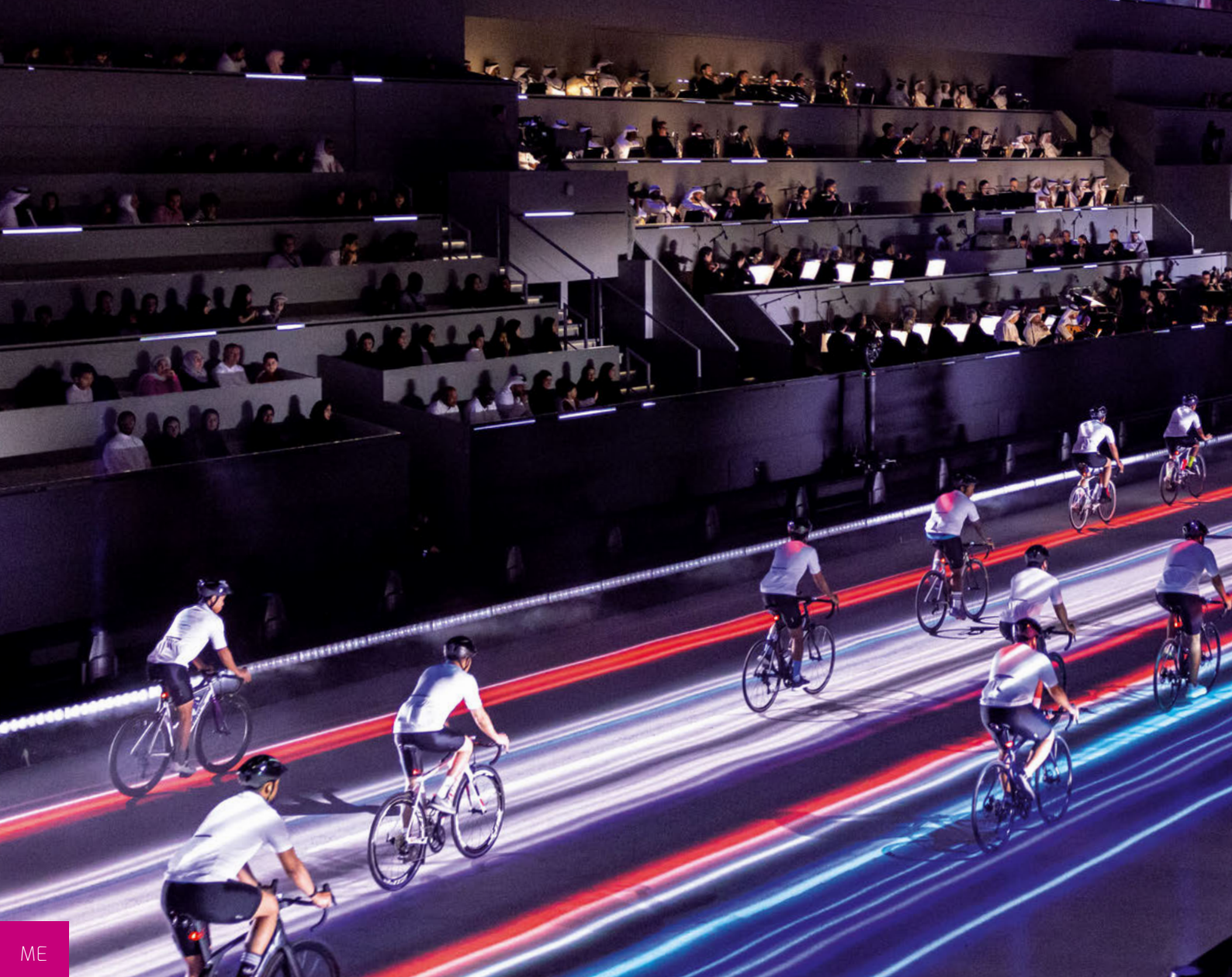
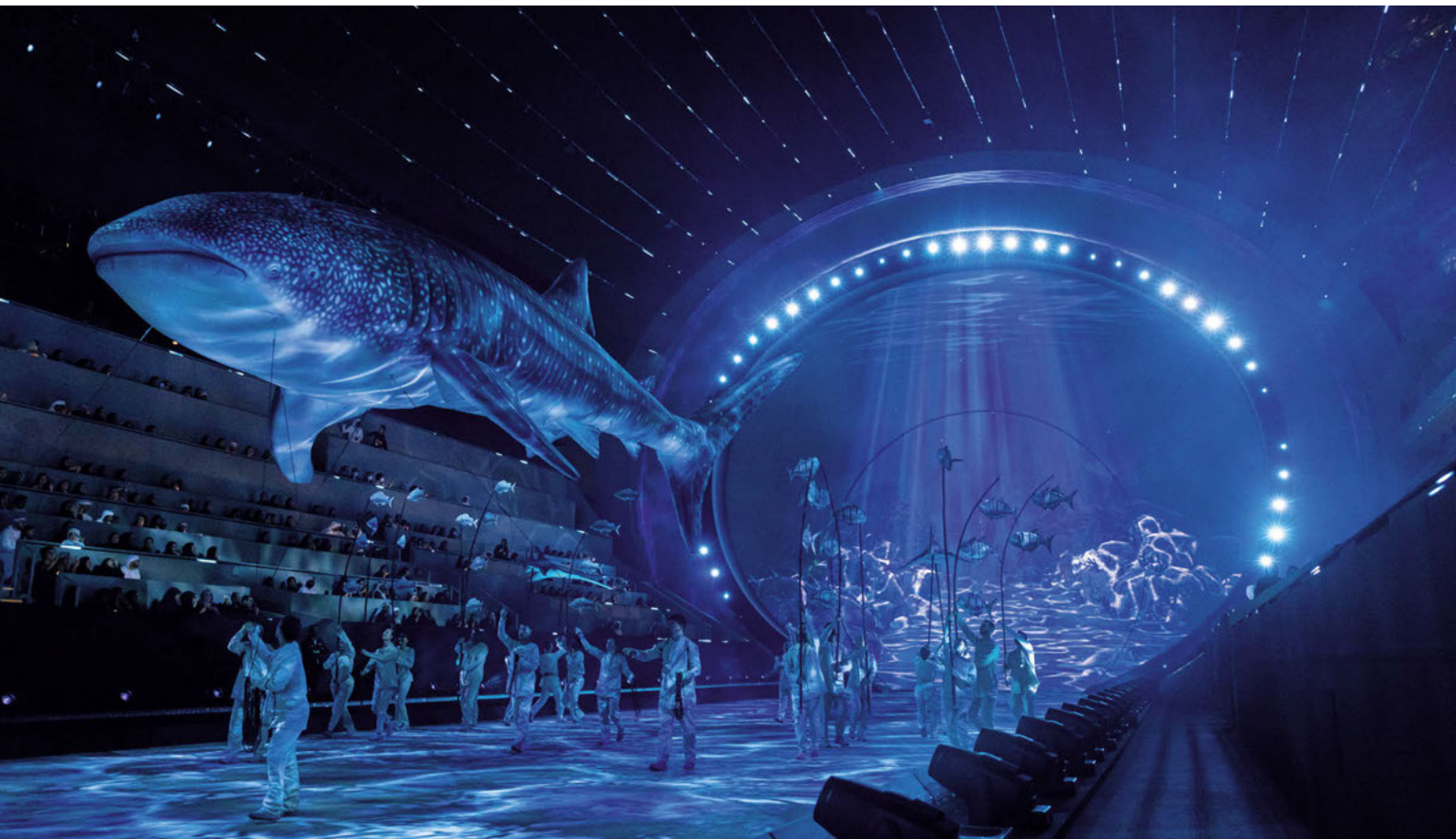


# UAE 51ST NATIONAL DAY CELEBRATION

THE UAE CELEBRATES NATIONAL DAY IN TYPICALLY DAZZLING FASHION, WITH A SPECTACULAR CEREMONY THAT PROVES WORLD-CLASS EVENTS ARE WELL WITHIN THE GRASP OF THE COUNTRY'S LOCAL SUPPLIERS.







One of the great things about UAE National Day is that you never know what you're going to get; the only thing that is for certain is that it won't be an understated affair. For the country's 51st National Day on 2 December 2022, the National Projects Office once again wanted to make a major statement, and it commissioned the Abu Dhabi office of creative agency, People, which worked alongside Creative Director, Es Devlin, to produce a spectacular ceremony at Abu Dhabi National Exhibition Centre (ADNEC).

With Devlin's previous UAE National Day creations including a giant rotating cube in the Abu Dhabi mangroves for the 49th National Day and a gargantuan seed-shaped structure floating above Hatta Dam for the 50th, producing something that would live up to previous years was far from an easy task. The 51st National Day celebration took the form of a 108m-long 'time tunnel' sandwiched in between two portals, with one end representing the past and one the future. Featuring 35 Emirati musicians, 67 members of the Royal Philharmonic Orchestra, and an extensive cast of over 3,000, the show premiered to an invited VIP audience on 2 December, before being played out to the public for a further nine days consecutively.

The performance looked back on the first half a century of life in the UAE, before looking forward to what may lie ahead for the country in the next 50 years, touching on subjects that

are cornerstones of the UAE's ethos, such as sustainability, connectivity and even space exploration. "What the show illustrates is that while the UAE is accelerating at rapid pace, the core values remain strong," explained People Project and Marketing Director, Rachel Sweeney. "While the UAE is blasting off into space, tradition and heritage are still at the forefront and run through everything the country does."

People Head of Major Projects, William Jensen, gave TPMEA the lowdown on how the concept was formed and developed. "Es Devlin and her studio was again behind the creative vision; our role was to manage that creative process and help to bring the project through to realisation, from the idea-generating sessions for the theme, through to the narrative and how that turns into a design," he explained.

People has worked on UAE National Day for the past three years in different capacities, but this year was the first that it has been the lead producer – something that brings a great sense of pride for Jensen. "National Day has historically been produced by international agencies, so, to be entrusted with the project as a homegrown UAE-based company is incredibly satisfying," he shared, noting that there was a workforce of around 280 people on site – over 70% of which are UAE residents.

"It's been such a pleasure to be able to handle the project in its entirety and bring in local

teams and suppliers who we know and trust," he added. "We believe it's the right thing to do to use as much locally as possible. As we've proved with this project, you certainly don't need to ship in lots of talent and resources to deliver a world-class show in the UAE. When we deliver shows like this using mostly local resources, we leave a legacy behind, boost the local economy and support the community."

As well as supporting the local economy, there was also a major focus on sustainability – both in the show's content and the approach taken behind the scenes. This was on display in various forms, with real objects used rather than props being manufactured from scratch, real trees in the show being replanted, and props and costumes designed and made locally and repurposed wherever possible.

In tandem to building the show, People also oversaw the construction and fitout of four different majlis for invited guests, managing the full front of house guest experience and building retail units to sell local products. "It was a full 360° approach covering every single touchpoint from the moment the guests arrive to the moment they depart," Sweeney noted.

ShowTex Middle East once again provided a huge amount of its custom printed fabrics for the site. All visitors were welcomed through a striking tunnel made of multi-layered print fabrics and frames. "Even the buggies had a dedicated



entrance filled with layers and layers of UAE-themed prints," recalled ShowTex Managing Partner, Sven Peeters.

Back-to-back printed artworks featuring the UAE's history were visible on banners of blackout fabric, carefully tensioned in aluminium frames to form arches, which displayed a stunning 3D-like image by alternating the blackout material with lighting and prints on see-through sheers. Layer after layer, the setup resulted in an impressive 42m-long entry for the general public as well as a separate Leader's Entrance tunnel – a staggering 110m long.

The Sheikh and Sheikha's Majlis was decorated in translucent sheer fabric. "Using both printed and unprinted Voile CS as serene partitions, the large sitting areas could be transformed into relaxing and peaceful spaces," Peeters explained. A grandstand in the middle of each Majlis featured a freestanding aluminium structure with printed sheers and a projection screen displaying the UAE flag.

Even after the event, the printed artwork formed an impressive expo showcasing the history of the UAE. "The combination of printed blackout fabric and see-through sheers ensured the expo was one to remember," Peeters said.

Brian Aviso, Sales Manager for ShowTex, added: "Installing 2,500 linear metres of custom-

made aluminium frame with hundreds of layers of blackout prints and printed sheer fabric with different artworks in 10 different site locations within a short timescale was a huge challenge, but we pulled it off with great team coordination."

#### 'THE SPIRIT OF DEDICATION'

One of the handful of international suppliers onboard for the project was Wonder Works, which returned to work on its fifth consecutive UAE National Day. "They are long-time collaborators with Es and a company that we have worked with numerous times before, so it was a natural fit," Jensen noted. "They became a seamless part of the development team and were instrumental in helping us turn Es's creative thoughts into a reality."

Wonder Works Co-Founder, Piers Shepperd expanded on the company's remit. "Our role is to support the creative vision, client and myriad suppliers who all have slightly different requirements – it's always a fine balancing act," he explained. "We try to provide a strong foundation in the early stages of planning that as a priority ensures that everybody understands the principal pieces of show architecture required by Es Devlin's design team."

Wonder Works' Lead CAD Designer, Andy Bailey, set out the controlling site dimensions, and

the team then factored in the technical overlay of the designs coming in from Bruno Poet (lighting), Auditoria's Scott Willsallen (audio), and Anthony Bezencon (video). "People's technical production team led by Mark Fogwill and Chris Hey were then supported on site by our CAD Designer, Ben O'Neill, who used our Trimble laser scanner to verify any site issues," Shepperd said. "Ben is used to working alongside production teams to ensure that any last-minute design work and detailing can be delivered where it's needed – on site."

One of the largest technical challenges was presented by the overhead LED strips, which spanned the entire length of the cylindrical performance space, enhancing the 'time tunnel' illusion. The installation comprised 657 ROE Visual LED strip fixtures totalling 968m, which were suspended from 19 106m-long catenaries, with four 30m-tall towers providing support in the centre of the catenary spans, and over 1,200 tonnes of ballast required to resolve the forces in the system.

This ambitious installation required the combined talents of Cundall, Stage One, Al Laith, VK Exhibition, Creative Technology Middle East, and the People production teams, who worked closely together to ensure it was a success.

"Our first job was to establish the rough order of magnitude of weights needed to be hung from

the catenary system so that our engineering team – Rasti Bartek and Danilo Cava from Cundall – could advise on the catenary cable diameters and likely ballast requirements,” Shepperd recalled. “We then worked closely with the team from Stage One to ensure that the concept could be delivered. Once the engineering model was complete, we could then work with Es Devlin’s team to make sure the layout of the LED strips still matched with their overall creative brief.”

Creative Technology Middle East (CTME) supplied a massive 2.2km of ROE Visual LED strip across the project, along with immersive projection and a site-wide video systems solution. Dan Hughes, Senior Project Manager at CTME, commented: “It was an absolute pleasure to work on NDS1 this year. Our specialist teams personified the spirit of dedication and teamwork. Thank you to our friends at People for engaging us on such a jaw-dropping event that was truly spectacular.”

Stage One was commissioned to install the long axis steel wire catenaries above the time tunnel that were used to suspend the lighting. The company was also charged with building the 23m-high by 30m-wide portal projection screen at each end of the venue, with sliding doors to allow the entrance and exit of the parade floats. “The skeleton was formed by two scaffold towers,

one on each side, which supported a double aluminium box truss that acted as a lintel above the opening,” explained Stage One Managing Director, Tim Leigh. “The box trusses supported the top ‘mohawk’ fin frames and lighting rigs.”

The front and back projection walls comprised steel box framing units with a plywood finish. The steel box framing units were tied together with a circular steel box-truss frame that followed the curvature of the archway and ran down to the ground.

The colossal frames were ground supported, with up to 380 tonnes of concrete ballast per structure, providing resistance to overturning and sliding. The circular doors meanwhile were 12m high and controlled by Stage One’s Qmotion automation software, providing a portal for scenic storytelling.

As ever, timings were tight, and while the number of axes of automation on the show were limited, Leigh described the size and scale of the installation as “significant”.

He added: “The 108m-long catenaries needed to have as little deflection under self-weight as possible to achieve the desired lighting effect. These cables were terminated at the ground-supported portal frames at each end of the tunnel, and so had to be picked up additionally along their length from tower crane

masts. There was a lot of build activity on a relatively compact site.”

With precious little time for fabrication in the UK and in support of the general mandate of increasing the local contribution, Stage One looked to others in region for support. “We worked more closely than ever before with suppliers in region and were very grateful for help from VK Exhibition and Al Laith,” Leigh revealed. “Without this reliance on homegrown talent, we would not have been able to deliver this in time. It’s superb to build closer relationships with these organisations and find ways of working together.”

He added: “We are proud to have worked on the past four UAE National Day celebrations. It’s always a privilege to bring ambitious projects to life. We enjoy working in the region and are looking to grow our permanent base out there.” Al Laith provided the main grandstand, staging and majlis structures, and supplied a vast array of ancillary support equipment for in and around the main arena. In total, more than 100,000 cubic metres of scaffolding was utilised, along with over 30 heavy duty machines.

“The project totalled over 8,400 man days of work with zero downtime and zero incidents,” stated Al Laith CEO, Jason English. “We are honoured to be part of the elaborate process in providing engineering and construction services

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for such an important and flagship project that represents the past, current, and future direction of the UAE," he added. "To be trusted by the UAE National Day Organising Committee and People is an honour we take very seriously."

For Wonder Works' Shepperd, the most pleasing aspect of the project was teamwork on show throughout. "These mega projects are driven by a very experienced and passionate team," he noted. "Tim Elliott, William Jensen and Mark Fogwill from People worked incredibly hard to pull together a fantastic team of professionals and suppliers – that really helps when the pressure mounts."

In fact, Shepperd sees this latest project as a continuation of the rapid progression of the industry in the region. "I think there is a real appetite and expectation that the Middle East will continue to deliver high-quality entertainment," he stated. "There is no doubt in my mind that as the events industry in the region continues to mature, we're starting to see world-class events being produced and delivered by people and suppliers based mostly in the Middle East. That should be a real source of pride for the region."

#### 'INCREDIBLE FORCES'

Encore supplied a complete lighting setup, including fixtures, network, control, processing, trackers, wireless DMX, and work lights. "One of our biggest considerations when putting this

project together was to deliver ND51 while still looking after our day-to-day business," began Encore Project Manager, Riaan Gomes. "With the Middle East having one of the busiest seasons ever, we knew we had to do everything to support our client, People."

As soon as the Encore team received Lighting Designer, Bruno Poet's brief, they went to work finding the required fixtures. "Fixtures used on the main show needed to be IP rated and LED based," Gomes noted. "The RFP shared was great and left very little out in terms of what was required to complete the job."

Elation Professional fixtures featured heavily on the rig, with Poet specifying 160 Proteus Lucius, 260 Proteus Maximus, 27 Proteus Rayzor 760s, and 28 Proteus Rayzor Blade Ls. These were joined by 102 Ayrton Perseos, 202 GLP impression FR10 Bars, 84 Astera AX2s, and 13 Robe Forte follow spots, each controlled individually from Robe Base Stations.

According to Gomes, the most challenging aspect of the setup was the positioning of the lights around the rim of the portal. "They were all rigged at 90° facing inwards on a custom 2in pipe curved to match the shape of the portal," he recalled. "It was challenging to get them up there, but once they were in, they looked incredible."

There was also an extensive prop and set lighting package, including 16 GLP impression S350s, 108 SGM P-6s, 30 ETC Lustr 2s, 24 Elation

Professional KL Panels, 32 Astera AX3s and 32 Titan Tubes, 156 Litecraft AT.10s, and 46 Claypaky Sharpys, as well as 70 City Theatrical Multiverse transceiver nodes and three City Theatrical Multiverse transmitters with six panel antennas.

Control and networking was handled by three MA Lighting grandMA3 full size and four grandMA3 light consoles, with 15 MA3 NPUs and a plethora of Luminex GigaCore switches.

With a huge cast spread over a massive performance area, the production utilised the largest zactrack system ever assembled – featuring 75 tags, 22 anchors, six pucks, and main and back-up PRO servers – to ensure that the show was well lit throughout.

"We installed the anchors at different locations and heights around the grandstand; they needed to be as asymmetrical as possible to give the most accurate results," Gomes noted. "The tags were placed on all floats, props, and actors. This data was sent to the zactrack PRO servers, which processed it and routed it onto the grandMA3 desks – all with no visible delay."

While this was Gomes' first experience of working with a zactrack system, he found it easy to get to grips with. "Associate Lighting Designer, Max Nerula, has been using zactrack for a while and he really knew his way around the system – and the added support from the zactrack team in Austria was a massive help," he said. "With a show this big, there are so many moving parts," the PM



added, reflecting on the project. "Luckily, I had amazing support. I can't say enough about the great team I had on ND51 this year; it just proves that anybody can hire the kit, but you need the correct people in the correct positions to make it happen. I've worked with some incredible forces over the past few months, and that's exactly what was needed to pull this off."

The Organising Committee of the 51 National Day Celebrations comprised: Creative Executive Producer, Rawdha Al Qubasi; Artistic Director, Ayesha Hadhir; Head of Operations, Butti Al Muhairi and Head of Communications, Eisa Alsubousi. Francisco Negrin worked alongside Es Devlin as Co-Creative Director; Gavin Robins and Bryn Walters were Co-Show Directors; Mohammed Al Ahmad was the Composer; Music came courtesy of Al Watan Studio, Musicom and Polyphonia; Content Creation was by Luke Halls Studios; Leigh-Ann Vizer was the Choreographer; and the broadcast was handled by Done+Dusted.

Stage FX supplied pyro and special effects; Pitchblack provided drapes; Maestra supplied various scenic elements; and Aggreko once again handled all power requirements.

#### 'COLLECTIVE DESIRE'

Auditoria's Scott Willsallen returned to the UAE National Day fold once again, producing what he described as a "complex" audio system, made so by the "combination of a live orchestra centrally

located in the South grandstand, pre-recorded musical and sound design content, large scenic objects moving through the space and reflective surfaces everywhere".

In total, 761 L-Acoustics loudspeakers were used to deliver the audio experience, which consisted of a music system, several sound effects systems and a near-field system. "The music system was an arrangement of five arrays of L-Acoustics Kara mounted above the orchestra to service the North grandstand, with an additional pair of Kara arrays to fill the ends of the North grandstand," Willsallen said. "A pair of Kara arrays were used to reinforce the music to the South grandstand, either side of the orchestra."

The music system was enhanced with an overhead system of 30 L-Acoustics X8 loudspeakers, which were fed from the spatial room engine in L-ISA. The live orchestra mics were used in the main L-ISA system and the pre-recorded copy of the same orchestra stems were used to create the ambience through the overhead system.

The near-field system consisted of 500 L-Acoustics loudspeakers, a mixture of 5XT and X4i as well as 30 Syva Low. "These were arranged in front and rear systems with loudspeakers on 1m spacings to provide a stereo front and stereo rear for each VIP seat," Willsallen revealed. "These systems were used to enhance the music, and the rears were particularly effective

in enhancing the reverberation of the orchestra and choir." The sound effects systems meanwhile consisted of a ground row of 13 X8s either side of the performance area used for sound design content relating to the floor projection, a flown row of 13 A10-WIDE loudspeakers either side used for sound design content relating to the elevated objects and scenery moving through the performance area, and a stereo system of K2 at each portal, which was used for any content that related to the projection on these surfaces.

"These portal systems were particularly effective in directing the attention of the audience to a short film playing on one portal while a new scene was entering through the opposite portal," he noted.

For control, Richard Sharratt operated a mirrored pair of DiGiCo Quantum 7 consoles, with a pair of L-ISA Processor II units, one per console, connected using MAD1, and a pair of TiMax SoundHub2 processors. The signal distribution system comprised multiple DiGiCo SD Racks for inputs and various AVB and Optocore network devices distributing the outputs to LA-Racks around the venue. The primary signal distribution was AVB on Luminex network switches with Optocore network devices providing AES/EBU secondary inputs to the amplifiers.

"L-ISA was operated by me; it was the spatial mixing platform for the music and consisted of the main Kara loudspeaker system of five arrays



and the overhead loudspeaker system of 30 X8 loudspeakers to provide room simulation," Willsallen detailed.

"The spatial fill feature of L-ISA was used to provide signal to the overhead loudspeakers with a greater emphasis on distribution than localisation. We created three room engine presets based on the large warm concert hall preset – each was assigned to a snapshot and used to suit the different compositions throughout the show."

A dual-engine DiGiCo SD7 operated by Toby Chester and a pair of SD Racks were used to capture the orchestra. The console was located behind the orchestra and provided monitoring for the players via wired and wireless in-ear monitors. Clicks, counts and some pre-recorded content was sent to the orchestra console from the main Ovation playback system.

"A MADI recorder was included in the system to capture the orchestra for backup purposes and refining mixes," Willsallen added. "A duplicate system was deployed in the rehearsal venue to allow the same console session file to be used and refined throughout the rehearsals. Pro Tools was used as the playback system in the rehearsal venue with the session built by our team and the music editor."

Simon Sayer and Luis Miranda operated a dual-redundant pair of Merging Technologies Ovation systems. "The system consisted of a purpose-built Windows 10 computer running

Ovation, the Horus audio interface delivering 128-channels via MADI and the Ovation keyboard for each system," Willsallen commented. "The DiGiCo SD11 console is used for local monitoring for the Ovation operators with a pair of Neumann KH310 loudspeakers."

The inclusion of a live orchestra added another layer of complexity – albeit nothing that Willsallen and his team hadn't handled before. "We approached it in a similar fashion to the 47th UAE National Day, by putting a specialist team and system on it," he revealed. "The team built the sub-mix and monitoring systems for the rehearsal and show venues and worked with the music team and conductor to provide a comfortable environment for the musicians. We invested lots of energy and time in making sure the rehearsal was the same as the show situation, so the players were as familiar as possible when it came to the first run in the show venue."

Willsallen explained how the tight timescale for construction had a knock-on effect for the audio department. "Agora, our supplier, installed systems as the supporting elements became available, so each day we would get access to a few more speakers and continue our piecemeal commissioning," he recalled.

"The tuning and balancing of the total system were only done a couple of days prior to the show once all the construction and installation works had been completed. All contractors worked extremely hard to get their work done

in a cooperative and collaborative way. The collective desire to work together and make it happen was key."

While fine-tuning, adjusting, and balancing the systems in the virtual environment is a normal process for the Auditoria team, according to Willsallen, the level of accuracy when the systems were translated into the real world was a major source of pride. However, echoing the sentiments from several other departments on the project, what he found most pleasing was "the way our team and the teams from Agora and Clair worked together to deliver the audio and comms for such an extraordinary project".

#### 'A SHOW THAT WE CAN ALL BE PROUD OF'

A major feature of ND51 was the 17 floats, which were scenically dressed and carrying various props and performers travelling through the length of the show arena. This brought with it a multitude of technical and operational challenges, which People appointed KB Event to take care of. "Our remit was to examine the options and practicalities for manufacturing multi-trailer floats to a very specific design," explained KB Event CEO, Stuart McPherson.

The brief stated that the floats were not to be pulled by standard motive units but by vehicles and drivers that would blend in and be "almost invisible". He added: "The Floats were to present in a 'road train' format, with the initial brief having some vehicles as long as 60m under the control



of a single driver." As well as an engineered solution for the floats, People asked KB to design and present a safe and workable method of operation that would allow such specialist vehicles to operate and move within the confines of show site with very limited space.

While in the UAE to complete a recce of the site, KB's senior projects team met with Dubai-based VK Exhibition to work through a first vehicle and trailer prototype, before advising modifications required to present a stage one working vehicle.

In addition to a dedicated management team to oversee the development from prototype to operational vehicles and trailers, work through rehearsals, then finally deliver the show, KB Event also brought together a team of specialist Drivers, Spotters and Driver Buddies.

Mike Beard led the project management team, with Jim Bruce as his Lead Driver. Beard had a team of experienced KB Event show drivers and worked with local partner Marcel Meyer at EFM Global, who resourced and provided a team of one Manager and 44 Driver Buddies as well as Safety Spotters.

The whole project was a one-off design, developed from the ground up as a custom build.

"Getting the vehicle and trailer design and build correct and fit for purpose in a safe and reliable manner while meeting the requirements of the creative lead of the show was a big challenge," reflected McPherson.

"This was multiplied tenfold when it came to operating these unique, very large vehicles in an incredibly tight environment with a cast of hundreds of adults and children riding on, interacting with, and moving around the vehicles in show mode.

"Working closely with VK Exhibition on the design and construction of the vehicles, methodical planning of the method of operation and days and nights of rehearsals – initially just as vehicle operation and then with the crew and cast – ensured a safe and very successful delivery of everything the client desired."

While he was "very happy" with the design and engineering solution, the most pleasing aspect for McPherson was "the hard work, dedication and professionalism of the Driving teams, Driver Buddies, Safety Spotters and Project Management, who worked tirelessly in pre-production planning, rehearsals and then delivered a flawless show, exactly as planned". He added: "This isn't the first time we've worked

in the UAE, and it was a delight to work with the whole team in Abu Dhabi."

People CEO, Tim Elliott concluded by reflecting on the scale of the achievement. "This project had a huge number of moving parts, from mass cast to mass vehicle movements, automation to augmented reality, hundreds of props to real-life items – such as a 300-tonne train," he recalled. "To deliver this, the cohesion of collaborators was essential. We had an incredible collection of creatives, partners, and suppliers – some of which were new to us, but many are long-term partners.

He added: "It was one of those shows that made me proud to know so many talented people that put so much energy and commitment into the project. It was also a privilege to work alongside the talents from Es Devlin Studio and Done+Dusted, each of whom played a huge part in the project's success. Thank you to everyone involved."

*Photos: People*

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