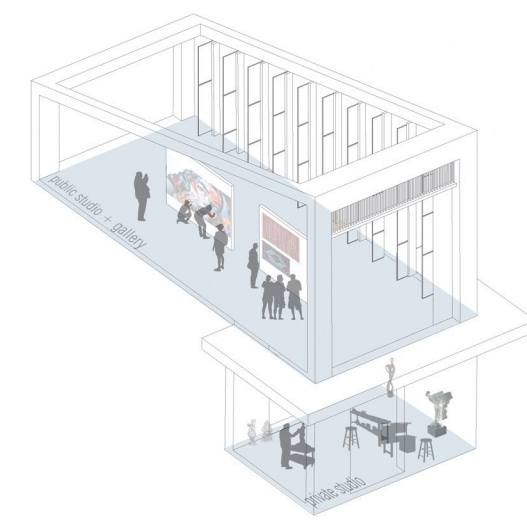


LUMINA PLEX

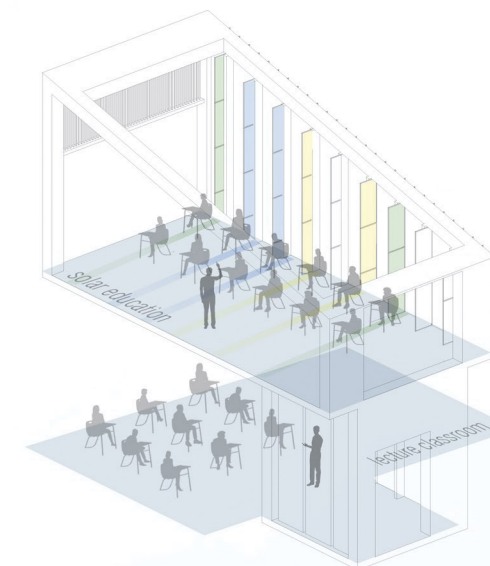
As a seaside attraction, St. Kilda represents an important subculture within Melbourne that deserves to be celebrated. Although its locale is ideal for bringing in locals and tourists alike, one of the largest concerns pertaining to the site is exposure to harsh sunlight. This project attempts to ameliorate this drawback by utilizing solar energy collection methods with an aesthetic layer.

Each building of the cultural facility has a "hanging pavilion" with a photovoltaic façade that functions similarly to a building-integrated array. Acting as a solar collector, each structure will celebrate a different aspect of the community, including food, art, and music. In addition to its bright color scheme influenced by the local Bohemian lifestyle, every panel is operable and can maximize energy production at nearly any angle.

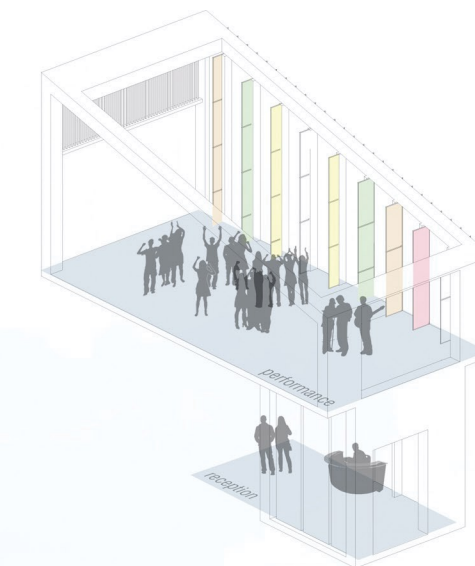
This is due to the usage of dye-sensitized solar cell (DSSC) technology, the color of each panel is determined by how much light is absorbed in any given day. The harvesting process is designed to mimic the biological phenomenon of photosynthesis, with colored dye in place of chlorophyll. Each façade will collect enough light to power the pavilions—and by extension the cultural facility.



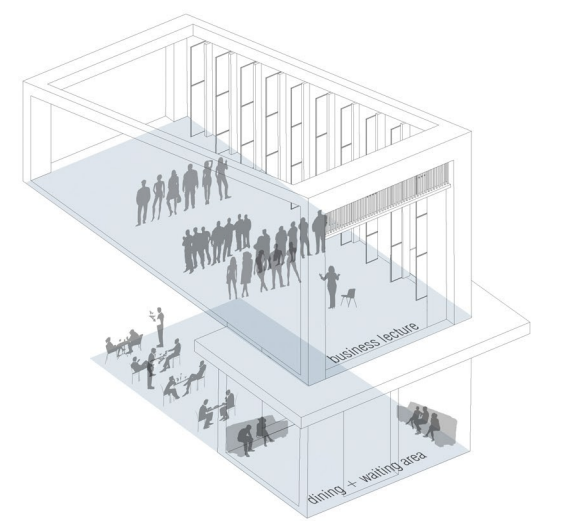
Art



Education



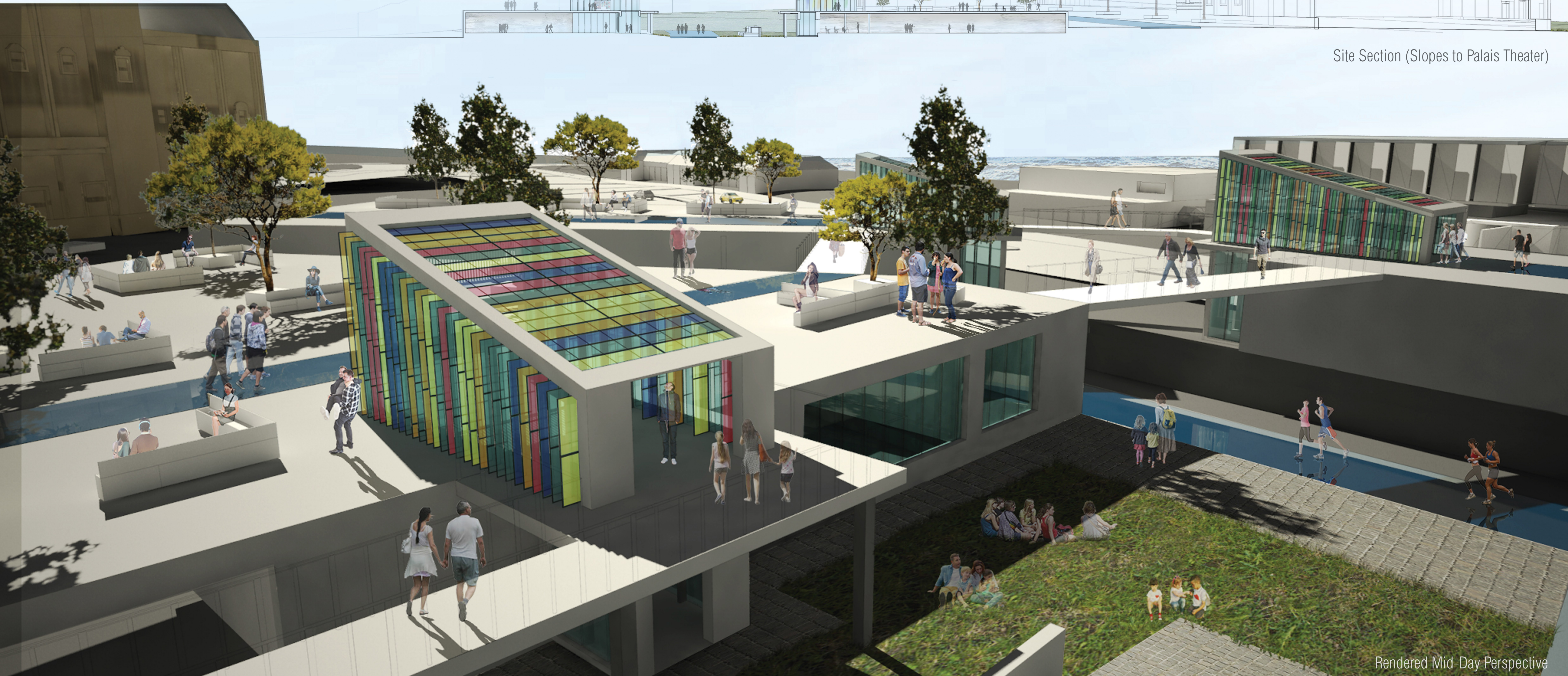
Music + Performance



Dining + Conference



Site Section (Slopes to Palais Theater)



Rendered Mid-Day Perspective