

Sustainable Design Collective - India

Tuesday 27th September 2022 at Vitra/Kvadrat showroom, Bengaluru

Core Team:

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Purpose:

A 'think tank' group made up of professionals from the A&D, IPC and developer community in Bangalore, committed to acting as a collective within the workplace design community to identify developments and 'best practice' relating to sustainability. This report highlights some of the points raised during the two-hour discussion.

Meeting 3: Driving Circularity

The 3rd meeting aimed at taking a deep dive into circular design and all that it entails.

"The circular economy is an evolution of the way the world produces and consumes both goods and services. The circular model redefines the economy around principles of designing out waste and pollution, keeping products and materials in use for as long as possible.



Equally vital are restoring the world's wilderness, building regenerative agricultural systems, using renewable materials, and shifting to renewable energy sources."

Places:

In the Indian context, over the last few years, there is enhanced awareness and knowledge sharing about sustainability. There is, however, a gap relating to reuse and refurbishment.

The main challenge remains to convince clients that Circular Design should be a default - cradle to cradle product checklist, modularity in the built environment, and how a client benefits from these measures. Currently there is a high cost attached to this which is becoming a deterrent. Unfortunately, clients are looking at what they are spending now and not how it can prove beneficial in future.



Does circular design mean modular design which can be then easily dismantled? Clients, such as Microsoft, Google, LinkedIn etc., have a need for modular meeting rooms but this need is stemming more from a shift towards future flexibility. The pandemic has forced clients to think about collaboration and meeting spaces with a fresh outlook and bringing about change from dry walls to curtains and moveable acoustic partitions. This could be a 'sweet spot' where modularity will also aid circularity as reducing the 'built' mass would lead to lesser unusable waste.

Construction waste is only 3% of overall waste generated in construction works for interior design. Duct work is the biggest component followed by gypsum works. Modular construction will also help in reducing waste.

LEED & WELL certifications unfortunately do not stress enough on points related to carbon emissions – it is easy to achieve a Platinum rating without touching upon these aspects.

Apart from office space, the building envelope is also seeing a post-pandemic change as occupiers are less willing to lease older structures. This provides an opportunity to refurbish and update the infrastructure.

Built architecture, based on local climate centric solutions, can create a 'sea change' in how the interior office can be designed. Technologies like UFAD (Under Floor Air Distribution), passive cooling, radiant cooling, need to be explored and advocated widely.

The reality is that the cost to achieve circular design goals with refurbished or upcycled elements including reuse of older furniture is far more expensive than a new fitout and contractors are not willing to step up for such projects.

One way to get client buy-in would be for carbon emission calculations for construction projects highlighted to clients. This will lead to awareness and acceptance of the higher costs entailed.

If client driven RFPs for building leases start including language of circularity, building developers would be forced to fall in line leading to a 'domino effect'. Lease terms should also have waste management clearly outlined so that clients are forced to rethink rather than just 'junking' older furniture and fixtures in older premises.

Technology is the fastest growing 'negative circular' element with global AV and IT mandates leading to a lot of e-waste.

Products:

Product companies, for example workstation manufacturers, should adopt credit systems where credits are awarded for recycling/upcycling a proportion of the overall newly manufactured products. Product companies with higher credits would be more attractive to clients wanting to achieve circular design goals.



On digging deep, none of the ubiquitous product companies, despite their claims on sustainability and with manufacturing and assembly factories in India, offer any viable avenue to provide for refurbishment or even 'taking back' their older products for recycling, as all recycling takes place overseas.

There are some modular and sustainable products, however costs are very high and again importing is also adding to the carbon footprint.

Kvadrat explained their approach to circular design - their woollen fabrics which are regeneratable at source itself, PET bottles which are recycled into fabric, and acoustic material which has recycled components. Modularity is also built in so that components are flexible to be dismantled, post fitted and moved to new premises easily. Kvadrat's 'Taking back' policy is available in certain sectors, but not currently in India.

India has always been a textile hub and the fashion industry is seeing huge developments in indigenous and sustainable natural fibre fabrics. However, in our corporate projects, we end up using imported fabric – how can we bridge this gap? Can we initiate dialogues with international fabric manufacturers for local tie-ups with all the international standards in place? Companies like Steelcase and Haworth are manufacturing their workstations in India, if fabric could get added to this, it would lead to a meaningful change.

People:

Hurdles remain of self-education amongst the architect community to clearly understand ourselves and then articulate to clients what we mean by circular design. On receiving a 'go-ahead', the exploration of products and product companies is a struggle as we have a very limited pool of vendors to choose from and it is 'easier' to go with a new fitout.

The aim should be creating a sustained effort of awareness amongst the design community, cultivate vendor and product manufacturers who can provide services of upcycling and sustainable disposing of furniture and furnishings. Every single organisation has net zero goals, so it should be easy to start engaging with clients and vendors alike.

Parallel Actionable Outcomes:

Identify Influencers and Knowledge partners who can speak to the Collective for deep diving into separate aspects like:

- HVAC Design for Net Zero projects
– McD Burl
- Sustainability Policy Influencers like
Environmental Design Solutions, Delhi
- Green Building Council India
- Nirmal Kishnani, NUS School Singapore
- Wilma Saahas, Zero Waste



Members suggested sessions which could be held virtually between the bi-monthly meetings to hear from the experts.