

Green IT in CEE: Keen companies still lack clear plans

Results of CIOs survey on Green IT
in Poland, Czechia and Hungary

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In partnership with

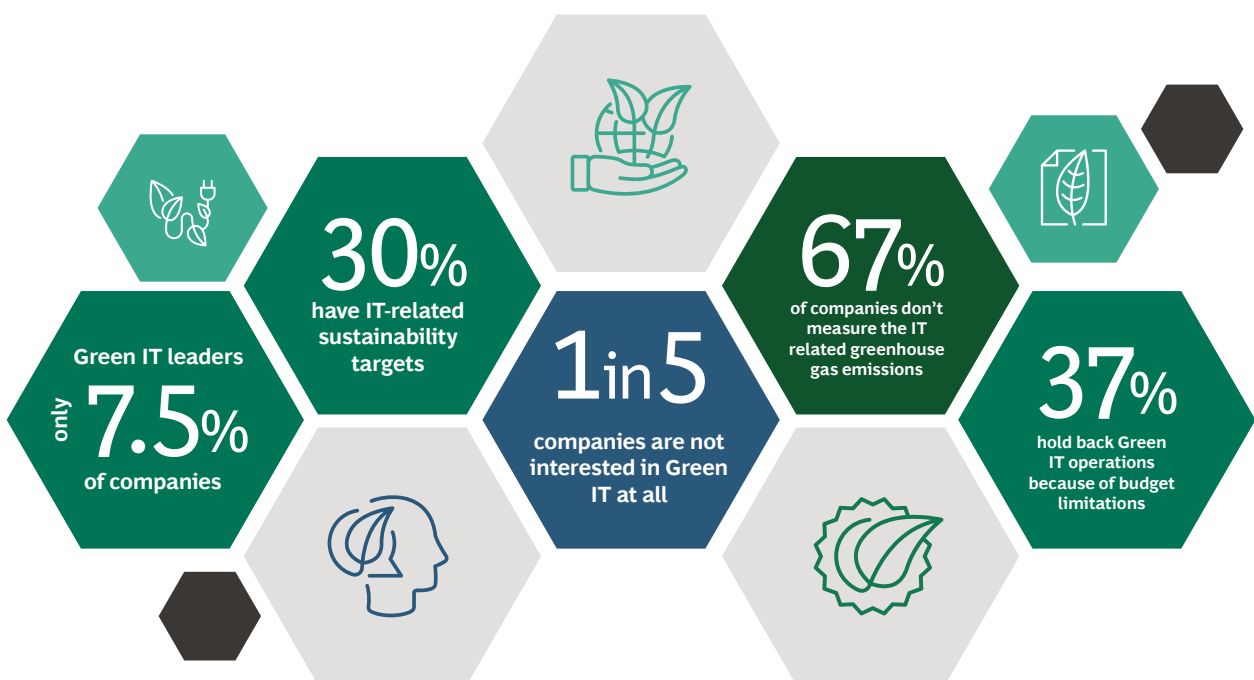
The SAP logo, consisting of the letters 'SAP' in white on a blue rectangular background.The BCG PLATINION logo, featuring a stylized green and white geometric shape to the left of the text 'BCG PLATINION' in white.

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Companies failing to take adequate Green IT action despite 4% global footprint

Executive summary

- Just 7.5% (27) of the sample we surveyed could be considered 'Green IT leaders.'
- 28.8% of respondent companies (103) have defined some IT-related sustainability targets, and 30.2% (108) have set out some general targets and future plans.
- 33.5% (120) of the companies we heard from expressed no interest in enhancing their Green IT position, have no targets in place, and no plans to act in the near future.
- 67.3% of companies do not measure their IT-related greenhouse gas emissions.
- According to 37.4% of respondents, the primary challenge preventing Green IT action is budget limitations.
- A significant average of 52.5% selected savings as their main incentive, while 21.2% said that pre-empting regulations was the central reason for engaging in Green IT initiatives.
- Only 23.7% of the respondent companies have put a Green IT strategy in place that incentivises actions and progress, despite 11% of organisations identifying employee satisfaction as a key motivation.
- IT companies are leading the way in implementing Green IT initiatives, with 78.9% having taken demonstrable action.
- The 358 companies we surveyed from Poland, Hungary, and Czechia were made up of medium and large companies from across 14 different sectors.
- It is encouraging that companies adopt ambitious goals, even if they are not yet underpinned by a clear roadmap. There are a lot of actions that can be undertaken and many of them don't require huge budgets.



Introduction

IT is a major consumer of energy, and more must be done to promote a sustainable approach to its use. To indicate the scale of this consumption of energy, a single email accounts for 4g of CO2 emissions, while an email with an attachment generates 50g. Bitcoin serves as another example, as its distributed infrastructure alone required 91 terawatt-hours to operate last year, more than was used by Finland and its population of 5.5 million people.

While Green IT has for some time been a secondary topic in regard to climate and sustainability, new challenges and pressures are mounting. With many large organisations now pledging to achieve Net Zero by 2050, this ambitious target has brought all polluting operations into a sharper focus. The vital importance of IT means businesses will have to double down on a greener approach if they are to achieve Net Zero, and IT must also be a part of the solution. For example, video conferencing capabilities are reducing the need to travel to in-person meetings, and AI can be deployed to optimize energy consumption.

“Earth provides enough to satisfy every man’s needs, but not every man’s greed.”

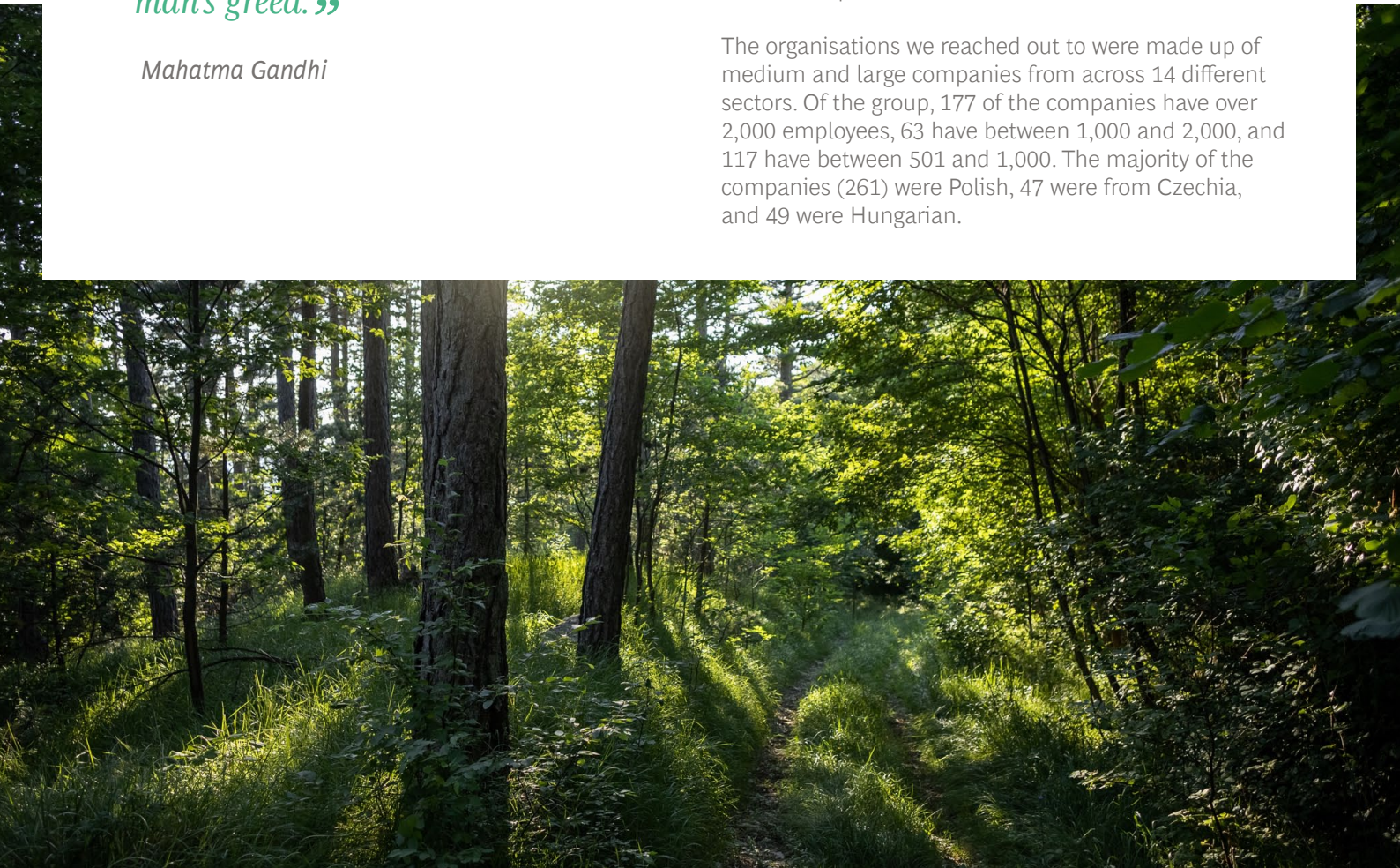
Mahatma Gandhi

This quote from Mahatma Gandhi is especially relevant when considering the rapid and widespread growth of digitization, which will increase energy consumption and environmental impact. The operational enhancements offered by digital transformation are a top priority for many businesses, but it is now more important than ever that these goals are pursued via Green IT initiatives.

Green IT as a concept is nothing new, with one of the first initiatives being the Energy Star program unveiled by the United States Environmental Protection Agency in 1992. The purpose of this government-backed effort was to label energy efficient devices, services, and even commercial buildings. Despite its history, Green IT is not widely understood or upheld, and to be effective it will need to be implemented and enforced on a global scale.

To form a basis for learning more about the maturity and benefits of Green IT adoption, we surveyed 358 companies and conducted a series of interviews with CIOs and senior IT managers to better understand our global region. With a focus on Poland, Hungary, and Czechia, the results presented valuable actionable insights that can be implemented to advance Green IT across the wider world. In the following sections of this report, we will frame what Green IT actually means, explore the results, describe the approach we took, and outline the practical steps that you can take to promote Green IT.

The organisations we reached out to were made up of medium and large companies from across 14 different sectors. Of the group, 177 of the companies have over 2,000 employees, 63 have between 1,000 and 2,000, and 117 have between 501 and 1,000. The majority of the companies (261) were Polish, 47 were from Czechia, and 49 were Hungarian.



Exploring our Green IT insights

Although the majority of companies are taking some action to put sustainability strategies and communications in place, there is still a widespread lack of understanding when it comes to Green IT. It can be summarised as the practice of environmentally sustainable computing, and currently only 33% of the companies we surveyed measure the IT-related emissions they are responsible for.

Some key Green IT priorities include maximising energy efficiency, increasing the use of green energy in IT operations, reducing the use of environmentally hazardous materials, and increasing recyclability. Depending on their scope, different industries cause higher or lower levels of IT-related environmental impact and may feel more or less obligated to act. In the case of heavy industry, organisations in this category typically generate less IT-related emissions, but technology can help them to reduce their overall footprint. It is for reasons like this that all industries must explore ways to optimize their approach to Green IT.

Assessing Green IT maturity

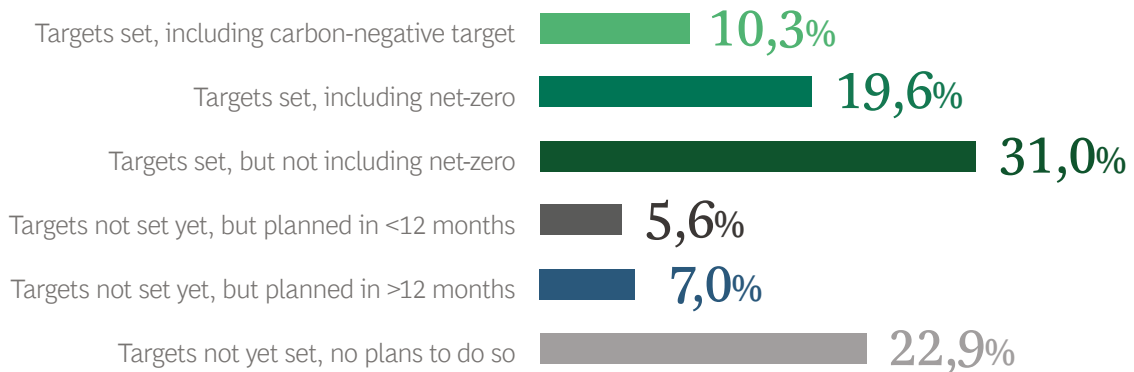
While almost 50% of respondents stated that sustainable energy supplies were important for reducing the environmental impact of IT, 75.1% did not know to what extent emissions could be mitigated. Further demonstrating a general lack of Green IT action among organisations in the region, only 7.5% (27) of the sample we surveyed could be considered 'Green IT leaders.' This classification was attributed to the companies that measure IT-related emissions, have set incentivised net zero targets that feature Green IT goals, and have communicated them publicly.

An additional 28.8% of respondent companies (103) have defined some IT-related sustainability targets, and 30.2% (108) have set out some general targets and future plans. Most concerningly, 33.5% (120) of the companies we heard from expressed no interest in enhancing their Green IT position, have no targets in place, and no plans to act in the near future. Overall, our findings indicate that 67.3% of companies do not measure their IT-related greenhouse gas emissions.

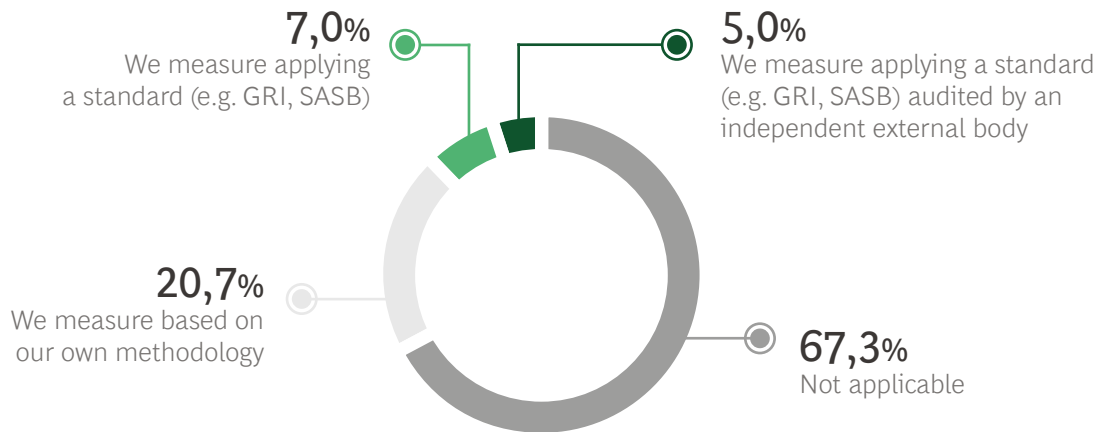
“I have not yet come across the topic of CO₂ footprints in the IT area in my conversations with customers in Poland. They focus on production and the use of electricity where it is visible, but the IT aspect remains unseen by companies, and this is something we need to work on.”

*Dorota Zaremba,
Member of the Board, SAP*

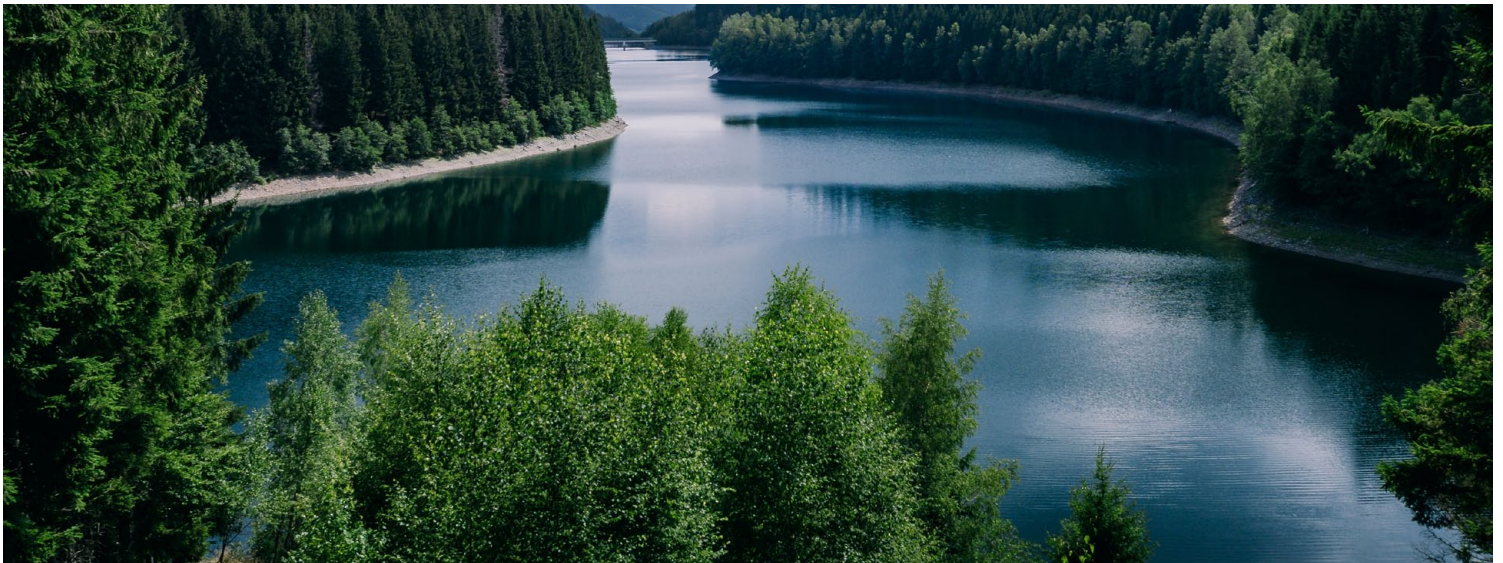
Clear targets



How many companies measure their IT greenhouse gas emissions



Question: Do you measure your IT Greenhouse gas emissions?



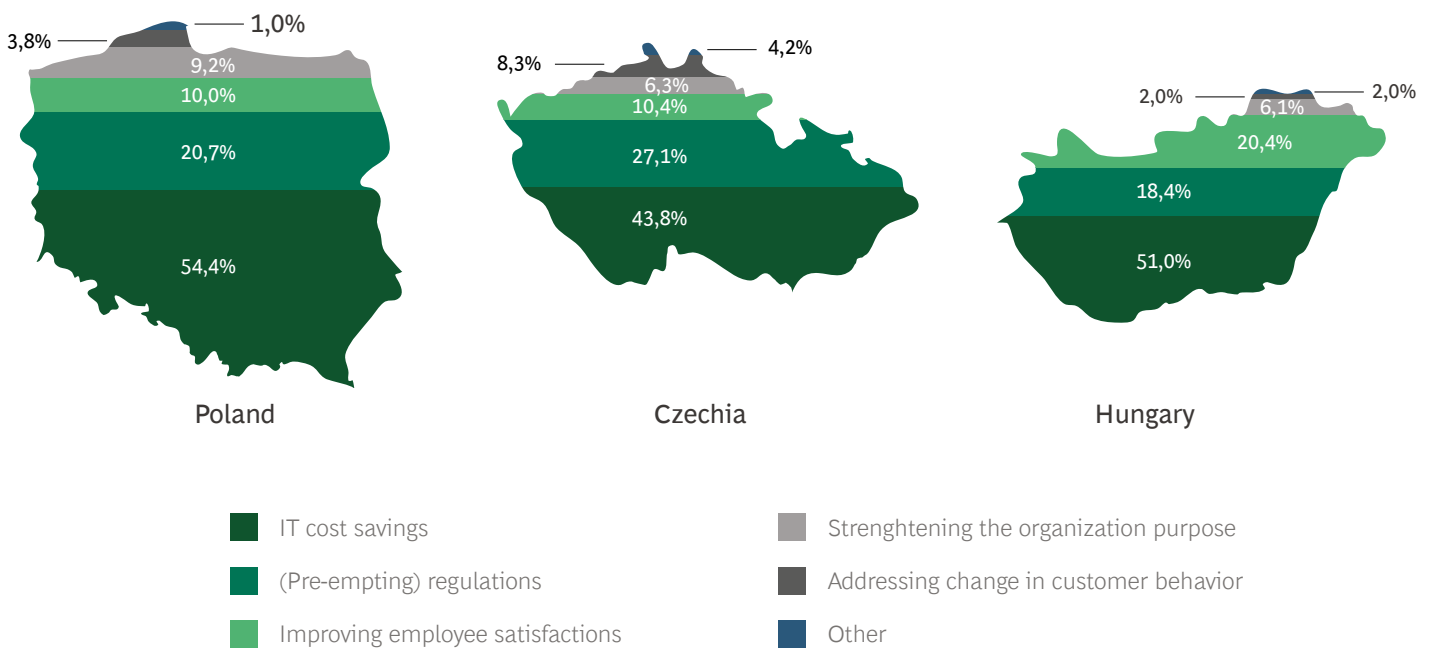
“Two results of the survey should be highlighted. 61% of companies claim to have clearly defined climate goals, while only 35% say they measure their climate impact. There is a large discrepancy between the declaration of having climate impact goals and the reality. Without measuring your climate impact, you can’t set a goal; statements like ‘I want to care about the climate’ need to be backed up by concrete, measurable action.”

Jacek Hutyra,
Climate Officer, Orange

Savings incentives motivate Green IT action

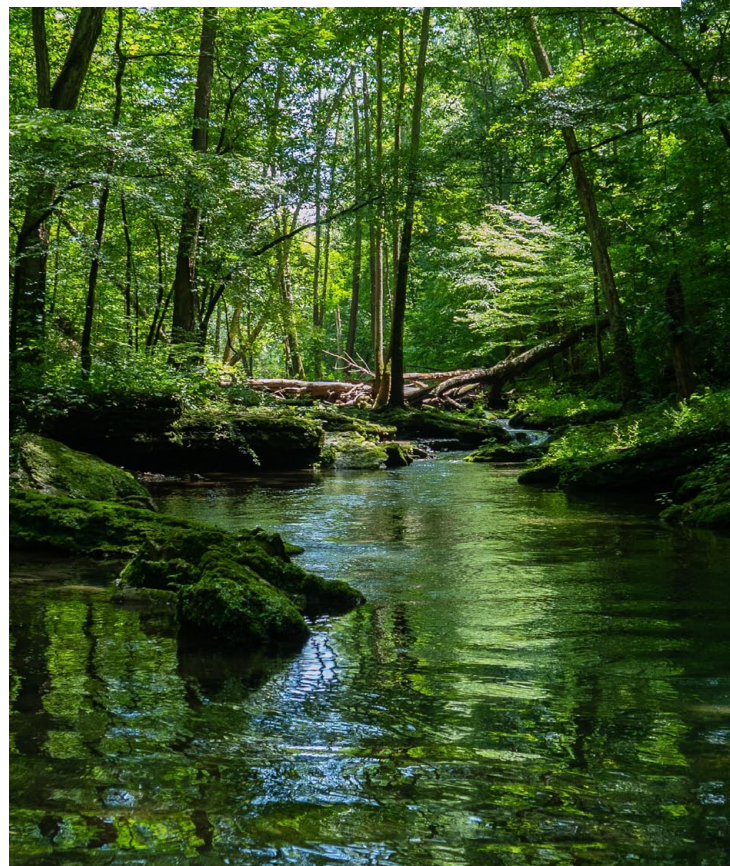
The survey revealed that companies see potential cost savings as the main motivation for improving the environmental performance of their IT. A significant average of 52.5% selected savings as their main incentive, while 21.2% said that pre-empting regulations was the central reason for engaging in Green IT initiatives. Smaller percentages of 11.5% and 8.4% respectively pointed to employee satisfaction and enhanced organisational purpose as the main drivers.

Motivation to improve the IT environmental performance



Question: What do you think is the main motivation to improve your IT environmental performance?

While the ability to cut costs is just one benefit of implementing Green IT, BCG has experienced numerous positive business cases realised by clients when prioritising more sustainable computing. Savings have been a central motivator for organisations in Poland, where there is less regulatory pressure to drive Green IT action. As the diagram above indicates, 54.4% of the Polish organisations that responded selected IT cost savings as the top reason to improve the environmental performance of their IT.



“I am a financier, so the result indicating the motivation to cut costs is not surprising to me. I would also like to point out that the remaining 47,49% of respondents have not yet learned their lessons about “green” investments. I have not seen a green IT project with a negative long-term return on investment. However, the overall goal is more than just financial, it is the future and well-being of our planet, which means benefits for all of us.”

*Stawomir Soszyński,
Vice-President of the Management Board, CIO,
ING Bank Śląski*

“The motivator to take into account issues related to sustainability is, of course, care for our planet, but also issues related to savings or improving the efficiency of companies. This means that very often the issue of sustainability appears in the goals of companies, which in turn makes it more important and increases the chance of quick implementation.”

*Przemysław Poppe,
Associate Director,
BCG Platinion*

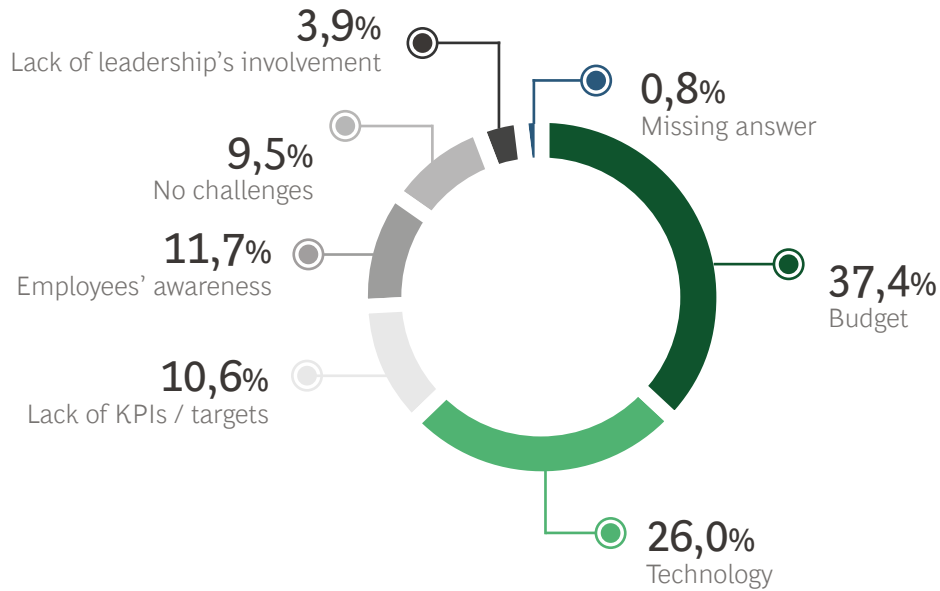


Lack of dedicated budget

According to 37.4% of respondents, the primary challenge preventing Green IT action is budget limitations. The survey revealed that only 25% of the companies in the group have dedicated Green IT budgets, and when they are in place, they are rarely bigger than 5% of the total IT budget. It also emerged that only 25 companies with dedicated budgets could precisely describe how they use it, with most simply referencing the purchase of new infrastructure and equipment.

While lack of budget may be presenting a genuine challenge for organisations, the fact that so few of those with dedicated budgets could explain its use indicates an awareness gap. The reality, as Sebastian Zasina, Data Center Solutions Architect at Schneider Electric pointed out, is that ‘Green IT does not always necessitate a drastic increase in financial expenditure’. Zasina went on to explain that in many cases simple analysis of how resources are used can lead to significant optimisation of consumption, including the disabling of unused resources.

What is perceived as the key challenge to reduce the environmental impact of companies IT?



Question: What do you perceive as the key challenge to reduce the environmental impact of your IT?

Green mindsets must be fostered

Our survey found that only 23.7% of the respondent companies have put a Green IT strategy in place that incentivises actions and progress, despite 11% of organisations identifying employee satisfaction as a key motivation. Emphasising the need for a cultural shift among many organisations, 12% of companies cited employee awareness as a central challenge in reducing the environmental impact of IT. These statistics combine to highlight the significant lack of structure and communication when it comes to Green IT initiatives.

“It is important to change the mindset - the same old solutions are not necessarily energy-efficient. This is especially true in the case of server room temperatures, which can be much higher nowadays. Therefore, it is worth keeping sustainability in mind as early as the designing stage for a server room - “Sustainability by Design” enables the negative impact on the environment to be minimized, both at the construction stage and during the life cycle of the facility.”

Sebastian Zasina,
Data Center Solutions Architect,
Schneider Electric

“It is very important to build a proper organizational culture focused on sustainable development and responsibility. The key element here is to raise awareness of the importance of these activities among the bank’s personnel. And on the labour market, it is an important tool for employer branding since sustainable development issues are often the basis for choosing an employer. We observe this, especially among younger generations.”




Stawomir Soszyński,
Vice-President of the Management Board, CIO,
ING Bank Śląski

Diving deeper into the results relating to environmental target incentives, 12.6% of companies had implemented them for the entire organisation, while 11.7% had only provided those in leadership roles with incentives. A further 10.9% said that they have set incentivised targets for specific employees responsible for achieving environmental goals. This breakdown of the statistics reveals an even smaller segment of organisations that are driving a green mindset on a widespread basis, which is critical in enabling a major cultural shift.

Identifying the green maturity leaders

As part of our survey, we also mapped the green maturity of the various industry segments represented by the respondents. Perhaps unsurprisingly, IT companies are leading the way in implementing Green IT initiatives, with 78.9% having taken demonstrable action. The technology, media and telecom space also performed well, with 72.3% having implemented initiatives. In contrast, transportation, consumer goods, and banking services are lagging behind, with 59.5%, 60%, and 41.7% respectively.

Approach to Green IT across three CEE countries

		Defined targets to reduce environmental impact	Becoming net-zero until 2030	Having IT environmental targets	Dedicated budget for IT to improve its environmental performance	Having automated sustainability reporting	IT Greenhouse gasses emission monitoring
Poland		61,7%	28,7%	35,6%	22,6%	55,9%	26,8%
Czechia		54,2%	25,0%	41,7%	27,1%	70,8%	56,3%
Hungary		63,3%	20,4%	49,0%	28,6%	67,3%	40,8%

Approach to Green IT across different industries



This maturity pattern was echoed when respondents were asked about dedicated Green IT budgets, with 42.1% of IT companies having specific financing in place. Banking was a particularly poorly performing space once again, with just 16.7% of respondents in this category operating with dedicated budgets. The energy sector was also at the lower end of the scale at just 18.2%, as was consumer goods with 20%.

A more balanced set of statistics was generated in terms of automated sustainability reporting, with consumer goods performing the worst with 43.3%. In this category, IT companies were for once outpaced by tech, media, and telecom, of which 70.2% of companies use automated sustainability reporting. A substantial 68.4% of IT companies use this capability, as do 63.6% of energy companies.

Of the companies we surveyed, Polish companies were found to have ambitious targets in place, while Czechia and Hungarian organisations demonstrate greater action and commitment. This may be due to a lack of involvement of leadership to drive progress towards these ambitious targets, or the absence of specific Green IT KPIs. However, only 58% of Polish companies highlighted budgets and technology as barriers to implementing Green IT, while 85% and 71% of Czechia and Hungarian organisations identified them as challenging factors.

Practical actions to increase your Green IT maturity

By analysing the statistics gathered during the survey, we have identified the most effective next steps organisations can take to improve their Green IT position. These actions can be segmented into three overarching groups, which include governance and management, daily operations, and investments and projects:



Governance and management

To set a baseline upon which to build, it is essential to measure your IT-related carbon footprint and define realistic KPIs as part of a wider strategy. These objectives can be set by identifying the appropriate actions needed to optimise and reduce energy consumption, or any other factors that are contributing to your overall environmental impact. To facilitate this progress, it is effective to appoint IT champions within your organization, who will work to actively drive cultural and process changes. This could include baking carbon neutrality requirements into sourcing contracts and external vendor interactions. Other actions could include modernising equipment and extending maintenance periods.

Daily operations

The foremost action that should be taken within daily operations to boost Green IT maturity is to source and purchase renewable energy for your operations, including solar and wind options. As the world witnessed during the COVID-19 pandemic, remote working can also be extremely beneficial for the environment, emphasising the value of implementing a hybrid workplace. Finally, finding methods of optimising overall performance and productivity will enable you to optimise energy consumption and enhance your Green IT maturity.



Investments and projects

Reviewing the carbon footprint contribution of your current initiatives is also an important step, and innovation can be the key to optimising them. Cloud migrations are one example of a way to enhance Green IT maturity, and another example can be seen in the data centre space. This is because hyperscalers often demonstrate high levels of energy efficiency, an approach that has been further optimised by green data centres. Another example of a pragmatic use case is the implementation IoT to manage energy consumption in buildings.

“The cloud has made a big difference: not only to the process of defining future goals but also that of accurately measuring environmental impact and minimizing it. All large suppliers are measuring their emissions precisely and are working on keeping them as low as possible. Today, this is a natural and crucial argument in favour of the cloud, which enables both these things to be done in an extremely efficient way. We have been working on the issue of minimizing carbon footprint for more than 15 years, and in 2020 we declared that, from 2030 onwards, we would like to power all our operations using carbon-free energy sources.”

Michał Żyliński,
Customer Engineering Manager, Google Cloud

Conclusions

In summary, the findings from our survey reveal a significant Green IT gap in Poland, Czechia and Hungary, with 67.3% of organisations failing to measure their IT-related greenhouse gas emissions. While there clearly is a great deal of work to be done to catch up, there are signs of increasing progress, particularly in specific segments. IT companies themselves are leading by example, as 78.9% of those surveyed have taken meaningful action to drive IT sustainability. When reviewing the results as a whole, it is encouraging to see that progress towards Green IT is taking place, with 28.8% defining Green IT targets and plans, and 7.5% achieving ‘Green IT leader status.’ Whether companies are Green IT laggards or leaders, we have defined sets of actions that both can take to enhance their positions.



Actions for today

Regardless of whether your Green IT approach is advanced or not, there are actions you should be taking. Beginners should conduct pre-baselining by estimating their current position using existing data, positioning them to identify ongoing activities, priority areas for change, and quick wins. At this stage, beginners can start to build an internal team that is dedicated to these ongoing activities by devising and executing an action plan. This team should also be tasked with reviewing the action plan's impact on a regular basis and using the insights to inform additional actions and budgetary requirements.

More advanced organisations that have already addressed the beginner steps should build a more comprehensive greenhouse gas (GHG) emissions baselines based on existing methodologies. This should be structured by scope, functions, products, and units respectively. An effective GHG emissions baseline will allow an organisation to define realistic targets and a clear timeline that are industry benchmarked. Organisations that have achieved this can then build a set of rules and a framework to enhance consistency and accuracy. A roadmap also has a powerful role to play for companies that have a clearly defined strategy in place, serving as a way to align actions and targets and ensure ownership.

Ultimately, all areas of business will need to become more sustainable by design, including products, services, and processes. While we are increasingly seeing standalone initiatives and ideas being introduced to address sustainability challenges, we are yet to see a comprehensive “matrix” come to the fore. Przemysław Zakrzewski, Head of Corporate Technology Center at ABB, explained a ‘circular approach’ that seeks to contribute to this goal:

“We pay attention to the circular economy. In addition to the sale of new robots, our parallel activity on the market is the modernization of 25,000 already produced. Among the materials from which we produce, we plan to eliminate everything that is not ecological. By 2030, at least 80 percent of ABB’s products and solutions will be covered by our circular approach.”

*Przemysław Zakrzewski,
Head of Corporate Technology Center at ABB*

Question: What is holding you back from taking more decisive action to decrease your environmental impact?



Achieving a “matrix” style approach to tackling IT-related emissions will require the right mindset, and a strategic approach to KPIs and targets. For some this will mean readjusting their view of what zero emissions really is, and what they must do to make it a reality. Outlining how this shift should be addressed, Dorota Zaremba, Member of the Board at SAP, said:

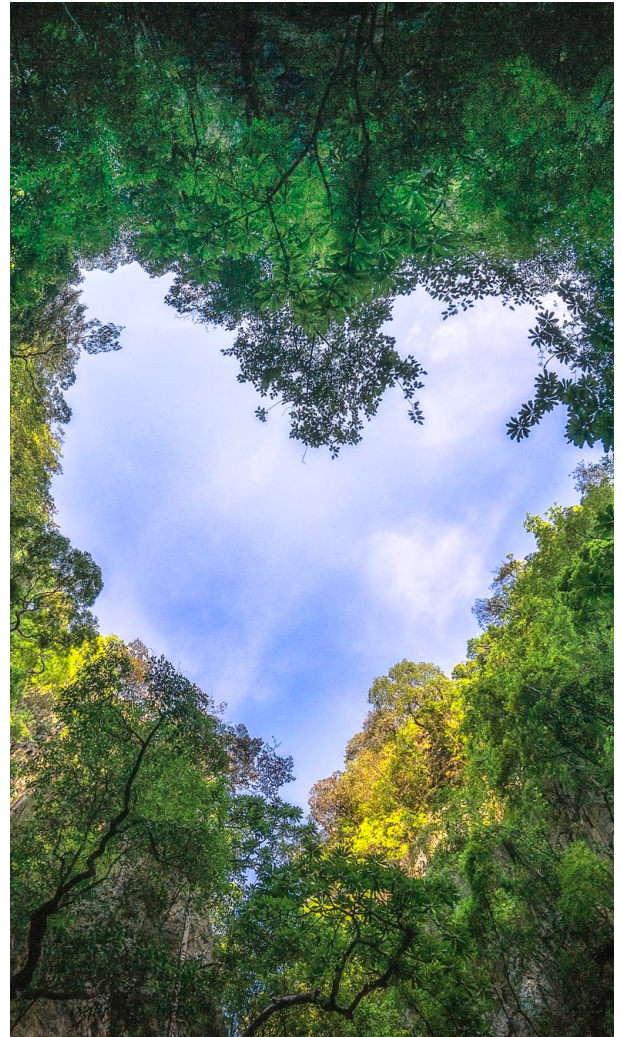
“We work on the basis of the Science Based Targets initiative, i.e., a set of specific indicators and KPIs that also help to compare with other organizations. It is important how companies perceive zero emissions, and it is worth talking about the entire value chain, not just about the current operation and production.”

*Dorota Zaremba,
Member of the Board at SAP*

BCG's Net Zero Pledge

At BCG, we not only advise on sustainability topics, but take direct action ourselves to implement our overall Net Zero pledge. We are committed to achieving Net Zero climate impact by 2030, an ambitious goal that demonstrates our determination to create sustainable operations. We are on track to halve our emissions impact that was baselined in 2018 by 2025, and we have already decreased our greenhouse gas emissions by 71%. As stated in this report, measurement is vital, and we publish our Annual Sustainability Report to outline policies and programs with the goal of realising our sustainability values and purpose. In 2020, 100% of our electricity was produced by renewable sources, and we are committed to achieving Net Zero by 2030 at the latest. We have also highlighted the need for strategy and planning, and we have implemented this ourselves by setting new emission reduction targets to neutralise our remaining climate impact.

We have been appointed as an exclusive consulting partner of COP27 in Egypt, and we recently launched new partnerships with the First Movers Coalition and Breakthrough Energy Catalyst, aimed at advancing climate technologies. BCG also delivered over 780 cases addressing climate and sustainability challenges for our clients, doubling our support in this area. Combating the climate crisis remains the defining challenge of our time, and we are dedicated to playing a leading role.



About the survey

The survey was conducted in November and December 2021 on a group of large companies and corporations with operations in Poland (77% of entities), Hungary (14%) and Czechia (13%).

Nearly half (49%) of the surveyed companies employed more than 2,000 people. 33% of those surveyed represented organizations with between 501 and 1,000 employees, while the remaining 18% represented organizations with between 1001 and 2,000 employees.

The surveyed entities came from different sectors of the economy. Industrial, manufacturing and mining (18%) and the financial and insurance sector (16%) were the most represented in the survey. The survey also included companies from the fast-moving consumer

goods, trade and distribution (11%), telecommunications (11%), and transportation and logistics (11%) sectors. There were also numerous representatives from the health care, broadly defined utility sector (energy, gas, water, heat, treatment), and IT industries.

We asked people employed in managerial positions to fill out surveys, including IT managers and directors (91%) and CIOs and board members (8%).

Preliminary results of this Green IT survey have been discussed in a debate with 10 industry leaders, held in early 2022. The quotes in the report have been derived from the transcript of this discussion.

About the Authors



Marek Molisz

Senior Consultant in the Warsaw office of BCG Platinion. He has 9 years of experience as a translator between IT and business. He supported multiple European insurers and banks in their large scale programs, digital transformations, post-merger integration, building greenfield insure-techs, make billion-dollar strategic decisions and various other unique challenges. Always eager to talk about the climate, he still believes technology will help us rebuild what technology destroyed.



Przemysław Krajewski

Lead IT Architect based in the BCG Platinion Warsaw office and an expert in explaining complex architectural topics in simple words. Digital strategist and IT architect with 10+ years of experience in business analysis, enterprise architecture design and business processes analysis and automation. Worked as a leading consultant for numerous clients from retail, financial, P&U and government sectors in projects covering development of IT strategies, design and selection of complex IT/IoT solutions. Passionate in seeking real business value which can be brought by IT / IoT solutions.



Łukasz Margański

He is an experienced advisor, strategy and transformation expert working at the intersection of business and technology. He brings 20 years of consulting experience from +30 large institutions from banking, consumer finance, insurance industries from Europe and Asia. Lukasz covers the main areas of a tech transformation from reorienting business strategy to digital, through customer experience design, to technology strategy including IT architecture, scaled agile transformations and innovation agenda.



Przemek Poppe

With broad experience in IT Functions Transformations and IT cost optimization. He has more than 15 years of experience in managing of operations, business processes and huge IT departments (teams up to 500 people) in large organizations. Przemek builds his experience in multiple industries like retail, QSR, hospitality, telco, utilities, chemicals, logistics, automotive, healthcare, manufacturing, and data centres. He has an in-depth competence in creating and implementing the IT strategy in international companies.



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