



**Green Building
Congress 2022**

Green Interiors

21.10.2022



A **TATA** Enterprise

CASE STUDY GODREJ ONE

WELLBEING IN WORKPLACES

*A pathway to holistic building evaluation and
performance enhancement*

Presented By:

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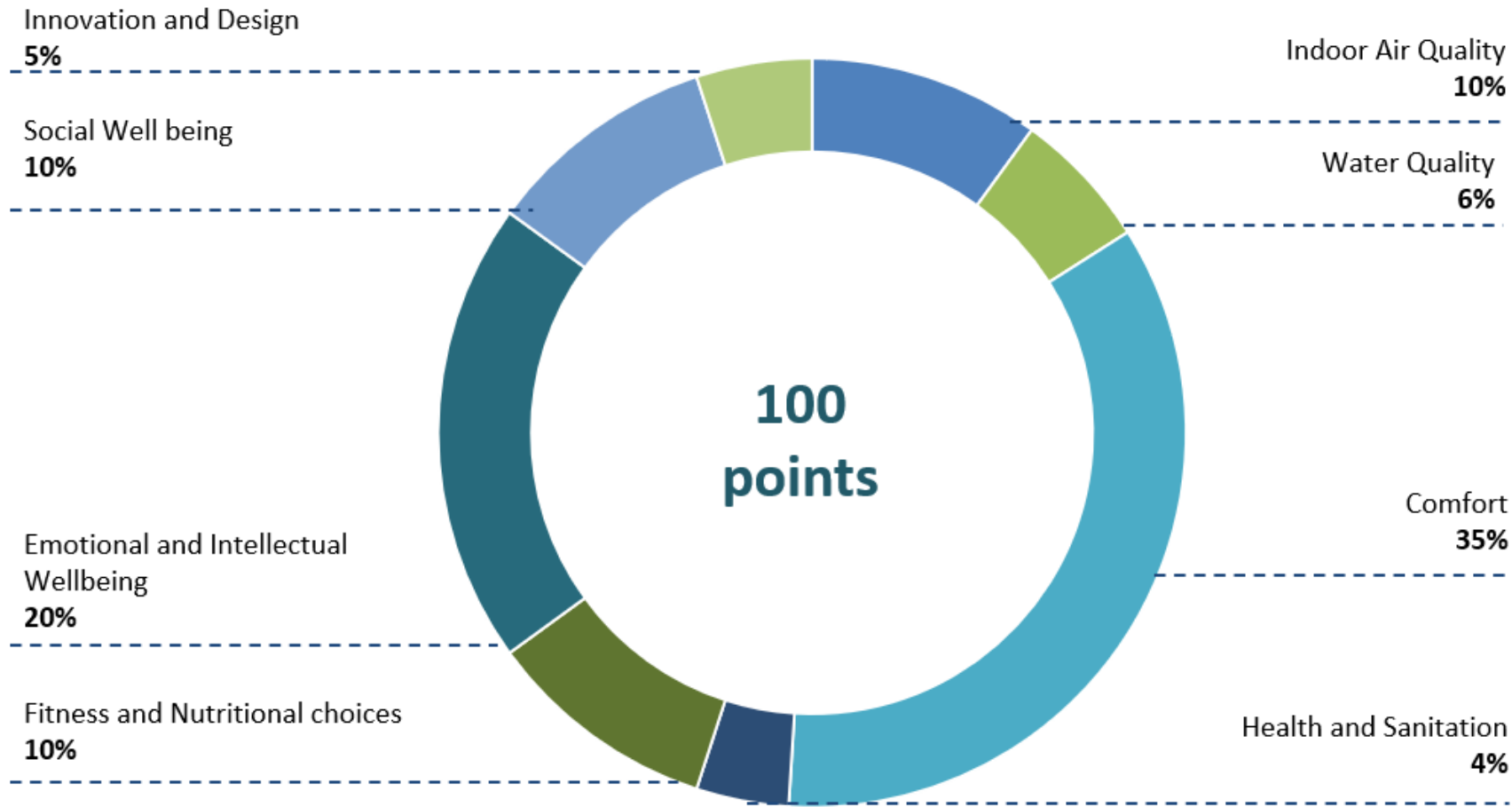
**Senior Vice President
Ecofirst Services Limited :**

A **TATA** Enterprise

IGBC Fellow, RESET AP, LEED AP (BD + C)

Health as a state of complete **physical, mental and social well-being** and not merely the absence of disease or infirmity’. Wellness is an extremely powerful element that can play a significant role in **occupant engagement, productivity, talent retention, creativity and innovation**. **How people ‘function’** and ‘feel’ within personal and social circles strongly reflects the kind of environment they live in. **The way people ‘function’** reflect their connection with their surroundings. Therefore the built environment plays a vital role in health & well-being of the occupants and should be closely knitted with **people centric design**.

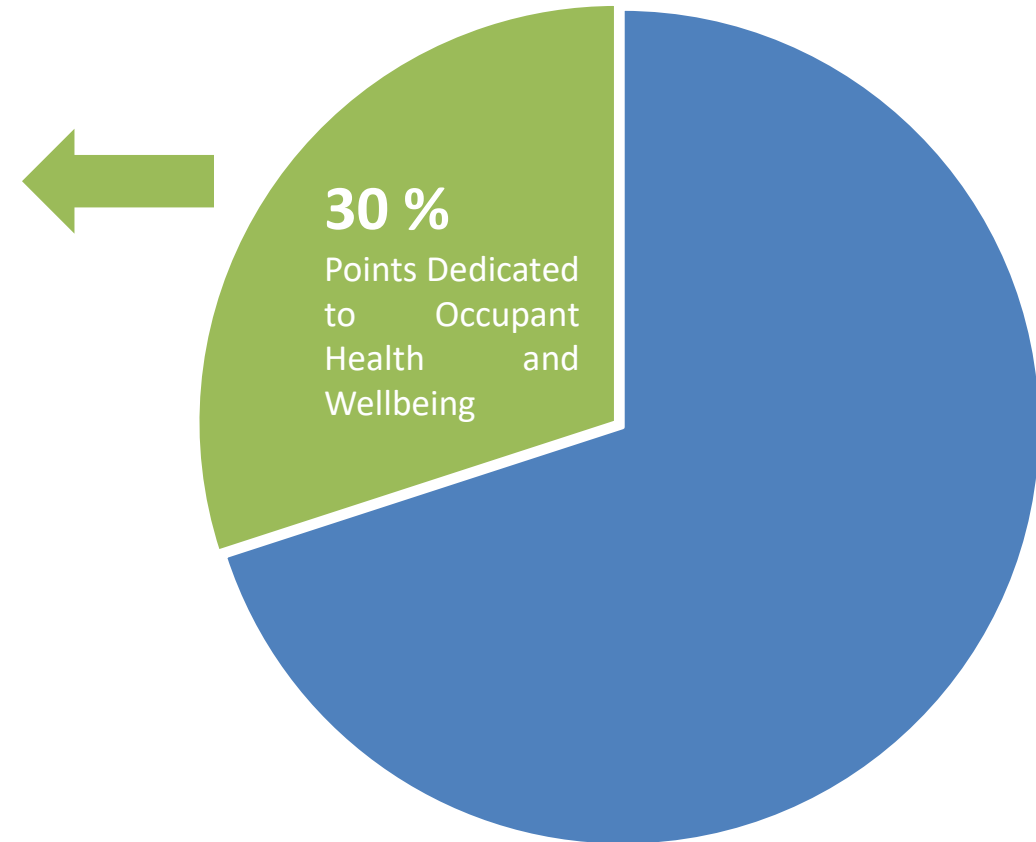




Certified	50 to 59 points
Silver	60 to 69 points
Gold	70 to 79 points
Platinum	80 to 100 points

S. No.	Features
1.	Tobacco Smoke Control
2	Fresh Air Ventilation
3	Daylighting
4	CO2 Monitoring
5	Thermal Comfort
6	Ergonomic Design
7	Indoor Plants
8	Low-Emitting materials
9	Material Acoustic Performance
10	Outdoor Views
11	Interior Flush out
12	Minimise Indoor Pollutant Contamination
13	Occupant Wellbeing facilities
14	Dedicated Dining Spaces

Point Distribution



1. Tobacco Smoke Control

Entire Premises to be no-smoking zone.

2. Fresh Air Ventilation

Minimum Fresh air ventilation to be maintained in the interior spaces. Helps in reduction of CO2 levels and pollutants within the space

3. Daylighting

Providing connectivity between the interior and exterior spaces, to achieve visual delight to occupants. Intake of daylight within the spaces also helps with maintain the circadian rhythm.

4. CO2 Monitoring

Install monitoring systems to measure and control air quality to ensure occupant health and well-being..



7. Thermal Comfort

Maintenance of thermal comfort(temperature humidity air velocity) enhance the working environment of the occupants thereby promoting better productivity . Hence regular monitoring of the parameters is recommended

6. Ergonomic Design

Ergonomically well design spaces assist the occupant to maintain better postures while sitting, moving and enhances accessibility of the spaces

5. Indoor Plants

Certain indoor plants assist in purifying the air naturally within the spaces. Plantation of such type of species is recommended 5

1. Low-Emitting Materials

Encourage use of materials and systems with low emissions, so as to reduce adverse health impacts on building occupants. Materials with LOW VOC content, Ecolabelled /green certified materials are encouraged to be procured

2 Material Acoustic Performance

Promote occupants' well being, productivity and communication through effective acoustic design.

3. Outdoor Views

Design interiors to provide connectivity between the interior and exterior space.

4. Interior Flush Out

Avoid occupant's exposure to indoor airborne contaminants before occupying the premises, so as to reduce the adverse health impacts on building occupants



5 Minimize Indoor Pollutant Contamination

Minimise the exposure of building occupants and maintenance team to hazardous indoor and outdoor pollutants, thereby enhancing indoor air quality and occupant health.

Methods like installation of door mats and interior pressurizations , installation of air curtains provide assistance for the same

6. Occupant Wellbeing facilities

Promote occupant well being so as to enhance physical, emotional and spiritual well-being of building occupants.

Access to fitness centers, recreation areas, meditation areas, etc helps in enhancing occupant wellbeing

7. Dedicated Dining Spaces

Encourage people not to dine in working areas so as to avoid contamination of indoor spaces, thereby enhancing health and hygiene

GODREJ ONE, GODREJ INDUSTRIES LTD





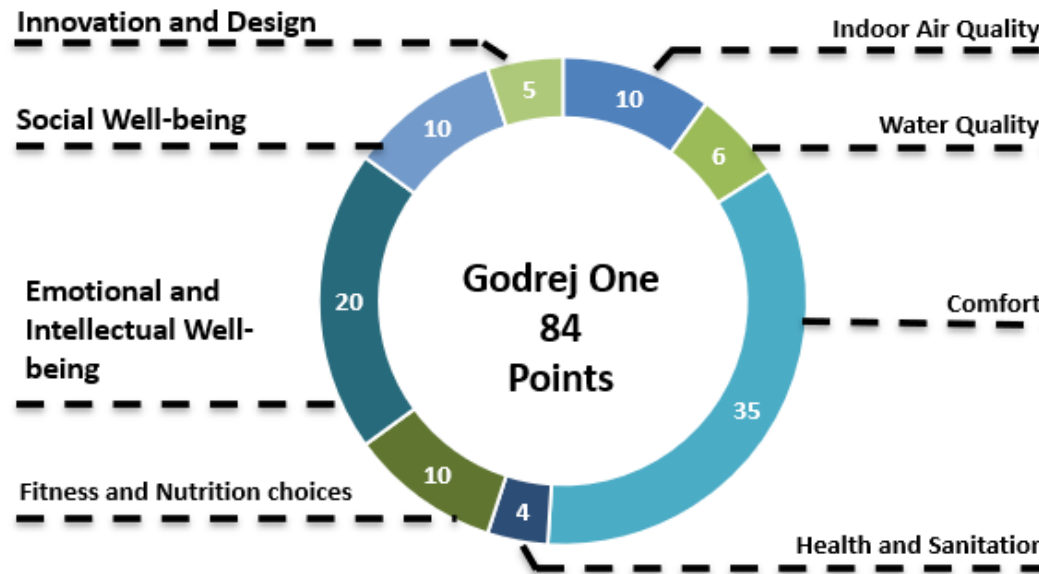
Site Area- 10,00,000 sq. ft
Location- Vikhroli East, Mumbai

- Nos of floors: **11 floors**
- Building Type: Commercial Office Nos. of occupants: **3450 (Design capacity)**
- Operational Hours: **9 hours, 5 days a week.**

Project Brief:

Godrej One is the headquarter building of Godrej. It hosts several Godrej group companies under one roof. It has open, flexible office spaces, on multiple floors, with class apart amenities for all the employees.

Godrej One as been awarded the prestigious IGBC Platinum ranking under the category of IGBC Health and Wellbeing rating system. The Project triumphs and performs well under all the sections.



Tobacco Smoke Control

Avoid exposure of non-smokers to the adverse health impacts arising due to passive smoking

Fresh Air Ventilation

Provide quality fresh air within the building, thereby enhancing health, wellness, productivity and cognitive ability of the occupants



Monitor Indoor Air Quality

Monitor indoor air quality thereby enhancing the awareness amongst occupants on the impacts of air pollutants

Reduce Indoor Emissions

Monitor and implement measures to reduce indoor emissions & microbes, thereby reducing the associated adverse health impacts on the occupants

Tobacco Smoke Control

- Entire Premise is a no- smoking zone
- Appropriate signages installed across the premise at every 10-12 m



Fresh Air Ventilation

- Fresh air more than 30% above thresholds on all floors.
- Fresh air quality indoors as per ASHRAE 62.1-2007
- MERV 13 filters to purify air of air borne particles

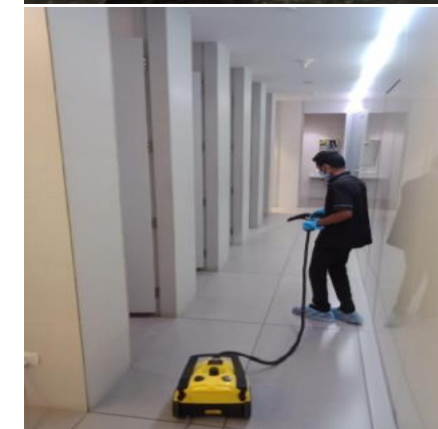


Reduce Indoor emissions

- Strict protocol followed to disinfect the entire premises, including cleaning of high touch surfaces every 2 hours.

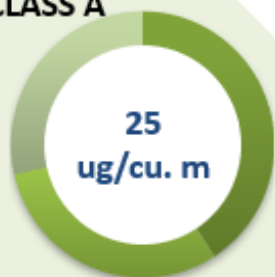
Monitor Indoor Air Quality

- IAQ sensors installed in all AHU's and across regularly occupied spaces, integrated with BMS
- Parameters monitored – Temperature, Humidity, CO2, PM 2.5, PM 10, within thresholds of ISHRAE 2016:10001 on all floors



Threshold: CLASS A

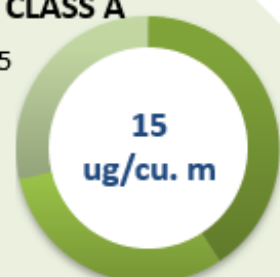
- Value: <25 ug/cu. M
- Quality: Excellent



PM 10

Threshold: CLASS A

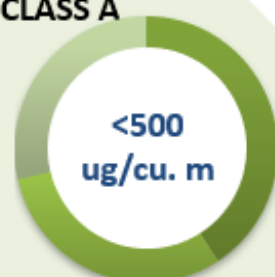
- Value: <15 ug/cu. M
- Quality: Excellent



PM 2.5

Threshold: CLASS A

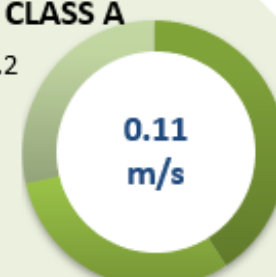
- Value: <500 ug/cu. M
- Quality: Excellent



TVOC

Threshold: CLASS A

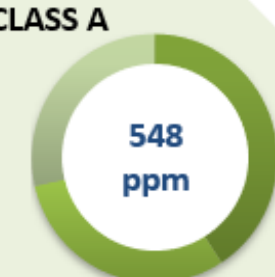
- Value: <0.2 m/s.
- Quality: Excellent



Air Velocity

Threshold: CLASS A

- 350 ppm above ambient levels.
- Quality: Excellent



Carbon dioxide

1. Occupant Satisfaction Survey

Ensure that the occupants are satisfied with the comfort conditions, thereby enhancing the Well-being and productivity of occupants

2. Visual Comfort

Ensure adequate lighting to provide visual comfort for the occupants, thereby reducing strain on the eyes and associated health impacts

3. Thermal Comfort

Provide comfortable indoor thermal environment, for enhanced productivity, health & well-being of occupants

4. Acoustic Comfort

Minimize noise levels and provide acoustically comfortable environment for the building occupants, to enhance productivity and reduce the associated negative health impacts



7. Comfort for Differently abled

Ensure that the facility caters to differently abled occupants, thereby addressing their physical comfort

6. Ergonomics

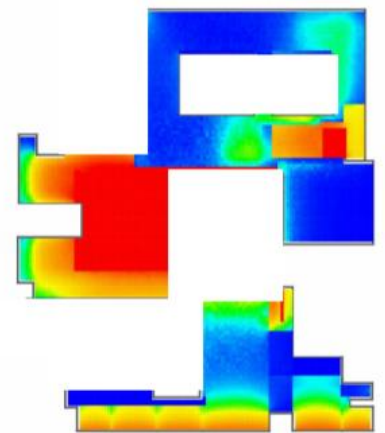
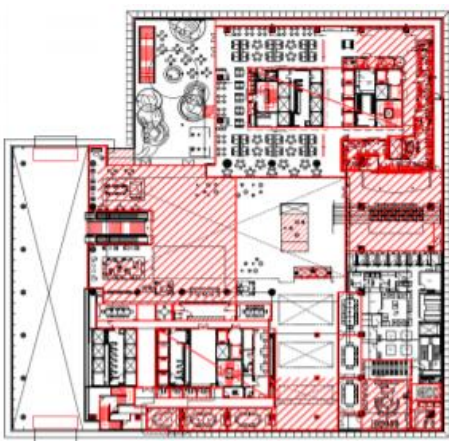
Provide ergonomically designed spaces to enhance occupants' comfort, thereby addressing health aspects related to bone & joint disorders

5. Olfactory Comfort

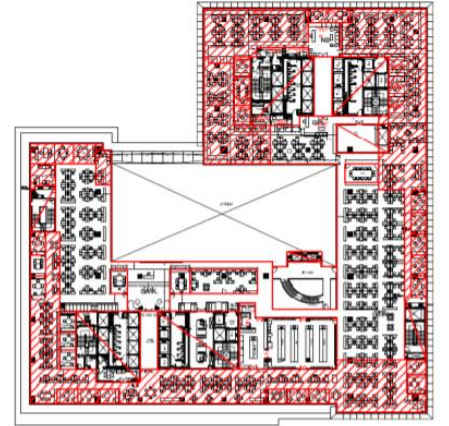
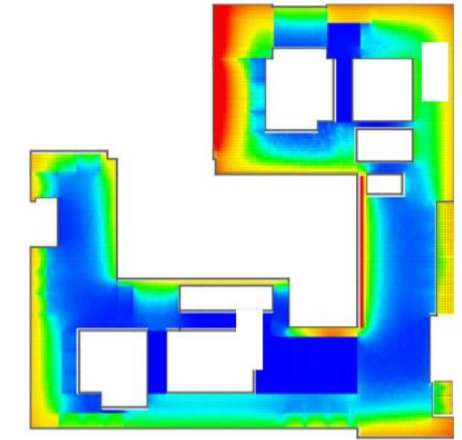
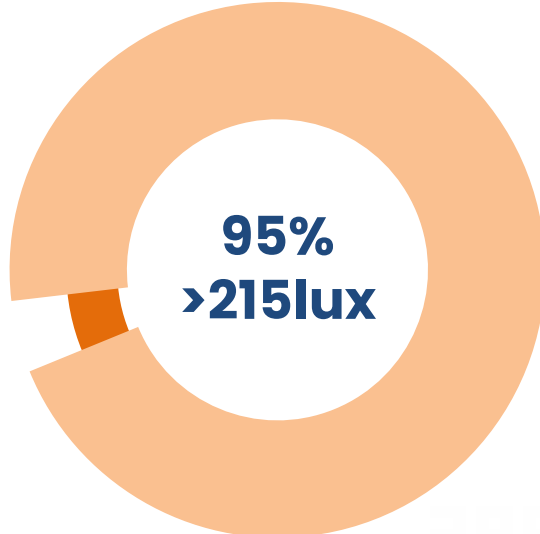
Minimize odor in service areas to reduce discomfort and associated negative health impacts to the occupants

Daylighting and illumination

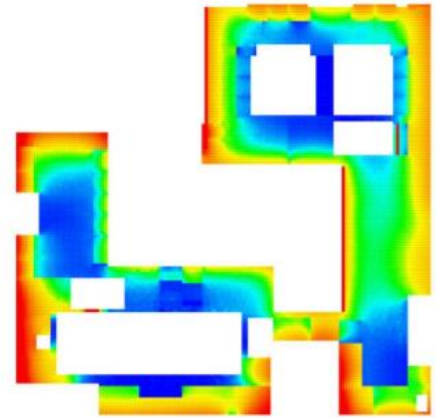
More than 86% of the regularly occupied spaces achieve daylight between 110 lux and 2200 lux, which is comfortable and healthy for occupants.



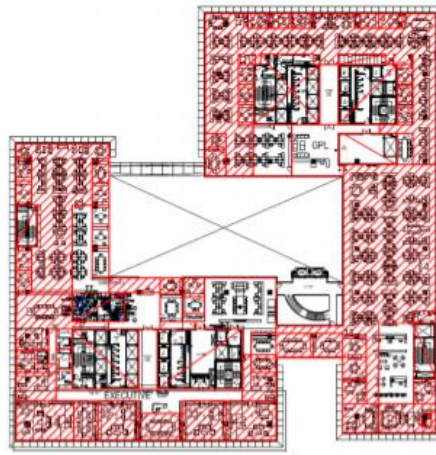
First Floor atrium space- plan, picture and daylighting analysis



Third Floor: plan, Typical office space picture and daylighting analysis



- Blinds are utilized to control excess daylight and glare .
- LED efficient light fixtures installed for good quality visual.



Fifth Floor : plan, typical office space. and daylighting analysis

Ergonomics:

Furniture designed as per **Time Saver Standards for interior designing Space Planning for comfort of occupants**. Different types of tables, chairs, sofa's etc have been provided based on the type of work in different spaces and are **adjustable and flexible in nature** to provide optimum body poster comfort.

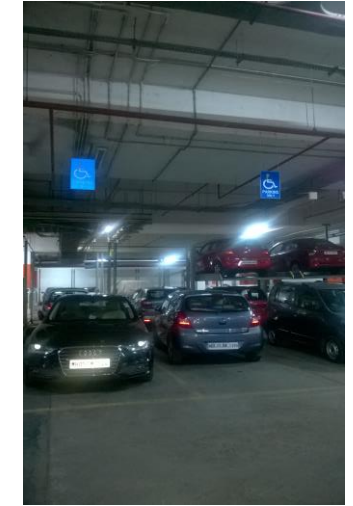


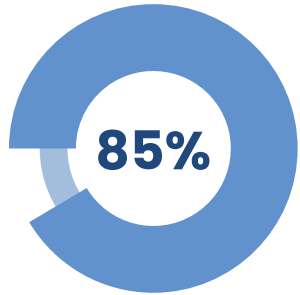
Olfactory comfort:

The exhausts systems function efficiently with an **exhaust rate of 0.5cfm/sq. ft** in all service areas such as toilets kitchen etc. and are segregated separately from office spaces

Universal Design:

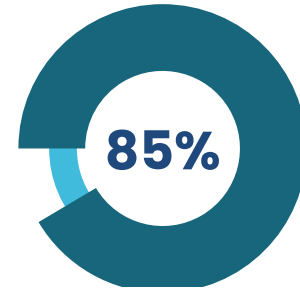
Dedicated parking space for differently abled, no hindrances on floor level imparting freedom of movement, dedicated restrooms ,Braille and Audio assistance in lift.





Exterior connectivity:

- Office spaces have maintain clear line of sight and view to the outdoors or the atrium space, accentuating work environment for employees.
- Site premises has multiple green spill out spaces, which are accessible to all employees



Thermal Comfort:

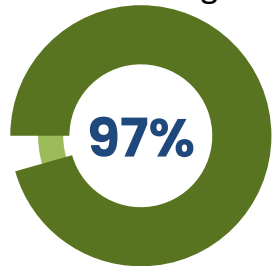
- Spaces maintained comfortable temperatures, humidity and air velocity in accordance to ISHRAE 10001:2016.
- The parameters are monitored daily across the building in various spaces and AHUS's.



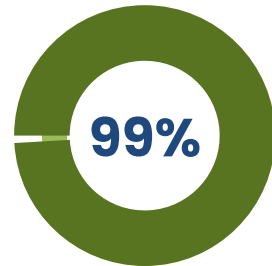
Parameters	Units	Thresholds ISHRAE standard 10001:2016	Levels Maintained within the building (average)	Quality Rating
Temperature-Summer	C	24.5 +/-2.5	23.6	Excellent
Temperature - Winter	C	22 +3	23.5	Excellent
Humidity	%	30-70	67	Good
Air Velocity	m/s	<0.2	0.11	Excellent

Occupant Comfort Survey

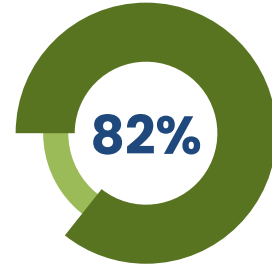
- Sample occupant surveys were carried out and about 200 occupants across the building located in various offices and departments participated in the survey. Overall 92% of the occupants were satisfied with comfort parameters
- Occupants feedbacks are highly valued by the entire team of Godrej One, and occupants are encourages to participate thereby completing the full circle of Building assessment.



Thermal Comfort.



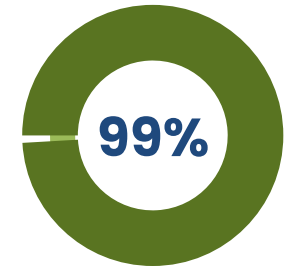
Acoustic Comfort



Visual Comfort



Olfactory Comfort



Ergonomics

Access to Drinking water

Provide access to drinking water for adequate consumption by the occupants for their health and well-being.

Quality of Drinking Water

Ensure quality drinking water to minimize the risk of water-borne diseases

Quality of Recycled Water

Monitor the quality of recycled water to minimise the risk of water borne diseases



Housekeeping

Have well defined procedures in place to maintain cleanliness and hygiene thereby reduce the risk of spreading respiratory and other communicable diseases.

Eco-friendly Chemicals

Encourage use of eco-friendly housekeeping chemicals so as to reduce adverse impacts on respiratory systems

Control of Outdoor Dust Pollutants

Minimise entry of outdoor dust into the facility, thereby reducing impacts on respiratory systems and dust allergies

Access to Clean Water:

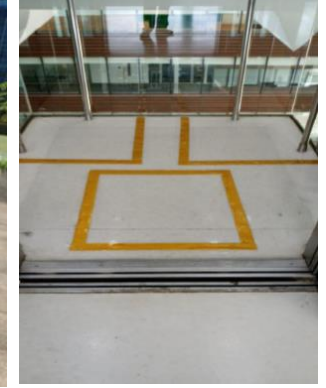
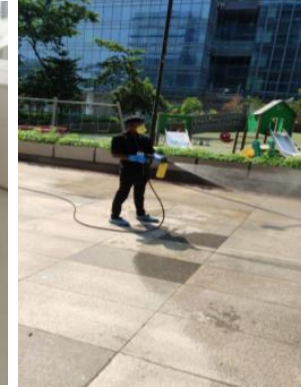
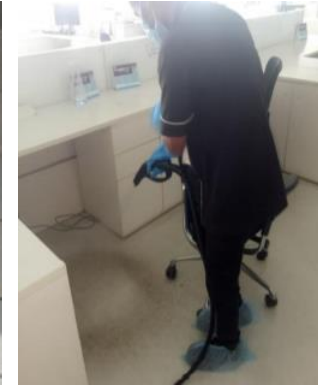
- Quarterly Drinking water quality tests.
- The water purifiers are serviced every 3 months
- Housekeeping protocols ensure utmost cleanliness and sanitization of vessels pantry area
- In the current situation of COVID-19 pandemic, extra precaution have been taken to ensure safety of all- demarcation on flooring to ensure social distancing etc.



Cleaning and Sanitization .

In light of COVID- 19 pandemic, an upgradation in cleaning and housekeeping protocol have taken place. Some of the key features are as follows:

- Temperature checks on site and at the entry of the building, individuals with temperature more than 100 F would be guided to nearest hospital
- Sanitization points located across the building- in common areas and offices.
- Awareness Signages regarding COVID-19 and social distancing, sanitization are located in common areas for occupants in local languages as well
- Steam cleaning for all floors and offices daily, Fumigation of all exteriors areas like roads pathways parking etc, Pest control activities would be carried out daily wherever required, high touch surfaces cleaning every two hours.
- Social distancing demarcations on floors spaces, in lifts canteen spaces etc.



FITNESS FACILITIES

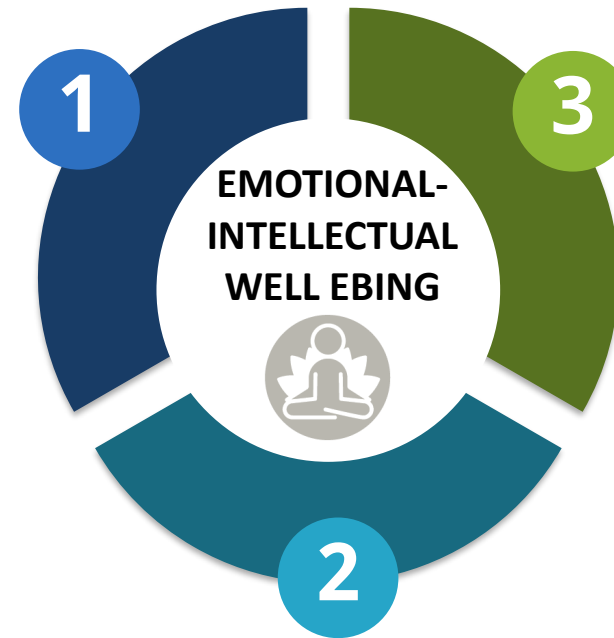
Provide fitness facilities for occupants to enhance their physical Well-being.

Awareness on Physical Fitness

Create awareness and encourage the occupants to adopt practices that improve their physical fitness

Nutritional Choices

Encourage increased consumption of healthy nutritional options for improved health and well-being of the occupants



Exterior Connectivity to occupants

Develop green landscape and provide connectivity, thereby enhance the emotional Well-being of the occupants

HR Policies

Adopt policies that would portray a caring environment, thereby creating an emotionally inspiring work place.

Spiritual Well- being

Provide an environment to embrace spiritual activities, which can enhance the emotional strength of occupants

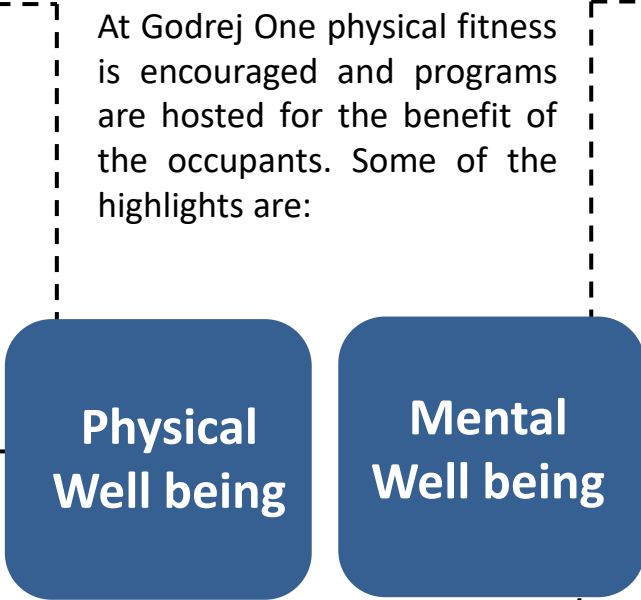
- A fitness app to assist all in their health progress, annual health check.



- Indoor fitness facilities like foosball, Snooker, table tennis, chess, Gymnasium etc. Outdoor activities facilities like football, cricket, basketball



- Nutritional values in all the meals are catered to employee needs and the meals are crafted to suit different palette of the employees.



- Meditation, Zumba, yoga workshops are hosted in the outdoor as well as indoor areas regularly mental fitness.



- Employee assistance program' (EPA) which is designed to provide the employee with coaching, consultation, advise and support as and when required.



- Dedicated spaces such as relaxation rooms, prayer rooms, rooms for nursing mothers, daycare have been provided in the building.

Recreation and Culture

Encourage activities that would enhance bonding amongst the occupants

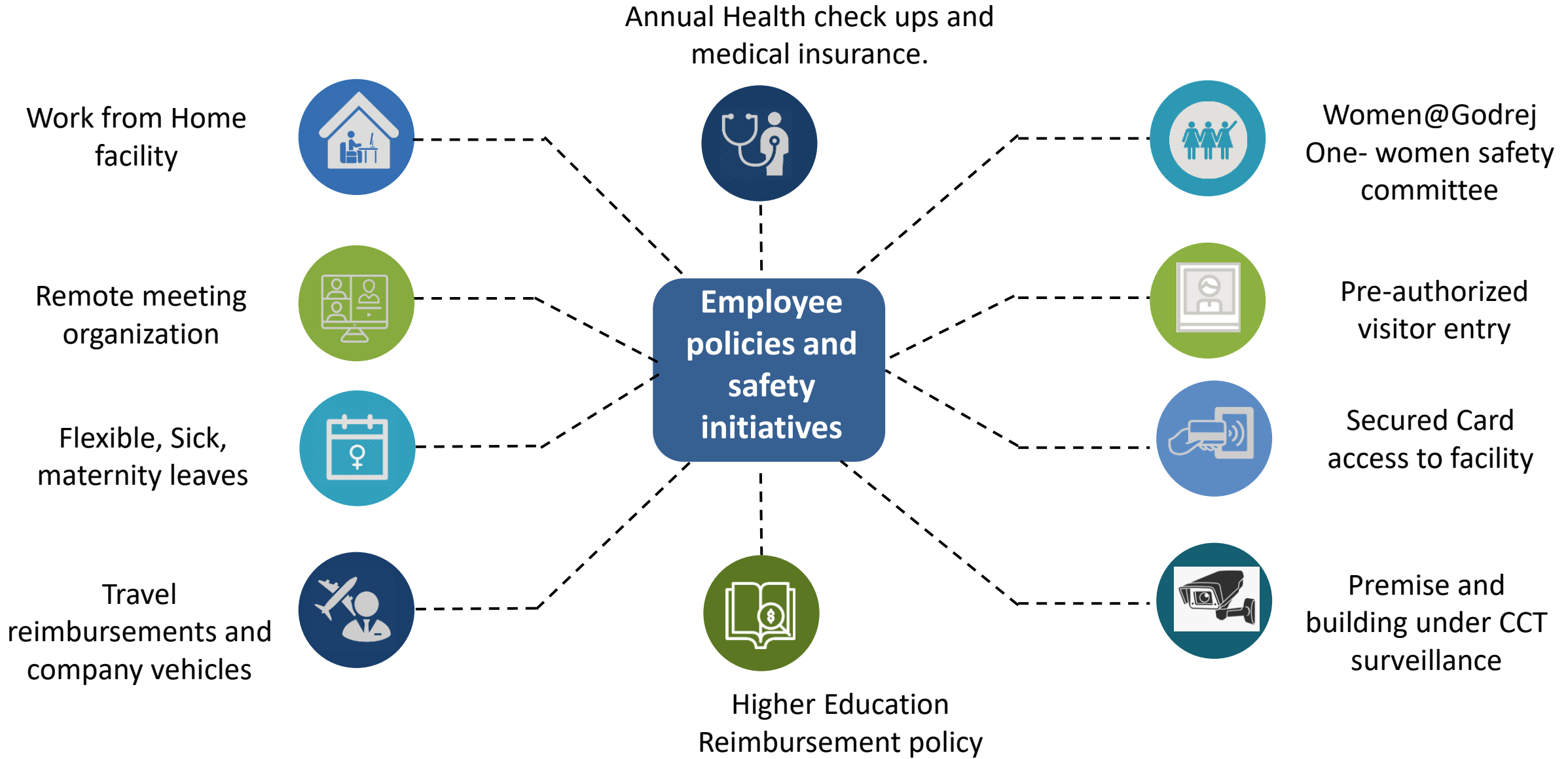


Employee Safety

Ensure safety measures are part of good practices so that occupants feel emotionally strong and secured.

Service to Society

Encourage and initiate occupant engagement, by fostering active participation in community welfare activities for social well-being



Mangrove protection and Maintenance



1

Supports Teach India, Smile train, and WWF for nature



2

Volunteering programs- teaching, health and hygiene training, cleaning drives. Donation drives for communities in need



3

4

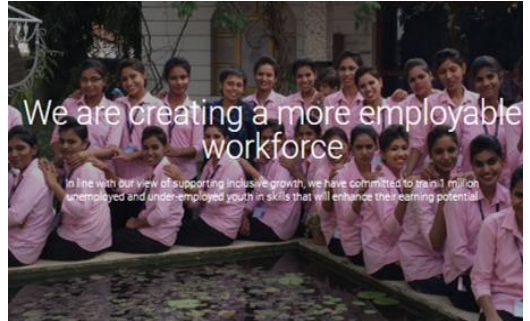
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6

Blood Donation Camps and Disaster relief initiatives



Women empowerment and employment generation for community welfare



Plantation drives, Green carnivals and Godrej conclaves discussing pathways and achievements in sustainable



develop

Hygiene in Buildings

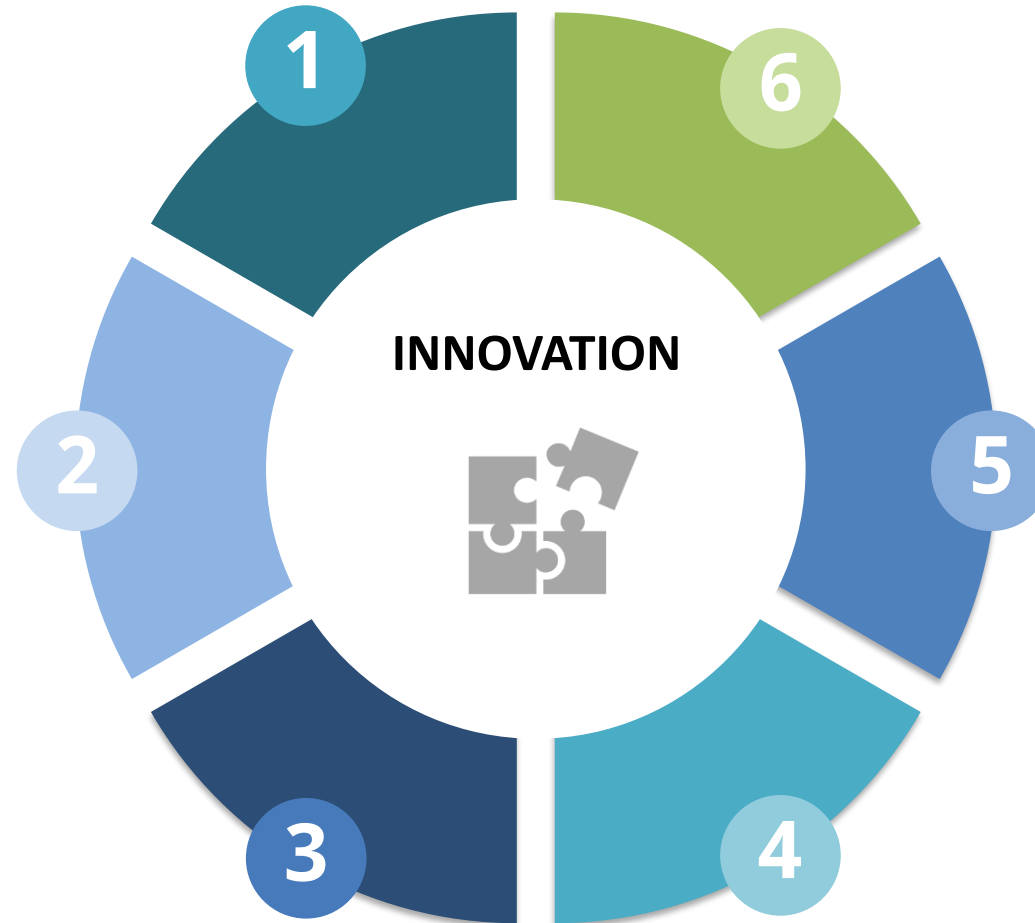
Hygiene measures should be adopted at the individual level and specific measures to be implemented at all the spaces and surfaces where in the occupants are likely to come in contact.

People transit

Create awareness about the COVID 19 amongst all the occupants and encourage them to take measures to protect themselves during their transit.

Water and plumbing fixtures

Specific measures for reducing the spread of infection through water and related plumbing fixtures before starting and during the operation of the building.



IGBC AP

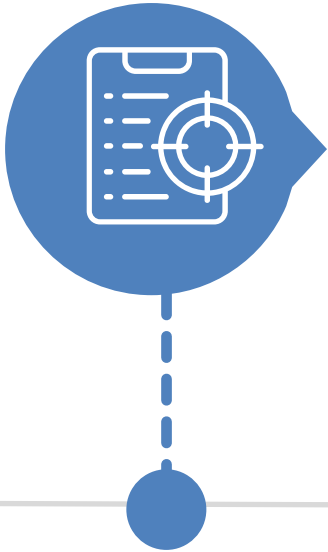
Support and encourage involvement of IGBC Accredited Professional in green building projects, so as to integrate appropriate design measures and streamline the certification process.

HVAC and related equipment

HVAC system cleansing protocol before and during operation and maintenance of a building

Measures at construction site

Extreme care needs to be taken to protect workers from COVID 19. Create awareness amongst the workforce about COVID 19 and sensitize them about the measures that need to be followed to protect themselves.



TRACKING ENERGY CONSUMPTION

- Annual Energy consumption trend analysis
- Annual renewable energy generation
- Cost investment and savings
- Devising methods for further improvement



TRACKING WATER CONSUMPTION

- Annual Water consumption trend analysis
- Cost investment and savings
- Devising methods for further improvement



TRACKING WASTE DIVERSION

- Annual waste generation trend analysis
- Annual waste segregation and diversion trend analysis
- Devising methods for further improvement



TRACKING GHG EMISSIONS

- Transport survey from occupants,
- Tracking Scope 1, Scope2, scope 3 GHG emissions as applicable
- Device methods for improvement



EXPERIENCE ENHANCEMENT

- Regular online occupant feedback and survey system.
- Trend analysis for IAQ

THANK YOU

Presentation by: Ecofirst Services Limited: A TATA Enterprise

CONTACT DETAILS

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