



## Visual Storytelling in Small Spaces: *ARNOLD O. BECKMAN AT WORK*



**BY KAERIE RAY** In the early 1900s, a blacksmith from a farming community in Illinois converted a tiny corner of his backyard tool shed into a makeshift laboratory. The inspiration for the project was his son's newfound interest in chemistry. Not much in terms of square footage, the sectioned-off area still had plenty to offer young Arnold O. Beckman. At ten years old, he organized the open shelves with solutions and equipment, designed experiments, and conducted his own research at the workbench. Seemingly without saying a word, Beckman's father had asked the question, "How can a small space be used for maximum effect?" Fewer than twenty years later, he got his answer. The micro-

scopic backyard laboratory that gave Arnold one of his first glimpses into the scientific universe inspired him to pursue a PhD in photochemistry at the California Institute of Technology and kickstarted a scientific instrumentation company that would later take the Beckman name global.

Arnold O. Beckman was a twentieth-century scientific instrumentation pioneer whose inventions transformed laboratories and whose philanthropic contributions continue to benefit young researchers throughout academia, industry, and medicine. Born in 1900 in a rural Midwest town, he traversed the country, obtained a doctoral degree, launched a Southern California-based company that achieved international renown, and played an important role in the leadership of a namesake foundation for most of his 104 years. While at one point Dr. Beckman's company was the largest employer in all of Orange County, California, he did not experience the kind of recognition that might be expected of such a successful entrepreneur and active philanthropist. In fact, years later nearby schools did not even teach about this

inspiring local who went on to work with five U.S. Presidents, established multiple state-of-the-art research institutions across the nation, and whose foundation has to date provided more than \$700 million in grants and scholarships to undergraduates, postdoctoral fellows, and young investigators.

Like Dr. Beckman's small backyard laboratory, the *Arnold O. Beckman at Work* exhibit explores the utility of small space design as a special installation set within the Revolutionary Tools Exhibit Hall at the Beckman Center venue in Irvine, California. Dr. Beckman envisioned this facility as a center that would enable discussions surrounding science and technology, as well as activities and conferences. The Irvine



*The Beckman family at home in Newport Coast, California.*

Company donated the land, and the Beckman Center was built with a grant from the Arnold and Mabel Beckman Foundation. The Revolutionary Tools Exhibit Hall tells the story of Arnold and Mabel's scientific and philanthropic contributions, with a focus on early model instrumentation displays. The Center's approximately 20,000 annual visitors are predominantly comprised of university students and faculty in the sciences, research-related organization members, past and current Beckman employees, and the general public. The project challenged the curatorial staff to re-evaluate the small space as an opportunity for visual storytelling in communicating history, and to consider ways that the exhibit could meaningfully engage visitors with learning moments that touch on this remarkable man's legacy using

personal stories and archival objects.

*Arnold O. Beckman at Work* features two dozen objects, images, and documents arranged within just 350 square feet, with vintage furnishings and desktop accoutrements to recreate the original office used by Dr. Beckman throughout the mid- to late twentieth century. Extending beyond simple planning of the footprint, design of this special installation focused on the "small spaces within the small space," such as the desk drawer which reveals a curated mini collection of artifacts with personal significance to Dr. Beckman. This unconventional, hidden display lets visitors discover another layer of the Beckman story within a modest space.



Right: *Interpretive space in the Center's exhibit hall.*



Interpretation and artifacts in the venue connect today's scientific researchers to the Beckman story.

visitors back in time and afford an opportunity to sit behind the desk where decisions with generational significance were made. The exhibit strives to educate visitors of all ages about Dr. Beckman's substantive contributions to science and research.

The small exhibit space measures just 16.8 feet wide by 20.8 feet long and has 10-foot-high ceilings. Along with the tile floor and paneled ceiling, its three walls create an open box shape that faces the building's main exhibit hall like a

The key experience of the exhibit is a re-creation of Dr. Beckman's office that enables visitors to briefly step into his shoes and view a part of what was his everyday world. Vintage furnishings and reproduction images, objects, and documents transport

diorama. The first vignette that visitors encounter is located at the entrance to the exhibit and includes a title panel in the form of poster signage, with a QR code for access to additional resources, and a tray holding giveaway posters of Dr. Beckman and his *Seven Rules for Success*. This vignette maximizes a very small space by employing a vertical orientation and using the QR code to offer more content than the display area of the sign would normally allow. The base of the aluminum stand takes up less than a square foot, the sign frame is nearly flush to the wall, and the entire unit is six feet tall.

Upon entering the exhibit, visitors face the second vignette: a black-and-white photographic series that follows a 90-degree turn to fill one of two corners within. The series tells the story of the various locations of National Technical Laboratories/Beckman Instruments from the 1930s to 1960s and is anchored by a three-panel reader rail that traces the same path. The snap frames hold twelve linear feet of full-color printed content with an illustrated timeline spanning four decades as well as narrative text, charts, and photographs that tell the story of how Dr. Beckman's work helped meet the critical infrastructure needs of researchers and supported the early careers of rising scientists. An awardee spotlight on

recent Nobel Prize Laureates rounds out this section and brings it into the present day.

The end of the reader rail points visitors in the direction of the remaining three vignettes. The first fills the other corner of the space with a framed canvas painting by French-Canadian artist Jean Guay and a commemorative pedestal globe with engraved plaque from the 1950s. The learning moment attached to this vignette speaks to Dr. Beckman's various activities outside of work; the two items reflect community interests such as support for local artists and service with the Los Angeles Chamber of Commerce.

Rounding that last corner, visitors confront the fourth vignette, located behind Dr. Beckman's desk. The vintage console cabinet is adorned with a guest book and two floating shelves that create a vertical display of framed academic degrees, professional membership documents, awards, certificates, and correspondence from government officials and local service organizations. Visitors learn of Dr. Beckman's extensive involvement in business, philanthropy, and civic arenas.

Situated in front of the console cabinet is the fifth and final vignette: Dr. Beckman's desk holds handwritten notes about advisory council work, one of his three original Rolodex card files, and two framed family photographs. On the edge of the desk, a life-size display of Dr. Beckman is arranged to appear as though he has sat down on the corner to greet guests. Labels are mounted throughout the space to provide insight on the objects, through which visitors learn about Dr. Beckman's priorities, work, and personal life.

Since the Arnold and Mabel Beckman Foundation (AMBF) office is located within a larger conference facility, use of additional space at Beckman Center at the National Academies of Sciences, Engineering, and Medicine required approval from the building's senior management. The curatorial staff prepared a proposal to tap space formerly used as a conference room but recently vacated and opened to the main exhibit hall. The proposal included a sketch of the design plan with prospective content, along with budget estimates, timeline for completion, and additional programming elements. The Executive Director reviewed the proposal and provided comments on the content, then issued tentative approval. It was then recommended to the facility's



Above: Although small, the space offers multiple learning moments through the use of vignettes.

senior management. Pending an impact assessment of potential noise and debris, the conference center manager gave final approval, and we scheduled the installation.

AMBF's philanthropic efforts aim to "support young scientists today for tomorrow's breakthrough discoveries" and one component of that support is a commitment to inspiring the next generation of scientists through the legacy of Dr. Arnold O. Beckman. Telling his story and detailing his remarkable accomplishments through an interpretive exhibit featuring artifacts of his life is an excellent way to support this effort. Presented in conjunction with tours, symposia, and online educational resources, the exhibit hall and special installation effectively connect with local students and visiting researchers.

At the time that we proposed *Arnold O. Beckman at Work*, there were modest funds readily available for updates to the exhibit hall: \$6,500 had been previously approved by the Board of Directors in a review of the fiscal year budget. During preparation of the budget, the conference room space within Beckman Center had not yet been considered as a special installation site; however, due to its immediate proximity to the exhibit hall, AMBF made the decision to allocate partial funds from these resources.



#### **Hidden Drawer Display**

A look at the interior of the top right drawer of Dr. Beckman's desk, which reveals a hidden display of artifacts with personal significance. Curious visitors are rewarded with this surprise that tells another aspect of the Beckman story.

The impetus for the decision was that the installation was viewed as an intimate, small space experience with a decidedly personal feel which distinguished it from other exhibit hall content, and that its proposed installation date would make it available for third quarter events attended by AMBF's program awardees. We did not seek outside funding for the project, but were dedicated to realizing a thoughtful, impactful design while keeping costs low. The tile flooring, lighting, temperature control, and walls were prepared and maintained by facilities staff, who also pitched in to move the heavy furnishings into place.

There was a variance between the initial estimated budget submitted for review with the proposal and the actual expenditures; printing and materials related to the hidden drawer display (proposed at a later stage) primarily accounted for the increases. Estimated costs for the exhibit were \$3,350, and actual costs came to \$3,939. The total expenditure did not exceed the allocated funds for the project; however, there were additional costs not factored into the overall budget, which involved staff time and promotional outreach.

Because the installation was a re-creation of Dr. Beckman's office and there was photographic reference material available, the curatorial staff undertook the design work rather than outsourcing it. Planning commenced with a thorough review of the reference material, and brainstorming ideas to keep the spirit of the original office and introduce engaging visual storytelling ideas to communicate history in a personal way. One solution was to feature a life-size display of Dr. Beckman within the space; the image for this display came from the reference material wherein he appeared at his own desk. Another idea was to implement focused vignettes of objects that could enable multiple learning moments within the small space.

We sketched an initial concept layout for the exhibit proposal, and the final design appeared nearly identical to the proposed layout. Minor modifications involved the placement of objects on the console and desktop and moving the location of the life-size display from behind the desk to in front of it and affixed to the top. Likewise, signage at the front of the exhibit shifted slightly to the right upon installation. The neutral wall color for the space was not changed, as it was already a match with the original office walls and in keeping with the rest of the facility. One compromise was that the original checkerboard rug from Dr. Beckman's office had not been retained, so a replacement was selected from AMBF's holdings from the same time period. This supported our dedicated effort to keeping costs low. After the initial concept was approved, it was later revised to include addition of the hidden drawer display within the desk, the inspiration for which came during a collaborative discussion with curatorial staff at a nearby Presidential library and museum that had earlier featured Beckman archival objects in its special exhibit commemorating the anniversary of the Apollo 11 mission to the moon.

We assembled the reader rails with snap frame attachments, stanchions with toppers, and signage, mounted the shelves and framed photographs, and crafted the hidden drawer exhibit (an acrylic vitrine). Conservation was also provided for vintage furnishings; namely, AMBF had previously invested \$2,555 in the preservation of the vintage desk. The exhibit



*Interpretation shows the diversity of Beckman's interests and causes.*

offered an opportunity to showcase that investment. The life-size display of Dr. Beckman required a removable backer block that could be affixed to the desk corner to enable the display to sit upright and secure. Fabrication of the interior pine wood box was provided by a local student and satisfied a service hour requirement for graduation. We then wrapped the exterior in black velveteen and attached rubber feet to prevent movement and damage to the desktop. Loop and hook strips connected the display to the backer block. Facilities staff installed the large vintage furnishings and curatorial staff placed these in their final positions and installed all other elements of the exhibit.

When the exhibit opened in October 2022 at the Beckman Center, the entire process, from conception to installation, was completed within one quarter. All schedules were met except for assembly of the reader rails, whose delivery was delayed by two weeks due to inclement weather. Small exhibits can come with great benefits: not only can they be quick to turn around, they can often work with a modest budget and staff, inspire creative design ideas, and make use of previously untapped space. Feedback from visitors has been positive with much enthusiasm for the life-size display of Dr. Beckman with corresponding hashtag and selfie campaign, described as "fun" and "like he's really in the room." Other feedback noted that the small exhibit was "a great use of space," "unique and different," "refreshing," and a "showcase of Dr. Beckman's accomplishments."

We planned the opening of the exhibit to coincide with two events at Beckman Center: the 2022 Beckman Young Investigator (BYI) Awardee Summit, which featured technical talks from AMBF grantees who are conducting research during the first three years of a tenure track position in academia, and the quarter four meeting of the board of directors, both of which were well attended. Special visitors included AMBF's Executive Director, members of the board of directors, Beckman Center staff, members of the BYI executive committee, BYI alumni and college/university faculty from across the nation, as well as undergraduate students from the museum studies program at California State University, Fullerton. As a busy conference facility, the location enabled a



wide variety of visitors to experience the exhibit, including representatives of the University of California, Irvine and the Gavin Herbert Eye Institute. We announced the exhibit opening via social media with a coordinated two-week campaign across Instagram, Twitter, and LinkedIn, and through a monthly e-newsletter.

*Arnold O. Beckman at Work* was augmented by several other elements that, once again, focused on the small space design theme. Signage at the exhibit entrance featured two QR codes that visitors could scan with their phones to be directed to the additional resources. The first resource was a booking site where visitors could sign up for docent-led tours that would take them through

the stanchions and to get an up-close look at the artifacts. The second resource was a suite of online learning materials for students and teachers which center on the science concepts behind Dr. Beckman's most well-known inventions. These included classroom activities, printable worksheets with answer keys, videos, readings, discussion questions, and information about which California state learning standards

were met through use of the materials. The suite also featured ten audio tours covering the whole of the exhibit hall, five trivia quizzes, and three coloring pages. A dedicated web page for the special installation itself provided an overview of the exhibit, images with captions for each object within it, the full text displayed on the readers rails, curatorial notes, and two time-lapse videos of the installation.

*Arnold O. Beckman at Work* showed us that exhibits need not be large or expensive to be impactful. Small spaces, when thoughtfully designed, can provide meaningful opportunities. We learned that a special installation with a more intimate footprint, like the re-creation of Dr. Beckman's office, can help visitors to Beckman Center feel a more personal connection to him and his life—especially when given the chance to sit behind his actual desk or see artwork he chose for his own space—and this will inform future outreach to AMBF audiences as we strive to interpret one man's remarkable life in the space where his vision lives on.



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