

SUSTAINABLE URBAN REGIONS

NED University of Engineering & Technology



Final Year Project Showcase Batch 2019 Year 2024

Department: Architecture and Planning Programme: Architecture

Project Idea

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Biophilic design has the tendency to create restorative environment in office spaces which can improve the employee wellbeing.

Process

The study included a comprehensive literature review focusing on wellbeing, its types, and how it has evolved in modern times. It also explored theoretical studies of biophilic design, its evolution, and benefits, along with the impact of office environments on employee wellbeing. The next research phase involved collecting quantitative and qualitative data through surveys and interviews with office workers in Karachi, focusing on their experiences, comfort, time management for physical fitness, and perceptions of biophilic design. Additionally, the research examined case studies from global urban centers that implemented biophilic approaches to improve employee wellbeing and included regional case studies from South Asian urban centers to address climatic requirements for biophilic corporate offices.

The research phase guided the selection of a specific program aimed at designing a workspace for employees, focusing on providing essential spaces for restoration from the daily work routine, which can be naturally exhausting. The design program was developed based on the feedback from surveys that highlighted what employees desired in their workspaces and what is often lacking today. It also drew inspiration from international examples of workspaces that successfully integrated various elements to enhance employee wellbeing.

Outcome

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The objective was to create a healthy workspace where employees can enjoy their work environment rather than feel deprived by it. The study aimed to contribute to existing literature by focusing on Karachi as a case, exploring the design of office spaces within its context.

Evidence (Theoretical Basis)

Please provide the summary of the FYP instead of attaching the FYP report.

In 2010 WHO predicted that by 2020 mental health disorders and cardiovascular diseases will emerge as the leading categories of illnesses among workersi .It is well-established that a sedentary lifestyle, especially prolonged sitting, leads to more fatalities from diabetes, heart disease, and other diseases associated with inactivity than smoking does.

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Gallup's survey from 2014 reveals that a mere 32% of employees in America were actively engaged in their work. The situation globally isn't any more encouraging, with countries like China and Hong Kong reporting especially dismal engagement rates of 6% and 4% respectively. According to Gallup's research, the most significant drops in productivity are linked to employee disengagement. Further findings indicate that employees who are content with their jobs are 87% more likely to remain with their employers compared to those who feel disconnected from their work.

The presence of nature in workplace environments, from plants to views of natural surroundings, has consistently shown benefits such as increased productivity, creativity, and improved emotional and physical well-being. Global research involving 7,600 office workers across 16 countries reveals compelling benefits: environments featuring greenery and natural light are associated with 15% higher levels of employee well-being, a 6% increase in productivity, and a remarkable 15% boost in creativity compared to sterile office settings.



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The research phase underscored the significance of biophilic design in office spaces, demonstrating how it contributes to creating a healthy environment for employees and the added benefits for employers when their workforce is healthy. Consequently, this research culminated in a project that emphasizes designing a workspace integrating restorative spaces through biophilic design principles.

Sustainable development Goals

The project incorporates biophilic architecture **to promote good health and well-being (Goal 3)** by integrating natural elements such as plants, natural light, and water features within the workspace. These features are designed to reduce stress, enhance mood, and improve mental and physical health, leading to increased productivity, reduced absenteeism, and a healthier work-life balance. Restorative spaces within the design offer employees a break from their hectic routines, positively impacting their well-being.

Aligned with Goal 8: Decent Work and Economic Growth, the project provides a healthy and restorative environment that enhances employee productivity and satisfaction, contributing to better economic performance. This approach reduces healthcare costs related to workplace stress and improves employee retention, creating a more motivated and efficient workforce.

Supporting Goal 11: Sustainable Cities and Communities, the project integrates biophilic design to foster sustainable urban development by enhancing biodiversity, air quality, and overall sustainability. Vertical gardening is incorporated to maximize space for natural elements, creating green, resilient workplaces that contribute to sustainable urban communities focused on occupant well-being.

Competitive Advantage or Unique Selling Proposition

(Cost Reduction, Process improvement, Attainment of any SDG (Sustainable Development Goal), increase of market share or capturing new market or having superior performance over a competitor. In summary, any striking aspect of the project that compels the industry to invest in FYP or purchase it. Some detailed description is required in terms of how, why when what. You can select one or more from the following dropdown and delete the rest of them). Please keep relevant options, delete the rest of them, and correct the sequence

The project is centered on creating a workspace that enhances the wellbeing of all its users, including employees, employers, and support staff, by employing the principles of biophilic design. This approach integrates natural elements such as greenery, natural light, and water features into the built environment, seamlessly blending nature with the workspace. By incorporating these elements, the design aims to improve the overall experience for users by reducing stress, boosting mood, and enhancing mental and physical health. The workspace not only becomes a more pleasant and productive environment but also offers numerous benefits, such as increased productivity, reduced absenteeism, and improved job satisfaction. Ultimately, the project seeks to transform the traditional office setting into a restorative and inspiring space that supports the holistic wellbeing of its occupants.

Attainment of any SDG (e.g. How it is achieved and why it is necessary for the region)

(Goal 3) to promote good health and well-being Project focuses on the health of users by providing them an environment where they can work and also enhance their wellbeing

Goal 8: Decent Work and Economic Growth, the project provides a healthy and restorative environment that enhances employee productivity and satisfaction, contributing to better economic performance.

Goal 11: Sustainable Cities and Communities, the project integrates biophilic design to foster sustainable urban development by enhancing biodiversity, air quality, and overall sustainability.

Increased Productivity and Performance

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The project offers significant benefits by enhancing focus and concentration in the office. A quieter environment with smart acoustic design minimizes distractions, enabling employees



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to concentrate more effectively. Access to natural light and biophilic elements further supports energy levels, keeping staff alert and engaged throughout the day.

Additionally, the design boosts creativity and innovation by incorporating open spaces and collaborative zones that promote teamwork and spontaneous brainstorming. Natural patterns, such as fractals and spirals, are integrated into the design to inspire creative thinking and foster innovative problem-solving among employees.

Improved Employee Satisfaction and Retention

The project enhances job satisfaction by creating a beautiful and functional workspace that contributes to a positive work experience. The inclusion of wellness amenities, such as fitness rooms and relaxation areas, demonstrates that employees are valued, further elevating their sense of satisfaction.

Moreover, the well-designed and supportive environment reduces turnover rates, as employees are more likely to remain in a workspace that meets their needs and fosters a positive atmosphere. This leads to a more stable and committed workforce.

Enhanced Company Culture and Collaboration

The project strengthens team relationships by incorporating inviting spaces for collaboration and social interaction, fostering a sense of community among employees. Shared areas promote inclusivity, helping everyone feel connected and that they belong.

Additionally, the emphasis on wellbeing aligns with modern values, enhancing a positive company culture. This focus not only attracts like-minded talent but also reinforces a supportive and engaging work environment that reflects the organization's commitment to its people.

Enhanced Brand Image and Competitiveness

The project enhances the attraction of top talent by offering a modern office design that appeals to professionals who prioritize well-being and work-life balance. A workspace that visibly values employee wellness helps build the company's reputation as a desirable and competitive employer in the job market. Furthermore, the project positively influences client perception; visitors experience an environment that reflects innovation and a commitment to quality, boosting the company's brand image and reputation as an organization that cares about its people.

Target Market (Industries, Groups, Individuals, Families, Students, etc.) Please provide some detail about the end-user of the product, process, or service.)

The building primarily serves employees of a software company, offering a well-designed office that fosters collaboration, innovation, and productivity. It incorporates biophilic design and restorative spaces to enhance employee well-being and job satisfaction. Additionally, coworking areas attract top talent, support dynamic idea generation, and provide a professional setting for client interactions, boosting the company's reputation and appeal to stakeholders, including potential hires, clients, and investors.

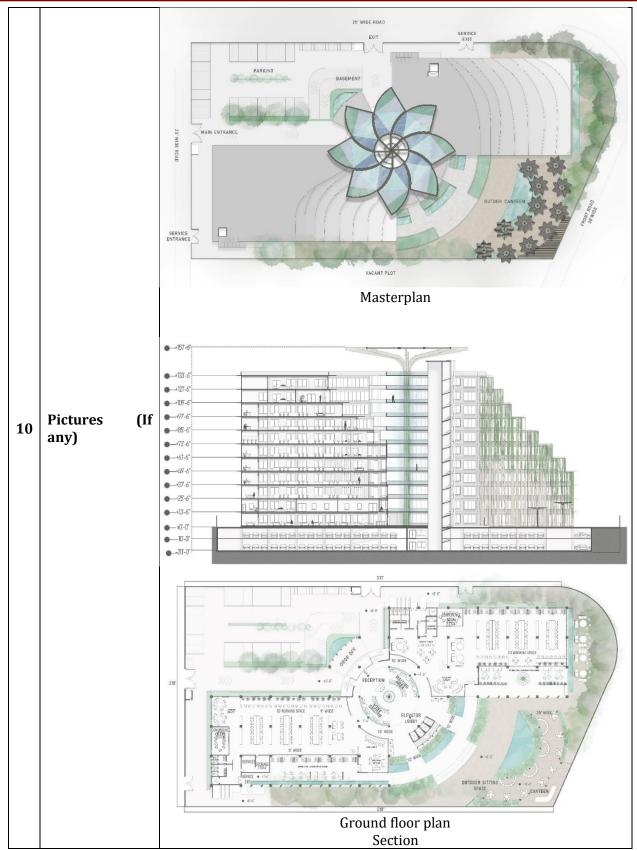
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¹ World Health Organization. (2010). *Global status report on noncommunicable diseases,2010*. Retrieved from http://www.who.int/nmh/publications/ncd report full en.pdf