

**Product**

Planar TVF Series

Location

Edmonton, Alberta; Canada

Industry

Public Service

ApplicationVisitor Engagement
Digital Learning**Partner**

AVI-SPL

Immersive Digital Experience Inspires Imagination and Learning at Revitalized Edmonton Library

Stanley A. Milner Library

Located on Sir Winston Churchill Square in downtown Edmonton, Alberta; Canada, the Stanley A. Milner Library is the flagship branch of the Edmonton Public Library (EPL) and receives over 1.2 million visitors each year. In December 2016, the library closed its doors for a major revitalization project which included a complete interior renovation to add new spaces and 21st-century library amenities.

When the project was being conceptualized, EPL solicited feedback from the Edmonton community through a series of consultation sessions to help inform the services and features to be offered with the revitalized library. With a multi-story atrium to be built as part of the new building design, EPL CEO Pilar Martinez envisioned a central focus point for customers entering the building—something that would wow them and set expectations for everything else within the library.

While in Brisbane, Australia in 2015 for a library convention, Martinez visited Queensland University of Technology (QUT) to see The Cube, one of the largest interactive displays in the world. This inspired the idea for a massive, two-story interactive digital experience in the revitalized Stanley A. Milner Library.



The following year, EPL Director of Technology Services Steve Till-Rogers went to see The Cube and established a collaborative partnership with the QUT team. “We became inspired by the educational and entertainment opportunities of a large-scale interactive experience,” he said.

In addition to The Cube, the EPL team conducted research on several more digital installations throughout the world and evaluated a range of different display technologies, all of which guided the vision and subsequent design of their project. After identifying an LCD touch screen from Finland-based MultiTaction, they searched for the best technology that could seamlessly merge with that display. “We wanted to achieve a cohesive visual experience integrating different digital surfaces,” Till-Rogers said.

The EPL team ultimately landed on LED which offered a rich visual impact and crystal-clear video reproduction—features that were needed for overcoming the high amount of ambient natural light in the atrium, according to Till-Rogers. For a specific solution, the Planar® TVF Series LED video wall was chosen.

Building a showcase attraction

EPL engaged digital services provider AVI-SPL on a collaboration to construct a large-scale, ‘double-sided’ digital interactive experience in the revitalized library’s new foyer. Essentially, two installations were built—a larger, front installation incorporating a V-shape design and a smaller installation located on the backside of the bigger one. Both displays—known collectively as The Wall—consist of Planar TVF Series LED video walls integrated with a bottom row of high definition LCD touch panels.

The larger, V-shaped display includes a nearly 40-foot-long, 16-foot-high Planar TVF Series LED video wall in a 20x14 configuration and a 1.8mm pixel pitch (TVF1.8). The reverse side includes a nearly 16-foot-long, 9-foot-high Planar TVF Series LED video wall in an 8x8 configuration and a 1.8mm pixel pitch (TVF1.8).

“The Wall is intended to capture people’s attention as they enter the branch and draw them in for a closer investigation,” Till-Rogers said. “The use of vibrant Planar LED displays in combination with MultiTaction touch screens creates a lifelike simulation that’s hard to describe in words.



The colors are bright and saturated which allow the scenes to really stand out. The display technology is framed to create a window into a 3D-rendered scene that appears so lifelike you could almost climb inside.”

The vision behind the V-shape design of the front installation was to more fully immerse visitors in the digital experience. “When standing close to the display, you can sense the scenes in your peripheral vision. It gives the experience more dimension,” Till-Rogers said.

EPL sought the lowest pixel pitch for the LEDs that the budget would allow to optimize image sharpness at a close range. “Viewed from a distance, the resolution is fantastic and the colors are vibrant. And, when you see it up close, that fidelity is not lost—the images and experience are still sharp,” Till-Rogers said.

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*— Steve Till-Rogers,
Director of Technology Services,
Edmonton Public Library*

Engaging audiences with immersive STEAM content

The main purpose of The Wall is to encourage visitors to explore STEAM (science, technology, engineering, arts and math) content by interacting with dynamic scenes. Exhibits that are presented on The Wall include:

- **Virtual Reef**—a life-sized virtual marine ecosystem that provides an immersive, simulated underwater experience. Customers are invited to learn about the Great Barrier Reef’s unique ecosystem by interacting with tropical fish, eels or giant clams.
- **Dino Zoo**—a presentation of life-sized dinosaurs that are among the most scientifically accurate portrayals in the world. With the use of artificial intelligence, the dinosaurs mimic their innate behaviors, based on a set of behavioral parameters for each species.
- **Sim Flow**—the Sim Flow virtual wind tunnel simulates air flow as it passes over a static object such as an aerofoil or a car, truck or plane, allowing users to explore Bernoulli’s principle of aerodynamics.

- **Carnival**—a twist on skee-ball and other traditional carnival games, Carnival engages users to score points to light up a fairground and activate side show rides.

“The experiences are fully integrated with content moving in and out of the interactive areas,” Till-Rogers said. “Even though the touch parts are on the bottom row only, users can still engage with the overall scenes. When visitors become immersed with the content, the experience becomes not only entertainment but also provides knowledge. The interactive component brings another dimension to learning.”

A platform for collaboration

Looking to the future, EPL plans to forge partnerships in the Edmonton community and take a collaborative approach to designing more digital learning experiences. “As a library, we’re focused on digital innovation, imagination and sparking curiosity,” Till-Rogers said. “The Wall gives us a platform for serving that purpose. We have content designers and developers and want to collaborate with scientific experts and specialists in different fields to create new exhibits.”



As an example, EPL is in the early stages of a space exhibit and has begun to associate with astrophysicists including the University of Alberta. “We are going to make sure that our projects are informed and underpinned by real science,” Till-Rogers said.

Confidence in a premium LED manufacturer

With the capital investment that was made in The Wall, it was critical for EPL to partner with leading technology vendors in their respective industries. “The project had to be the very best—there was too much risk involved,” Till-Rogers said. “We needed to have the utmost confidence that each component and technology would meet expectations and create an experience that would impress customers.”

During the initial design collaborations, AVI-SPL recommended that the LED component of the installations come from Planar.

“Planar was a great choice in a partner based on their worldwide presence and notable projects,” said AVI-SPL Account Manager Adrian Bullock. “This is truly an amazing digital interactive experience and unique in North America for a nonprofit library.”

Till-Rogers said, “For me, Planar really stood out as a premium vendor in the market for LED. Quite simply put, the Planar LED video walls are stunning. The color reproduction, saturation and brightness contribute to an amazing visual exhibit.”

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— **Adrian Bullock,**
Account Manager, AVI-SPL

About the Planar TVF Series

The Planar TVF Series is a family of fine pitch LED video wall displays featuring a 16:9 aspect ratio that allows every pixel pitch to exactly achieve popular resolutions including Full HD, 4K and 8K. With a profile of less than three inches, the Planar TVF Series reduces the overall video wall footprint and is easier to fit in more spaces, compared to other LED video wall solutions.