INTRODUCTION TO SUSTAINABLE FINANCE AND INCORPORATING CARBON RISK AND BUDGETS INTO CAPITAL PLANNING

GBCI Europe Sustainable Finance Roundtable
Steelcase Munich | 07.11.2019

CARBON RISK REAL ESTATE MONITOR

CRREM

IIÖ
INSTITUTE FOR REAL ESTATE ECONOMICS

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IIÖ INSTITUTE FOR REAL ESTATE ECONOMICS

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 785058

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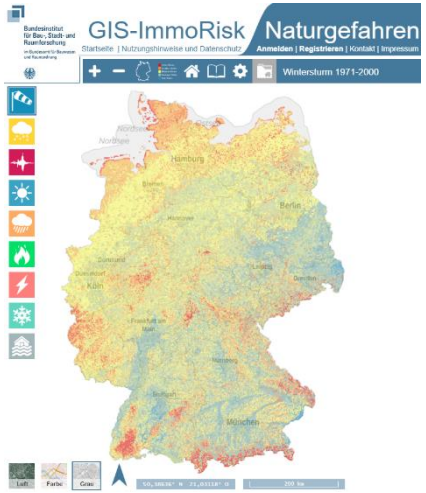
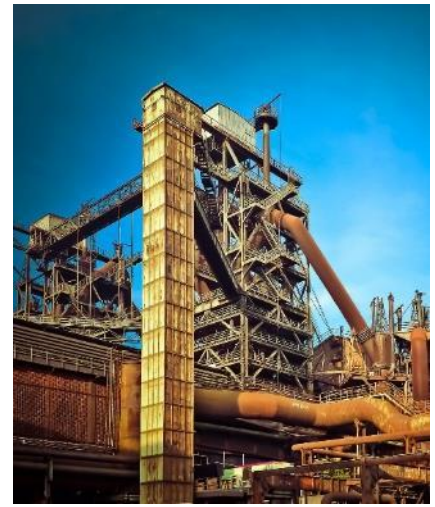
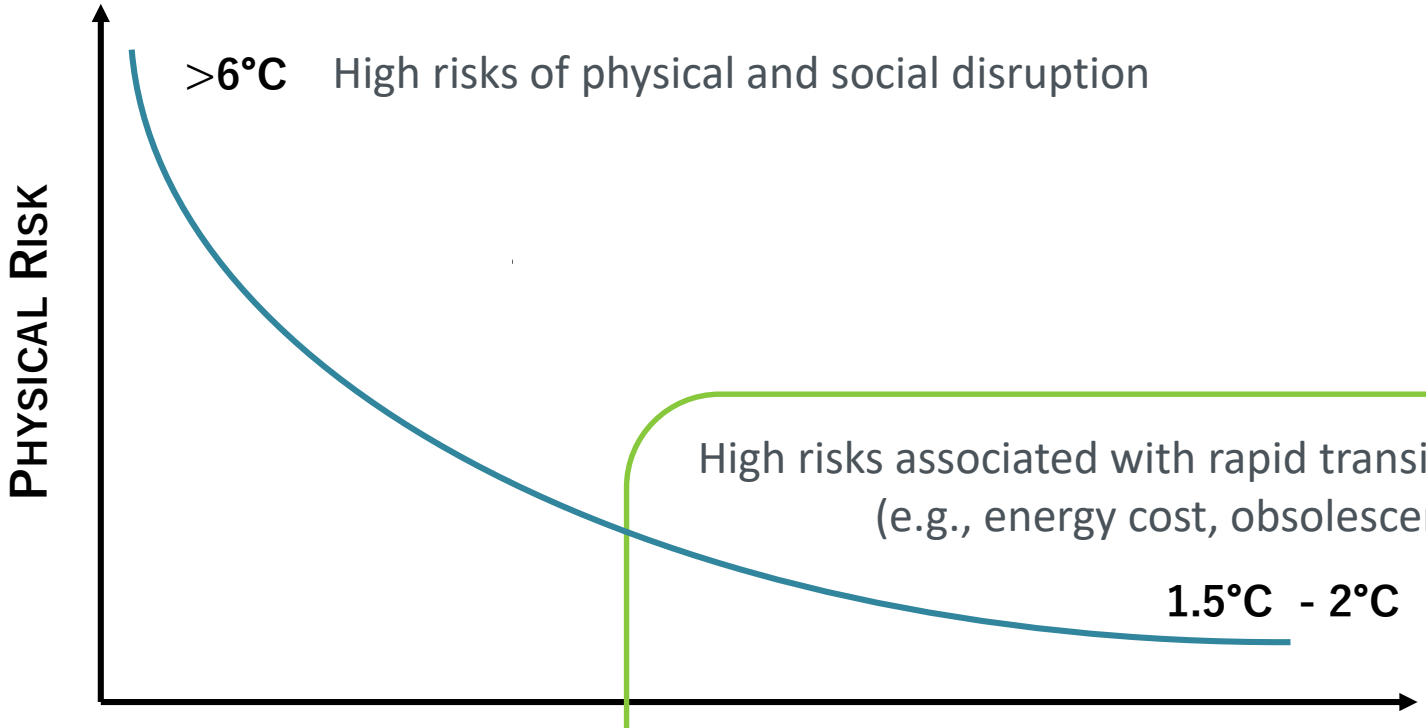


PHYSICAL RISK + TRANSITION RISK





High risks associated with rapid transition (e.g., energy cost, obsolescence)

"**STRANDED ASSETS** are properties that will be exposed to the risk of early economic obsolescence due to climate change because they will not meet future regulatory efficiency standards or market expectations." *(CRREM, 2019)*

Source: TCFD Technical Supplement, 2017

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Climate science: Climate impact and carbon emission budgets/pathways compatible with limiting global warming to x.x°C

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Politics: Commitment to limit global warming to 2°C or better 1.5°C

↓

New mandatory and voluntary requirements to (sustainable) finance & carbon risk

EU SUSTAINABLE FINANCE TAXONOMY

Sustainability Metrics and Thresholds

↓

'Taxonomy eligibility' of activities and assets

↓

Indicates sustainability of assets and impacts investibility / attractiveness to investors

CARBON RISK REAL ESTATE MONITOR

CRREM pathways

- Paris-aligned decarbonisation & energy reduction pathways
- Per country and building type

CRREM Tool

- Assess the carbon and energy performance of buildings and portfolios
- Benchmark against CRREM pathways and peers
- Derive indicators for risk management, reporting, disclosure

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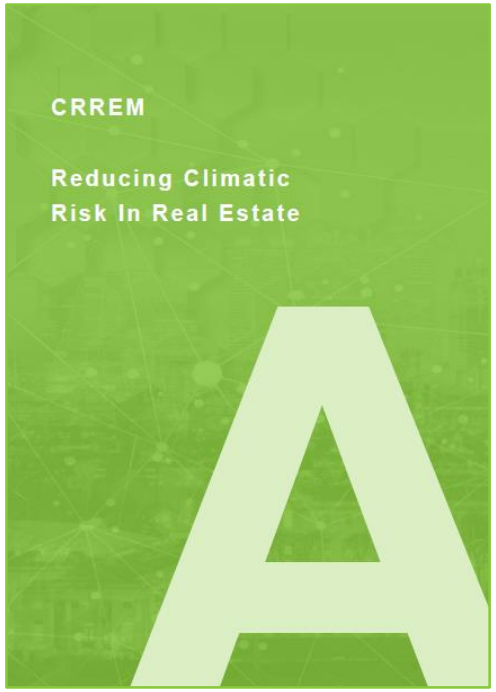
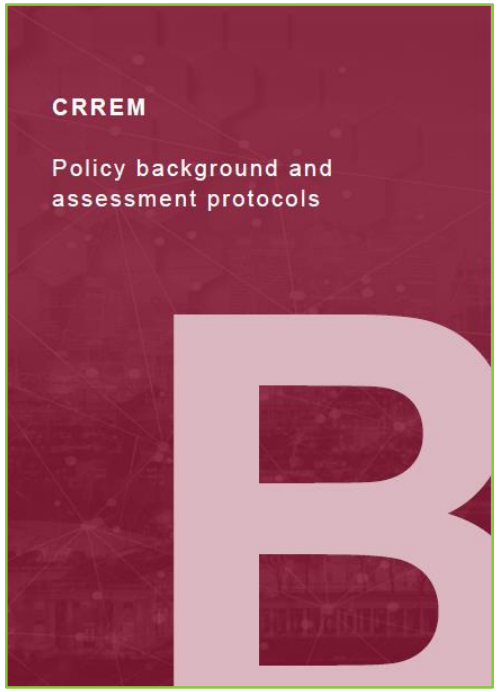
STRANDING RISKS & CARBON

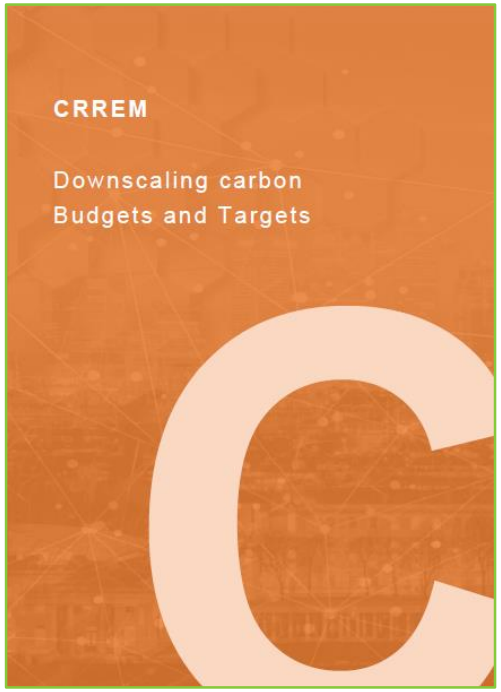
available on
www.CRREM.eu

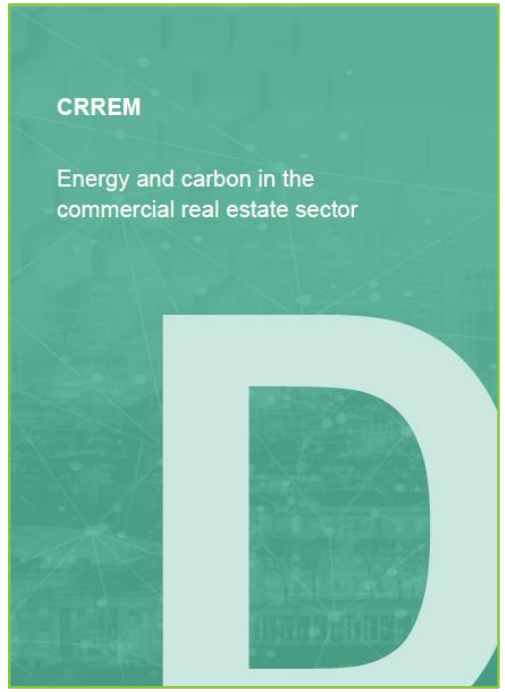
Science-based decarbonising of the EU commercial real estate sector

available on
www.CRREM.eu









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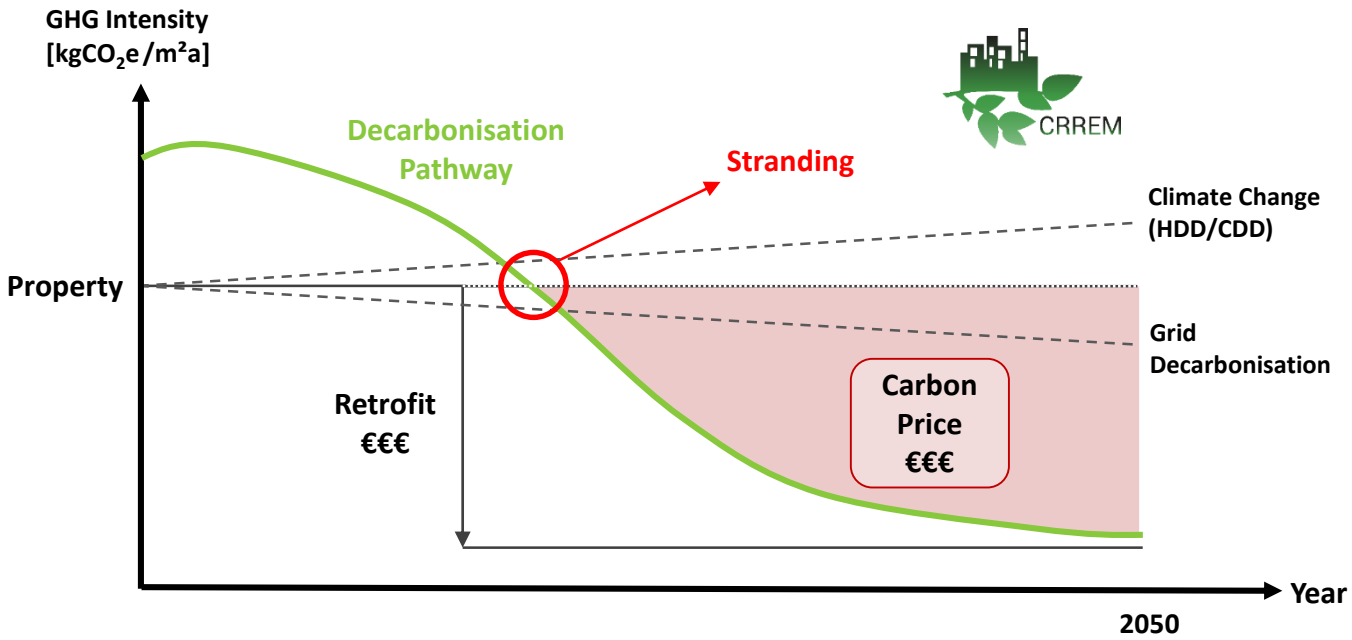
GRESB

Universitat d'Alacant
Universidad de Alicante

Carbon Risk Assessment & Management based on quantitative performance data and target setting



DECARBONISATION PATHWAYS

Aligned with 1.5°C and 2°C global warming, country- and building type specific

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BUILDING'S CARBON PERFORMANCE

Energy consumption, carbon emission factors, grid decarbonsation), changed heating and cooling demand, normalisation

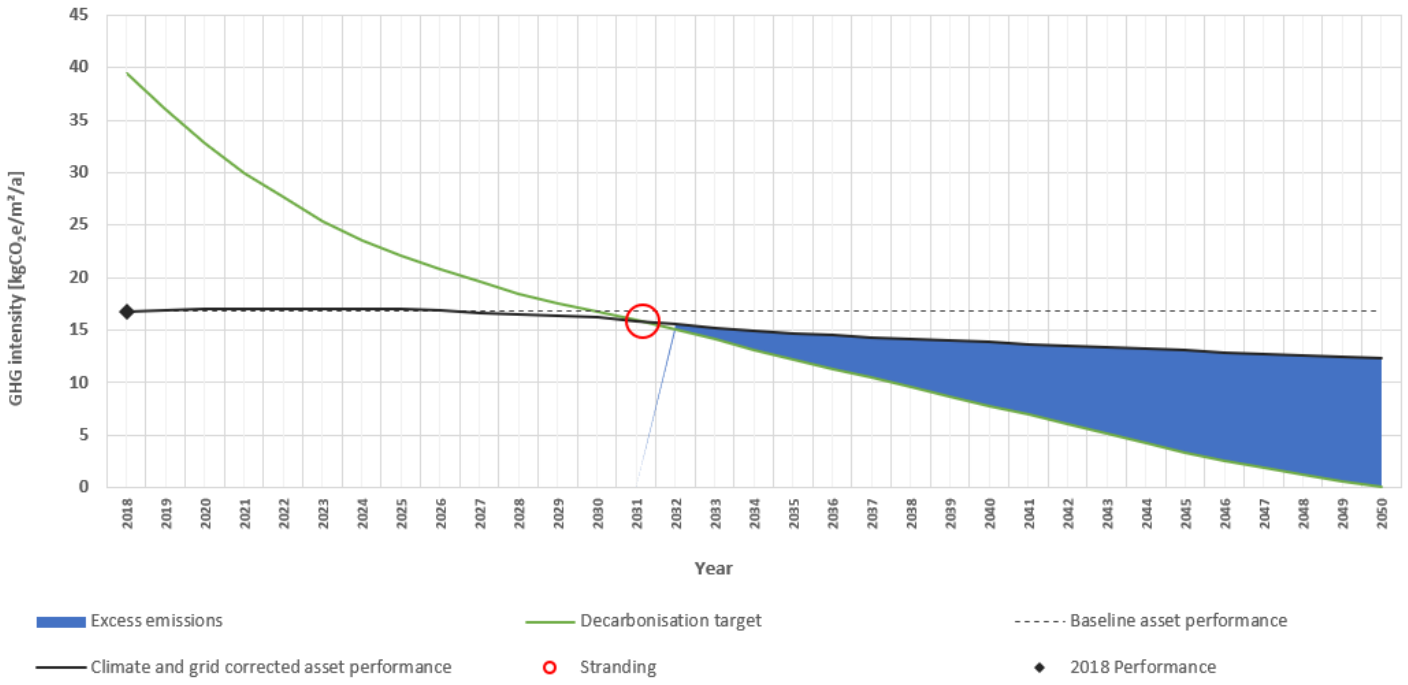
=

CARBON RISK ANALYSIS

Year of stranding, excess emissions, carbon costs, energy costs, benchmarking

Carbon Risk Assessment & Management based on quantitative performance data and target setting

CRREM TOOL STRANDING DIAGRAM



Year of stranding: 2032 **Type of use:** Office **Country:** Austria

DECARBONISATION PATHWAYS

Aligned with 1.5°C and 2°C global warming, country- and building type specific

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BUILDING'S CARBON PERFORMANCE

Energy consumption, carbon emission factors, grid decarbonsation), changed heating and cooling demand, normalisation

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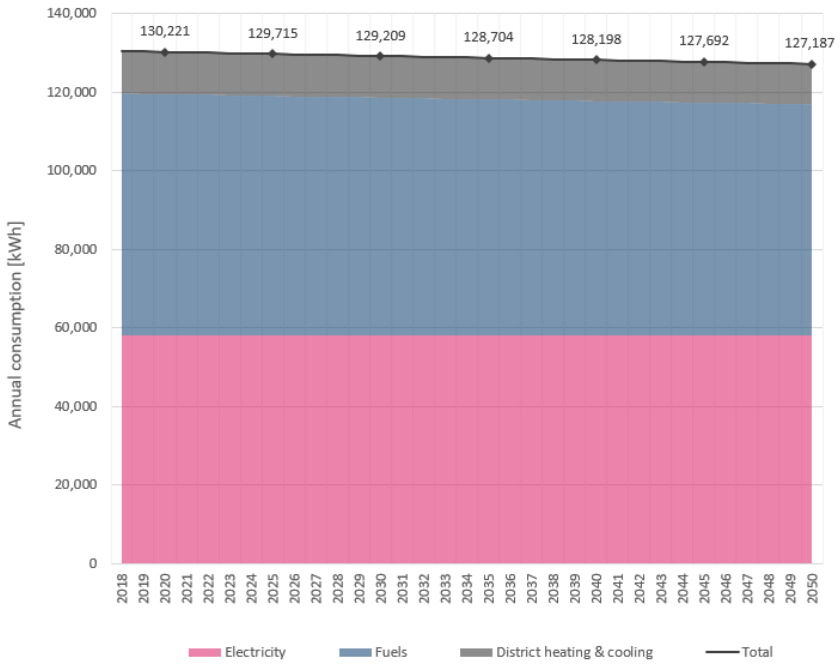
CARBON RISK ANALYSIS

Year of stranding, excess emissions, carbon costs, energy costs, benchmarking

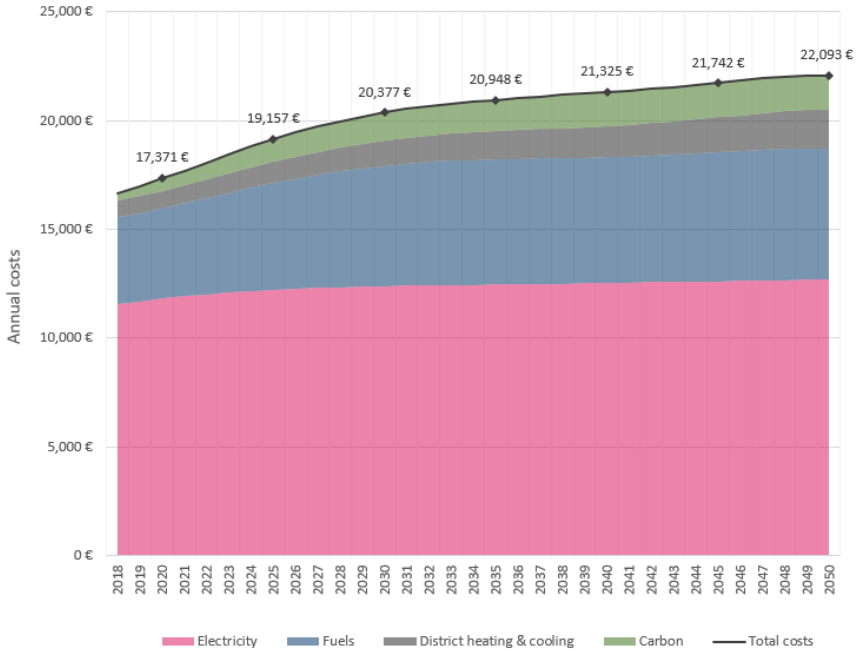
Quantitative Carbon Performance and Risk Indicators

Energy Consumption



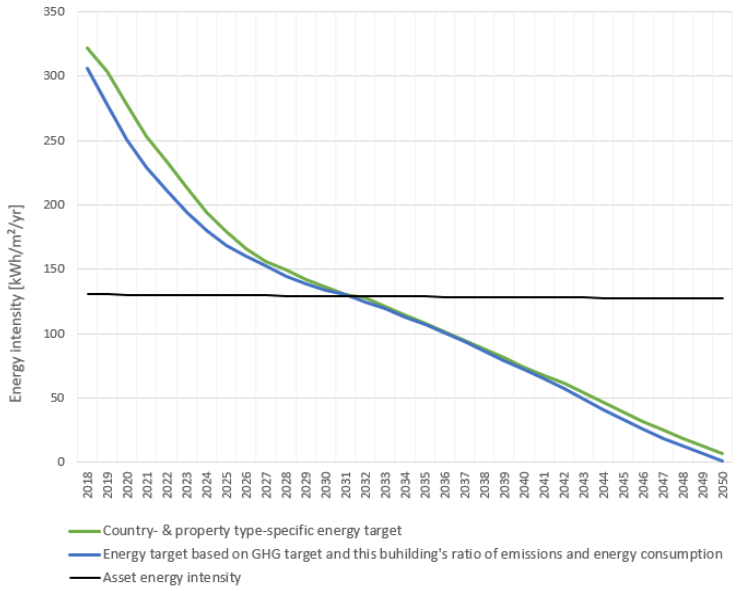
Based on (optionally) normalised baseline consumption and projected data considering changed heating and cooling demand

Costs of Energy and Carbon



Based on energy and carbon price projections (IEA, EU etc.)

Energy Reduction Pathways



Energy targets based on (i) country-specific sector-wide and (ii) individual building-specific emission factor reflecting energy mix and evolving grid decarbonisation

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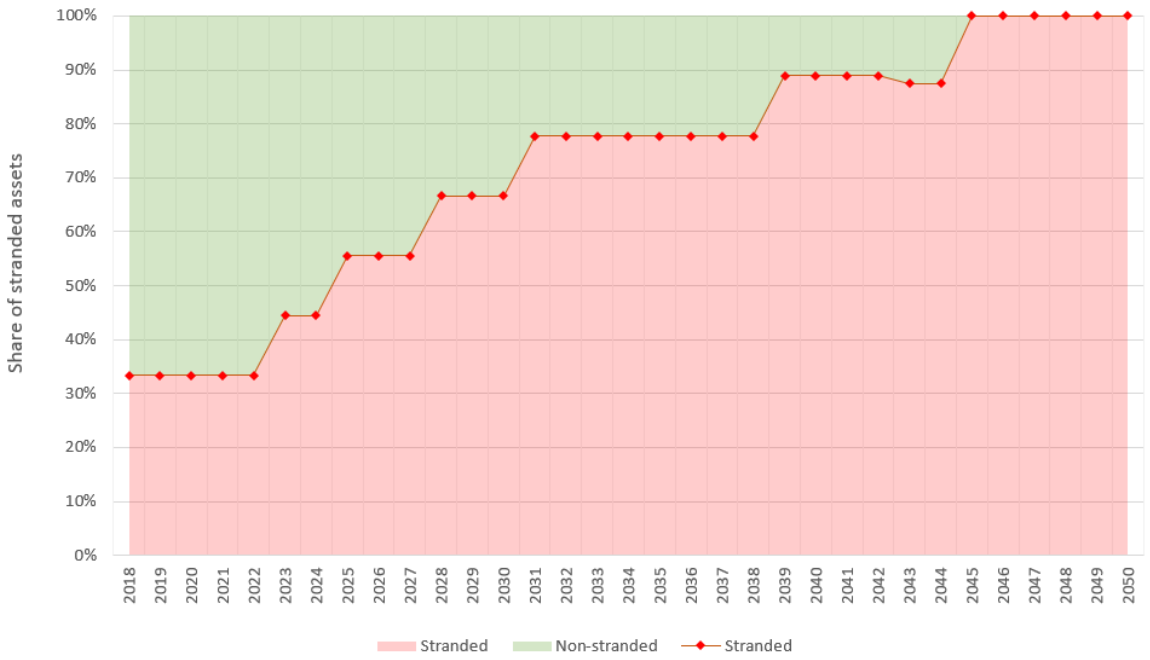
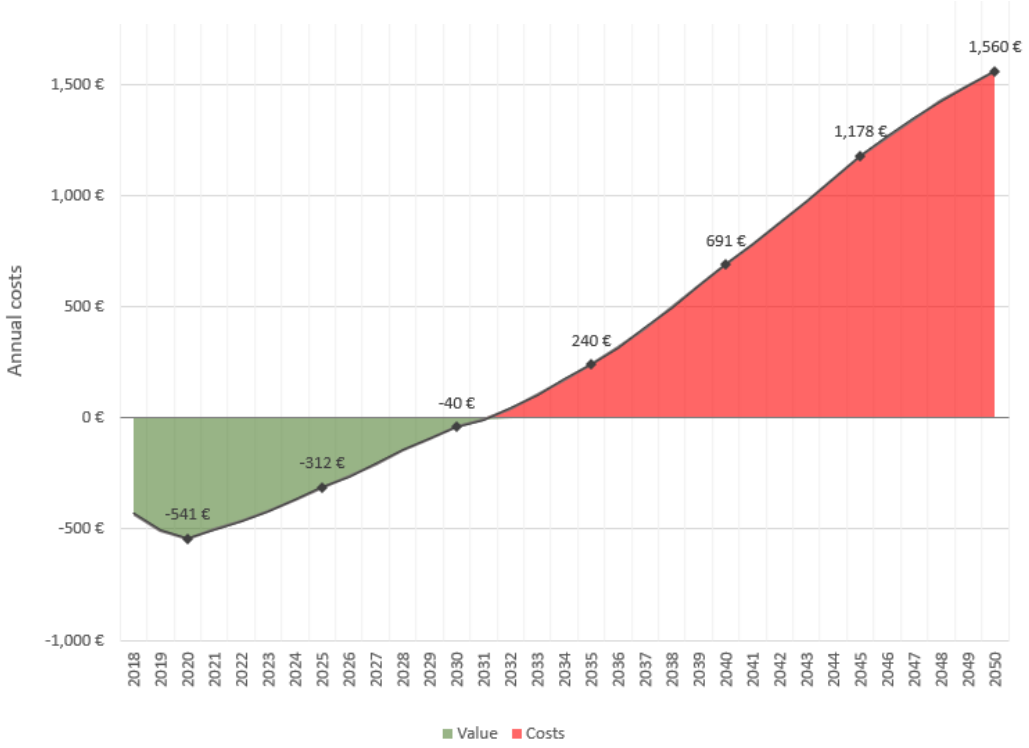
Quantitative Carbon Performance and Risk Indicators

Share of stranded assets over time



Shares based on number of buildings, floor area or asset value.

Costs of excess emissions above target



Analoguous to the NY City model with penalties for each ton of emission above emission limit (and possibility of trading emission credits)

CRREM DOWNSCALING: FROM GLOBAL EMISSIONS TO CARBON INTENSITY PATHWAYS

DOWNSCALING

Global GHG budget and emissions pathway (consistent with a certain amount of global warming)

↓

EU emission pathway (convergence of per capita emissions until 2050)

↓

EU commercial real estate (CRE) sector

↓

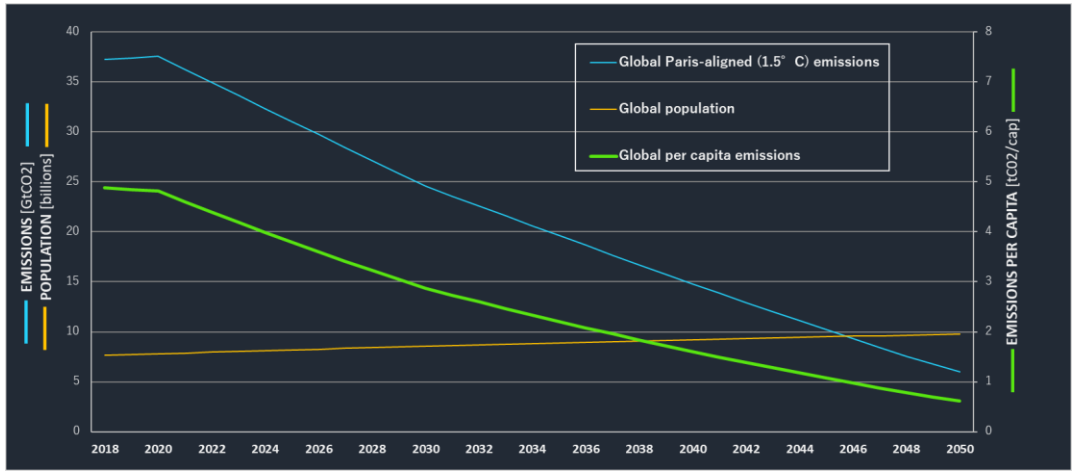
Country-specific targets (convergence of GHG intensity)

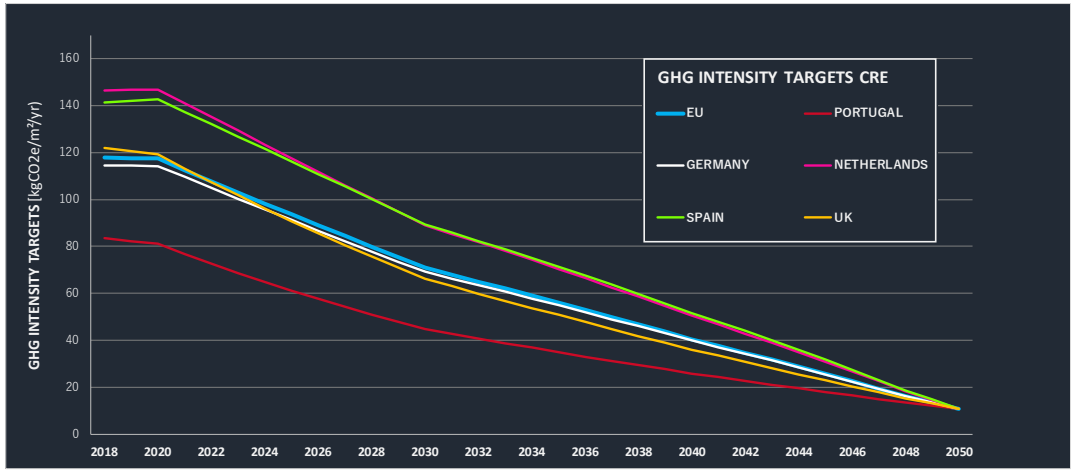
↓

Sector-specific GHG targets for each country

↓

Energy reduction pathway





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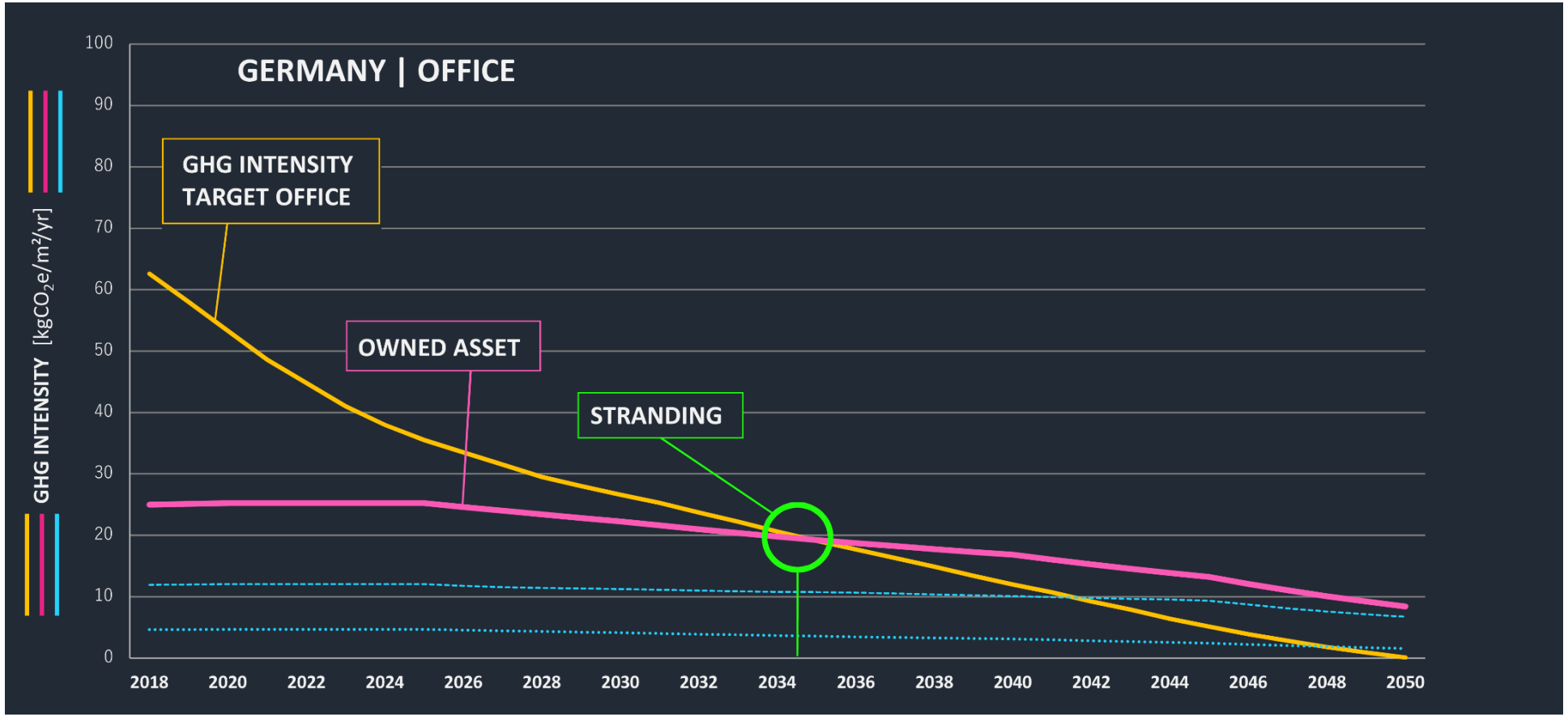
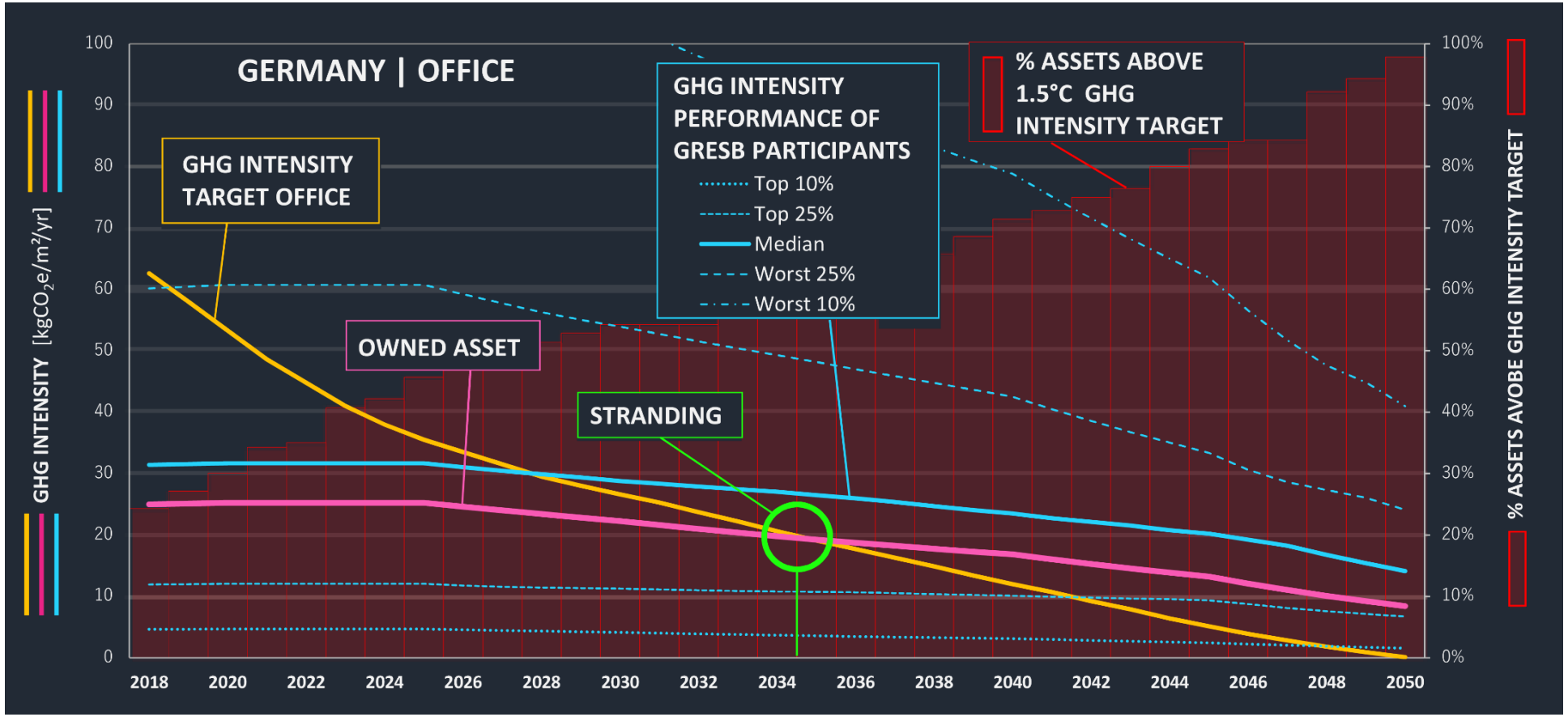
Identify outperforming assets with a high carbon performance / low carbon footprint

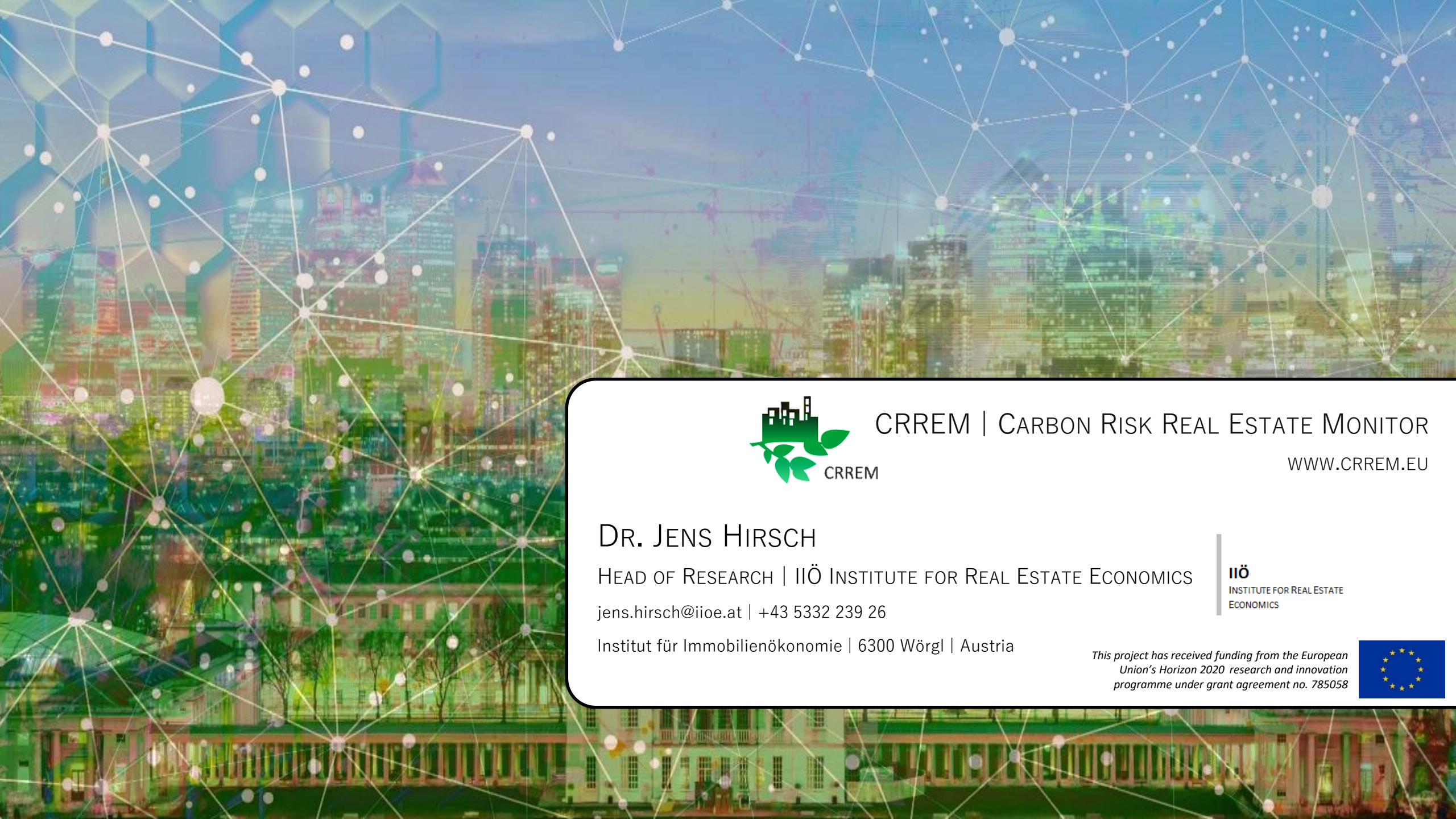
Visualise your long-term decarbonisation pathway together with individual assets or portfolios performance until 2050



Identify challenges to target achievement, potential (transition) risks and potential for improvement

Current and projected future position compared with peers from the annual GRESB assessment





CRREM | Carbon Risk Real Estate Monitor

WWW.CRREM.EU

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