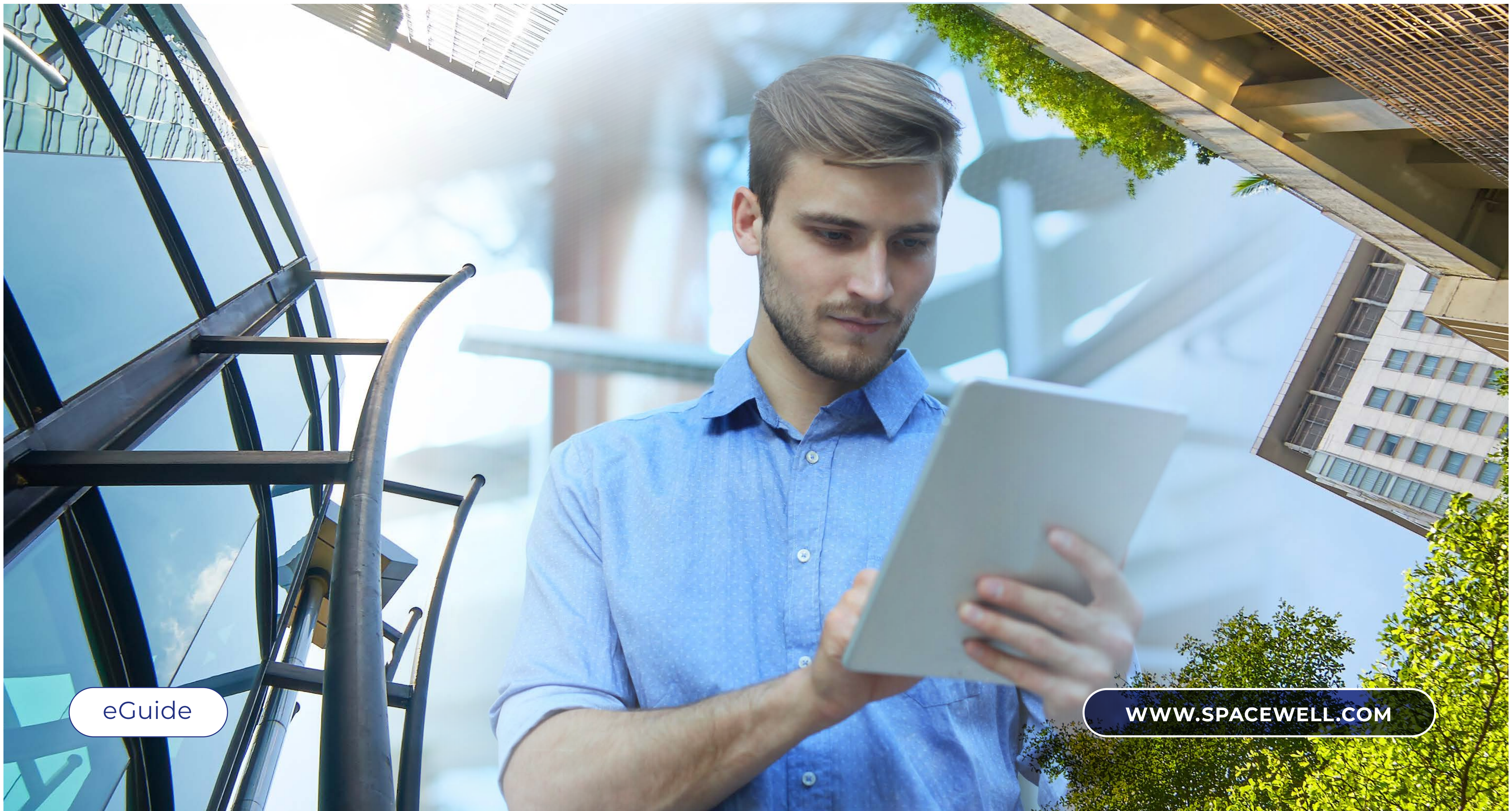
SPACEWELL
A NEMETSCHEK COMPANY

Data-Driven ESG Strategy:
How Facilities Management Can Lead the Way



Introduction

‘E’ is for ‘evolving roles & responsibilities’

By now, ESG needs little introduction. At first limited to “green” incentives and woolly references to ‘sustainability’, ***E****nvironment,* ***S****ocial and* ***G****overnance* credentials are top of mind for investors and a growing focus for both ESG-literate employees and consumers demanding visibility and clear measures of progress across the three pillars.

For corporate real estate (CRE), the implications represent a major step change in how offices are designed, built, maintained, monitored and even repurposed.

As the demands for more transparency and corporate responsibility become increasingly important, corporate real estate (CRE) strategy has had to move quickly to assimilate, not just ESG monitoring criteria, but realistic and effective ways of producing the right data for satisfying them.

It’s no surprise then that, according to McKinsey, 90% of S&P 500 and 70% of Russell 1000 companies now routinely publish regular ESG reports.

THE NEW ROLE OF FACILITIES MANAGEMENT (FM)

As part of that move, facilities managers - often perceived as ‘reactive firefighters’ - can pivot to ‘proactive risk mitigators’, becoming key contributors in CRE-strategic drivers such as operating profit, cost reduction, digitalization, Net Zero, employee engagement, and future-of-work goals that are all intersected by ESG factors.

Though broad brush awareness of ESG is nearing saturation, what remains unclear are the practical implications for facilities managers increasingly called on by corporate real estate peers to show up on cue with reliable ESG performance data.

An ear to the ground

PERSPECTIVES FROM INDUSTRY VOICES

The demand for ESG reporting – voluntary, regulatory, or by law – is increasing across all business sectors. With ESG reporting, organizations can demonstrate their commitment to responsible stewardship and transparency for investors and other stakeholders. However, many of these stakeholders are wary of the ESG claims made by organizations due to the lack of standards. To address this issue, several initiatives from regulators and standard setters have been established, such as the UN 2021 United Nations Climate Change Conference's International Sustainability Standards Board, the European Union Non-Financial Reporting Directive (NFRD) and others. Another major challenge associated with ESG reporting is the presence of data silos for many of the underlying systems that feed data into annual reports. Gathering data from a well-integrated smart building platform is a good starting point, such data has better alignment and leads to greater control and trustworthy ESG reporting.

— Erik Ubels
Smart Building Consultant, former CIO Deloitte Netherlands

Can you build a smart building without a fiercely inspired reason 'why'? The highest scoring and most innovative buildings seen by the Smart Building Collective | Certification have focused on the social and individual experience from the very beginning. In fact, many of the smartest buildings we see first set out to make an extraordinary building and used smart as the ultimate instrument to get there. What we can do to transform the ESG in buildings is profound and way beyond current legislation. We believe and support all efforts toward a better and more responsible future. And we champion those fiercely inspired gladiators who are paving the way for all of us!

— Elizabeth Nelson
PhD Candidate, Co-Founder & Head of Research and Innovation, Smart Building Collective | Certification

Office real estate is currently facing an unprecedented challenge. On the one hand, hybrid work is reducing space needs. On the other hand, a lot of office stock doesn't work anymore for today's economy due to rising sustainability expectations and modern-era tenant preferences. The imbalance between supply and demand is putting a green premium on smart, sustainable buildings, making ESG an essential value driver for commercial real estate.

— Rodolphe d'Arjuzon
MD & Global Head of Research at Verdantix

Technology continues to change how we operate real estate. Specifically, new solutions can be used to collect, organize and analyze disparate data sets to provide actionable intelligence that reduces energy consumption, improves environmental performance, and optimizes facility performance. Moving forward, solutions will extend support to more use cases, provide ROI in a wider range of categories, and continue to improve the occupant and operator experience. While there is a crowded market of solutions in these categories, we tend to believe that there still is plenty of innovation to come in the future.

— Joe Aamidor
Managing Director, Aamidor Consulting

ESG in the workplace has a lot to do with shared purpose so that people's assignments are meaningfully connected to a bigger picture. This connection to something larger helps boost employee engagement and satisfaction. Against this background, the workplace experience is no longer solely the responsibility of Facilities Management, as it was before the pandemic. We need to collaborate across functions and share knowledge and aspirations, so that employees are supported and empowered to live a better life at work, in an environment where they feel valued and safe. Technology and the data derived from it plays a crucial role in creating such an energizing high-performing workplace.

— Momcilo (Momo) Pavlovic
Workplace Support Leader, Ingka Group (IKEA)

In this eGuide

Where can we take you?

What's the ESG opportunity for FM?

In short, facilities management (FM) faces a cluster of new pressures under the scope of ESG requirements for CRE stakeholders. By anticipating, adapting and advocating for ESG-centric solutions, facilities and workspace managers can turn risks into strategic opportunities, becoming indispensable contributors to compliance, talent attraction and retention, employee wellbeing and performance, and operational profit.

ESG criteria & key factors to monitor

Although 'E', 'S' and 'G' factors overlap, the 'E' (environmental) is the key area of focus in which facilities managers can contribute raw CRE asset value, but also operational profit and shareholder returns.

	CRITERIA	KEY FACTORS TO MONITOR
[E]	**Environmental** The **E** concerns the energy workspaces use vs the waste they discharge, the resources they consume and the net consequences for living beings in and outside of physical workspaces.	Energy efficiency Decarbonization Supply chain efficiency Resource efficiency Workspace utilization Circularity: reduce, reuse, recycle
[S]	**Social** The **S** addresses the impact of your organization's reputation and relationships with people, institutions and communities.	Pay equity Health & safety Labor relations Diversity, equality and inclusion (DEI)
[G]	**Governance** The **G** relates to internal controls and procedures for self-governance, decision-making and compliance.	Data protection Policy & documentation Financial transparency Audit and risk assessment

Unpacking the 'E' in ESG:
Why it's so important to CRE

'E', 'S' and 'G' criteria share cause-and-effect relationships. For example specific workspace design concepts might bring an uptick in energy efficiency, but negatively affect the way teams collaborate and communicate.

For workspace management, however, it's the 'E' incentives that stand out as critical within the scope of wider facilities management goals. Being alert to the opportunities means being alert to how ESG confers advantages as a CRE value driver.

ESG is shifting toward 'mandatory' in the long term. But in the short term, the key motivators should trigger early voluntary action for perfecting the right processes that capture the right benefits.

The bottom line is that there are both intuitive and well-evidenced links between resource efficiency and overall financial performance.

PERKS PER SQUARE FOOT

According to the U.S department of energy (DoE), 'green' properties gained a 28.8% increase in net operating income (NOI) and a 17.6% OpEx reduction per square foot vs. 'non-green' properties.

The DoE study assessed 131 commercial properties throughout the U.S. with 25 million square feet of aggregated space.

Overall, the results indicated that 'green' workspaces had:

- higher occupancy
- higher market value
- higher net operating income (NOI)
- higher rent per square foot

with lower operating expenses and rent concessions per square foot.

HOW DO ‘E’ FACTORS MOTIVATE CRE STRATEGISTS?

Top-line growth: Having a sound environmental proposition can open up new markets and help develop presence within existing markets.

Cost reduction: Executing on ‘E’ factors help control OpEx expenses in carbon, raw materials and water.

Productivity: *is* just one example where the ‘E’, ‘S’ and ‘G’ overlap comes into play. Great ‘E’ credentials help attract and retain motivated, talented teams that unite around shared purpose. And employee satisfaction is upstream from shareholder value.

HOW DO ESG ‘E’ FACTORS MOTIVATE OTHERS?

Regulators: are increasingly focused on how workspaces negatively contribute to climate-risk and ‘Net Zero’ accords.

CRE owners: aware of increased scrutiny, are anxious about staying on track with sustainability targets.

Tenants: with their own ESG goals are increasingly selective in occupying buildings pre-aligned to active commitments.

Investors: are increasingly choosy about the way CRE assets they invest in represent their reputation or affect liability.

Getting ready

3 steps for building your ESG Baseline

Qualifying the ‘why?’ opportunities of integrating ESG into CRE strategy requires little more than a brief thought experiment - and implementing the right workplace analytics tools capable of putting workspace sustainability monitoring on autopilot doesn’t have to be rocket science either. What’s trickier is understanding:

- **What’s optional and what’s mandatory?**
- **What are the most trusted reporting frameworks?**
- **Which ESG scorecard to use for showcasing ESG credentials?**
- **Which are the most trusted benchmarks for validating your ESG data?**

BUILDING UP TO DIALOGUE

In the following section, we’ll walk through three steps to take before meeting with ESG stakeholders to discuss the real-world practicalities of exactly how you’ll start gathering the right data.

1

Understand your ESG obligations
How is mandatory ESG evolving throughout different regions?

2

Choose your ESG reporting framework
Which frameworks are useful for which use cases and industries?

3

Build your ESG scorecard
What should your ideal ESG scorecard look like?

Before you do anything,
get familiar with GRESB

Before wading into ESG obligations, frameworks and scorecards, you'll want to get to grips with GRESB.

WHAT IS GRESB?

GRESB (Global Real Estate Sustainability Benchmark) is arguably the most trusted provider of actionable and transparent ESG data for investors and financial markets.

GRESB BENCHMARK REPORT & ASSESSMENTS

Your GRESB Benchmark Report is the outcome of the GRESB Assessments. That gives CRE investors in-depth ESG performance analysis that can sway big investment decisions relating to your CRE assets.

GRESB BENEFITS FOR CRE STRATEGY

1. Validate ESG data you collect using IoT sensors placed throughout office space
2. Engage ESG-conscious CRE investors with GRESB-validated data and credentials
3. Benchmark ESG strategy and performance against industry peers

MORE GRESB RESOURCES

- What's included with GRESB membership?
- 2023 Real Estate Assessment resources to download
- GRESB Infrastructure Asset Scoring Methodology

1 Understand your ESG obligations

In some corners, ESG reporting remains voluntary. In others, mandatory requirements are rapidly expanding, extending ESG's sphere of influence, but also the opportunities for correctly gearing up workspaces with smart monitoring tools for matching requirements with accurate sustainability data to score points early.

The good news is that evolving regulation largely builds on existing reporting frameworks such as the TCFD recommendations. For those already finding their ESG gears, this means less 'reinventing the wheel' but instead 'optimizing' it with more robust workspace monitoring practices.

That said, **even if new ESG regulation doesn't apply to you, investors are increasingly demanding of ESG reports** and global asset managers like **State Street and BlackRock already expect to see robust ESG disclosures** – so it's worth positioning yourself ahead of the curve.

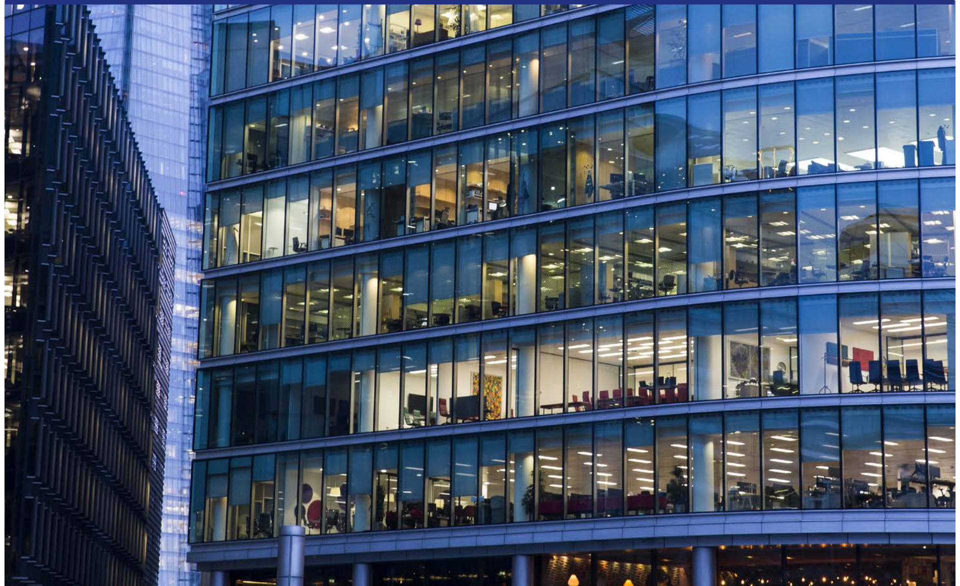
Is ESG reporting mandatory?

In short, not yet. At least not for all businesses. According to the **European Corporate Governance Institution** (ECGI), ESG reporting was already mandatory across 25 countries as of 2017.

In 2023, ESG reporting is still not mandatory wholesale, though specific disclosure requirements affecting many, exist under these two pieces of legislation:

- **the Non-Financial Reporting Directive**
- **the Sustainable Finance Disclosure Regulation**

Even if you fall outside of ESG disclosure requirements now, an early dress rehearsal will help for building a baseline to build out from when things start to get real.



MANDATORY ESG REPORTING IN THE **US**

At time of writing (2023) there are **no mandatory ESG disclosure requirements** at the federal level in the US.

It's worth noting, however, that in May 2022 the US Securities and Exchange Commission (SEC) proposed

"amendments to rules and reporting forms to promote consistent, comparable, and reliable information for investors concerning funds' and advisers' incorporation of environmental, social, and governance (ESG) factors."

If the fresh proposal gains traction, it will enact new disclosure requirements for advisers and funds that advertise an active ESG focus.

MANDATORY ESG REPORTING IN **CANADA**

The Canadian Government's 2022 budget made clear commitments to enacting **mandatory climate-related reporting requirements** to federally regulated banks and insurance companies.

The implications? **From 2024 Affected organizations will need to publish climate-related disclosures** in accordance with the TCFD framework mentioned above.

Although the change impacts on federally regulated financial institutions, Canadian Government projections **anticipate a broader impact on the wider Canadian economy.**

MANDATORY ESG REPORTING IN **CHINA**

At time of writing, there are **no mandatory ESG reporting obligations in China. However**, in June 2022, a new set of voluntary ESG reporting guidelines came into play: the Guidance for Enterprise ESG Disclosure.

While these guidelines are non-binding, according to Bloomberg, they give *"a glimpse of what mandatory disclosures might eventually look like in the country."*

MANDATORY ESG REPORTING IN THE **EU**

In the EU, **certain larger companies with more than 500 employees** are obliged to disclose ESG information under the Non-Financial Reporting Directive (NFRD).

This includes:

- banks
- listed companies
- insurance companies
- Designated 'public-interest' entities

IMPORTANT NOTE: from 2023, expect the NFDR to be replaced by the Corporate Sustainability Reporting Directive (CSRD) that will extend mandatory requirements to a further 50,000 or so EU companies representing almost 75% of EU companies' turnover.

MANDATORY ESG REPORTING IN THE **UK**

The UK passed **two mandatory ESG disclosure laws** in 2022.

1. **The Companies (Strategic Report)** (Climate-related Financial Disclosure) Regulations 2022)
2. **The Limited Liability Partnerships** (Climate-related Financial Disclosure) Regulations 2022)

The implications? If the following applies to you, you'll need to provide climate-related ESG disclosures in your strategic report.

- More than 500 employees + EITHER transferable securities admitted to trading on a UK regulated market OR qualify as banking companies OR insurance companies classified as 'Relevant Public Interest Entities' (PIEs).
- UK registered businesses with securities admitted to The Alternative Investment Market (AIM) with more than 500 employees.
- UK registered businesses, not part of the above categories, with more than 500 employees AND a turnover of more than £500m
- Large untraded LLPs and banking LLPs with more than 500 employees and a turnover of more than £500m
- Traded or banking LLPs with more than 500 employees.

Source: Government's Q&A guidance on how to apply the new requirements

2 Choose your ESG reporting framework

Note that this is by no means an exhaustive review of available ESG reporting frameworks - the options are continually evolving. When deciding, factor for voluntary vs. mandatory requirements, your specific ESG goals and stakeholder preferences.

STANDARDS VS FRAMEWORKS

ESG disclosure frameworks and standards can be combined and are in some cases complementary, though on paper they differ significantly.

STANDARDS

Standards like GRI and SASB below - are laser specific offering detailed guidance on reporting requirements for disclosing performance on ESG topics.

FRAMEWORKS

Frameworks on the other hand, offer principles-based guidance on what companies should report on, and how reports should be prepared.

Global Reporting Initiative (GRI)

The GRI framework outlines ESG standards that are the most widely used for ESG reporting globally.

GRI Standards seek to satisfy stakeholders' information needs. Their modular structure makes it a useful framework for both holistic ESG reporting, but also narrower, specific disclosures.

Sustainability Accounting Standards Board (SASB)

The SASB framework focuses on topics and metrics covering 77 industries across the full 'E', 'S' and 'G' scope of ESG.

Overall, the SASB framework is useful for helping align reporting with investor needs and steering efforts for gathering the right data.

The Climate Disclosure Standards Board (CDSB)

The CDSB framework focuses on environmental and climate change-related ESG disclosure as part of corporate financial reporting.

The aim of the framework is to promote the same level of rigor typical of financial reports as a means of providing investors with the right informational utility for ensuring resilient capital markets.

The United Nations Sustainable Development Goals (SDGs)

The SDGs is a collection of 17 goals adopted by the UN member states committed to the 2030 Agenda for Sustainable Development.

Although the SDGs were originally intended for UN member states, the UN Global Compact and GRI have now combined forces to help global businesses report on their sustainable development goals.

The Task Force on Climate-related Financial Disclosures (TCFD):

Although initially voluntary, TCFD-based reporting became mandatory in 2020 for asset owners and managers signed on to the UN Principles for Responsible Investment.

The TCFD recommendations may be used by CRE lenders, insurers and investors to better assess and price risks and opportunities.

The Carbon Disclosure Project (CDP)

The CDP is a global disclosure system for companies and investors, but also cities, states and regions with goals for managing environmental impacts.

Annually, CDP sources information obtained through its annual reporting and scores entities' environmental performance.

3 Building your ESG scorecard

ESG scorecards come in different flavors and are typically based on the ISS ESG Corporate Rating methodology, that intersects multiple ESG performance requirements.

Designing your ESG scorecard will require careful considerations that factor for both ESG disclosure obligations, but also strategic goals.

WHERE TO START

One useful starting point is to model your ESG scorecard around principles outlined by the Balanced Scorecard system developed in the early 1990s by Robert Kaplan and David Norton.

Basing your ESG scorecard on the balanced scorecard (BSC) will help with, not just strategic planning but also outlining precise ‘E’-related workspace monitoring goals to help align day-to-day monitoring activities with top-down ESG strategy.

WHY DO I NEED AN ESG SCORECARD?

1. Get to grips with which ‘E’ factors to track and monitor throughout workspaces.
2. Easily showcase ESG credentials to peers, potential CRE tenants, investors, employees and occupiers.
3. Maintain one-source-of-truth for aligning your ESG change committee around shifting goals

THE ESGGEN SCORECARD™

The ESGgen Scorecard™ is by no means 'the perfect ESG scorecard'. Though it's an effective center of gravity for tracking general progress against workspace monitoring goals.

TRACKING 'E' RELATED ESG MEASURES

In the next section, you'll find an itemized breakdown of each ESGgen measure related to 'Environmental' ESG criteria, matched to smart, scalable ways of automating monitoring and obtaining accurate, on-demand data.

TOTAL MEASURES ACCOUNTED FOR: 29

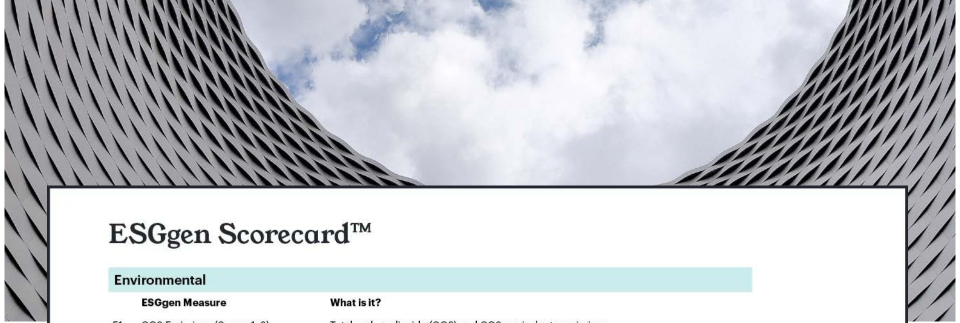
[E]nvironmental: 8

[S]ocial: 15

[G]overnance: 6

The ESGgen Scorecard is an open resource and free to use under Creative Commons License Attribution-ShareAlike 4.0 International.

Simply visit ESGgen, right-click and save



ESGgen Scorecard™

Environmental

	ESGgen Measure	What is it?
E1	CO2 Emissions (Scope 1, 2)	Total carbon dioxide (CO2) and CO2 equivalents emissions
E2	Supply Chain CO2 (Scope 3)	Total carbon dioxide (CO2) and CO2 equivalents emissions for the supply chain
E3	Renewable Energy	Percentage of renewable energy purchased and produced
E4	Waste Recycling	Percentage of waste recycled
E5	Recyclable Packaging	Percentage of recyclable packaging used in supplying the company's products and services
E6	Water Usage	Total water withdrawal in cubic metres
E7	Energy Efficient Vehicles	Total environmentally-friendly vehicles registered
E8	Total Expenditure on Improving Environmental Impacts	Total investment and/or spend switched to reducing negative environmental impacts (or increasing positive impacts)

Social

	ESGgen Measure	What is it?
S1	Number of Employees	Number of employees (include all types of employment such as part-time and full-time employees)
S2	Net Employment Creation	Employment growth over the last year
S3	Salaries and Wages	Average value of salaries and wages paid to all employees and officers (including all benefits, payments and allowances)
S4	Gender Diversity	Percentage of female employees
S5	Ethnic Diversity	Percentage of BAME employees
S6	Gender Pay Gap	Percentage difference in average earnings between women and men
S7	CEO Salary Gap	CEO's (or the highest salary) total remuneration compared to average employee remuneration
S8	Employee Support	Employee benefits and support (including working conditions)
S9	Employee Training	Investments in employee training
S10	Supply Chain ESG	Requests for requirements and disclosures of social impacts from supply chain (over the value of £10,000)
S11	Customer Complaints	Customer complaints as a percentage of sales
S12	Management of Personal Data	Number of reportable incidences (internal and external) about company's use of personal data
S13	Responsible Marketing	Brand ranking/Customer satisfaction
S14	Product & Service Quality	Sales refunds due to faulty or deficient products or service failure
S15	Total Expenditure on Improving Social Impacts	Total investment and/or spend switched to increase positive social impacts (or reduce negative impacts)

Governance

	ESGgen Measure	What is it?
G1	External, Independent Advisors	Percentage of strictly independent Board members or Advisors
G2	Board Gender Diversity	Percentage of females on the Board
G3	Board Meeting Attendance	Average overall attendance of Board meetings
G4	Tax Interventions	Number of interventions with tax authorities that have resulted in further taxes being demanded/paid
G5	Business Ethics	Number of involvements with regulatory bodies that have necessitated reformative actions
G6	ESG in Decision Making	Inclusion of relevant non-financial indicators and KPIs in the company's decision making
P1	UNGC/OECD Monitoring	Is there material evidence to support systems and procedures to handle violations and grievances/complaints in relation to UNGC principles and OECD guidelines (e.g. policies, meeting notes, stakeholder correspondence)
P2	Whistleblower	Reporting person as defined in Article 5(7) of Directive (EU) 2019/1937

ESGgen

Unlocking the value of ESG for SMEs

In one corner, employers expressed concerns over a perceived cap on innovation and productivity potential in a remote-first context. In the other, employees - amid an almost total reevaluation of life priorities triggered by the pandemic - demanded greater flexibility, with some resolutely swearing by a felt productivity boost working remotely.

ONCE THE DUST SETTLED...

After major operating reshuffles and Big Tech U-turns calling employees back to the office, **the hybrid workplace has emerged as a new center of gravity** providing enough mutual overlap for striking a balance between in-office and remote work advantages.

According to commercial real estate giant CBRE's Occupier Sentiment Survey 2022:

Nearly three-quarters of companies say they are moving to a choice-based "hybrid workplace."

CASE STORY: AXA Belgium: a Smart Building for a New Work Culture

AXA Belgium's award-winning smart building provides staff members with a range of shared spaces in a flexible workplace concept.

It obtained BREEAM certification for sustainable built environment, among other things thanks to the reduction of the surface area via workplace occupancy monitoring and data-driven optimization.

Things to consider
ESG factors in hybrid workplace scenarios

With more and more employers settling one of the hot-button work culture debates by establishing a 'happy middle' of hybrid working, new considerations are arising around the themes of workspace utilization.

A FINAL LOOK IN THE REARVIEW MIRROR

One of the conclusions drawn post-pandemic is that productive work can, for many, be done at least as effectively from home as in the office.

What remains in question is collaboration and socialization that some would argue are better suited to face-to-face interactions - particularly in new-starter scenarios.

WHAT SHOULD CRE & FM LEADERS IN HYBRID WORKSPACES CONSIDER?

CRE operating hybrid working models will be prone to increasing the availability of conference rooms, communal areas, and other collaborative workspace design features that accommodate new ways of working.

However, even if workspace design trends toward 'collaboration hub' status, uncertainty remains around precise workspace needs - and it's a question that needs an accurate answer.

KNOWING VS. GUESSING

1. How intensely and effectively are your workspaces being used?

2. How is switching to hybrid impacting your CRE energy efficiency

Fast, accurate answers require fast, accurate data: and smart IoT sensors placed throughout workspace zones are the fastest, most accurate way of obtaining that data.

Finding the data

IoT Workplace Analytics
Measuring space utilization, instead of just occupancy

WORKPLACE ANALYTICS

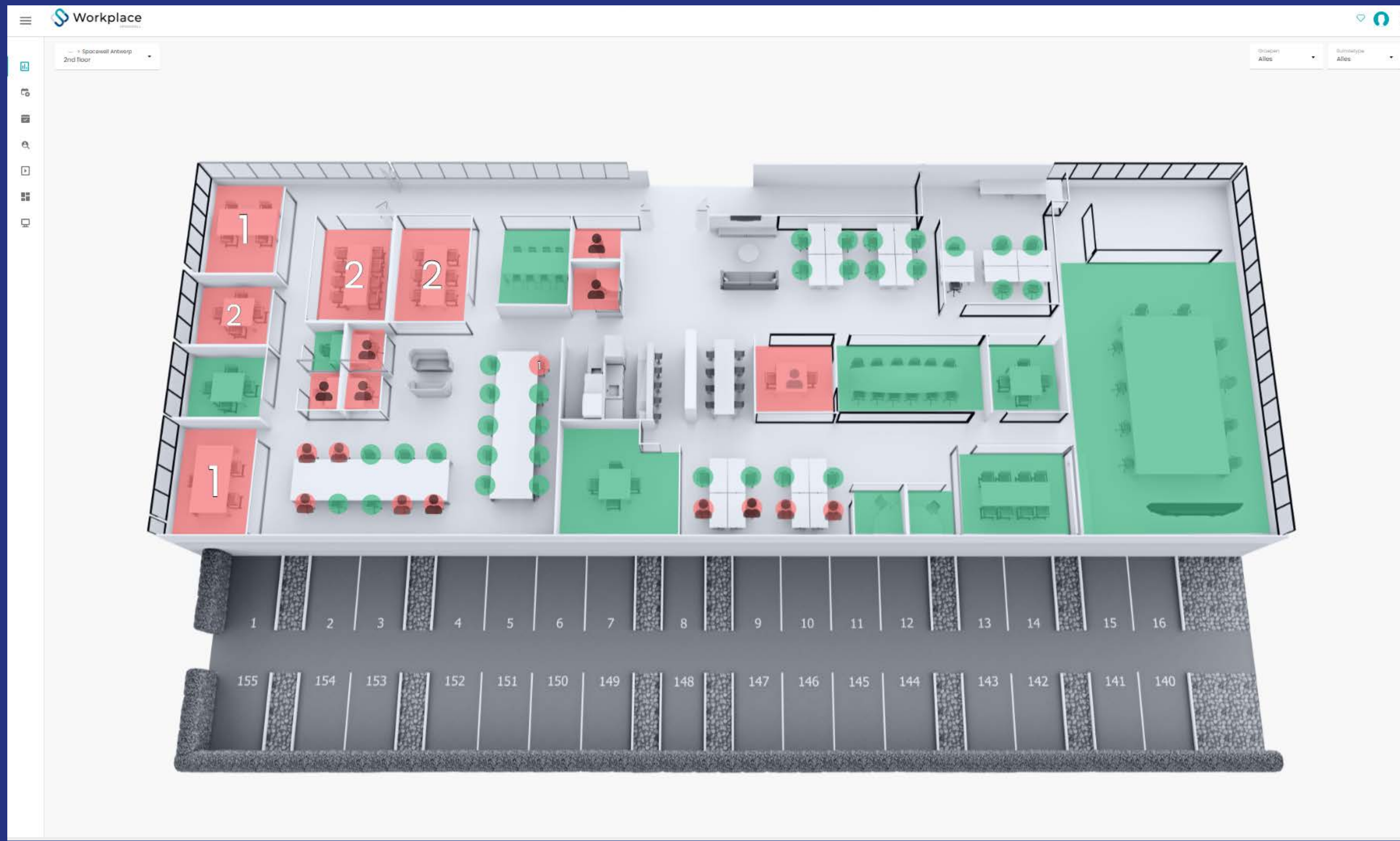
Spacewell Space Monitor helps facilities managers automate away part of the challenge of capturing sustainability data for ESG monitoring.

Imagine a visually intuitive, on-the-go view of how your workspaces are being used at any given time. And not just workspaces - parking spaces too.

- Easily gather space utilization for ESG reporting
- Optimize office footprint and workspace usage
- Make better FM decisions that boost ESG score

Get a demo

Space Utilization Analytics



HOW DOES IT WORK?

By placing smart **'Internet of Things' (IoT)** sensors throughout workspaces, facilities managers can **capture relevant ESG data anonymously**. This data is mapped onto color-coded floor plans that provide an **intuitive understanding of how workspaces are being used** and which spaces are busy or quieter, both in real-time or in time-lapse.

Workspace Planning Simulation

Turn occupancy data into ESG-focused workspace redesign

WORKSPACES SIMULATION

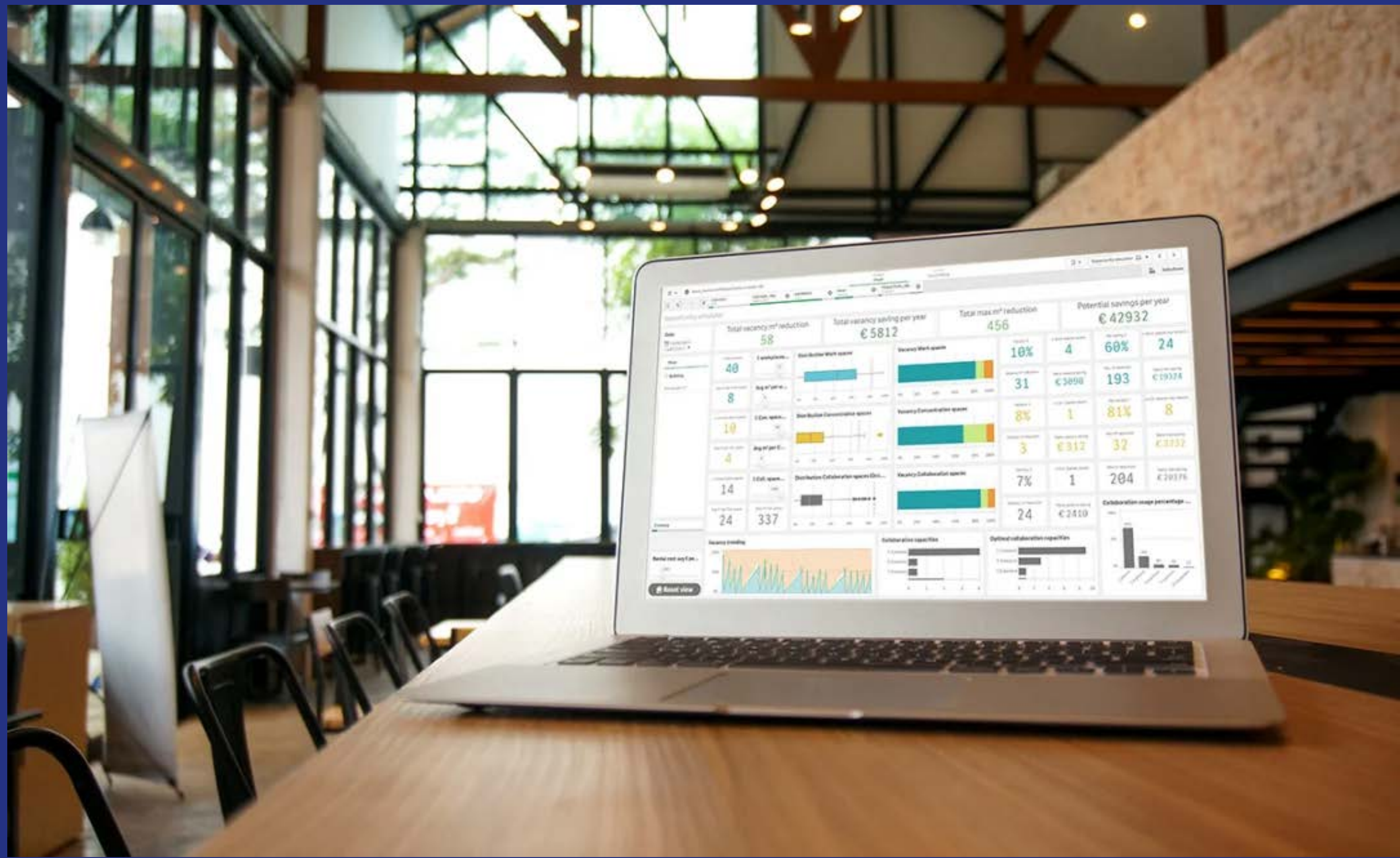
Spacewell Opportunity Simulator empowers facilities managers to positively impact key ESG factors by testing space-optimization scenarios.

Imagine achieving the optimal workspace design across your entire CRE portfolio for ticking key ESG boxes, without moving a single piece of furniture.

- Turn occupancy data into workspace design insight
- Optimize footprint and lower multiple costs across your CRE portfolio
- Improve 'Environment' and 'Social' ESG score

Get a demo

Space-saving Opportunity Simulator



HOW DOES IT WORK?

Spacewell Workspaces Simulator **combines your occupancy data with best-practice benchmarking data**, providing insight into space redundancy.

Use your simulator dashboard to **plan space-optimization incentives for scoring ESG points** and improving employee experience by creating the right mix of workstations, collaboration spaces, and concentration spaces.

Indoor Air Quality (IAQ) Monitoring

Protect indoor air quality and provide transparency

AIR QUALITY MONITORING

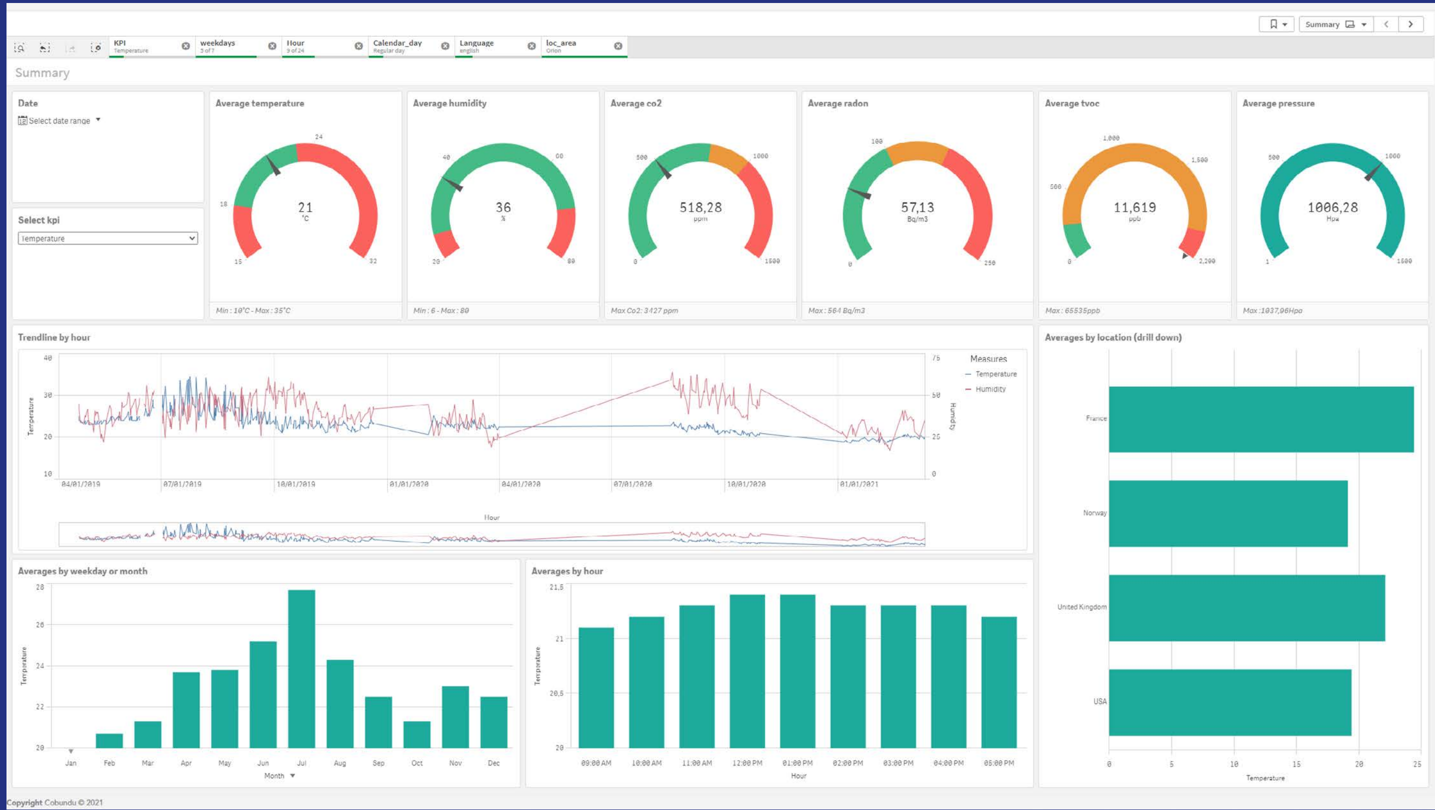
IAQ Monitoring captures indoor climate data to ensure a healthy work environment. Use your IAQ dashboard to improve your ESG score and to provide transparency.

Employees rightly expect a healthy work environment with clean air, that supports their well-being and performance. Show people they are in a safe place.

- ✓ Ensure clean air across your building portfolio
- ✓ Provide transparency to employees
- ✓ Improve 'Social' ESG score

Get a demo

Indoor Air Quality Monitor



HOW DOES IT WORK?

These days, small sensors in the workplace can monitor many aspects of environmental quality. From the presence of volatile organic compounds (VOCs), particle pollution, and radioactive radon gas to CO2 concentrations, temperature, humidity, air pressure, noise levels, and light. It is enabled by the Internet of Things (IoT).

IAQ Monitoring measures the indoor air quality in individual rooms and spaces, so that facilities managers can understand which areas have poor ambient conditions or an increased risk of airborne virus transmission.

Detect Energy Savings Potential

Massively assess your portfolio savings potential

DETECT

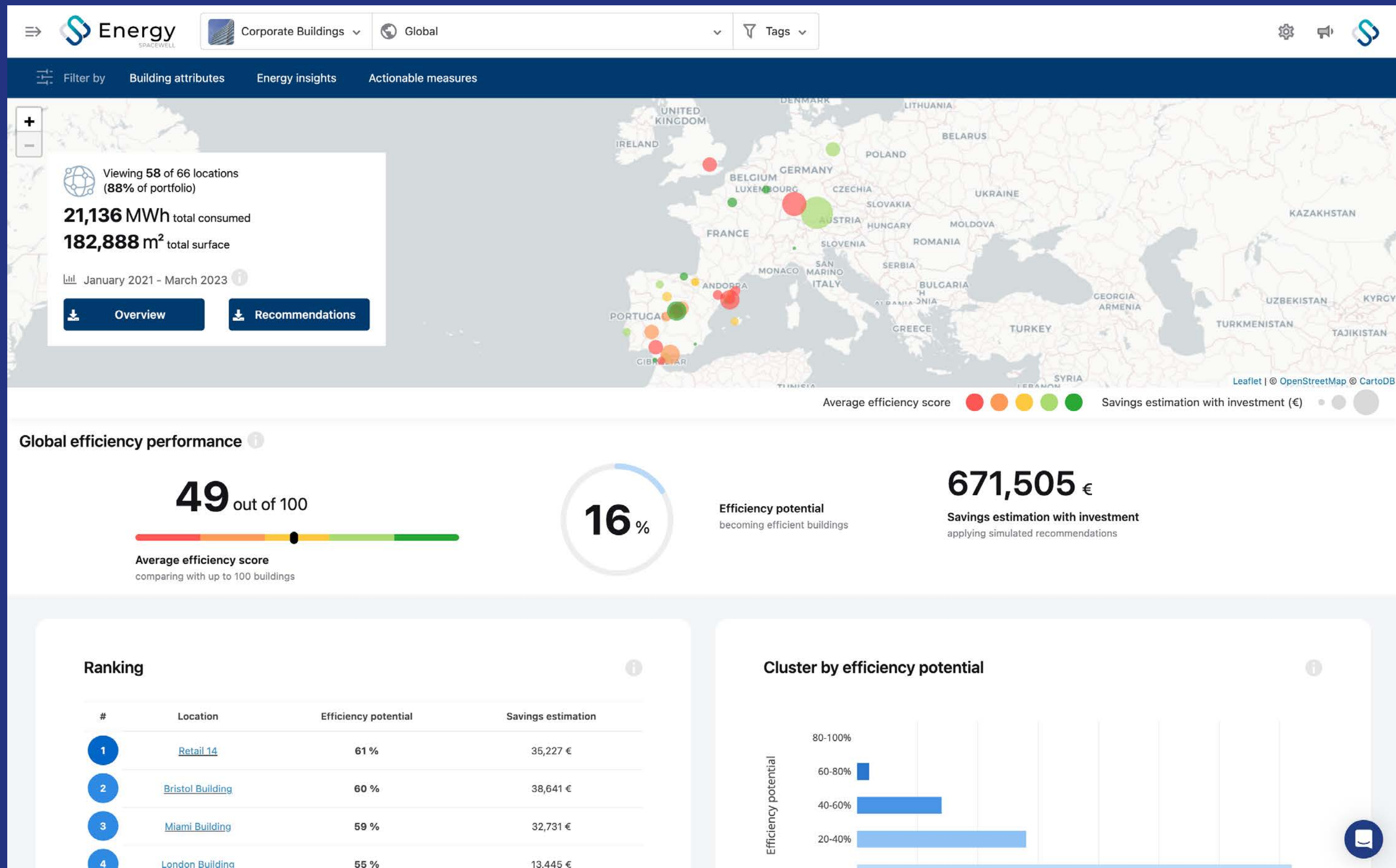
Spacewell Energy Detect: helps facilities managers detect portfolio-wide savings potential to improve energy efficiency and ESG scores

Imagine benchmarking energy saving opportunities and prioritizing investments in sites and projects that make the biggest difference.

- ✓ Detect buildings/sites with the biggest savings potential
- ✓ Benchmark against comparable buildings
- ✓ Get recommendations, simulate their impact, and focus investment

Get a demo

Energy Detect



HOW DOES IT WORK?

Without even the need to install hardware, facilities managers can detect their savings potential across portfolios of commercial or administrative buildings. The software allows to **assign energy-efficiency scores**, **benchmark** against a large dataset of comparable buildings, and **simulate the impact** of specific recommendations on energy consumption and emissions. This makes it easy to **prioritize investments** that matter most for energy savings and 'E' scores.

Energy Reporting

Monitor energy performance with real-time data

ENERGY REPORTING

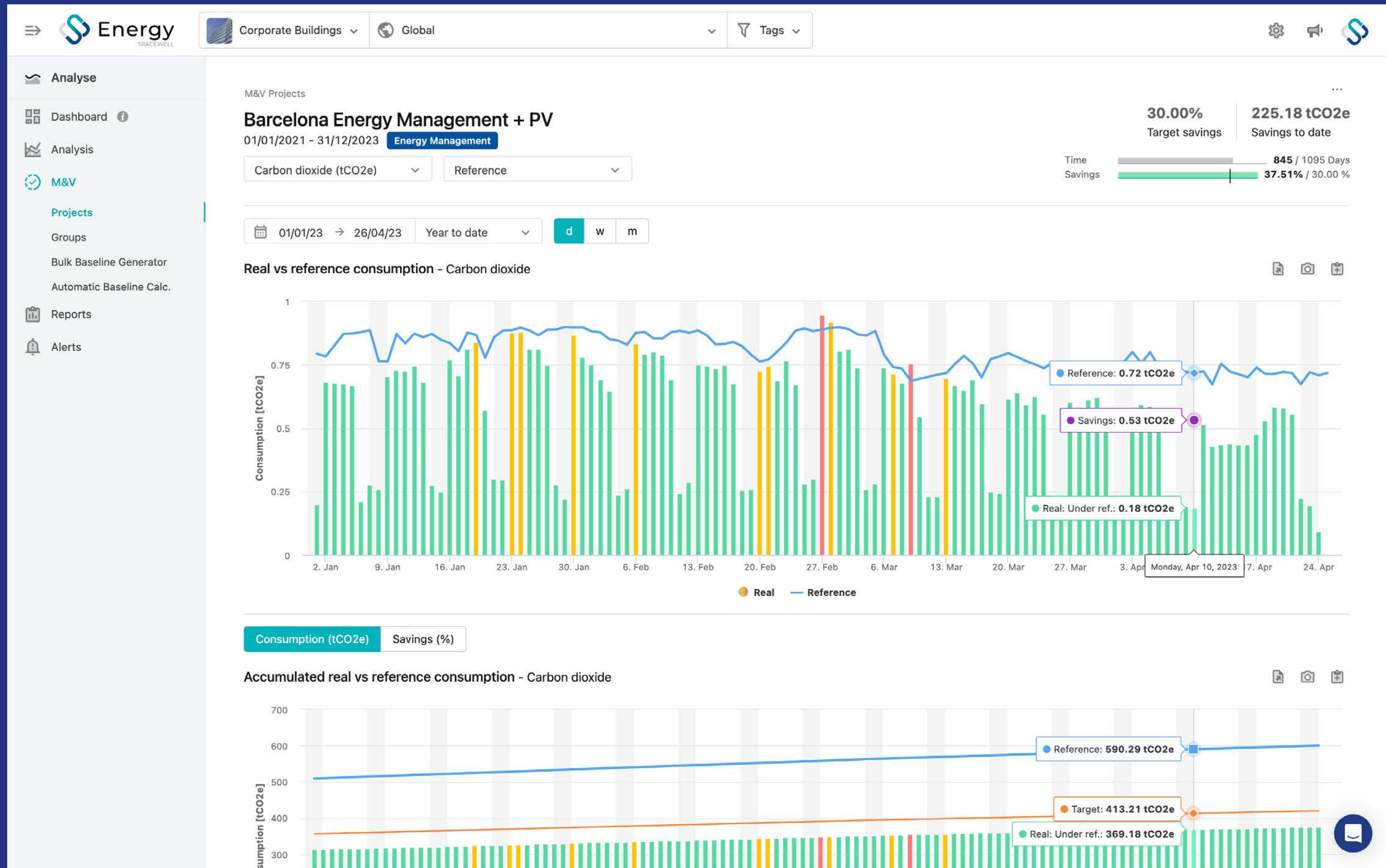
Spacewell Energy Analyze: Reliable building energy reporting is a key part of ESG and corporate sustainability reporting.

Real-time usage data gives you granular, up-to-date information needed to plan actionable goals and calculate ROI on energy improvement projects.

- Understand your energy consumption and production profiles with real-time data-based insights
- Set energy and GHG reduction targets
- Measure and verify actual energy savings and emissions reduction

Get a demo

Energy performance reporting



HOW DOES IT WORK?

Data from digital meters and submeters is analyzed in the real-time Spacewell Energy **monitoring platform**, with **dashboards** providing insights into energy **performance of buildings and individual assets**. It allows you to measure and **verify actual performance against targets** set for energy consumption and carbon emissions reduction.

Carbon Reduction Pathways

Monitor your carbon risk and embrace renewables

CARBON REDUCTION

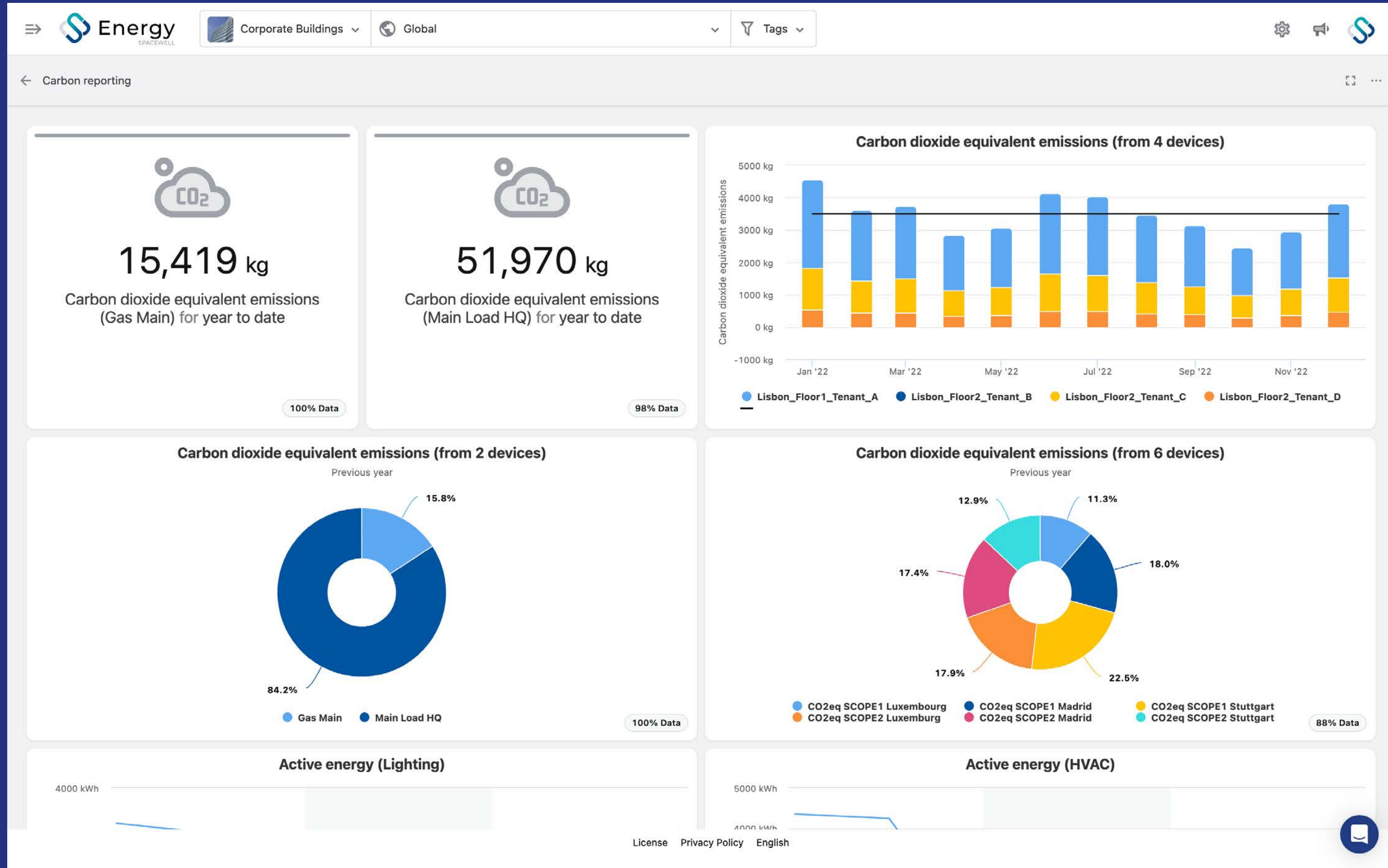
As the push for more transparency and quantitative disclosures continues, it's important that you can demonstrate compliance.

To achieve your decarbonization goals faster and more efficiently, your energy management software must allow you to:

- ✓ Track and benchmark carbon footprint
- ✓ Set GHG and energy efficiency targets and monitor your actual performance
- ✓ Embrace renewables to save emissions and calculate their impact on decarbonization

Get a demo

Carbon monitoring and reporting



HOW DOES IT WORK?

Based on insights into energy performance and carbon intensity, energy managers can **define targets and paths to achieve these targets**, including the use of **renewables** (green energy consumption and/or production) to achieve decarbonization objectives and boost ESG scores.

AI-based 24/7 Anomaly Detection

The Energy Manager's Always-on Virtual Assistant

AI-SUPPORTED ANOMALY DETECTION

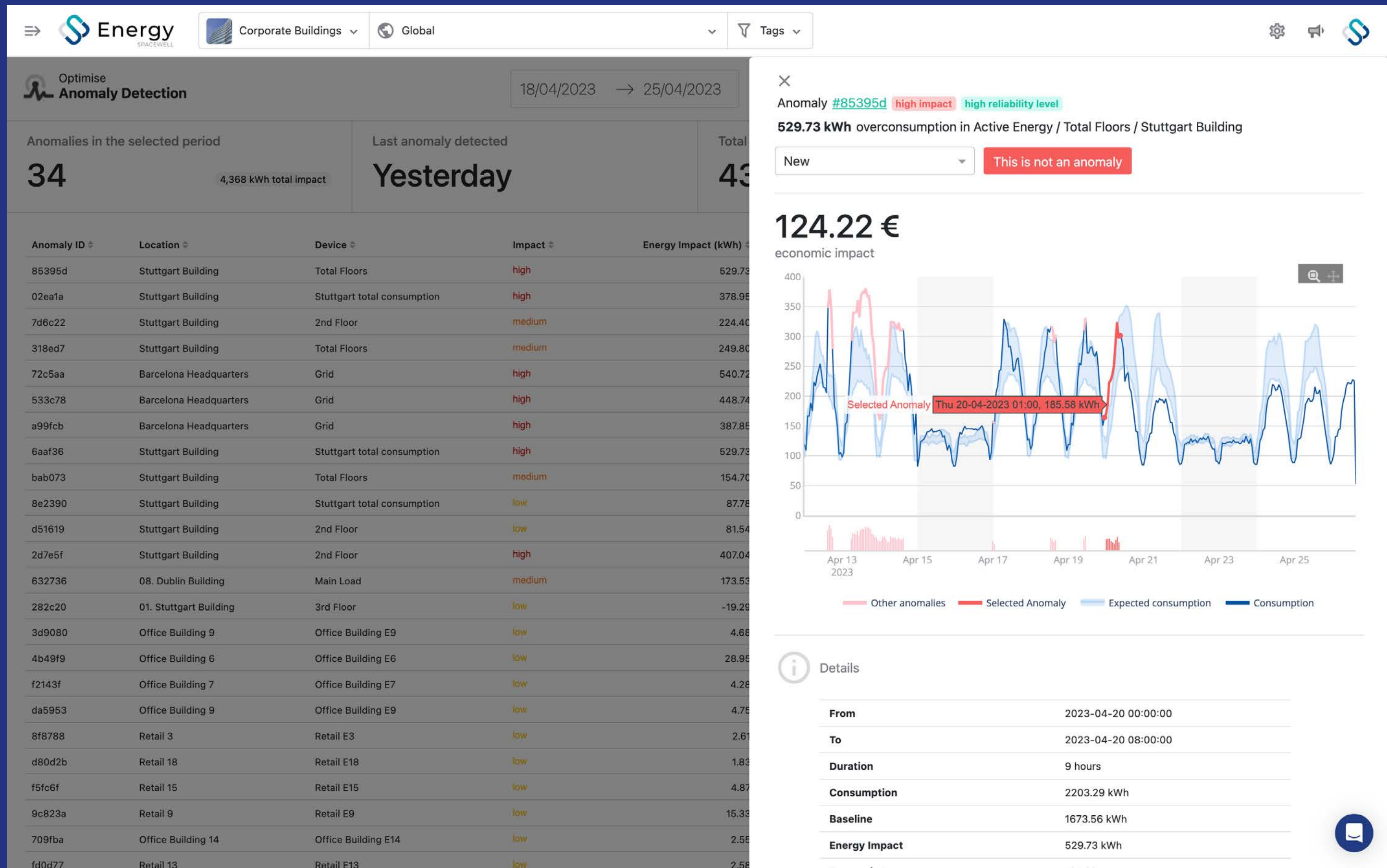
Submeters and smart sensors in buildings produce huge amounts of energy data every single day. AI constantly analyzes all this data, weekends and vacations included.

Imagine an AI assistant that does the boring stuff for you, so that you can focus on fixing problems and finding solutions to improve ESG scores.

- AI analyzes all energy data. All the time.
- Detailed reporting of anomalies
- Stop minor problems from becoming bigger

[Get a demo]

AI-powered anomaly reporting



HOW DOES IT WORK?

Anomaly detection of energy consumption based on artificial intelligence provides enormous **time savings** and **early warnings** to reduce energy waste in buildings. It is a technique that uses AI to identify abnormal behavior as compared to an established pattern. AI **constantly learns from your data** in order to distinguish between expected and atypical behaviour.

Taking the first step

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A NEMETSCHEK COMPANY

We can all learn a lot from Spacewell. They have solutions that span the entire certification and can truly deliver holistic smart buildings, from asset management, facility management, maintenance, smart workplaces, and energy efficiency. Whatever the subject around smart buildings, Spacewell has an intelligent opinion.

— **Nicholas White,**
Co-Founder
[Smart Building Collective / Certification]

[> READ MORE]

About Spacewell
MAKE BUILDINGS WORK FOR PEOPLE

Spacewell is one of the select vendors recognized by research and consulting firm Verdantix as a Leader in both IWMS and IoT platforms for Smart Buildings

PropTech solutions, software, and advisory firm Spacewell is part of the listed Nemetschek Group, a strategic holding company whose operating subsidiaries employ around 3,500 experts around the world. The Group's software enables lifecycle management of buildings through integrating the processes of designing, constructing, and operating a facility. The Nemetschek Group drives the digitalization of the building industry and fully supports **OPEN BIM**, in order to realize a seamless flow of information and feedback throughout all project stages, from design to build, to maintenance and operations.

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April 2023

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