

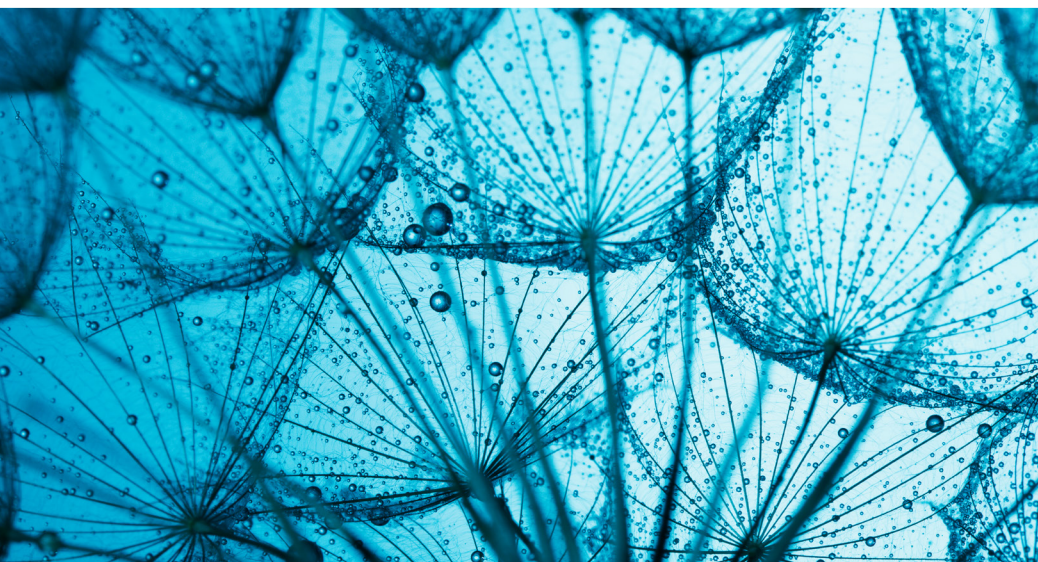
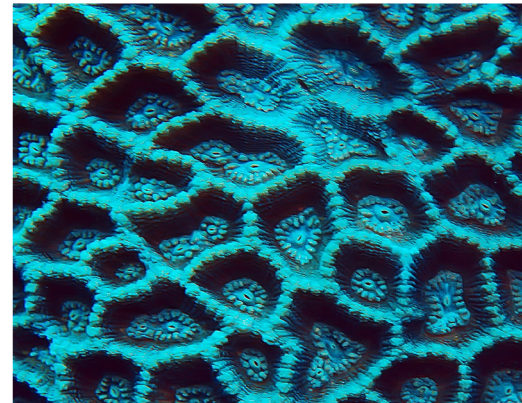
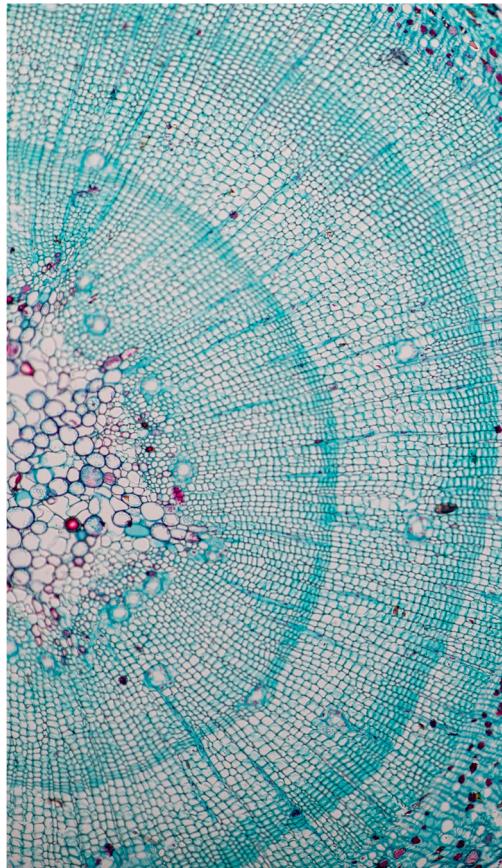
Research 2020



# Future of Cities

## Sustainable Investing

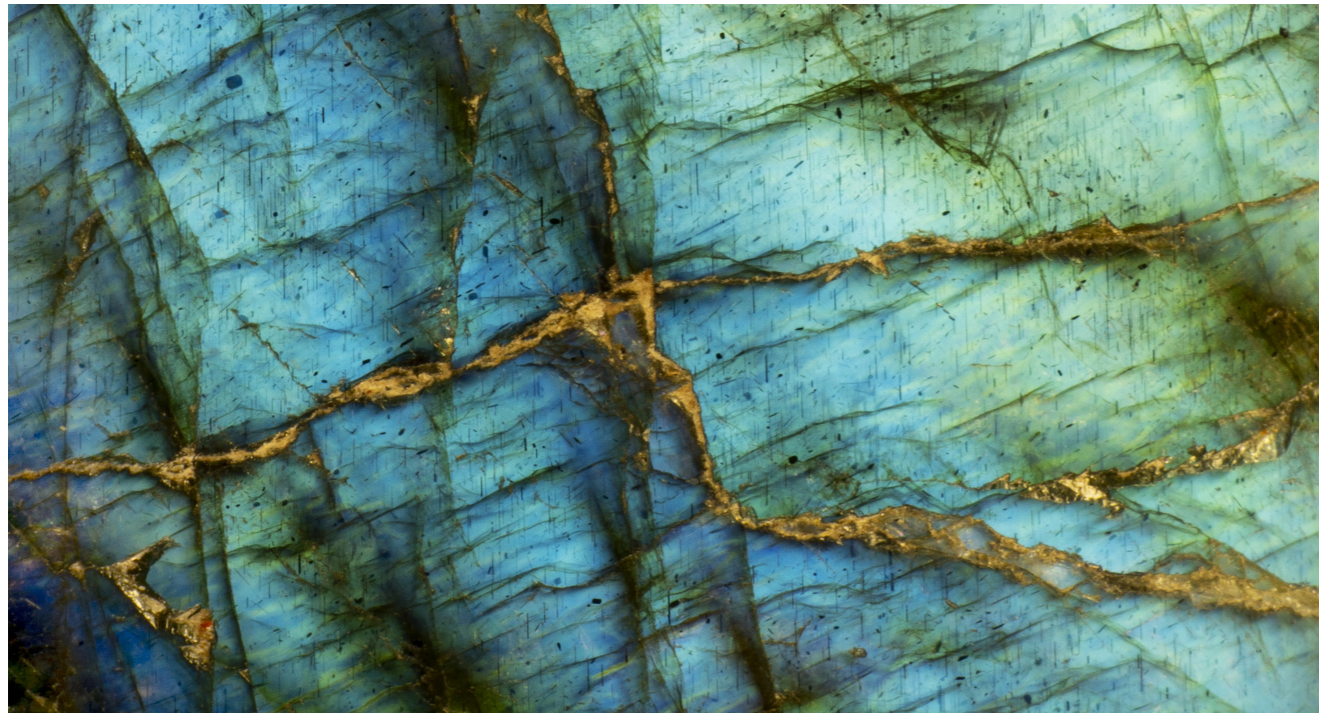
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# INTRODUCTION

MONIKA A. DĘBSKA-PASTAKIA  
CHAIRMAN OF THE BOARD



In view of climate change we have been experiencing due to “galloping” urbanisation as well as recent developments resulting from global Covid-19 pandemic, our social awareness has risen; undoubtedly, the future of our cities must lie in **sustainable investments**.

Results of climate change in the world seen in varying scales depending on a region, water and food contamination, air pollution or intensifying extinction of animal and plant species as well as global pandemics are an opportunity to reflect for a growing number of institutions and people and to make changes.

Based on data provided by the World Business Council for Sustainable Development, currently cities have been generating approximately 80% of total global demand for electricity and have been responsible for 70% of greenhouse gas emissions. In the cities buildings are major consumers of energy and emitters of greenhouse gases. The International Energy Agency’s estimates show that buildings are responsible for one third of CO<sub>2</sub> emissions, 40% of energy consumption and 50% of the consumption of all natural resources.

As a result, growing awareness of a climate disaster and its consequences, changing consumer preferences as well as global legal regulations which have been introduced lead to changes affecting investors’ approach and expectations on global capital markets.

In 2015 United Nations introduced the first urban sustainable development goal pertaining to sustainable cities and human settlements, showing that building and urban spaces are key to the implementation of the United Nations’ global vision in regard of attaining sustainable development, especially if we take into account the fact that 70% of the global population will have inhabiting cities by 2050. That is why it is so important for buildings to be more energy-efficient and safe as regards, among other things, health protection, and environment friendly, to promote biodiversity and opportunities for inclusivity because it is vital in terms of the improvement of health and life quality of their occupants.

**17 sustainable development goals (SDG) are a major component of the 2030 Sustainable Development Strategy. It is the first global sustainable development agenda adopted in 2015 that was negotiated by the UN Member States. The adopted goals include, among others, promoting sustainable economic growth in response to climate change. It is assumed that those goals are to be implemented in 2030. Participatory process underlies the sustainable development goals, that is why responsibility for attainment rests with individual states, the private sector, research institutions and civil society which are to aim at solving the said problems together.**

Another important point of reference for measures supporting a more environmentally-sustainable economy is the Paris Climate Agreement endorsed by 195 countries during the UN Climate Change Conference in 2015.

In force since 2016, the Paris Climate Agreement is to strengthen a global response to threats emerging from climate change. The Agreement’s long-term central aim is keeping global warming to well below 2 degrees above pre-industrial levels. Also a structure was established thanks to which the countries undertook to implement transitional plans to reduce their greenhouse gas emissions.

To contribute to the achievement of such aim, as part of an adopted plan of action European Union has assumed that capital totaling EUR 180bn per year will have been raised annually from the private sector by 2030 to be spent on special investments in the energy and transport sector.

However, as part of the EU’s involvement in the initiative regulations governing construction are also introduced to reduce greenhouse emissions in Europe as exemplified by the European Parliament and Council Directive scheduled to become effective after 31 December 2020. Under the Directive the EU Member States will be obligated to issue permits for the construction of nearly zero-energy buildings only. The process of improving the energy performance of buildings will also gradually apply to existing buildings that are to be thermally upgraded.

In consequence, investments in real estate have begun to change and institutional investors have started to adopt a socially responsible approach. Players active in that sector have been searching for smart solutions and investment projects aimed at reducing CO<sub>2</sub>. Currently in the Western Europe and North America sustainable investments are one of the most dynamically growing segments of the investment market. Such involvement of capital investors in responsible solutions helped drive up the demand for “green” buildings which results from, inter alia, preferences of investment funds that have been more and more often introducing investment strategies in accordance with environmental, social and management criteria (ESG) to meet stakeholders’ requirements. Research conducted by Knight Frank Global Research shows that 45% of responders (investors) active on the commercial property market pay attention to the degree to which buildings in which they have been investing affect natural environment and whether they fit the idea of sustainable development.

As consultants who are active in the property sector in Poland for over two decades, working with numerous global investment funds, we have observed a number of changes in the approach of capital investors to sustainable development, a long-term investment strategy and key risk factors. Based on Knight Frank’s experiences, property investments have been changing because the number of investment funds implementing an ESG policy at a global level or at the level of their asset portfolio being developed has been growing. In our view, sustainable investments and socially responsible investment approach are the future of the property sector.

**THE PARIS CLIMATE AGREEMENT’S (COP21) AIMS:**

◆◆

**Keeping a global temperature rise well below 2 degrees Celsius above pre-industrial levels.**

◆◆

**Pursuing efforts to limit the average temperature increase even further to 1.5 degrees Celsius.**

◆◆

**Rapidly reduction of CO<sub>2</sub> emissions.**

◆◆



# WHAT IS ESG?

When asked about major criteria behind the choice of properties, a traditional mantra of managers of investment funds investing in commercial properties was: “3xL”, that is, location, location, location. ESG is an abbreviated term more and more frequently used by property market specialists and it stands for environment, social and corporate governance issues.

An ESG revolution has been gaining momentum and investors focused on sustainable development have been adjusting their asset portfolios to such changes. ESG criteria are accounted for in investment decisions taken by capital entities and included in risk management by the majority of global investment funds.

Although in recent years many private funds managing commercial properties have focused on all components of ESG, the “E” factor, that is, climate risks, have become particularly important.

In many funds decisions to develop and implement the ESG policy additionally helped the 2015 Paris Climate Conference arrangements gather speed. One of its goals has been to aim for carbon neutrality which, in the case of buildings, is even more crucial as owing to the scale of energy consumption and greenhouse gas emissions by buildings and construction, the property sector has been significantly blamed for climate change and resultant natural disasters which have become more and more common.

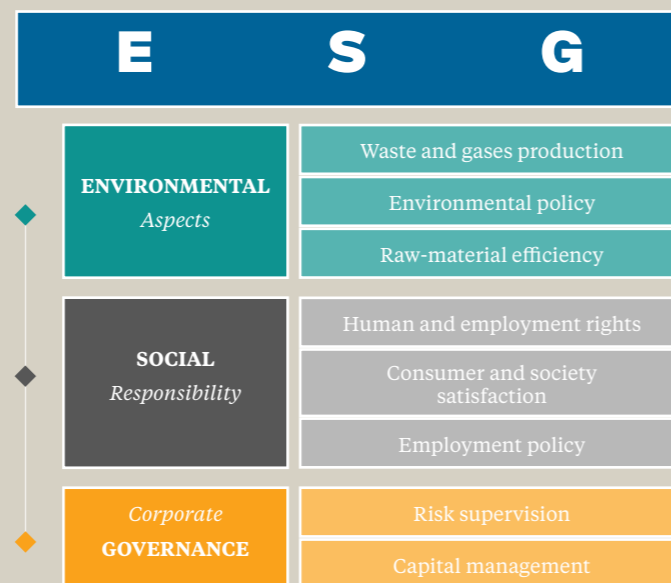
The implemented ESG policy is to facilitate identifying risks related to environmental, social and corporate issues. Thanks to that the funds can take measures to mitigate the impact of those risks on operations and operational performance and take investment decisions based on the same. At the level of individual properties or the entire fund those measures can lead to positive impact on the environment which ideally would help achieve carbon neutrality and comply with the Paris Agreement.

◆◆  
**ESG means the application of environmental, social and governance factors to assess a company/investment project to determine a degree to which a sustainable development strategy has been implemented by it.**  
 ◆◆

E – environment - the implementation of an environment strategy and policy, environment management, discharging the principles of responsibility and care about the environment.

S – social responsibility - relationships with shareholders on the market, work conditions and compliance with employment rights and health and safety regulations, the company’s disclosure policy and its transparency.

G – corporate governance - the company’s management structure, respecting its shareholders’ rights, respecting disclosure obligations in regard of all shareholders, decision-making independence and management skills.



Buildings (both residential and commercial) and construction account for **36%** of global energy consumption and **39%** of greenhouse gas emissions.

That sector even beats transport in both categories (**28%** and **22%**, respectively)\*

\* 2019 Global Status Report for Buildings and Construction - the report prepared by the IEA coordinated by the UN Environment Program

## HOW IS THE ESG POLICY IMPLEMENTED?

The ESG policy is most frequently introduced based on three related levels:

- ◆◆ **organizational** – incorporating the ESG components in the investor’s corporate operating strategy. Those are usually short- and long-term objectives related to reducing the consumption of energy, water and CO<sub>2</sub> emission as well as those orientated towards improving health, well-being and bio-diversity. Such approach underlies international strategies, e.g. Sustainable Development Goals determined by the UN or the so-called Science Based Targets.
- ◆◆ **fund/portfolio** – strategies incorporating ESG at the organization’s level are frequently translated into initiatives at the level of the funds. Those initiatives are primarily aimed at adjusting the fund’s plan of action spanning at least 3-5 years in such way that it complies with the ESG policy. At this level the transparency of the fund’s actions becomes particularly important to many owners along with the possibility of verifying the effects of the implementation of the ESG strategy with comparable funds. For example, the application of specialist benchmarking is helpful in the process, including GRESB (Global Real Estate Sustainability Benchmark).
- ◆◆ **individual properties comprising the fund** – plans of action at the level of individual products can have a very broad scope and high level of details. They can involve technical issues, e.g. a building’s system modernisation, smart monitoring of the operations of individual systems in a building or obtaining “green” certificates.



## IS THE ESG POLICY MEASURABLE?

There is growing demand for information among investors as regards the ESG policy implemented by the funds from the fund's management. To evaluate the degree to which the ESG policy has been implemented, the funds' managers have been relying on various performance benchmarks that can also facilitate investment decisions.

One of such tools dedicated to the real estate sector is GRESB (Global Real Estate Sustainability Benchmark) that evaluates and compares how effective the ESG policy measures are. It is based on the assessments of important problems related to sustainable investments in real estate by investors and the industry. Its methodology is consistent regardless of a region or type of property.

After it is completed, each participant is provided with a report analysing the performance of a company, fund or assets participating in GRESB in regard of sustainable development. The assessment also presents the performance of individual rates vis-a-vis other comparable companies/funds/assets. Investors use the ESG data and GRESB analytical tools to monitor their investments or asset portfolios and take decisions on risk assessment vs. ROI.

It is important that over the past decade the number of properties benchmarked using GRESB went up from 21,000 to over 100,000 facilities and the value of the benchmarked properties rose from USD 928bn to USD 4.5 trillion. In 2019 over 1,000 investment funds and other players of the property sector were evaluated in terms of their ESG policies using GRESB.



## WHAT BENEFITS STEM FROM THE IMPLEMENTATION OF THE ESG POLICY?

There are strong arguments to support incorporating the ESG criteria into decisions to invest in and manage properties. In a survey prepared at the request of the United Nations' Environment Program, "Global ESG Real Estate Investment Survey", in the early 2019 the majority of investment funds gave the following reasons to support the incorporation of the ESG policy into the investment process:

### ◆ REDUCING BUSINESS RISK

Accounting for ESG-related components such as climate risk, energy or water consumption and management of municipal waste and greenhouse gas emissions in the process of building management can help reduce the risk of its obsolescence and, in consequence, will help drive down operating expenses. That is a clear proof showing the correlation between the ESG and the fund's financial performance. What is more, the analyses show that obtaining the so-called "green" certificates for buildings (as part of the implemented ESG policy) helps increase a net operating income and improve an overall valuation of such buildings compared to non-certified buildings.

The property sector is also exposed to "physical" effects of climate change. Effects of devastation, if any, will manifest themselves in the form of, e.g. higher investment expenditure and operating expenses which will adversely affect liquidity and value of the buildings. Extreme weather conditions may become more frequent which, in turn, may lead to higher insurance premiums and capital costs to maintain the buildings' proper standard.

Legal regulations have become more and more rigorous upon the adoption of the Paris Agreement. Signatory countries will be implementing strategies for the reduction of greenhouse gas emission in the years to come and the property sector is one of the economy's key areas towards which the measures are to be orientated. The implementation of the ESG policy by owners of buildings will help plan measures related to adjusting to low emission requirements and avoid the risk of bearing costs of insufficient transformation.

**The past decade (2010-2019) turned out to be the most expensive in terms of losses caused by natural global catastrophes- the loses were estimated to approximate USD 3 trillion, over USD 1 trillion more than in the previous decade.\***

\* Weather, Climate & Catastrophe Insight 2019, AON

### ◆◆ GROWING DEMAND AMONG TENANTS FOR SPACE IN "GREEN BUILDINGS"

Tenants have been more and more frequently choosing high quality buildings which are LEED or BREEAM certified which evidence that a given building is environmentally friendly, including, as regards energy use, emission of pollution, water use, and offers solutions that ensure health security or well-being. If applied, those solutions ensure optimal value of the property for investors as they are preferred by tenants.

The demand for such buildings among tenants frequently results from their ESG strategies and is also a response to requirements of current and potential staff to whom ethical business and responsibility towards the environment play a crucial role when choosing an employer.

### ◆◆◆ INCREASED DEMAND AMONG INVESTORS FOR INFORMATION ON SUSTAINABLE DEVELOPMENT

To respond to the investors' expectations, fund managers rely on various tools allowing them to present the performance and assessment of the degree to which ESG has been implemented at the level of assets or portfolio. Investors are aware how ESG affects operational activity, hence, it can be expected that in the future they will focus not only on the kind of data to be disclosed but also on the quality, range, importance and comparability of the data.

What is more, investors look for such information to be able to rely on it in the process of taking investment decisions regarding funds invested on a current basis, and above all in regard of decisions about their future activity.

Global Sustainable Investment Alliance's data show that approx. ¼ of funds managing approx. USD 31 trillion worldwide has already been applying different forms of the ESG strategy measurements. Although property assets represent just a few percent of that amount, in absolute figures such volume is impressive and it is only expected to grow.

Expecting an upward trend is justified as in the world (e.g. in USA or in Japan) funds have already been established whose strategy involves investing only in sustainable products that are GRESB-benchmarked in terms of the ESG policy.



# ARE SUSTAINABLE INVESTMENTS THE FUTURE OF OFFICE CONSTRUCTION IN POLAND?

In recent years we have been witnessing a number of changes as regards the development of sustainable investments in the Polish office construction. A perfect urban landscape with smart houses and offices that ensure friendly and safe workplace in office buildings adapted to the needs of employers and employees is still ahead of us. Definitely the number of investors who emphasize enhancing the comfort of office staff, at the same time paying attention to health security requirements in buildings, optimal energy efficiency and the maximum lowest adverse effects of office buildings on the natural environment, has been growing.

Modern buildings' attractiveness is now frequently assessed in terms of modern technologies applied in the facility. From the perspective of the sustainable development idea it is just one of many important aspects. It seems that it is much more important for the building to constitute a whole of some space performing a citygenic function, and to be maximally functional for its users, at the same time ensuring minimum impact on natural environment.

In Poland technologies naturally support sustainable construction because integrated interdisciplinary systems, rainwater recovery systems, energy efficient LED lighting are standard solutions applied in office buildings. Technologies also support architects and developers in the process of creating ecological buildings with "green" certificates.

The number of office buildings with ecological certificates has significantly grown in recent years in Poland. At the end of 2019, out of 11.2m of sqm of office space offered on the Polish market, more than 60% represented certified space. Both the certificates awarded at the stage of the design and construction and those obtained by buildings already in use have material impact on the perception of properties by tenants looking for a location for their seat and the investors analysing investment opportunities on the property market. In the case of newly designed buildings, among other things, location, design process, site management, technical systems applied, construction materials and building characteristics are evaluated. The facility must meet energy efficiency and user comfort requirements. Regional and recycled materials, if used, are also important. In the course of the certification, the consumption of utilities is optimized and their functioning is assessed in buildings in use. The facilities' efficiency and procedures are verified. Currently, building certification is actually a standard practice on the property market; thus, it can be expected that each new building will have a "green" certificate when commissioned for use and the majority of the existing facilities will be regularly certified. Nevertheless, we are still a long way from delivering passive buildings and undoubtedly it is still a challenge for the entire property market in Poland.

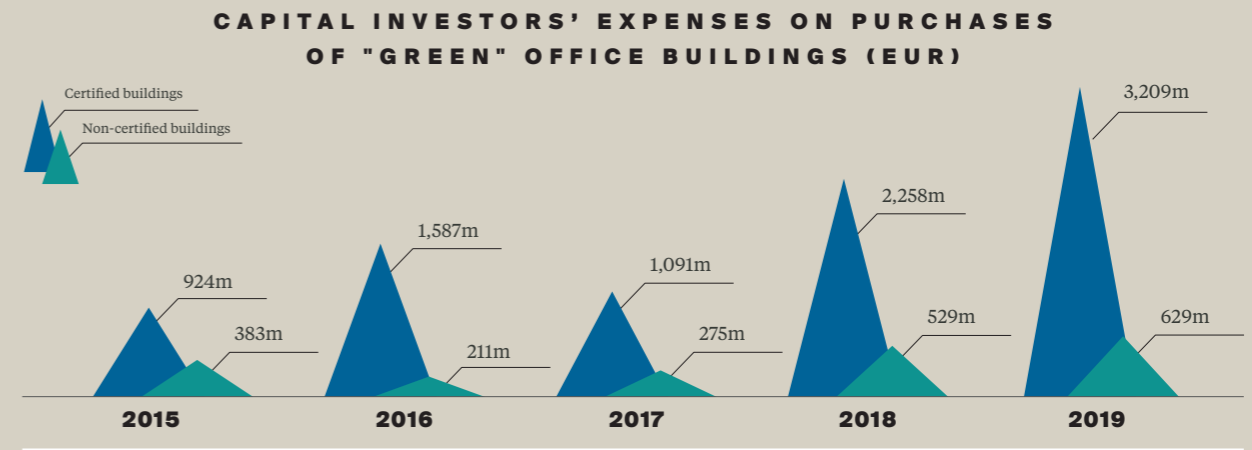


Certified solutions allow to optimize running costs. Energy efficient lighting, the use of rainwater, limited water consumption thanks to its recovery (greywater) are solutions more and more frequently applied both in new and modernized facilities. Optimization and reduction of the consumption of utilities in office buildings have become an important environment protection element. Also the quality of designed space of individual offices matters. Currently, more attention has been paid to optimal lighting of the space with daylight in order to improve work comfort and at the same time limit the use of artificial lighting. Reducing office zones that rely solely on artificial lighting is also aimed at limiting the consumption of electrical energy required for that purpose. At the same time limited access of sunlight through the use of appropriate glazing or internal blinds allows to reduce the consumption of electrical energy to cool the premises. Hence, well-designed facilities and office space are key to effective environment protection.

On the Polish market, however, an office building cannot be an island in a city. In line with the idea of sustainable development, developers have been increasingly taking efforts to ensure that office buildings are a part of urban fabric and that their potential benefits all city users, not just people working in the building. That is why places are created that can facilitate cultural interactions as intended for all interested parties, frequently outside standard office hours. Open-air cinemas, exhibitions, sport fan zones are organized in the buildings' shared space or in specially designed outdoor areas. In that way a growing number of office buildings has become citygenic and inclusive, in that way meeting the ESG criteria.

The importance of the idea of sustainable development in the Polish office sector has been growing also thanks to capital investors acquiring office assets. Many of those entities are investment funds with global presence whose long-term strategies include ESG criteria and sustainable development goals.

Polish investment market data show that in recent years the scale of purchased office buildings with "green" certificates has exceeded the volume of investment transactions pertaining to non-certified buildings several times.



Source: Knight Frank

**In the majority of western European countries the process of designing new office, commercial, recreational or housing space involves a common practice of accounting for aspects related to the natural environment, social policy and governance (ESG). The planning of new investment projects in those countries requires meeting a number of criteria resulting from sustainable development aims because of users' expectations. To-date in Poland sustainable, ecological solutions, "green" construction and mixed-use projects which are citygenic, have become ever more important. Our next step is analysing new projects through the prism of ESG criteria.**



# WHAT WILL OFFICE BUILDINGS BE LIKE IN OUR CITIES OF THE FUTURE?

Technologies and new legal regulations encourage developing zero-energy buildings, i.e. those that are characterized by net zero energy consumption and zero CO<sub>2</sub> emission. They will be definitely orientated towards the development of the best work conditions and the WELL or Fitwel certification attesting to that will be a standard market practice.

Following the well-being trend, employers have already been transforming their office space, creating more technologically advanced offices which are at the same time healthier, safer and more friendly to their occupants.

It should be emphasized that incorporating the idea of sustainable development in the scale of the city, that is, transforming cities into centres inclusive to all social groups is a very long process. The idea is supported by legal regulations, education and actions taken by industry association which have been introduced such as the initiative of Polish Green Building Council (PLGBC) presented in detail. However, employers can already develop sustainable workplaces or flexible offices accounting for the staff's preferences and beneficial to their health and the natural environment.

MAGDALENA OKSAŃSKA  
HEAD OF PROPERTY MANAGEMENT COMPLIANCE  
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There is much talk of extremely technologically advanced facilities featuring modern solutions. Applications allowing to customize one's workplace (temperature, lighting, air humidity), advanced air-conditioning systems, effective ventilation, regulation of lighting intensity and color, etc. are elements of a well-thought out strategy of developing offices accounting for the so-called well-being aspects. Are those offices and facilities more environmentally friendly and economical as well? Our analyses show that advanced technologies that ensure perfect work conditions for each user require more energy in the process. Hence, economy and ecology clash with now trendy well-being. It is necessary to come up with such technologies that will help develop a zero-energy facility or that consumes minimum energy and at the same time allows to rely on technologies that will make it possible to meet requirements of office users and maintain well-being in a broad understanding of the term.

The current situation related to Covid-19 pandemic which affects the entire world is also likely to change the perception of our surroundings. Perhaps after a longer period of isolation and lockdown we will appreciate contact with nature that we cannot live without, and will also understand that each and every one of us must become involved in protecting it and must change the way we function to stop its progressing degradation. Undoubtedly, it is also going to impact changes in the property sector to an even greater degree.

ALICJA KUCZERA  
MANAGING DIRECTOR  
POLISH GREEN BUILDING COUNCIL (PLGBC)

Compliance with the Paris Climate Agreement requires complete building decarbonization by 2050. The majority of national laws applicable to buildings and climate action in the private sector pertains to operational emission only (29% of global emission). However, failure to solve the problem of so-called embodied carbon (i.e. carbon footprint of construction materials and processes, estimated to total 11% of global emission) will mean that it will not be possible to maintain an average global temperature within limits set by COP 21.

As a result, PLGBC initiated the development of a road map determining specific measures that the interested parties (the public, private and non-governmental sector) must take within specific timeframe in order to ensure net zero CO<sub>2</sub> emission during the entire life of a building by 2050. It is an indispensable tool that will help our country implement the objectives of the Paris Climate Agreement.

#### DETAILED OBJECTIVES OF THE ROADMAP DEVELOPMENT:

- ◆◆ Incorporating, in the plan, 11% of the global emissions related to embodied carbon which has been omitted in climate action in construction, and ensuring a firmer approach to decreasing 29% of operational emissions.
- ◆◆ Explaining actions (including a timeframe and role) required to achieve buildings' net zero CO<sub>2</sub> emission.
- ◆◆ Getting all interested parties involved in taking measures in designated areas for the purpose of fostering the progress in the roadmap development.
- ◆◆ Updating national regulations as regards the emission of CO<sub>2</sub> in the entire lifecycle of a building.



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- ◆ market reports and analysis available to the public,
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Reports are produced on a quarterly basis and cover all sectors of commercial market (office, retail, industrial, hotel) in major Polish cities and regions (Warsaw, Kraków, Łódź, Poznań, Silesia, Tricity, Wrocław). Long-term presence in local markets has allowed our research team to build in-depth expertise of socio-economic factors affecting commercial and residential real estate in Poland.

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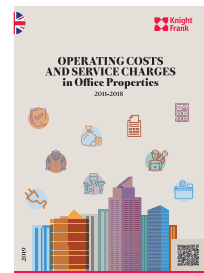
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