



in park

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The National Comedy Center



Dubai Expo 2020

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Blind spots

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Times have changed since theme parks and museums first started welcoming guests primarily from their local communities. Nowadays, a guest could well be visiting from another continent, bringing with them a host of different life experiences and values. We truly are living in a global village of entertainment and tourism.

This shrinking of the globe necessitates introspection – hopefully we see things with a wider, clearer perspective. That’s why, today, we question things that formerly may have seemed benign. We take a fresh, more critical look at the bride auction scene in the original Pirates attraction, or why a park in the American South might consign the Confederate flag to history.

It’s a natural evolution of our industry and one we should embrace for what it has to teach us about our own biases and perceptions. It’s about accessibility, inclusion and diversity. Moving forward, as the storytellers and creators of experiences, our industry must remember that representation matters. How people, places and events are depicted can influence how guests experience what we create. Let’s try to be as welcoming to people as possible.

As an industry connector, InPark tends to look at the visitor attractions business from the project viewpoint. Where is the work? Who are the players? What are the trends?

But we all know that a truly successful project is one that has an audience that grows year over year, and a positive economic impact on its community. It must enhance its location as a destination. If it is successful, it will likely also be influential.

In this issue, we’ve explored a number of projects that promise to help transform their regions as catalysts of construction, business, tourism, job creation, cultural identity and civic pride – in addition to raising the bar for creative and technical innovation. That’s what the best projects do. Their benefits are felt on the local, regional and international scale.

We hope you enjoy and learn from our exploration of Dubai Expo 2020, Universal Studios Beijing, the National Comedy Center, Liberty Science Center, the St. Louis Aquarium and more.



COVER: Journey Gunderson, Executive Director of the National Comedy Center, Kelly Carlin, Melissa Rivers, and Julian Ramis, son of late comedy writer Harold Ramis, celebrate at the groundbreaking for the National Comedy Center on August 1, 2015 in Jamestown, New York. *Photo courtesy the National Comedy Center.*

Full story on page 6.



Joe Kleiman is News Editor for the InPark website. He has 25+ years management experience: in tourism, museums and attractions, in the giant screen industries and as a zookeeper.

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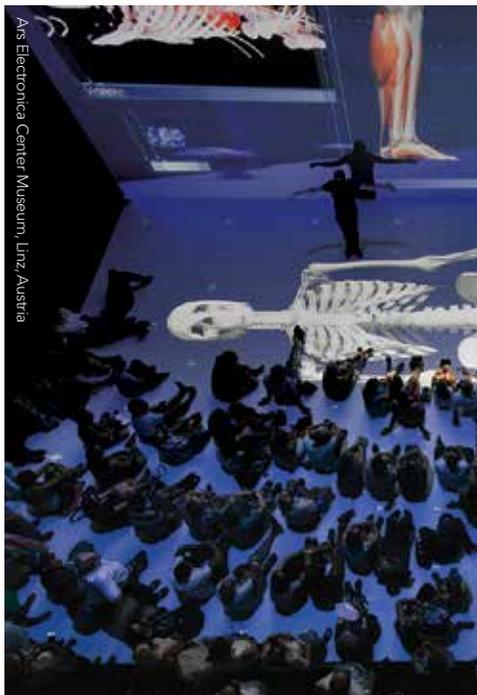
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Image courtesy of JRA

Exhibiting signs of laughter

JRA leads creative team for National Comedy Center, set to revitalize Jamestown, NY as an international destination

by Mira Cohen

For this exclusive report, InPark contributor and museum specialist Mira Cohen spoke to four key players: Tom Benson, Journey Gunderson, and Laura La Placa of the National Comedy Center; and David Ferguson of JRA.

Imagine a town of 35,000 people in Western New York state looking to re-energize its economy, re-develop business centers, attract international visitors, and create a buzzing hub of creative production.

All that was a welcome challenge to Tom Benson, Chairman of the National Comedy Center Project. When Tom modestly expects to step aside and into an advisory role for the Center once it opens this summer, it will be at the end of a detailed, collaborative process in which JRA (Jack Rouse Associates) played a significant role helping to realize the vision and goals for the project.

The \$50 million National Comedy Center (NCC) boasts more than 50 exhibits. Business leaders of Jamestown, NY, a town of 35,000 inhabitants, have pinned their city's future on the center, and internationally renowned comics such as Kamau Bell, Lewis Black and Alan Zweibel are backing them up. The team behind the center takes the work of comedy very seriously. Team members meticulously collect and preserve archival content – such as the 25,000 artifacts saved by George Carlin – and are working tirelessly to illuminate the process of creating comedy.

Projections for the project are so good that the governor of New York donated additional state money and included the National Comedy Center in the iconic "I Love New York Campaign."

**Tom Benson
Chairman of the
National Comedy
Center Project**

With nearly 20 years of background in the public accounting field, Tom Benson has invested a “tremendous amount of personal capital” in the National Comedy Center project. He and the business members of his community have been on a nine-year mission to restore Jamestown, New York to its mid-century appeal and to retain and attract millennials. Jamestown being the hometown of Lucille Ball and the home of the Luci Desi Center for Comedy, as well as a successful yearly comedy festival, were jumping off points for NCC.



Tell us something about the vision and inspiration behind developing a National Comedy Center in Jamestown.

I am a lifetime resident of Jamestown. In the 1960s and 1970s, the economy of Jamestown, which used to be a manufacturing center of premier furniture, began to

erode. Jamestown had significant foundations committed to righting the ship. Community leaders decided to turn our annual, world-class, Lucille Ball Comedy Festival event into an attraction. Chautauqua County is already a tourist area with a lake, ski areas, etc. We hired an urban design firm and created a blueprint for downtown redevelopment. Jamestown has a population of 35,000 people, and we wanted to attract 120,000 visitors a year.

JRA, our experience designer, is the “Gold Standard” of experience designers. JRA hired AECOM, a company that has done feasibility studies all over the world, to determine if we could build an attraction that would develop local business, attract repeat visitors, and inspire young people to build their future in our town. We knew we needed an attraction that is national in scope.

We’ve been starved for optimism, and that’s what it takes for people to invest. We are changing the culture of the way people think. Changing the mentality creates energy. With the expectation of the opening of the National Comedy Center, local business has already been affected in huge ways. There are two hotel projects. One \$30 million resort hotel on the lake is being built as a destination hotel on the back of National Comedy Center.

Team members from the National Comedy Center, JRA, Herzog & Co. and Cortina Productions gather in the main lobby of the National Comedy Center. Photo courtesy of JRA



David Ferguson, Art Director, JRA

What do the Green Bay Packers Hall of Fame, The National Underground Railroad Freedom Center and Science Centre Singapore all have in common? They are a few of the experiences David Ferguson helped design. With a background in theater, David likes to say that the “show begins as the guest walks through the door.” Given that the National Comedy Center is about the process behind the show as well as the experience of the show, David was a good match for the project. His love for the theatrical capacity of the visitor experience to captivate audiences shone through in our discussion.



How did you plan to place NCC visitors inside the story of comedy?

The space is a mixture of old and new facilities. The building is a mixed bag of things, which is great for comedy. The guests walk across a bridge, connecting them from a restored historical train station to a donated former electrical plant. We added color to the newer space to make it more theatrical. We wanted it to be fun and have a good, strong presence. We added deep, rich jewel tones to the theater.

My favorite aspect of the National Comedy Center is that we are telling a variety of stories. We all have different thoughts about what we find funny. Visitors will get an RFID bracelet, and the bracelet will be programmed to reflect each visitor’s comedic interests. The experience is tailored to your likes. You can also get a slice of comedy that is very broad through “comedy karaoke,” laugh booths, and artifacts.

JRA’s creative team for the project includes

- Ron Bunt, Vice President
- David Ferguson, Art Director
- Matthew Wheeler, Senior Project Director
- Colin Cronin, Senior Designer
- Scot Ross, Senior Project Designer
- Molly Gray, Executive Producer, Media
- Ekaterina Batt, Production Coordinator
- Sam Colvin, Designer

Laura La Placa- Director of Archives, National Comedy Center

With a doctorate in Radio-TV-Film and a specialization in the history of American radio and television broadcasting, Laura is well cast to serve as archivist of the National Comedy Center. She discussed each piece in the collection with glee and excitement. Her dedication to not only the preservation of the artifacts themselves but also her will to share them with the public was clear.

What is your favorite piece from the archive?

We are looking at the DNA of comedy. My favorite piece is the Bob Mills (one of Bob Hope’s writers) collection. We see his work over 25 years from brainstorm to performance. We focus on the process of comedy. We look to collect pieces that illuminate one person’s process and demonstrate something special.

We like to dig deep enough to tell about individuals and what they have contributed. From this, we learn that comedy is an art form. While comedy has often been considered low-brow, and the records have been seen as dispensable, we find that comedy has flourished in so many venues. We celebrate it all. We are hunting for treasures across a vast landscape and have already received about 12 collections, and we are announcing more soon.

Journey Gunderson, Executive Director, National Comedy Center

Journey Gunderson was named one of Buffalo Business First’s “Top Forty Under 40.” Journey shared her delight for the comic process, her driving vision to elevate comedy as an art form, and her enthusiasm for engaging what she hopes will be generations of return visitors to Jamestown, New York.



Why did you decide to build an attraction that is national in scope in Jamestown, New York?

Jamestown, New York has a comedic history. Lucille Ball was born and raised here. The larger vision from her family was not just to honor her and Desi Arnaz but to inspire the next generation of comic artists. The nice thing about the Jamestown location is that Chautauqua Lake

is a destination already. There is an institution for leisure learning which attracts 100,000 visitors a year. Niagara Falls is near. The infrastructure is in place to attract visitors nationally and internationally.

How and why did you decide to include the process behind the comedic arts in the center?

We were inspired by the disconnect of most people to comedy artists. Because comedy hasn't been treated like other art forms and isn't part of the curriculum of study, most people have no idea how it is built, how it's honed. They listen to Jerry Seinfeld and have no idea he honed each joke to syllable and inflection.

The National Comedy Center is designed to engender respect for the art form. For instance, the participatory wing of the center allows visitors to deliver jokes to friends and experiment with the nuances of delivery. It gives audiences the thrill of what it feels like to make someone laugh. There is also a theater in a narrow space with a view facing a huge audience staring back at them. There are heckling, cocktail waitresses and other distractions. There isn't another art form where artists are expected to perform under these conditions. We also incorporate storytelling and physical papers.

What can you learn about our cultural history through the lens of comedy?

It's been said that if you want to understand a country's culture, look at its comedy. At every seismic social cultural

change, comedy has been at the root. Minds open through the vehicle of humor.

What did JRA bring to the project that was unique – that no one else could have done?

We chose JRA as our designer because of their decades of experience with attractions all over the world. It was appealing. Knowing the industry well enough to bring the right players to the table was critical. JRA's experience helped us identify core players like Cortina Productions, Adirondack Studios, Electrosonic, and Abernathy Lighting Design.

Part of the success of the production process was the creativity and "sky is the limit" mentality of Colin Cronin of JRA. We designed with repeat visitation in mind. We are aiming high with the mindset that if someone comes to Jamestown, New York, it's our job to exceed expectations and inspire visitors to come back. We are excited about the future of a living, breathing institution.

• • •



Mira Cohen (mira.cohen@nara.gov) is Director of Education at the Ronald Reagan Presidential Library & Museum and Project Manager of the Situation Room Experience.



Crowd gathers at the National Comedy Center Groundbreaking ceremony on August 1st, 2015. Photo courtesy of National Comedy Center

Flying for all

Dynamic Motion Rides is inspired by the Museum of the Bible to engineer flying theaters for venues of many different sizes

Michael Prager, CEO Dynamic Motion Rides

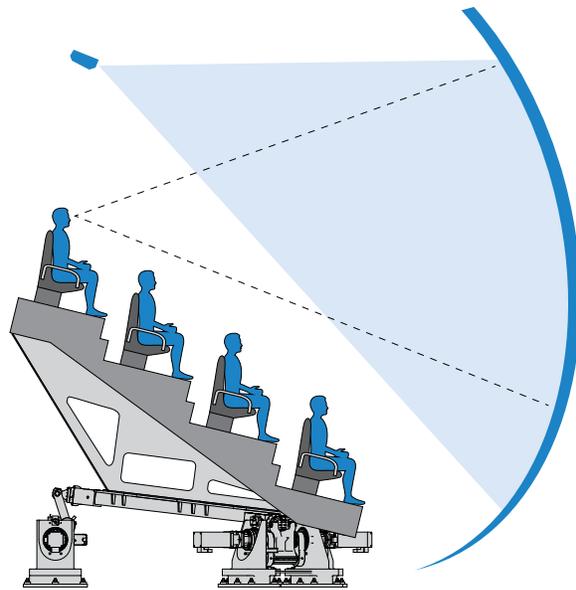
Flying theaters have earned their spot in major theme parks and attractions around the globe. As the technology has evolved and become more accessible, smaller attractions are also seeking the advantages of a flying theater. We at Dynamic Motion Rides have taken a look into these markets and their needs.

When we started developing our newly patented motion system technology and implementing it in new attractions a couple of years ago, our engineers certainly had major theme parks in mind where space and room height is normally no problem. The company was then approached by The Museum of the Bible in Washington DC, asking if a great flight experience could also be done in a smaller venue with less room height.

This request started a thought process within Dynamic Motion Rides. First we asked ourselves, “What are the framework conditions for smaller theme parks, visitor centers, museums, zoos, aquariums and stand-alone attractions?” We spoke with a couple of operators and it became clear very quickly that this question cannot be reduced to simply “less space.” There were some needs that seemed universal for bringing a flying theater to a smaller facility:

- A desire for the same intensity and level of immersion as a major flying theater
- Less space and weight
- Good capacity
- High reliability (with minimal down time)
- Low maintenance cost
- Lower regular operation costs
- Reasonable total cost of ownership

In the development process that followed, every measure taken was driven by these points. For example, the DyMoRides team carefully considered screen design, sightlines and positioning of the guests to be able to create an experience comparable to a Soarin'-style flying theater in its intensity and immersiveness.



Flying Theater 4.0 puts guests in the center of the dome. Image courtesy of Dynamic Motion Rides

This was achieved by placing all guests in the center of the dome screen for perfect sightlines, maintaining a specific ratio of screen-size to platform-size. Furthermore the platform was designed with stadium seating, high steps and an offset of 50% from one row to the other to give every guest the feeling of flying in the front row. This also resulted in a compact overall design of the theater.

Addressing the operating cost factor, we only use electric motors capable of regenerating power in such a way that they create and return energy when a motor slows down, thus reducing power consumption and driving down energy costs. This development also led to a more robust design that increases reliability – our tests show that 99.7% has been achieved.

By approaching all of the points in this fashion, we were able to re-think and re-design, meet all of our goals, and retain quality. We have succeeded in making flying theaters feasible for smaller venues - and attractive in terms of return on investment.

Flyboard Flying Theater & Flying Theater 4.0

The thorough engineering and design process resulted in two products: Flyboard Flying Theater and Flying Theater 4.0. The base-technology of both products is the same: a tiered platform on top of a 3-DOF electric motion-system capable of being exactly programmed (frame-by-frame) to superimpose movements, thus creating vibration and the fine jiggling that is typical of flying. Flyboard Flying Theater allows guests to lean forward into comfortable Flyboard Support Devices®, further creating an intense flying experience in the style of a prone superhero.

A more traditional approach was taken with Flying Theater 4.0 where guests are seated in separate rows focused on the center of the screen. Both systems offer a range of sizes and capacities. This flexibility enables delivery of highly profitable exciting flying theaters for all types of attractions.

Proof of Concept: The Museum of the Bible

When Carry Summers, president of the Museum of the Bible in Washington DC, approached Dynamic Motion Rides for a flying theater he asked three questions:

- Could we do a flying theater when the room height is only 5.7 meters (19 ft)?
- Could we deal with the limited floor loading capacity since the attraction had to be installed on the second floor of the building?
- Could the total cost of ownership be suitable for the museum's smaller budget?

Based on the parameters that were given to us by the museum, it was determined a Flyboard Flying Theater made the most sense for this project, which we reengineered to fit the lower ceiling height. In addition to meeting the space and load bearing requirements, the

compact design and the simple loading and unloading procedures allow for an operation with fewer staff – driving down operating costs.

For content, the museum's request was to show the many impacts the Bible has left in Washington DC during a breathtaking, 4.5 minute flight through the city. The movie, an animation in photo-realistic CGI, was also produced by Dynamic Motion Rides and is called "Washington Revelations."

Proof of concept came when the museum opened its doors in November 2017 and the general public had the first chance to experience "Washington Revelations." In a December 2017 Washington Post article, Kathryn Keane, the director of the museum said, "It's a new platform for storytelling. It allows us to try new things to capture the imagination of young people especially." ("An amusement-park ride at the museum? Technology makes visitors part of the exhibits," December 22, 2017)

In the same article, museum president Cary Summers said these experiences may be cutting-edge now [for a museum], but they will soon be the norm. •••

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To the stars

Liberty Science Center embarks on a new era with digital full-dome projection

By Judith Rubin

In December 2017, Liberty Science Center (LSC) in Jersey City, New Jersey opened the largest and highest resolution planetarium in the Western Hemisphere. Since opening, the new Jennifer Chalsty Planetarium has been covered by the New York Times, Forbes, Washington Post, Time Out, Space.com, Popular Mechanics, and ABC News, in addition to numerous media outlets in the Garden State and quite a few mom bloggers.

On the industry level, the story is big in a different way. The new planetarium grew out of converting the museum's giant dome theater from 1570 film to digital. The conversion didn't just transform a theater with an 89-foot (27-meter) diameter dome. It fueled an expanded programming and educational vision for LSC and a re-branding of the facility, and it achieved a major milestone in the planetarium-giant screen convergence.

Located on the bank of the Hudson River near the Statue of Liberty, the 300,000 square foot science center celebrated its 25th anniversary in January 2018. LSC has annual visitation of 650,000 and is billed as the largest interactive science center in the NYC-NJ metro area. More than 250,000 students visit each year, with tens of thousands more via offsite and online programs.

LSC boasts 12 exhibition halls, a live animal collection, giant aquariums, live simulcast surgeries, a wind simulator, K-12 classrooms and labs and teacher-development programs, and now it boasts an Evans & Sutherland (E&S) Digistar 6 True8K™ system with 10 Christie® Boxer projectors and a Spitz NanoSeam screen, in the new, 400-seat Jennifer Chalsty Planetarium and Giant Dome Theater.

Expanding the scope

"I sat down in the middle of the theater. I watched as constellations outlined themselves on the night sky, flew across Central Park, and through the Orion Nebula. Then I went on a roller coaster ride of a Möbius strip that was more intense than some theme-park attractions," Mary Beth Griggs wrote about the new planetarium at LSC in Popular Science ("Planetariums seem old-school, but they have a surprisingly lively future," December 19, 2017).

"When our IMAX Dome Theater technology was approaching end of life, LSC jumped at the opportunity to reimagine the space," said Mike Shanahan, who joined as planetarium director in September 2017, coming from the Bishop Museum in Honolulu. "Doing so has exponentially increased the



The new Jennifer Chalsty Planetarium at Liberty Science Center is the largest and highest resolution planetarium in the Western Hemisphere. Photos courtesy of LSC

number of people we can deliver astronomy-based programming to and attracted even more people to LSC. Nowhere else in the region can students experience the space science standards in such a fully immersive manner.”

Besides the simple fact of status that size confers, why is bigger better? “When trying to show detail in an image of the rings of Saturn or the clouds of Jupiter, it’s just easier to explore that detail in a large image,” said Shanahan. “And being able to accommodate 400 people per program has really helped to meet the high demand for our programming. The planetarium response has been tremendous. Overall attendance at LSC has been very strong with planetarium shows often selling out.”

LSC’s new projection technology package, with the new Digistar system, Christie projectors and repaneled screen at the heart, enables it to perpetuate the venue’s giant screen cinema exhibition capabilities while adding state-of-the-art planetarium functionality with access to everything in the Digistar toolbox. The theater retrofit also includes a DCI-compliant projection system, new seating, and new lighting and sound systems.

Michael Daut, director of Product Marketing for E&S, noted that at the time of the RFI (request for information), Digistar 6 had not yet been released, but was available by the time of the RFP (request for proposal), allowing them to offer all the latest improvements and tools such as Domecasting; enhanced terrain for the moon, Earth, and Mars; Data2Dome implementation; and native support for Unity 3D, among other features.

As consultant to LSC, Paul Fraser of Blaze Cineworks helped engineer the RFI and RFP processes that led to selecting the new systems, over the course of two years (2015-2016).

A result of the RFI process was a request for Blaze to dive deeper into the planetarium option. Fraser delivered a report that would include planetarium programming and giant screen documentaries repurposed for fulldome. Not long after, Jennifer Chalsty, a philanthropist and member of the LSC Board, became a primary benefactor.

A symbol of the convergence

What happened in the evolution of LSC’s vision and the system ultimately installed represents a fulfillment of the convergence of markets and technologies, bringing the planetarium and giant screen industries together. This process has been underway for decades, as fulldome systems have steadily improved since the first permanent installations in the 1990s.



“Nowhere else in the region can students experience the space science standards in such a fully immersive manner,” says planetarium director Mike Shanahan.

E&S has been positioning and developing its product lines for such a moment as this, and the E&S True8K Digistar fulldome system won the day - and the night sky.

“The team at Liberty Science Center entered the process with an interest in 8K,” said Daut. “Some of them were present at the E&S and Christie True8K demo at the October 2016 Giant Screen Cinema Association’s annual conference in Toronto. The E&S 8K system has the image quality to surpass and decisively replace 1570 film, and we have the largest library of planetarium shows and giant screen film content digitized for domes.”

For concerns about replacing a single film projector with multiple digital projectors, Daut cites Digistar’s auto alignment and blending features, which coordinate well with the Christie projectors. “They make manual alignment a thing of the past,” he said. “We knew we had to provide a consistently seamless image to make a multi-projector solution viable. It’s a big, big dome, and takes a lot of light to fill up and lots of pixels to make it look spectacular. Liberty Science Center needed the 10-projector recipe for a beautiful, bright, high-resolution image.”

“The automated system works very well, both in terms of the blend and the alignment,” said Shanahan. “A great deal of care was put into setting the 10 Christie projectors so that no one sitting in any seat would get the light in their eyes; the solution of placing four projectors in front and six in back worked out well. The renovation also ‘completed’ the dome so that it covers a full 180 degrees.”

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To the stars

“LSC is a good model for dome operators looking to build on their business,” said Fraser. “Adding a planetarium system can be seen as 1+1=3 because you’re adding a whole new content stream. These are all singing, all dancing, wonderful immersive theaters that can do many things.”

While LSC is the largest example, the first museum to expand its educational offerings in this way - discovering and leveraging the capabilities of a new digital planetarium system in the course of converting an IMAX film dome and bringing in a dedicated planetarium specialist - was the Science Museum of Virginia in Richmond. Its theater was renamed “The Dome” and reopened in 2014 with an E&S Digistar 5 8K system with five Christie D4K25 projectors. The museum’s new “immersive experience specialist”

Justin Bartel quickly gained a loyal following with his topical, real-time science and astronomy shows.

Operators, especially of giant domes (over 60 feet in diameter) have taken longer to convert from film to digital systems because of quality concerns. But while there will always be upgrades and improvements, the adoption of 8K systems for giant domes indicates that a quality threshold has been reached. As the example of LSC shows, reaching and crossing that threshold opens the door to additional possibilities. •••

This article first appeared in *The Planetarian*, published by the International Planetarium Society (www.ips-planetarium.org) and is reprinted here with permission.

The combination: E&S, Digistar and Christie

Christie projectors are often integrated into E&S Digistar systems. The custom LSC Digistar 6 system features 10 Christie Boxer 4K30 projectors. “The Christie Boxer projectors have been a workhorse for us,” said Michael Daut. “One of their many great attributes is flexibility; you can install a Boxer at any angle, any position, even straight up or down; they are that flexible. For a tilted dome such as the theater at LSC, that means you can position the projectors exactly as needed for the best audience sightlines. Christie has done a great job of eliminating those kinds of limitations and making even tricky installations possible.”



Daut reported that the same projector recently served well for two temporary installations, both high-profile Digistar demonstrations. One employed 10 Boxers at Ontario Science Centre in Toronto in 2016 in connection with a meeting of the Giant Screen Cinema Association (GSCA); the other used 5 Boxers at the Saint Louis Science Center as part of the Pleiades Planetarium Conference in

2017. The Toronto installation featured split screen demonstrations comparing 1570 film projection side by side with Digistar True8K digital fulldome. “The projectors were positioned in front of the theater and the audience,” said Daut. “Even with those limitations, they performed extremely well; aligning seamlessly and producing beautiful images, in addition to withstanding the rigors of shipping. They’re just very reliable. The power of Digistar technology and E&S engineering combined with the Christie projectors’ image quality made this demo a huge success and left an indelible impression on the giant screen cinema community.”

Both Christie and E&S are visibly invested in serving the planetarium and giant screen sectors. Each is a well-established technology and manufacturing company (E&S has celebrated 50 years; Christie has been in business nearly 90 years) and offers a suite of innovative display products developed in response to market and customer needs. Each is actively represented within trade organizations.

Notable Digistar installations using Christie projectors include Planetarium Hamburg (Digistar 6; 5 Mirage 4K30 projectors); Science Centre Singapore (Digistar 5; 5 Mirage 4K30 projectors); Science Museum of Virginia (Digistar 5; 5 D4K25 projectors); the Center of Science and Industry in Columbus, Ohio (Digistar 5; two Christie D4K2560 projectors); and Milwaukee Public Museum (Digistar 6; 5 4K Christie Boxer projectors).

Sustainability, mobility and opportunity

At Dubai Expo 2020, construction is underway and international tourism promotion will soon commence for the first world's fair to be held in the Middle East.

Exclusive overview from expo specialist James Ogul, travel expert Rona Gindin and IPM editor Judith Rubin

Images courtesy of Dubai Expo 2020

Dubai 2020: The Expo

By James Ogul and Judith Rubin

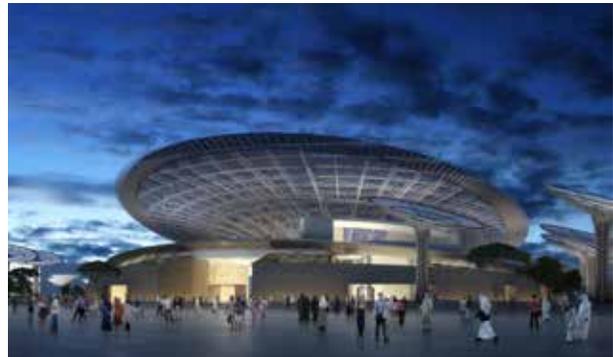
Dubai Expo 2020 is set to take place October 20, 2020 – April 10, 2021, coinciding with the 50th anniversary of the founding of the United Arab Emirates. It will be the first world's fair to be hosted in the Middle East.

On 27 November 2013, The Bureau International des Exhibitions (BIE), the Paris-based entity that regulates world's fairs, conducted a vote among its 169 member countries, and Dubai won the privilege to host the 2020 world expo, beating out Yekaterinburg, Russia; Izmir, Turkey and São Paulo, Brazil.

The Dubai 2020 theme is “Connecting Minds, Creating the Future”; sub-themes are Sustainability, Mobility and Opportunity. Organizers project visitation of 25 million, with 70% of those visits coming from outside the UAE. At this writing, 170 countries had committed to take part in the expo.

Construction, jobs and green initiatives

Over the course of 2017, some \$294 million was awarded in Dubai 2020 expo construction contracts. According to an article in “Arabian Business,” the Dubai expo reported that the foundations of the three theme areas are complete, with building construction currently underway. The three theme districts, which are being developed by Al Futtaim Carillion, are slated for completion by the end of 2018. UAE-based companies taking a lead role in the construction effort include Al Futtaim Carillion, Khansaheb, Besix, Arabtec, Tristar Engineering and Al Naboodah. According to recently released BNC Network figures, more than \$9.5 billion in contracts will be awarded prior to the opening of the expo and projects are expected to generate 500,000 new jobs over the next eight years.



Green initiatives are being factored into Expo 2020. Examples include: paving the expo road with concrete from previous projects; a 30,000-vehicle parking lot built by grinding thousands of recycled tires; using additives in the concrete mix that will reduce the consumption of water in the construction; and moving 5 million cubic meters of sand but reusing the sand for leveling the site. Smart building and smart grid technology will complement passive strategies to reduce power consumption by 20 percent – or 150,000 megawatts per hour. All expo permanent buildings are targeting LEED Gold certification or higher.

But the expo goes even further in its goal to present innovative models of sustainability, in the form of Dubai's Mohammed bin Rashid Al Maktoum (MBR) Solar Park, currently under construction and projected to furnish the expo with a dedicated capacity of 464MW of clean energy. During the 6th edition of the World Government Summit, HE Reem Al Hashimy, UAE Minister of State for International Cooperation and Director General, Dubai Expo 2020 Bureau, HE Saeed Mohammed Al Tayer, MD & CEO of Dubai Electricity and Water Authority (DEWA), and Joe Kaeser, President and CEO of Siemens, signed a Memorandum of Understanding to commence a pilot project for what is being billed as the region's first solar-driven hydrogen electrolysis facility at DEWA's outdoor testing facilities at the Solar Park. DEWA has allocated AED 4.26 billion to support the infrastructure for electricity and water at the expo, and is the official Sustainable Energy Partner. There will be three substations, named Sustainability, Mobility and

Opportunity, after the three subthemes of the expo. DEWA aims to generate 100% of the energy that will be used by the expo from clean and renewable energy sources.

Infrastructure

In addition to development of the expansive expo site, a great deal of infrastructure work is taking place to support the event. The Road and Transport Authority (RTA) in Dubai has lined up \$4 billion in related transport projects, including an Airport Road Improvement Project, and more buses and taxis, and a 15 km, 7-station Route 2020 Dubai Metro Red Line extension that will connect the expo site with Nakheel Harbor & Tower.

ExpoLink Consortium, led by Alstom (St-Ouen, France) signed the contract to design and extend the Dubai Metro's Red Line and modernize its existing systems, with the Dubai Roads & Transport Authority (RTA) in 2016. The consortium includes London-based Weston Williamson+Partners, a master planning and infrastructure firm, collaborating with engineering and construction firms CH2M (Englewood, CO), Alstom, ACCIONA

Dubai 2020 facts

- The 4.38 square meter expo site is four times the size of the previous six-month world's fair, held in Milan, Italy in 2015.
- More than 1,200 contracts have been awarded to small- and medium-sized enterprises, and those 1,200 make up half the number of contracts expected to be awarded.
- Infrastructure improvements supporting the event include Dubai 2020's own Metro Station capable of handling 23,000 passengers per hour each way. It is part of the Red Line set for completion by May 2020.
- The Expo's four gates will be capable of handling 60,000 visitors an hour.
- Five million meals will be needed to feed the Dubai 2020 workforce during the run of the Expo.
- The site of Dubai 2020 features a central plaza surrounded by three sections, each devoted to one of the three sub-themes. Each participating country can decide which sub-theme it wishes to address with its exhibits. For example, the United States will focus on Mobility and will be located in that section.

Dubai 2020 organizers

A list of some of the key individuals running Dubai Expo 2020

- Her Excellency Reem Bint Ebrahim Al Hashimy, Cabinet Member and Minister of State for International Cooperation and Director General of the EXPO 2020 Dubai
- Tony Aitkenhead, Acting Chief Operating Officer
- Manal AlBayat, Senior Business Development and Integration
- Nadimeh Mehra, Director Legacy Development and Impact
- Omar Shehadeh, Senior Vice President – International Affairs
- Mukhtar Safi, Senior Vice President - Finance
- Gillian Hamburger, Senior Vice President - Commercial Affairs
- Richard Evans, Senior Vice President Event Operations

(Madrid) and Gulermack JV (Ankara, Turkey) on the new, \$2.45 billion Red Line extension, which includes an 11.8km viaduct and 3.2km of underground track. In June 2017, Alstom announced that drilling was underway with its tunnel boring machine, nicknamed "Wugeisha Expo 2020." In March 2018, Reuters reported that the government of Dubai had completed arrangements of a financing package for the metro extension project, and that in 2017 it had secured a \$3 billion loan for airport expansion, including Al Maktoum International Airport which serves Dubai and currently handles some 7 million passengers a year.

Dubai's Roads and Transport Authority (RTA) has awarded two contracts worth Dh1.36 billion (\$370 million) for phases One and Two of the Expo Roads Improvement Project to handle traffic that will serve expo visitors and future projects in the area. These two phases include improving Jebel Ali-Lehbab Road at the intersection with Sheikh Mohammed bin Zayed Road. It also includes the construction of bridges on Sheikh Mohammed bin Zayed Road to serve the traffic from and to expo yard.

A partial list of other companies that have been awarded contracts for the expo: AECOM (urban planning and public realm design consultant), Thinkwell (content master planner), Parsons International (infrastructure design and construction support services consultant), Foster & Partners (Mobility Pavilion), Bjarke Ingels Group (Opportunity Pavilion), Grimshaw Architects (Sustainability Pavilion), Santiago Calatrava (UAE National

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Pavilion), Deloitte (concept of operations), JLL (real estate feasibility study), The Event Planning Group (operations consultant), The Russell Partnership (food & beverage consultant) and Goodharbour (security consultant).

Exhibitors show enthusiasm and RFPs are being issued

As is usual for a six-month world's fair, many of the participants will plan and build ground-up pavilion structures and strive for innovative architectural statements. With 170 countries already on board and more expected, there will be many RFPs and tenders issued for exhibition design and fabrication. Nowadays, expo participants often set up their own websites and social media presence to help build enthusiasm and form their teams. Some participants are planning to start foundation work as early as April 2018.

There have been a number of recent tenders issued and announcements of participation including from the US, UK, Germany, Ireland, Vienna, Czech Republic, Australia, Brazil, Kuwait, Kazakhstan and Namibia.

Senior officials for participating countries have gone on the record expressing their enthusiasm and the benefits of having a presence at the Dubai expo.

J.M. Mollen, Ambassador of the Kingdom of the Netherlands, to the UAE, said in an interview with Dubai's Khaleej Times, "The Netherlands sees Expo 2020 as an important tool to strengthen our relationship with our Emirati friends and other partners worldwide and to work with these partners to find solutions for the problems of today and tomorrow."

Italy's General Commissioner Paolo Glisenti was quoted in "ANSA Med" saying, "... in its participation in the expo, Italy will work on four axes: economic, cultural, informal and educational diplomacy." He added that the UAE is a "strategic" area for Italy and that it will be holding three years of events for the expo, from 2018 through 2020."

"Expo 2020 will allow us to demonstrate New Zealand's culture of innovation and entrepreneurship, through a lens of *kaitiakitanga*, to a global audience of millions," said Clayton Kimpton, New Zealand's Commissioner-General for Expo 2020. New Zealand recently announced the design team for its \$53 million pavilion: a multi-disciplinary consortium led by Jasmax (architecture) along with Special Group (creative story-telling) and Mott MacDonald (engineering). New Zealand's pavilion will be located in the Sustainability District.

Dubai 2020 business partners

Dubai Expo 2020 is recruiting business partners to join the project. The list includes:

- DP World, active in global marine and inland trade. The company owns and operates 77 terminals globally including the Port of Jebel Ali, less than 10 km from the Expo site, and will play a vital role in the supply chain for the Expo.
- Siemens will target the site of Dubai 2020 as a future business location after closing day. The move supports the legacy aspirations of the expo. The company expects this development to support its Vision 2020 and related logistics businesses, creating new growth opportunities globally.
- Emirates Airline will play an important role in bringing visitors to Dubai 2020 as a licensed ticket reseller. With its route network to over 150 destinations it is well placed to support Dubai 2020 in attracting visitors, 70% of whom are expected to travel internationally to visit the expo.
- Emirates NBD will be the exclusive onsite banking partner for the Expo.
- Etisalat Group will play a key role in creating the infrastructure for the Expo site and facilitate a range of digital interfaces for visitors and participants. It will also provide on-site WiFi.
- SAP is Dubai Expo 2020 Enterprise Software Partner and will develop technology to enable organizers and exhibitors to analyze data and support the visitor experience.
- UPS is Official Logistics Partner and will provide more than 27,000 square meters of warehouse space and a team of 1,000 employees during the Expo in Dubai. The company has similar prior experience, as logistics sponsor for the Beijing 2008 and London 2012 Olympic Games.
- Dubai Electricity and Water Authority (DEWA) will work with the Expo to deliver renewable energy, electricity and water projects.

According to a UK government report, UK International Trade Secretary Dr. Liam Fox has stated that the UK plans to theme its Pavilion around “Opportunity,” focusing on how UK expertise can help spread prosperity across the world. Fox indicated that the UK is committed to playing a key role in helping Dubai stage a successful expo and his department is helping British companies bring their expertise to build pavilions.

Post-use plan

Dubai 2020 organizers have a detailed plan for use of the site after closing day, based on retaining 80 percent of the site. Some buildings will remain unchanged, including the Santiago Calatrava-designed UAE National Pavilion. Others will see interior changes: The Sustainability Pavilion, for instance, will live on as a center for child and scientific education. The Dubai World Trade Center Conference and Exhibition Center will also remain once the expo closes.

The expo site will include District 2020 which will have 700,000 square feet of residential space, education facilities and parkland. The Al Wasl Plaza, the central hub of the expo, will remain, and contain gardens within its dome. Siemens has agreed to build a new logistics hub

in District 2020. Finally, the development will have one of the world’s first 5G mobile networks and will target companies working in tech and innovation to occupy some of the 1.5 million square feet of commercial space allocated to the site.

All considered – in view of its being the first world expo in the region, forecasting 70% of an expected 25 million attendance from abroad, having a huge \$7 billion investment and a solid, viable residual use plan – Dubai Expo 2020 is one of the most ambitious world’s fairs ever undertaken. We look forward to the next chapter of this adventure, and to opening day. •



James Ogul is world’s fair editor of InPark and spent much of his career administering world’s fair pavilions for the US Government. Read his book, “Tales from the Expo,” available free at www.inparkmagazine.com.



Dubai 2020: The tourist destination

Marketing efforts haven't yet begun, yet ambitious travel pros are exploring options now

by Rona Gindin

When Dubai Expo 2020 opens on October 20, 2020 in the UAE, it debuts with a mighty goal: luring 25 million visits to the UAE's largest city over its six-month run. Expo organizers forecast 70 percent of those visits coming from outside the UAE. Historically speaking, this is an unusual and ambitious forecast, as most past expos have drawn 30 percent or fewer of their visits from abroad.

Reaching their attendance goal will take an effective marketing campaign, and Dubai officials seem prepped to step up. Starting May 2018, they'll launch international efforts to lure Dubai newbies to experience not only the technology-savvy event, but also a host of other attractions opened recently or under construction. In the meantime, in January 2018 - 1,000 days before opening day - the country introduced a global advertising campaign, which began to appear on a variety of media platforms in the US, UK and India.

Where Dubai tourists hail from

Those three nations are prime tourist targets, and there are others. Like regular Dubai tourism, Expo 2020 visitors will likely come from a mix of destinations. Currently, of Dubai's 15.79 million annual visitors, 15 percent travel from India, according to Visit Dubai's Dubai Tourism 2017: Performance Report. Other top markets are Saudi Arabia, Oman, China and Russia.

"When it comes to the Dubai Expo, a high number of visitors are expected from Western Europe, South Asia and Gulf countries," says Kinda Chebib, a consultant with Euromonitor International. "Western Europe and Asian countries are particularly being targeted by UAE authorities. Within Western Europe, Germany will play a major role with an investment estimated at 50 million euros and 3 million expected visitors for the expo."

Marketing initiatives outside the UAE

So far, outside of the UAE, travel industry marketing efforts are minimal, and there are reasons for that. According to organizers, the expo itself plans to begin its outreach in May 2018. And airlines won't be booking flights until a year out. As a result, air-inclusive package tours can't be priced and sold until that time - thus no marketing from that quarter. Likewise, Emily Zazado, a spokesperson for hotels.com, indicated that its online



platform, on which independent travelers book lodging, won't see action for a while yet. "Typically, our lodging partners do not load any inventory on our site more than 18 months in advance, so we wouldn't have any data pertaining to 2020 yet," says Zazado.

Still, exceptions can be found. Manak Flights, a flight-booking website based near Toronto, is eager for expo momentum to build. The firm, billed as a "top producer" for Emirates Airlines, according to Director of Sales and Operations Saleem Akhat, specializes in flights from North America to the Middle East. As such, Akhat anticipates "very, very" special deals on flights from the airlines that link Canada, the US and Dubai. Akhat indicated that his firm will pass on "early bird" savings to consumers. "The airlines will do the marketing," he adds. "They might have a big gold raffle, a car raffle," and other such promotions, he said.

For its part, Manak has a website page with information about Dubai, and will add content about the 2020 expo in the future. "This will make readers alert that the expo is coming," says Akhat, noting that viewers will then have access to info when flights are announced. "When the date of the expo is within a year, we will start promoting our low fares on the website, in e-mail blasts, and via radio programs, newspaper and TV ads," Akhat says. "As we get other information, we will start spreading it to consumers. We will also run promotions such as, 'Receive a \$10 gas card if you buy a ticket to Dubai during the world's fair.'"

Since four entities – United Arab Emirates, Dubai, the Emirates airline and the world’s fair – are “the same people” related under the government’s umbrella, Akhat notes, the Manak execs plan to encourage the airline to offer business incentives such as lower airport landing taxes. His reasoning: bringing people into the country will benefit all.

Marketing initiatives closer to home

Within Dubai, planning is aggressive. The hospitality company Jumeirah, for instance, is based in Dubai and is in the midst of a pre-expo boom. “We currently have 11 luxury Jumeirah hotels and resorts in the United Arab Emirates, offering nearly 4,000 rooms across Dubai and Abu Dhabi, and with a robust pipeline we anticipate opening two further Jumeirah luxury hotels and resorts in Abu Dhabi and at least one other Jumeirah hotel in Dubai before the start of Expo 2020,” says Vicki Morley, senior director, corporate communications. “In addition, we recently launched a second brand, Zabeel House by Jumeirah™, which offers visitors an upscale casual experience, and we will have at least three Zabeel House hotels open in Dubai welcoming guests by 2020.”

Although Jumeirah has no solid marketing plans related to the world’s fair just yet, much is under discussion, Morley notes. “Commercially we are of course working with Expo 2020 organizers to see how we can assist, and with travel partners to explain our offerings as they look to bring their clients into Dubai for the event. We have looked at ways that our Emirates Academy of Hospitality and our catering division, Jumeirah Hospitality, can provide services or expertise to the Expo 2020 organizers and we are open to discussions and engage in regular dialogues as required.”

On-the-ground tour company Dubai by Foot is prepping for what Operations Manager Arushi Bhargaba sees as a tourism renaissance. “We’ll be unveiling the Dubai Eye, which will be the biggest observation wheel in the world. We will probably double the number of tourists who come here yearly by 2020. We’ll have a new train, a new museum, new beach property and many new structures. Right now, people come to Dubai by chance, stopping over on the way to Australia or Europe. Once the expo is here, those who visit will see that this is where technology is, that it’s easy to do business here, that we are not afraid to experiment with the future.”

Bhargaba agreed with others we spoke to about timing - “It’s a little bit early to do the marketing” - but feels confident the government will not only market effectively but will also help local tourism professionals do their jobs well. “All tour guides here take a rigorous, three-week training session to get licensed,” she says. “As the new attractions open, we’ll have more materials to learn and explain to visitors.” At her company, an offshoot of a Washington, DC-based tour group, existing tours will be expanding, and an expo 101 tour will likely be added. “Some people will feel overwhelmed and want someone to lead them through the world’s fair,” she predicts. “Our Downtown tour may highlight the modern new buildings, and our Doing Business in Dubai tour will probably have an Expo 2020 angle,” she says. “We’ll conceptualize the details closer to the start date.”

We’ll report back soon, as Dubai begins its marketing push, to let InPark readers know how the outreach and marketing campaigns continue, to fulfill the promise of the unprecedented 70:30 world’s fair attendance model. Their efforts may well be as innovative as the expo displays. •



Journalist Rona Gindin (www.ronagindin.com) has been covering travel from various business and consumer angles for three decades, and today follows the attractions and travel industries from an Orlando, Florida base.

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Talking about transformation

InPark speaks to industry leaders making changes

by Judith Rubin and Martin Palicki

Anthony Esparza

Interview by Judith Rubin

Anthony Esparza has stepped down as Chief Creative Officer, SeaWorld Parks & Entertainment, a position he had held since September 2015. The announcement came March 1, 2018, less than a week after the departure of CEO Joel Manby, with John Reilly being named interim CEO. Esparza had joined SeaWorld shortly after Manby took the helm and had previously been part of Manby's team at Herschend Entertainment, as SVP, Guest Experiences, Design + Development.

How do things stand now between you and SeaWorld?

I'm leaving on great terms and continue to be a super fan. There was inspiration and purpose behind what we were doing and what we were setting up. I feel positive about my time at SeaWorld; I helped stabilize a very tough situation (post "Blackfish") and initiate cool initiatives to help take SeaWorld into the future.

What are some of those cool initiatives?

They included the establishment of great master plans to help map out where new attractions would be, and a new heart for design and guest experience development in the company. We took attraction development into new technologies as represented by Kraken VR coaster, Orca 360 and Battle for Eire. I helped to expand some horizons.

What are some other things you're proud of from your time at SeaWorld?

Helping the company refine its voice to better tell its story – particularly the story of SeaWorld's rescue efforts. Our group partnered with the marketing team; I helped craft the new Park to Planet initiative that was driven by the CMO, Denise Godreau. We also launched a very robust event initiative to build in more reasons for guests to come back, and extend their stay, with big events like Electric Ocean, at all SeaWorld parks.



Photo by Chris Chien for TEA; provided courtesy TEA.

At the foundation of all this is one of the accomplishments I am most proud of: the establishment of SeaWorld's creative arm, Deep Blue Creative. That brought together attractions, entertainment, media and new business development together under one umbrella and in one place. They had been all different departments, but as Deep Blue Creative, they became a team. Setting up Deep Blue Creative involved restructuring in regard to who was in charge, how the business was run, and project workflow. This brought a new creative spirit to the way SeaWorld functions – all the creative people doing these things brought together in one location, aligned around the company goals, communicating and collaborating. The founding of Deep Blue Creative set a strong foundation for new ventures such as the new park in Abu Dhabi, and it revitalized programs such as Sesame Workshop.

Can you comment on Joel Manby's departure in connection with your own?

When there is a change in leadership – as with Joel – there are often other changes in the team. I wish the company all the best. SeaWorld has a great team. Joel is a great

leader, and he did a really tough job for the company for several years. It was time to pass it on to somebody else. It was a very intense time; he did a lot of heavy lifting, and he did a good job of it.

You've been a part of this industry since the 1980s. What are some of the things you brought to the table at SeaWorld from your decades of experience?

I brought a creative spirit that connected people, and an eye for recognizing talented people and bringing them onto our team or into the company, and both those things will serve SeaWorld well into the future. I brought energy and excitement and a fresh viewpoint that helped the company see that it could become something different, fresh, and entrepreneurial. We helped SeaWorld explore some pretty big boundaries. I'm a builder: I was brought in to bring a vision for what could be, and we did that. They have some excellent plans in their hands now.

I see my past roles in three chapters. First, an intense time of learning and doing on a range of great projects for various parks and attractions, including some at Universal Studios and in Las Vegas. Second, my time

with Paramount [eight years with Paramount Parks/VIACOM as SVP, Design and Entertainment] provided a great grounding in working with story-driven IPs such as Nickelodeon, helping double the value of the company before it was sold. Third, my time with Herschend [12 years]. There, I learned the voice of middle America, what a strong culture can do in a company, and how to apply being kind-hearted to what you do in design to touch people's hearts. All of that was my school for SeaWorld, and I used every part of it: working on projects that had clear stories, driving innovation on rides and expressing the culture of rescue and taking care of our Earth and animals.

What's next for Anthony Esparza?

I'm going to continue to be a cheerleader for our industry. I love it, I love the people and companies and organizations we work with, and will continue to be involved.

Right now, I'm going to recharge my creative mind and connect with family for a bit, and then kick back into gear later in the year. Connect with me on LinkedIn. •

Taylor Jeffs

Interview by Martin Palicki

In March, "Legacy | GGE" was announced as the new name of what had been The Goddard Group. Taylor Jeffs, Legacy | GGE's recently-appointed President and Chief Creative Officer, spoke on the recent changes within the company.

Tell us about the new name and why you selected it.

We're excited about the Legacy name for a few reasons. First, it's a light nod to our roots as Landmark Entertainment Group, and more importantly, it's symbolic of the passing of the torch to the next generation, myself included. We'll also continue to use "GGE" as that's how we're primarily known overseas, but for North America, we will be focusing on building the Legacy brand.

Why are you changing your name now?

The idea of evolving our identity has been in discussion for a few years now. The strength of our company lay in the team we've assembled over the last 15 years, and not in



any one person as our prior identity reflected. The timing was also ideal in order to allow us to most-effectively reestablish our presence as we promote a couple high-profile project openings later this year, including Haichang Ocean Park in Shanghai, and Chimelong's Ocean World in Zhuhai.

Gary took a leave of absence from the company in late December. Is that still the case?

Back in December, we all agreed that it was in the best interest of our clients and projects to mitigate any possible distractions, and that continues to be the case.

Are there any organizational or staffing shifts associated with this change?

My appointment as President had been in the works, but obviously those plans ended up being accelerated a

bit. Beyond that, thanks to the unflinching support of our clients and partners, it's been business as usual. If anything, I think the last few months have made everyone here reflect upon the opportunity we've been given, and reminded all of us to never take for granted how lucky we are to be part of an industry that designs and builds projects that push boundaries, expand minds, and capture hearts. •

Loren Barrows

Interview by Martin Palicki

In late January, Alcorn McBride, manufacturer of show control, audio and video equipment for the themed entertainment industry, announced the promotion of Loren Barrows to Chief Operating Officer. An eight-year team member of Alcorn McBride, Barrows formerly served as Director of Business Development during a period of unprecedented growth and expansion for the company.



What has drawn you to technology throughout your career?

I discovered my interest in technology somewhat by accident when I became a client service manager for a structured cabling systems company in the Washington DC area. That opportunity allowed me to learn about the behind the scenes technology that makes other things work. The problem solving part of technology pulled me right in. The idea of improving, transforming and streamlining things by matching the right technical solution fires me up!

Who have been your mentors and inspiration?

I am very fortunate to have many. I value Simon Sinek's perspective on business and wholeheartedly believe inspired and fulfilled people deliver their best work. Steve Alcorn is a great mentor. His business philosophy resonates with me unlike any other leader I have encountered. He inspires us to live our mission statement of "Have fun, make money."

The Alcorn McBride team is an amazing group of people. We keep things simple and focus on finding solutions.

Every member of our team is passionate about what they do and the success of our company. They push themselves for the benefit of our Alcorn McBride Family and that inspires me every day.

What do you hope to accomplish in your COO role at Alcorn?

Our company engineers A/V and show control solutions for the themed entertainment industry. It is a very niche market in that most commercial products do not meet the demands of theme park applications so we design purpose-built gear. Our engineers are continuously pushing the boundaries of technology to make products that match our clients' unique needs. My role is to support them and create an environment where they can be inspired to do their best work.

Steve Alcorn founded Alcorn McBride 32 years ago with a mission to create a company for his employees while doing really cool things in partnership with our customers. My goal is to keep that as our core belief and continue his vision.

How do you see the role technology plays in the themed entertainment industry evolving over the next 5-10 years?

The growth of more immersive and interactive experiences demands more complex “behind the scenes” technology. The creative minds of our industry need the support of new technologies to bring their ideas to life.

How has Alcorn McBride grown and changed during your time there and what do you see going forward?

In the years I have been with the company I have seen the complexity of our projects increase exponentially. Years ago, one, maybe two engineers could work on a product

and deliver that product to market within a short time. The products we are developing now require an entire team of engineers in order to make it happen within our clients’ project cycles.

Our sales team has also evolved. Scott Harkless is our chief innovation officer and leads our sales and support team. He started with our company almost 16 years ago as an engineer and has a vast knowledge of our products, the core technologies we use, and theme park applications. His engineering problem-solving mindset has transformed our product development and our sales/support team follow his lead. This has made us a stronger resource for our clients which helps us build relationships and deliver rock-solid products. That’s what we are all about! •



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Artist rendering of Universal Studios Beijing. Image courtesy of Universal

Big names in Beijing

Universal Studios Beijing develops on a grand scale

by Joe Kleiman

The Chinese theme park market has changed dramatically in the past 20 years. Where once OCT was the dominant player, other China-based players, such as Chimelong, Wanda, Fantawild, and Haichang Ocean Park have emerged. At the same time, they have been joined by Western brands, such as Merlin Entertainments, Village Roadshow, SeaWorld, Six Flags, Parques Reunidos/Palace Entertainment, Walt Disney Parks & Resorts and now Universal Studios.

Disney and Chimelong set the stage

Shanghai Disney Resort was announced in 2009 and opened in June, 2016, drawing attendance of 5.6 million during its first six months of operation. The Shanghai Disney resort would not only bring a new benchmark to the Chinese market, but it would prove to be a branding and marketing coup for Disney, providing an outlet to market its films and franchises to China's increasing middle class population (something Universal took an early stab at in 1998, with the short-lived Universal Studios Experience in Beijing).

Developments by Chimelong Group had shown the viability of opening a major theme park destination in mainland China, most notably Chimelong Zhuhai International Ocean Resort, featuring Chimelong Ocean Kingdom, which had its grand opening in March 2014. A year later, in spring 2015, Chimelong Ocean Kingdom was honored with a TEA Thea Award, and new attractions within the park have since earned it two additional Thea Awards. The park showed strong attendance trends. Visitation has continued to climb: according to the 2016 TEA/AECOM Theme Index, Chimelong Ocean Kingdom posted 8.5 million attendance that year, ranking 12th worldwide and 4th in Asia Pacific.

Universal announced in November 2014 that it would build an entire themed resort in the Beijing region in partnership with a number of government agencies. The signs were right: a major Disney park was coming, and there was domestic growth as well, with the success of Chimelong Ocean Kingdom setting a new standard.

As mentioned above, this was not the first time for Universal Studios in this market – in 1998, the company opened the Universal Studios Experience Beijing in the Henderson Center. Although neither the attraction nor the mall lasted long, it provided the studio an outlet for marketing its films to Chinese audiences through a behind-the-scenes multimedia presentation on moviemaking buoyed with film props from recent Universal releases and themed retail and dining. And in 2010, Vivendi-Universal, then owner of Universal Studios, signed an agreement with Shanghai Waigaoqiao Group and Jinjiang Group to build a Universal theme park in Shanghai. The deal fell through once Vivendi sold majority interest in the company to General Electric.

The largest Universal resort

According to figures published by Comcast (parent company of Universal Studios), the overall cost for Universal Studios Beijing will be in excess of 20 billion RMB (approximately US\$3.3 billion at the time of the November 2014 announcement), with the park being jointly owned by Comcast and a consortium of four state-owned companies, operating under the collective name “Beijing Shouhuan Cultural Tourism Investment Company, Ltd.” In the official conceptual rendering of the park that has been released, one can see elements from Universal’s two Orlando parks (Universal Studios Florida and Universal’s Islands of Adventure), including what appear to be two distinct Harry Potter realms, along with elements currently existing at Universal Studios Singapore, a licensed park owned and operated by Genting at its Resorts World Sentosa resort.

The official rendering shows a large hotel marking the entrance to the park, in much the same way that hotels are integrated into the entranceways of Disneyland Paris and Tokyo DisneySea. The resort is scheduled to also house a second hotel, a CityWalk dining and retail district, and a parking structure. Future phases will include a waterpark, second theme park, and five more hotels.

In a March 2017 interview with “Beijing Business Today,” Duan Qiang, Chairman of Beijing Tourism Group, an investor in the Universal Studios resort, shared that it is being designed to cater to Chinese sensibilities, with an estimated 35% of the park’s design based around local culture. Two recent deals by Comcast subsidiary NBCUniversal, under which Universal’s studio and theme park divisions operate, will play a key role in the direction the park takes with its attractions.

Government support

Universal Studios Beijing will be located in the suburb of Tongzhou, east of downtown, on a 1,000-acre parcel

of land. This is approximately the same size as Universal Orlando Resort, which currently occupies 580 acres, with another 450 acres near the Orange County Convention Center targeted for future development. By comparison, Universal’s theme park properties in Universal City, California (which includes both entertainment and production facilities) and Osaka are much smaller, at 450 and 108 acres respectively.

Groundbreaking took place in October 2016, with a scheduled opening in 2020. The overall project is expected to create 40,000 new jobs in the Tongzhou region. The Tongzhou Culture and Tourism Zone Managing Committee is overseeing the infrastructure on the project and surrounding areas, including the construction of 50 new roads to support the new resort. One of the more unique tasks involves military fiberoptic cables that run under the property and will have to be rerouted.

Universal Studios Beijing will have the advantage of two subway lines that are being extended, with a station added at the resort. This new transportation infrastructure will link the resort to downtown Beijing and the rest of the Beijing metropolitan area, placing the park within 30 minutes via car or public transportation from downtown.



Tom Mehrmann

Mehrmann, park guru

To bring the resort to fruition, the company brought in new leadership from outside the Universal organization to be president and general manager of Universal Studios Beijing Park and Resort. Tom Mehrmann is perhaps best known as the former chief executive of Ocean Park Hong Kong, where he oversaw a HK \$2.3 billion master plan that added new themed areas, attractions, transportation options, and the start of construction of new hotels and Hong Kong’s first waterpark. During his tenure at Ocean Park, (2004-2016), Mehrmann was able to maintain Ocean Park’s strong standing, even with new competition such as

Hong Kong Disneyland and Chimelong Ocean Kingdom nearby.

In addition to his experience at Ocean Park, Merhmann has a track record of transforming and opening new parks internationally. His accomplishments include being part of the team that opened Knott's Camp Snoopy in Minnesota's Mall of America (1991-1994), overseeing the transformation of The New Marine World (now known as Six Flags Discovery Kingdom) in Vallejo, California from a zoological park to a Six Flags theme park (1998-2004), and opening Warner Bros. Movie World Madrid (1999-2004). In 2016, he founded a consultancy, Themed Advisors.

Meanwhile, in Osaka...

Comcast now owns Universal Studios Japan (USJ) outright, since its \$1.5 billion purchase in 2015, and has been investing heavily in the park since then. Thanks to this investment, USJ, which opened in 2001, has new themed lands based on the Harry Potter and Despicable Me/Minion brands, and a major, new Jurassic Park-themed coaster. In 2016, under full Comcast ownership, the park underwent its third consecutive year of attendance growth (at a time when Tokyo Disneyland Resort's numbers were dropping), welcoming 14.6 million visitors. On Dec 19, 2017, USJ welcomed its two millionth foreign visitor, three years after having welcomed its millionth. The majority of these foreign visitors are from Asia, primarily mainland China. The increase in Chinese visitation to the Japanese park over the past few years has provided a test bed for Universal's theme park division as to what works and what doesn't with that national demographic.

In addition to its own intellectual studio and theme properties, which now include the franchises of DreamWorks Animation, Universal in 2014 entered a distribution deal with Legendary Entertainment, part of Dalian Wanda Group. A number of the Legendary films distributed by Universal, including "Great Wall," "Pacific Rim Uprising," and the upcoming Dwayne Johnson action film "Skyscraper," have either Chinese directors and production teams or leading Chinese actors, or both. There are a number of clues that Universal will likely integrate these franchises into its Beijing park, among them a casting call on the website "Acting Showcase," calling for "sorcerers" and "Great Wall Defenders" for a Universal theme park attraction - roles similar to those in "Great Wall."

The Olympic factor – Access and Exposure

USJ is planning to open a new themed land based on Nintendo's video game franchises in 2020. The timing was chosen specifically to coincide with Tokyo's hosting of the XXXII Olympic Summer Games, Jul 24 - Aug 9, 2020, and the large crowds anticipated in the country for those games.

There are similar opportunities for Universal in Beijing in 2022, with Beijing hosting the Olympic Winter Games 2022 (Feb 4-20). The new Universal resort in Beijing will have opened by then and will be an easy commute to and from Olympic facilities. National and local governments have been extensively improving and increasing both information and transportation infrastructure in the Beijing region. The games will also reuse urban facilities from the 2008 Summer Olympics in Beijing, such as the Bird's Nest stadium for the Winter Games' Opening and Closing Ceremonies and the Water Cube indoor stadium (later transformed into an indoor waterpark) as the venue for curling. Furthermore, with NBC having the exclusive US broadcast license for the Beijing games, it's anticipated that Universal Beijing resort will feature extensively in the network's coverage.

Nintendo may be part of the Universal Beijing experience by the time the Olympics arrive in Beijing in 2022. Tom Cavanaugh, the CEO of Comcast, announced in 2017 that Nintendo would be added some five years down the road.

A New Benchmark

With strong infrastructure and financial support from both the Chinese and Beijing governments, Universal Studios Beijing is set to create a new standard for cooperative projects between Chinese entities and Western entertainment companies, with the additional benefit of the resort doubling as a synergistic marketing tool for Universal's film and television properties in China. As said by Tom Williams, chairman and CEO of Universal Parks & Resorts, in an official Comcast announcement: "Universal Beijing will create a higher level of economic growth, understanding and cultural exchange between our two countries. Together, we will create a unique experience that spotlights hugely popular Western entertainment concepts as well as China's rich cultural legacy. This will be an opportunity to build relationships with the Chinese people on a direct and personal level." •••

Gateway to the ocean

LHM expands entertainment components of St. Louis Union Station with new aquarium

Interviews with PGAV and zoOceanarium by Judith Rubin

Lodging Hospitality Management (LHM) held the groundbreaking ceremony in November 2017 for the St. Louis Aquarium at Union Station. St. Louis-based LHM owns the historic, downtown train station, which is a National Historic Landmark.

The 125,000 sq.-foot, \$45 million, 1.3 million-gallon St. Louis Aquarium at Union Station will house thousands of aquatic species from Earth's rivers and oceans.

Projected opening for the new aquarium is 2019. The annual attendance projection is one million.

The aquarium project represents the second major entertainment development LHM has brought to Union Station since acquiring it in 2012 – the first was the Grand Hall Experience, an indoor, multimedia/projection mapping show that was honored with a TEA Thea Award in 2015.

LHM, headed by chairman and CEO Robert O'Loughlin and president and COO Steve O'Loughlin, has an excellent track record in reviving the performance of hospitality-based developments and also owns the adjoining, 539-room St. Louis Union Station Hotel. Future entertainment development is in the works, including an observation wheel.

Under contract to LHM, and reporting to Chad Smith (vice president of design and construction, LHM) are PGAV Destinations as designer and zoOceanarium Group as operator of the new aquarium.

Judith Rubin interviewed PGAV's Emily Howard (vice president) and Justin Stichter (project architect/attraction designer) and zoOceanarium's Erin Clark (director of animal projects) about the project and each company's role.



Emily Howard



Justin Stichter



Erin Clark

Tell us about the PGAV team.

Emily Howard: The PGAV internal team consists of architects, exhibit designers, graphic designers, renderers, interior designers and various other disciplines within PGAV.

Our team of consultants and engineers is integral to the success of the project. For this project, PGAV is working with some of the best in the world. We are partnering with TJP for life support engineering, and exp for MEP engineering. Local structural engineer Alper Audi and MLA out of Seattle are engineering the specialty aquatic concrete and working to preserve as much of the existing structure as possible. Lighting design is by Oculus Light Studio and local engineer Frontenac Engineering is the civil engineer. Food service provider is DDG. PGAV is also working closely with Moondog Animation Studio to develop the audiovisual components throughout the Aquarium.

How are PGAV and zoOceanarium teams interacting for this project? How does having the operator on board at the start help the process?

Erin Clark: We're continually bouncing recommendations and ideas off of each other in developing a unique but operationally-feasible attraction. PGAV is one of the most experienced aquarium design companies in the world, which certainly makes our job much easier. Our typical conversations largely revolve around design considerations related to general operations and creating exhibits that are appropriate for the animals. This often includes such things as materials, temperature, the depth, height of the tanks, the turning radius needed by certain kinds of fish, as well as specific lighting requirements.

Having the operator onboard during the design process has numerous advantages. Foremost is the fact that our team is involved from the very beginning, so there is no learning period with getting it up and running. Basically, we have the full period of design and construction to develop facility-specific SOPs, staff onboarding schedule, the educational components, etc... so we hit the ground running as soon as the construction company turns it over to us.

Justin Stichter: There are three avenues we design for: animal-centric, guest-centric, and operations-centric. Having the operator on board helps ensure we traverse all those avenues effectively and keep them in balance.

Erin: The tanks and exhibits must be designed specifically for the animals that will live in them. An additional level of complexity is added because many of the exhibits will house several different types of animals.

Tell us about the overarching story informing the design.

Justin: Story is often the starting point for a successful project and the driver of decisions. Sometimes we have to educate the client about story and why it is so important, but in this case, Bob [O'Loughlin] is a storyteller himself, a lover of history.

The story was an interesting genesis, because this building, while it has a significant architectural history, has nothing to do with fish per se. So we had to find a way to tell a story that combines fish and trains. The common element became the journey from the world's waterways and back.

Emily: That journey becomes the undercurrent; talking about rivers, how they flow into our oceans, starting right here at home with the Mississippi and Missouri Rivers. That confluence is where we start - everything works together to get from here out to the ocean and this ties into the greater global and conservation stories.

Justin: One of the directives was how to differentiate this, as a regional aquarium, from other regional aquariums. Tying it to the river city heritage that is the origin of St. Louis is important - that common thread of transport and cultural significance, our people and the river.

Erin: The design includes numerous components where guests can actually interact with the exhibits. This interactivity allows for the visitor to become an active part of the story and the journey from river to ocean.

How does the new aquarium fit into the master plan for the property?

Justin: It will serve to anchor the overall entertainment district that LHM is building, which includes the observation wheel, outdoor shopping and dining, a lake show and so on. Families will, ultimately, be able to come and spend several hours there.

Everything will manifest the aquatic vernacular and play off the existing Union Station architecture. This will not be a passive journey for the guest, but rather a very immersive journey, and everything will fit the story.

Tell us something about the animal welfare, education and conservation mission of the facility.

Erin: We are fortunate to have great partners who are committed to developing a facility that exceeds industry standards in terms of providing a phenomenal level of animal welfare. Everyone involved is also equally committed to a facility that is educationally and conservationally focused.

Geographically, we're in a unique position here at the confluence of the Mississippi and Missouri Rivers to highlight the importance of these rivers, and the life within and along them and the region. Simultaneously,



The entry clock will connect the historical architecture to the modern aquarium. Courtesy of PGAV



The Mississippi River exhibit will take visitors in a themed environment below the river's surface. Courtesy of PGAV

we also need to recognize the impact we as people have on these rivers, and how our actions here in Saint Louis can impact everything down river and in the Gulf.

Justin: It is our desire and our passion to educate people, to get them to care. We're touching the heart to teach the mind, and to do that, we have to connect with people. If people come away caring for animals, then we win. Our three main priorities are human welfare, animal welfare and story.

Tell us about the process of staffing and training for the new aquarium.

Erin: LHM and zoOceanarium Group have been working together to develop staff onboarding schedules to ensure we have proper time to recruit and then train staff. We will have a good combination of highly experienced staff as well as individuals who are new to working with aquariums. The goal from the onset is to create a single, cohesive team made up of people from all different disciplines; customer service, animal care, advertising, finance, and cleaning. Everyone has to work together, so all the staff we work with go through a training program. Having started my career as an animal trainer, cleaning exhibits and working my way up from there, I can see a facility from all aspects.

We have been filling some key positions recently and will fill the rest closer to opening.

A lot of the maintenance work is focused on life support. For that, we need people who are very experienced with that equipment, someone who understands from

the animal perspective the importance of maintaining a specific environment.

What's it like for PGAV as a St. Louis-based firm, to be doing this high-profile, local project?

Emily: It sure is fun to work in your home town! The city is excited about it, and I get a lot of questions from friends who want the inside track (and I can't give it to them). All I can say is "it's gonna be fun." At PGAV we do a lot of local projects, working for the Saint Louis Zoo, which happens to be one of the best in the world, the St Louis Cardinals Hall of Fame and Museum and the St Louis Science Center, to name a few. But this is a whole new thing. I think St. Louis is yearning for an aquarium and we're honored to be part of it.

Justin: My kids are growing up here, and there's a pride of working in your own back yard. I believe this aquarium will be around for a long time, and become part of the legacy of great attractions in this great city. It's strengthened by the fact that LHM is doing it, because of their deep understanding of hospitality. When you think about an attraction like this, hospitality comes into it very quickly.

Erin: It's really exciting. In the time I have been in St. Louis, I have discovered that there is a lot of excitement around bringing back to St. Louis Union Station the luster it had in years past. I hear so many stories from people I meet about how this was the place to be during their youth. We are excited to be a part of creating something at Union Station that the City can be proud of. •••

Tech talk

The Golden Rule of theme park technology

by Scott Harkless, Chief Innovation Officer, Alcorn McBride



Before I was fortunate enough to fall into this industry, I worked in one of those big box technology stores. As an engineering student with an affinity for technology, I remember being fascinated by the gimmicks manufacturers would use to lure consumers into spending more money. One example I'll never forget was Sony's top-of-the-line CRT TV called the WEGA. In the late 1990s, this was the only TV to offer a flat screen (instead of the dome-shaped screen most CRT televisions had). This slight improvement came at a high cost, though - and I'm not just talking about money.

This 36" behemoth weighed a hernia-inducing 223-pounds. One night I was unloading one of the supply trucks when an unfortunate shift in cargo resulted in a revelation that can only be brought on by a 223-pound TV striking you square in the face. As I came to, bloody and battered on the floor of a trailer, I remember thinking... 'is this really what people want? I find it hard to believe that someone is going to take this thing home and say, "It took a herniated disc and a reinforced concrete TV-stand - but check out the flat corners on that picture!"'

While technology has certainly come a long way in the 20 years since, I still see plenty of examples of people getting caught up in the idea that amazing new technologies drive great experiences. If I have learned anything from this industry, it's that the complete opposite is true. It is the desire to create great experiences that drives amazing new technologies. For me, this has become a golden rule that influences everything I do.

As we kick off 2018, we're all wondering what lies around the corner for our industry. As a technology professional, I try to keep tabs on technical progress and I'm pretty sure that time machines are still on the drawing board. While I wait for my flux capacitor to arrive, I just try to keep in mind what makes the most successful themed attractions special: the ability to transplant guests to an alternate reality.

The more immersive the experience, the more "real" it feels and the more likely it will be enjoyed. There was a time that I might have referred to an immersive experience as a "virtual reality," but those pesky technology gimmicks I mentioned are forcing me to reconsider that terminology (sorry, VR fans). We build these alternate realities from physical things like stone, plants, sounds, visual effects,

smells, animals, robotic figures, costumes, human beings, and anything else that makes the experience feel as real and immersive as possible. We also consider the social aspect of including friends and family in these experiences, because our fondest memories always involve people we care about.

With that foundation in mind, I believe that making these social and physical experiences even more immersive is the future of theme parks. People don't just want to go on a five-minute ride based on their favorite story; they want to spend an entire day, or maybe even their entire vacation, living in that experience. They want to interact with objects and characters from the story, dress like them, feel powerful like them, and anything else that makes them feel like that story is real and that they are part of it. Remembering the golden rule, this is the path that I believe will drive incredible new theme park technologies.

I don't have enough battery life left in my laptop to go into all of the areas where I anticipate these advancements, but I'd like to focus on the ones I feel will play the largest role: interactivity, personalization, and inclusion.

Interactivity

Let's start off with interactivity. Seeing an object from your favorite story glued to a shelf is nice, but physically interacting with that object in a meaningful way can take the experience to a whole new level. Having that object move, make sounds, light up, and react to proximity or touch can easily enhance the guest's experience when done effectively.

To use a generic example that won't provoke a lawsuit, my four-year-old son is obsessed with dinosaurs. He gets a big smile on his face just from seeing fiberglass dinosaur statues. That being said, I can only imagine how much it would mean to him to interact with a dinosaur figure that actually moved, breathed, made sounds and reacted to his presence. His big smile would transform into giggling bliss if a Velociraptor leaned down and snorted in his face. Let's not kid ourselves, though. Making things that are non-existent (or extinct in this case) come to life isn't

easy! It's going to require continuous improvements in animatronics, puppeteering, costume design, special effects and sensor technologies by people who are devoted to those pursuits.

Personalization

Personalization will also play a key role in our future. There's a trend in giving guests the opportunity to buy a unique object (perhaps a bracelet or elegantly themed stick?) to carry with them. The idea is that they use this item throughout the day to interact with the themed world around them. When done well, the guests feel a personal connection to the item and the unique way in which their environment reacts to them.

Advances in portable electronics, wireless communications, and database technologies will no doubt lead to these experiences being even more personal. To continue with my lawsuit-safe example, I imagine my son unearthing a Velociraptor claw at a dig site. Using RFID or other near-field identification technologies within the item, the characters and attractions would know him as "Daniel - World-Famous Velociraptor Hunter" and personalize their interactions with him. His prized discovery might even get him access to special areas like the paleontologist club, or access to special treats reserved for hungry excavators. When his day is over, he gets to go home with a souvenir that reminds him of the time when he discovered something incredible and was rewarded with a unique experience. There are countless examples of how this type of personalization tech can be used, but I can't imagine a better way to draw guests deeper into an experience.

Inclusion

Inclusion will also play a key role in the experiences we create. We live in a global society. Many languages are spoken. Many people have special needs. These are areas where new technologies offer the opportunity to include more guests in the experience. For example, devices like smart glasses can now be worn by guests to see personalized captions for attractions or park areas. Identification items such as wristbands could interact with ride vehicles so that the audio in the seats plays in the guest's language. This could bring dramatic new levels of inclusiveness to a guest experience. Again, the

possibilities here are endless and much more achievable with the technologies we've been developing with these experiences in mind.

It's no coincidence that there's a great deal of overlap in the areas I've mentioned, and I hope the reason is obvious. When done properly, the technologies we develop to make attractions more interactive, personalized and inclusive all coalesce to form a single memorable experience for guests and their loved ones. Whether your interests lie in the creative or technological aspects of attraction design, within our industry we all share the same goal of making those experiences as memorable as possible.

When it comes to daily life, many of us are aware that technology often stands in the way of having meaningful interactions with other people and the world around us. With the alternate realities we create, we have a unique opportunity to apply technology in the exact opposite manner; to immerse guests and their loved ones in a world they can experience and enjoy together. •••

As Chief Innovation Officer at Alcorn McBride, Scott Harkless works closely with clients to determine their biggest areas of need and leads a talented team of problem solvers to create the products used in many of the world's most popular attractions. He draws upon his experience in product development, system commissioning, client training, marketing, and sales to ensure that the products stamped with the Alcorn McBride logo exceed client expectations and offer value to the entire industry.

The Orlando Eye preshow in Orlando, Florida utilizes Alcorn McBride equipment. Photo courtesy of Alcorn McBride



Of Epic Proportions

The City of Grand Prairie builds a resort quality municipal waterpark in North Texas

by Martin Palicki

When most mayors are elected they promise better roads, more services or a cleaner city. But when Ron Jensen took office in Grand Prairie, Texas, he promised an epic waterpark - literally.

Epic Waters Indoor Waterpark is one part of a multi-year, 170-acre development that combines park space, recreation facilities, entertainment and more for residents and visitors to the Dallas-Fort Worth (DFW) suburb. To be fair, the plan had been part of the city's master plan for years, but Jensen helped to fast-track the project.

To help pay for the development, residents voted in a 25-year 0.25% sales tax. In exchange, residents received lowered ticket and pass prices at Epic Waters as well as the site's other facilities. Jensen turned to Rick Herold, Grand Prairie's Director of Parks, Arts & Recreation, to help manage the project.

"During our initial research for the project we came across Jay Peak Resort in Vermont," explains Herold. The Pump House waterpark at Jay Peak Resort is an indoor waterpark built in 2011 to supplement the activities available at the ski and mountain destination in Vermont. "We loved the concept and felt that many components of that resort were missing from the DFW metroplex." Some of those key components they liked were the AquaLoop slide and FlowRider® from WhiteWater, a retractable roof and the French-Canadian fries-meets-cheese-and-gravy food known as poutine. The team began a feasibility study and reached out to Richard Coleman of American Resort Management (ARM), which assisted in development of the Vermont facility.

ARM served as a secondary owner's representative during development and through opening day. They consulted on building design aspects as well as programming and



The central slide tower at Epic Waters greets guests upon entry.



WhiteWater's Boomerango slide, known as Yellowjacket Drop at Epic Waters. Photo courtesy of WhiteWater

engineering for the structure. One year prior to opening, they assembled a management team, assisted with creating the facility brand and started building excitement for the project in the local community. Today, ARM manages the daily operation of the facility.

“We are in awe that this municipal-built complex is really a resort-quality facility (without lodging),” says Coleman. “We frequently refer to it as a ‘cruise ship on land.’” That description largely has to do with the long, narrow shape of the building and the striking glass walls that cover and encompass three of the four facility walls. The structure includes an OpenAire retractable roof that management can use to control temperatures in the facility and bring in additional fresh air.

According to Coleman, Grand Prairie wanted to choose vendors who shared their work ethic and vision for the property. They selected Lee Lewis Construction as the general contractor, Ramaker & Associates for aquatic design and engineering, Aquatec for slide, slide tower and handrail construction, CenterEdge software for the admission and FEC systems and WhiteWater West for the slide package, FlowRider® and child’s play structure. “WhiteWater’s proposal impressed us, along with their track record for municipal projects in North America,” says Coleman.

Epic Challenges

“We wanted to challenge everyone on this project to think more epic,” explains Herold. “We challenged WhiteWater to develop a single tower of slides, and the ride package they put together is unlike anything they’ve ever done.”

“We were also concerned because we are not the only waterpark around,” says Coleman. “We had to ensure that we had an attraction package that would entertain everyone. We call it ‘mild to wild.’”

Similarly, when the construction teams were impacted by what Rick Herold calls “terrible soil” they addressed the challenge by building more support piers into the foundation.

Visiting the park

“The City of Grand Prairie asked us to help create a special environment and an extraordinary guest experience that hit all the different age groups the city wanted to attract,” says Steve Brinkel, president of WhiteWater’s parks and recreation division. “They wanted to inspire guests to come to the waterpark and to keep coming back.” According to Brinkel, the real challenge was to put together a package that included everything the city wanted while fitting into the indoor waterpark envelope.

The park’s central feature is a slide tower that extends above the main roof line and is home to nine slides, all provided by WhiteWater. Four of those are body mat racers (e-Racers). There are two traditional body slides, one enclosed that circles around outside the building (Texas Twist) and a steep drop slide from the tower’s highest point (Prairie Plunge). Next to it is the LassoLoop, an AquaLoop slide which, according to Brinkel, is the tallest indoor AquaLoop in the United States.

The tower also features two additional industry-first slides for WhiteWater. Yellowjacket Drop is the first fusion inner

tube slide that combines the Boomerango slide with a Constrictor element. The Constrictor is a tight-radius turn that adds speed into a twisting drop, and the Boomerango provides a moment of weightlessness as the raft goes up and then back down a giant, angled wall.

The Aquanaut raft slide incorporates two AquaSphere elements and is North America's very first 2-person inner tube AquaSphere. As a raft enters each sphere it slides back and forth before exiting out one end, although riders often are spun around and continue through the course backwards.

Each slide provides a distinct experience, packing a lot of variety into the compact tower. The raft slides empty out into the 650-ft lazy river that encircles most of the park. A wave machine generates waves that pulse through the river periodically and lap up on the zero-depth entry access. The center of the park features an activity pool, with basketball nets and other games. Across from that is the Rascal's Round-Up AquaPlay structure with three kids' slides, a dumping bucket and dozens of other waterplay interactives.

The FlowRider® Double surfing wave attraction is a double-wide model, which allows for larger surfing moves

on slower attendance days and can be divided in half for better throughput when needed.

Ample seating is located around the park, which has its own quick-service restaurant and bar. A retail space sells park-specific sundries as well as toys and other branded merchandise. A 4,000 sq-foot arcade adjoins the shop, and features the latest in video games. A second level overlooking the park holds three party rooms that can be divided or combined to fit nearly any size group.

Building on Epic

Epic Waters is part of the larger EpicCentral development in Grand Prairie. The facility joins The Summit, an older adults' recreation center, and will soon be joined by The Epic, a 120,000 sq-foot indoor lifestyle and recreation center, expected to open later this year. Finally, PlayGrand Adventures, an accessible outdoor playground designed for people of all abilities, is planned shortly thereafter. City leaders also hope for additional developments on the property such as a hotel, restaurants and a conference center. EpicX, not yet funded by the city, has the goal to bring more adventurous options to the site including zip lines and other outdoor activities.

WhiteWater's AquaPlay structure, known as Rascal's Round-Up at Epic Waters.



Epic Waters itself is already expanding. Construction is underway on a 10,000 sq-foot outdoor wave pool, with wave generating equipment provided by WhiteWater. Plans include extending the roof over that part of the park in the future with room available for additional expansion outside the park for more slides and attractions.

“Our plan is to add a new attraction every other year,” says Coleman. The park has deliberately capped its daily capacity at a strategically lower level in order to create a better experience for guests. As the park matures and more guests come, regular expansion will be necessary to accommodate the increase in visitation.

According to the park’s general manager Michael Hays, the park can be run with 30 lifeguards per day and six concessions staff. Epic Waters currently employs 225 staff altogether and is expected to hire more for the summer. About 20% are full-time.

So far, the results have been impressive. In February, Epic Waters was named to the Travel Channel’s “Eight of the Most Incredible Indoor Waterparks” lists. Within

the first month, the facility had booked over 700 birthday parties and five overnight events, with bookings going out a full 12 months. About 70% of guests to the waterpark are non-residents so far. “We exceeded our attendance projections for January and February by 15-20%,” states Hays. “We expect to surpass our goal of 350,000 guests for 2018 and anticipate over half a million for 2019.”

The success reflects the focus on the end product for the consumer that the entire team worked towards. Rarely does a community coalesce around a unified vision for development, vote for a tax increase to build, and support the project to completion. Red tape, politics and personalities can often get in the way in government projects. But having that level of unity clearly resulted in a top-notch project that the citizens of Grand Prairie will be proud of for decades to come. “This is really first in the municipal market,” says Brinkel. “It is truly a waterpark resort owned by a municipality – I think that’s really special.” •••

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Eco-tourism has provided decades of success and expansion for Experiencias Xcaret Group, culminating in their latest sensory-based park

by Martin Palicki

In 1986, when Mexican architect Miguel Quintana Pali purchased 12 acres of property south of Playa del Carmen in Quintana Roo, Mexico, his initial plan was to create an oceanside retreat for his family. While clearing the land, however, he discovered the site was full of *cenotes* (large sinkholes) and underground rivers, and the land was likely once inhabited by Mayans, the region's native population from over 2000 years ago.

He felt the location was special enough to be turned into a destination attraction and partnered with the Constandse brothers (Oscar, Marcos and Carlos) to help develop the property into a public attraction.

In December of 1990 the group opened Xcaret (meaning "little inlet") park. (InPark visited and reported on Xcaret in issue #52, v.10, issue 2, 2014) The park combines a heavily modified natural landscape with local customs and art influenced by both Mayan and modern day Mexican traditions.

The company has since grown to become Experiencias Xcaret Group and is a major force in the Riviera Maya tourism market. The company now operates a variety of parks and experiences:

Xcaret – The original park contains more than 40 attractions in the jungle, coves, underground rivers. It offers exciting shows, as well as cultural activities that promote Mexican traditions.

Xel ha – The company acquired this natural park in 1995 that features all-inclusive service, snorkeling and water activities. In 2017, the park added a lighthouse-themed waterslide tower.

Xplor – Opened in 2009, this adventure park features zip lines, amphibious vehicles, swimming and rowing in underground rivers. The park also operates an evening version of the activities called "Xplor Fuego."

Xichen – Starting in 2010, the group started offering tours to archeological and cultural sites in the Yucatan. In 2013, they added a tour devoted to visiting regional cenotes.

Clockwise from top left: Flying like a bird; outside a villa and then looking "uphill" at the playfully disorienting town street; the mud river bath. All photos taken by automatic cameras at Xenses except for bottom center, taken from IPM files



Xoximilco – In 2013, Xoximilco opened as a tribute to the traditional Xochimilco of Mexico City. Guests board colorful themed boats and cruise through canals while enjoying Mexican cuisine, free drinks and live music.

Xenses – The latest addition to the parks is Xenses, which offers more than 17 different activities that challenge the power of the senses and the mind.

Evolving into Xenses

The newest park to be built, Xenses, combines the essential elements of the Xcaret, Xel Ha and Xplor parks, but adds an additional element of curiosity and learning, while fully integrating the experience with a camera “selfie” system.

The park contains two main experience journeys and a smattering of individual optical illusion curiosities. The first path takes guests past a large symbolic heart and into a town street, constructed to give the illusion of walking uphill, when in fact the grade is slightly downhill. While many attractions have built this sort of illusion before, this is done on a massive scale and results in a great deal of playful disorientation for the guest.



An infrared photo taken of the pitch black Sensorium experience at Xenses. Photo taken by automatic camera at Xenses

Beyond the town, a circuit allows guests the opportunity to ride a waterslide into a cavern, fly like a bird on a zip-coaster, float through a mineral-enriched underground river, take a mud bath, and clean off in an subterranean rain shower.

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The second circuit takes guests through more optical illusions and to the Sensorium – a walk-through experience. Parties are separated and individuals enter a building completely dark. Inside, guests walk forward in a straight line, using their hands to feel the environment around them. Sounds, temperatures, textures and water are used to create a variety of climate zones. After emerging back into the light, guests walk through a series of scenic caves, cenotes and waterfalls.

Integrated into the whole experience is a photo system designed to take the best “selfie” photos a guest could want. Each guest is issued a RFID wristband and can choose to activate cameras by waving the band at a contact point. Other cameras are hidden and, sensing the wristband, take photos unexpectedly. Viewing stations around the park allow guests to see their photos, and their entire gallery of digital pictures is available for purchase.

While the park is designed around experiences to stimulate one’s senses, the actual focus often seems to revolve around photo-ops that engage nearly all five senses. In total, it’s a fun park that provides an interesting half-day experience for guests.

The future of Xcaret

In late 2017, the group opened its first resort hotel, the Hotel Xcaret Mexico. The luxury resort is the group’s first

foray into lodging. In addition to typical resort amenities, guests are given unlimited access to all of the Experiencias Xcaret Group properties and tours during their stay.

Recent announcements from the company include the expansion of an additional 12 hotels, a convention center, shopping plaza and a 12,000-seat stadium. The expansion is part of a \$2 billion investment scheduled for a phased 8-year process. In the immediate future, the company plans to open a new park closer to Cancun later in 2018 and is adding a new attraction to the Xplor park. “Soon [we will publicize] the details of both projects, but they are totally different and will allow us to offer diversified options to the visitors who arrive at the destination,” said Vice President Carlos Constandse Madrazo.

The aggressive expansion plans and the company’s dominance in the regional tourism market are indicative of the company’s success and the staying power of the eco-tourism concept. The group reported over 3 million visitors in 2017 and is expecting 3.5 million over the coming year - not too shabby for a budding mega-destination resort started less than 30 years ago on 12 acres of forested land. •••

For more information, visit grupoexperienciasxcaret.com



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