Case Study: Museum of New Zealand Te Papa Tongarewa



# VECTORWORKS HELPS THE AZTECS RISE AGAIN IN NEW ZEALAND



What do you do for an encore after working on the set design team for *The Hobbit: An Unexpected Journey,* which garnered three Oscar nominations and more than \$300 billion at the box office? If you're designer Ben Barraud, you bring the fascinating and controversial Aztec civilization back to life on the other side of the world.

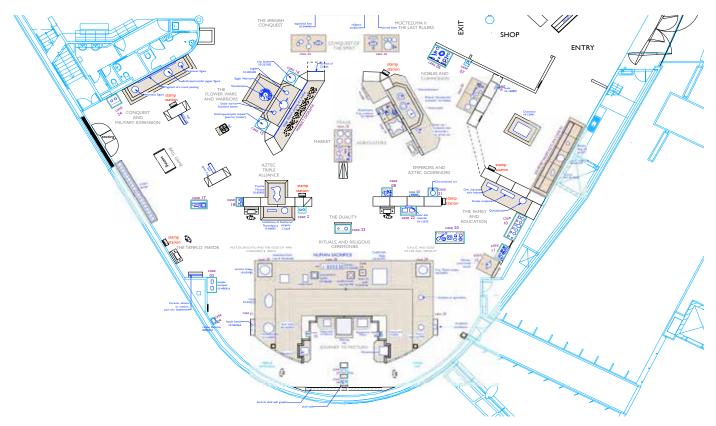
A native New Zealander, Barraud attended Dunedin School of Art in Wellington, New Zealand. He then ventured to New York City in 1993 to do some traveling. He ended up building a 15-year career there, first art directing commercials and then working in the film industry where he was a set designer, production designer, and art director, using Vectorworks<sup>®</sup> Fundamentals software to produce and communicate his design visions. The last New York-based film on which he collaborated was the highly acclaimed *Julie and Julia*, which was nominated for an Oscar and received numerous other notable awards.

In 2009, Barraud returned to New Zealand with his family and settled in Wellington. Then he saw something that changed his life: a job posting for an exhibition designer for the Museum of New Zealand Te Papa

Tongarewa (Te Papa). "I always loved museums and would seek them out," recalls Barraud. "And it seemed like the required skillset would be complementary to what I had been doing because they are both quite theatrical in nature and rely on similar software." He got the job and learned to use Vectorworks Spotlight, the program that lighting, scenic, set, theatre, exhibit, and event designers use to make their productions memorable.

Since New Zealand is a small country, Te Papa fills the role that multiple art and history museums do in a big city. Providing visitors with a wealth of experiences gives Barraud great opportunities to try different things. For example, he designed *A Day in Pompeii*, which showcased Italian artifacts. He also collaborated on *The Mixing Room*, an exhibit revealing the stories of refugee youth whose families found homes in New Zealand. Barraud especially enjoyed putting together the *Collecting Contemporary* exhibit, which fused recent contemporary art exhibitions, as well as the German initiated *European Masters: 19<sup>th</sup>-20<sup>th</sup> Century Art from the Städel Museum*, an exhibit spanning different eras, from post impressionism to expressionism and through to modern art.

Following those successful exhibits, Te Papa graciously extended Barraud a 16-month leave of absence to serve as set designer and second unit art director for *The Hobbit*, which was filmed in New Zealand. Barraud used Vectorworks as part of a large team that created the legendary Esgaroth Lake-town for the movie.



Ben Barraud worked with Vectorworks Spotlight software to create a detailed exhibit plan that chronicled the Aztec civiliation.



The rendered concept design below reveals a wide view of the south end of the gallery, which is realized in the live photograph shown here.

### Welcome to the Aztec World, 500 Years Later

Then came *Aztecs: Conquest & glory*, from late September 2013 to February 2014, which chronicles the 200-year history of the Aztec civilization, from its meteoric entrance in 1325 to its equally quick demise at the hands of the Spanish in 1521. The show is a major endeavor and marks the first time that it is touring the Southern Hemisphere. In fact, the Aztec culture has only been displayed in a handful of exhibits. When it was showcased by London's Royal Academy of Arts in 2002 and 2003, it was heralded by the public and called "powerful and macabre" by The Observer. Te Papa's exhibit will enjoy the limelight in other cities,



as well. Barraud carefully designed it to be packaged and shipped to two other museums—the Museum Victoria in Melbourne and the National Museum of Australia in Sydney.

Barraud and curator Lynnette Townsend built the exhibit from the ground up. Their Mexican partners and a team of curators selected about 200 rare artifacts culled from more than 30 museums across Mexico. Two full planeloads transported elaborate pottery, jewelry, and vessels around the world. Working with Vectorworks Spotlight software, Barraud created a design that integrated the wealth of artifacts, including golden medallions, large carved stone figures, and intricate containers, into a stunning backdrop supplemented with models and multimedia displays to tell the complete Aztec story. Barraud says, "It was wonderful to see all the Aztec treasures and design combine to bring the Aztec story to life."

This exhibit was seven years in the making, the result of a trade with Mexico's National Institute of Anthropology and History. Since New Zealand has an isolated history, the Museum saw this as an opportunity to shine a light on a markedly different culture, known for its artwork, jewelry, and, of course, its human sacrifices.

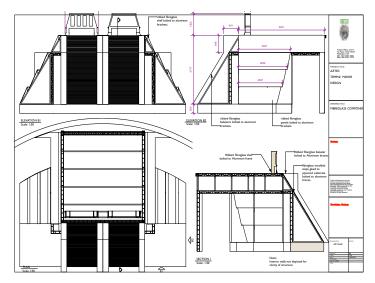
## The Great Temple Guards Ancient Secrets

Barraud estimates that it took about one year to develop the project from concept to completion. His inspiration was the centerpiece of Aztec culture, the nearly 200-feet-tall Templo Mayor. This "Great Temple" was buried for hundreds of years under a Catholic cathedral erected by Cortez and the Spanish conquistadores when they defeated Montezuma. It came to light in the mid-1900s and was excavated in the 1970s. The Templo Mayor Museum now stands on the same spot in Mexico City. That's where most of the artifacts in the exhibit hail from, including large gold statues that hung from the temple, ceramic and stone figures, evil warriors, and other representative pieces.

Barraud used the Templo Mayor as the exhibition's larger-than-life focal point. He designed and constructed a smaller 1:10 scaled version and echoed the layout of that precinct by placing cases, walls, and plants around the temple in a similar radiant fashion. Since the temple had to be flat-packed for future travel to Australia and designed to withstand the threat of local earthquakes, Barraud made it light with an aluminum framework and PVC multi-board painted to look like stucco.

He and the curators felt it was important to introduce the oftencontroversial Aztec world slowly. First, visitors are immersed in the Aztec's daily life, learning about agricultural practices like the gardens they built on a lake. This experience is contextualized with items representing things that were happening concurrent to that era in New Zealand. Then, visitors can decide to enter the temple to learn about the gods and the sacrificial rituals, which included human sacrifices, as well as dismemberments.

Barraud carved out this sacred inner chamber space for several reasons, even though the actual Templo Mayor was a monument without an interior. First, he notes, several artifacts were used for the Aztecs' daily



Since the Templo Mayor had to be flat-packed for future travel to Australia, it was designed with an aluminum framework and PVC multi-board painted to look like stucco.

human sacrifices, made on the Templo Mayor to ensure the sun would rise in the morning. Second, the native New Zealand Māori culture is especially sensitive to the proper handling of human remains, which are also present. And third, the temple absorbed so much floor space that building a chamber granted them much-needed display space.

"This is a real insight into the Aztec culture," Curator Townsend remarks of the temple. "It's dramatic, vibrant, and incredibly intriguing." Visitors enter the interior by passing by the stone God of the Underworld, Mictlantecuhtli, as well as a large stone eagle that weighs three-quarters of a ton. It has a hollowed-out basin in the top of its back that once held human hearts. Visitors can also view a skull mask with a blade in its mouth that's was crafted from an actual human skull.

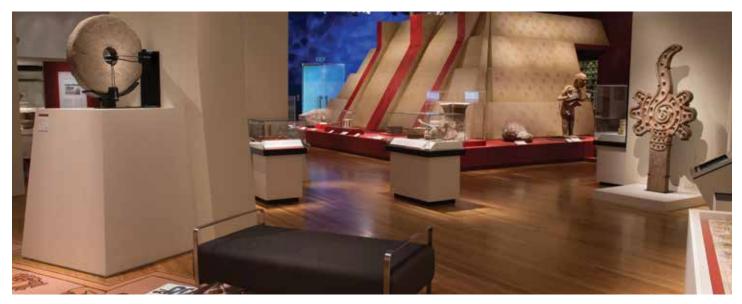
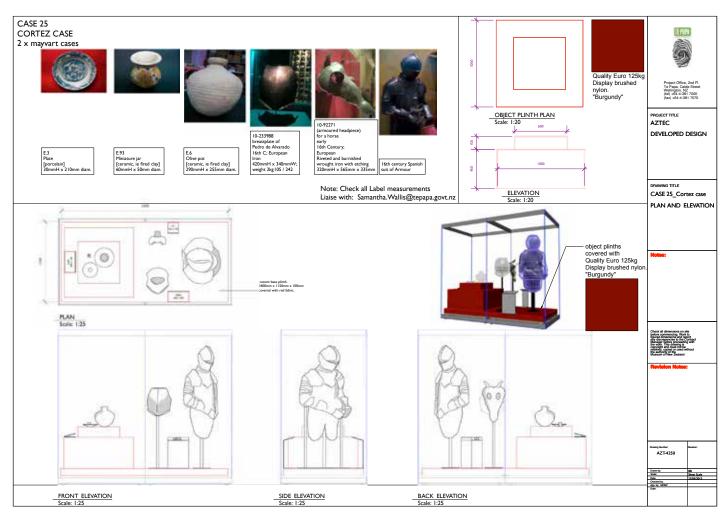


Exhibit visitors are slowly immersed in the Aztec's daily life before entering the temple to learn about the gods and sacrificial rituals.



By converting object images into image props, Designer Ben Barraud could quickly create 3D objects in the correct scale to populate a virtual exhibition.

## Vectorworks Brings a Civilization to Life

Barraud used Vectorworks software to efficiently design a space to house these relics. For his concept design phase, he started with an object list from the curator that he received as an Excel spreadsheet with associated JPEG photo images. Barraud doesn't have time to do complex 3D models of every item in an exhibition. But he doesn't have to; with Vectorworks Spotlight, he imports the photographs. Then, by converting object images into image props, he can quickly create 3D objects in the correct scale to populate a virtual exhibition. The tool saves him time because he can start his ideas in 2D and develop them in 3D, so that all stakeholders can visualize the exhibition, and the objects within it, in 3D.

"Vectorworks has been a useful exhibition design tool," Barraud says. "As an all-around design program, the solution works well in exhibition design because it picks up theatre features from SketchUp<sup>®</sup> and Adobe<sup>®</sup> and mixes in a rich color palette, endless built-in objects for creating lighting positions, and more. It has flexibility to incorporate JPEG and other file types into my drawings." The software also helped him overcome his biggest challenge, which was collaborating across the world with a number of different institutions. "Vectorworks is great as an interoperative tool," he says, "so it supported my design inspiration while enabling me to share information fluidly."

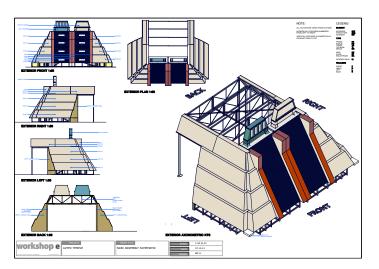
In addition to translation and time zone issues, Barraud and his team needed accurate measurements for all of the objects. "It was quite difficult to work like that—and also difficult trying to get the right weights and sizes for the items, which is really important when you're dealing with heavy objects," notes Barraud. To keep communication clear, he created his designs in Vectorworks Spotlight and then sent PDFs to the experts and curators in Mexico to review. He also flew to Sydney to give a presentation using 3D Vectorworks renderings, as well as plans, elevations, and case layouts to the other two museums that would receive the exhibit next. He played a walkthrough in the program in which he actually flipped the whole exhibition 180 degrees to give everyone great insight into his design as he panned, zoomed, and "walked" through his plan.



The exhibit integrates a wealth of artifacts, including golden medallions, large carved stone figures, and intricate containers, into a stunning backdrop supplemented with models and multimedia displays to tell the complete Aztec story.

## **New Worlds Beckon**

Barraud is designing two new exhibitions from the National Museum of China that will open at Te Papa in early 2014. *Throne of Emperors* will tell the stories of seven dynasties and seven emperors. He's also creating a complementary exhibition adjacent to this, a retrospective of Shi Lu, who is known as "China's Van Gogh." No matter what new worlds he brings to the visitors of the Museum of New Zealand Te Papa Tongarewa, one thing is certain. They will be larger than life.



Temple design development drawings courtesy of Workshop e.

## Acknowledgements

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