LORD
GREEN STRATEGIES

ENVIRONMENTAL
SOCIAL
GOVERNANCE

2020-2021

RENOVATIONS & TENANT FIT-OUT GUIDE

INTRODUCTION

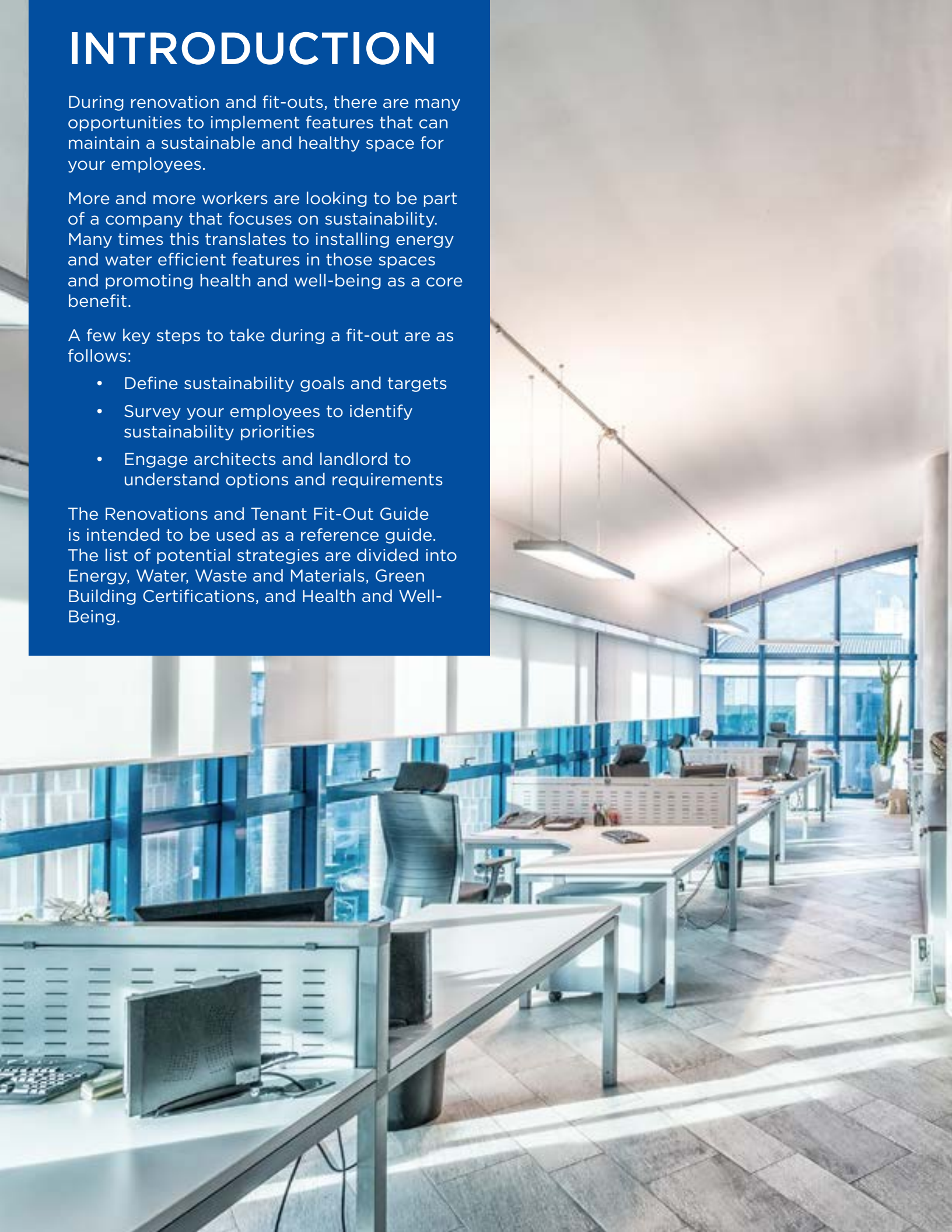
During renovation and fit-outs, there are many opportunities to implement features that can maintain a sustainable and healthy space for your employees.

More and more workers are looking to be part of a company that focuses on sustainability. Many times this translates to installing energy and water efficient features in those spaces and promoting health and well-being as a core benefit.

A few key steps to take during a fit-out are as follows:

- Define sustainability goals and targets
- Survey your employees to identify sustainability priorities
- Engage architects and landlord to understand options and requirements

The Renovations and Tenant Fit-Out Guide is intended to be used as a reference guide. The list of potential strategies are divided into Energy, Water, Waste and Materials, Green Building Certifications, and Health and Well-Being.



ENERGY

HVAC EQUIPMENT

- If HVAC needs to be installed, ensure the refrigeration equipment and fire suppression systems do not contain CFCs or HCFCs.
- When installing HVAC systems for the space, ensure that it is tied into the property's Building Automation System (BAS) and will operate correctly.
- Engage a commissioning agent to verify the mechanical, electrical, and plumbing systems are performing and meeting energy goals.
- Consider motor efficiencies and high SEER units.
- If using existing HVAC system for the space, ensure the controls and set points are adjusted as needed.

APPLIANCE & FIXTURES

- Install ENERGY STAR-labeled appliances. Utilize ENERGY STAR-labeled office equipment, electronics, and commercial food service equipment in all instances where such products are available.

LIGHTING

- Replace incandescent/CFL lamps and fixtures with ENERGY STAR Certified LED lamps and fixtures.
- Ensure lighting loads do not exceed ASHRAE/IES Standard 90.1- 2016. For example, the Maximum Lighting Power Density for office use is 0.9 watts per square foot.
- Install occupancy/vacancy sensors with manual override capabilities in all regularly occupied office spaces. Lighting controls shall be tested prior to occupancy to ensure that control elements are calibrated, adjusted, and in proper working condition to achieve optimal energy efficiency.
- Evaluate the installation of daylight-responsive controls in all regularly occupied office spaces within 15 feet of windows.

LED Bulb Efficiency Comparison

20%
less energy than a CFL

80%
less energy than an Incandescent Bulb

3–25x
longer lasting than traditional bulbs

Source: www.energy.gov

METERING

- Separately meter electric, gas, and water use for the space.
- If installing a Data Center, follow the Environmental Protection Agency's definition and requirements. Make sure to provide the landlord with the following:
  - The square footage of the area used as a data center.
  - The energy configuration, i.e. where the data center submeter is in relation to the equipment.
  - The monthly information technology (IT) energy consumption.

WATER

PLUMBING

Unless building design prohibits the effective implementation of the below flush and flow rates, install new plumbing fixtures for the space that meet the following:

 LAVATORY FAUCETS	0.5 GPM[1] Automatic motion sensor faucets equipped with tamper-proof aerators
 PANTRY/KITCHENETTE FAUCETS	1.5 GPM Tamper-proof aerators
 WATER CLOSETS	1.28 GPF[2]
 URINALS	0.125 GPF
 SHOWERHEADS	2.5 GPM
 COMMERCIAL PRE-RINSE SPRAY VALVES (FOR FOOD SERVICE APPLICATIONS)	1.3 GPM

If the state or city where the property is located has more stringent requirements, follow the more stringent requirement.

[1] Gallons per Minute

[2] Gallons per Flush

WASTE & MATERIALS

WASTE MANAGEMENT

Work with the landlord to ensure that the contractor implements a waste management plan to reuse, recycle, and salvage building materials and waste during both demolition and construction phases. Records showing the weight or volume of material that is sent to landfill and the weight or volume that is recycled must be shared with the property management team. Discuss your day-to-day recycling needs with your landlord.

BUILDING MATERIALS

- Ask the contractor to make commercially reasonable efforts to use materials meeting the following criteria:
  - Harvested and processed or extracted and processed within a 500-mile radius of the project site.
  - Containing at least 10% post-consumer or 20% pre-consumer materials.
  - Containing material salvaged from offsite or onsite.
  - Containing rapidly renewable material.
  - Made of wood-based materials certified as harvested from sustainable sources, specifically Forest Stewardship Council (FSC)-certified wood (excluding movable furniture).
  - Cradle to Cradle Certified.

GREEN BUILDING CERTIFICATIONS

BUILDING CERTIFICATION

Green Building Certifications help guide, demonstrate, and document efforts to deliver sustainable, high-performing spaces. They provide a framework for increasing energy and water efficiency, reducing greenhouse gas emissions, improving indoor environmental quality and occupant wellness, and fostering community and social engagement at the building level.

- If interior certification is planned for the space such as LEED ID+C or WELL, renovate following the certification requirements/prerequisites.

HEALTH & WELLNESS

Buildings can have an impact on the health and productivity of the occupants. With salaries and benefits typically accounting for 90% of a company's operating costs, productivity and retention rates are a major concern for employers. The below wellness features and indoor air quality strategies can play an important role in creating a healthy workplace.

WELLNESS

- Install solar control films or blinds which reduces overheating and glare.
- Install smart indoor environmental monitoring systems that can measure and control temperature and humidity.
- Design spaces so everyone has access to views of outdoors.
- Designate loud and quiet zones of work.
- Consult architects to eliminate outside noise by installing acoustical wall panels, tiles, curtains, etc.
- Designate a wellness room for employees and provide comfortable furniture with low lighting.
- Install greenery throughout the space.
- Provide secure bicycle storage, accessible showers, and changing facilities.

INDOOR AIR QUALITY

- Speak with the architect and general contractor about making reasonable efforts to specify low-VOC paints, coatings, primers, adhesives, sealants, sealant primers, coatings, stains, finishes, and the like.
- Install carpet meeting or exceeding the requirements of the CRI Green Label Plus Testing Program and can be recycled where available.
- Use PVC-free resilient flooring such as linoleum or natural rubber (do not use rubber from recycled tires for indoor use). Use flooring certified to FloorScore or Greenguard standards.
- Avoid flooring with formaldehyde binders.
- Do not use manufactured wood components with urea-formaldehyde binders.
- Do not use fabrics and foams with halogenated flame-retardants.
- Do not purchase drywall made in China.
- Install a CO_2 monitoring system with one CO_2 sensor per return duct.
- Ensure contractor implements appropriate indoor air quality protocols for construction activity. This includes:
  - Installing pre-filters on return air vents to avoid dust and debris from reaching the ventilation system or other suites.
  - Blocking off doorways and other openings that lead to building common area spaces and other suites.
  - Upon construction completion, flush out the space with outside air to remove potential VOCs, dust, or debris.

Better indoor air quality can lead to productivity improvements of

8-11%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