



Future foundations

Driving long-term asset value through sustainable design and fit-out

The right renovations can improve sustainability, create value and enhance resilience through climate change and evolving occupier needs

The demand for sustainable space is accelerating

What determines the value of commercial space is evolving. As businesses and people prioritise environmental and social responsibility, factors such as carbon footprint and health impacts increasingly determine how appealing a space is to occupiers and investors.

Companies in all industries seek office space that supports ambitious business targets for reducing carbon, improving employee wellbeing, and fostering inclusion. Meanwhile, valuers increasingly raise the asset value of sustainable, socially beneficial workspace.

Across 20 major global office markets, surging corporate demand for sustainable buildings means that just 34% of future demand for

low-carbon workspace¹ will be met in the next several years. Premiums are rising and there is a prime opportunity for investors to retrofit aging assets to meet new needs.

Design and fit-out plays a pivotal role in increasing the sustainability of a space, boosting the value and resiliency of asset portfolios.

As a multinational design and build specialist with over 24,000 projects completed, Tétris is a leader in strategies for sustainable design and fit-out of spaces of all sizes. Among our clients, sustainable spaces have transitioned from a nice-to-have to a must-have, a trend we believe reflects the wider market.

74%

of CRE leaders say they would pay a premium for leasing a green building

Source: JLL Future of Work Survey, 2022



This report addresses five essential questions about how design and fit-out can create a sustainable space that preserves value and generates long-term returns.

1. JLL research, The commercial case for making buildings more sustainable, Nov 2023

1 / How can a sustainable design and fit-out increase the value of a space?

Sustainable spaces are environmentally friendly, resilient to climate risk, and beneficial to human health and communities. Such spaces typically command higher premiums. For example, 11.6% is the average rental premium for London offices with a sustainability certification². Across eight major office markets in North America, spaces with a sustainability certification enjoy a 7.4% boost to rent value, while such certified assets in nine leading Asian markets see a 9.9% increase in rent value³. Occupiers are willing to pay more for a sustainable space because of the uplift such spaces have on critical business goals:



Supporting corporate decarbonisation journeys:

A JLL survey of 405 global occupiers found that 37% had adopted rigorous Science-Based Targets to reach net zero, with a further 30% planning to do so within a year⁴. The physical office is increasingly recognised as a vital factor in cutting emissions. A light renovation can reduce energy spend by 10-15% while a deeper retrofit that also tackles mechanical, electrical and plumbing systems can cut consumption by 30-40%⁵, accompanied by a significant fall in emissions.



Reducing operational and maintenance costs

Core sustainability features such as energy-efficient lighting and water-saving technologies can significantly reduce operational costs. Sustainable design, which prioritises durable materials to minimise the carbon emissions of replacement, also creates a longer-lasting space that costs less in maintenance, increasing the appeal of a space to businesses seeking to optimise long-term expenses.

2. JLL research, Sustainability and Value, Capital Markets: Central London offices, 2023

3. JLL research, The commercial case for making buildings more sustainable, Nov 2023

4. JLL research, Decarbonising the Built Environment, June 2021

5. JLL research, Retrofitting Buildings to be Future-Fit, Nov 2022



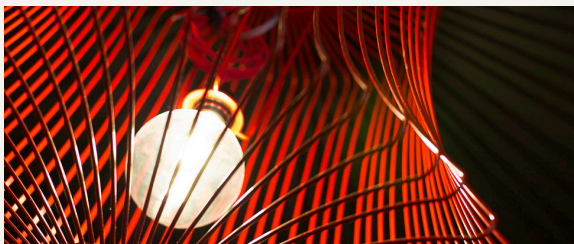
Attracting and retaining talent:

Spaces that support health and wellbeing can be a powerful way to engage employees, contributing to better employee satisfaction, health, productivity and creativity⁶. Meanwhile, employees increasingly prioritise sustainability, with one survey finding that two in three respondents⁷ are more willing to apply for and accept jobs from companies they consider sustainable. As the physical representation of a company, a sustainable office is increasingly valuable for retaining top talent seeking organisations that align with their values.



Improving social impact:

Corporate sustainability goals increasingly include social impact initiatives such as improving diversity, inclusion and benefit to the community. Interior design can create an environment that caters for what different employees need to perform best, helping foster a sense of belonging and supporting companies in their diversity, equity and inclusion strategies. A sustainable fit-out can also integrate art and materials from nearby communities, anchoring the space as a valuable contributor to the local economy.



11.6%

average rental premium for London offices with a sustainability certification

Source: JLL research, Sustainability and Value, Capital Markets: Central London offices, 2023

6. Science Direct, The potential of high performing workplaces for boosting productivity, health and creativity, Sep 2023

7. IBM Global Consumer Study, Sustainability actions can speak louder than intent, Apr 2022

2 / How can you justify the investment needed for sustainable design and fit-out?

Soaring demand for sustainable offices has already created a significant undersupply of low-carbon office space in Asia-Pacific and U.S.⁸, with similar trends observed in London and Paris⁹.

A sustainable design and fit-out can be a cost-effective, lower-impact way to secure high-quality assets that attract and retain tenants, in comparison to the costs and carbon emissions incurred by a demolition and new build. Where a new build can emit up to 1,500 kg of CO₂ per square metre¹⁰, retrofits typically produce below 500 kg CO₂ per square metre, or just one-third of the CO₂.

Fit-outs can also be designed to meet demonstrable sustainability credentials, such as environmental and health certifications, which are shown to increase rents and capital value¹¹. Higher energy efficiency alone also boosts the rents a space can command – among London offices, each “step” increase in Energy Performance Certificate (EPC) rating results in an average 4.2% increase in rents and 3.7% increase in the price per sq m.

Government incentives for sustainability initiatives can help to offset initial costs, improving the financial viability of a sustainable fit-out over comparable asset development without a sustainability focus.

Sustainable design and fit-out also offers an opportunity for returns on investment beyond financial gains. As scrutiny grows on the impact of corporate investments, brand reputation can experience an uplift from sustainable asset development. Communicating how sustainable design and fit-out of asset portfolios aligns with company values can enhance relationships with partners, customers, employees and wider society, ultimately improving corporate image and business potential.



8. JLL, Cities brace for shortage of net-zero carbon office stock, Oct 2023

9. JLL, Soaring demand for low carbon offices will outstrip supply, Sep 2023

10. JLL research, Retrofitting Buildings to be Future-Fit, Nov 2022

11. JLL research, Sustainability and Value, Capital Markets: Central London offices, Jan 2023

22%

of organisations already pay a premium for a green building

Source: JLL research, The Future of Work Survey 2022



Clarifying sustainability: **Tétris / Sustainability Code**

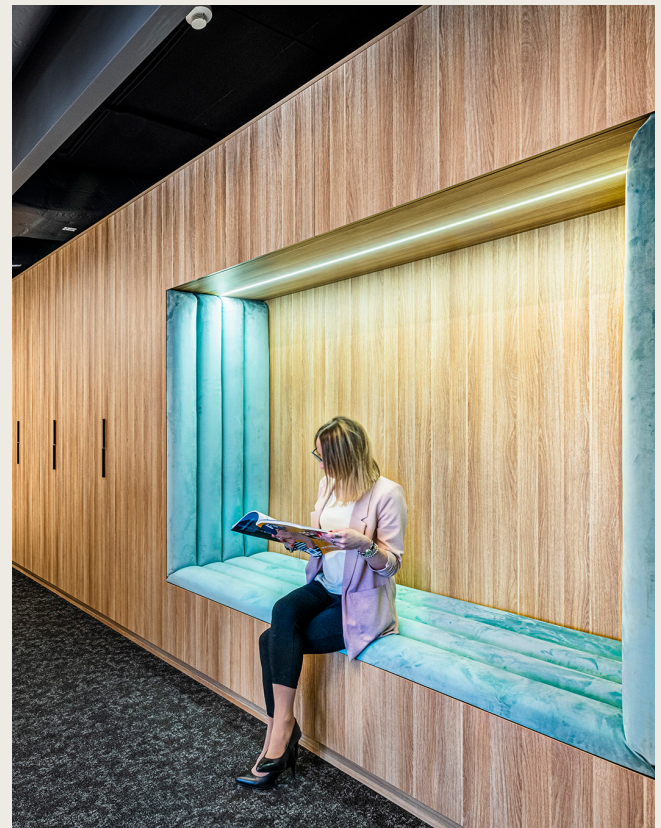
The **Tétris / Sustainability Code** is a project tool that articulates detailed recommendations to improve sustainability in 10 categories of a design and build project, from materials choice to supplier and construction practices. Improvements are assessed using language that is suitable for sustainability reporting, supporting this critical aspect of low-carbon asset development and helping investors communicate progress and achievements.

3 / How can a sustainable fit-out make spaces future-ready in preparation for stricter legislation?

Across 10 major cities in Europe and North America, 90% of office buildings are over 10 years old and unlikely to comply with future energy efficiency standards¹². Legislation for building emissions and energy performance will become increasingly stringent in the next few years¹³ in these regions, as well in Asia-Pacific. Climate risk assessments are likely to become part of building valuations, with energy audits already mandatory for sales and leases in major European cities. In Copenhagen, landlords need to meet energy efficiency requirements in order to raise rents¹⁴.

A sustainable fit-out can align a space with incoming legislative changes and prepare it for compliance with future requirements. Strategic fit-out management also offers a reliable method to gather and disclose the necessary build and operations data for sustainability reporting that is now mandatory for sales and leases in major cities in North America, Europe and Asia-Pacific¹⁵, including compulsory annual disclosures in Paris¹⁶.

Sustainable fit-outs therefore not only yield a 'green premium' – enhancing property value – they can protect against the 'brown discount' associated with outdated spaces. Delaying environmental upgrades can mean



assets become non-compliant with current or future legislation, diminishing sales or leasing potential and risking asset stranding if the costs of updating outweigh its worth. Research indicates¹⁷ that on average, buildings that are not upgraded will start to fall below standard by 2025.

As legislation ramps up, investors who leverage strategic design and fit-out to meet or exceed environmental and reporting requirements have an advantage in spaces that remain resilient through evolving market demands.

12. JLL research, Retrofitting Buildings to be Future-Fit, Nov 2022

13-15. JLL research, Decarbonising Cities and Real Estate, May 2022

16. JLL research, The commercial case for making buildings more sustainable, Nov 2023

17. JLL research, Retrofitting Buildings to be Future-Fit (referencing 2022 GRESB results), Nov 2022

4 / How can a sustainable design and fit-out advance the Environmental pillar of ESG strategies?

Given that the construction and operation of buildings is responsible for 38% of global emissions, decarbonising real estate portfolios is vital for achieving environmental targets that support broader ESG strategies.

Sustainable design and fit-outs can play a pivotal role. However, this multifaceted challenge requires a nuanced approach that considers how to reduce operational carbon emissions as well as minimise the embodied carbon impact associated with fit-out works, including materials and furniture.



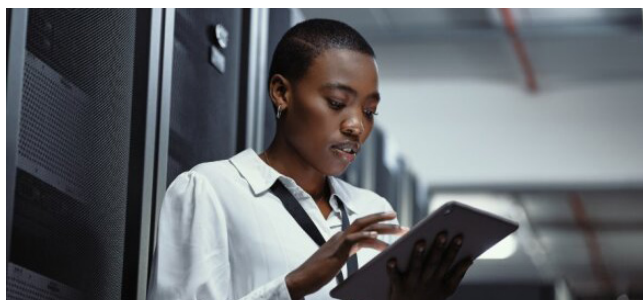
Reducing operational impact

A sustainable fit-out improves the efficiency of a space, decreasing resource consumption and waste to ultimately reduce operational emissions.

Works can include the installation of energy-efficient LED systems and smart ventilation systems that work with occupancy sensors to optimise lighting, heating and cooling based on users' needs, minimising energy consumption in unoccupied areas.

Low-consumption equipment would further reduce operational emissions.

Water-saving fixtures and leak detection systems are cost-efficient measures to optimise water consumption, while rainwater-harvesting systems can further reduce usage. Waste-sorting and recycling systems help reduce waste that's sent to landfill and the associated emissions.



Reducing embodied carbon emissions

Sustainable procurement and construction practices improve the environmental impact of fit-out works as well as the completed space.

This includes a waste-reduction mindset to reduce the volume of materials and products used, audit what elements can be reused, and to recycle those that can't be reused, reducing the impact of landfill waste. Furniture and materials carry an embodied carbon footprint – the emissions generated by their production and transport – so sustainable fit-out strategies need to balance procuring new, more efficient elements with the reuse or repurpose of existing items, which incurs a smaller carbon footprint.

Where new materials are necessary, selecting for durability extends lifespan, reducing the emissions from replacements. Eco-certified materials ensure minimal impact on both environmental and human health.

To maximise efficiency and reduce waste, digital design processes help minimise material loss, while sustainability-focused logistics planning can reduce packaging waste and transport emissions.



Tackling lifetime emissions

The EU is considering a bloc-wide policy that would require developers to detail the carbon impact of construction projects for planning approval, as France, Finland, Sweden and Netherlands already do¹⁸. These countries, and Denmark, have also passed laws to regulate whole-life carbon emissions from buildings, which includes the emissions of all construction works carried out on a space.

Sustainable design and fit-out strategies would therefore consider flexibility, for example, by installing reconfigurable floors, partitions and furniture and modular, easily accessible mechanical, electrical and plumbing systems. This adaptability can mitigate the need for extensive future modifications to suit occupier needs, helping to manage total carbon emissions throughout the lifespan of the space.



18. JLL research, Retrofitting Buildings to be Future-Fit, Nov 2022

5 / How can sustainable design and fit-out advance the Social pillar in ESG strategies?

As the urgency to improve environmental impact becomes more integrated into investor ESG strategies, there is mounting recognition that social impact is an equally fundamental pillar of sustainable development.

Spaces that positively impact people offer a profound opportunity to deliver sustainable, long-term returns and lasting change in communities, yet few corporate decision-makers are successfully embedding social value ambitions and targets into real estate strategies.

A sustainable design and fit-out can upgrade a space so that it promotes health and wellbeing, encourages inclusivity, and contributes to the local economy, ultimately improving the social value of a space as part of broader ESG strategy.



Source: JLL research, Responsible Real Estate: Social Value March 2023

Sustainable opportunities

A space designed and built to drive environmental and social goals is uniquely positioned to generate positive impact and long-term asset value.

91%

of leaders say real estate is a critical vehicle for meeting social value targets

93%

of leaders agree environmental and social goals are intrinsically linked and must be tackled together

8%

of organisations have a mature approach to social value in their real estate strategy

19%

of organisations have a mature approach to environmental value in their real estate strategy



Enhancing health and wellbeing

The psychological experience of a space depends on several important aspects around its sensory impact.

For example, one of the most common complaints in office buildings is noise and a lack of private space¹⁹. Sustainable fit-outs address this by designing for acoustic comfort. This can include providing private space, phone booths and enclosed meeting areas, and the use of sound-absorbent floors, ceilings and partitions to diminish noise travel, creating environments for both concentration and collaboration. Access to nature is a critical component of sustainable design, with indoor plants shown to improve mood and perception of thermal comfort²⁰ while green walls help improve indoor air quality²¹. Design can also enhance window views and leverage any outside space to make it suitable for work or relaxation.



Fundamentals in sustainable design

The Tétris / **Sustainability Code** defines design guidelines for comfortable spaces that enhance health and wellbeing.

Visual comfort:

Maximising natural light and complementing it with artificial lighting creates an environment conducive to productivity and wellbeing. Individual window shades to control glare and strategic workspace layout will help ensure optimal lighting for all users of the space

Posture:

Adjustable, ergonomic furniture accommodates different employee profiles and work styles for enhanced comfort, including sit-stand desks that can improve posture and energy.

Water:

Drinking water at optimum temperature should be installed at short distances from all regularly occupied workspaces

Olfactory comfort:

Eating areas should be separated from workspaces to control food odours

19. JLL research, Is Hybrid Really Working? Dec 2023

20. Wageningen University & Research, A plant a day keeps the doctor away, 2019

21. Chemosphere, Botanical filters for the abatement of indoor air pollutants, Dec 2023



Promoting diversity and inclusion

Sensory experience plays a crucial role in fostering an inclusive environment. Thoughtful design will consider colours, textures, focal points, spatial composition and material choices to create an atmosphere that caters for diverse preferences.

A sustainable design and fit-out will create varied, flexible space that accommodates different individual needs for stimulus, quiet, and comfort – for example, silent or dimmer areas, and space that can be partitioned for privacy as needed. This can improve productivity and engagement among employees, help occupiers meet diversity and inclusion goals, and establish the space as an asset that creates value for businesses.

Sustainable design can also think beyond workspace to improve user experience and raise space utility. For example, areas less suited for working might be converted into coffee points, game rooms, exercise rooms or bike parking to support the personal needs of those using the space. Such support spaces also include multi-faith rooms, gender-neutral and accessible toilets, and parents' rooms.

Inclusive signage in audio, Braille, enlarged print or universal symbols ensures the space is navigable by all, enhancing its accessibility and appeal to diverse people.



Building community connections

A sustainable design and fit-out can connect a space to its community by integrating local cultural elements and sourcing local furniture and materials. By strengthening ties to the neighbourhood and supporting local enterprise, this boosts social impact and establishes a distinct sense of place that is beneficial for attracting and retaining occupiers.

Ultimately, a sustainable design and fit-out creates a memorable experience that improves how a space impacts its people – be it employees, clients or the surrounding community. The result is a resilient, sustainable asset that can hold its value long into the future.



In conclusion: sustainable design and fit-out helps meet evolving market demands

When design is rooted in environmental and social considerations, it can craft a space that generates sustainable value far beyond the bottom line.

A sustainable fit-out not only safeguards against spaces becoming obsolete, it boosts health and community benefits, with investment returns that align with today's environmental and social priorities. Crucially, a sustainable design and fit-out can lock in long-term value by elevating tenant satisfaction, climate resilience, and adaptability to changing markets.

Corporate real estate is now a critical part of businesses' ESG roadmaps to decarbonise and improve social impact. Sustainable design and fit-out isn't just a nice-to-have – it's essential for spaces to stay competitive and preserve their value in markets that are becoming more environmentally and socially conscious.



Learn how we can help you develop your space for sustainable long-term returns

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