

ESG

FOR COMMERCIAL REAL ESTATE

SELECTED ISSUES AND PRACTICES



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POLSKA RADA
CENTRÓW HANDLOWYCH
POLISH COUNCIL
OF SHOPPING CENTRES

Ladies and Gentlemen

The issues of sustainability and non-financial reporting in commercial real estate have recently been on everyone's lips. There is probably no doubt in anyone's mind about the importance and necessity of environmental, social and governance (ESG) requirements for those in the real estate industry. It is now time to look at it from the practical side - how are green resolutions reflected in lease agreements in the commercial real estate market in Poland? What does their implementation look like? What is the impact of ESG on property financing, valuations and insurance? We attempt to answer these questions in the following sections of the report. Articles by member companies showcase ESG issues in specific market sectors: office, retail and warehousing.

It is with great pleasure that we present to you the publication **"ESG for commercial real estate. Selected issues and practices"**

Given the great diversity of the commercial property market and the different realities and needs of the office, retail and warehouse sectors, we invited partners whose input allowed us to look at the topic from a practical and wide-ranging perspective. In the study, which is also intended as a useful guide, you will find not only the results of two surveys – a sector-wide survey and a consumer survey - but also the results of the work of three working groups of members of the Polish Chamber of Commercial Real Estate (PINK) and the Polish Council of Shopping Centres (PRCH).

We encourage you to read the entire publication, as it contains texts revealing the challenges that the entire real estate industry is facing or will soon be facing. However, being aware that the recipients of our publication have different needs and expectations, and that sometimes they will reach only for selected articles, we have included the most important issues regarding legislation, especially the EU Taxonomy, to varying degrees in several texts, especially if their content has a direct impact on the issues discussed therein.

The publication, however, does not address the issues of the current CSDDD, which is "to anchor human rights and environmental considerations in companies' operations and corporate governance." The directive has not yet been enacted, but we are aware that its shape, as known today, will also affect the operation of companies active in the commercial real estate sector. It will most likely be the subject of interest to our organizations in the next year.

Our sincere thanks go to PINK and PRCH member companies, as well as to the partners supporting the report: EPP, GLP, Nhood and Skanska, as well as the European Shopping Places Trust for supporting the project and taking it under their patronage. We would also like to thank the main content partners of the project - PwC and the National Energy Conservation Agency (KAPE) - as well as experts from PLGBC, the Warsaw School of Economics, the law firm Sołtysiński, Kawecki & Szlęzak and the research company Inquiry. Special thanks go to all members of the PINK and PRCH working groups.

Enjoy the reading.



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Board Member,
PINK



Krzysztof Poznański,
Managing Director,
PRCH



PRCH and PINK *working groups*

The ESG-related topics cover a very wide range of issues. Therefore, even though achieving the ultimate goals requires commitment on all fronts, different issues are relevant for different industries or companies. For this reason, working teams have been set up comprising members of the Polish Commercial Real Estate Chamber and the Polish Council of Shopping Centres.

The majority of ESG-related topics are common to all commercial property sectors, which is why both organisations collaborate on a daily basis and have joined forces in this joint publication.

The ESG team, coordinated by the PRCH, has set its sights on, among other things, a better understanding of the challenges associated with the need to technically adapt buildings to new climate targets. The meetings were attended by representatives from retail property companies. The group's work has shown that virtually the entire industry agrees that the implementation of ESG principles can bring tangible benefits. Entities active in the market are aware that introducing sustainability standards in the company means additional costs and responsibilities, but regulatory pressure (the impending obligations under the CSRD and the Taxonomy) is also a motivation for action in this area. Members of the group shared their knowledge of upgrading buildings and their experiences in preparing ESG strategies and reports. The team's work has helped to refine the thematic scope of the texts included in this publication and to provide a systematic overview of the key challenges facing the industry.

PINK's "ESG and Sustainability" working team has been in place since 2022 and is led by the report's content partner PwC. This is the largest of the working groups in PINK, which shows the interest in the topic. The main objective of the team is to support members in understanding and implementing ESG-related legal requirements in their companies and to promote knowledge and share sustainability expertise among member companies. We organised webinars, in particular on green leases, ESG-related requirements of financing banks, the impact of ESG on property valuation and we also touched on energy purchasing and PPA issues. PINK has partnered with webinars organised by member companies and related to ESG. ESG issues were addressed in the PINK 2021 report and at the PINK 2023 conference.

For the purposes of this report, subgroups were formed within PINK to develop chapters on financing, green leases and property valuations.

On the brink of change.

A few words about the multi-faceted nature of PINK and PRCH's publication

The issues that fall under the acronym ESG at first glance describe specific areas of the economy – its impact on the environment, social relations and an organisation internally. The deeper we look, however, the more relationships we discover between them, areas of influence, ambiguity or – sometimes unexpected – clarity and specificity.

The publication by PRCH and PINK is of a similar nature. Starting with the concept of ESG, various authors touch upon many – sometimes overlapping and sometimes different – aspects of commercial real estate operations. An attentive reader will therefore surely see that our publication does not build a single, straightforward narrative about ESG, it does not show universal solutions and formulas, it does not describe ready-made procedures and scenarios. Commercial real estate, not unlike other industries, is diversified – obviously in terms of types: retail, office, warehouse, but also locally and even within a single ownership portfolio. They range from state-of-the-art office buildings and shopping centres, automated warehouses of the future, large and small assets located in city centres, but also older buildings, workplaces and retail premises located outside major hubs, sometimes not sufficiently funded and not yet ready for change.

The diversity of challenges, reflecting the 'multiple speeds' of business, can also be seen in our publication. It does not create a linear story about the state of the market and a list of general challenges, but shows selected issues of importance to the market today for various reasons. The texts included in the publication are not homogeneous. Its shape is the result of months of reflection, discussions and meetings between the PRCH and PINK working groups, as well as contributions from experts and guests who provide a view of ESG in their companies or the results of their own research. Where it was possible to do so given the current state of ESG in the market, we tried to structure the knowledge and indicate recommendations (e.g. legal issues, green leases, financing, energy audits), which, however, will be subject to change over time as legislation changes and practices evolve. The publication also includes the results of two surveys – a sector-entities survey and a consumer survey – which should be taken as the underlying context for the factual content. Finally, there are guest articles elaborating on selected topics and shedding light on specific issues relevant to the sector at the time of this report being published.

The publication does not claim to be a comprehensive guide, but rather a general signpost or inspiration, a starting point that takes into account different points of view and different stages at which businesses active in the market are today.

Therefore, on behalf of the authors, we encourage you to look at the texts as an impulse to reflect on the place of the organisations you represent on the present-day ESG map. In particular, we encourage you to map your own challenges, to define your position along the path of transformation. We hope that the focused information contained in the publication will bring you closer to understanding what challenges are facing not only the sector in general, but you in particular today.

We understand that the readers of this publication are not constructs, perfect models, but real people who are looking for (and, we hope, will find here) practical support for strategic and day-to-day, operational planning. We sincerely wish you enjoyable reading – even if our publication may seem devoted to many themes and thus slightly lacking in consistency – but it is a reflection of the current state of the market at the dawn of great change.

Authors:

**Polish Commercial Real Estate Chamber (PINK),
Polish Council of Shopping Centres (PRCH)**



Our industry as good *corporate citizens*.

We at the European Shopping Places Trust have seen seismic change in the European retail real estate industry over past decades from the creation of large out-of-town shopping and leisure destinations, the renaissance of town centres, widespread refurbishment and regeneration, the growth of the outlet mall and advent of new, mixed use and community based development. There is no doubt that 'shopping places' can make a positive difference to the economy, employment, environment and enjoyment of many, however this rapid growth can become a part of today's much wider concerns over the impact of unregulated or expansive development. Our industry needs to be at the forefront of ensuring responsible and sustainable decisions so that all developments add to the quality of people's life and the environment they serve. As a Trust we are keen to support initiatives that promote all aspects of ESG goals particularly where education and knowledge can influence new and current thinking.

Sensible European regulation will ensure that financial transparency and sustainability are at the heart of every development opportunity. Where investors, developers and retailers have an ethical approach throughout their processes the consumer will be far more confident to support that development and those stores where genuine efforts are made to deliver long term environmental objectives. The retail and leisure industry touches on multiple other factors such as logistics, transport and manufacturing. This results in far-reaching decision making for the future, which highlights the need for expert knowledge and access to business and scientific data to ensure responsible planning across the entire built environment.

It is not just the buildings themselves that need to be sustainably designed but the wider impact on generations to come through housing, health services, leisure and work space, public transport, ease of movement and opportunity. Understanding regulations, laws and guidance in support of our industry is essential and the ESPT is very keen to support initiatives that focus on delivering excellence across all aspects of our industry.

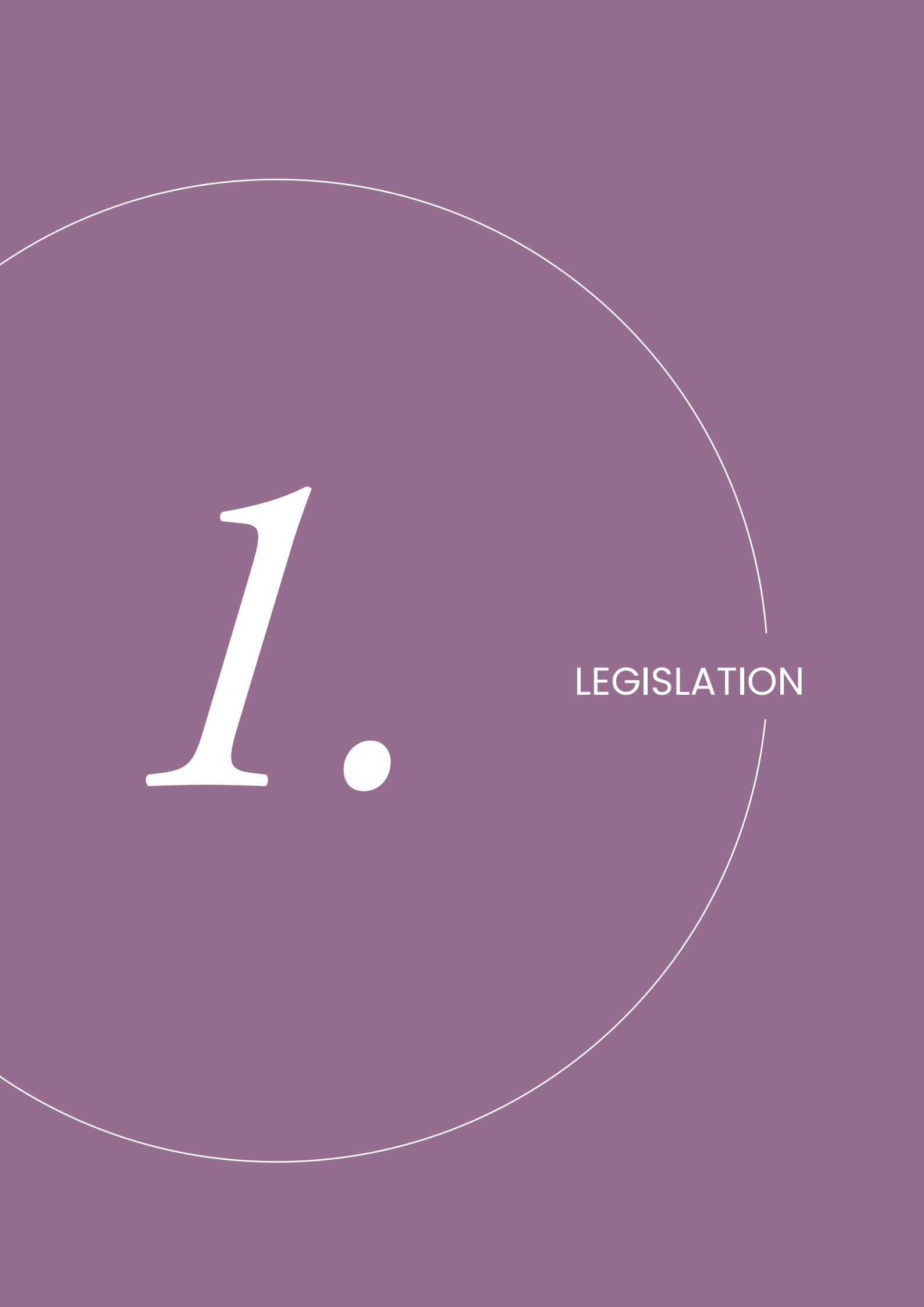
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ESG – A COMMON DENOMINATOR FOR MANY AREAS

This guide sheds light on several aspects of commercial real estate operations as seen from different perspectives





1.

LEGISLATION

ESG legal regulations - introduction

ESG (Environmental, Social and Corporate Governance) has been present on the real estate market for a long time. In recent years, we have observed growing interest among investors and other entities operating in the real estate market in environmental, social and corporate governance issues.

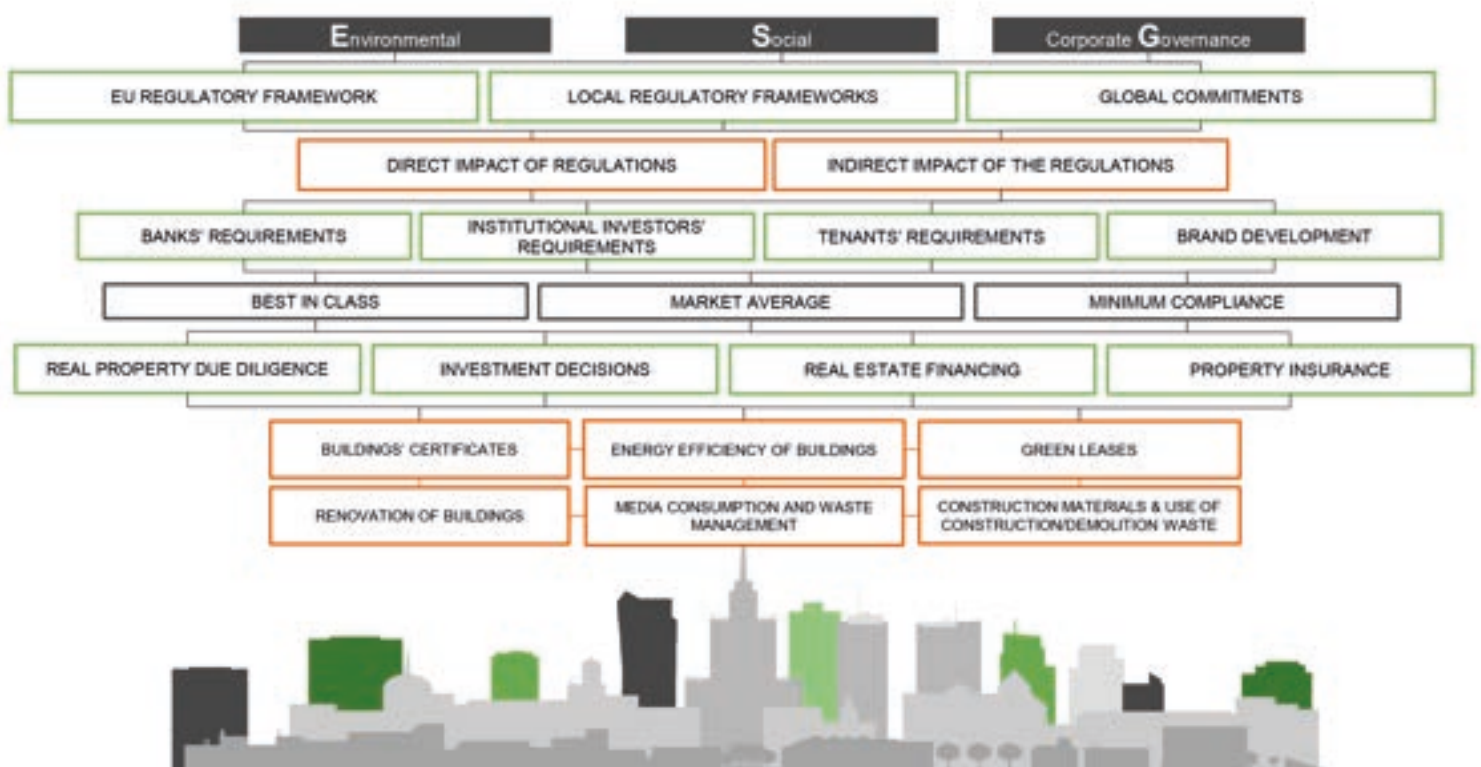
We encounter ESG at all stages of the real estate asset life cycle: from investment planning, through construction, commercialisation to property management.

In the context of real estate, ESG is not only about obvious issues related to energy efficiency or certification of new buildings. ESG also concerns investment in existing buildings, especially older ones, in relation to the cost that must be incurred to make them sustainable. ESG involves a different approach to the construction process, including, for example, the need to use construction or demolition waste for another investment. In addition to environmental factors, ESG also comprises social factors and factors related to corporate governance, which may include, among others: selection of tenants or other contractors, employee remuneration policies and anti-corruption policies. ESG entails issues related to reporting data to banks and institutional investors, as well as the changing expectations of landlords, tenants and customers. ESG already has a significant impact on investment decisions - in many cases it determines the business strategies of entire capital groups.

Despite the above, in many people's opinions, Poland still lacks a legal regulatory framework for ESG. Arguably, this is because most of the existing regulations are introduced at the EU level. However, this does not mean that these regulations do not apply at the national level.

At the EU level, ESG issues are mainly regulated by directives and regulations. While it is true that the EU directives require implementation by the Member States into their national legal systems (leaving a certain degree of freedom to the Member States), regulations are binding in their entirety and directly applicable in all Member States without the need for their implementation.

IMPACT OF ESG LEGAL REGULATIONS



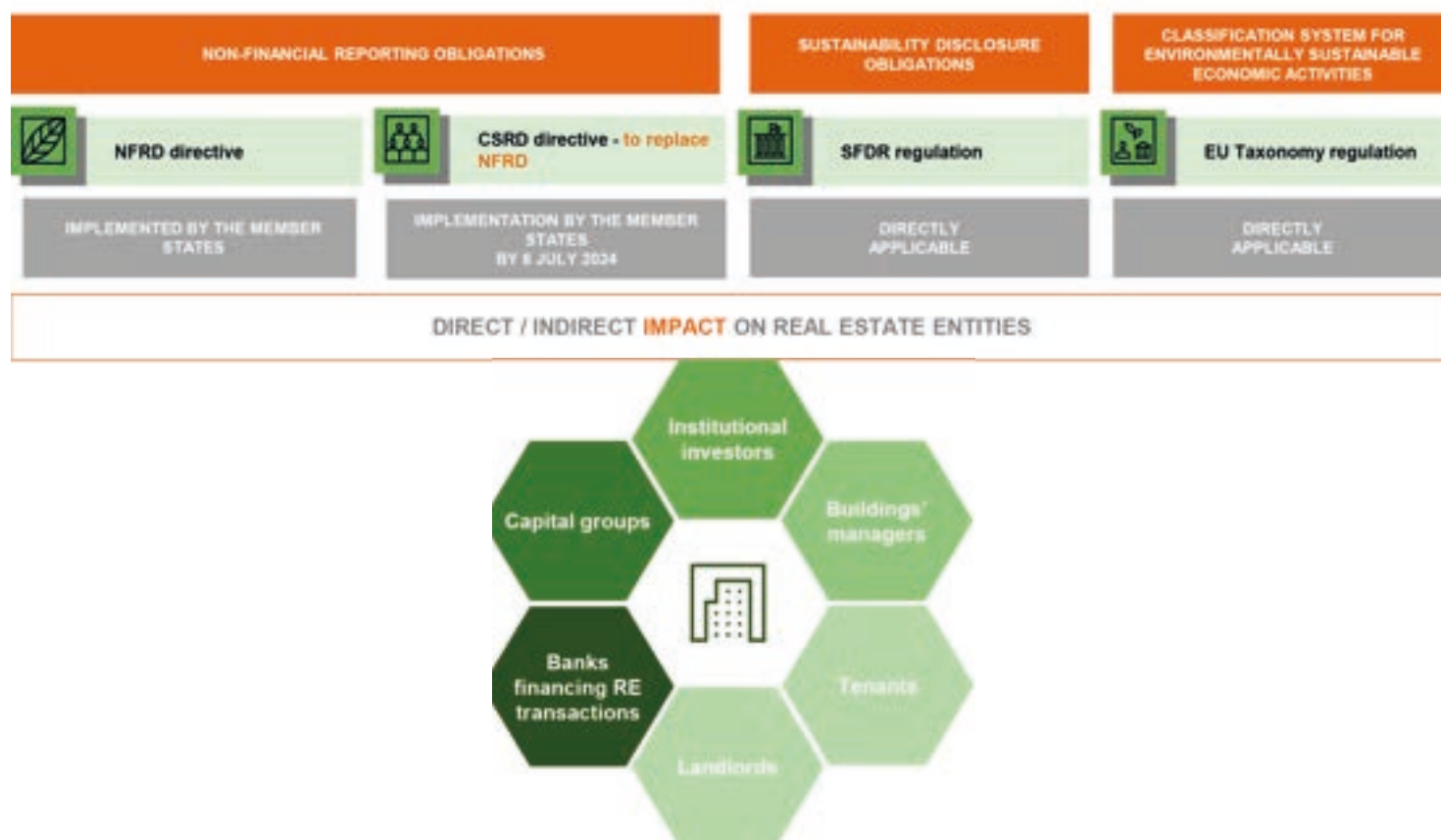
It is therefore worth taking a closer look at the mechanism for implementing the assumptions of the European Green Deal¹.

EU regulations aim to redirect capital towards sustainable investments. They primarily affect large financial market players. It should be noted, nonetheless, that from the perspective of ESG regulatory framework, the entire real estate market is an interconnected vessel. Requirements set by the EU regulator towards i.a. banks and institutional investors, translate into reporting requirements for borrowers regarding acquired assets or companies.

The key legal acts at the EU level that set the basis for ESG regulatory framework include:

- SFDR regulation² (Sustainable Finance Disclosure Regulation);
- directives on non-financial reporting: NFRD³ (Non-Financial Reporting Directive) and CSRD⁴ (Corporate Sustainability Reporting Directive);
- EU Taxonomy regulation⁵

KEY ESG LEGAL ACTS



¹ https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/delivering-european-green-deal_en

² Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector

³ Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups

⁴ Directive (EU) 2022/2464 of the European Parliament and of the Council of 14 December 2022 amending Regulation (EU) No 537/2014, Directive 2004/109/EC, Directive 2006/43/EC and Directive 2013/34/EU, as regards corporate sustainability reporting

⁵ Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088

SFDR

SFDR was introduced to increase transparency in terms of: (i) the impact of ESG indicators on the value of investments, and (ii) the impact of investments on ESG indicators, unifying criteria and enabling sustainable investment decisions.

Financial market participants and financial advisors are subject to the obligations arising from the SFDR. The SFDR introduces disclosure obligations both at the entity level and at the product level.

Disclosures resulting from the SFDR are made on the website of the obliged institution, as part of pre-contractual disclosures provided to clients, or as part of periodic reports.

The SFDR is directly applicable, but some provisions require further clarification, i.e. in terms of environmental indicators and indicators of corporate governance and social issues. Therefore, Regulatory Technical Standards (RTS) containing PAI (i.e. Principal Adverse Impacts) indicators were introduced in the form of a regulation delegated to the SFDR. In the case of real estate, environmental indicators have been introduced, both in the category of mandatory and additional indicators.

Since SFDR was presented in 2018, much has changed in the field of sustainable finance. On 14 September 2023, the European Commission launched targeted consultations and public consultations on the implementation of SFDR obligations. The consultations aim to verify whether the SFDR provisions meet needs and expectations and whether they achieve what the EU wants.

Legal acts on non-financial reporting (NFRD and CSRD)

The currently applicable EU directive on the disclosure of non-financial information (NFRD), implemented into the legal systems of Member States, imposes the obligation to disclose non-financial data and information on sustainable development where a large public interest entity employs more than 500 employees.

The NFRD directive will soon be replaced by the CSRD directive, which introduces new provisions, significantly increasing the scope of entities obliged to report non-financially and changing the scope of reporting.

The CSRD, combined with the EU Taxonomy (referred to below), is expected to lead to much greater transparency and comparability of market actors.

Member States are obliged to implement the CSRD directive into their legal systems by 6 July 2024. The entry into force of the provisions for groups of entities has been staggered, with the first reporting cycle taking place in 2025 based on data from the financial year starting on 1 January 2024. Large

public interest entities that are already subject to reporting obligations under the NFRD will be the first to report under the CSRD.

It is estimated that the CSRD will have a direct impact on approximately 50,000 entities in the European Union, which is a significant increase compared to approximately 11,000 entities required to report under the NFRD.

The European Financial Reporting Advisory Group (EFRAG) has prepared a draft of the first European harmonised reporting standards. Entities obliged under the CSRD will have to disclose information on sustainable development in accordance with the new European Sustainability Reporting Standards (ESRS). The ESRS were adopted on 31 July 2023 and were scheduled to enter into force by June 2024. Nevertheless, on 17 October 2023, the European Commission published its Commission Work Program for 2024, according to which the European Commission proposed that the implementation of the ESRS will be postponed until June 2026. According to the European Commission, the postponement is necessary to give additional time to prepare to the entities obliged to report. The Commission's proposal now needs to be assessed by the European Parliament and the Council, but neither is expected to reject the proposal.

EU Taxonomy

The EU Taxonomy is a system for classifying environmentally sustainable economic activities. It is a tool enabling the creation of a common language for identifying environmentally sustainable activities and financial instruments, also in the real estate market.

The EU Taxonomy applies, among others: to financial market participants offering financial products and companies obliged to provide non-financial reporting (currently under the NFRD directive, and soon under the CSRD directive).

The EU Taxonomy identifies six environmental objectives that are considered as key to the transition to a sustainable and neutral low-emission economy:

1. climate change mitigation;
2. climate change adaptation;
3. sustainable use and protection of water and marine resources;
4. transition to a circular economy;
5. pollution prevention and control;
6. protection and restoration of biodiversity and ecosystems.

It also includes a list of activities that can be considered environmentally sustainable if they meet technical screening criteria. It indicates specific, often strict, indicators in the area of the environment.

The EU Taxonomy enables market entities to assess business activities in a transparent and comparable manner. It is, among other things, a reference point in fulfilling the obligations arising from the SFDR and the NFRD (and the NFRD/CSRD).

In the case of 'eligible' activities according to the EU Taxonomy, when assessing the 'alignment' of an economic activity in the context of the EU Taxonomy's objectives, it should be reviewed as to whether the activity is:

- contributing significantly to one of the indicated environmental objectives,
- do no significant harm to other environmental objectives (the so-called DNSH principle - „do no significant harm”),
- is consistent with minimum social safeguards⁶, and
- meets technical screening criteria that makes it possible to determine whether a given activity makes a significant contribution to achieving a given environmental objective and whether it does no harm to other environmental objectives.

The above legal acts constitute only a small part of ESG legal acts that are currently in force. Nevertheless, these legal acts clearly indicate the direction of upcoming regulatory changes. At the EU level, work is underway on further legal acts in the field of ESG. In the case of real estate, the adoption of the Energy Performance of Buildings Directive (EPBD IV), which is being processed as part of the “Fit for 55” program, will, among others, be of importance.

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⁶ Among others, the OECD Guidelines for Multinational Enterprises, or the UN Guiding Principles on Business and Human Rights, including the ILO Declaration on Fundamental Rights and Principles at Work, the eight ILO Core Conventions and the International Bill of Human Rights

EU Taxonomy and Minimum Safeguards

The Taxonomy is a common, EU-wide system for classifying business activities. It is to be used by EU authorities, Member State authorities, investors, financiers (including banks), businesses and consumers to ensure a unified understanding of which activities are environmentally sustainable. Once assessed against the Taxonomy, the activity will therefore be suitable for use in relationships with different categories of entities.

Determining whether an activity (project) is environmentally sustainable is done on the basis of the criteria indicated in Article 3 of the Taxonomy. These criteria are as follows:

- a) making a significant contribution to one or more of the environmental goals set out in the Taxonomy;
- b) not causing serious harm to any of these environmental goals;
- c) operating in accordance with the minimum safeguards.

While the first two criteria are assessed on the basis of precisely described technical eligibility criteria (contained in the delegated acts of the Taxonomy Regulation), the minimum safeguards have their origin in previously non-binding international regulations, which do not constitute a uniform and coherent system of standards.

The criterion of “operating in accordance with minimum safeguards” in view of Articles 3 and 18 of the Taxonomy is construed as conducting business in accordance with procedures designed to ensure compliance with the OECD Guidelines for Multinational Enterprises (**the “OECD Guidelines”**) and the UN Guiding Principles on Business and Human Rights **Rights (the “UN Guiding Principles”)**, including the principles and rights set out in the eight fundamental conventions identified in the International Labour Organization’s Declaration on Fundamental Principles and Rights at Work and the principles and rights set out in the International Bill of Human Rights. In applying these procedures, companies should comply with the principle of “do no serious harm” (DNSH) according to the SFDR regulation; however, the conceptual scope of this principle is not precisely defined and allows for interpretation.

In the case of minimum safeguards, it is not so much the specific activity (project) that may (or may not) meet certain specific technical eligibility criteria that is examined, **but the entire activity carried out by the company concerned**. This means that even if an activity (project) met the technical criteria for classification, if the company carrying it out violated, for example, labour rights (which are part of the minimum safeguards) – and even in a dif-

ferent scope/area of its activity than the one being examined – then that activity (and any other activity carried out by that company) could be considered to not be in line with the Taxonomy (as environmentally sustainable).

Compliance with minimum safeguards is assessed in four key areas: (i) human rights, including workers’ rights; (ii) corrupt practices; (iii) tax compliance; and (iv) fair competition.

Both the OECD Guidelines and the UN Guiding Principles indicate that the key to ensuring a company’s operational compliance in terms of minimum guarantees is the due diligence process. This process should be implemented in the company on a continuous basis. It includes six basic steps:

- (1) **integrating** RBC (responsible business conduct) issues into company policies and management systems;
- (2) **identifying and assessing negative impacts** related to the company’s operations, value chain and/or business relationships;
- (3) **stopping, preventing or mitigating** negative impacts;
- (4) **monitoring** the execution of the measures taken and their results;
- (5) **informing** on how to deal with negative impacts;
- (6) taking/providing **remedial actions** or cooperating with the remedial actions taken.

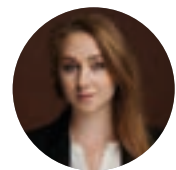
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2.

FINANCING
REAL ESTATE
AND ENERGY
TRANSITION



ESG criteria: new challenges for banks and requirements for the real estate sector

1. Introduction

In December 2022, PINK took the first steps towards unifying the understanding of ESG in the area of financing in the commercial real estate market by organising a webinar in which financial institutions discussed the need to implement ESG-related risks in financing processes. At that time, it was recognised that there was a need to create ESG guidelines that would simultaneously meet the ESG reporting needs of financial institutions and support the real estate market, in particular borrowers in implementing the necessary ESG elements in their products.

As part of the "Green Financing" Working Group established for the purpose of the project, representatives of a lot of banks (including Berliner HYP, BGK, BNP Paribas, Dresdner Bank, Helaba, ING, Millenium, Mbank, PBB Deutsche Pfandbriefbank, PKO BP, Pekao SA, Santander Bank Polska) and consulting companies met regularly, exchanging experiences and developing understanding of ESG in the area of financing in the commercial real estate market. During these meetings, Arcadis shared its experience in transaction advisory in the ESG area based on cooperation with global investors and representatives of rating organisations such as GRESB.

Banks, participating in the work of the Working Group, provided recommendations regarding ESG requirements that affect their investment decisions. They emphasised that appropriate ESG strategies and implementation will be required from clients of financial institutions, both at the building and organisational level. Some of these requirements translate into banks' expectations towards borrowers. It is worth noting that the requirements at the organisational level cover all three aspects of reporting, and banks ask not only about the decarbonisation strategy, but also broadly about various social policies.

A number of workshop meetings of the Working Group led to the selection of criteria and indicators for real estate, resulting from the analysis of European Union legal regulations, which seem to be crucial when verifying investments in the commercial real estate sector in terms of ESG requirements.

2. Recommendations of banks in the field of green financing - current status

The banks' ESG questionnaires provide some insight into the level of preparation and expectations of the banking sector regarding green financing of commercial real estate. The level of advancement of the work varies, which is due to the limited number of available ready-made recommendations. Their detail and the variety of verified ESG aspects also vary from bank to bank.

Below we present a summary of the ESG requirements collected as part of the work of the PINK Working Group based on banking questionnaires:

Criterion	Details
Biodiversity strategy (planned/existing)	Avoiding invasive plant species; biodiversity inside and around the building, greenfields
Level of soil sealing/ land consumption	
Level of harming the environment by the organization	Yes (describe the drivers)/No Such as: deforestation, loss of biodiversity, soil degradation
Carrying out environmental impact assessment for the funded activity	Yes/No

Criterion	Details
Activities counteracting climate change within planned project	Yes/No Such as: the construction of green areas, planting trees, implementation of irrigation systems or water reservoirs, other elements in the field of small retention
Organizational carbon accounting and reduction pathway	Reduction data or improvement plans or share of green buildings Option 1: reduction kg CO ₂ e or CO ₂ e/m ² is > 0% and ≤ 5% p.a. compared to last year (or > 0% and ≤ 10% in 2 years) concrete plans to achieve the aforementioned reductions within the next 12 or 24 months Option 2: reduction kg CO ₂ e or CO ₂ e/m ² is > 5% p.a. compared to last year (or > 10% in 2 years) share of „green buildings“ is > 20% of the leasable area or market value of the portfolio
Energy efficiency (related to the portfolio)	Reduction data or improvement plans or share of green buildings Option 1: kWh/m ² year is > 0% and ≤ 5% p.a. compared to last year (or > 0% and ≤ 10% in 2 years) or concrete plans to achieve the aforementioned increases within the next 12 or 24 months Option 2: kWh/m ² year is > 5% p.a. compared to last year (or > 10% in 2 years) or share of „green buildings“ is > 20% of the leasable area or market value of the portfolio
Energy performance of the building	Certificate corresponds to at least energy efficient class A or LEED with Gold status or higher, BREEAM with Very Good status or higher, DGNB with Gold status or higher, HQE with High Level status or higher
Plans in place to improve the energy efficiency/sustainability of the building	Yes/No If yes, provide details
Classification as EU Taxonomy compliant Eligibility criteria (at least 1 must be meet to qualify as green building lending)	Buildings meet the EU Taxonomy criteria set out in the EU Commission Delegated Regulation, Chapter 7.7 „Acquisition and ownership of existing buildings“.
Classification as EU Taxonomy compliant Eligibility criteria (at least 1 must be meet to qualify green lending renovation)	Energy-efficient modernization/renovation measures need to meet the EU Taxonomy criteria according to the EU Commission Delegated Regulation, Chapter 7.1 „Renovation of existing buildings“
Energy efficiency improvement measures Eligibility criteria (at least 1 must be meet to qualify green lending renovation)	Completion of the measure results in an energy efficiency improvement of at least 30%
Green building certification (type/level) Eligibility criteria (at least 1 must be meet to qualify green lending renovation)	Completion of the measures brings the property up to the green building standard defined in criteria 1.2/1

Kryterium	Opis szczegółowy
Green building certification (type/level) Eligibility criteria 1.3/1 (at least 1 must be met to qualify as green building lending)	Property meets the national requirements for a nearly zero-energy building (nZEB) and/or Property falls below the maximum energy reference values derived from national requirements/green building requirements and bank's evaluation levels.
Reporting on ecological construction or renovation	Reporting data Yes/No If yes, a) information available on current or future projects; b) current projects >10% of the portfolio or their share in new acquisitions / development
Reporting on ecological construction or renovation	Reporting data Building fabric/materials used are: a) mostly recycled >70% b) partially recycled <70%

As we found out when analysing the questionnaires of the banks cooperating with us in this project, at the moment there is no uniform set of universal bank expectations regarding the commercial real estate sector. An additional difficulty is the fact that some banks are just creating recommendations, others are in the process of changing them.

Work on a set of joint recommendations of banks in the field of green financing will continue as part of the workshop meetings of the Working Group. Meanwhile, the guidelines resulting from EU regulations for real estate will be a helpful premise, as described below.

3. Challenges and expectations of the financial sector - survey results

In order to verify the extent to which taking into account environmental and social aspects in the decision-making process is already introduced in the financial market, PINK prepared a survey for members of the Working Group representing the financial sector. The survey contained 11 questions, 1 of which was closed, one was multiple choice and the rest were open. The answers were collected anonymously.

The respondents were asked the following questions:

1. Does your bank have an internal ESG policy/strategy?
2. Do you have a dedicated person/department/external entity that is responsible for developing ESG requirements in your bank's area of operation? If yes, please briefly describe.
3. How does your bank verify the compliance of the planned investment with ESG standards? (e.g., own list, verification under a specific ESG standard)

4. Under what specific standard does your bank verify ESG investment criteria?
5. List which ESG criteria/themes are most relevant to your bank when verifying planned investments. (list at least 3 criteria)
6. Does your bank have defined indicators/values for the criteria listed in the previous section? If yes, provide them below.
7. Are there ESG criteria that are a "deal breaker" for your bank? If yes, provide them below.
8. Does your bank offer financial tools that offer preferential terms when certain ESG criteria are met? If yes, please specify the type of such tool and terms.
9. What do you think is currently most lacking to further develop/define ESG standards in your bank's area of operation?
10. Who do you think (institution/organisation/other external entity) has the most influence on further development and clarification of ESG requirements in your bank's area of operation?
11. What would help create the final ESG criteria requirements for your bank's investment decisions?

The survey was addressed to 14 banks, of which 9 institutions completed the questionnaire, and one institution of the remaining returned with the information that it was unable to provide a response at this time.

A summary of the survey results is presented below:

- **90% of the financial institutions surveyed have an internal ESG policy and/or strategy.** An ESG strategy is already a common standard of operation for financial institutions, which are an essential link for a sustainable market transformation towards climate neutrality.
- **90% of the surveyed institutions have a person or entity responsible for developing ESG requirements in the bank's area of operation.** There are ESG/sustainability departments, committees or experts within the organisation's structures who are responsible for internal ESG guidelines and implementation of the sustainability strategy.
- **Most of the surveyed financial institutions verify the compliance of the planned investment with ESG standards based on their own list of criteria.** The questionnaires are developed internally, and there is currently no single common approach to verifying ESG aspects of an investment in the market.
- **The criteria of the European Taxonomy and the energy efficiency of the property were indicated most often as aspects to be verified during investment decisions.** Green certification (e.g., BREEAM, LEED), CO₂ emissions using the CRREM methodology and the technical standard of the building were also indicated as other criteria in the survey.
- **40% of respondents answered that they did not have specific quality requirements for the ESG criteria being verified.** Some respondents confirmed that they have internally agreed thresholds for a building's declared primary energy demand, green certification level and CO₂ emissions.
- **Among potential "deal-breakers",** banks cited a lack of ESG capital expenditure plans, a low level of certification or lack of efforts by the investor to apply for certification, and exposure to "black energy" sourcing industries.

- **40% of respondents answered that they have no ESG-related "transaction brakes."**
- **Nearly half of the surveyed institutions are working on financial tools that offer preferential terms when certain ESG criteria are met.** Less than 30% have already introduced such solutions, such as "green" loans or bonds.
- **A significant inhibitor to further development/definition of ESG standards** reported by almost all respondents is standardisation of reported data, including precise definitions and market transparency in reporting detailed ESG data.
- **The European Union is indicated as the most important entity influencing the further development and clarification of ESG requirements in the area of the banks surveyed.** Customers and competitors are also cited as influencers in shaping ESG standards.
- Among the important factors helping to create definitive requirements for ESG criteria for investment decisions, the surveyed institutions declared greater availability of data, clear definition of criteria and best practices by supervision and the banking sector, and clear standards for energy consumption in buildings. Responses also included practical recommendations for specific sectors (i.a. real estate, financial) on ESG requirements, and the need to develop a common industry position.

By analysing the survey results as well as the information previously provided by banks, it can be seen that the banking sector is aware of the importance of taking ESG criteria into account in the investment decision-making process. Most of the surveyed banks employed people or created departments responsible for ESG and established internal ESG requirements according to which investments are verified. The most important gap identified by the surveyed banks is the lack of a common approach to verifying ESG aspects. The banking sector looks to regulators and the European Union as the most important entities influencing the further development and clarification of ESG standards. In recent months and years, we have been observing a dynamic development of ESG regulations. The next step seems to be to verify the current ESG requirements and, based on them, establish criteria for future financial decisions.

4. Key regulations affecting the further development of ESG requirements in the area of investments and their financing in the real estate sector

Below are the key regulations that the authors believe have a significant impact on the further development of ESG requirements in the area of real estate sector investments.

4.1 CSRD: a higher level of reporting

The EU's Corporate Sustainability Reporting Directive (CSRD) requires all large companies and all listed companies (with the exception of listed micro-enterprises) to disclose information on what they perceive as risks and opportunities arising from social and environmental issues, as well as the impact of their operations on people and the environment.

The CSRD requires more from reporting than any previous regulation and emphasises the key role of value chains in determining the total environmental footprint of companies. As a result, companies must ask their value chain to take appropriate measurements and report emissions data. This helps investors, civil society organisations, consumers and other stakeholders assess companies' sustainability performance.

4.2 SFDR: the transparency framework for the financial market

The EU has introduced a transparency framework, the Sustainable Finance Disclosure Regulation (SFDR). By specifying how financial market participants must disclose sustainability information, it helps investors who want to invest their money in companies and projects that support the Sustainable Development Goals (SDGs) make informed choices. The SFDR also aims to enable investors to properly assess how to incorporate sustainability risks into their investment decision-making. In this way, SFDR contributes to one of the EU's most important policy goals: attracting private funds to help Europe transition to a net-zero economy.

4.3 EU Taxonomy Delegated Acts

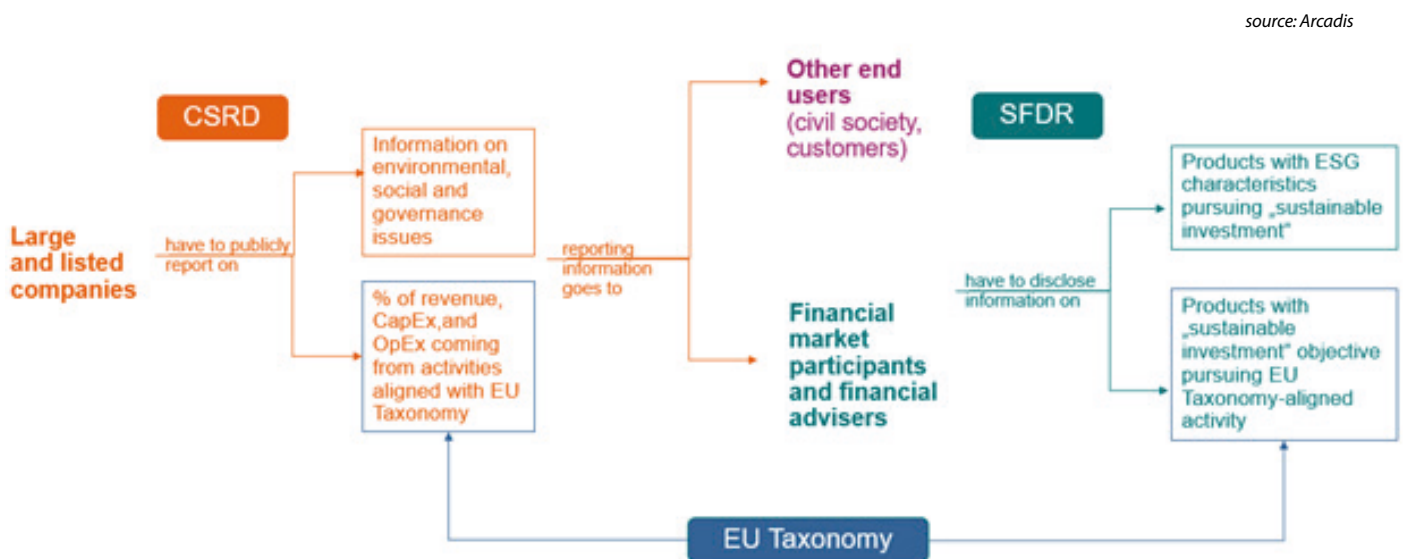
The EU Taxonomy is a cornerstone of the EU's sustainable finance framework and an important market transparency tool that helps direct investment into the types of economic activities most needed for the green transition. It is a green classification system that translates EU climate and environmental goals into criteria for specific economic activities for investment purposes.

The six environmental goals of the Taxonomy are: mitigating climate change; adaptation to climate change; sustainable use and protection of water and marine resources; transition to a circular economy; pollution prevention and control; protection and restoration of biodiversity and ecosystems.

An economic activity is considered environmentally sustainable if it makes a significant contribution to the achievement of at least one of the objectives of the Taxonomy, while at the same time does not cause serious harm to any of these other objectives and meets minimum social security.

4.4 Interdependence of EU regulations

The EU Taxonomy, CSRD and SFDR form a key triad of regulations aimed at improving and strengthening sustainable investment practices. Together they create a coherent framework that aims to enable investors to make more informed and responsible choices and create a more transparent and accountable corporate environment.



5. Guidelines resulting from EU regulations for the real estate sector - what ESG aspects are the most important?

The EU is creating a comprehensive regulatory and enforcement mechanism to achieve the climate goals of the Paris Agreement. The regulations presented in the previous part oblige financial investors to report the degree of implementation of the requirements of the EU Taxonomy, with the goal of achieving climate neutrality in accordance with the Paris Agreement plan. This will facilitate access to comparable and reliable non-financial information disclosed by companies in a consistent manner.

The regulations impose an obligation on entities to report data regarding the entire value chain, transferring to those reporting the obligation to obtain information and data regarding sustainable development from entities at higher (e.g. suppliers) and lower (e.g. distributors, customers) levels of the value chain.

The real estate criteria resulting from key EU regulations are presented below. In order to ensure greater transparency, the key criteria are also summarised in the form of a table constituting Annex 1 to this article.

5.1 CSRD – mapping the carbon footprint across the entire value chain in accordance with the GHG Protocol

The EU's Corporate Sustainability Reporting Directive (CSRD) requires more from those reporting on their overall environmental footprint, in line with the standard set by the greenhouse gas (GHG) Protocol. Since 80% of a typical company's carbon footprint comes from its value chain, Scope 3 is likely to be relevant to most reporters, including banking institutions. Companies will have to break down these emissions by category and provide information on the measures taken to put their value chain on a 1.5°C decarbonisation path.

In the case of real estate investments, investors may require the following information regarding:

- total energy consumption in MWh, broken down by fossil fuels and electricity expressed in utility bills (broken down into renewable and non-renewable sources, if available), and
- estimated gross greenhouse gas emissions in tonnes of CO₂ equivalent (tCO₂eq), including:
 - Scope 1 emissions in tCO₂-eq (from own or controlled sources) and
 - Scope 2 emissions in tCO₂-eq (from purchased energy).

5.2 SFDR and PAIs for real estate

The SFDR Directive introduces a transparency framework for the disclosure of information on sustainable finance. With a view to enabling investors to properly assess how to incorporate sustainability risks into the investment decision-making process, SFDR has identified the most important negative impacts of investment decisions on sustainability factors related to environmental and social issues - Principal Adverse Impacts (PAIs).

When investing in real estate, two mandatory PAIs are verified:

1. exposure to fossil fuels through real estate
 - share of investments in real estate related to the extraction, storage, transport or production of fossil fuels
2. exposure to energy inefficient properties
 - share of investments in energy-inefficient real estate

The PAI list also includes additional voluntary aspects, such as:

1. greenhouse gas emissions generated by real estate
 - scope 1, 2 and 3
2. energy consumption intensity
 - energy consumption expressed in GWh in the case of owned properties per square meter,
3. generation of waste as a result of operation
 - share of properties not equipped with waste sorting installations and not covered by an agreement on waste recovery or recycling

4. consumption of raw materials in the case of new buildings or major renovations
 - share of construction raw materials (except recovered or recycled materials or materials of biological origin) in relation to the total weight of construction materials used in new buildings and major renovations
5. share of artificial land
 - share of unvegetated area (areas where there is no ground vegetation or vegetation on roofs, terraces and walls) in relation to the total area occupied by all properties

Confirmation of compliance with Articles 8 and 9 of the SFDR also requires verification of the investment in accordance with the technical qualification criteria contained in the EU Taxonomy, which are presented in the next chapter.

5.3 EU Taxonomy

The EU Taxonomy introduces the division of economic activities into sectors for which technical qualification criteria have been defined. These include "Construction and activities related to the real estate market", which defines the requirements that buildings should meet. This sector includes, among others: technical criteria for three types of real estate activities: 'Construction of new buildings', 'Renovation of existing buildings' and 'Acquisition and ownership of buildings'.

A summary of the technical qualification criteria resulting from the European Taxonomy for newly constructed buildings is presented below. In the case of the assessment of existing or renovated facilities, the requirements should be adapted in accordance with the guidelines contained in the delegated act to Regulation (EU) 2020/852 of the European Parliament and of the Council.

5.3.1 Climate change mitigation

Do no significant harm to the environmental objective

- The building is not designed for the extraction, storage, transportation or production of fossil fuels.
- The primary energy demand calculated in the Energy Performance Certificate does not exceed the threshold specified for the requirements for near-zero energy buildings in the national legislation implementing Directive 2010/31/EU.

Significant contribution to the environmental objective

- The primary energy demand, as calculated in the Energy Performance Certificate, is at least 10% less than the threshold specified in relation to the requirements for near-zero energy buildings in the national measures implementing Directive 2010/31/EU of the European Parliament and of the Council.
- For buildings with an area exceeding 5,000 m², upon completion, the building shall be subjected to air tightness and thermal integrity tests, and investors and customers shall be informed of any deviations or defects in the building envelope.
- For buildings larger than 5,000 m², the global warming potential (GWP) of the building's life cycle is calculated for the various stages of the life cycle and provided to investors and customers upon request.

5.3.2 Climate change adaptation

Do no significant harm to the environmental objective

- An assessment of climate-related risks with climate change prediction has been carried out.
- During the implementation of newly constructed buildings, adaptation solutions that reduce the most important identified climate-related physical risks should be included.

Significant contribution to the environmental objective

- An assessment of climate-related risks with climate change prediction was conducted.
- Adaptation solutions that reduce the most important identified climate-related physical risks should be considered during the implementation of newly constructed buildings.
- Implemented adaptation solutions have been implemented with "no serious harm" criteria, promote the use of solutions based on nature's resources, and have no negative impact on the adaptation activities of other assets and activities.

5.3.3 Sustainable use and protection of water and marine resources

Do no significant harm to the environmental objective

- Maximum permissible flows for water-using devices (except for residential premises):
 - * Taps of sinks and basins - 6 litres/min;
 - * Showers - 8 litres/min;
 - * Toilet bowls - maximum discharge of 6 litres, the average volume of water used for flushing must not exceed 3.5 litres;
 - * Urinals - maximum outflow of 2 litres/bowl/hour or 1 litre/flush
- In order to avoid negative effects of construction work, an environmental impact assessment was conducted on water levels.

5.3.4 Transition to a circular economy

Do no significant harm to the environmental objective

- At least 70% (by weight) of non-hazardous construction and demolition waste generated on site is ready for reuse, recycling and other material recovery processes.
- Building designs and construction techniques support closed-loop recycling, and specifically indicate-with reference to ISO 20887 or other standards-in the assessment of the feasibility of dismantling or adapting buildings.

5.3.5 Pollution prevention and control

Do no significant harm to the environmental objective

- Building elements and building materials used in construction are not on the list of prohibited materials defined by the Taxonomy.
- Building components and building materials used in construction that users may come into contact with emit less than 0.06 mg/m³ of formaldehyde based on testing in accordance with Annex XVII of Regulation (EC) No. 1907/2006 and less than 0.001 mg/m³ of other carcinogenic volatile organic compounds based on testing in accordance with CEN/EN 16516 and ISO 16000- 3:2011.
- If a new building is erected in a potentially polluted area such an area has been tested for potential pollutants, for example using ISO 18400.
- Measures have been put in place to reduce noise, dust and pollutant emissions during construction or maintenance activities.

5.3.6 Protection and restoration of biodiversity and ecosystems

Do no significant harm to the environmental objective

- An environmental impact assessment has been conducted in accordance with Directive 2011/92/EU and appropriate mitigation measures have been implemented.
- The new building shall not be erected on any of the following land:
 - * arable land and farmland with medium to high soil fertility,
 - * undeveloped land with recognised high biodiversity value and land serving as habitat for endangered species,
 - * land that meets the definition of forest as defined by national law.

6. 6. Conclusion

This article is a summary of the activities of the Working Group established by PINK to examine ESG requirements for the commercial real estate sector resulting from the expectations of the banking sector. Analysing the collected information, it can be concluded that the banking sector is aware of the importance of taking into account ESG criteria in the process of making investment decisions. In most banks that participated in the Working Group, positions or departments responsible for ESG were created and internal ESG requirements were established, according to which investments are verified. The ESG questionnaires provided by banks provide some insight into the expectations of the banking sector, but due to the small amount of materials provided and the discrepancies in the verified ESG aspects, it was not possible to clearly define universal expectations regarding real estate on their basis. However, all participants of the Working Group confirmed that they are

currently in the process of developing or specifying the ESG criteria according to which investments will be verified in the future. They also confirmed that currently one of the most important factors hindering the setting of ESG standards is the lack of a consistent approach on the market to verifying these aspects. The banking sector looks to regulatory authorities and the European Union as the most important entities influencing the further development and clarification of ESG standards. In recent month and years, a dynamic development of ESG regulations has been observed. The next step seems to be verification of the current ESG requirements and, based on them, establishing criteria for future financial decisions.

The guidelines presented in this study can be a starting point for developing criteria for verifying real estate in terms of meeting ESG requirements. It is recommended that before implementation, the criteria included in the article are verified with the assumptions of the internal ESG strategy and adapted to the subject of the investment. The authors have made every effort to ensure that the presented recommendations are current and compliant with the regulations on the date of preparation of the report. Due to the high dynamics of changes in regulations and guidelines in the ESG area, it is recommended that the requirements contained in the article are treated as a guide and verified in source documents before implementation.

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Appendix:

Below is a table of real estate criteria resulting from key EU regulations:

CRITERIA ARISING FROM THE CSRD	
total energy consumption in MWh, split between fossil fuels and electricity expressed in utility bills	split between renewable and non-renewable sources, if available
estimated gross greenhouse gas emissions in tons of CO2 equivalent (tCO2eq)	- Scope 1 emissions in tCO2-eq (from owned or controlled sources) and - Scope 2 emissions in tCO2-eq (from purchased energy).

CRITERIA ARISING FROM THE SFDR	
MANDATORY PAIS FOR REAL ESTATE INVESTMENTS	
exposure to fossil fuels through real estate	The share of investments in real estate related to the extraction, storage, transportation, or production of fossil fuels
exposure to energy inefficient real estate	The share of investments in energy inefficient real estate
ADDITIONAL VOLUNTARY PAI FOR REAL ESTATE INVESTMENTS	
greenhouse gas emissions generated by real estate	Scope 1, 2 and 3
energy consumption intensity	energy consumption expressed in GWh for owned properties per square metre
waste generation from operations	share of properties not equipped with waste sorting facilities and not covered by a waste recovery or recycling contract
consumption of raw materials for new buildings or major renovations	share of construction raw materials (excluding recovered or recycled materials or materials of biological origin) in relation to the total weight of construction materials used in new buildings and major renovations
share of artificial land	share of non-planted area (areas with no ground vegetation or vegetation on roofs, terraces and walls) in relation to the total area occupied by all properties
CRITERIA RESULTING FROM THE EUROPEAN TAXONOMY	
CLIMATE CHANGE MITIGATION	
Do no significant harm to the environmental objective	The building is not designed for the extraction, storage, transportation or production of fossil fuels. The primary energy demand calculated in the Energy Performance Certificate does not exceed the threshold specified for the requirements for near-zero energy buildings in the national legislation implementing Directive 2010/31/EU.
Significant contribution to the environmental objective	The primary energy demand, as calculated in the Energy Performance Certificate, is at least 10% less than the threshold specified in relation to the requirements for near-zero energy buildings in the national measures implementing Directive 2010/31/EU of the European Parliament and of the Council. For buildings with an area exceeding 5,000 m², upon completion, the building shall be subjected to air tightness and thermal integrity tests, and investors and customers shall be informed of any deviations or defects in the building envelope. For buildings larger than 5,000 m², the global warming potential (GWP) of the building's life cycle is calculated for the various stages of the life cycle and provided to investors and customers upon request.
CLIMATE CHANGE ADAPTATION	
Do no significant harm to the environmental objective	An assessment of climate-related risks with climate change prediction has been carried out. During the implementation of newly constructed buildings, adaptation solutions that reduce the most important identified climate-related physical risks should be included.

Significant contribution to environmental objective	An assessment of climate-related risks with climate change prediction was conducted. Adaptation solutions that reduce the most important identified climate-related physical risks should be considered during the implementation of newly constructed buildings. Implemented adaptation solutions have been implemented with "no serious harm" criteria, promote the use of solutions based on nature's resources, and have no negative impact on the adaptation activities of other assets and activities.
SUSTAINABLE USE AND PROTECTION OF WATER AND MARINE RESOURCES	
Do no significant harm to the environmental objective	Maximum permissible flows for water-using devices (except for residential premises): • Taps of sinks and basins - 6 litres/min; • Showers - 8 litres/min; • Toilet bowls - maximum discharge of 6 litres, the average volume of water used for flushing must not exceed 3.5 litres; • Urinals - maximum outflow of 2 litres/bowl/hour or 1 litre/flush In order to avoid negative effects of construction work, an environmental impact assessment was conducted on water levels.
TRANSITION TO A CIRCULAR ECONOMY	
Do no significant harm to the environmental objective	At least 70% (by weight) of non-hazardous construction and demolition waste generated on site is ready for reuse, recycling and other material recovery processes. Building designs and construction techniques support closed-loop recycling, and specifically indicate-with reference to ISO 20887 or other standards-in the assessment of the feasibility of dismantling or adapting buildings.
POLLUTION PREVENTION AND CONTROL	
Do no significant harm to the environmental objective	Building elements and building materials used in construction are not on the list of prohibited materials defined by the Taxonomy. Building components and building materials used in construction that users may encounter emit less than 0.06 mg/m³ of formaldehyde based on testing in accordance with Annex XVII of Regulation (EC) No. 1907/2006 and less than 0.001 mg/m³ of other carcinogenic volatile organic compounds based on testing in accordance with CEN/EN 16516 and ISO 16000- 3:2011. If a new building is erected in a potentially polluted area such an area has been tested for potential pollutants, for example using ISO 18400. Measures have been put in place to reduce noise, dust and pollutant emissions during construction or maintenance activities.
PROTECTION AND RESTORATION OF BIODIVERSITY AND ECOSYSTEMS	
Do no significant harm to the environmental objective	An environmental impact assessment has been conducted in accordance with Directive 2011/92/EU and appropriate mitigation measures have been implemented. The new building shall not be erected on any of the following land: • arable land and farmland with medium to high soil fertility levels, • undeveloped land of recognised high biodiversity value, and land serving as habitat for endangered species,, • land that meets the definition of forest as defined by national law.

White certificates – support for financing investments to improve energy efficiency

What are White Certificates?

The system of energy efficiency certificates, so-called white certificates, based on the provisions of the Act on Energy Efficiency of 20 May 2016, as amended, is a mechanism that allows additional funds to be received for performing energy efficiency upgrades.

Almost anyone can benefit from this support, and the key condition **for receiving white certificates is to demonstrate annual final energy savings of at least 10 toe = 116.3 MWh, where 1 toe = 41.868 GJ or 11.63 MWh.**

White certificates are issued only for planned (future) energy efficiency improvement projects, which means that an application to the Energy Regulatory Office (URE) must be submitted before the modernisation starts, i.e. before signing the contract with the contractor.

Property rights arising from Energy Efficiency Certificates can be sold on the Polish Power Exchange (TGE). They are purchased by obliged entities, which are bound to report annually to the President of the URE the energy savings generated by, among other things, redeeming a certain number of white certificates. These entities are primarily energy companies involved in the sale of electricity, gas, heat and liquid fuels.

HOW TO OBTAIN WHITE CERTIFICATES SAMPLE PROCEDURE FOR OBTAINING WHITE CERTIFICATES

- 1. Assessment of the client's potential.** The energy auditor verifies, using the information and technical data provided by the client, whether the planned project gives the client the opportunity to apply for white certificates.
- 2. Defining the principles of cooperation and signing the contract.** The most common type of cooperation is settlement on a success fee basis. Success in this case is when the service provider is remunerated after the application has been positively verified by the URE and the energy efficiency certificates can be subsequently sold. Other possible forms of settlement are: a lump sum or partial lump sum for the audit and a success fee after the sale of the certificates obtained.
- 3. Conducting an energy efficiency audit.** This stage requires close cooperation with the client, as the audit requires information and data from the client.
- 4. Setting a schedule for project execution.** The schedule makes it possible to estimate the time required to prepare the audit and submit a complete application to the URE before the project launch. The schedule should also specify the estimated date of completion of the project, after which the Applicant is required to submit information on the completion of the project to the URE.
- 5. Drafting and submitting a full application for white certificates to the URE.** Of the possible forms of cooperation with an adviser, the most common is when the advisory firm acts as a proxy, submitting the complete application on behalf of the client (in this case, the applicant is still the client and the white certificates are granted directly to the client's account). Another option for cooperation is the preparation of the audit and the required documents, which the client then submits to the URE on their own, as well as the application on behalf of the client and the sale of certificates through the brokerage account of the consulting company.
- 6. Receiving a positive decision on the granting of white certificates and a promise for the declared toe value** should take 45 days by law – in reality it takes much longer.
- 7. Establishing rules of cooperation with a brokerage house and setting up an account in the Certificate of Origin Register (RŚP).** The entity organising the trading of the aforementioned property rights is the Polish Energy Exchange (Towarowa Giełda Energii S.A.), and energy efficiency certificates can only be sold, purchased or redeemed through a brokerage house.

8. After completion of the project, the applicant is obliged to **prepare and submit to the URE an as-built audit confirming the achieved planned final energy savings, as a result of the completed project** together with any documents verifying the correctness of the completed investment.
9. Once the application has been positively verified by the URE, the energy efficiency certificates go directly to the Applicant's RŚP account, and the previously selected brokerage house handles the **sale of the white certificates on the Polish Energy Exchange**.
10. **Settlement of the service provided according to the terms of the contract.**

WHICH RETROFITS ARE ELIGIBLE FOR WHITE CERTIFICATES?

The list of energy efficiency improvement projects for which white certificates can be applied for is set forth in Article 19.1 of the Energy Efficiency Act and in the Announcement of the Minister of Energy of 23 November 2016 on the detailed list of energy efficiency improvement projects (M.P. 2021 item 1188). These include:

- **insulation of industrial installations;**
- **redevelopment or renovation of a building, including installations and technical equipment;**
- **retrofitting or replacing:**
 - lighting,
 - equipment or installations used in industrial, energy, telecommunications or IT processes
 - local district heating networks and local heat sources within the meaning of Article 2(6) and (7) of the Act of 21 November 2008 on supporting for thermal modernisation and renovation and on the central register of building emissions,
 - vehicles for road or rail transport;
- **energy recuperation, including energy recovery in industrial processes;**
- **reduction of losses:**
 - related to the consumption of reactive energy,
 - networks related to the transmission or distribution of electricity, natural gas or liquid fuels,
 - during transformation,
 - in district heating networks,
 - related to power supply systems for telecommunications or IT equipment,
 - related to the storage and handling of liquid fuels;
- **the use, for heating or cooling of buildings, of energy generated in renewable energy source installations, utility heat from high-efficiency cogeneration as defined by the Act of 10 April 1997 - Energy Law or waste heat from industrial installations.**

What can go wrong, or who is not entitled to White Certificates?

As part of stimulating investment projects in energy efficiency, the lawmakers give preference to the so-called 'incentive effect', i.e. the application must be submitted before a contract is concluded with the Contractor and before the modernisation work begins. Submitting the application to the URE after the deadline of signing the contract with the Works Contractor is the most common reason for the rejection of applications by the Energy Regulatory Office.

White certificates are also ineligible for a project that has been granted:

- the thermal modernisation bonus within the meaning of the Act of 21 November 2008 on supporting thermal modernisation and renovation and on the Central Register of Building Emissions;
- investment aid, where the granting of the certificate (white certificates) will result in exceeding the permitted amount of public aid for the project.

Only projects of the same type can be combined in an application for White Certificates. For example, if the investor is replacing the lighting in one building and fails to receive the required 10 toe savings, this project can be combined with a lighting upgrade from another building. The URE, on the other hand, does not accept retrofits containing combined projects of different types in a single application.

Energy efficiency certificates will also not be granted to entities that have carried out investments in Renewable Energy Sources, e.g. the installation of a photovoltaic system is not considered as an energy efficiency improvement project under the regulation, but only as a change of energy source.

White certificates in the real estate sector

For companies operating in the real estate industry, there are many opportunities and types of projects that can be submitted to the white certificate system. There are still plenty of installations and operating areas of space in retail facilities that need upgrading. The devices in use are generating more and more losses over time and the technologies used are being displaced by more effective and efficient technologies. The most common retrofits carried out in retail buildings are:

- Replacement of air handling units / RTUs
- Replacement of lighting and its control system
- Replacement of pump and fan inverters
- Replacement of chillers
- Installation of escalator motion detectors
- Extension of the BMS system
- Installation of air curtains
- Application of reflective film
- Installation of additional CO₂ sensors and VAV ventilation control
- Thermal insulation of flat roofs
- Replacement of car park lighting

Benefits of acquiring White Certificates

The white certificates system was created as a tool to stimulate investment to improve the energy efficiency of the Polish economy, enabling energy savings needed to meet the EU climate targets.

White certificates have many benefits for a company:

- reduction of electricity and heat losses,
- generating energy savings for end users,
- reducing the cost of doing business,
- lowering the carbon footprint by reducing greenhouse gas emissions,
- funds generated from the sale of white certificates result in a quicker reimbursement of the costs incurred for the modernisations carried out.

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Real estate - ESG regulatory environment

1. CSRD, pillar of ESG reporting

*EU Parliament and Council Directive
2022/2464 of 14 December 2022*

Corporate sustainability
reporting requirements

2. EU taxonomy, a framework for defining sustainable investment

*EU EP and Council Regulation 2020/852
of 18 June 2020*

Clarification of the criteria for defining
a project, including construction investments,
as environmentally sustainable

3. EU ETS, buildings, road transport and other sectors

*EU Parliament and Council Directive
2023/959 of 10 May 2023*

Inclusion of the construction industry
in the ETS, creating funding opportunities
and initiatives for the decarbonisation
of the sector

4. Energy efficiency performance of buildings

*EU Parliament and Council Directive
2018/844 of 30 May 2018*

Setting up a long-term strategy for the
renovation of existing buildings and energy
offsetting requirements for new buildings

5. SFRD: Promoting environmental aspects

*Regulation 2019/2088 of the European
Parliament and of the Council
of 27 November 2019*

Evaluation of projects (including real estate)
against sustainability objectives

6. RTS: Promoting environmental aspects

*Commission Delegated Regulation EU
2022/1288 of 6 April 2022*

Assessment of the compatibility
of projects with sustainable
development objectives



3.

PROPERTY
VALUATION



Impact of ESG on the estimation of property values

1. Introduction

The topic of the impact of ESG factors on property valuation has not resounded loudly enough to date. Meanwhile, the global real estate market, one of the main emitters of greenhouse gases, should become zero-emission in less than three decades. It is estimated that as many as 80% of the world's existing¹ buildings will still be in operation in 2050, and this best demonstrates the scale of the challenge facing the real estate sector.

The report 'Obsolescence = Opportunity: The Next Evolution of Office and How Repositioning and Repurposing Will Shape the Future of European Real Estate' by Cushman & Wakefield in 2023 showed that more than three-quarters (76%) of office buildings in Europe could be obsolete by 2030 unless owners invest in solutions to upgrade them or find alternative uses for them.

All market participants, including property valuers, face this challenge. Issues such as energy efficiency, rising property maintenance costs, the impact of rapidly changing EU legislation applying to buildings and the prevalence of multi-criteria certification have become typical aspects to be considered in the valuation process. Valuers need to be aware of the risks that may affect value, both the physical risks associated with climate change and the transformations associated with new regulatory requirements and market expectations, but also of the opportunities associated with, for example, energy saving optimisation measures carried out on properties.

A good approach would be to take a fresh look at traditionally described building features in terms of the way they meet sustainability objectives in both the short, medium and long term, whilst remembering what is emphasised in the RICS professional standard, amongst others, that "valuers are supposed to reflect the market and not create it".

¹ Call for action: Seizing the decarbonisation opportunity in construction, McKinsey

2. Legislative challenges

An ambitious but necessary milestone on the path leading to the attainment of the Paris Agreement goals is to upgrade 20% of the existing building stock to zero-carbon readiness by 2030. To achieve this, the deep renovation rate should be above 2% from now on. The renovation should also aim to achieve 60-75% savings in energy consumption. In addition, existing buildings should be adapted allowing installation of renewable energy sources and all new buildings should meet stringent new energy performance standards.

Legislative action on sustainability standards is progressing in the European Union. The main regulations under the Sustainable Finance Strategy of the European Green Deal are:

- Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on establishing a framework to facilitate sustainable investment, commonly referred to as the EU Taxonomy
- Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on disclosure of information related to sustainable development in the financial services sector (SFDR)
- as well as a Directive of the European Parliament and of the Council (EU) 2022/2464 of 14 December 2022 amending Regulation (EU) No 537/2014, Directive 2004/109/EC, Directive 2006/43/EC, and Directive 2013/34/EU with regard to corporate sustainability reporting (CSRD), which concerns organisational sustainability reporting but significantly affects the market as a whole.

Properties that comply with the technical classification criteria of the EU Taxonomy will increasingly be seen by investors as valuable assets as they enhance the sustainability credibility of their portfolios.

Under the requirements of the SFDR Delegated Regulation, financial market participants and financial advisers must publish statements about the adverse effects of investment decisions on sustainability factors (PAI - Principal Adverse Impact) on their website and describe them in pre-contractual information. Financial market participants, also including investment funds, are obliged to disclose how sustainability risks, which could have a material adverse impact on the value of the investment, are integrated into the investment decision-making and advice process, as well as publishing indicators for real estate investments. Mandatory indicators to be disclosed for real estate include the share of real estate related to the extraction, storage, transport or production of fossil fuels and the share of energy inefficient real estate in the portfolio. Non-mandatory indicators currently include energy consumption or Scope 1, 2 and 3 greenhouse gas emissions, i.e. both direct and value chain emissions and, in the case of new buildings or major renovations, also resource consumption.

The second parallel strand of the European Green Deal is the 'Fit for 55' legislative package. Some of the legislation associated with this package is still in the legislative process.

Key aspects of the impact of the Fit for 55 package on the property market in the coming years include:

a) Introduction of minimum energy efficiency standards for existing buildings

At the end of 2021, the European Union (EU) proposed a major recast of the Energy Performance of Buildings Directive (EPBD). The recast EPBD aims to accelerate the pace of building renovations, promote the use of renewable energy in buildings, and introduce a new EU definition of a 'zero carbon building' that would apply to all new buildings from 2027 and to all buildings undergoing renovation from 2030. The recast EPBD is also expected to accelerate energy-efficient renovations in the worst 15% of EU buildings and set minimum energy performance standards. The draft directive proposes dates by which buildings have to achieve certain energy classes and, for example, public and non-residential buildings have to achieve at least Class E by 2027 and at least Class D by 2030.

In Poland, we are still waiting for the introduction of energy classes.

Properties that do not meet minimum energy efficiency requirements will not be able to be traded, as is already happening in the UK, for example.

b) Commencement of systemic tracking of embedded carbon footprints

CO₂ emissions over the life cycle of buildings should be progressively taken into account, according to an EU methodology to be established by the European Commission. The obligation to estimate the carbon footprint will first cover new and then renovated buildings, for which Member States should set greenhouse gas reduction targets. According to the draft EPBD, this indicator is to be presented on the energy performance certificates for all new buildings from 2030, and for new buildings with a usable floor area over 2,000 m² from 2027. This will be another element to be taken into account when assessing properties.

c) Extension of emissions rights trading to cover the construction and transport sectors

The ETS2 will cover emissions from conventional fuels (coal, coke, fuel oil, natural gas) used to heat buildings. The new ETS2 is expected to impose a reduction target of 43% of emissions by 2030 compared to 2005 and is likely to take effect from 2026. Emissions accounting obligations will be imposed on suppliers and sellers of fuels used to heat buildings, which in practice means that the cost of allowances is to be passed on to end users. This is going to have an impact on property maintenance costs, with the greatest impact on unmodernised and highly energy-intensive buildings.

Adopting most of the regulations proposed² in the 'Fit for 55' package and the RePowerEU plan would reduce the European Union's CO₂ emissions by around 60% by 2030 compared to the levels recorded in the 1990s.



² source: <https://climateactiontracker.org/countries/eu/>

3. Professional standards

Sustainability and ESG issues are not a new concept in the RICS, Tegova and IVS Exposure draft standard IVS 104. In contrast, an example of a standard dedicated entirely to the topic of sustainability, which became a professional standard in May 2023, is the RICS association document "Sustainability and ESG in commercial property valuation and strategic advice".

The standard ensures a practical approach to sustainability and ESG and reporting requirements as part of professional advice and valuation. According to the RICS guidance, valuers should already have a working knowledge of the impact of sustainability on property values.

In order to achieve this, valuers should not only gather data, including on environmental risks, but also assess the extent to which the property in question currently meets sustainability criteria including environmental, social and governance (ESG). Valuers are also expected to express their opinion on the relationship between sustainability factors and the valuation, including commentary on the benefits and risks (or lack thereof). If sustainability and ESG factors are identified and considered to have an impact on value, they should be reflected in the valuation.

The RICS standard identifies the main opportunities and risks and describes the property characteristics that need to be taken into account when estimating the impact of sustainability factors on the valuation. Their importance depends on the property type, purpose, and scope of the valuation. More details can be found below:

- **Energy efficiency, CO2 emissions and the strategy for achieving low/zero carbon emission** – it is important here, for example, to compare costs and savings resulting from implemented energy efficiency measures or to verify additional revenues, e.g. generated by overproduction of energy from RES (Renewable Energy Sources).
- **Climate risks** – according to the RICS standard, valuers should consider the extent to which such risks may affect the property directly or indirectly in the short or longer term.
- **An approach to capex** – i.e. capital expenditure in the context of, for example, replacing building components and systems with better-performing ones to improve energy efficiency and reduce CO₂ emissions.
- **Financial and legal issues** – properties that do not meet regulatory requirements may face penalties and, in some cases, a decrease in value (transformation risk). Taxes levied on emissions or unsustainable aspects of a property can also reduce its value. Real estate financing is also increasingly dependent on the implementation of ESG strategies.
- **Benchmarks and certifications** – data and criteria used in sustainability and ESG related certification processes such as BREEAM, LEED, WELL, GRESB, SDG, ISO 14001 can be a valuable source of information for the valuer.
- **The way in which the property is managed** – which affects the actual meeting of standards and the extent to which the potential of the property is realised.
- **Functionality and usability of the property** – assessment in terms of adaptability or repositioning, which can extend the life cycle of the property.
- **Planning and development considerations**
- **Transport accessibility of the property** with a focus on public transport.
- **Social and human wellbeing considerations** – factors that affect the physical and psychological comfort of property users and tenant retention such as access to communal spaces, natural lighting, individual temperature control, and amenities such as showers, nurseries, crèches and food outlets, among others.

The catalogue of factors Tegova identifies is similar, but open-ended. Tegova additionally draws attention to the construction materials used, soil contamination and "green lease contracts".

4. Which building features are most relevant from the ESG point of view?

A global survey conducted by real estate consultancy CBRE among more than 500 real estate experts, entitled 'Global Investor Intentions Survey', revealed the importance of certain green features of a building for the value of the property and the decision to enter into a transaction. The aim was to identify features whose presence or absence would lead investors to pay more or seek a price reduction. Among the top five environmental features affecting the transaction, the eco-certification of the building was listed in first place and the ability to reduce the building's energy consumption in second place. Below are the results of the survey, which confirm how important the issues of energy saving or a building's green certification are to investors.

THE FIVE MAIN SUSTAINABILITY FEATURES AFFECTING THE TRANSACTION:

INVESTORS	THEY WILL PAY MORE (IF ANY)	THEY ARE SEEKING A PRICE REDUCTION (IF THERE IS NONE)	THEY REJECT THE BUILDING (IF THERE IS NONE)	TOTAL IMPACT*
Environmental building certification	47,1%	28,2%	14,1%	89,4%
Elements to reduce energy consumption	35,5%	42,4%	10,5%	88,4%
High resistance to the effects of climate change (e.g. flooding)	35,3%	28,8%	16,0%	80,1%
Intelligent technology that controls building functions to reduce environmental impact	55,0%	22,5%	2,5%	80,0%
On-site renewable energy generation	60,7%	14,7%	4,3%	79,7%

Source: CBRE Research

Among the communal features of the building, the most important factors, appreciated by investors, include access to public transport, facilities for pedestrians and cyclists, building elements affecting 'wellbeing' such as a canteen in the office building and having a Well certificate.

The survey also shows that, for 88% of respondents, reducing energy consumption and carbon emissions is the most important ESG issue that can affect property values.

5. Multi-criteria certification

Investors are increasingly making their own commitments to reach net zero emissions and are setting more ambitious targets than those set 2050. In the real estate sector, multi-criteria certification systems can help to achieve these targets and even more so once more criteria in line with the 'EU Taxonomy' are introduced into the procedure.

Multi-criteria certification of buildings has become a common element identifying commercial buildings in Poland. The international certificate is a transparent system that allows a multi-level view of a building and its assessment, taking into account environmental aspects, energy optimisation and social factors. Multi-criteria certification makes it possible to certify both new buildings and buildings already in use (the operational version in BREEAM is 'In-Use', in LEED 'Operation & Maintenance'). It is worth noting that certification of new buildings is carried out in terms of the design and construction phase, while the so-called operational certifications verify the operational processes and management of the property.

As shown in the report issued by the Polish Ecological Construction Association "Sustainable Certified Buildings 2023", there already is almost 37 million m2 of certified buildings in Poland, of which BREEAM certification is the clear leader (with a share of over 80%). The number of certified buildings in Poland has already exceeded 1,600 and recorded a 20 per cent year-on-year increase (as of March 2023). The number of certified warehouse buildings is currently growing at a faster rate, i.e. by 35% year-on-year, resulting in over 540 certified buildings and 55% of certified modern warehouse space. In the office sector, 90% of modern office space (Class A and B) is already certified, while in the retail sector, 60% of space is certified.

The most popular certification schemes: BREEAM and LEED are widely chosen by developers. There is an increasing number of buildings on the market obtaining higher levels of certification. As indicated in the PLGBC report, 49 per cent of buildings certified under the BREEAM system received a rating of 'Very Good', while 32 per cent and 2 per cent were rated 'Excellent' and 'Outstanding' respectively.

BREEAM Rating Benchmarks

Rating	%
Outstanding	≥ 85
Excellent	≥ 70
Very Good	≥ 55
Good	≥ 45
Pass	≥ 30
Unclassified	< 30

In terms of the second most popular certification system in Poland, i.e. LEED, which covers just under 14% of all certified buildings in Poland, a great convergence in ratings can be seen. The 'Gold' level (the second highest rating) was reached by 56% of certified buildings and 'Platinum' (the highest level of certification) by 36% of certified buildings.

Observations of investors' preferences show that they appreciate the value of a higher certification rating leading them to invest in new systems of water saving, energy or waste recycling management solutions or other solutions in communal areas, such as the provision of bicycle infrastructure or access to a canteen.

Since the pandemic, there has been a significant increase in interest in WELL Health-Safety Rating certification, which emphasises the comfort and health of tenants in buildings. The first WELL HSR certified building was an office building in Katowice in 2021, and now (as of 2023) more than 100 such certificates have been awarded. Certificates such as WiredScore and SmartScore assessing a property with regard to technological advancements and smart solutions have also appeared in the Polish market. Already, tenants from the technology sector such as, Google and Microsoft prefer to lease space in buildings that boast such certificates.

In January 2023, consultancy firm JLL published its 'Sustainability and Value' report based on an analysis of almost 600 commercial property investment transactions that took place between January 2017 and December 2021 in central London analysing the impact of the established criteria for a sustainable building makes on financial performance. The report indicates that BREEAM certification has helped to increase rents by more than 11% and property values by up to 20%. The report also indicated that there were no statistically significant differences between the various BREEAM levels.

6. Energy efficiency and, impact on maintenance cost

With the energy crisis forcing property owners and tenants to pay close attention to maintenance costs, there is strong interest in the topics of energy efficiency, opportunities to reduce energy and heat costs, the use of renewable energy sources and the application of smart building solutions to optimise the management of utilities, including electricity. Investors and tenants are increasingly willing to pay more for buildings with on-site renewable energy generation capabilities and technology to monitor and regulate energy consumption.

Analysis carried out by the consultancy firm Colliers shows that electricity prices in Poland are to remain high and the need to address tightening EU regulations in the area of alternative energy sources will increase. Currently, almost 70% of electricity in Poland is produced from coal-fired power plants. The availability of energy and the cost of CO₂ emissions will determine future price levels. The main objective and challenge facing commercial property owners and managers is therefore to manage energy in such a way as to reduce energy consumption while increasing the share of energy coming directly from RES.

The amount of energy produced from renewable energy sources in Poland is limited in relation to the needs of commercial buildings. There are several models by which owners can use energy from green sources. The strategy of purchasing energy with a direct contract with a renewable source (PPA - Power Purchase Agreement) offers many advantages, such as reducing the risk of further increases in energy purchase costs, ensuring the possibility of stabilising the cost of energy in the operating budget (service charge), or even reducing the risk of a lack of offers for energy or the termination of a contract for its sale. Not insignificant is also the possibility of generating savings with the rising cost of coal or gas and reducing the carbon footprint of the property. In addition to the tangible benefits, it is also worth mentioning the meeting of EU requirements (CSRD, EU Taxonomy), reductions of greenhouse gas (GHG) emissions in reported Scope 1 and 2 (Scope 1, 2), and the support for tenants in reducing GHG emissions in Scope 3 (Scope 3).

The focus on RES is in line with the REPower EU policy presented by the European Commission, which calls for the mandatory installation of photovoltaic systems on new commercial buildings with more than 250 m² of floor space from 2026 and also on existing buildings from 2027.

Property owners and managers are also considering the viability and cost-effectiveness of using a local distributor (DSO). In the classic model, energy sales are re-invoiced to tenants and form part of the service charge. Tenants cannot benefit from the TPA (Third Party Access) principle, which means that it is not possible for a tenant to use a local energy supplier's network to supply the electricity they buy from any retailer.

As part of an DSO, the energy company leases the energy infrastructure in the building, so the owner gains a fixed monthly lease rent, outsourcing of energy infrastructure maintenance costs and improved NOI. Tenants gain the ability to choose any vendor on terms they agree - they can sign PPAs directly or they can use their own farms.

This enables tenants to get better prices for electricity, build their own contracting strategy and be responsible for their energy consumption in terms of environmental impact.

Energy costs are becoming a more significant item in service charges. Colliers carried out an analysis of nearly 100 office properties in the market on the rate of service charges in 2022 and 2023. The analysis shows that the average increase compared to 2022 was around 30% in Warsaw office buildings, while in regional markets it was approximately 21%. In the office sector alone, electricity costs increased on average by PLN 4.9 per sqm, while in some buildings this cost group increased its share of the operating budget from around 12-15% to over 40%.

Particularly in sectors with a fairly high proportion of common areas, high energy costs have an impact on operating costs due to concessions to some tenants in reducing service charges or flat-rate billing.

7. Impact of climate risk on value

The climate crisis, which is occurring due to an increase of greenhouse gas emissions, has already caused the global average temperature to rise by at least 1 degree Celsius above pre-industrial levels. This increase in the average temperature is associated with serious negative consequences of an increase in the frequency and intensity of hurricanes, droughts or heat waves and extreme precipitation events that can lead to flooding.

The Paris Agreement aims to strengthen the global response to the threat of climate change by working to keep the global temperature rise to well below 2 degrees Celsius above pre-industrial levels by 2100 and to continue efforts to limit the temperature rise to 1.5 degrees Celsius.

A JLL survey from 2020 showed that 78% of investors considered climate risk to be a financial risk. From the point of view of the investor or owner, but also the tenant of a property, the emissivity of a given building can be a criterion for assessing its quality and value.

Reducing the negative effects of the climate crisis, including a reduction of greenhouse gas emissions and the continuous improvement of energy efficiency, should be permanently embedded in the actions taken by the real estate sector players. Significant is that currently only 20% of emissions come from construction processes globally, while about 80% come from the operational phase of buildings³.

An individual assessment of the occurrence of these risks is extremely important for both the decision to locate a property and the choice of investment strategy. It also becomes natural to forecast the costs associated with climate change, such as additional property insurance, estimating the energy required for cooling, as well as assessing the possibility of ensuring uninterrupted power supplies. Potential reductions in energy or water supply can be fundamental hindrances to business operations. There is a risk that leases could be terminated or rent renegotiated. There may be questions about the continuation of business operations in a region subject to increasing climate risks.

Faced with the risk of rising water levels, investors should determine whether the property they plan to build in an area identified as a possible future floodplain will have time to depreciate economically over the assumed investment period. It may also be the case that the planned development will be considered a non-corporate development.

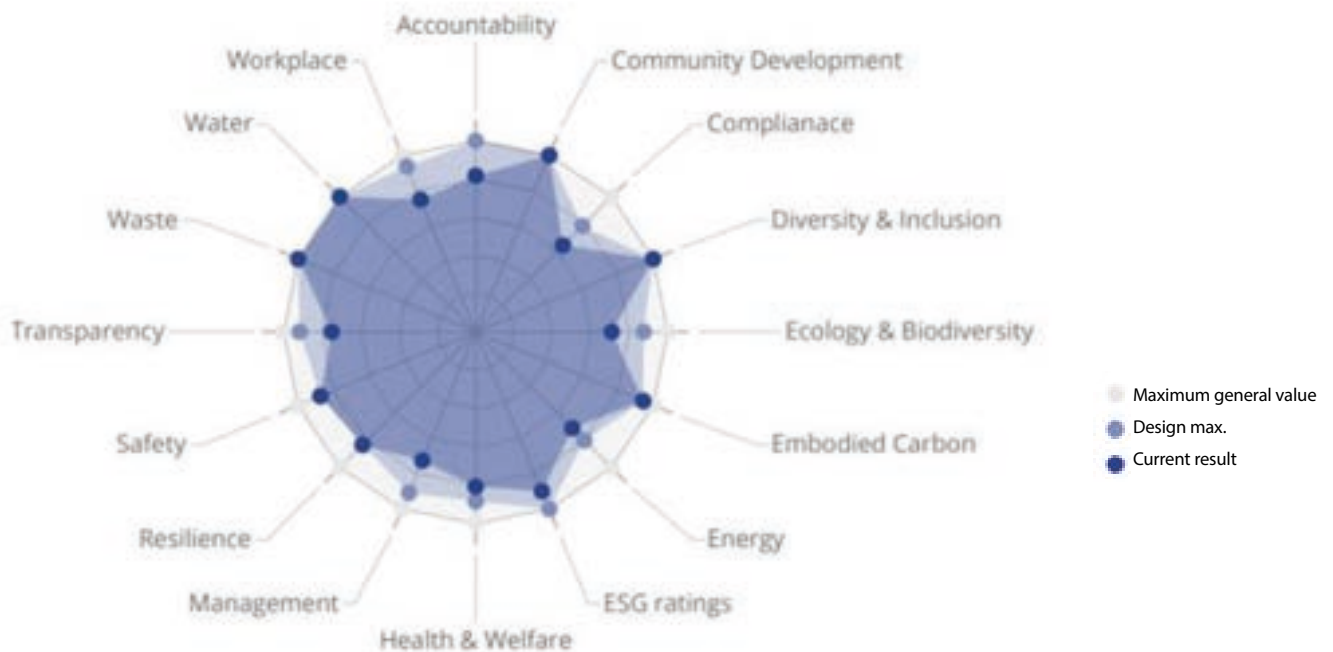
#CASE

In the case of the ESG audit that Colliers carried out for Cotton Warehouse, 136 indicators and 15 performance indicators (KPIs) were analysed. The percentage results presented for each source (KPI) should be interpreted as the ratio of opportunities and risks associated with the project.

In the process, both the average compliance opportunity rate and the average compliance risk rate were estimated. Annual CO₂ emissions (kg/CO₂/e/sqm) were calculated in accordance with Colliers' proprietary methodology, and the year in which the building's carbon footprint would fall off the decarbonisation path stipulated by the Paris Agreement was determined. The property's main opportunities were also identified, which included reducing the risk of the potential impact of extreme temperatures on HVAC systems and facades through appropriate property design or a sustainable rainwater drainage system for watering vegetation.

Risks were identified as, for example, the lack of openable windows or the lack of building installations designed to continuously monitor the quality of the indoor environment.

³ Źródło: IEA



Source: Colliers ESG Due-Diligence-Summary Report - Cotton Warehouse

Experts from Cushman&Wakefield Poland point out that it is becoming increasingly common to perform Net Zero Carbon analyses and create decarbonisation strategies for real estate.

The Net Zero Carbon analysis enables the planning of a decarbonisation pathway over a longer term. During the analysis, an energy audit is carried out and the CRREM tool described below is used to analyse different scenarios to reach Net Zero Carbon by introducing potential technical improvements to the building identified during the analysis. Opportunities involving, among other things, optimising the operation of existing building systems, such as HVAC or building automation, are analysed first. Monitoring and optimisation of the building's thermal energy use, heat recovery and process water are introduced, and leaks in installations rectified. Measurable savings are also achieved by replacing lighting with LEDs, installing photovoltaic panels, or using adiabatic cooling.

The next step of the Net Zero audit is to estimate the capital expenditure to support the decarbonisation of the building in the medium to long term, as well as ways to acquire energy from renewable sources.

8. CRREM tool

Investment funds use tools such as the **Carbon Risk Real Estate Monitor (CRREM)**, among others.

CRREM is a leading global initiative that has developed a tool that allows investors and property owners to identify and assess the risks associated with excessive carbon emissions in buildings during occupancy in the context of regulatory requirements. The CRREM tool is based on a building's energy consumption data and shows in practice how a property is positioned on a decarbonisation path in line with the Paris Agreement goals of keeping the average global temperature rise below 1.5°C by achieving net zero emissions by 2050.

CRREM introduced the concept of a 'stranding year', which is an indicative period during which a given property will not be in line with the national and sector-specific decarbonisation pathways stemming from the Paris Agreement and will require capital expenditure and thus may become less marketable due to transformational changes towards a low-carbon economy.

Transformational changes include new environmental challenges, stringent sustainability regulations or changing social norms and market relationships, including tenant and/or investor demands. Non-compliance with the low-carbon economy will make energy inefficient or fossil fuel-dependent properties less desirable and considered riskier investments.

The CRREM tool helps to plan the capital expenditure required to adapt buildings to improve energy efficiency and to estimate and minimise the transformation risks that may affect the property in the short, medium, and long term. The analysis of these risks helps to minimise their negative impact on the value of the property, so it is valuable to both the property owner and investors and can also provide information in the valuation process.

From a practical point of view, estimating the costs of replacing building systems or other elements connected with modernisation of real estate is not a complicated process. It is much more difficult to calculate, for example, the risks arising from the imposition of new taxes or charges related to excess CO₂ emissions (which is also an element of transformation risk). Meanwhile, according to estimates made by an international organisation that creates internationally recognised benchmarks for tracking ESG performance for the real estate industry - **GRESB** (Global Real Estate Sustainability Benchmark, which analyses companies annually for their ESG performance and currently brings together more than 1,800 real estate companies, real estate investment funds and developers worldwide) - the average 'stranding year' in the real estate sector for Europe is already 2025.

And this is a clear signal that the transformation process needs to accelerate significantly.

9. Investment expenditure related to ESG risks

Although the capex related to ESG risks described above requires a specialised view of the property, in principle it is no different from other costs incurred to bring the property into compliance with new legislation and market expectations. Thus, capex related to ESG risks, should be treated like any other capital expenditure driven by local law or market expectations. The pace at which ESG-related investment approaches are changing requires consideration of how to recognise capex costs in valuation. This will have a significant impact on the majority of assets in the market, especially as there is increasing uncertainty about the costs required, particularly for older buildings.

It is worth noting that, until a few years ago, investment in environmental and social factors which increased the value of a property could generate a so-called "green premium", whereas now and in the years to come, it will primarily serve the purposes described above, i.e. maintaining and preventing the loss of value of a property.



10. Carbon bubble

There is a concern that if property valuations, do not reflect the costs and benefits of decarbonisation, as well as other factors related to the transition such as non-compliance with future regulations or failure to meet market expectations and ESG requirements, a so-called '**carbon bubble**' may emerge. If it is allowed to develop and we start to include the factors related to the transition of a low-carbon economy in valuations too late, there is a risk that the so-called 'carbon bubble' could lead to significant price adjustments at some point.

At the same time, valuers still do not have sufficient market data to adequately assess ESG-related transformation risks in valuations.

This is the view of, among others, experts at The Urban Land Institute Europe (ULI), who have warned the real estate industry of a serious crisis unless standards are developed to allow the effects of transformation to be realistically reflected in valuations.

ULI, as part of its developed Transition Risk Assessment Guidelines for Consultation, has published transition risk assessment guidelines to help property owners and managers pass a critical barrier to decarbonising real estate. The proposed guidelines are a further step that can help the industry standardise the way it assesses and discloses transition risk.

The purpose of these guidelines is to standardise the disclosure of transformation risks throughout the value chain of real estate investments. ULI has identified transformation risks that have a material impact on real estate assets now and will have in the future. These include decarbonisation costs, energy costs, carbon pricing, property depreciation, change in rental income, vacancy due to decarbonisation measures, embedded carbon footprint or exit yield.

For example, in the case of leases, ULI points out that today the risk description refers to this potential change in rental income resulting from decarbonisation measures. Valuers are already seeing an increase in rental income for the best office buildings in terms of energy class. In addition, a reduction in potential income for buildings with very low energy efficiency is also anticipated.

However, today we do not have a causal link between decarbonisation and value, whereas we can value the violation of minimum norms or standards for buildings.

ULI predicts that in the future these risks may be broadened to include the impact of factors other than decarbonisation itself.

11. ESG from the perspective of the property owner and purchaser

Investor behaviour and the property market provide further important insights into the impact of ESG on liquidity and asset value. The energy crisis of recent months, which has driven up the cost of real estate, as well as the growing awareness of environmental and social factors, has put pressure on property owners to incorporate ESG objectives into their investment policies. 60% of respondents to a survey conducted by CBRE said that they already include ESG factors in their investment strategies.

Investor motivation surveys help interpret which ESG goals are currently most important to investors, and so reducing greenhouse gas emissions is important to 74% of investors from Europe and 80% of investors from the US.

In recent years, a trend can be observed whereby investors are actively integrating ESG issues into their investment processes. The result is the development of sustainable investment based on the management of risks related to environmental and social aspects. An adequate and informed assessment of these risks is crucial for the value of the assets of the investor in question and, above all, the value of developed properties. Investors expect valuers to assess the risks associated with environmental and social aspects and reflect them in the valuation of the property concerned.

However, it should be stressed that valuers in principle always comment in their valuation reports on the environmental conditions of the property being valued, describe what certificates the property has, analyse the electricity consumption, and describe the operating costs of the property comparing them with the level of market operating costs for similar properties, comment on geological aspects, hydrology, the presence of flood risk, and describe environmental risks in a broad sense. It can therefore be concluded that ESG aspects are not really anything new for valuers. However, it is expected that these risks are not only defined and described by the valuers, but also included in the valuation in a quantifiable way that allows the investor to translate the ESG issues and associated investment into added value for the property.

Investors hope that valuers, having analysed the ESG strategies including environmental and social aspects implemented by the property owner, will take these into account when assessing the risks associated with the property, and reflect this commensurately in the capitalisation rate and discount rate for the property.



12. How do investment funds approach the preparation of their property portfolios to meet ESG requirements under EU legislation?

The increasing number of ESG regulations in recent years has obliged investors to implement an ESG strategy that addresses both the financial and non-financial aspects of sustainable management. The benefits that investors see from implementing an ESG strategy are mainly:

- a reduction in operating costs,
- extending the life of the property,
- increasing and maintaining a high level of property occupancy,
- being able to source energy from alternative renewable sources, and
- minimising the negative impact of climate risks.

When investors prepare their properties for ESG-related regulations, they first commission energy, environmental and waste management audits to analyse the property in question, in terms of energy efficiency and environmental impact. Then, on the basis of their analyses, they expand their capital expenditure budgets (**so-called capex**) to include cost items such as environmental capex, which primarily includes expenses related to the sustainable management of the property. These include expenses aimed at significantly reducing the consumption of utilities such as electricity, water, heating or gas. Many investors use the 'Measurable' platform and CRREM, which is one of the modules implemented in this platform that collects, among other things, data on the consumption of utilities and waste management (amount of waste generated with a breakdown by fraction).

In the case of retail properties, but not only, social aspects are also an important part of ESG. As part of this strategy, owners and managers of retail properties carry out activities to involve local communities, cooperate with local institutions, and as part of this cooperation, organise, for example, free events for residents to promote **environmental protection**. In turn, training programmes or social media webinars are organised for the tenants of retail facilities to promote sustainable management policies.

Another element of the ESG strategy being implemented by investors and property owners is the introduction of so-called green leases. This involves the inclusion of so-called 'Green Clauses' in leases, which are also defined as 'Sustainable Property Management Guidelines'. The guidelines include recommendations for tenants to commit to conducting their business in rented space with an eye on the environment. In particular, operational energy efficiency, where the tenant will analyse feasible environmental improvements to be implemented, aims to reduce energy consumption and CO₂ emissions. Operational water management to reduce water consumption and measures to reduce the carbon footprint through, for example, the use of alternative modes of transport and the promotion of public transport are also recommended.

The catalogue of environmentally friendly sustainable management practices enshrined in leases should be market standard, which should also be reflected by the valuer in the valuation of the property. This will have an impact on the determined value of the property if only through an improved image of the property and a better competitive position, optimisation of operating costs and thus meeting sustainability targets and improving the image of the company.

In order to understand the ESG analysis of assets, investors are increasingly conducting additional assessments such as ESG DD, ESG Audit or ESG Assessment, etc. Their main objective is to understand the overall ESG credentials of an asset so that investors are able to protect its value and minimise risk.

13. 'Green premium' or 'brown discount'

All the aspects described above provide a new perspective on real estate in terms of its compliance with regulatory requirements, the possibility of obtaining bank financing for a given investment or asset purchase and the expectations of market participants. An analysis of whether the Polish market is already observing a 'green premium' for buildings with the best certification, energy efficient, and using RES, or rather the so-called 'brown discount' for buildings that do not meet regulatory and market expectations, may be important in this respect.

Analysing the changes that are taking place in the Polish commercial real estate market, we observe a "brown discount" rather than a "green premium". A certain set of market features, including those already discussed in this chapter, have become a standard expectation of the market, while the lack of these features makes the property more and more exposed to the occurrence of a "brown discount" related to the need to incur capital expenditure in the near future, e.g. for performing an energy audit, obtaining a green certificate for the property or improving energy efficiency. Research indicates, and despite the currently limited transactional record, that investors are planning or already making sustainable investments on their properties to defend against a lowering value of their asset or to protect the value rather than to achieve a premium. Strengthening brand image or regulatory issues are much less often the motivation for change. Nor is protecting the value the only goal. The strategy of some funds is already based on investing only in environmentally and socially friendly buildings.

Demonstrating a 'green premium' or 'brown discount', depending on what balanced set of features a building has, should be based on current market records and a specific analysis of investor/buyer approaches. An analysis of impairment where a property does not have a certain standard set of features can be helpful in demonstrating what action needs to be taken on the property. A discount is expected when a building does not have certain desirable features, for example, LED lighting, access to cycling facilities, inefficient and inflexible space, poor air quality and a lack of quality monitoring or access to a well-maintained and biodiverse green space. On the other hand, certain features are desirable to some investors who are able to pay for a specific premium, for example, access to renewable energy on the property.

It is worth noting that the presence or absence of these features is also increasingly influencing tenants' decisions on building choice and, in an increasing number of cases, eliminating substandard buildings from consideration.



14. Challenges in integrating ESG aspects into valuation

In a valuation, traditional tools are used, i.e. the analysis of supply and demand, the assessment of market rents and the profitability of a property investment. An analysis is made on how the characteristics of a sustainable property affect the factors analysed so far and to what extent they determine the investment decisions made by market participants.

The limited availability of data and indicators for comparison is one of the biggest challenges when considering ESG aspects in property valuation. Without reliable evidence, especially from investment transactions, the difficulty of estimating what role an environmental or social factor plays in an investment transaction and how to quantify it in the return on investment is exacerbated.

The difficulty also lies in the fact that in the ESG approach we are talking about securing future value, which is very important from the property owner's point of view, while it may not affect the value of the property at this point in time and lacks confirmation in the market records that have occurred. An example would be counting the carbon footprint, which is not part of the valuer's assessment, whereas typically, valuers should refer to documents such as green certificates or the energy performance certificate.

The approach of valuers at this point is more pragmatic than ambitious. This is deliberate in order to provide consistency and certainty so that the market can collectively move forward in recognising standard practice on how to incorporate sustainability considerations into asset valuation.

An opportunity for valuers could arise, for example, in the assessment of climate and transformation risks, which could form part of the strategic advice offered to clients in both property valuations and investment appraisals. However, robust guidance on how to signal these risks within valuations is lacking at this point. Nor does every valuation method allow such risks to be taken into account directly. On the other hand, when valuing for debt security purposes, banks clearly signal the need to consider ESG aspects and, especially for this valuation purpose, the valuer should highlight the possibility of green transformation for a specific building and, in case of difficulties in adapting the building, describe this in the risks.

It is also worth noting that, with regulatory and market adaptations, what currently appears to be a novelty will become standard, as changes are taking place in the market aimed at broadening and systematising knowledge of how well real estate is responding to climate challenges.

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4.

GREEN LEASES

Examples of Best Practices of Green Lease Agreements in Poland - *Introduction to Green Leases*

What is a „green” lease?

A “green” lease agreement is a standard lease agreement supplemented with additional provisions or annexes aimed at defining the mutual efforts of the parties to ensure that the leased building and the rented space within it are used and managed in a manner conducive to sustainable development and improving the environmental efficiency of the building and leased spaces.

In practice, the concept of a “green lease” is used in reference to any type of provision that aims for sustainable use and management of the building.

As of now, there is no legal requirement in Poland for the use of any form of “green” lease agreement, and there is no widely used and established template for “green” provisions. Based on the analysis of lease agreements used in the market, both “dark green clauses,” which introduce absolute obligations on the parties, and so-called “light green clauses,” which are more general provisions that specify that each party will “use best efforts” to comply with certain sustainable development principles and improve the environmental efficiency of the building, can be found among “green provisions” of lease agreements.

Commonly encountered “green” provisions in the market include those specifying the implementation of finishing works in a way that ensures economical use of construction materials with minimal negative impact on the environment, clauses regulating the certification of the building and the leased property, and clauses limiting the consumption of utilities and CO₂ emissions.

Why are “green” lease agreements needed?

Sustainable development has become a significant element of the long-term strategy for many entities operating in the Polish commercial real estate market. In some cases, the strategy has been voluntarily adopted based on non-binding international standards (e.g., GRI or TCFD). However, in many cases, lease agreement parties are part of capital groups subject to increasingly detailed regulatory obligations, particularly regarding the disclosure of information related to investing in sustainable investments. Interested entities are committed to conducting business based on so-called sustainable investments. Demonstrating to regulatory authorities that such an investment is being made requires reflecting this in relevant documentation and reported data.

Year after year, we observe a growing interest among investors and fund managers in the results related to sustainable development in real estate. ESG factors increasingly influence business decisions, and property owners also assess their real estate portfolios in the context of ESG factors. As tenants pay attention to sustainably managed buildings, there is a growing demand for rental space in green buildings. Banks financing real estate transactions play a significant role in intensifying efforts related to sustainable development of other entities operating in the real estate market – banking regulatory obligations affect, among other things, the necessity of collecting information from entities receiving financing.

ESG in relation to commercial real estate is not only a construction phase but also a property usage phase. Satisfactory “ESG results” of real estate require collaboration between the landlord and the tenant. “Green” lease agreements can become a useful tool regulating this collaboration while serving the implementation of strategies for sustainable development.

“Green” lease agreements also enable both lessors and tenants to achieve cost savings.

Regardless of the type of property, “green leases” can help lessors and tenants optimise the ESG parameters of the building while simultaneously reducing property operating costs - maintenance fees or utility consumption costs (both current and projected). “Green” lease agreements may include provisions for implementing energy-efficient solutions, water-saving systems, or waste reduction, which can lead to lower operational costs and increased building profitability.

In recent years, numerous political and legislative factors have focused on reducing carbon dioxide emissions and increasing the energy efficiency of buildings. "Green" lease agreements can aid in limiting greenhouse gas emissions (by reducing the building's carbon footprint) and contribute to reducing reliance on non-renewable energy sources. Contracting parties may decide, for example, to reduce the maximum/increase the minimum temperature in the building/premises to appropriately limit excessive heating or cooling (depending on circumstances) or establish a gradual increase in the share of renewable energy sources. The above can bring benefits to both parties, especially in the context of obligations related to reporting environmental factors (including the carbon footprint). However, it should be noted that, in addition to the impact of commercial buildings on the natural environment, we have recently observed efforts to improve their impact on social issues.

"Green clauses" in lease agreements addressing these needs can contribute to providing higher-quality spaces for tenants, their employees, and customers, allowing them to make greater use of the buildings and thereby increasing their commercial attractiveness. This, in turn, aids in building positive relationships between lessors and lessees, fostering closer collaboration.

Implementation of "green clauses" in lease agreements, combined with effective building management, can reduce operational costs. It can also assist both the lessor and the tenant in fulfilling strategies, commitments, and regulatory requirements (including reporting obligations) in the realm of sustainable development. The implementation of sustainable practices can enhance the public image of the property, and consequently, the lessor and the tenant.

It seems that for banks, "green" lease agreements will become a standard for commercial real estate in the not-too-distant future and one of the tools confirming that a given entity is implementing an ESG strategy. Banks will require their counterparts to confirm that lease agreements contain green clauses.

Of course, much will depend on the specific provisions of the "green" lease agreement. However, it is indisputable that the implementation of "green" agreements can contribute to increasing the attractiveness of real estate assets, especially for banks, institutional investors, or tenants from large capital groups who prioritise sustainable development issues. Entities demonstrating consideration of the impact of sustainable development on their property portfolios, leased or financed properties, showing awareness and a plan of action to address current and future legal regulations, are likely to have a competitive advantage.

Legal regulations regarding "green leases":

Currently, there are no regulations governing "green leases" in Polish law. There are also no uniform standards for such provisions developed by industry organisations, as is the case in some Western European countries.

The situation is somewhat different at the EU level. Recently, the European Union adopted a legislative package as part of the so-called "Green Deal." EU member states confirmed in it that achieving zero carbon emissions and sustainable development of buildings is a priority within the EU development strategy. Various solutions prepared under the "Green Deal" serve as incentives for introducing pro-environmental changes in the real estate sector.

In this regard, particular attention should be paid to two legal acts – the EU Taxonomy and the CSRD directive, expanding reporting obligations related to the environmental impact of business activities.

The EU Taxonomy introduces criteria that allow determines whether a particular business activity contributes to achieving EU environmental goals. These guidelines will also apply to the assessment of real estate investments in terms of meeting pro-environmental standards.

From January 2023, the CSRD directive is also in effect, introducing standardised reporting obligations in the ESG domain. It is estimated that the new reporting obligations in sustainable development, including the impact of businesses on the environment, will directly affect approximately 50 thousand companies in the EU. As part of environmental reporting, entities will be obliged, among other things, to demonstrate their actions and policies related to the use of natural resources, and in certain situations, also those of their suppliers, contractors, and business partners. This will also involve the necessity of recording greenhouse gas emissions (carbon footprint), for example, in buildings used for business activities.

Furthermore, in line with legislative plans under the "Fit for 55" initiative, the European Union is undergoing further changes regarding the energy performance of buildings. Work is also underway on a new directive on the energy efficiency of buildings (EPBD IV). These changes aim to achieve zero-emission status for all buildings by 2050. As a rule, by 2028, all new buildings will need to be emission-free, and existing non-residential buildings will need to undergo renovations within the next few years to increase their energy efficiency. There is also an expected obligation, with some exceptions, to install photovoltaic systems on all new and existing buildings, promote electromobility, and implement intelligent systems to optimise resource consumption.

The implementation of environmentally friendly solutions in real estate, mandated by the aforementioned legislation, will have an obvious impact on lease agreement provisions. It is sufficient to mention the obligation to use environmentally friendly solutions during adaptive work, the necessity of reporting resource consumption, etc.

It should be noted that despite the lack of specific legal regulations, the trend of incorporating "green clauses" into lease agreements in the Polish real estate market has recently gained momentum. An increasing number of not only lessors but also tenants are advocating for the inclusion of provisions in lease agreements aimed at developing environmentally friendly standards for the use of premises or spaces. This is particularly noticeable in the case of tenants from large capital groups, who are or will be obligated to report on ESG matters in the future. They will be seeking spaces in buildings that not only meet high-quality standards but also genuinely contribute to sustainable development.

At the moment, however, the "green provisions" introduced into lease agreements typically consist of general clauses involving mutual commitments and the establishment of best practices. As a rule, the parties do not anticipate sanctions for their violations, such as contractual penalties or termination of the agreement. However, this situation may change with the growing environmental awareness of entrepreneurs and the emergence of new legal obligations on both the lessor and tenant sides.

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Examples of green provisions in leases

The table summarises and groups the so-called green provisions practiced on the market into the main subject areas of such clauses, i.e. defining common goals for sustainable use and management of the property, concerning cooperation, including exchange of information between the landlord and the tenant, certification of facilities, optimisation of utility consumption and CO2 emissions, as well as technical requirements related to the leased space and the building. Presented are the most interesting, in our opinion, examples of green provisions that can be encountered in the market today. Through the presented summary, attention should be drawn to the variety of solutions used, but this is by no means a collection of all regulations that can be introduced into a lease agreement. With increasing awareness of sustainability as well as changing regulations, the list of recommended provisions will grow and it will be possible to create uniform standards for a green lease agreement.

SUBJECT / PURPOSE OF THE PROVISION	EXAMPLE OF GREEN RESOLUTIONS	COMMENTARY
COMMON GOALS AND COMMITMENTS OF THE PARTIES	- The parties are aware of their responsibility for the quality of the environment as a result of which they seek to protect natural resources and the climate, as well as foster the development of the local labour market. With the above in mind, the Parties agree to undertake an initiative to promote the economical and cost-effective use of natural resources and energy in the management and use of the leased premises, to avoid emissions, and to ensure constructive cooperation in order to introduce innovative ways for the building to optimise its consumption of natural resources and energy, taking into account economic, environmental and social aspects ("Sustainable Use and Management"). - It is the common intention of the landlord and tenant that the use of the building (including the premises) be done in an environmentally friendly manner. (...) to ensure environmentally friendly use of the building/ (including the premises), the landlord and tenant agree to take measures to reduce: » electricity consumption, » water consumption and the amount of waste produced, and furthermore declare to: » segregate waste, in accordance with the rules of the building and allow recycling (processing) of waste; » promote the use of environmentally friendly materials and equipment; » promote among their own staff and encourage their contractors to use the building in a sustainable manner, including the use of environmentally friendly means of transportation to the building and when making deliveries. - Mutual commitment by the parties to give special attention to environmental issues in making decisions about the building and activities undertaken in the building, including, in particular, taking into account the effect of decisions/ activities on the consumption of energy, water and other resources, as well as the production of waste or pollution. - The Parties undertake to cooperate and to inform each other (when called upon by the other Party) about the measures taken in implementation of the commitment mentioned above. Indeed, the purpose of achieving the best results is to properly coordinate the measures taken by the Parties. - A statement of intent by the parties to adhere to the goals of sustainable development in the use and management of the leased premises, as well as the responsibility to protect natural resources and the climate in the interest of future generations. - The landlord is entitled to have the management services, the costs of which are passed on to the tenant, provided in a different, greener manner than is technically and economically absolutely necessary in order to promote the Sustainable Use and Management of the leased premises [whereby the increase in costs, in such a manner, may only be [10]% higher than the most favourable offer that does not take into account the principles of sustainable management]. - The Parties are aware that the Parties' compliance with EU and national standards and requirements for broader sustainable development may require: (1) certain expenditures and adjustment work, which (i) may affect the type and amount of the service charge, (ii) may result in the removal or addition of new costs within the service charge, and/or (iii) may affect the way service charges are billed to take into account the source of the cost generated by individual tenants, including, in particular, to charge individual tenants 100% of the costs generated by a given tenant/ may affect the manner in which maintenance fees are billed due to the distinction between tenants participating in the costs of introducing Sustainable Management and Use solutions (in particular, by billing the costs charged in connection with the use of Sustainable Management and Use solutions only to tenants participating in the costs of the changes introduced).	- Such provisions are most often in the nature of a directive, an introduction to define a common philosophy and intentions regarding the conduct of the parties to the agreement during the lease. They constitute general obligations of the parties to act in accordance with the spirit of sustainable development and environmentally friendly actions. Based on them, the parties to the lease establish general goals for using the building/location in the most environmentally sustainable manner. - These provisions may result from a group ESG strategy/program adopted by the landlord, or from building certification requirements. - As a general rule, the provisions presented provide a starting point for further discussions and agreements between the contracting parties on specific rules of interaction in the ESG area. For example, a general commitment to introduce environmentally friendly solutions in the course of the building's operations may later develop into a landlord's obligation to use green cleaning products in the building, or to reduce utility consumption. - The provisions in question can also provide guidelines for interpreting the other provisions of the agreement, i.e. in the spirit of sustainable development. - Provisions on information obligations to the landlord may consist, for example, of the tenant presenting to the landlord: » a list of (environmentally sustainable) building materials used for the adaptation work, » information on electricity and water consumption in the leased premises, » certificates of the origin of electricity, adopted policy on the reduction of utility consumption, etc. The parties may also detail the aforementioned information obligation, specifying its frequency and form. - Failure to comply with the provisions in question, due primarily to their general wording and often the nature of recommendations or obligations to cooperate rather than specific obligations of the parties, is not, as a rule, currently associated with sanctions. The possible introduction of penalties for the parties' failure to comply with the obligations in question, on the other hand, remains to be considered by the parties to the lease agreement in each case. - It should not be forgotten that even such general provisions in the agreement, can generate additional costs for both parties to the lease (e.g., the obligation to record consumption or calculate gas emissions, use more expensive green materials). Therefore, as an incentive for the tenant to use the premises in an environmentally sustainable way, additional incentives can be introduced, e.g. additional rent discounts, free training/workshops, etc. However, regardless of the introduction (or not) of a system of incentives for the tenant to act in the spirit of sustainability, in order to avoid doubts about the legitimacy of the tenant incurring additional costs related to the implementation of ESG standards during the lease, it is necessary to regulate this issue very precisely in the agreement, e.g. in terms of the catalogue and quality of services covered by the service charge, or within the provisions for repair work in the premises (type of materials used). - In line with the EU's sustainable development goals, it is only a matter of time before new mechanisms emerge to oblige entities operating in the EU market to take measures to achieve established climate, environmental and other sustainability goals. Compliance with these obligations will result in the need for additional expenditures (e.g., in the pursuit of zero-carbon buildings), while at the same time creating savings. Also, market participants themselves may set additional goals aimed at, for example, reducing CO2 emissions into the atmosphere even before widespread regulation in this regard is introduced. They will certainly be motivated to do so by the obligation under the CSRD to disclose in their reports a plan for limiting the increase in global temperature by 2030 and 2050. Since leases are most often concluded for 5 years or more, and changes in either regulation or strategy are likely to happen sooner rather than later, it is in the interest of all parties to have at least preliminary provisions already in place at this stage.

SUBJECT / PURPOSE OF THE PROVISION	EXAMPLE OF GREEN RESOLUTIONS	COMMENTARY
COMMON GOALS AND COMMITMENTS OF THE PARTIES	The Parties further agree that the introduction of technical solutions to raise the adaptation of the building or the subject of the lease to the principles of sustainable management and use may also cause temporary restrictions on the use of the building or the subject of the lease (in particular, in connection with the conduct of relevant adaptation activities). However, each Party that will carry out such activities undertakes that they will be carried out in a manner appropriate to their scope and that they will not cause undue hardship to other parties using the building.	- Provisions of this kind can be controversial insofar as they explicitly provide for a change (and, above all, an increase) in costs within the service charge. Landlords, for obvious reasons, want to protect their interest already at this stage by passing on additional costs to tenants. In doing so, it will be important that these costs are linked to the new regulations, so that no doubts arise as to their legitimacy. - Also, the mechanism regarding the settlement of costs between individual tenants must be adequately transparent and justified. Otherwise, it may be treated as an unfair differentiation of individual customers that is an act of unfair competition. Therefore, a possible mechanism for settling maintenance fees must make the degree of burden on individual tenants dependent on their compliance with the requirements and obligations described in the regulations. The introduction of an appropriate algorithm, differentiating the status of a tenant depending on whether it meets the requirements related to the principle of sustainable development may even be seen as a necessity - so that entities acting in a pro-environmental manner obtain tangible benefits from such behavior, which will encourage further such actions.
DIALOGUE BETWEEN THE PARTIES	- Promote among its own staff the use of environmentally friendly means of transportation to get to the mall. - The parties shall take steps to ensure that their personnel and the third parties they engage are aware of the importance of the proper implementation of this section. - The parties will hold regular meetings (as often as necessary) to improve the principles of environmentally friendly use of the premises. The subject of such meetings will be primarily: » exchanging information regarding electricity and water consumption, in addition to the amount of waste generated, information regarding segregation and enabling recycling (processing) of waste, carbon footprint emissions, and furthermore regarding the parties' inspections of the main equipment serving the premises, respectively, with the landlord compiling said information with respect to the common areas, and the tenant compiling said information with respect to the premises; » setting joint strategies and goals for reducing energy and water consumption, reducing waste generation, optimising waste segregation, reducing the carbon footprint generated, promoting environmentally friendly forms of transportation, and in other areas that may contribute to using the premises in an environmentally friendly manner; » analysing and summarising the implementation of previously established strategies and goals. - Each party shall designate its representative authorised to represent the party in coordinating the activities referred to in this section. - The parties agree that in implementing solutions for environmentally friendly use of the building (including the Premises), the parties shall act on the basis of environmental laws, standards, recommendations and guidelines of relevant environmental authorities ("EIA Regulations"). In the event that the EIA Regulations are inconsistent with the provisions of this Section, neither party, shall deny the other party permission to deviate from the provisions of this Section. - Landlord and Tenant shall mutually cooperate in providing the Tenant with any information reasonably requested by the Landlord (information the Tenant shall be able to obtain) relating to energy and water consumption and waste management statistics for the Premises (but only at reasonable intervals) and in providing the Landlord to the Tenant with any information which the Tenant reasonably requests (but only at reasonable intervals) relating to analogous statistical data relating to the Common Areas, in all cases on such terms as the parties may reasonably agree.	Adequate exchange of information between the tenant and the landlord, as well as cooperation, is important not only in terms of the introduction of sustainability principles themselves, but also in terms of the regulations currently being introduced, including reporting. While the catalogue of actions the parties can take to convince each other to act in accordance with these principles, or even to provide the information necessary for the preparation of reports, is limited, every market participant should (and it is possible that future regulations will explicitly introduce an obligation in this regard) make every effort to do so. Such an assumption can be seen in the reporting policies introduced by the CSRD, where there is a rule along the lines of "comply or explain," according to which the entity preparing the report should describe the efforts made to obtain information about its value chain, the reasons why the information could not be obtained, and the entity's plans to obtain all the necessary information in the future. It is possible that such a policy will also be introduced in the field of other activities related to the implementation of the principles of sustainable development and their observance, hence the widest possible cooperation of the parties to the agreement will be particularly important. This is what the described provisions may serve.

SUBJECT / PURPOSE OF THE PROVISION	EXAMPLE OF GREEN RESOLUTIONS	COMMENTARY
DIALOGUE BETWEEN THE PARTIES	• The Landlord supports the facilitation of alternative means of transportation suitable for the Centre. The Landlord also invites the Tenant to participate and encourage its employees and visitors to use public transportation, sustainable transportation (bicycle, etc.), carpooling or other alternative transportation. • The Landlord shall provide (to the extent possible) storage and charging areas for bicycles and electric scooters (racks), either at the entrances to the Building or inside the Building, as determined by the Landlord. • The Landlord may introduce preferential parking programs for hybrid and alternative fuel vehicles in the Building and install charging stations for electric cars in the Building (if possible) for use by tenants, their employees and their visitors.	
CERTIFICATION	• The Tenant acknowledges that the Landlord aims to meet the highest ecological standard and, inter alia, for this purpose seeks to obtain the BREEAM (i.e. the standard set by the BRE Global (Building Research Establishment) organisation) green building standard for the building. • Considering that enhancing the environmental standard of the building also relies on the Tenant's activity, the Tenant will endeavour to implement the following technical solutions: » installation of electronic ballasts in all fluorescent and compact fluorescent lamps; » use of solutions that minimise the occurrence of waterborne or airborne legionella bacteria in any place where ventilation equipment or other equipment using water is installed; » selection of taps, pissoir, toilets, showers on the premises that ensure lower water consumption than standard solutions (e.g. use of toilets with a dual flush system, taps with infrared sensors, air showers, etc.); » provision of automatic water shut-off by a valve in the immediate vicinity of the sanitary area.	• Furthermore, in addition to the lease provisions regulating the fit-out works, the landlord may also include in "green" lease agreement provisions concerning the existing or planned certification of the building and/or the leased premises; • Certification is discretionary in Poland, but without any doubt it can be stated that it is a common practice in the European market, including Poland. The most popular certificates are BREEAM and LEED; • The provision regulating the certification should be adjusted each time, including, among others, taking into account whether the building already has a certificate, or whether it will seek a relevant certificate, and in the case of the premises, whether the fit-out works are to be carried out in accordance with the guidelines of a given certificate; • The provision concerning the certification should precisely indicate the certificate to be obtained. It should be noted that some certificates, such as LEED, are divided into several different categories, inter alia: Building Design and Construction (BD+C), Operations and Maintenance (O+M), the categories are divided into schemes, such as in the category Building Design and Construction distinguishes are made, for example: LEED New Construction and LEED Core & Shell; Additionally, depending on the number of points awarded, a different level of certificate can be obtained, such as in the case of LEED: Certified, Silver, Gold, Platinum; In a situation where the landlord has specific objectives and is adequately prepared, the landlord can specify which level of certificate will be achieved for the building; • In a situation where the building does not yet have a certificate, the landlord, depending on the situation, may undertake to obtain a given certificate with or without indicating the deadline by which the certificate will be issued. The provision may also be more general, non-binding and only indicate that the landlord will "make every effort" to obtain a given certification; • The provision concerning the certification may also specify the cases in which the certificates may be modified (e.g. obtaining a higher level certificate); • In the case of an obligation of the tenant to carry out the fit-out works in accordance with the guidelines of a given certificate, the specific requirements should be attached to the lease agreement as an annex; • Moreover, the "green" lease agreement may stipulate that both parties are obliged to ensure that any changes in the premises and arrangement works are carried out in accordance with the guidelines of a given certificate.
	• All fit-out and interior design works should comply with the LEED certification guidelines, including those regarding water-efficient fixtures and lighting. • No changes are allowed in the premises that could adversely affect the LEED or WELL certificate.	• Some of the certificates' guidelines provide for recertification, whereby the building or the leased object will be subject to inspection for compliance with the certification criteria. The conducted assessment may result in a change of the certification level (obtaining a higher or lower level), or even in the loss of certification; Therefore, in the case of certificates that require an audit, the provision on certification should specify, for example, the tenant's obligation to maintain an appropriate level of certification of the premises or the parties' obligation to cooperate mutually in creating and maintaining the conditions necessary for renewing a given certificate; • If the agreement provides for an obligation to obtain certification, the parties may regulate appropriate remedies in the event of non-performance of such obligation, such as the demand to cease violations, an obligation to pay a contractual penalty or the possibility of terminating the lease agreement in the situation of a severe breach of such provision.

SUBJECT / PURPOSE OF THE PROVISION	EXAMPLE OF GREEN RESOLUTIONS	COMMENTARY
MEDIA CONSUMPTION, CO₂ EMISSION	- With respect to the devices that generate the highest energy consumption on the premises, the tenant undertakes to enter into maintenance agreements with the suppliers of those devices or with other entities that have the appropriate qualifications in this regard. The tenant undertakes to carry out regular inspections and maintenance of all devices installed on the premises in accordance with the recommendations of their manufacturers, and also in a way that ensures the longest possible lifespan of those devices. - On the premises, the tenant undertakes to use electricity, gas and water in the most environmentally friendly way possible. For this purpose, the following solutions will be applied: - the tenant will reduce, where possible, the lighting of the premises outside the opening hours by 2/3 in relation to the amount of lighting consumed during the opening hours; - if the tenant uses external lighting, the landlord will turn off or reduce such lighting outside the opening hours to the extent that can be reasonably expected from the tenant; - the tenant will turn off all electrical devices that are not in use at any given time, and will also maintain them properly and ensure that these devices are programmed and installed in a way that utilises their possible energy-saving features; - in case of any leaks/seepages of water supplied to the premises, the tenant will take action to identify the cause of their occurrence as soon as possible, ensure the immediate removal of defects causing the leak/seepage and notify the landlord thereof, and in case the repair is on the landlord's side, the tenant agrees to promptly inform the landlord of the need to carry it out, however, in such a situation the tenant will take appropriate measures to at least temporarily eliminate the leak/seepage and take appropriate steps to secure the leak/seepage before the landlord makes the final repair; - the tenant is responsible for the waste produced by the tenant other than municipal waste. The tenant will limit the generation of waste resulting from the Tenant's activity, and will also ensure the segregation of the generated waste; the tenant will segregate paper, glass, plastic, metal, bio waste, green waste and chemical waste and store them separately; - the parties agree that they will endeavor to use the premises in an environmentally friendly way, in particular by: - using water and electricity and other utilities supplied to the building in the most efficient and economical way possible; - encouraging the use of environmentally friendly materials and devices; - sorting waste in the broadest and reasonable extent possible. - The Tenant shall be obliged to provide the Landlord with [monthly, quarterly, annually] data on the consumption of energy and water and other utilities, including the total consumption of electricity, gas, water [and other utilities, if applicable] and the carbon footprint generated by the Tenant. The Landlord agrees to provide, upon the Tenant's request, data on the consumption of energy, water, gas [and other utilities] at the building level, as well as the energy performance certificate of the building. - The data on the utility consumption, exchanged between the parties, based on the point above, shall serve the parties only for the purpose of ensuring the implementation of the principles of sustainable management and use of the building. The parties are obliged to keep the obtained data confidential. - The Landlord is entitled to read the meters/measuring devices related to the leased premises. - Upon the Tenant's request, the Landlord shall inform the Tenant annually of the total carbon dioxide emission of the building.	The achievement of sustainable development goals concerns the entire life cycle of a building, including its longest phase – use and management. One of the important elements related to the use of a building, affecting ESG factors, is the consumption of utilities and CO₂ emissions. Cooperation between the landlord and the tenant in this area, regulated in the lease agreement, is essential for the control of utility consumption and CO₂ emissions. The "green" lease agreement may contain provisions aimed at determining the manner and scope in which the tenant and the landlord should manage the consumption of utilities, such as water, electricity, waste management, or CO₂ emissions, to reduce them. These issues may be regulated by the parties to the lease agreement in the form of declarations of the parties without further legal consequences, or by means of binding obligations related to legal consequences. The "green" clauses of the lease agreement may bring tangible benefits to both parties and contribute to reducing operating costs. The "green" lease agreement may contain provisions aimed at lowering the level of utility consumption, for example by installing energy-efficient sources of energy (including, for example, motion sensors designed to automatically switch off the lighting), or installing modern devices with high efficiency. The parties to the lease agreement may also agree that the property/premises will be supplied with energy from renewable sources. The parties may also include in the agreement provisions specifying the planned or acceptable levels of media consumption or carbon footprint. The parties may agree to lower the maximum/increase the minimum temperature that should prevail in the building/premises, so as to limit excessive heating or cooling (depending on the circumstances). In the case of planned renovations of the building, the lease agreement may indicate that this will be done using specific building materials that are environmentally friendly. Similar provisions may apply to the fit-out works and changes in the premises made by the tenant. The tenant is responsible for the waste generated by the Tenant, but it should be noted that the landlord will also participate in its further management, mainly by providing adequate infrastructure related to its storage or delivery to entities dealing with its recycling. The introduction of such a provision does not mean that the landlord will be exempt from liability for the tenant's waste in every situation. It is necessary to regulate more broadly the obligations of both the tenant and the landlord, including adapting them to the mechanism and technical possibilities of waste management in a given building. The parties to the lease agreement may include in the agreement appropriate provisions concerning waste management. Such provisions may concern, among others, maintaining a certain proportion of recyclable waste in relation to the total amount of waste, or using materials that are recyclable or derived from recycling. In the absence of detailed provisions in the lease agreement, it would be necessary to refer to general obligations, but they may be difficult to monitor. The obligation to pursue sustainable waste management cannot, however, be a burden imposed solely on the tenant – it is hard to expect the Tenant to fulfil the obligation of selective waste collection or recycling without having the appropriate infrastructure and conditions, which are the tasks of the property manager/owner of the building.

SUBJECT / PURPOSE OF THE PROVISION	EXAMPLE OF GREEN RESOLUTIONS	COMMENTARY
MEDIA CONSUMPTION, CO₂ EMISSION	- The Landlord has the right to install a separate sub-meter for the consumption of utilities in the common areas and in the premises, and the Tenant has the right to install (at the Tenant's expense) a separate sub-meter for the consumption of utilities in the premises. The parties shall provide each other with the necessary access for the purpose of enabling the installation of such separate sub-meters, subject to certain reservations, namely: - giving notification with reasonable advance (at least 10 days ahead); - that such installation will not in any way interfere with the use and occupation of the premises by the Tenant (and the Landlord will take into account the reasonable instructions of the Tenant regarding the installation of such sub-meters); - the installation will be carried out (if it is to be carried out by the Tenant) in accordance with any reasonable requirements specified by the Landlord; and - any damage caused by the installation will be repaired immediately in a satisfactory manner to the other Party. - To the extent possible, the Parties will use natural lighting/skylights instead of artificial lighting. - If artificial lighting is required, the Parties will only use LED fixtures. - The Tenant will install A class equipment in the premises. - If necessary, the Parties will cooperate to install motion and daylight sensors to control the lighting. - The Tenant will set the heating and cooling parameters according to the Landlord's guidelines, but taking into account the specifics of the Tenant's business activity. - The Tenant will not allow the installation or use of heaters, coolers or other energy-intensive devices in the premises. Any such devices that are placed in the premises with the Landlord's consent will operate on sensors and timers that will limit the operation of the devices. - The Tenant will regularly conduct load tests on the installation to confirm that no additional load is being placed on the electrical installation that could cause fires. - When carrying out any repairs or other works provided for in the lease agreement, the Tenant will make efforts: - to do them in a sustainable way; - to treat and maintain all materials in accordance with the instructions and recommendations of their manufacturers; and - to duly take into account the environmental impact assessment system (i.e. any assessment system adopted at any time by the Landlord to measure the environmental performance or impact of the building) applied in the premises or in the building. In addition, when making any changes or additions to the premises, the Tenant will try to comply with any reasonable policy adopted at any time by the Landlord in relation to managing the property in an environmentally friendly way, as well as the environmental management plan (i.e. any environmental management plan in relation to the building, which includes, among others, reasonable annual targets for reducing energy consumption, carbon dioxide emissions, water consumption, and waste generation in the building). If the Tenant makes any changes to the machines and devices or services in the building that affect the efficiency in terms of energy, water or waste characterising such machines and devices or services, the Tenant will provide such information (if the Tenant is able to obtain such information and obtaining such information does not generate any costs for the Tenant) on the efficiency in terms of energy, water or waste of the changed machines and devices, as the Landlord may reasonably require.	

SUBJECT / PURPOSE OF THE PROVISION	EXAMPLE OF GREEN RESOLUTIONS	COMMENTARY
MEDIA CONSUMPTION, CO ₂ EMISSION	- For fit-out works and any adaptation works carried out by the Tenant, without prejudice to the applicable legal restrictions, including those concerning public safety, the Tenant undertakes to: - promote a sustainable development approach in the project, - select environmentally friendly materials, wood and similar, - use durable, reusable and recyclable materials, - use low-emission adhesives (e.g. water-based), - not glue any floor coverings to any floor of the Premises with any type of adhesive without obtaining the written consent of the Landlord and choose low-emission carpet installations, limiting the level of volatile organic compounds and dust, - use paints without emission of volatile organic compounds (VOC) and - deal with large amounts of waste in accordance with the Lease Agreement, the fit-out instruction and/or the Internal Regulations, or in any other way agreed by the Landlord.	
FIT-OUT WORKS / EQUIPMENT	- When carrying out the tenant's works and making structural modifications, the tenant undertakes to use recycled materials and environmentally friendly materials to the greatest extent possible. When using wood, the tenant will use environmentally approved/certified materials. When carrying out the tenant's work and making structural modifications, the tenant undertakes to use devices that ensure the lowest possible energy consumption and ensure the greatest possible water savings, and also to use only such devices in the premises that bear an energy efficiency label (A, B or C). - The documentation submitted by the tenant for approval by the landlord regarding the tenant's works or structural modifications will include: » installation of energy-saving lighting; » the use and description of other electrical appliances to be installed in the premises that will ensure energy-efficient use of electricity (including air conditioning control), with the documentation submitted for verification by the landlord including a description of their energy efficiency; » with respect to equipment installed or to be installed in the premises, and operating with the use of water, the use of equipment and a description of solutions ensuring its economical use, with the documentation submitted for verification by the landlord including a description of the savings in water consumption that will be ensured by the application of individual solutions; » the use of environmentally friendly fit-out materials (including their description) to the fullest extent possible. - If the documentation provided by the tenant shows that the solutions proposed by the tenant do not take into account the provisions of this section, the landlord may refuse to allow the works to be carried out. In such a case, the tenant will be obliged to adjust the submitted documentation and resubmit it to the Landlord for approval. - When replacing, maintaining, repairing or refurbishing materials or equipment installed, each party undertakes, to the fullest extent possible and reasonable, to use environmentally friendly solutions, materials and equipment. The tenant further hereby consents to the inspection by the landlord of the equipment used in the premises if warranted.	EXAMPLE 1: When carrying out all repairs and other works provided for in a relevant lease agreement, the Tenant shall endeavour: (a) to do so in a sustainable manner; (b) to treat and maintain all materials in accordance with the instructions and recommendations of their manufacturers; (c) and to take due account of the environmental impact assessment system (i.e., any rating system adopted by the Landlord at a given time to measure the environmental performance of the building or its impact on the environment) used in the premises or in the building In addition, when making any alterations or additions to the premises, the Tenant shall endeavour to take into account any reasonable policy adopted by the Landlord at the time with respect to environmentally friendly management of the property, as well as an environmental management plan (i.e., any environmental management plan for the building that includes, but is not limited to, reasonable annual targets for reducing energy consumption, carbon dioxide emissions, water consumption, as well as the generation of waste in the building). If the Tenant makes any alterations to machinery and equipment or services in the building that affect the energy, water or waste efficiency of such machinery and equipment or services, the Tenant shall provide such information (if the Tenant is able to obtain such information and obtaining such information does not generate any costs for the Tenant) on the energy, water or waste efficiency of altered machinery and equipment that the Landlord will reasonably require. EXAMPLE 2: For fit-out works and any adaptation works carried out by the Tenant, without prejudice to applicable legal restrictions, including public safety regulations, the Tenant undertakes to (i) promote a sustainable approach to the project, (ii) select environmentally friendly materials, wood and the like (iii) use durable, reusable and recyclable materials (iv) use low-emission (e.g. water-based) adhesives, (v) not to apply any floor coverings to any floor of the Premises with any type of adhesive without the written consent of the Landlord and to select low-emission carpet systems that reduce the level of volatile organic compounds and dust, (vi) use paints without volatile organic compound (VOC) emissions and (vii) handle large quantities of waste in accordance with the Lease Agreement, the fit-out instructions and/or the Internal Rules, or as otherwise determined by the Landlord

SUBJECT / PURPOSE OF THE PROVISION	EXAMPLE OF GREEN RESOLUTIONS	COMMENTARY
FIT-OUT WORKS / EQUIPMENT	• Obligation to use environmentally friendly and resource-saving materials. • Mutual commitment to provide relevant evidence of compliance with the agreed requirements.	
OTHER	• The lease agreement also includes a stipulation that: » obligations relating to environmental protection or sustainable use and management do not create an obligation on the part of the landlord to achieve a certain level of building efficiency, as they largely depend on the occupants of the building, » the tenant shall have no claims for compensation or for a reduction in rent or other charges in connection with the existing or future level of efficiency of the building, its equipment, including the consumption of utilities. • Smoking is not allowed in the building and its immediate vicinity.. • (...) The tenant represents and warrants that it adheres to the principles and values set out in the principal's commitment to observe the principles of sustainable development available on the website [...], as updated from time to time by the Landlord, and that it will take all necessary measures to ensure that its staff, as well as its subcontractors/suppliers/associates, as the case may be, adhere to such principles and values. • The Landlord will prepare a Sustainable Development Handbook as a set of guidelines for the sustainable use of the property. • Compliance with ecological requirements in relation to cleaning, indication of recommended agents (reference to ISO). An obligation to transfer the requirements also to cleaning or maintenance service providers by each party. Possible verification of the above by each party.	

This summary has been compiled by a team of PINK member company experts consisting of:

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based on their own practices and interviews with other PINK and PRCH member companies.



Green lease - a vital step in a way to creating an ESG value chain

A key driver of the green revolution in the real estate industry in Poland is the approach of tenants and users towards leased spaces. It can be observed that an increasing number of companies, aligning business goals with achieving climate neutrality, opt for presence in low-emission facilities, such as certified ones powered by alternative energy sources, and employ environmentally friendly solutions in their occupied premises. This way, they implement part of their decarbonisation plans. It's a significant shift that allows substantial progress towards achieving zero-emission status in the commercial real estate sector and individual properties. Without taking action across the entire value chain, with active participation from all building users, significant emission reductions cannot be achieved to curb global warming.

"Green lease agreements" serve as support, committing both parties to undertake sustainable actions. They can include provisions related to the energy efficiency of used equipment and systems (ventilation, air conditioning, heating, lighting), water conservation, waste segregation, and the use of appropriate materials during construction, operation, and building use. These provisions address the needs of tenants, especially those reporting under the CSRD directive. They are regularly informed about initiatives taken by the property manager to reduce emissions and the effects of these actions. This way, when EU regulations come into effect, they will find it easier to fulfill the obligation to calculate and report the impact of their business on the environment and surroundings. While legislation is still lacking in this area in Poland, it doesn't hinder the industry from implementing "green leases."

Since August 2022, such provisions are attached to every newly signed agreement for commercial and office properties managed by EPP. Based on these provisions, we share information with tenants about our progress in reducing the emissions of the properties and involve them in decarbonisation efforts. The property manager can independently decide on new solutions in the common areas, which, in a holistic view, represent only a limited space. Therefore, the active participation of tenants in reducing the energy consumption of the entire facility through actions taken in rented premises or offices is crucial. Their involvement can manifest in water and energy conservation, the use of environmentally friendly finishing materials and cleaning agents, or retain rainwater and proper segregation. Collaboration between the manager and tenant in this area has the potential to lead to significant reductions in energy and resource consumption in buildings, consequently reducing greenhouse gas emissions and operational costs.

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5.

CHALLENGES
FOR NEW
AND OLD
BUILDINGS

Energy audit – types, purpose, function

In view of the decarbonisation challenges facing the construction sector, building owners and managers are already looking for solutions to improve the energy efficiency of their facilities, which translate into lower energy consumption and costs, and a reduced carbon footprint. A tool to identify a set of energy-saving measures to be implemented in a building is an energy audit. There are several types of audits that are grounded in Polish legislation or international norms and standards.

An energy audit is a study to assess the costs and benefits of measures to improve the energy efficiency of a building, production process or business. It identifies the possible energy and cost savings achieved by implementing the relevant redevelopment measures, ranked from most to least cost-effective from an economic point of view. The environmental effect expected from the undertaking, expressed as a reduction in CO₂ emissions, is also specified in the audit.

The main breakdown of energy audits involves the scope of balancing energy, and can refer to an area, a process, a piece of equipment, an installation, a building or an entire organisation. This is why there are so many regulations, standards and rules for carrying out energy audits.

The **energy audit of an enterprise** analyses the energy and fuel efficiency of the organisation itself in the area of:

- buildings,
- transportation,
- industrial and process plants,

while the **energy audit of a building** covers the following areas affecting the energy and fuel consumption of the facility:

- the structure of the building (building envelope, roofs, flat roofs, windows, doors),
- HVAC systems,
- lighting system,
- renewable energy sources (PV panels, solar panels, heat pumps, biomass installations and other locally available renewable energy sources),
- heat recovery systems.

We can find the following types of audits on the market:

- an energy audit performed in accordance with the Regulation on the detailed scope and forms of an energy audit and a part of a renovation audit, audit card templates, and an algorithm for assessing the profitability of a thermal modernisation project of 17 March 2009, as amended [1]
- energy efficiency audit under the Energy Efficiency Act of 20 May 2016, as amended [2]
- energy audit of an enterprise under the Energy Efficiency Act of 20 May 2016, as amended [2]
- energy audit based on standards e.g.: ASHREA-211 [3], ISO 50002 [4], PN-EN 16247 [5]

Depending on the type, purpose or legal basis of the audit, the content, scope and focus of the content described in the document will change.

1. ENERGY AUDIT OF A BUILDING AND RENOVATION AUDIT CARRIED OUT IN ACCORDANCE WITH THE REGULATION OF 17 MARCH 2009 AS AMENDED

The most popular and widely used energy audit standard in Poland, stems from the Act of 21 November 2008 on support for thermal modernisation and renovation, as amended [6], whose scope, form and methodology of execution are defined in the Regulation of the Minister of Infrastructure of 17 March 2009, as amended [1]. The regulation refers to an energy audit of a building, a district heating source and a district heating network, as well as a renovation audit.

ENERGY AUDIT OF A BUILDING

This type of audit focuses on the energy efficiency of a building or buildings. The audit assesses energy consumption for the purpose of heating and preparing domestic hot water, and defines the scope and technical and economic parameters of a thermal modernisation undertaking, indicating the optimum solution, in particular from the point of view of the costs of implementing this undertaking and energy savings, while at the same time laying down assumptions for the construction project.

An energy audit of a building performed in accordance with the Regulation of 17 March 2009 [1] is the only type of energy audit, legally established in Polish law, prepared for the building as a whole and accepted by national institutions responsible for supporting thermal modernisation investments. An audit of this kind is required when applying for a thermal modernisation grant from BGK (residential and public buildings), as well as when applying for financing from external sources (e.g. within the framework of programmes of the National Fund for Environmental Protection and Water Management (NFOŚiGW), European Funds, e.g. BGK's 'Ecological Credits').

The regulation, which is the basis for performing energy audits of buildings, is a piece of secondary legislation to the Act on Support for Thermal Modernisation and Renovation of 21 November 2008, as amended [6]. The scope and form of the audit corresponds to the purpose and definition of thermal modernisation investments described in the Act [6]. It is tailored to the needs of residential and communal housing in particular, and may therefore be methodologically inappropriate for projects set in commercial buildings. This is because the analysis is only concerned with measures to reduce heat loss through the building envelope, ventilation, and the modernisation of the heating and hot water system. The calculation algorithms and the procedure for selecting the optimum variant contained in the Regulation of 17 March 2009 [1] do not provide for the analysis of savings resulting, for example, from the replacement of lighting, the construction of RES installations, or the modification of a cooling system. This type of activity is treated as an additional element, requiring modifications to the audit execution procedure and standard tables and texts. Additional retrofits are usually described in the annexes to the audit, where the calculation methodology adopted by the auditor and used to determine the energy balance in the pre- and post-retrofit state is also included.

BUILDING RENOVATION AUDIT

A renovation audit, prepared in accordance with the requirements of the Act on the Promotion of Thermal Modernisation and Renovation [6], is a study determining the scope and technical and economic parameters of a renovation project. At the same time, it is a basis for a construction project and involves financial support in the form of a renovation bonus for renovation projects in multi-family residential buildings that were commissioned before 14 August 1961.

2.2. ENERGY EFFICIENCY AUDIT PERFORMED IN ACCORDANCE WITH THE ENERGY EFFICIENCY ACT OF 20 MAY 2016 AS AMENDED

An energy efficiency audit is a study containing an analysis of the energy consumption and identifying the technical condition of a building, technical equipment or installation and information on the energy savings that can be achieved [2].

The scope of an energy efficiency audit covers only one type of undertaking of the same type, e.g. a lighting modernisation, thermal modernisation, engine replacement. The aim of the audit is to identify final energy savings, expressed in the toe unit, i.e. tonnes of oil equivalent.

An energy efficiency audit is usually an annex to an application for White Certificates or other instruments supporting energy efficiency (e.g. a Green Loan – as a supplement to a building energy audit). It can also serve as a basis for assessing the viability of modernisation projects.

3. ENERGY AUDIT OF AN ENTERPRISE CARRIED OUT IN ACCORDANCE WITH THE ENERGY EFFICIENCY ACT OF 20 MAY 2016 AS AMENDED

According to the Energy Efficiency Act of 20 May 2016, as amended [2], an energy audit of an enterprise, also known as a mandatory audit, is an important instrument to improve energy efficiency in the industrial and business sector. It is also a tool to achieve energy savings, reduce energy costs and contribute to the sustainable energy management of the company.

AN ENERGY AUDIT OF AN ENTERPRISE SHOULD:

- be based on current and measurable data on energy consumption and, in the case of electricity, power demand,
- include a detailed overview of the energy consumption of buildings, industrial installations and transportation, which account for at least 90% of the enterprise's total energy consumption,
- be based on a life-cycle cost analysis of buildings, industrial installations and long-term projects, not just on the payback period. The aim is to take into account the energy savings over the long term and the residual values of the investment and the discount rate.

The Act of 2016 [2] introduced the obligation to prepare an energy audit of a business for entrepreneurs who, in the previous two financial years:

- employed an average of at least 250 employees per year, or
- had an annual net turnover in excess of the equivalent of EUR 50 million, and the total assets of their balance sheet as at the end of one of those years exceeded the equivalent of EUR 43 million.

An energy audit of the business must be carried out every four years and submitted, upon request, to the President of the Energy Regulatory Authority (URE) for review. Companies that have an ISO 50001-compliant energy management system or an EMAS environmental management system in place are exempt from the business energy audit, provided that an energy audit has already been carried out as part of these systems.

In August 2023, a new version of the Energy Efficiency Directive[7] entered into force, which introduced two significant changes:

- mandatory energy audits of businesses will no longer be restricted to companies "larger than SMEs", but will cover companies of any size that consume more than 10 TJ/year (all energy carriers in total), which means that many more companies will be obliged to undergo an energy audit,
- Companies consuming more than 85 TJ/year will also be required to have an ISO 50001 certified Energy Management System.

The changes aim to increase energy efficiency and reduce energy consumption in businesses, which is in line with sustainability and greenhouse gas reduction targets.

4. ENERGY AUDITS BY STANDARD: ASHRAE 211-2018, ISO 50002 AND ISO 16247

The main differences between these standards relate to the scope, classification of audits and the application and level of detail. Choosing the adequate standard or norm depends on the needs of the organisation and the context and objectives of the energy audit

ASHRAE 211-2018

ASHRAE 211-2018 [3], entitled “Standard for Commercial Building Energy Audits” is a standard developed by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). The standard specifies which building elements and HVAC&R systems should be evaluated during the energy audit. The scope of the audit includes aspects such as HVAC systems, lighting, thermal insulation, windows, heating, cooling and ventilation systems, as well as control and energy management systems. The ASHRAE 211-2018 standard defines three levels of energy audits:

- **Level 1 (Walk-through Analysis):**

This type of audit, commonly referred to as a ‘walk-through analysis,’ aims to provide companies with a starting point for making changes or performing a further in-depth audit. The purpose of an ASHRAE Level I audit is to identify glaring areas of energy inefficiency. The audit should include an initial benchmark of energy consumption and a short report describing the results, which can sometimes include a number of energy efficiency improvement possibilities that have been identified. A Level 1 energy audit report does not usually contain comprehensive recommendations, beyond identified projects or operational issues.

- **Level 2 (Energy Survey and Analysis):**

The level 2 audit helps to identify the areas with the greatest potential for energy efficiency improvements. It includes a detailed analysis of invoices, looking for ways to reduce energy-related costs. In addition, building technical personnel are interviewed to gain a better understanding of the building’s performance characteristics, identify potential areas of energy loss and define the audit objectives, both financial and non-financial. This is a more advanced stage of the audit that enables a more precise identification of areas where energy efficiency improvements and potential savings can be achieved.

- **Level 3 (Detailed Analysis of Capital-Intensive Modifications):**

As part of this audit, a thorough collection of facility data is carried out, which is analysed in detail, with a focus on areas where improvements can be made and the potential costs associated with these changes. Existing energy consumption data is supplemented with measurements of energy use by key systems, such as HVAC, and close monitoring of individual parameters of these systems.

The ASHRAE 211-2018 standard is an important tool for professionals involved in energy management and energy audits in commercial buildings, helping organisations identify and implement measures to improve energy efficiency and reduce energy costs.

ISO 50002

The standard ISO 50002 [4], entitled “Energy audits — Requirements with guidance for use,” is an international standard developed by the International Organisation for Standardisation (ISO), which provides guidelines for conducting energy audits in organisations. An energy audit in line with this standard is a systematic process of assessing the energy consumption of an organisation or facility in order to identify opportunities for energy efficiency improvements. The audit includes an assessment of energy use, identification of areas for improvement, recommendations for action and monitoring of results. No specific classes/levels of energy audits are defined, which means that organisations have the flexibility to determine the level of detail and complexity of the audit according to their needs. An energy audit can be tailored to an organisation’s specific objectives.

PN-EN 16247

An energy audit in accordance with the PN-EN 16247 standard [5] introduces general principles for preparing energy audits that are universally applicable to all audits, regardless of the purpose for which they are prepared. The standard addresses the general assessment of the energy consumption status of a facility or business, not necessarily in connection with planned retrofitting. According to the standard, the purpose of an audit can be, for example, an overall assessment of energy consumption, a search for energy consumption opportunities, an assessment of the desirability of changing the energy supply system, modifications to the operating system, the preparation of an energy management system and its subject can be a building, an installation, a technical system, a production process or energy management in a company.

The standard describes very precisely all the activities that must be carried out as part of an audit. A great deal of attention is paid to working with the client and their colleagues, establishing and describing in detail: the preliminary visit, the opening meeting and the closing meeting.

The standard unifies the way a company's energy audit is carried out in all cases; the audit report can vary considerably in content, form, scope and quantity, depending on the type of energy audit, shape and size of the company being audited.

CONCLUSION

Energy audits are an important tool in managing energy efficiency in both buildings and businesses. Their main aim is to identify energy saving opportunities and improve energy efficiency. Audits provide reliable data and analysis to help companies make better decisions related to reducing energy costs, sustainability and the environmental impact. Through audits, it is possible to optimise the use of energy resources, which contributes to both financial savings and the promotion of environmental responsibility. As a result, energy audits are a key step towards building a more sustainable future in which energy efficiency plays an important role.

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- [1] Regulation of the Minister of Infrastructure of 17 March 2009 on the detailed scope and forms of the energy audit and part of the renovation audit, templates of audit cards, as well as the algorithm for assessing the profitability of a thermal modernisation undertaking, as amended.
- [2] Act of 20 May 2016 on energy efficiency, as amended.
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- [4] Standard ISO 50002: Energy audits - requirements with guidelines for use', 2019.
- [5] 'PN-EN 16247-1: Energy audits Part 1: General requirements', 2013.
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Nhood's activities for sustainable development

Our sustainability activities are driven by our /People, Planet, Profit/ strategy, according to which we strive to have a positive impact on our surroundings in the social, environmental and economic areas. As part of the adopted strategy, the company has committed to take action to protect the environment, combat climate change and have a positive impact on the society.

We have taken numerous measures to protect the environment and increase the efficiency of using the natural resources. We increase the biodiversity of the areas around managed sites and restore their original nature by increasing the biologically active area. In the course of these activities, we cooperate with ecologists and implement the recommendations from their reports. So far, 20 locations have already been included in the process. We are also transforming shopping centres, refurbishing them to make them more energy-efficient, comfortable for customers and shoppers, and to reduce their carbon footprint.



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Nhood Services Poland

Innovations and challenges in circular economy rules - implementation in the office real estate market

The office real estate market faces a challenge of transformation towards sustainable operations. Data cited by the Polish Green Building Association speaks for itself: buildings are responsible for 38% of global CO₂ emissions¹. By using recycled materials, we can help reduce greenhouse gas emissions and use resources responsibly, which is part of a very important and, fortunately, increasingly popular sustainability trend in our industry.

A report we published together with ThinkCo shows that globally as much as 92.8% of non-renewable raw materials are not in a closed loop. In Poland, there are already buildings that use recycled materials, but this is still a niche rather than the mainstream. For example, in the case of Wrocław-based Centrum Południe office complex, we used recycled materials such as concrete, steel, aluminum, glass and mineral wool in various elements of the building: from the foundations to the facade in the parking lots. They are used in under- and above-ground structures, facades, metal structures, fireproof doors and gates. Another interesting example is Poznań's Nowy Rynek complex, where reclaimed materials were used in structures, insulation, cladding and gate systems. In our P180 office building in Warsaw, we used concrete and steel with recycled additives.

However, before materials can be reused, they must be recovered from existing facilities through properly planned and executed demolition. Our experience from the Mercury project in the Czech Republic is an important reference point for us. Instead of traditional demolition, we decided to pilot a selective dismantling of the 1971 Merkuria building in order to reuse as much of the material as possible. Located in the heart of Prague, the 90-meter-high building required advanced demolition techniques that minimised noise, dust and vibration so as not to disrupt the functioning of nearby communities or the buildings located in the neighbourhood. Each stage of the dismantling was carefully planned and monitored for the safety of both workers and passersby. Special attention was paid to the proper disposal of hazardous waste - more than 50 years ago, the construction industry used materials and technologies that are avoided today due to their negative impact on human health, such as asbestos.

The decision to demolish an office building in Prague was preceded by an in-depth analysis of the structure of the existing facility, the materials used and the systems installed. This made it possible to plan the reuse of many components. The dismantling of the Merkuria building began with its in-

terior. We temporarily stored the sorted materials in the basement. At the same time, we actively searched for potential partners who could give these resources a new life. In the second half of 2023, we performed work on the building's facade. Each of its elements was removed from the skeleton of the building, which was then gradually dismantled, down to the foundations. Materials from the dismantling of Merkuria will be used in the creation of a new project, called Mercury. We will use parts of the facade, including the lamellas and nacelles originally used to clean the facade. In addition, reclaimed bricks will be used to create a new facade, and cobblestones will get a new use in creating sidewalks. Wood waste, on the other hand, will be transformed into particle board, cables into various rubber materials, and metals will be carefully sorted and recycled, as will glass from the facade.

With projects such as Mercury and the aforementioned projects in Poland, we are showing that circular economy principles can be effectively implemented in real estate development practice. However, it should be noted that technologies and materials alone are not enough. The key to successful implementation of circular economy rules in our industry is close cooperation between all parties in the investment process and the market's openness to such solutions. Only in this way can we achieve the expected results and bring real change to the real estate sector. Without cooperation, we will not build a closed loop in our industry.



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¹ <https://plgbc.org.pl/zrownowazone-budownictwo/dekarbonizacja-budownictwa/>

² <https://thinkco.pl/raport-cyrkularne/>



A circular economy is a concept aiming to the rational use of resources and reducing the negative environmental impact of manufactured products, which - like materials and raw materials - should remain in the economy as long as possible, and the generation of waste should be minimized as much as possible.

Źródło: <https://www.gov.pl/web/klimat/goz>



The retail schemes of the future are already here

Modernisation and adaptation is the future and at the same time a challenge for the industry

The Polish shopping centre market is mature and stable. In Q1 2023, the retail space density settled at 347 sqm per 1,000 inhabitants¹, which is in line with the European average. More than 60% of the retail projects in Poland's largest agglomerations are between 16 and 30 years old², and around 80% of the assets that will be in use in 2050 have already been built³. These figures show that efficient refurbishment will be the future of the Polish shopping centre sector, so as to ensure that today's schemes meet tomorrow's challenges. This includes solutions to support the decarbonisation of the sector, as the operation of buildings currently accounts for as much as 26% of global emissions from energy consumption⁴. According to the objectives of the EU's Renovation Wave Strategy, 35 million buildings are to be renovated in Europe by 2030⁵. Shopping centres will account for a large share of these.

The pace and direction of change in the sector is and will continue to be dictated by regulation, including the CSRD, which increases the pool of companies obliged to report non-financial information. This contributes to the widespread interest in the environmental and climate impacts of real estate. The European Union's Taxonomy redirects the capital flow towards low-carbon buildings, which translates into financing opportunities and costs, as well as having an impact on property valuation. The need for a green revolution in the industry is also being voiced by stakeholders – investors, building users, tenants and consumers. In order to remain attractive to all the groups mentioned, retail assets will strive to become zero-carbon and develop resilience to progressing climate change.

The real estate industry is therefore faced with the challenge of determining what measures to take in order to improve the energy efficiency of existing buildings and, at the same time, optimise the financial outlays in this area.

Retrofitting involves considerable investment, and successful modernisation should primarily be cost-effective and lead to further savings. It will also be crucial to seek and implement solutions that significantly improve the energy efficiency of existing buildings without disrupting their ongoing operations. A lot will happen in this area in the coming years.

It is worth starting the modernisation process with a baseline audit. It will verify the energy efficiency level of the building and identify priority areas with a significant impact on carbon performance. One of the basic elements to be implemented is the improvement of building management systems, such as the BMS, by optimising the operation of ventilation systems based on CO₂ sensors. Another focus is the replacement of lighting with energy-efficient LED fittings. These measures make it possible to achieve visible reductions in emissions in a short period of time. Reducing the building's energy consumption and purchasing energy from renewable sources significantly reduce the carbon footprint of the project.

These energy-reducing features have already been implemented in the EPP-managed Galeria Młociny in Warsaw, which ranks among the 30% most energy-efficient non-residential buildings constructed before the end of 2020. By the end of 2025, photovoltaic panels will have been installed on the roof of the centre, with 20% of the energy used in the common areas of the building already coming from alternative sources. Galeria Młociny also cares about water resources: the photocells and aerators installed in the taps have resulted in water savings of 50%. The shopping centre also responds to the diverse transport needs of its customers by offering facilities, such as 120 bicycle parking spaces and a multi-station charging point for electric vehicles.

¹ Polish Council of Shopping Centres, PRCH Retail Research Forum report H2 2022.

² Colliers, "A second life is possible", 2023 r.

³ Cushman&Wakefield, Is 'carbon bubble' a threat to the property market?

⁴ International Energy Agency, Tracking Buildings

⁵ SWECO, "Urban Insight", 2022 r.



Adaptation of the surroundings of shopping centres is also an important aspect. New and interesting initiatives are emerging in the market, such as LIFE Archiclima. Its aim is to support landlords and property managers in building resilience to the effects of climate change, such as rising temperatures, droughts, floods or strong winds. Seven shopping centres from EPP's portfolio have joined the project. The company's intent is to increase biodiversity on managed properties. The solutions developed will help ensure resilience to violent weather events and reduce the impact on the climate.

Properly adapted, existing buildings can offer good energy efficiency, a high quality indoor environment and the flexibility to adapt to the changing needs of users. Renovations of older projects should therefore become the standard for the entire industry.

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Energy loss in commercial buildings

Huge amounts of materials and energy are used during the construction and operation of buildings. It is no wonder then that regulators and businesses alike expect the real estate sector to play an active part in the drive to curb climate change. Responding to these expectations, the industry has, among other things, made efforts to source energy from green sources and is verifying the origin of materials used in construction and redevelopment. Almost everyone has realised that it is crucial for businesses, as well as for the success of the entire emissions reduction plan, to reduce energy demand as quickly as possible. The retail property sector has an important role to play here.

As long as energy was relatively cheap and the regulations in place were not as thorough as they are today, it was easier to consider energy losses as an acceptable cost. However, this has changed rapidly last year. Clearly, a great number of operators were already reducing heat losses and introducing electricity and water conservation measures, but it was only after the rapid increase in energy prices associated with the outbreak of war in Ukraine that such measures became widespread.

Places of greatest energy loss in retail properties.

As far as the architecture of the building is concerned, these occur primarily in the entrance area, especially in places where sliding doors are used instead of pivot doors and where there is no adequate shut-off of the inflow of outside air by air curtains. Heat escaping upwards in multi-storey buildings is also a challenge, while buildings sited on the ground with open car parks tend to lose more heat. It often happens that architectural or design decisions motivated by aesthetic considerations result in a loss of energy efficiency parameters. This is the case, for example, if large areas of glass are used. Their heat transfer coefficient is always higher than that of a wall made up of multiple layers. However, it should not be forgotten that the walls and roof, if not sufficiently insulated, can also cause the building to heat up too much in the summer and have to be heated intensively in the winter.

The second area is HVAC systems. Improperly set up ventilation and air-conditioning systems – running with an incorrect operating schedule, cooling too much in summer and heating too much in winter – and the lack of cross-exchangers are the main problems of retail buildings. Care should also be taken when setting up recuperation so that the proportion of fresh air in the exchange is not too high. Most facilities have crossflow or counterflow heat exchangers installed, but considerable energy losses can occur when those are not present.

The third area of greatest loss is lighting. Using old-style lighting, lack of motion and light intensity sensors and poorly set operating schedules all contribute to the unnecessary consumption of significant amounts of electricity.

In response to these problems, landlords and managers of commercial facilities are making efforts to reduce their operating costs, reduce utility consumption and move towards zero-carbon buildings. They have implemented strategies and plans related to sustainability and building upgrades.

Measures to reduce heat and electricity losses include replacing lighting with LED technology. According to experts, replacing the light source with an energy-efficient light source (LED) is the primary form of reducing energy consumption in retail buildings, in terms of lighting. This applies to both outdoor and indoor lighting. The next step is to limit the operation of light fittings during the closing hours of the facilities. When planning changes involving the lighting systems in shopping centres, it is always important to bear in mind current legislation and customer and employee safety issues.

In order to reduce energy consumption, lamp usage is also monitored and the running time of the system is limited, while the lighting of car parks and green spaces is restricted at night and on non-trading days.

Energy efficiency is positively influenced by investments in building automation/BMS and recuperation. Installing CO₂ sensors, allows for more precise control over air parameters in buildings. However, the key measures for managing the air conditioning and ventilation of buildings include, above all, reducing the differences between the temperature outside and inside the building. Without sacrificing customer comfort, air conditioning operation can be limited to 7 degrees celsius below the outside temperature in summer. Re-

defining the optimum comfort temperatures in the various zones of the building for each season, day of the week and hour of the day is key to reducing energy consumption.

As always with technical equipment, proper maintenance is key. Regular maintenance and repair of HVAC equipment results in considerable savings. With devices that are well taken care of, it is easier to maintain the correct operating parameters of the heat and cooling sources and of the equipment distributing the heat or cooling media (heat exchangers, water pumps, compressors, fans, constant-temperature water circuits). Air handling unit operating schedules are also often modified (delayed start of units, rotating operation).

Despite the considerable efforts already being made by landlords and property managers to reduce heat and electricity losses, innovations and the integration of existing systems with new solutions are still planned in this sphere. Energy audits, where targets can be set for improving specific building performance parameters, are increasingly common. The result is comprehensive plans to be applied to the project. Controlling the operation of heating and cooling equipment in tenants' premises, UV film on glass, purchasing a BMS and investing in building automation are among the key solutions that are often recommended as a result of audits. In addition, companies on their own are planning to introduce consistent strategies for comfort parameters in buildings.

In terms of lighting, which is the area of the fastest change taking place in the retail property industry, the replacement of lighting with LED technology using sensors and DALI systems will continue. More and more accurate lighting operation schedules will be created. Retrofitting in this area is now one of the most widespread tendencies for the entire retail property sector.

In terms of large-scale thermal energy, there are a lot of plans for building thermal modernisation and retrofitting equipment. Installation of fully controllable heat pumps with a cooling function, installation of inverters on the circulation pumps and the replacement of worn-out equipment (chillers, air handling units) with those that are more energy-efficient make for a comprehensive action plan to further reduce energy losses and fully integrate sustainable practices.

A growing trend is the installation of renewable energy sources (RES). More and more sites have photovoltaic panels on their roofs to power common areas of the building. It is, however, only the beginning. In the not too distant future, it may not be unusual to see small-scale wind farms conveniently located close to retail assets.

Regardless of what particular technological solutions will be applied to a particular building, one can be certain that over the next few years we will see intensive efforts to reduce energy consumption and increase the thermal insulation of buildings. Both the ESG regulations that enforce the inclusion of this area in companies' business plans and the values implemented by enterprises mean that, in the overwhelming majority of strategies already in place or in the pipeline, the actions described in this article are becoming one of the pillars of the operation of business organisations.



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GLP Wrocław V Logistics Centre - a space for discerning users

Up to now, GLP has built three modern warehouse and production buildings in Magnice near Wrocław. Once fully expanded, the 50 ha site can offer a total of nearly 240,000 sq m of logistics space. As one of the largest projects of this type in the region, it stands out for its scale, as well as solutions that have a positive impact on the environment and the local ecosystem, building energy efficiency and employee wellbeing.

A truly sustainable warehouse is a space created in partnership with the clients that supports their sustainable development goals. These can include the road to net zero, already achieved by GLP in selected projects across Europe. The company is also one of the emissions reduction leaders in Poland. GLP Wrocław V Logistics Centre is an example of this approach.

Situated next to the Expressway S8, within a mere 30 minutes from central Wrocław, this advanced cross-dock warehouse is used by large e-commerce multinationals. The GLP Wrocław V Logistics Centre was designed to support the day-to-day operations of its tenants while optimising warehousing costs. This is made easier by the 12-metre building height, which greatly facilitates automation-based logistics processes specific to e-commerce.

Another important feature of the GLP Wrocław V Logistics Centre is its biologically diverse green surroundings. GLP has preserved the mature trees growing on the premises and planted additional trees and shrubs. Next to the buildings, there are relaxation areas for employees with carefully planned landscaping.

Focusing on energy efficiency

All tenants at the GLP Wrocław V Logistics Centre can individually monitor energy, gas and water consumption using the so-called smart metering system. Lighting inside the building is DALI-controlled, which generally brings down the associated cost in a logistics building by 60% - 80%.

The rooftop is fully solar-ready, with one of the tenants having already installed a 150 kWp photovoltaic system. In addition, 100% of the energy bought for the GLP project has a renewable energy guarantee of origin. Furthermore, water saving is facilitated by waterless urinals and a rainwater harvesting system for flushing.

Raising the bar

As GLP Wrocław V expands, the standard of its buildings continues to improve. The newest part of the park (which will meet

the BREEAM Excellent certificate requirements) will feature new solutions that support sustainable development goals, including a low-carbon steel roof structure and additional wall and roof insulation to reduce heat demand. It also makes it possible to easily add more storeys for offices or convert a part of the warehouse to an office and welfare area in the future. Modifications of this type increase the cost of the project but ensure a long lifespan. Any additional green solutions will be introduced according to the individual requirements of the future tenants.

Developing the local infrastructure

The GLP Wrocław V Logistics Centre provides both an excellent connection with Wrocław Airport and easy freight transport by road within the city, the region, as well as further across Poland and the neighbouring countries. The company also improved the local infrastructure, building a gyratory system at the intersection of the access road to warehouses and Expressway S8, which connects the park with motorways A4 and A8, as well as expressways S3 and S5. The investment is aligned with GLP's strategy to improve local solutions for pedestrians and drivers near the company's projects. Ensuring seamless traffic and safety, the road infrastructure in Magnice benefits local residents, transit, as well as tenants of the GLP logistics centre. As an additional step to blend in with the local landscape, the owner has co-established an educational trail on settlements in Kobierzyce from the 13th and 14th centuries.

With the experience of its experts and partnership with reliable designers, GLP buildings stand out in many areas, from a functional layout, top-quality materials and green solutions to focus on thoughtful landscaping and even such details as selecting the colour of the façades to match the dominant colours in the neighbourhood. This is the approach that distinguishes GLP projects from the stereotypical vision of a warehouse floor while meeting all the needs of a modern business.

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6.

EXPECTATIONS
AND STRATEGIES

Report on ESG readiness survey of selected commercial real estate companies in Poland

The exponential growth of regulations in the ESG area, which drives an environmental, social and corporate perspective on governance and often forces far-reaching reforms, is part of the effort to address the climate crisis. Even though even the largest capital market players have introduced environmental risks into their calculations and also the largest commercial real estate players are announcing their ESG strategies one by one, there is still scepticism surrounding the topic.

The Polish Council of Shopping Centres (PRCH) and the Polish Chamber of Commercial Real Estate (PiNK) checked to assess what extent companies operating in the commercial real estate market are ready for the challenges posed by the need for ESG reporting resulting from the CSRD and Taxonomy Directive. In the study, the focus was not on the companies' motivations or analysing their strategies. In the current situation, the motivation for change is actually less important – what is more important is that organisations are well prepared to present a report in line with the guidelines, which some entities will have to do as early as next year.

Experts in financial analysis indicate that the topic of ESG is of interest to investors. It is clear from the Warsaw Stock Exchange's 2021 consultation that most of the world's largest asset management firms are moving towards fully integrating ESG criteria into the investment process. Non-financial factors are also becoming an increasingly important aspect for individual investors. According to the results of the latest (2023) SEC Newgate ESG Monitor survey, 61% of Poles already declare an interest in these issues, an increase of up to 13% on the previous year. This means that more than half of the potential customers of Polish companies pay attention to ESG challenges. How has the commercial property sector been adapting to these requirements?

Key findings

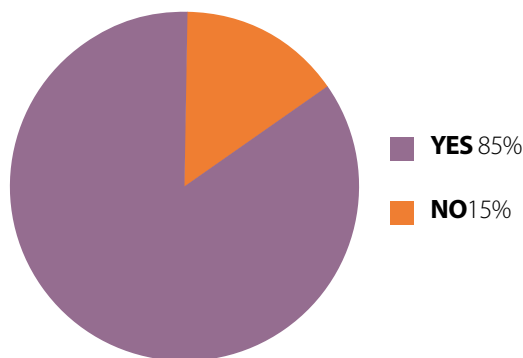
- ESG issues are important in valuation for the vast majority of respondents
- The organisation surveyed have carried out numerous activities to comply with the EU Taxonomy and meet the reporting requirements imposed by the CSRD
- The level of preparedness of entities for reporting varies considerably: from companies that provide full reports to those that are just analysing the legislation
- The lack of adequately educated staff and experience in organisations are the main obstacles identified by respondents for ESG transformation in companies
- Preparations for compliance with the Taxonomy and CSRD focus on technical issues

In total, the survey covered entities managing more than 13 million m² GLA. In aggregate, they owned or managed as many as 302 retail schemes, 76 office buildings, 11 residential projects and 211 industrial and logistics facilities.

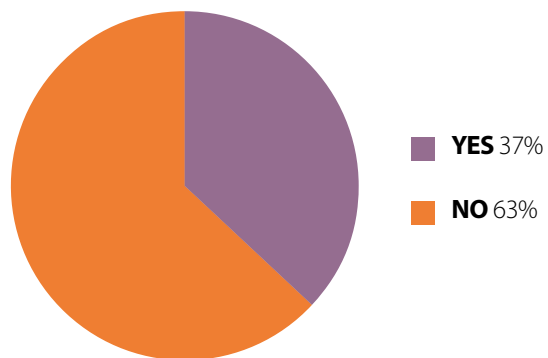
Preparations in numbers

ESG reporting issues link many areas of an organisation. From recognising the extent to which general legislation applies to the company in question, to strategic issues and establishing procedures for collecting the necessary data, to the purely technical issues of measuring the relevant indicators. Combining these activities usually requires a considerable amount of work. We therefore asked the respondents whether they had appointed persons responsible for ESG reporting? 85% of companies have appointed such a person, but as many as 15% have not yet done so.

Have you designated individuals dedicated to reporting ESG matters?



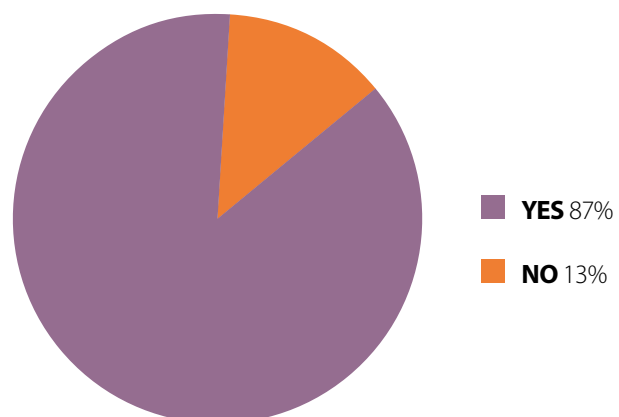
Do those persons exclusively focus on ESG topics?



Out of the 85% of companies that have appointed dedicated persons for ESG reporting, 37% have not assigned these persons responsibilities from other areas. In the remaining cases (37%), those responsible for ESG combined these functions with, among others, asset management (10%), financial analysis (10%) and "supervision of ongoing projects." In one case, the reporting person is also responsible for business development.

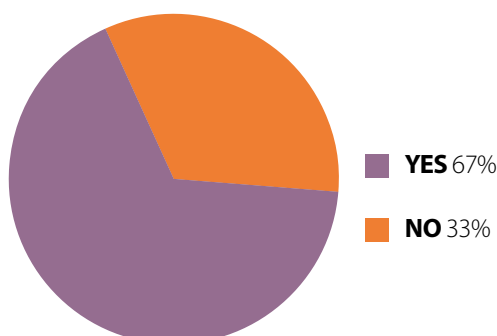
The vast majority of companies surveyed considered ESG issues to be an important factor when valuing property. Experts predict that the EU Taxonomy will encourage financing institutions to take these aspects more into account when making financing decisions, which will translate into valuations

Do you consider ESG factors as significant to the valuation of real estate properties?

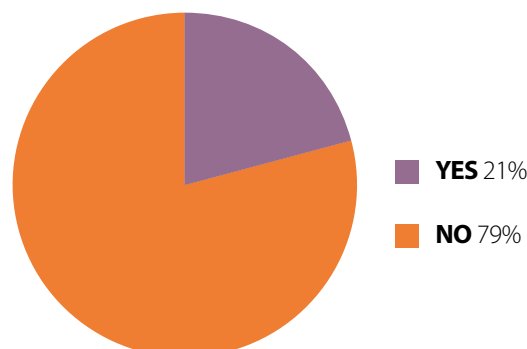


The vast majority of companies surveyed also carried out energy audits, which are important, i.e., in identifying possible areas of efficiency improvement. Buildings are also audited as part of the process to obtain white certificates and confirm the parameters that qualify a facility for some form of green financing. Audits are increasingly important in refinancing investments and are also increasingly often part of reporting.

Since the beginning of 2021 did you audit your buildings?



Do you finance your investments with green bonds?



So far, an unpopular form of capital raising among the companies surveyed is the issuing of green bonds. It seems that, for a relatively new financial tool, the use of such issuances by one-fifth of those surveyed should be considered a very good result.

Fundamental challenges: Compliance with the EU Taxonomy and reporting

The first challenge for companies embarking on the ESG transformation path is the EU Taxonomy, i.e. the requirements contained in the European Parliament and Council Regulation no. 2020/852. It provides a classification framework to define what can be considered a sustainable business activity. It is based on environmental criteria, covering climate aspects, environmental protection, climate change adaptation and sustainable use of natural resources. It is a tool to accelerate the transition towards a low-carbon and sustainable economy, providing clear guidance to businesses and investors on their contribution to achieving environmental goals. The EU taxonomy is a key element of the European Union's roadmap for sustainable finance and the effective achievement of the Sustainable Development Goals. Companies have targets that they must achieve by acting in a certain way.

Further requirements are imposed on companies by EU Directive 2022/2464 - the Corporate Sustainability Reporting Directive (CSRD). On 31 July 2023, the European Commission has published the European Sustainability Reporting Standards (ESRS). The adoption of the first set of standards for businesses covered by the CSRD is an important step towards a transparent and comparable system for reporting on a company's sustainability performance.

Main challenges

In the survey, we asked surveyed organisations for an indication of what the biggest problems were when preparing the implementation of non-financial reporting. The majority of responses were related to the challenges of adapting to existing and planned legislation. Responses suggest that the surveyed appear to be at different stages of the sustainability reporting journey. Some of the answers position them only at the beginning of their journey – at the stage of becoming familiar with the regulations. A lot more responses point to the considerable difficulties associated with the next stage of reporting, i.e. data collection and aggregation.

This is not surprising, given that some ESG experts estimate that reporting in line with the guidelines requires the introduction of some 1,200 data points, from which data has yet to be collected and compiled.

Linked to this problem is another obstacle identified in the study: "lack of personnel and expertise."

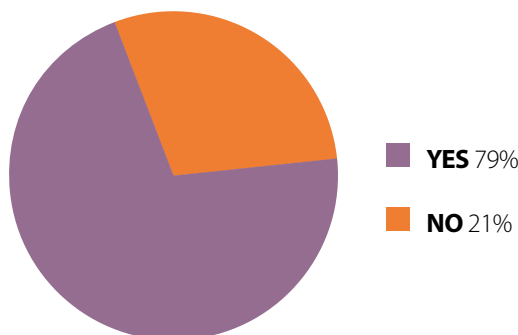
The lack of experienced staff with practical knowledge of carbon footprint calculation and reporting in the open-ended survey questions was also noticeable in the context of the fact that it is not easy to move from the regulatory level (knowing and understanding the legislation) to the issue of making specific calculations and reporting.

Conducted activities

Although the obstacles that companies face on their path to compliance with ESG regulations are often systemic in nature, many entities are well advanced in their efforts to make a change. From the responses collected, a picture emerges of widespread mobilisation to meet legislative requirements.

The question “Has your organisation taken action related to ensure compliance of your organisation and buildings with the EU Taxonomy?” was answered affirmatively by 71% of respondents.

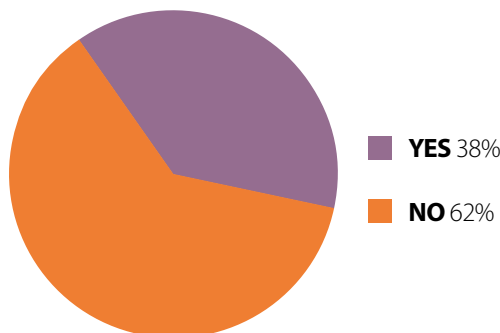
Has your organisation started the process of compliance with EU Taxonomy?



Of the 10 entities that described their preparations, the majority focused on preparing buildings for the changing requirements. They were “assessing the current condition of all buildings, planning improvements for each facility, carrying out a climate risk assessment” and “reducing CO2 by changing equipment technology.”

What is particularly noticeable is the large-scale implementation of technical solutions to reduce emissions and energy intensity. One respondent acknowledges that taxonomy disclosures have only been partial so far, as they apply to companies which will not be subject to mandatory reporting until 2026.

Are you legally obliged to ESG reporting in 2024?



When it comes to integrated ESG reporting, in many cases we do not yet have a mature strategy for action. In two cases, however, full ESG report documents have already been produced, which are based on commonly accepted methodologies. Although we already have examples of comprehensive preparation, it is likely that the independent audits required by the regulations will identify quite a few areas of possible improvement in the coming years.

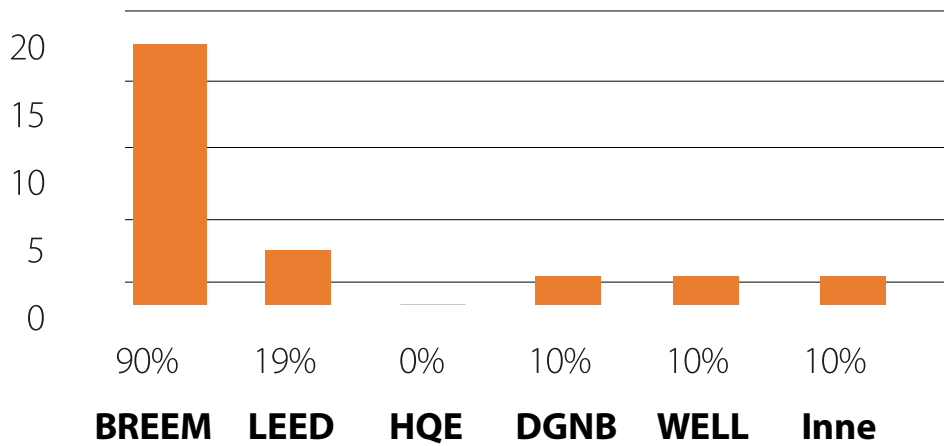
Green lease agreements

Respondents were also asked about green clauses in lease agreements, i.e. agreements that include solutions to enable the building to be used in an environmentally friendly way. As many as 85% of the entities surveyed described their activities in this respect.

One respondent is planning to “introduce green leases in newly designed projects and apply them to renewals in existing facilities.” Some companies have just ordered draft agreements, others are preparing annexes which will soon be presented to potential tenants. The most advanced along the way (2 organisations) have introduced in their flagship projects green annexes to agreements as a permanent feature since 2022 or are “currently actively negotiating with tenants, adapting contract provisions to include aspects related to energy efficiency, employee welfare and benefits for the local community.”

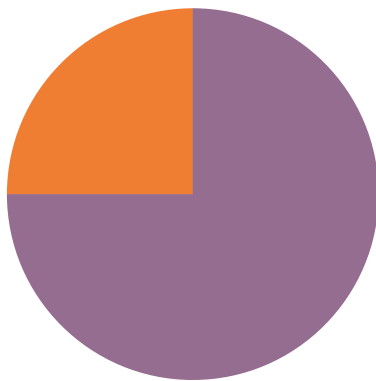
It is worth taking a closer look at the issue of multi-faceted certificates. The survey shows that companies are making significant efforts to certify their facilities. The most popular certificate by far is BREEAM, chosen by almost all entities surveyed. For other types of certification, their popularity is shown in the table (the total does not add up to 100% as it was multiple choice).

Certification types



The surveyed emphasised the relevance of environmental, social and governance (ESG) issues when valuing property. Companies are taking various steps towards complying with EU Taxonomy and meeting the reporting requirements under the CSRD. In the context of preparing for compliance with the Taxonomy and CSRD, companies are focusing mainly on technical aspects, among which it is worth highlighting the installation of photovoltaic panels or chargers for electric cars.

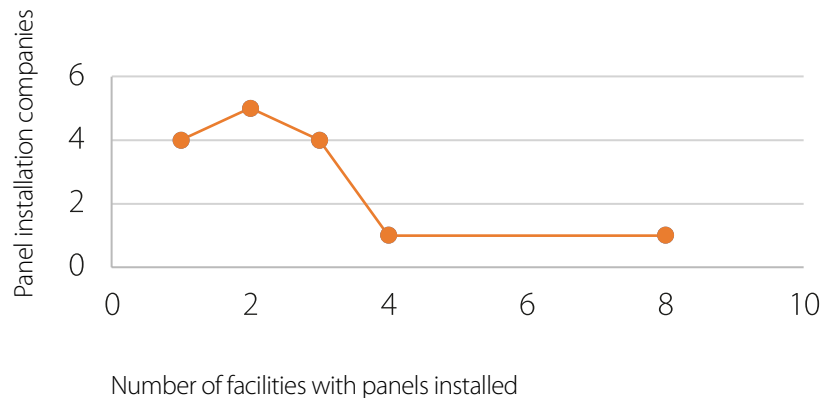
Solar panels



INSTALLED 75%

HASN'T INSTALLED 25%

Number of buildings with solar panels



Author: Karol Templewicz,
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Polish Council of Shopping Centres





Nhood's Strategy: People, Planet, Profit

ESG represents a holistic approach to the functioning of a company, and all employees should be involved in sustainable development efforts. Involving all the company's departments in the implementation of an ESG strategy ensures synergy of actions and gives positive results.

These are the principles that guide us at Nhood Services Poland, and we have a history of implementing ESG goals within our company that goes back 10 years. Year after year, our sustainable development policy activities are expanding and we continue to work to further enrich them. I recommend reading the latest "Nhood Services Poland Sustainability Report" to learn more about our activities under the /People, Planet, Profit/ strategy.

**Author: Agnieszka Gutowska,
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Nhood Services Poland**



ESG factors from the perspective of real estate funds in Poland

As part of the research project entitled "Quality of management of ESG aspects and resilient to crises. Enterprises - financial institutions - local government", headed by Barbara Ocicka PhD Associate Professor, planned for 2022-2024 at the Collegium of Business Administration at the Warsaw School of Economics, not only did we learn about the current research achievements in the field of managing ESG aspects, but the focus was on how ESG factors are understood by various economic entities from both the private and public sectors. The researched entities were represented by companies listed on the Warsaw Stock Exchange, financial institutions, in particular, investment funds focused on investing in securities and funds investing in real estate, and local government units. The interdisciplinary research team was divided into research groups depending on the type of entity being the subject of the research. Empirical research was conducted in November / December 2022 in the form of focus group interviews divided into the entities under study. A reflection

of the implementation of the conducted research and its results is a book titled "Sustainable Transformation, the state and conditions in the context of ESG", which was published by the SGH Publishing House in October 2023, edited by B. Ocicka and K. Gemra.

Common findings for all research groups concerned the general uncertainty as to the characteristics of the adopted principles of policy implementation in the context of sustainable development or non-financial reporting. Very often, the great need for education and building awareness was indicated in the context of the importance of ESG at the level of operational areas of researched entities. The need to determine benefits for individual entities to make the ESG transformation process more effective was also emphasised.

Real estate funds towards ESG factors

The following section presents detailed conclusions from focus group interviews conducted among selected real estate funds. On the research side, the group was led by Anna Grygiel-Tomaszewska PhD and Jolanta Panas. In the context of real estate funds, people were invited to join the research group representing, among others, asset managers of closed-end real estate funds who decide on the selection of real estate for investment portfolios, risk managers, managers responsible for creating products and managers responsible for compliance.

Sustainability assessment of real estate

According to the responses received, each new potential investment is currently subject to a sustainability assessment, which is already part of the initial phase of an investment analysis. This assessment is inclusive and is considered to be as important as the fundamental analysis of the investment. External multi-criteria building certificates (BREEAM, LEED, WELL, etc.) and ESG reports prepared by the owner or developer of the property are used as sources of information. Moreover, as part of internal procedures, internal investment assessment standards are implemented, primarily in relation to the possibility of achieving zero emissions by 2050.

The importance of individual ESG areas in real estate portfolios

Individual ESG areas have non-equivalent importance when analysing the sustainability of a real estate portfolio. Definitely, great importance is placed on environmental factors (E), as the real estate sector is very resource-intensive. Next, the subject of the investment is assessed within the social area (S), although according to experts, it is difficult to de-

fine due to the lack of standards. The governance area (G) is of the least importance. In the environmental area, the most important criterion is energy efficiency, especially in relation to older buildings because their modernisation requires, in addition to the involvement of capital, also taking the building out of service for a longer period of time.

ESG in the real estate due diligence process

According to experts, investors expect that failure to take ESG criteria into account in the process of constructing and managing a real estate portfolio will have a negative impact on the value of the portfolio in the long term. Moreover, ESG factors are beginning to be perceived as an integral part of the investment process and as an important determinant of the capital raising policy. Therefore, before a property is included in an investment portfolio, it is thoroughly analysed in terms of ESG criteria. With respect to assets that are already in an investment portfolio, if they are not adapted to ESG requirements, the property is sold from the investment portfolio through the sales process.



ESG standards as a tool for assessing new investment goals

According to experts, there are noticeable difficulties in identifying applicable standards for assessing the sustainability of real estate. First, multi-criteria building assessment systems are used. Next, the provisions of taxonomic regulations, indicating assessment criteria in the environmental area, play an important role. In another step, documentation is obtained from the developer, seller, owner, or manager of the property, which is the basis for the analysis of ESG risks and, consequently, allows for the creation of internal ratings of the fund. Green lease agreements are gaining importance and are not yet common, but according to experts, it is expected that there will be more and more of them soon, as they are an expected standard not only on the part of the landlord, but also on the part of the tenant. In addition, the GRESB (Global Real Estate Sustainability Benchmark) assessment has been indicated as a tool for assessing investment goals through the prism of ESG factors, which is also starting to gain importance, however, the challenge here is the low level of data coverage on the Polish market.

Summary

The multi-faceted nature and complexity of the ESG issue is reflected in the broad impact of the issue of sustainable development on the functioning of the entire economy and on the functioning of the real estate sector due to the resource-intensity and emission-intensity of buildings.

The results of the above-described research among real estate funds indicate that nowadays ESG factors constitute a key challenge for real estate portfolio managers. From the research cited above, it can be clearly stated that real estate fund managers are striving to create a standardised assessment of real estate sustainability because the expected future value of investment portfolios depends on the degree of their sustainability.

In the modern day, the possession of a multi-criteria certificate by a property is high on the agenda. According to experts, the lack of multi-criteria certification will result in difficulties in finding buyers.

The real estate funds participating in the described study are in the initial phase of ESG transformation, yet at the same time, the people representing them are highly aware of the importance of ESG issues for the entities they represent. In the near future, further identification of criteria should be expected to assess the potential benefits resulting from compliance with ESG requirements by entities from the real estate sector, as well as closely related sectors.

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Space for logistics for years to come

Every building developed by GLP from the ground up is in line with the latest sustainability trends. This is especially evident in multi-stage projects, where, in our capacity as the development manager, we listen to client feedback and analyse the data we collect. The resulting insights are then implemented in both our existing buildings and the ones we plan at any given park.

A good example of this approach is the GLP Poznań Airport Logistics Centre, where the first facility was fairly standard, but the second was already built in compliance with the BREEAM "Very Good" certification requirements, while the most recent one was awarded an "Excellent" rating, an honour bestowed on only a handful of warehouse and production facilities in Poland. We have also raised the certification level for every new building at the GLP Wrocław V Logistics Centre and use solutions that we know will meet the needs of our tenants, e.g. regarding the expansion of relaxation areas for employees.

Furthermore, we continue to work on improving the buildings we buy as an investor. In those cases, we appoint working parties whose job is to develop a programme and budget for upgrades that improve the sustainability, energy efficiency and work environment.

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Impact of ESG on real estate

In the area of commercial real estate, elements of ESG implementation have been present for many years. However, recently adopted EU legislation extends their reach considerably, both to buildings not previously covered by such legislation and to companies in the construction sector and related sectors (e.g. energy).

According to ESG Institute research, only 15% of Poles have encountered the acronym ESG. The construction industry, especially the part of it related to commercial real estate, seems to be much more aware of it. The most visible aspects embedded in the implementation of ESG are the multi-criteria certifications and the measures resulting from the Sustainable Development Goals (SDGs), which were visible in the industry long before the term ESG became popular. The growth of certification from a few buildings in 2010 to more than 1,600 in 2023 (Sustainable Certified Buildings - Report 2023, Polish Green Building Association) shows that parts of the construction industry are better prepared for the changes taking place. Many aspects considered in certification translate into indicators needed for non-financial reporting. As part of certification, investors have started, among other things, to count the environmental impact of buildings (**LCA - Life Cycle Assessment**) (from which the embedded carbon footprint is easily calculated), to carry out dynamic modelling analyses of buildings and their operational footprint, or to develop climate change adaptation strategies.

However, the situation we have in the commercial real estate sector should rather be seen as an exception. According to the 2021 study, only about one-fifth of companies in Poland have a climate target, and only a dozen or so percent count indirect third-party emissions (from the value chain). The Global ESG Monitor report, which included the WIG20, shows how far behind Polish listed companies are compared to other European indices. The Polish reports are the most comprehensive, but lack specifics, especially in terms of CO2 reduction and supply chain transparency. We perform similarly poorly as a country in terms of the use of ESG support tools and initiatives. Out of almost six thousand companies that had taken action under SBTi by August 2023 and more than 3000 had approved their reduction targets. However from Poland we had only 18 such companies.

The specifics of ESG will affect the construction industry more widely than the reporting obligations of regulated companies alone. Primarily because of the linkages in supply chains, which will also indirectly affect smaller companies. The changes that are discernible at this stage manifest themselves on several levels.

Companies that have so far done little and are just starting to enter the reporting field need above all to sort out and adapt internal procedures (data collection and consolidation), deve-

lop strategies, policies and procedures or train staff, all often with the help of external consultants.

Companies that are more aware (such as the commercial real estate sector mentioned earlier) are already publishing their reports at this point, even before the formal reporting obligation. Although the first market reports have varying levels of detail (companies that do not yet have to report often do not show many figures), it is a great exercise and builds the right background in the organisation. We are also increasingly seeing pressure on counterparties, expectations subject to which mutual cooperation decisions are made. Such examples are no longer just curiosities heard at industry conferences, but real-life decisions by companies that have refused to cooperate due to non-transparent practices or involvement in environmentally damaging projects.

The growing awareness and pace of development of ESG topics can be seen in many layers. There is a growing demand for new services, requirements for qualifications of ESG specialists in organisations and the related dynamic increase in the number of courses or postgraduate studies, as well as personnel turnover in the market or, finally, the number of published ESG reports. A positive and welcome development (especially in the context of the weak positions of Polish companies in various ESG compilations) is the increasing interest of investors in an ever wider range of services and tools aimed at expressing company objectives more precisely in figures. Although the number of signatories to standards or initiatives such as SBTi, CDP or EcoVadis is growing relatively slowly, the market is seeing a direction of change in the approach to ESG topics.

In addition to multi-criteria certifications (which have long since become a standard in Poland), clients are interested in a set of services that fit as broadly as possible into the ESG context. As part of decarbonisation pathways (increasingly developed using tools such as CRREM), advanced energy audits are being carried out (e.g. based on ASHRAE standards) and carbon footprint reduction strategies are being developed. For newly designed buildings, elements of a circular economy strategy are taken into account (e.g. modularity, ease of demolition or use of recycled components). The compliance of buildings with the requirements of EU taxonomy is assessed, the GWP (carbon footprint) indicator is counted and climate risk analysis is carried out. Green leases are also growing in popularity. Such measures, and especially their transparent communica-



tion (with references to the assumptions used for calculation, methodologies and scopes) are the basis for building the credibility of companies. The above elements mean that in the commercial real estate sector, changes are taking place relatively smoothly, at least as far as the 'best cared for' letter E is concerned. Among the barriers to decarbonisation, we can note the limited availability of energy produced from RES in the Polish energy system at present and the slow transformation of this sector.

An important role in accelerating change in the construction sector is played by non-governmental organisations and their mutual cooperation, which for the Polish Green Building Council (PLGBC) is one of the strategic elements. Thanks to the partnerships we enter into, we have a much better chance of utilising the potentials of our organisations, exchanging know-how and better educating and inspiring each other. Cooperation between foundations, associations, chambers, universities or local authorities and businesses allows us to significantly expand our networks of influence through our affiliates. These elements allow change to happen faster and more effectively, and the transformation of our environment can take place more efficiently and equitably.

Author:

**Dr. Ing. Marcin Gawroński,
Polish Green Building Council**



Creating *inclusive work spaces* as part of sustainable development

Inclusive office spaces are places to work that support the needs of a diverse workforce, regardless of their innate or acquired characteristics, such as age, gender, fitness level, sexual orientation or gender identity, etc. If they are not inclusive, they cause chronic discomfort, a sense of inadequacy or exclusion. Operating in such conditions for 1/3 of the day (assuming an 8-hour workday) has a negative impact on employees' well-being and thus on their efficiency, which translates into their employers' bottom line. This is a strong business case for nurturing inclusive work spaces. Last but not least, such spaces are part of a company's social impact, the „S” of ESG.

Companies that create inclusive workplaces recognise that diverse teams are a very important factor of business success. Such communities are more creative, can more effectively identify opportunities and risks, and more accurately develop solutions that address the needs of a diverse customer base.

Gender, age, race, nationality, identity, sexual orientation, personal situation, ability level, the way one's brain functions - these are just some of the many diversity spectra. It's impossible to solve them all at once, but it's worth investing in raising awareness of the diversity of needs and challenges, so that the workplace is a safe haven to compensate for what may just be difficult outside of it. At Skanska, we try to hint at how to do this, both in cooperation with tenants in our office buildings and in the pages of publications.

Together with partners from the world of architecture (Workplace) and neuroscience (Impronta), we have published a report titled "Neurodiversity in the office"⁴. This is the first study that organises knowledge about neurodiversity and provides practical tips on how to support neuroatypical individuals in work environments by improving spatial conditions. In turn, in cooperation with the Love Does Not Exclude Association, we published a compilation of good practices aimed at and implemented by LGBT+ communities in private sector companies⁵. We have also supported the publication of guidelines for the design of architectural barrier-free spaces entitled "The Switch"⁶, authored by the Integration Foundation.

We hope that these publications will help the topic of inclusive workspaces to be settled in the real estate sector for good, contributing to the operation of our industry in a more sustainable way from a social perspective.

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¹ <http://neuroinclusive.design/>

² https://biznesniewyklucz.pl/wp-content/uploads/2022/12/Bezpieczne-Przystanie_2022.pdf

³ <https://www.integracja.org/wlacznik/>





7.

DECARBONISATION
AND EMISSIVITY

Building a decarbonisation strategy

Challenges for the construction sector

The construction sector is responsible for about 38% of global greenhouse gas emissions, of which about 10% of emissions are generated during the production and transport of building materials and the construction and demolition process of the building itself (the so-called embodied carbon footprint), while 28% of emissions are generated during the operation of the building (the so-called operational carbon footprint). In the European Union alone, buildings are responsible for 36% of greenhouse gas emissions and 40% of energy consumption, where, according to European Commission communications, around 75% of buildings are energy inefficient.

The decarbonisation of building stock is key to achieving the climate goals set by the Paris Agreement. The measures taken

should address the entire life cycle of buildings, from the concept and design phase, to construction and occupancy, to demolition. This poses a challenge for the entire value chain of the building sector, both for users, property managers and landlords, as well as for building material manufacturers, designers and building contractors.

Commercial property decarbonisation

In order to meet the necessary changes, demands and also to build the climate 'resilience' of a property, it is necessary to develop a building decarbonisation strategy. It will set the direction with objectives and plans for modernisation and retrofitting measures.

Decarbonisation is the process of reducing or avoiding the emission of greenhouse gases released into the atmosphere until their anthropogenic formation stops altogether. The decarbonisation process can involve a company, facility, product or service .

The starting point is an assessment of the existing building in terms of the factors influencing its energy intensity and emissions, in terms of the material and technical solutions used in the structure of the building, the building installations, the way energy is managed, as well as the sources of energy supplied to the building. Determining the energy demand indicator (energy class in the near future) and CO₂ emissions gives a picture of how far along the road to decarbonisation a building is.

Roadmap for the decarbonisation of a commercial property

The decarbonisation of commercial buildings is a process that takes time and investment, but the sooner it is implemented the greater the environmental, financial and image benefits for owners. A decarbonisation roadmap can help organise the available knowledge, set targets and facilitate the management of the process. There are eight steps that can be identified in the process.

1. EXTERNAL ANALYSIS.

Analysis of the legal environment and external requirements in terms of environmental impact and climate change, climate change adaptation and energy efficiency and RES.

In the context of the challenges posed to the building sector, every property owner and manager should familiarise themselves with the current legislation, acts, documents and systems that regulate, from a legislative side, the decarbonisation of buildings. This issue is regulated, among others, by

- Energy Performance of Buildings Directive (EPBD);
- Emissions Trading System (EU ETS2);

The planned transposition of the EPBD introduces changes to increase the energy efficiency of buildings and reduce greenhouse gas emissions, the most important of which are:

- the introduction of MEPS – Minimum Energy Performance Standards
- establishing energy classes for buildings,
- the requirement for public, residential and non-residential buildings to be thermally upgraded so that the energy class requirements of the buildings are met within a certain timeframe,
- the requirement to calculate the carbon footprint of buildings.

- Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on establishing a framework to facilitate sustainable investment, the so-called EU Taxonomy, which is a classification system for environmentally sustainable economic activities;
- The Corporate Sustainability Reporting Directive (CSRD) obliges an increasing number of businesses to disclose non-financial information, i.a. on climate change issues and risks, with the organisation's carbon footprint being one of the most significant environmental factors subject to assessment by the company's key stakeholders;
- National regulations – such as the Long Term Renovation Strategy for Buildings in Poland (DSRB);
- National legislation - Act on Energy Efficiency, Act on Energy

Performance of Buildings, Act on Renewable Energy Sources, Act on Support for Thermal Modernisation and Renovation and Central Emission Register of Buildings.

These legislative acts introduce new standards with which buildings and businesses must comply on the road to carbon neutrality.

2. INTERNAL ANALYSIS.

Analysis of the internal situation within the property portfolio.

In order to manage greenhouse gas emissions it is necessary to start by measuring them. For this purpose, a tool to examine the carbon footprint of a building such as CRREM (Carbon Risk Real Estate Monitor) can be used. Using such tools, it is possible to check whether the current and projected operational greenhouse gas emissions from a building's use fit into the building's decarbonisation pathway to 2050 resulting from the Paris Agreement targets. As part of the CRREM analysis, a 'stranding year' is identified, i.e. the point at which a building will fail to meet current and future carbon performance standards, as

well as the market's expectations of climate risks and the corresponding market value. If emissions are exceeded, appropriate decarbonisation measures should be taken, at least up to the level set by the decarbonisation pathway for the property. CRREM is a useful tool for property owners and managers, as well as investors, as it enables them to assess the climate risks faced by a building and plan for their implementation against CRREM's decarbonisation pathway to 2050 or earlier.

3. ENERGY AUDIT.

An energy audit of a building, detailing energy consumption and identifying areas of significant loss.

The size of a building's operational greenhouse gas emissions is primarily influenced by the amount of energy consumed, so decarbonisation should first look at solutions leading to its reduction.

It is good practice in the property market to carry out energy audits of commercial buildings every four years. These studies

include a detailed analysis of energy consumption and use, which allows the identification of areas of significant energy loss and a proposal of feasible measures to contribute to the reduction of energy consumption in the building, including the use of carbon-free energy sources.

4. REDUCTION TARGETS.

Setting GHG reduction targets.

When defining reduction targets, both future standards and legal requirements, as well as advances in low-carbon technologies, should be taken into account.

CO₂ reduction targets can be achieved by implementing appropriate measures in the building in the following areas:

- Improving the energy efficiency

- Producing energy from renewable sources
- Connecting the building to an efficient district heating network
- Purchasing renewable energy under the cPPA formula with certificates of origin
- Green lease agreements

The energy consumption of a facility is primarily influenced by its users, so it is important to involve them in the decarbonisation process. So-called green leases between a landlord and a tenant to incorporate sustainable practices in the use and management of the building are becoming increasingly common.

5. DECARBONISATION SCENARIOS.

Identifying scenarios for reaching zero carbon and selecting the most optimal path.

To select and implement a decarbonisation scenario is to embark on a long-term process using existing and potential financial and technological resources. The scenario should take into account the current and future capacities of the property manager and the financing models for the investment, taking into account available national and EU funds, as well as instruments such as 'green' credit and green bonds. It is also necessary to include ESG non-financial reporting issues in the scenario that provide transparency to investors and other key stakeholders.

Each decarbonisation scenario includes a timetable for achieving the set reduction targets, together with a projection of the costs of implementation and the effects of the planned actions. This stage concludes with the setting of specific and realistic deadlines for implementation, with a frequency of regular reviews of the objectives set and possible adjustments to the activities carried out.

6. RISK ASSESSMENT.

Assessment of the risks associated with the implementation of the indicated scenario.

Failure to comply with legal requirements within a certain timeframe entails legislative, climate and financial risks for the property. Factors related to the energy efficiency and carbon footprint of buildings are among the key criteria for sustainable real estate development considered by investors, financiers and tenants. At the strategy development stage, it

is worth setting targets and adopting an action plan also for decarbonising the operational use of buildings. The actions taken should also address the magnitude of embodied emissions associated with the materials and equipment used and the construction process.

7. INVESTMENT FINANCING.

Analysis of funding sources including national and EU funding for planned energy efficiency projects.

Both national and EU funding for energy efficiency improvements in buildings is available to the real estate industry. The most important of these are:

- European Funds for a Modern Economy Programme (FENG), 2021-2027 Measure 3.1 Ecological Credit
- European Funds for Infrastructure, Climate, Environment Programme 2021-2027 Measure 1.1 Energy efficiency - Im-

proving energy efficiency (including installation of RES) in large and medium-sized enterprises

- European Funds for Infrastructure, Climate, Environment Programme 2021-2027 Measure 2.2 Development of RES
- European Funds programmes for individual provinces
- Other funding sources (NFOŚiGW, WFOŚiGW)
- White Certificates

8. CONTROL AND MONITORING.

Monitoring the effects of the strategy and reporting on the set targets.

Part of the decarbonisation of a building is the monitoring of the implementation of the planned measures, the effects achieved and the reduction targets set. It allows the strategy adopted to be evaluated on an ongoing basis and dynamic action to be taken to adapt to changing conditions.

The incompatibility of the building's emissions profile with the target decarbonisation path (net-zero by 2050) creates liquidity risk, putting pressure on the investment value of the property. From the perspective of an investor or landlord, but also of a property tenant, the emissivity of a building can be a criterion for assessing its quality and market value.

The challenges of decarbonising the construction sector are linked to the area of investment project financing, as well as its organisation and human effort. The result, however, will be the transformation of buildings into facilities that are comfortable, cheap to maintain and friendly to people and the environment. The vision of the buildings of the future depicts them as assets characterised by low social, environmental and financial costs. This effect is to be achieved through efficiency in the use of energy and other resources.

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Striving for net zero

GLP is at the forefront of emissions reduction at the construction stage in the logistics real estate market, with net zero being a goal we want to reach within two years. This is why in 2024 we are going to carry out pilot projects in every country we operate in, including Poland, to acquire experience and develop procedures and methods for working with partners and subcontractors.

Our latest projects will feature new solutions in the spirit of sustainability; we select low-carbon structural steel and improve wall and roof insulation parameters, which increases the energy efficiency of our warehouses. We will also test heat pumps as an alternative energy source. As far as existing buildings are concerned, we are looking for opportunities to install PV panels wherever the rooftops are prepared for it, installing EV charging stations, introducing more vegetation and improving the infrastructure for employees. We work closely with the clients of our parks on all these efforts and, responding to their “green” needs is our priority.

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8.

SOCIETY

CONSUMER AT A CROSSROADS

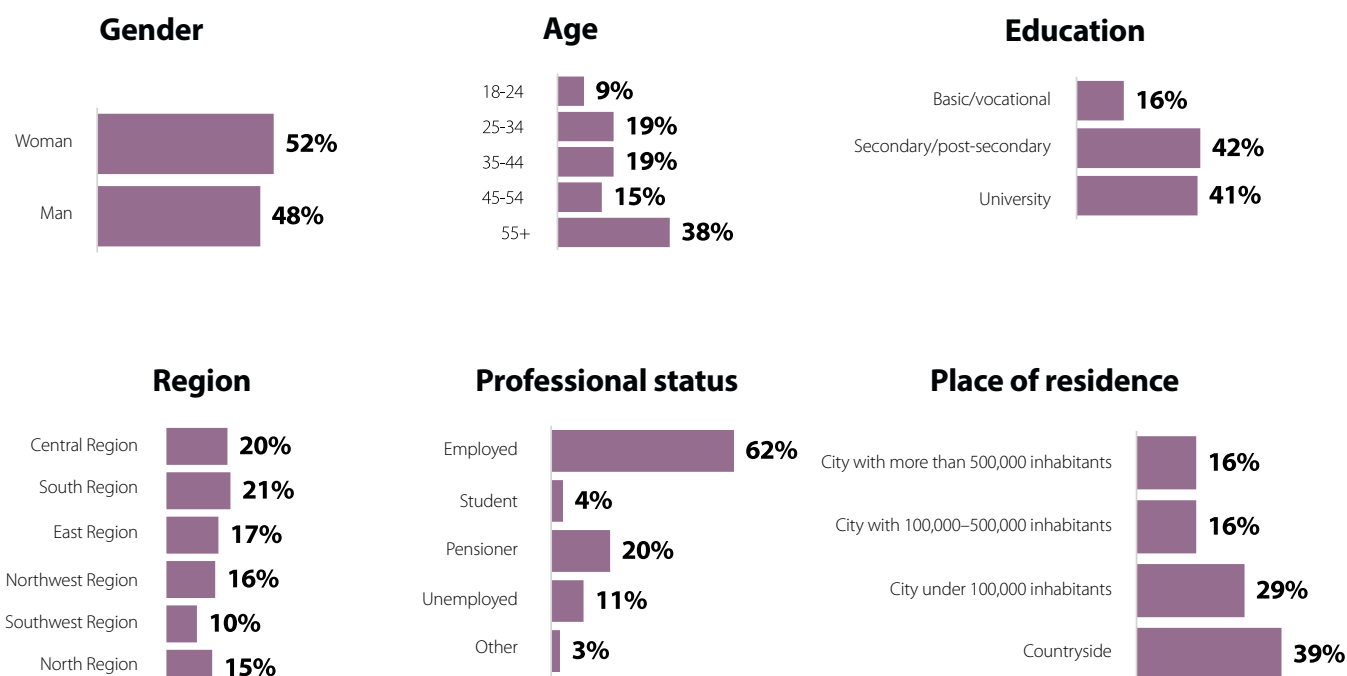
PRCH and Inquiry's study – ESG in retail real estate from a consumer's perspective

When planning measures to adapt to ESG challenges, commercial property owners and managers do not forget the social dimension of their existence – in addition to functioning in technical, financial or operational terms, buildings first and foremost serve people as places to work, to spend time, to shop, as spaces where we eat, play, relax, and play sports.

For a long time now, we have seen the commercial real estate industry viewing a building as a place that combines multiple functions (even if one function is dominant), paying attention to architectural and functional accessibility, a turn towards universal design that takes into account not only what the property is meant to be used for, but also by whom and for what it is actually used.

Hence, in the context of ESG, we do not want to overlook the social aspect of the functioning of commercial properties, either. In cooperation with the Inquiry agency, we asked more than 1,000 respondents how they perceive retail schemes as places to shop and office buildings as places to work, in terms of their environmental impact. In this publication, we present selected results from a survey conducted using the CAWI method in November 2023 on a representative sample of 1,003 adults.

SAMPLE STRUCTURE



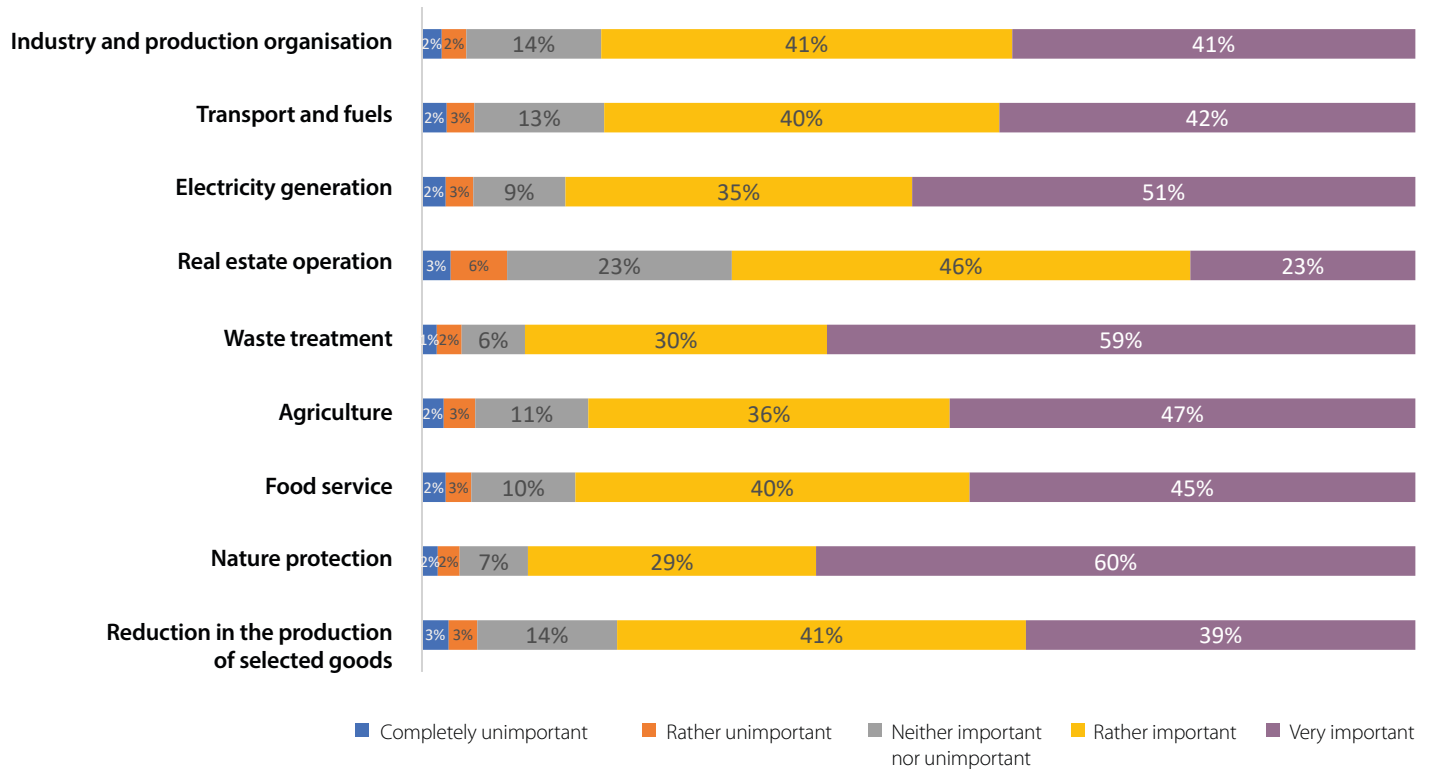
N=1,003 all respondents

REDUCING THE HUMAN IMPACT ON THE ENVIRONMENT

1. Now think of the different areas where solutions can be introduced to reduce the harmful impact of humans on the environment. How important do you think it is to implement green solutions within each of the following areas?

According to respondents, the most important areas in which it is very important to introduce environmentally friendly solutions are nature protection, waste treatment and electricity generation. It is noteworthy, however, that for the vast majority of the surveyed, each of the nine areas mentioned requires the implementation of environmental solutions – their presence was considered unimportant or rather unimportant by between 4% and 6% of respondents.

In the context of real estate operations, respondents were the least decisive, with almost ¼ (23%) not believing that there is or isn't a need to implement green solutions – a considerably higher percentage than for any of the other areas mentioned in the survey (followed by the reduction of production of selected goods and the organisation of industry and production, each selected by 14% of respondents).

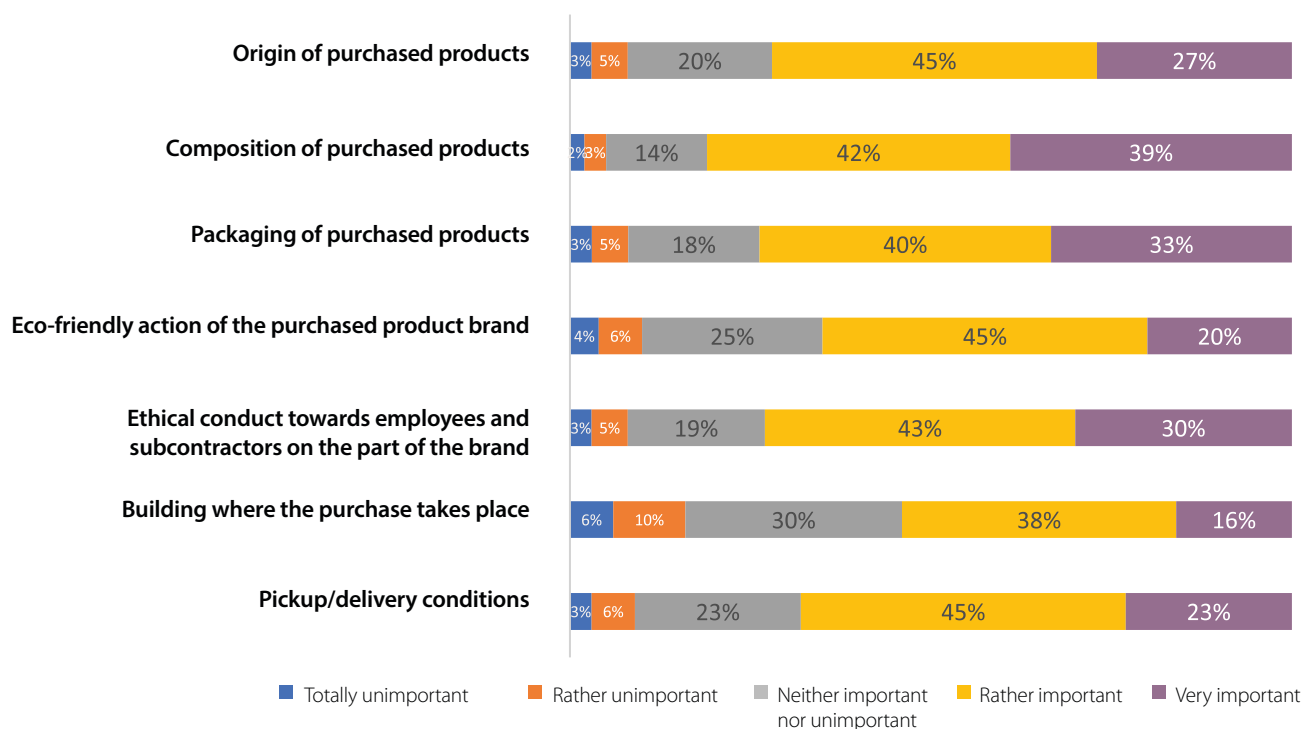


N=1,003

ECOLOGY AND PURCHASING DECISIONS

2. Now think about what influences what and where you buy. To what extent are environmental and sustainability issues important to you when making purchasing decisions in the following areas?

Assuming that ecological issues are important to consumers (as indicated by the results of the previous question), it should be noted that, in the context of specific purchasing decisions, ecological aspects are important and very important to them, especially in the context of product composition (81% of responses in total), product packaging and ethical behaviour towards employees and subcontractors (73% in total each) and product origin (72% in total). The building where purchases are made is of great or very great importance in this context for a total of 54% of respondents but also the lowest of all responses, and of little or very little importance, for a total of 16%.



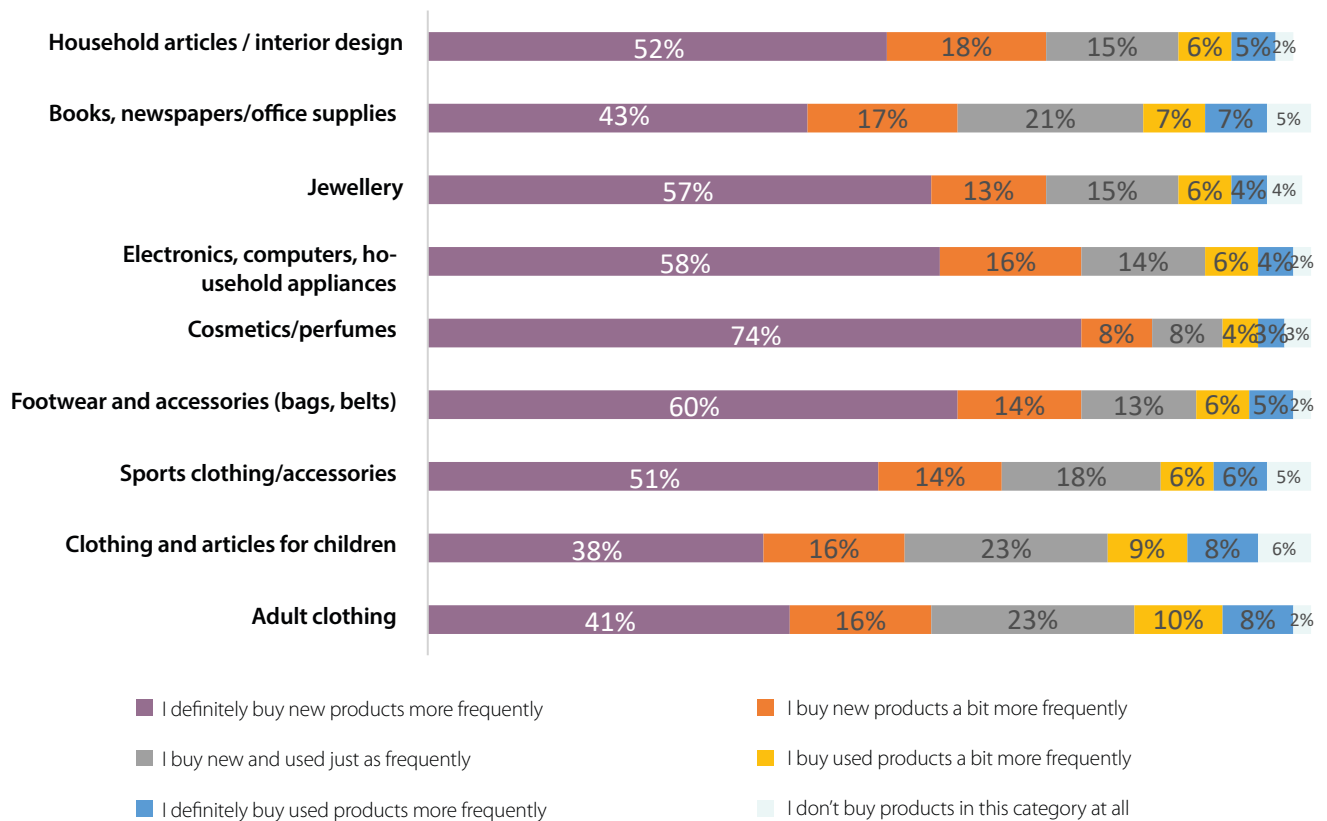
N=1,003

NEW VS. USED PRODUCTS

6. How do you usually buy the following product categories? For each of these, indicate whether you are more likely to buy new or second-hand/used products from that category

Retail projects have been observing a trend for product second life for some time. This new category of tenants includes not only second-hand shops, but also exchange points for clothes, books or other items. Exchanges and trade fairs are organised as special events.

Even though in all shopping categories, the dominant responses related to buying new items (the highest responses of "I definitely buy new products more frequently" were recorded in the cosmetics and perfume category (74%) and shoes and accessories (60%), the percentage of people buying second-hand products more frequently and "a bit" more frequently is high enough to be relevant for facility managers planning the tenant mix: the highest level of these responses was reached in the categories of adult clothing (as much as 18% in total, children's clothing and articles – 17% in total, books, newspapers, office supplies – 14% in total).

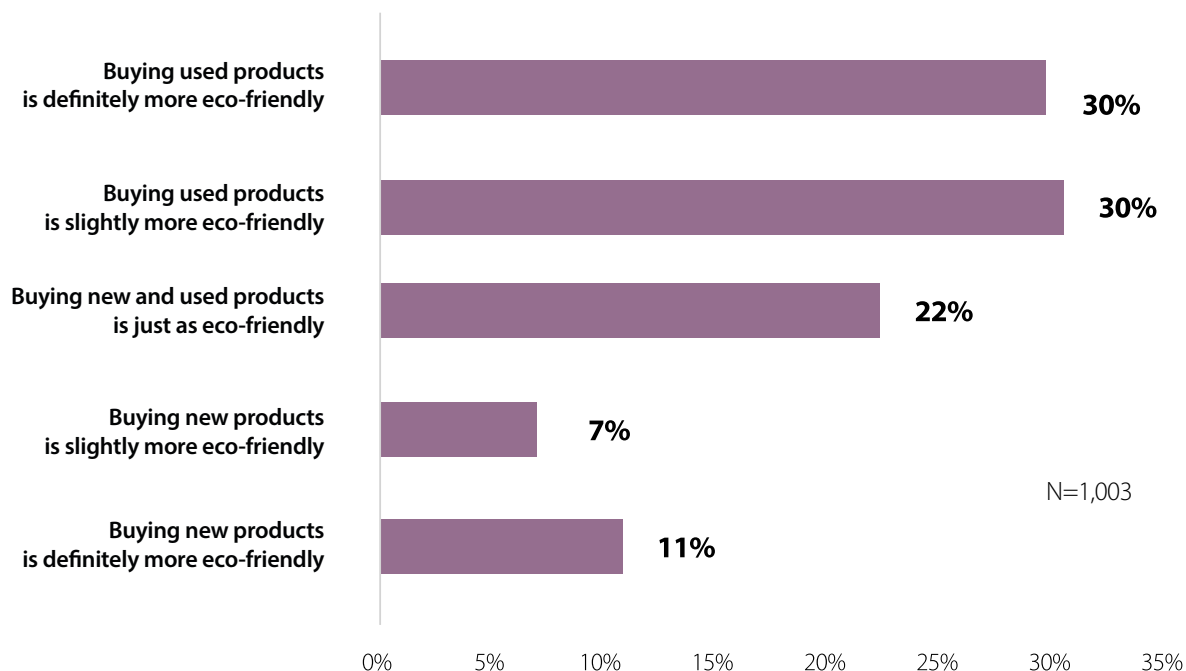


Respondents who indicated in Q5 that they buy a particular category.

ENVIRONMENTAL IMPACT OF PURCHASING DECISIONS

7. Which do you think is more environmentally friendly (i.e. has a less harmful impact on the environment) - buying new products or buying used products?

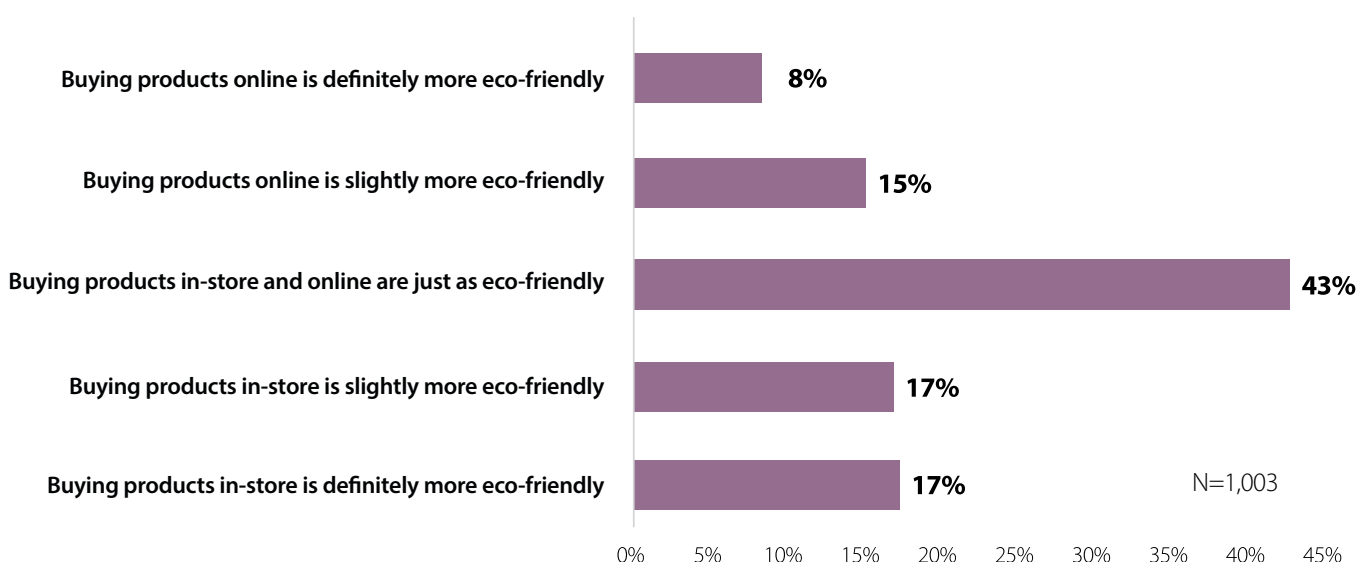
The responses to the question related to buying new and second-hand items are not surprising. The majority of the survey respondents consider buying second-hand items to be much greener (30%) or slightly greener (30%) than new items.



ENVIRONMENTAL IMPACT OF PURCHASING DECISIONS

8. Which do you think is more environmentally friendly (i.e. has a less harmful impact on the environment) – buying new products or buying used products?

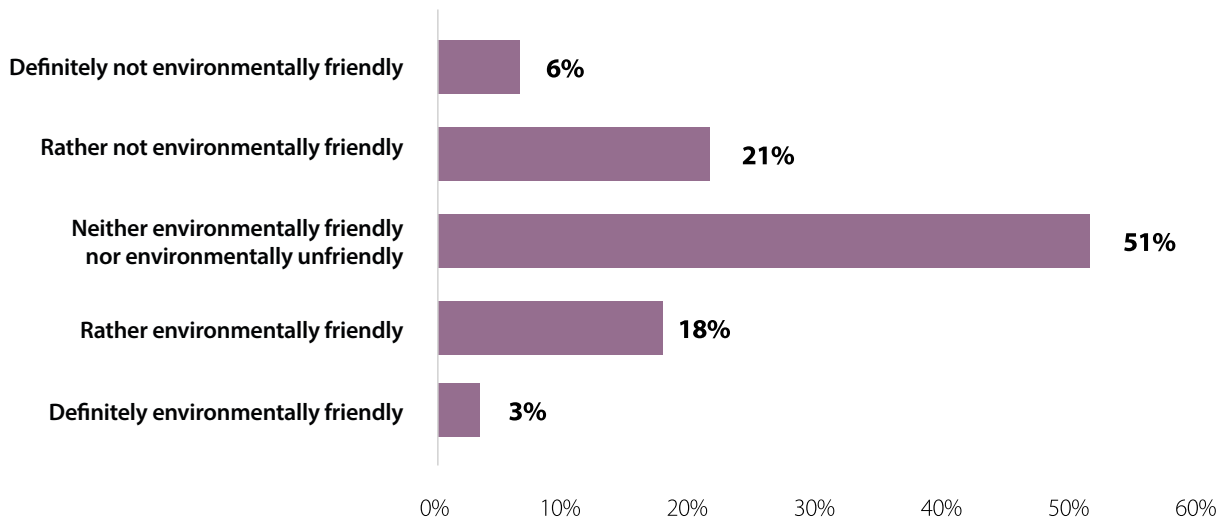
In terms of sustainability and the positioning of brick-and-mortar locations against online shopping, there is a widespread perception that in-store shopping is greener than online shopping (definitely more – 17%, slightly more – 17%). Only 8% of respondents considered online shopping to be greener and 15% considered it to be slightly greener. The dominant group believes that both channels are just as green (43%)



SHOPPING CENTRES AND THE ENVIRONMENT

14. In general, how environmentally friendly do you think shopping centres are?

The majority of respondents believe that retail properties cannot be said to be or not to be environmentally friendly (as many as 51%), but there is instead only a small group of people who believe that they are definitely environmentally friendly (3%) or definitely not environmentally friendly (6%). It seems that these results should be viewed from the perspective of the question regarding the need to introduce green solutions in specific sectors of the economy, where real estate was found to be an area where their introduction is neither important nor unimportant.

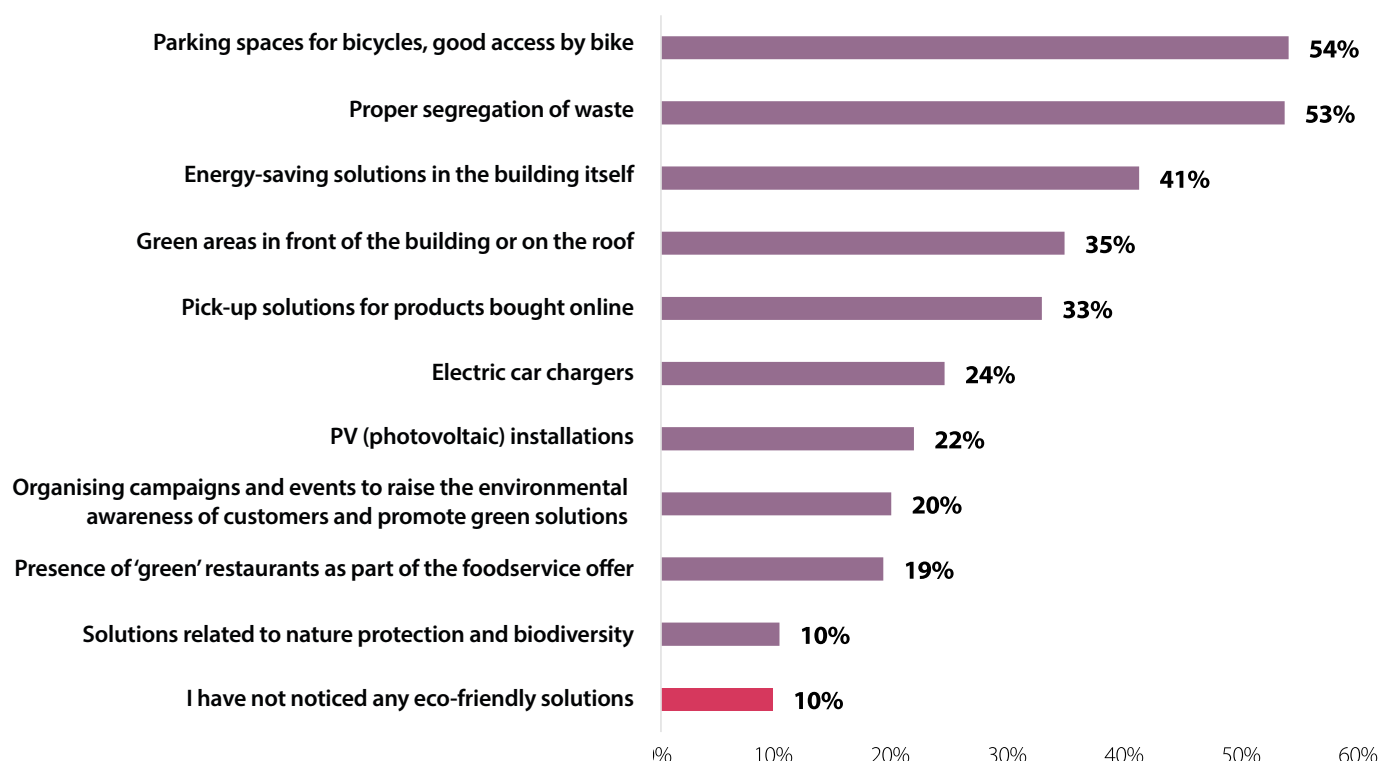


N=1,003

ECO-FRIENDLY SOLUTIONS IN SHOPPING CENTRES

15. Thinking about the shopping centres where you shop at least occasionally, which of the following environmentally friendly measures have you noticed?

The majority of respondents observe a variety of environmental solutions present in retail properties. These primarily include parking spaces for bicycles (54%), bins for waste separation (53%), other energy-saving solutions in the facility (41%) or green areas in front of the building or on the roof (35%). Interestingly, only 20% of respondents notice environmental actions and events. It seems, therefore, that respondents primarily see everyday, ever-present solutions in the building landscape, and less so occasional events. Only 10% of respondents did not notice any eco-friendly solutions in retail assets.

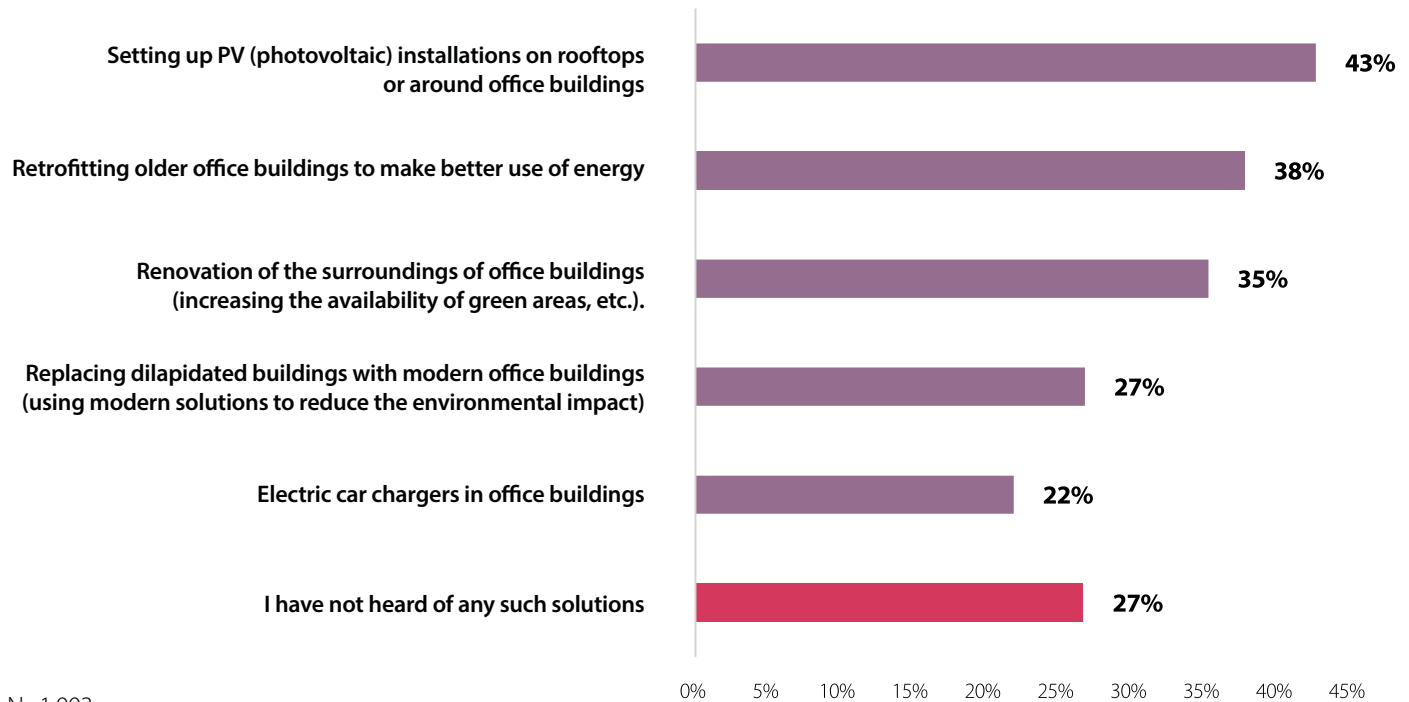


N=878

Unlike in the case of retail buildings, in the case of office buildings respondents know that there are photovoltaic installations on them in their cities (as much as 43% vs. 22%), that modernisation of older office buildings (38%) and their surroundings (35%) take place. A challenge for the industry, however, is the relatively low level of public awareness of the sustainability of office buildings; as many as 27% of respondents have not heard of any green solutions on office buildings in their city.

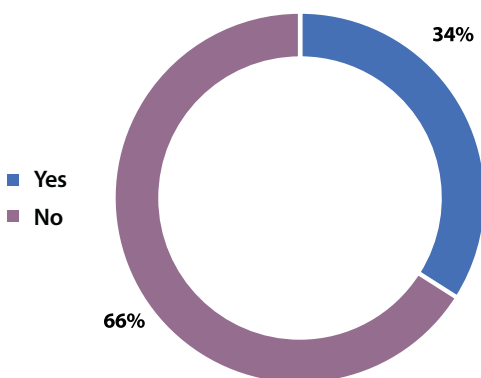
ECO-FRIENDLY SOLUTIONS FOR OFFICE BUILDINGS

16. Now think about office buildings (buildings designed and intended primarily for office use) and the solutions that can be applied in their context in order to save energy and reduce the environmental impact. Which of the following initiatives have you heard of happening in your city/town?



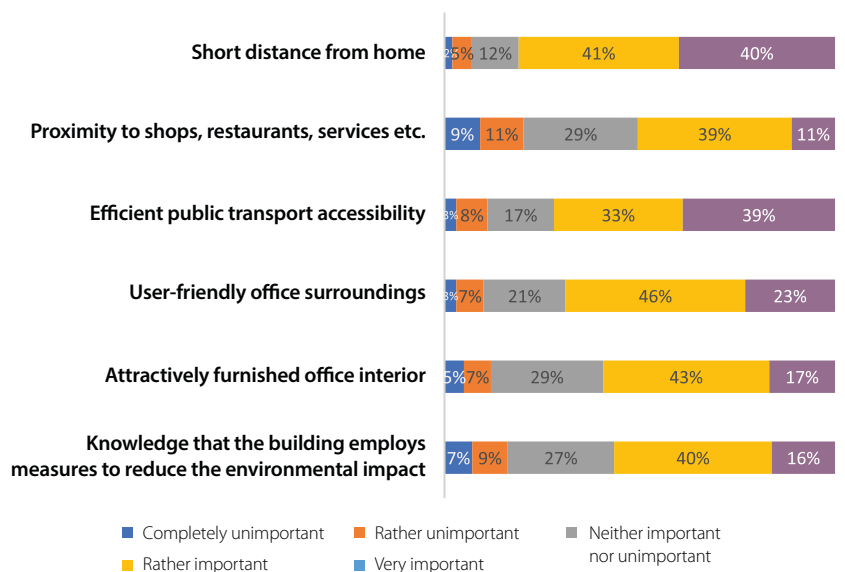
OFFICE BUILDING AND ITS SURROUNDINGS

17. Are you employed in a workplace that requires regular attendance at the office building (at least once a week)?



N=340

18. Thinking about your workplace (office building and its surroundings), how important are various aspects to you?



OFFICE BUILDING AND ITS SURROUNDINGS

Responses regarding the office building as a place to work accounted for only about a third of the survey respondents (340 people), so they should be approached with more caution.

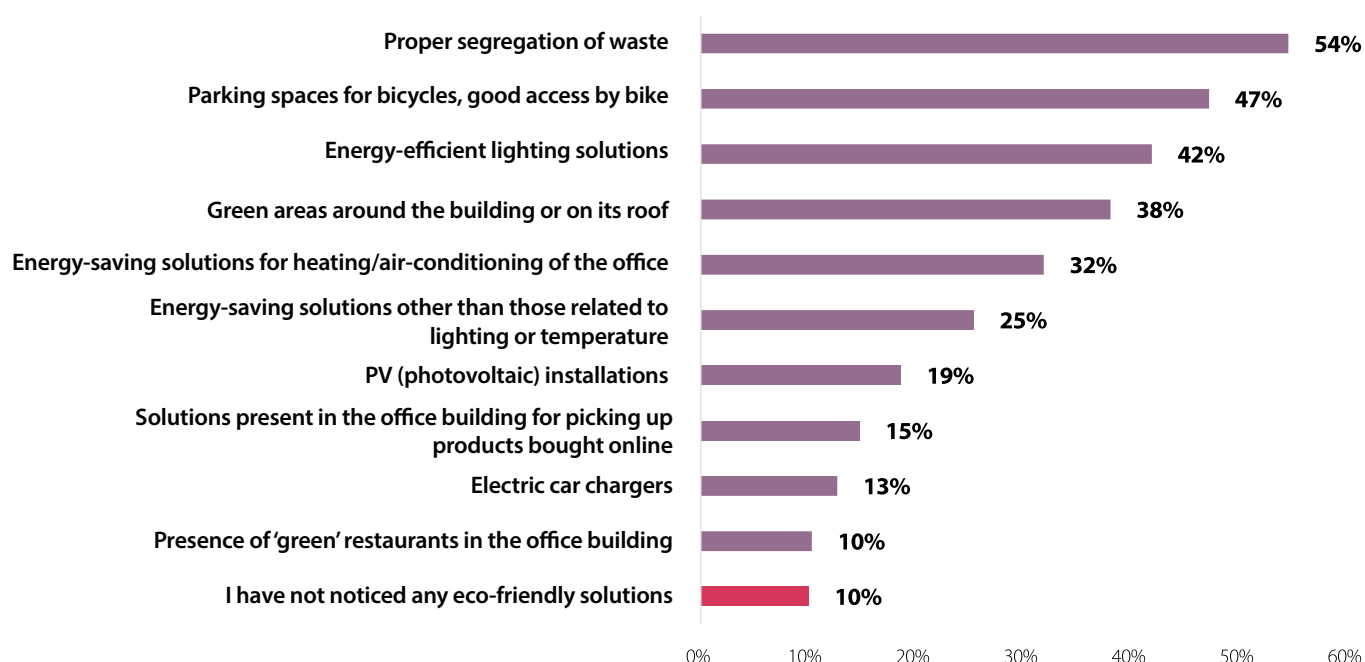
For office employees who participated in the survey, the most important factors from a personal point of view are the short distance from their place of residence (very important for 40%, rather important for 41%) and the possibility of efficient travel by public transport (very important for 39%, rather important for 33%). On the other hand, proximity to shops, restaurants and services was found to be the least important (unimportant for 9%, not very important for 11%), but this aspect is very important for as many as 11% and rather important for as many as 39% of respondents.

For employees, the knowledge of the fact that green solutions have been used in the building is rather important (40%) or very important (16%), while for 27% it is neither important nor not important. It seems that the above data should be looked at from a broader perspective, as up to 27% of respondents in general (including those not working in office buildings) did not notice such solutions in office buildings.

ECO-FRIENDLY SOLUTIONS FOR OFFICE BUILDINGS

21. Thinking about the office building where you work, which of the following environmentally friendly solutions do you happen to notice in it?

In particular, employees in office buildings notice whether there is an appropriate collection of waste (54%), whether there are parking spaces for bicycles (47%), energy-efficient lighting (42%) or green areas around the building or on the roof (38%). Only a small percentage of respondents notice electric car chargers (13%) or green restaurants (10%).



N=340

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Polish Council of Shopping Centres



Consumer on the Crossroads

Poles are beginning to recognise the significance of ecological solutions implemented by companies, including in the commercial and office real estate sector. Until recently, many were unable to identify such actions at all. Now, they see waste segregation containers, bicycle racks, energy-efficient solutions, and "greening" of spaces around shopping centres and office buildings, on rooftops and terraces.

According to Inquiry research, the primary motivation for ecological choices (in addition to savings) is health, often closely associated with ecology. Therefore, in communication, it is valuable to emphasise this aspect rather than just the application of a particular solution.

Respondents highlight the significant role of the composition of purchased products. There is also a group of people accepting the purchase of used products, especially concerning adult and children's clothing.

However, it is crucial to emphasise that many people still do not perceive the presence of ecological solutions in the functioning of properties, particularly when comparing the results with other industries. According to a significant portion of respondents, it is challenging to determine whether shopping centres or office buildings are environmentally friendly or not; the same applies to online shopping compared to in-person purchases. This indicates the need for further education in this field. Nevertheless, we see an optimistic signal that ecological matters are becoming an important element in the decision-making process for purchases.



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For the benefit of the environment and local communities

The basis of Nhood Services Polands sustainable activities is the Positive /People, Planet, Profit/ strategy, according to which the company aims to have a positive impact on its surroundings in the following areas: social, environmental and economic. As part of this strategy, the company is taking action to protect the environment, combat climate change and have a positive impact on the society.

Actions aiming at the responsible use of resources

The Triple Positive Impact /People, Planet, Profit/ strategy commits the Nhood team to proactive measures to protect the environment and natural resources. The company wants to make a positive impact on the planet by, among other things, tackling climate change, prioritising renewable energy sources and the efficient use of raw materials.

The main document that sets the company's standards in this area is Nhood Services Poland's environmental policy, which obliges the property management team to take pro-environmental measures tailored to the managed buildings and to monitor the achievement of assumed levels of utility consumption reduction.

As part of their **energy saving strategy**, the Nhood Services Poland team implemented a system for recording and reporting electricity and heat consumption and a register of all energy carriers in the managed buildings, converting the amount of energy consumed into CO2 emissions – if no meters were present, they have been installed in systems significantly affecting energy consumption. The company carries out cyclical inspection of installations and equipment, as well as regular technical inspections, replacing and/or installing appliances with more energy-efficient ones, adjusting light intensity to the time of day and prevailing weather conditions, limiting lighting at night, using passive solutions and RES and educates users on energy efficiency through appropriate information materials and events.

In 2022, as part of a project with Energisme, Nhood implemented an online tool to monitor utility consumption at all managed sites on an ongoing basis. This solution allows for an in-depth analysis of the data and the identification of areas for improvement.

The “Good Neighbour” CSR programme – building relationships with local communities

An important element in the implementation of the sustainability strategy is our **proprietary CSR programme “Good neighbour”**, which the Nhood Services Poland team has been implementing **continuously since 2012 in all 24 shopping centres it manages**. Through a variety of activities, the company nurtures relationships with its immediate surroundings and supports local communities.

Dialogue with the local community is at the core of the Good Neighbour CSR programme. This ensures that the initiative responds to their most important needs, supports NGOs and foundations operating in the vicinity of shopping centres and malls, as well as local artists and craftspeople, and reflects the diversity of Poland's regions.

The Good Neighbour programme includes **five thematic tracks** – culture and science, ecology, safety and health, region, sports and fun. The themes of the programme's events vary from one shopping centre to another and are tailored to the specific characteristics of the destination and local traditions. The Nhood Services Poland team invites local organisations and foundations as well as artists to participate in the campaigns and collaborates with local media.

The 5 thematic tracks of the Good Neighbour programme included **1,200 events** which took up **8,843 event days** across 22 Auchan Shopping Centres, Galeria Bronowice and Galeria Łomianki by the Nhood Services Poland team throughout 2022. These figures also include **378 CSR actions**.

The number of events organised under the programme is increasing year by year.

Through the “Good Neighbour” programme, the Nhood Services Poland team pursues the company's People, Planet, Profit sustainability strategy, as well as the **sustainability goals as per SDGs #3, #4, #11, #13**.



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The role of office real estate in meeting tenants' *ESG* goals

Just a few years ago, the choice of an office property was determined primarily by a good location, as well as a modern design and an assigned budget. Today, the estate is not only a place to work, but also a tool to enable companies to meet their sustainability goals. Therefore, in addition to the address, arrangement and price, the impact the office has on the environment and people is becoming an important decision factor.

Companies pursuing a sustainability strategy are choosing workplaces powered by renewable energy, ensuring energy efficiency, built and finished with low-carbon and recycled materials, in locations that have been previously urbanised and are accessible by public transportation and bicycles. This contributes to reducing tenants' environmental footprint, something that both corporates themselves and regulators are paying increasing attention to. Properly designed offices also support positive social impact. They offer a variety of spaces (for group and focused work, for relaxation and for integration) tailored to the different needs of employees, properly adjusted parameters (lighting, air quality, temperature, acoustics) of the workplace and the absence of architectural barriers. These features foster the comfort and well-being of all users. This also translates into the efficiency of employees and their increased propensity to work from the office. Ethical standards for the establishment and operation of the property are also important, reflected, among other things, in relations with suppliers and subcontractors.

Offices built and operated in accordance with ESG principles contribute to achieving tenants' sustainability goals, as well as to strengthening employer attractiveness in the eyes of employees, helping to attract and retain talent. This is indicated by the results of an opinion survey conducted among office users by Zymetria and commissioned by Skanska. 59% of respondents indicated that working in a building that was built and operates in a way that results in a reduced carbon footprint is important to them. With a growing awareness of the impact of human activity on the environment and the expectation that the business world will take part in addressing social challenges, the next generation of employees will place even more importance on employers operating in accordance with sustainable principals. Choosing the right office is an investment in the company's future.



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Acknowledgments

This publication gathers and organises the most important issues related to the ESG (Environmental, Social, Governance) theme in the commercial real estate market.

The topic of sustainable development has been present in the real estate business for many years, not only as a general trend but also, and today primarily, as a crucial determinant influencing strategic decisions. In the context of the working groups at PRCH (Polish Council of Shopping Centres) and PINK (Polish Chamber of Commercial Properties), one can expect that many of the issues discussed here will be further clarified, expanded, and probably sometimes modified in the near future. This will be facilitated by emerging and updated legislation and the experience gained by entities active in the market.

The content included in the publication should be treated as a snapshot of the current state of knowledge, key issues, and applied practices, whose significance and value will be verified over time. Today, the European and global economy faces significant challenges related to adapting to climate change and limiting its impact. To address these challenges, various guidelines, lists of best practices, and recommendations are being created, around which legislative, economic, and political efforts will converge in the coming years. Commercial real estate will be part of this great change that is already happening.

The Polish Chamber of Commercial Real Estate and the Polish Council of Shopping Centres express their gratitude to the authors and consultants of this publication, which gathers and describes the most important phenomena, legislative trends, guidelines, and challenges facing commercial properties, not only in Poland. Special thanks go to representatives of PwC and the National Energy Conservation Agency, whose experts participated in the working groups of PRCH and PINK. We also thank the European Shopping Places Trust for supporting the project, as well as the project partner companies EPP, GLP, Nhood, and Skanska. Special thanks are also extended to the research agency Inquiry, lawyer Borys Sawicki and lawyer Paulina Książopolska from the law firm Sołtysiński Kawecki & Szlęzak, the Polish Green Building Council, Ms. Joanna Panas from the Warsaw School of Economics, and all entities whose representatives participated in the working groups of PRCH and PINK.



The Polish Chamber of Commercial Real Estate (PINK)

brings together representatives from all sectors and services of the commercial real estate market within a single organization, enabling them to exert a tangible influence on the surrounding economic, political, and social environment. PINK serves as both their representative and a platform for the exchange of experiences, knowledge, and collaboration. Collaborating with other organizations, it promotes best practices in the commercial real estate market. The association includes developers, investors, and asset managers, property managers, project companies, and construction consultants, real estate market advisors, as well as legal, tax advisory, and financial services providers.

PINK's publication can be found at:
www.stowarzyszeniepink.org.pl



The Polish Council of Shopping Centers (PRCH)

is an organization with a mission to represent the interests of the shopping center industry and its members. Its goals include fostering integration, providing a platform for dialogue within the industry, and engaging with external entities such as organizations, institutions, and government bodies. PRCH actively manages the industry's positive image, promotes and rewards best practices, and organizes events to inspire, educate, and facilitate experience-sharing within the sector. Additionally, the council plays a role in shaping and promoting market standards by collecting, analyzing, and presenting data on industry trends and development. It serves as the authoritative voice of the sector on legal regulations, contributing to the formulation of industry standards. PRCH also develops and publishes materials and market research, addressing topics such as sustainable development, safety, accessibility of shopping centers, and their future.

More at: www.prch.org.pl