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Yayoi Kusama

JAPANESE ARTIST BUILDS HER OWN MUSEUM



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100 PER CENT ACCESSIBLE

Fortunate adults build the lives they dream of as children, so giving kids the opportunity to play, invent, imagine and socialise goes to the heart of what makes a healthy society. A new venture in the US extends this opportunity to children with disabilities and it's a game changer

A few years back we were privileged to interview entrepreneur Gordon Hartman about the inclusive theme park he'd built for his daughter, Morgan, who has cognitive delay. The park was designed so that children of all abilities could play side by side and families supporting a child with a disability could play together (*Attractions Management* Q4 2012, page 30).

Morgan's Wonderland, in San Antonio, Texas, is now seven years old and going from strength to strength and in this issue, we report on a second gate which has just been opened by Hartman in the form of a waterpark called Morgan's Inspiration Island (page 76).

As with the original theme park, he turned to users to develop both the concepts and the features for the new attraction, saying: "We spoke to people in the community – people with special needs, people without, care givers, teachers, doctors, therapists – and pooled our ideas."

The team then collaborated with industry experts to deliver and install a range of specially adapted water experiences.

The waterpark is completely wheelchair accessible. The development team worked with the University of Pittsburgh, Pennsylvania and others to create a wheelchair that runs on compressed air, without batteries, so that users can retain their independence while enjoying the waterpark. Waterproof wheelchairs are also available.

Watersprays were adapted to enable guests to control the level of force involved, for times where an intense spray would cause distress. The aim – in short – is for the waterpark to

be 100 per cent accessible. "We live in a world of exclusion rather than inclusion," says Hartman, "but we hope talking more about inclusion will help change that conversation."

The wonderful story of Morgan's Wonderland and Inspiration Island needs to be shared, so the expertise gained by the team who worked on both projects can be deployed widely across the industry as we strive to become more inclusive.

The fact that the US – one of the most prosperous countries in the world – has only this small number of fully adapted

facilities is an indication of the scale of the challenge which lies ahead.

There are no official statistics for the number of children in the world with a disability, but Unicef estimates it to be at least 93 million and probably a great deal more, saying: "Children with disabilities are one

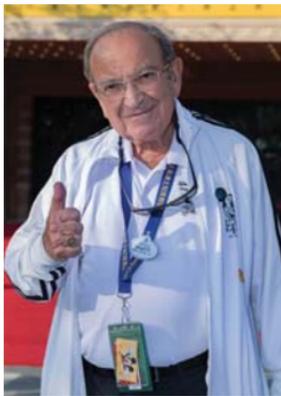
of the most marginalised and excluded groups in society, facing daily discrimination in the form of negative attitudes, lack of adequate policies and legislation [In many cases] they are effectively barred from realising their rights."

We urge all operators to take this matter ever more seriously – to examine current policy, practice, investment plans, staff training and marketing – to see what more can be done to make our industry open, accessible and inclusive.

We welcome feedback about best practice in this area for our letters pages, so if you have something to share with the wider industry, please write to us and let us know and we'll publish your story. Write to theteam@attractionsmanagement.com

Liz Terry, editor. Twitter: @elizterry

Children with disabilities are one of the most marginalised and excluded groups in society, facing daily discrimination and barred from realising their rights



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Attractions People

“Bespoke hair pieces make exhibits more authentic and bring things alive for visitors”

Angelo Seminara hair stylist



Angelo Seminara is one of the world's leading hair stylists. He's created catwalk looks for leading fashion houses like Chanel, Hermès, Stella McCartney, Dolce & Gabbana, Alexander McQueen and Vivienne Westwood. But he also brings his own special brand of imagination and glamour to the attractions industry, making wigs for a variety of museum and exhibition projects.

Four-time winner of the BHA British Hairdresser of the Year Award, Seminara has worked with fashion curator Judith Clark since 2010 to create "hair installations" for exhibitions, including Chloé. Attitudes at the Palais de Tokyo, the Diana Vreeland retrospective at the Museo Fortuny in Venice and Appearances Can Be Deceiving: The Dresses of Frida Kahlo, at the Frida Kahlo Museum in Mexico. He's also worked on permanent attractions, like the Simone Handbag Museum in Seoul, South Korea, and Louis Vuitton's La Galerie in Asnières, France.

Most recently, Seminara worked with Clark on *The Vulgar: Fashion Redefined*. The exhibition examines questions of taste and vulgarity in fashion and culture. It ran at London's Barbican from October 2016 to February 2017 and the Winterpalais in Vienna from March through June. It's expected to travel to Belgium next.

"I work very closely with the curators," Seminara tells *Attractions Management*. ▶

Leading British hair stylist Angelo Seminara uses his skills to design hair pieces for exhibitions



Seminara created hair installations for *The Vulgar: Fashion Redefined*; and for Simone Handbag Museum (below) in Seoul, South Korea





Seminara uses a variety of materials in his wigmaking; *The Vulgar* (right) ran at the Barbican in London in 2016, and then headed to Vienna

► “They explain exactly what they want to achieve, then we have meetings to come up with ideas. I always try to add in something that’s new, cool and fresh.”

For *The Vulgar*, Seminara and his team of assistants made around 30 different wigs over a course of just a few weeks – and they’re not just made from hair.

“For each design, we created distinctive and individual looks; not necessarily created with hair only, but incorporating different materials too,” he says. “I work with an armoury of materials, including real and artificial hair, mouldable mesh, foam, fabrics, textiles – quite a mix of materials.”

“The process sees me designing all the looks in my private studio, working together with my assistants and the curator on a daily basis. It can be very frustrating sometimes, especially as we’re working on mannequins and things don’t always work the way you want. It means you have to keep trying and trying, persevere until you get the desired result.”

Seminara highlights the Frida Kahlo and Diana Vreeland shows as being some of the most challenging and creatively rewarding he has worked on. And it’s an aspect of his career that he values greatly, saying there’s always “something cooking on the back burner” – though he won’t reveal any more details.

With such stunning creations working so well to complement these exhibitions, does Seminara think museums could make more effort to use specially commissioned artisan skills like these?

“Creating bespoke pieces makes the exhibits look better,” he says. “They help make exhibitions more accurate, feel more authentic. They bring things alive for visitors and help them visualise the subject.”



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PHOTO: YAYOI KUSAMA

“I consider myself a heretic of the art world”

Yayoi Kusama artist



PHOTO: PALMARES / THECHIVEX

Yayoi Kusama: Life is the Heart of a Rainbow is on at the National Gallery Singapore

Yayoi Kusama – the Japanese artist famed for her use of repetitive patterns, polka dots and bold colours – has announced the opening of her own art museum, in Tokyo, Japan.

The five-storey museum building, designed by architecture firm Kume Sekkei, has already been erected in the Shinjuku district of Tokyo, but the purpose of the structure had been kept under wraps.

Two of the storeys will be devoted to exhibiting Kusama's latest artworks, while one floor will be dedicated to an Infinity Mirrors installation. There will also be archive space, a reading room and a shop.

"This museum is established by Yayoi Kusama and managed by the general incorporated association, Yayoi Kusama Foundation, with the purpose of dissemination and promotion of Kusama's art throughout the exhibition of her artworks and related materials, to contribute afterwards to the general development of art," said a museum statement.

"We aim to be the museum where everyone can get familiar with contemporary art; we transmit the message of world peace and human love, which Kusama has been embodying



People view Kusama's artwork *Obliteration Room* at the Hirshhorn Museum in Washington, DC; (below) the five-storey museum is opening in October

PHOTO: PAUL MANNES / JOSHUA ROBERTS

through her artworks, and hold biannual exhibition with her artwork collection along with some lectures," it said.

Art therapy

The artist, who was born in Nagano Prefecture in 1929, has long spoken out about her desire for a peaceful, non-violent planet and also about how art has helped her deal with her mental illnesses and obsessive-compulsive neurosis.

"The world today is in a terrible situation," Kusama told *Bomb* magazine. "My desire to use my art to protest against war and man's inhumanity to man has never diminished. I am always trying to transmit through my work the message that we should all live life in peace and with humanitarian love."

Since childhood, Kusama has painted numerous dots and "nets", which she says helps block out dark thoughts in her head.

"I am an obsessional artist. I consider myself a heretic of the art world. I think only of myself when I make my artwork," Kusama says. "I will continue to create artwork as long as my passion keeps me doing so. I am deeply moved that so many people have been my fans. I have been grappling with art as a therapy for



my disease, but I suppose I would not be able to know how people would evaluate my art until after I die. I create art for the healing of all mankind."

Kusama's eminently "instagrammable" works – from huge polka-dot pumpkins to seemingly endless expanses of twinkling lights – could be a starting point for imaginative forms of visitor engagement. The museum will likely feature unique photo opportunities and other ways to engage visitors – and their phones – with art.

Named by *the Art Newspaper* as the world's most popular artist in 2014, Kusama may also want her visitors to take advantage of their social media networks to infinitely share their experiences – and their selfies.

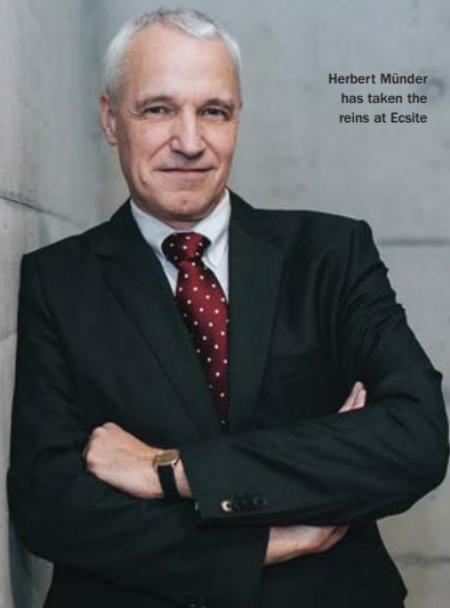
The Yayoi Kusama Museum is scheduled to open on 1 October, and its debut exhibition is titled *Creation is a Solitary Pursuit, Love is What Brings You Closer to Art*. Admission costs ¥1000 (\$9 €8, £7) and scheduled visits last about 90 minutes.

A major retrospective, Yayoi Kusama: *Infinity Mirrors*, is touring North America and is currently on display at Seattle Art Museum in Seattle, Washington.

Herbert M \ddot{u} nder
has taken the
reins at Ecsite

Science centres will become even more important in the future because of this 'post-truth' trend

Herbert M \ddot{u} nder Ecsite president



Ecsite's new president, Herbert M \ddot{u} nder, has said a pressing challenge for the science engagement community is the rise of the 'post-truth' era.

"For Ecsite members, there is one big challenge, and that's what we're calling the post-truth time," M \ddot{u} nder tells *Attractions Management*. "As a group of science centres and museums and science communicators, we have to think about how we can address this in an adequate and efficient way."

One way forward posited by M \ddot{u} nder is to talk more about the process of science. He says there are times when scientists have different interpretations concerning scientific observations, which can be confusing to people.

"But of course, in scientific research, there's a need to have different views to be able to cross check, to challenge, to develop the thesis and antithesis, to determine repeatability – for example, would the same experiment in Australia and in Europe come back with same outcomes?" he says.

"These features of the scientific process must be more visible to the public and, I believe, we as science centres face a challenge to get these ideas across. This will

help the public to think more critically about things they hear, read or see on TV, and they can create their own opinion."

"We have to come up with a strategy to address this challenge. I feel science centres and museums will become even more important in the future because of this trend we observe now. And we have a responsibility to address it.

"Science centres make a huge impact already, but we are facing a new situation. To make an impact in the future we need to rethink our position and the things we do."

M \ddot{u} nder says his science centre, Universum Bremen, is a platform for businesses and other groups

M \ddot{u} nder is general manager at Germany's Universum Bremen science centre and is also past president of Eusea, the European Science Events Association, and current president of MINTaktiv, Germany's science museum network.

He says Universum is not just a place for exhibitions, but also acts as a communication platform between different partners, such as businesses, researchers, NGOs, and other groups.

He says: "The curator of this platform is the science centre, which is more or less neutral. We bring together different views and citizens have a chance to build their own opinion about it and have a voice, so we are a platform for the voice of citizens."

M \ddot{u} nder adds that another point of focus during his presidency will be ensuring the

science communication community has a voice at discussions for the next EU Framework Programme for Research and Innovation, with the current framework, Horizon 2020, drawing to a close in 2020.

"I believe strongly that science communication and science engagement is important for the future period of the framework, so my personal position is that we have to talk to the stakeholders and decision makers to show them it is necessary the sector is again visible in the programme."



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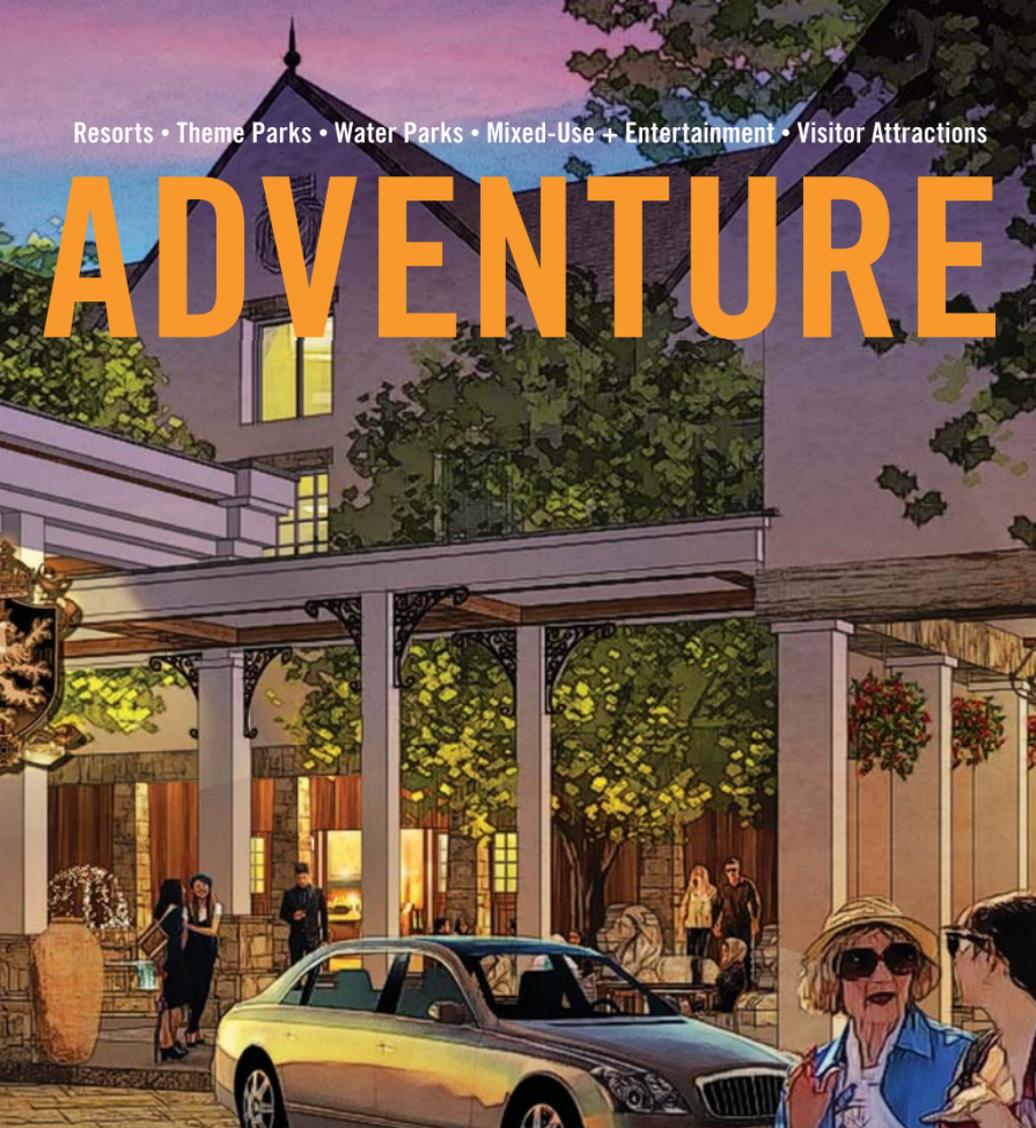
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Design complete for Sochi Science Park

Dutch design agency NorthernLight has completed the design phase for the redevelopment of the Sochi Olympic Village in Sochi, Russia, which is turning its former media centre from the 2014 Winter Olympics into a science and art park.

The addition is described by NorthernLight as the "crossover of an art biennale and a science gallery".

With 40,000sqm (430,500sq ft) of exhibition space, the Sirius Art and Science Park will develop as a hybrid science centre and museum. Educating visitors with day and night activities, the attraction will also expose the public to the Sirius talent programme, a scheme which teaches Russian youngsters maths, science and innovation.



■ The park will expose the public to the Sirius talent programme

Divided into four themed zones, the development features interactive media and experiences using new technology, while also incorporating hands-on science centre exhibits. In addition to scientific exhibits, contemporary artworks by both local

and international artists will be on display, with pieces relating to the thematic division of the different galleries.

The park will also feature a planetarium, food court and an outdoor area with a cinema and observatorium.

■ Details: http://lei.sr?a=z7N9G_T

INDUSTRY OPINION

Science Centre Summit seeks global approach to address challenges

Mamoru Mohri

As an astronaut, I was fortunate enough to orbit our beautiful Planet of Life. The Earth is a living entity, free of borders or boundaries, teeming with life. But we are reaching our planet's limits in its ability to sustain such a massive number of humans. It's time for humans to consider if, how, and when to change, as our species' survival is at stake.

To meet global challenges, we must go beyond borders and regional cultures and draw from all the wisdoms of all the cultures and develop a global wisdom.

The Science Center World Summit (SCWS) is organised by science centre networks to discuss global issues involving science centre partners and experts from other fields. The theme for SCWS 2017 is Connecting the World for a Sustainable Future. It embraces the global wisdom approach and welcomes the rich diversity of all areas of society. The Summit will also discuss how our field can meet the UN's Sustainable Development Goals.

Visionary leaders and creative thinkers will challenge and inspire participants on their path to sustainability, divided into three strands: Global Sustainability; Co-design for Transformation; Personal Engagement with Science.

Speakers include world famous architect Tadao Ando, Nobel Prize winner Shinya Yamanaka, sustainability researcher Johan Rockström, and Lord John Krebs, who worked as the first chair of the UK Food Standards Agency.

Join us at Miraikan in Tokyo, Japan, on 15-17 November. Help us find sustainable solutions for a sustainable future. scws2017.org ●

Mamoru Mohri, chair, SCWS17; chief executive director, Miraikan; astronaut



Cape Town planetarium gets R30m upgrade

The Iziko Planetarium in Cape Town has reopened its doors to the public following a R30m (£1.8m, \$2.3m, €2.1m) digital upgrade.

The Iziko Planetarium, part of the Iziko South African Museum, has had a much-needed upgrade to the 31-year-old facility, with its new digital full-dome 8K Sky-Skan theatre allowing for multimedia image production and data visualisation "on a scale not previously seen in Africa".

"This space is no longer a planetarium as you know it," said Iziko CEO Rooksana Omar. "It is in fact a digital dome."

"As part of the upgraded Iziko South African Museum, the planetarium will feature as one of the African continent's foremost centres



■ The new digital full-dome 8K theatre is a first for Africa

of excellence for indigenous knowledge generation. This type of partnership, between museums, academia and government illustrates the value and impact of collaboration in creating synergies between generating knowledge and providing platforms of expression and innovation."

The planetarium is one of only six fully-fledged planetariums on the African continent, which – in addition to acting as a visitor attraction – will also serve as a research facility and be used to bridge the divide between the sciences and the arts.

■ Details: http://lei.sr?a=V9iK2p_A

Life for New York Wheel as developer closes in on contractor

Stalled plans to develop America's largest observation wheel have been given a lifeline after New York Wheel's developer announced negotiations with a new contractor to take over the beleaguered project.

Originally scheduled for early 2017, the 630-foot-high (192-metre) development was pushed back to mid- and then late 2017, with the \$580m (£442m, €503m) wheel then delayed until April 2018 thanks to a "complicated engineering process".

The project was then put completely on hold last month after developer NY Wheel ended its working arrangement with contractor Mammoet-Starneth, citing its "inability" to meet development deadlines.

"NY Wheel is in advanced negotiation with the American Bridge Company, the builder of the Queensferry Crossing, Las Vegas High Roller Observation Wheel and the new Tappan Zee Bridge, to take over and complete the erection of the New York Wheel," said a statement from the developer to *Attractions Management*.

"As part of that transition, the cranes previously provided by Mammoet are not required and will be removed from the project



PHOTO: NY WHEEL

■ The 192-metre-tall New York Wheel project is expected to cost almost \$600m

site in order to make way for replacement equipment. Work on the Terminal building continues. NY Wheel expects to announce a new completion date in the near future."

Featuring 36 capsules and able to accommodate 30,000 visitors a day, the

climate-controlled cabins are slated to include permanent bar cars and a 20-seat dining car. Construction is at an advanced stage, with the wheel's concrete foundations now in place and its supporting legs already delivered.

■ Details: http://lei.sr?a=g5c3b_T



PHOTO: DXB

■ Motiongate is one of DXB's three parks

DXB reorganises following poor Q2

DXB Entertainment, owner of Dubai Parks and Resorts, suffered significant losses for Q2, which grew sixfold to AED286m (£56m, \$78m, €66m).

As a result, DXB has announced a new strategy, introducing three new business units to better manage its existing assets. DXB has also announced a deal to manage assets including Hub Zero, Mattel Play Town and Roxy Cinemas among others.

■ Details: http://lei.sr?a=Q7S9y_T

Eden Project planning new projects globally

Cornwall's iconic Eden Project is set to be replicated in China, Australia and New Zealand, with further developments being planned in the Middle East, North America and the UK.

The British attraction has launched a new company to drive the establishment of Eden botanical parks around the world.

Eden Project International Ltd (EPIL) is the new entity, formed to partner with like-minded organisations and conservation groups across the globe and establish new parks that "deliver social and ecological benefits during a time of global environmental decline and social disruption".

Three projects will be developed in China and others in Australia



PHOTO: EDEN PROJECT

■ A project in Yan'an, China, is among planned developments

and New Zealand, some of which have been previously announced. Other overseas projects, including some in the Middle East and North America, are due to be revealed in the coming months, and EPIL also has plans to build more attractions in the UK.

In a statement, EPIL revealed that each will have a focus "on the big global challenges as defined by their specific localities, such as soil, water, food and biodiversity."

Eden Project executive director David Harland is the new CEO of EPIL.

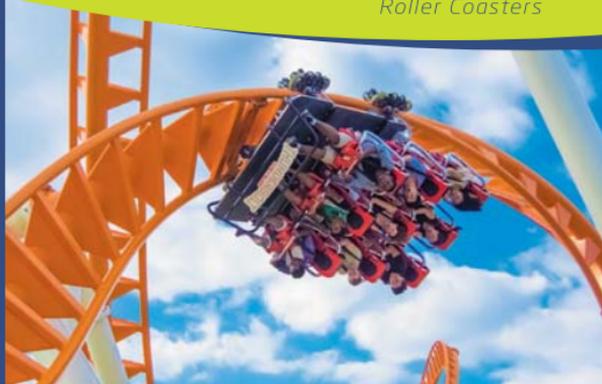
■ Details: http://lei.sr?a=w3h5g_T



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Lionsgate theme park in the works for Jeju Shinhwa World

A fully-fledged Lionsgate theme park is in the works, after plans were announced to develop the new attraction at the recently-opened Jeju Shinhwa World.

Called Lionsgate Movie World, the development at Jeju Shinhwa – one of South Korea's largest integrated resorts – will span 122,000sqm (1.3 million sq ft) and will be the largest Lionsgate attraction to date.

Split into seven zones, each based on a different Lionsgate movie, IPs in the park will include The Hunger Games, Twilight and Now You See Me, as well as the upcoming Robin Hood, which comes to cinemas in March 2018.

Developer Landing International Development Limited has confirmed the park – which will be Lionsgate's first branded outdoor theme park – will include a number of rides, attractions and 4D experiences, as well as streets and towns based on Lionsgate IPs. Each area will also include themed restaurants, cafés, souvenir shops and theatrical performances.

"Our partners are creating a resort that will be the perfect home for our theme park," said Lionsgate CEO Jon Feltheimer.



■ The Hunger Games will be among the IPs featured in the Lionsgate theme park

"Driven by a valuable portfolio of intellectual property, we have built a global location-based entertainment business in just three short years, and Lionsgate Movie World promises to become one of its crown jewels."

Development is expected to start in 2018, with a scheduled opening date of 2019. Lionsgate Movie World will join a number of entertainment options at Jeju Shinhwa, which opened earlier this year.

■ Details: http://lei.sr?a=j4h3h_T



■ The park will go ahead minus Paramount

Paramount leaves £3.2bn UK project

London Resort Company Holdings (LRCH) – the developer behind the Paramount theme park in Kent – has split from the film studio, which was to act as the attraction's masthead.

Attractions Management understands that LRCH is now exploring new IPs to replace the Paramount brands – something that was previously a challenge with the overarching Paramount masthead.

■ Details: http://lei.sr?a=D7D71_T

China removes theme park trade restrictions

China has removed restrictions on foreign investment in large-scale theme park projects, opening up the possibility for new developments in what is already a hotbed for theme parks under development.

China's leaders have previously pledged to open the country's economy – the second largest in the world – to wider foreign investment.

Earlier this year, China's State Council approved seven new free-trade zones to prepare for the further opening up of its economy. The zones are areas where goods may be landed, handled, manufactured and re-exported without intervention of the customs authority. China now has 11 such zones.



■ Foreign investment restrictions have been lifted by China

A total of 27 restrictions have been removed from the country's negative list for foreign investment in these areas, including large theme park projects. Under the new regulations, would-be theme park developers will no longer have to enter a joint venture with Chinese

partners or let the Chinese partner take the majority share to be able to establish an attraction.

In 2013, there were 190 items on the list. This was reduced to 139 in 2014, and to 122 in the previous 2015 update. The list now stands at 95 items.

■ Details: http://lei.sr?a=E2x8d_T

Six Flags eyeing waterpark acquisitions

Six Flags is continuing with its waterpark acquisition strategy after success with parks in Mexico and California.

The operator – which recently opened its newest Six Flags waterpark in Oaxtepec, Mexico, and also reacquired WaterWorld California in April as its 20th property – has set out a strategy of acquiring or developing waterparks near its existing theme park assets in North America.

"In our first test market of Mexico City, we've seen season pass sales increase by almost 40 per cent this year, most of which we estimate is due to the new waterpark being bundled into the season pass offering," said Six Flags president and CEO, Jim Reid-Anderson, speaking during the recent Six Flags earnings call.



■ Six Flags recently acquired two new waterparks

So far in 2017, Six Flags has invested \$97m (£75m, €83m) in new capital, which includes the two waterpark projects.

According to Six Flags, these kind of deals allowed the operator to expand capacity with minimal investment, providing a quick payback and high return.

"Since we announced our waterpark acquisition strategy, we have received multiple inbound inquiries from waterpark operators around the US," said Reid-Anderson. "So the opportunity is not only compelling, but it's large scale."

■ Details: http://lei.sr?a=7p7x8_T

INDUSTRY OPINION

Three big trends show waterpark industry continues to mature

Aleatha Ezra

A question the World Waterpark Association (WWA) is often asked is: what are the current trends in the water leisure industry? Whether



it's media covering the industry or waterpark professionals who want to benchmark their own best practices, people are always curious to hear what's making a big impact.

One trend we are happy to report is that new developments are back full force, with large-scale, mixed-use projects opening all over the world in the past few years. It's especially exciting to see new waterpark projects coming online in North America. From Typhoon Texas in Houston last year to much-anticipated projects this year, like Universal's Volcano Bay in Orlando, Florida, and Hurricane Harbor at Six Flags in Oaxtepec, Mexico, these waterparks are making an immediate impact in their markets.

A second noticeable trend is the growing use of established intellectual properties to create fully integrated theming throughout a facility. Waterpark theming, in general, has stepped up and more operations use theming in ride development, signage, marketing elements, etc. Strong theming builds memorable interactions within the park, which can lead to stronger brand attachments and repeat visits.

A third trend is the focus on accessibility. Waterpark operators are addressing the needs of more guests and implementing operating procedures to accommodate guests with various physical and cognitive disabilities. New rides and products, like an air-powered, fully waterproof wheelchair, are also being created, enabling higher quality interaction for guests with different abilities. ●

Aleatha Ezra, director of park member development, WWA

Cuba plans investment in water and theme parks

Cuba's government has announced plans to boost its tourism infrastructure by courting foreign investment for proposed theme and waterparks.

Reinaldo Daniel Alonso, director of development, investment and business for the island nation's Ministry of Tourism, has said up to 140 joint venture projects could be included in a portfolio set to be unveiled in November at the Havana International Fair – the largest annual multi-sector trade fair in Cuba.

According to the minister, while the island's major goal is to increase its hotel capacity to accommodate a surge in tourism related to improving US relations, proposed projects include a number of non-hotel



PHOTO: SHUTTERSTOCK.COM/OLESIA BLAKE

■ Cuba's tourism ministry is lining up waterpark projects

investments, with waterparks and theme parks at the top of the wish list.

Cuba's tourism development plan is anchored by the construction of 224 new hotels, which are in addition to the expansion of 32 existing hotels by the end of 2030. This would boost the number of available hotel

rooms in the country from 67,000 to 103,000.

In 2016, Cuba welcomed 4 million tourists, up 13 per cent on the previous year, which had already leapt 36 per cent over a five-month period following a landmark diplomatic agreement with the US in 2015.

■ Details: http://lei.sr?a=W5T2H_T



A LEISURE INDUSTRY

Each EAS begins with a different mission but ends with a valuable new collection of industry insights.

ANDREAS SIEVERING
CEO, Fort Fun Abenteuerland,
Looping Group



OPERATOR'S EXPERIENCE AT EURO ATTRACTIONS SHOW

For Fort Fun Abenteuerland CEO Andreas Sievering, no two visits to Euro Attractions Show are alike, which is precisely why the executive of this small theme park and his team value the annual event so highly. Each EAS begins with a different mission but ends with a valuable new collection of industry insights, connections, and opportunities to access new innovations and technologies rarely available elsewhere to smaller businesses in this industry.

"At EAS 2015 we organized a final meeting for the purchase of two new attractions," says Sievering. "The year before, we were looking for simulators/5D theatres and we found the best product on the market on the EAS show floor."

Just as important as the acquisitions the CEO has made for Fort Fun Abenteuerland are the insights he has gathered both as an educational seminar attendee and as a presenter. Each year, Sievering tells us, he reserves the majority of his time for educational seminars, scheduling the rest of his itinerary around the events he finds most intriguing and beneficial to his team.

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While every visit is carefully planned, Sievering also leaves enough time for chance meetings and informal networking. "The networking possibilities are perfect," he explains. "And we are always looking for new and hidden champions."

This plays perfectly into Euro Attractions Show's philosophy of the Business of Fun, in which Sievering believes camaraderie and competition can not only co-exist, but actually help his and his fellow businesses flourish. "Our only business is bringing fun into this world," he states. "So we should exchange and work together, even if we are competitors. This will make us all stronger."

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For the first time players have complete agency over all elements of their experience creating opportunities for complete customisation and personalisation.

Celebrity curators create mini museums for Dutch railways

Waiting rooms at railway stations across the Netherlands are being converted into temporary mini museums in an effort to promote the National Museum of World Culture's vast unseen collections.

The National Museum of World Cultures – made up of the Tropenmuseum, Africa Museum and Museum of Ethnology – commissioned the project. The three institutions, which since 2014 have acted as one museum on three sites, jointly manage a collection of more than 375,000 objects, with the bulk stored in an underground facility off-limits to the general public.

Showcasing some of the collection, they asked five Dutch celebrities to choose their favourite artefacts, which are going on display at the temporary installations.

Television presenter Floortje Dessing was the first celebrity to debut a collection, opening her exhibition on platform 8/9b of Leiden Central Station in June. Dessing's museum was open until 23 July and contained a collection of treasures of the sea, selected by the presenter because island life in the South Pacific made the most impression on her during her travels.



Television presenter Floortje Dessing was the first celebrity to debut a collection

The celebrity-curated mini museums are free to visit, as they double as waiting rooms, and are open seven days a week from 6AM to midnight.

In addition to Dessing's museum, singer Kenny B, street soccer player and rapper

Soufiane Touzani, presenter Filemon Wesselink and cookbook writer Yvette van Boven will also open their own installations at stations in Arnhem, Utrecht, Zwolle and Amsterdam, with each lasting a month.

■ Details: http://lei.sr?a=D8F4N_T



Trainees design and conduct the tours

AMNH interns create unique visitor tours

New York's American Museum of Natural History (AMNH) is hosting 30 students for a summer of training, with the interns acting as tour guides for the 500 camp groups that visit throughout the summer.

Part of the Museum Education and Employment Programme (MEEP), interns gain six weeks of employment, in which they design and conduct their own personalised tours for visitors.

■ Details: http://lei.sr?a=h6p3M_T

BBC plans culture event alongside new series

The BBC is seeking museums, art galleries and libraries across the UK to run a series of cultural events alongside *Civilisations* – a new 10-part television series telling the story of art.

Airing next year on BBC 2, the series is inspired by *Civilisations*, a series presented by art historian Kenneth Clark which was first broadcast in 1969 and looked at Western art, architecture and philosophy.

The *Civilisations* Festival, which runs between 2 and 11 March next year, will showcase ideas related to the programme, with cultural institutions being called upon to develop new events or link existing shows and exhibitions to the festival.

"We are inviting museums, galleries and



David Olusoga, Mary Beard and Simon Schama are presenters

libraries to schedule events to spark debate, broaden understanding and share ideas about what is meant by the term civilisation," said the BBC in a statement. "The content of the events is up to your organisation. It could be a debate or a keynote speech, a

performance or a hands-on workshop using an item from your collection as the starting point."

An application deadline of 30 September has been set. Interested cultural organisations are advised to contact civilisations@bbc.co.uk.

■ Details: http://lei.sr?a=F7e2h_T

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WMF training Syrian refugees to restore nation's lost heritage

The World Monuments Fund (WMF) is beginning to lay the groundwork for a new heritage conservation training programme after announcing plans last month to establish a £500,000 (\$648,000, €550,000) scheme for Syrian refugees to rebuild historic heritage sites.

The destruction of ancient sites and theft from shrines and monuments in war zones and areas of conflict has long posed a challenge to those who try to protect Syria's heritage, with the terrorist organisation ISIS targeting the war-torn country's cultural heritage.

Creating a workforce of skilled stonemasons, which WMF says is a "precondition for saving Syria's shattered heritage", the training scheme will help people living in and around the Zaatari camp on the Jordanian border develop new skills in heritage restoration.

"In addition to the 80,000 refugees in the camp, it is estimated there are an additional 100,000 refugees living in the town and surrounding region, and many are destitute, living off aid," said Stephen Battle, programme director for Sub-Saharan Africa at WMF.



■ Stephen Battle recently visited Jordan to lay the groundwork for the Syrian heritage project

"At present, Syrians in Jordan may only work in the agricultural sector, but there are moves to open up the construction sector as well. Training in stonemasonry will give a group of young people a skill and the means to earn a living. I hope most will return to

Syria when the time comes to take part in conserving their country's magnificent cultural heritage. But before then, our project provides a potential source of income, and hope for rebuilding shattered lives."

■ Details: http://lei.sr?a=p4N9f_T



■ The 1960s site has been redeveloped

Hadrian's Wall visitor centre opens

The long-awaited Landscape Discovery Centre at Hadrian's Wall – known as The Sill – has opened after more than three years of development for the British heritage attraction.

Replacing a 1960s-era visitor centre, the Sill has been completely redeveloped with learning facilities, accommodation, conference spaces, retail, a tourist information service and a local produce café.

■ Details: http://lei.sr?a=3W7N_T

Unesco launches heritage fundraising platform

Unesco's World Heritage Centre (WHC) has launched a new platform aiming to help donors find heritage projects in need of funding.

Called the Marketplace for World Heritage, the service allows would-be donors to explore in depth what kind of funding heritage projects need and what impact their donation would have on these projects.

The Marketplace features a variety of projects, from funding development of an official Unesco World Heritage app to safeguarding the Temple of Bel in Palmyra, Syria. The platform will also show success stories with the aim of increasing visibility of heritage work being carried out



■ One proposal seeks to safeguard the Temple of Bel in Palmyra

worldwide. Proposals, which are currently listed between \$60,000 (£46,500, €52,600) and \$750,000 (£581,000, €658,000), will be submitted by WHC and Unesco's regional offices.

On the World Heritage Centre website, a detailed breakdown is given for

each funding proposal in terms of context, objectives, budget, outcomes, beneficiaries, relevance and project timeline. If a donor chooses to fund a project, a community and visibility plan will be developed in consultation with them.

■ Details: http://lei.sr?a=6P2W6_T

Zoo Berlin launches new panda enclosure

German Chancellor Angela Merkel and Chinese President Xi Jinping were on hand to mark a momentous occasion for Zoo Berlin, with the debut of its new €10m (£8.8m, \$11.4m) giant panda enclosure.

A pair of giant pandas, which prove very lucrative for zoos with visitors travelling from far and wide to get a glimpse of the rare animals, arrived in Berlin on 24 June, marking their debut to the public on 6 July for the first time following a quarantine period.

Covering 5,480sqm (59,000sq ft), the Dan Pearlman-designed Panda Garden is themed as a Chinese-style pavilion, centred around a new building with a visitor plaza and educational experience on the life of a panda.



■ Xi Jinping and Angela Merkel attended the opening

Two outdoor habitats are designed around the giant panda's natural surroundings, with rock formations, small watercourses and more than 800 bamboo plants.

Dan Pearlman worked with Berlin-based Emproc Bauprojektmanagement on the project, who handled

construction work for the nine-month development.

The arrival of the two pandas was preceded by a lengthy negotiation period between the German and Chinese governments, with a 15-year loan deal agreed between the two nations.

■ Details: http://lei.sr?a=b6c3v_T

PHOTO: MI ZHANG/CHINA NEWS AGENCY/CPA IMAGES

PHOTO: DAN PEARLMAN ARCHITECTS

Chester Zoo details £100m redevelopment

Chester Zoo will redevelop 100 acres (405,000sqm) of its existing site into grassland and forest areas as part of a new £100m (\$130m, €113m) development masterplan.

The grasslands area will be located in the western part of the zoo and will be characterised by vast, open savannah landscape populated by a mix of free-roaming species.

To the eastern side of the zoo, the forest zone will be multi-layered, with ground-level experiences telling the story of trees, while a treetop experience will offer exploration of the forest from a different viewpoint.

A major new restaurant and a number of yet-to-be-decided ride experiences are also in the works.



■ Chester Zoo plans to open forest and grassland zones

Jamie Christon, managing director of Chester Zoo, said the new areas will build on the attraction's £40m (\$52m, €45m) Islands project, using high levels of immersion to create an authentic feel for the visitor experience.

"On the back of our success with Islands,

we decided that as the majority of our collection comes from the three different types of area – island, forest and grassland – that we should look at developing the remainder of the zoo under those categories," he told *Attractions Management*.

■ Details: http://lei.sr?a=8P5K7_T

INDUSTRY OPINION

More zoos partnering species conservation organisation IUCN

Kira Mileham

As zoos and aquariums evolve beyond their role as social and business leaders in recreation, tourism and education, they are delivering on their mission to protect animals in the wild.

This is a worthy cause, but it also positions zoos and aquariums as change-makers to engage new and wider audiences and diversify development opportunities for staff, fundraising, reputation and brand.

Zoos and aquariums are crucial players in species conservation; many utilise their funds, expertise, facilities and public profiles to drive conservation efforts within their organisations, in the field and through visitor engagement. More than 40 zoos and aquariums globally are forging stronger partnerships with the International Union for Conservation of Nature (IUCN) Species Survival Commission (SSC) to integrate further into the global conservation leadership community.

The IUCN SSC is a network of 10,000 experts, including scientists, field researchers, zoo and aquarium staff, government officials and other conservation leaders worldwide. The zoo and aquarium partnerships with IUCN aim to collaboratively assess and monitor the extinction threat faced by species for publication on the IUCN Red List, identify emerging conservation issues and develop action strategies. Some zoos are 'hosting' IUCN Species Specialist Groups to create global hubs for the conservation expertise for a species.

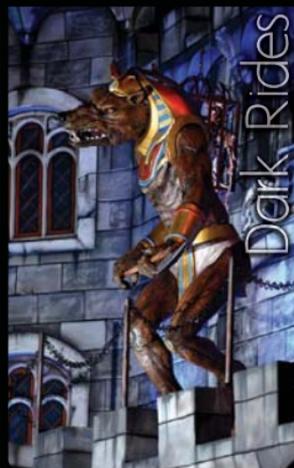
With over 23,000 species classified on the Red List as Threatened with extinction, it has never been more important for zoos and aquariums to help lead on saving them. ●

Kira Mileham, director, IUCN SSC Strategic Partnerships





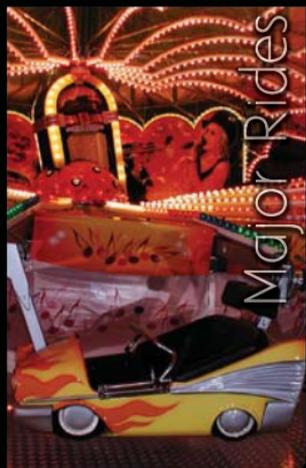
Venetian Carousels



Dark Rides



Bumper Cars



Major Rides

Neurable creates world's first brain-controlled VR system

Tech startup Neurable has taken virtual reality to the next level, creating computer interfaces for the brain to allow users to control the technology using only the power of their minds.

Showcased at the recent Siggraph event in Los Angeles, California, Neurable uses EEG (electroencephalography) sensors combined with eye-tracking technology to allow users to interact with virtual objects through cerebral activity – creating a brain computer interface (BCI).

For the Siggraph event, Boston, Massachusetts-based Neurable debuted *Awakening*, a VR game preview likened to the television show *Stranger Things* and made in partnership with eStudiofuture. In the game, the player is a child held prisoner in a government facility. The player discovers they have gained telekinetic powers and must use them to defeat robot guards and free themselves from the lab. The game is played entirely without the use of a handheld controller.

"Brain signal acquisition is accomplished through our upgraded headband for the HTC Vive," said Michael Thompson, vice



■ The Neurable virtual reality system disposes of the need for hand-held controllers

president of Neurable. "Simply remove the elastic straps in the back and replace them with our straps. Our solution is a demonstration prototype of how brain sensors and neurotechnology can be integrated with AR/VR devices. In the

long run, we expect that AR/VR headset companies will integrate brain sensors directly into their products. What the touch interface became to smart phones, BCIs will become to mixed reality headsets."

■ Details: http://lei.sr7a=4s2N9_T



■ A bot picks results based on keywords

Text emojis, get art, thanks to SFMOMA

San Francisco's Museum of Modern Art (SFMOMA) has introduced a unique way to take in its collection – through text.

To use the service, users text 572-51 with the words "send me" followed by a keyword or emoji. In response, they get a related artwork with caption via text.

The museum was aiming for 100,000 texts through the summer. The service was such a success it passed 2 million in less than a week.

■ Details: http://lei.sr7a=d5U8q_T

VR startup bringing Norse mythology to life

Plans are underway in Denmark to develop a travelling VR fantasy exhibition based on Norse mythology, which – if successful – will eventually be turned into a fully-fledged theme park unique to Scandinavia.

Known as Yggdrasil, the concept is rooted in the region's cultural heritage and folklore, with the startup initially developing an exhibition to go alongside a VR experience called Yggdrasil GO.

The attraction will centre around the VR experience telling the Yggdrasil story, with the accompanying exhibit explaining how the fantasy story matches up with Viking history.

"If you look at Denmark's existing heritage attractions,



■ The VR attraction will tell a fantasy story based on history

they are mainly strictly based in factual history.

No one is telling the folklore that is still a part of Denmark today," said Yggdrasil co-founder Peter Würtz, speaking to *Attractions Management*.

"The Yggdrasil GO experience will not only tell the story that we have

created, but it will also educate our visitors about Norse history and folklore."

The park will include a blend of VR experiences and rides in its first phase. It will add accommodation and restaurants in phase two, and is forecasting 500,000 annual visitors.

■ Details: http://lei.sr7a=3H2F5_T



Parc Spirou, themed around the well-loved comic strip character, will feature a trio of Simworx installations

France's Parc Spirou to feature three key rides from Simworx

Simworx is supplying an Immersive Tunnel, Stargazer Motion Theatre and AGV dark ride

As its global customer base continues to grow with the completion of a variety of projects at theme parks and other visitor attraction venues around the world, leading dynamic simulation attractions specialist Simworx has announced that it is to supply three major attractions to a brand new park scheduled to open in France in 2018.

Parc Spirou, which is currently under construction at a site in the area of Beaulieu in Montoux, close to Avignon in southern France, will bring to life the well-known comic strip character Spirou and his friends, popular with young children as well as parents and grandparents.

Simworx is supplying three key attractions to the theme park, all of which will incorporate the most recent technological developments available to provide Parc Spirou with the latest in cutting-edge, media-based attractions.

Dinosaur adventure

Among these will be an example of Simworx's popular Immersive Tunnel. The ride features a 30-seat, tracked tram and is based on Simworx's exclusively produced ride film, Dinosaur Island.

With a pre-show starring Spirou himself, the Immersive Tunnel is suitable for people of all ages. Following the pre-show, Spirou joins visitors on a jeep-styled simulator which – after a short journey along a track into the main show area – takes them on a fun-filled dinosaur adventure.



Also being provided by Simworx is an attraction based on the company's highly dynamic, 6DOF, seven-seater Stargazer Motion Theatre. Themed around the Spirou character, four Stargazer units will be used

in the attraction, which will take visitors on a madcap adventure with one of the Spirou characters, Gaston, an enthusiastic inventor who often ends up in trouble.

The third Simworx ride to be installed at Parc Spirou will be the very first example of the company's AGV (Advanced Guidance Vehicle) dark ride, which takes the ride genre to a whole new level. With no track or power cables and vehicle acceleration that is unrivalled in the industry, the themed attraction will be based on an educational, amazing and magical story featuring Spirou and several of his friends.



Simworx's dino-themed Immersive Tunnel will be installed at Parc Spirou

Simworx is supplying three key attractions to the theme park, all of which will incorporate the most recent technological developments available to provide Parc Spirou with the latest in cutting-edge, media-based attractions

WOLFGANG KIESSLING

After 45 years in the business, Loro Parque and Siam Park founder Wolfgang Kiessling could rest easy. Instead, he's opening two more major attractions on the nearby island of Gran Canaria

Alice Davis, managing editor, Attractions Management

Attentions Management last spoke with Wolfgang Kiessling in early 2009 (see AM/1/09). He and his son, Christoph, were celebrating the launch of their second visitor attraction, a waterpark on the island of Tenerife.

That attraction, Siam Park, is now routinely voted TripAdvisor's Travellers' Choice top waterpark in the world (in 2015, 2016 and 2017) and recently enjoyed an impressive 15 per cent increase in visitor numbers, welcoming 1 million guests in 2016.

Kiessling opened his first attraction on the Spanish island back in 1972 – the equally popular Loro Parque, which these days attracts some 1.2 million guests annually. The internationally renowned 13.5-hectare (33-acre) zoological park is located in the picturesque north of Tenerife and has more than 10,000 animals and the biggest and most diverse collection of parrots in the world.

Having built, from scratch, two of the best visitor attractions in Europe (and possibly the world), one might expect Kiessling, who turns 80 this year, to be thinking about retirement. But quite the contrary; he's just months away from opening his third major visitor attraction (an aquarium), with a fourth on the horizon (a new waterpark).

POEMA DEL MAR

The first to launch, by the end of this year, will be Poema del Mar (Poem of the Sea). The €30m (\$35m, £27m) aquarium development will this time be located on the neighbouring island of Gran Canaria, on the Las Palmas harbourside.

The project came about thanks to a meeting between Kiessling, some local politicians, and the owners of the port,



Wolfgang Kiessling has been in the attractions business for 45 years



The Kiessling Group currently operates an award-winning waterpark and zoological park and is about to open an aquarium



Loro Parque and Siam Park in Tenerife have won TripAdvisor's Travellers' Choice accolade

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We can count on the tourists who come to Gran Canaria to visit the new aquarium because, up to now, this kind of attraction has been missing

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who said they had a great site for an aquarium. With Loro Parque already housing a major aquarium, Kiessling Group had the knowhow and the expertise.

Kiessling says Poema del Mar will house 300 species of fish, birds, small mammals, amphibians and reptiles, with a focus on creatures of the Atlantic. It will have both freshwater and saltwater exhibits, a 6,000 cubic metre, 9-metre-deep (30-foot) pool, and the second-biggest aquarium window panel in the world. (At 36 metres (118 feet), it's just shy of Chimelong Hengqin Ocean Kingdom's Whale Shark Exhibit tank – a world-record 39.6 metres (130 feet)).

Spanish architecture firm VDR Designs has masterplanned the aquarium, which will be ecologically sustainable and focus on renewable energy. The name of the

aquarium is inspired by Canarian artist Néstor Martín Fernandez de la Torre (1887-1938), who painted a series of paintings of the ocean, titled *Poema del Mar*.

According to Kiessling, the launch of the 12,500sqm (134,500sq ft) aquarium will help boost tourist activity in the city of Las Palmas and the surrounding areas.

"We're right in the harbour, next to where the cruise ships arrive, so that's a whole new market," he says. "We can also count on the tourists who come to Gran Canaria because, up to now, this kind of attraction has been missing. I think we can move quite a lot of people. And, naturally, we hope the residents will also come."

Like Loro Parque, Poema del Mar will work closely with the Loro Parque Foundation – the Kiessling family's nonprofit research and conservation





Siam Park is located in the south of Tenerife and the theming is inspired by Thailand. Siam Park 2 is planned for Gran Canaria



“We don’t want to repeat what we have done before. We want the two waterparks really to compete with one another”



► organisation, which was set up in 1994 and is currently working to conserve endangered species in more than 30 countries around the world.

SIAM PARK 2

According to Kiessling, plans for Siam Park 2, which will also be located on Gran Canaria, were underway well before the aquarium, which is almost complete. Getting clearance for the 18-hectare (44-acre) development has taken a long time and there have been many hurdles to getting the required permissions and permits in place. However, Kiessling seems confident construction on the waterpark is starting soon, with a projected completion date within three years.

The €60m (£54m, \$71m) attraction, which aims to become the biggest

waterpark in Europe, will be built in a similar Thai-inspired style to its older sibling, and located at Playa del Inglés.

“It will be in the Thai style, but Siam Park 2 will be different,” says Kiessling. “The slides and attractions will be different. We don’t want to repeat what we have done before. We want the two waterparks really to compete with one another.”

All the theming is done by in-house designers and architects. The Thai inspiration is something that has endured, having first been implemented at Loro Parque, which boasts the largest Thai-style village outside Asia. For Siam Park, the family obtained the blessing of Thailand’s royal family, and the park was officially opened by Thai Princess Maha Chakri Sirindhorn.

“I always had some kind of special affection towards Thailand and Thai art.

ABOUT LORO PARQUE FOUNDATION

The Loro Parque Foundation was established in 1994, when Loro Parque donated ownership of all its parrots – some of them highly endangered – to the charity. Its mission is to fight for animal welfare and biodiversity conservation and work in the areas of conservation and research, education and rescue. The Loro Parque Foundation especially focuses on improving the conservation status of threatened parrots and cetaceans and their natural habitats. Loro Parque supports the foundation with €2m per year, meaning all other donations and sponsorships go straight to the 36 current initiatives.



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Loro Parque boasts the world's largest and most diverse parrot collection; (left) Wolfgang and his son Christoph Kiessling



► Our visitors get really excited about the beautiful style of architecture, so we just kept on developing the theming."

FAMILY AFFAIR

The businesses, falling under the umbrella of the Kiessling Group, have always been a family affair. In the early 1970s, German-born Kiessling managed a charter airline that flew to the Canary Islands. Enamoured by Tenerife's scenery and people – and aware that tourism to the already popular destination was likely to continue to grow – Kiessling decided to stay.

"I didn't have much money. I couldn't start up with a big hotel construction or anything like that, so I was looking for something different," he says. "Since I'd always liked animals, I was thinking about a safari park, but it was much too expensive. I talked to my father about my problems. He asked me if I remembered visiting a

bird park in Miami. He said that parrots can live to be 100 years old and they eat very little. And that's how it started."

Kiessling and his wife did everything themselves, from sourcing the birds to planting the trees. When Loro Parque opened – *loro* is the Spanish word for parrot – it was about one-tenth of the size it is today, with around 200 birds and 30 staff, three of whom still work at the park. In its first year, 180,000 visitors came, and in year two, over 300,000.

However, they were the most challenging years too. The banks refused to lend money to the business. Kiessling says they couldn't understand his parrot-themed attraction. "We had no credit," he says. "We were badly treated, but we worked very hard and we persisted and we were not going to be easily destroyed. We managed to get through three or four years and, all of a sudden, the business started to make enough money to support itself, pay salaries and bills."

In a few weeks, I'll be 80, but I still work eight or nine hours every day. My wife and my son are the same, but we love what we do so we don't mind

COMPARING CANARIES

TENERIFE

890,000 population
2,034sq km area (785sq mi)
5.6 million tourists in 2016
5.1 million tourists in 2015
7.9% rise in tourism from 2015 to 2016
160,000 hotel beds
7.54 days average stay
€137 daily expenditure per person

GRAN CANARIA

838,000 population
1,560sq km area (602sq mi)
4.2 million tourists in 2016
3.7 million tourists in 2015
13.6% rise in tourism from 2015 to 2016
154,000 hotel beds
7.86 days average stay
€142 daily expenditure per person

Sources: Tenerife Tourism Corporation / Gran Canaria Patronato de Turismo

CONSTANT INVESTMENT

Kiessling began buying up the land around his park and expanding. He paid the family a salary so they wouldn't spend the profits. "We grew from 30 employees then to over 1,000 today. We invested the money into renewal, renovation and new attractions."

He opened Loro Parque in north Tenerife – at that time, the tourist hotspot. Following the Tenerife airport disaster of 1977, when two planes collided killing 583 people, a new airport was built in the south. The south then became the destination of choice for holidaymakers, and was the obvious choice for the waterpark.

"I stepped into the park business at a time when you could start up with very little money. Today, it would be very difficult to do that. Like always in life, you have to have luck. But it's also hard work. We've always been a working family. In a few weeks, I'll be 80, but I still work eight or nine hours a day. My wife and my son are the same, but we love what we do so we don't mind." ●



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THE MAN WHO WALKED WITH WALT

Disney's Marty Sklar died this July in his Hollywood Hills home at the age of 83. We look back at his influential career and how he became an inspiration for so many

Tom Anstey, news editor, Attractions Management

Marty Sklar – the legendary Disney Imagineer and IAAPA Hall of Famer who played a major role in the creation of almost every Disney theme park – was an inspiration to generations of theme park designers.

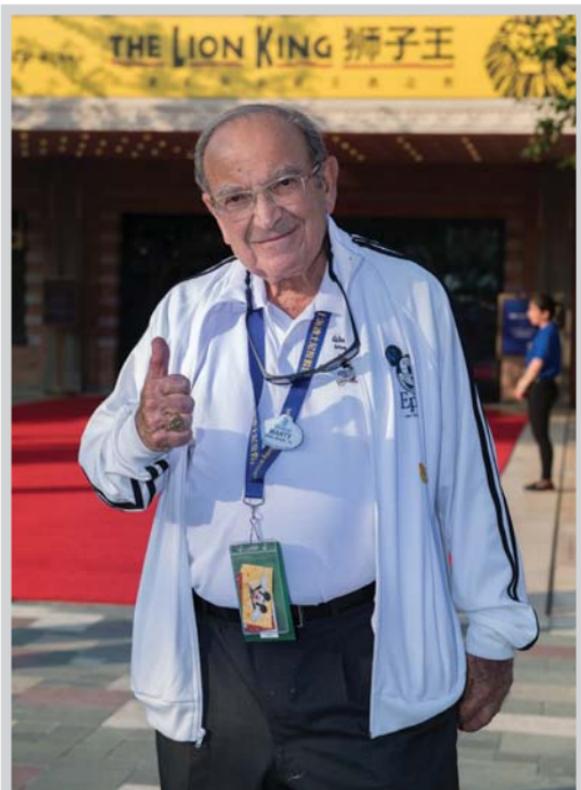
His 54-year career started in 1955 as a writer of *The Disneyland News* for the just-opened Disneyland in Anaheim, California. Sklar went on to work closely with Walt Disney and was referred to as the “keeper of the keys” by his peers – someone who understood the Disney way because he had “learned it at Walt’s knee”.

Joining the company full-time in 1956, Sklar would act as Disney’s right-hand man, writing speeches and marketing materials and creating a film showcasing the vision for Walt Disney World and Epcot. He also joined WED Enterprises – the precursor to Walt Disney Imagineering – which he would go on to lead for the next three decades.

Working closely with Disney helped instill in Sklar a sense of the “Disney DNA”, which he circulated to his Imagineers through the doctrine of “Mickey’s Ten Commandments”.

“It was vital to instill self-belief and imagination in the team,” Sklar said, speaking to *Attractions Management* in 2015 (see AM/2/15). “I always said there are two ways to look at a blank piece of paper: it’s either the most frightening thing in the world or the greatest opportunity. You need to get people to see it as a chance to let their imaginations run wild.

“You have to figure out where you’re going and motivate people to help you get there. As a creative leader, I was focused on getting people to follow the foundation that we had set up and getting them to buy into and understand it. If you have a team



Marty Sklar visits Disney Town at Shanghai Disney Resort in June 2016



Sklar and fellow Imagineer John Hench review a Future World model for Epcot; Sklar was named a Disney Legend in 2001 (right)



He embodied the best of Disney, from his bold originality to his joyful optimism and relentless drive for excellence



of talented creative people, once they understand where you're going, they really respond. That's when the magic happens."

In July 2009, on the 54th anniversary of Disneyland, Sklar retired from Disney as executive vice president and Imagineering ambassador, an occasion marked by a dedication in his name on Disneyland's City Hall – the highest Disney honour.

"Everything about Marty was legendary – his achievements, his spirit, his career," said Disney chair and CEO Bob Iger. "He embodied the very best of Disney, from his bold originality to his joyful optimism and relentless drive for excellence. He was also a powerful connection to Walt himself. No one was more passionate about Disney than Marty and we'll miss his enthusiasm, his grace, and his indomitable spirit."

Bob Chapek, chair of Walt Disney Parks and Resorts said: "Marty was the ultimate Disney Imagineer and Cast Member. From his days working as an intern with Walt to

just two weeks ago, engaging with fans at D23 Expo, Marty left an indelible mark on Disney Parks around the globe.

"We will dearly miss Marty's passion, skill and imaginative spark that inspired generations of Cast, Crew and Imagineers."

Enduring legacy

Fellow Imagineer Bob Weis, who is now president of Walt Disney Imagineering, paid tribute. "Marty was one of Walt's most trusted advisors and helped turn his most ambitious dreams into reality," he said. "For us, it's hard to imagine a world without Marty because Marty is synonymous with Imagineering. His influence can be seen around the world, in every Disney park, and in the creative and imaginative work of almost every themed entertainment professional in the industry."

Recognised with the top awards and accolades, Sklar is a member of the IAAPA Hall of Fame and was named a Disney

Legend in 2001. He has also been awarded the Themed Entertainment Association's (TEA) Lifetime Achievement Award.

Sklar remained active after his retirement, regularly attending events such as the IAAPA Expo D23 Disney fan expo.

During his extensive career, Sklar played a part in the opening of every Disney park up to Shanghai Disney Resort, which opened in 2016 – the first project he would watch from the sidelines.

Marty and his wife of 60 years, Leah, were two of the founders of the Ryman Program for Young Artists, a project of Ryman Arts, a nonprofit foundation whose purpose is to teach and mentor traditional drawing and painting skills to talented young artists in Southern California. In lieu of flowers, the family requests that donations be made in Marty's name to Ryman Arts at www.rymanarts.org.

He is also survived by son Howard, daughter Leslie, and their families. ●



Star Wars: Galaxy's Edge will have a number of experiences, including a Millennium Falcon attraction

LIVING, BREATHING, BEING STAR WARS

Disney wowed fans with news of 'the most experiential concept ever', where guests will become characters in their very own multi-day Star Wars stories

Star Wars was a focal point of the D23 Disney fan expo, held in Anaheim, California, in July, with the announcement of the new themed zone's official name – Star Wars: Galaxy's Edge – and a highly detailed scale model of how it will look.

More than that, plans to develop a Star Wars-inspired hotel were revealed. Part of Disney's new "360 vacation" concept – where immersive experiences allow guests to be part of their favourite stories – the holiday would be a living adventure, with visitors staying at the resort existing as part of the Star Wars' universe.

Though few details have been released, guests will get to role play their character over the period of their stay in an interactive, immersive,

story-driven experience. This means every guest's actions and decisions will have consequences for their own unfolding narrative, and on the cast members – including smugglers, bounty hunters and rogue adventurers – they interact with.

The hotel will be a highly detailed spaceship, where the windows look out at deep space. There is speculation that guests may have the chance to take on secret missions, learn to use light sabers or fly spacecraft, and be waited on by droids.



Mark Hamill (above), who played Luke Skywalker, presents a detailed model of Star Wars: Galaxy's Edge; Disney renderings of the hotel (right)





Disney has been capitalising on the Star Wars franchise since acquiring Lucasfilm for US\$4bn in 2012



The Telegraph reports the Star Wars hotel will feature four-bed rooms, a swimming pool, waterpark and fitness centre, and would cost \$900 to \$1,000 (£700 to £780) per person per two-night stay.

"We want you to ... live out a Star Wars adventure of your own making," portfolio creative executive at Walt Disney Imagineering, Scott Trowbridge, told IGN during D23. "Let's say you do a great job in the Millennium Falcon cockpit, you may find some extra intergalactic credits coming your way. But, if you do a lousy job and bang the ship up, the boss might not be too happy with that and when you go over to the Cantina, the barman might let you know the boss is not happy, and you might even end up with a bounty on your head."



Parks and resorts chair Bob Chapek reveals details of the immersive vacation

WHAT DID DISNEY SAY?

"the story will touch every single minute of your stay"

parks and resorts chair bob chapek, at D23

"You may have heard that we recently did a survey about an entirely new way to live your very own Star Wars adventure. We wanted to explore a revolutionary vacation experience and I must tell you that the response was out of this world. So, I am thrilled to confirm that we are working on our most experiential concept ever. It combines a luxury resort with immersion in an authentic Star Wars environment. It will invite you to live your own dedicated multi-day adventure in a galaxy far, far away. It's unlike anything that exists today. From the second you leave Earth, you'll board a starship alive with characters, stories and adventures that evolve all around you - during the voyage and on the galaxy - that expands



several days. You'll immediately become an active citizen of the galaxy and live everything that that means, including the opportunity, of course, to dress up in the proper attire. It is 100 per cent immersive and the story will touch every single minute of your stay with us. And it culminates in a unique journey for every person who visits. These early artist concept renderings show that this is going to be a truly unbelievable experience, but one of the things I'm most excited about is that every window in this place has a view of space. It will stand out among all the resorts around the globe and will make an incredible addition to Walt Disney World. And I have to tell you, we feel like this could be the start of something very, very big."



First-look renderings give an impression of what a Star Wars resort would be like

PARK LIFE

Disney has announced a slew of new additions for its parks worldwide, including Marvel and Pixar attractions, and the very first ride for the company's iconic figurehead, Mickey Mouse



PIXAR

Toy Story Land at Hollywood Studios will open in summer 2018. Featuring two new themed attractions, the larger-than-life world shrinks visitors to the size of a toy, with a family coaster based on Slinky Dog.

Also in 2018, Disney California Adventure will welcome an immersive

attraction, with the park's Paradise Pier rebranded as Pixar Pier. The new-look waterfront attraction will feature IPs including The Incredibles, Inside Out and Toy Story, with characters from Pixar films populating the area and debuting during Pixar Fest – a celebration of the brand which will include a Pixar-themed fireworks display and the Pixar Play Parade.



Pixar Pier will be located at Disney California Adventure

PHOTOS: © PIXAR 2017, DISNEY

MICKEY MOUSE

Disney's iconic mascot is to get his first ever ride experience when Mickey and Minnie's Runaway Railway comes to Hollywood Studios, replacing the existing Great Movie Ride.

Featuring a "singable theme song", the experience will be "2.5D", according to Disney, with a no-glasses-required approach to the 3D attraction, "turning the flat world of a colourful cartoon short into a dimensional display of amazingness."

Based on Mickey Shorts seen on the Disney Channel, the ride will feature "surprising twists and turns, dazzling visual effects and mind-boggling transformations that happen before your very eyes."



Mickey and Minnie's Runaway Railway is replacing the Great Movie Ride



PHOTO © MARVEL 2017 DISNEY



Disney has several new Marvel experiences planned, including a Disneyland Paris hotel

MARVEL

Disney has a couple of plans for its Marvel IPs. Guardians of the Galaxy is soon to be joined by Spider-Man and The Avengers at California Adventure. And, Guardian's of the Galaxy ride Mission: BREAKOUT! will see the superheroes team up "like never before", with a new experience to be revealed at a later date.

At Disneyland Paris, Hotel New York is getting a Marvel-themed makeover, dubbed "The Art of Marvel".

"We're going to create a hotel at Disneyland Paris that would make Tony Stark proud," says Disney parks and resorts chair Bob Chapek. "It will transport our guests to the action-packed, inspiring world of superheroes including Iron Man, the Avengers and Spider-Man."



A space-themed restaurant is in the pipeline for Epcot

EPCOT

Disney has announced plans to bring Guardians of the Galaxy to Epcot in the form of a new attraction, while also bringing Pixar's Ratatouille to the park, with a ride based on the version at Disneyland Paris.

Disney is also developing a restaurant for Epcot, which will simulate dining in outer space for a starlit experience.

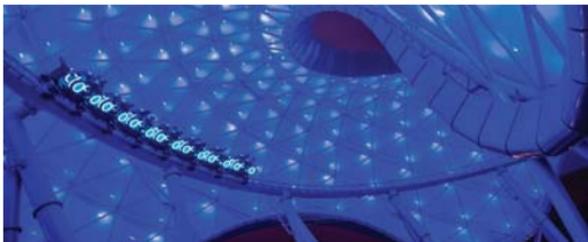
"We know our guests love dining at Epcot – and the restaurants really are out of this world," said Walt Disney Imagineer Tom Fitzgerald, speaking at D23. "Now we're about to create one that takes that literally."

PHOTO © DISNEY 2017

AND FINALLY

A Tron rollercoaster is coming to Magic Kingdom in Florida. There are also plans for a live show theatre on Main Street, based on the 1920s Willis Wood theatre in Kansas City, where Walt Disney once lived.

Disney's fleet of cruise liners is also expanding, with three new ships being built. With two ships currently under construction at the Meyer Werft shipyard, an additional ship will be built and is scheduled to be completed in 2022.



Magic Kingdom is in line for a Tron rollercoaster, similar to the one at Shanghai Disneyland

Blue Planet



The highly anticipated new themed land, Pandora – The World Of Avatar, has opened in Florida. Lauren Heath-Jones shares her experience of Disney's latest investment

Disney's Animal Kingdom has recently welcomed a new addition to the park, the long anticipated Pandora – the World of Avatar.

Replacing Camp Minnie-Mickey, Pandora – the World of Avatar is a \$500m (£446m, £386m) immersive land inspired by James Cameron's 2009 Academy Award-winning blockbuster.

The new land is a standalone experience, separate from the story of the films, and set a generation after the events of *Avatar*. The Na'vi (Pandora's indigenous humanoid species) have achieved peace with humans – thanks to the film's protagonist, Jake Sully – and have reclaimed their land from the RDA mining company. They have also developed a partnership with travel agency Alpha Centauri Expeditions (ACE) to showcase Pandora as a conservation site, research facility and spectacular eco-tourist destination, dedicated to the study and preservation of the native flora and fauna.

The theming, in typical Disney style, is breathtaking, with the Pandora experience

starting the moment guests set foot on the bridge that connects it to Discovery Island. From the first step, you're in the world of Cameron's imagination; a world originally achieved through CGI technology, now flawlessly rendered in real life.

Magical planet

It's easy to believe that you've arrived on a lush and beautiful planet, that is both alien and familiar. With its floating mountains, interesting and beautiful plant life, stunning water features and the



Avatar director James Cameron (above) attended the Pandora launch; Na'vi River Journey travels into a bioluminescent forest





The Valley of Mo'ara, with its floating mountains, is the backdrop for the \$500m (€446m, £386m) attraction

“ FROM THE FIRST STEP, YOU'RE IN THE WORLD OF CAMERON'S IMAGINATION; A WORLD ORIGINALLY ACHIEVED THROUGH CGI TECHNOLOGY, NOW FLAWLESSLY RENDERED IN REAL LIFE ”

sounds of exotic and unknown animals filling the air, Pandora is captivating.

On entry, guests are welcomed with a sign briefly explaining the Na'vi partnership with ACE and are greeted by a gigantic alien plant, a purple and green pod known as a Flaksa Reclinata, that interacts with guests by spouting steam and water when touched.

I spent my first 15 minutes in Pandora taking in the spectacle, before heading straight for Avatar Flight of Passage ride, stopping only to look on in awe at the floating mountains. Accomplished with a combination of steel rods, forced perspective and the magic of Disney's Imagineers, it's these mountains, more than anything, I think, that make you believe you're on another planet.

Technical issues

I was brought back down to Earth with a bump, however, when I arrived at Avatar Flight of Passage to find it was closed, alongside Pandora's other major attraction, the Na'vi River Journey. The Na'vi River Journey was shut due to technical difficulties and Avatar Flight of Passage due to an emergency that was never fully explained, but was rumoured to be a fire.

LOCATION

Pandora – World of Avatar is located at Disney's Animal Kingdom at Walt Disney World Resort in Lake Buena Vista, Orlando, Florida.

OPENING HOURS

Until 19 August 2017:
From 9:00 to 22:00 with Extra Magic hours for Pandora – World of Avatar available between 22:00 and 00:00 for guests staying in Walt Disney World Resort Hotels.
From 20 August 2017:
From 9:00 to 21:30 with no Extra Magic Hours available.
Operating hours may vary by season.

ADMISSION PRICES

A peak-time one-day ticket costs \$119 plus tax (£91, €102) for an adult and \$113 plus tax (£86, €97) for a child. A two-day ticket costs \$220 plus tax (£169, €189) for an adult and \$207 plus tax (£159, €177) for a child.



Avatar 2 is expected to hit cinemas in December 2018, almost a decade since production was first announced

Having opened only two weeks previously, hiccups were to be expected, but I couldn't help feeling disappointed. Anticipating huge crowds, I'd headed early to Pandora in an attempt to avoid the long lines. Now it seemed queues would be inevitable.

The Cast Members at this time were courteous and professional, but not



Pandora covers 12 acres and has two signature rides; (below) the queue line for Flight of Passage

► particularly helpful. It wasn't made clear why we were being evacuated.

Queue quandry

Once the technical issues had been resolved, I headed back to Pandora. Queue times were in excess of three hours and unfortunately there were no single-rider queues and fast passes for the day for both rides had long since sold out, and I'd been unable to get them through the app. Realising that I was facing a three hour wait by myself – an unthinkable tedious task – the Cast Member felt sorry for me and gave me fast pass access, becoming my favourite person in the process.

The only downside to the fast pass queue was missing out on the extensive theming throughout the queue line. I have since heard that the staging

is incredible, reminiscent of a film set, with meticulous attention to detail and a floating avatar in an incubation tank serving as a spectacular focal point, but when on a short trip as I was, I just couldn't justify the time.

Flight of Passage

Avatar Flight of Passage is a 3D augmented reality flying simulator ride. Riders are taken on a spectacular journey across the Pandoran landscape, on the back of a banshee (a large bird-like predator native to Pandora).

Riders sit astride the body of a bike and are clamped into place, before they are neurologically connected to their avatar. It essentially provides the rider with the same experience that Jake would have had in the film. It is one of the best rides I

PLACEMAKING PANDORA

Joe Rohde,
Walt Disney
Imagineering
portfolio creative
executive,
who joined
Imagineering in



1980, was lead designer on Disney's Animal Kingdom before heading up the Avatar – World of Pandora project.

The two worlds work seamlessly thanks to a shared design philosophy. Disney's Animal Kingdom and Pandora are both about the intrinsic value of nature and the idea of transformation through adventure, says Rohde.

"The World of Pandora is meant to be real," says the veteran creative. "The story we're telling about Pandora is our own story, Animal Kingdom's story. And we're setting it long after the films, so we can talk about Pandora in a way that harmonises with Animal Kingdom itself."

"At Disney's Animal Kingdom we try to make the experiences you are having relate to experiences in the world. It's not exactly a fantasy, it's more like a journey to another land," Rohde says, giving as an example the Africa and Asia zones, which are based on real-world places with design and architecture recreated as closely as possible to the real thing.

The same is true in Pandora. For example, the Imagineers created Na'vi crafts by drawing on Indonesian weaving techniques. The use of natural elements like water features, plants and trees and animals helps make the Pandoran environment feel authentic. Disney Imagineers also created a soundscape that evokes an alien jungle and there are plenty of signs of the Na'vi culture, like cave paintings and totems.

have ever experienced. It was completely immersive and multi-sensory, with bursts of wind whipping my hair, sea spray splashing my face and a sweet, earthy scent permeating the air when flying through the rainforest. There was even an incredible moment where the seat mimicked the panted breathing of the banshee. It was truly incredible and emotional. I left the ride feeling elated and a little bit tearful.

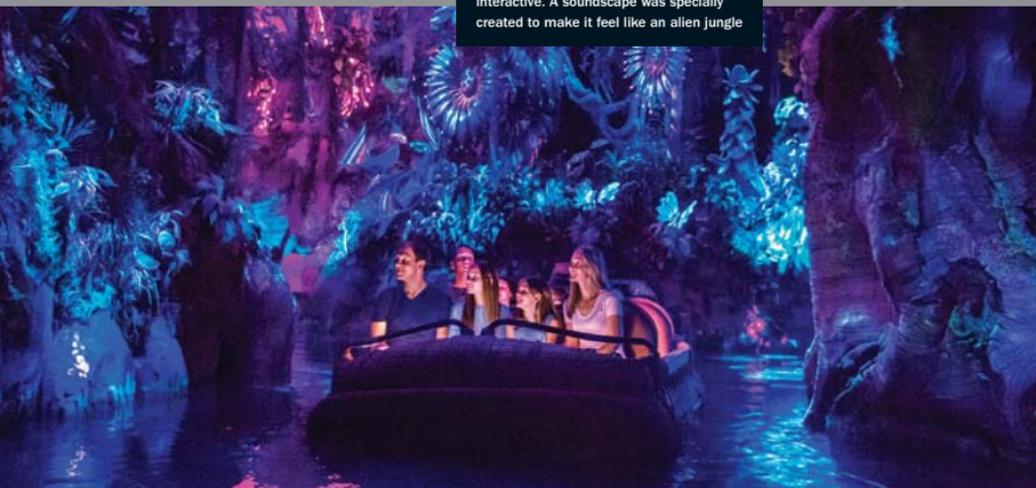
Retailing

After riding Flight of Passage I spent some time in Windtraders, Pandora's gift shop. The first thing that struck me about Windtraders was the total





Pandora's plants are bioluminescent and interactive. A soundscape was specially created to make it feel like an alien jungle



In the 4½-minute Na'vi River Journey, guests travel on a reed boat and meet a 10-foot-tall audio-animatronic Na'vi Shaman of Songs





The Satu'li Canteen is themed around a former RDA mess hall

“ WHILE SORELY TEMPTED TO DROP \$70 ON A NA'VI
IN MY OWN IMAGE, I RESISTED AND SETTLED
FOR A VEIN POD KRISPY TREAT INSTEAD ”

► absence of general Disney merchandise, which has been eschewed for a wide variety of souvenirs, including t-shirts, mugs, plush, action figures, clothing and collectible items, themed around the Avatar universe, ensuring the guest is totally immersed in Pandora, where the inclusion of Mickey and others would shatter the illusion.

Windtraders has three in-store experiences exclusive to Pandora. The first involves a small, mechanical banshee, that was very popular with guests. The banshees perch on their owner's shoulder, via a cross body shoulder strap, and are controlled by a handheld device that allows them to move their heads and flap their wings. Guests are guided through an official ceremony, bonding the banshee to its new owner once it has been purchased.

With a reservation, guests can create a custom Na'vi action figure in their own likeness. A facial scan is carried out and

WHAT'S THE SCORE?

- Staff 9/10
- Cleanliness 10/10
- Toilets 7/10
- Experience 9/10
- Value for money 8/10
- Overall experience 9/10**

guests can then choose their figure's facial features and body type, as well as additional extras including clothes and accessories. While sorely tempted to drop \$70 (£54, €60) on a Na'vi in my own image, I resisted and settled for a Vein Pod Krispy Treat instead.

The third experience was an interactive station where guests could create their very own, authentic Na'vi necklaces.

Na'vi River Journey

I headed for the Na'vi River Ride. With queue times over three-and-a-half hours, I decided to head out of Pandora, stopping to ask a Cast Member when to return for reduced queue times. I was told that late

afternoon was my best bet, as Pandora gets really busy at night with guests queuing to see the bioluminescent wonderland that Pandora transforms into after dark.

A few hours later, the waiting time for the Na'vi River Journey had reduced by more than half. The time went quickly, thanks to the stellar staging throughout the queue line, which meant that there was always something interesting to see and interact with, and Disney providing free Wi-Fi. Before I knew it, I was heading into the ride.

The Na'vi River Journey is a traditional river ride, in a similar vein to Disney classics like the Pirates of the Caribbean and It's a Small World attractions. Guests are taken on an tour down the Kaspanan River, through gorgeous, bioluminescent rainforest, in search of the Shaman of Songs. Riders are treated to animal sightings and rare glimpses of the Na'vi, before coming face to face with the Shaman, an impossibly real-looking audio-animatronic – and Disney's most sophisticated to date. The ride is executed beautifully. I only wish I'd experienced it first so I could fully appreciate it for the work of art it is. However, for me, its brilliance is overshadowed by that of Flight of Passage.

Pandora – the World of Avatar is a stunning new attraction, and its placement at Disney's Animal Kingdom has breathed life back into this park, making it a new priority for visitors as a result of this tactical investment ●



Visitors can purchase a small mechanical banshee in the Windtraders retail experience



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TEA/AECOM THEME INDEX 2016

BE OUR GUEST

Disney dips, waterparks ride the wave and the world's museums rally -
Tom Anstey highlights the key findings from the latest TEA/AECOM report

THEME PARKS

Following a period of growth in 2015, the world's top theme parks have experienced a mixed year, according to the latest edition of the TEA/AECOM Theme Index report.

For the world's top 25 theme parks, attendance declined 1.1 per cent, down from 235.6 million visitors in 2015 to 233.1 million in 2016, with the top operator – Disney – telling a similar story.

Mouse trap?

According to the 2016 Index, which marks the 11th edition of the report, overall attendance at Disney attractions was, in fact, up by 2.5 million, although this was, in part, a result of the Shanghai Disney Resort launch, which recorded visitor numbers of 5.6 million in its debut year.

Florida's Magic Kingdom remains the world's most visited park, with Disneyland California and Tokyo Disneyland in second and third place, respectively. All three parks suffered attendance declines however, with drops of 0.5 per cent, 1.8 per cent and 0.4 per cent, respectively.



PHOTO: DISNEY

The new Shanghai Disney Resort welcomed 5.6 million visitors in just six months

All Disney parks in the Index recorded attendance declines, the largest being a 10 per cent drop at Hong Kong Disneyland

Table 1: Theme Park Groups Worldwide

Rank & Group name	% Change	Attendance 2016	Attendance 2015
1 Walt Disney Attractions	1.8%	140,403,000	137,902,000
2 Merlin Entertainments Group	1.2%	61,200,000	60,500,000
3 Universal Parks And Resorts	5.5%	47,356,000	44,884,000
4 Oct Parks China	11.9%	32,270,000	28,830,000
5 Fantawild	37.0%	31,639,000	23,093,000
6 Six Flags Inc.	5.4%	30,108,000	28,557,000
7 Chimelong Group	16.0%	27,362,000	23,587,000
8 Cedar Fair Entertainment Company	2.7%	25,104,000	24,448,000
9 Seaworld Parks & Entertainment	-2.1%	22,000,000	22,471,000
10 Parques Reunidos	-6.0%	20,825,000	22,154,000
TOP 10 TOTAL ATTENDANCE 2016		438,267,000	416,426,000
TOP 10 ATTENDANCE GROWTH 2015-16	4.3%	438,267,000	420,360,000

In 2016, Magic Kingdom welcomed 20.4 million visitors, while Disneyland California drew 17.9 million and Tokyo Disneyland attracted 16.5 million. Other Disney parks included in the Index all recorded attendance declines, the largest being a 10.3 per cent drop at Hong Kong Disneyland, which lost 700,000 visitors to welcome 6.1 million visitors.

Universal approval

Other operators have fared better than Disney, with Universal Studios recording attendance increases at all of its parks, buoyed by new attractions and IPs, including the continued success of its Harry Potter worlds and attractions.

Universal Studios Japan was ranked fourth for attendance overall, with visitor numbers increasing from 13.9 million



Students visit Universal Studio Japan. The Osaka park enjoyed 4.3 per cent attendance growth

in 2015 to 14.5 million in 2016 – a 4.3 per cent increase. Universal Studios in Orlando also saw its numbers surge by the same percentage, up from 9.6 million to 10 million. The neighbouring Islands of Adventure park in Orlando increased numbers by 6.5 per cent from 8.8 million to 9.4 million during the period.

Universal Studios Hollywood launched its new Wizarding World of Harry Potter attraction in April 2016, with the boy wizard's magic spell once again driving park attendance – up 13.9 per cent year-on-year, from 7.1 million to 8.1 million.

An eye on Asia

“Disney resources have lately been concentrated in Asia, with Shanghai Disney Resort having opened in mid-2016,” says Brian Sands, vice president of economics, the Americas, for AECOM. “Meanwhile, Universal’s Harry Potter attractions have been a powerful draw in both Hollywood and Orlando. But Disney has new IP magic of its own in its North American parks, most notably the Pandora land (Avatar) at Disney’s Animal Kingdom, Hong Kong SAR and Disney’s Animal Kingdom, as well as the redesigned and renamed Disney Springs retail-dining-entertainment area. For its part, Universal is also continuing to grow domestically, with its new second gate in Orlando – Volcano Bay.”

Group dominance

For the world’s top 10 theme park groups, overall attendance was up 4.3 per cent, with numbers rising from 420.4 million in 2015 to 438.3 million in 2016. Walt Disney Attractions holds a substantial lead

Table 2: Top 25 Theme Parks Worldwide

Rank, Park & Location	% Change	Attendance 2015	Attendance 2016
1 Magic Kingdom at Walt Disney World, Lake Buena Vista, Florida	-0.5%	20,395,000	20,492,000
2 Disneyland, Anaheim, California	-1.8%	17,943,000	18,278,000
3 Tokyo Disneyland, Tokyo, Japan	-0.4%	16,540,000	16,600,000
4 Universal Studios Japan, Osaka, Japan	4.3%	14,500,000	13,900,000
5 Tokyo Disney Sea, Tokyo, Japan	-1.0%	13,460,000	13,600,000
6 Epcot, Walt Disney World, Lake Buena Vista, Florida	-0.7%	11,712,000	11,798,000
7 Animal Kingdom, Walt Disney World, Lake Buena Vista, Florida	-0.7%	10,844,000	10,922,000
8 Hollywood Studios, Walt Disney World, Lake Buena Vista, Florida	-0.5%	10,776,000	10,828,000
9 Universal Studios at Universal Orlando, Florida	4.3%	9,998,000	9,585,000
10 Islands of Adventure At Universal Orlando, Florida	6.5%	9,362,000	8,792,000
11 Disney’s California Adventure, Anaheim, California	-0.9%	9,295,000	9,383,000
12 Chimelong Ocean Kingdom, Hengqin, China	13.2%	8,474,000	7,486,000
13 Disneyland Park at Disneyland Paris, France	-14.2%	8,400,000	9,790,000
14 Lotte World, Seoul, South Korea	11.5%	8,150,000	7,310,000
15 Universal Studios Hollywood, Universal City, California	13.9%	8,086,000	7,097,000
16 Everland, Gyeonggi-do, South Korea	-3.0%	7,200,000	7,423,000
17 Hong Kong Disneyland, Hong Kong SAR	-10.3%	6,100,000	6,800,000
18 Ocean Park, Hong Kong SAR	-18.8%	5,996,000	7,387,000
19 Nagashima Spa Land, Kuwana, Japan	-0.3%	5,850,000	5,870,000
20 Europa Park, Rust, Germany	1.8%	5,600,000	5,500,000
21 Shanghai Disneyland, Shanghai, China	-	5,600,000	New entry
22 Walt Disney Studios Park at Disneyland Paris, France	-1.6%	4,970,000	5,050,000
23 De Efteling, Kaatsheuvel, The Netherlands	1.8%	4,764,000	4,680,000
24 Tivoli Gardens, Copenhagen, Denmark	-2.0%	4,640,000	4,733,000
25 Seaworld Florida, Orlando, Florida	-7.9%	4,402,000	4,777,000
TOP 25 ATTENDANCE GROWTH 2016		233,057,000	228,081,000
TOP 25 ATTENDANCE GROWTH 2015-16	-1.1%	233,057,000	235,568,000

PHOTO: SHUTTERSTOCK / RODANRHC



FAST FACTS

Key figures from the TEA/AECOM 2016 Theme Index and Museum Index:

- 438.27 million visits to attractions run by the top 10 global theme park groups, up 4.3 per cent
- 233.06 million visits to the top 25 amusement/theme parks worldwide, down 1.1 per cent
- 148.01 million visits to the top 20 amusement/theme parks in North America, up 1.2 per cent
- 127.26 million visits to the top 20 amusement/theme parks in Asia-Pacific, down 2.8 per cent
- 107.80 million visits to the top 20 museums worldwide, up 1.2 per cent
- 74.84 million visits to the top 20 museums in Europe, Middle East and Africa, up 0.9 per cent
- 60.51 million visits to the top 20 amusement/theme parks in Europe, Middle East and Africa, down 1.1 per cent
- 59.40 million visits to the top 20 museums in Asia-Pacific, up 3.1 per cent
- 58.49 million visits to the top 20 museums in North America, up 1.8 per cent
- 29.69 million visits to the top 20 waterparks worldwide, up 3.6 per cent

Wet 'n Wild Orlando closed at the end of 2016. Volcano Bay has opened in its place

Table 2: Top 20 Waterparks Worldwide

Rank, Park & Location	% Change	Attendance 2016	Attendance 2015
1 Chimelong Waterpark, Guangzhou, China	7.90%	2,538,000	2,352,000
2 Typhoon Lagoon at Disney World, Orlando, Florida	-0.70%	2,277,000	2,294,000
3 Blizzard Beach at Disney World, Orlando, Florida	-0.80%	2,091,000	2,107,000
4 Thermas Dos Laranjais, Olimpia, Brazil	11.20%	1,959,000	1,761,000
5 Bahamas Aquaventure Waterpark, Paradise Island, Bahamas	0.00%	1,868,000	1,868,000
6 Caribbean Bay, Gyeonggi-Do, South Korea	8.10%	1,550,000	1,434,000
7 Aquatica, Orlando, Florida	-4.00%	1,536,000	1,600,000
8 Ocean World, Gangwon-Do, South Korea	-2.40%	1,473,000	1,509,000
9 Aquaventure Water Park, Dubai, UAE	2.10%	1,430,000	1,400,000
10 Hot Park Rio Quente, Caldas Novas, Brazil	7.20%	1,381,000	1,288,000
11 Wet 'n Wild, Orlando, Florida	0.00%	1,310,000	1,310,000
12 Sunway Lagoon, Kuala Lumpur, Malaysia	17.90%	1,270,000	1,077,000
13 Therme Erding, Erding, Germany	0.80%	1,245,000	1,235,000
14 Wet 'n Wild Gold Coast, Gold Coast, Australia	3.50%	1,242,000	1,200,000
15 Shenyang Royal Ocean Park Water World, Fushun, China	1.70%	1,170,000	1,150,000
16 Tropical Islands, Krausnick, Germany	13.10%	1,133,000	1,002,000
17 Atlantis Water Adventure, Jakarta, Indonesia	14.40%	1,110,000	970,000
18 Beach Park, Aquiraz, Brazil	7.60%	1,044,000	970,000
19 Schlitterbahn, New Braunfels, Texas	0.00%	1,037,000	1,037,000
20 Wuhu Fantawild Waterpark, Wuhu, China	44.60%	1,024,000	708,000
TOP 20 ATTENDANCE GROWTH 2016		29,688,000	28,370,000
TOP 20 ATTENDANCE GROWTH 2015-16	3.6%	29,688,000	28,659,000

PHOTO: JAMES RAY/GETTY IMAGES FOR ANDORRASCOUT

► over second-placed Merlin Entertainments, with 140.4 million visitors in 2016 for Disney's parks, compared with 61.2 million for all Merlin's theme park operations worldwide. Universal Parks and Resorts places third, with 47.35 million visitors.

In terms of attendance, Chinese operator Fantawild, which opened two theme parks in 2015, had the largest increase, with a 37 per cent jump from 23.1 million in 2015 to 31.7 million in 2016.

Out of the top 10 group operators, SeaWorld Parks & Entertainment and Parques Reunidos were the only two groups to record a decline, with drops of 2.1 per cent and 6 per cent, respectively.

WATERPARKS

Waterparks worldwide enjoyed a fruitful 2016, with combined attendance among the top 20 increasing to nearly 30 million.

The waterparks sector performed particularly strongly in Asia last year, with 6.9 per cent overall growth in 2016.

Elsewhere, due to ongoing macro-economic challenges, a boost in domestic tourism meant fewer Brazilians travelled

PHOTO: PA IMAGES / ZHENG HUANGSONG



The National Museum of China, in Beijing, was the world's most visited museum in 2016

to Orlando, a market that Florida has traditionally counted on for attendance.

However, some of Brazil's attractions benefited from increased attendance. The economic climate combined with a facility expansion drove Olimpia's Thermas Dos Laranjais waterpark to fourth in the overall list. During 2016, visitor numbers at the waterpark increased 11.2 per cent, totalling 1.96 million people.

Similar increases were seen at Brazil's other listed waterparks, with 10th place Hot Park Rio Quente in Caldas Novas increasing

attendance by 7.2 per cent to 1.38 million, and 18th place Beach Park in Aquiraz increasing 7.6 per cent to 1.04 million.

MUSEUMS

Growth among the global top 20 museums increased following a 0.7 per cent decline in 2015's *Museum Index*, with a 1.2 per cent increase from 106.5 million visitors in 2015 to 107.8 million in 2016.

Since the first *Museum Index* was published in 2012, attendance globally has risen between 2 and 3 per cent, with Asia accounting for most of that growth.

"The US and European markets are mature, with approximately 1 per cent growth annually," said the report. "In Asia, we have seen growth of 9 per cent annually over the past few years."

Louvre loses top spot

The National Museum of China in Beijing is now the world's most-visited museum, displacing the Louvre in Paris, which suffered a 14.9 per cent attendance drop.

Tourist numbers to Paris and other areas of France have suffered in the wake of multiple terrorist attacks in the country, marked by the attendance decline at the Louvre, which dropped from 8.7 million in 2015 to 7.4 million in 2016, which means the historic institution is now the world's third-most visited museum.

Similarly in Paris, the Musée d'Orsay experienced a double-digit drop in attendance, falling 12.8 per cent to 3 million visitors, dropping outside of the top 20 from 17th position last year.

Recording an increase of 3.6 per cent year-on-year, 7.55 million people visited the National Museum of China. It took the number one spot, narrowly edging out the 7.5 million people who visited the National Air and Space Museum in Washington, DC. The full *TEA/AECOM Theme Index* is available at teaconnect.org/Resources.

Table 2: Top 20 Museums Worldwide

Rank, Park & Location	% Change	Attendance 2016	Attendance 2015
1 National Museum of China, Beijing, China	3.60%	7,550,000	7,290,000
2 National Air and Space Museum, Washington, DC	8.70%	7,500,000	6,900,000
3 Louvre, Paris, France	-14.90%	7,400,000	8,700,000
4 National Museum of Natural History, Washington, DC	2.90%	7,100,000	6,900,000
5 The Metropolitan Museum of Art, New York, New York	6.30%	6,700,000	6,300,000
6 British Museum, London, UK	-5.90%	6,420,000	6,821,000
7 Shanghai Science & Technology Museum, Shanghai, China	6.20%	6,316,000	5,948,000
8 National Gallery, London, UK	6.00%	6,263,000	5,908,000
9 Vatican Museums, Vatican, Vatican City	1.10%	6,067,000	6,002,000
10 Tate Modern, London, UK	23.90%	5,839,000	4,713,000
11 American Museum of Natural History, New York, New York	0.00%	5,000,000	5,000,000
12 National Palace Museum (Taiwan), Taipei, Taiwan	-11.80%	4,666,000	5,288,000
13 Natural History Museum, London, UK	-12.50%	4,624,000	5,284,000
14 National Gallery Of Art, Washington, DC	3.80%	4,261,000	4,104,000
15 State Hermitage, St Petersburg, Russia	12.30%	4,119,000	3,668,000
16 China Science Technology Museum, Beijing, China	14.00%	3,830,000	3,360,000
17 National Museum of American History, Washington, DC	-7.30%	3,800,000	4,100,000
18 Reina Sofia, Madrid, Spain	12.20%	3,647,000	3,250,000
19 National Museum of Korea, Seoul, South Korea	8.50%	3,396,000	3,130,000
20 Centre Pompidou, Paris, France	6.30%	3,300,000	3,105,000
TOP 25 ATTENDANCE GROWTH 2016		107,798,000	105,771,000
TOP 25 ATTENDANCE GROWTH 2015-16	1.2%	107,798,000	106,514,000

TEA/AECOM THEME INDEX 2016

RISING STAR

Effective marketing campaigns, smart reinvestment and facility upgrades drive growth in Asia-Pacific, but it's not all plain sailing. AECOM's

Chris Yoshi looks at the successes and the hurdles still to leap

For the Asia region, 2016 was a year of contrasts, with some parks marking record-breaking success and others experiencing sharp declines and losses. The biggest event was the successful opening of the Shanghai Disney Resort, which not only set the attendance record on a pro rata basis for a park in mainland China, but also set the highest admission prices.

On the other hand, major theme parks in Hong Kong (Ocean Park and Hong Kong Disneyland) suffered sharp declines and recorded losses for the year. In between, there are stories of success and challenges worth noting as the industry matures.

The outlook is for a boom in development of new "theme parks", waterparks and indoor entertainment centres. We estimate more than 100 projects are due to open in the next five years. Most of these are in China, although there is rising interest in Indonesia, Malaysia, Philippines and India.

The big get bigger

By and large, theme park group operators had a strong year with an overall increase of 4.3 per cent, well ahead of the average. The big are getting bigger. The Asia group operators had a strong year with substantial growth from OCT, Fantawild and Chimelong. These operators opened new locations and saw some growth in park attendance.

Some parks offered cheaper nighttime tickets and pay-as-you-go (PAYG) tickets, boosting attendance at older attractions. There was a new trend for nighttime tickets that include a show and a few rides. Also, a number of Asian theme park companies are entering management agreements with scenic areas and smaller attractions to extend their operations and business mix.

Songcheng Worldwide is a successful operator with a growing number of properties. However, its focus is on large performance shows with small supporting



Chris Yoshi, global director of economics at AECOM

areas. For consistency, we are no longer considering these shows in the same category as full-day, large-scale theme parks. Therefore, Songcheng is not included in the 2016 report and standalone performance shows have been excluded from group operator attendance estimates.

Mixed bag

The Asia theme park industry had mixed results, with a few parks having a standout year and some experiencing attendance declines. Universal Studios Japan had

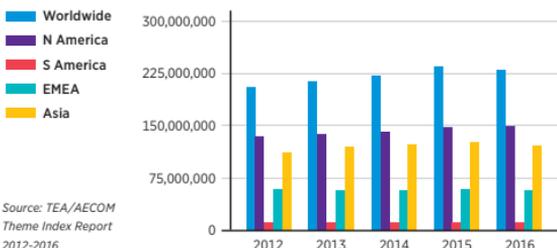
another strong year with over 14 million visitors as Harry Potter continues to provide an attendance boost. Attendance at theme parks in the rest of Japan was largely flat.

China was generally a growth market with new parks opening and attendance rising at existing parks. Shanghai Disney Resort had a strong first half-year of operation, exceeding expectations. It opened with six themed lands and a number of first-ever attractions. Overall, the length of stay is a very high 9.5 hours – visitors are arriving early and staying late to get the full experience. Disney's largest castle is the backdrop for a dramatic evening spectacular show, keeping people in the park. The main complaint is long lines (four-hour waits) for a few attractions. The most popular ride is Soaring Over the Horizon.

Fantawild's several new parks resulted in large increases in attendance. The company also added new attractions and shifted to a flexible pricing system, including general admission tickets at their older parks, helping drive attendance growth. OCT experienced growth in many parks due to new investments, more entertainment programming and cheaper nighttime tickets.

Both Hong Kong Disneyland and Ocean Park experienced sharp visitation declines,

Graph 1: Attendance at top theme parks/amusement by region





A Nickelodeon zone boosted attendance at Sunway Lagoon in Malaysia (left); visitors to Shanghai Disney Resort stay for the evening show

Recent political troubles have caused a sharp drop in Chinese arrivals, which will have a negative impact on South Korean parks

largely as a result of reduced tourism from China and regional competition. Increasing competition is a worrying issue – as more parks open in Mainland China, there's less need for tourists to Hong Kong to visit a theme park. Hong Kong Disneyland has approved a \$1.4bn (€1.2bn, £1.1bn) capital investment plan for 2018-2023, with new attractions and lands opening nearly every year. New hotels and a waterpark are under construction at Ocean Park.

In South Korea, Lotte World benefited from increased foreign tourists, but recent political troubles between South Korea and China have caused a sharp drop in Chinese arrivals, which will have a negative impact on South Korean parks in the coming year.

Riding the wave

Waterparks performed well in 2016, with 6.9 per cent overall growth. Chimelong retained its position as the world's most attended waterpark, with solid attendance growth thanks to more entertainment programming and a longer operating season. The summer nighttime programme has been successful, with China's wealthy, urban millennials enjoying this offering.

Waterparks in other Chinese cities generally experienced growth or flat

performance despite many new smaller waterparks and waterplay areas opening. It's estimated that more than 60 waterparks and waterplay areas are currently under construction in China.

In South Korea, Caribbean Bay had a standout year with strong growth while other waterparks were flat. In Southeast Asia, Sunway Lagoon in Kuala Lumpur introduced a Nickelodeon waterplay area, resulting in strong results. In Thailand, there are reports of a flood of waterpark and waterplay areas opening up, creating intense pricing competition in the market.

The culture side

Museums in Asia had a good year with 3.1 per cent attendance growth. The National Museum of China in Beijing became the world's highest attendance museum for the first time. The trend in Asia is for more "free" entry museums, which is great for consumers, but challenging for operations.

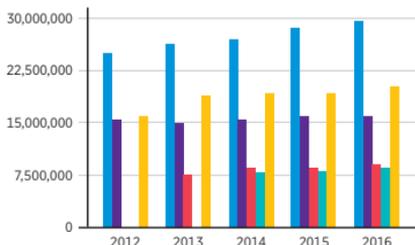
Science museums continue to be a popular format, with travelling shows and temporary exhibits being very popular. However, there are challenges. There is a lack of essential components like collections, exhibitions, trained curatorial, conservation and other museum professionals, education programmes, business planning and operating funds.

Road ahead

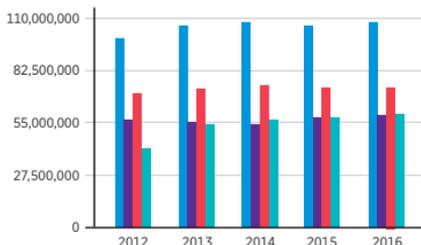
In summary, Asia's theme park industry is booming. Well planned and well executed projects are achieving critical and financial success. However, increasing competition is raising the bar in terms of quality and the need for continual reinvestment.

We're seeing more innovation in terms of product and format in Asia than anywhere else. This innovation has a cost and not all parks will be successful. Guest experience is still the most important factor in the success of theme parks and waterparks. ●

Graph 2: Attendance at top waterparks by region



Graph 3: Attendance at top museums by region



RUSSIAN EVOLUTION

Alice Davis and Tom Anstey travelled to Moscow, Russia, to check out the newest VR multiplayer attraction on the block, a start-up called Anvio. CEO Eldar Iskhakov talked them through the huge opportunities - and challenges - offered up by this next-gen entertainment model

Alice Davis and Tom Anstey, Attractions Management

You know when you meet people who are making a career out of doing what they love? That's the feeling you get when you meet Eldar Iskhakov and his team at Anvio, where a passion for gaming and some world-class programming skills are helping the company deliver their own vision of the latest form of out-of-home entertainment.

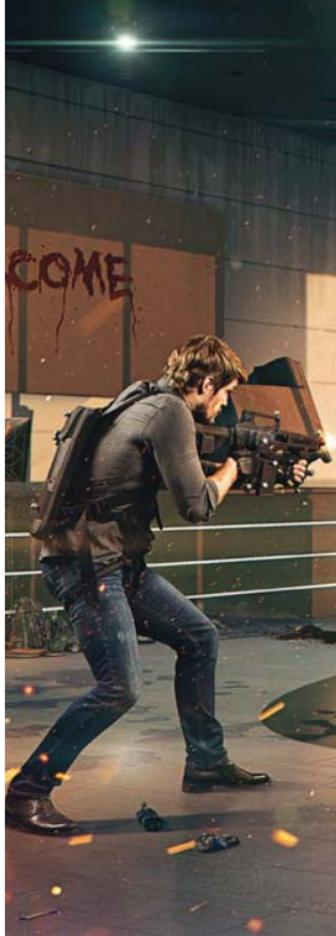
After less than a year in development, Iskhakov has opened the company's first VR multi-player free-roam experience in a former warehouse in the Presnensky district of Moscow. The experience - ideally set up for four people, in this case - takes place in an 200sqm (2,150sq ft) room and lasts about 30 minutes, with a 10-15 minute pre-show and instruction session, and followed by a 5-10 minute debrief.

The game we played was a multi-level zombie shooter, *City Z*, set in a devastated building in post-apocalyptic Moscow.

Once you complete a level, you enter a new scenario on the next storey of the building, repeating the process until you reach the roof. Each level is different - darker levels, brighter levels, levels where you walk around, levels where you

shoot. Priced at 6,000 rubles per peak-time session - about £20 (\$25, €23) each with four players - the experience is expensive by Russian standards, but doing well so far, nonetheless.

"We can host more than four people, but in the space we have, four people is



Eldar Iskhakov, CEO at Anvio, says his company's model is versatile and scalable



The first Anvio VR attraction is located in Moscow and opened in May 2017

optimum. We don't want people running into each other. Our priority is always that this is fun for the customer. As we're charging relatively high ticket prices, we don't want to impede the experience," Iskhakov says.

Immersive

Anvio's offer has been fine-tuned to provide a stimulating, exciting, immersive challenge for its audience and since the location opened in May, it's going well and feedback has been positive. Iskhakov now wants to bring the product to other countries and is looking for partners who can help make that happen. At the time of writing, the company was close to securing a site in London.

The company has worked hard to try to set Anvio apart from the competition. The 15-strong team – most of them in their 20s and 30s – has developed



Anvio is working on an adventure game set in an abandoned temple



Each player is provided with a set of VR gear, including an Oculus Rift headset and tracking equipment



WITH HORROR, SOME PEOPLE WILL JUST GET REALLY
FREAKED OUT. WE'VE GOT TO TRY TO CATER TO EVERYONE



► an advanced free-roam platform that supports precise full-body tracking including hands, legs, head, torso and weapon – thanks to markers worn on the player's body, which are tracked by the 30-plus cameras in the game zone. Every movement is transferred into the game so players can better inhabit their characters, able to see their arms and legs and their teammates movements in real-time.

A game master controls the experience and can adjust in-game elements according to how the players are responding. The media content has been made to be as immersive as possible, with long "views" off into the distance making the player really feel as though they're in an expansive world. The company has also experimented with having live actors play some of the roles.

Library of games

One learning curve has been gauging what level of difficulty or stimulation works best without either boring people or upsetting them. "With horror, some people will just

get really freaked out. We've got to try to cater for everyone," he says.

A major selling point of the Anvio model is its versatility. Iskhakov says the hardest part is finding a suitable open (obstruction-free) space, but once you do, "you just need to map the canvas and you can put it up in a day". With a team of game developers constantly working on new content, Anvio will be able to offer a library of games options which can easily be changed on-site according to the customers' needs.

"We're working on an India Jones-style, temple-type, Tomb Raider-type game," says the entrepreneur. "There are caves to explore, a lost city, a lake, treasure to find and puzzles to complete. There are also environmental elements like planks to walk over, traps and labyrinths. This game will be strictly no guns, so we'll have a grappling hook, a flashlight, items like that. We're developing as much quality content as possible."

There are other companies taking advantage of the growing interest in VR, who are harnessing the technology in a

similar way (see AM/1/17). The Void, a more established Utah-based firm, has recently worked with Merlin Entertainments on Ghostbusters: Dimension at Madame Tussauds in New York City. The company also just announced it is working on an immersive Star Wars experience with Disney – it indicates that the potential for this area of the industry is developing.

In terms of technology, Anvio's platform is graphically and immersively playing at the top of the league. Anvio is constantly on the lookout for ways to improve, eyeing wireless systems and next-gen 4K headsets coming down the line – though there's no current hardware solution to run that effectively. However, the technology is only getting better, until someday virtual reality will look as crisp and clear as the real thing.

Iskhakov says: "We use the best engine and the best equipment publicly available and put a lot of effort into making it work seamlessly and look as good as possible. Moore's law says that computing power doubles every two years. Nowadays, that's more like every 13 months." ●

TOM ANSTEY

news editor,
Attractions Management

Having tried several VR experiences – both as static and moving attractions – nothing has felt as immersive and complete as the offering from Anvio. In addition to the full-body tracking, the multi-level game means you feel as though you're going on a journey, despite the fact you're really pacing an empty room.

From balancing on pipes to mowing down hordes of the undead, *City Z* offers a great mix so it doesn't feel as though you're repeating the same process over and over.

As an avid gamer, this experience matches up to games such as *Left 4 Dead* and goes on to deliver much more. If each experience is as crisp as this, and if VR keeps developing at the rate it has in recent years, it won't be long before this kind of product makes a worldwide impact.

**ALICE DAVIS** managing editor, Attractions Management

I'm a non-gamer and someone who always achieves the lowest score in this kind of exercise, but once I was immersed in this new zombie battlefield reality, that didn't matter at all. All that matters is shooting as many of the attacking zombies – each one created with its own unique look – as possible. *City Z* lasts a long time in comparison to other VR experiences, around 30 minutes inside your headset, so you completely lose yourself in the story and focus on achieving your aims, such as finding the generator to



proceed to the next level.

I enjoyed the element of teamwork. The game is also punctuated by quieter moments where you can admire the stunning views over post-civilization Moscow or take in the clever detail of the closer surrounds inside the derelict zombie-filled tower block. It's an intense experience where my heart rate was definitely elevated and I was literally scared of walking over a narrow bridge some 15-stories above ground level. I certainly screamed aloud on several occasions.



“MOORE'S LAW SAYS THAT COMPUTING POWER DOUBLES EVERY TWO YEARS. NOWADAYS, THAT'S MORE LIKE EVERY 13 MONTHS”

The *City Z* VR experience takes place inside a tower block in post-apocalyptic Moscow, Russia

BUNKERING DOWN

Architecture firm BIG expands a Danish WWII bunker to create a museum camouflaged among the dunes

Kim Megson, journalist, Attractions Management



PHOTO: RASMUS HJORTSKOV

Tirpitz Museum is a former bunker, one of hundreds of coastal defences and fortifications built by the German army during World War II

Danish architects Bjarke Ingels Group's (BIG) transformation of a World War II German bunker into a cultural complex camouflaged among the protected dunes of Blåvand, western Denmark, opened to the public on 30 June.

Named Tirpitz Museum, the 82,000sqm (882,600sq ft) attraction relates the history of the rugged coastal area, including stories of lost ships, smugglers and war. The architects describe the building as "a sanctuary in the sand that acts as a gentle counterbalance to the dramatic war history of the site".

On approach, visitors first see the bunker, one of hundreds of coastal defences and fortifications built by the German army during the war to protect against invasion.

“The architecture of Tirpitz is the antithesis to the WWII bunker ... marking the entrance to a new cultural meeting place”

Bjarke Ingels, founder, BIG



Museum complex

Beyond the bunker, the new museum emerges, designed to contrast with the heavy volume of the wartime structure. The complex is divided into four main underground galleries. These can be viewed and accessed from a central courtyard on ground level, with 6-metre-tall (20-foot)

glass panels allowing natural light to flood into the interior spaces. A tunnel links the galleries with the back of the bunker.

"The architecture of Tirpitz is the antithesis to the WWII bunker," says BIG founder Bjarke Ingels. "The heavy hermetic object is countered by the inviting lightness and openness of the new museum."



The museum building consists of four main materials and elements – concrete, steel, glass and wood – which are found in the existing structures and natural landscape of the area



“We wanted to be extremely honest with the materials. What’s important in my mind is that it’s a very simple idea”

Finn Nokjaer, partner, BIG





The Army of Concrete exhibition is about the Atlantic Wall and the history of the area

"The galleries are integrated into the dunes like an open oasis in the sand," says Ingels. "The bunker remains the only landmark of a not-so-distant dark heritage that, upon close inspection, marks the entrance to a new cultural meeting place."

Partner at BIG, Finn Nokjaer, explains that it was important to be sensitive to this rural region, which boasts some of Denmark's most beautiful scenery.

"Everyone in Denmark loves the west coast," Nokjaer says. "It's a protected area, so to do something wild or to shout would be impossible and it's not something we wanted to do. There were a lot of demands, a lot of things we couldn't do. We also wanted to be extremely honest with the materials. What's important in my mind is that it's a very simple idea."

Four exhibitions

The four exhibition rooms, designed by Dutch agency Tinker Imagineers, showcase permanent and temporary themed experiences dedicated to Blåvand's natural surroundings and history and its "treasure trove of hidden stories".

In the central room, visitors learn about the seafaring nation of Denmark. 'Army of

"A visit to the museum is not a visit to an exhibition gallery, but a scenic journey through time and space"

Erik Bär, founding partner, Tinker



Concrete" tells human stories in the shadow of Hitler's enormous European defence project, the Atlantic Wall. Visitors learn the story of Danes and Germans who worked and lived here, such as the story of Anna, who had a child with a German soldier.

Collections are varied. The West Coast Stories exhibition describes thousands of years of west coast history and is turned into a nighttime 4D theatre every hour, where visitors sit inside a lifeboat that takes them on a thrilling journey. While Gold of the West Coast is Europe's most comprehensive exhibition of amber.

"Tirpitz was a unique opportunity to combine nature and culture in a spectacular fashion," says founding partner at Tinker Imagineers Erik Bär. "A visit to the museum

is not a visit to an exhibition gallery, but a scenic journey through time and space. The idea is that the whole place itself comes to life following the rhythms of nature."

The museum was financed by the municipality of Varde, alongside the AP Møller and Chastine McKinney Møller Foundation, the Nordea Foundation and the Augustinus Foundation. It is expected to attract around 100,000 visitors annually.

Tirpitz Museum is the latest in a series of major cultural projects for BIG. In 2013, the studio completed the Danish National Maritime Museum. The firm is also working on the LEGO House in Billund, Denmark; the MECA Cultural Center in Bordeaux, France; and the Smithsonian Institution Masterplan in Washington, DC. ●



(Clockwise from left) A lifeboat-themed 4D theatre in the West Coast Stories zone; interactives teach visitors about amber, in Gold of the West Coast; people gather in the central area



DOWNTON TO BUSINESS

Downton Abbey: The Exhibition is an immersive walkthrough experience that shows what life was like in post-Edwardian Britain through the prism of one of the most popular costume dramas of all time

Alice Davis, managing editor, Attractions Management

A newly created exhibition that brings the world of hit British series *Downton Abbey* to life has kicked off at the Marina Bay Sands in Singapore, with a five-year world tour to follow.

Downton Abbey: The Exhibition, a project by NBCUniversal International Studios and Imagine Exhibitions, immerses guests in the world of the post-Edwardian period drama that captured the imaginations of millions of viewers across the world.

Taking place between 1912 and 1926, the programme follows the lives of an aristocratic family and their servants against the backdrop of the sinking of the *Titanic*, World War I, the Spanish influenza tragedy and the Irish War of Independence.

Attractions industry consultancy Grant Leisure assisted in the planning and implementation of the touring exhibition, including preliminary economic, feasibility



Attractions consultant Andy Grant worked on the feasibility studies

and operational studies and managing the tender process with the host locations.

In the 15,000sq ft (1,394sqm) tour, visitors cover nine zones depicting the stately home of *Downton Abbey*, engaging with the show's well-loved cast, which includes actors Hugh Bonneville and Dame Maggie Smith. Visitors watch exclusive footage filmed with key cast members, including Lord and Lady Grantham (played by Bonneville and Elizabeth McGovern), and see costumes and props that defined the show. They also learn about Edwardian cooking and the way the house operated.

The multi-million-dollar exhibition was designed in the UK by Mather & Co and built by Kingsmen in Singapore, so it made sense to launch the tour in the Asian city.

"When you take any kind of intellectual property and try to develop it into an attraction, it's like taking a large novel and adapting it for a screenplay," says Andy



PHOTO: FASHIONTECH



PHOTO: NICK BRIGGS

Visitors learn about British society, culture and fashions of the 1920s through authentic sets like this dining room; cast members, like Dame Maggie Smith (right), feature in the exhibition

Grant, founder of Grant Leisure. "You've got to know exactly what you want to show and how it relates to the six-year history of one of the most acclaimed dramas in the world – a drama that the world fell in love with."

The NBCUniversal-owned Carnival Films production, which was written and created by Julian Fellowes, has been broadcast in over 250 territories and is the most nominated non-US show in the history of the Emmys with 69 nominations.

Downton Abbey: The Exhibition follows the success of *Dressing Down*, a costume exhibition which toured the US last year.

As a television series that has attracted well over 120 million viewers, Grant says



TAKING AN IP AND DEVELOPING IT INTO AN ATTRACTION, IS LIKE TAKING A NOVEL AND ADAPTING IT FOR A SCREENPLAY ▶



Sets from *Downton Abbey* have been faithfully recreated, including the kitchen; also inspired by the hit British TV show, fashion exhibition *Dressing Downton* (below) is touring the US



EVERY SINGLE THING HAD TO BE
VETTED FOR ITS AUTHENTICITY,
JUST AS THE SHOW WAS

market research helped determine which audiences to target and what made the show appeal to them. After Singapore, *Downton Abbey: The Exhibition* will head to locations in the US and UK, a number of Asian countries, Commonwealth countries and other worldwide destinations.

"Our research also showed us that one of the most important things to the audience is authenticity," Grant says. "*Downton Abbey* is the most authentic, Edwardian experience ever portrayed in a drama."

Downton Abbey has been recognised for achieving the highest levels of authenticity

and detail, down to the mannerisms and behaviours of the actors. Set during World War I and the post-war years, like the TV show, a team of advisors was involved in ensuring the exhibition experience is as historically accurate as possible.

Grant says: "The way you dressed, the way you spoke, what you served on the menu, how the flowers were arranged, the people you invited – it was all a direct reflection of your status in those days."

Expert in the field Alastair Bruce of Cricnaich, the royal, religious and events commentator for Sky News, was an

historical advisor for the ITV series and the exhibition. Many others from Carnival Films were also involved, including Fellowes, executive producers Liz Trubridge and Gareth Neame, set designer Donal Woods and costume designer Anna Robbins.

"We had to take this off the screen and create a successful brand extension," Grant says. "Every single thing in this exhibition had to be vetted for its authenticity, just as the show was. We made sure everyone at Carnival Films was comfortable because it's a direct reflection upon their work." ●



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TURNING YOUR WORLD AROUND

WHAT GOES ON TOUR

10 television and film-inspired exhibitions making their mark on cities around the world

1

GAME OF THRONES: THE TOURING EXHIBITION

launch: Q3, 2017

presented by: GES / HBO Global Licensing

visiting: worldwide locations to be announced



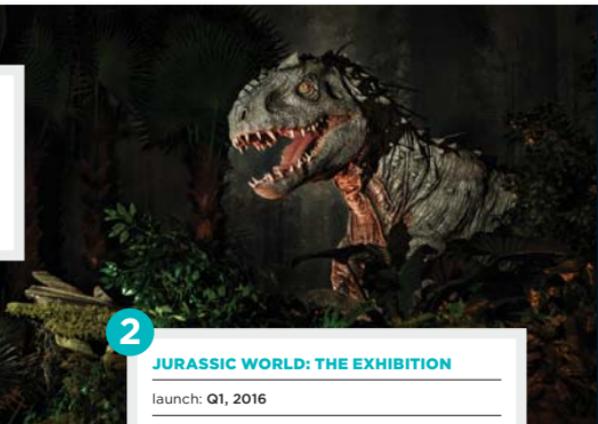
2

JURASSIC WORLD: THE EXHIBITION

launch: Q1, 2016

presented by: Imagine Exhibitions / NBCUniversal

visiting: Melbourne, Philadelphia, Chicago



3

HARRY POTTER: THE EXHIBITION

launch: Q2, 2009

presented by: GES / Warner Bros Consumer Products

visiting: Boston, Toronto, Seattle, New York, Sydney, Singapore, Tokyo, Edmonton, Cologne, Paris, Shanghai



4

MARVEL UNIVERSE LIVE! AGE OF HEROES

launch: Q3, 2017

presented by: Feld Entertainment / Marvel Entertainment

visiting: Los Angeles, Atlanta, Dallas, Miami, New York; international locations to be announced





5

HUNGER GAMES: THE EXHIBITION

launch: Q2, 2015

presented by: Imagine
Exhibitions / Lionsgate

visiting: New York, San
Francisco, Louisville;
possibly next to Australia



6

DISCOVER PANDORA

launch: Q4, 2016

presented by: GES / 20th Century Fox

visiting: Taipei, Bangkok; more
locations to be announced

7

CSI: THE EXPERIENCE

launch: Q2, 2007

presented by: CBS / EMS
Exhibits / Fort Worth Museum

visiting: Davenport, Chicago,
New York; now permanently
housed in Las Vegas



8

THE SCIENCE BEHIND PIXAR

launch: Q2, 2015

presented by: Boston Museum of Science / Pixar

visiting: Boston, Philadelphia, Los Angeles,
St Paul, Edmonton, Dearborn

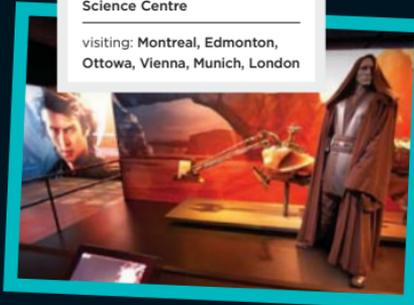
9

STAR WARS IDENTITIES: THE EXHIBITION

launch: Q2, 2012

presented by: Lucasfilm /
X3 Productions / Montreal
Science Centre

visiting: Montreal, Edmonton,
Ottawa, Vienna, Munich, London



10

DOWNTON ABBEY: THE EXHIBITION

launch: Q2, 2017

presented by: Imagine Exhibitions / UniversalNBC

visiting: Singapore; more locations to be announced

EDDIE NEWQUIST

Turning global IPs into edutainment experiences, touring exhibitions are big business. Eddie Newquist, executive vice president of exhibitions and events creator GES, talks about the growing sector

Alice Davis, managing editor, Attractions Management

How would you describe the touring exhibitions sector at the moment?

The sector is in a time of growth and that's due to a number of reasons, from the improving economy to people's desires for well-rounded, entertaining and educational experiences. There's high demand from consumers, venue owners and promoters to host branded experiences that will drive attendance, revenue and profits.



Clearly there is an opportunity for success with the right mix of brand appeal and people's desire to step into the worlds of their favourite characters from film, television, literature and video games

What GES exhibitions have been most successful so far?

GES has enjoyed success with Harry Potter: The Exhibition, National Geographic Presents: Earth Explorers and a wide variety of other branded experiences. We focus on immersing guests into unique, entertaining experiences and that has helped us achieve great attendance levels. GES has recently announced

its partnership with HBO to bring the craftsmanship and artistry of *Game of Thrones* to fans. We're committed to giving fans worldwide the opportunity to experience some of their favorite elements from the show firsthand and experience the world of the hit series like never before.

What trends are you seeing in the sector?

We see growth in branded attractions, interpretive centres, touring entertainment properties and corporate visitor centres.

How do you choose an exhibition?

Finding the right brand and partner is the most challenging part of the equation. Not every brand is easy to put on display and not every IP holder has the strategic thinking needed to ensure ongoing success.

How do you work with the partner in planning the exhibition?

We always like to start by setting mutual goals, not only for the visitor experience, but also from a business point of view. It's great to work with partners that respect our process of design, production and fabrication, who will work hand-in-hand with us to maximise the visitor experience and ultimately ensure the success of the touring exhibition long-term.

What kind of investment is involved?

Touring exhibitions require not only a financial commitment but also a large investment in human resources from a wide variety of skill sets. Shipping and logistics is just as critical as storytelling and artistry.



The Earth Explorers exhibition showcases the work of National Geographic's global explorers

Everybody involved in the exhibition has to show a commitment to the quality of the end product and the business overall.

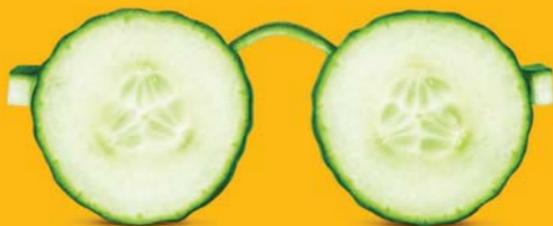
How do you decide where to tour?

There is a global demand for both permanent and touring exhibitions and attractions and there's a wealth of IPs that consumers want to be immersed in. Venues such as museums, science centres, expo halls, malls and theme parks all have a successful track record of hosting both small and large-scale experiences.

What makes an exhibition stand out?

Standout touring exhibitions focus not only the quality of the experience, but also on business models that will be successful for everyone involved. Ultimately, guest satisfaction drives success. Many of our personnel come from the design and fabrication sectors, with a high level of experience in education, theatre, interactives, theme parks and storytelling, and that helps us exceed expectations. ●

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Inspiration Island has five waterplay areas – Hang 10 Harbor, Rainbow Reef, Shipwreck Island, Harvey's Hideaway Bay and Calypso Cove

WATER WONDERLAND

Tom Anstey spoke to the team behind Morgan's Inspiration Island, a new waterpark designed for children with disabilities and special needs

Morgan's Wonderland – the inclusive theme park that's catered to disabled guests since 2010 – has launched a new accessible waterpark. The \$17m (£15.2m, £13.4m) project opened on 17 June.

Morgan's Inspiration Island is completely wheelchair accessible, offering a selection of waterpark activities, including raintrees, waterfalls, pools, geysers, water cannon and tipping buckets. A five-minute river boat ride takes visitors through a jungle setting, with bird and animal sounds playing.

With five themed zones, a seven-storey lighthouse at the centre and spacious private areas available for guests, the waterpark also offers the Rusty Anchor Galley Grub and Little Italy Bistro food outlets, the Surf Shack shop and a panoramic viewing deck.

GORDON HARTMAN

Founder

Morgan's Inspiration Island

Tell us about Inspiration Island

About seven years ago, we opened Morgan's Wonderland, which is the world's first ultra-accessible theme park. It's been incredibly successful, with people visiting from more than 66 countries and all 50 US states. People from all over the world come here to experience "ultimate inclusion".

As Morgan's grew, people started asking about a waterpark. Three-and-a-half years ago, the discussion started. Then, six months later, those discussions became more serious. We brought a team together, similar to the team that developed the original park. We spoke to people in the community – people with special needs, people without, care givers, teachers, doctors, therapists – and pooled our ideas.

The reason we did that was in order to maximise everything in the development of Morgan's Inspiration Island to make



Gordon Hartman is founder of the Gordon Hartman Family Foundation and creator of ultra-inclusive parks

sure it's ultra-accessible. Whatever your special need may be – no matter how acute – we want to accommodate that, so that you can be a part of this park.

What's different about the waterpark?

Many aspects are specially designed. The water, for example, is warmed slightly to allow those with muscular issues to enjoy the park. Every element of the waterpark is wheelchair accessible. We built access areas and camouflaged them with faux rocks. We have a boat ride that lasts about eight minutes. Normally, there's a ramp that would take passengers up to the boat, but we did this without ramps. The seating area actually raises up in the boat itself. Those are examples of the small things we do.

What makes Morgan's Wonderland and the new waterpark so special?

It's the whole culture of the park. People come because, out of four people who enter each day, three of them do not have special needs. Our attractions are not just for the special needs individual, but for



There's a variety of splashy elements, such as raintrees, geysers and tipping buckets

Morgan's Inspiration Island is ultra-accessible. Whatever your special need may be, we want to accommodate that, so that you can be a part of this park



Hartman's daughter, Morgan, 23, has been the catalyst for all his projects

everyone involved. We want families to feel relaxed and be able to play.

Many parks are built for 85 or 90 per cent of the population, but our parks cater for 100 per cent of the population. Nobody comes to one of our parks and says, "I wish I could do that." You can do everything. It's been thought out and designed that way.

What other adaptations have you made?

We have two areas with tipping water buckets. Some of our guests don't want

to be dumped with water, some do. So, we created an alarm that warns people – a pleasing sound so as not to bother guests on the autistic spectrum – to let them know that water is about to drop. For those with hearing difficulties, we have a whirling sign that alerts them. When the guests see or hear the alarm, they can back away from the water if they don't want to be splashed.

Many waterpark elements have little wheels on them, which control the amount of water coming out of the waterplay

features. If someone is fragile because they have physical issues, the intensity level can be lowered so they can enjoy it.

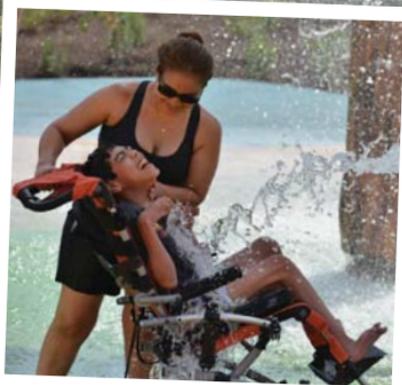
What technology have you used?

We use RFID technology. If a visitor gets separated from their group or wanders



Every part of the new attraction is wheelchair friendly

We worked with a grassroots approach towards understanding what was necessary in the waterpark, working directly with the people who were going to use it



Guests can alter the intensity of the water flows to suit their preferences

► off, their wristband relays their location data back to their companions. The RFID wristbands are also waterproof.

One thing that was very important in our planning was our knowledge that many Morgan's Wonderland guests come independently. They arrive in their own battery-operated wheelchairs. But what if someone comes to the waterpark and they want to stay independent? They wouldn't be able to, because battery-operated wheelchairs can't get wet. So, we worked with the University of Pittsburgh, Pennsylvania, and other groups to create a wheelchair that runs on compressed air. It takes no batteries. It's much lighter and easier to move around in, so guests can get around, get wet and stay independent.

We also designed chairs with special fabrics that can get wet. If someone has a muscular disability, they can transfer into

one of our waterproof chairs via the hoist we have in a special changing room.

Who else did you work with on the project?

What's pretty neat about the waterpark is that we talked about bringing people together. We didn't go out to a bunch of consultants; we worked with a grassroots approach towards understanding what was necessary in the waterpark, working directly with the people who were going to use it. We did a lot of testing with special needs individuals, testing wheelchairs, water strength and much more.

What has the initial reaction been?

A woman who was just at the park sent me some photos of her daughter using one of our special wheelchairs. She had never been able to do that before, so it was a

great feeling. Another woman sent me an email about the parents of a special needs individual who had never been involved in a water activity with their child before. They did not know how to swim, so they could not put their child in a pool. This was the first time for this young adult where they had been in the water with their family. Those are the kind of stories we hear. And for those who don't have special needs, it's a learning experience for them.

There has been global interest in the new attraction and we're proud of that. We live in a world of exclusion rather than inclusion, but we hope talking more about inclusion will help change that conversation.



River Boat Adventure meanders through a jungle-themed setting



Morgan Hartman, with her father Gordon, inspired the entire development

JEFF KELSO

Senior project manager

WhiteWater West



Tell us about Inspiration Island. What was the starting point?

One only needs to hear Gordon Hartman recount the time he observed his daughter, Morgan, wanting to play with other vacationing kids at a hotel swimming pool, but the kids not wanting to interact with her.

Then and there, Gordon resolved to create opportunities and places where those with and without disabilities can come together not only for fun, but also for a better understanding of one another.

I heard this story at our first client ride manufacturer project meeting. As a former Special Olympics adaptive aquatics coach, I could relate to Gordon's observations.

Following the meeting, I walked the existing Morgan's Wonderland park to learn about guest needs from a customer point of view. I reviewed the rides, talked to the ride operators and maintenance team, talked to some parents in the park and even saw Morgan playing with some guests that day.

Knowing customer needs made it easy to go back to the WhiteWater project engineering team and communicate the clear direction we needed to go in.

What challenges did you face?

The project team had to ensure that any guest with any special need could load and unload safely and efficiently on the rides. The term coined and widely used by the Morgan's team was "ultra-accessible".

We also made sure that the final designs would not make a guest feel different or special or unique. We wanted every guest, with or without disabilities, to

enjoy the ride experience in the same way. Inspiration Island had to be all-inclusive.

Additional ride vehicle testing parameters were specially developed and used to commission the rides.

These parameters ensure all unusual occurrences that might happen in a park could be planned for in the park's standard operating procedures

What has the initial reaction been?

I understand from the Morgan's team that social media is off the charts, globally. They're already talking about taking this ultra-accessible model to the next level.

Are there any next steps?

Yes. WhiteWater follows a very defined new product development stage-gate process. You might say that this is a limited release product design, but the trend going forward could see WhiteWater adapting our other water rides products to be ultra-accessible as well.

MICHAEL AYOTTE

Senior project manager

WhiteWater West



"My involvement started upon contract execution, so I oversaw the design development, engineering, manufacturing, shipping, installation and commissioning phases. The most challenging aspect was the design development, as our client was very detailed in their preferences in terms of visual impact, colours, and so on. We did adapt some of our equipment. Most of the AquaSpray features were customised, so the engineering endeavour was significant. Ensuring that each feature was designed to provide the right "spray" effects was key. Moving forward, I'll be staying in touch with the client to support them with any warranty work."



Wheels allow guests to control water flow



▶ JOSH MARTIN

President and creative director
Aquatic Design and Engineering

What was your role in the project?

We provide professional consultancy services, specifically tailored to water and water interaction. For Morgan's Inspiration Island, we were contracted to deliver the mechanical filtration structural system designs for the project. Our job was to provide the systems to service the play equipment supplied by WhiteWater West.

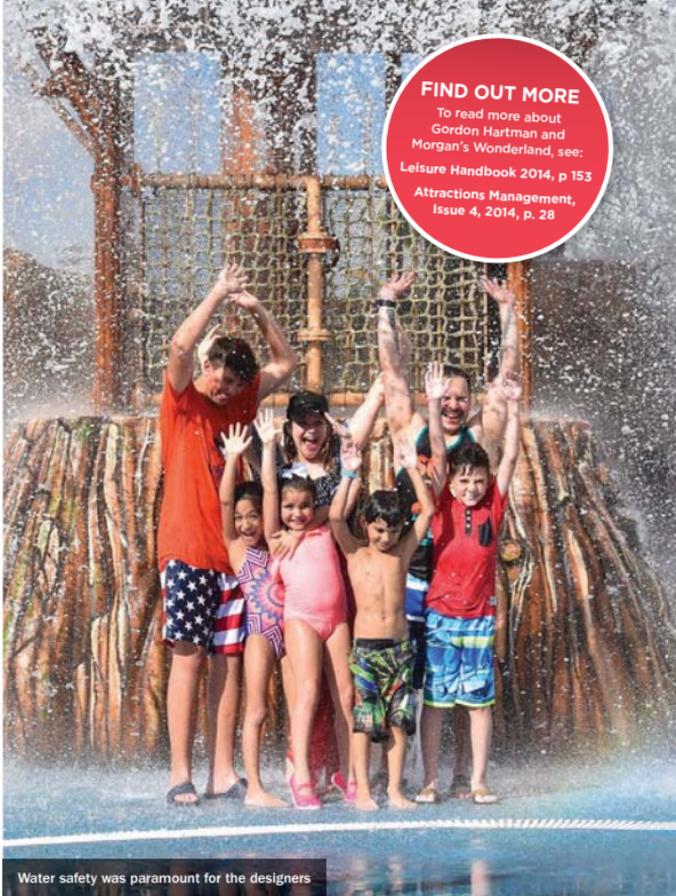
Morgan's trusted us to provide them with what would be an industry-leading first for waterplay. We had to make sure the water quality was beyond reproach. The park invested heavily in state-of-the-art chemical filtration equipment and heaters so they could guarantee they'd have successful play and no concerns over water quality.

What were the main challenges you were faced with when creating this?

I think the biggest challenge for us was helping to educate the team and the client about what was out there in the industry technology-wise and how to take the best technology approaches from a few different applications, including UV sanitation to kill organisms and up to 1-micron filtration.

Did your approach to the project change because of the target customers nor was it the way it would have worked normally?

One thing that was especially critical was making sure that these systems were built in a way that if something did go down for service, we could still operate as normal. Understanding that a guest's visit may be a once-in-a-lifetime chance, we took the idea of guest satisfaction very seriously. We did everything in our power to have backup or redundant systems that can easily be swapped out to be sure they are safe.



FIND OUT MORE

To read more about Gordon Hartman and Morgan's Wonderland, see:
Leisure Handbook 2014, p 153
Attractions Management, Issue 4, 2014, p. 28

Understanding that a guest's visit may be a once-in-a-lifetime chance, we took the idea of guest satisfaction very seriously

What kinds of technology did you use?

The brains of our system is a chemical controller that enables remote monitoring of the water, allowing us to see temperature, chlorine and PH levels and automatically adjust all of those. One of our goals was to run the minimum levels of chlorine because we knew how sensitive the kids could be to the smell or to chlorine on their skin. When it comes to the heated system, it was designing a system that would bring heated water to a very exact level. I've never seen a project so specific on what we needed to achieve.

Are you pleased with the results?

We do a lot of projects around the world and this is one of those that will always hold a special place in our hearts because of the mission of Morgan's. We've also worked with Give Kids The World in Florida, when we did their splash pads about a decade ago. For us, letting kids be kids, regardless of what's happening in their lives, is something that always makes us happy. To see the smiles on their faces and to know there's a place like this that exists, is something that will always be a feather in our cap as a design firm. ●

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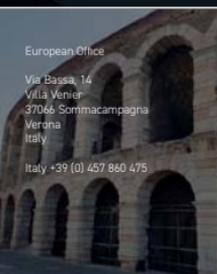
Design Management,
Scheduling & Budget Management,
Guest Experience Analysis,
Research & Brainstorming,
Masterplanning, Interpretive Design,
Story Boarding & Storytelling,
Concept Development & Design,
3D Visualisation, Schematic Design,
Graphic Design, IP Integration

Build

3-Axis CNC Flatbed Router,
5-Axis CNC Milling, Joinery,
Metal Work, Sculpting Studio,
Dual-Component Spray
Systems, GRP/FRP Spraying,
Mould Making, Rota Casting,
Spray Bake & Spray Booths,
Scenic Painting, Digital Printing

Fit-out

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Estimation & Budget Management,
Health & Safety Management,
Transport & Logistics,
Feasibility Analysis, Venue,
Attraction & Exhibit Maintenance





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Trade Show: 26-28 September

EURO ATTRactions SHOW 2017

Preparations for the European attractions event of the year are well under way – so what can attendees expect?



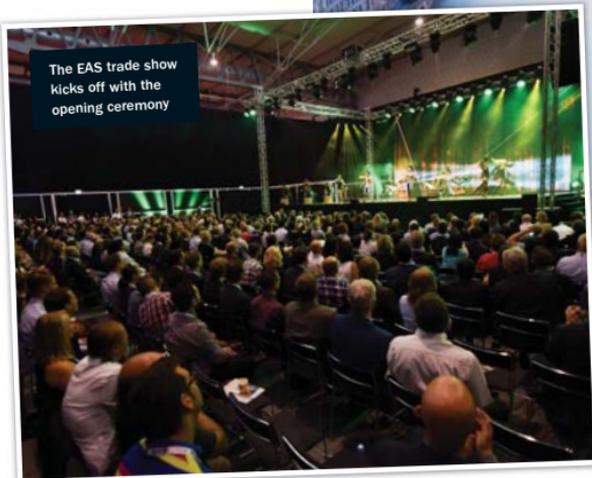
This year's Euro Attractions Show (EAS) boasts the most comprehensive education programme in the show's history, with about 100 industry experts invited to share their knowledge with attendees.

EAS, which takes place from 24 to 28 September at the Berlin Messe Exhibition Centre in Berlin, Germany, offers more than 20 seminars during its four-day programme, covering best practice, safety, revenues, IPs, accommodation, F&B and much more.

As well as longrunning sector-specific events like the Waterpark Forum and the FEC/Indoor Playground Day, EAS is launching five new seminar tracks, designed to provide an in-depth look into each topic.

- **Digital Future Track** – the new digital landscape
 - **Profit and Revenue Track** – increase and expand revenue
 - **Safety and Security Track** – focus on new concerns and solutions
 - **Trends and New Ideas Track** – analyse the latest industry trends
 - **Immersive Experiences Track** – create unique experiences
- Established events like the IAAPA Safety Institute and IAAPA Institute for Attractions Management will also run.

The show floor offers buyers more than 100 different products and services, including dry rides, water rides, design and theming, theatrical equipment, shows and productions, ticketing technology, F&B services, resort and hotel development, computer software, coin-operated machines, costume design and more.



Jakob Wahl
Vice president Europe
IAAPA EMEA

What's your new role at IAAPA EMEA?

I've rejoined IAAPA EMEA in my new role of vice president, Europe. My main tasks are to increase membership and trade show services. We have grown and developed massively over recent years and the region today has over 1,300 members. The trade show, EAS, has grown the same way and has become the true meeting point for the leisure industry in this region of the world.

We also want to further increase IAAPA EMEA's regional activities, so we have



plans to bring people together at smaller events at a more local level. In addition, the organisation wants to carry out benchmark studies to benefit its members, and we may be able to present these studies during these events. We're working to make the organisation even better for its members.

What's new at EAS?

It's clear that the trade show has developed steadily over recent years. We're proud that we add new seminars and sessions every year, such as the Lunch and Learn sessions. We don't want EAS to be the same every year, so we always look at what worked well, what was interesting, how we



DON'T MISS OUT

- exhibitors from 500 companies
- companies from 60 countries
- 11,500 sqm of trade show floor
- more than 20 hours of educational programming
- 11,000 attendees



At EAS, attendees find business opportunities on the show floor and at networking events



LOOK WHO'S TALKING

- Christoph Kiessling, Siam Park, Tenerife
- Robert Dahl, Karls Tourismus, Germany
- Andreas Leicht, Hansa Park, Germany
- Andreas Sievering, Fort Fun, Germany
- Martin Kring, Legoland Deutschland
- Bruno Vanwelsenaers, Tomorrowland, Belgium
- Fernando Aldecoa, PortAventura World, Spain
- Andreas Knieriem, Berlin Zoo, Germany
- Eric Cosset, Disneyland Paris, France
- Robert Arvidsson, Liseberg, Sweden
- Robert Owen, Blackpool Pleasure Beach, UK
- Bas Bakkers, The Coca-Cola Company, Netherlands
- Christoph Zwahlen, NXP, Netherlands
- Thorsten Duess, Weber Shandwick, Germany

can refresh our model, how we can offer more to attendees and how we can attract even more people to EAS.

For example, for the first time this year, EAS will offer attendees a zoos seminar and a trip the next day to Berlin Zoo.

What's the difference between EAS and the IAAPA show in Orlando?

Despite its large size, EAS still has a very intimate atmosphere. People know each other and share their knowledge. In my opinion, that is something special to EAS.

What trends are you noticing in the European attractions industry?

We're seeing an increase in destination development, not just at big theme parks building hotels – like Efteling and Europa

Park – but also at the smaller parks that are building log cabins, for example, or zoos that are offering glamping. More attractions are developing into hospitality.

We're also seeing less distinction between different attraction types. More amusement parks are adding waterparks. More waterparks are building hotels. Even zoos are now building waterparks.

Why attend EAS?

It's a must for operators, attracting everyone from the little fish to the big attractions. It's very inspiring and attendees gather plenty of ideas and learn new ways to innovate. It's a great place to meet colleagues and learn from them, with even the top operators sharing their best practices and learnings.



Educational sessions at EAS

REGISTER NOW!

Registration is open. Visit the website now to avoid disappointment.

www.IAAPA.org/EAS

SEA CHANGE

World aquariums join forces in fight against marine litter



The European commissioner for environment, maritime affairs and fisheries, Karmenu Vella, has launched a new programme calling on aquariums around the world to pull together in the fight against ocean debris, especially plastic waste.

Almost 100 aquariums have so far signed up to take part, helping raise visitor awareness and creating exhibitions to illustrate how plastic is destroying the marine environment and its wildlife.

"Aquariums are a TV screen to the ocean," says Vella. "This campaign on marine litter is urgent and welcome. The world's aquariums have decided to become the oceans' 'breaking news' to avoid becoming its history channel."

The campaign, World Aquariums Against Marine Litter, aims to educate visitors about the 10 million tonnes of litter that end up in the oceans annually, causing the deaths of millions of marine animals. Aquariums in



Karmenu Vella, European commissioner for environment, maritime affairs and fisheries

Asia, Europe, and the Americas are getting involved in the project, which was organised by the European Union as part of the United Nation's #CleanSeas campaign.

As well as showing visitors the dangers and consequences of plastic pollution, aquariums will also present solutions, such as a circular economy approach, and offer advice on what individuals can do to help.

"This summer, millions of visitors across the globe will visit an aquarium. To bring change we must show them the reality of plastic pollution," Vella says.

The project was launched in July at the Oceanographic Museum of Monaco and attended by Prince Albert II of Monaco, UN Environment Programme executive director Erik Solheim and World Association of Zoos and Aquariums (WAZA) CEO Doug Cress.

The World Aquariums Against Marine Litter initiative is being held in the run up to the Our Ocean conference, which takes place in Malta on 5 and 6 October.



PHOTO: SHUTTERSTOCK/ISAIELEMEIN

NEED TO KNOW

- 10 million tonnes of litter end up in the oceans every year. That's a rate of one garbage truck per minute, or 400kg per second
- Millions of marine animals die every year because of marine litter, including sea birds, seals, whales, dolphins and turtles
- In some places, microplastics outnumber plankton by six to one
- By 2050, there could be more plastic than fish in the oceans
- By 2050, 99 per cent of seabirds could have ingested plastic
- Europeans use 200 plastic bags per person every year. Only 7 per cent of those are recycled

SOURCE: EU COMMISSION FOR ENVIRONMENT, MARITIME AFFAIRS AND FISHERIES



The amount of plastic waste ending up in the oceans is reaching a critical point

PHOTO: GARETH HILLIER/PA ARCHIVE/PA IMAGES

JOINING THE FIGHT:

Participating aquariums include:

- Fundación Mundo Marino (Argentina);
- Fundación Teimaken (Argentina);
- Haus des Meeres (Austria);
- Zoo Antwerpen (Belgium);
- Vancouver Aquarium (Canada);
- Ocean Park (Hong Kong);
- Beijing aquarium (China);
- Aquatika (Croatia);
- Den Blå Planet (Denmark);
- Cretaquarium (Greece);
- Aquamarine Fukushima (Japan);
- Bergen Aquarium (Norway);
- Malta National Aquarium (Malta);
- Moskvarium (Russia);
- Two Oceans Aquarium (South Africa);
- Georgia Aquarium, National Aquarium (US), plus tens more aquariums across France, Germany, Spain and the UK.

WORLD AQUARIUMS against marine litter

10 million tonnes of litter end up in the oceans every year.

80% is marine litter.

By 2050, 99% of seabirds could have ingested plastic.

Europeans use 200 plastic bags per person every year. Only 7 per cent of those are recycled.

WHAT CAN YOU DO?

- Check receipts, products
- Prevent packaging waste
- Recycle
- Change your habits
- Pick up litter
- Participate in beach clean-ups
- Do not litter, litter does not go away

#OurOcean

Learn more on europecan2017.org/

#OurOcean campaign material from the European Commission gives practical tips



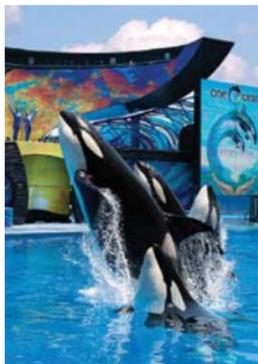
David Camp

SERIES ROADMAP

This eight-part series outlines the patterns and dynamics that define every attraction – from visitor behaviour and guest spending to operating costs and profitability

CONTENTS

1. An overview
2. How are you perceived?
3. Benchmarking
4. Planning a new attraction
5. Driving revenues
6. Controlling costs
7. **Is it worth it?**
8. Benefits and impacts



SeaWorld's profit margin is impacted by negative attitudes to orcas in captivity

THE ATTRACTIONS BUSINESS

Is it worth it?

In the penultimate part of this series by industry consultant David Camp, understand how to assess profitability and predict whether a new venture will deliver adequate returns

In this series of articles, we have discussed demand volumes, revenues and operating costs. Combining these leads to the critical assessment of profit or loss for a business, helping us answer the question – is it worth it?

While there is no standard financial reporting method for visitor attractions specifically, a common measure of the profits of a business is an assessment of the EBITDA (earnings before interest, tax, depreciation and amortisation). This effectively measures the core business operation and also allows comparison between attractions businesses.

Comparing the EBITDA to the total revenue provides a measure of the profit margin for the business. All too often, promoters of development projects overstate the potential profits, either through an over-estimation of the income or understating the operating costs, or both.

Analysing income

Table 1 provides revenues and profit margins for 2016 from the annual reports for a number of attractions operating groups. The average profit margin across the sample is 32.5 per cent, although, as shown, there are some variances, with

Universal Parks performing particularly well on the back of the popularity of their Harry Potter-themed attractions.

The continuing negative press coverage around keeping killer whales in captivity and the *Blackfish* film is impacting SeaWorld's performance, while Compagnie des Alpes continues to wrestle with operating a diverse range of medium and small attractions across Europe.

With each group operating a number of attractions, these consolidated figures mask stronger or weaker individual attraction operations. While details for individual attractions within these groups are not publicly available, there is published information available on the performance of a range of visitor attractions. We show the performance across a selection of individual attractions in Table 2.

Talking margins

The list includes a number of theme parks, entertainment attractions, museums and wildlife attractions. As shown, the majority of the attractions listed achieve EBITDA margins between 10 per cent and 40 per cent, with an average of 22 per cent. These margins are generally lower than the averages

Table 1 : Revenues and profit margins for operating groups in 2016

Group	Revenue (mill)	EBITDA (mill)	Profit margin	Currency
Universal Parks	4,946	2,190	44.3%	USD
Six Flags	1,319	506	38.4%	USD
Cedar Fair	1,289	481	37.3%	USD
Parques Reunidos	584	188	32.3%	EUR
Merlin Entertainment	1,457	451	31.0%	GBP
Disney Parks & Resorts	16,974	5,019	29.6%	USD
SeaWorld	1,340	332	24.8%	USD
Compagnie des Alpes	301	68	22.6%	EUR



Bellewaerde in Belgium is one of many parks operated by Compagnie des Alpes

Table 2 : Revenues and profit margins for individual attractions

Attraction	Revenue (000s)	EBITDA (000s)	Profit margin	Year	Currency
Empire State Building	112,172	82,329	73.4%	2015	USD
Paulton's Park	25,472	9,819	38.5%	2016	GBP
CN Tower	62,700	20,800	33.2%	2012	CAD
Ocean Park	1,598,200	505,400	31.6%	2012	HKD
Farup Sommerland	122,236	34,225	28.0%	2014	DKK
Polynesian Cultural Center	53,632	13,645	25.4%	2011	USD
Taronga Zoo	96,773	22,731	23.5%	2015	AUD
Monterey Bay Aquarium	92,141	21,350	23.2%	2013	USD
Liseberg	1,073,340	245,595	22.9%	2014	SEK
View from the Shard	20,031	4,495	22.4%	2014	GBP
Berlin Zoo	29,153	6,291	21.6%	2016	EUR
Blackpool Pleasure Beach	28,689	4,575	15.9%	2015	GBP
Chester Zoo	35,445	5,455	15.4%	2015	GBP
Canadian Museum of History	87,193	13,263	15.2%	2013	CAD
Tivoli Gardens	1,288,100	187,200	14.5%	2016	DKK
San Diego Zoo Authority	273,847	38,258	14.0%	2014	USD
Imperial War Museums	56,179	6,727	12.0%	2015	GBP
MET Museum, New York	389,778	46,363	11.9%	2016	USD
Toronto Zoo	45,563	-394	-0.9%	2015	CAD
Disneyland Paris	1,278,000	-34,000	-2.7%	2016	EUR



The Empire State Building's visitor attraction achieves a profit margin of 73.4 per cent

achieved by the major operators, reflecting the experience of these operating groups.

While almost all of the attractions report a positive EBITDA margin, a number of them require significant financial support from grants, donations or endowments to be able to deliver these returns. This is common with many museums and wildlife attractions where visitor revenues account for less than half of the annual revenues and it is only through external funding that the attractions can continue to operate.

As shown, while attraction operations can be profitable, even for the strongest commercial operators it is difficult to exceed profit margins of more than 35 per cent. This leads to the question of what attractions are worth and how much should be invested to create new attractions? ▶

Madame Tussauds and other Merlin midways are based on tried-and-tested models, and only sited at locations that meet the operator's specific criteria

Successful attractions developers and operators understand the importance of balancing costs and values

► An attraction's value

For visitor attractions, valuations are based on the earnings of the business, regardless of the amount invested. Sometimes there is an additional value associated with a building, if owned, but for most attractions there is little alternative use that the assets could be put to. Therefore, attractions are valued on a multiple of their EBITDA.

The assessment of what multiple to use depends upon a number of factors, such as the future potential of the business, whether the current EBITDA is strong or weak, the quality of the assets, how much future investment will

be needed at the attractions, and the appetite of the investor for the business.

Table 3 shows examples of attraction sales and the associated EBITDA multiple. The average EBITDA multiple across the deals is just over eight, meaning that, in general, attractions are worth around eight times their annual profits. This is a useful guideline for the scale of investment that can be supported by a new attraction.

However, this presents a challenge for developers and designers of new attractions, as it is often difficult to create the scale and vision that a developer is seeking for budgets that can be supported by the business and deliver a return.

over-optimistic, have little relationship to the size of the markets or demand levels, and do not reflect industry performance benchmarks. This may not stop them getting funded and built, but it often leads to financial problems when the operation cannot deliver on the forecasts.

Successful attractions developers and operators, such as Merlin Entertainments, understand the importance of balancing costs and values. Much of Merlin's expansion has been through their midway attractions – Sea Life Centres, Dungeons, Madame Tussauds and Legoland Discovery Centres. These attractions are designed to a standard scale and budget, and new locations need to be able to deliver appropriate attendance levels and revenues to provide the company with a solid return on their investment. If a location cannot do this, they do not pursue the opportunity.

Success for Merlin is based on learning from past experiences and replicating proven business models. While this is not the only route to creating successful attractions, new developers would do well to take a leaf out of their book. ●

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website: www.djintcon.com*

Table 3 : Sales of attractions and EBITDA multiple

Attraction	Deal date	Sales value	EBITDA	EBITDA multiple
Dolfinarium Harderwijk & Walibi Sud-Ouest	Jan-15	38	4	10.4
Merlin Entertainments	Nov-13	3,190	340	9.4
Sydney Attractions Group	Jan-11	115	12	9.6
Cedar Fair	Dec-09	2,279	300	7.6
SeaWorld	Oct-09	1,563	248	6.3
Parques Reunidos	Jan-07	927	114	8.1
Six Flags Europe	Mar-04	200	28	7.1

Forecasting success

It is not uncommon for promoters of new projects to develop a bottom-up business plan based on a target investment level, with operating revenue and cost forecasts created to justify the scale of investment. Typically, these plans are



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- Les Hudson, VP Design Six Flags



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RISING TIDE

Annual audiovisual expo InfoComm debuted its first ever TIDE conference at the three-day show in Orlando, Florida. Lauren Heath-Jones filed this report

TIDE – Technology. Innovation. Design. Experience – is a brand new thought-leadership conference designed to give context to the technology exhibited at InfoComm. The one-day conference focused on the ways in which businesses can create experiences that customers will respond well to, and how technology can be utilised to deliver those experiences.

The event was themed around storytelling and featured presentations from an array of speakers from a diverse range of industries, including design, marketing, retail and the creative sector.

More than 150 delegates listened to talks on storytelling in the audiovisual industry, with each speaker exploring ways in which technology can be used to enable and enhance a story or experience, rather than it being the point of it. The speakers were consistently excellent, with each presentation offering a unique and interesting perspective.

The event was presided over by blogger, digital strategist, author and self-proclaimed “techie” Luvvie Ajaye, who brought a relatable warmth to proceedings and kept the audience fully engaged throughout.

EMOTIONAL JOURNEY

The day began with a keynote speech delivered by former *Simpsons* animator and Pixar storytelling veteran Matthew Luhn. Luhn started his career as an animator at *The Simpsons*, until a chance visit to the writer’s room inspired him



Panelists, including Amazon’s Dan Quigley, predict the next storytelling technologies

to pursue a career in storytelling. Luhn left *The Simpsons* at the end of its third season and joined the then unknown animation studio, Pixar. He has worked on every Pixar movie since *Toy Story*.

Luhn’s speech, which was called *Storytelling for the Business of AV*, aimed to answer two questions. What makes a good story? How can this be used to connect to an audience?

Luhn primarily addressed the emotional journey that impactful stories take their audience on, and how that helps to create an authentic connection with the audience. He said that storytelling creates great experiences, and discussed how its application can assist with bridging the gap between “business and heart”.

He says: “Stories are meaningful when they’re memorable, impactful and personal.”

ENDURING EXPERIENCE

Following Matthew Luhn was Jake Barton, the principal and founder of experience design studio Local Projects. Barton’s speech, titled *The Intersections of Space and Storytelling: Interactive AV Exhibit Design*, discussed some of Local Projects recent works, including a collaboration with The ARoS Art Museum in Aarhus, Denmark. The partnership saw the New York-based company create three interactive experiences for the museum; one of which, *The Art of Seeing*, used eye-tracking technology to monitor user’s eye movements when looking at a work of art.

Local Projects previously partnered with world-leading architecture firm Bjarke Ingels Group (BIG) to create a 10-foot (3-metre) sculptural heart in Times Square on Valentine’s Day 2012.

(Left to right)
Jake Barton, Local
Projects; Matthew
Luhn, Pixar; Barry
Ross Rinehart, Multi-
Image Group; Nonny
de la Pena, VR expert





Jake Barton addresses the audience (top); a panel discussion focused on storytelling in business (left); the event featured networking opportunities



The experience endures even though the technology becomes dated. The emotional connection is the core, amplified by technology

Made from 400 acrylic tubes, embedded with red LED lights, the heart was an interactive installation that could match the heartbeat of those interacting with it.

In recent years, Local Projects has also worked on the National September 11 Memorial and Museum, the Cooper Hewitt Smithsonian Design Museum and the Museum of the City of New York.

Barton says: "The experience endures even though the technology becomes dated. The emotional connection is the core, amplified by technology."

MAKING MEMORIES

Barry Ross Rinehart, creative director of Multi-Image Group, gave a speech on the foundations of a good memory. He said that for an experience to be memorable it

must be three things: extremely sensory, emotional and extraordinary.

He argued that the brain erases ordinary experiences in a process called habituation. Once the brain becomes used to an event, it will no longer expend the energy to remember it, as it has become ordinary.

Rinehart says: "To create long-term memories we must design a variety of extraordinary sensory experiences that trigger specific extreme emotions."

Rinehart told *Attractions Management*: "Humans can only remember the extraordinary – the most sensual and emotional moments. That's why I try to convince professionals to focus on strategically exploiting emotion and sensory delivery systems – such as stories, technology, and personal human

interactions – to craft unexpected experiences that the brain can't forget."

AUTHENTICITY

The general consensus amongst all the speakers was the importance of authenticity and the need to create lasting impressions, memories and experience, with these experiences taking priority over the actual technology. The experience must come first, the tech second.

Other speakers at TIDE included: Nonny de la Pena, the "godmother of virtual reality" and founder of Emblematic Projects, Oak Labs CEO and co-founder Healey Cypher, TAIT's COO Eric Grossman, Toshi Hoo director of research at the Emerging Media Lab and Jason Crusan director of Advanced Exploration Systems at NASA. ●

FACTS OF LIFE

Post-truth and alternative facts, diversity and design, participation and public engagement – just a handful of topics discussed and debated at the Ecsite Annual Conference. Alice Davis reports

Alice Davis, managing editor, Attractions Management



A recurring topic at the Ecsite Annual Conference was how the science centre sector should respond to the rise of “post-truth” and “alternative facts”.

Just minutes into the opening ceremony, Ecsite’s outgoing president, Michiel Buchel, had touched on the subject, saying: “Science is not just an opinion.”

Ecsite, the European network of science centres and museums, which holds a conference on a yearly basis, was held in Porto, Portugal, from 15 to 17 June. It attracted 1,058 people from 52 different countries, attending 90 sessions informally based around the theme, Life Everywhere.

A number of high-profile guest speakers gave talks, including Manuel Heitor, Portuguese minister of science, technology and higher education; Dr Alice Roberts, science academic and BBC broadcaster; and Nina Simon, executive director of the Santa Cruz Museum of Art and History.

Politic Heitor spoke at the opening event, calling on the science centre community not to waver from its mission to educate, engage and increase public participation in scientific endeavour. Science communication, a profession in its own right, is vital to engaging people with some of the most pressing topics, he said.

“Science does not survive in social isolation. It is very important when we create science policy to clearly stress the mission of science centres, because they should not waver from their unique and very critical mission to promote science with passion, to promote science for all, in a very clear way, and to be straightforward and pragmatic in that mission.”

Break out the bubble

In her keynote, which took the audience on a journey through the study of human origins, Roberts also emphasised the role of public engagement, noting that there had been a culture change in higher education to better support academics to share knowledge more widely.

“There are challenges,” she said. “Can we free up researchers in our universities to do this job of science communication and work with people who are experts in that field, such as yourselves?”

She also said: “Public engagement is about mutual learning between academics and the public. It’s not just academics who have access to a body of knowledge and then share that with the rest of society. There’s important knowledge within society as well, and the opportunity to discover different world views.”

Roberts warned against the dangers of the science community living in its own “bubble” without understanding how society sees it. “It’s extremely important to break out of that bubble and engage effectively.”

Earlier that morning, a panel session debated different statements about science engagement in the post-truth context. Operating under the Chatham House Rule to facilitate free discussion, a number of interesting points were raised, including that science centres could:

- teach visitors about checking and verifying to better understand the process of science and why it is robust
- teach visitors to ask themselves whether the things they hear and read are true and objective
- address the fact that facts rarely change people’s opinions or convictions
- help scientists communicate their research and engage with the public
- understand some people fear science will threaten their way of life
- address the role of social media and the Internet in the post-truth context

Be actively inclusive

This edition of Ecsite, the 28th, provided the backdrop for the first session held dedicated to LGBT diversity in science ▶



(Left to right) Outgoing and incoming Ecsite presidents Michiel Buchel and Herbert Mürder; keynote speakers Nina Simon and Alice Roberts



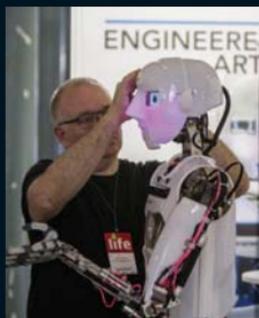
Escsite's Annual Conference – now in its 28th edition – is the largest meeting of science engagement professionals in Europe



Science centres have a mission to promote science with passion, to promote science for all, and to be pragmatic in that mission



Local hosts include the Natural History and Science Museum, University of Porto, Ciência Viva network and the Stock Exchange Palace





The programme combines pre-conference workshops, three days of learning sessions, Business Bistro and networking events



► and science attractions. The panel asked why the LGBT community is quite well represented in the arts, media and elsewhere, but often barely visible within the science communication sector.

The convener, Andrea Bandelli, executive director at the Science Gallery International in Dublin, Ireland, said this inclusivity is important, not just to provide broader representation in programming and reach out to LGBT visitors, but also to ensure science is approachable to LGBT students and the science centre sector appears welcoming to LGBT staff.

The panel noted that visibility is key. It's not enough to do nothing. Attractions need to be "actively inclusive" at the organisational level, within their exhibitions, and with networking and programming. Try not to take a "heterosexual approach" to everything – that's a good place to start.

"This is a topic we should be addressing in terms of content," said Antonio Gomes de Costa, an independent science communication consultant.

Hands on, feet in

Another session featured panelists from a number of Mediterranean facilities and the topic of biodiversity loss, invasive species and high-impact environmental problems occurring on a local level. One initiative that was discussed was that of the Centro Ciencia Viva do Algarve in Faro, Portugal,

SUSTAINABLE CONFERENCE

The Ecsite conference strives to reduce waste and encourage environmentally friendly choices where possible. In Porto, each attendee was given a small reusable water bottle to fill from the water dispensers around the conference centre, eliminating the need for disposable plastic cups. At social events, water was served from glass bottles and food was sourced locally, with reduced meat options. Attendees were also invited to make their own way round the city on foot or by bike, rather than supplying shuttle buses.



Conference organisers aimed to be green

which has adopted a "hands on, feet in" approach with school trips – taking children to the local nature reserves and teaching them to not only observe, but also "do things". For example, they can monitor water quality and take sediment samples.

With controversial or challenging topics, especially where there may be stakeholders with different priorities, the experts said science centres could explore crowd production and field activities.

While many workshops talked about engaging children, there was a contrasting session. The speakers in an afternoon discussion – titled Give Natural History Museums Back to Grown-Ups! – wondered

if there might be a trend towards refining target audience groups, something that's been seen in London, Chicago and Berlin.

Raphael Chanay, exhibitions and interpretation manager at the Natural History Museum in London, said it was time to challenge the perception of the attraction as a "dusty dino museum".

Chanay has been targeting two adult groups – "contemporary cultured", who are 18 to 34-year-olds, social and have no children; and "learned liberals", who are 45-plus and driven by an interest in learning. It's challenging, he said, to change people's perceptions, but one thing that adults do enjoy is being surprised. ●

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For 20 years, Sysco has worked at the heart of the creative profession and has built up a wealth of exceptional expertise working at the intersection between storytelling art and engineering science.

Sysco delivers projects across the UK and worldwide, with its head office and research and development centre in Godalming, Surrey. Founded in 1998, the company was formed to support the growing demand for multidisciplinary engineering teams that truly understand the application of audiovisual technology.

The first project undertaken by Sysco was the design and delivery of elements of the Millennium Dome's visitor experience. This served as an important introduction to many of the UK's leading experience designers who were impressed by the team's 'can-do' attitude, creative vision and collaborative approach to working.



Graeme Bunyan (left) and Hugo Roche, Sysco

International reputation

Since then, the team has grown into a sales-focused, market-leading AV integration company with an international reputation for managing the complex relationship between creative ambition, robust engineering, budget and time.

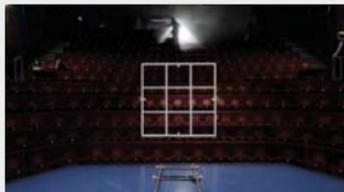
During this time, audiovisual technology has transformed from the pre-digital age of working with light and sound, into a phenomenal tool capable of bringing visions of different spaces to life. It has

the enormous capacity to provoke human emotion and create long-lasting memories. The accelerated development of technologies, virtual and augmented realities, robotics and artificial intelligence is generating new applications, changing the way people interact and experience their world.

Employing AV to rearticulate stories in a variety of markets, Sysco has become an integral force within the industry as a systems integrator, designing and delivering audio, visual and control systems packages for attractions and leisure clients such as Imperial War Museum, the Victoria and Albert (V&A) Museum, Science Museum, Twickenham Stadium and Ascot Racecourse.

Story engineers

However, the technology is only a small component within the project delivery process. To support this evolution from systems integration into the world of



Embracing the evolution from systems integration into the world of storytelling and engagement, Sysco is rebranding as Story Engineers



Choosing the right technological medium is central to every project, whether depicting a tepidarium at the Roman Baths (above) or robots at the Science Museum in London



As Story Engineers, Sysco reimagines space with technology, maximising the potential to create memories and trigger emotions in order to produce an experience that lingers long after the event

storytelling and narrative engagement Sysco have rebranded as Story Engineers. At the heart of every experience is a story that needs to be told, whether that's in an exhibition, a museum, an arena, a visitor centre, a stadium or a theatre.

Through the dynamic developments of technology, there remains an undeniable truth that real-world engagement and collective experiences will forever sit at the heart of who we all are as people. As Story Engineers, Sysco reimagines space with technology, maximising the potential to create memories and trigger emotions in order to produce an experience that lingers with you long after the event.

"It is the trinity of space, storytelling and engineering that are the three pillars of our approach. Stories with a clear narrative need to evolve from the client's creative vision and the challenge is about framing this story within the discipline and physical constraints of the space," says Hugo Roche, Sysco's managing director.

The methodology grid

The Sysco 'Story Engineering' methodology plays a vital role in this process. It's defined by four key phases; Imagining, Engineering, Implementation and Synthesis. The tool underpinning this approach is best

CURRENT / FORTHCOMING PROJECTS:

- Brooklands Museum: Aircraft Factory & Racetrack Revival (2017) - Permanent Installation
- Aerospace Bristol (2017) - Permanent Installation
- Snowdonia National Park: Yr Ysgwrn (2017) - Permanent Installation
- National Maritime Museum: Endeavour Galleries (2018) - Permanent Installation

RECENT PROJECTS:

- Science Museum: Robots (2017) - Temporary Exhibition
- The Roman Baths: Tepidarium (2017) - Permanent Installation
- The Historic Dockyard Chatham (2016) - Permanent Installation
- V&A: You Say you want a Revolution? Records & Rebels 1966-1970 (2016) - Temporary Exhibition
- Lincoln Castle: Revealed (2015) - Iconic Spaces
- Milan Expo UAE Pavillion (2015) - Temporary Exhibition

described as a grid, the cornerstone of the new brand and brand identity. The logo is a visual representation of this, a device to represent the world we live in, framing the different elements of a story and a visual connection between it and the context. It is sometimes as simple as a uniform design interpretation of the space; more often, it is a device used as a framework to interpret the constraints, opportunities and dynamic nature of the space and its objects.

Behind the methodology, the grid and Sysco's evolution is a workforce driven by passion, people and experience delivery. Twenty years of delivery has taught us that nothing works unless it all works and that projects start with people, not systems. Whether working with exhibition/experience designers, fit-out contractors, media creatives or working for end clients, the mission at the very core is to deliver world-class experiences; engineering imagined ideas into powerful realities.

"The focus should always be to find appropriate technology to complement and enhance, not overpower or distract. Our mantra is that technology is an enabler, it should never dominate the story. If it's doing its job correctly, you may never even know it's there," says Graeme Bunyan, Sysco's director of technology. ●



The vibrant city of Berlin, Germany, will provide the backdrop to EAS 2017

EURO ATTRACTIONS EXPO

The European edition of IAAPA's trade show returns to Berlin this September.

Here's what to expect from the show – plus, news from a selection of exhibitors

The 2017 Euro Attractions Expo (EAS) is heading to Berlin, Germany, this September. In addition to the expansive trade show floor, EAS 2017 will also offer a programme of 25 educational sessions, featuring presentations by some of Europe's leading operators on industry trends, new technology, marketing and communications, entertainment, government relations, safety and security, food and beverage, games and merchandise, facility operations, human resources, and more.

The event will also include networking and behind-the-scenes tours to Berlin's tourism attractions, including Tropical Islands and Filmpark Babelsberg.

"Taking EAS to Berlin for the second time will provide value to all attendees, regardless of their background in the leisure and attractions industry," says Karen Staley, senior vice-president of IAAPA Europe, Middle East, Africa (EMEA). "Some of the best in the leisure industry are located in Germany and the strong reputation of the Berlin-Brandenburg region in hospitality and business makes it an ideal location for EAS."

NEED TO KNOW

- What:** Euro Attractions Expo 2017
When: 26-28 September 2017
Where: Messe Berlin Exhibition Centre, Berlin
How much: €68 - €217
Register: www.IAAPA.org/EAS



On the educators' conference bill are Christoph Kiessling (Siam Park Tenerife), Robert Dahl (Karis Tourismus), Andreas Leicht (Hansa Park), Andreas Sievering (Fort Fun), Martin Kring (Legoland Deutschland), Bruno Vanwelsenaers (Tomorrowland), Fernando Aldecoa (PortAventura World) and Andreas Knieriem (Berlin Zoo), to name just a few.

The IAAPA Safety Institute and the IAAPA Institute for Attractions Managers will also be taking place. All educational offerings at AAE can be used as credits by those seeking IAAPA Certification.

EAS 2017 expects to welcome 11,000 attendees and more than 500 exhibitors across the 11,500sqm of trade show floor.

TRIOTECH

Booth #20-419

For the first time in Europe, Triotech is showcasing a four-seat demo unit of its new Flying Theatre technology, which attendees will be able to try. Also in Triotech's stand, its award-winning XD Dark Ride Interactive Theatre featuring the latest interactive title, *Werewolves*. Triotech recently announced the appointment of industry veteran Tony Gattillo as regional sales director for Europe and Africa.

BRUNSWICK

Booth #20-910

Brunswick Bowling is promoting Epicenter, a way to bring authentic bowling to spaces with a smaller footprint. It is an all-in-one solution that appeals to all demographics, making it popular with operators of restaurants, hotels, casinos, cinemas, FECs and other venues that might not have room for traditional bowling. Epicenter increases revenues by keeping guests on the property longer and encouraging them to return.

A demo of Triotech's new ride, *The Flyer*, is being presented at the show



DYNAMIC ATTRACTIONS

Booth #21-301

Dynamic Attractions is introducing its Creative Studio, focused on the design, media production and storytelling that turns a "ride" into an "attraction". Servicing the Unlimited Attractions division in Orlando, Florida, the Creative Studio will provide attraction design services, drawing packages, media and animatic production, pre-visualisation, show mock-ups and ride system integration. Dynamic is best known for its Flying Theatre, SFX-Coaster and robotic-arm ride.

GATEWAY

Booth #20-704

Gateway Ticketing Systems is showcasing its customer relationship management solution, CRM Plus Powered by Galaxy, at this year's Euro Attractions Show in Berlin. CRM Plus combines all the ticket, food and beverage, retail purchasing and usage information from the Galaxy Product Suite with marketing touchpoints to provide a 360° view of guest behaviour. Gateway says CRM Plus empowers customers to deliver "the right experience, at the right time, in the right way to the right people".



WHITEWATER

Booth #18-411

As you stand at the base of No Boundaries, the giant structure towers 70-feet (21-metres) above you, creating a skyline-defining presence. WhiteWater describes it as a truly iconic attraction, offering high-thrill zip coasters and challenging climbing activities for guests of all ages and skill levels. No Boundaries integrates different ways to play within one attraction, accommodating up to 750 happy guests per hour.

ALTERFACE

Booth #21-811

Alterface is working with Jora Vision to build the interactive dark ride *Bazyliszek*, which will be installed at a theme park in Silesia, Poland. Part of the recently rebranded *Legendia* (formerly *Slaskie Wesole Miasteczko*), the attraction boasts the latest in dark ride technology. Alterface is overseeing the total ride experience as main contractor for the attraction, applying interactive technology including video mapping, show control and shooting devices. Jora Vision is devising the theming.

EAS attendees can find out about WhiteWater's No Boundaries attractions

NWAVE

Booth #18-713

At EAS, nWave is presenting *Son of Bigfoot 4D*. Follow Adam Harrison on his wild adventure to find his father, Bigfoot. In *Return to the Lost World*, watch out for ferocious dinosaurs as an expedition returns to a familiar island. EAS attendees are invited to stop by the booth for an exclusive preview of these exciting attraction films.

THE PRODUCERS GROUP

Booth #23-1108

The Producers Group has teamed up with US coaster maker Premier Rides to create a turnkey attraction that combines the dark ride with the dining room. *Extraordinary Voyages Adventure Dining (EVAD)* takes place in a 80-seat vehicle, departing at intervals of between 45 and 90 minutes. The vehicle, *Centurion*, takes its passengers on a journey that stops at different points to immerse them in a variety of ▶

EXHIBITOR NEWS

HUSS is presenting the film-based ride experience, *Explorer*

- ▶ destination-inspired scenarios. During this adventure, the passengers are served food and beverages that complement the story.

HUSS**Booth #20-705**

At EAS, HUSS is highlighting its film-based ride attractions, *Explorer* and *Movie Base XS*. *Movie Base XS* is a "next generation" flying theatre, which is smaller and more compact than the original version. *Explorer* provides visitors with the sensation of being immersed in the scenes which surround them, via a 360° screen. It accommodates guests of all ages, is accessible to those with disabilities, offers a high capacity and works with any theme. The improved Shot 'n Drop Maxi will also be on show.

VEKOMA**Booth #20-411, #20-413**

Vekoma's *Bermuda Blitz* has debuted at Legandia Poland – the Lech Coaster. The coaster is 908 metres in length and stands 40 metres high, combining a variety of ride elements in a compact design. The ride constantly changes direction, both vertically and horizontally, while forces change from positive to negative and back – it's a fast paced, extreme experience.

RED RAION**Booth #23-304**

VR media company Red Raion is showcasing two new virtual reality movies: *Aztec VR* and *Dystopia VR*. Red Raion provides a full line-up of CGI virtual reality films specifically designed for amusement

Red Raion is presenting two CGI virtual reality films, *Aztec* and *Dystopia*

professionals, with movies setting a new standard for VR experiences in the attractions industry. Stop by the booth to try *Aztec VR* and *Dystopia VR*.

LAGOTRONICS**Booth #18-213**

Logotronics Projects is showing a sneak preview of a new interactive ride concept that combines the company's *GameChanger* with a brand new IP and game. *Farm Fair* is an interactive rotating dark ride (patent-protected), completely designed in a farm theme. Logotronics is showing the model of its *GameChanger* and several completed projects.

OPEN AIRE**Booth #18-704**

Visit OpenAire at EAS to find out about retractable structures across Europe. OpenAire's team of experts has completed nearly 1,000 unique retractable roof enclosures and operable skylights for venues of every size and kind, including many groundbreaking designs across Europe. Many clients see increased business after opting for an OpenAire solution.

**INTAMIN****Booth #20-709**

Celebrating 50 years of innovation and success, Intamin is presenting several new products at this year's EAS Show in Berlin, including a number of LSM Launch Coasters and Family Launch Coasters. Intamin has also worked with Attraktion! to create the *Dome Ride Theatre* – a next generation immersive media based attraction. Visit the booth to find out more.

WALLTOPIA**Booth #18-912**

Walltopia Adventure promotes active entertainment all around the globe. Manufacturing climbing walls for 19 years, the company makes attractions that engage the adventurous spirit of participants through



Find out about Vekoma's *Bermuda Blitz* coaster at EAS

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Booth
18-213



► sport, fun and adventure. Walltopia has a team of over 500 professionals and the largest production capacity in the industry. Its brands include Rollglider, Ropetopia, Fun Walls, Rocktopia, Ninja Course and Adventure Hub.

PREMIER RIDES

Booth #20-417

Premier Rides has completed a high-tech, triple-launch coaster at Särkänniemi Amusement Park in Finland. The Hype coaster, which opened in June, is the largest investment in the theme park's history. Premier Rides is known for focusing on large, technically complex projects that incorporate the newest technologies. The coaster maker has provided the ride equipment for award-winning attractions like Revenge of the Mummy at Universal Studios and the world record-breaking Full Throttle at Six Flags Magic Mountain in California.

INTERLINK

Booth #20-107

Interlink has installed a SuperFlume water ride at Tayto Park, in Meath, Ireland. The SuperFlume is a new design, which is gradually replacing the older traditional Log Flumes in the market. The SuperFlume



Simworx's Cobra Motion Theatre is installed at Motiongate, Dubai

boats are six-seaters and provide a more comfortable experience compared to the older design. The ride, named Viking Voyage, includes three lifts and chutes, one of which incorporates a "speed curve" and another a surprise reverse drop. The Deluxe Group managed the ride theming.

PROSLIDE

Booth #18-401

Six Flags Fiesta Texas has just opened their ProSlide RocketBLAST LTG (Low-to-Grade) FlyingSAUCER hybrid, branded Thunder Rapids by the park. According to ProSlide, the RocketBLAST takes water propulsion coasters to a new level with 100 per cent steeper hills than traditional 'blaster' coasters, 100 per cent more capacity and 60 per cent more efficiency. The massive FlyingSAUCER shape is steeply angled to create a thrilling 'drop-and-dive' sensation. And LTG means more options, lower cost, and differentiated coaster performance.

ProSlide's Thunder Rapids uses state-of-the-art water jet propulsion technology for faster uphill speeds

SIMWORX

Booth #18-709

Dynamic simulation attractions specialist Simworx is promoting its full range of media-based products at the Euro Attractions Show this year, examples of which can be found at numerous venues around the world. Attendees can find out more about Simworx's 4D/5D effects cinemas, Immersive Tunnels, 360° Flying Theatres, AGV dark rides, Stargazer motion theatres and various products under the RoboCoaster umbrella. The show will also see the launch of a brand new product, the ParadoxVR, an immersive, virtual reality attraction.

SIMEX-IWERKS

Booth #18-311

SimEx-Iwerks continues to refine its flying theatre product line with 6DVX. The 6DVX Flying Theatre system evolved from the SimEx-Iwerks 6D Vertical Flying Theatre at Enchanted Kingdom in the Philippines. 6DVX offers a world-class flying experience that can fit into existing spaces and compact footprints with substantial cost savings, as well as taking advantage of SimEx-Iwerks' extensive film catalogue.

HOLOVIS

Booth #22-1104

At the Berlin trade show, Holovis is demonstrating its new attraction concept, R3ex (Rideable Realtime Robotic Experiences). Augmented reality will be used to depict a scale model of the giant robot arm and four-seat guest experience. R3ex consists of real-time immersive visuals with gesture-based interactivity, synchronised with the dynamic motion of the robot and networked, guest-to-guest storytelling.

SALLY

Booth #18-205

Sally Corp will be on hand to discuss turnkey dark ride attractions with parks and entertainment facilities worldwide. Sally has new dark rides to present based on two of today's most popular franchises, The Walking Dead and Five Nights At Freddy's. In addition to our IP-centred products, our dark ride selection includes rides of all sizes and themes, including Power Blast, Challenge of Tutankhamon, Ghost Blasters, Scream in the Dark, Forbidden Island, and Zombie Apocalypse, to name a few. ●

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The Province of Ontario is seeking a partner who can share in the government's vision for a revitalized Ontario Place, anchored by a new development on the West Island focused on the theme of culture, discovery and innovation. The West Island is part of the iconic Ontario Place property on Toronto's waterfront.

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PRODUCT INNOVATION

Suppliers tell Attractions Management about their latest product, design and technology launches

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attractions-kit.net



● Disney's researchers have been working on a multi-sensory mixed reality experience in which people can interact with animated characters

Moshe Mahler unveils Disney Research's Magic Bench

Disney's research and development arm has revealed a new mixed reality technology concept – a bench where people can see, hear and interact with virtual characters in the real world.

The prototype uses depth sensors from a Microsoft Kinect and an RGB camera to render an image of the bench and the users on it. This rendering is then displayed as a mirror image on an opposite screen so the user can see the virtual characters and interact with them in real time.

The experience is a simple 'walk up and play', requiring no special technology on the part of the user with no set-up time.

"This platform creates a multi-sensory immersive experience

in which a group can interact directly with an animated character," explains Moshe Mahler, principal digital artist at Disney Research. "Our mantra for this project was that you would hear a character coming, see them enter the space, and feel them sit next to you."

To further enhance the experience, the bench features haptic technology corresponding with the movements of the virtual character, giving the person sitting on the bench the sense that a physical presence with weight and impact is sharing the bench with them.

"The bench itself plays a critical role," Mahler says. "Not only does it contain haptic actuators, but it constrains



● Moshe Mahler, Disney Research

several issues for us in an elegant way. We know the location and the number of participants, and can infer their gaze. It creates a stage with a foreground and a background, with the seated participants in the middle ground. It even

serves as a controller; the mixed reality experience doesn't begin until someone sits down and different formations of people seated create different types of experiences."

One demonstration of the technology shows a small cartoon elephant jumping up onto the bench. It then proceeds to hand the user a golden orb, which they can take from the virtual character.

The Magic Bench is capable of offering group orientated experiences, with multiple persons able to enjoy the experience at the same time.

ATTRACTIONS-KIT KEYWORD

DISNEY

Ernest Yale on Triotech's Fear the Walking Dead Survival attraction

Triotech has partnered with US broadcasting company AMC to create a new attraction at the Fremont Street Experience in Las Vegas, Nevada.

Fear the Walking Dead Survival is billed as a "unique, multi-sensory experience" and is set against the backdrop of a zombie apocalypse.

The attraction is inspired by AMC's hit TV series *Fear the Walking Dead*. It combines a thrill ride, escape room and maze, and includes interactive gaming elements. It also features elaborate sets, immersive audio and video and motion simulator technology.

On entering the experience guests find themselves inside a temporary military facility amid rumours of a zombie apocalypse. Once inside, guests will have to make their way through a number of different zones and experiences in the facility,



● The attraction is based on a zombie apocalypse narrative

whilst defending their lives from a horde of the infected.

Ernest Yale, president and CEO of Triotech, told *Attractions Management*: "Triotech's goal was to bring the concept of a walkthrough attraction and augment it to make it into a futuristic, immersive and interactive attraction that will operate year-round. We feel the IP has very strong appeal and is a perfect demographic match for our location."



● Ernest Yale, Triotech



ATTRACTIONS-KIT KEYWORD

TRIOTECH

Polin's Bilge Pakis on a waterpark beside an 800-year-old church

Waterslide manufacturer Polin Waterparks will create an indoor waterpark next to a church spire that was built in the Middle Ages, in Coventry, UK. The spire originally formed part of a larger cruciform church that was built in the 1200s, and destroyed with the dissolution of the monasteries in the 1600s.

The Coventry City Centre Leisure Park is set to open in 2018/2019 and will feature an indoor waterpark, a 25-metre swimming pool, a gym, a climbing wall, squash courts, a dance studio, a day spa and administrative areas.

Bilge Pakis, design manager at Polin Waterparks, says of the project: "It is a game-changer in its distinctive design, which is required to fit the facility into a very tight footprint on a site where Franciscan monks originally constructed a cruciform church in the early 1200s."

Pakis adds: "Over the years, the site's space became smaller and smaller as history has left its mark."

The waterpark will feature a range of Polin slides that have been specially adapted to suit the dimensions of the spire. All rides will have reduced heights, with the Space Hole measuring less than 15 metres (48 feet) high and the other slides measuring 11.5



● Bilge Pakis, Polin Waterparks



● A range of Polin's most popular slides will feature at the leisure centre

metres (38 feet) tall. The rides, excluding the Space Hole, will also feature dry out exits without swimming pools.

The rides include the Tunnel Bodyslide, the Sphere-Space Shuttle, the Space Hole the Mini Tsunami, the Navigator and the Looping Rocket.

Polin is collaborating with FaulknerBrowns Architects, the Buckingham Group and consultant Neuman Aqua on the project.

ATTRACTIONS-KIT KEYWORD

POLIN

BRC's Christian Lachel introduces the Say it Loud experience

US experience design firm BRC Imagination Arts has created the Say it Loud story booths for the new Rock & Roll Hall of Fame in Cleveland, Ohio, as part of the Power of Rock Experience.

Following the Power Rock immersive show, also designed by BRC Imagination Arts, guests enter the Say it Loud zone and are encouraged by Rock Hall inductees, including

Alice Cooper, Smokey Robinson and Deep Purple's Glenn Hughes, to tell their very own rock and roll stories.

Christian Lachel, vice president and executive creative director at BRC Imagination Arts, says: "Say It Loud gives fans a chance to have a virtual conversation with a Rock & Roll Hall of Fame inductee. The technology our team combined and crafted provides a meaningful engagement moment for visitors and gives them a way to share their rock story with others. This is what audiences are craving, the ability to have two-way conversations and add their voice to the narrative."

Guests scan their wrists bands on entry into one of the four booths. They are greeted by name and select a Hall of Fame



● Christian Lachel, BRC

inductee to "meet". When the artist finishes telling a story, they invite the guest to choose from a list of questions and share their own rock and roll tale.

Visitors get to star in a 30-second "interview", with the video instantly emailed to them so they can share their Say it Loud experience on social media.

ATTRACTIONS-KIT KEYWORD

BRC IMAGINATION ARTS



● The story booths allow visitors to interact with a rock hero

Nicola Said presents England's Historic Cities app

HEX Digital has created a new app, England's Historic Cities (EHC), in collaboration with a dozen of the UK's most important heritage sites.

Funded by the Discover England Fund, a £40m (\$52.7m, €44.7m) investment in English tourism made by the British

government in 2015, the app tells the stories of some of the UK's most fascinating heritage sites, and gives users access to exclusive content and never-seen-before insights into well-known landmarks.

Trigger points are stationed at various points across these

landmarks. Users simply scan the triggers with their phones to access content, including augmented reality displays, 3D reconstructions and 360-degree panoramas, to enhance their experience.

Nicola Said, commercial director at Marketing Cheshire, who project-managed the EHC app, says: "This is one of the most exciting projects I have worked on. It is a true marriage of old and new, and a completely innovative way to inspire an increasingly digital world to take a step back into the past."

The app also allows users to access audio content including stories told by historical figures including William Shakespeare, Countess Ela of Salisbury and the Venerable Bede.

The app will be available at 12 locations: Carlisle, Durham, Lancaster, York, Chester, Lincoln, Stratford-upon-Avon, Oxford, Cambridge, Greenwich, Bath and Salisbury.

Said says: "I cannot wait to see the app in action and watch people from all around the world take pleasure in England's glorious, captivating history. It will enable all the cities in question to be able to reach new audiences and showcase the iconic cultural heritage we have to offer."



● Nicola Said, Marketing Cheshire

ATTRACTIONS-KIT KEYWORD

HEX DIGITAL



● Visitors scan a trigger to unlock augmented reality and 3D content



ParadoxVR simulates a realistic feeling of gliding through the sky

Simworx partners with Frontgrid to bring new 'world-first' attraction to market

ParadoxVR immersive paragliding experience to launch at EAS

In an exciting move for Simworx, the UK-based company has joined forces with a new name to the attractions industry, Frontgrid, to bring a brand new, "world-first" product to the market. The official product launch will take place at EAS 2017 in Berlin, Germany. The patent-pending ParadoxVR™ is an IP-protected, immersive, virtual reality (VR) attraction, featuring integrated gamification which allows the user to fully control the game play and movement.

Developed by the Conwy, North Wales-based Frontgrid team, led by co-founder and chief executive Matt Wells, ParadoxVR™ provides a truly immersive VR experience that simulates flying a paraglider, with an up-and-down motion that incorporates sudden drops and smooth deceleration to create a realistic feeling of gliding through the skies.

Additionally, the ParadoxVR™ ride features an interactive gaming element controlled by the participant, with points awarded to each individual rider as they make their way 'back down to earth'.



KEY SPECIFICATIONS

- Unit size: 2.5m x 2.5m x 4.5m
- Minimum rider height: 1.2m
- Maximum rider weight: 160kg
- Ride/game time: 2 minutes
- Actual distance travelled: 1.8m
- Total hourly ride capacity (THRC) for the four to 12 rider units: 80 to 240
- THRC for the six to 20 rider units: 120 to 400

Riders will aim to fly through a series of targets, for example, to score as many points as possible. Riders physically move through a vertical distance of 1.8 metres (6 feet) during the experience.

With multiple theming and content options on offer and a modular design that provides high hourly capacity and low operating costs, ParadoxVR™ is ideal for operation in a wide range of venues, including theme parks, FECs, shopping malls, cinemas, bowling locations, cruise ships and more, while also being an ideal attraction for the events and mobile sector.

"Our mission is to create world-first, iconic adventure experiences with strong brands and protectable IPs, underpinned by disruptive, high-growth, high-return business models," says Wells. "We are delighted to have partnered with Simworx, a world leader in the development and supply of media-based, dynamic simulation attractions, to create and bring to market the first of our experiences. And, of course, we are excited to be launching ParadoxVR™ at this year's EAS. It's a totally new concept and I'm sure it will create much interest among operators when revealed in September."

Standard configurations of the attraction are four to 12 rider units, in line or double, and six to 20 rider units in a circular layout.

Attractions MANAGEMENT DIRECTORY

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