

# Case Studies

## Museums & Cultural Centers



## Turning Solar Innovation into a Living Exhibit at Children's Discovery Museum



*Children's Discovery Museum of San Jose, CA*

Innovation often comes from reimagining existing technology – like solar panels. At the Children's Discovery Museum of San Jose, exhibits help children build curiosity, creativity and experimentation skills for future success. The SmartFlower beautifully embodies this, blending photovoltaic technology with robotics and nature-inspired design.

The installation of SmartFlowers, at the museum's outdoor exhibit Exploration Portal, marks a vibrant intersection of sustainability, education, and innovation. Since its unveiling, the SmartFlowers have produced clean, renewable energy directly on site, demonstrating solar power in action for thousands of children, parents, and educators each week. With its kinetic motion and sculptural form, the SmartFlowers capture attention instantly and provide a visible example of biomimicry and sustainability in action. The system's self-cleaning and self-closing features inspire conversations about STEM, energy efficiency, and the future of clean technology.



The SmartFlowers also contribute to the museum's broader sustainability goals, reinforcing its commitment to the community and environmental leadership. As a public, highly visible installation in Silicon Valley, it aligns with regional goals around clean energy innovation and climate action, and serves as a living example for schools, companies, and municipalities exploring ways to integrate sustainability into their spaces.



It's not just a solar system, it's a storytelling platform that merges art, science, and sustainability into one striking display. Ultimately, the SmartFlowers at the Children's Discovery Museum of San Jose stand as a model for how educational institutions can use technology to inspire and inform. It transforms an ordinary visit into a moment of discovery, empowering young minds to imagine a cleaner, brighter future powered by innovation.

## An Iconic Platform for Sustainability Leadership in Oman with SmartFlower



### *Global Sustainability Academy in Oman*

Oman Cables Industry unveiled its Global Sustainability Academy featuring Oman's first SmartFlower. The Academy is also the first of its kind in Oman and was built to spark innovation and inspire the next generation of leaders driving the country's future.

The Academy builds on Oman Cables Industry's long-term strategy by providing an iconic platform to exchange ideas, deepen expertise and put sustainable solutions into practice. The initiative also significantly contributes to the country's transition to sustainable energy and economic diversification.

H.E. Dr. Saleh bin Said Masan, Undersecretary of the Ministry of Commerce, Industry and Investment Promotion for Commerce and Industry, said: "The Global Sustainability Academy represents the kind of partnership that translates national vision into practical progress. By embedding sustainability and innovation within industry, it strengthens the foundations of Oman's knowledge-based economy and builds the capabilities our future industries will rely on."



In addition to its SmartFlower educating visitors on solar energy, the Academy also features renewable energy zones and circular design materials – creating a space that reflects Oman's vision for a more sustainable future. These features will complement the Academy's programs, such as She STEMS, Build the Future and Kids in STEM, by providing hands-on learning demonstrations and environments for initiatives like innovation and climate action.

## Anaheim's Commitment to Sustainable Progress Featuring SmartFlower



*Sustainability Education Center, Anaheim, CA*

Anaheim celebrated its newest facility, the Sustainability Education Center (SEC) with a ribbon-cutting ceremony featuring its SmartFlower at the heart of the outdoor educational garden. Elected officials and students from neighboring schools joined the ceremony and each spoke about the importance of building a sustainable future.

The facility provides regional, educational, and workforce development resources to the local community that educates residents on the benefits of renewable energy, electric transportation, and water technologies, and prepares students for sustainability careers in STEM-related fields. In addition to the facility's SmartFlower and other interactive displays, Anaheim SEC will demonstrate new technologies, host seminars, provide job training, and provide educational programming to its visitors.

## Smartflowers Come into Bloom at the Franklin Park Zoo

Zoo New England is an organization dedicated to creating engaging experiences to inspire people to protect and sustain the natural world for future generations. It is no surprise, then, that it installed two Smartflowers at its Franklin Park Zoo location! The flowers are located near the *Butterfly Hollow* and *Giraffe Savannah* exhibits and all generated energy goes back to the grid. With an estimated 10,000 kilowatt hours a year being generated, that's enough to power the zoo's carousel and new golf carts!



The organization received great support from Green Mountain Energy Sun Club, who made the purchase of the Smartflowers and two golf carts with solar charging systems possible. “We really liked the eye-catching look of the Smartflower and how it is self-contained. It is a wonderful opportunity to highlight solar energy and educate guests about its importance,” said Robert Chabot, the Chief Operating Officer at Zoo New England.

As a conservation organization, Zoo New England always makes sustainability one of its priorities when undertaking new projects. Its cell phone recycling and rain garden initiatives are some of the many ways the zoo is committed to preserving the Earth

and educating its guests. The Smartflowers are a welcome addition to the zoo's sustainability initiatives, providing guests with a visual representation of the zoo's dedicated conservation and sustainability work.

"The Smartflowers have become a natural photo opportunity and focal point for our guests. Many guests stop to take photos, and we hope that they are sharing these photos and our commitment to sustainability on their social media," said Robert Chabot. With its beautiful flower-like appearance, innovative sun-tracking technology, and striking green wrap, it is no wonder that guests are stopping to look at the Smartflowers. A sign with further information on how the Smartflowers work sits between the two flowers to educate guests on the importance of renewable energy.

"Conservation is a cornerstone of our mission, and we are committed to having a meaningful impact in the conservation of wildlife and habitats. The Smartflowers align with our mission perfectly and presents us with the opportunity to talk about the importance of sustainable practices with our guests. We hope that their experiences at the Franklin Park Zoo educate and inspire them to take an active role in ensuring a healthy, thriving planet for generations to come."



## Can a Smartflower Installed at a Kansas Zoo Help Primates in Madagascar?



A Smartflower can now be spotted at the Lee Richardson Zoo in Garden City, Kansas, and is the very first in the state! The flower, installed earlier this month, is located directly behind the Primate Forest – Lemurs! exhibit in the zoo and provides power to the primate building. Any excess electricity produced is redirected to the nearby Flamingo Habitat. Primate Forest – Lemurs! and the Smartflower are now open to the public and act as a visual representation of the strong relationship between renewable energy and wildlife conservation.

One of Lee Richardson Zoo's main goals is to connect their visitors with wildlife and to inspire an appreciation and understanding of the natural world through conservation, education, and engagement. With [climate change threatening 40% of the world's primate population through extreme weather events](#), the zoo needs to educate its visitors on the links between climate change and habitat loss. That is why they are creating education and conservation programs that feature the Smartflower. One upcoming program, titled 'Story Time', involves reading children's books to families at the zoo by the Smartflower, and will include a take-home activity focused on renewable energy for families to do when they get home.



“We wanted something that would be a central component of our conservation message and could also be easily viewed by our guests. Our goal is to provide our guests with knowledge about renewable energy and wildlife conservation. This way, they can make sound decisions about mitigating climate change,” said Max Lakes, the Deputy Director of the Lee Richardson Zoo.

With the Primate Forest – Lemurs! being a new exhibit and the central hub of the zoo, the Smartflower gets ample visitors every single day. An interpretive graphic and power production meter accompanies the solar system, allowing for visitors to understand how the Smartflower operates and see its energy production statistics in real-time. The zoo is currently designing a survey on the Smartflower to gather more data about its public impact. They also plan to engage its followers on social media with future posts on the impact of the Smartflower and their other new habitats.

“When our visitors learn that our Smartflower follows the sun, they like to look at the unit and come back in a few hours to observe how the position of the panels has changed. It’s an eye-opening experience for them, noticing that difference,” said Keo Bounpaseuth, the Electrical Engineering/SCADA Specialist with the Garden City Public Utilities.

Planting the very first Smartflower in Kansas at Lee Richardson Zoo started with a simple idea: pairing the new zoo habitats with a renewable energy project. The zoo was initially unsure what the direction of the project would be until Mike Muirhead, Director of Public Utilities in Garden City, introduced the Smartflower to them. The rest of the project came together after that.

“As a member of the Association of Zoos and Aquarium, we have a Green Committee that meets to work on making the zoo as sustainable as possible. Renewable energy is central in helping save wild habitat and allow animals a place to live. We hope our Smartflower inspires people to think about the global impacts of climate change on wildlife and act to mitigate it. We are very excited about all the ways we can capitalize on how amazing the Smartflower is and can’t wait to show everyone our new source of solar power,” said Deputy Director Max Lakes.

## Detroit Zoological Society



*Detroit Zoo, USA*

### **“A really powerful tool.”**

“It’s really important because it not only generates electricity, but it also stops a lot of visitors who are going ‘what is that?’ and it gives us a chance to have a conversation about renewable energy. We think both because of what it actually generates and because of the interest and educational value, it’s a really powerful tool.”

– Ron Kagan, CEO of the Detroit Zoological Society