

# P5 Presentation

Assessing Asset Manager Familiarity with the EU

Taxonomy Concerning Climate Risks

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14-4-2025

The flag of the European Union, featuring twelve yellow stars arranged in a circle on a blue background.

## EU Taxonomy

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# 01 Context



## What do asset managers do?

- Real estate asset managers are responsible for making sure buildings retain their value and perform well over time.
- Climate change is creating new risks for real estate.
- The EU Taxonomy is a new regulation from the European Union.

## 02 Problem Statement



### Climate Risks

Climate change poses significant risks to real estate, affecting property values, insurance costs, and investment decisions.



### Climate Adaptation

The focus of sustainability efforts has largely been on climate mitigation while climate adaptation remains under-addressed.



### EU Taxonomy

A regulatory framework that classifies sustainable activities and mandates asset managers to report on their alignment.

## 03 Research Questions

### Main Research Question

How familiar are real estate asset managers with the regulations of the EU Taxonomy concerning climate risks?

#### SQ 1

What specific climate risks are relevant to existing real estate?

#### SQ 2

How do asset managers align climate risk measures with the EU Taxonomy?

#### SQ 3

What motivates real estate asset managers to incorporate economic activities in alignment with the EU Taxonomy

#### SQ 4

What challenges do asset managers face in complying with the EU Taxonomy's criteria?

#### SQ 5

How do cost and administrative burden influence decision-making to pursue EU Taxonomy alignment in the case study?

## 04 Research Methods

### Mixed-Method Approach

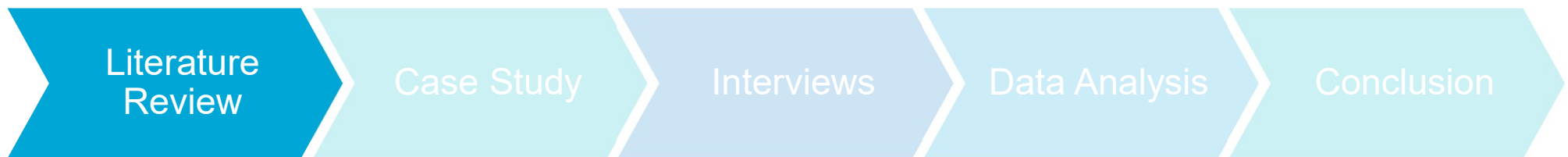


How was it conducted?

Why was it conducted?

## 04 Research Methods

### Mixed-Method Approach



#### How was it conducted?

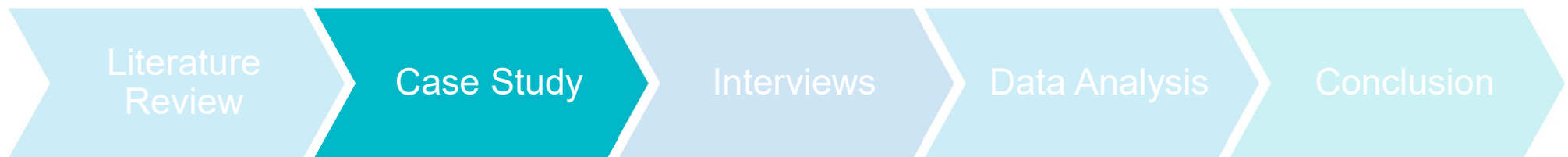
- Review of academic articles, industry reports, and policy documents.
  - Scientific research on climate risks in real estate.
  - EU regulatory documents: EU Taxonomy, SFDR, CSRD.
  - Reports from industry organizations.

#### Why was it conducted?

- Defines key climate risks for real estate (SQ1).
- Establishes how asset managers align with the EU Taxonomy (SQ2).
- Forms the conceptual framework for interviews and case study development.

## 04 Research Methods

### Mixed-Method Approach



#### How was it conducted?

- An asset manager evaluates EU Taxonomy compliance for a building in the Netherlands.
- Internal reports, regulatory documents, financial analysis.
- Weighing investment costs vs. financial benefits (e.g., insurance savings, asset value).
- Identifying administrative challenges and compliance complexity.

#### Why was it conducted?

- Provides a practical application of the EU Taxonomy.
- Assesses whether asset managers would choose to align after evaluating trade-offs (SQ5)



## 04 Research Methods

### Mixed-Method Approach



#### How was it conducted?

- 8 asset managers from different organization types (pension funds, REITs, real estate investment firms).
- Semi-structured interviews with open-ended questions allowing for in-depth discussion.

#### Why was it conducted?

- Provides first-hand insights into how asset managers perceive climate risks & compliance (SQ 2 & 3).
- Identifies real-world barriers that literature may not capture (SQ4).
- Helps validate the practical application of the EU Taxonomy in investment decision-making (SQ 5).

## 04 Research Methods

### Mixed-Method Approach



#### How was it conducted?

- Literature & policy analysis: Thematic review of climate risks and regulatory frameworks.
- Thematic analysis of the interview transcripts.

#### Why was it conducted?

- Identifies key themes in compliance decision-making.
- Highlights differences in awareness, strategies, and barriers across asset managers
- Ensures findings are data-driven and systematically categorized for clarity.

## 04 Research Methods

### Mixed-Method Approach



#### How was it conducted?

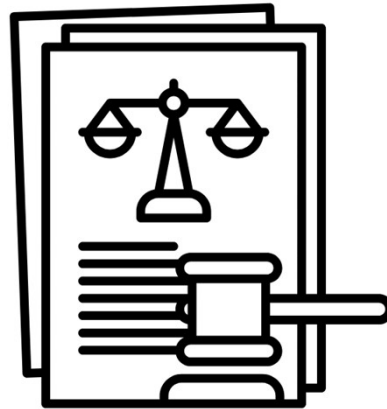
- Produced insights from literature, case study, and interviews.
- Compared theoretical findings with real-world perspectives.
- Identified practical recommendations for improving compliance strategies.

## 05 Literature Review



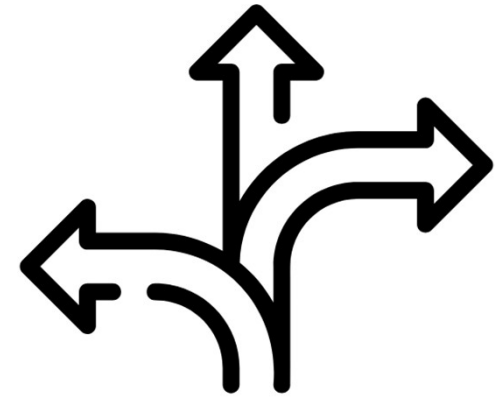
### Climate Risks

Which climate risks pose a threat to the real estate market in Europe and the Netherlands?



### Regulations

What regulations are there currently and how do they affect real estate stakeholders?



### Decision-making

What influences the decision-making process of real estate stakeholders?

## 05 Literature Review

### Climate Risks

#### Physical Risks

- **Flooding:** The costliest climate risk, responsible for 81% of economic losses in Europe (Lamond et al., 2019).
- **High-wind storms:** causes structural damage, disrupt infrastructure, and increase insurance claims (Storm Ciara: £560M in damages, ABI, 2020).
- **Urban Heat Islands:** worsen temperature extremes, especially in Amsterdam, Rotterdam, Utrecht (van Hove et al., 2011).
- Coastal properties face higher insurance costs and reduced market demand (EIOPA, 2022).
- Buildings without adaptation measures lose value and become less attractive to tenants (Heusinkveld et al., 2014).

#### Transitional Risks

- EU Taxonomy require asset managers to integrate sustainability (European Commission, 2024).
- Tenants & investors prioritize sustainable buildings (Mangialardo et al., 2018).
- Institutional investors favor green-certified buildings (PWC, 2023).
- Firms failing to meet climate adaptation goals risk devaluation and lower investor confidence (UNEP FI, 2023).

## 05 Literature Review

### Regulations

**Dutch Context**

**European Context**

## 05 Literature Review

### Regulations

#### Dutch Context

#### European Context

Regulation	Purpose	Obligation Date	Who is affected?
Bouwbesluit (Dutch Building Decree)	Sets energy performance and safety standards for buildings.	Ongoing updates	Developers, contractors
Nearly Zero-Energy Buildings (BENG)	Mandates ultra-low energy use in new constructions.	Since Jan 2021	New building owners
Energy Label C for Offices	Requires all offices <b>&gt;100m<sup>2</sup></b> to meet at least Label C.	Jan 2023	Office building owners
Environmental Management Act	Large energy users must implement cost-effective energy-saving measures.	Ongoing	Buildings using <b>&gt;50,000 kWh/yr</b>

## 05 Literature Review

### Regulations

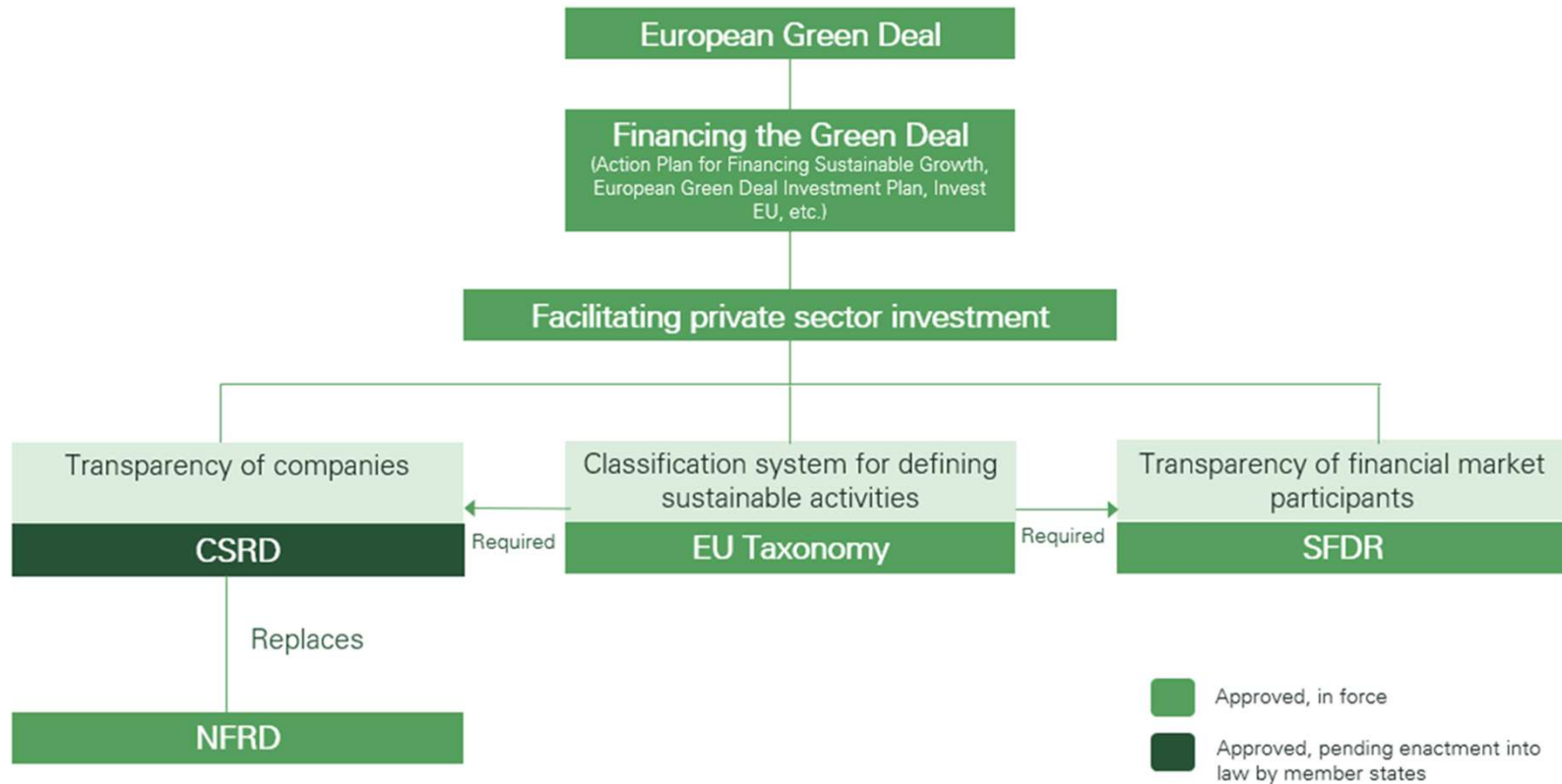
#### Dutch Context

#### European Context

Year	Policy/Framework	Purpose
1997	Kyoto Protocol	Established binding emission reduction targets for industrial nations.
2015	Paris Agreement	Global commitment to limit warming to below 2°C
2018	Clean Energy for All Europeans Package	Targets building energy efficiency to reduce emissions.
2019	European Green Deal	Comprehensive climate strategy, legally binding carbon neutrality goal.
2021	Fit for 55 Package	Aims for 55% GHG reduction by 2030 via updates to energy laws.



## 05 Literature Review



Classification of the different reporting policies in the EU (Onetrust, 2024).

## 05 Literature Review

### EU Taxonomy

A classification system defining environmentally sustainable economic activities.

Created to prevent greenwashing and support Europe's climate neutrality by 2050  
(European Commission, 2024).

#### **Substantial Contribution Criteria**

Substantially contribute to one environmental objective (e.g., climate adaptation).

#### **Do No Significant Harm (DNSH)**

Do No Significant Harm (DNSH) to other environmental goals.

#### **Minimum Safeguards**

Comply with minimum social & governance safeguards

## 05 Literature Review

### EU Taxonomy

A classification system defining environmentally sustainable economic activities.  
Created to prevent greenwashing and support Europe's climate neutrality by 2050.  
(European Commission, 2024).

#### Environmental Objectives

To align with the EU Taxonomy, real estate projects must meet one of the environmental objectives:

1. Climate Change Mitigation
2. Climate Change Adaptation
3. Sustainable Water Use
4. Circular Economy
5. Pollution Prevention
6. Biodiversity & Ecosystem Protection

European Commission (2024)

## 05 Literature Review

### Renovation of existing buildings

◀	Sector	▶	Activity	Climate mitigation	Climate adaptation	Water	Circular economy	Pollution prevention	Biodiversity
	Construction and real estate activities		Renovation of existing buildings	⊕ T	⊕		⊕		

#### Renovation of existing buildings

Contributing to climate mitigation



Contributing to climate adaptation



Contributing to circular economy



Minimum safeguards



## 05 Literature Review

### Renovation of existing buildings

Contributing to climate adaptation ^

Description v

Substantial contribution criteria v

Do no significant harm criteria v

## 05 Literature Review

# Renovation of existing buildings

### Substantial contribution criteria

1. The economic activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that activity.
  2. The physical climate risks that are material to the activity have been identified from those listed in [Appendix A](#) to this Annex by performing a robust climate risk and vulnerability assessment with the following steps:
    - a. screening of the activity to identify which physical climate risks from the list in [Appendix A](#) to this Annex may affect the performance of the economic activity during its expected lifetime;
    - b. where the activity is assessed to be at risk from one or more of the physical climate risks listed in [Appendix A](#) to this Annex, a climate risk and vulnerability assessment to assess the materiality of the physical climate risks on the economic activity;
    - c. an assessment of adaptation solutions that can reduce the identified physical climate risk.
- The climate risk and vulnerability assessment is proportionate to the scale of the activity and its expected lifespan, such that:
- a. for activities with an expected lifespan of less than 10 years, the assessment is performed, at least by using climate projections at the smallest appropriate scale;
  - b. for all other activities, the assessment is performed using the highest available resolution, state-of-the-art climate projections across the existing range of future scenarios<sup>(633)</sup> consistent with the expected lifetime of the activity, including, at least, 10 to 30 year climate projections scenarios for major investments.
3. The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-

### Do no significant harm criteria

Climate mitigation

Water

Circular economy

Pollution prevention

Biodiversity

## 05 Literature Review

### SFDR & CSRD

The SFDR and CSRD are the main directives guiding mandatory sustainability disclosures in the EU under the EU Taxonomy.

#### **Sustainable Finance Disclosure Regulation (SFDR)**

Requires asset managers to disclose how they integrate ESG factors into investment decisions.

Funds are categorized based on sustainability:

Article 6: No sustainability criteria

Article 8: Sustainability-promoting investments

Article 9: Fully sustainable investments

#### **Corporate Sustainability Reporting Directive (CSRD)**

Obligates large companies to report sustainability data clearly and consistently.

Broadens sustainability reporting, making it detailed and mandatory.

Aligns corporate disclosures directly with EU Taxonomy criteria.

## 05 Literature Review

### Decision-making Process

#### Enablers

- Software Tools
- Collaboration Networks
- Climate Awareness & ESG
  - Regulation & Policy

(Andersson, 2023; Kumar et al., 2021)

#### Barriers

- Complex Location Choices
- Misaligned Risk Perceptions
  - Regulatory Uncertainty
  - Financial Constraints

(French, 2001; Kumar et al., 2021)

#### Institutional Pressures

- Coercive Pressure (Regulatory Compliance)
- Normative Pressure (Market Standards)
- Mimetic Pressure (Industry Imitation)

(DiMaggio & Powell, 1983; Scott, 1995)



## 06 Case Study

Evaluate how real estate asset managers practically apply the EU Taxonomy criteria for climate adaptation.

Identify drivers, barriers, and financial considerations influencing decision-making for compliance with sustainability regulations.

### Climate Risks

#### Flooding and Heavy Rainfall:

Increased flood events pose financial and operational risks.

#### Heatwaves and Urban Heat Island Effect:

Higher temperatures impacting occupant comfort and building efficiency.



Picture of Groot Willemsplein with green roof renovation (top010, 2013)

## 06 Case Study

### Proposed Adaptation Measures: Green Roof Installation:

- Enhances water retention capacity.
- Reduces urban heat island effect.

### Nature-Based Infiltration Systems:

- Manages excessive rainfall and reduces flood risks.
- Improves local biodiversity.

### Electric Vehicle Chargers & Enhanced Monitoring Systems:

- Prepares building infrastructure for future sustainable transportation needs.
- Allows better monitoring and management of building performance.

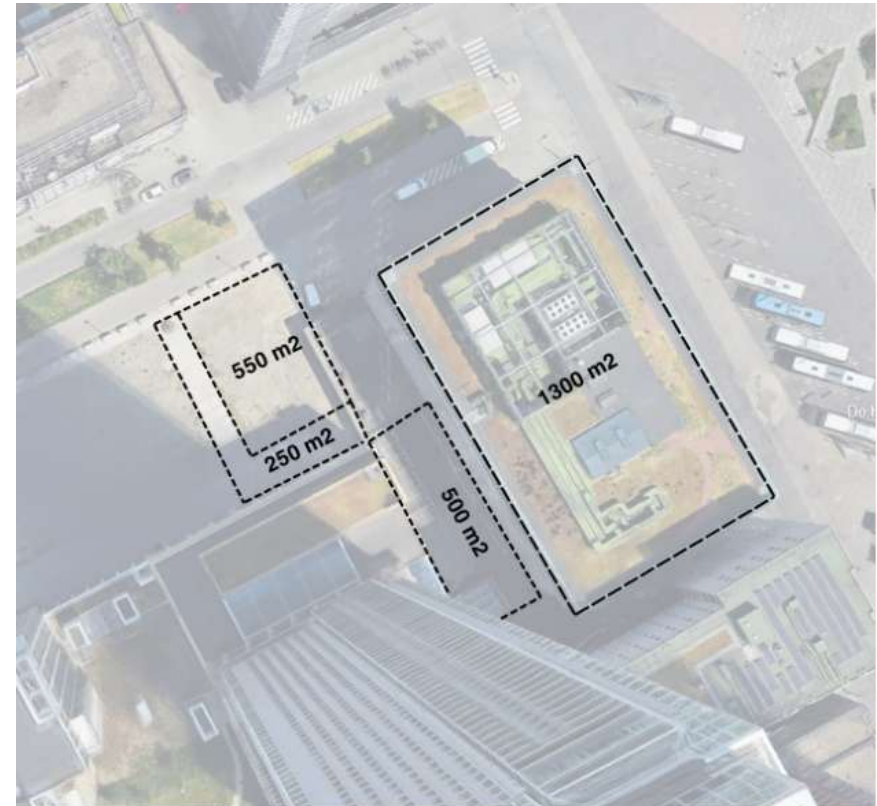


Figure 7: Estimated square footage of each measure (own work, derived from Google Maps).

## 06 Case Study

Measure	Categories	Activities
Install green roof to reduce runoff and improve insulation	Construction and Real Estate Activities	Renovation of existing buildings
	Water supply, sewerage, waste management and remediation	Sustainable urban drainage systems (SUDS)
Measure	Categories	Activities
Incorporation of permeable surfaces, rain gardens, or bio-retention basins around the building's perimeter.	Construction and Real Estate Activities	Renovation of existing buildings
	Water supply, sewerage, waste management and remediation	Sustainable urban drainage systems (SUDS)
Measure	Categories	Activities
Adding electric vehicle (EV) chargers and improving monitoring equipment	Construction and Real Estate Activities	Renovation of existing buildings
	Construction and Real Estate Activities	Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)
	Construction and Real Estate Activities	Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings
	Transport	Infrastructure enabling low-carbon road transport and public transport

## 06 Case Study

### Climate Risk & Vulnerability Assessment (CRVA)

#### Screening:

Identify relevant climate hazards

#### Materiality Assessment:

Evaluate impact of identified risks.

#### Adaptation Solutions:

Prioritize nature-based measures

### Construction & Sustainability Requirements

#### Sustainable Materials:

Use high-recyclability, low-VOC materials; align with circular economy (ISO 20887).

#### Waste Management:

Recycle/reuse  $\geq 70\%$  of construction waste through selective demolition.

### Water Management (SUDS)

Integrate systems into urban drainage networks:

Water Framework Directive 2000/60/EC

#### Drainage report:

Clearly quantify rainwater retention/delay, pollutant removal, or reduced peak runoff.

(European Commission, 2024).

## 06 Case Study

Groot Willemsplein			
Renovation Costs	Cost per m2	Price per unit	Costs
Green Roof Installation	€ 120		€ 156.000
Permeable Pavements	€ 75		€ 56.250
Rain Gardens/Bio-Retention	€ 7		€ 38.500
EV Chargers		€ 1.750	€ 26.250
			€ 277.000

## 06 Case Study

Waste Management	Premium Low	High	Added Costs Low	High
Green Roof Installation	1,4%	4,1%	€ 2.184	€ 6.396
Permeable Pavements	1%	4,1%	€ 562	€ 2.306
Rain Gardens/Bio-Retention	1%	4,1%	€ 385	€ 1.578
EV Chargers	-	-	-	-
			€ 3.131,50	€ 10.280,75

Circular Material Use (ISO 20887)	Premium Low	High	Added Costs Low	High
Green Roof Installation	5%	9%	€7.800	€ 14.040
Permeable Pavements	5%	9%	€ 2.812,50	€ 5.062,50
Rain Gardens/Bio-Retention	5%	9%	€ 1.925	€ 3.465
EV Chargers	-	-	-	-
			€ 12.537,50	€ 22.567,50

## 06 Case Study

Renovation Type	Total Cost (Low)	Total Cost (High)
Without EU Taxonomy Alignment	€ 277.000	€ 277.000
With EU Taxonomy Alignment	€ 292.669	€ 309.848,25
Added Cost for Alignment	€ 15.669	€ 32.848,25
Premium	+ 5,35%	+ 10,6%

## 06 Literature Review

### Benefits

#### Increased Asset Attractiveness & Value

- Green-certified buildings consistently achieve higher transaction prices and rental premiums

(Van Overbeek et al., 2024; Kok & Jennen, 2012)

#### Preferential Financing & Lower Cost of Capital

- Better financing conditions (lower interest rates) due to lower perceived risk from regulatory alignment
- Enhanced access to sustainability-linked loans and inclusion in green finance portfolios.

(Leutner et al., 2024).

#### Regulatory Preparedness & Futureproofing

- Early compliance with EU Taxonomy minimizes risks of future non-compliance, protecting asset value from "brown discounting"

(Hoss & Luppi, 2023).



## 06 Literature Review

### Benefits

#### Improved Reputation & Stakeholder Confidence

- Demonstrated Corporate Social Responsibility (CSR) improves brand image, tenant loyalty, and stakeholder relations.

#### Long-Term Resilience & Effective Risk Management

- Reduced vulnerability to climate hazards (flooding, heatwaves, severe storms).
- Avoidance of stranded assets and safeguarding of rental income by minimizing downtime and disruption.
- Lower operational costs through adaptive measures (e.g., cooling cost reductions via green roofs)

(Wong et al., 2021).

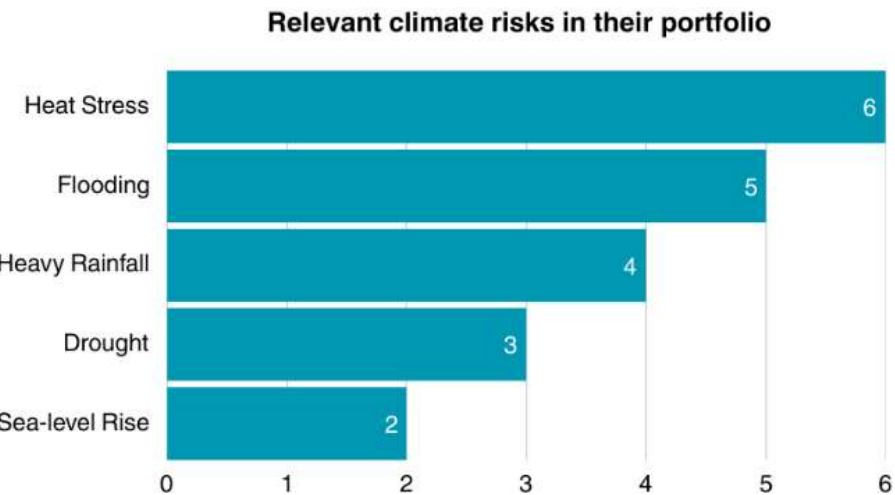


## 07 Results

### Climate Risks

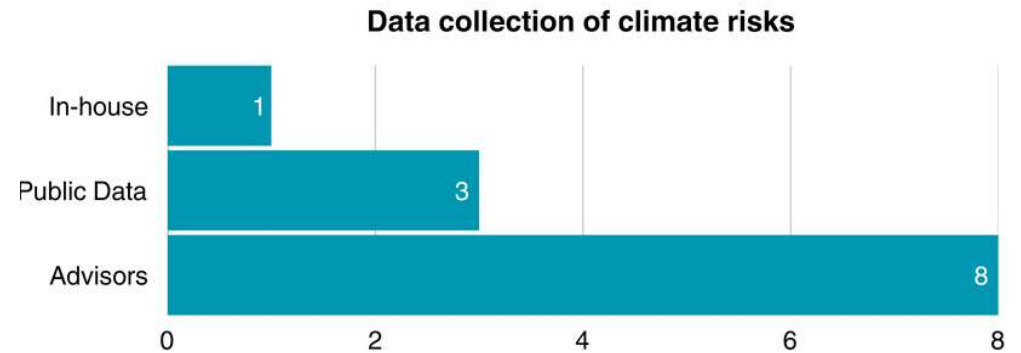
#### Physical Risks

Asset managers prioritize heat and flooding due to immediate financial and operational threats.



#### Risk Assessment Methods

Strong dependency on external experts for climate risk analysis.

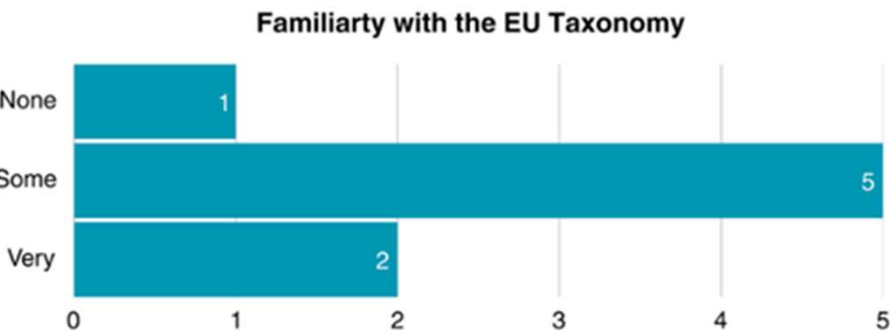


## 07 Results

### Awareness and Familiarity with the EU Taxonomy

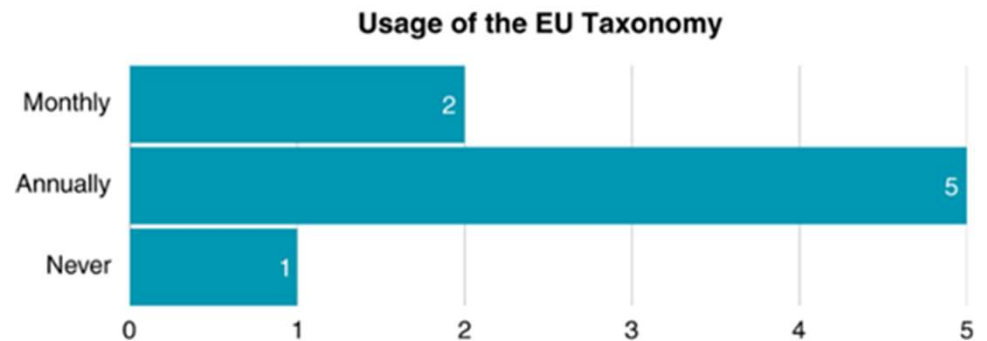
#### Awareness & Understanding

Awareness widespread, but depth of understanding and active engagement limited.



#### EU Taxonomy in Decision-Making

Use mainly driven by compliance needs rather than strategic decision-making.

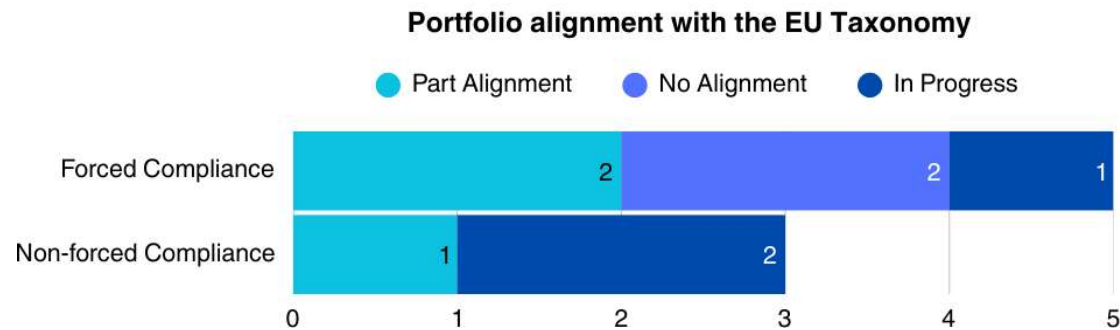


## 07 Results

# Awareness and Familiarity with the EU Taxonomy

### Portfolio Alignment

Most asset managers are either partially aligned or in progress.

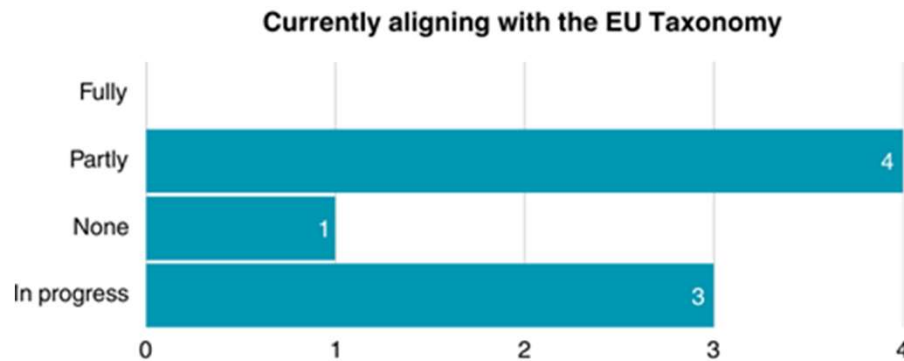


## 07 Results

### EU Taxonomy Alignment of Climate Risks

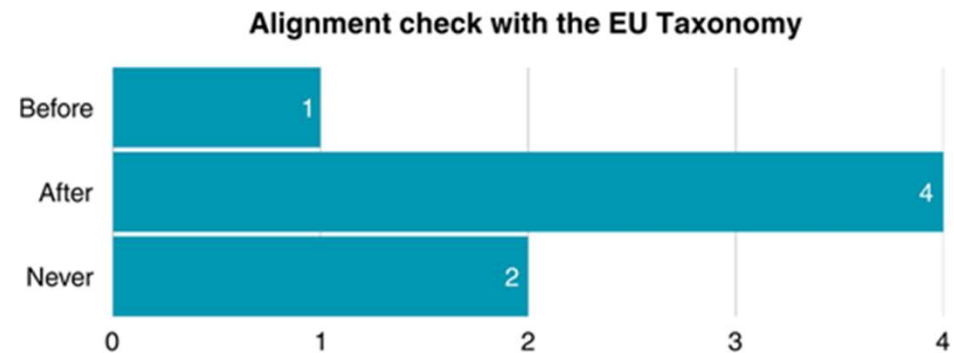
#### Adaptive Renovation Alignment

Asset managers progressing unevenly towards alignment of renovation measures



#### Alignment Check

Alignment checks mostly occur after investment decisions, not proactively.

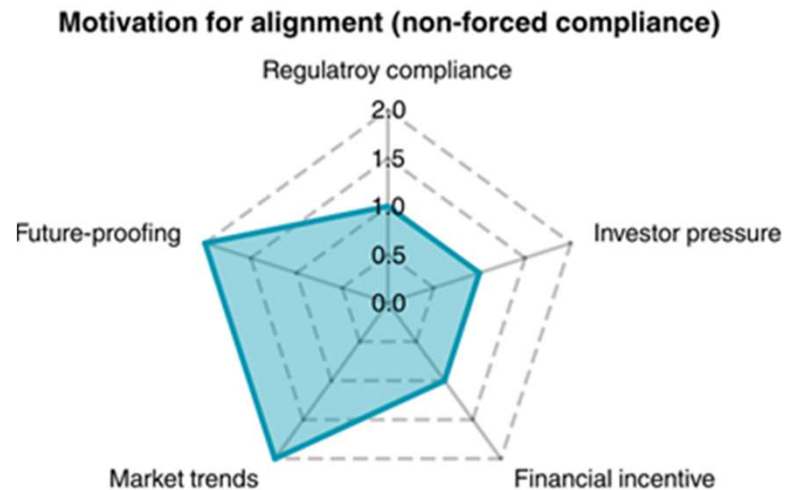


## 07 Results

### Motivation to Compliance

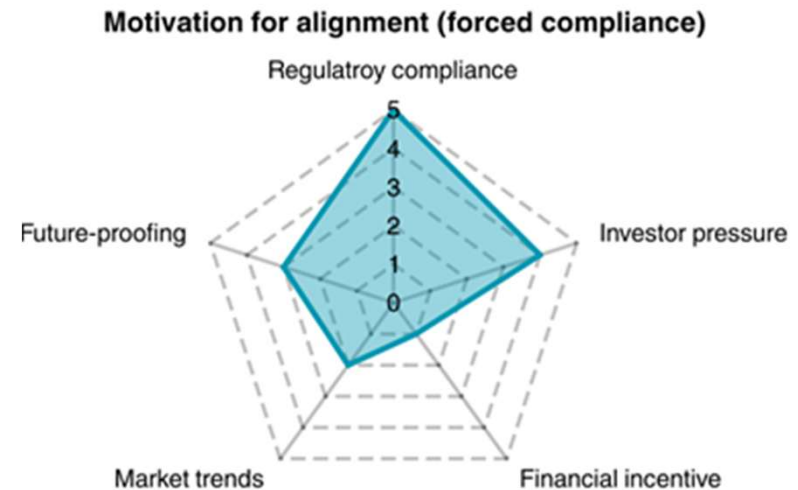
#### Non-forced compliance

Asset managers aligning voluntarily prioritize long-term resilience and market positioning.



#### Forced compliance

Alignment is primarily driven by regulatory obligations, with asset managers prioritizing immediate compliance over external market factors.

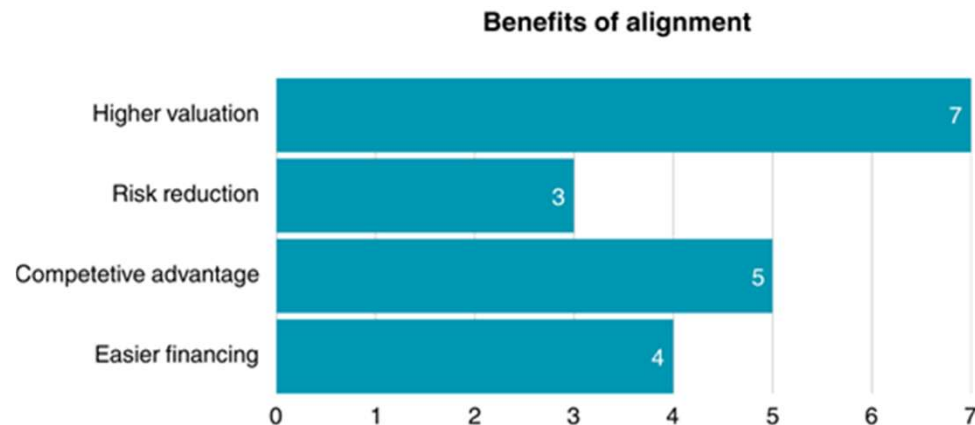


## 07 Results

### Motivation to Compliance

#### Perceived Benefits of Alignment

Asset managers think alignment mainly enhances valuation, competitive advantage, financing conditions, and risk management opportunities.



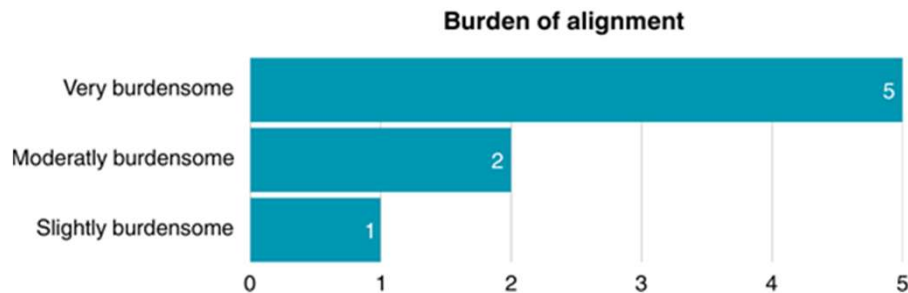


## 07 Results

### Barriers to Alignment

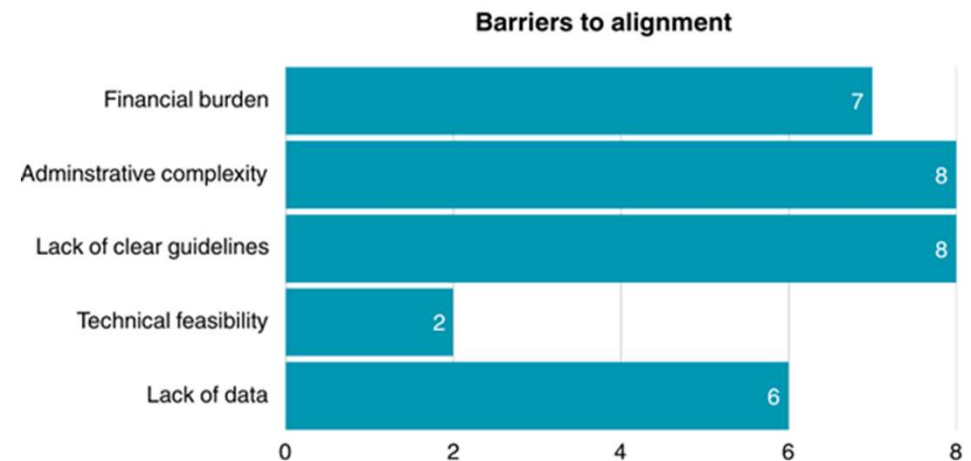
#### Burden of Alignment

Asset managers find the burden of EU Taxonomy Alignment very high.



#### Barriers to Alignment

Alignment barriers largely due to complexity and financial pressures.

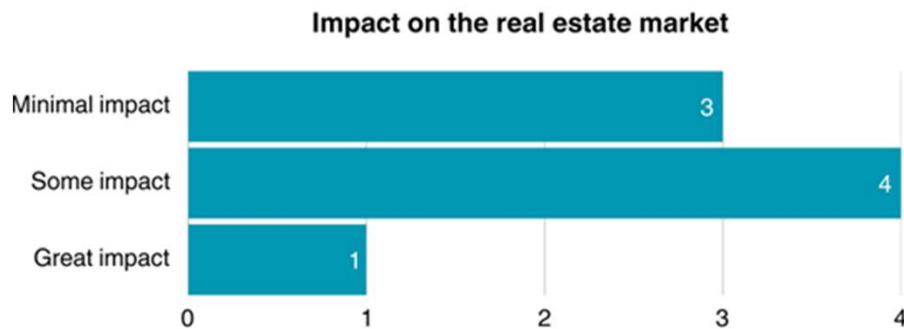


## 07 Results

# Impact of the EU Taxonomy

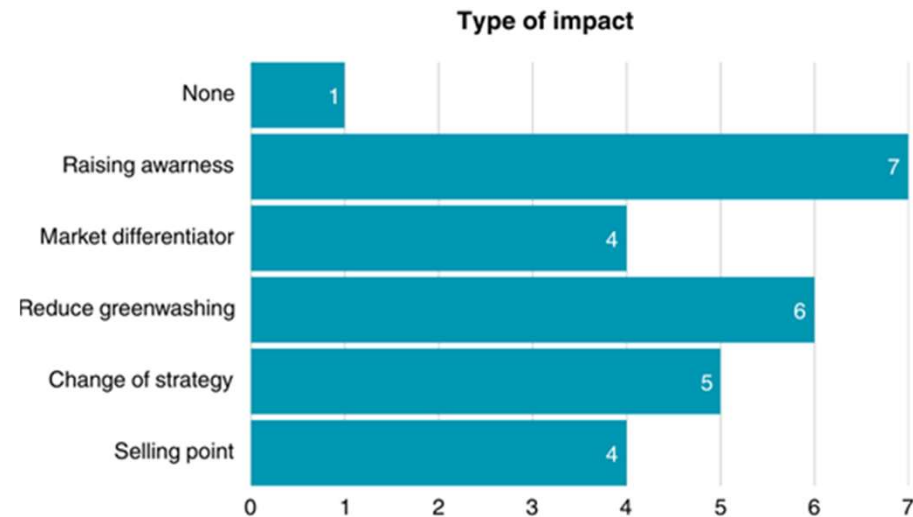
### Impact of the Real Estate Market

Asset managers currently find the impact of the EU Taxonomy minimal to some impact.



### Type of Impact

The impact is primarily the increase of awareness and reducing of greenwashing. Asset managers also think the EU Taxonomy will change investment strategies.

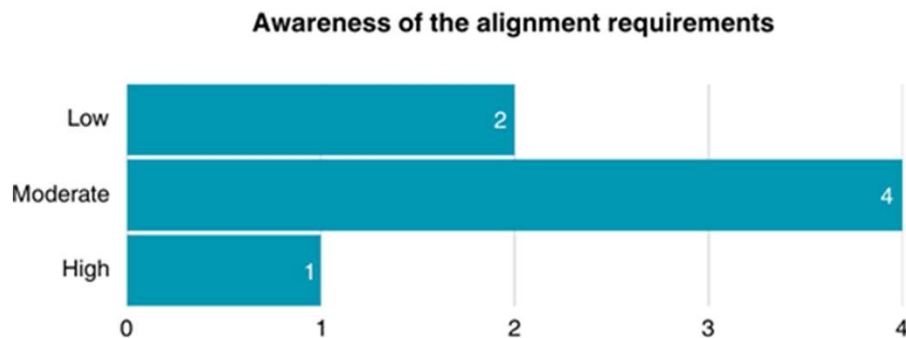


## 07 Results

### Case Study

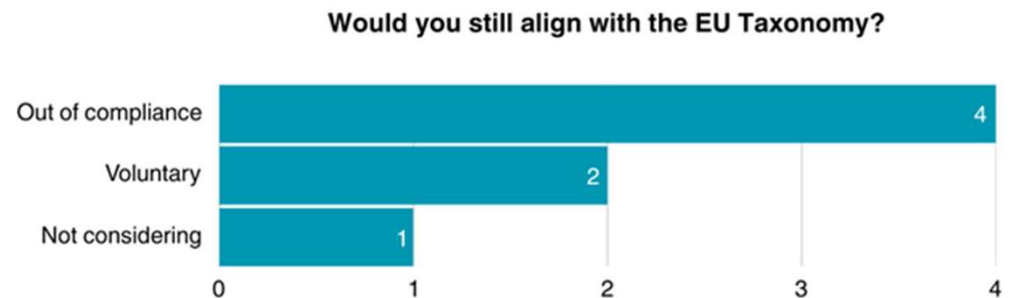
#### Awareness

The awareness of the different technical criteria for alignment in the case study is uneven among the asset managers. With moderate to low awareness.



#### Still Aligning

Most asset managers would align out of compliance and investor pressure. With some voluntarily and one not considering alignment for the case study.

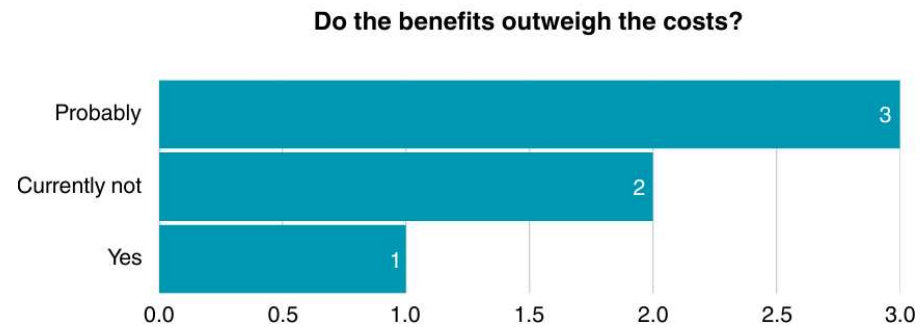


## 07 Results

### Case Study

#### Benefits and Costs

Most asset managers are unsure about the benefits of alignment compared to the costs.



## 08 Conclusion

### SQ 1: What specific climate risks are relevant to existing real estate?

- Focus on short-term risks (heat stress, flooding).
- Long-term risks (sea-level rise) receive less attention, possibly due to reliance on existing flood management infrastructure.
- Climate risk data is mostly sourced externally: all respondents rely on advisors, with only one conducting in-house assessments.

## 08 Conclusion

### SQ 2: How do asset managers align climate risk measures with the EU Taxonomy?

- General awareness but limited familiarity with technical criteria.
- Compliance is often checked after investment decisions rather than before, limiting its influence on asset selection.
- No respondents reported full portfolio alignment.
- The Taxonomy is used mainly for reporting purposes rather than as a decision-making tool.

## 08 Conclusion

### SQ 3: What motivates real estate asset managers to align with the EU Taxonomy?

- Forced compliance: Regulatory obligations (SFDR, CSRD).
- Voluntary compliance: Future-proofing, market trends, strategic positioning.
- Competitive advantage is not yet a key driver, indicating sustainability differentiation is still developing in the market.

## 08 Conclusion

### SQ 4: What challenges do asset managers face in complying with the EU Taxonomy?

- Administrative complexity & unclear guidelines.
- High financial costs. Costs include retrofitting buildings and hiring compliance experts.
- Limited data availability, especially for older buildings. Older properties often lack standardized sustainability data, making alignment difficult.



## 08 Conclusion

### SQ 5: Would asset managers still choose EU Taxonomy alignment after assessing costs?

- 4 out of 7 would still align despite costs.
- Most agree sustainability brings financial benefits, but alignment is burdensome.
- Perceived benefits stem from energy efficiency & rental demand, not Taxonomy itself.

## 08 Conclusion

### MRQ: How familiar are real estate asset managers with the EU Taxonomy's climate risk regulations?

- Asset managers are aware of the EU Taxonomy but lack deep familiarity.
- Compliance is mostly regulatory-driven rather than strategic.
- Still rely on third-party consultants.
- Future enforcement & market shifts may increase engagement.

## 09 Recommendations

### Enhancing Awareness & Knowledge

Develop targeted training programs.

Issue real estate-specific guidance to simplify compliance with technical screening criteria.

### Reducing Administrative & Reporting Burdens

Align reporting with existing ESG frameworks.

Ensure regulatory stability to provide long-term clarity for asset managers.

### Strengthening Financial Incentives

Expand green financing, tax incentives, and preferential loan rates

Promote premiums for sustainable buildings to reinforce business cases for compliance.

### Improving Data Availability & Standardization

Develop consistent data collection methods for energy efficiency, carbon impact, and climate risks.

### Shifting from Compliance to Strategic Integration

Use Taxonomy alignment into investment decisions rather than using it only for reporting.

Leverage market demand to drive sustainability beyond regulatory compliance.

# Thank you for your attention!

Martijn de Ridder

30-4-2025