

DSID 130 Sustainable Design

The San Jose Story Map Kiosk/Display

The Objective

Design a public postcard **display/kiosk** for “*San Jose Story Map*” Project, a postcard submission competition led by SJSU, by leveraging **generative design** and various eco-design solutions. With the help of the Okala Practitioner Guidebook reduce the environmental impact of this display compared to the previous display by **50%**.

Previous Design

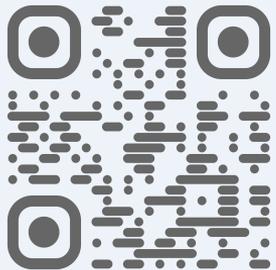
The previous postcard display named “Our Lives in this Place” was designed by Robin Lasser, Trena Noval, and Genevieve Hastings.

We will be using this design as a template to compare the Okala Environmental Impact Factor to.

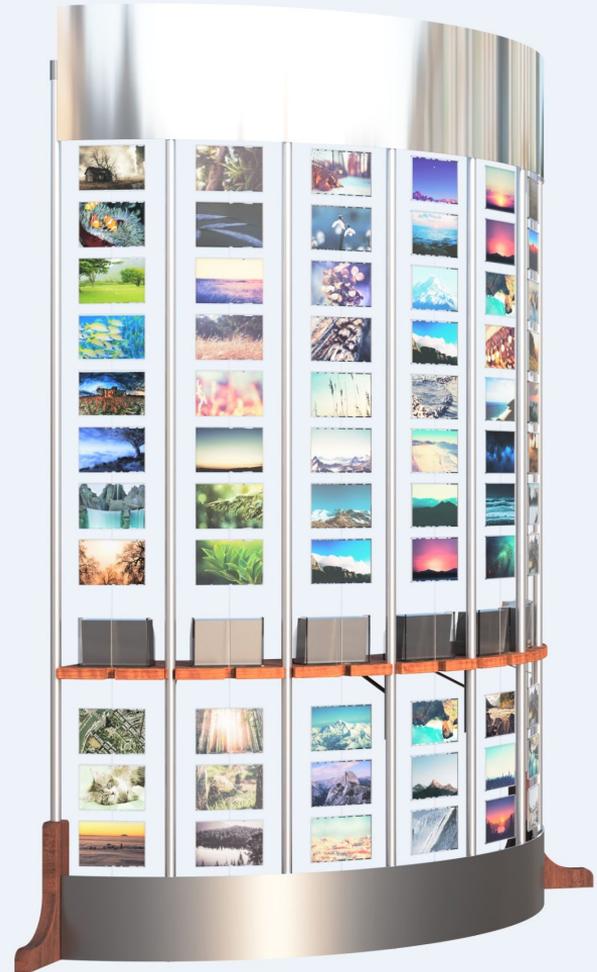


New Design

A postcard display with sustainability and modularity in mind. Every component of this display is made with recycled or reclaimed materials and the joint components were designed with the help of generative design.



Click or Scan Me For 3D Model

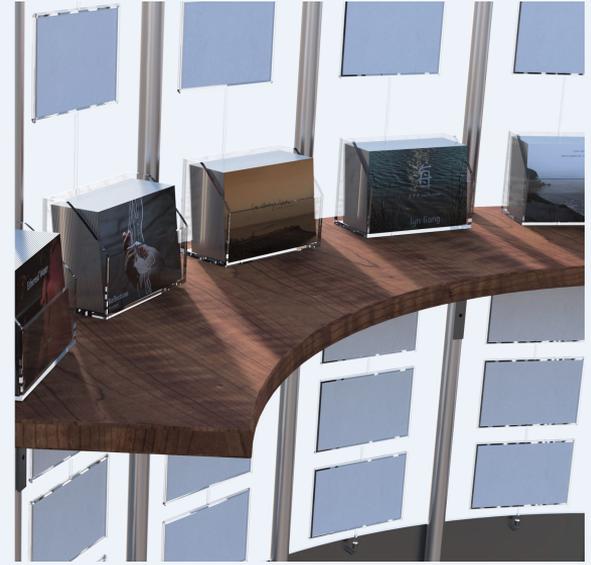


The postcards are showcased in acrylic casings hung on wires that can be seen from both sides for a more dynamic viewing.

Postcards swivel in acrylic casings on tension wires.

Acrylic postcard boxes for distribution and submission.

Supports are extruded recycled aluminum.



Top and bottom sheet metal is reclaimed local manufacture waste.

The design is compliant with ADA (Americans with Disabilities Act) standards.



LCA+SBOM

Utilizing the Okala Practitioner and Okala Impact Factors, we can calculate the environmental impact and Life Cycle Assessment of both kiosk designs. We do this by breaking down and organizing the material amounts, manufacturing processes and energy costs (Okala Factor Points) of our kiosks and we end up with an estimated total impact cost number (Okala Impact Points).

Generally, the lower the number, the better for the environment.

Example: Stainless Steel

| Material | Amount | Unit | Pounds | OKFP /unit | OIP |
|-----------------|---------|-------|----------|------------|--------|
| Stainless Steel | 15875.7 | grams | 34.92654 | 13 | 454.04 |

Amount in grams -> to pounds x Impact Factor Points = Total Impact Points

LCA+SBOM

Our Lives in this Place

| | |
|---------------------|----------------|
| Total Impact | 1050.13 |
|---------------------|----------------|

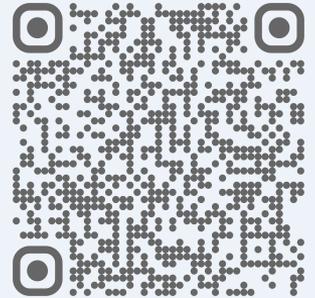
San Jose Story Map

| | |
|---------------------|---------------|
| Total Impact | 644.98 |
|---------------------|---------------|

| | |
|-----------------------|--------------|
| Percent Change | 47.8% |
|-----------------------|--------------|

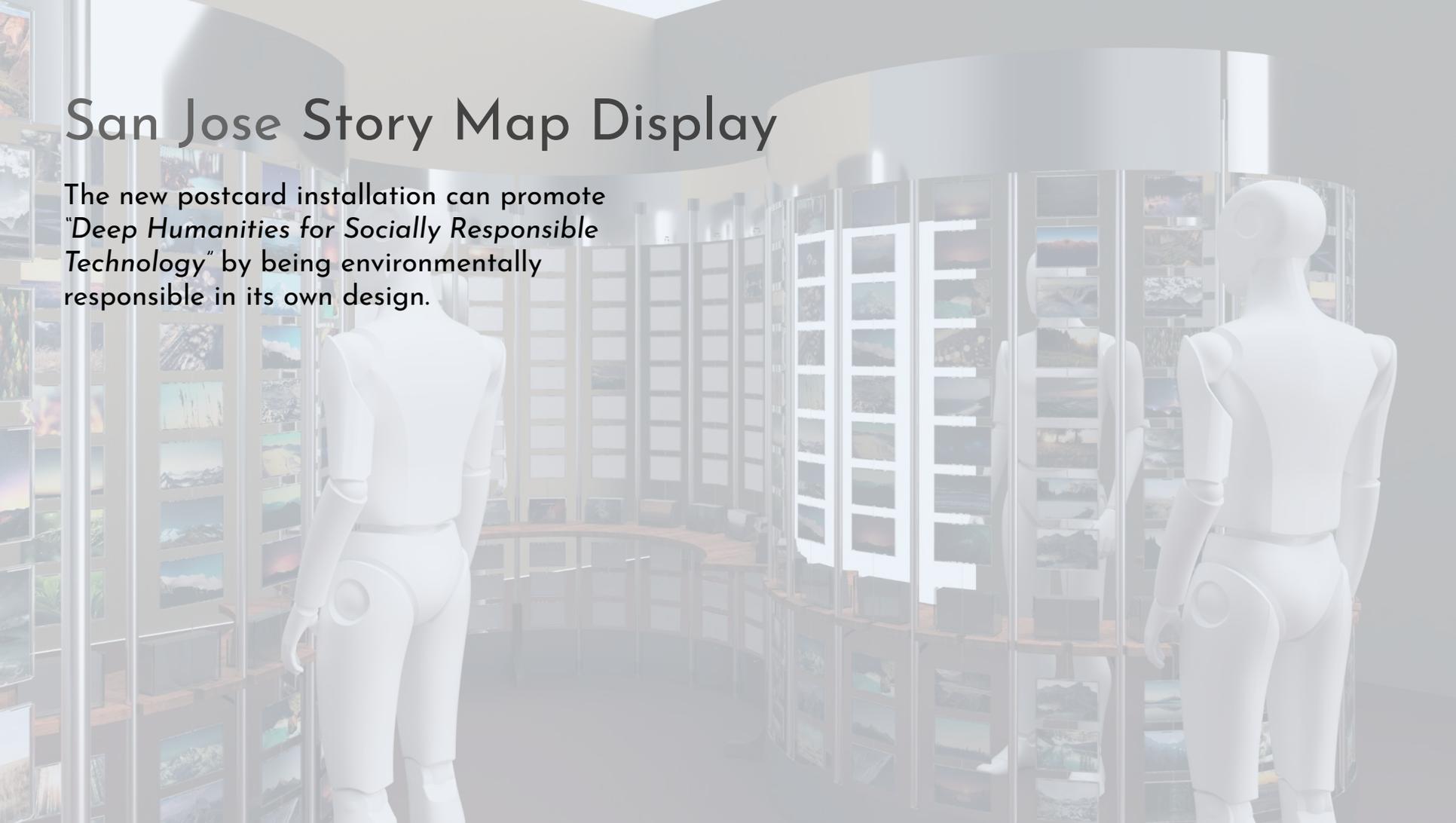
Designing with sustainability in mind, and being conscious of what materials I use, I was able to reduce the environmental impact of the kiosk by almost 50%.

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LCA study



San Jose Story Map Display

The new postcard installation can promote "*Deep Humanities for Socially Responsible Technology*" by being environmentally responsible in its own design.



Thank You