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# Attractions management

VOL19 Q3 2014

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## HERE COMES CHINA

As China opens up to the West, the nation's attractions are booming, with existing attractions reporting record attendances and new museums, theme parks and science centres planned. Disney and the Puy du Fou are leading the charge.

**S**peaking at the opening of the recent IAAPA Asian Attractions Expo in Beijing, Paul Noland, president and CEO of IAAPA, said the Chinese market is the fastest growing in the world, with at least 59 theme parks under development, probably more.

The trade show – IAAPA's first foray into mainland China after years in Singapore, Hong Kong and Macau – was a huge step up size-wise on previous events, as suppliers gear up to tackle the commercial opportunities presented by this massive market.

Further evidence of the momentum in the Chinese and wider Asian markets comes from the new *TEA/AECOM 2013 Theme Index & Museum Index* (see page 36), which shows that attractions in Asia are booming in terms of both new facility development and attendance. This trend applies to everything from theme parks to museums and waterparks.

The gap in attendance figures between the top 20 North American theme parks and the top 20 Asian parks is narrowing fast, falling from a difference of 22.9 million people in 2012 to 18.3 million in 2013.

Museum attendances in Asia grew by 27.8 per cent in 2013, mainly as a result of a new free-access museums policy which has been implemented in China. The change was rolled out to two-thirds of the nation's museums during 2013, and its impact shows how – by sheer force of numbers – growth in the Chinese market will enable this rapidly emerging nation to dominate in Asia.

At facility level, the National Museum of China saw a huge jump up the rankings, reporting growth in attendance of 38.7 per cent and moving into third place internationally. This is partly a result of the free admissions policy and partly because the museum has benefited from significant investment. As part of this, the focus of the collections has shifted from local to national history, with a number of popular international exhibitions organised as China opens up to the world.

In 2000, when rumours first circulated about Disney's intention to build in China, the nation was largely closed to the West, so it was an audacious move by the Mouse.

It was a further nine years before the formal announcement came, showing the incubation period required for a project of this nature, scale and scope.

Disney's move showed the world China was open for business and was partly responsible for sparking the current wave of development. Shanghai Disneyland will open at the end of 2015.

All schemes in China are subject to state approval and as the government favours those promoting Chinese history and culture, they're dominating proposed developments.

This includes plans by the Puy du Fou – France's world-class historical reenactment theme park – which will work with Chinese partners to build an attraction by the Great Wall.

With such exciting plans in the pipeline, the industry will be riding the development wave in China for decades to come.

**Liz Terry, editor, twitter: @elizterry**

**Puy du Fou – France's world-class historical reenactment theme park – will work with Chinese partners to build an attraction by the Great Wall**





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**Web gallery:**

For suppliers of products and services in the worldwide attractions industry, turn to page 84

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# Theme Parks

## Harry Potter attractions light up Orlando and Osaka

Harry Potter has been making waves with the highly anticipated Wizarding World of Harry Potter: Diagon Alley opening to the public on 8 July, closely followed by a Harry Potter attraction in Osaka, Japan, which launched on 15 July.

The US attraction opened to much excitement, with fans turning out in droves to explore Universal Orlando Resort Florida's new attraction. Thousands showed up to explore the area, which includes the signature attraction Harry Potter and the Escape from Gringotts.

Visitor demand was so high that queue times for the Gringotts ride exceeded five hours. The ride is a 3D attraction, with a rollercoaster car that tilts and weaves in tandem with the action on screen.

Harry Potter fans in Japan also got closer to the magic with the opening of the \$500m (£362m, £297m) Wizarding World of Harry Potter attraction in Osaka.

Located at Universal Studios Japan, the attraction covers nine acres within the theme park and includes a giant recreation of Hogwarts Castle, a Hippogriff roller coaster, the Three Broomsticks tavern and Hagrid's Hut. The village of Hogsmeade



Harry Potter fans celebrate the opening of the Wizarding World attraction at Universal Studios Japan in Osaka

also has an array of souvenir shops.

The Osaka park aims to build on the 10.5 million visitors it welcomed in 2013, a 7.7 per cent rise from 2012 and the second-highest figure since opening in 2001.

Harry Potter is extremely popular in Japan. The first movie, *Harry Potter and the Philosopher's Stone*, is the country's fourth-highest grossing movie of all time. Details: <http://lei.sr?a=x7B4I>



Six Flags plans to license its popular park brand

## Six Flags joins China's boom in theme parks

Six Flags will join the 60-plus theme parks under development in China after it signed a strategic partnership with a real-estate developer to build multiple Six Flags-branded theme parks over the next decade. The deal is with the Riverside Investment Group, which has more than \$3.5bn (£2bn, €2.6bn) in assets under management and over 300 acquisitions.

Details were not disclosed, but Six Flags said it will receive royalties from parks using the brand, and will supervise construction and operation of the site to maintain appropriate standards. Details: <http://lei.sr?a=q9h6w>

## Wait over for Ratatouille fans as ride opens

After a near five-year wait, the highly anticipated Ratatouille attraction opened on 10 July at Disneyland Paris. The debut visitors were plunged into a world based on the Disney-Pixar movie, and on boarding the ride were whisked off on a "ratmobile" into the heart of the over-sized Parisian restaurant Chez Gusteau.

The immersive family attraction, L'Aventure Totalement Toquée de Rémy (translated from the French as Rémy's Totally Zany Adventure) includes a restaurant and soon-to-open shop inside a Paris quarter. The ride itself is based on the concept that the guests are shrunk down to a rat's size. Travelling through Chez Gusteau in the six-seater ratmobile, an entirely new ride experience



The kitchen scene by P&P Projects is part of the new Ratatouille ride

at the park, they experience animation uniquely created in 3D by filmmakers Pixar. P&P Projects were also involved, and developed and created all the oversized elements in the kitchen scene, like gigantic vegetables, sausages and fish.

The making of the €150m (\$204m, £119m) Ratatouille attraction has been in itself a gigantic undertaking, with 4,000 craftspeople involved in the building process and more than 40 companies from France alone. Details: <http://lei.sr?a=v9K0x>

# Visitor Attractions

## Google Glass to revolutionise the way we look at art

A research team is investigating how Google Glass can be used to display instant information on artworks as visitors walk around museums and galleries, with the possibility the technology could replace guidebooks and audio guides entirely.

A team from Manchester Metropolitan University (MMU) in the north of England is using artist George Stubbs' artwork *Cheetah and Stag with Two Indians* to test the service, which provides the user with information they would normally read on the wall, while audio information about Stubbs will also be made available to the viewer.

The wearer uses the glasses to take a picture of the painting, which is recognised by Google Glass, that then provides the information through the technology.

Testers of the technology were art gallery goers of all ages, genders, social groups and occupations. An MMU spokesperson said that the response to the new technology in the art gallery had been generally very positive.

Further tests on the technology were carried out on six more paintings throughout June, with the team hoping that the glasses will eventually be able to provide



George Stubbs' *Cheetah and Stag with Two Indians* was used as a test for the Google Glass project

suggestions and recommend similar works, for example other oil paintings of that period or other works by Stubbs. The glasses would then direct the user to the right area of the gallery, something like a

private bespoke tour guide. There are also plans to test the technology on sculptures and three-dimensional works, though it becomes more complex with 3D works. Details: <http://lei.sr?a=Z8d8Z>



US attractions: President Obama sees dollar signs

## Obama pushes US tourist attractions

US President Barack Obama is aiming to draw an additional 30 million tourists to the country each year by promoting national visitor attractions. He made the statement during a recent visit to the National Baseball Hall of Fame in Cooperstown, New York.

Improvements to entry processes are designed to cut waiting times, while six government agencies will work with the public-private partnership Brand USA to launch advertising campaigns in 10 global markets. The adverts will tout the best US attractions.

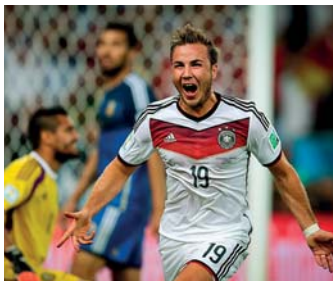
Details: <http://lei.sr?a=U3P8y>

## Pioneering 360 film to debut in FIFA museum

The 2014 final of what has been touted by football fans and media as "the greatest World Cup" of all time has been filmed using a pioneering 360° Ultra HD viewing experience to debut in FIFA's recently approved World Football Museum, opening in 2016.

The final of the 2014 World Cup – in which Germany triumphed over Argentina with a 1-0 extra time victory – will be relayed in a 360° viewing experience with a state-of-the-art Ultra HD OmniCam developed by scientists.

The equipment used a panoramic shooting technique meaning the game can be watched on 360° or 180° screens of future panoramic cinemas, as if the viewer is sitting in the stadium watching the recorded match in person.



Mario Götze's World Cup final goal will be available in full panoramic HD

FIFA gained approval to begin construction on the \$200m (£146.8m, £116.8m) museum – to be housed in downtown Zurich, Switzerland.

In addition to an exhibition space with trophies and shirts from years of

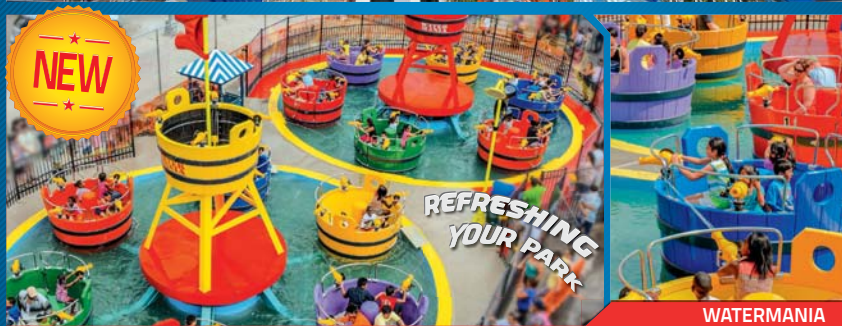
historical football events, the upper storeys of the museum will house offices for 136 workstations as well as 34 apartments. The museum will include a hall of fame, 3D displays and interactive games.

Details: <http://lei.sr?a=r6w6x>



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# Waterparks

## Cartoon Network waterpark opens

Cartoon Network's first branded waterpark opens in August to invited guests and annual pass holders in Bang Saray, Thailand. The grand opening – when all features and attractions will be operational – is scheduled for the end of the year.

The highly-anticipated \$30.9m (£18.2m, €22.8m) Cartoon Network Amazone, overseen by theme park developers Amazon Falls, was announced at the beginning of 2012, with the television network aiming to open more branded attractions across the Asia-Pacific region.

The attractions – supplied by Polin – incorporate a variety of popular animated series including *Adventure Time*, *Ben 10*, *The Power Puff Girls*, *Johnny Bravo* and *The Amazing World of Gumball*.

The waterpark becomes



Many Cartoon Network IPs have been incorporated into the park

Thailand's first globally branded theme park and features signature attractions including a gigantic family wave pool, an adventure river, speed-racing slides, family raft slides and one of the world's largest interactive water fortresses.

"Thailand has excellent tourism credentials, a

vibrant culture with a vast history and also the most welcoming people in the world," said the chair of Amazon Falls, Liakat Dhanji. "Cartoon Network is a global household name. We have no doubt that it will be a great draw for our waterpark."

Details: <http://lei.sr?a=5r2r>

Don't underestimate the value of leading customer service

ALEATHA EZRA

According to an interview in the 2013 Theme Park Index released by TEA and AECOM in June, John Robinett, senior



vice president economics for AECOM, said last year's success in attractions is due to "a global rise in the importance of leisure as a driving influence in culture and economies." Waterparks are very much a part of this mix, with eight of the 10 top theme park groups having multiple waterpark locations in their brand.

So, just how are the top 20 waterparks in the world driving more than 27 million guests through their gates? Along with the addition of some spectacular attractions, waterpark operators are focusing on hiring the best people who can deliver consistent, memorable customer service that anticipates the guests' needs before they even have to ask for it. This is what a recent *Forbes* article entitled "Spilled Ice Cream And Six Flags: A Great Customer Service Adventure" refers to as "anticipatory customer service." In this article, author Micah Solomon looks at how Six Flags as a brand has created a culture of "pre-planned service recovery." Six Flags has instituted a "key component of a successful customer experience: ensuring that your business is a conduit for relationships. In other words, turning your business into a setting for customers to form stronger bonds with the people your customer cares about," wrote Solomon.

So, it's not just providing thrilling ride experiences, although those still matter; and it's not only about providing the safest, cleanest environment possible for waterpark patrons, although that will always matter first and foremost to consumers. To achieve the kind of success that places you in the top 20 worldwide, you also need to provide a well-trained seasonal and full-time staff that focuses on "anticipatory customer service."

Aleatha Ezra, director of park member development, WWA

## Splash Kingdom plans Christian waterpark

The owner of Christian-orientated Splash Kingdom Family Waterparks has announced that he will be opening another attraction, this time in the county of Brazoria, Texas, US.

The company's parks are operated with the intention of "glorifying God", according to Splash Kingdom's owner Johnny Blevins, with a new faith-based facility expected to open in 2015 if it makes it past a county ballot later this year.

Splash Kingdom has waterparks in Canton and Hudson Oaks, Texas, as well as Shreveport, Louisiana. The company's owner belongs to the Faith-Based Amusement Association.

Given their Christian grounding, Splash Kingdom's waterparks operate following a conservative set of rules, with particular types



Splash Kingdom Waterparks operates a number of attractions in the US

of women's swimwear, denim and alcohol banned from their premises.

Guests at the waterparks can also be asked to cover up if their swimwear or tattoos are deemed to be offensive or inappropriate.

Attractions based around

religious principles have been growing in numbers across the world, particularly in the US, where a Christian group called Answers in Genesis is also seeking to push ahead with plans for an Old Testament theme park. Details: <http://lei.sr?a=U6r6J>

## Taking the sector's pulse at the Ecsite Annual Conference

CAMILLE PISANI

**E**csite, the European network for science centres and museums, held its 25th annual conference in the Hague, Netherlands, from 22-24 May, attended by 954 participants from 48 different countries.

As chair of the Annual Conference Programme Committee, I want to discuss two of this year's main trends.

The first striking observation from the 2014 edition is the strong participation of makers and gamers. The Maker movement in particular has firmly rooted several of its branches inside science centres and museums, often via the setup of Fab Labs or Maker Faires. These high-tech, low-cost DIY workshops represent more than a new tool: they bring new science engagement practitioners and new audiences with them. Both theoretical and practical sessions gathered large crowds at the conference, whether to discuss the movement's "social epidemiology" or build a giant chain reaction. Gaming also attracts increasing attention and could not remain limited to a few sessions.

The second trend shows a deep shift in the way science centres and museums consider their role in society. Institutions are increasingly entering in dialogue with professionals from other sectors, with policymakers, entrepreneurs, as well as ordinary citizens. We are moving away from a top-down approach towards a more participatory model of science engagement. Definitions and possible uses of citizen science, responsible research and innovation and living labs were strongly debated – a healthy sign of diversity and experimentation.

Interestingly, this trend is changing the Ecsite Annual Conference itself: many suggestions made during an idea-gathering session for the next 25 years of conferences went in the direction of more participation.

*Camille Pisani, director of the Royal Belgian Institute of Natural Sciences*



## Abu Dhabi centre aims to inspire

Plans for a new science centre in Abu Dhabi have been revealed by the country's Technology Development Committee (TDC), offering more than 200 interactive exhibits as part of a campaign to get more young children interested in science.

Opening in 2016, the state-of-the-art facility – located in Masdar City adjacent to Abu Dhabi International Airport – features a planetarium, water play area and seven signature galleries for exhibitions, as well as teaching spaces.

Abu Dhabi Science Centre (ADSC) will serve as both a local facility for education and a major attraction for the people of the UAE and visitors worldwide. Targeted at children aged 6-11, the centre is expected to attract more



The science centre will include a planetarium, which will seat 75 people

than 200,000 visitors a year, with building set to start later this year.

Costs for the creation of the two-storey 6,500sqm (70,000sq ft) ADSC have not yet been revealed.

The centre is part of a strategy by the Abu Dhabi Technology Development

Committee to "establish a vibrant Science, Technology and Innovation (STI) base in the Emirate" and is also a strategic initiative that's aimed at inspiring the next generation to consider STI education and careers further down the line. Details: <http://lei.sr?a=17K9X>

## KidsSTOP science centre debuts in Singapore

KidsSTOP – an interactive science centre aimed at children – has become the first such attraction to open in Singapore.

Designed by Jack Rouse Associates (JRA), the centre is an addition to the existing Science Centre Singapore and comprises 17 zones with areas designed around the themes of imagine, experience, discover and dream

The centre, reported to have cost around \$8.5m (£5m, €6.3m), aims to encourage learning through activity, play and exploration.

The "imagine" section of the centre uses the concept of innovative role play, encouraging kids to practice creative and communication skills to boost self-confidence, intellectual growth and social skills.

In the "experience" area, the centre will encourage



The 17-zone science centre is reported to have cost around \$8.5 million

art appreciation from children and appreciation of nature through interactions with live animals, stop-motion animation and more.

The "discover" aspect centres around science, technology, engineering and mathematics (STEM).

KidSTOP's most prominent feature is Big Dream Climber, a 9-metre (29.5-foot) climbing structure which allows children to ascend and explore different zones incorporating hanging leaves, doors and gears. Details: <http://lei.sr?a=Z217G>



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# Zoos & Aquariums

## Efforts in amphibian conservation grow in leaps and bounds

JENNIFER FIELDS

**M**ore than one-third of the world's amphibian

population is in danger of extinction due to habitat loss and degradation, disease and environmental changes. Zoos and aquariums accredited by the Association of Zoos and Aquariums (AZA) are committed to working to protect the future of these animals through their various conservation projects.

With Head Start programmes and breeding, rescue and reintroduction initiatives, as well as public engagement through citizen science programmes such as AZA's FrogWatch USA, AZA-accredited facilities make significant contributions to amphibian conservation.

These facilities also conduct vitally important research and train amphibian conservationists around the world. Important projects are underway throughout all of the Americas, as well as in Africa and Asia.

Recently, AZA published the 2013 *Amphibian Conservation - Highlights and Accomplishments* report, which is available on the AZA website. The report features the work of individual facilities, as well as AZA's Amphibian Taxon Advisory Group (ATAG) and amphibian-focused Species Survival plans, and it highlights many of the successes so far and the ongoing commitments regarding amphibians.

While amphibians serve an important role in the lives of other species that depend on them, they also act as indicators that can help humans understand the health of the environment. As threats to the species increase, the conservation efforts of AZA-accredited zoos and aquariums and their partners are more important than ever. Working together, they will continue to make a difference.

Jennifer Fields, communications coordinator, AZA



## Zurich Zoo's elephant 'aquarium'

Visitors to Switzerland's Zurich Zoo can now get up close and personal with the park's six Indian elephants following the opening of the \$63.3m (£37.8m, €46.7m) Kaeng Krachan elephant park, which welcomed its first guests on 8 June.

The new 11,000sqm (118,400sq ft) elephant enclosure features six water basins, one of which offers an aquarium view of the land animals swimming.

The basin has a glass wall – reinforced to take the weight of the elephant occupants – and is designed to give the elephants conditions that more closely resemble their natural environment.

The habitat also features an area for the elephants to "socialise" where keepers are not allowed to go, featuring covered and open areas



The new enclosure offers an aquarium view of the elephants swimming

with different vegetation.

"Paris has the Eiffel Tower, Rome the Colosseum – Zurich now has its elephant park," said zoo chair, Martin Naville.

The cost of the elephant park was financed through foundation grants, legacies and sums donated by more than 5,500 members of the

public to the zoo.

The elephants have been in the new park since mid-March and have had ample time to acclimatise to their new conditions, according to the zoo, while a new addition is soon expected with the imminent birth of an elephant calf.

Details: <http://lei.sr?a=u267t>

## BIG imagines new kind of zoo with Zootopia

Bjarke Ingles Group (BIG) has been commissioned to design a new form of enclosure at Givskud Zoo, Denmark – Zootopia. Zootopia is based on the concept of man and nature becoming one; it is a hybrid of a traditional zoo and a safari, which will be split into four different sections, three of which will be themed around the continents of Africa, Asia and the Americas, with a central plaza in the middle.

BIG stated: "It is our dream – with Givskud – to create the best possible and freest possible environment for the animals' lives and relationships with each other and visitors."

Across BIG's three-continent concept, each will have a different mode of transport, allowing the visitor to "fly" over the



Rendering of BIG's concept for the Zootopia site in Denmark

Americas (in a cable car), cycle or hike through Africa and sail across Asia.

The traditional caged aspects of the zoo will be hidden in a natural manner within the new landscape, allowing homes for the animals to blend seamlessly with the overall design.

Linking the areas together, the Central Plaza will allow guests to glimpse the

surrounding attractions.

BIG is aiming to make this space an extension of the city, allowing freedom of movement and integration from a proposed square outside. The entrance will wrap around itself to create a natural entrance gate.

The 1,200,000sqm (3,937,007sq ft) project is currently in progress. Details: <http://lei.sr?a=y3P2M>

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# Museums & Galleries

## New look for London's Imperial War Museum

London's Imperial War Museum (IWM) has marked the centenary of World War One with the reopening of its museum following the completion of the first phase of a larger £40m (US\$68.3m, €50.5m) revamp of the entire facility.

The first phase of the IWM's refurbishment was made possible with £6.5m (US\$11.1m, €8.2m) in funding from the Heritage Lottery Fund and £5m (US\$8.5m, €6.3m) from the Department for Culture, Media and Sport, as well as other public and private donations.

Foster + Partners (F+P) has been working on the Imperial War Museum (IWM) for the last four years as part of a wider redevelopment and masterplan of the entire site. The new atrium by F+P and the IWM's World War Galleries were officially opened by Prince William, Duke of Cambridge and prime minister, David Cameron, on 17 July.

The first phase of the IWM's development has been finished in time to coincide with the centenary of the start of World War One. The subsequent phases of the museum's redevelopment are planned to coincide with other commemoration dates.

Michael Jones, senior partner at F+P,



An Imperial War Museum image shows the newly redeveloped atrium and exhibits

told *Attractions Management* "there are lots of milestones coming and we hope to pin those future phases to those dates, so there will hopefully be a series of big projects that commemorate these different

milestones. That is the objective."

Architecturally, the museum still has several phases to go before it's envisaged masterplan is complete, said Jones. Details: <http://lei.sr?a=V2J2y>



British contemporary artist Damien Hirst

## New gallery to house Hirst's art collection

The personal art collection of British artist Damien Hirst is set to go on display in May 2015, when a new gallery opens in Vauxhall, south London.

The collection – which contains 2,000 pieces – will be housed in a converted warehouse, also designed by Caruso St John Architects, who also worked on the recent revamp of Tate Britain.

Hirst's collection includes work by Francis Bacon, Jeff Koons and street artist Banksy. The local council hailed the start of a "Gallery Quarter" alongside the major regeneration in the area.

Details: <http://lei.sr?a=v2Q8W>

## George Lucas picks Chicago for museum

Chicago has been selected as home for the much sought-after George Lucas museum, with the city narrowly pipping bids from Los Angeles and San Francisco.

Lucas – creator of the *Star Wars* and *Indiana Jones* movie franchises – looked initially to have chosen San Francisco for the home of what will be known as the Lucas Museum of Narrative Art. However, complications in the San Francisco plans and an aggressive lobbying effort by Chicago Mayor Rahm Emanuel led to him choosing the Illinois city.

Pending approval by the Chicago Plan Commission, Lucas' institution will be built on parking lots between Soldier Field and McCormick Place, with a projected opening date of 2018. Renderings will be presented to city officials by October, a museum



George Lucas plans to initially invest a reported \$300m

statement said.

"I am humbled to be joining such an extraordinary museum community and to be creating the museum in a city that has a long tradition of embracing the arts and architecture," Lucas said.

Plans may not be that

straightforward, though, as an open space campaign group has threatened a lawsuit against Lucas, claiming the museum would breach regulations designed to protect open space adjacent to Lake Michigan.

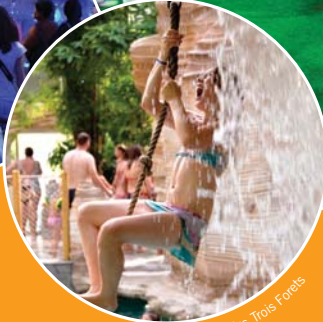
Details: <http://lei.sr?a=V2J2y>



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## Looters, gangs putting Egypt's heritage in danger

Egypt's heritage sector is in disarray following the revolution and the collapse of the country's government in 2011, with armed gangs, looters and general destruction placing the country's rich cultural history in peril, according to an eminent academic.

A breakdown in security to culturally significant sites in Iraq in 2003 led to widespread looting and now the same is happening in Egypt, comparable to some of the losses seen in other warring countries in the region such as Syria, which has suffered a similar breakdown in heritage and cultural protection.

The illicit excavation of archaeological sites in Egypt – carried out in the hope of finding antiquities that can then be smuggled out of the country for sale abroad – has been going on for centuries, but there has been a huge increase in such activities since the 2011 revolution.

Museums have been targeted, as well as heritage sites, with violence leading to the destruction of many sites in Cairo, including the bombing of the Islamic Museum.

Speaking to *Al-Ahram Weekly* Salima Ikram, professor of Egyptology at the American University in Cairo said problems



US-based Antiquities Coalition says looting has occurred at every major Egyptian archaeological site since 2011

in the country have become serious for heritage, and dangerous to protect.

"There has been an increase in the number of armed gangs, operating with instructions from one or more knowledgeable parties, targeting sites," said Ikram.

"Looting is going on particularly in desert areas where it is very difficult to patrol. Often the looters are armed. The encroachment on the sites is also terrible. The history of Egypt is being lost forever." Details: <http://ei.sr?a=M2r4T>



Shahr-i Sokhta, Iran, is a new entry on the list

## World Heritage list tops 1,000: UNESCO

The remains of an ancient city in Iran, a prehistoric cave in France and a wetland in Botswana are among a host of new sites that have been added to UNESCO's World Heritage list, pushing its total past 1,000 sites worldwide.

The Okavango Delta in Botswana was the 1,000th site to be added to the UN cultural agency's list, which first started in 1978 and enforces strict rules on conservation for the chosen areas. Twenty sites joined the list, including Shahr-i Sokhta in Iran, and Stevns Kilt, Denmark. Details: <http://ei.sr?a=07W2J>

## Star Wars flies into Ireland heritage row

UNESCO has voiced concerns about whether appropriate authorisation was granted for the use of World Heritage site Skellig Michael as a film set for the latest instalment in the *Star Wars* franchise.

A UNESCO spokesman confirmed the heritage body had approached the National Monuments Service (NMS) – which oversees heritage sites in Ireland – for more "information on filming permissions" that had been granted.

Skellig Michael is an island off the coast of County Kerry, and is the site of a Christian monastery founded between the 6th and 8th centuries. The remains of the monastery, along with most of the island, were added to the World Heritage list in 1996. In addition to UNESCO,



Skellig Michael was listed as a UNESCO World Heritage site in 1996

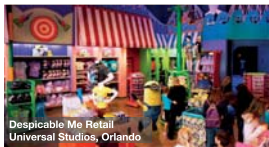
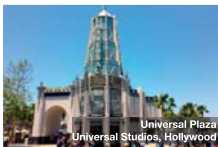
both Birdwatch Ireland and an independent archaeologist have expressed concerns about the impact of a major film crew on a fragile environment.

UNESCO said it was not obliged to inform it of such projects unless there was

deemed to be a potential risk to the "universal value" of a UNESCO site.

The NMS said it was looking into the matter and that it would submit a report to UNESCO by 3 August – though this wouldn't help the heritage site as filming had already begun before that date. Details: <http://ei.sr?a=k6y9j>

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# THE ART OF COLLABORATION



Huge, green and grumpy - Shrek is an evergreen IP in more ways than one, and Merlin's new attractions are sure to be a global crowd pleaser. We find out about what it's like to work with DreamWorks on a popular franchise like this.

Alice Davis, managing editor, Attractions Management

**F**alling for the perfect IP can be the start of a beautiful — and lucrative — relationship. When in February this year Merlin Entertainments announced a deal with DreamWorks to create six Shrek-themed midway attractions, it was a sign of a blossoming romance. There's more to it, though, than throwing money at an IP holder and running off with the spoils. Like any successful relationship, it needs to be nurtured and based on the foundations of communication, commit-

ment, mutual respect, the ability to get along and — who knows — even have a good time together.

Merlin's creative team, Merlin Magic Making (MMM), headed up by Mark Fisher, has been driving the DreamWorks partnership since they worked together on the live Madagascar show staged at Chessington World of Adventures in the UK in 2012 and Heide Park, Germany, the following year. Things have developed organically — though purposefully — thanks to Fisher's strategic consolidation of all their IP business, bringing it under ▶

*continued on page 26*

Mark Fisher joined the Tussauds Group in 1991 and Merlin in 1995. He was part of the original management buyout team from Vardon







## THE GREEN OGRE IN ALL OF US

We asked Jonathan Linn, head of location-based entertainment at DreamWorks Animation, what's happening behind the scenes of the upcoming Far Far Away Adventure

### **What's most exciting about the Shrek-themed attraction?**

We are very excited as this is the first attraction of its kind for our globally beloved Shrek franchise. Fans and guests will have the chance to interact with many of their favourite characters in a unique and exciting way, including custom animation, special effects, a 4D experience and live entertainers.

### **What makes the Shrek franchise translate well into a global attraction?**

Shrek is an international brand and there really is a little bit of the green ogre in all of us. People respond to him as he is an unlikely hero who feels like a dear friend.



### **How closely are DreamWorks' designers working with Merlin on the attractions?**

Merlin's and DreamWorks' creative teams have been collaborating for the last year to design the most innovative, adventure-packed and fun-filled attraction. In fact, the DreamWorks creative team is led by the actual film makers who brought Shrek and his humorous stories to the screens. They have been working very closely with Merlin's creative teams to bring the animated land of Far Far Away to life for fans and guests around the world.

### **What are the biggest challenges to creating an authentic Shrek world?**

One of the exciting challenges of the project is how we will immerse the guests fully into the experience. Attention to detail is also crucial in bringing Shrek's animated world into ours.

### **Can you provide a brief overview of the planning and design process for the first Shrek attraction?**

DreamWorks and Merlin are working to provide a fully immersive experience combining animation, special effects and live entertainers. We are in the process of developing each of these elements now. We are delighted to be working with Merlin, a global leader in creating unique, memorable and rewarding visitor experiences around iconic brands.

### **DreamWorks is working on original content, scripting and animation for Merlin. Can you give us some clues about the content you're working on?**

We don't want to tease you with a "spoiler alert" right off the bat! Rest assured that fans and guests will find the same great level of comedy and attention to detail as in all of our Shrek films.

“An IP holder’s main collateral is his IP. He’s not going to let you walk all over it.”

one umbrella at the centre of MMM. Every brand, franchise and partner is unique, each with its own challenges and, indeed, each with its own rewards.

When Fisher, who joined Merlin Entertainments in 1995, took the role of chief development officer for MMM in 2011, it was all about reaching out and building relationships. He got rid of the existing system, where IPs were managed haphazardly by different staff across the globe, and appointed an IP director, Jonathan Lewis, to anchor the license portfolio — a critical component in Merlin’s business model. (Present IP partnerships include licenses for Madagascar and Ice Age with Fox, CBeebies with the BBC (and others), Saw with Lionsgate, Sonic the Hedgehog with Sega, Angry Birds with Rovio Entertainment and Charlie and the Chocolate Factory with the Roald Dahl estate.) “Then we literally got on a plane and went to sit down with all the Hollywood studios,” Fisher says. “DreamWorks was one of them, and we got on really well.” That led to the Madagascar shows, where the teams on both sides worked closely together. When Merlin pitched the idea of the Shrek attractions, DreamWorks “was in the right



Ocean characters the Octonauts (above) proved a good fit for Merlin’s Sea Life. The Zingzillas perform at CBeebies Land (below)

frame of mind to look at it,” says Fisher.

The initial agreement reached with DreamWorks is for Merlin’s midways operating group to open six attractions named Shrek’s Far Far Away Adventure over the next 10 years. The first of these will be in 2015 in London, a new addition to the FTSE 250 company’s Thames-side cluster at County Hall, where the London Eye, Sea Life London and London Dungeon are located. The other Far Far Away Adventure locations have not been decided, but will be in different countries around the world on sites of between 20,000sq ft and

30,000sq ft (2,000sqm and 3,000sqm).

The family-focused attractions will be actor-led, interactive Shrek adventures, “where you’ll actually take part in the story,” says Fisher. “It’s participative like the Dungeons, and massively immersive, so you’ll feel like you’re in the middle of the story. That’s the majority of it, and then there’s a second part where you’ll meet some of Shrek’s friends and some other DreamWorks characters.”

The beauty of this first Far Far Away Adventure is twofold: its proximity to other Merlin offerings, and Shrek’s enduring and age-spanning appeal. “From a strategy point of view, you can cross-sell tickets across sites, have bigger central management teams in those clusters, things like that,” says Fisher. “And I suspect it won’t just be about cross-selling to our visitors, but that it will actually drive more people into London because there’s been a massive interest and people will come into London to try it.” Fisher adds that the franchise fits well with Merlin’s wider midway strategy. These attractions need to be chainable and scalable: “We’re not interested in having one-off midways round the world.”

When it comes to Shrek’s popularity, his audience has been growing since the first film was released in 2001. From the beginning, the characters and narratives have offered enough ambiguity in interpretation to entertain both children and adults. And it’s not just the ogre protagonist who wins hearts; the franchise’s success is owed to the multitude of genial characters. A 2012 poll by Co-operative Pet Insurance to find the UK’s all-time favourite animal film star saw Donkey claim the number one





Postman Pat has been entertaining children since 1981. As popular as ever, he's one of the biggest IPs in the CBeebies portfolio

spot. "It really does appeal to everybody because of its multi-level humour," says Fisher. "Some people have grown up with the franchise, and older people too have an affection and an affinity with it."

This near-universal fondness for the animated characters gives added weight to the importance of Merlin and DreamWorks working so closely together. The UK-based entertainments business accepts that a global franchise like this puts it ahead of the game in terms of marketing the final products to the public, but as Fisher points out, the challenge then is to "make sure we deliver and live up to what people love about Shrek."

There are several aspects of this partnership that seem to have helped lay the foundations for a successful attraction that meets and surpasses expectations. The first is the ability to negotiate – and skilfully. According to Fisher, DreamWorks was "pretty open because they are a good group with similar aims." Even then, it took a little time for the details to be ironed out. "An IP holder's main collateral is his IP, and he's not going to let you walk all over it. There was some negotiation [with DreamWorks] about what we

## FINDING THE RIGHT IP

**There are a lot of IPs with a lot of potential, but how do you know which ones to bank on? Here are some tips from Merlin Magic Making's Mark Fisher.**

- A well known and loved IP means a readymade customer affinity with the brand. That helps when it comes to building its appeal and the marketing side of things.
- Be driven by what customers say they want. Try not to be too subjective.
- Do your research. With CBeebies Land, we found out the biggest and best IPs in the pre-school market, then asked the audience to choose their favourite from the best five or six we'd found. Turned out CBeebies is far and away the biggest IP brand for the toddler group.
- Be on your toes. You never know the next big thing, and some of these opportunities come up quickly, like a temporary project we're doing with a [CBeebies] brand called the Octonauts at Sea Life. It went bonkers.
- Choose IPs that are going to be around for a reasonable amount of time, particularly in today's society where everything moves so quickly.

wanted to do and how we wanted to do it, but it was all done with good grace."

Every IP holder will be protective of their creation, and each presents a unique set of circumstances that needs to be handled accordingly. The recent collaboration between the BBC and Merlin to create CBeebies Land at Alton Towers not only involved working with the BBC on their own IPs but also managing sub-IPs owned by other parties. Fisher says: "I think there were 12 to 15 different IP holders, and that's probably the most

complicated one we've ever done. You have to try to please everybody." Despite the complexity, he's confident that Merlin and the BBC joined forces to good effect, and is hoping the groundwork will lead to a "deeper, longer-term relationship" with the potential for more opportunities. These deeper relationships promote a better understanding of one another and the IP. "What we don't want to do is go and 'logo slap,'" Fisher says, believing great IP-based attractions need to be based on something more profound.



Another contributor to the success of the relationship is regard for the IP. Working within a complex legal framework, presenting “other” ideas to the creators and winning their trust is no easy feat. “There’s a very specific set of rules that exist because the brands are protected,” says the MMM head. “We’re conscious that when we deal with someone else’s IP that we deal with it in a respectful manner and follow what they want as well.”

Ultimately, though, it’s about the people. A collaborative environment, where the IP holder’s team and the licensee’s understand each other and get along, is invaluable to the project. Part of that could be recognising and capitalising on each other’s strengths; part of it could be straightforward team-building activities. DreamWorks’ and MMM’s creatives have been perfecting the art. “The Merlin team has been to the US to Burbank on regular visits, and their team has been in London. It’s a bit of a love-in, to be honest,” Fisher says. “They’re the same kinds of people – gregarious, creative – so there’s a really good relationship.”

That philosophy runs from the creatives to the management and right up to the top, with Merlin CEO Nick Varney and DreamWorks’ boss Jeffrey Katzenberg maintaining a close personal relationship

“Merlin and DreamWorks are having a love-in. They’re the same kinds of people – gregarious, creative – so there’s a really good relationship.”

too. Could this lead to a “wider collaboration” as Varney has suggested? “There are a number of things; whether it’ll be other attractions, I don’t know at this stage, it’s too early,” Fisher says. “But there are a lot of ambition in DreamWorks to do more of these kinds of things as well. The great thing about them is that they are creating new IP all the time; recently there’ve been the Croods and Turbo. There’s lots of things we can do.”

Though Fisher is quick to iterate that Merlin is not going to turn into “everything to do with IP”, the business, with its 2013 flotation on the London Stock Exchange, is riding a wave right now and the vital role IPs have played is undeniable. “When they’re relevant to what we

Angry Birds Land at Thorpe Park opened in May, featuring the 100ft rapid drop tower ride Detonator and the Angry Birds 4D experience

want and, more importantly, to what our customers want, then all these relationships with major IP holders are massively important.” He mentions Ice Age as an example of a successful IP attraction, running at Alton Towers, UK, and Gardaland, Italy, where the relationship with Fox has been cultivated, not neglected. Another big IP-led attraction that opened recently is Angry Birds Land at Thorpe Park, UK. “Now that we have got people running these relationships, Nick and I can go and meet these guys and talk to them and demonstrate it’s not about a one-off, but about how we do things in the long term.”

The spotlight now though is likely to stay on Shrek and friends, as expectation rises and fans’ anticipation builds for the first Far Far Away Adventure. Fisher, for one, is excited. “All I can say at the moment is that I went through some of the scripts and I was howling with laughter. The same humour and fun that you see in the Shrek films comes through.” ●



## SHREK BY NUMBERS

**2001**

The year the first Shrek film was released.

**919.8m**

The total lifetime worldwide grosses for Shrek 2, in US dollars.\*

**60m**

The budget for the original film, in US dollars

**88**

Critics score for Shrek on the film review website Rotten Tomatoes.

**46m**

Number of people who have "liked" Shrek's Facebook page.

**1990**

The year the book Shrek!, by William Sleig, was published. The rights were bought by Steven Spielberg in 1991, before DreamWorks acquired them in 1995.

**5**

Number of films in the Shrek franchise so far. They are Shrek, Shrek 2, Shrek the Third, Shrek Forever After, and the spin-off Puss in Boots.

**484.4m**

The total lifetime worldwide grosses for the original film, in US dollars.\*

\* Figures from Box Office Mojo

**9**

Position in the rankings of the highest-grossing movie franchises of all time, below Batman and above the Twilight Saga.\* Harry Potter tops the chart.



# Whose museum is it anyway?

The public is vital to the health, wealth and motivations of a museum. But the collection and exhibits form its beating heart. Do museums exist to serve the public or the collection?

**A**ngry exchanges over building proposals at the Museum of Modern Art in New York have reignited the debate over priorities. For some, the decision to tear down the adjacent building – the former home of the American Folk Art Museum – to create a public space was misguided. Others are passionate that the quality of the visiting and non-visiting public's experience will be enhanced.

The focus of museums on the public is not new. Over decades, the audience has been increasingly courted by museums. Museum activist and author Kenneth Hudson went so far as to say "the most fundamental change that has affected museums is the now almost universal



An interior view of the Museum of Modern Art (MoMA) in New York

PHOTO: (C) MUSEUM OF MODERN ART

conviction that they exist in order to serve the public. The old-style museum felt itself to be under no such obligation ... The museum's prime responsibility was to its collections, not to its visitors."

These days, museums have to compete. Audiences are demanding. Museums seem to fight to stay relevant, so many market themselves as commercial enterprises.

Attracting an audience, therefore, means giving a modern audience what it wants: technology, exciting architecture, public spaces, coffee shops, hi-tech audiovisual guides, popular exhibits, social media interaction – the list goes on. But amid these crowd-pleasing initiatives, are we losing sight of what's important? Should the visitor experience be the priority?

## DR WENDY EARLE

Knowledge Exchange Manager, Birkbeck University of London and Convenor, Institute of Ideas' Arts and Society Forum



**M**useums are great places for losing yourself. In London's Hunterian Museum in the Royal College of Surgeons you'll be blown away by beautifully displayed surgical specimens and 17th-century instruments. Across Lincoln's Inn Fields is the completely different John Soane Museum, housing his amazing collection of architectural objects and art, which he left for students and the public to freely "consult, inspect and benefit" from. He left instructions for the museum to be kept as he left it – where the exhibits speak

for themselves with few labels or curatorial interpretation. It's in stark contrast to the current trend to invest substantially in public engagement, interactive technologies and heavily curated exhibitions aimed at attracting wider audiences.

Making collections accessible has always been one of the major functions of museums. Exhibitions are designed for the public to look at and learn from, while students

and researchers are given additional access to exhibits or collections not on display. In the past, "the public" was seen by museums as anyone interested in their collections, which were to provide open-ended opportunities for learning and contemplation.

Now many museums practise audience segmentation and treat collections as if they can do people good. They cater for a wide range of interests and needs, offering visitor attractions such as cafés and gift shops, interactive apps, tablets and audio guides, and events such as family workshops and party nights to attract young people.

Many museums see their collections as a means towards community cohesion or providing a resource for educating children. They make fun-filled apps to

engage children's attention or provide labels making the exhibits relevant to contemporary political and social issues.

These measures show a lack of faith in both collections and audiences. Museums are not (and need not be) everyone's idea of a good time, but they offer access to unique resources which help us expand our knowledge of the world. Museums like the Hunterian and the Soane are respected because their collections talk directly to visitors. Looking at the displays, like reading books, involves interaction with other minds, which in itself is refreshing and enlightening. There's no necessary dichotomy between audiences and collections and museum professionals should underestimate neither.

■ [@wearlieg](http://bbk.ac.uk)

Concept illustration for a sculpture garden, part of the MoMA expansion, by Diller Scofidio + Renfro



## KATHY FREDRICKSON

Director of Exhibition Research and Publishing, Peabody Essex Museum, Salem, Massachusetts

Museums today don't have the luxury to think of curating at one end of a spectrum and engaging visitors at the other. This implies an internal-versus-external focus that is not in anyone's best interests. To remain viable for generations to come, we have to consider how these objectives can be integrated to create unique opportunities for museums to share content and ideas. We have to stop thinking in terms of museum staff and museumvisitors and think of museums as communities. Architecture and technology



are no good without communities to populate them with content and ideas.

So what's the main objective of the museum? Peabody Essex Museum is a collection of global art and culture, and our main objective – ie mission – is to transform people's lives through art. Collecting and curating are imperative to that effort, but we can't fulfil our ultimate goal without engaging our audiences. We have to

make them care about us if we aim to transform their lives.

*Trendswatch 2014* cites the "economy of collaborative consumption" as a key driver for millennials. In this "peer-to-peer" economy, people are more interested in sharing experiences than buying things. Museums are well positioned to share experiences, so our challenge is to do this in fresh, appealing ways.

On one hand, curation implies a premium attached to the knowledge we deliver. The term "museum quality" has street cred. On the other hand, we have audiences who regularly curate their own experiences and expect to participate. We have to find a balance. Technology offers many platforms for content sharing and social engagement. Content sharing can be a two-way street where everyone can

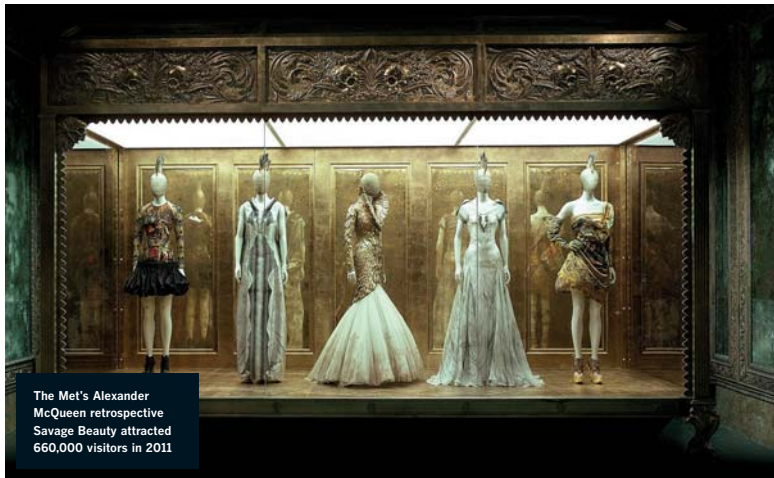
contribute ideas.

Inspiring architecture can attract people, like the Turbine Hall at the Tate Modern. Commercial enterprises like Disney and Broadway productions, which have invested tremendous capital into considering the visitor experience, can be sources of inspiration for museums.

There's a lot of opportunity for museums to successfully curate, collect and build community. Our only limitations are the boundaries we place on ourselves. Not everybody finds art approachable so we must keep trying new ways to engage new audiences. One of those ways is to display wonderful objects.

As Bill Moggridge said, "The only way to experience an experience is to experience it."

► [pem.org/@peabodyessex](http://pem.org/@peabodyessex)



The Met's Alexander McQueen retrospective Savage Beauty attracted 660,000 visitors in 2011

Museums offer us all the chance to see each other through each others' eyes, transgress cultural and social barriers, share in each others' knowledge and grow as human beings

## TOM HENNES

Founder, Thinc Design,  
New York City

Asking whether museums exist to serve the public or the collection presents a false dichotomy. Most if not all museums today would claim the preservation of their collections is for the public good. In an interconnected world, the real question museums need to answer is this: "what publics do they and their collections serve and how do they serve them?"

It is erroneous to believe the only relevant public is the *visiting public* – the users of the museum. For museums with historical or cultural collections (and even many art and science museums) the public also includes those communities from whom the



collections are drawn and whose stories the museum tells – the *represented public*.

Both the *represented* and the *using public* have a stake in what the museum shows and the stories it tells. It's fair to say that both publics are composed of innumerable, overlapping communities with a diversity of sometimes competing interests. It is at the intersection of these interests that museums operate today,

and thus they cannot act as unquestioned authorities.

Instead, modern museums are what the anthropologist James Clifford calls "contact zones" in a dense social web, within which they can connect disparate communities around areas of common interest. They serve the public whose stories they tell by providing a platform for authentic representation. They simultaneously serve the visiting public by offering the chance to witness culture, history, art and nature in an immediate way that expands their knowledge.

By bringing "us" into contact with multiple "others", whether they are indigenous people, scientists, parts of our own society, or a diverse group of museum-goers, museums offer us all the chance to see each other through each others' eyes, transgress

cultural and social barriers and grow as human beings.

It is here that the relevance of new technologies and modes of interaction – from vibrant audiovisual storytelling to the visualisation of complex phenomena to the crowdsourcing of social history – comes into play. New modes of curation that guide and organise multiple modes of listening and representation open museums to broader discourse and interaction among multiple publics. This vibrant mode of interchange, based fundamentally in authentic objects, evidence and human contact, builds on museums' core strengths and strengthens them as sites of culture, knowledge and understanding that are unlike any other in modern society.

■ [@ThincDesign](http://thincdesign.com) ►





# Leisure – a vital part of today's shopping mall

Q&A with Nathalie Depetro, director of Mapic



## Why are leisure and entertainment so important for retail areas today?

With online sales booming, traditional retail – whether in city centres or shopping centres – has adapted its offering and its marketing approach. The challenge now for those involved in real estate business such as Triple Five, Regions Group, Sonae Sierra, Wanda Group and Apsys, to name a few, is to redefine the idea of the shopping centre, and provide an enhanced customer experience. Customers will still visit shopping centres with the goal of purchasing, but they will also come to spend a day of fun, fellowship and leisure with family and friends. The shopping centre is a one stop shop for today's customers.

sites are represented: shopping centres, city centres, outlying areas, transit zones, factory outlets and leisure centres. This is a unique opportunity for leisure operators and leisure brands to meet with their peers and exchange best practices with international players and owners of different retail site types.

## How will entertainment and leisure integrate in shopping centres?

In the previous century, culture, leisure and entertainment played a nominal role in the shopping centre strategy, and were perceived in some ways as merely philanthropic or charitable in nature. But in the wake of online competition, many savvy developers and shopping centre operators now perceive a major opportunity to increase footfall by rebranding the shopping centre as an event-space that encourages the public to stay longer (and buy more) while visiting the mall. Events can be focused on culture, leisure or education. ●

## How does MAPIC showcase Retailtainment & Edutainment over three days?

Firstly, MAPIC focuses on retail real estate on a global scale. It's the only event where all types of development

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### FIND OUT MORE

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In 2014, a dedicated RETAILTAINMENT zone will gather key players from the sector. Strategically located in Riviera 7, this unique area will feature pitching sessions and a café to network and do business in.



**retailtainment**

## DR TIMOTHY EWIN

Senior Curator, Natural History Museum, London

I'm passionate about the crucial and unique role museums play in understanding and preserving important objects for society, whilst making them accessible. Curatorial knowledge and collections form the foundation of all museum work and are thus vital to an effective service, including attracting visitors.

In the last 15 years many museums have prioritised attracting wider audiences. This has had many benefits, but it's not without problems. This is because stored collections and curatorial expertise, which don't always directly contribute



to attracting audiences, have become regarded as dead weight, leading to the idea that museums better serve society if they don't resource them.

This view however is erroneous, as collections are public assets, a record of our past and an investment in our future understanding of society and the world around us.

Furthermore, the preservation and acquisition of significant objects is a key societal demand on museums, regardless of contemporary use.

Whilst attracting visitors should not be a sole focus, the museums that are most attractive are those which blend an understanding of visitor needs, technology and design with collections and curatorial expertise. Thus, museums need to serve both the public and the collections to remain attractive and fulfil their societal obligations, irrespective of resources available.

So, the question "do -museums exist to serve the public or serve the collection?" is an unnecessary and damaging polarisation, distracting from the more important debate of

"what does society need from museums?" Serving one is not exclusive of the other and decoupling collections and curatorial knowledge from visitors is damaging to both.

In the future I hope to see a broader appreciation that museums exist for a plethora of different but interconnected and equally important reasons. Each area requires resources for the service to function effectively and sustainably. I hope national organisations begin to champion raising resources for all aspects of museum work, including curatorial expertise and stored collections, instead of focusing on potentially divisive, damaging and limited arguments.

■ [@NHM\\_London](http://nhm.ac.uk)

Tailoring exhibitions to create genuinely individual experiences is the future, while offering what people can't get anywhere else – be it an object, knowledge, experience or spectacle.

## ALEX McCUAIG

Chairman and CEO, MET Studio, London

The remit for all museums used to be relatively straightforward; they were both national institutions for learning and showcases for international – often colonial – acquisitions, which encouraged public access in order to educate, amaze and inspire patriotic pride. But museums today no longer form that single homogenous group.

Some primarily exist still – especially in art and culture – to protect, preserve and present their collections. Museums like the V&A in London or the Metropolitan Museum of Art in New York add hard commercialism to their mix by curating blockbuster temporary exhibitions linked to music or fashion.



David Bowie Is at the V&A was one of the most successful exhibitions in its history. At the Met's Alexander McQueen: Savage Beauty I saw the kind of queues most museums can only dream of, snaking right around the block.

It's the world of science museums where bigger questions are being asked in relation to all the razzmatazz kids and young adults in the developed world possess, enabling them to interact

globally in real time via online video gaming or streaming myriad information and entertainment onto their laptops, tablets and phones. Do museums have to compete with this? Yes, because they need each generation's leisure time – yet their budgets can't possibly accommodate the pace of change or the technological investment this would require.

Competition isn't just coming from home technology. Just as Frank Oppenheimer changed the science museum paradigm, Epcot changed the theme park paradigm by adding educational value. Epcot's 360° train journey across the Chinese steppes is an incredible high-adrenaline experience and a learning experience. How can museums hope to counter that by just showing a steam engine or the model of a bridge Brunel built to highlight

engineering feats of the past?

The split between science museums and science centres has been one answer, with the latter trying to compete more directly with experiential technology. Science museums need to concentrate on something no one else can give – access married to the best knowledge and technology, such as live-time film of a scientist on the edge of a volcano, for example. We are already questioning the one-size-fits-all inclusive voice; families, school groups, tourists, enthusiasts, students and peers can no longer be catered for as one audience. Tailoring exhibitions to create genuinely individual experiences is the future, while offering what people can't get anywhere else – be it an object, knowledge, experience or spectacle.

■ [@metstudio](http://metstudio.com)



<b>EAS</b> Euro Attractions Show	MEET US AT BOOTH 7232
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## 3D/4D ATTRACTION AND RIDE FILMS



# ENDURING APPEAL

The TEA/AECOM 2013 Theme Index signals another bright year for visitor attendance across the industry, with exceptional figures for waterparks, museums and theme parks in Asia

## GLOBAL PICTURE:

### STILL ON THE UP

Attendance at the world's top 25 theme parks reached an all-time high last year, according to the TEA/AECOM 2013 Theme Index & Museum Index.

With 215 million visits in 2013, it's an increase of 4.3 per cent year-on-year. The top of the chart is dominated by Disney, with Universal Studios Japan the only non-Disney park to break into the top 10.

Particularly strong performance was witnessed at parks situated in Asia, most notably Tokyo Disneyland in Japan and Lotte World in South Korea, both of which experienced commendable attendance jumps of 15.9 per cent in 2013. This is indicative of a shift in focus for theme park development towards the East, which



Universal Studios Japan is the only non-Disney park to make the top 10

has come to the forefront in recent years. The gap in attendance between the top 20 North American parks and the top 20 Asian parks is narrowing further, falling from a difference of 22.9 million people

in 2012 to 18.3 million in 2013. New openings are still focused on emerging markets like the Middle East and Asia.

Despite experiencing another challenging year of flat growth, the European theme park market did see some success stories. Parks located in Northern Europe generally outperformed those in Southern Europe, with Merlin's attractions performing particularly well. For example, attendance to Merlin-operated Chessington World of Adventures in the UK jumped by 15.4 per cent in 2013 to 1.5 million due to the addition of the new Zafari: Ride Into Africa off-road safari trail.

The global top 20 waterparks had a great year, witnessing year-on-year growth of 7.1 per cent. Half of these parks are located in Asia, with Aquaventure in the UAE still the only top water-based attraction in the EMEA region. The rest are situated in the Americas.

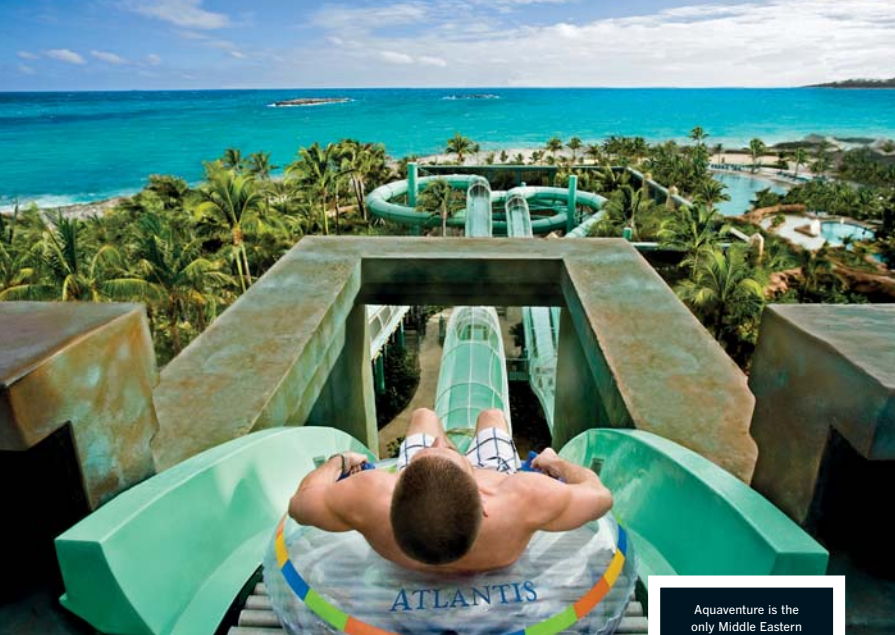
Europe dominates the global museum market in terms of visitation; however, the National Museum of China experienced an incredible leap in attendance of 38.7 per cent, moving it into third place internationally. This growth reflects not only the change to free entry, but also the significant redevelopment which has taken place at this museum, where the focus has shifted from local to national history and a number of attractive international exhibitions boosted audience attendance.

## OPERATOR PERFORMANCE: DISNEY RULES

The global top 10 attractions operators had another successful year, seeing attendance increases of 5.4 per cent across the attractions in 2013. Disney led the way again, achieving an aggregate attendance level of 132.5 million, a growth of 4.8 per cent, primarily due to the incredibly strong performance of its Asian parks. Tokyo Disneyland, Tokyo DisneySea and Hong Kong Disneyland all posted double-digit growth in 2013, a result of significant reinvestment in new rides and park expansions.

## TOP 25 THEME /AMUSEMENT PARKS WORLDWIDE

PARK AND LOCATION	CHANGE	2013	2012
1 Magic Kingdom At Walt Disney World, Orlando, USA	6.0%	18,588,000	17,536,000
2 Tokyo Disneyland, Tokyo, Japan	15.9%	17,214,000	14,847,000
3 Disneyland, Anaheim, USA	1.5%	16,202,000	15,963,000
4 Tokyo Disney Sea, Tokyo, Japan	11.3%	14,084,000	12,656,000
5 Epcot At Walt Disney World, Orlando, USA	1.5%	11,229,000	11,063,000
6 Disneyland Park At Disneyland Paris, Marne-La-Vallée, France	-6.9%	10,430,000	11,200,000
7 Disney's Animal Kingdom At Walt Disney World, Orlando, USA	2.0%	10,198,000	9,998,000
8 Disney's Hollywood Studios At Walt Disney World, Orlando, USA	2.0%	10,110,000	9,912,000
9 Universal Studios Japan, Osaka, Japan	4.1%	10,100,000	9,700,000
10 Disney's California Adventure, Anaheim, USA	9.5%	8,514,000	7,775,000
11 Islands Of Adventure At Universal Orlando, Orlando, USA	2.0%	8,141,000	7,981,000
12 Ocean Park, Hong Kong	0.5%	7,475,000	7,436,000
13 Hong Kong Disneyland, Hong Kong	10.4%	7,400,000	6,700,000
14 Lotte World, Seoul, South Korea	15.9%	7,400,000	6,383,000
15 Everland, Gyeonggi-Do, South Korea	6.6%	7,303,000	6,853,000
16 Universal Studios At Universal Orlando, Orlando, USA	14.0%	7,062,000	6,195,000
17 Universal Studios Hollywood, Universal City, Los Angeles, USA	4.0%	6,148,000	5,912,000
18 Nagashima Spa Land, Kuwana, Japan	-0.2%	5,840,000	5,850,000
19 Seaworld, Orlando, Orlando, USA	-5.0%	5,090,000	5,358,000
20 Europa Park, Rust, Germany	6.5%	4,900,000	4,600,000
21 Walt Disney Studios Park At Disneyland Paris, Marne-La-Vallée, France	-6.9%	4,470,000	4,800,000
22 Seaworld, San Diego, USA	-3.0%	4,311,000	4,444,000
23 Tivoli Gardens, Copenhagen, Denmark	4.1%	4,200,000	4,033,000
24 De Efteling, Kaatsheuvel, Netherlands	-1.2%	4,150,000	4,200,000
25 Yokohama Hakkeijima Sea Paradise, Yokohama, Japan	2.4%	4,149,000	4,050,000
<b>Total</b>	<b>4.3%</b>	<b>214,708,299</b>	<b>205,906,000</b>



Aquaventure is the only Middle Eastern waterpark to register a presence in the top 20



► Building on remarkable growth of 16 per cent in 2012, Merlin Entertainments cemented their silver medal position by posting yet another year of attendance growth; up 11 per cent for 2013. A new addition to the top 10 global operator list is the Fantawild Group. The Chinese chain registered incredible growth of 43 per cent in 2013, entering the chart for the first time at number nine, more than 3 million visits ahead of the Haichang Group who slipped back to number 10.

## EUROPEAN PICTURE: NORTH – SOUTH DIVIDE

Overall, attendance at the top 20 European theme parks dropped slightly from 57.9 million down to 57.8 million in 2013, a decline of 0.1 per cent. A key reason for this is the relatively poor performance of the two Disney parks situated near Paris: Disneyland Park and Walt Disney Studios Park.

From a geographical perspective, one-quarter of the top 20 theme parks are located in France, while one-fifth are in the UK. The strongest increases in attendance were experienced in the UK (7.3 per cent), followed by Denmark (5.6 per cent) and Germany (5.2 per cent).

These countries' economies performed far better than those of the other European countries with parks in the top 20. Generally speaking, there seems to be a correlation between the GDP of a particular country and its attraction attendance dynamics. When looking at the top 20 European parks as a whole, attendance has declined following the economic recession. Comparing GDP growth by country to the attendance growth of these parks located within

## TOP 20 WATERPARKS WORLDWIDE

PARK AND LOCATION	CHANGE	2013	2012
1 Chimelong Waterpark, Guangzhou, China	7.5%	2,172,000	2,021,000
2 Typhoon Lagoon At Disney World, Orlando, FL	2.0%	2,142,000	2,100,000
3 Blizzard Beach At Disney World, Orlando, FL	2.0%	1,968,000	1,929,000
4 Ocean World, Gangwon-Do South Korea	-1.2%	1,700,000	1,720,000
5 Thermas Dos Laranjais, Olimpia, Brazil	26.9%	1,650,000	1,300,000
6 Caribbean Bay, Gyeonggi-Do, South Korea	7.6%	1,623,000	1,508,000
7 Aquatica, Orlando, FL	1.0%	1,553,000	1,538,000
8 Wet N Wild Gold Coast, Australia	17.4%	1,409,000	1,200,000
9 Wet 'N Wild, Orlando, FL	1.0%	1,259,000	1,247,000
10 Resom Spa Castle, Deoksan, South Korea	2.7%	1,189,000	1,158,000
11 Aquaventure, Dubai, Uae	-7.7%	1,200,000	1,300,000
12 Sunway Lagoon, Kuala Lumpur, Malaysia	-8.3%	1,100,000	1,200,000
13 Shenyang Royal Hawaii Water Park, Shenyang, China	10.0%	1,100,000	1,000,000
14 Piscilago, Girardo (Bogota), Colombia	0.2%	1,035,000	1,033,000
15 Schillerbahn, New Braunfels, TX	1.0%	1,027,000	1,017,000
16 Woongjin Playdoci Waterdoci, Gyeonggi-Do, South Korea	-0.6%	997,000	1,003,000
17 Atlantis Water Adventure, Jakarta, Indonesia	-2.0%	980,000	1,000,000
18 Beach Park, Aquiraz, Brazil	14.4%	964,000	843,000
19 Summerland, Tokyo, Japan	-5.2%	939,000	990,000
20 The Jungle Water Adventure, Bogor, West Java	-7.5%	880,000	951,000
<b>Total</b>	<b>7.1%</b>	<b>26,887,000</b>	<b>25,100,000</b>

each country, economies boasting positive changes in GDP also experienced positive growth in attendance to theme parks. The sole anomaly was France (whose GDP increased by 0.3 per cent in 2013 but attendance to parks featuring in the top 20 fell by 6.3 per cent) though GDP did exceed expectations and the positive economic picture was only achieved towards the latter half of the year, when people are less likely to go to theme parks.

## THE WEATHER: DOES IT REALLY MATTER?

Poor weather is often to blame for poor attendance levels at visitor attractions

with a dominant outdoor component. The UK market is a good example of the relationship between the two, given the country's weather is so often a subject of heavy discussion, and indeed the change in rainfall (mm) over the last five years points to a link between attendance and weather. More rain leads to a drop in attendance; less rain equals growth in attendance. In 2011, there was significantly more rainfall than in 2010 (99 per cent more) and theme park attendance fell by 0.6 per cent. In 2010, there was significantly less rainfall than in 2009; theme park attendance grew by 2.1 per cent.

Despite finding some evidence of what may be a causal relationship between weather patterns and attendance levels, a number of other factors contribute significantly to the performance of the attractions market. The weather is just one of these. Other key reasons for swings in performance include: economic conditions; reinvestment; strength of marketing campaigns; special offers or strategic linkages between parks (for example, Merlin's two for one deals and multi-attraction discounts); expansion of a park; and the addition of other components to the destinations, such as accommodation.

**MUSEUMS:**  
2ND YEAR IN THE THEME INDEX  
Museums are a recent addition to the Global Theme Index, with 2013 marking the second year they have been included

## KEY FACTS AND FIGURES

- 214.7 million visits to the world's top 25 theme parks in 2013; a 7.1 per cent rise
- 377.3 million visits to attractions run by top 10 operating groups in 2013; a 4.3 per cent rise
- 135.1 million visits to top 20 North American theme parks in 2013; a 2.7 per cent rise
- 13.7 million visits to top 10 Latin American theme parks in 2013; a 3.8 per cent rise
- 116.8 million visits to top 20 Asian theme parks in 2013; a 7.5 per cent rise
- 26.9 million visits to the world's top 20 water parks in 2013; a 7.1 per cent rise
- 15 million visits to top 20 North American water parks in 2013; a 2.3 per cent fall
- 57.7 million visits to top 20 North American museums in 2013; a 1.6 per cent rise
- 53.0 million visits to top 20 Asian museums in 2013; a 27.6 per cent rise
- 74.8 million visits to top 20 European museums in 2013; a 4.6 per cent rise



Wild Africa Trek at Disney Animal Kingdom allows visitors to get up-close with the park's wildlife

into our analysis. The most striking performance was that of the Asian market, where attendance increased by 27.8 per cent in 2013. This was largely a result of the Chinese policy for all public museums to have free entry, an initiative which has been rolled out to approximately two-thirds of Chinese museums over the course of 2013. Europe dominates the museum market on a global scale, benefitting from a mature market and a large number of collections which are free to enter. Whereas theme park attendance fell across Europe in 2013, museum attendance grew by 4.5 per cent from 71.5 million to 74.8 million visitors in 2013.

Remaining at the top of the chart is the Louvre. It is head and shoulders above the rest of the global museum market with 9.3 million visitors versus 8 million at the Natural History Museum of Washington DC, in second place. This isn't merely an interesting fact, but it is a true feat of force as the Louvre levies an entry fee and the Natural History Museum is free of charge. Furthermore, 2012 was a record year for the Louvre, with Da Vinci and Raphael exhibitions boosting attendance numbers significantly during that year. Despite a fall in attendance numbers in 2013 of half a million, attendance to the museum was still the strongest in the world at 9.3 million. A true *tour de force*!

Unsurprisingly, given the prevailing economic uncertainty in Europe, free

## TOP 20 MUSEUMS WORLDWIDE

MUSEUM AND LOCATION	CHANGE	2013	2012	ENTRY
1 Louvre, Paris, France	-4.0%	9,334,000	9,720,000	Paid
2 National Museum Of Natural History, Washington DC, USA	5.3%	8,000,000	7,600,000	Free
3 National Museum Of China, Beijing, China	38.7%	7,450,000	5,370,000	Free
4 National Air And Space Museum, Washington DC, USA	2.5%	6,970,000	6,800,000	Free
5 British Museum, London, UK	20.2%	6,701,000	5,576,000	Free
6 The Metropolitan Museum Of Art, New York, USA	2.7%	6,280,000	6,116,000	Paid
7 National Gallery, London, UK	16.8%	6,031,000	5,164,000	Free
8 Vatican Museums, Vatican	7.8%	5,459,000	5,065,000	Paid
9 Natural History Museum, London, UK	6.4%	5,250,000	4,936,000	Free
10 American Museum Of Natural History, New York, USA	0.0%	5,000,000	5,000,000	Paid
11 National Museum Of American History, Washington DC, USA	2.1%	4,900,000	4,800,000	Free
12 Tate Modern, London, UK	-8.2%	4,885,000	5,319,000	Free
13 National Palace Museum (Taiwan), Taipei, Taiwan	1.2%	4,412,000	4,361,000	Paid
14 National Gallery Of Art, Washington DC, USA	-2.4%	4,100,000	4,200,000	Free
15 Centre Pompidou, Paris, France	-1.4%	3,745,000	3,800,000	Paid
16 Shanghai Science & Technology Museum, Shanghai, China	11.5%	3,580,000	3,210,000	Paid
17 Musee D'orsay, Paris, France	-2.7%	3,482,000	3,579,000	Paid
18 National Museum Of Natural Science, Taichung, Taiwan	15.0%	3,396,000	2,954,000	Paid
19 Science Museum (South Kensington), London, UK	10.9%	3,317,000	2,990,000	Free
20 Victoria & Albert Museum, London, UK	1.8%	3,290,000	3,232,000	Free
<b>Total</b>	<b>7.2%</b>	<b>105,582,000</b>	<b>98,486,000</b>	

museums outperformed paid museums, registering 5.8 per cent and 2.1 per cent growth respectively. French museums, for example, underperformed relative to museums situated in other European countries all French museums in the top 20 charge an admission fee to visitors and consequently, French museum attendance performance was negative overall (-3.1 per cent) for this year which was

also a bad year for the French economy.

Museum attendance was mixed in the UK when looking at individual museum performance, but the overall picture is positive, with the industry achieving 6.7 per cent growth in 2013. This increase in attendance has been attributed to the success and strength of "Brand London" in the wake of the Olympics, which provided a spotlight on the UK's attractions ▶



The Louvre in France maintains its position as the most well attended museum in the world

**EXCITING PROJECTS ARE IN THE PIPELINE IN THE MIDDLE EAST, WHICH IS LIKELY TO FEATURE ON THE INDEX IN YEARS TO COME, AND PRE-RECESSION PLANS ARE RESURFACING**

► and the city as a tourist destination. This strong performance has also been boosted by the string of popular exhibitions such as Pompeii and Herculaneum, which attracted around 471,000 visitors to the British Museum alone. This is a good example of how museums rely on exhibitions to drive attendance, much like theme parks investing in new rides.

#### OUTLOOK:

**FOCUS ON EMERGING MARKETS**  
Key trends to watch this year include the evolution of theme parks into destination resorts (through the addition of second gates, mixed use developments and accommodation options) and a rise in the number of branded attractions and rides. The results of this year's Theme Index point towards continued growth on a global level, particularly within Asia. Despite another year of relative stability at theme parks across Europe, growth in museum attendance is a positive indicator for the attractions market in this region. Further recovery in the European theme park market is likely to be tied to economic recovery in Southern Europe.

A large number of exciting projects are in the pipeline in the Middle East, a region likely to feature heavily in the Index in years to come. Pre-recession plans are resurfacing, with the development of a new museum cluster on Saadiyat Island in the UAE and Warner Bros' Park on Yas Island representing just two of the new visitor experiences expected to hit the market in the short to medium term. While attraction development in the UAE has been focused on waterparks thus far (with the exception of Ferrari World Abu Dhabi), we are now seeing a broader range of visitor attractions in the pipeline, which are expected to move swiftly into the operational phase.

Internationally recognized IP providers are rapidly gaining interest in the Middle East, with Walt Disney announcing it's in talks with a number of partners in Doha, Dubai and Kuwait with the aim of attracting high spenders from the region to its resorts. Other key operators expressing interest in the region include British-born Merlin Entertainments (Legoland, Dubai) and Universal Studios, which is considering developing a theme park as part

of the multi-park Dubailand development. We also understand that Seaworld is currently undertaking studies to help it assess the potential for developing a number of theme park concepts in locations across the Middle East.

The museum industry looks set to continue to grow further in Asia, as the free-entry museums initiative in China rolls out further and local governments push to open more establishments across the country as part of their goal to increase the ratio of museums to people. In addition to state-run institutions, the so-called "museumification" of China includes a large number of institutions under construction in order to support corporate and private interests.

The danger of building so many museums in quick succession is vast oversupply, and there is already speculation that demand will not support the large number of scheduled and newly opened collections. However, "build it and they will come" is a popular phrase used by developers and if recent attendance figures are anything to go by, Asia's appetite for museums is very strong. ●



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# OCEANS OF FUN

One of China's most ambitious tourism projects – Chimelong International Ocean Resort, dubbed the Orlando of China – opened on Hengqin Island this year. Another mega-resort by Chimelong Group is in the works

Jennifer Harbottle, journalist, Attractions Management

**D**on't be surprised if you haven't heard of Hengqin Island. This tropical islet, just over 41sq miles (106sq km) and fringed by the South China Sea, has been pretty much off the radar. It would have stayed that way had it not been earmarked for development by the Chinese government in 2009, thanks to its strategic and geographical proximity to both Hong Kong – just one hour by ferry – and Macau, a 10-minute drive over a bridge. Today, Hengqin Island is home to Chimelong International Ocean Resort.

Macau is the only tourism destination in China where gambling is legal,

making the special administrative region a cash cow for the Chinese government. Investment in hotels, mega-resorts and behemoth-sized casinos has flooded the former Portuguese colony with developments. But there's a problem: Macau's success in attracting hotel and casino operators has eaten up most of the available land on the island. It's also pushed up real-estate prices to the point where there's no obvious opportunity to attract developers of large-scale attractions.

Enter Hengqin Island. Designated a special economic zone by the Chinese government, this mainly undeveloped island is in prime position to deliver

what's missing in Macau: a family-friendly leisure anchor. Almost 3,000 companies have already taken advantage of the favourable tax and other regulatory incentives offered by the government to investors who set up business on the island, including RMB50bn-worth (\$8bn, £4.7bn, €5.9bn) of infrastructure projects.

The project getting the most attention by far is the Ocean Resort, a world-class tourist destination consisting of theme parks, luxury hotels, exhibition centres, shopping, sports and nighttime entertainment. Chimelong Ocean Kingdom, Chimelong Hengqin Bay Hotel and the International Circus Town are the main



Super Splash is a drift ride and roller coaster combination located at Mount Walrus



The park's aquarium is the largest in the world, housing sharks, manta rays and other ocean species. It also boasts the largest aquarium window

components of the mega-resort, which opened at the beginning of 2014.

Guangdong Chimelong Group, which already owns China's largest theme park (Chimelong Paradise in Guangzhou), is the developer behind the new resort. It has been loosely modelled on Orlando's leisure hub in Florida, but this is China, so naturally everything is bigger. In Hengqin, Chimelong International Ocean Resort claims to be have the country's "largest ecologically themed hotel" and the world's longest Wing Coaster (1,278m, 4,193ft), as well as a rather hefty RMB20bn (\$3.2bn, £1.9bn, €2.4bn) construction budget.

For Yanling Yu, a lecturer in tourism management at Sanya University, the opening up of Hengqin will help diversify Macau's tourism portfolio. "Even with its rich cultural heritage and its recent effort to develop the MICE [meetings, incentives, conferences and exhibitions] industry, Macau still can't manage to extend the length of stay of most of its tourists," she explains. "Government policies indicate that Hengqin is being developed as a destination for leisure and ecological tourism, which is exactly what Macau is lacking at the moment."



Apart from some children's shows and a small animal zoo, Yu says Macau is not a child-friendly destination. "It stands no chance of competing against Hong Kong for the family demographic, which is why Hengqin's Chimelong stands to become a major attraction for this market."

### MAKING A SPLASH

Chimelong Ocean Kingdom is the largest ocean theme park in the world. The aquarium exhibit in Ocean Kingdom holds 10.7 million gallons (48.7 million litres) of water and includes a whale shark exhibit featuring the world's largest aquarium window. One of the key attractions at the park, a 68-metre (551-foot) whale shark

statue greets visitors as they enter the main lagoon area. The large tank is also home to over 15,000 live exhibits, including a 4-metre (13-foot) manta ray.

A submarine ride, Deep Sea Odyssey, which goes into the aquarium and a 250-seat underwater restaurant called Ocean Beauty are also located in this area.

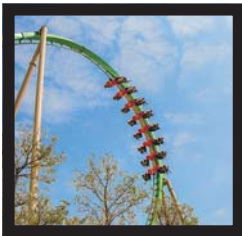
Ocean Kingdom is divided into eight themed areas, which represent different parts of the sea. Live shows, animal performances with dolphins and sea lions, and theme park rides are the main attractions. At 3.00pm each day, the park puts on a parade of ocean-themed floats featuring over 100 performers. In the polar adventures zone, up to 4,000



► guests can be seated in the polar theatre — a thermostatic venue where seven beluga whales and 20 performers put on a choreographed show with music and lights. Every evening the park closes with a fireworks display in the Hengqin sea zone. The show includes lasers, lighting effects, fireworks and fountains, as well as a flyboard performance designed to give the park a festival atmosphere at sundown.

Rides are a key component of Ocean Kingdom. The 67mph (108kph) Wing coaster, named Parrot Coaster, is a high-speed ride that lasts eight minutes, while the Happy Bump Bump, High Speed Warship and Super Splash ride are more family-oriented. The park's main coaster, designed by Mack Rides, is part thrill, part educational, teaching guests how polar bears search for food in the wilderness before plunging the riders into a valley of ice.

Despite all the excitement, Ocean Kingdom hasn't been without controversy. In its quest to be the biggest and best, some questions remain over the ethics of the procurement of some of the park's larger animals. Rumours that it plans to open an orca whale attraction have



dogged Chimelong Group, although so far the park doesn't have a facility big enough to house them and isn't answering questions about plans to do so. If it does, environmentalists fear it will open the floodgates for rival parks to acquire killer whales too, in order to remain competitive with a Chinese audience, a worrying trend given the number of aquariums being built in the country.

### FAMILY ROOMS

Like Orlando, a themed hotel complements the main park in Hengqin.

Huge performances are staged in Circus Town (above) and Asia's first wing coaster (left) can be found in the park's Amazon-themed area

Chimelong Hengqin Bay Hotel is built on 3.2 million sq ft (300,000sqm) of land a short shuttle bus ride from Ocean Kingdom and shares its underwater motif. Designed by WATG, the 1,888-room hotel and convention centre also has its own leisure attractions to keep guests entertained. As well as a huge dolphin-themed swimming pool, surf pool and lazy river, the hotel also boasts its own indoor water-park. Guests can take a water taxi directly from the hotel down the Fuxiang canal to Chimelong Ocean Kingdom. Hotel guests get VIP treatment in the theme park too, including priority admission and fast-track entry so that queuing, for the time being at least, is kept to a minimum.

Ivan Leung, general manager of Chimelong Hengqin Bay Hotel, says his guests mainly come from within the Pearl River Delta, no more than one or two hours' drive from Hengqin, including



Towering golden dolphins (above) capture the hotel's marine theme. The hotel development (left, right) has six restaurants, a conference centre, spa villas, a salon, tennis courts and swimming pools



Hong Kong and Macau. The average length of stay is two days and the positioning of the hotel, he says, is focused very much on the family market.

"We see ourselves as providing something different from gambling," he explains, although he is quick to point out that Chimelong views its leisure attractions, including its hotel, as assets that can help both Hengqin and Macau gain a regional advantage as a tourism destination. "The Ocean Resort has become the most popular attraction of the Pearl River Delta in 2014, especially in peak seasons like Lunar New Year or Labour Day, so the entire region's hospitality industry can directly benefit from this."

"We believe Chimelong International Ocean Resort is not only setting the trend for the tourism industry in China but will also boost the local economy," Leung says. "We want to work closely with Macau to develop the tourism and leisure industry in this region."

## A CLASS ACT

In the evenings, Chimelong's International Circus Town provides the entertainment.

The 86,000sq ft (8,000sqm) circus stadium is designed to complement the marine-themed park and hotel and faces both properties, providing a bridge between the theme park and the sea. Built to a budget of RMB300 million (\$48m, £28m, €35m), the circus brings together over 150 performers and showcases acts from a number of overseas circus troupes.

## BRIDGING THE GAP

Local analysts predict that as the hospitality industry in Hengqin continues to grow — the Sheraton Hotel is the next to open on the island — some Macau-based hotels will suffer, but having additional hotel rooms close by in peak periods like Chinese New Year will allow more people to gamble in Macau. (Gambling is banned on Hengqin Island.) Likewise, guests that may not have considered Macau as a place to bring family now have a serious, world-class attraction to visit, as well as the gambling tables.

Some Macau operators, it seems, are buoyed by a big-name attraction coming to the region. Melco Crown Entertainment has announced it is increasing the budget

for its movie-themed Studio City project in Macau, due to open mid-2015. James Packer, co-chairman of Melco, says his company's new integrated entertainment, retail and gambling resort has been given a "key competitive advantage" by the anticipated growth of Hengqin. Meanwhile, some casino operators are looking to invest in non-gambling leisure operations in Hengqin, such as sports and retail, to complement their Macau businesses. All of this is good news for Chimelong Group, who stands to benefit in terms of visitor numbers to its theme park.

Currently, Chimelong Group is working on a new mega-resort in Qingyuan, based on the same model as Guangzhou and Hengqin. If it chooses to further develop its attractions in Hengqin, the infrastructure underway right now will help its cause. Rail services to the island are being extended and on completion of the Hong Kong-Zhuhai-Macau Bridge in 2016, Hengqin will be the only place on the mainland directly connected to both Hong Kong and Macau. For Chinese visitors who like travel to be simple, this will make Hengqin a popular destination. ●

# VIRTUAL VISITS

Three concepts shared at the recent MuseumNext conference illustrate how technology can reimagine the future, recreate the past and preserve a collection once decommissioned

Tom Anstey, journalist, Attractions Management



## EYEING THE FUTURE

A method of drawing the next generation to museums and galleries was offered by freelance artist and digital guru Adam Clarke at the MuseumNext conference in Newcastle in June. He said that Minecraft – a sandbox indie game which allows players to build constructions out of textured cubes in a 3D-generated world – could be used to educate children and promote their interest in museums worldwide.

A forefront creator within the online Minecraft community, Clarke has instigated numerous groundbreaking Minecraft projects and is widely involved in the use of Minecraft within cultural, heritage and educational settings.



Clarke suggested using Minecraft to teach young people about museums, artefacts, science and archaeology. Among the innovations created by Clarke in the game, one of the most outstanding is Tatecraft – a project shortlisted for the Tate Britain IK Prize, which celebrates talent in the digital industry. In Tatecraft, Tate Britain is recreated in-game, with players able to enter the works of art, explore the scene and see “behind” the image depicted.

“It’s an adventure in art and culture –

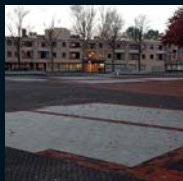
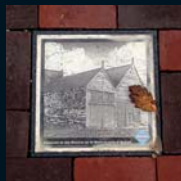
not learning in the traditional sense, but kids are making these connections from gameplay,” Clarke says. “If you look to the side there are a lot of opportunities to turn games like Minecraft into learning.”

Objects created in Minecraft can now be 3D printed in the real world, bringing virtual creations to life.

This also benefits learning institutions such as science museums, who find hi-tech tools like this appeal to a young generation of visitors to their attractions.



■ In Tatecraft, players “walk in” to gallery works. For example, one can explore the streets of this painting ‘Liverpool Quays By Moonlight’



An app created by Dutch firm Twnkls Augmented Reality reconstructs an old village square in 3D as it would have appeared in the past. The experience, for a tablet or smartphone, is accompanied by an audio narrative

## RELIVING HISTORY

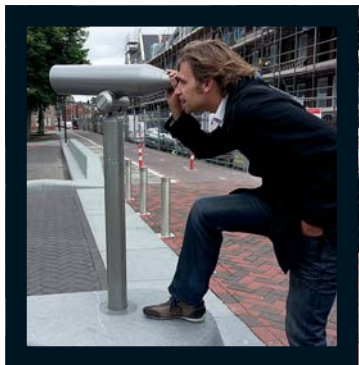
An entirely virtual museum was presented at MuseumNext. The De Museum op de Markt Spijkenisse – an augmented reality museum – operates as an app, and uses a marketplace in the town of Spijkenisse in the Netherlands as the backdrop on which it creates the “museum”.

Using the app, visitors walk around the market place and observe the virtual museum, which asks your height and then uses floor mechanics to activate sensors reacting with the device. Full-size three-dimensional objects and long-demolished buildings

seem to appear.

“We worked with two groups,” says app creator Ferry Piekart. “The older group who are nostalgic and the tech-savvy children who like the app. When you look at things, an audioguide will tell you the story of what you’re looking at and the app will pop up further images.”

For those without an android device, fixed telescopes have been introduced around the marketplace with the same augmented reality technology installed for what is at present a one-of-a-kind experience.



■ Ferry Piekart uses the on-site telescope to view the market



## PRESERVING PAST COLLECTIONS

Using a different tactic, Scanlab and the Science Museum in London used cutting-edge 3D laser-scanning technology to 3D scan an entire area of the museum before it was decommissioned, preserving the exhibits for generations to come.

The museum's shipping galleries, which originally opened in 1963, closed in 2012. They formed the largest gallery in the Science Museum. The entrance was a huge floor mural of a compass rose and beyond this was a two-tiered exhibition space of hundreds of exhibits chronicling maritime technology. Hundreds of incredibly detailed models of various sea vessels were included.

Scanlab's Matthew Shaw and William Trossell told MuseumNext how they used two Faro Photo 120 terrestrial laser scanners. Rotating mirrors recorded 1 million reflections per second in a 360° scan at sub-millimetre resolution. Over five nights, 275 scans made 2 billion precise measurements to build a 3D model called a "point cloud" composed of 256GB of data that took 16 weeks to process.

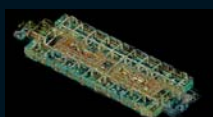
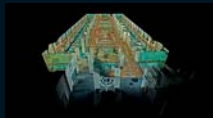


Scanlab's William Trossell

Colour was later added to the scans by means of a digital camera on top of the scanner taking panoramic images. The colours from these images were mapped on to the monochromatic model.

Because of the size and scope of the scan it has so far only been used to produce a three-dimensional video fly-around of the gallery representing just one-tenth of the data collected, though in the future the museum hopes to find a way to make the data readily available for anyone who wishes to use it. ●

Scanning the Shipping Galleries at London's Science Museum meant they were digitally captured before they were decommissioned



### About MuseumNext

MuseumNext is Europe's largest conference dedicated to museums. Making its debut in 2009, the event asks what the future holds for museums, showcasing

tech innovations and best practice for the museums of tomorrow. For 2014, keynote speakers debating the hot topics included museums expert Koven J Smith, Colleen Dilenschneider of market

intelligence analysts IMPACT and design agency founder Jason Minyo. The networking and seminar event took place this year at Newcastle's Sage Gateshead, UK, with next year's host to be announced

in August. The conference covered everything from how Minecraft can get more kids into museums to how love affects how we view a museum. For more details go to [www.museumnext.com](http://www.museumnext.com)





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## Vice President - Regional Business Development, North America

**Location:** North America **Salary:** Competitive Six Figure Package **Closing Date:** 30 September 2014

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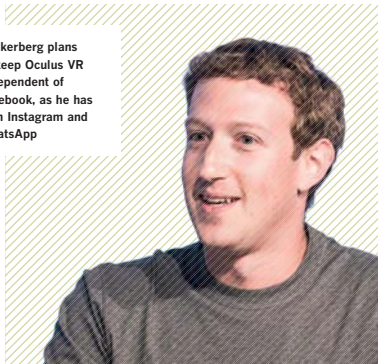
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Zuckerberg plans to keep Oculus VR independent of Facebook, as he has with Instagram and WhatsApp



# FACE REALITY

Facebook has purchased virtual reality company Oculus VR for \$2bn, with the promise of providing a platform to share “entire experiences and adventures.” Does this deal represent a breakthrough for virtual reality technology and, if so, how will this affect the visitor attractions industry? Jason Holland investigates

Virtual reality (VR) technologies have been around for years, but failed to take off in the way many predicted. Systems have come and gone, but VR has never taken a place in mainstream culture.

That could be about to change, since Facebook made the potentially seismic decision to acquire Oculus VR, a promising virtual reality company known for raising finance via a successful Kickstarter crowdfunding campaign.

Facebook founder Mark Zuckerberg believes that in the future this technology could be incorporated into the everyday lives of billions of people – explaining why he decided to spend \$2bn (£1.2bn, €1.5bn) on the unexpected acquisition.

As surprising as the price tag was that a social networking company would be so interested in the Oculus Rift virtual reality headset – an inherently anti-social device.

Does this purchase mark the coming of age of virtual reality? The main differ-

ences between Oculus Rift and previous headsets are the price point and the fact that a number of technological problems have been solved, but Zuckerberg's purchase is most significant for shifting the focus of the technology. Oculus has always been about gaming, facing competition from the likes of Sony in an imminent consumer battle. But Facebook is not in it for pure gaming.

Oculus notes its development kits are open platforms and the software development kit that comes with it is also open source, meaning developers and companies can create content for anything they want. This could signal a bright future for virtual reality in the attractions industry.

“After games, we're going to make Oculus a platform for many other experiences,” Zuckerberg said when he announced the purchase. “This is really a new communication platform. By feeling truly present, you can share unbounded spaces and experiences with the people in your life. Imagine sharing not just

moments with your friends online, but entire experiences and adventures.”

## COMPELLING EXPERIENCES

Virtual reality can be described as a three-dimensional, 360-degree computer simulation of an environment – essentially a fully immersive experience. Headsets like the Rift have become the expected format for VR because they block out other stimuli and alter the view, depending on the angle of the head, using motion tracking.

For innovation technology consultant David Hughes, who has conducted pioneering VR work at companies such as Silicon Graphics, there has always been a close link between simulation and entertainment, with the two fields converging periodically. When an attraction or experience is made immersive, there has always been tension in whether it should be a real-time experience, or a prescribed, linear experience. The latter almost always wins out because it is

# VIRTUAL REALITY - A TIMELINE

1920s



First flight simulator produced by Edwin Link in the US.

1950s



Morton Hellig builds Sensorama, a simulator with 3D images designed to create the illusion of reality.



1960s



Ivan Sutherland builds the first head-mounted display (HMD) VR system. It is so heavy that it has to be suspended from the ceiling.



1970s



Videoplace, an artificial reality system, is developed by Myron Krueger. It uses projectors, cameras and user silhouettes to create an interactive environment.

The LEEP (Large Expanse Extra Perspective) wide-angle stereoscopic optical system is developed for head-mounted displays.



The Aspen Movie Map hypermedia system is created at the Massachusetts Institute of Technology (MIT).

1980s



In 1985, VPL Research is founded by Jaron Lanier, who popularises the term virtual reality. It's the first company to sell a complete VR system with goggles and gloves.

Silicon Graphics, which produces high-performance computer graphics solutions, is founded in 1982.

*Tron* is the first movie to depict virtual reality, released in 1982.



The Holodeck - probably the ultimate in fantasy virtual reality - makes its first appearance in the TV show *Star Trek: The Next Generation* in 1987.



1990s



DisneyQuest opens in Florida, featuring a series of cutting-edge virtual reality attractions.

Jonathan Waldern launches Virtuality, a public venue multiplayer VR HMD entertainment system. The system ultimately registers 42 million plays in 17 countries.

Electronic Visualization Laboratory (EVL) invents the virtual reality theatre CAVE and produces the ImmersaDesk portable VR system.

The first wireless tracking system is produced by Ascension, while SensAble launches the first low-cost haptic device.

Researchers at Georgia Tech use VR to create war zone scenarios as therapy for military veterans suffering from post-traumatic stress disorder.

Nintendo creates the Virtual Boy video game console, but it's a commercial failure.



*The Lawnmower Man* is released in 1992 tackling the issue of VR, and what could potentially go wrong. Many people's concept of VR emerges from this film.

*The Matrix*, which features a computer-generated world in which citizens are unknowingly imprisoned, becomes a global phenomenon in 1999.

2000s



*Second Life*, an online virtual world in which people create avatars which can interact with other people's, is launched by Linden Labs.

2014: Facebook purchases Oculus VR and its Rift device for \$2bn, while Sony launches its Project Morpheus VR headset.



Oculus VR co-founder Palmer Luckey set out to develop a more effective and better designed head mounted display



**TWO INDEPENDENT DEVELOPERS COVERTLY TOOK THE DEVICE ON A ROLLER COASTER, HAVING CREATED A PROGRAM THAT ALLOWED THEM TO SEE A VIRTUAL WORLD, WHILE EXPERIENCING THE PHYSICAL SENSATION OF REAL-WORLD RIDE**

► the safe option, but the aim for new VR technology must surely be to create more compelling experiences.

One of the attractions industry's first forays into the virtual reality sphere was DisneyQuest. The "indoor interactive theme park" opened in 1998 at Disney World, Florida and is still going strong, a "success story in itself" according to Hughes, who was involved in the project during his time at Silicon Graphics.

Jesse Schell, now CEO of Schell Games, was once creative director of the Disney Imagineering Virtual Reality Studio, where he worked as designer, programmer and manager on several projects for Disney theme parks and DisneyQuest. For him, VR in the attractions industry has been a novelty so far and "mostly, not a very successful one."

He says the head-mounted experiences at DisneyQuest were less popular than the computer assisted virtual environment-based (CAVE) and motion simulator-based experiences on offer.

While DisneyQuest Florida is still open, a second location, Chicago DisneyQuest, closed after a couple years. "A novelty-based experience can succeed at a year-round tourist destination, but if you depend on locals for admission, you need to have something with deep replay value," says Schell. Plans to expand the DisneyQuest model were scrapped after the failure of the Chicago

operation, and the attraction remains something of an industry quirk.

Schell isn't convinced VR headsets can ever work in attractions. "The technology has been expensive, and difficult to deploy for space reasons and hygiene reasons. More importantly, VR is an isolating experience, and people go to theme parks and museums to be together," he says.

A bigger question might be whether VR could have a relevant impact on wider issues affecting the attractions industry, such as design, marketing or adding to the experience of traditional rides.

**GETTING IT RIGHT**

There are several reasons why VR technology keeps coming to the fore but never quite establishing itself. While cost as a limiting factor has largely been solved by the technology available on devices such as Oculus Rift, it remains to be seen if headsets will become socially acceptable. The devices can become uncomfortable after a prolonged period of use and when headsets are shared, hygiene issues are a challenge. Furthermore, some industry experts also worry that there are still technical issues to resolve.

The "absolute biggest no-no" in virtual reality is making users feel nauseous, according to Hughes. It tends to be "discontinuities" that make people feel this way, such as flipping lights in peripheral vision, zooming in or out,


latency (the difference between making something happen and seeing or experiencing the result). A high frame rate is a necessity for VR, making on-screen motion appear smooth and natural.

The causes of nausea are not entirely understood, so creating any immersive experience is a challenge. "The more immersive an experience is, the more responsibility you have for not making people nauseous and sick," says Hughes. "If you take away all the other cues, you now have people's brains in your hands and you can really mess around with people's brains pretty badly."

This has dictated the journey of VR so far in attractions. "Companies say they want nice, slow prescribed parts through a scene – no discontinuities, so it's safe and doesn't generate nausea," says Hughes. "Some of the early rides didn't do a great job on this and made people sick."

If you start giving people choice – as using VR headsets would surely necessitate – there is always the possibility they will select an option which will generate discontinuities. This helps explain why immersive, but linear, attractions such as 4D movies are so popular. However, Oculus appears to have solved the Rift's latency issue, and the device has been widely praised as users are not generally reporting experiencing nausea.

Another challenge to overcome is navigation. You should be able to move



Games for Oculus Rift, like this space game *EvE Valkyrie*, are more advanced than ever before

## A BIGGER QUESTION MIGHT BE WHETHER VR COULD HAVE A RELEVANT IMPACT ON WIDER ISSUES AFFECTING THE ATTRACTIONS INDUSTRY, SUCH AS DESIGN, MARKETING OR ADDING TO THE EXPERIENCE OF TRADITIONAL RIDES

from A to B and initiate commands seamlessly, Hughes says. In a lot of interactive experiences today, just getting around the world is pretty clunky. "It's another big unresolved issue," he says.

### INDUSTRY POTENTIAL

Another question is whether to have an individual or a shared experience – or a shared experience through multiple individual experiences.

Facebook will of course be interested in social experiences. "I can see how this could be used in a *Second Life*-type experience, extending into a virtual world where people meet each other – an experiential space to make friends and meet people," says Hughes. But both Hughes and Schell note that headsets are inherently an isolating experience, and most attractions spaces are social.

"I think we'll see a lot of experiments with VR in attractions. The most successful will incorporate a multi-user social component," says Schell. "These experiments will happen right away. But the lasting changes won't come until the social networking systems are deeply integrated, which will take about 10 years."

The Rift is an exciting, relatively cheap technology, and Facebook expects to have a commercial winner on its hands. From this perspective, the deal makes sense, but shouldn't Facebook be looking ahead to VR technologies like contact lens-size devices and retinal scans? "Never underestimate what Facebook can do," says Hughes. "What's different this time around could simply be sheer will and investment."

Several uses for Oculus Rift in the attractions industry have already been mooted. Two independent developers covertly took the device on a roller coaster at a UK theme park, having created a program that allowed them to see a virtual world as if they were flying through space, while experiencing the physical sensation of the real-world ride.

Another use might be to transport visitors, such as a classroom of children, to any museum in the world. This would be a great experience, although a possible source of worry if users virtually visited museums rather than physically attending.

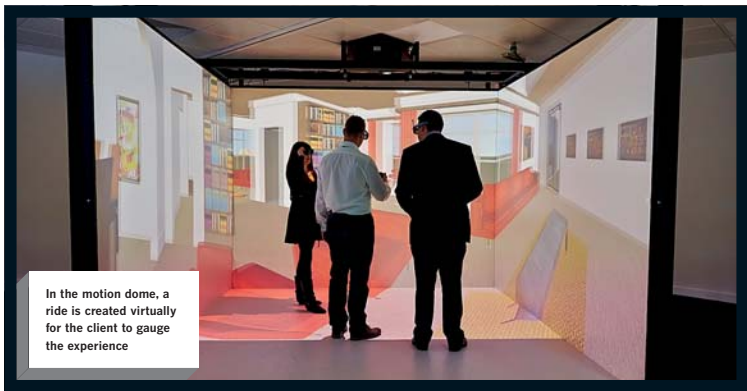
The potential for virtual experiences opens up many other opportunities. If a theme park is fully mapped out, for instance, people could take a virtual tour

before visiting, or plan a visit in advance – this could be a real advantage, especially with added features such as pre-booking.

In terms of using VR technology in a visitor attraction, the problem is still economics. Time is another limiting factor – people have to be in and out the door quickly if any money is going to be made. A VR experience will probably require some sort of training, so will there be enough time left for enough people to have a sufficient impact on the world they are in to make it feel meaningful? It comes back to linear narratives being the safe option, and the challenge to make VR work as a viable attraction.

While use of VR technology represents a specialist investment, what makes the Rift so compelling to a wider market is its relatively low price point and the plethora of potential uses. But whether or not the time for virtual reality has finally come, it certainly now has some big hitters on board. "One day, we believe immersive, augmented reality will become a part of daily life for billions of people," said Zuckerberg.

How will the attractions industry face this new reality? ►



In the motion dome, a ride is created virtually for the client to gauge the experience



## HOLOVIS

Perhaps the main impact VR technology will have is in the design and manufacturing of attractions. UK-based company HoloVis is already working in this area. "With our virtual reality systems we can deliver experiential design and solutions in a completely different way, so outside Disney we're probably the only company that's taken this on board and is now delivering solutions around the world at theme parks and entertainment venues using our core expertise in virtual reality to enable that," says

CEO Stuart Hetherington. The company has its own VR design and testing facility, utilising CAVE technology. The aim is to design rides right the first time around, allowing them to be tested and simulations to take place before any physical work actually goes into them. To achieve this, HoloVis launched the bespoke RideView software application, an immersive design and visualisation tool created on the back of game engine technology.

These technologies mean users can be transported into the virtual environment of an individual attraction, or a full park, with true 1:1 scale offering real-time interactivity.

"When designing an immersive attraction we need to test specific things to make it experiential, and we need to understand the immersion within it," says Hetherington.

Immersive rides as well as practicalities like evacuation procedures can be tested in VR

All these aspects can be tested in the virtual environment, and stakeholders can be positioned anywhere on the ride to see how it moves – whether from the perspective of an eight-year-old child or a full-grown adult. Functional aspects, such as emergency evacuation procedures, can also be tested.

"Using a motion dome, we can put you in the virtual attraction where you can play the real game that you would be playing in the real attraction," says Hetherington. Although a level of motion can be added, the system cannot test G-forces and physical

motion. "But we can get an exceptional experience within the virtual space long before we've started construction."

Although the hardware required to achieve this does represent a significant outlay, Hetherington says virtual design is very cost effective, especially from the software perspective. Challenges remain in data manipulation and compatibility, but these issues are being addressed in the design of the system itself, according to the company.

HoloVis is now scaling up to provide a turnkey solution on products – from design to manufacturing to delivery – all using VR. For Hetherington, virtual reality-assisted design is definitely the future, and he thinks any designer that fails to embrace VR technology, no matter how big a name they are, is in danger of being left behind. ●

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# SARAH MALTBY

Seventeen million people have visited the Viking-focused Jorvik in the 30 years since it opened. The centre's director of attractions looks back

Kathleen Whyman, journalist, Attractions Management

## Tell us about the Jorvik Viking Centre.

A five-year excavation from 1976 to 1981 by the York Archaeological Trust [YAT] unearthed the 1,000-year-old remains of the Viking city of York in the UK. A million people came to see the excavation, which showed us how much interest there'd be in an attraction.

In 1984, 30 years ago, we at YAT built the Jorvik Viking Centre on the exact site where that excavation took place. The remains of the timber-framed and wattle houses, workshops and backyards of the Viking city of Jorvik are beneath the visitors' feet and can be seen through the glass floor on arrival and then up close as they travel around on a motorised car ride.

Everything is authentic and based on what we found, from the layout of the houses to the positioning of the objects where they were found – and would have been laid out during that Viking period.

## What's the content?

We're an interactive experience rather than an exhibition, with different elements and areas, and staff and archaeologists who will happily talk all day to visitors. A car ride takes visitors



Sarah Maltby, director of attractions, Jorvik

past the reconstructed Viking city, following the street patterns we found as we excavated. For example, the blacksmith's house is built on the spot where the slag, ironworking and tools were found.

After the ride, there is a series of galleries where visitors can get close to and handle some of the objects and learn about the research we've done over the

past three decades. Among the objects are some skeletons of the Viking-age inhabitants and we discuss how they lived and died. There are about 400 objects, which are brought to life using AV and touch screens and floating heads in glass cases (using the Pepper's Ghost effect) that talk to visitors.

The final section is dedicated to the



Actors help to portray Viking life on the very site where Vikings once lived and worked





Visitors are invited to handle some of the artefacts as part of the interactive experience

**We want to make archaeology as accessible as possible. We aim to provide visitors with something they didn't know when they arrived ... Archaeology is who we are and what we do**

end of the Viking period and we show how the Normans came into England in 1066, how it affected York and what happened after the invasion.

Our live Vikings tell visitors everything they need to know about Viking-age York. An average visit lasts 90 minutes, but some people stay for several hours chatting to our staff.

#### What is its aim?

The three words we use to describe Jorvik are discover, explore, experience. We want to make archaeology accessible to as many people as possible. We aim to provide visitors with something they didn't know when they arrived. It's about learning, but having fun while learning.

#### What makes Jorvik special?

We're different to other attractions because we're authentic. Visitors are standing on the site of the excavation. It's not like a museum in a building. Visitors are standing on the exact spot where the Vikings lived and worked.

We take people underground, down to the level of the Vikings. We're an immer-



Viking coprolite, or poop, is one of the museum's more unusual exhibits

sive experience - we get visitors involved with objects. Feedback shows visitors really appreciate being able to talk to the staff and archaeologists we have onsite.

#### What is the archaeological element?

Archaeology is who we are and what we do. We have the objects, the research and the people. The Jorvik Group is part of York Archaeological Trust, so we have access to continuing research and excavation, which feeds into the attraction.

#### What's the most unusual artefact?

Viking poop. Or Viking coprolite, to give it its proper name. From this we can tell

what that Viking ate and that he had worms in his stomach. You don't expect to find that. It brings Vikings to life that little bit more.

#### What are the smells and sounds?

The smell is a very important part of what we represent and is one of the main things people comment on. The general Viking city smell isn't too fragrant. We have iron-working because there's a blacksmith's shop, and food smells including stew and apples at the market scene. There's a variety of smells. People tend to remember the not so nice smells, such as the cesspit. On the ride, visitors hear the old Norse language. We worked with York university to get that as authentic as possible. We translated our scripts so you hear the chatting and discussions and arguments of the people of Jorvik at that time.

#### What technology do you use?

This summer we are launching an app that brings the Coppergate area [the surrounding area to the centre] to life. It'll show where we found artefacts and how we used those objects in Jorvik. ▶

**We worked with Dundee University to recreate a Viking face using a digital reconstruction from one of the skulls we found. We can now show what that particular Viking woman looked like**



Since the Jorvik Viking Centre opened three decades ago, 17 million people have visited

► We have state-of-the-art animatronics which talk to visitors. These were put in in 2010 by US firm Life Formations, who also provides many of the large US theme parks. The animatronics chat in Norse and we provide translations.

We worked with Dundee University to recreate a Viking face using a digital reconstruction from one of the skulls we found. We can now show what that particular Viking woman looked like.

### What are the 30th anniversary celebrations?

We started on our actual birthday with a street party in April. Through the year we have a series of archaeological talks based on the material that we've found. That will culminate in April 2015 with a publicly accessible conference on the theme of the Vikings. Over the summer we have many things planned, including an eight-week-long open-air exhibition with interactives and a chance for people to have a go at archaeological activities.

### How has the centre evolved since 1984?

We've had three looks to the centre. In 1984 we had a ride and various galleries, which, at the time, was a new way of doing things compared to traditional museums with artefacts in glass cases. In 2000, we stripped everything out and rebuilt the whole thing. We put a suspended ride in and new animatronics. In 2010, we took the story back to the archaeology more, as the notion that everything you see comes from this excavation had been lost a bit. We returned to that and put the glass floor in the first gallery, which visitors can walk over. Some attractions have done this before, but not in the expense that we have – 700sq ft [65sqm].

Over the past 10 years we've extended the number of staff who work in the centre. In response to visitor feedback we've

had, we now have 10 to 12 people on the floor at all times.

### How will the centre develop?

Technology's changing all the time and we're trying to keep on top of that. The mobile technology we're introducing this year with the app will keep advancing and we'll bring more 3D elements in, such as the face reconstruction.

Archaeologically, we're always responding to the new research that comes through. We're constantly researching the objects and excavation we did 30 years ago and finding out new things from science progresses. For example, we can tell more about the skeletons – where that person came from, what they ate, what diseases they suffered from, how old they were when they died. That kind of scientific research changes things for us and will continue to do so.

### What other sites do you oversee?

There are five altogether. As well as Jorvik, we have Dig, a hands-on archaeological centre in a medieval church near Jorvik. We took four iconic digs that we've

done in York over four different time periods – a Roman excavation, Viking Coppergate, a medieval and a Victorian dig – and reconstructed those using rubberised soil.

We look after Barley Hall, a late-medieval, early Tudor, timber-framed town house in York that we excavated in the 1980s and have reconstructed, and two of the mediaeval gateways, or bars, in the city walls surrounding York. We run Monk Bar as the Richard III Experience and Micklegate Bar as the Henry VII experience. It's the same concept with interactive, informative experiences. We also run the Viking Festival and Yorkshire Mediaeval Festival.

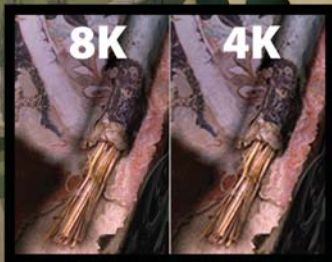
### How many visitors do you have?

Jorvik receives 400,000 visitors a year. Across the five attractions it's more than half a million. We're on the hit list of the top three things to see in York for tourists and have many school trips. We rely on admissions, as we don't receive any other funding. We've had 17 million visitors since opening, so we were right about there being an interest. ●

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# INSIDE STORY



Atkins Global introduced a story and narrative concept to a waterpark environment for the first time at Yas Waterworld in Abu Dhabi. Kevin Johnson explains how it was done

Julie Cramer, journalist, Attractions Management

## How would you sum up the essence of Yas Waterworld?

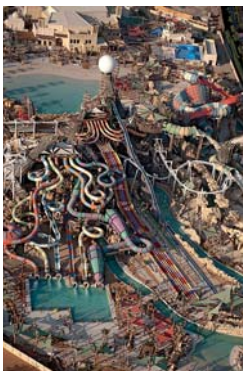
It's an amazing interactive waterpark, offering a fusion of elegant Emirati heritage with cutting-edge ride technology. There are 43 rides and attractions, several of them world firsts, and it is all sewn together by an enchanting story that runs through every element of the park.

## What was the brief?

There were four main elements. Firstly, write a captivating story; secondly, involve Emirati heritage in the story and design; thirdly, create an authentic souk within the park, and lastly, incorporate some world firsts, with a particular request for a double flow barrel ride.

## How did you begin to create the Yas story?

The story had to be something that was plausible, complex and three-dimensional. It had to have historical context – in this case the history of pearl diving – but



■ An aerial view of Yas Waterworld, which has more than 40 rides and spans an area the size of 20 football pitches

also contemporary cultural relevance to the market. So the Emirati creatures of the story also exist in the region – sand vipers, camels and dolphins.

It also needed to be something that reflected the progressive nature of the region. Many people have a rather outdated and mistaken notion of what countries in the Middle East are like. So for our story, we chose a young female protagonist who would be the saviour and the heroine of the adventure.

We had to run this past Sheikh Khalifa bin Zayed Al Nahyan and both he and the younger members of his family played an active part in naming the characters we'd created. The Sheikh even created his own character – a dolphin named Bubbles – that we incorporated in the story.

## How do you engage the visitors with the story?

It all begins at the gate where the operator animates the story with life-sized dressed-up characters. As guests queue



The pearl diving experience is unique to the Yas Island aqua park



The "Dawwama" Tornado funnel slide, by Proslide, is a popular attraction, and can carry six riders at a time.



Our mantra is this: one third of what we deliver should be familiar, one third should be an evolution of those things, and one third should be revolution, introducing something totally different



## THE STORY OF DANA AND THE PEARL

The story at Yas Waterworld revolves around a pearl diving village and the discovery of a giant pearl which brought luck and prosperity to the area. One day a violent storm blew in and when it was over, the precious pearl was gone. The village's fortunes changed overnight and it fell prey to bandits – until Dana, the daughter of the chief pearl diver, decided to set off on an adventure across the desert to find the pearl.

Secretly followed by a team of bandits, the heroine Dana encounters numerous colourful characters and passed-down tales about the pearl as her hunt for the precious jewel unfolds. All ends well when the mighty pearl rises majestically into the air supported by a huge rock and great jets of water, flinging the greedy bandits aside and causing them to flee. With the pearl returned, peace and prosperity return to the village.

rides, but they can still engage with the story within each ride. Younger children tend to stay in the children's area. For this reason, the water fortress there incorporates the whole story and all the characters in one place.

### What is the mix of national and international visitors?

When it opened in January 2013, Yas was designed to cater for a 70 per cent local and national market, with 30 per cent of visitors expected to come from overseas.

It surpassed all targets in its first year, and as time goes on and Abu Dhabi grows as a leisure destination, it's expected the balance will tip towards a predominantly international clientele.

### What would you say is the park's USP?

Its USP is that it truly is one of the first hybrid

parks to be built – with highly innovative wet and dry coasters.

There are world firsts like Bubble's Barrel – a double barrel flow pen – a hydro-magnetic tornado called Dawwama and the Falcon's Falaj, a hydromagnetic family ride. Also, the Bandit Bomber is an interactive roller coaster with wet elements, where riders can operate laser guns that hit targets and cause water cascades to go off round the park.

But they are more than just thrilling rides as the detail of the story is in everything. For example, the motion of the Falcon's Falaj, as it rises and then plummets and then rises again, is scribing the flight of the falcon in the story.

### Do visitors have to follow the story in a chronological way?

No, not at all. They can enjoy elements of it all over the park – whether on a single ride or dining in the F&B outlets.

But for those who want a much deeper engagement with the story, there is a paid-for Quest experience, which can last

► up, the narrative is graphically depicted on a series of boards, so they have the opportunity to fully comprehend the story as they wait in line. It's also on the website, of course, if people want to read it before they arrive.

When they enter the park, guests immediately understand the context of what's around them – the dhows in the lagoon, the hustle and bustle of the souk.

They walk through the souk to get to the changing rooms so the excitement starts right there with the noise and the smell of spices. By the time they've changed and are ready to enter the wet areas, they're ready for the adventure.

### What's the first thing they encounter?

There's a huge reveal when they leave the souk and enter the waterpark. Giant 6-metre-high [20-feet-high] doors open to give an amazing vista onto the waterpark and roller coasters. Jets are going off, coasters are whizzing by in all directions, there's a lively bandit fort. They see a huge suspended pearl – which is at the centre of the PearlMaster story – rising 30 metres [100 feet] above the oasis. It's really dramatic stuff.

Of course, it's difficult to conceal everything from the visitor as Yas Waterworld is so large it can be seen from 4 kilometres [2.5 miles] away. However, visitors don't really get the true sense of it until those huge doors part.

### Have you catered for all ages?

Yes, there's entertainment for everyone, from young babies to pensioners. The teenagers tend to head for thrill-seeking

■ The story's main character is Dana, a young Emirati girl





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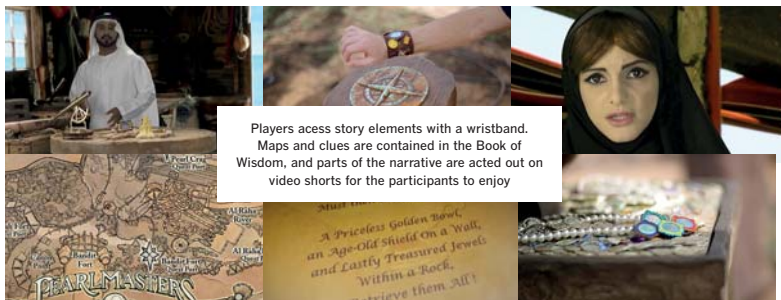
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Players access story elements with a wristband. Maps and clues are contained in the Book of Wisdom, and parts of the narrative are acted out in video shorts for the participants to enjoy

### THE PEARLMASTER QUEST

The PearlMaster is a unique interactive quest experience where participants get to search for lost treasure, encounter magical creatures, discharge hidden water cannon and

solve ancient puzzles.

The adventure begins at a dedicated booth in the waterpark's souk where visitors choose their tribe as well as the length of quest (from one hour to a whole

day) they require. They fill out a parchment with their details, choose an adventure name and are entered into the game network. After a 10-minute training video, they are given a book and

a personal wristband which enables them to track their progress as they play the game. The race is then on for them to complete as many different quests and levels in their allotted adventure time.

from one hour to several days depending on what people sign up for. It's never been done in a waterpark before.

There are over 60 elements of the Quest around the park that can be set off by the participant's wristband – from secret caves opening and lights flashing to sudden cascades of water. Guests progress to the top level where they become a PearlMaster and control exclusive elements within the park with their wristband.

#### What were the main challenges of the project for you?

At Atkins we design everything in three dimensions and because of this the story drives the design and therefore the guest experience is very complex.

We have a saying in our company: "animate, animate, animate". It doesn't matter where a guest is in the park they must be having multiple experiences at one time, from unexpected vistas opening up to sound effects to transparent roller-coaster cars whizzing over their heads. It's not just the big stuff. We take everything down to the minutest detail, such as what the hinges should look like on the doors. It's all part of the immersion.

It was also quite a challenge to convince the client of our vision, but they went with it and once Yas was two-thirds built, they started to see what we'd seen all along and they couldn't stop grinning.



There's going to be a trend towards having much more meaning within parks. The Far East market in particular is keen on having culturally relevant attractions that the market can relate to

#### Are you pleased with how Yas Waterworld has been received?

Absolutely, the *LA Times* best sums it up. They ran a story on the 20 best waterparks in the world and Yas was rated second only four months after opening, with Wild Wadi in Dubai, which Atkins also designed and which also has a strong storyline, rated fourth.

Before it opened, Yas Waterworld also received an award for innovation from the World Waterpark Association, and it broke all visitor targets in its first year.

#### Do you see any emerging trends in the waterpark industry?

There's going to be a trend towards having much more meaning within parks.

The Far East market in particular is keen on having culturally relevant attractions that the market can relate to.

As architects we can drive the waterpark market. When we designed Wild Wadi in 1999 the waterpark industry was in its early embryonic stages. We found the best rides manufacturers and challenged them to come up with something different to suit our needs. With Yas, we came up with the ride paths for experiences like the Falcon's Falaj and commissioned the ride companies to create the ride. We'll start to see a lot more of this in the future – the story and guest experience informing the design and not the other way around.

#### So will we see evermore thrilling waterpark experiences in the future?

Yes, and also the edge between wet and dry parks will become more blurred, and we'll see a lot more hybrid parks.

Our mantra at Atkins is this: one third of what we deliver should be familiar and already exist in the market, one third should be an evolution of those things, and one third should be revolution, introducing something totally different.

Once guests have visited several big waterparks around the world, they'll be looking for the next level of experience. The industry, which is still really in its infancy, must be primed to deliver it. ●



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Tiger Trail is a new exhibit at San Diego Zoo Safari Park, a forested habitat for Sumatran tigers

# RICK SCHWARTZ

VISITORS ARE INVITED TO LOSE THEMSELVES AT SAN DIEGO SAFARI PARK'S IMMERSIVE EXHIBIT OF RARE SUMATRAN TIGERS. A ZOO AMBASSADOR TELLS ALL

Alice Davis, managing editor, Attractions Management

San Diego Zoo Safari Park has unveiled a new home for its Sumatran tigers. The winding trail brings visitors through forests, ponds and long grasses to see the majestic cats in an environment designed to feel as close to their natural Indonesian habitat as possible. We spoke to zookeeper Rick Schwartz following the Tiger Trail's opening weekend. Schwartz, who is also an ambassador for San Diego Zoo Global, told us about the exhibit, the zoo's conservation drives and the joy of zookeeping.

## Can you describe the new Tiger Trail to us?

The safari park is very open. It's a huge exhibit that has all these species roaming through it just like you'd see in Africa. So what really stands out about the Tiger Trail is that you're suddenly immersed in the bamboo rainforests of Southeast Asia. You disappear in this forest and it's remarkably different from the rest of the safari park experience. We've always had Sumatran tigers at the safari park, but the exhibit we had before was where you had to stand on the perimeter and look in. But now, in the newly opened Tiger Trail, the path winds and curves through the exhibit space and (although you are safe, of course!) your perspective is that



■ Rick Schwartz

you can see tigers on your left, you can see tigers on your right. There are also pools and ponds and streams – plenty of water features because, in fact, the tigers are one of the few cats that actually enjoy playing in water. We have already seen on the warmer days that the cats will actually go in and play in the water. That's a real treat because it's great for our guests to witness this natural behavior that maybe your average person wouldn't expect to see from a cat.

## There's also some Indonesian-style architecture on the trail, is that right?

Yes, there is a traditional longhouse, which is a community meeting house like you'd see in Indonesia. We have many conservation efforts going on in Sumatra, so we have people coming and going all the time. They always bring back a lot of photographs and imagery and information about the architecture and everything else. The trail's attention to detail is very vivid. It feels as though you're in an isolated forest in Southeast Asia. The longhouse offers another view of the exhibit and the cats, and it has a lot of educational content too about the challenges the tigers face in the wild – such as habitat loss and poaching.

## What do you hope visitors take away from walking the Tiger Trail?

The main idea behind it is to immerse our guests into the experience. We don't want to hit them over the head with the educational side, but it's there so we hope they'll learn and be excited about tigers, and also have a better understanding of the challenges they face.

## How large is the exhibit and how much did it cost?

The Tiger Trail is just over 5 acres [2 hectares], and it cost \$19.5 million



The 5-acre trail was entirely funded by donations and cost almost \$20 million.



Children learn about threats to the tigers – such as illegal logging – as well as having fun at the exhibit

► [£11.6m, €14.3m]. We're very fortunate with our donor base; it was all paid for by donations. The Tull family put up \$9 million [£5.4m, €6.6m] and asked our donors to match it. They did, and actually came up with a bit more. We have great community support here in San Diego and across the nation. Our donors see the efforts in the work that we do.

**There are six tigers now. Do you have room for more?**

Definitely. This is essentially a breeding facility. There are only about 400 Sumatran tigers left in the wild, and so our Species Survival programme and our efforts to end extinction are vital. Our goal is to work alongside other zoos that have Sumatrans. We pay very close attention to the blood line and genetics which allows us to match the proper cat to the proper breeding programme. Making a strong blood line for the future is a really important goal. By doing that, we can ensure that some day we'll have a Sumatran tiger population in zoos that can sustain a population in the wild.



■ Condors, on the edge of extinction in the 80s, are a conservation success story

**What other exhibits do you have at the safari park in San Diego?**

At the safari park, one of the main attractions is the Africa Tram, where you go out to these very large fields and it really does have that feel of being on safari. We have a lot of different safari experiences

that you wouldn't get in a normal zoo. San Diego Zoo is a more traditional zoo in the city. There are great attractions there, like the koalas, which is set up like the Tiger Trail in that when you go in you're immersed in that Australian experience, with animals, and reptiles and plants from Australia. It's about experience. It's also true of the giant pandas, which are a huge attraction at the San Diego Zoo, in their bamboo forest, as though you were in a panda territory in China. We want people to enjoy and have fun, but also give them a little education so they walk away having learned.

**Are the pandas the most popular animals at the zoo?**

Yes, they are among the most popular with our visitors. Traditionally it's elephants, big cats and apes, but one of the draws of the pandas is that only a few zoos have them. At the Institute for Conservation Research we have on-site scientists who are trying to build an understanding of panda conservation and breeding and what pandas are facing.



San Diego Zoo Safari Park covers an 1,800-acre site and is home to more than 300 species. Many of them roam freely through large, spacious enclosures. The Africa Tram ride (top left) is popular with visitors



#### What have been San Diego Zoo Global's biggest successes in conservation?

One of the most widely understood and widely publicised examples is the case of the California condor. I use it as an example not only because it's a large magnificent bird, but it's a story that holds true to many conservation efforts. In the mid-1980s, there were only 22 or 24 individual condors left. Out of an entire species, there were less than two dozen. San Diego Zoo brought those birds into the zoo environment to prevent losing them altogether. Now in 2014 there are almost 400 condors in the world, and about half of them are free in the wild.

#### What does your role entail?

My role as ambassador is great because I enjoy talking about what we do and our conservation efforts and I am passionate about animals and animal care. I work with animals here in San Diego, and I also get to travel the world speaking to press organisations, national TV shows, going to conservation sites, like Galapagos and Australia. I share that story with everyone.

#### What's the best part of your job?

Occasionally, I get to just hang out with an animal that I've known since it was a baby. Those little moments are just amazing gems of experience that you can't get anywhere else or in any other job. And then, the other week I was in Africa tracking elephants and I can't believe I got to do that. And then, when

you have the opportunity to talk to a group of children, they are so locked in and so excited and they ask such great questions and that is really fulfilling too.

#### What else is happening?

Our centennial is in 2016, so we are currently planning how to best to celebrate. That's the big buzz right now. ●

### SAN DIEGO ZOO GLOBAL

San Diego Zoo Global is the non-profit organisation that oversees San Diego Zoo and San Diego Zoo Safari Park. The third entity of San Diego Zoo Global is the Institute for Conservation Research, which is based in San Diego and several other locations around the world.

San Diego Zoo Global was established as the Zoological Society of San Diego in 1916 by Dr Harry M Wegeforth, who felt there was a need for a zoo for the children of San Diego to enjoy.

The name San Diego Zoo Global was decided on to reflect the operations of the organisation, which has a presence in 35 countries doing conservation work, and scientific study at the Institute of Conservation Research. San Diego Zoo Global runs breeding programmes and Species Survival plans, and works with other zoological societies around the globe. "Our aim is very simple, although it is a big undertaking: it's to end extinction." says zookeeper Schwartz.

EAS

Euro  
Attractions  
Show

Amsterdam  
23-25 Sept.  
2014



# E FOR EDUCATION

The Euro Attractions Show is just around the corner, and the organisers are calling on guests to get educated and get inspired

**T**his September, the Euro Attractions Show (EAS) ramps up its educational programme, offering attendees more seminars, workshops, forums and presentations than ever before. Leading industry figures have been invited to discuss a variety of pressing issues and hot topics, and with hands-on workshops too, over 20 hours of educational content will be available.

According to Karen Staley, vice-president of IAAPA Europe, the expo is a great way to see where the industry is going, but the educational programmes "actually teach you how to anticipate these developments by learning from best practices and experts from the industry." Attendees also learn from others' experiences. "People really look forward to the CEOs Talk and the Leadership Breakfast. Their ways of working, philosophies and visions broaden the horizon for many people," Staley says.

The three-day event, from 23 to 25 September at the RAI Exhibition and Convention Centre in Amsterdam, the Netherlands, will host 375 exhibitors and an estimated 8,500 visitors. It's easy to get involved, with a range of educa-



Karen Staley, vice-president IAAPA Europe

tional activities for managers and leaders. "We always try to prepare a programme with a holistic approach, incorporating HR, marketing, new ideas and hot topics," Staley says. "Based on last year's feedback, we've focused on more practical seminars this year, such as Fright Fest - how to develop, market and manage a haunted attraction - and Old Wine, New Bottles, a panel session on how to refresh existing products and make them more profitable, extremely interesting for

both management and executive staff."

Then, the Institute for Attraction Managers is a regularly held training course with an edition to coincide with EAS. "It's aimed at industry professionals with three years' management experience who have demonstrated the potential and commitment to be on your senior management team," Staley explains. "The programme includes extensive education on attraction finance, marketing, leadership, operations, safety and revenue operations such as F&B and retail."

There is an event for attendees at an earlier stage in their careers; the Young Professionals Forum, taking place at the Heineken Experience in Amsterdam on 24 September. It's a great opportunity for those relatively new to the industry to share, network and learn about the steps others have taken to develop a successful career. "We have speakers from Toverland, BRC Imagination Arts and CoasterLab," Staley says. "Also, Professor Erwin Taets from VIVES Flanders Leisure Academy will share his experiences."

With the largest exhibition floor in the history of the European event and the strong focus on inspirational and informative parallel sessions, the show looks set to be one of the most exhilarating yet.



WE ALWAYS TRY TO PREPARE A PROGRAMME WITH A HOLISTIC APPROACH, INCORPORATING HR, MARKETING, NEW IDEAS AND HOT TOPICS



Seminar topics range from crisis management to dealing with online reviews. These are some highlights from the educational conference programme schedule

## STIMULATING SEMINARS

23 SEPTEMBER

13.45 - 15.15

**Fun, Fright and Festivals: How to develop seasonal events to increase attendance and revenues**

The off-season can be tough, especially in European climates. This seminar, presented by park event managers and show designers, explores how the potential of festivals like Halloween can be harnessed to extend your season and boost business later in the year. This seminar also discusses one-off events such as music concerts, giving guidance on how to develop, market and manage special events.

23 SEPTEMBER

15.30 - 17.00

**Branded Goods: Is using intellectual property the right choice for your facility?**

More and more parks are investing in IP, and it's often a surefire way to attract new customers and boost profits. But intellectual property rights can be a complex area with potential disadvantages and pitfalls as well as its advantages. The panel here — attraction designers, IP license-holders, park operators, industry consultants — will share their experiences and advice on this popular subject.

24 SEPTEMBER

12.45 - 14.15

**Old Wine, New Bottles: What mature attractions can do to renew and refresh their facilities**

It's vital in the attractions industry to renew our offerings and tempt customers to return, and perhaps most germane to those more mature attractions. This session will be conducted by a panel of planners, designers, operators and owners who will share a five-point strategy to the growing attendance at older attractions, and present case studies to illustrate their insights in practice.



GET INSIGHTS  
GET EDUCATED  
GET INSPIRED

## TOP-CLASS TALKS

23 SEPTEMBER

17.00 - 18.00

**CEOs Speak: A quartet of CEOs talks about the industry past, present and future**

Learning from the experts who possess a wealth of experience can be invaluable, and it's central to the EAS ethos. Continuing the CEOs talk series of talks this year, the event has invited four heads of family-oriented amusement parks to share their knowledge and insights with fellow attendees. The panel will be made up of Andreas Anderson of Liseberg Amusement Park, Sweden; Roderick van Zuylen of Duinrell Park, the Netherlands; Mascha van Till of Walibi Holland and Tolga Alisoglu of Vialand, Turkey.

24 SEPTEMBER

8.30 - 9.55

**EAS Leadership Breakfast**

Breakfast features Plopsa Group CEO Steve van den Kerkhof as the keynote speaker. Van den Kerkhof, chairman of the board of Belgian children's TV company Studio 100, who owns the Plopsa parks, will talk about the relationship between Studio 100 brands and the parks, with the Plopsa sites attracting fans of the studio's characters and creating further marketing and merchandising opportunities.

## PRACTICAL PROGRAMMES & FASCINATING FORUMS

21-23 SEPTEMBER

**Institute for Attractions Management**

IAAPA's management development training course is in session at the Heineken Experience, giving mid-career professionals the chance to learn new skills.

24 SEPTEMBER

15.00 - 19.30

**Fifth Annual IAAPA Europe Waterpark Forum**

This forum held at Center Parcs Eemhof involves presentations, a park tour and a briefing on the waterpark industry.

25 SEPTEMBER

9.45 - 15.00

**Family Entertainment Centre / Indoor Play Centre Programme**

Exclusively designed for FECs and indoor play centres, with a series of activities and seminars dedicated to these sectors.

For more information on EAS, visit [www.IAAPA.org/EAS](http://www.IAAPA.org/EAS) or contact the IAAPA Europe offices at [Europe@IAAPA.org](mailto:Europe@IAAPA.org)

EAS

Euro  
Attractions  
ShowAmsterdam  
23-25 Sept.  
2014

# EURO ATTRACTIONS SHOW

The Euro Attractions Show (EAS) takes place at the Amsterdam RAI Exhibition and Convention Centre from 23-25 September, with more than 375 exhibitors. Here's a sneak preview from some of the stands



## MAURER SÖHNE

Maurer Söhne is giving show guests the opportunity to view its new Saturn-V project, an affordable and easy-to-maintain dark ride. Based on one of Maurer Söhne's Spinning Coaster layouts, this ride has been dressed up with a space theme and storyline, designed and written by New York design company Raven Sun.



## ZAMPERLA

Zamperla is presenting its latest roller coaster, the Thunderbolt, a modern-day imagining of the original Thunderbolt which served New York's Coney Island thrill seekers from 1925 until 1982. This nine-seater ride takes passengers through a 90-degree dive, where vehicles reach 65mph (105kph), with a big loop, a zero-G roll, a Stengel dive, Z loop, fast camel backs and a corkscrew. The first installation has been made at Coney Island, its first custom coaster since the Cyclone.



## DYNAMIC ATTRACTIONS

Dynamic Attractions is using the show to launch a host of new rides. The Flying Theatre and the Immersive Transporter are both aimed at the family market. The Circumotion Theatre is a massive spinning, tilting and dropping room and the SFX Coaster is a roller coaster-dark ride mix which incorporates a high speed catapult launch and a free fall as the track drops.



## HOLOVIS

Holovis is launching its next-generation interactive dark ride solution. Its latest interactive game title in the Dome-Rider series is River Raid, a highly immersive themed experience designed for up to six players using interactive devices, high-quality visual gaming content and real-time special effects, all within a full motion vehicle.



## NWAVE

nWave is launching its newest ride simulation title, Glacier Race 3D. Riders enter a death-defying race over frozen landscapes, through tunnels and across ice waterfalls. A new 4D attraction, the House of Magic 4D, makes its European debut, and a new film for the Halloween and Christmas season, the Haunted Mansion 4D, will be revealed. Inside nWave's 54sqm [580sq ft] booth, a unique 3D screening facility means EAS visitors can fully experience nWave's new content.





## P&P PROJECTS

P&P Projects is promoting its various services from design to build, with some of its latest props and objects on show. The company has worked on a number of exciting projects recently, including Europa Park's Arthur and Disneyland Paris's latest attraction, Ratatouille, which opened this summer.



## CRUDEN

Cruden will be showcasing its 6 DOF motion race simulation system, which offers a Formula 1 racing experience. The company has just supplied a high-end private members club in Guangzhou, China, which features eight private car simulators linked together.



## PROSLIDE

ProSlide is showcasing the popular ProSlide funnels which are consistently topping installation lists. Twenty-five different versions of the customisable Tornado are opening in 2014. ProSlide is also promoting its tailored hybrid rides having installed many "world firsts" this year, including a Tornado 24 plus Tornado 60 at La Viva Water Park in China.



## POLIN

Polin is exhibiting waterslide tubes and new-generation play structures, which include modular designs for flexibility and interactive features like tipping buckets. In June, Polin installed a side-by-side Racer Twin Turbolance with its natural light effects technology at Aqualand Maspalomas, Spain.



## HUSS RIDES

Besides top sellers like Giant Frisbee, King Kong and Sky Tower, Huss Rides has redesigned and improved some of its classic rides, including the Condor-2G. The company is promoting its latest gondola ride, the Huss Pirate Ship. This is already in situ in Djurs Sommerland in Denmark, designed as a Viking ship in a new Viking-themed area.



## JORA VISION

Dutch park design firm Jora Vision is currently working on the concept for Bames Värld at Kolmården Zoo in Sweden, a new area celebrating an iconic Swedish character slated to open next year. The area, based on the comic book bear Barse, will include themed rides, play areas and a show area. Jora Vision is developing the shows, entertainment, sound effects and special effects for the experience. ▶

## SHOW PREVIEW



### SALLY CORPORATION

Sally Corporation is talking to visitors about its dark ride options. Den of Lost Thieves, a wild chase through a pirate's secret island in search of hidden booty, has a small footprint which makes it a good budget choice. At the opposite end is the interactive Challenge of Tutankhamun dark ride, where riders try (often unsuccessfully) to make it to the treasure room. Look out for the animatronic pirate at the Sally stand.



### BARCO

Visualisation product maker Barco is profiling the first new projector to come from its acquisition of projection technology company Projectiondesign. The F50 combines sleek looks with compact engineering to provide sharp images. Full production of the F50 started during the summer, with a pipeline of installations already lined up.



### PREMIER RIDES

Premier Rides is showcasing its latest ride, the Sky Rocket II, which launched at Holiday Park in Germany this season. Branded as Sky Scream, it features a slingshot launch, backward accelerations, heights of 50m (164ft), a vertical drop and a loop — the ride lives up to its name.



### JACK ROUSE ASSOCIATES

Jack Rouse Associates (JRA) is introducing recent projects, including the Science Centre Singapore's KidsSTOP, which opened in June. JRA provided the master planning, concept and schematic design for the interactive museum, which encourages children to learn about science through purposeful play and exploration. Features include a climbing structure with hanging leaves and fanciful doors, a virtual pond and a fossil dig.



### OMNICKET

OmniTicket is promoting Best Overview Solution, integrated software for ticketing, retail POS, access control, stored value cards and online sales. This has been installed at high-profile attractions, including the Louvre in Paris and the Finnair Skywheel in Helsinki. OmniTicket is part of the Best Union Group, which acquired French ticketing company IREC.

### WHITEWATER

Raft Battle is Whitewater's latest innovation, an interactive adventure-themed raft ride where riders encounter a sequence of surprise water effects and water battles. Whitewater is also unveiling an adventure park installation that combines different elements of the adventure genre — zip lines, rope courses, vertical climbs, slides — into a single family-oriented attraction called No Boundaries.



### GATEWAY TICKETING SYSTEMS

Gateway Ticketing Systems is profiling its Galaxy RevGen solution, which is a comprehensive revenue generation solution which promises to drive up revenue across all collection points as well as providing crucial business intelligence. Spending trends can also be monitored using the solution. Historic Scotland says it has just implemented the system across 75 of its sites.

# MotionDome™

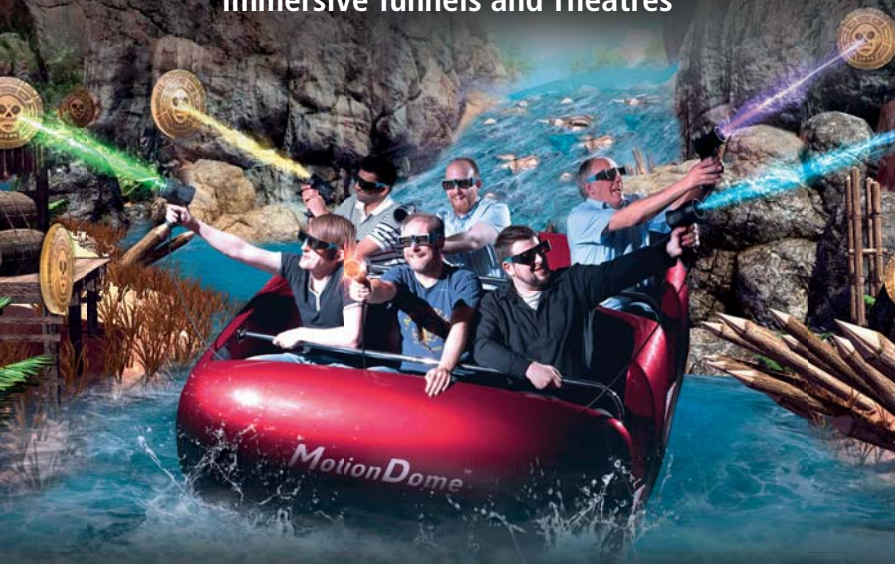
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Walter Ginckels of Technopolis



François Englert (right), who shares a Nobel prize for his Higgs boson work

# SCIENCE CENTRE WORLD SUMMIT 2014

**T**hree astronauts, two Nobel prize laureates and one member of the royal family – His Majesty King Philippe, King of Belgium – were among the 464 delegates from 58 countries at Science Centre World Summit 2014. The summit was hosted by Technopolis in Belgium in March, with Belgian Nobel laureate Professor François Englert opening the conference. In his address, Englert discussed the importance of science and technology, and how to engage the next generation with these crucial subjects.

## SCREENAGERS

The World Summit was built up around three main themes: research and communication of research; engaging learners in all settings; and new technologies for

Attracting teenagers and keeping up with digital developments were among the topics at the recent conference, as Erik Jacquemyn, CEO of Technopolis, reports

learning and engagement. Attracting teenagers, or screenagers as they're often referred to, was one of the most important topics raised at the conference. Delegates were told science centres

can play an important role when it comes to teenagers and their screen addictions. Through education, perhaps they can be tempted away from their computers, tablets or smartphones and converted into more active members in society. It was suggested that science centre operators nurture teenagers' making and tinkering at popular Maker Faires [a family-friendly festival of invention, creativity and resourcefulness and a celebration of the Maker movement]. These become opportunities for science centres to help make the makers of the future, and turn consumers into producers.

The role of science centres in society was also discussed, and it was suggested they act as bridges between science and society, encouraging everyone to become a citizen scientist. To encourage people's curiosity, science centres should help visitors to ask questions, rather than simply providing the answers.

## DIGITAL DILEMMA

Adapting to the digital age and the speed of innovation poses a great challenge to science centres. One of the sessions questioned whether new technologies enhance learning or create barriers. The use of apps was also debated, with a focus on how they can serve as powerful bridges between science centres and museums, universities and the public. A session about serious gaming discussed

## Partnerships

Another result of the World Summit are the new partnerships that are initiated and formalised. The agreement between the Chinese Association of Natural Sciences Museums (CANSM) and the Association of Science-Technology Centres (ASTC) for the translation of its award winning magazine Dimensions in

Chinese was officially signed. The International Council of Museums (ICOM) expressed its interest in partnering with the science centre field.

Also, the Human Brain Project (HBP), the new Flagship EU initiative, announced a global collaboration with science centres. This co-creation approach will bring the public along a scientific journey through thousands of science centres around the world.



Scientist Colin H. Johnson  
(left) and Technopolis CEO  
Erik Jacquemyn (right)

## THE MECHELEN DECLARATION

One of the outcomes of the World Summit is known as the Mechelen Declaration. In this document, the science centre field and its strategic partners commit to concrete actions. The document was signed by delegates from within the science centre field and their networks: ASPAC (Asia Pacific Network of Science and Technology Centres), ASTC (Association of Science-Technology Centres), ECSITE (European network of science centres and museums), NAMES (North Africa and Middle East Science centres network), NCSM (National Council of Science Museums), REDPOP (Network for the Popularisation of Science and Technology in Latin America and the Caribbean) and SAASTEC (Southern African Association of Science and Technology Centres).

Many delegates outside the science centre field also signed the Mechelen Declaration: Kris Peeters (minister-president of the government of Flanders), Dr Hans-Martin Hinz (president of the International Council of Museums – see



King Philippe of Belgium signs  
the Mechelen Declaration

interview in AM Q2 14), Tissa Vitarana (senior minister scientific affairs, Sri Lanka), Anne Glover (chief scientific adviser to the president of the European

Commission) and Marie Levens (director human development, education and culture at the Organisation of American States). By signing the document, they agreed to promote the declaration to their organisation and respond to future invitations to discuss potential partnerships.

sharing scientific content in a smooth and playful way, as gaming gets the player emotionally and personally involved.

Personalising the science centre visit was also discussed. As visitor expectations are increasing, science centres are experimenting with new ways to generate more personalised content and provide deeper access. Many delegates predicted that interactive artworks would feature far more in science centres of the future. Ensuring a strong interaction and behavioural enrichment is paramount, as real experiences will last long after the latest

gadget becomes defunct.

Other key speakers during the opening session were Professor Tissa Vitarana (senior minister scientific affairs, Sri Lanka), Marie Levens (director human development, E education and culture at the Organisation of American States) and Professor Anne Glover (chief scientific adviser to the president of the European Commission, José Manuel Barroso). Glover emphasised the importance of communicating research: "Research not communicated is research not done."

For the first time, speakers from both

inside and outside the science centre field were involved. Ideas and debates provided by people outside the industry provided fresh insight and will be used in the theory and practice of planning, operating and developing science centres. ●



Erik Jacquemyn  
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centre Technopolis and chair  
of the summit's international  
programme committee  
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# PLAY TO THE GALLERY

A spate of exciting museum design has set pulses racing, with new projects embracing the outside world, and renovations eyeing a perfect balance between modern and original architecture. Here's a round-up

## PÉREZ ART MUSEUM MIAMI, FLORIDA, US

### ARCHITECTS HERZOG & DE MEURON

The new Pérez Art Museum Miami (PAMM) reflects both the natural and urban landscapes of this Florida city. Designed by Swiss architects Herzog & de Meuron, the museum plays a key role in Miami's bid to become an important arts and culture destination.

The museum's front façade is oriented toward the bay area, making it a highly visible landmark in Miami's cityscape. PAMM includes 3,000sqm (32,000sq ft) of gallery space with educational facilities, a shop and waterfront café spread over three storeys. Extensive plazas and gardens make the most of the favourable climate. The building offers a threefold increase in programmable space compared to the facility – the Miami Art Museum – that it replaced.

Within the contemporary art museum, different modes of display have been used in a non-linear sequence, allowing visitors to map their own routes through the collection and space. The permanent collection galleries are on the first and second levels. Benefiting from natural light and views of the surrounding park and bay, outward-facing exhibition spaces alternate with enclosed, intimate galleries with a focus on single subjects. Art is displayed throughout the museum, including the garden and the parking garage.

The museum sits on a platform below a

A view of the east facade of the Perez Art Museum Miami, designed by Swiss architecture firm Herzog & de Meuron

canopy, both of which extend far beyond the facility's walls to create a comfortable shaded veranda. Wide stairways connect the platform to the bay and a waterfront promenade, creating a continuous, open civic space that integrates community, nature, architecture and art.

Herzog & de Meuron co-founder and senior partner, Jacques Herzog says: "Miami is known for its iconic art deco district – in fact art deco was about decorated boxes with no great relationship and exchange between inside and outside."

"The greatest thing, however, that makes Miami so extraordinary is its amazing climate, lush vegetation and cultural diversity. How can these assets be fully exploited and translated into architecture? That's the way we tried to go with our design for the new art museum in Miami."

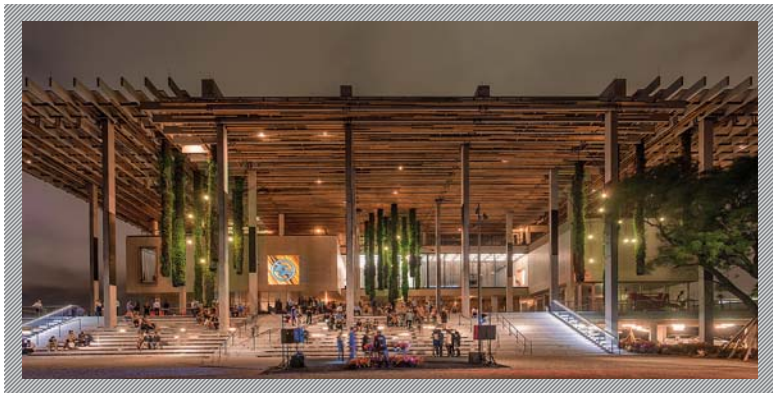


PHOTO BY ARMANDO MANINFOR MIAMI.COM



✦ A rendering of the courtyard of the Museo Maya de América. The cenote-inspired waterfall is the focal point

## MUSEO MAYA DE AMÉRICA GUATEMALA CITY, GUATEMALA

ARCHITECTS HARRY GUGGER STUDIO

The Museo Maya de América is due to open in Guatemala City in 2017 and its developers say it will represent one of the most ambitious cultural development projects ever undertaken in Central America.

Designed by Swiss architects Harry Gugger Studio in collaboration with Boston-based design firm Over Under, the new museum will be home to one of the world's most important collections of artefacts, artworks and textiles from the sophisticated Mayan civilisation.

The museum will offer 60,000sqm (646,000sq ft) of programmable space, and has a budget of \$60m (£35m, €44m). The building design draws inspiration from traditional Mayan temple architecture.

Harry Gugger, principal of Harry Gugger Studio, says the building will form "a monolithic box perched atop blocks of stone, as if floating above the ground. On closer inspection, a pattern of



A park and lush greenery will frame the architecture, based on the motifs of the traditional Mayan temple

staggered stone screens is punctuated by over-scaled loggias that draw light into the building and offer glimpses inside."

Organised for maximum public interaction with the site, the ground floor will be almost entirely open space. The galleries will reside within the floating box,

connected to the lower levels by stairs that climb around a central courtyard.

This courtyard evokes the cenote, a type of natural sinkhole characteristic of the Yucatan and held sacred by the Maya. Open to the sky and lushly planted, the eight-storey cenote will be the heart of the museum. The large roof surface will collect rainwater and filter it through the cenote in a method recalling traditional Mayan practices of channelling water.

Situated at a prominent location on the edge of L'Aurora Park, the new museum will be visible when exiting Guatemala City's international airport, and is expected to become the capstone to a series of museums, including the Children's Museum and the Museum of Contemporary Art. This new cultural nexus – located in what will be the largest recreational open space in the city – will provide a new destination for tourists and residents alike.



## GALLERY DESIGN



The central spiral staircase in the rotunda of the Tate Britain (left) and the lower level rotunda (above). Tate Britain's exterior (below)

## TATE BRITAIN LONDON, UK

ARCHITECTS: CARUSO ST JOHN

A new-look Tate Britain, comprising an ambitious transformation of the oldest part of the Grade II-listed London building, has been completed by architects Caruso St John.

The £45m (\$77m, €57m) project included the reopening of the main entrance on Millbank, combining new features with the excavation of the building's original architectural elements. The changes included a striking new spiral staircase inside the entrance in the Rotunda, which opens up access to new public spaces below.

The floor of the Rotunda was remade in terrazzo in a pattern that recalls the original marble mosaic floor. The Rotunda niches have once again become locations for the display of art.

New learning studios are located throughout the gallery, including a dedicated schools' entrance and reception,

and a new archive gallery, presenting temporary displays from Tate's extensive archive of artists' letters and ephemera.

The museum's food and beverage outlets have also been extensively remodelled. The Whistler Restaurant has been reopened, with its famous Rex Whistler mural, *The Expedition in Pursuit of Rare Meats* (1926-7), fully restored. Originally opened in 1927, the restaurant was once, owing to its mural, described in a newspaper as "the most amusing room in Europe" and it's been a site of political and social intrigue ever since.

The redevelopment included the opening of the circular balcony of the Rotunda's domed atrium, which had been closed to visitors since the 1920s. The space is now an elegant café for Tate members complete with a 14-metre-long (46-foot) bar, while the Grand Saloon, overlooking the Thames, offers a light-filled space for seminars and events.



ORIGINALLY OPENED IN 1927, WHISTLER RESTAURANT WAS ONCE, OWING TO ITS MURAL, DESCRIBED IN A NEWSPAPER AS "THE MOST AMUSING ROOM IN EUROPE"





## PHILADELPHIA MUSEUM OF ART PHILADELPHIA, PENNSYLVANIA, US

ARCHITECTS: **GEHRY PARTNERS**

Frank Gehry and the Philadelphia Museum of Art (PMoA) have unveiled a master plan for the 90-year-old museum. Known for the Guggenheim Museum in Bilbao, Spain, Gehry's latest designs for PMoA were revealed in an exhibition this summer entitled Making a Classic Modern: Frank Gehry's Master Plan for the Philadelphia Museum of Art.

Gehry's plans to extend and renovate are unlike any of his previous works, "dramatically different and virtually unique," according to the museum. The architect's plans include opening up the space at the centre of the museum, creating subterranean galleries lit by a skylight in the East Terrace, and re-opening a vaulted underground walkway long closed to the public. The plans are undeniably modern, yet sympathetic to the historic building.

The most daring aspect of the \$352m (£205m, €257m) scheme appears to be the proposed creation of a 7-metre



(23-foot) opening in the "Rocky steps" that lead up to the east entrance of the museum. The steps became a tourist attraction in their own right following their appearance in *Rocky* in 1976. Visitors often climb the steps to recreate a famous Sylvester Stallone scene. The opening in the steps would provide access to several underground galleries.

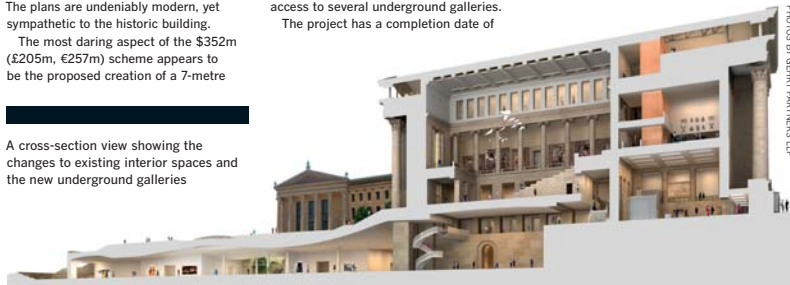
The project has a completion date of

✚ Lenfest Hall rendering (above), and an aerial mock-up of the west wing with a view of the museum's west (left)

2028, says Gail Harrity, the museum's president and chief operating officer. "Given the ambitious scope of the plan, it has been designed in separate phases that can be implemented as funds become available," she says.

Ultimately, the expansion and renovation would be time-consuming and costly undertaking, but with a predicted increase of almost 16,000sqm (170,000sq ft) of gallery space, the interior of the building would be completely transformed. ●

A cross-section view showing the changes to existing interior spaces and the new underground galleries



PHOTOS BY GEHRY PARTNERS LLP

# TRIOTECH CELEBRATING 15 YEARS OF SUCCESS

From small beginnings, interactive attractions creator  
Triotech has chartered a path to global recognition

**E**rnest Yale nurtured his schoolboy obsession with computers to become founder and CEO of a market-leading interactive attractions company. As the Montreal-based dark ride specialists enjoy their 15th anniversary, Yale recalls the highlights of the journey so far.



Ernest Yale,  
President & CEO

is a very innovative attraction that combines the best of several technologies. It provides great value for parks because it allows the deployment of a signature attraction with great guest experience at the fraction of the investment typically required. This is a great example of gamification and ride entertainment at play.

shows in Asia and Europe. It was a big, though calculated, risk. It turned out to be a great move as it isolated us from the downturn of 2008-09.

#### WHAT HAS CHANGED IN THE LAST 15 YEARS?

Of course there is global reach. We have over 15 systems installed in China. We have a Triotech office there staffed with our own employees and that team is growing, as is our presence in Asia.

Then there is the size and complexity of projects. An interactive dark ride is a multi-million dollar investment that can involve many stakeholders, park owners, master planning firm, architects. In response to that, we've hired project and bid managers, implemented a Project Management Office, and developed improved quality control processes.

The fact that we do content is another change. It's a solid arrow in our quiver. We

can supply a turn-key solution with original content or we can integrate characters or environments from our client.

We integrate IP and create custom branded content, as we are doing for a dark ride at Hello Kitty World in Shanghai.

We now operate attractions in partnerships around the globe, which allows us to acquire first-hand experience of what works with visitors.

#### WHAT'S THE SAME?

You have to provide an attraction that guests will enjoy and provide a superior ROI for the operator. The former drives the latter. If it's a great experience, guests will come back.

#### HOW DID YOU BECOME INVOLVED IN THIS INDUSTRY?

I started dabbling with computers at a young age. We didn't have the money to get a computer or even video games when I was a teenager so I stayed around after school and learned how they worked, how to program them. I made my own games working at lunch time and after hours. It was a passion for me. I completed my studies in that field and eventually started Triotech in 1999.

#### AS TRIOTECH TURNS 15, WHAT HAVE BEEN THE MAIN MILESTONES?

We began in the coin-op world but realised that our technology and know-how were scalable, which meant bigger attractions. Motion technology, 3D projection, software and the integration of all elements of an attraction put us on the map. Then there's interactivity, one of our core assets. It takes the fun of video games and brings it out-of-home and into a group setting. Winning a Brass Ring Award last year was, in a way, a thumbs up from our industry that we have something unique.

The next big thing is interactive dark rides. We have just commissioned Wonder Mountain's Guardian at Canada's Wonderland and it has been a success. It

#### CAN YOU TELL US ABOUT THE TRIOTECH TEAM?

We have a really strong team at Triotech. Gabi Salabi is vice president of business development. He has a strong background of over 15 years in global sales. Gabi joined Triotech in 2010.

Late that year Eric Marradi joined as creative director. Christian Martin joined over a year ago and has been in marketing and sales with multinational companies throughout his career.

This year we added Jean-Francois Campeau to head R&D. They join the talent that has been with Triotech for a long time; Sylvain Larose as CFO/COO and Jeff D'Arriso as software director. It is key to reinforce your team with people that bring different skill sets if you want to grow your company.

#### WHAT HAS BEEN MOST CHALLENGING FOR TRIOTECH?

Around 2007 we decided to invest in international deployment. This was a huge challenge for a small (at the time) Canadian company. We started doing



Triotech won a Brass Ring Award for its XD Dark Ride in 2013



Triotech CEO Ernest Yale (front) with part of Triotech's team (from left to right) Eric Marradi, Christian Martin, David Miron and Gabi Salabi

#### WHAT IS THE SECRET TO TRIOTECH'S SUCCESS?

Develop everything with the guest in mind. Whether a coin-op or an interactive dark ride for a major theme park, it's all about the guest experience.

#### HOW DO YOU APPROACH BUSINESS?

Steve Jobs said: "You've got to start with the customer experience and work back toward the technology – not the other way around." We apply the same philosophy in our product development. We believe people should have access to a fun, safe, wide-appeal adventure that can be experienced as a group. This is what creates the buzz. This is what Triotech is about.

#### HOW IMPORTANT IS IT THAT YOU APPEAL TO A BROAD AUDIENCE?

We provide a great guest experience, with wide appeal measured in terms of age, gender and culture. Some alternative rides have a much narrower appeal – say, teenage boys. But, a Triotech attraction appeals to kids and their parents ... and their grandparents, whether they are in the US or China or the UK.

**We believe people should have access to a fun, safe, wide-appeal adventure that can be experienced as a group. This is what creates the buzz. This is what Triotech is about**

Furthermore, our attractions are not dependent on the weather. This is key in certain areas of the globe where inclement weather can affect the ROI of an attraction. Then there is the safety aspect as media-based attractions have an extremely good record for safety.

#### WHAT MAKES GUESTS COME BACK FOR MORE?

"Replay-ability" is key in our interactive attractions. This is driven by two factors. Firstly, we take guests on real-time media-based adventures so they live it differently each time. Much like a video game, the characters react to what the guests do. Secondly, there is competition. The fact that scores are kept increases the fun factor and makes guests want to relive the experience to get an even better score or just to beat their friends.

#### WHAT'S NEXT?

We have interactive dark ride projects on several continents, involving interesting IP for some and creative new content for others. We're becoming the supplier of preference on IDRs for our interactive technology and real-time media content production capabilities. This trend is growing, especially for brandings.

We're also developing new products. We can't reveal our product pipeline but we like to bring something special to IAAPA in Orlando every year. Last year we brought a fully functioning interactive dark ride. This year we are working on a few special items too.

Another development is our foray into the edutainment market. We have installations in zoos and we believe we can enhance the offering at museums, science centres and aquariums. ●

# GRAND TOURS

In our latest apps and audioguides round-up an interactive tour around an artist's home adds a deeper level to the visitor experience

## FRIDA KAHLO TOUR

Location: **Museo Frida Kahlo**  
Design: **Antenna International**



Increasing dwell time and boosting visitor engagement at the home of Mexican artist Frida Kahlo were the primary reasons for Museo Frida Kahlo launching its first handheld interactive audiovisual digital guide. The guide takes visitors around the home and grounds of the cultural icon, located in Casa Azul, Coyoacan, Mexico.

The hour-long tour, in Spanish or English, describes the collection of different artefacts throughout her home and garden. The museum particularly wanted people to spend more time in the outdoor space enjoying the sculptures.

"The museum wanted an audio tour that would be authentic in their eyes. They are very protective of Frida and didn't want the story to be over-dramatised," says Blaire Moskowitz, Antenna International's



Frida Kahlo spent most of her life at Casa Azul, which became a museum in 1958

marketing manager, Americas. "They wanted to highlight the fact that the home was the centre of her creative universe."

Visitors can click on images of artefacts and learn their significance, while constantly hearing commentary by the artist herself. During the guide's development, Antenna had unlimited access to Kahlo's

letters, diaries, poetry, notes and memos.

Two games are also included. In the first, players are sent on a scavenger hunt to discover treasures hidden throughout the grounds by Frida's naughty monkey. In the second, players make music with virtual conch shells, inspired by the shells which decorate the terraces at Casa Azul.

## KENWOOD HOUSE TOUR FOR VISUALLY IMPAIRED AND DEAF

Location: **Kenwood House**  
Design: **Acoustiguides**

English Heritage has launched a free app, via Android and iOS, to open up the experience of Kenwood House to visually impaired and deaf visitors.

Using the Acoustiguide mobile platform, the British sign language app plays video of interpreters signing the commentaries. Each tour is subtitled. "English Heritage chose an app because it was the best tool to reach all visitors, since the house doesn't



have a main reception area, just floating volunteers in the welcome area," says Sarah Mallett, Acoustiguides' head of digital media sales and marketing, UK and Europe.

The tour of the Hampstead Heath, London, attraction is led by a narrator and includes insights from a number of different specialists. Each segment has a voice prompt that tells the visitor which commentary they are about to listen to.

The app presents Kenwood House through four different themes and includes a variety of visuals and maps.

## SHAKESPEARE'S GLOBE EXHIBITION TOUR

Location: **Shakespeare's Globe**  
Design: **Acoustiguides**

Apps and audioguides provide an effective way of enhancing the visitor experience and help people from a multitude of nationalities. This summer, Shakespeare's Globe Exhibition in London added Mandarin and Russian to the six languages that it already has on offer on its Opus Click multimedia guide.

The 60-minute multimedia tour, written by Acoustiguide's creative team, gives an engaging account of the Globe's history, from its construction in the 16th century to its accidental burning down in 1613 and rebuilding in the 20th century.

## BACK IN TIME: HISTORY AND ROYALTY TOUR

Location: **De Nieuwe Kerk**  
Design: **Guide ID**

Famous Dutch heritage site De Nieuwe Kerk in Amsterdam has opened its annual installation Back in Time: History and Royalty, which features a multimedia tour via the Podcatcher from Guide ID.



The tour allows the visitor to choose his or her own path through the exhibition as they navigate 600 years of history, medieval mysteries and royal traditions. A children's trail and quiz provide another element to a family-oriented experience.

Manager of commercial business Heleen van Ketwich Verschuur says as well as being a flexible, user-friendly and easy-to-update guide, the Podcatcher is also effective for research and evaluation.



## HOUSES OF PARLIAMENT FAMILY TOUR

Location: **Houses of Parliament**  
Design: **Antenna International**

Historic and cultural sites can be less exciting for young visitors than they are for their parents, but not if illustrious histories are brought to life with guides designed specifically with them in mind.

London's Houses of Parliament has created a version of its audio tour especially for families. The tour includes engaging commentary delivered in the style of a live news broadcast, with time-travelling

reporters delivering stories associated with the historic building, from places like the Royal Gallery, Members' Lobby and Queen's Robing Room.

The tours are available in a range of languages, including Mandarin and Russian. Amy Pitts, head of visitor and retail services, says visitors are being offered a wider choice than ever before. "We are confident this summer's tours will appeal to new audiences and encourage previous visitors to come back and see what we now have to offer," she says.



## ANNE FRANK HOUSE TOUR

Location: **Anne Frank House**  
Design: **Guide ID**

The Anne Frank House in Amsterdam in the Netherlands has introduced Guide ID's Podcatcher platform as a way of talking to a number of different nationalities.

The museum has also introduced an immersive video projection to give visitors a

further opportunity to reflect on the life of the famed diarist. It shows people from across the world explaining what Frank means to them and how she has inspired them.

The narration has been translated into seven different languages which people can listen to on a small, handheld Podcatcher device provided to them at the museum.

## DIGGERLAND UK

Location: **Diggerland**  
Design: **Diggerland**

Diggerland, the construction-themed adventure park, has launched an in-house designed smartphone app called Diggerland UK. The app is being used mainly for marketing purposes, making information about the park easily accessible.

The app will be accompanied by a new mobile website, set for launch in time for the 2015 season. A game will be downloadable later in the year.

The new app coincided



with the opening of the first US Diggerland park in New Jersey in June this year.

Diggerland believes app-based guides are increasingly important to enhancing customer satisfaction.

"More and more people are using apps with their smartphones and tablets," says UK marketing manager Sherene Garvin-Mack. "At Diggerland we wanted to tap into this market by putting ourselves in front of a much larger, younger audience who, as our research has shown, prefer to search for information this way."

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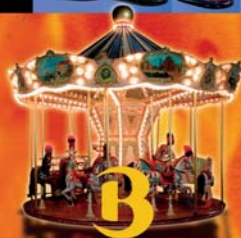
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# LIGHT FANTASTIC

In our latest light and sound round-up, narratives are projected onto castle walls and Tate Modern's Turbine Hall is transformed by a lighting installation



## BRINGING HISTORY TO LIGHT

Projection Studio has been involved in a number of recent projects which have lit up castles, cathedrals and other historic buildings.

Projection artist and digital art specialist Ross Ashton is able to bring building's histories to life in colourful, accessible, informative and entertaining narratives. He recently created three new *son et lumière* shows for Colchester Castle, UK, comprising a giant projection onto one of the castle's internal walls, accompanied by a soundtrack by sound artist Karen Monid.

The castle – which recently reopened

having been closed for 15 months to undergo a £4.2m (\$7.1m, €5.3m) transformation – wanted the shows to inspire visitors to learn more about the building's history. "The challenge was picking a selection of historical moments that would best translate to large format projection and also encapsulate the scope and breadth of the Castle's story in a short timeframe," says Ashton.

As well as storyboarding, scripting and producing the three stories, Ashton designed the projection system, which has a Panasonic PT-DW17K at the centre, fitted with a .6 short throw lens. The projector is attached to the ceiling and projects an

Giant images were beamed onto the wall by a single Panasonic PT-DZ21K machine

image 15 metres (49 feet) wide by 10 metres (33 feet) tall. Installation was completed by Sysco AV.

In another project, The Projection Studio collaborated with artist Maria Rud to take its Animation concept

to Durham Cathedral, UK. The company projected nine painted sequences onto the wall of the cathedral's library, accompanied by live music. The adjacent cloisters were lit by a scheme designed by Randal Neilson that complemented the projection.

"This idea can work in numerous locations and environments," says Ashton.

■ attractions-kit.net keyword: Projection

## AUDIO INTERPRETATION

A museum which explores the life and legacy of 16th US president Abraham Lincoln is using Alcorn McBride audio systems to interpret the world in which he lived.

The Lincoln Heritage Museum opened in 1942, but with a growing collection moved in April this year to a new Lincoln Center at the campus of Lincoln College, Illinois, US. The museum features multiple presentations about the president within each room. Visitors interact with 53 audio and video programmes by way of 35 motion



and touch-points, which are controlled by proximity sensors from Technovision.

Alcorn McBride's Digital Binloop carries the surround sound audio, while its A/V Binloop HD provides synchronised video playback. Other Alcorn McBride AV

Presentations include a reenactment video of Lincoln's assassination and a multimedia review of Lincoln's life

and control systems were used, with DMX Machines controlling about 400 lights in the museum, a ProTraXX 16-channel audio player being used for other programs; and a V16 Pro serving as the show controller.

Eidson Studios performed the AV design and installation, while Taylor Studios, of Rantoul, Illinois was the exhibit design, fabrication and lighting firm for the project.

■ attractions-kit.net keyword: Alcorn



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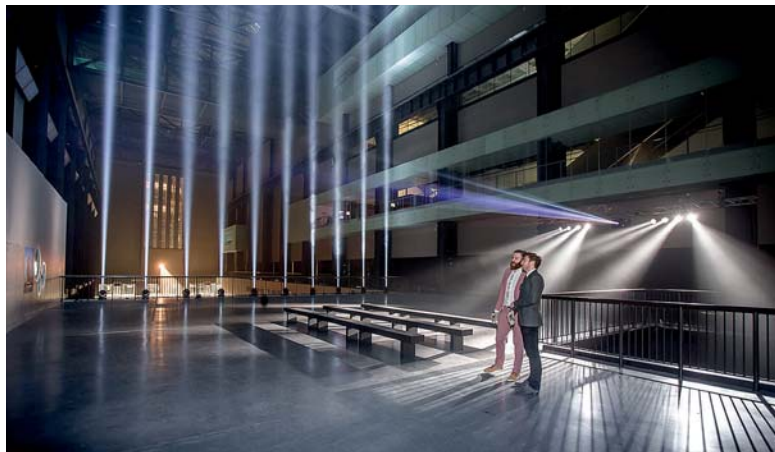


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## MISSION ACCOMPLISHED AT TATE MODERN

Lighting and visual design practice Renegade's recent installation at London's Tate Modern became an art exhibit in its own right.

The lighting installation at the famous Turbine Hall was for a special event marking brand and live communications agency Mission's 10th anniversary. Renegade's

Nick Gray aimed to highlight the room's imposing industrial architecture – the gallery was formerly Bankside Power Station – and bring it into a new dimension and context using the full height and scale. The Turbine Hall measures 152 metres (499 feet) long and 35 metres (115 feet) high.

"Most visitors don't immediately notice a lot of the detail, so lighting the space is a big chance to make it almost into an art

Using entirely white light created an atmospheric monochrome effect

exhibit in its own right for the evening," said Gray.

Using white light, Gray also introduced repetitive number sequences in the design – in multiples of 10 – representative of Mission's

10-year celebrations. The design also preserved and accentuated the overall sightlines rather than losing them for the sake of "standard" lighting effects.

■ attractions-kit.net keyword: Renegade

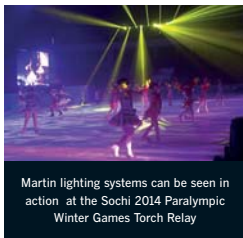
## CIRCUS FUN AND PARALYMPIC GAMES

Martin lighting systems are deployed in a number locations and projects but two unique projects this year were an ice show in Russia celebrating the 2014 Paralympic Winter Games and a circus festival in China.

The ice show at Yubileiy Sport Palace in St Petersburg was provided by equipment supplier Euroshow and held before the final stage of the Torch Relay.

The Martin fixtures were selected based on their functionality and brightness, and the lighting concept of the show featured creative lighting and midair effects.

Euroshow's lighting designer Alexey Yevstifeyev used a combined truss mounting and floor mounting system and placed



Martin lighting systems can be seen in action at the Sochi 2014 Paralympic Winter Games Torch Relay

the MAC 101 fixtures on the floor around the ice hockey rink where the show took place. With the ice surface itself an integral element of performance design, Yevstifeyev deployed the MAC Viper to get the maximum out of the space he was given.

In Zhuhai, China, Martin's M6 Console

was selected to control and calibrate the lighting systems for the 10-day Changlong International Circus Festival. The console offers advanced visualisation of lighting control, accommodating a product range from traditional fixtures to moving lights and the most advanced media servers.

"During shows that span multiple days, it is imperative for the lighting systems to be controlled by a console that can consistently keep up with the pace without failure," says Yuri Zhang, vice GM of local Martin distributor Guangzhou Dan-Pro Stage Equipment. "To this end, the body of the console consists of a lightweight aluminium shell, which also allows for a compact design and fast set-up times."

Denmark-based Martin is the lighting division of global infotainment and audio company Harman International Industries.

■ attractions-kit.net keyword: Martin

to find out more, log on to [www.attractions-kit.net](http://www.attractions-kit.net) and type the keyword into 'keyword search'



## A holistic approach to water park design

Nature-themed Senbo Green Park Resort in China made Forrec responsible for master planning and concept design down to detail design. The theme is based on a magical story of ancient tribes. The Canadian company is also responsible for concept and schematic design for Dawang Deep Pit Water World, China, an indoor water park in a recreational development that includes an Ice and Snow World.

**Keyword: Forrec**



## A dynamic and colourful interactive environment

Empex Watertoys has supplied water park equipment at the newly refurbished and redesigned Cronwell Platamon Resort in Platamonas, Greece. Empex has created a dynamic and colourful spray park for children up to the age of 12. It features an interactive play structure with water sprays and slides. Empex supplied water features from its different design lines. These included Aquatons, Aquatoys and Aquanetics.

**Keyword: Empex**

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## Twin racing waterslide thrills Aqualand visitors

Polin has installed its Racer Twin Turbulance at Aqualand Maspalomas, part of the Aspro Group chain. It's the first of its kind in Spain, and one of the biggest waterslides in Europe, according to the Turkish manufacturer. The ride features two circular racing tube slides. Polin uses its Natural Light Effects technology on the attraction – as water sluices through

the ride, it interacts with sunlight that shines through translucent stripes at the top of the slide's tunnels. These natural effects take different forms as the sunlight changes throughout the day. The half-closed/half-open waterslide is manufactured with resin transfer moulding technology, offering a smooth, shiny finish on both sides.

**Keyword: Polin**



## Custom theming is no monkey business

Whitewater West themed a new \$4.5m (£2.6m, €3.3m) play structure at the Zoombezi Bay waterpark. The AquaPlay RainFortress at the park in Ohio, US, features baboons and a sprawling octopus created by Whitewater West. The play structure, called Baboon Lagoon, opened in May, and has more than 90 interactive water elements and nine waterslides.

**Keyword: Whitewater**

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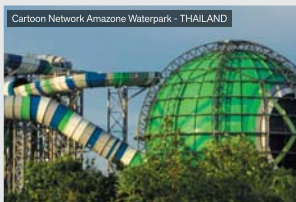
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