

UNDERSTANDING THE OTHER



Reception shares the vision

A January reception at the Autodesk Gallery in San Francisco shared the Bridge Museum's vision with stakeholders from the private and public sector, as well as with local community groups.

It was also an occasion to show off some of the archives to be showcased later this year, which include the pantheon of Swiss bridge builders Robert Maillart, Christian Menn and Othmar Ammann as well as the Forth Bridges in Scotland and Mostar in Bosnia, the latter two UNESCO World Heritage Sites.

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Thornton Tomasetti, Arup financially on board

The Bridge Museum received a big financial boost in January, with the Thornton Tomasetti Foundation and Arup investing \$25,000 in the Bridge Museum.

New York-based Thornton Tomasetti Foundation has pledged a matching grant of \$15,000 for the Bridge Museum. Thornton Tomasetti has long been a staple of the built environment, working on landmark bridges and buildings around the world, whether it be the world's tallest building, sculptures, hospitals or exhibitions.

Arup, donating \$10,000, has been a key player around the world in bridge building, with such iconic bridges as the Queensferry Crossing in Scotland, the Helix bridge in Singapore or their study of the western



Bay Bridge bike path, currently being undertaken.

The Bridge Museum's Executive Director Richard Dion commented, "the financial involvement of Thornton Tomasetti and Arup, as two marquee names in the built environment, is simply fantastic. This is a big boost for us and shows their commitment to the Bridge Museum's exhibition later this year and our mission of inspiring future bridge builders. We feel confident that we will meet the TTF's match and continue our advance to realize the exhibition."

Top Right, Throgs Neck Bridge, Bronx, NY – Suspended Span Deck Replacement, in which Thornton Tomasetti is concluding the final design. **Above**, Arup with JV partners Jacobs, worked with Transport Scotland from feasibility study to completion on the Queensferry Crossing, the world's longest three-tower cable-stayed bridge.

Left, top (L to R), Board Member Jennifer Anderson (left) speaks with Joseph Deery (Jacobs), Steve Line (Donald MacDonald architects) and Liz Nugent (Autodesk). **Left**, Richard Dion describes the Museum's Factor X and the philanthropic opportunity. Photo by Scott Wall.

(Reception, cont.)

The Autodesk Gallery was an appropriate choice said Board President Jamey Gottlieb, "This Gallery is world class if you want to see the intersection of architecture, design and engineering and the space itself is about the size of our exhibition in Oakland. We are very grateful to the folks at Autodesk for the opportunity to hold our reception here."



Top, Board President Jamey Gottlieb with his wife Lea. **Above**, Margena Wade Green, Faith Network of the East Bay Education Working Group member, Caltrans's Myeast MacCauley, Tipping's Natalie Tse and consultant Bart Ney.

New logo creates burgeoning brand

The Board's Jennifer Anderson has developed a new logo for Bridge Museum. Jennifer, who joined the Board in 2018, is an Oakland-based Creative Director, who spent a number of years working for Ogilvy and Mather, among many others.

Jennifer said, "I wanted to create something that spoke to both the physical and the symbolic aspect of bridges. The hand-crafted typeface feels very human and approachable, similar to how human empathy makes us feel. I wanted the logo to capture *that*."

Thought leadership through op-eds

The Bridge Museum is becoming more widely known, particularly in the engineering world, with opinion-editorials recently appearing in the U.K.'s *Bridge Design and Engineering (BD&E)*, *Aspire* (Concrete Bridge magazine) as well as in the industry leading *Engineering News Record*.

The *BD&E* article concentrated on ways to inspire the next generation of engineers, starting from an early age to nurture the creator in everyone. As children grow up, the scale of the "toys" increases, as well as the difficulty. Site visits and internships while still in high school ensure that the funnel of infrastructure needs are met this century. As one senior Bay Area transportation official commented, "we are concerned with training enough people to take care of this world-class infrastructure in the future. We have to get them interested earlier than college and university."

The *Aspire* op-ed looked at the business reasons of consulting local communities in large infrastructure projects, particularly bridges and also the potential positive knock-on in business development of getting community consent right, particularly given the influence of social media.

The *ENR* Blog - "A Night at the Bridge Museum" covered our vision as well as the **exhibition's three themes of "structures, symbols and concepts"** and the hands-on, interactive and theatrical elements that the Museum hopes to display. Less Museum and more Experience.

As Executive Director Richard Dion has asked, "How much value does a child with an empathetic approach to the built environment bring to a society? Potentially two generations worth of value."

Bridge quote? Two from Switzerland.

"It's a crime to build an ugly bridge."

Othmar Ammann (1879-1965, designed many of NYC's bridges)

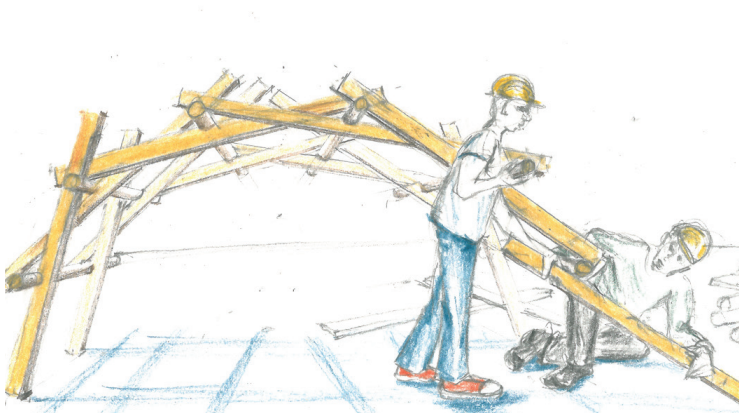
"The most beautiful bridge? Easy, the one that hasn't yet been built."

Christian Menn, (1927-2018, designed the Ganter (right) and Sunniberg bridges)



We get it, but what's in it?

We've been asked, "what will my child experience in the exhibition itself?" With a target audience of children, ages 6-18, interactivity will be crucial. Below are just a few examples of what visitors can expect. We are busy creating a narrative storyline which describes the exhibition layout more fully and look forward to sharing it very soon.



Building teamwork on a "Leonardo" bridge.

Building and testing bridges - Arguably the most famous bridge collapse, the Tacoma Narrows bridge "Galloping Gertie" in Tacoma, Washington in 1941 succumbed to severe winds. Children will be able to build a number of wooden or plastic bridges (arch, beam, cantilever, truss) and test them against the elements - both wind and water. With access to the University of Washington's extensive research after the collapse, complete with smoke tests, the wind aspect will be a fan for the wind and bridges will be in a small
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Board gains more depth

The Bridge Museum's Board has grown in the last few months, welcoming Cheryl Buck, Maria Dion and Derya Thompson.

Derya, formerly Senior Vice President at Thornton Tomasetti and now at Gannett Fleming, has worked on bridge projects on all continents outside of Antarctica. Born in Istanbul, Turkey, Derya's California projects include, among others, as design manager for the Gerald Desmond Bridge in Long Beach, CA. She is equally an engineering consultant for Hyperloop Transportation Technologies.

Maria Dion leads the project management group at the University of New Mexico's Planning, Design and Construction department. Maria has a strong museum background, having served as project manager on museum phase of The Getty Center project. She has lived in Albuquerque for 20 years where she has worked on numerous projects, most notably "The Pit" University Arena.

Cheryl Buck, our newest member, resides in Los Altos and has spent years working for the Hunger Project and the Pachamama Alliance. Cheryl is also working with a number of senior stakeholders around the changing of conversations on big topics. These dialogue sessions are intended to create a way forward for continuing cooperation and creating a mechanism for dialogue, with the first topic examining cancer.

We are very sorry to see Ami Tseng leave the Board in January. As a former Director of Marketing at the Asian Art Museum, Ami played a crucial role in our initial messaging in a cultural context. Good luck, Ami!

From the top....Derya, Maria and Cheryl.



We get it, but what's in it? (continued)

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pool with a rush of water, to show the importance of issues such as scour (the erosion of sand/gravel of a bridge pier) as well as the importance of open spandrels, reducing damage or destruction during a flood.

Educational Value - Building the bridges will allow students to understand the principles of stress in different circumstances, to provide hands-on experience in constructing them, and to learn about the specific parts of the bridge under stress. It will equally build perseverance in a multi-step process and technical task. Depending on the age group, the types of bridges will increase in difficulty and number of parts.

Diorama - To understand the complexities of bridge building and to illustrate the key variables in deciding the scope and scale of a bridge, a 5' x 5' diorama in the form of a canyon will have numerous interchangeable parts, provoking visitors to analyze the most suitable site, the most economic and most purposeful type of bridge. Variables will include population density and market demand, proximity to materials (near a forest or a rock quarry), is erosion a challenge in one area, pricing options, and the involvement of local communities. While the Diorama will be a fictional location to allow for the most creativity, we hope to weave in real-life examples.

Educational Value - The diorama will provide the context for children to understand complex environments with variables and to persevere, helping them reason abstractly and construct viable arguments in advocating for a certain type of bridge and understanding its both positive and negative impacts.



Left, Benjamin Baker's famous experiment of the cantilever for the Forth bridge in Scotland, with visitors able to replicate the 1880s experiment, experiencing the forces at play first hand.

Page 3, above, children will be able to build "Leonardo" bridges, named after Leonardo da Vinci, in which no screws, nails or fasteners are used. Bridge components will be scaled to fit the appropriate age group.

"40 shoes, 40 lives" - Taking the adage of "walking in another's shoes", this "wall of shoes" will give children (and adults) a glimpse into some lives, ranging from architects, to engineers and construction workers to humanitarian workers, refugees, teachers, parents and homeless people. Accompanying a one-page description of a typical day (when they get up, the education and sacrifices required to "get there", the challenges of the day-to-day, visitors will also be able to hear first-hand stories of those who walk in those shoes, enabling them to not only feel the shoe (and potentially try it on), but learn through reading and listening to their stories.

Educational Value - This exhibit will expose children to a variety of lives and lifestyles, helping them consider possible career paths, the education requirements for that path, as well as the ups and downs of that person's life, promoting empathy.