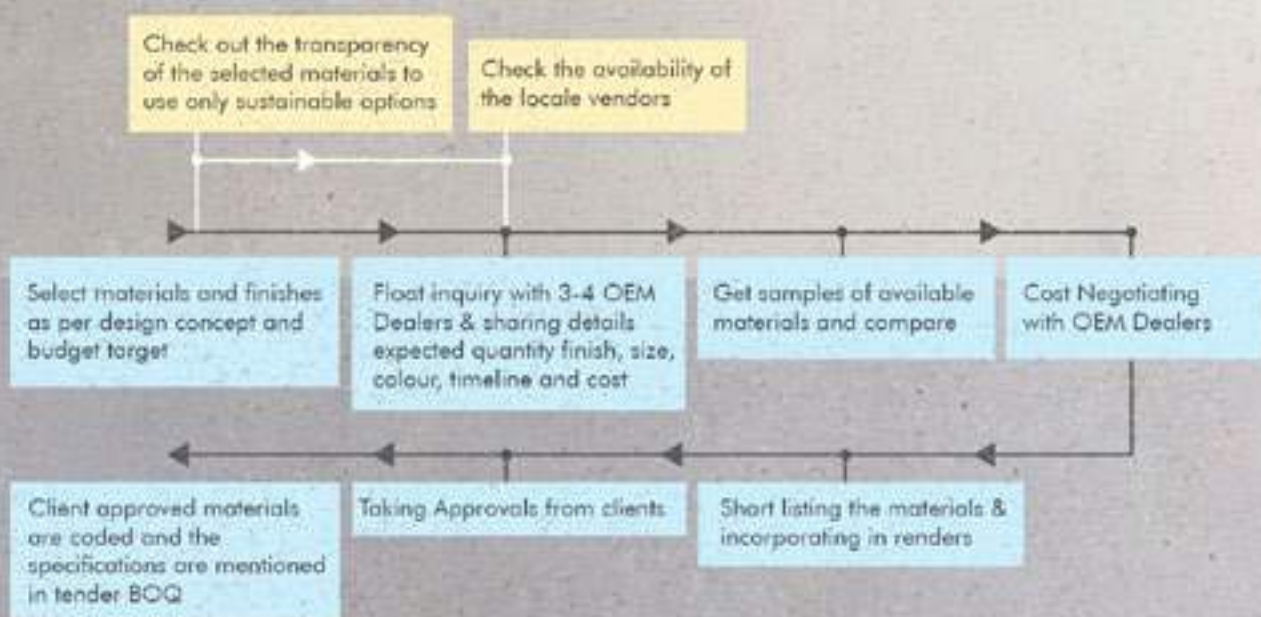


Why **Material Matters** In Workplace Design?



Materials and finishes are the core of design that can influence the environment and even the occupants. In workplace design, materials are like the promoters of design that give meaning to themes and concepts. While materials are usually associated with the look of a place, they are, in actual, the influencers of mood, health and productivity in workplaces. There are several factors on which designers and architects choose materials in a project. And their choices may depend upon availability, cost, aesthetics, maintenance etc. However, one of the top factors is wellness. Materials are found in every corner of the workplace. Be it the flooring or the artefacts, almost every corner exhibits materiality and finishes that are crucial in workplace design and in employee wellbeing.

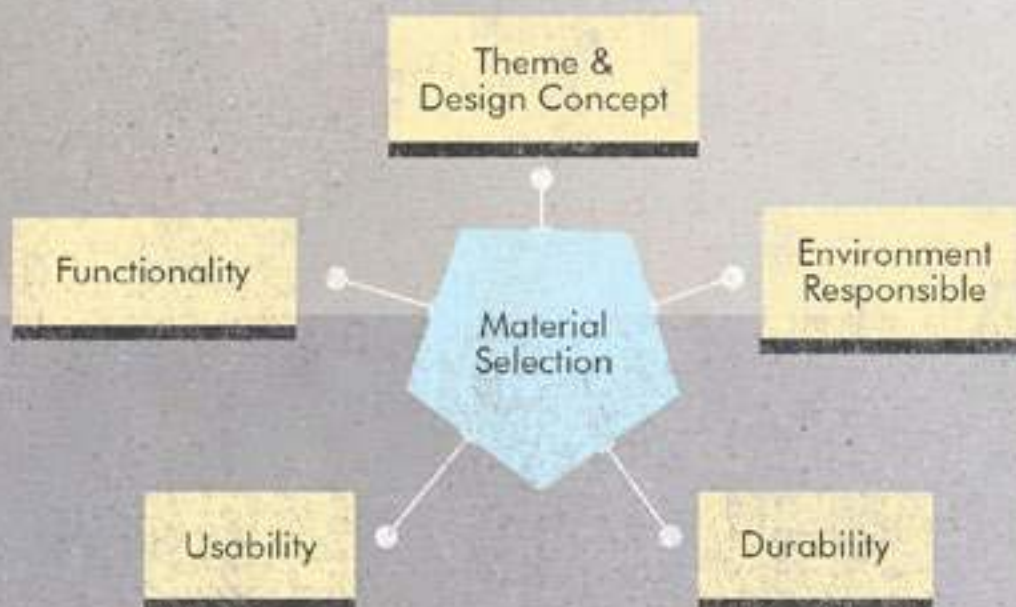
Here's how a general material and finishes selection occurs in any project



The process flow in blue is usually followed for material selection; however, while considering material sustainability, there are two important steps (marked in yellow) that must be included.

But simple as it sounds, the process of material selection, especially choosing the sustainable options, goes through a series of considerations that designers need to strictly follow. Although largely depending on the design concept, materials in a workplace design project are also selected based on their impact on the following parameters:

a. Emotions: Materials and finishes can greatly affect the mood and emotions of the users. Besides the functional and visual roles, materials are found to evoke positivity, dullness and even stress among the users. This makes the choice of



materials so crucial, especially for office interiors that tend to affect many users. For example, smooth textures reflect light that makes places look spacious where people feel liberated, whereas the use of rough textures make the place feel cozy and comfortable.

b.Functionality: Designers also go for material selection, based on their role and functional aspects. Like, the use of glossy materials on tiles may look posh and glamorous; however, they won't be safe for people in the office, specifically for the users in heels and slippery footwear. Similarly, travertine tiles may look gorgeous but they are not preferred, as they need regular maintenance.

c.Health: Another aspect where material choice directly impacts is the health and wellness of the users. With the recent pandemic, health consciousness of employees is becoming the topmost priority for workplace designers. Therefore, material selection is largely based on its effect on human health. A research led by Mount Sinai School of Medicine in New York found 167 chemicals, pollutants and pesticides in the urine of nine Americans, who were not associated with any chemical job or lived near any industry. The presence of such chemicals is believed to be extracted through different sources that include their offices too. With people spending most of their time at work, designers need to take care of the chemical content of the materials used in the workplace design. This means that the materials and finishes in workplace design need to be evaluated fairly to be sure about the health factors involved.

d.Environment: While good-looking places have their appeal, a “good-feeling” place stands stronger. That is why designers are now adopting sustainability as the prime criterion for material selection in workplace design. Using environmentally responsible materials and finishes can protect the health of the users as well as the global ecosystems. For example, using agricultural materials to build interior wall systems or using agricultural waste products for construction materials can immensely help in keeping the eco-friendly goal in check.

e.Durability and cost: Material selection also greatly depends upon its reliability and cost. Most of the workplace design projects come with a budget that needs to be followed. Hence, designers go for the longevity of materials, as well as the cost, to make sure the designs stand through time and are affordable for the clients. However, cost becomes a negotiable element if certain materials and finishes fulfil the other factors that are mentioned above.

Healthy Materials & Workplace Sustainability

While “Green Design” is appreciated, it’s still not a part of the design code. This is mostly because healthy materials and finishes cost more and are also quite difficult to arrange in a short period of time. Therefore, “Green Design” remains to be a luxury and an extra effort instead of a standard rule. But, with the advent of a pandemic, this attitude may change and finally, there may be a strict universal code for healthy buildings.

But what do healthy materials refer to?

Healthy materials and finishes are products that have less or no hazardous effect on human health. These materials are also responsible towards the environment and help in promoting a healthier space that doesn't promote human connection with unnecessary chemicals. There are several certifications that categorize construction and design materials into safe and unsafe sections with respect to their effects on human health.

The AIA in their 2014 Annual Report recognized the impact of building materials on the environment and human health before, during and after they are used. The AIA hence passed the statement that urges architects to use materials that are committed to public transparency.

Human body attracts chemicals through several processes like skin contact respiration. David Cordell of the global architecture firm Perkins noted that in umbilical cord blood samples, 287 chemicals were transmitted from the mother to the baby-with 257 of these being commonly found building substances, such as flame retardants, wood preservatives and adhesives.

So, just like the labelling certifications for food products, the building materials must abide by transparencies enlisted by labels like the HPD that help us avoid products with harmful chemical contents. These protocols are intrinsically followed in projects that are under WELL or LEED certifications. However, all projects should start adopting at least the basic health and sustainable rules for material selection.

Key Features in Selecting Materials

Besides the content check for the materials, other features can help in selecting the best sustainable materials for any project. Considering a few key features can help attain the bigger picture of sustainability.

- *Designers should encourage obtaining material resources from nearby or locale vendors. This way, the materials are manufactured locally and hence, no need to spend time and efforts in ordering them from other places.*
- *Using materials that are recycled or using reclaimed materials can also be a great step in protecting the environment.*
- *If using wood, it is advisable to go for FSC sources so that you know the wood that you are using hasn't impacted any forest.*
- *Selecting the materials that have the lowest effects on human health; for example, using environmentally friendly ceiling tiles instead of PVC materials.*

A Simpler Way of Choosing Materials in Workplace Design

We all know how materials influence the look and feel of a place. But, they can also directly impact productivity among employees. Some studies even show how healthy and sustainable materials can reduce employee stress at work. [1] Several other pieces of research have also indicated that workplaces with sustainable design elements can raise employee productivity by up to 15% annually. And a mere 1% increase in productivity can be worth as much as \$3 per square foot to a company annually, or \$600 to \$700 per employee per year. [4]

In simpler words, choosing natural materials and avoiding processing and synthesizing techniques on materials can elevate the eco-friendly status of any workplace interior, which in turn can benefit the employees.

Adding materials such as wood, wall gardens, bamboo flooring, natural light, stone walls and slate finish to different areas of a workspace can add a homey vibe to the place while making it healthy for the occupants. Natural materials can also be included in fabrics and patterns of different design elements to make the workplace organic. Even the simple addition of carefully textured fabrics for sofas and carpets in the workplace can hugely impact the human minds. It is found that people admire complex patterns and textures that are close to nature. This is why there's more and more demand for using biomimetic forms as design elements.

Materials constitute an integral part of design concepts as well as branding for companies. Therefore, using them together and including the safety material protocols can contribute to the improved cognitive and physical wellbeing of employees that eventually enhances their productivity. Materials and finishes can also improve the emotional wellbeing of users by creating a calming effect that cancels stress and anxiety. A direct impact can be seen from paint colors and finishes that can make the users feel vibrant, happy, light or even dull at times. Although color schemes largely depend on a company's branding and corporate guidelines, there's always room to add color choices that can impact a work environment.

The bottom line is, therefore, to smartly and carefully choose materials for workplaces. Besides their active impact on human health through different types of chemicals, materials also have a deep clandestine effect on human brains and bodies. So, material selection matters as it influences design which immensely influences a workplace's vibe and wellbeing.

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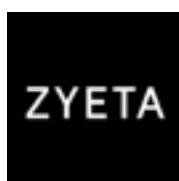
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