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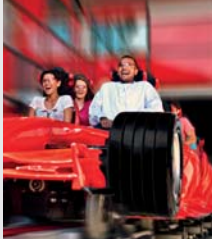


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Ferrari World Abu Dhabi, p42

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ATTRactions MANAGEMENT

EDITOR'S LETTER

INVESTING IN INDIA

News that MGM is in talks to build a \$100m (£62.3m, £71.8m), 70-acre theme park in India, in partnership with Mumbai-based Lavasa Corporation, further confirms India's status as one of the emerging markets for the global attractions industry.

The new park will open in 2014 and is the second for the city: a Spaceworld theme park is already under construction down the road – in partnership with Belgium-based Spaceworld International – with an opening scheduled for 2012.

Opportunities in India are attracting the attention of international investors and operators – where even a decade ago such a thing would have been unthinkable – because in spite of ongoing issues with wobbly infrastructure, the middle class in India has grown to the extent that it's seen as offering a serious business opportunity.

This group already represents 30 per cent of the 1.2bn population and McKinsey forecasts that India's middle class will reach the half billion mark over the next 20 years, saying this 'unique period in India's evolution' will see total consumption in the coun-

India's middle class will grow to half a billion people over the next 20 years, while total consumption in the country will quadruple, making it the world's fifth largest consumer market

try quadrupling, making India the fifth largest consumer market in the world by 2025.

For many years, large-scale theme park developments couldn't be built, because government taxes on imported steel made the market for the infrastructure unviable – vendors of rollercoasters just couldn't compete, for example. As a result, India's attractions were typically local, low-rise in style and with a focus on themeing and soft landscaping. However, changes in government policy have eased these restrictions and the market has been opening up to change.

Although these new parks are being built primarily for the local market, India is also growing rapidly as a tourist destination; 5.37million foreign tourists visited the country in 2008, up 57 per cent from 1996. It also remains an increasingly attractive destination for business travellers and affluent Indian expatriates.

As a result, future opportunities for the sector will include attracting inbound tourists, so the adoption of international brands such as MGM will be important drivers of business and we're likely to see more of these kind of deals being done.

India already allows foreign-owned brokers to trade directly on the country's exchanges, and a government panel has recommended the finance ministry make it easier for foreign retail investors – in particular, wealthy Indians settled overseas – to buy shares on Indian exchanges.

Foreign investors will benefit from this change as they will directly participate in India's growth, making investment an even more attractive proposition.

Liz Terry, editor, attractions@leisuremedia.com



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For suppliers of products and services in the worldwide attractions industry, turn to page 83

THEME PARK NEWS



The new park is expected to cost around £1.5bn

Euro Disney eyes third Paris attraction

Euro Disney SCA has revealed its ambition for a third Paris theme park development after securing an agreement with the French government to expand its operations. The deal is set to allow the group to develop a new resort in the Marne-la-Vallée region, alongside the original Disneyland Paris and the eight-year-old Walt Disney Studios attraction.

Euro Disney has been given an additional 13 years and an increase in the amount of land it has available to build on following the agreement, which is an

amendment to an original deal signed in 1987. A sustainable tourism scheme - Les Villages Nature de Val d'Europe - is also planned in partnership with the Pierre and Vacances Group and is expected to cost €1.8bn (£1.5bn, US\$2.5bn).

Euro Disney estimates that around €8bn (£6.7bn, US\$11.2bn) is to be invested by 2030 in its proposed developments.

Euro Disney chief executive officer Philippe Gas said: "We are continuing to develop our tourist destination and supporting France's tourism leadership."

PCL to design and build Legoland, FL

Merlin Entertainments has appointed PCL Construction Services and Morris Architects to design and build the Legoland Florida attraction, which is scheduled to open in 2011.

The 145-acre family attraction, which will be located on the site of the former Cypress Gardens theme park in Winter Haven, is set to include more than 50 rides, shows and attractions.

Merlin acquired the park - which includes the Splash Island Waterpark - in February 2009 for US\$23m (£14.3m, €16.3m) following the bankruptcy of the park's previous owner.

Vietnam park plans

A US\$2bn (£1.2bn, €1.5bn) hotel and leisure complex is being planned for the Ben Luc commune in the Mekong Delta province of Long An, Vietnam. The 338-hectare (835-acre) Happyland complex is to be financed by the Khang Thong Group and its subsidiary, the Phu An Construction and Infrastructure Development Company.

Aqualandia takes over Terra Mitica

Following the news that the loss-making Benidorm theme park was being put up for sale, Terra Mitica has been leased to Mundomar Aqualandia with an option to buy the attraction for €75m (£63m, US\$103m), the global debt of the company.

The contract obliges the new managers to take over the current workforce and managers, with Aqualandia paying about the same - €1.8m euro (£1.5m, US\$2.48m) - as Terra Mitica is paying in interest on its loans at the moment. There is a further rental linked to both visitor numbers and income at the park. Although Terra Mitica has seen an upturn in business recently, losses after tax at the park last year were still €164m (£137m, US\$226m).

New coaster for Six Flags Over Georgia

Six Flags Over Georgia in Austell, GA, US is to open a new rollercoaster for the 2011 season. The 100ft-high 'euro fighter' coaster features a 10-storey vertical lift and a beyond vertical drop.



The new Dare Devil Dive at Six Flags

"We're excited to welcome Dare Devil Dive as our 11th roller coaster," said Melinda Ashcraft, park president of Six Flags Atlanta Properties.

"This thrill ride features a vertical lift hill and beyond vertical first drop that our guests have never experienced before. It will be the perfect complement to an already stellar coaster lineup."

The ride is designed and engineered by Gerstlauer Rides based in Germany, who also created the popular Tony Hawk's Big Spin at several Six Flags parks and Pandemonium at Six Flags New England.

The coaster is scheduled to open Memorial Day Weekend alongside other rides and attractions at Six Flags Over Georgia. These include the hypercoaster Goliath, Batman: The Ride and Superman: Ultimate Flight.

Smurfs theme park planned for China

A US\$2.9m (£1.8m, €2m) theme park, based on the Smurf characters created by Belgian cartoonist Pierre Culliford, is being planned for Chengdu, China.

The current owner of the Smurf brand, Belgium-based International Merchandising, Promotion & Services (IMPS), and Chengdu Teda Sino-Europe Construction are behind the project, which is expected to open in three to five years.

Chengdu is an area famous for its pandas but it is believed that the new Smurfs park will form a crucial part of a wider tourism plan for the region.

The Smurfs were created by Culliford under the nom de plume 'Peeyo' and first emerged in 1958. They began as comic strips before the Saturday morning TV series began in 1981. Recently, they have seen somewhat of a resurgence, with a movie planned for release next year starring US pop star Katy Perry.

Waligator Parc near Metz in France originally opened in 1989 as Big Bang Smurf. The Smurf characters were withdrawn in 2003.



The first phase of the Coney Island redevelopment has proven very popular

Visit numbers soar at NY's Luna Park

The Luna Park amusement park on New York's Coney Island is reported to have attracted more than 400,000 visitors this summer, the highest figure for any summer since Steeplechase Park closed in 1964.

The 3.1-acre park was opened in May this year by the city of New York and Central Amusement International as part of the Coney Island Revitalization Plan. It features 19 attractions, both traditional and new state-of-the-art, which saw in excess of 1.7 million rides taken. Based on success of its inaugural season, the city and Central

Amusement International have extended the park's 2010 season by three weeks until the end of October.

This will include new programming featuring Halloween themes scheduled to debut on 15 October.

The second phase of Luna Park – the Scream Zone – is on track to open for summer 2011 with an additional four rides.

The Coney Island Revitalization Plan – in which the city of New York has invested more than US\$6m (£3.8m, €4.2m) – is designed to preserve the historic park.

Barnstormer of a new ride for Dollywood

Dolly Parton's Dollywood theme park in Tennessee, US has unveiled its plans for a new ride for the 2011 season.

Barnstormer – built by S&S Worldwide and due to open in March – will be a US\$5.5m (£3.5m) family thrill ride situated in a barnyard-themed area of Owens Farm. Surrounding it is to be a play zone for younger children, featuring a 22ft x 16ft (6.7m x 5m) bi-plane play area and a pig-pen waterplay attraction.

Taking its name from the daring flyers and stunt pilots of the 1920s, Barnstormer features two pendulum arms with seating for 32 riders. Seated back to back, riders travel progressively higher on each swing of the arms, reaching a maximum speed of 45mph (72.4kph) and 230° of rotation.



Riders travel on rapidly swinging arms

At its highest, riders are 81ft (24.5m) up in the air. The new ride, with a duration of 60 seconds and a capacity of 450pph, will be situated adjacent to the park's Mountain Slidewinder attraction, one of Dollywood's most popular rides.



The park would be India's first

Universal in talks over Indian park

Universal Studios and Reliance ADA Group have opened talks over the possibility of establishing a new US\$1.5bn (£960bn, €1.1bn) park in India.

If a deal is agreed, it would be likely that Reliance, owned by Indian billionaire Anil Ambani, would own and operate the park while paying Universal royalties and fees for using the brand and its intellectual properties.

MUSEUM NEWS

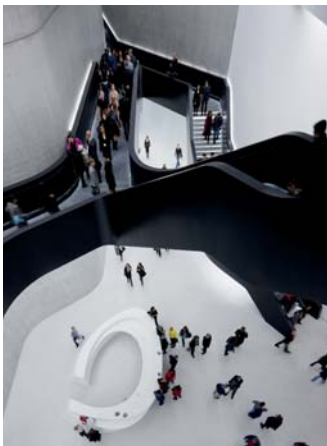
Rome museum nets RIBA Stirling Prize

Zaha Hadid Architects have picked up the RIBA Stirling Prize 2010 for the design of MAXXI, the National Museum of XXI Century Arts in Rome, Italy.

The contemporary art museum held off competition from five rival shortlisted entries, which included Oxford's Ashmolean Museum - designed by Rick Mather Architects. Opened in November 2009, the €150m (£130m, US\$205m) MAXXI building covers

21,200sq m (228,195sq ft) of internal floor space and contains a wide range of 21st century artworks. The museum is the fourth project to earn Zaha Hadid Architects a place on the Stirling Prize shortlist, although it is the first time that the design firm has been awarded the accolade.

Speaking on the design of MAXXI, the Stirling Prize judges said: "MAXXI is described as a building for the staging of art, and while provocative at many



The museum was described as having a "free line"

levels, this project shows a calmness that belies the complexities of its form. This is a mature piece of architecture, the distillation of years of experimentation, only a fraction of which ever got built. It is the quintessence of Zaha's constant attempt to create a landscape as a series of cavernous spaces drawn with a free line."

Other shortlisted entries included Neues Museum in Berlin, Germany by David Chipperfield Architects.

Cinema plans revealed for NMAH

The National Museum of American History in Washington D.C., is to install a new US\$5m (£3.1m, €3.5m) cinema.

Warner Bros. Entertainment is donating the money, which will allow the Smithsonian museum to turn its 46-year-old, 270-seat Carmichael Auditorium into a modern 3D theatre.

To be named the Warner Bros. Theater, the new attraction will be used for lectures, symposia, concerts and other programmes as well as special events and gatherings.

The new theatre is scheduled to open next year.

£10m Birmingham museum plans

Plans for the creation of a new £9.7m (€11.5m, US\$15.5m) wing at Birmingham Museum and Art Gallery have been given the green light by city council cabinet members.

Work to build and fit-out Birmingham - A City in the Making is due to get underway by the end of the year, with the top floor of the attraction to be transformed with the creation of five new galleries. Proposals drawn up by West Yorkshire-based Redman Design will see four galleries focus on the development of the city from its origins to the end of the Second World War.

US\$36m Dali Museum near completion

The new US\$36m (£22.4m, €25.5m) Dali Museum being built in St Petersburg, Florida, US, is nearing completion; however, developers have run into a US\$5m (£3.1m, €3.5m) funding shortfall.

Pinellas County's Tourist Development Council has since recommended that the county commissioners should spend US\$2.5m of (£1.5m, €1.7m) its hotel bed tax revenue on the project.

The county initially refused funding, but the St Petersburg City Council said that it would also donate US\$2.5m if the county matched it. The museum, scheduled to

open on 11 January next year, will replace the current site at 1000 Third St. SE. The new building, designed by Jann Weymouth at HOK Architects, will be located at Bayshore Drive and Fifth Avenue SE.

HOK said the museum is influenced by Dali's Surrealism, and that "though the museum is designed as a treasure box that shelters the priceless collection from hurricanes behind thick concrete walls, the box opens in ways that welcome and intrigue visitors".

It will feature the largest collection of Salvador Dali's works outside of Spain.



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SCIENCE CENTRE NEWS



The museum will combine the three existing museums, including the Branigan Center

Architect appointed for Las Cruces

An architect has been appointed to design the new Museum of Nature and Science in Las Cruces, New Mexico, US.

The current site of the museum, at Mesilla Valley Mall, is 3,900sq ft, (362sq m) is not big enough.

ASA Architects, based in Las Cruces, have been given a US\$400,000-plus (£250,000, €289,000) contract to design a new, larger, building at a downtown location. The new site will combine the three museums that currently operate as separate entities – the Branigan Cultural Center,

the Museum of Art and the Museum of Nature and Science

The project is expected to cost US\$5.3m (£3.3m, €3.8m) and the money will come from the US Department of Energy, Housing and Urban Development, the Bureau of Land Management and state legislative funds. Groundbreaking for the museum has already been scheduled for May next year, with completion of the building expected in September 2012.

The museum currently attracts around 155,000 visitors a year.

Multi-million dollar expansion for St. Louis

The Saint Louis Science Centre in Missouri, US, is planning to build a new 13,000sq ft, US\$9.5m (£6.2m, €6.9m) exhibition hall adjacent to its main entrance off Oakland Avenue.

The new space will replace the existing 1996 Exploradome, which, according to centre officials, is coming to the end of its lifespan and needs to be replaced.

Site preparation is already under way and the new hall is scheduled to open next summer. It will connect to the east side of the Science Center, just south of its main entrance and its inaugural exhibit will be announced during the autumn.

The Exploradome will be taken down shortly after the new hall is completed.

The new structure, with PGAV as architect and building work by Alberici



Met ilisi. Borper susto odignibh er itat.

Constructors, will house travelling exhibits, such as the current "Real Pirates," and special events, such as SciFest.

The centre has introduced free admission and attracts more than 1.2 million visitors annually. Exhibitions include a Omnimax-branded domed theatre space and a Lego Mindstorms zone. Details: www.slscc.org



Mike Bruton

Targeting a rebirth of Africa

Foreign investment into the African continent has quadrupled since 2000. The IMF puts Africa's average annual growth for 2004 to 2008 at more than 6 per cent – better than that of most developed economies. Africa would therefore appear to be prime territory for the establishment of a network of interactive science centres: cash is starting to flow, the economy is moving away from commodities towards technology-based services and information. Furthermore, the modus operandi of science centres exactly matches Africa's developmental needs: they offer cost-effective ways of strengthening the science and technology culture, and their relatively language-free exhibits, and hands-on, experiential teaching methods, are ideally suited to educationally-disadvantaged but smart learners in multilingual societies.

However, the stark reality is that science centres are poorly established on the African continent, confined to around 28 institutions, almost exclusively in the extreme north and south. Africa has many traditional museums, which have tremendous potential as seeds for the development of a strong interactive science centre network.

The hosting of the sixth Science Centre World Congress in Cape Town, South Africa, in September 2011 will be a tremendous boost for this goal.

Mike Bruton is the founding director of The MTN Sciencecentre in South africa

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ZOO & AQUARIUM NEWS



The project will include a new 10,000sq ft facility for reptiles and amphibians

Expansion for Pittsburgh Zoo

A five-acre expansion has been proposed at Pittsburgh Zoo in Pennsylvania, US.

The new project will sit on a section of land at the top of the zoo and will consist of a new veterinary hospital and education centre, a 10,000sq ft (930sq m) facility for reptiles and amphibians and 10 to 13 outdoor exhibits. The animals being considered are the snow leopard, orangutans and Komodo dragon.

Tracy Gray, a spokesperson for the zoo, told *Attractions Management*: "We don't

have sizes or anything concrete at this time. We are strictly in the design phase and working with an architectural firm to determine how and where each phase of the project will be built.

"We will start the design work and will be constructing the project in three phases beginning with the two story animal care facility. Included in the animal care facility is a room for kids who can play vet by dressing up and using a toy stethoscope and work with plush animals."

Expansion for Reid Park Zoo

Reid Park Zoo in Tucson, Arizona, US, is to add a new US\$8.5m (£5.3m, €6.4m) seven-acre exhibit.

The Expedition Tanzania project is the largest expansion in the zoo's 45-year history, and will dedicate three acres solely to elephants.

The exhibit will also feature the Click Family Elephant Care Centre and an Education Gallery. Fifty per cent of the money has come through donations to the Reid Park Zoological Society, with donors including The Kresge Foundation, Mrs. Bernadine Shirley, Tucson Electric Power, the John M. Simpson Foundation - Susan and Mickey Cavender, and numerous private donations. A further US\$3.7m (£2.3m, €2.8m), was donated by the city of Tucson through increases in zoo admission and bond elections.



The exhibit will cost €28m

Dolphin exhibit for Genoa Aquarium

The Acquario di Genova in Genoa, Italy, is being extended to house a major new dolphin exhibit. Designed by Renzo Piano Building Workshop, the €28m (£23.4m, US\$34.1m) development is being funded by public investment, Porto Antico di Genova (owner of the aquarium) and Costa Edutainment, which manages the site.

The exhibit will open in 2012 and is part of the aquarium's strategy to raise awareness of the issues of conservation and responsible use of marine environments.



Walk the Talk: Green Zoos

As wildlife around the world is impacted by shifting habitats and environmental threats, a critical part of the zoo and aquarium mission is to inspire visitors to learn about the effect of human behaviour.

Every zoo and aquarium accredited by the Association of Zoos and Aquariums (AZA) has a conservation and science education mission. Educational signage and programs and field conservation are widespread in accredited zoos and aquariums, but additionally, there is a large increase in the prevalence of zoos and aquariums that have green initiatives.

For example, new exhibits and buildings across the country are attaining the globally recognised Leadership in Energy and Environmental Design (LEED) certification.

Going green is in line with the mission of accredited zoos and aquariums, but it is also good for business. A 2008 PGAV Environmental Sustainability Study found that attractions visitors are 70 per cent more likely to visit 'green' attractions, and 30 per cent of visitors have already made these discriminating choices. In addition, four in 10 people expect to pay more for green attractions than other businesses.

Actions speak louder than words. Accredited zoos and aquariums, with their built-in conservation mission, are taking the lead as green attractions and, through their actions, inspiring visitors to change their own.

Linda Cendes, communications assistant,
Association of Zoos and Aquariums

HERITAGE NEWS



The museum has been designed by Chyutin Architects

New design for Museum of Tolerance

The Los Angeles-based Simon Wiesenthal Center has unveiled a new design for its planned Museum of Tolerance in Jerusalem, Israel, to be built at an estimated cost of US\$100m (£64m, €72m).

The structure will include a theatre seating up to 1,200 people, an education centre and a glass wall opening onto the nearby Independence Park.

Speaking to The Jerusalem Post, the organisation's founder, Rabbi Marvin Hier, said: "We gave an opportunity to three different architectural firms and the board voted unanimously in favor of the design by Chyutin Architects. Although the others were also fine designs, we were most impressed with this one."

The Chyutin design replaces an earlier one by architect Frank Gehry, whose esti-

mated cost of US\$250m (£160m, €177m) made it too expensive to build. Hier said: "We originally wanted to incorporate some of his design into the complex, but Frank said his work was like a sculpture and that if you take out some of the pieces the whole design falls apart."

The museum scheme was initially challenged by petitioners who said it should be relocated since its plot is on part of an old Muslim cemetery.

After years of legal wrangling, the Supreme Court ruled in favour of the State of Israel, which gave the land to the museum. The recession then caused a drop in donations and led to the Wiesenthal Center's decision to abandon the Gehry plan. Hier said he hoped the museum would be open by 2015.

Welsh heritage worth £1.8bn

Wales' historic environment is worth around £1.8bn (US\$2.8bn, €2bn) to the nation's economy and supports 30,000 full-time jobs, according to a major new report.

Valuing the Welsh Historic Environment was undertaken by ECOTEC Research and Consulting to explore the impact of Welsh heritage attractions on the wider economy.

The research found that the adaptation of historic buildings can be helpful in acting as a catalyst for regeneration, while many visitors to the Principality are attracted by historic sites. Protecting the historic environment has also had a positive impact on the conservation of landscapes and wildlife habitats, while also helping to create employment and training opportunities.

Welsh heritage minister Alun Ffred Jones said: "Wales has a rich and diverse heritage which has great value to those who live here in many different ways. Clearly it is important to conserve this environment."

"But sometimes what is not recognised and what this report shows is that our heritage also has an important economic impact, both through the benefits it can bring to local people and the income generated through visitors."

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WATERPARK NEWS



The planned indoor waterpark would be located less than two miles from a Disney park

Great Wolf to open California resort

Waterpark operator Great Wolf Resorts has secured a license and management agreement to open and operate a park in Garden Grove, California, US.

The resort will be publicly owned – by the City of Garden Grove – and located less than two miles from Disneyland. The resort will be built by construction company McWhinney. Once complete, Great Wolf Lodge in Garden Grove's International West Resort will be marketed as a full-

service, family destination resort. Facilities will include 600 family suites, a 100,000sq ft indoor waterpark, 30,000sq ft of meeting space and additional indoor entertainment areas and amenities.

Great Wolf Resorts will receive license fees for use of the Great Wolf Lodge brand name and other intellectual property at the resort, and will receive management fees to operate the resort on behalf of the owner.

Wet 'n' Wild park for Sydney

The Australian media firm Village Roadshow is to build a new A\$80m (US\$74.7m, €58m, £48.5m) waterpark in Sydney. Wet 'n' Wild Sydney will be built on a 25-hectare site, under a long term lease agreement with the New South Wales Government.

Chair of Village Roadshow, Robert Kirby, said: "We are very excited about the opportunity to bring our water theme park concept to Sydney. This is a huge step forward for one of our foundation businesses."

The project is not yet in the design stage, but the park will employ water efficient design, filtration and recycling technology. Village Roadshow owns Wet 'n' Wild parks in Queensland, Australia and in Arizona and Hawaii in the US. The waterpark is scheduled to open in the summer of 2013-14.



The rude towers above the Hanwha Resort

Huge water ride to open in Korea

What has been billed as the world's largest waterslide has now opened at the Hanwha Resort in South Korea.

Built by Canada-based waterpark design company WhiteWater West, 'The Abyss' stands nearly 30m (98ft) tall. Using four- or six-person rafts, its design is said by WhiteWater to feature bigger drops, higher walls and more near vertical oscillations than any other ride in its class.



Aleatha Ezra

Exploring the science of rides

Waterpark rides might get a lot of credit for being amazingly fun and exciting, but they don't always get the credit they deserve for being scientific marvels.

To the average waterpark guest it probably seems pretty easy to build a good ride: put some tubes together, turn on the water and start sending riders down the slide. However, thanks to innovations within the industry, some of the latest water rides are starting to receive proper notice from science practitioners and enthusiasts.

Two such recent examples are:

World's Toughest Fixes, a tv show aired on the National Geographic Channel. It offers behind-the-scenes coverage from the final construction of the Wildebeest ride at Holiday World & Splashin' Safari, Santa Claus, US. It is the world's longest water coaster, built by ProSlide Technology and uses a combination of water lubrication and 'HydroMagnetic' technology to propel riders uphill at high speeds and through twists and turns.

For the show, host Sean Riley and his crew, spent time with ProSlide team going through the final phases of the installation, while also testing sections of magnets to see exactly how the system programming works.

This type of coverage of the waterpark industry illustrates how important it is for these types of innovations to receive the attention that they deserve.

Aleatha Ezra is the membership manager of the World Waterpark Association

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BALPPA NEWS



An artist's impression of the Heart of Africa plans

Council backing for Chester Zoo plans

Chester Zoo's plans for a major £225m (US\$361m, €256m) expansion have been handed a boost after Cheshire West and Chester Council recommended the scheme for approval.

The council's strategic planning committee has submitted its decision – along with 36 conditions – to the secretary of state.

A new £90m (US\$144m, €102m) bi-dome – called the Heart of Africa – is at the heart of the proposals, which will be

themed on an African rainforest and will include connected domes housing a water ride and dining facilities.

Locum Consulting was responsible for drawing up the business plan for the project, which will also boast a 150-bed-room hotel; underwater exhibits; new animal paddocks; and a revamped main entrance. London-based architects Proctor and Matthews will design the bi-dome with the assistance of Faber Maunsell.

Summer time paper published

A report outlining the benefits of introducing Central European Time (CET) in the UK was published on Thursday 23 September in Edinburgh.

The report, which has been written by Mayer Hillman of the Policy Studies Institute, was commissioned by the British Association British Association of Leisure Parks, Piers and Attractions (BALPPA), which has been one of the leaders of the daylight saving campaign for the last six years. In August, Prime Minister David Cameron said he would "consider seriously" the bill, which is due to be debated in the Commons in December.

He added: "It's up to those who want the change to make the argument to try to convince people right across the country that it's a good thing. That's the key to winning this argument."



Visits to London sites were up 5 per cent

London attractions see growth in August

London attractions experienced a boost in August, as the number of visitors during the month increased by 7.5 per cent over the same period in 2009.

The Visit London Attraction Monitor, which samples 34 attractions both free and paid, said that the growth follows on from the two months prior, which saw gains of 6.3 per cent in June, and 3.4 per cent in July. The marked rise over the three months has resulted in an overall increase during the last quarter of 5.7 per cent.



Martin Barratt

Making the government listen

Last month David Cameron made a well-publicised speech about the importance of tourism to the British economy. It was well received by many involved in tourism, maybe because we're not used to being noticed by politicians, but what exactly can we expect as a result?

Cameron recognised that many tourism businesses are in the private sector and pledged to support them, but although he mentioned several attractions all of them were national museums and none of them charged for entry. The help he promised was confined to waiving some employment taxes on the first 10 jobs created by new businesses outside London and some minor cuts to corporation tax.

There was nothing in his speech that even acknowledged the existence of commercial attractions. Why is he not taking the commercial sector seriously? Commercial attractions are a big reason why tourists come to the UK and why UK residents are choosing to 'staycater'. We bring benefits to the hospitality and service industries, we provide new jobs more cheaply than any other sector and we don't require lottery funding or public money.

When the government understands the economic impact of commercial attractions it will start paying attention, but that will only happen when we share information and quantify our impact. In the meantime it is up to us to push for a level playing field.

Martin Barratt, chief executive, BALPPA

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BIG MACK

This year marks German family business Mack Rides' 230th year and Europa-Park's 35th anniversary. Roland Mack tells Kathleen Whyman how the family work together and the secret of their success

WHEN WAS THE BUSINESS STARTED?

In 1780 my ancestors set up a business constructing carriages and coaches. In 1870 the family entered the fairground business and in the 1920s our company manufactured the first rollercoaster. Soon afterwards, we started building rides for the international leisure market and since then have been among the trendsetters and influential producers of amusement rides in the industry.

I remember vividly that I was very popular among my schoolmates because they got to test ride our new attractions.

WHEN DID YOU AND YOUR BROTHER, JÜRGEN, GET INVOLVED?

We started working in the workshops in Waldkirch at an early age, doing anything to support the company and get the experience we needed to manage the company one day. But even as children we were involved – we lived next to the production grounds and experienced every day what it means to run a business and develop rides.



Three generations of the Mack family – (from left) Michael, Roland, the late Franz (sitting) Thomas and Jürgen

Our father, Franz, taught us not only his knowledge, but also the importance of being innovative and providing an extremely high standard of quality. We spent a lot of our free time in the company at the drawing board, while our friends played football and enjoyed themselves.

Later on, my father and I founded Europa-Park together. I'd already studied and was therefore able to get involved in the development of Europa-Park from the start. My younger brother Jürgen finished his studies and then joined the business.

HOW DO YOU AND JÜRGEN WORK TOGETHER?

It was very clear from the beginning who would take which role in the company. In its simplest form, Jürgen is the "interior minister", while I'm the "foreign minister". We didn't have to decide who would take which role, as our skills and expectations



Europa Park opened its doors in 1975 and has since become Germany's largest theme park

were quite different. Jürgen is an industrial engineer and I'm a mechanical engineer.

We work together smoothly and complement each other perfectly. We meet regularly to discuss the daily business and all decisions are taken together.

WHAT ARE THE CHALLENGES OF WORKING WITH FAMILY?

In any situation, where there are several people involved, there are also several

The Blue Fire megacoaster was installed as part of a €50m upgrade scheme carried out last year, during a time of economic uncertainty



opinions. So, sometimes it's difficult to reach a decision that everybody can live with. With the development of Europa-Park, the new attractions, hotels and the infrastructure, we discuss everything until we can pass a resolution unanimously. We never decide by majority! This sometimes takes some time, but it makes us think and rethink big developments and decisions until we're all backing the new project.

WHAT ARE THE BENEFITS?

We can talk openly with each other, which makes things much easier. And once we've finalised a decision, we can start planning and making it happen immediately.

DID YOU ALWAYS WANT TO JOIN THE BUSINESS?

I've definitely always wanted to join our family business. As a child I was fascinated by the fairground and wanted to be involved in the development of innovative rides and attractions. The leisure business is exactly where I always wanted to be.

My brother and I, and my two sons, have gained experience during internships abroad. But we all joined the company as soon as we'd completed our studies and internships.

WHAT DO YOUR CHILDREN DO?

My two sons, Michael and Thomas, joined our business a few years ago. Michael entered the Mack Rides management in 2005 and since 2007 has been responsible for our new branch Mack Solutions, strategic business management, our show and event department and construction management at Europa-Park. My younger son, Thomas, entered the business in 2007 and is responsible for the hotel resort, and the F&B division in the park and our hotels.

Every family-run company should be happy when the next generation wants to enter the business because a family member will always be more into the business than an external manager could ever be. In my opinion, you have to grow up in the leisure industry to have the passion

that's necessary to develop a theme park such as Europa-Park. This also applies to the next generation. It will be their duty to expand the park, to keep and improve on our quality and safety standards and to add rides and attractions year after year.

ARE ANY OTHER FAMILY MEMBERS INVOLVED?

During the past 35 years, all of our family members have been involved in our business. Especially during the first years, everybody worked for the success of Europa-Park. We all did anything that was necessary to develop Europa-Park into what it is today.

Today, all of us have many representative duties. My wife Marianne and Jürgen's wife Mauritia are very committed to various charity activities.

WHY DID YOU AND YOUR FATHER OPEN EUROPA-PARK?

The idea to open our own theme park was a result of my father's visionary fore-



Since it opened, Europa-Park has been the showcase for Mack Rides. The track of Euro-Mir, launched in 1997, is wrapped around large reflective towers

sight. In the beginning of the 1970s my father predicted that our industry would develop into a leisure sector. During a trip to the US, he and I came up with the idea to open a theme park with an entertainment offer for all age groups. The first drafts of Europa-Park were drawn on a beer mat! For us, family entertainment was always our focus and this has never changed. We were also increasingly aware that we needed some kind of shop window for the rides and attractions made by Mack Rides. We wanted to present our products to potential clients and our company grounds in Waldkirch weren't big enough to mount rollercoasters permanently.

WHAT IS THE SECRET TO EUROPA-PARK'S SUCCESS?

You have to love people! You have to listen to what your visitors say and be able to improve and change things rapidly if you see a change in the trends. I also think we're successful because we're a family company. We put a lot of importance on detail, quality, innovative ideas and safety. Our visitors know that and they get the best possible quality when they come here.

WHAT HAVE BEEN THE CHALLENGES?

It was difficult in the beginning. No one outside the family had any confidence in the project so wouldn't work with us and no bank would lend us the money. As a result, we developed and opened the park with our private means. This was a huge burden, especially for my father, who was fully liable. It was also difficult to find a suitable area to build Europa-Park. But we overcame these problems because we were convinced the park would work and kept pursuing our plans.

"It was difficult in the beginning. No one outside the family had any confidence in the project so wouldn't work with us and no bank would lend us the money. This was a huge burden, especially for my father"

Another challenge is that the ride manufacturing business is a highly competitive market. This is an issue for Mack Rides, especially in difficult economic times when many theme parks can't afford big investments for new rides. Over the years, we've had to face some difficult years, but with our innovative ideas and good strategies, we were able to overcome them.

HOW DO YOU RUN TWO BUSINESSES?

Time is definitely a challenge! You have to give 100 per cent of your dedication and professional knowledge to both companies, which is a difficult task. When we founded Europa-Park, my father's workload doubled, so he dedicated his time to Mack Rides and I looked after Europa-Park. Now we have two experienced managers who deal with the operations side of Mack Rides. And my son Michael is closely involved in the Mack Rides business and acts as a link between both companies.



FRANZ MACK

On 3 October 2010, the entrepreneur and founder of Europa-Park Franz Mack sadly passed away, aged 89. He was inducted into the IAAPA (International Association of Amusement Parks and Attractions) Hall of Fame in 2006.

"My father never dreamt of being inducted and it was a great honour," says Roland Mack.

"For him, this honour was fantastic proof that Germany is able to compete on the international market. Our father was a role model for all of us until the last days of his life. His attributes included humbleness, diligence, endurance, sincerity, emotion and frankness and he deeply influenced our family and our company."

HOW HAS THE PARK CHANGED IN ITS 35 YEARS?

In 1975 the total area of the park was 16 hectares offering 15 attractions and one show. During our first year we received 250,000 visitors. Now we have 85 hectares with more than 100 attractions and many international shows and have annual attendance figures of more than four million guests. One of the milestones in the history of Europa-Park was the introduc-



The opening of Europa-Park was the realisation of Franz Mack's vision of a park for all the family



The 350-bedroom Colosseo is one of the Europa-Park's four hotels

THE FAMILY'S HISTORY

1780

Paul Mack began building carriages and stage coaches

1880

Construction of organ wagons, which led to the development of saloon caravans for travelling showmen and circuses

1920

First development of rides for funfairs

1921

Production of the first wooden coaster

1936

Production of the first petrol ride

1951

Production of the first wooden bobsled ride

1952

Strong increase in exports to the USA

1957

First prototyping of the Wild Mouse (wooden version)

1975

Europa-Park opened by Franz and Roland Mack, displaying a range of Mack Rides attractions

1995

Europa-Park's first hotel opens

tion of our European themed concept. We opened our first European themed area, Italy, in 1982. Today, we have 13 European countries. Our business policy has always been to expand the park continuously, so we've added a large number of attractions and activities for all age groups.

In the 1990s we decided to add overnight accommodation in the park and opened our first hotel in 1995. Now we have two four-star hotels, two four-star superior hotels, a guesthouse and a Camp Resort. The introduction of our Conferment (conferencing and entertainment) branch has proven to be very successful among our business clients.

HOW WILL IT CHANGE IN THE NEXT 35 YEARS?

By continuing to invest in expansion, Europa-Park will increasingly develop into a destination for short holidays. We're already planning our fifth themed hotel and our infrastructure and the others inside the park will grow accordingly.

HOW HAS MACK RIDES CHANGED?

The market has changed completely over the last few decades. We've developed new production methods to deliver new and innovative rides. Our range of prod-



The park boasts 13 European-themed areas and more than 100 individual attractions

ucts has changed completely and we've gone from building fairground rides to developing fantastic family rides, water attractions and thrill coasters.

WHY IS MACK RIDES SO SUCCESSFUL?

Mack Rides is a family company, which combines traditions with innovation. We have a great management, fantastic engineers and staff who are very dedicated to the production of our rides. We offer our clients innovative rides at an exceptionally high quality and with the utmost safety standards. We often develop prototypes first for Europa-Park. This is a great advantage as we're able to show other clients these new rides in action. Another big

advantage is that our wide portfolio is for all size parks.

HAS THE ECONOMIC CRISIS AFFECTED EITHER EUROPA-PARK OR MACK RIDES?

The economic crisis had a positive impact on Europa-Park, as many people didn't have the budget for a long holiday abroad, so instead visited Europa-Park for a short break. With more than four million visitors, 2009 was our most successful year ever.

It's extremely important to be creative, innovative and courageous during difficult economic times. Despite the crisis last year, we invested €50m (£43.7m, US\$69.4m) in the Blue Fire Megacoaster, a themed area and the improvement of our infrastructure.

Mack Rides is also doing very well and our production is working at full capacity. We're currently working on water rides, coasters and small family rides for clients in Europe, America and Asia.

WHAT ARE THE CURRENT TRENDS IN THEME PARK RIDES?

The ride manufacturing industry is not just about higher, bigger and faster – family entertainment is increasingly popular. There's a strong demand for attractions that combine entertainment and thrill with elaborate theming and authenticity. ●

Q Why should attractions use social networking?

Social media is the fastest growing category of internet marketing, and it's easy to see why when Facebook alone has more than 500 million users - or potential customers. But do social media actually benefit attractions operators and how can they track who's using it? Kathleen Whyman asks the experts



MARC A SMITH
chief social scientist,
Connected Action /
Social Media Research
Foundation

Social media is important for all businesses because it's the place where many customers form and express their opinions about your products and services. It's also a powerful way to provide better support before, during and after the sale to customers who may understand the strengths and weaknesses of your product better than you do. Using accurate targeting, it can also be an effective way to get your message out to a potentially wide audience at a modest cost.

When you properly use a collection of social media, including email, blogs, wikis, web discussion boards, Twitter, Facebook, or leading-edge applications like location-based services, you can build or reinforce a set of relationships with the key people talking about your category of products or services you offer. These influential people may already be widely known as industry leaders or journalists, but social media has opened the field to people who may be passionate about your sector albeit relatively unknown [to you]. Finding these people is the first challenge, fol-

lowed by building an authentic relationship. The stream can be daunting, however, and even dedicated staff can be overwhelmed without tools to focus in on the key people and topics that matter to you. One method for creating a clearer picture of the sea of posts, messages and tweets is to apply the social science techniques of social network analysis (SNA) that builds maps of collections of connections between people and things. SNA has been an esoteric topic for years but the rise of social media and social network services have made SNA more accessible than ever before.



SIMON JONES
marketing director,
Digital Visitor

Social media sites such as Twitter and Facebook are already used by large communities, so tapping into these is an excellent way for visitor attractions to create immediate awareness about special events, offers or news.

It's also an excellent way to gather feedback about what your visitors did and didn't like, to make loyal customers feel

special and to quickly deal with any unsatisfied customers. But, ultimately, the aim should be to direct people back to your own website where they then can make an enquiry or booking.

These offsite social media sites are however only one aspect of social media marketing and an effective social media marketing strategy should consider both offsite and onsite social media.

Encouraging your online users to upload comments, photos and videos of their experiences on your own website, provides you with information and imagery to use in other marketing campaigns. It also increases the browsing time of your online visitor, increases organic search traffic, encourages repeat visits, increases your sites overall interactivity and your sites attractiveness, while building brand loyalty at the same time.

Our clients include attractions such as SS Great Britain, Longleat, Bristol Zoo and Thermae Bath

Spa and our results consistently show that crossing over content from the onsite social media solution to offsite social media solutions such as Facebook and Twitter can generate additional visitors to your site. For example, crossing over just 10 reviews to your Facebook page per month will generate extra visitors up to 2.5 times within your community per month.



EMMA ANDREWS
digital marketing
manager, Go Ape

We started communicating with our customers online in March 2009. People were talking about the brand online so we joined in. It also drives traffic to our website and blog to influence our brand reputation and increase brand awareness. The average Facebook person has between 150 and 200 friends – if they only talk about your brand once, it gets you heard by people who you might not have otherwise been able to reach.

We've got nearly 12,500 friends on Facebook and just over 2,000 on Twitter. We talk to them daily about anything from an event we've heard about, to a competition, to something we're doing. We try not to talk about ourselves all the time so we can add value. Users talk to each other as well as comment on other people's posts. It's like a little community.

We use Google News alerts to monitor what's being said about us online. Using Facebook Insights, we look at the number of fans and how they're growing. We ask customers where they heard about us when they booked and look at referrals

to our website – Facebook is in the top 10 every week; it's driving business to our website. We can also measure it by the take up of promotions – sometimes we'll only publicise something on Facebook. For example, at the moment we're doing some half-price courses for

visitors who check in through Foursquare (a location-based social media platform).

We've got photos, comments and videos that our fans have shared with us. That shared ownership over user driven content makes it much richer and more authentic and vibrant than anything we could ever put out there as a pre-marketing message.



ASHLEY PAYNE
e-communications and
new media manager,
Georgia Aquarium

From February to May we ran a promotion for people who followed us on Twitter, Facebook or MySpace. The offer was for free admission for up to four children under the age of five and free parking.

We sold thousands of tickets as a result of the promotion. The monitoring was directly tied to tracking the unique web

page and ticket sales. We knew how many times the page had been visited and the number of tickets that were sold.

The "mum blogs" picked it up and people began forwarding it to each other via email and social media. We started receiving phone calls about it. Soon, coupon and discount blogs in the region began promoting both offers and the interest continued.

The main challenge with social media is staying ahead of the game and knowing what's coming next. The landscape changes so quickly that everything we're doing today may not be relevant in a few years' time. There may be something bigger and better to be working with and there's no way to know what that is right now. The main benefit is having a direct connection with your audience and customers. Social media has become another facet of customer service and it's an opportunity to not only help consumers, but to build brand loyalty. Social media brings in

an audience with different interests. It's a great way to learn about your community.

However, while it's an important marketing tool and one that will grow in the future, it can't be the only tool. A mistake some people make is failing to continue with the traditional marketing tools that have always worked – such as advertisements, commercials and billboards. ●

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The authentic medieval French village at the BàNà Hills Mountain Resort

GRAND DESIGNS

It's not all about the biggest and fastest rides; now innovation is top of the list when it comes to rides and theme park design. Kath Hudson looks at latest projects and trends

Whether it's creating a medieval French village in Vietnam, or a high-tech games centre in Kuwait, the emphasis this year is on quality, immersive experiences. Operators are demanding with their investments, so budgets are being tightly controlled, with the resulting experiences highly targeted at the end user.

The US-based Falcon's Treehouse is in the throes of creating an authentic medieval French village, at Vietnam's BàNà Hills Mountain Resort. As one of the key entertainment anchors of the resort, the village aims to set the standard for Vietnam's emerging entertainment industry, with its fine dining, shopping and hotels.

According to Cecil Magpuri, president and chief creative officer of Falcon's Treehouse, BàNà Hills is neither a theme park nor a typical entertainment destina-

tion, but uses elements of both. "It blends the highly themed, immersive environments of a theme park, with modern resort amenities, such as condos, luxury hotel rooms and spa experiences," he explains.

Many elements have been used to make the village as authentic as possible, going beyond simple theming. The architecture is influenced by Gothic and Baroque-Rococo eras and each building has been designed as a fully themed architectural structure, rather than just having a scenic front. Existing elements were also integrated into the design, including French chateaus and the cable car station.

Magpuri explains that the design process began with the creation of a storyline for the resort, based on the region's French history, which gives a technology timeline and architectural focus. An immersive experience is created with authentic

RISE DESIGN NEWS

German firm HUSS Park Attractions, has just created King Kong as the exciting new addition to the China Dinosaur Park in Changzhou, China.

A huge animatronic with a shaking head, moving mouth and shining eyes, King Kong dominates the area. Visitors ride on a gondola up to head level; fog, sound effects and seat vibrations add to the atmosphere. Vice president and director of sales

for HUSS, Michael Hesse, says the park was looking for a highly decorated family ride, and this offers both a ride, a theming opportunity, a storyline and marketable landmark which is great for PR generation.

"It is not important to have the biggest and fastest ride. The need is to be innovative and to have a specific target group. The King Kong is innovative because of the combination of ride, show and animatronics," says Hesse.



King Kong is a combination of ride, show and animatronics



Forrec's National Intangible Heritage Park in Chengdu, China

touches, such as the aroma of freshly-baked baguettes, a blacksmith, character actors and 'streetmosphere' performances, such as a musical trio acting as minstrels.

"After the massive, all-inclusive development model of the mid-2000s and the minimal, cautious development model of the late-2000s, we are happy to see a project like the BaNà Hills Mountain Resort," says Edmonds. "The resort has found the perfect middle ground of an array of developments with an achievable scale, balancing phased development with an existing tourist draw."

INTANGIBLE THEMEING

Another project using clever and subtle themeing is the National Intangible Heritage Park at Chengdu, China, to cel-

ebate cultural heritage. Forrec was given the brief to create a complex entertainment facility, which would be exciting and dynamic during the day and commercial night periods, and could appeal to a wide range of audiences, festival attendees to local residents and international tourists.

The entertainment portion of the development includes a theme park, a family entertainment centre and a commercial urban entertainment centre, which comprises restaurants, retail stores, dark rides, an IMAX theatre and a cinema complex, as the gateway to an outdoor theme park.

A natural forest theme is used and there are educational entertainment activities, costume play, live shows, rides, dark attractions, food, beverage and retail. The theme park is 95,000sq m and divided into four

themed zones representing four continents with corresponding festivals: Asia, with the Water-Splashing Festival; South America and the Samba Festival; North America with Mardi Gras and Venice's Masked Carnival for Europe.

"Each of the four zones needed to have a separate architectural style and theme, to allow visitors to travel the globe within the space of the park," says Forrec's regional manager China, Nancy Patterson.

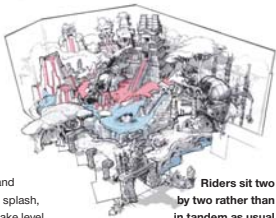
"It embodies a global movement to celebrate the preservation of worldwide cultures and provides the opportunity for connection to these cultures, through sights, sounds and experiences."

All attractions were placed in appropriate areas, for example, the rapid river ride is in the Brazilian jungle in the Samba Carnival Zone and the flume ride is in the Asian Water Splashing Festival Zone.

"The theme park is a variation on the application of intangible themeing through architecture, festival lighting, parades, costumes, themed rides and materials, such as stucco on the walls in the European area, bamboo in the South American Zone and wrought iron in New Orleans," says Patterson. "There is a trend towards more abstract themes. So instead of simply reproducing buildings and spaces from somewhere else, we are recreating the mood and feeling of other places, using themes and activities, such as intangible cultural heritage."

RISE DESIGN NEWS

■ Interlink has just designed an indoor six seater Superflume for a park in Indonesia. People sit two by two, rather than in tandem as with a normal flume. The ride has two chutes, one 4m (13ft), the other 9m (30ft), with a total length of 270m (886ft). A flat pumping system was used to reduce the ride power consumption and increase the visual impact of the boat splash, with the channels set into the lake at lake level.



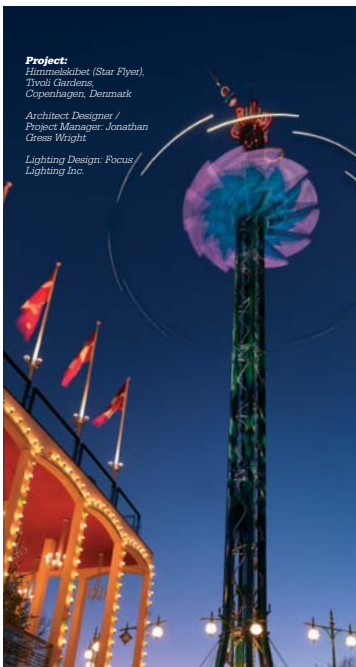
Riders sit two by two rather than in tandem as usual

Project:

Himmelskibet (Star Flyer),
Tivoli Gardens,
Copenhagen, Denmark

Architect Designer /
Project Manager: Jonathan
Gress Wright

Lighting Design: Focus
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The Kuwait 360° Mall is anchored by a Gerstlauer rollercoaster

EVER CHANGING ENVIRONMENT

Concept i has created a cutting edge family entertainment centre at a mall in Kuwait. The Kuwait 360° Mall comprises Infinity, a 7,000sq m entertainment centre; Freeze Club; a 1,500sqm Teen Zone and a 3,500sq m bowling complex.

The brief given was to create a world class interactive facility which provides both cerebral and physical challenges, using creative technology to create an ever changing interactive environment.

Business development manager of Concept i, Hidemizu Kanamoto, says: "Our goal was to create a dynamic visual world, where the combined creativity of visitors can affect the total sensory experience."

"The interior design seamlessly blends audiovisual effects, rides, attractions, games, physical activities and cyber graphics technologies in an exciting and intensive way."

A suspended ropes/climbing course is intertwined with the rollercoaster and go carts environment, including a see through Plexiglas climbing wall, with colour change lighting. The main anchor is a custom designed spinning coaster, from Gerstlauer, surrounded by a series of custom themed family rides.

There is also a food hub, where parents can base themselves and plug into WiFi, or watch their children, in the foam factory, multi-skill play domes, bumper cars and redemption games area.

As the Teen Zone is aimed at a tech savvy crowd, the interior is super cool, with games, digital imaging and media walls. Concept i collaborated closely with Electrosonic to use the digital technology in experimental ways as part of the overall décor and experience.

"As the emphasis is on digital technology, the park will be able to continually change

and refresh by simply updating software, which is much easier than a park dependent on ride/mechanical based equipment," says Kanamoto.

"Most of the games and attractions are highly interactive and visitors have a different experience each time they play."

Kanamoto thinks there will be more emphasis on immersive experiences where families of all ages can interact together. Interactive, non-repetitive ride experiences and more role play environments for both adults and kids to learn.

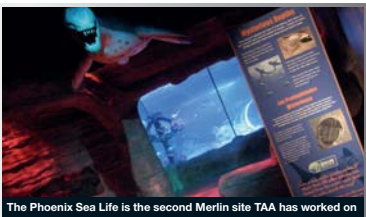
These projects show that theming is being taken to a new level, becoming integral to the entire experience, rather than just bolted on for show. Making sure that all of the elements add up to create the theme makes sure it is both comprehensive and subtle. This attention to detail is also being applied to other theme park rides and experiences (see boxouts). ●

RISE DESIGN NEWS



Following the success of working on the Sea Life Center in Porto, northern Portugal, TAA was asked by Merlin Entertainments to create an authentic shipwreck for the Sea Life Aquarium in Arizona. TAA specialises in design and manufacture and works closely with artists to create a well designed


functional product, at excellent value for money.


"The shipwreck is an artisan masterpiece. The creaking floorboards let the guests delve into a sunken ship world and amidst the boards they experience aquariums and sea dwellers," says TAA director of international marketing and sales, Christian Angenvoort.




The Phoenix Sea Life is the second Merlin site TAA has worked on

 Kiddie
  Kart


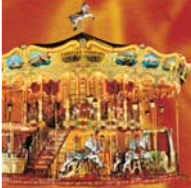
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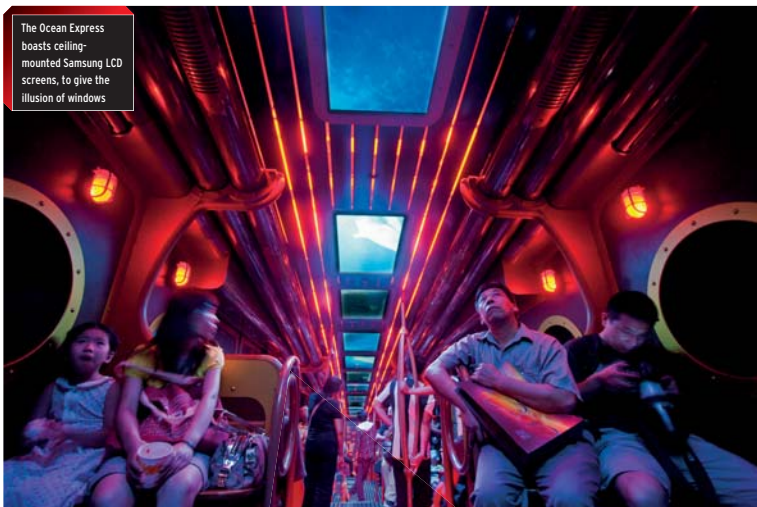


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MULTITASKING

From transporting audiences to a party in 1780 to journeying through a whale's internal organs, the applications for audiovisual and multimedia are increasingly complex and thrilling. As these recent case studies illustrate, it sets the scene, tells the story, presents historical footage and provides the basis for interactive displays

The Ocean Express boasts ceiling-mounted Samsung LCD screens, to give the illusion of windows



OCEAN EXPRESS

Sarner has used sophisticated audiovisual technology, animation and surround sound to make visitors on a ride at Hong Kong's Ocean Park feel as though they're travelling underwater as they traverse the park.

Ocean Express is a funicular train, which has been built as part of the park's HK\$5.55bn (£454m, €544m, US\$708m) master redevelopment project. It can transport up to 5,000 people per hour, offering an alternative to the current cable car system, the capacity of which will soon be inadequate as visitor numbers rise. However, it's not just a means of transportation, but a fully immersive experience. Guests embark on submarine-like carriages, and are then taken on an 'underwater' jour-

ney. The underwater visuals are viewed on 42 ceiling-mounted Samsung LCD screens, which appear to be windows into the ocean. "As the audio visual technology had to be within the confined space of the funicular, so much of the electronics and the display panels were specially manufactured to fit the very tight spaces between the internal cladding and the external skin of the train," says Sarner's managing director, Ross Magri. "A number of design modifications were made to the ride to ensure the seamless integration of the audio visual technology and achieve the creative vision."





London's biomedical science attraction, Centre of the Cell, is an almost entirely audiovisual experience

As it's used to deliver almost all of the content, audiovisual was key to the success of The Centre of the Cell in London, a biomedical science centre created to allow the public to see research taking place.

David Willrich, managing director of the centre's AV systems integrator DJ Willrich (DJW), says: "Centre of the Cell was an exciting challenge because it represented an opportunity to integrate a hardware and software solution into a space where the visitors' needs would be entirely addressed by an audiovisual system."

CENTRE OF THE CELL

There were a number of challenges, including the tight space and complex programming, as the computers needed to run different games and audiovisual software at different times. Tackling a complex subject, the games needed to be exciting, and convey a high level of scientific accuracy.

A wealth of games are run on touch screen tables. Visitors can grow virtual cells to help a real scientist with their

experiments. In another game, guests see their faces engulfed in flame and watch their photo acquire a burn. They then grow and transplant new skin onto it and see research into regrowing hairs after burns.

With Centre of the Cell being an almost entirely audiovisual experience, the staff need a high level of control over the system. The space and design demanded a timed show, which would change the space with different interactives, lighting and films at different times. DJW provided a portable panel PC running a program to provide that control.

MUSEUM OF LONDON

The £20m (€24m, US\$31m) Galleries of Modern London, which were launched in May at the Museum of London, is another example of how audiovisual and multimedia are being used to update and enhance museum exhibits. Electrosonic was the AV systems integrator.

Clever projection techniques are used to create life size characters in a dramatisation of a typical evening around 1780. One screen uses two projectors to produce one wide screen image and the second a single projector. The 18-minute sequence runs automatically, using three synchronised high definition video players linked to a hard disc audio player.

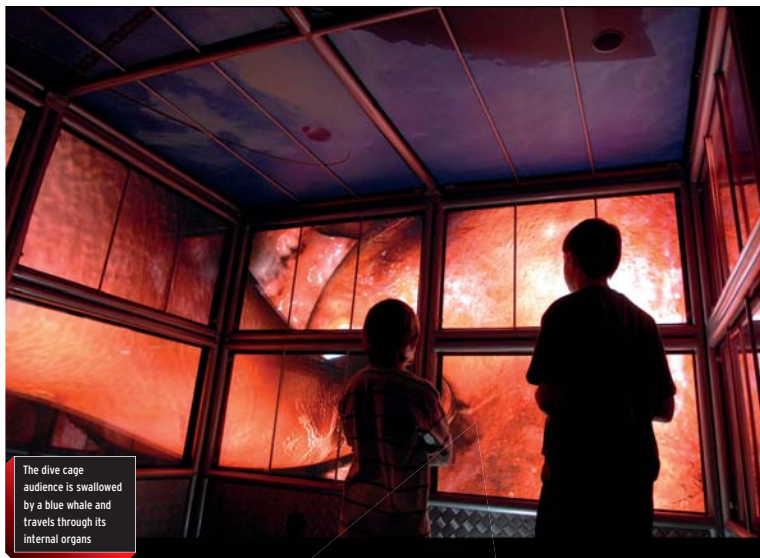
An enveloping experience is created in the World War II exhibit, when the show is presented on two large projection screens with the addition of mirrors. It's supported by three 26 inch LCD screens, multi-channel sound and programmed lighting.



The Galleries of Modern London at the Museum of London launched in May at a cost of £20m

A printing press, which appears to have paper flying off it, gives the impression of having more than 30 screens of different sizes, but actually only uses three high resolution projectors, with images masked in the software to match the screen layout.

Many glass case exhibits also have small screens built in. For example, an exhibit on the Great Exhibition of 1851 shows a model of the original Crystal Palace and has an associated supporting video based on contemporary images.



The dive cage audience is swallowed by a blue whale and travels through its internal organs

Well established, but still ahead of its field, Bournemouth Oceanarium's award-winning Interactive Dive Cage is a fully immersive multimedia experience, which uses a mix of computer generated images, painstakingly created artificial water and real world footage to submerge visitors in the ocean. The audience is even 'swal-

INTERACTIVE DIVE CAGE

lowed" by a blue whale, and travels through its internal organs, before being ejected through its blowhole.

Designed and installed by Amigo Integration, the 2.5sq m (27sq ft) Dive

Cage can accommodate 12 visitors at a time, where they are immersed in a 270-degree computer generated view of the ocean and use touch screens to discover more about great white sharks, bottlenose dolphins and manta rays.

It is made up of more than 450 individual video files and there are 46 individual sections, containing 138 completely different screens of content. The virtual water was so complex to create, using modelling, animation and rendering, lighting effects, colour correction and compositing, that it took almost a week to create 10 seconds.

The content was fully automated to provide Oceanarium staff with a simple operating system and flexible scheduling, to allow the timing of the finale of the blue whale journey to reflect how busy the environment was.

"The Interactive Dive Cage has provided the Oceanarium with a fantastic showcase feature and has been used widely across its PR and marketing activity," says Sarah Daintree of the Oceanarium. "It has substantially extended the average visit length – it's estimated that if one person were to interact with all the features it would take almost two hours."





Inspiration of Flight was housed in the China Aviation Pavilion at the 2010 Shanghai Expo

EXPO DARK RIDE

Falcon's Treehouse was given the challenge to create one of the few multi-media dark ride experiences for the 2010 Shanghai World Expo.

Housed in the China Aviation Pavilion, Inspiration of Flight tells the story of a grandmother who passes on her love of flight and shows the subsequent contribution of her grandchildren to China's aviation industry in 2100.

The ride begins with 2D content depicted as an old painting coming to life by breaking frame into the 3D world. This approach was used to draw the guests into the story and serve as a gateway to the experience.

According to Cecil D Magguri, president and chief creative officer of Falcon's Treehouse, a number of challenges had to be overcome, including fitting a ride into a pre-designed building and a pre-defined exhibit space on the second level of the pavilion.

A trackless ride system was used to fit the ride into the space, and intelligent vehicles with control systems help keep the ride perfectly synchronised to the media and surrounding effects.

The pre-show journey begins on the ground level, where guests are first introduced to the Inspiration of Flight storyline. Media is cleverly integrated throughout the pre-show areas: projected on the walls, integrated into the ceiling, integrated into the scenic elements and even in the elevator, further reinforcing the storyline as guests proceed to the second level load area.



Sao Paulo's Museu Du Futebol is dedicated to football and reflects Brazil's passion for the beautiful game

The Pacaembu stadium in Sao Paulo, Brazil has been enhanced with the addition of a soccer museum, to reflect the country's passion for the game – from street kickabouts, up to its international success. The Museu du Futebol has extensive visitor interactivity and one of the most impressive features is the projection of 25 football stars seemingly floating in mid air.

Video plays a key role in the delivery of the subject. KJPL Arbyte was the systems integrator and used Dataon's WATCHOUT software to control the shows

MUSEU DU FUTEBOL

and orchestrate the image sources. The whole museum, with its 117 monitors and 55 projectors, is controlled from a central data center, making it possible to re-programme any part of the museum from one location and for equipment status to be monitored from the same location. 104 WATCHOUT display stations are used, which interface with the Medialon manager show control backbone.

THE JEWISH MUSEUM

With multimedia at the heart of a recent extension and upgrade, The Jewish Museum in north London received record attendances in the first month of the relaunch.

Blackbox-av provided the AV hardware solution for the 35 zones, one of which includes a multi-touch table. This is a large table housing a projector and camera sensing equipment, allowing up to eight people to interact with it at any one time, playing a game which gives key information on Jewish life, such as people, events and artefacts. It has directional sound equipment, RFID technology, on glass projection techniques and uses LCD screen technology behind a mirror to provide a unique special effect.

A synchronised video projected onto five large bespoke projection screens, featuring Jewish people talking about their life and religion, provides a dramatic welcome at the museum's entrance. ●



The Jewish Museum in North London received record attendances in the first month since the relaunch



INVESTED INTEREST

Investment and expansion has been the key to success for many theme park operators this year. Deloitte LLP's Nigel Bland and Liz Smith look at how the industry has performed during 2010

W

hen we last reviewed the attraction sector for *Attractions Management* at the start of this year, 2009 had been a good year for UK and European operators, but difficult for the highly leveraged US operators. Continual product development looked likely

to remain a priority for operators with the start of 2010 showing signs of increased levels of transactional activity and investment in new parks.

For UK and European operators, 2010 has seen a continuation of the positive trends in trading performance. With growing attendance levels and strong trading despite, in some cases, lower secondary spends, many players in the sector have looked to raise funds in 2010 either through debt refinancing or capital raising. These funds will be used to drive future growth. For US operators, this year has witnessed the resolution of a number of issues with the focus now on the future.

INVESTMENT IN THE UK

In February, Merlin, like a number of other companies, decided to postpone its flotation on the London Stock Exchange. Some observers wondered if this was a sign of a difficult year ahead. This proved not to be the case when in June CVC Capital Partners Group announced it had agreed to acquire

a 28 per cent stake in the company, in a deal that valued Merlin at £2.25bn (€2.56bn, US\$3.58bn) – Merlin's ongoing EBITDA for the year ending 31 December 2009 was £238.6m (€2.7bn, US\$3.8bn).

The acquisition provides an exit for Dubai International Capital with Blackstone Group reducing its stake. The transaction also provides a windfall for about 300 managers, whose stake in the company reduced from 12 per cent to two per cent. The stake owned by the family who founded Legoland remains unchanged.

Merlin will use these new funds to drive its numerous investment and growth plans. In August, Merlin unveiled plans for renovating Blackpool Tower and the surrounding area, providing a Dungeons and a Madame Tussauds attraction.

The Legoland brand is also set to expand significantly over the next few years. In August, it was announced that a deal had been agreed for an £18.5m (€21.1m, US\$29.5m) hotel to be developed at Legoland Windsor. The brand is also set to expand internationally. In September, it was announced that the company is to go ahead with its expansion plans in Dubai. In the US, Legoland Florida is scheduled to open in the autumn of 2011.

SPANISH SALE

Candover's plans to exit Parques Reunidos have not gone so smoothly. In July, Candover announced it was postponing the sale until after the summer to see if the company meets its budget targets. The Spanish economy has not recovered from 2008-09 as quickly as other economies and the recession has curtailed travel and tourism in Europe. Candover is believed to be looking to achieve a sale price



Ripley Entertainment expanded into Orlando and Missouri in the US and opened sites in Canada and Mexico

of c.€2bn (£1.75bn, US\$2.8bn) having acquired the business in 2007 for €935m (£820.5m, US\$1.3bn).

Parques Reunidos has, however, continued to invest with the acquisition of Movie Park Germany, the third largest theme park in Germany, for an undisclosed amount from Palamon Capital Partners in May. This completes the sell-off of the seven former Six Flags parks acquired by Palamon in 2004.

STRONG TRADING IN FRANCE

In June Compagnie des Alpes refinanced its debt and raised €100m (£87.7m, US\$140m) through a capital increase to expand its leisure business and make acquisitions. The move will provide €550m (£482m, US\$768m) to help develop the Walibi leisure park brand, extend the Grevin business to international markets and look to take advantage of lower asset prices for acquisitions.

Futuroscope announced in September 2010 that it had had its best season since 2000. A total of 1.8 million visitors are expected in 2010 compared to 1.7 million in 2009. In 2009, revenue climbed 12 per cent to €80m (£70m, US\$112m) and net profit was €8m (£7m, US\$11.1m). Compagnie des Alpes is currently in talks

Brand and product development with both domestic and international expansion are likely to be the focus for many operators in the theme park and attractions sector



with Futuroscope about becoming a major shareholder in the group.

In September, Paris-based Eurodisney announced plans to open a third theme park and thousands of holiday chalets on the outskirts of the city in a £7bn (€8bn, US\$11bn) expansion.

THINGS LOOK UP FOR US OPERATORS

2009 proved to be a difficult year for both Cedar Fair and Six Flags. For Cedar Fair, the start of 2010 saw its largest shareholder continuing to oppose a proposed US\$650m (£408m, €465.4m) LBO by Apollo Global Management. Discussions with Apollo were terminated in April due to not receiving the required level of shareholder support. The termination agreement required Cedar Fair to pay Apollo US\$6.5m (£4m, €4.65m) to cover expenses incurred.

Following the termination of talks with Apollo, things have started to look up for Cedar Fair. The company reached agreement with its largest shareholder, Q Investments, regarding the appointment of board directors. In July, Cedar Fair completed the restructuring of its senior secured credit, which now consists of a US\$260m (£163m, €186m) revolver and a US\$1.6bn (£1bn, €1.1bn) term loan enhancing the firm's financial flexibility.

Germany's third largest theme park, Movie Park Germany (above), was acquired by Parques Reunidos for an undisclosed sum in May this year

Since the start of the year, Cedar Fair has also witnessed strong year-to-date trading. Attendances have increased by 5 per cent compared to the prior year driven by marketing and pricing initiatives together with the introduction of new attractions. While spend per head is marginally lower than the prior year, the company believes it is on track to hit full year revenues of between US\$940m (£590m, €673m) and US\$965m (£605m, €690.6m).

2010 has also proved to be a much better year for Six Flags. Six Flags emerged from Chapter 11 in early May 2010 and resumed trading on the New York stock exchange. The company restructured its debt from c.US\$2.7bn (£1.7bn, €1.9bn) to approx US\$1bn (£627m, €716m). Six Flags has seen similar trading patterns to Cedar Fair. Since the start of the year admissions levels have increased – the second quarter of 2010 was 7 per cent higher than the prior year, but spends per head were lower.

Ripley Entertainment, known for its Believe It or Not museum-style "oddloriums", acquired two of its most successful franchises in Orlando and Missouri and also opened new sites both in the US and internationally in Canada and Mexico.

PREPARING FOR 2011

2010 is set to be another successful year for the leisure attraction sector. The UK and European operators continue to go from strength to strength while the US players have resolved stakeholder issues and can now move forward more confidently. Many operators are planning for the future and have used 2010 to increase their financial flexibility either through refinancing their debt or raising capital. The funds raised will be used to drive investment and growth. Brand and product development with domestic and international expansion are likely to be the focus for many.

The mergers and acquisitions market in freehold leisure remains fragile with few transactions getting completed. However, good assets are still attracting full valuations (for example, Merlin) and therefore we expect to see a steady increase in transaction activity through 2011. ●

Liz Smith, assistant director and Nigel Bland, associate partner, Deloitte LLP

Ferrari World Abu Dhabi

Spanning 86,000sq ft and offering the world's fastest roller coaster, the first ever Ferrari theme park opens in Abu Dhabi on 28 October. Kathleen Whyman asks the management team about the challenges of building and running the park

ANDY KEELING PARK MANAGER, FERRARI WORLD ABU DHABI

What is Ferrari World Abu Dhabi?

It's the first and only Ferrari theme park offering a multi-sensory experience that celebrates the passion, the technology, the excellence and the true story of Ferrari. It's the world's largest indoor theme park with 86,000sq m (925,000sq ft) of space offering 20 rides and attractions which cater for different demographics and groups ranging from children's driving experiences to the world's fastest rollercoaster.

The park has been developed by Aldar Properties PJSC, a property development, management and investment company.

It's being managed by Farah Leisure Parks Management LLC, a joint venture between Aldar Properties PJSC and ProFun Management Group Inc, an international leisure facilities management and operating company.

What operational challenges will you face?

We've brought in a number of rides and attractions that are state of the art so it's a demanding park for us to operate. We gladly take on the challenge because we want to deliver a fantastic experience to



our guests. But, by building the world's fastest rollercoaster you have to then maintain and keep in good repair and honour all safety checks. You have to be very diligent and committed to what you do. Over time, we've got to find suppliers, as we don't want to be importing all our spare parts.

How have the cultural differences affected the park?

Our research shows that people here don't like queuing. Rather than dealing with the queue jumping situation, we've taken a pro-active approach and redesigned the size and layout of all our queue lines to remove all the niggly bits that make

queues longer, so people don't think 'why should I walk down to the end of this row when I can jump over the rail'? We've also reduced the width of our queue lines to deter people from pushing through.

One of our attractions has a low through foot – a collection of 10 simulators, which are the same as the ones used by F1 drivers for training. We've introduced a timed ticket solution, so rather than wait extended periods of time in this area, guests can go away and enjoy the rest of their day and come back shortly before their scheduled ride time.

Another cultural difference is that many people wear headdresses and flowing outfits, such as saris. We've designed a special wind breaker-type jacket that can be worn over loose gowns and head-dresses. It holds the clothing tightly onto the body and allows guests to ride some of the more exciting and fast rides. We have a very clear safety rule that is no loose clothing. We fully respect the culture and religion so we offer free jackets so guests don't have to remove any clothing to go on some of the rides.

Another issue resulted from our two outdoor rollercoasters. Yas Island is still in development and we're one of the first attractions to be built so it's not fully landscaped yet. There are storms and air born dirt. We'll provide goggles, so when shooting through the environment, guests' eyes are protected from air-born sand particles.

Why is Ferrari World Abu Dhabi so special?

Everything is authentic. For example, we have a state of the art simulator by Cruden. On top of this simulator platform is a real Ferrari 430 Scuderia. It's a track car and car has been raced. So you get into an actual Ferrari when you get into the simulator. A lot of the parts used to build the rides are genuine car parts. It would have been so easier to use cheaper replicas, but we didn't – that shows the commitment and passion to the park.



THE JUNIOR GRAND PRIX FEATURES SCALED DOWN F1 CARS



THE 86,000SQ M FERRARI WORLD OFFERS 20 ATTRACTIONS

CLAUS FRIMAND GENERAL MANAGER, FERRARI WORLD ABU DHABI

What is your day-to-day role?

As this stage it's fire fighting. Initially it was the planning. We decided early on that we'd be completely ISO compliant. We got all the processes and procedures written up as much as we could so when the park was built it would just be a case of fine tuning. The advantage of coming in early was that we worked with the architect, designer, the ride vendors and the contractors so we put our fingerprint on everything, rather than living with someone else's designs.

How did you source your team?

In 2008, there were 10 of us involved with the set up. We had experience from Disney, Six Flags, Tussauds, Planet Hollywood and House of Blues. All our middle management recruitment was done with our industry contacts. We then pulled people from abroad and found people in the local market who had experience from the other parks in Dubai that were planned but didn't happen so we had a fantastic team from the beginning.

What are the staffing challenges?

Being the first major theme park in this region, there's no structure to manage or support this industry. The first challenge is finding a labour pool to work with and train who haven't worked in a theme park before. We have to introduce them to theme parks, to high safety standards, train them to



operate safely and introduce courtesy and customer service.

We've hired staff from more than 45 different nationalities, so we can have native speakers in most of the languages of the countries that we expect people from. For most of the nationalities, their mother language is not English. Our business and training language is English so we have to ensure communication is correct because of safety issues.

All the hundreds of staff have one week of intensive induction and basic training to get to know each other and the company before they're released to the different departments to start their specific training.

What about the cultural differences with staff?

The way the employment market works here, you have to take complete care of your front-line colleagues. This includes

flying staff in, getting visas, housing, healthcare, feeding them and transporting them around to shops on weekends – it's all the employer's responsibility.

Has the economic situation affected the park's progress?

Not really. The big advantage and maybe some luck was that the project was so advanced when the economic crisis set in, that Aldar had everything planned, the contractors in and everything sourced, so we progressed according to plan.

What are the development plans?

The park is indoors (although two roller coasters and a tower ride puncture the roof and come back in again) to give us full climate control all year round, so we can't expand beyond the size of the building and all the space is occupied. We also have five major attractions in black boxes, which are supported by show effects. We can upgrade, update or swap out any of these attractions. We have one live show at the moment but could add more.

We have a large physical area – the piece of land we're positioned on is 45 hectares. On this there are zones which are titled future expansion areas, so we have the space to add more attractions when attendance grows – which we are forecasting, just as Abu Dhabi is predicting growth in tourist visitor numbers and residents.

RANDY SMITH SENIOR PROJECT DIRECTOR, JACK ROUSE ASSOCIATES

What was the design brief?

It had two components. One was designing the theme park, the other was how the theme park works in concert with the bigger concept of Yas Island. Aldar is developing this resort island, so we had to work around the attractions, hotels and shops that had been decided on. We worked with Aldar, Ferrari, ERA, Benoy and Tilke Engineering on the masterplan and design for the whole island. There was some minor infrastructure on the island, but nowhere close to what was needed, so getting this in place was a very serious part of the development.

What is the design?

The theme park is under one roof, so we concentrated the closed, black box attractions to allow for a big, fairly open area in one section of the park. The ground is made of different floorings from Italian tiles and stonework to different textured and coloured concrete, and there are many trees and plantings, so it feels like a traditional park in a lot of ways.

How is an Italian theme achieved?

An Italian architect was used to bring the character of Italy to the park. We also have a number of attractions that look closely at Italy and tie it back to driving or road racing. One attraction tours a dozen Italian



cities through film. Another attraction miniaturises some of the great Italian buildings and lets you drive through the country past these iconic buildings. Another attraction is centred around Sicily – it's filmed as though you're in a road race in Sicily in the 1930s. And of course there's the food!

What materials have been used within the park?

Everything from basic materials such as stained and textured concrete through to high end materials like marble, Italian tiles, Murano glass and Italian furniture. Then there are large format films and domed screens and the many mechanical devices with each of the different rides.

Each of our buildings within the overall attraction have what we call fins – these are white, curvilinear panels that are perpendicular to the building and create a

kind of typography for the architecture. Through graphics and projection of lighting, each of these buildings will take on a slightly different character. In one instance, each building has a similar architectural motif, but by changing the lighting and graphic techniques, each building has its own unique character too.

What technology is involved?

The important thing was to achieve cutting edge rides with reliable, tried and tested mechanisms. For example, the Formula Rossa is hydraulically launched with a catapult-type system. It's an Intamin coaster that's been built before in terms of the technology, so we knew it would work and had confidence that we could reliably achieve the top speed.

What were the challenges?

Expressing the quality brand that is Ferrari in a theme park. We had to maintain that untouchable element and then do the opposite and make it touchable.

We also had to make sure that it had an appeal to families, young children, mothers, as well as the easy pickings – guys interested in racing and fast cars. If we were only going for the car crew, it would have been a different kind of theme park. The hard work was stretching it out to give that broad appeal.

ABOUT YAS ISLAND

Ferrari World Abu Dhabi is located on Yas Island, a 25 km² entertainment and recreation destination and venue for the first Formula 1 Etihad Airways Abu Dhabi Grand Prix. Already open are the Yas Marina Circuit, seven hotels, Yas Marina and all the infrastructure and race-related facilities. More attractions will open in the future, including a golf course, a water-park, a music venue and a mall.

Yas Island is one component of the mass infrastructure development outlined in the Abu Dhabi Government's 2030 Plan to diversify and expand the emirate's economic base.



YAS ISLAND IS THE HOME OF FERRARI WORLD

FERRARI WORLD'S ATTRACTIONS

■ FORMULA ROSSA

The world's fastest rollercoaster, reaching speeds of 240kmph

■ SPEED OF MAGIC

A 4D journey following a boy's adventures in a Ferrari

■ MADE IN MARANELLO

A virtual trip behind the scenes of the Ferrari factory in Maranello

■ V12

A flume ride that takes guests to the heart of a 12 cylinder's engine

■ G-FORCE

A tower ride that recreates the G-force of a Ferrari and shoots guests 62m (200ft) into the air

■ SCUDERIA CHALLENGE

Racing simulators similar to those used by the drivers of the Scuderia Ferrari in training



THE 200FT G-FORCE TOWER RIDE

■ VIAGGIO IN ITALIA

A virtual aerial voyage over Italian cities pursuing a Ferrari

■ FIORANO GT CHALLENGE

A duelling rollercoaster with Ferrari F340 Spiders twisting and turning to the finish line

■ BELL'ITALIA

A miniature recreation of Italy's most famous locations including the Colosseum in Rome

■ PADDOCK

A recreation of the Ferrari motor home. Interactive shows take guests to a Grand Prix race day

■ THE PIT WALL

An interactive theatre putting guests into racing scenarios

■ GALLERIA FERRARI

The world's largest Ferrari gallery outside Maranello

■ JUNIOR GT

A driving school for children

■ JUNIOR GRAND PRIX

Children can race in scaled-down Ferrari F1™ cars

■ THE RACING LEGENDS

A ride through Ferrari's greatest moments in racing history

■ DRIVING WITH CHAMPIONS

An interactive 3D show following a ride with a racing champion

■ CINEMA MARANELLO

Ferrari World's theatre showing a short film about Enzo Ferrari

■ JUNIOR TRAINING CAMP

Interactive play area for children. Activities include a peddle Ferrari

■ CAROUSEL

Featuring never-before-seen Ferrari prototypes of winning designs from a competition

■ DINING AND SHOPPING

TROY LINDQUIST DIRECTOR OF MARKETING AND SALES, FERRARI WORLD ABU DHABI

How do you market a brand new attraction?

You start with the strengths – Ferrari is a very well-known, iconic brand globally, which lends itself well to a very broad, story-telling experience.

How are you marketing the park?

The PR and media attention we've been getting because of the brand has been very helpful. We've been going to a number of the F1 races with a model of Ferrari World and have a presence in many of the Ferrari stores in the region.

Ferrari launched a website last year and we have our own and are on Facebook. The PR and social media have generated a lot of interest. We had around 5,000 resumes and CVs from various sources without doing much advertising.

Who are you marketing to?

While we communicate to fans of Ferrari, the family audience is very important in



any theme park experience, so we promote the experiences that are appropriate to both. Geographically we will focus attention on the GCC and Pan-Arab areas, but will market the park globally as well.

Are there facilities for corporate events?

We have some incredibly well decorated spaces for events, including a mock up of the Ferrari headquarters in European F1 races. We have a fabulous space in the

galleria where you could host a stand-up function while surrounded by a gallery of vintage, racing and current Ferraris. And we have larger facilities for sit-down events.

How do you work with Aldar, Pro Fun and Ferrari?

Farah is a joint venture between Aldar and Pro Fun. We have a very respectful and beneficial relationship. Aldar is the expert developer in this region so has the wisdom of building, developing and running things in the Middle East region.

Then Pro Fun brings in the actual practical experience of planning, preparing and operating theme parks.

We're the energy on the location, doing the implementation and the fine tuning of some of the design elements.

Ferrari is an amazing company and brings in passion, excellence of performance and technical innovation. As the license holder they ultimately have a say over how we present their product. ●

ROBERT RIPPY



R

ippy's first involvement with the attractions industry was in 1987 when he became a silent partner in Jungle Rapids because it "sounded like fun". Built in Wilmington, North Carolina in 1974, the park comprised of "a little

water slide on a hill with three little slides". In 1990 Rippy took ownership of the park, tore it down and started again. The waterpark now covers 16 acres and offers go-karting, climbing walls, Laser Tag, restaurants and a play area.

Also in 1990, Rippy went to his first IAAPA (International Association of Amusement Parks and Attractions) convention and immediately embraced the ethos of sharing advice and knowledge with peers. In his time with the association, this practice has extended internationally, with offices now in Europe, South America and Hong Kong. One of Rippy's aims for his year as chair is to establish the recently opened Hong Kong office and get the Asian community more involved.

"Asia is such a growth area with the construction of new parks and rising quality. We're seeing a lot of growth now in Indonesia, Malaysia and China. We need to make sure we're helping out in the same way we've helped in other countries, especially in the US," he says.

Challenging times

Rippy is well aware that he will be facing some challenges during his year as

IAAPA 2010 sees Robert Rippy step into the position of chair of the association. Kathleen Whyman hears how he started his first business in college, how he's made his park Jungle Rapids a success and what his plans are for IAAPA

chair. These include government regulation. "Often when there's an accident, the immediate reaction is 'we need more government regulation'. We, at IAAPA, don't feel like we need any more," he explains. "In most cases we're more than willing to work with our governments around the world and make sure we have safe parks, but we feel we can do as good a job of policing ourselves as we have done in the past and will continue to do in the future. The general public doesn't always understand all the things that we in the industry do to make our parks safe and fun for people to come to."

Another challenge is the current economy in the US. "Around 60 per cent of our members are manufacturers and suppliers to the industry. Those people are facing some strong challenges business-wise with the slow down in growth in the US and Europe in new parks," he says. Despite this, Rippy feels that the future for the business is very strong.

"So many jobs have gone overseas, especially in the US. One thing that's great about our industry is that we're in the entertainment business and we can't just ship all that overseas," he explains. "The parks in Europe, the US and South America continue to have good numbers and do well - people want to get out with their families. Despite all the new technology people now have, one thing you can't do at home is experience a ride, experience air blowing in your face or the true thrill of being upside down on a rollercoaster at 100mph. I think we have a great future in front of us, it's just going to be one that we have to continuously update to meet the demands of the consumer."

"The Harry Potter attraction at Universal has been a sell out from day one. We'll see more of that kind of thing over time."

Inspiration

Rippy's own fascination with the industry started when he was working on Wall Street in the 1980s. One of the companies he was doing financing for was called Silver Screen Partners. Through them, he spent time with Frank Wells, who was the president of Disney at the time and was intrigued by his love of the entertainment industry. "He really loved the parks that Disney had and was very much a visionary man," Rippy recalls. "He had great ideas, many of which are in the parks now. I asked him what he loved about the industry and he said he just enjoyed the smiles on the kids' faces as they walked in. He said: 'Bob, I get to come to work every

ABOUT ROBERT RIPPY

How do you like to spend your free time?

I love to hunt, fish, play golf and fly planes.

What's your favourite food?

Thin crust pepperoni pizza

What's your favourite film?

Good Morning Vietnam

Who do you admire in business and why?

I admire all entrepreneurs for what they do for this country and this world. They start the businesses and give job opportunities to so many people

What drives you?

I enjoy the operations of businesses and figuring out what makes them tick. I have an internal desire to succeed

What's the best piece of advice you've received?

"Bobby, the greatest thing you can do in your own business is make sure your employees are happy." I make sure my employees know I really appreciate what they do. Hopefully we create an atmosphere where they enjoy coming to work.

Does anything daunt you?

I don't speak foreign languages all that well. I can work my way through a little French, Italian and Spanish, but once I've worked my way through a menu or asked directions, I'm a bit lost.

How would you describe yourself?

A very happy person

How would others describe you?

I'm outspoken. I form my opinions and speak them



In most cases we're more than willing to work with our governments around the world and make sure we have safe parks, but we feel we can do as good a job of policing ourselves as we have done in the past and will continue to do in the future

day where people are happy and that's a very fortunate job to have. I love my job and would probably do it for nothing – but don't tell my board that," Rippy laughs.

Likewise, Rippy has fun going to work every day, "which is the main thing you should do in life," he says.

Rippy has looked into expanding the brand and opening Jungle Rapids parks elsewhere but feels that the US market is already mature. "There's always an opportunity out there," he says. "But does it make sense? Could we manage it without stretching ourselves thin?" Being only an hour and a half north from Myrtle Beach, he is painfully aware of the risk of failure as this is where Hard Rock Park opened and swiftly closed last year. Like Myrtle Beach, Wilmington has a very short tourism season of about eight or nine weeks. To avoid suffering the same fate as Hard Rock Park, Rippy cannily designed a park that can be open year-round with the FEC and the waterpark located at the back of the park.

Building the park wasn't completely straightforward though. Work started in 1995 with an estimated opening in 1996, but the arrival of three hurricanes during the construction period delayed the opening by a year. "We've had seven hurricanes since we built it. Our park's built to withstand them so there's no physical damage, but we do make a financial loss."

Industry changes

Rippy has seen many changes in the industry in the last 20 years: the failure of many FECs which were built in the wrong place for too much money and not operated correctly and the increase in home entertainment, which has seen the park's income from video games drop from 35 per cent to 20 per cent. "One thing I haven't seen though is the release of something completely new," he observes. "I'm hoping that some bright entrepreneur will figure out something new to add to our that will bring people out to the parks."

Consolidation among the larger players is also another change that Rippy has witnessed and he's been approached about selling his park several times. "I'm always tempted to sell," he admits. "But then I



RIPPY WILL PUT ASIDE ALL NEW VENTURES FOR 12 MONTHS AS HE CHAIRS IAAPA

get home and think about how much I enjoy what I'm doing and how I don't want to change that for something else. I love seeing kids with smiles on their faces and that's extremely hard to give up."

Like all entrepreneurs, Rippy is always looking at ideas for new projects. This started in graduate college when he and a friend started a chain of self-service car washes. "It was extremely successful so I thought I was a genius at that time!" he laughs. "But then we ran into an era in the US in the late seventies, early eighties when interest rates went to 22 per cent. We

almost went bankrupt at a young age, but we survived. It was a good lesson to learn at a young age and taught me not to ever bet the ranch on any deal."

Rippy is going to be putting all new ventures on hold for next 12 months so he can focus fully on IAAPA, a role he's looking forward to relishing. "I feel fortunate to have the opportunity to serve as a chair," he says. "It's a great honour and I hope I'll do as good a job as all the previous chairs have done. It's a very challenging thing but it's extremely exciting to become, as my wife says, the king of fun!" ●

NICOLAS MOULIN

**Kathleen Whyman talks
to the director of Terra
Botanica, which opened
in France earlier this year,
about the challenges of
creating a theme park
based on plant life.**

Could you describe briefly what Terra Botanica is?

It's a theme park dedicated entirely to horticulture. The concept stems from the region's economy. Around 25,000 people in the area work in the horticultural and botanic sectors – growing seeds, flowers, trees and working in green houses. The local university also has courses on the subject. Finally after four years, in December 2004, the local government decided to finance the theme park which had a total budget of €100m (£87.7m, US\$140m).

The park was in planning for a long time before opening? Why?

From June 1998 to December 1999 we constructed a budget and outlined all the ideas we wanted to include in the theme park, as well as the way we wanted to manage it. We then looked for designers and partners to run and finance the park. This took from early 2000 to the end of 2002.

During this time we began working with Ira West from Duell Corporation and Don Stuart from ECS and by the end of 2002 we had a masterplan and all the partners in place. At that point the local government decided not to support the project, but we didn't give up. We redesigned it and came up with a new proposal – which was then approved by the government in 2004.

How did you come up with the ideas for the entertainment?

We didn't have a set idea of what we would do with the attractions. We visited a number of countries to see what others were doing with similar parks. We realised that, to attract younger people and families, you would have to have more than just trees and plants. So we included a games area, rides and shows. We went to the likes of Efteling, Europa-Park and The Eden Project. The main purpose was to speak to the operators about their experiences.

The designer was Thierry Huau. Did you give him free reign?

He had a pretty free hand as far as the design was concerned, but he worked closely with our team. We told him which ideas had to go where and how much budget he had for each idea.

How did he choose the design?

The masterplan took about six months because he had to work out how to organise the restaurants and services. The main factors were how people would filter through and what the experience would be – what they would hear, see and learn.

How would you describe the design?

It's a genuine theme park. We present the subject of horticulture in many ways, from 4D movies to games to attractions.



**The park offers plenty of
activities for the family. The
average visit lasts for five hours**



What are the park's centrepieces?

People enjoy the 4D theatre. It tells the story of two rain drops that you follow into a tree and to the rivers. You have to pedal through a five-minute trail between trees.

What educational elements does the park have?

In June we had more than 6,000 children visit the park and we usually host between four and five classes a day. Each class is a full-day experience and we work with the French Ministry of National Education on the content of the programmes.

How do you educate day-to-day visitors?

In three ways. Firstly, they learn information along their journey through the park about plants' names, historical information, where they grow and how big they get.

Secondly, we have gardeners working during the day who are happy to answer questions and explain what they're doing.

Finally, we have an animation throughout the day that focuses on different things. For example, one demonstrates how to look after tomato plants.

How will the park change through the seasons?

Early spring it is mainly flowers and tulips. From June to late August it's roses and vegetables. In autumn it's more about trees and the different colours of the leaves.

The way the park's designed, it includes flowers and trees for all seasons throughout the whole park. We close for the winter in November and reopen at Easter.



The team behind Terra Botanica visited a number of European parks for ideas. As a result, the attraction is a mixture between a botanical garden and an amusement park

Would you consider hosting a Christmas event?

I visited Efteling and Europa-Park, as they open at Christmas, to see how they handle it. We have many attractions on water, which wouldn't work at Christmas. Plus we need to close at some point to do technical updates, so I don't think we will.

You have 25,000 species of plants. How do you care for them all?

The park has been designed for sustainable development. We don't use any chemicals when caring for our plants. We use the water from the roof and the trail for all the lakes and rivers and the plants.

What other sustainable elements are there?

We don't use air-conditioning and have invested in solar power. We use wood to provide heat for the greenhouse and use electric engines for almost everything. As part of our educational aspect, the games in the park explain everything connected to sustainable development.

The park opened in April this year. How many visitors have you had so far?

So far [September 2010], we have received 120,000. Our target is to receive 250,000 visitors for the year.

What feedback have you had?

The first thing we've had to deal with is that people think we're just a botanical garden, and an expensive one at that. In France you'd usually spend around €5 (£4.40, US\$7) to visit a garden. Our adult ticket costs €17.50 (£15, \$24).

But post-visit feedback has been good. We need to improve signposting, but families are enjoying their visits and many local people have bought season passes.

If people think it's a garden, do you need to change your marketing in some way?

Yes, we need to work on our marketing to get the message across. We do show attractions in the marketing, but until people come and visit, they can't imagine what the park's like. Due to the theme, they assume it's a garden attraction with some additional shows. It's only once they've been that they realise it's a theme park.

How long do people stay at the park?

Dwell time is between five and seven hours.

Any plans for a hotel?

No, my job isn't to set up a hotel. There are about 2,000 hotel rooms within a 10-minute radius and we have many partnerships with existing hotels in the area in and around Anjou.

Where do most of your visitors travel from?

Around 50 per cent come from Anjou and about five or seven per cent come from

► abroad. In May and June we attract a more local visitor, but from July onwards the visitor mix is more international.

All our films and communications are presented in both French and English.

What are the challenges of running the park?

The challenge will be to bring new ideas and new attractions to the park each year. The park currently covers 11 acres of land, but we have 28 acres of land at our disposal, so we can grow. We need to ensure we have the finances in place to position new gardens and attractions.

We'll put a new attraction in each zone each year, so that'll be four new attractions every year – it could be a ride, a show or an attraction. We already have plans in place for next year to come up with a new game for kids. We will also be launching an educational plant garden.



Moulin says he is looking to add new entertainment facilities to the park each year to encourage repeat visits

How will it be maintained without interfering with the guests' experience?

A garden isn't a garden without being worked on – that's what makes us different. People enjoy being able to ask the gardeners what they're doing and why. It's part of the animation and experience.

Which suppliers have you worked with?

Kraftwerk supplied the 4D theatre, Mack Rides worked on the river and AAB supplied the fake rocks in the landscapes. ●



THE EXPERIENCE:

**Evelynne Villame,
marketing and
leisure consultant,
Loisirs & Marketing**

BACKGROUND

Terra Botanica is situated in Angers, capital of Anjou. This historical region is located along the Loire Valley and is praised by tourists for its lovely countryside, its mild climate and wine. However, for the more knowledgeable, Anjou is also the region in France where plants adapt very easily. Historically, botanical interest has always been vivid in Anjou and has now developed into a very active industry.

Developed by the local government with public funds, Terra Botanic, Parc du Vegetal is the showcase of Vegepolys – a 'cluster' of companies which bring together specialists in the plant field. These include research centres and training organisations to develop innovative projects and strengthen members' competitiveness.

Terra Botanica is built on 11 hectares in a semi-circle. Somewhere between a botanical garden and a leisure park, Terra Botanica offers different gardens, ornamental water ponds, greenhouses, exhibition halls, some shows, a few gentle rides, and interactive games for both chil-

dren and the young at heart. The park also offers a 350sq m (3,800sq ft) congress centre with 325-seats, an amphitheatre and four separate rooms.

VISIT

Paris is a three-hour drive away. Signage to the park is good and access is easy and parking is free. The carpark is pleasant to look at, offering a view of lawns on which you park your car.

ENTRANCE

Much effort has been put into the entrance landscaping and the reception building is made of wood. Upon arrival you get a feeling of being in a city park or garden. Once you've passed the gate, the 'city garden feeling' gets stronger. The park is divided into four sections with somewhat strange names – Sought After plants, Generous plants, Mysterious plants and Domesticated plants – all situated around a central part where services, café, restaurant and shop are located. The layout is not obvious and signage is rather poor – you'll need your map to guide you.

EXPERIENCE

The park offers an amazing selection of plants, manicured gardens and alleys which make you almost feel you are in the botanical gardens of a French castle. There is plenty to see, smell and learn.

Children are well catered for with interactive hands-on exhibits.

There are more than 30 experiences, large and small, passive and interactive. You can choose from four cinematic experiences, a boat ride and a pedal car ride, while there are also some excellent (and unexpected) surprises. I didn't have time to see the *Once Upon a Time – a Flower Movie*, but found the other three films quite basic compared to those at Futuroscope, the park's nearest competitor. The rides are gentle, in harmony with the park, and the real charm of the park is definitely in its clever and well thought out interactive exhibits geared towards children.

Food and beverage seems good with a healthy offer. The entrance shop has a wide selection, ranging from books and educational games, to local products and wine, which invite guests to further explore the region.

DESIGN AND LAYOUT

Most of the visitor experience is designed according to a very linear mode: a show to introduce the theme, a big indoor exhibit of plants, outdoor exhibits and smaller unexpected plants exhibits. For a visit of eight hours, as recommended in the guides, the not-so-young would wish to have more comfortable places to sit. Overall, the park is an excellent family attraction and a "must see" if you are ever in the area.

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Recent projects include **4Dventure** for Our Dynamic Earth, Scotland: a highly entertaining and thought provoking immersive experience driven by high-end computer generated stereoscopic 3D visuals, 4D environmental effects and a 7.1 surround sound score. **We Are Astronomers** narrated by David Tennant, a Fulldome digital planetarium film launched in 2009 to 7 UK digital domes and now licensed around the world. We are uniquely placed to understand a science centre audience and what it takes to inspire, entertain and educate both young and old.

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VISIONARY TACTICS

4D cinema is going from strength to strength, while 3D is becoming increasingly popular for planetariums. Kath Hudson looks at some of the latest developments in this busy market

Although the economic climate has been tough over the last year, this hasn't dented the desire of many operators to invest in their attractions and many have looked at 3D, 4D and 5D experiences to up the ante and even help to regenerate an area.

Merlin Entertainments is currently working with Blackpool Council to restore Blackpool Tower to its former glory as part of a wider regeneration of the promenade. A 4D London Eye-style experience is planned, with the tower-top ride benefitting from a 4D pre-show telling Blackpool's story.

Simworx has installed the first 4D theatre in Wales, at The Works, the regeneration of the former steelworks at Ebbw Vale into a mixed-use development with leisure, housing, a hospital and other amenities. It's currently showing a library of films, but a custom-made film – the working title of which is *How Green is Our Valley?* – is in production and will focus on local history.

The director of New Zealand's International Antarctic Centre in Christchurch, Richard Benton, believes the 4D experience can be a powerful draw and put an area on the map. The centre will bring 4D to New Zealand in November, with the launch of the cinema experience, *Extreme*. Benton hopes it will have a positive impact on visitor numbers. "Our market research tells us *Extreme* will conservatively add another 10 per cent growth in visitors in year one. This is an exciting goal in what has been, for many businesses around the world, a challenging last 12 months," he says. "We were looking for a competitive edge, and 4D hasn't come to New Zealand yet, so we saw a niche in the market to be the first."

Simworx has provided the theatre and the film has been custom-made by Emmy Award-winning cinematographer Mike Single and

computer graphics production facility Animated Research Ltd. "We had to have a film that nobody else could access and we did this by making the first ever 3D movie actually filmed in Antarctica," says Benton. "We wanted real life, not animation. It had to be fun, exciting and leave viewers wanting more."

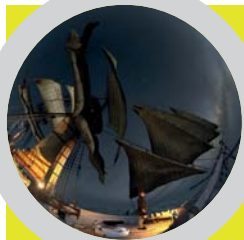
Ice Voyage is a journey to Antarctica onboard a cruise ship that delivers incredible footage of the wildlife, icebergs and wilderness. But it isn't just a natural history film, there are some edge-of-the-seat moments – the 11-minute film has eight different 4D special effects and culminates with the boat sinking.

AN EDUCATIONAL SLANT

Scotland's science attraction Our Dynamic Earth also launched a 4D theatre, *4DVENTURE*, as this season's main attraction. Again, a bespoke film was commissioned, which could excite the audience while imparting an educational message. The curriculum-linked film, commissioned from NSC Creative, brings the visitors face to face with some fearsome creatures, while also giving the audience a greater understanding of the fragility of life on our planet.

Our Dynamic Earth chief executive John Simpson says: "Immediately from the launch of *4DVENTURE* in April, we saw an uplift in visitor arrivals, experiencing our busiest day in eight years over the Easter weekend. It has proven to have significant longevity as the snowball effect created by positive word of mouth and recommendations has grown. The initial performance has been sustained and attendance figures for the summer were among the highest achieved since our original opening 10 years ago."

Other museums taking the 4D route are the RAF Museum in Hendon, which has installed a Simworx 4D theatre, showing *The*



Mirage3d's Darwin-based film *Natural Selection* (left and centre) and Our Dynamic Earth's *4DVENTURE* (right)





nWave spent €5m
(£4.16m, US\$6.4m)
on developing its *The
Little Prince* 4D movie

► *Mission*, a story of a WWI bombing mission. The project is a revenue share scheme, with Simworx providing the capital costs for hardware and film licensing for a cut of the revenue.

Also participating in one of Simworx's revenue share scheme is the Manchester Science Museum, which has installed a new theatre with 4D motion seats.

London's Science Museum has used 3D attractions as the main draw for its flight season this summer. Centrepiece of the Fly Zone is a 3D motion effects theatre, Fly 3D, which creates an immersive experience of what it would be like to be a Red Arrows pilot. Produced for Metropolis Entertainment, by Impact Image, this year, and showing highlights of this year's Red Arrows display, the 3D film is complemented by dynamic motion simulation, surround sound and the aroma of jet fuel. The IMAX cinema also has a new film: *Legends of Flight 3D*, produced by The Stephen Low Company with K2 Communications.

WORLD-LEADING PLANETARIUMS

Planetariums are also scaling up their offering to more dimensions, and whereas the norm has been to have a pre-recorded show, the trend in the new wave of planetariums is to have presenter-led live shows, capable of streaming data from observatories.

Global Immersion is involved in a couple of exciting projects, including the multi-million pound redevelopment of Moscow Planetarium into an international attraction. There will be two 4D theatres alongside the 3D planetarium; the 11-seat mini dome will be primarily educational, aimed at the teenage market, while a 47-seat theatre will show a range of films and will be able to operate as an attraction in its own right. The latter will be open late into the night and has its own entrance. Both will have D-Box motion seats.

Global Immersion's international commercial manager, Ian Dyer, says it's an exciting project as the client is ambitious to create a flagship attraction for the city. "It will tick all the boxes: entertainment, educational, scientific and astronomical. There's an observatory next door and telescope data will be used in the dome."

Global Immersion is also working on the new Tainan Science and Education Museum, creating Taiwan's first 3D stereoscopic astronomy planetarium, which will open early next year. The planetarium will have a mainly educational focus and is a purpose-built building, next to an observatory. It will incorporate real time navigation with stereoscopic technology. "With more and more facilities integrating 3D technology, they're looking for something which will allow them to present live shows, so they can tailor their astronomy, or earth science presentation, to their audiences' needs, and for

this to be capable of instantly streaming out 3D visuals," says Global Immersion's marketing manager, Beth Nicholas.

The Dutch-based Mirage3d has completed its second full-dome video planetarium film in stereo 3D, which will be shown at the Macao Science Center in China; the Hamburg Planetarium in Germany; and the Imiloa Astronomy Centre in Hawaii. The 41-minute film *Natural Selection* tells the story of Charles Darwin's scientific discoveries, and explains the idea of evolution.

The film combines 3D action shots of characters, with 3D computer generated backgrounds. "It works extremely well in 3D, especially the underwater scenes, where there is an overhead environment

Redstar is about
to release its
Christmas production,
Sleigh Ride



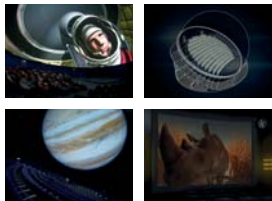


don't ever grow up

At Global Immersion, we continually strive to develop and engineer the most innovative, leading-edge immersive theater solutions so your visitors can re-live childlike excitement and amazement during each and every performance. From the exhilaration of a 4D theater, to the wonder of a stunning 3D planetarium, our job is to create your emotion.

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- Gondwana Prähistorium, Schiffweiler (GER)
- Galeria Bran, Bran (ROM)
- AIDAluna (OCEANS)
- Costa Luminosa (OCEANS)
- City of Dreams – The Bubble, Macau (CHN)
- City of Dreams – Virtual Aquarium, Macau (CHN)
- Aviation Pavilion, World Expo 2010, Shanghai (CHN)
- Austrian Pavilion, World Expo 2010, Shanghai (CHN)
- Shanghai Pavilion, World Expo 2010, Shanghai (CHN)
- Futuroscope, Poitiers (FRA)
- Madame Tussauds, London (GBR)
- Aquapulco, Bad Schallerbach (AUT)

with different layers of life forms all moving over the dome," says Mirage 3d's Robin Sip.

Sky-skan, which has been busy installing planetariums all over the world, reports there is a definite trend for traditional planetariums to upgrade to full-dome video and a high quality optical star field. "In particular, China is adding several spectacular large theaters and asking for the latest and greatest technology," says marketing director Marcus Weddle. "In India, a large number of classical planetariums are now seeking digital upgrades. Audiences who haven't seen a planetarium show for a few years are simply blown away by today's shows. They have exciting visuals which today's media-saturated public still can't get anywhere else."

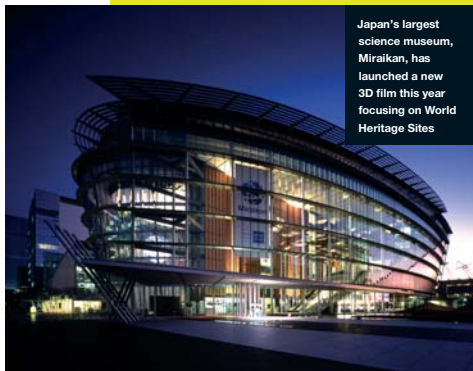
Japan's largest science and technology museum, Miraikan, has launched a new 3D film this year, which incorporates images from DAICHI, the Earth's observation satellite. It focuses on three World Heritage Sites, in New Zealand, the Nile River in Egypt, and Japan's Itsukushima Shrine, and tells a story through the eyes of local children. Giant ruins and natural scenes are recreated with super high precision 3D images, taken by the 4K3D digital camera. Japanese company, GOTO Inc built the 3D system VIRTUARIUM II-3D, with Sony SXRD, and it is powered by Digistar4 from Evans and Sutherland.

COMPACT AND BIJOU

In response to customer demand, a couple of new products have come onto the market, which offer a 4D experience in a compact experience. Alterface launched its new 5Di concept at Asian Attractions Expo in Kuala Lumpur, this July. "On a limited footprint and easy to install, dismantle and move, the 5Di is a solution for parks and family entertainment centres, as well as shopping malls or bowling venues," says Benoit Cornet, CEO of Alterface.

Kinoton recently installed an open air 3D cinema on the grounds of a public swimming pool in Mönchengladbach, Germany. The Starpac Open-Air Cinema is showing 3D films including *Avatar*, *Alice in Wonderland*, *Forever Shrek*, and *Step Up*. Kinoton installed a DCP Digital Cinema projector and an XPand 3D shutter glasses system. "The XPand system is fast and easy to set up and provides lively 3D effects on the inflatable matte white cinema screen we're using," says Klaus Kraemer, head of the local Kinoton service team. "Because of the large picture size of 16 by eight meters, we're using a very bright projector with a 6,500-watt xenon lamp."

Japan's largest science museum, Miraikan, has launched a new 3D film this year focusing on World Heritage Sites



Simworx is launching its S-FX motion theatre at IAAPA. This is a fully enclosed 4D theatre with individual motion seats. Monkon says this has been developed mainly because of demand from projects in Turkey, which don't have large scale attractions.

These projects illustrate that 4D is marching across the globe. Simworx is even in talks with a company in Columbia about taking the experience there. Fortunately, the experiences can be easily refreshed with the library of films on offer. Redstar is about to release its Christmas production, *Sleigh Ride*. This adventure will involve viewers being splashed with slushy snow and smelling the aroma of mince pies.

nWave is launching *The Little Prince*, a 13-minute, 4D film based on the famous French novel by Antoine de Saint-Exupéry at IAAPA in November. For CEO Ben Stassen, *The Little Prince* was an obvious subject choice. "The book sells between seven and ten million copies a year worldwide. This gives operators who show it a big marketing advantage, as visitors already know the story and the characters," he explains. "We spent €5m (£4.16m, US\$6.4m) making the film, which is a huge amount for an attraction, and have really raised the bar with the animation."

Kraftwerk has developed a 4D/5D theatre which is aimed exclusively to waterparks/wet environments, where people can experience a 4D/5D attraction in swimsuits. The system looks similar but is totally different, as it needs to work properly and be long lasting in wet environments with chlorine and other chemicals involved. The seats have still up to 3 Dof.

The whole steel work is high grade stainless steel, the entire electronics system is situated outside the auditorium and the speakers are waterproof.

The main difference of the experience, adding to the fact that people enter wearing swimsuits, is a big watersplash involved at the end of the show. The theatre's films are also played mainly based on water and pirates themes. The first installation will open in spring in Aquapulco Bad Schallerbach, Austria, and many more are currently in planning.

Kraftwerk has also recently signed a global partnership for distribution with Polin Slides from Turkey, which has a global network of more than 50 local representatives.

(Below) Sky-Skan is working with planetariums; (right) Kraftwerk has developed a 4D/5D theatre for waterparks





Ben Stassen, CEO of nWave gives his view of the next step for 3D and 4D Future

The future of 3D depends on the increase of the frame rate. If we don't do

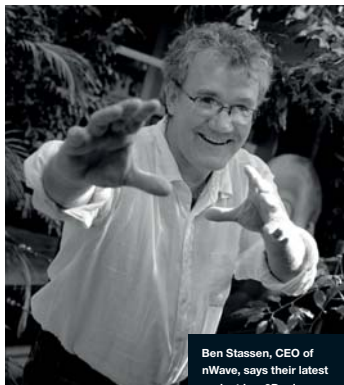
that, there's no future for 3D. It won't fully come to maturity until we increase the frame rate from 24 frames per second to 48 or possibly even 72. There are too many technical limitations with a slower frame rate. It would have a big impact on theme park attractions because we can make them much more dynamic in 3D once the frame rate is increased.

I hope it's going to take place in the next year or two – or 3D will be dead in the movie theatre. Because of the limitations with frame rates, many 3D films shown at the cinema are actually quite bad and it can't be used in action scenes. I saw a study in the US last week that said 37 per cent of the movie goers in North America already say they don't want to pay extra to see 3D and more than a quarter of movie goers are saying they'd rather see the film in 2D. The danger is that this figure will only increase if quality isn't improved. We need to react and we need to do something very quickly.

When it does happen, because it will be expensive, there's a good chance that theme parks will be used as a pilot project for the higher frame rate before it's rolled out into cinemas, so our industry will be the first to benefit.

I am often asked why we do feature films in 3D and why 3D has found a new life in theme parks. 3D was around in the 50s

THE FUTURE OF 3D



Ben Stassen, CEO of nWave, says their latest project is a 3D adventure film based on the book *The Little Prince*

and the 70s – it came and went. Then we started doing film-based 3D attractions in theme parks, museums and IMAXs and 3D became a revolutionary language of cinema. For the first time 3D was enabling film-makers to totally immerse the audience in the film and position the viewer within the film space itself. There's no better place in the world to see 3D films than in theme parks.

When we create a 3D film, we try to explode the frame around the picture, and make people forget they're watching a film – instead they're participating in the story. Our latest project is *The Little Prince*, which is based on a TV series of the famous book. Our story is that the Little Prince's rose has disappeared so he goes to three different planets to find it – the planet of time, the planet of music and the planet of the sleeping giant. The film's been designed to work well as both an immersive 3D and 4D attraction. We've designed many moments in the film, such as water spray and wind, for exhibitors who have physical effects in their theatres so they can programme them. There's no better way of taking the audience on a journey throughout space and into the fantastic world of *The Little Prince* than in 3D." ●

I hope it's going to take place in the next year or two or 3D will be dead in the movie theatre. Because of the limitations with frame rates, many 3D films shown at the cinema are actually quite bad and it can't be used in action scenes

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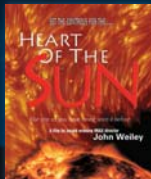
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THIS TIME IT'S PERSONAL



The ICT device was designed with children in mind, so that they can feel like they're part of the story

Mass customised entertainment experiences have been a hit with visitors to Expo 2010 in Shanghai. BRC's Christian Lachel explains the trend

For years our industry has been experimenting with ways to integrate the hand-held digital world of our guests with the immersive real dimensional worlds we create. And at last, here is mass customisation applied to experience design. At the Information and Communications Pavilion at Expo 2010 Shanghai, guests personally imagine a future in which Information Communication Technology (ICT) connects anyone, anything, at anytime and in nearly every way imaginable.

The pavilion combines state-of-the-art immersive digital media with personal interactive wireless network technologies and tactile (4D) special effects. This involves a new story and technical approach to the long-standing industry dream of combining a shared full-immersion story to a hand-held mobile device, with high hourly capacity.

New approach

What's interesting is not the device, but the approach. The groundbreaking ICT mobile device marks an entirely new way to experience a major pavilion exhibition.

Every visitor to the pavilion is lent their own touch-screen ICT mobile device that accompanies them throughout the various stages of the pavilion exhibits and shows, allowing them to personalise their experience and interact with what they see. The device lets users actively participate in the world's first multi-dimensional interactive network visitor experience.

The technology reflects the main messages of the Information and Communications Pavilion – boundless communication and a futuristic ICT experience. It is, in effect, a combined Wi-Fi video game, storage device and interactive media player that can be personalised to give each user a unique visitor experience.

THE PAVILION'S HIGHLIGHTS

THE PSP FACTOR: Children who come into the pavilion are given their own PSP or Gameboy-like ICT mobile device. This immediately makes them feel that this pavilion was designed for their generation. It creates a personal connection, which extends to the accompanying parents and grandparents. If the child is happy, the family is happy.

THE ICT POWER CHARACTERS: The animated pavilion hosts Gudu and Jiling. The ICT Powers acknowledge the kids directly and encourage them to participate in the experience, breaking the barrier of just watching the film. It's not only a movie you watch, it's about involvement, interaction and the kids get it.

THE DREAM BIG THEME: This idea resonates with children because in the future anything is possible if you dream big.

FUN VISUAL STYLING:

The animation styles include traditional and state-of-the-art CGI techniques. The quality of the animation is a next-generation version of what is seen in popular Asian and Hollywood shows.

ANIMALS:

Every zone of the pavilion uses animals to help tell the story. For example, the talking penguins are something that children remember; they emotionally connect with them.

TACTILE SPECIAL EFFECTS: The Information and Communications Pavilion is the only Expo pavilion that uses snow, so people remember this magical



effect. There's also a giant bubble shower at the end of the main show.

DREAM COLLECTION GAME INTERACTION:

A post-show Dream Lantern game encourages children to run around collecting lanterns for their virtual game boards to win prizes



Each guest is lent their own PCT device to accompany them on their visit, but they can continue their experience by logging onto the pavilion's own social networking site, which has three million members

HOW IT WORKS

- Every guest borrows a hand-held personal mobile device
- Every guest creates a personal web page that is posted on a secured site, recording their personal experiences
- Every guest can continue their visitor experience at home by logging onto the pavilion's social network site
- Every guest instantly becomes a member of the pavilion's online community, connecting people across the world. It has attracted over three million members in just six months

In order to keep pace with the huge flow of traffic into the pavilion – 1,900 visitors an hour, and 20,000 per day – 8,000 ICT mobile devices are on hand at the pavilion, with 2,600 working simultaneously in different show spaces at any given time.

Despite the massive throughput, supported by a sophisticated Wi-Fi system and a network of powerful servers onsite to ensure smooth two-way integration with the RFID (radio frequency identification)-tagged devices, the ICT mobile device is intimate and personal. It records visitors' interests, stores their photos, allows them to delve deeper into the content that interests them after the show, and go beyond what they see inside the actual pavilion itself.

Dream catcher

As users see things that interest them, they make selections via touch screen or, in some areas, swipe the device over the target. The item, or 'dream', is collected so they can learn more about it later at home. The device sets up a personalised web page for each visitor so they can connect online to continue the voyage, retrieve their

photos and prizes and interact with other visitors who share their dreams.

They can even use the device to choose their own dream wallpaper for their web page based on their choice of the kind of dreamer they are.

For example, as the visitor watches an animated messenger pigeon taking flight in one part of the show, their device shows them the wing speed in a graphic 3D-like format. The device vibrates and an LED light alerts them at important moments of the story. Guests can choose their own language from four options (Chinese, Korean, Japanese or English) and it even accommodates the hearing impaired.

This unique combination of interactivity, storytelling and personalisation is one of the reasons the Information and Communications Pavilion at Expo 2010 is a hit with children and families. The pavilion has struck an emotional connection with this very important audience in China. Nielsen Group has ranked the pavilion in the top three corporate pavilions and in the top 10 pavilions at the Expo (there are more than 200 pavilions).



The Nielsen Group ranked the pavilion in the top three corporate pavilions, and in the top 10 pavilions at the Expo

Visitor satisfaction is 97 per cent and the pavilion continued to build momentum heading into the final weeks of the Expo season. Children world-wide use personal mobile devices to play games, connect socially and watch their favorite movies. The design of the ICT took this new audience into consideration and delivered something that made them feel as though they were part of the story.

Operators should think about the opportunities their attraction offers of bringing personalisation and mobile technology into their experience. If they don't consider this, they may be missing an opportunity to emotional connect with this very important audience. ●

Christian Lachel, ICP Pavilion creative director and vice president, BRC Imagination Arts

AN AMBITIOUS NEW CULTURAL ATTRACTION LOOKS LIKE SETTING A BENCHMARK FOR THE INDIAN ATTRACTIONS INDUSTRY, COMBINING OLD WORLD CHARM WITH STATE OF THE ART TECHNOLOGY. JENNIFER HARBOTTLE DISCOVERS WHY KINGDOM OF DREAMS HAS GOT THE LOCALS BUZZING

THE STUFF DREAMS ARE MADE OF ?

THE BACKGROUND

Kingdom of Dreams is a new entertainment venue situated in the millennium city of Gurgaon, 25km south of Delhi. It's designed to offer tourists a showcase of modern and traditional India, through a blend of art, culture, heritage, crafts, cuisine and performing arts.

Opened in July 2010, Kingdom of Dreams is owned and operated by the Great Indian Nautanki Company, a joint venture between entertainment and communication company Wizcraft International Entertainment and Apra Group of Companies.

THE OFFER

Kingdom of Dreams is made up of three main attractions – Culture Gully, the Nautanki Mahal theatre and the Showshaa theatre. Guests can buy a ticket just for Culture Gully, or they can book add on tickets to one of the two theatre productions.

Culture Gully is a culture, arts, crafts and food boulevard under a skydome and is the main reason people visit Kingdom of Dreams. The idea is that it showcases the 14 regions of India under one roof. It includes six restaurants, two bars and seven retail stores, all themed to specific

regions of India, including West Bengal, Mumbai and Goa. Other attractions in this boulevard include an ayurvedic spa, a bar themed around the Indian movie industry and a 'beach' symbolising the laid back southern tip of India.

The Nautanki Mahal theatre is a state-of-the-art auditorium showing a Bollywood musical. The musical combines 4D effects and live actors and is set against the backdrop of a cinema screen.

Showshaa Theatre, which will open in December 2010, will showcase ancient Indian mythology. The experience will include a mock Indian wedding ceremony, which guests can become part of by dressing up in traditional costume.

MARKETING

Despite being one of the few leisure attractions in Gurgaon, there has been little marketing of Kingdom of Dreams. As a temporary resident of New Delhi, I read the mainstream newspaper, watch local television and listen to the radio on a daily basis. The only advertising I've seen have been full-page colour adverts in the paper and one billboard ad visible from the main road between Delhi and Gurgaon.

ACCESS AND SIGNAGE

My driver took me to Kingdom of Dreams and without him, I'd have been lost. There are no signs for the attraction anywhere in Gurgaon. In fairness, however, there are no signs to anywhere in Gurgaon!

As a general rule, roads in India leave a lot to be desired and since we're just coming out of the monsoon season, they're more heavily pot-holed than ever. The road leading to Kingdom of Dreams is no exception, although building work is still going on. A huge car park is being built within easy walking distance of the attraction, but this is a way off being finished.

Having said that, most people do have drivers here, and it's easy to be dropped off outside the main gates.

TICKETING

Tickets for the main show, Zangoora, in the Nautanki Mahal theatre, can be booked via the Kingdom of Dreams website or by phoning its hotline. You can choose your own seat and payment is simple. If you're just visiting Culture Gully and the Showshaa theatre, there's no need to book in advance, so tickets can be bought on the day at one of the attraction's five booths.



The site is made up of three main attractions – Culture Gully, the Nautanki Mahal theatre and the Showshaa theatre



The staff in the ticket booths are quick, but not very informative about the attraction. With no carry-round map or leaflet to read, it's hard to know what to expect.

The 'ticket' is a smart card and costs 750 rupees (£10.50, €12.40, US\$16.50). This is broken down into 100 rupees (£1.40, €1.65, \$2.20) entrance fee, 600 rupees (£8.40, €9.90, \$13.30) non-refundable spending money and 50 rupees (£0.70, €0.80, \$1.10), refundable at the end if you have any money left on your card.

DISABLED ACCESS

As a mother of young children, I visit attractions with a pram and so face many of the same challenges someone in a wheelchair would: heavy or narrow doors, lack of lifts, and shops and restaurants that don't have space for wheelchairs or prams.

Kingdom of Dreams provides wheelchairs on site, and has lift access to the top floor in Culture Gully, but steering a wheelchair (or pram) in and out of many of the retail outlets is difficult. There are little steps leading into many of the rooms, which makes things difficult for wheelchair users and is also a potential trip hazard for older members of the public.

The Nautanki Mahal theatre does have disabled access.

DESIGN AND LAYOUT

Kingdom of Dreams is an impressive facility. Lifesize elephants adorn plinths at the entrance plaza and inside, it definitely has the wow factor, mainly because

KINGDOM OF DREAMS

Location: Auditorium Complex, Sector 29, Gurgaon – 122001. Haryana, India

Opening hours: Tuesday to Sunday, 1pm – midnight

Admission prices:

INR750 per person to enter Kingdom of Dreams (theatre entrance is extra)

INR750 is inclusive of:

- INR100 as entrance fee not refundable
- INR50 deposit for the smart card is refundable
- INR600 has to be spent at Culture Gully. This amount isn't refundable, even if the customer doesn't spend this amount at Culture Gully

Free entrance for children below 4ft (in height)

it's so finished compared to anything else in Gurgaon. (Believe me, I'm not being unkind – Gurgaon can at best be described as a work in progress.)

Beyond the ticket booths, you walk through archways into the football pitch-sized main courtyard. This is the transition area from Culture Gully to the two theatres. It's easily the most impressive part of the attraction – think South-East Asian Universal Studios with a Bollywood twist.

The sheer size and scale of the buildings are an attraction in themselves, as are the decorative domes and Mogul architecture. But the most enchanting part of the design is the attention to detail, such as candles in walls, hand-crafted mosaic tiling on the ceilings and flower petals strewn across water carriers shaped as huge tear drops.

The Nautanki Theatre is the second largest in India and its design is extremely opulent. The foyer features gigantic chandeliers and inside the auditorium is richly decorated with plush velvet seating and sumptuous flock wallpaper.

Landscaping in the attraction is in its infancy, but once the substantial number of trees and plants are established, Kingdom of Dreams will be a little green oasis in an otherwise very brown and dirty city.

FOOD AND BEVERAGE

The restaurants in Culture Gully are all of a standard you'd expect from a fine dining experience and menus are extensive. You can choose food from all over India, cooked and served by professionals drafted in from each area.

For a lighter option, the tea houses serve cakes and tea or coffee while the two bars in Culture Gully serve alcoholic beverages.

RETAIL

With a cultural shopping mall at the heart of its attraction, Kingdom of Dreams does a good job of showcasing trinkets and souvenirs from across India's 14 states. Some of the shops are small and intimate



and sell delicate jewellery and silk scarves, while others, like the homeware outlet, are spacious and sell large pieces of furniture.

Prices are reasonable – a brass elephant coat hanger costs 500 rupees (£7, €8.25, \$11) and natural bars of chamomile tea scented soap are 150 rupees (£2.10, €2.50, \$3.30). All items bought are packaged beautifully in handmade paper bags.

THE STAFF

Like many businesses in India, Kingdom of Dreams is flooded with staff members. From doormen to road sweepers, gardeners to theatre ushers – did it really take two people to show us to our seats? – it's not hard to find a staff member at any given point. Finding one that speaks English, however, is not so easy. The restaurant staff seem to have the greatest grasp of English and also seem to know most about what's going on in the attraction.

CLEANLINESS AND MAINTENANCE

Kingdom of Dreams is spotless and it's hard to see that changing given the number of people working in all areas of the venue to keep it clean. Tables in the food court are regularly wiped down, toilets are impeccable and items for sale in the retail outlets seemed to be dusted down every few minutes.

Maintenance, however, is going to be a big issue for this attraction, mainly because it hasn't been built with any finesse to begin with. Despite the low-level lighting inside Culture Gully, cracks in the walls are evident and electrical wires stick out from ceilings. The joinery and paintwork are not well finished, and parts of the facility

WHAT'S THE SCORE?

Toilets	10
Staff	7
Cleanliness	10
Experience	5
Value for money	5
Overall experience	6

already look in need of a fresh lick of paint.

The façades and gardens look incredible and it appears the budget for this area was larger than for any of the interior.

VALUE FOR MONEY

Given that you get to spend 600 of your 750 rupee entrance fee inside Culture Gully, the cost isn't too bad. However, if you want to go to the theatre, things become quite expensive. The cheapest seats are 1,000 rupees (£14, €16.50, \$22.20) and you still have to pay the 750 rupees to get in, adding up to 1,750 rupees (£24.50, €28.90, \$38.90) for an evening out.

MY EXPERIENCE

I paid two visits to Kingdom of Dreams, once in the day and once at night. Both visits were very enjoyable, although there are more entertainers in the evening. There's no doubt the place has the wow factor and the owners are right when they say there's nothing else like it in India – yet.

Culture Gully reminded me of the Grand Canal Shoppes at the Venetian hotel in Las Vegas, with the same artificial sky and winding footprint with restaurants and shops either side. The entertainers were

good fun and created a great atmosphere. The restaurants are simply beautiful and it feels like a treat to dine in any one of them. Meanwhile, the retail shops are fun to browse, but after a few, you realise they pretty much all sell the same thing.

Zangoora at the Nautanki Mahal Theatre was a show stopper. A live Bollywood musical, complete with 3D screen, fireworks, aerial dancers and breathtaking costumes, it was two hours well spent. International guests should brush up on their Hindi if they want to understand what's being said.

My main criticism (and really there's only one), is that while it's an amazing place to eat and shop, I'm not sure it's really fair to charge for an 'entertainment experience' when all you're actually offering is food and shopping. Granted, your typical shopping mall doesn't have faux sky and a choice of six top class restaurants, but still, it's free and it doesn't pretend to be something it isn't.

In my opinion, Kingdom of Dreams needs to increase its free entertainment quota. The entrance plaza and courtyard need more street entertainers (I suggest redeploying some of those working inside Culture Gully). Inside, the retail area could showcase local handicrafts and feature artists painting the pictures to be sold, potters creating the pots and weavers using a loom to make the knitted bags to buy.

Locally, Kingdom of Dreams is creating a real buzz in New Delhi and locals are rightly taking pride in this attraction. However, it's hard to see it meeting international standards unless the operators either define the experience better or make the entertainment more of a focus. ●

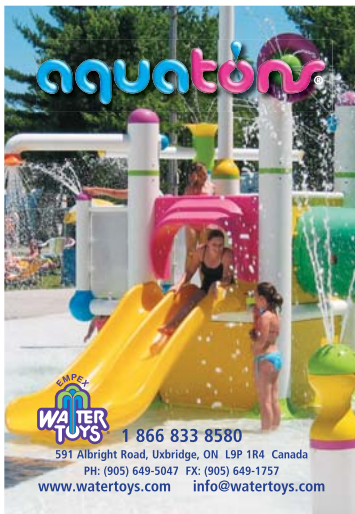


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Seek expressions of interest from highly qualified and experienced contractors with extensive audio visual knowledge and experienced quality contractors for general theming works. Interested parties must have proven knowledge of working within a multidisciplinary team alongside hardware providers and creative design teams to provide unique Dungeon and Waxworks environments on high volume visitor attractions to exacting timescales.

Interested parties should provide their contact details in the first instance no later than Friday 5th November 2010 to: Emma White of Cullum Morris Powles - Chartered Quantity Surveyors or mail: emma.white@cmpqs.co.uk
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SPLASHING OUT!

Bigger and better is the requirement for many waterparks and suppliers are well equipped to fulfil this need.

Kathleen Whyman rounds up some of the exciting new projects



WHITEWATER WEST, CANADA

What has been billed as the world's largest waterslide recently opened at the Hanwha Resort in South Korea.

Built by waterpark design company WhiteWater West, The Abyss is almost 30m (98ft) tall. Using four- or six-person rafts, WhiteWater claims the ride features bigger drops, higher walls and more near vertical oscillations than any other ride in its class.

The size of the Hanwha installation site – a small space on the roof of a building constructed partly underground – meant the WhiteWater engineers had to develop a special lightweight exo-structure to minimise

The design means the structure appears to hover above the ground

weight and fit into the area available.

Most of the weight is supported by angled concrete footings and pilings instead and less steel is visible.

"Clients always want the latest and the greatest and this is definitely that," says WhiteWater West's Julie Zakus.

WhiteWater West also worked with Prime Play on Legoland California's Aquaplay and Aquatune (see p. 63).

The Aquaplay multi-level, interactive, family play structure has 20 decks at various heights.

▨ CASE STUDY ▨ Kangaroo Island, Jamberoo Action Park, Australia

Jamberoo Action Park in New South Wales, Australia, is hoping to receive planning approval for its AUD\$20m (£9.7m, US\$15.8m, €11.5m) expansion by the end of this year. Work will then commence on the project, which is called Kangaroo Island.

Designed by the park's directors Jim Eddy and Alan Griffith, the theming, like the rest of the park, represents Australia's indigenous culture and history. Covering between 10 and 12 acres, the park's target audience will be families and teenagers with a capacity for 5,000 guests. The new attractions being created are the Rocket, a rocket coaster which will propel people along a tube and up a hill; two aquatic play structures; the Mammoth Mountain Raft Ride; and the Behemoth Bowl, in which riders whirl in a spiral around a massive bowl before dropping into a splashdown pool.

Others include the Tornado, in which rafts loop and twist down the hill before dropping into the huge funnel and shooting out into the pool; Tantrum Alley, a 250m (820ft) -long rock wall with cascading water falls and traditional rock face



The 400m-long river will link all of the park's other elements

carvings; and a 400m (1,300ft)-long, 5m (16ft)-wide river. The expansion is being completed in five stages. The river tornado and aquatic play areas are due to open by September 2011; the behemoth bowl and food outlets will open September 2012; the Rocket opens September 2013; Tantrum Alley will be completed by September 2014. The fifth stage is still to be confirmed. Eddy

expects a 34 per cent increase in visits when the development is completed and is employing 100 additional casual staff to manage the attractions, pool maintenance and landscaping.

Suppliers involved with the park are Proslide, White Water/Alan Griffith, Jordan Mealey and Partners, Neptune Benson and Strike Resources.



The ride has been designed to appeal to both beginners and experts

MURPHY'S WAVES LTD

Murphy's Waves recently installed its latest surfing machine, called StingRay, at Manhattan Park, US.

The company's aim was to design and develop a wave ride that would have the widest possible appeal to users and bring it to market at an affordable price. Having studied the use of all types of board

and established key elements that provide ongoing challenges to users, it was decided that the ride had to include curved ride surfaces to satisfy every possible expectation.

The machine uses a half pipe and individual nozzles which allow the flow direction to be set and optimise the water flow while ensuring very small loads. "We've designed the ride around

conventional and accessible pumps to keep ongoing service and maintenance costs low," says sales director Jim Stuart.

"We've also developed a soft padded ride surface that allows the ride to be used by all age groups and experience levels in complete safety. We're guarded about the exact process, but have a one-inch energy-absorbing foam base encapsulated within a single skin pvc ride surface."



It has a load of 250lbs per square foot

WATER SAFETY PRODUCTS INC

To launch at IAAPA Expo 2010 is a 22ft (6.7m) section of staircase to be used with waterpark rides and slide towers designed by Water Safety Products.

The staircase is a 22ft (6.7m) by 4ft (1.2m) professionally engineered one-piece stairway. The design is self-supporting, with 12in (30cm) structural channel stringers, with galvanized steel supports. It has 11in (28cm) closed riser treads and 0.5in (1.25cm) radius bullnose. It has a non-slip surface on the treads and weighs 460lbs (200kg).

Sheetless ThermoForming Technology™ was used to allow for moulding large composite parts. Unusually, the staircase is made of HDPE (Polyethelene) with UV stabilisation and colour pigment.



PROSLIDE TECHNOLOGY INC

The world's longest water coaster opened in June at Holiday World's Splashin' Safari in Santa Claus, Indiana, US.

Situated in a wooded area north of Bahari wave pool, the 1,710ft (521m) Wildebeest experience begins with a conveyor ride up the coaster's lifthill. Following a 38ft (11.6m) drop at a 45° angle, eight linear induction motors power the four-person boats up seven more hills, through two tunnels and round a helix.

Designed, engineered and manufactured by ProSlide Technology of Ontario, Canada, the ride is the world's first ride-up HydroMagnetic water coaster and covers

Total ride time is 2.5 minutes.

ProSlide's HydroMagnetic technology helps propel the rafts

more than two acres, increasing the water park's size to 27 acres.

Costing US\$5.5m (£3.8m, €4.5m), Wildebeest is 64ft (19.5m) tall and its 14 cars with toboggan-style seating hit a top speed of 36ft/sec (11m/sec) during the ride.

To make the uphill journey possible, ProSlide used a combination of water lubrication, downhill and uphill gravity and the company's HydroMagnetic technology. This uses Linear Induction Motors to produce an alternating magnetic field beneath the slide surface that propels the rafts.



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Some models not available in Canada and United States

WATERPARKS



EMPEX WATERTOYS, CANADA

Empex has created a water playground within Beijing's Happy Magic Watercube Indoor Waterpark, which caters for children up to age 12. Offering a central Aquadeck climb and slide feature with a variety of small slides and water events, the area is surrounded by spray features and ground jets, creating a park for younger children.

The 5,000 sq ft (464sq m) area is controlled by an activation bollard, which, when touched by the children, starts a sequence of water sprays and jets. Water comes up from the floor, children can interact with spray nozzles and water features, while tipping vessels dump from above. Separated from the larger children, the area offers a safe haven for children to play with their own age group. The area is designed with two Spray park areas at the outer ends and a beach entry shallow pool in the central area. This spray park area has no standing

A combination of large and small slides and water play structures cater for a variety of different age groups

water and offers ground jets and above ground water features while the shallow pool allows for playing in and around the water on the larger structures and slides.

All products are fabricated from non ferrous composite and specialty plastics offering a lifetime corrosion warranty. Empex products use larger columns and tactile forms and moulding of the features, which offer an organic design with dynamic colors to accent.

Empex's president, Wyeth Tracy, says: "Waterparks are now more focused on adding interactive water play for young families, so water playgrounds are becoming an integral part of waterpark design. Theme parks without a water component are also a focus, as the cooling off provided by these areas adds to the length of stay."

Empex Watertoys has also developed a new concept called Aquacircus, which is a new Aquadeck slide structure with a variety of interactive aquatic features. Children can turn hand wheels diverting water to different spinners, flywheels, water sprays and jets. Empex is currently constructing a 12,000sq ft (1,115sq m) water playground with this concept called Aquacircus at Beachpark Waterpark in Fortaleza Brazil.



The interactive Aquacircus concept



The waterpark's roof will help reduce electricity and heating costs

CASE STUDY Legoland Water Park

Legoland Water Park opened within Legoland California in May. To date it's the world's only Lego themed waterpark and is the single biggest addition to Legoland California since the park opened in 1999. The 5.5 acre Water Park is a \$12m (£7.5m, €8.6m) investment and, like Legoland California, is geared towards two- to 12-year-olds.

The waterpark features eight rides and attractions including seven slides, Build-A-Raft River, an interactive platform called Joker Soaker, 22 Lego models and a toddler area called Duplo Splash Safari.

The centerpiece of Legoland Water Park is a 45ft (14m) -tall tower with four slides: Orange Rush – a family tube slide where up to four people can ride together down a 312ft (95m) -long curving track; Twin Chasers – two side-by-side enclosed red tube slides that stretch 130ft (40m) and pour into a wading area below and Splash Out – a 240ft (73m) open body slide.

Designed by the Legoland creative team and unique to this waterpark is the Build-A-Raft River where families customise their own inner tubes with soft Lego bricks before floating down the lazy river.

Another unique feature is Imagination Station where guests build bridges, dams and cities out of Duplo bricks. Also popular is Aquatune – a musical fountain where children conduct their own water sym-



Guests create their own inner tubes using Lego bricks and float down the 244m-long lazy river

phony by covering holes creating music notes with their hands.

The use of regenerative media filters means that the addition of Legoland Water Park has only increased the resort's water usage by five per cent. These filters don't require backwashing on a daily basis so use less water than traditional sand filters. All rubbish bins, recycling bins and benches throughout the waterpark are made of recycled milk containers.

To create the waterpark, Merlin Entertainments worked with Whitewater West, Prime Play, Funtraptions and Storyland Studios.

OPENAIRE INC, CANADA

A waterpark with a retractable roof will be opening at Vermont's Jay Peak ski resort in October 2011. OpenAire has been contracted to build the glass roof with aluminium framed enclosure, which, at 142ft (43m) -high and 250ft (76m) -long, is the largest the company has ever built.

The aluminium structure was chosen because, unlike other materials, it's not affected by chlorine and withstands the elements, so is low maintenance. The translucent, polycarbonate roof lets

natural light into the building, reducing electricity costs in lighting. And in the summer, the building won't need heating, venting or air conditioning as the roof will open, releasing the chlorine.

That isn't to say the project isn't without its challenges, as OpenAire's president, Mari Albertine, explains. "The main issue is that the area gets a lot of snow, so we've had to build an extremely strong structure to support the weight. Our aim is to have the superstructure up by January 2011, ready to glaze by the spring, but it depends on the winter."



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I've ever been on in
my entire life!

Wet'n Wild, Australia



Intrepid de la Sal Waterpark, Mexico



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PROJECT SHOWCASE

Happy Magic Watercube



ANTHONY VAN DAM
VICE PRESIDENT
FORREC

What is The Happy Magic Watercube?

It's one of China's largest indoor water-parks and is built in Beijing's Olympic aquatic centre. The RMB350m (US\$51m, €39m, £33m) underwater themed water-park reopened in August and includes slides, a wave machine, an arcade, retail outlets and a café.

What work did Forrec do?

Forrec was involved in the entire process, through to opening day. This included planning, programming, creative development, detailed design, shop drawing reviews and on-site art direction.

Please describe the waterpark

The waterpark is set in an abstracted, fantastical under-the-sea environment. The thematic elements are intended to be sculptural – not literal – with colour and floating props used to intensify the scale of the high volume space. The water rides and attractions are also world class, and have been designed to contribute to the overall sculptural quality of the park.

What's different about this waterpark?

What makes the 11,000sq m (118,400sq ft) park unique is a strong thematic programme. Sculptural props, such as the



The Happy Magic Watercube in Beijing

giant suspended jellyfish, floating bubbles, stylised seaweed, LCD walls, vinyl architectural membranes, mosaic tile and well considered use of colour all contribute to the magical quality of the environment. In particular the lighting has really enhanced the overall effect in the evening. We wanted the park to have a very different feel in the daytime and evening. During the day, natural light filters through the building's outer and inner skin. At night, the outer shell glows with a light show.

What are the attractions?

Attractions within the park include a ridehouse, tube slides and Tornado by Proslide; a body slide and Aqualoop by WhiteWater West; water play elements from Empex; and a wave pool from Murphy's Waves. There are also several spa and plunge pools, a lazy river and interactive play elements throughout. The wave pool is a central feature, with an area of 1,200sq m (13,000sq ft) 1.2m (4ft)-high waves. The Lazy river is 150m (492ft)-long.

How has it been received?

The park has garnered significant attention throughout China and internationally since opening. The operators are controlling the attendance, and capping daily attendance at around 4,000 guests.

How can the waterpark be developed?

We believe the park will be successful with its current mix for many years. We have


left room to add a spa and small pools for future expansion. Major programme elements could be changed but this will be a major undertaking. To keep things fresh, the film for the LCD wall, as well as the live performance venue, both major focal points behind the wave pool, will be changed as frequently as required.

What are the current trends in waterparks?

We believe in creating strong environments and believe this will be an ongoing trend, not the bland cookie cutter water parks we have seen so often. The Watercube is an excellent example of combining great attractions with unique well executed design. The boundaries need to be pushed and we're hopeful that this park will raise the bar in China.

What other projects are you working on now?

We have a number of waterparks on the boards. Most notably a major outdoor water park in Beijing scheduled to open in the summer of 2011. This park is 28 hectares in total size and will feature 20 of the most sophisticated attractions available incorporating 28 slides, a 7,500sq m (81,000sq ft) wave pool, two water play structures, spa pools, grotto's, lazy river, Flow Rider and more. Other water parks are being designed for Nanjing, Yunnan, and Suzhou in China, plus parks in Malaysia, France and Korea. ●



The most **successful places** are the ones that
make the people in them – and the people that
own them – **very happy.**

Even before the opening of Happy Magic Watercube, there was a buzz in the water park industry — something new and exciting was about to happen. The buzz has now increased and the park has become our client's flagship project, firmly establishing and defining the brand. The Happy Magic Watercube concept, a high-quality themed water park, has expanded to water parks in Beijing and Nanjing and, with the help of Forrec there are plans to further expand the brand throughout China.

*Winner of World Waterpark Association's
2010 Industry Innovation Award for Waterparks*

FORREC

expert opinions



DAVID CAMP DIRECTOR, ECONOMICS **AECOM**

At a time when cuts are being made, can operators justify the cost of consultants? Kathleen Whyman asks why operators need them and how they can help their business

In tough times, tough decisions have to be made; but what decisions? How do you know if the changes you make will be for the best? Will pay-roll cuts improve your bottom line or will they negatively impact service? Where could you make savings in marketing costs yet still retain impact? What new events and activities can you develop for minimal outlay and maximum benefit?

The most important starting point is the acknowledgement and realisation that changes are needed. It often helps to bring in experienced external heads to aide in the process, but they need to be the right people with the right experience and be able to help the attraction management team with creative thought and smart decision making.

Every circumstance is different, yet there are typically common issues and the best consultants will be able to get to the core issues quickly. It is often a lot easier to see the challenges from an external perspective than from within and this is one of the greatest values that external advisors can bring.

Measurement is critical to evaluate change and having sound base data is an important starting point or else how will you know if the changes and decisions you make work? The first source is historic performance. This is helpful but may be limited to the amount and type of data



Aecom consulted the Guinness Storehouse in Dublin, Ireland

available. Groups like Merlin can draw on large numbers of their own attractions to compare an individual site's performance, but most attraction operators cannot.

In our work with Guinness Storehouse we were able to show the management team that through an assessment of benchmarks from comparative attractions in a range of locations, that the market penetrations rates, per capita revenues and operating performance achieved in Dublin was of a market leading status. From this assessment the team could evaluate where

improvements could be made and what could be left to carry on working well.

The value of this kind of assessment relies on the consultant having accurate information from a range of comparable attractions, a sound understanding of the industry and an appreciation of the characteristics of the attraction being assessed.

They must also remember that the past does not equal the future and that the greatest strength of the industry – the passion that operators and staff have for their venues – can overcome a lot of challenges.

JILL BRITTON
DIRECTOR
BRITTON
MCGRATH
ASSOCIATES



He reasons that operators should and do use consultants in these difficult times are the same reasons that apply in normal circumstances, but now the stakes are higher.

The ability to bring in specialist expertise; the need for objectivity; the desire to learn from the breadth of industry experience that a consultant can bring to

bear; the expedience of a focused team, unimpeded by day-to-day operations and the need for a fresh pair of eyes, are all still equally relevant – probably more so during times of financial uncertainty.

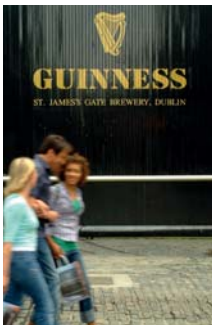
These days though, trustees, chief executives, managing directors and general managers alike are facing ever greater scrutiny and are under increasing pressure to justify every penny spent. In the face of potential job uncertainty, the



(Above and right) One of LM Associates' clients was the famous Tate Modern in London



LESLEY MORISETTI DIRECTOR LM ASSOCIATES



Employing consultants to undertake economic analyses can bring four areas of benefit – a wider context, experience, independence and cost control

Basing attraction development decisions on thorough research and analysis is important at any time, irrespective of the economic climate. Employing consultants to undertake economic analyses to inform attraction development decisions (the area that I consult in) can bring four main areas of benefit – a wider context, experience, independence and cost control.

Knowledge of best practice internationally and the ability to benchmark an attraction's performance within the context of a range of comparable attractions provides a framework which allows attraction operators to realistically determine just how well their attraction could/should be performing. The breadth of the consultant's knowledge compliments the depth of understanding which the operator has of their own attraction.

Consultants are often grey-hairs (I dye mine!), with years of industry experience. As a result they're able to quickly grasp the key issues and focus on finding the optimum solution – supporting and providing a sounding board for teams within an attraction who may not have been around for quite as long.



Consultants are employed for specific tasks, frequently under fixed-term contracts, providing cost effective senior resource. The impact on the attraction's overheads is minimised, controlled and specific to the task in hand.

For most operators, the current economic climate presents a high level of uncertainty. The not-for-profit sector faces cuts in funding and external capital to fund the development of the commercial sector continues to be tough to come by. Despite strong performances in 2009, the question of how long the staycation factor will continue to offset any impact of economic downturn on discretionary spending keeps attractions keenly focused on both income generation and cost control.

In such a climate, when the ability to take risks is at a minimum, external consultants can bring even greater benefits than in times of growth. Initiatives to optimise attraction performance are crucial, but the approval process requires an even greater rigor, and proposals require detailed analysis and sound rationales to minimise the risk. For all these reasons, external consultants can support this process, with the added benefit that their cost can be set against revenue budgets.

use of consultants could result in internal unrest and given that the USP of most leisure businesses is its people, this is definitely something to be managed carefully. However, in our experience, quality advice brought in to support internal management can be received with relief by managers facing difficult decisions.

Innovative and lateral thinking is often the route to success during difficult trading conditions, but the need to manage

the risk that comes with trying new things requires a breadth and depth of experience that internal management may lack.

We genuinely believe that to get the most out of consultants, there has to be a collaborative, team-based approach. If the two parties work well together then there are true economies of scale with the consultants doing what they do best; giving focus to particular issues such as objectivity, fresh thinking, application of lessons from

within and without the industry – and the clients continuing to do what they do best, which is day-to-day operations and nurturing a dialogue with their visitors first hand.

We believe that desperate times call not for desperate measures but for bold, innovative thinking, which will help businesses rise above the crowd and sustain them for future success. We believe that consultants, used at the right time and in the right ways, can help to achieve this.

KEITH THOMAS DIRECTOR PETERSHAM GROUP LTD

Recession should be no surprise – experience shows that every period of expansion and growth will be followed by a period of retrenchment and often contraction. These differ only in terms of their severity and nature: a phenomenon to endure, but a time for a shake out of poor attraction concepts and management practices and a re-evaluation of long-held assumptions. It's also a great opportunity for new ideas and exciting new visitor experiences to be developed.

Arguably, much expansion in the attractions sector in the last 10 to 15 years was stimulated (with notable exceptions) less by public demand, but rather by increased public sector and Lottery funding, leaving many organisations and institutions peculiarly vulnerable when these dry up.

Now is the time to put together an action plan for survival. Firstly, make sure you have the right leadership in place. Identify the most skilled in the organisation, agree a survival and growth strategy and trust the team to deliver it. Next, bring in additional experience and resources if these are lacking. The right consultants can be a vital part of the team and can work on fixed-price contracts. With their help,

review and re-evaluate what you offer to the visitor. Is it still fresh, compelling and vital? Do people still want to experience your attraction and will they continue to want to do so? Be brave and prepared to try new methods. Smart marketing is the key to success.



The BugWorld Experience in Liverpool is one of Petersham Group's clients

Manage branded channels to the full, challenge sales and marketing to look for new markets and segments. Focus management unrelentingly on revenue generation and incentivise them with targets.

Don't cut corners on quality. However, great customer service can overcome the occasional physical shortcoming, so keep asking your visitors what they think and take action if they are critical. Also, watch and learn from your competition and manage your cost base rigorously. For example, review and re-negotiate terms with suppli-

ers, cancel or postpone all but the most essential capital expenditure, close down poorly performing units and respond promptly to seasonal variations in demand. With regards to staff, salary freezes, reduced hours and benefits are preferable to head count reductions. Trained staff are a valuable asset – so treasure them.

Organisations that focus on increasing operational efficiency, developing new markets, and enlarging their asset bases show the strongest performance on average in pre-tax profits after a recession. ●

JEAN-PAUL HAENEN CEO

KWAN LEISURE (NETHERLANDS)



We're not really seeing investment in new and innovative attractions and shows at the moment and theme parks need to develop to provide something special to guests. Facebook should be filled with positive news about their park and sites such as Flickr and YouTube you should be used to showcase pictures and movies about new attractions.

The first step in the process of creating new and exiting attractions is developing

a clear and unique strategy. To do this, operators need to keep track on trends globally and be aware of new and exiting strategies and concepts. They be new and innovative and set new trends and standards rather than following the market. Companies that champion creativity are industry leaders.

In this time of decline, operators need to invest. The right consultant can create a new strategy and help translate this into concepts that get visitors talking.

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DESTINATION MARKETING

GATEWAY TICKETING

Michael Turner, director of sales

Several of our customers already work together under a multiple ticket. I expect this will increase as the market becomes more competitive and the operators realise that they can actually draw from each other's customers - which makes selling tickets easier.

The biggest challenge for us is working with competitors, but any feature that allows the ticketing supplier to increase market presence or market share is a benefit.

Destination ticketing will continue to become more important as new attractions try to enter the destination market - they'll need a tool to compete against the established markets.



MICHAEL TURNER

The economic benefits of one ticket for multiple attractions are clear, but this requires suppliers of ticketing systems to work together. Kathleen Whyman finds out how ready the industry is to support destination marketing activities

MERLIN SOFTWARE

Owen Gleadall, sales director

We've already joined forces with two other organisations to provide integrated ticketing and access control and any operator selling tickets can add their venue or event via a special website. There's also the option for anyone offering complimentary products and services to join our consortium.

We're speaking to various organisations about the 2012 London Olympics with a view to selling tickets to events and venues. This may include access control to specific Olympic villages.

People want to see total ticketing solutions when making plans to visit events or venues, especially when it comes to something as diverse as the Olympic Games.

Destination marketing is by far the best way to go, but it's difficult to create a level playing field in which all attractions feel that they have adequate exposure. A web-based solution offers the best of all worlds, as each venue will be equally and individually represented within a given destination.



OWEN GLEADALL

GAMMA DATAWARE LTD

Peter Ferguson, managing director

We already work with a number of visitor centres and tourist attractions that offer multiple or joint ticketing.

We've worked with two types of scheme: one where operators combine to provide free or reduced cost access to each others' attractions when a joint ticket is purchased at one of their sites. The other is where a ticket or pass is sold by an independent third party, which can then be used at certain attractions which are part of that scheme.

For ticketing suppliers, the issue of intellectual property on other suppliers' systems, together with concerns about dealing so closely with competitors, could make this a very difficult exercise. However, it does open up new opportunities to market our systems.

When working with other ticketing suppliers, there's a need to be able to recognise and process tickets purchased across different systems. A common format for bar code, magnetic coding or smart card would be required so that tickets could be recognised across systems and assigned to the appropriate revenue categories. A common reporting standard would also be required to allow revenue to be distributed among the attractions participating.

The main challenge would be getting competing organisations to agree to work together. In my opinion, this would only work where an independent body was established to work with the ticketing suppliers to agree common formats. This body would be responsible for determining which suppliers' systems meet those standards and for ensuring ongoing compliance. Ticketing suppliers



PETER FERGUSON

would inevitably need to carry out development work to ensure they complied with the standard established in terms of ticket format, reporting and the exchange of data.

As far as revenue is concerned, the main issue would be who would fund and maintain any body set up to establish and ensure compliance. The main benefit to multiple ticket operators is the potential increase in visitor numbers. Many attractions operators are happy to forgo an element of admission income on the basis that this will be recouped on secondary spend.

Destination marketing can work in certain sectors and geographic areas where there is a concentration of attractions. In other areas where the number of attractions is limited or their offering is particularly specialised, destination marketing would be of little benefit.



Working with other attractions can result in higher attendances for everyone

OMNITICKET NETWORK

John Davies, director of UK operations

Every attraction and venue needs the flexibility to implement their unique marketing initiatives, including possible joint/multiple ticket offers with other attractions and destination packages. Ticketing suppliers can keep and win attractions clients by offering solutions that allow the attractions to successfully implement and manage all of their marketing initiatives.

There are technical and operational challenges to effectively offering a joint/multiple ticket, as well as the challenge of creating a win-win business model for all the involved attractions and suppliers. Technically, you need systems that are advanced enough to offer real-time, standard interfaces between the systems. Operationally, you need to make sure all related staff at each attraction are trained on the product offerings and aware of any special procedures

required in relation to the joint ticket. And each party involved must be able to offer or support the joint ticket offering at a profit. This challenge often involves creative pricing models and effective negotiating amongst the parties.

How the profits are split is an important question that usually takes a bit of negotiation between the parties. The revenue earned from the sale of joint tickets can be split based on several factors – firstly, where the ticket is sold or by whom. Sometimes the party selling the ticket gets more of the revenue split. Sometimes each party gets a fixed amount no matter who is actually selling the ticket. Many times, if a ticket is sold through a particular sales channel, such as a distributor's website, the revenue share will include a portion for the sales channel as well. The second factor is where the ticket is used. Often the attractions get more revenue if the ticket is used at their venue. For example,



JOHN DAVIES

a ticket may be valid for use at three venues, but the consumer only manages to visit two of the three sites. In this case, the venues that the consumer visited may get more of the revenue share. Other times the venues do not consider visitation at all.

Thirdly, other factors in the revenue split include how much the standard admission is for each venue. For example, the standard admission price at a museum may be US\$10 and the standard admission price at a theme park may be US\$60. If the two venues wanted to offer a joint ticket, the attraction with the higher value standard admission would ask to receive a larger portion of the joint ticket revenue.

While each attraction's ticketing strategy will continue to strongly focus on their unique brand and individual products and ticket offerings, many attractions actively investigate ways to increase overall sales by working with partners to offer packages or joint tickets. They also realise that promoting their destination increases the number of visitors coming into their market. As a supplier, we feel that the technology behind our destination marketing program is a crucial component that's required to fully support our attraction client's diverse distribution requirements.

“ While each attraction's ticketing strategy will continue to focus strongly on their individual products, many attractions investigate ways to increase overall sales by working with partners ”

OPEN FRONTIERS LTD

Oliver Wigdahl, managing director

While we see the benefit of driving footfall to an area, we see destination marketing as more of a marketing initiative. It's not actually a distribution channel, although it could be if the destination marketing company is also providing a third party distribution capability through some form of portal.

Dealing with other ticketing suppliers would depend on the technology. It's going to be easier for the exchange of data to take place where both providers are using up to date technology and processes. In reality though, you're unlikely to be dealing with another competitor directly, but would be dealing with a third party provider of the destination marketing mechanism. The London

Pass is a good example of this, where the technology provider, Scotcomms, creates the customer account and the technology for validating that account, and for decrementing value. Activity operators, all using their own ticketing suppliers, are just agreeing to accept that card as a form of payment, and agreeing to validate at the point of sale.

The biggest challenge for us, as a ticketing supplier, is the real-time connectivity with the multi-ticket/pass operator. Our booking and ticketing system works across all sales channels in real-time. It's therefore in our interest to be able to perform the account validation, and decrement card value as a real-time web-service. This then allows us to treat the multi-ticket/pass as another form of payment (like a credit card)



OLIVER WIGDAHL

where we process the transaction on the spot with certainty of collecting the value for our client. Unfortunately destination marketers vary enormously in their technical credentials – many are unable to provide real-time web-services.

Inevitably, the challenges come when you roll out such an initiative across all sales channels. If the online portal model is used as the method of distribution, rather than pre-paid stored value, then it's an easier task as we just need to provide a booking link from within the portal providers' website to our client's e-commerce booking apparatus, which we already provide for them.

For the operator, direct sell is typically the most rewarding in terms of yield, but destination marketing by third parties is expensive as the middle-man has to be paid. However, they'll take on some of the marketing burden and increase your visitor reach. Don't forget the hidden costs of systems integration and training. My money's on destination marketers playing a useful but not predominant role, due to the cost of sale increase.

"Destination marketing by third parties is bound to be expensive as the middle-man has to be paid, but they'll take on some of the marketing burden and increase your visitor reach"

REFTECH SERVICES LTD

Andy Povey, director, business development

We supply ticketing systems for several companies that work together. We have the technology to operate multiple tickets from multiple locations and sell tickets for multiple attractions from a single website.

We see this as a particularly valuable marketing tool for attractions owners. If a family books a ticket for one attraction, they may well be tempted to book for another attraction at the same time. Even if they don't do it then, the process will probably bring other attractions to their notice and increase the possibility of them visiting in the future.

We're happy to work with other ticketing system suppliers and are confident that data can be moved between the different operators, given willingness on all sides. But again, I suspect that the biggest suppliers are likely to be the slowest to understand the dynamics of destination marketing and accept its value to their customers. You also have the odd situation in the ticketing market where some suppliers regard information

about customers as belonging to them. The difficult part is getting ticketing system vendors to understand that they don't own their customers. If the customer wants to have collaborative marketing, the vendors should be able to provide it. Our view is that the person who buys a ticket is the attraction's customer and therefore the data belongs to the attraction. People are constantly surprised that they don't have to pay to get their data from us.

The biggest challenge in establishing multiple ticketing systems is changing the culture in the market. The problem is that operators aren't sure of what they can get because they've become used to the current relationship between suppliers and customers. Once they understand there are alternatives, the market will start to change.



ANDY POVEY

Operators stand to benefit from a massively increased marketing presence. Leaflets for all the local attractions are already displayed in tourist information offices. What we're talking about is going a step beyond that and giving people

the ability to book several attractions at once. Far East conference destinations recognised the value of collaborative marketing years ago. They knew that if conference organisers chose to go to Hong Kong one year, they might choose Singapore the next. It's all about competing locally and collaborating globally.

Ticketing for individual sites will probably remain the main way of operating for some time but once attractions owners realise there's a potential new market through collaborative or destination marketing, the popularity of that will grow.

"The biggest challenge in establishing multiple ticketing systems is changing the culture in the market. Once operators understand there are alternatives out there, the market will start to change"



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**VENNERSYS**

Kerry Lee, executive director

When working with other ticketing system suppliers on combined/destination tickets, there would need to be an agreed protocol for exchanging unique identification numbers between systems to aid the redemption process and ensure that funds are allocated correctly.

This would require the full cooperation and participation of the attractions as well. They are unlikely to simply agree to split the costs evenly, so proportionality will play a significant factor, as will simple protectionism. It would be necessary to find some way of cross-referencing tickets to ensure authenticity and aid accurate redemption.

This would probably require some kind of representative industry body to be set up to determine the best approach and provide technical guidelines and protocols. Sounds easy, but vested interests may make the task difficult to achieve. If visitor attractions put pressure on their ticketing providers to participate, it's more likely to happen.

The real issues will be whether or not the ticketing providers and attractions will be willing to work with each other to provide the solution, the fear being that they may lose competitive advantage and identity, or dilute visitor numbers and marketing spend effectiveness by participating.



Just as there are lead attractions in a given locale or region, it's also likely lead ticketing providers will emerge based on the efficacy of their systems and the relative seniority of their customers. It's reasonable to assume that the lead ticketing providers will drive the schemes with the backing of their customers and may therefore wish to secure a share of the resulting revenue, which fairly reflects the effort expended.

Destination marketing offers distinct possibilities for the future, but the attendant barriers to implementation are many and varied. Strong individual ticketing offers will always play a key part in most visitor attractions' strategies. ●

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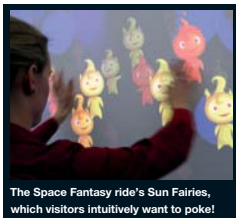
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SOCIAL ACTION

With children getting increasingly comfortable with technology, Kath Hudson looks at how interactives are still managing to raise the bar to create thrilling experiences

From the world's first interactive experience on a rollercoaster, to immersive 5D experiences, suppliers are using increasingly clever and absorbing methods to draw visitors in to the world of their making. Interactive experiences are integrating a huge amount of multimedia features and trends include the scaling up of video games into attractions for bigger groups of players, and using the features to encourage greater interaction between the players, whether that be competition, or group bonding.

California-based GestureTek has taken interactivity to a new level at Universal Studios Japan, with the new Space Fantasy ride. This is the first in-ride device-free interaction, where 60 people are simultaneously given an interactive experience, using their hands and heads to directly engage with the ride. The premise of the ride is the impending death of the sun, so



The Space Fantasy ride's Sun Fairies, which visitors intuitively want to poke!



Clostermann's Haunted House Shooting Gallery concept, which is coming to Vietnam

as guests travel up the tunnel, they collect energy from "stardust clouds", which will be used to re-energise the sun.

"Guests wave their hands at the tunnel wall to leave an energy trail in the 'universe' as they pass through," says Francis MacDougall, co-founder of GestureTek.

The other area of interactivity is the pre-show, where 60 people at a time can reach out their hands and interact with the Sun Fairies on the wall.

This area needed to be reworked a couple of times: "The intuitive user response was to poke the fairies, so a version was created which was highly responsive to the poke gesture," says MacDougall. "However, this version was a little too responsive and resulted in users banging and punching the walls as hard as they could to get the biggest reaction from the fairies! The final version rewarded the user for holding their hand close to the screen and moving it around to give the Sun Fairies energy and generate animated responses."

The challenge of providing an interactive experience for so many people at a

time was overcome by using an array of 3D depth sensing cameras mounted in the ceiling. These sensors gave an overlapping set of 3D images which, when coupled with GestureTek's custom tracking software, allowed them to track a user from the time they entered the room until they left.

RAISING THE PULSE

Saving the Lego princess from mean trolls, by shooting at the screen, is the new interactive experience at Manchester's Legoland Discovery Centre. 3DBA supervised the development of this interactive dark ride and Alterface implemented the show control and shooting/scoring system. "On this attraction we came up with a new feature: interactive physical targets," says Alterface CEO, Benoit Cornet. "Players can shoot at videos, but also on real elements in the set up. This can be achieved without LED, or red dot targets, which don't look good in the scenery."

Aimed at three to 12-year-olds, the ride features smoke effects, animatronic trolls, treasure boxes, rats, spiders, bats and



Alterface's Kingdom Quest at Legoland in Manchester

Eden's Eye (above and right) is Meticolous' new interactive sensory maze at Drusillas in Alfriston, East Sussex is based on the four elements and is designed to allow visitors to lose themselves in the adventure



dragon eggs. The seats move with the action and the shots trigger special effects.

For an older audience, Alterface has also created its first interactive haunted house in Europe this summer, at Tusenfyrd in Norway. Nightmare in Norway brings together 3D images, animatronics, and pop-up effects to create a spine-tingling atmosphere. Various impacts are synchronised to the shots; light spots are broken, candles sparkle and bugs explode.

A whole wall is filled with physical targets that react to shots: shooting at a mirror triggers a projection showing a zombie face; firing at a portrait causes the expression to change and shooting a drawer causes it to open and a hand comes out.

"Interactivity is not confined to the shooting," says Cornet.

"The zombies take a picture of the room which is shown on screen, a spurt of blood comes onto the picture, at the same time as water is blown onto the player.

And we can guarantee that people scream and check to see if they are covered with blood!"

BUILDING A THEME

Continuing the spooky theme, Clostermann is currently working on a Haunted House Shooting Gallery for an attraction in Vietnam. The Shooting Gallery concept can be tailored for each client, with appropriate theming. With a recent project in Austria, at the Marchenpark Neusiedler See, the attraction was integrated into the new water area and given a deep sea theme.

"What we offer is not a finished gallery, but an advanced shooting system with unlimited design possibilities, with many different designs and theme worlds to inspire young audiences," says director, Anne Walter-Koschwitz. "Our shooting galleries offer 3D scenarios which involve players directly in the unfolding of a story, with surprising and fast-paced effects."

On hitting targets, visitors can release animatronics, light and sound effects, as well as multimedia features, which can be tailored to suit the theme. For example, in a deep sea world, sneezing seahorses spit water onto the players and nervous crabs

click their pinsers. Target devices also fit the theming: they can be designed as guns, camera, torches or magic wands. The latest modular target system means that every effect works independently.

FANTASY WORLD

Meticolous has created an interactive, sensory maze, Eden's Eye, for Drusillas children's zoo in Alfriston, East Sussex. Based on the four elements: earth, air, fire and water, the quest is to find a garden where there is a golden apple, guarding on a golden tree, guarded by a snake.

"Our aim was to create a maze quest which was a visual treat and would allow visitors to lose themselves in the adventure," says creative director of Meticolous, Dean Weal. "We wanted magical features which would bring the maze to life. For example, there's a well on the water path which visitors have to shout down to hear the clue echo back. On the fire path, a magic lantern has to be rubbed to wake up the genie, who gives a clue complete with smoke effect."



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Also included are water squirts, smells, specially composed music to build the atmosphere and touch-based triggers, such as a buddha, who will laugh and give a clue when visitors rub his tummy.

MAKING SCIENCE EASY

Interactive exhibits are a great way of bringing science to life, as illustrated at the Visitor Centre Luxlait, at the headquarters of dairy group, Luxlait, in Luxembourg. The Vitarium, designed by Studio W, opened in September.

It aims to teach visitors about the scientific processes involved in the production and consumption of dairy products and answer questions, such as why is milk white and how does it affect the body.

One of the interactives, the digestion simulator, illustrates what happens with food once it's been eaten. Visitors can choose different tokens, representing different foods, put it in the "mouth" and watch the digestion process at different parts of the body, including the gullet and the stomach.

Another educational interactive experience, the highly acclaimed Launchpad exhibition, at The Science Museum in London is being relocated and reinvented and will open its doors on 24 November. Primarily aimed at eight to 14-year-olds, there will be 50 interactive exhibits to bring the world of physics to life, including a thermal imaging camera, so children can see on screen which parts of their body are the most hot. They will also be able to watch carbon dioxide turn from a solid into a gas and explore the properties of light at the light table. A whole host of com-



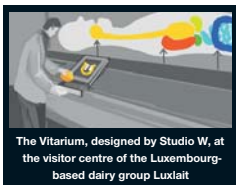
Teenagers interactive with the Launchpad exhibition at the Science Museum in London

panies were involved with the exhibition: Hüttinger, Science Projects, Sarah Angliss, Exploratorium, Scott Snibbe, Shawn Lani, Andy Huntington and Museum Workshops.

ROLE PLAYING

Newcastle attraction, The Life Science Centre, is in the final phase of its refurbishment, which will see the replacement of all the original installations at the 10-year-old site. Recognising that families are coming with younger children, one of the galleries, It's Up To You, will be aimed at the under sevens, and special projects manager, Andy Lloyd, says it has been inspired by the aforementioned Launchpad.

"The main idea is to give children spaces to role play at being grown ups, giving them control over an adult-style environment, such as a shop, with a touchscreen till, a café and a recycling area," says Lloyd.



The Vitarium, designed by Studio W, at the visitor centre of the Luxembourg-based dairy group Luxlait

One of the most exciting elements is a digital pond, where children will watch convincing projections of rippling water and goldfish. Video screens will be hidden in the treehouse and the crawl through tunnel, running films showing what goes on inside a bird's nest and a molehill.

"It is a challenge to see the world through the eyes of a five-year-old. For example, most have not seen a mechanical till, or a phone with a cord, but many know how to use the screen on an iPhone," says Lloyd.

The under sevens gallery will open in February 2011, by which time development will be underway on Curiosity, an interactive exhibition for older children and teens, to open in 2012. For the first time, the Life Science Centre will build its own exhibits.

Interactive exhibits can be inspiring and despite children being increasingly savvy when it comes to technology, interactivity can lead them into another world. Weal sums it up: "In this age of hand held computer games, children are sadly increasingly living a virtual life. We see it as a major part of our brief to get kids and their parents up and out there, having adventures and being interactive in a real fantasy world." ●



The Life Science Centre in Newcastle is currently in the final phase of a complete revamp



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