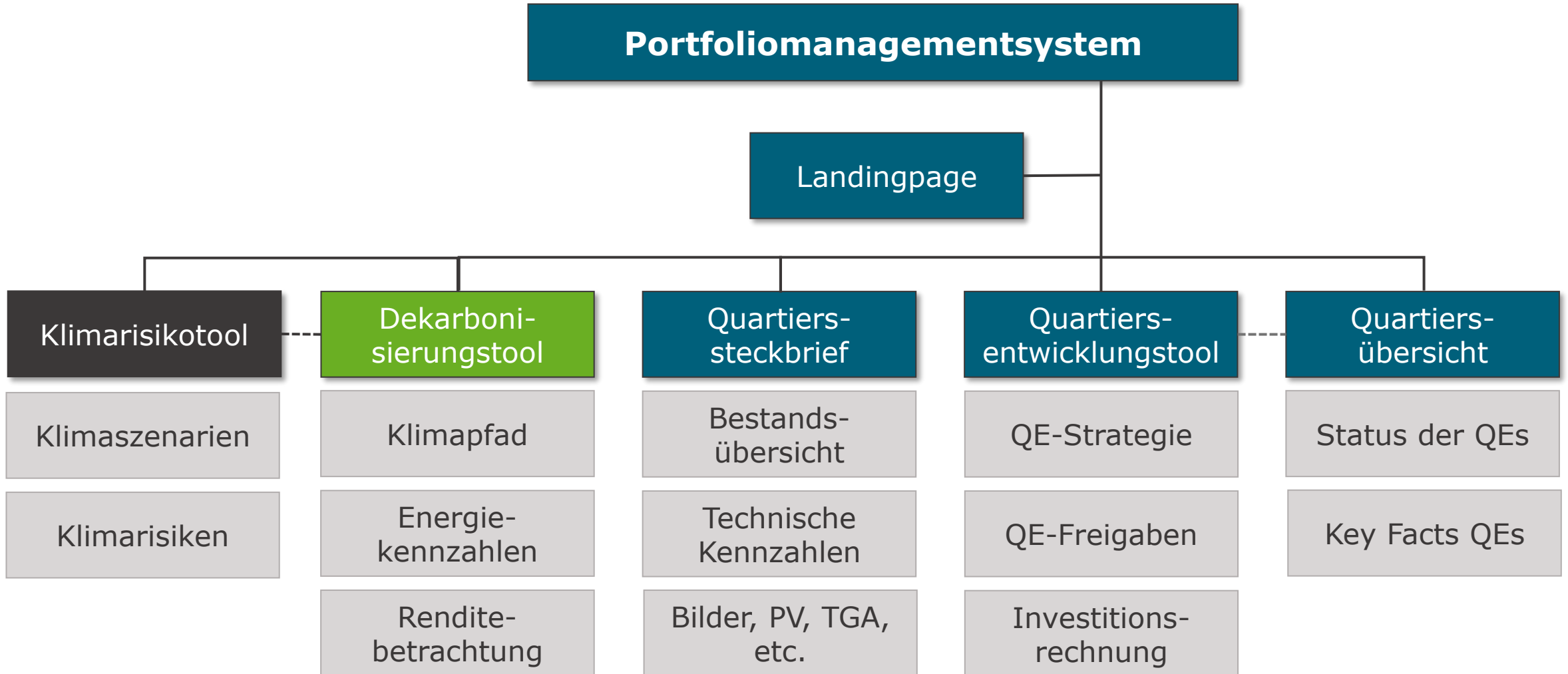
- K1 Hitze bzw. lokaler Temperaturanstieg
- K2 Trocken- und Dürreperioden
- K3 Niederschlag und Starkregen / Hagel
- K4 Schneelast
- K5 Starkwind
- K6 Überflutung und Hochwasser



- Prämissenbasierte Berechnung und Visualisierung Klimastrategie
- Berechnung eines Modernisierungsfahrplans
- Ableitung Modernisierungspfade für Teilportfolien zur Einhaltung aller Vorgaben
- Simulation verschiedener Szenarien für die Portfolioentwicklung

Übersicht

Aufbau Portfoliomanagementsystem



Investitionsstrategie unter Beachtung Klimapfad mit 1+3 Ansatz

Invest Wärme-Netze (Fern- oder Nahwärmeanschluss)
 Vorrang für leitungsgebundene Wärme (Ist 40%, Potenzial >53%)

1
+
3

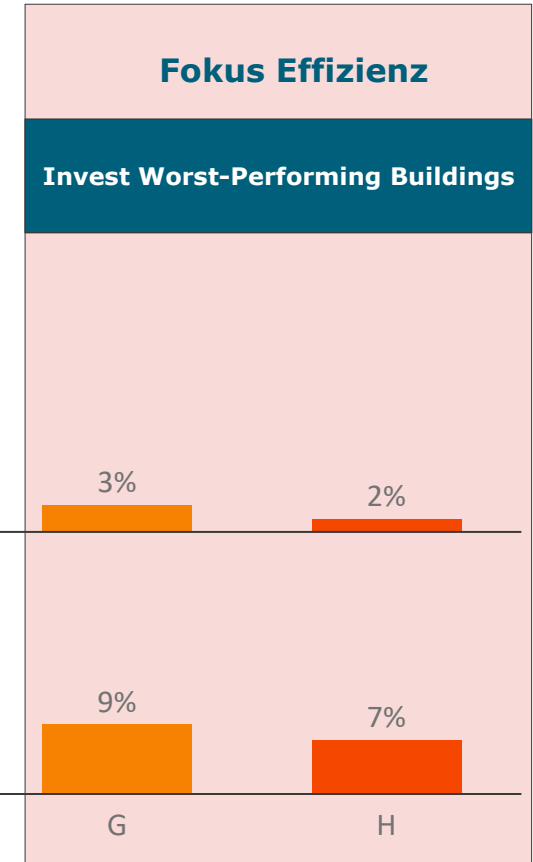
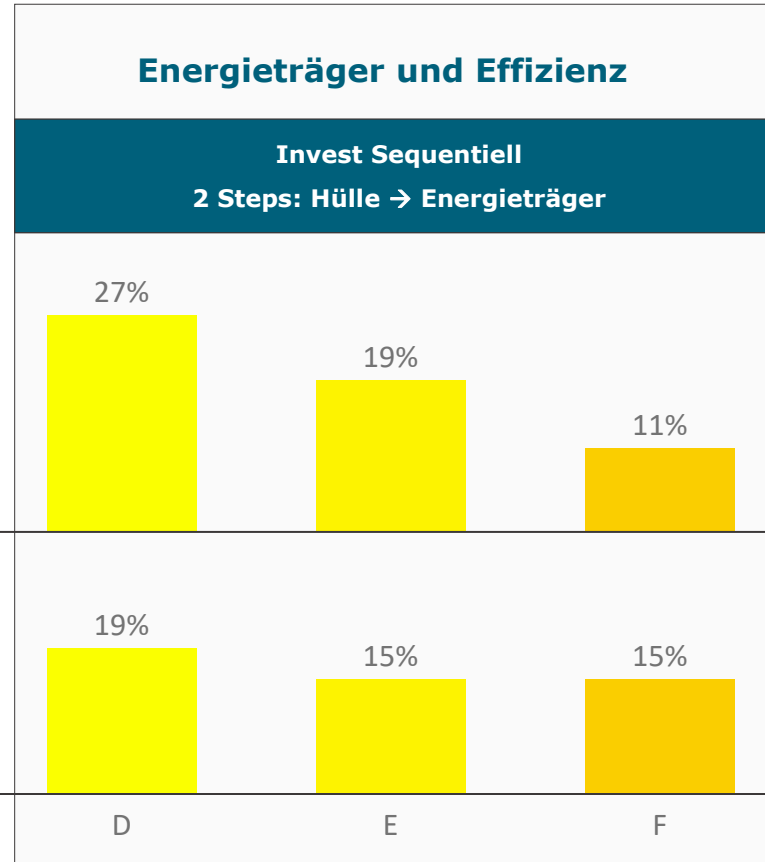
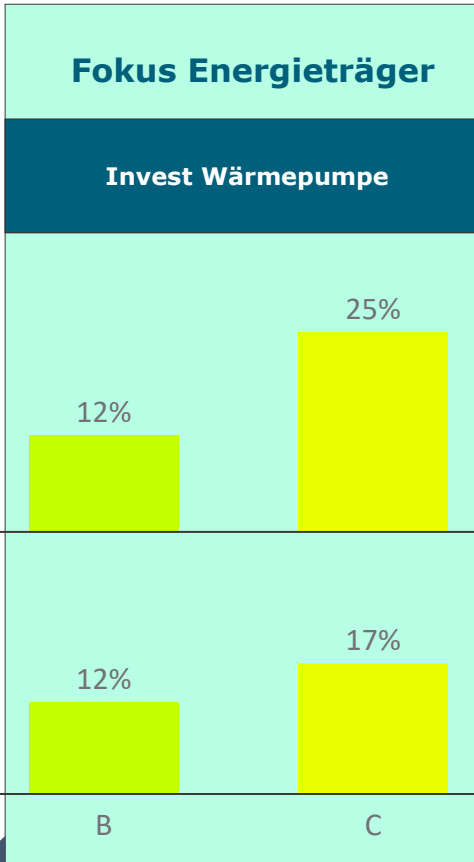
VONOVIA
 %-Mietfläche nach
 Energieeffizienzklassen

0% 1%

Deutschland

2% 4%

A+ A



Vonovia Werte: Bestand DE 31.12.22,
 Deutschland-Werte aus Agora-Studie 2022 für MFH-Bestand

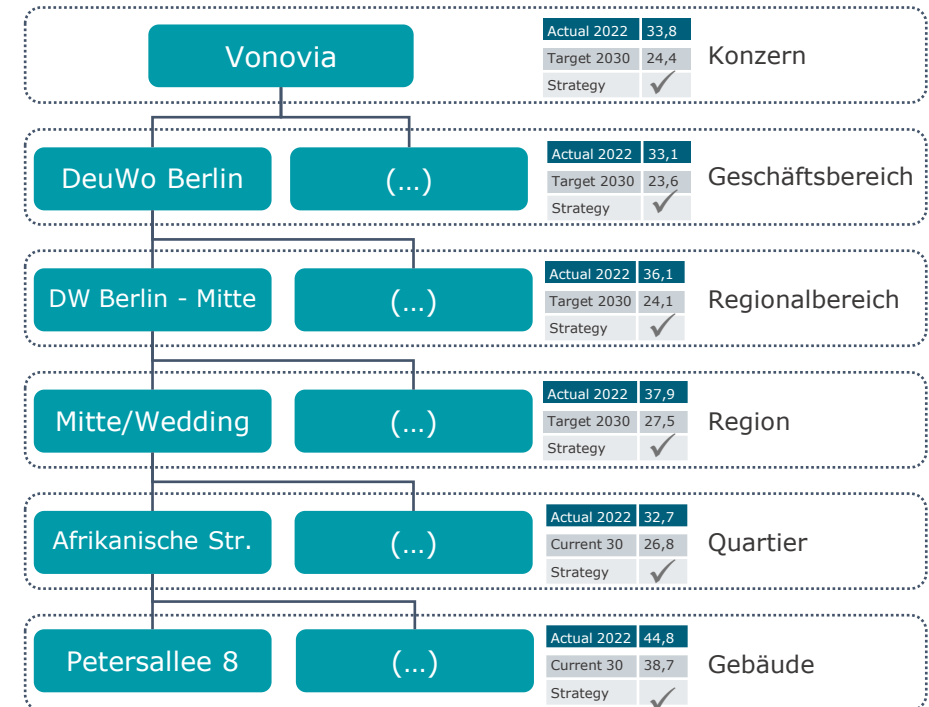
Ein klimaneutrales Portfolio...

...wird auf verschiedenen Ebenen gesteuert

Grundlage umfangreiche Datenbasis

- **Datenbasis**
Energieausweise und grundlegende Gebäudedaten
- **Scope**
Endenergie Wärme und Warmwasser
- **Emissionsberechnung**
Endenergiebedarf x Emissionsfaktor
- **Emissionsfaktoren**
Von GEMIS 5.1¹ und Agora² ebenso wie spezifische Faktoren von Wärmenetzen
- **Scopes Emissionen**
Direkte Emissionen (1), indirekte Emissionen (2) und Energiebezogene Emissionen upstream (3.3)
- **Zusätzliche Daten**
Fläche, Endenergie, Energieträger, Gebäudetyp, Mieten

Zielableitung auf allen Ebenen



¹ GEMIS 5.1 - www.iinas.org. ² Agora - www.agora-energiewende.de

Umfassender Scope des Dekarbonisierungstools

Digitale Abbildung Portfolios und der CO2-Emissionen

Energetische Gebäudedaten

Daten der Energieausweise (EAW) für Endenergiebedarf und Energieträger. Projektion Emissionsfaktoren bis 2045.

Input

Clustering und Baukosten

Clustering nach IWU¹-Typologie mit spezifischen Kostenansätzen. Einbezug laufender Investitionen und Planungen.

Input

Mieten

Aktuelle Mieten des Portfolios. Berechnung von Mietanpassungen entsprechend Mietrecht und Förderung.

Input

Algorithmus nutzt Inputdaten für Priorisierung



Quartiere & Gebäude



Optimale Reihenfolge Modernisierung

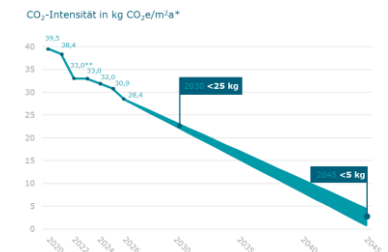
- Renditen und Kosten
- CO₂ Einsparung
- Restriktionen (bspw. Denkmalschutz)



- Indexierung
- Investgrenzen
- Kapazitäten

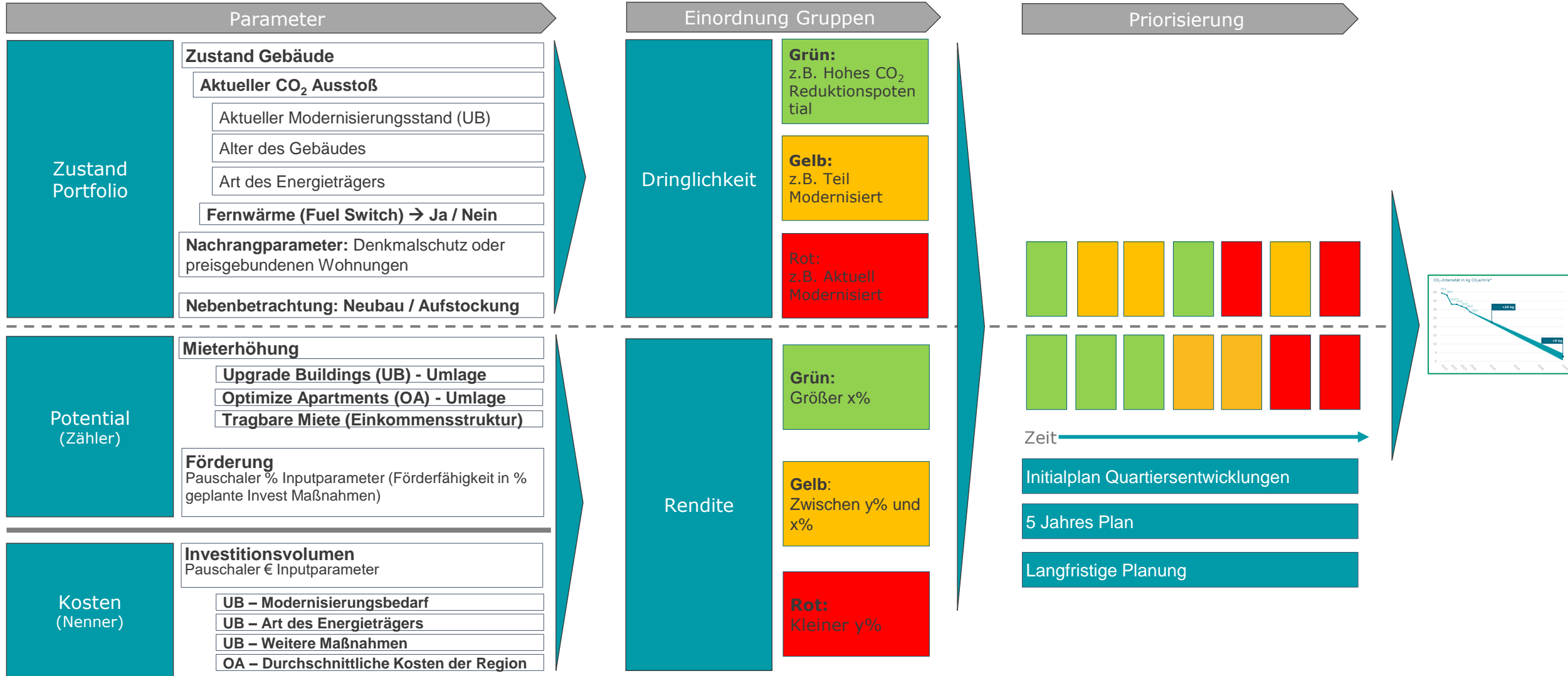
Output

- Ambitionierter Bottom up-Klimapfad auf Grundlage des aktuellen Status quo.
- Ein realistischer Pfad berücksichtigt Wirtschaftlichkeit und Emissionsreduktion.
- Pfad dient als Benchmark für laufende und künftige Investitionen.



Der Prio-Algorithmus führt zum Klimapfad

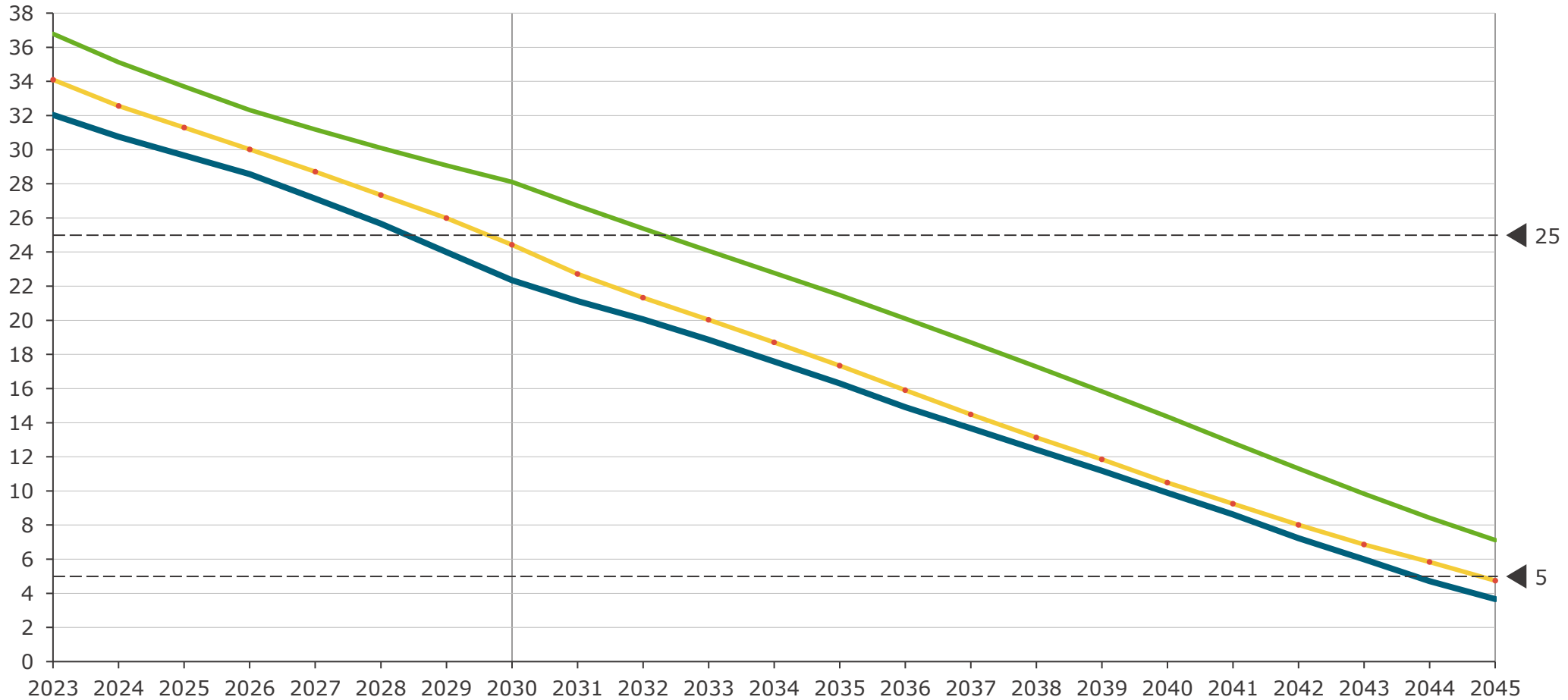
Prämisenbasierter Ansatz berücksichtigt CO₂, Rendite und Ausschlusskriterien



Klimapfad führt zu planmäßiger CO₂-Reduktion

DKT berechnet Modernisierungspfad für jedes Gebäude und Quartier im Portfolio.

CO₂ Intensität in
kg CO₂e/m² pro Jahr



1.4 °C
Paris-aligned Strategy
©2022 XDC3.0 2018-2100
right-basedonscience.de right

- CO2 Current
- Target
- CRREM 1,5° *

*) CRREM MFH-Pfad 2021; Zahlen CRREM-Pfad angepasst bzgl. Haushaltsstrom. **) Strategie wurde abgenommen von unabhängiger Ratingagentur right⁹ im September 2022 auf Grundlage Vonovia Core-Portfolio am 30.06.2022 (inkl. Deutsche Wohnen) in Deutschland; Emissionsfaktoren in Zusammenarbeit mit Fraunhofer (Basis Agora-Studie)



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