



sanofi



# SUSTAINABLE BUILDING CHARTER

*Office buildings*



November 2022

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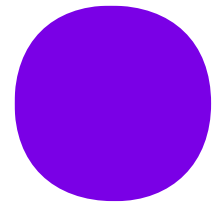
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# 01 WHY

*1.1 WORK AT SANOFI*

*1.2 OUR APPROACH*



# 1.1 Work at Sanofi

We are one company, driven by a unifying purpose - we chase the miracles of science to improve people's lives - and a common ambition: to transform the practice of medicine for patients worldwide. We bring this to life through our people, by delivering our strategy and living our Sanofi culture. To be successful, we need to continue reinventing how we work. How? By transforming our workplace into a place where *every Sanofian feels included, valued and able to bring their best selves to work every day.*

We believe our leaders and teams must reflect the vibrant diversity of the communities we serve so that we can act for our patients and customers in a way that makes a difference through our diversity of thought and our actions. Our work experience plays an important role in how we redefine how work gets done at Sanofi. The Play to Win strategy, combined with the changing dynamics of flexible work and talent expectations, have pushed us to think more broadly than the physical office environment.

*For Sanofi, progress means possibilities.* While the office will remain a significant part of our work experience, we believe that the role of the office has changed for good and will *continue to evolve.*

We are no longer limited to the four walls of a building. In the future, we will work in a variety of environments: offices and labs, in the comfort of our own homes or in the new co-working spaces and cafés, and even while we are in transit. With that in mind, at Sanofi we believe that our view of the employee experience should be one that is rooted in *hospitality principles that support this new way of working from office, home, and elsewhere.*

To make this vision a reality, we got together a group of innovative minds to make sure that when we started this new way of working, it would work for everyone. Over the past five years, we've been busy testing, trialing and learning from our new workplaces all over the world. By learning from one another, empowering fresh, new ideas and not being afraid to explore possibilities, we have built a strategy that will help propel us into a better future. We've done all of this with one North Star: creating a positive, inclusive work experience that allows every person at Sanofi to pursue progress. Let's get started.

We must anchor the Play to Win behaviors across the business to ensure that we leave our old ways of working behind and embrace the new culture we need.

*Natalie Bickford  
Executive Vice President,  
Chief People Officer*

## 1.2 Our approach

Sustainability is of paramount importance in every decision that we make corporately and as an individual. Through the definition of the Sustainable Building Charter, we aspire to *promote healthy, effective, and comfortable workplaces for everyone.*

This framework embraces our values and ethics and is intended to operationalize our sustainable goals into tangible, actionable directives across all projects.

Ultimately, our actions answer to the *Group Planet Care* stakes and aim to attract the best talents.

It is important to note that all projects from design to operation should strive for the embodiment of Sanofi's sustainable mission, above the achievement of *building certifications.*

**Local regulations must be applied if more constraining than this charter.**

- Water and Air emissions
- Noise emissions at site limit
- Visual aspects Compliance with local permitting process, building codes and architectural requirements



## 1.2 Our approach

### SAFETY CONSIDERATIONS:

One of the primary objective of a site is to provide a *safe working environment* to its residents. This objective requires our offices to be aligned with all local safety regulations as well as the Sanofi safety standards.



### Sanofi HSE Key Requirements act as a prerequisite for all real estate projects:

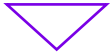
- Buildings and their surroundings are designed, in accordance with local regulation and company requirements, to ensure a proper protection of personnel, of environment and to avoid business interruption.
- Buildings are designed in partnership with HSE and the Corporate Insurance Department. Buildings are particularly designed or selected:
  - For adequate fire and explosion resistance, and ability to withstand natural forces (e.g. earthquake, flood and storms, lightning, tsunami).
  - With emergency power and lighting, fire detection/alarms and fire protection systems, where indicated by risk assessment.
  - So that maintenance can be performed safely. Structural elements relevant for building stability and functionality are integrated in the maintenance plan;
- Safety signage is in place in all relevant areas, workplaces and zones with the corresponding specifications (hazard labeling, obligations and prohibitions), protection means (required personal protective equipment), emergency issues (evacuation signs, emergency equipment labels) and fire-fighting device signage. Specific safety signage adapted to disabled people is systematically included.
- Contractor management:
  - Each site selects and uses qualified contractors who are dedicated to conducting the job safely. To this end, on-site contractors and sub-contractors are required to have and enforce a safety program consistent with Sanofi HSE requirements and local regulations. They commit to apply the same program to potential sub-contractors.
  - The site informs contractors of specific rules, hazards and risks unique to the contracted work and require the same from the contractors.

# 1.2 Our approach



## PEOPLE

Providing a healthy, safe and comfortable work setting for our employees and stakeholders.

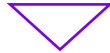


- **HEALTH:** Promote healthy work environments
- **COMFORT:** Provide comfortable workplaces for all
- **MIND:** Enhance psychological wellbeing through positive work environments



## PLANET

Reducing the environmental footprint of our administrative sites to preserve natural resources, as there is no "Planet B".

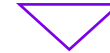


- **RESOURCES:** Reduce the asset consumptions and emissions
- **BIODIVERSITY:** Protect and develop local flora and fauna
- **CLIMATE:** Mitigate our impact on climate change and adapt to its effects



## COMMUNITY

Involving employees and company stakeholders into long-term relationships within the communities where we operate.



- **INCLUSION:** Take on its role as an ordering party to have a positive impact on the society
- **MOBILITY:** Support public networks and promote environmentally-friendly means of transportation
- **PARTNERSHIP:** Develop constructive relations with the economic partners and local community

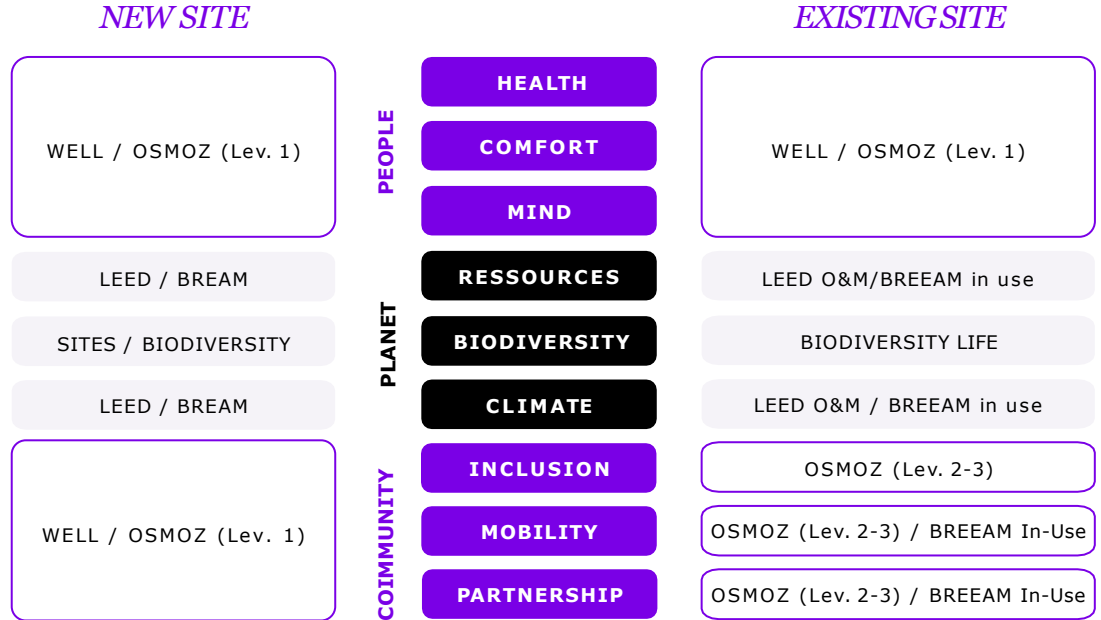
# 1.2 Our approach

## CERTIFICATIONS REQUIREMENTS:

The Charter is based on standards that are internationally recognized via certifications.

Obtaining an environmental certification is *a must* in the case of *newly constructed buildings* and *new leases* and recommended in other situations.

The *opposite tool* suggests the most *appropriate standards* for each of the 9 commitments of the Charter. Depending on *each project priorities*, the most suitable standard can thus be chosen and aimed.



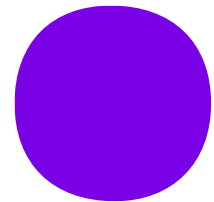


## 02 WHAT

*2.1 PEOPLE*

*2.2 PLANET*

*2.3 COMMUNITY*



# 2.1 People



Providing healthy, safe and comfortable work settings for our employees and stakeholders.

## HEALTH

- INDOOR AIR - Implement the conditions for healthy indoor air for all building users.
- DRINKING WATER - Provide and maintain drinking water points accessible to all building users.
- HARMFUL PRODUCTS - Design an environmentally-friendly and pesticide-free building management approach.
- ELECTROMAGNETIC WAVES - Consider current national regulatory guidelines to limit the electromagnetic impacts on occupants of technical and telecom equipment.

## COMFORT

- VISUAL - Give every workstation access to natural light, outdoor views and high-quality artificial lighting.
- ACOUSTIC - Ensure high acoustic performance in all areas of the building.
- OLFACTORY - Maximize olfactory comfort in all occupied spaces.
- HYGROTHERMAL - Work on thermal comfort factors for occupants by creating various thermal environments.

## MIND

- SOCIALIZATION - Combat social isolation by facilitating formal and informal exchanges between occupants using building design.
- ACTIVE DESIGN - Encourage movement within the site using building design.
- MULTI-AMBIENCES - Accommodate the specific needs of building users by creating various ambiances using a multisensory approach for interior design.
- BIOPHILIA - Facilitate a connection with natural elements and an experience of nature for occupants.

## 2.2 Planet



Reducing the environmental footprint of our administrative sites to preserve natural resources, as there is “no planet B”.

### RESOURCES

- ENERGY - Minimize energy consumption.
- WATER - Maximize the amount of drinking and non-drinking water saved.
- WASTE - Reduce impacts related to waste production.
- CIRCULAR ECONOMY - Identify the materials and furniture that can be reused in-situ, resold or given.

### BIODIVERSITY

- NATURAL SPACES - Limit impervious surfaces and maximize planted areas and flower meadows.
- REMARKABLE SPECIES - Promote local and protected flora and fauna by favoring remarkable species and limiting invasive or allergenic species.
- ECOLOGICAL MAINTENANCE - Implement a green spaces maintenance that respects living beings and proscribes pesticides.

### CLIMATE

- CARBON FOOTPRINT - Limit greenhouse gas emissions throughout the life-cycle of the asset.
- NATURAL HAZARDS - Prevent the consequences of global warming acceleration.
- MIXED-USE - Combat the technical and usage obsolescence of the building to extend its lifetime and to foster a feeling of sharing between occupants

## 2.3 Community



Involving employees and company stakeholders into long-term relationships within the communities where we operate.

### INCLUSION

- SITE CHOICE - Maintain the original social and environmental value of land parcels chosen for Sanofi's locations.
- CORPORATE CITIZEN - Act as a committed company providing local support to the city and local community.

### MOBILITY

- URBAN DENSITY - Support public transportation existing networks and foster their development.
- EMPLOYEE EMPOWERMENT - Promote the use of public transit and other environmentally friendly means of transportation for all staff, considering the specific needs of disabled people and elderly people

### PARTNERSHIP

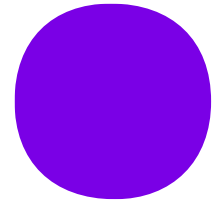
- DUE DILIGENCE - Make informed and responsible purchase decisions throughout the building life-cycle.
- IMPACT SOURCING - Support local economic system and community through real estate projects.
- CULTURE - Showcase the occupants' talents by developing an art project or festive events onsite.

## 03 HOW

*3.1 PEOPLE* Health | Comfort | Mind

*3.2 PLANET* Resources | Biodiversity | Climate

*3.3 COMMUNITY* Inclusion | Mobility | Partnership



# 3.1 People - Health



## Implement the conditions for healthy indoor air for all building users

### NEW SITE / RENOVATION

When selecting a new site and/or conducting works, consider the following requirements:

- Air exchange must guarantee fresh air flow rates of 25m<sup>3</sup>/h/pers in all offices areas and 30m<sup>3</sup>/h/pers in all collaborative areas (follow local legislation if more stringent).
- Air intakes and exhausts have to be positioned 10 meters apart and at least 20 meters from any source of pollution.
- Windows have to be positioned at least 10 meters from any source of outdoor pollution.
- Ductwork should be designed to guarantee high air quality and to minimize the risk of legionellosis.

### EXISTING SITES

- Monitor indoor air quality once per year including following pollutants: CO<sub>2</sub>, PM<sub>2.5</sub>, PM<sub>10</sub>, VOC, Ozone, Humidity. Local legislation must be followed if more stringent.
- If applicable, an action plan must be implemented to correct the issues raised in the analysis.
- Ban smoking inside buildings (including electronic cigarettes).
- Measure employees' satisfaction regarding comfort parameters. If more than 20% of survey respondents are dissatisfied, an action plan have to be implemented within a maximum of two years to correct the issues raised in the survey.



### KEY FACT

The cognitive scores of workers, including concentration capacity, double in a green, well-ventilated office.



WGBC, 2016, *Health, Wellbeing and Productivity in Green Offices*

### OBJECTIVES

- » 100% of sites have airflow rates of at least 25m<sup>3</sup>/h/pers, or consider local legislation if more stringent
- » Employees' satisfaction > 4 stars



### KPIS

- » Air flow rates in offices areas
- » Employees' star rating



# 3.1 People - Health



## Provide and maintain drinking water points accessible to all building users

### NEW SITE / RENOVATION

When selecting a new site and/or conducting works, consider the following requirements:

- Local country's regulation regarding water quality levels should be checked upon building takeover.
- Water distribution systems should be well-designed by integrating the followings:
  - Contamination should be prevented (follow standard ISO 15876:2017).
  - Materials used in the interior systems should be suitable for the type of water being distributed.
  - Means should be available for performing disinfection, anti-corrosion and anti-scaling treatments.
  - The risk of legionellosis must be taken into account when choosing equipment for the domestic hot water systems.

### EXISTING SITES

- Each site should regularly monitor the availability of potable water onsite and the quality of the associated systems.
- Every year the site should carry out analysis on taps used for human consumption
  - If applicable, an action plan must be implemented to correct the issues raised in the analysis.
- Measure employees' satisfaction regarding comfort parameters. If more than 20% of survey respondents are dissatisfied, an action plan must be implemented within a maximum of two years to correct the issues raised in the survey.
- If access to clean water is not possible in the building area using the public network, returnable bottled water should be provided to occupants.



### KEY FACT

The average amount of water contained in an adult organism is 65%, which corresponds to 45 liters of water for a 70 kg person.



*Centre National de la Recherche Scientifique*

### OBJECTIVES

- » 100% of sites have access to at least one drinking water point
- » Employees' satisfaction > 4 stars



### KPIS

- » Number of drinking water points onsite
- » Employees' star rating



# 3.1 People - Health



## Design an eco-friendly and pesticide-free building management approach

### NEW SITE / RENOVATION

When selecting a new site and/ or conducting works, consider the following requirements:

- Ensure to meet current health standards when choosing products used for construction or major renovation of a building. This applies in particular to the following finishing products:
  - Carpets, floor and ceiling coverings, paint, partitions, glues, wood.

### EXISTING SITES

- Manage all green spaces without using pesticides or plant protection products.
- Select only eco-labelled cleaning products:
  - ECOCERT, Nature et Progrès, Green Seal, Environmental Choice or local equivalent

### FOR ALL PROJECTS

- Consider health impacts when choosing products in contact with indoor air (materials and furniture). Select whenever possible certified products and consider the lowest emission levels for the following:
  - Total Volatile Organic Compounds: Class A / A+
  - Formaldehyde: Class A or A+
- Consider all bans on substances of concern for construction products and during building operation activities:
  - Asbestos, lead and lead compounds.
  - Limit mercury in all materials and furniture.
  - Check periodically the list of substance of very high concern (SVHC) published under the REACH Regulation.
- Each project must be complied with the current local legislation in these fields.



### KEY FACT

Atrazine, one of the most widely used pesticides, is a suspected endocrine disruptor and is associated with cardiovascular problems. Long-term exposure to glyphosate may also lead to kidney problems and reproductive issues.



*Well Standard*

### OBJECTIVE

» 100% of sites follow the charter's criteria for products selection



### KPI

» Number of sites following the Charter's criteria for products selection





# 3.1 People - Health



## Limit the electromagnetic impacts on occupants

### NEW SITE / RENOVATION

When selecting a new site and/or conducting works, consider the following requirements:

- Measure electromagnetic waves exposure inside the building and ensure that the levels reached respect the local regulatory guidelines.
- Carry out an inventory of the energy and telecom sources inside and outside the building, within a perimeter of 100 meters around the project site.



### KEY FACT

In 2011, radio-frequency radiation was classified as Group 2B, a possible human carcinogen, by the International Agency for Research on Cancer, while ambient levels have increased.



*Hardel, L. 2017, International Journal of Oncology.*

### OBJECTIVE

» 100 % of sites have undertaken an inventory of electromagnetically sources



### KPI

» % of sites for which an inventory of electromagnetically sources has been undertaken



# 3.1 People - Comfort



Give access to natural light, outdoor views and high-quality artificial lighting

### FOR ALL PROJECTS

- Ensure an access to natural light for all workstations. Offer possibility for occupants to control lighting.
- Consider a 300-lux luminance level in offices (computer work), conference rooms, and meeting rooms.
- Consider the following lighting quality requirements:
  - Illuminance uniformity should be higher than 70%
  - Color rendering index should be higher than 80
  - Color temperature should be between 3 300 K (hot) and 5 000 K (cold)
  - Unified Glare Rating should be lower than 19: direct glare being measured using the UGR model.
- Measure employees' satisfaction regarding comfort parameters. If more than 20% of survey respondents are dissatisfied, an action plan should be implemented within a maximum of two years to correct the issues raised in the survey.



### KEY FACT

It was noted that workers which located near windows sleep 46 minutes more than the other workers.



*WGBC, 2016, Health, Wellbeing and Productivity in Green Offices*

### OBJECTIVE

» Employees' satisfaction > 4 stars



### KPI

» Employees' star rating



# 3.1 People - Comfort



Enable high acoustic performance in all areas of the building

## NEW SITE / RENOVATION

When selecting a new site and/or conducting works, consider the following requirements:

- Brought in an acoustician to study the project and ensure the following:
  - Sound exposure daily limit (Lex,8h) of 80 dB(A)
  - Maximum peak value of 137 dB(C)
- All areas should be insulated from external noise, especially airborne noise. Acoustic insulation should be ensured between all areas.
- Acoustic levels in all areas should be suitable for their use.
  - Sound pressure level should not exceed 45 dB(A) in Work environments (open spaces)
  - Sound pressure level should not exceed 35 dB(A) in Concentration areas

## EXISTING SITES

- Measure employees' satisfaction regarding comfort parameters. If more than 20% of survey respondents are dissatisfied, an action plan should be implemented within a maximum of two years to correct the issues raised in the survey.



## KEY FACT

It was noted a 66% fall in staff performance as a result of distracting noise.



WGBC, 2016, Health, Wellbeing and Productivity in Green Offices

## OBJECTIVE

» Employees' satisfaction > 4 stars



## KPI

» Employees' star rating



# 3.1 People - Comfort



## Maximize olfactory comfort in all occupied spaces

### NEW SITE / RENOVATION

- When Sanofi enters into a new lease agreement or after renovation works, a flush out of the ventilation systems should be done.

### EXISTING SITES

- Ban smoking inside the building (including electronic cigarettes).
- Smoking areas (outside the buildings) must be located considering risk of fire and Sanofi reputation.
- Measure employees' satisfaction regarding comfort parameters. If more than 20% of survey respondents are dissatisfied, an action plan should be implemented within a maximum of two years to correct the issues raised in the survey.

### ALL PROJECTS

- Identify sources of odor:
  - Inside (e.g. specific activities, equipment, cleaning) the building;
  - Outside (e.g. emissions from neighboring buildings) the building.
- Reduce the effects of the sources identified:
  - Limit the spread of internal odors by optimizing the layout of interior spaces.
  - Zone off areas to isolate odor-emitting spaces from occupants.
- Treat smelly releases and emissions to prevent odors from spreading (e.g. filtration through activated charcoal, cyclone filter for odor treatment, odor destroyer).



### KEY FACT

In a typical office of 100 employees, unproductive time due to poor IAQ contribute to \$326,5 in wasted salary and benefit expenditures annually.



*The nature of air, 2019. TERRAPIN Bright Green.*

### OBJECTIVE

» Employees' satisfaction > 4 stars



### KPI

» Employees' star rating



# 3.1 People - Comfort



## Create various thermal environments

### NEW SITE / RENOVATION

When selecting a new site and/or conducting works, consider the following requirements :

- Occupants should be able to adapt their work environment based on their physiological needs:
  - Each work area should be fitted with a system for managing requests or taking action with regard to hygrothermal comfort.
  - Each zoning system should be designed to control a maximum of 4 workstations.
- Ensure that the design and fittings of the building are compliant with standard ISO 7730.

### EXISTING SITES


- Communicate information to occupants on best practices to integrate climatic conditions into daily thermal comfort management.
- Measure employees' satisfaction regarding comfort parameters. If more than 20% of survey respondents are dissatisfied, an action plan should be implemented within a maximum of two years to correct the issues raised in the survey.



**KEY FACT**


It was noted that staff performance fall by 6% when offices are too hot and by 4% if too cold.

*WGBC, 2016, Health, Wellbeing and Productivity in Green Offices*



**OBJECTIVE**

» Employees' satisfaction > 4 stars



**KPI**

» Employees' star rating



# 3.1 People - Mind



## Combat social isolation by facilitating formal and informal exchanges

### NEW SITE / RENOVATION

When selecting a new site and/or conducting works, consider the following requirements:

- Encourage interactions and exchanges onsite through the building's architecture and/or interior design.
- Endeavor connections between the different work areas through the development of informal areas to foster formal and informal exchanges.

### EXISTING SITES

- In common areas, occupants should be able to gather in order to share convivial moments. These areas can be equipped with recreational, relaxation and conviviality elements.
- Personalization of different work areas should be implemented. This criteria allow occupants to easily identify and appropriate each workspace. Examples of features that can be customized:
  - Visual atmosphere and colors
  - Office furniture
  - Vertical spaces for expression and communication (chalkboards, etc.)



### KEY FACT

The success of team building activities is part of a context of well-being enhancement: 90% of workers believe that new ways of organizing work improve their well-being and performance.



*Opinion Way, 2016*

### OBJECTIVE

- » 100% of sites have at least one common area for informal exchanges



### KPI

- » Number of areas dedicated to informal exchanges or entertainment purpose



# 3.1 People - Mind



## Encourage movement within the site using building design

### NEW SITE / RENOVATION

When selecting a new site and/or conducting works, consider the following requirements:

- Reduce sedentary tendencies by integrating interior pathways and stairs within the built environment, to incorporate short periods of physical activity into the workday. Pathways and stairs should be aesthetically pleasing and easily accessible to encourage their use.
- Create cyclist and pedestrian-friendly environments around the building to incentivize physical activity.

### FOR ALL PROJECTS

- For sites with outdoor areas, work on active design elements to encourage pedestrian activity onsite, such as: pleasing building entrances, walking paths, benches, drinking fountains and water features, landscaped elements, public art. These features should be provided with appropriate signage.
- Incorporate features of active design into furniture, such as height adjustable desks, sitting balls, or charging stations linked to bicycles.



### KEY FACT

Small amounts of activity can lead to significant benefits: just 2.5 hours of moderate-intensity physical activity per week can reduce overall mortality risk by nearly 20%.



WELL Building Standard

### OBJECTIVE

» 100% of sites have at least one outdoor and one indoor feature encouraging movement



### KPI

» Number of features encouraging movement



# 3.1 People - Mind



## Creating various ambiances using a multisensory approach for interior design

### FOR ALL PROJECTS

- In line with the Sanofi WorkX playbook, design activity-based workplace to best suit the tasks that would be done in them: for example, a quiet area would be dedicated to moments of concentration, an area without color or texture that attracts undue attention would be suited for problem-solving meetings.
- Include a variety of ambiances into the interior design typologies, considering the type of work being done in each space and using a multisensory approach based on a 2015 study of the architect firm Il Prisma:
  - Sight: Choose a variety of different colors adapted to their location (ex.: blue is associated with calmness and would be best suited for spaces where work requires more concentration and/or individual focus).
  - Touch: Use a balance of textures, through the presence of a variety of surface materials and textiles (ex.: a meeting room with a reclaimed wood table and chairs would be more welcoming and comfortable than a meeting room with a glass table and plastic chairs).
  - Sound: Create dedicated quiet zones and use sound masking and acoustic materials to work on sound privacy.
  - Smell: Make sure that unpleasant odors stay out of the office areas, as studies have shown that pleasing smells can increase alertness, thus positively impacting efficiency. However, scent diffusers are not allowed.
  - Taste: Provide a lunchroom or work café to allow people to take a break and socialize with coworkers.



### KEY FACT

A 2015 research shows that engaging one or more of the senses would improve concentration and learning.



IL PRISMA,  
Now We Work 2015

### OBJECTIVE

- » Provide at least 2 different interior design typologies onsite based on the multisensory design approach



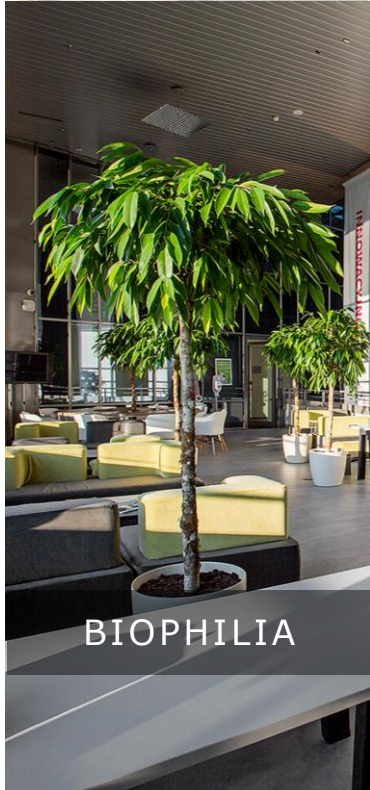
### KPI

- » Number of different interior design typologies





# 3.1 People - Mind



## Facilitate a connection with natural elements and an experience of nature

The 14 Patterns of biophilic design of Terrapin are organized into three broad categories. The principles "Nature in Space" bring a direct physical contact with natural systems. The principles "Natural Analogues" relate to representations and abstractions of Nature. The principles of "Nature of Space" are related to spatial conditions derived from Nature.

### "Nature in the space" patterns

- Visual connection with nature
- Non-visual connection with nature
- Non-rhythmic sensory stimuli
- Thermal and airflow variability
- Presence of water
- Dynamic and diffuse light
- Connection with natural systems

### "Natural Analogues" patterns

- Biomorphic forms and patterns
- Material connection with nature
- Complexity and order

### "Nature of the Space" patterns

- Prospect
- Refuge
- Mystery
- Risk / Peril

### FOR ALL PROJECTS

- Ensure that offices areas have at least one form of connection with nature, based on the 14 Patterns of biophilic design of Terrapin.
  - As a minimum, healthy offices should have a variety of plant species inside and out as well as views of nature.



### KEY FACT

It was noted a 7-12% improvement in processing time at one workplace when staff had a view of nature.



WGBC, 2016, Health, Wellbeing and Productivity in Green Offices

### OBJECTIVE

» 100% of offices areas have at least one form of connection with nature



### KPI

» Number of features facilitating an experience of nature indoor



## 3.2 Planet - Resources



### Minimize energy consumptions

#### NEW SITE / RENOVATION

When selecting a new site and/or conducting works, consider the following requirements:

- Select a building with an internationally recognized environmental certification (LEED, BREEAM) or at least a local environmental certification.
- Conduct a study to install solar PV panels.
- Set up tools to manage energy consumption:
  - Building Management System combined with an Energy management system including real time monitoring and consumption warning features;
  - Submetering plan to precisely follow energy consumption by item, type and usage.
- Conduct a study jointly with local communities and energy networks to evaluate best types of energy and lowest environmental impact. Fossil energy production is not allowed on-site (e.g. Gas boiler, fuel..).
- Conduct a building Commissioning to ensure buildings are delivered according to the Owner's Project Requirements.

#### EXISTING SITES

- All new equipment (Lighting, technical equipment...) should be chosen to achieve the best energy performance.
- Develop a maintenance policy in line with the FM building maintenance SOP.
- Set the BMS system with an occupied/non occupied (night and weekend) modes and indoor temperature according to seasons (3)
- Review site opening hours to limit energy consumptions and regroup people in less surface when low occupancy.

#### ALL PROJECTS

- Consider implementing renewable energies.
- Implement a strategy and tools to manage, report, and analyze energy consumption :
  - Monitoring of building occupancy and use;
  - Monthly report, including comparison with the previous year, considering meteorological factors and occupancy rates.
- Set up a five-year plan for reducing energy consumption including an action plan and a reduction target (at least 2%/year).



#### KEY FACT

Buildings construction and operations accounted for 36%(1) of global final energy use in 2017; green buildings can reduce energy use by 50%(2).



#### OBJECTIVE

» 100% of sites monitor their energy consumptions and have defined a reduction target of at least 2% per year (4)



#### KPIS

» Energy consumption in KWh per sqm  
 » Energy consumption in KWh per occupant



(1) UN Environment, 2018. Global Status Report.

(3) 19°C in cold seasons (heating) - 26°C in hot seasons (cooling)

(2) Kats, G. 2003, The Costs and Financial Benefits of Green Building. (4) When Sanofi has the control of the facilities

## 3.2 Planet - Resources



### Maximize the amount of drinking and non-drinking water saved

#### NEW SITE / RENOVATION

When selecting a new site and/or conducting works, consider the following requirements:

- Install low water consumption equipment (double size water flush, detectors on faucets and aerated faucets, etc.).
- Carry out a study on the use of greywater, including regulatory, economic, and technical feasibility criteria.
- Install dynamic leak detection systems.
- Install isolating valves in all sanitary facilities.
- Set up tools to manage water consumption:
  - Water management system (like BMS) based on automatic meter outputs and consumption warning system.
  - Submetering plan to precisely follow water consumption by item, type and usage.

#### EXISTING SITES

- Choose low water use equivalents for all plumbing works or replacements.
- Manage green spaces (if applicable) by exclusively using collected rainwater considering meteorological constraints. Use plants adapted to local climate.

#### ALL PROJECTS

- Implement a strategy and tools for managing, reporting, and analyzing water consumption based on the following:
  - Monitoring of building occupancy and use.
  - Monthly report, including comparison with the previous year, taking into account meteorological factors and occupancy.
- Set up a five-year plan for reducing water consumption, including reduction target and an action plan. This plan will be based on a comprehensive knowledge of the source of water supply, with a specific focus on water scarcity areas.



#### KEY FACT

In 2025, more than half of the world's population will live in areas of water stress.



WHO, 2018

#### OBJECTIVE

» 100% of sites monitor their water consumption and ensure to gradually reduce it over time, ceteris paribus



#### KPIS

- » Water consumption in m3 per sqm
- » Water consumption in m3 per occupant



## 3.2 Planet - Resources



### Reduce impacts related to waste production

#### NEW SITE / RENOVATION

When selecting a new site and/or conducting works, consider the following requirements :

- Reduce the production of construction site waste at the source, using the following means:
  - Organizational and technical measures for optimizing the collection and segregation of construction waste;
  - Provisions in supplier contracts.

#### EXISTING SITES

- Implement actions to reduce waste at source, including at least a paperless policy, the reduction of number of copy machines, the use of recycled paper (or at least eco labelled) and the ban of single use plastics (cups, stirrers, straws, bags, bottles...).
- Encourage waste segregation and spread good practices through regular communication.
- If Food services available, consider composting organic waste (incl. Coffee ground)

#### ALL PROJECTS

- Implement a material segregation and recovery policy in administrative buildings, at least for the following types of waste:
  - Cardboard, plastics, paper, glass, cartridges/toners, lights (light bulbs), batteries, furniture, waste electrical and electronic equipment (WEEE),
  - Organic matter (waste produced by green spaces and food services).
- Local regulations should be consulted in advance to ensure they allow the outlets required for selectively segregating waste.



#### KEY FACT

At least 25% (1) of total EU solid waste stream comes from construction and demolition waste; green buildings could reduce solid waste by 70% (2).



#### OBJECTIVE

- » Be landfill free by 2025
- » Reuse, recycle or recover 90% of the waste generated by all sites by 2025

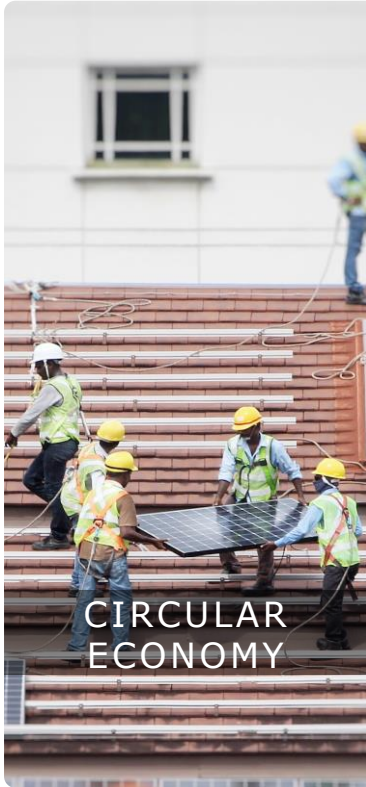


#### KPIS

- » % of waste sent to landfill
- » % of waste reused, recycled or recovered



# 3.2 Planet - Resources



**Identify the materials and furniture that can be reused in-situ, resold or given**

**NEW SITE / RENOVATION**

When selecting a new site and/or conducting works, consider the following requirements :

- Identify opportunities to choose products certified Cradle to Cradle (or equivalent).
- In the case of new construction, maximize construction site waste recovery in line with existing local processes, with an emphasis on recovering materials.

**EXISTING SITES**

- In the case of works, identify the materials and furniture that can be reused or resold.
- If on-site reuse is not possible, consider to reuse furniture through a donation to local schools, charities and community organizations, according to Sanofi’s compliance rules.

**ALL PROJECTS**

- Identify reuse opportunities which are typically related to furniture and furnishings, carpets and floorings, inert wastes such as concrete blocks, roof tiles, glazing.
- Use paints with natural pigments, which do not use plastics and fine particle in their composition.
- Choose firm which have Eco labels and working with recycled materials
- Choose sustainable coated steel and flooring which are fully composed of natural products (100% recyclable)
- Favour construction products that are extracted, manufactured and purchased within a 160-km radius of the project and furniture coming from local providers.



**KEY FACT**

More than half of greenhouse gas (GHG) emissions worldwide are related to materials management activities.



OECD 2018, Global Material Resources outlook to 2060

**OBJECTIVE**

» 100% of sites and projects evaluate the % of materials and furniture coming from or sent to “reuse and recycle” branch



**KPI**

» Number of sites and projects evaluating the % of materials and furniture coming from or sent to “reuse and recycle” branch



## 3.2 Planet - Biodiversity



### Limit impervious surfaces and maximize planted areas and flower meadows

#### NEW SITE / RENOVATION

When selecting a new site or conducting works, consider the following requirements:

- Maximize the surface of landscaped areas on the site. If the original parcel has any natural vegetation, preserve it.
- At the beginning of the construction project, carry out an impact study including an assessment of the planned building's impact on biodiversity.

#### EXISTING SITES

- Establish partnerships with local communities to promote biodiversity onsite.
- Every five years, review and update the biodiversity action plan.
- Raise employees' awareness through regular communication.

#### ALL PROJECTS

- Survey the site's current state of biodiversity and verify applicable regulations (specific protection zones). Be aware of local areas with high biodiversity and the status of species around the site.
- Develop an action plan to promote biodiversity and increase ecological connectivity.
- Implement initiatives to reduce impervious surfaces on the site :
  - promoting green roofs (especially to collect rainwater for reuse) and green walls;
  - promoting the installation and use of green elements for rainwater infiltration (e.g. planted swales);
  - promoting green outdoor parking lots;
  - use green spaces as biodiversity corridors.



#### KEY FACT

During heatwaves, 75% of the incoming heat flow is reduced thanks to a green roof.



APUR (Parisian urban planning workshop), 2013

#### OBJECTIVES

- » 100% of roof terraces are vegetated (or equivalent surface on the facades) and 90% of parking areas are vegetated
- » 100% of tertiary sites are fostering biodiversity by 2025

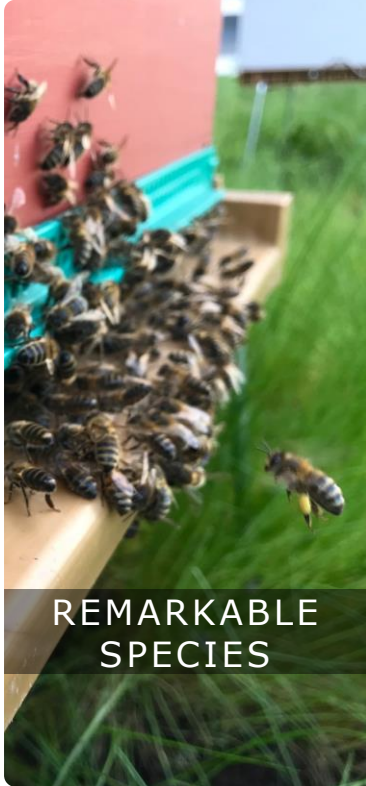


#### KPIS

- » % of vegetated areas in new sites
- » Number of existing sites developing awareness programs



## 3.2 Planet - Biodiversity



REMARKABLE  
SPECIES

### Promote local and protected flora and fauna

#### ALL PROJECTS

If green spaces are available:

- An assessment of the natural site could be carried out by an ecologist including an inventory of flora and fauna. Based on this study, favor the vegetal species recommended by the ecologist for all landscaping works, considering the meteorological constraints of the site location. This assessment could be updated every 3 years to identify potential changes in the list of remarkable species onsite.
- Increase the number of local nectar and honey plants, proscribe the presence of invasive species and limit the presence of allergenic plants.
- Preserve existing shelters (such as dead and dying trees) and install artificial shelters to promote local fauna (bird houses, insect houses, bee houses, etc.).
- Consider to join the global agenda of Sanofi's Plan Bee® program.



#### KEY FACT

More than 75% of the world's food crops, representing 35% of the tonnage of human food consumption, depend upon animal pollination.



*Food and Agriculture Organization of the UN, 2019*

# 3.2 Planet - Biodiversity



## Implement a sustainable maintenance approach for green spaces

### ALL PROJECTS

If green spaces are available:

- Manage green spaces in a sustainable way in order to respect living beings. In particular:
  - Proscribe chemical pesticides, fertilizers or plant protection products.
  - Space out garden mowing
  - Practice differentiated management of lawns, gardens, and fields; use different maintenance processes in different areas as appropriate.
- Sign contractual agreements with building management, building owner or any organization responsible for landscaping that stipulate that the work they undertake will maintain or enhance the ecological value on site.
- Ensure that internal and external lighting is concentrated in the appropriate areas and that upward lighting is minimized, reducing unnecessary light pollution that could be harmful for nocturnal wildlife.



### KEY FACT

According to a study, pesticides caused statistically significant effects on both the species and family richness with losses up to 42% of the recorded taxonomic pools.



*Helmholtz Centre for Env. Research-UFZ, 2013*

### OBJECTIVES

- » 100 % of green spaces area managed in a sustainable way (without pesticides, space out garden mowing...)



### KPIS

- » % of green spaces are managed in a sustainable way





# 3.2 Planet - Climate



## Limit greenhouse gas emissions throughout the life-cycle of the asset

### NEW SITE / RENOVATION

When selecting a new site and/or conducting works, consider the following requirements:

- Evaluate the level of CO2 emissions of the project, including the construction phase, and optimize it:
  - Use materials and equipment with limited carbon impact, by complying with Circular Economy previous guidelines.
  - Favour low carbon energy sources.
- As per the HSE carbon neutral design note, for all new sites, utilities must be sourced with Zero fossil primary energy (energy recovery, heat pumps, geotherm or biomass, etc.) and 100% renewable electricity.
- In case of renovation works, carry out a deconstruction diagnosis to optimize the reuse of site materials.

### EXISTING SITE

- Implement an energy management strategy with limited carbon impact, by complying with Energy previous guidelines.
- Evaluate the level of CO2 emissions of activities onsite and optimize it.
- In case of works, use materials and equipment with limited carbon impact, by complying with Circular Economy previous guidelines.

### ALL PROJECTS

- Evaluate CO2 emissions related to energy consumptions onsite.
- Implement an action plan to reduce the baseline level of the site's carbon emissions (example of action: set up a renewable electricity contract).
- Carry out a cost-benefit assessment of carbon reduction actions before choosing the main lines of action.



### KEY FACT

According to current data, the average temperatures increase on Earth's surface could reach 4.8°C by 2100 compared to the period 1986-2005.



*Intergovernmental Panel on Climate Change, 2014*

### OBJECTIVE

- » Achieve carbon neutrality by 2030 and net zero emissions by 2050
- » Switch to 100% renewable electricity by 2030
  - » Carbon neutral car fleet by 2030



### KPI

- » Tons/CO2eq/occupant
- » Tons/CO2eq/m<sup>2</sup>
- » CO2 emissions Scope 1/2/3



# 3.2 Planet - Climate



## Adapt to the consequences of climate change

### NEW SITE / RENOVATION

When selecting a new site and/or conducting works, consider the following requirements:

- Integrate climate change into the site choice considerations, such as consequences of a rise in temperatures or in sea levels, occurrence of extreme climatic events, etc. The impact of climate change being experienced in different ways by urban localities, refer to the local initiatives of the 100 Resilient Cities network.
- Define and implement a control and management plan during the construction stage for all relevant natural hazards, considering the geographic location of the site.

### EXISTING SITE

- Provide an Emergency Management for all occupants integrating natural risks management.
- Define and implement a program of works integrating adaptation factors, in line with the maintenance policy and based on the resilience assessment.

### ALL PROJECTS

- Keep up-to-date the site risk assessment, on a yearly basis.
- Carry out a «resilience assessment» to evaluate the building upgrade needs in order to reinforce assets to withstand climate impacts.
  - Examples of actions taken to improve the resilience of a site can be: providing utility redundancies (back-up resources to support the originals in case of failure) or making any other needed facility improvements identified in the resilience assessment



### KEY FACT

Climate change has quadrupled the number of climate-related disasters since the 1970s.



*International Federation of Red Cross, 2018*

### OBJECTIVES

» 100% of occupants trained to natural risks management



### KPIS

» % of occupants trained to natural risks management



## 3.2 Planet - Climate



### Combat the technical and usage obsolescence of the building to extend its lifetime

#### NEW SITE / RENOVATION

When selecting a new site and/or conducting works, consider the following requirements:

- For newly constructed sites, the base section of the building / the ground floor should be convertible into a public-access area (such as conference center).
- Provide high electric power and conservatory measures for building technical evolution (heating, cooling, electricity).
- Choose easily exchangeable equipment.
- Set up a ventilation system adaptable enough to meet an increase in occupancy.
- Implement open and evolving communication protocols.
- Write a note containing guidelines which describes the adaptability potential of the building, in anticipation of future works.

#### EXISTING SITE

- Undertake an adaptability assessment of the site and its different spaces with the support of a specialist or an architect. This would allow the building management team to evaluate the potential of the building for possible adaptation to meet future demands.

#### ALL PROJECTS

- Provide for the possibility of exchanging spaces within the building.
- Design interior spaces based on flexible partitioning and adaptable furniture. For instance, removable storage and furniture on wheels allow to make the offices adaptable to the employees' needs, a space being quickly turned into a meeting room or an isolated working plan.
- Set up meeting rooms and collaborative spaces with a complete flexibility criteria



#### KEY FACT

From now on, due to regulatory, territorial, usage or architectural obsolescence, the real estate offer is based on a 10 years horizon, instead of thirty or forty years.



BATIACTU 2017

#### OBJECTIVE

- » 100 % of sites have undertaken an adaptability assessment



#### KPI

- » % of sites for which an adaptability assessment has been undertaken



# 3.3 Community - Inclusion



## Maintain the original social and environmental value of land parcels

### NEW SITE / RENOVATION

- Ensure that, in case of a real estate acquisition project concerning premises or land to be developed, the previous owners and occupants have not been unfairly displaced.
- Ensure that the project doesn't deteriorate the original benefits to society provided by the chosen location: for example, avoid real estate development on natural parks and forests, or on historical sites or gathering places.
- Avoid the implantation of the building on agricultural areas or on habitats of threatened or endangered species.

### ALL PROJECTS

- Complete a site survey that includes information on human use of the project.
  - This analysis should highlight important relationships between site features and elements that may influence the building or real estate project
  - Examples: proximity of vulnerable populations, adjacent properties or protected natural areas, proximity to major sources of air pollution, etc.).



### KEY FACT

If all the highways, streets, buildings, parking lots and other solid structures in the 48 contiguous United States were pieced together, they would almost cover the state of Ohio.



*American Geophysical Union, 2004*

### OBJECTIVE

» 100% of sites follow the Charter's criteria for land parcels selection



### KPI

» Number of sites following the Charter's criteria for land parcels selection



# 3.3 Community - Inclusion



## Act as a committed company providing local support to local community

### NEW SITE / RENOVATION

- Design spaces in the building that can accommodate public for events organized by the city of implantation (fitness, conference and meeting rooms, etc.), in order to create places for interactions.

### ALL PROJECTS

- Evaluate the feasibility to provide premises to host people in case of human or natural disaster.

### KEY FACT

After the Hurricane Katrina in 2005, nearly 80% of the population left or was evacuated; at the end of 2006, more than 40% of them of still needed accommodations.



*Mancebo, F., 2009*

# 3.3 Community - Mobility



## Support public transportation existing networks and foster their development

### NEW SITE / RENOVATION

When selecting a new site and/or conducting works, consider the following requirements:

- Favor a location at less than 800 meters from a means of public transportation OR if appropriate and needed, consider development of a shuttle for SANOFI staff which will serve the main rail or road transport stations in the surrounding area.
- Particular attention will be paid on occupants' safety when moving onsite, thanks to lighting for dedicated uses (pedestrians, bikers, drivers, etc.) and an appropriate signage.

### NEW SITE / RENOVATION

- For buildings with no access to a public transportation service, an agreement could be negotiated with the municipality in order to create a specific service adapted to the operating hours of the site.



### KEY FACT

27% of European greenhouse gas emissions are due to the transportation sector (1). Communities that invest in public transit can reduce each nation's carbon emissions by 37 million metric tons annually(2).



### OBJECTIVE

- » At least 1 mean of public transportation available onsite at less than 800 m



### KPI

- » Distance from public transportation network
- » Number of means available



(1) European Environment Agency, 2016

(2) American Public Transportation Association, 2018

# 3.3 Community - Mobility



## Promote the use of environmentally friendly means of transportation

### FOR ALL PROJECTS

- Carry out a mobility plan every three years in order to be aware and to optimize the commuting times for all employees. This plan should include:
  - An employee survey;
  - An analysis of the options provided by local communities;
  - An analysis of the potential value of installing equipment that favors the use of public or environmentally-friendly transportation;
  - An analysis of the opportunity to implement policies that accommodate and promote the use of environmentally-friendly transportation.
- Following these analysis, an action can be defined for developing public and environmentally-friendly transportation networks.
- Install charging stations for electrical or plug-in hybrid vehicles considering your country eco-fleet roadmap and your employee mobility survey. Anticipate as much as possible the growing needs for this type of vehicles. When possible, Renewable electricity should be used as part of our RE100 commitment.
- Monitor business travel and staff commuting carbon impacts.
- Encourage employees, with regular communication, to follow the transport hierarchy to minimize carbon impacts of transport when selecting mode of travel.
- Consider the specific needs of disabled people and elderly people into transportation schemes.



### KEY FACT

Providing safe bike routes and equipment can contribute to financial performance: it was noted a €27m savings through cutting absenteeism as a result of Dutch cycle-to-work scheme.



WGBC, 2016, Health, Wellbeing & Productivity in Green Offices

### OBJECTIVE

- » 100% of sites, for which there are more than 500 employees, have carried out a mobility plan



### KPI

- » % of sites for which a mobility plan assessment has been undertaken



# 3.3 Community - Partnership



Make responsible purchase decisions throughout the building life-cycle

## ALL PROJECTS

- Favour subcontractors that have published a CSR report verified by an independent third party OR integrate social KPIs in the choice of subcontractors (e.g. equality, diversity, health and safety).
  - The ISO 26 000 guidelines (or equivalent) can be used as baseline to evaluate potential partners and subcontractors based on environmental and social factors.
- All suppliers have to respect Sanofi's procurement policy and the following points:
  - Sanofi HSE requirements related to contractors and suppliers
  - Environment: energy, CO2 and greenhouse gas emissions, local pollution, water, biodiversity, chemicals/materials/waste, product use, product end of life, customer health and safety and sustainable consumption
  - Labor practices and human rights
  - Diversity and inclusion
  - Fair business practices
  - Responsible chain: suppliers' environmental performance and social practices.



## KEY FACT

The Global Reporting Initiative (GRI), aim at establishing a baseline of CSR indicators for international organizations. Since 2010, 31 767 reports following the GRI rules have been published.



GRI Data base



## 3.3 Community - Partnership



### Support local economic system and community through real estate projects

#### NEW SITE / RENOVATION

Impact sourcing is a business practice where a company prioritizes suppliers that intentionally hire and provide career development opportunities to people who otherwise have limited prospects for formal employment. Impact workers are people hired into an organization who were previously long-term unemployed or living under the national poverty line (GISC, 2018).

- Implement impact sourcing actions:
  - Ask reintegration companies to intervene for the cleaning of premises or the sorting of waste.
  - Give preference to reintegration companies and to local businesses for the subcontracting needs during the works phase and after the handover.
  - Prioritize suppliers that intentionally hire and provide career development opportunities to people who otherwise have limited prospects for formal employment.
- Promote responsible supply chains, social equality and diverse workforces



#### KEY FACT

The Global Impact Sourcing Coalition incites its members to hire 100,000 new impact workers by the end of 2020. The goal is to increase employment and career development opportunities for disadvantaged workers.



*Global Impact Sourcing*

## 3.3 Community - Partnership



Showcase the occupants' talents by developing an art project or festive events

### NEW SITE / RENOVATION

- All new administrative buildings designed, constructed or refurbished for Sanofi should draw on the expertise and architectural and aesthetic vision provided by an architect.
  - » Features should be implemented to identify easily the building in its urban environment. Valued elements can be, for example, exterior or interior ornamental elements.

### ALL PROJECTS

- Art and culture should be promoted on Sanofi sites.
  - Develop an art project in buildings and on the sites:
    - Work with local associations;
    - Work with young artists;
    - Coordinate with the arts and culture calendar of local cities.
  - Promote works of art created by employees:
    - Exhibit employees' art in offices, halls, and dining areas;
    - Offer creative workshops.
- Installations should be proposed for including works of art in the building or in green spaces to promote access to art and culture on every site.



### KEY FACT

Music has been found to be a form of relaxation and anxiety reduction, according to studies examining the effects of music and music therapy on healing & wellness.



*American journal of public Health, 2010*

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Thank you  
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sanofi