

Taipei 101 now lights its central lounge with 3D-printed lamps. Known as Sky Park, the shared area is a unique part of the first high-end commercial building in Taiwan and can now be known for being a part of the circular economy.

Background

Taipei 101 was once the tallest building in the world and the first green building outside of the United States to be awarded LEED V4 platinum certification by the U.S. Green Building Council. As the tallest office building in Taiwan, it has 120 top global enterprise tenants.





With the impact of the global pandemic in 2020, Taipei 101's management team saw an opportunity to bring back focus to ways in which to make their office space an environment that's healthier, conducive of cooperation, and more interactive.

After a year of research and testing with its corporate tenants, Sky Park was conceptualized as a community space with restaurants, cafes, services, and events to serve the more than 13,000 people who work in the building daily.



Solution

In collaboration with Signify Taiwan, Taipei 101 chose to replace conventional downlights with 114 3D-printed downlights and decorative pendants from Philips.

The 3D printing technology used to produce these luminaires enabled a customized and flexible design-led solution for Taipei 101. Manufactured with recyclable polycarbonate, these luminaires have a 47% lower carbon footprint than similar conventionally manufactured metal luminaires. This contributes to the reduction of carbon emissions during the production process.

The concept of circular economy was also taken into consideration. To ensure a more sustainable and environmentally friendly interior, all 3D-printed lamps used in the Sky Park are made from recyclable materials and can be re-created when they are no longer in use – that means they are returned, melted, and printed again using a new design, which plays a valuable role for Taipei 101 to ensure zero waste while keeping the space current. More importantly, nothing ends on landfills.

The Sky Park area at Taipei 101 is an iconic example of an office space that shows real implementation of circular economy in both construction and operational aspects.

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Benefits:



Sustainable solution

High quality downlights and pendant lights designed for circular economy. Printed with recyclable polycarbonate that can be re-used to further reduce CO2 footprint.



Easy customization and installation

The 3D-printed downlights and pendant lights are highly flexible as can be customized in diverse colors and textures. They are also very easy to mount.

3D-printed downlights' contribution to your sustainability goals

Reduce CO2 emissions



^{*}Impact Assessment Carbon footprint IPCC 2013 GWP 100

Data based on comparison of traditionally produced downlight using die casting with 3D printed downlight in polycarbonate. Data for other products will vary.

^{**} The usage phase, although having the highest impact over its lifetime, is excluded as it is the same for the two combined products.



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