

World
Science
Festival
Brisbane

PRESENTED BY QUEENSLAND MUSEUM

WORLD SCIENCE FESTIVAL BRISBANE
2018: IN REVIEW



QUEENSLAND
MUSEUM



Queensland
Government



A general public informed by science, inspired by its wonder, convinced of its value, and prepared to engage with its implications for the future.

World Science Festival mission

| CONTENTS

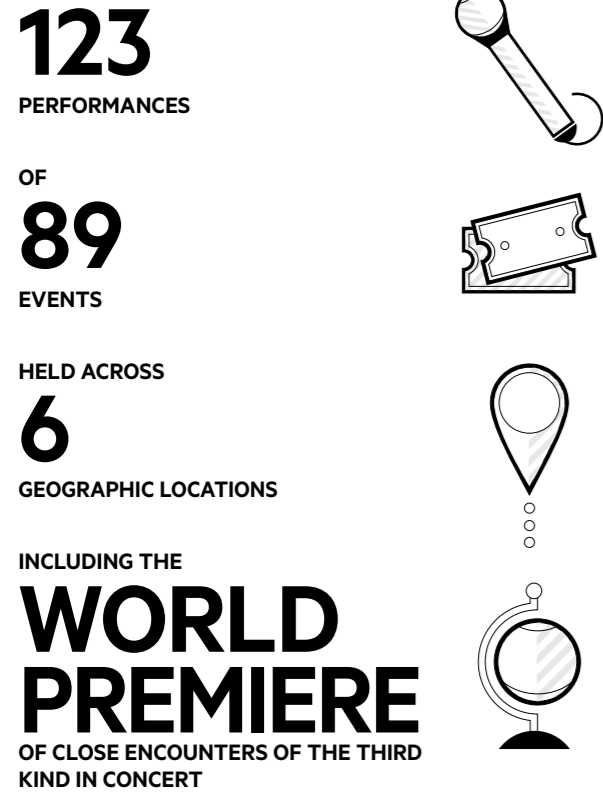
2	SNAPSHOT
4	PROFILE
4	QUEENSLAND MUSEUM NETWORK
5	WORLD SCIENCE FESTIVAL BRISBANE
6	PROGRAM
6	CLOSE ENCOUNTERS OF THE THIRD KIND IN CONCERT WORLD PREMIERE
8	SIGNATURE EVENTS
8	CONVERSATION+SALON SERIES
12	STREET SCIENCE!
12	FESTIVAL LAB
13	QUEENSLAND MUSEUM
14	EDUCATION
15	FILM
15	FORESIGHT SERIES
15	QUEENSLAND WOMEN IN STEM PRIZE
18	REGIONAL
18	GLADSTONE
18	CHINCHILLA
18	TOOWOOMBA
19	IPSWICH
19	TOWNSVILLE
19	TAKE-TWO: TOWNSVILLE 2017
20	VISITOR FEEDBACK
22	AUDIENCES
22	ATTENDANCES
23	PARTICIPANTS
23	VOLUNTEERS
24	MARKETING
24	ADVERTISING
25	OWNED DIGITAL+SOCIAL
25	OUTDOOR
25	SIGNAGE AND COLLATERAL
27	MEDIA RELATIONS
28	PARTNERSHIPS
31	APPENDICIES
31	1 NOMENCLATURE
32	2 ACTIVITY PROVIDERS
34	3 PARTICIPANTS
40	END CREDITS

Cover image: In celebration of World Science Festival Brisbane the iconic William Jolly Bridge was activated with imagery from the State Collection. Image courtesy David Sandison

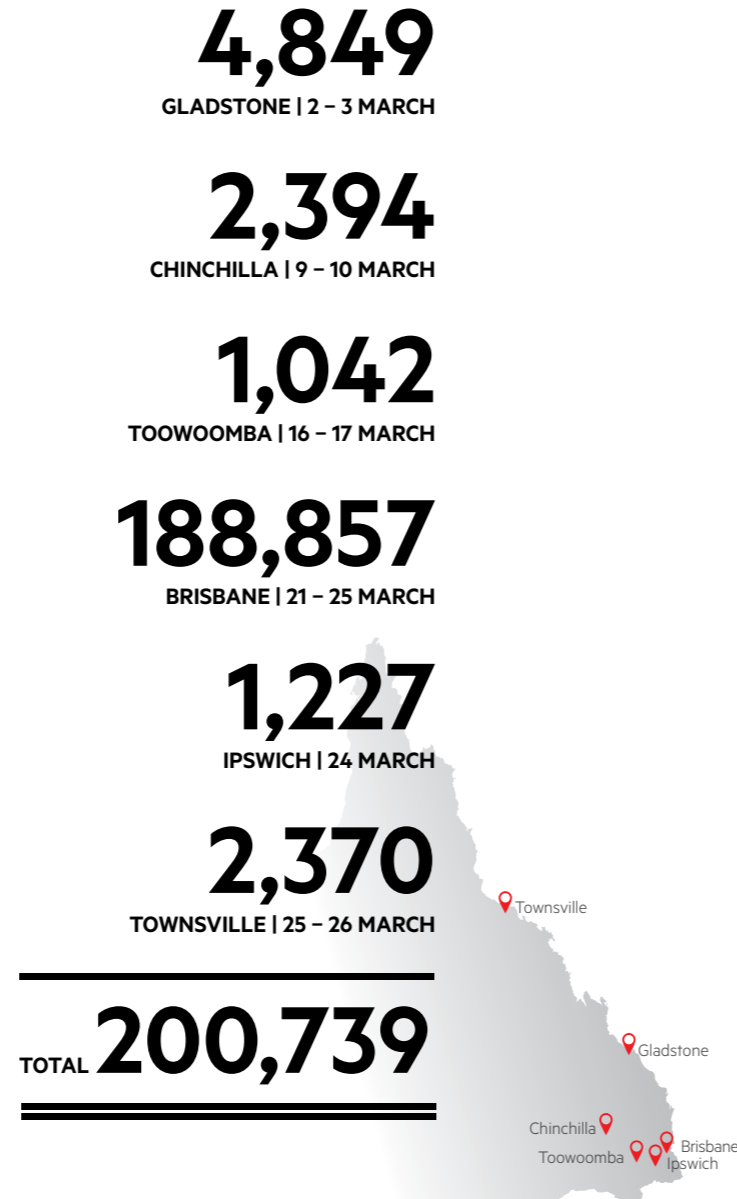
Inside cover: World Science Festival co-founder Brain Greene inspired audiences in **THE BELIEVING BRAIN: Neuroscience and the Spiritual Instinct**

SNAPSHOT¹ 2018

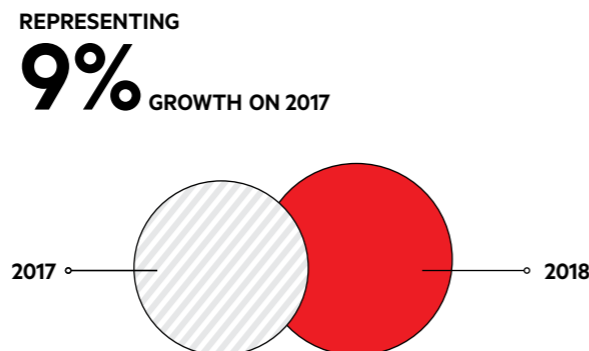
PROGRAMMING



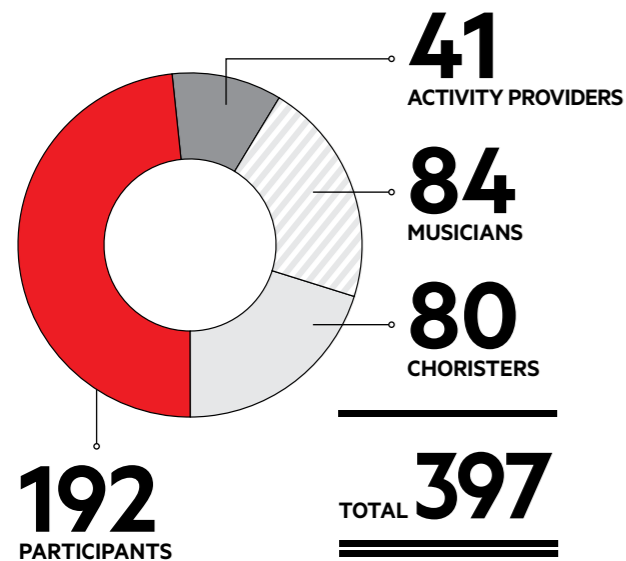
ATTENDANCES



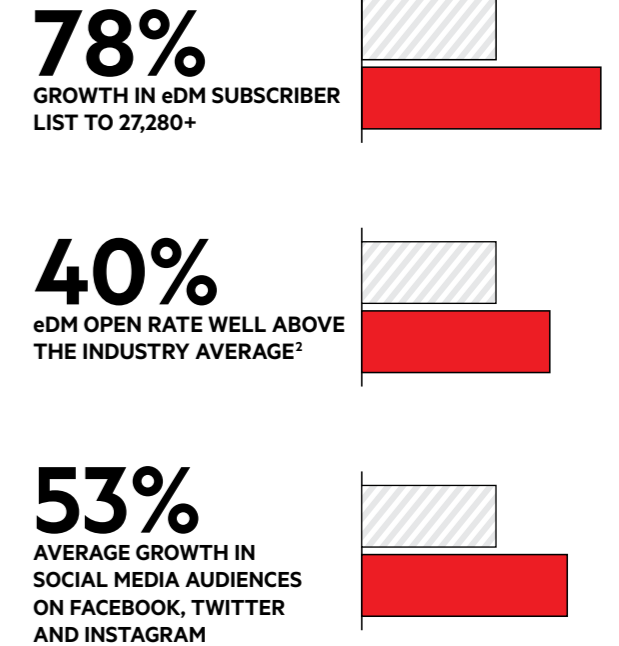
TOTAL **200,739**



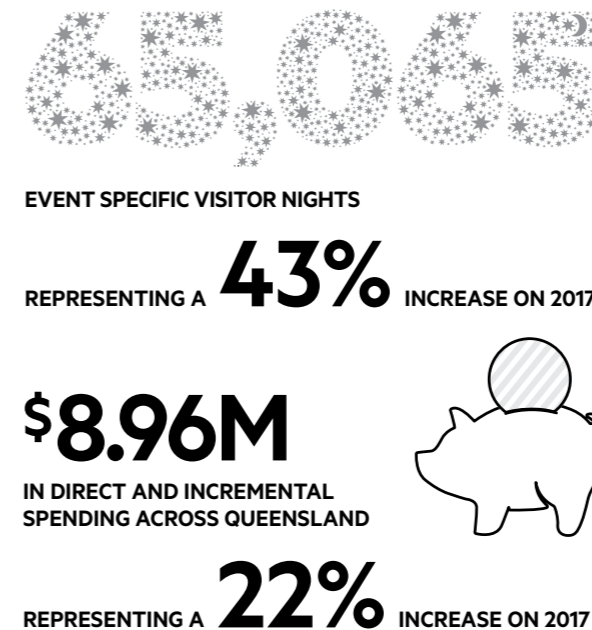
PARTICIPANTS, ACTIVITY PROVIDERS + PERFORMERS



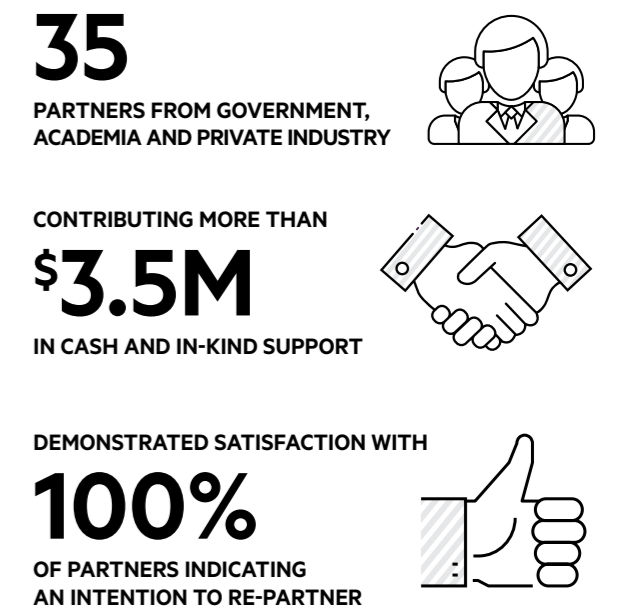
MARKETING + MEDIA RELATIONS



ECONOMIC IMPACT³



PARTNERSHIPS



¹ Refer Appendix 1 for a definition of key terms.

² Industry average 21%.

³ Source: Economic Impact provided by Tourism and Events Queensland

Queensland Museum entomologist Susan Wright shared her love of insects with Chinese students visiting Brisbane on a dedicated World Science Festival Brisbane 2018 international study tour



PROFILE

QUEENSLAND MUSEUM NETWORK

Founded in 1862 by the Queensland Philosophical Society, the Queensland Museum Network has been discovering, documenting and celebrating Queensland's biological diversity, cultural heritage and geological treasures for more than 150 years.

Today, the Queensland Museum Network is the keeping place for the State Collection, comprised of more than 1.2 million cultural objects and natural history specimens and more than 14 million research items.

We harness support of industry, government and community to celebrate the story of Queensland and our place in the world through leading research and unique experiences underscored by scientific rigour at our seven public sites:

1. Queensland Museum: South Bank, Brisbane
2. Cobb+Co Museum: Toowoomba
3. Museum of Tropical Queensland: Townsville
4. The Workshops Rail Museum: Ipswich
5. Queensland Museum Collections, Research and Loans Centre: Hendra, Brisbane
6. Museum of Lands, Mapping and Surveying: Woolloongabba, Brisbane
7. Earth Sciences Museum: The University of Queensland, Brisbane.

WORLD SCIENCE FESTIVAL BRISBANE

Queensland Museum Network holds exclusive licence to host World Science Festival in the Asia Pacific 2016-21: the only global extension of this hugely popular event celebrating the entanglement of art and science.

Through a curated program of theatre, conversation, film, major outdoor experiences and education activities World Science Festival Brisbane brings people together to inspire curiosity and debate, and make science visible, accessible and fun.

Presenting World Science Festival Brisbane reinforces Queensland Museum Network's position as a leader in STEM engagement, enhances Queensland's profile as a knowledge economy and positions Brisbane as an international hub for scientific thought leadership.

The third annual World Science Festival Brisbane was held in 2018 and comprised a Brisbane flagship event (21-25 March) and regional engagement in Gladstone (2-3 March), Chinchilla (9-10 March), Toowoomba (16-17 March), Ipswich (22 March) and Townsville (25-26 March).

PROGRAM

Each year, the World Science Festival Brisbane program is premised on curatorial themes informed by current research, scientific and technological discovery, and societal issues.

In 2018, the curatorial focus was humanity. Champions from across the globe examined what makes us human, how humanity has advanced, and how science is working to ensure we live better for longer.

CLOSE ENCOUNTERS OF THE THIRD KIND IN CONCERT WORLD PREMIERE

24 MARCH 2018

CONCERT HALL, QPAC

In a coup for Queensland, World Science Festival Brisbane 2018 secured the world premiere rights to present **CLOSE ENCOUNTERS OF THE THIRD KIND IN CONCERT**, uniting cinema, science and music in one spectacular evening of extra-terrestrial excitement.

Written and directed by Steven Spielberg, *Close Encounters of the Third Kind* tells the story of Roy Neary (Richard Dreyfuss), an ordinary blue-collar electrical lineman from Indiana who experiences a close encounter with an unidentified flying object (UFO). Increasingly obsessed with this unexplained phenomenon, Roy is drawn to a series of seemingly random strangers, each of whom has come in contact with similar UFOs, eventually making his way to Devil's Tower in Wyoming, where he finds the answers he seeks and where his life is forever changed.

Widely considered one of the most treasured and influential science fiction films of all time, *Close Encounters of the Third Kind* features a ground-breaking score from cinema soundtrack luminary John Williams. Nominated for eight Academy Awards® including Best Original Score, the film remains as engrossing and inspiring today as it was 40 years ago.

For the first time ever, in this World Science Festival Brisbane exclusive event, a sell-out audience experienced Williams' magnificent score, performed by the Queensland Festival Philharmonic and Resonance of Birralee under the baton of acclaimed conductor Nicholas Buc, live and in sync with Spielberg's extraordinary film.

Presented by Queensland Museum, **CLOSE ENCOUNTERS OF THE THIRD KIND IN CONCERT** was performed at Concert Hall, QPAC in a stunning international collaboration between World Science Festival Brisbane, Film Concerts Live!⁴ and Columbia Pictures.

⁴ Film Concerts Live! is a joint venture of IMG Artists, LLC and The Gorfaine/Schwartz Agency, Inc.



Nicholas Buc conducted the Queensland Festival Philharmonic orchestra and Resonance of Birralee choir in the world premiere of **CLOSE ENCOUNTERS OF THE THIRD KIND LIVE IN CONCERT**

Panellists considered the limits of physical achievement in **A SPORTING CHANCE: Building the Ultimate Athlete**.

SIGNATURE EVENTS

21 – 24 MARCH 2018

CONCERT HALL, QPAC AND QUEENSLAND CONSERVATORIUM, GRIFFITH UNIVERSITY

In 2018, World Science Festival Brisbane debuted a series of signature events developed to showcase the research expertise of our academic partners. The signature event program commenced on Wednesday evening with **FREUD'S DIVIDE: Bridging the Brain-Mind Gap**. Presented in conjunction with The University of Queensland, this sell-out event challenged the Freud-inspired distinction between the brain and mind – and the resulting fields of neuroscience and psychiatry – highlighting the common features across neurological disorders revealed by recent advances in medical research and scientific technologies.

The following evening, the science and ethics of self-renewal were explored in **BESPOKE BODIES: A Path to Human Regeneration**. A panel of experts, hand-picked in conjunction with QUT, contemplated the pros and cons of regenerative medicine – including spray-on skin, robotic limbs and 3D-printed bones – and the pursuit of a life that balances quality and quantity.

On Friday, the latest truths behind human survival versus dominance was revealed in **THE LONGEST WALK: Winning the Human Race**. Presented in conjunction with Griffith University, this signature

event traversed the story of how our ancestors split from their ape cousins to become Earth's prevalent Hominin species, and demonstrated how technological advances have complemented archaeological data to tell a story 300,000 years in the making.

CONVERSATION + SALON SERIES

21 – 25 MARCH 2018

CONCERT HALL, QPAC AND QUEENSLAND CONSERVATORIUM, GRIFFITH UNIVERSITY

Fast-paced and thoughtfully crafted, the content-rich conversation and salon series features the world's best minds discussing and debating cutting-edge science, ground breaking discoveries, technological innovation and our changing world.

Inspired by the Gold Coast XXI Commonwealth Games, World Science Festival Brisbane 2018 examined the interplay between health, humanity and science.

A SPORTING CHANCE: Building the Ultimate Athlete considered the complex interplay between science and sport with related advances in bioengineering, physiology, psychology and genetics. **BUGS AND DRUGS: The Resistance Wars** discussed the need for science, government and industry to join forces in defence of the escalating war of resistance against the rising threat of superbugs. In **VENOM AND PAIN: An Unlikely Alliance**, biologists, chemists and innovators examined how technological advances are harnessing new drug

candidates from our backyard apothecary to improve human health. **PROBING THE ETERNAL SUNSHINE: Memories and Fears** tapped into the deep recesses of the mind and the wealth of new research that could one day help clinicians modify memories and fears for patients with PTSD, Schizophrenia, Alzheimer's or brain injuries. **CHASING LONGEVITY: The Quest for Longer Life** explored the scientific possibilities and socio-economic impacts of humankind's quest for longer life. **ANCIENT DNA: How Genetics Can Reveal the Secrets of Evolution** uncovered the ways DNA can be decoded, even centuries after death.

At the heart of decoding – from unravelling the DNA of ancient penguins preserved in the frozen layers of Antarctica through to social media algorithms and smart phone technology – is mathematics. This year, World Science Festival Brisbane shone a spotlight on mathematics – the quiet, often overlooked component of STEM – with two conversation events. In **THE LANGUAGE OF THE UNIVERSE: Can Mathematics Explain Everything** internationally award-winning mathematicians revealed the boundless creativity and power yielded by maths. Aimed at a student audience, **FOR THE LOVE OF MATHS: More Than Just Numbers** demonstrated how mathematical mastery transcends time and space, keeping pace with advances in hardware and software to become one of the most sought-after skills required for the next generation of statisticians, oceanographers, meteorologists, designers, environmental modellers...

World Science Festival co-founder and renowned physicist Brian Greene took to the stage on Saturday evening to debut **THE BELIEVING BRAIN: Neuroscience**

and the Spiritual Instinct. Together with a panel of neuroscientists, philosophers, anthropologists and evolutionary biologists, Greene explored one of the most profound mysteries of our existence – faith, and the spiritual domains that shape our Earthly experiences.

The focus moved from ethereal and unexplainable to the inevitable during **ALIEN CONTACT: What Happens Next?** which wrestled with the implications and consequences surrounding the discovery of alien life. **SPACE INVADERS: To Infinity and Beyond** examined current and near-future operations in space and the socio-legal challenges of who will control the final frontier, while **SPACE JUNK: Cleaning Up After Ourselves** examined the growing environmental and safety problem of man-made celestial waste.

Waste of the terrestrial kind was on the agenda during **WASTE NOT, WANT NOT: Creating a Circular Economy**, which contemplated a world where rubbish, in all its forms, becomes intrinsic to the cycles of human existence, rather than a by-product. **EXTREME CITIES: Building Against the Tide** discussed ground-breaking global initiatives in urban planning, architecture and engineering that are addressing future challenges today to optimise human and environmental survival. **AUSTRALIA'S EPIC STORY: Exploring 130,000 Years of History** demonstrated how drawing science, humanities and Indigenous knowledge together will help develop a richer and more complete understanding of Australia's past—and help shape views about the continent's future.



South Bank

NOTICE
FILMING
TODAY

WV

Crowds flocked to Brisbane's Cultural Forecourt for STREET SCIENCE!

STREET SCIENCE!

24 – 25 MARCH 2018

CULTURAL FORECOURT,
SOUTH BANK PARKLANDS

Energetic and interactive, messy and loud, **STREET SCIENCE!** drew a record-breaking 92,000 attendances to the Cultural Forecourt on Saturday and Sunday.

Presented in partnership with BHP Billiton Foundation, **STREET SCIENCE!** explored the wondrous properties of STEM. Circuitry and automation, quantum levitation, meteorology and engineering were on the agenda. Visitors became botanists, spotting weeds and exploring the science of soil; discovered the chemistry behind tie-dye; examined viruses through high-powered microscopes; and uncovered what it takes to become a science Olympiad.

BHP Billiton Foundation tested the Pythagorean Theorem of humble H₂O with **BODIES OF WATER**, while early childhood specialists C&K explored human evolution through hands-on play and a creative obstacle course. A full list of **STREET SCIENCE!** activity providers is detailed in Appendix 2.

Nestled in the green space overlooking the Brisbane River, adjacent to the street food stations, was **THE OSMOSIS STAGE**. With a jam-packed daily program including physics, chemistry and robotics demonstrations, science-adventure storytelling and feature performances by Channel 9's *BrainBuzz* team, **THE OSMOSIS STAGE** provided a much-needed place to rest and recharge before embarking on more **STREET SCIENCE!** fun.

An undeniable favourite, **STREET SCIENCE!** continues to provide an exceptional platform for industry, academia and community-based organisations to showcase capability and raise awareness of current research, citizen science projects and conservation issues. Expressions of interest for **STREET SCIENCE!** activity providers were called in September 2018. All applications were assessed by the World Science Festival Brisbane 2018 program team, and those fulfilling the key criteria were invited to take part.

FESTIVAL LAB

22 – 25 MARCH 2018

CULTURAL FORECOURT,
SOUTH BANK PARKLANDS

Festival Lab was the place to celebrate the quirky, fun and unexpected faces of science.

Audiences jump-started their day with science served over easy during **BRAIN FOOD BREAKFAST**. On Thursday, evolutionary biologist Tanya Smith revealed how teeth assist with understanding human behaviour and development. On Friday, breakfast-goes determined whether innate sporting talent can be pre-determined biologically. Over the weekend, healthy-living champion Joanna McMillan shared fascinating facts behind gut health and the fight for a healthy digestive system while Dr Karl shared amazing and amusing facts about all things body, health and exercise in **FEED YOUR BRAIN, FEED YOUR BODY**.

As the sun went down, 18+ audiences socialised with a cool beverage, river views and a side of science. **THE ART OF CRYPTOLOGY** delved into the exquisite artistry of codes, algorithms, patterns, puzzles and encryption. In **SCULLY TO YOUR MULDER** wormholes, warp speed, DNA splicing, human hybrids and other sci-fi phenomenon were tested with the scepticism of Scully and the imagination of Mulder. **PILLOW TALK** ventured into the dark hours, exploring sleep patterns, REM and the wondrous world of dreams, and **ONLY IN YOUR DREAMS** saw scientists and civilians alike share their sleep-time experiences in an open-mic style event.

After dark on Saturday crowds of people switched off and explored the natural luminosity of our beautiful night sky through telescopes generously supplied by Celestron during **STARGAZING: Brisbane**. Later that evening renowned science broadcaster Robyn Williams and a hand-picked roster of speakers took to the stage for ABC Radio National's live **OCKHAM'S RAZOR** podcast event.

QUEENSLAND MUSEUM

22 – 25 MARCH 2018

Queensland Museum welcomed more than 68,000 visitors over the five nights and four days of World Science Festival Brisbane 2018. This included audiences for the **LET'S TALK** series of family-friendly conversations focussed on Queensland Museum's exhibitions, collections and research collaborations. Presented with support from Inspiring Australia, this year's topics included migratory shorebirds, frogs, and turtles. In homage to the international exhibition *Egyptian Mummies: Exploring Ancient Lives* (which opened five days before World Science Festival Brisbane 2018), mummification, medicine and the magic of Ancient Egypt were also explored. NASA's Jennifer Wiseman gave a special talk about the Hubble Space Telescope.

Back by popular demand was **THE HATCHERY: Turtle Conservation Experience**⁵. This year, more than 7,500 people witnessed the birth of Loggerhead Turtles as a result of a perfectly calibrated incubation program. Presented in conjunction with Department of Environment and Science, **THE HATCHERY** included live commentary and conservation messaging celebrating 50 years of Mon Repos Regional Park. The hatchlings' first moments were captured and live streamed on the World Science Festival Brisbane website, thanks to expertise and infrastructure from program partner AARNet. Ten days after the festival concluded, the hatchlings were released off the coast of Mooloolaba to begin their annual journey to New Zealand, Chile and Peru.

Next to **THE HATCHERY** was a beautiful display celebrating the endurance of Brisbane's migratory shorebirds. With taxidermied specimens, expert floor talks, live illustration by acclaimed Queensland artist Deb Mostert and an origami bird installation, **MIGRATORY SHOREBIRDS** demonstrated how the taxonomic work of the Queensland Museum can be used to inform conservation decisions.

On Thursday and Friday Queensland Museum curators, collection managers and scientists took to the public floors to delight visitors with their favourite artefacts and specimens from the natural and cultural heritage collections. Over the weekend, visitors were treated to hands-on encounters with live spiders, crocodiles, snakes plus gaming and hologram demonstrations and musical performances by *Jurassic Joe*.

Queensland Museum's popular **AFTER DARK** programs were held on Friday and Saturday evening to coincide with World Science Festival Brisbane 2018. Friday night programming was for an 18+ audiences and included expert talks on Ancient Egyptian culture. Saturday evening was family-friendly affair complete with science experiments, live music sing-a-longs and disco. Entry to both events included access to *Egyptian Mummies: Exploring Ancient Lives* exhibition and **THE HATCHERY**.

⁵ **THE HATCHERY: Turtle Conservation Experience** received ethics approval from the Queensland Museum Animal Ethics Committee and Department of Environment and Science.

EDUCATION

22 – 24 MARCH 2018

QUEENSLAND MUSEUM; CONCERT HALL, QPAC; QUEENSLAND CONSERVATORIUM, GRIFFITH UNIVERSITY

World Science Festival Brisbane 2018 included dedicated educational programs that underpin Queensland Museum's commitment to support and foster STEM-literacy and inspire a love of science by showcasing the diverse career opportunities afforded by studying these subjects.

In **FOSSIL FINDERS: Piecing the Past Together** students in Years 3-6 uncovered the dramatic environmental transformation of Queensland by investigating fossils from the Cretaceous period. The hugely popular **COOL JOBS** returned to a sell-out crowd of students eager to learn about a day in the life of cool STEM careers in astrophysics, neuro-ecology, quantum physics and materials science. Two Australians of the Year – Fiona Wood and Alan Mackay-Sim – took to the stage on Thursday and Friday respectively to share personal stories, life challenges and career highlights including their ground breaking work in burns and nerve regeneration during **PIONEERS IN SCIENCE**. Each session was followed by lively forum of Q&A posed by Queensland students.

In keeping with our mathematics focus, World Science Festival Brisbane 2018 hosted award-winning author and professor of mathematics Professor Arthur Benjamin for two performances of **MATHEMAGICS**. Benjamin took audiences on a highly entertaining presentation of mental gymnastics. He also explained

the secrets behind his mathematical magic and showcased the fun side of maths – often overshadowed by homework, assignments and exams.

Together with partners Griffith University, QUT and QIMR Berghofer Medical Research Institute four **APPRENTICE PROGRAMS** in the fields of evolutionary biology, genetics, microbiology and object conservation were delivered. These immersive, hands-on workshops give young adults the once-in-a-lifetime opportunity to experience, first-hand, the wonder of STEM by working in laboratories alongside subject-matter experts.

To allow for maximum engagement, student ticket prices were offered across all programmed events, resulting in more than 3,700 student attendances as part of pre-planned school excursions⁶. **PIONEERS IN SCIENCE, THE HATCHERY**, and conversation and salon events **FOR THE LOVE OF MATHS: More than Just Numbers** (Thursday), **SPACE JUNK: Cleaning Up After Ourselves** (Thursday) and **WASTE NOT, WANT NOT: Creating a Circular Economy** (Friday) were enhanced by curriculum-linked learning resources developed in conjunction with the Department of Education. Schools were encouraged to complement their time at World Science Festival Brisbane 2018 by visiting the free activities at Queensland Museum.

Back by popular demand was Australia's favourite science communicator Dr Karl Kruszelnicki. In the family-friendly **DR KARL FOR KIDS** he investigated the question of life beyond earth, while **EXTREME MOMENTS IN SCIENCE** took audiences on a whirlwind excursion around the scientific landscape from the sublime moments of deep thought to the arcane and bizarre, proving that it is never too late for adults to learn new things.

FILM

21 – 25 MARCH 2018

AUSTRALIAN CINÉMATHÈQUE, QAGOMA

The 2018 film program focussed on humanity with a program of non-fiction offerings artfully curated by program partner Australian Cinémathèque, QAGOMA. **EMPIRE OF OUR SENSES: The Body and Mind in Science**, reflected on the expectations we have of our intellect, form and function and how these beliefs can be re-evaluated through scientific investigation.

Broad-ranging topics including autism, interstellar discovery and climate change were covered with documentary screenings of *Life, Animated* (2016), *The Farthest* (2017) and *Before the Flood* (2016). *Bombshell: The Hedy Lamarr Story* (2017) chronicled the extraordinary story of a Hollywood actress who invented a radio system which became the technological precursor to WiFi and Bluetooth. *Fermented* (2017) provided a gastronomical guide to the beauty of rot, while *Le Nez (The Empire of Scents)* (1994) explored the profound impact smell has on our memory, emotions and interactions. True to the spirit of *Le Nez* a special event on Saturday evening combined the film with a scent-inspired meal complete with matched wines and commentary from a sensory scientist and a sommelier. Film offerings included *Experimenter: The Stanley Milgram Story* (2015) an historically-accurate recount of the behaviour experiments devised by controversial psychologist Stanley Milgram in post-WW2 America, and *The Immortal Life of Henrietta Lacks* (2017) which uncovers the plight of an African-American woman who became the unwitting pioneer for life-changing, medical breakthroughs.

In recognition of the extraordinary life and achievements of the late Stephen Hawking, world-renowned theoretical physicist, cosmologist and author, a free special screening of *The Theory of Everything* (2014) was offered on Thursday. A full house enjoyed an opening tribute from World Science Festival co-founder Professor Brian Greene.

FORESIGHT SERIES

Aided by the convening power of the World Science Festival Brisbane, the annual **FORESIGHT SERIES** assembles local thought leaders to consider 'big questions' about the world we want to live in.

Delivered in conjunction with exclusive innovation partner Arup, the focus for 2018 was the circular economy as a means of balancing massive population growth and finite resources. This new way of thinking draws together existing concepts such as regenerative design and biomimicry to redefine products and services to recycle and reuse waste with minimal environmental impact.

Results from these invitation-only workshops will underpin development of a circular economy strategy championed by the Department of Environment and Science.

QUEENSLAND WOMEN IN STEM PRIZE

Queensland's female STEM experts are at the forefront of breakthroughs and discoveries, striving to make a difference to the wellbeing of individuals and communities locally, nationally and internationally. Now in its third year, the **Queensland Women in STEM Prize** highlighted home-grown research, and celebrated the contribution of women engaging the broader community in STEM.

Presented by World Science Festival Brisbane and the Queensland Government's Office for Women and Office of the Queensland Chief Scientist, the **Queensland Women in STEM Prize** offered two, \$5,000 professional development bursaries. The People's Choice Award was voted by the public while the Jury Award was assessed by an expert panel comprising Christine Williams (Office of the Queensland Chief Scientist), Jim Thompson (Queensland Museum Network), Heidi Mathieson (Office for Women) and Michael Lund (*The Conversation*).

Entrants were required to provide a written application, supported by a two-minute video summarising their research. To ensure entrants the best possible chance of success, two free science communication training sessions were generously hosted by BHP Billiton Foundation.

The 2018 **Queensland Women in STEM Prize** was awarded on Saturday 24 March 2018 by The Hon. Leeanne Enoch, Minister for Science and Minister for the Arts and The Hon. Dianne Farmer, Minister for Child Safety, Youth and Women prior to the **SPACE INVADERS: To Infinity and Beyond** conversation event. Cecile Goode received the Judge's Choice Award for her entry *Sustainable Livestock Production and Gender Equity, Hand in Hand*. Amy Chan received the People's Choice Award for her entry *Mission Inflammation: Guarding Against Collateral Damage in Infection*.



⁶ Sourced from QTI Group Bookings data. Does not take into account schools/students purchasing tickets directly from the website (not part of a group).

Image (left): Pioneering burns specialist and Australian of the Year Fiona Wood shared stories from her trailblazing career during **PIONEERS IN SCIENCE**



Community members engaged with Queensland Museum scientists and learned about taxidermy, fossils, minerals at regional events in Chinchilla and Gladstone

REGIONAL

The World Science Festival Brisbane 2018 Regional Program included events in Gladstone, Chinchilla, Townsville, Toowoomba and, for the first time, Ipswich.

GLADSTONE

2 – 3 MARCH 2018

GLADSTONE CONVENTION AND EXHIBITION CENTRE

The regional program kicked-off in Gladstone with a Student Day attended by almost 350 students from Gladstone, Rockhampton and Tannum Sands. Presented with support from community partner QGC, events included a keynote from stand-up comedian, author and Mars One astronaut candidate Josh Richards and **COOL JOBS: GLADSTONE** featuring Andrew Christy (Queensland Museum Network), Nigel Waterhouse (QIMR Berghofer Medical Research Institute), David Lemalu (QGC) and Vincent J. Dalbo (Office of the Queensland Chief Scientist's Flying Scientist program). Events were complemented by a **SCIENCE EXPO** comprised of displays and hands-on activities delivered by Boyne Island Environmental Educational Centre, CQUniversity, Gladstone Regional Art Gallery and Museum, Gladstone Library, Harbour Watch and Power of Engineering.

On Saturday, 4,500 people converged on the Gladstone Convention and Exhibition Centre for the Community Day to explore the fields of palaeontology, mineralogy, taxidermy, archaeology and biology. Josh Richards encored his Student Day presentation, alongside the action-packed **STREET SCIENCE SHOW** and locals immersed themselves in the wonders of space in the AARNet IGLew (Immersive Global Learning Environment).

CHINCHILLA

9 – 10 MARCH 2018

CHINCHILLA CULTURAL CENTRE

Thanks to ongoing support from community partner QGC, World Science Festival Brisbane returned to Chinchilla for the third year. Almost 300 students from the Western Downs travelled to the Chinchilla Cultural Centre on Friday to learn about the parallel patterns in music and maths from 'mathbassador' and classically trained pianist Charles Gray. A day in the life of careers in microscopy, biomedical illustration, astrophysics and exercise physiology were explored in **COOL JOBS: CHINCHILLA**. Afterwards, students immersed themselves in the science displays and activities offered by the **SCIENCE EXPO**.

Charles Gray returned to the Chinchilla Cultural Centre for two presentations on Community Day, along with the ever-popular **STREET SCIENCE SHOW**. More than 2,000 locals took part in microscopy sessions, studied spiders, observed taxidermy demonstrations and marvelled at displays of fossils from Chinchilla's prehistoric past. Community Day activities also included scientific illustration workshops at the Lapunyah Art Gallery and science-themed storytelling at the Chinchilla Library.

TOOWOOMBA

16 – 17 MARCH 2018

COBB+CO MUSEUM AND EMPIRE CHURCH THEATRE

On Friday, Cobb+Co Museum offered two education events, attracting approximately 120 students from Toowoomba schools. In **FLIGHT CLUB: Design a Creature with Flight Club Features**, students explored how the animal kingdom has perfected the art of flying, soaring, parachuting and gliding to survive within diverse habitats, while **COOL JOBS: TOOWOOMBA** offered insights into the careers of biomedical illustration, taxonomy and astrobiology.

That evening, more than 200 Toowoomba locals converged on the Empire Church Theatre to learn the steps being taken by the medical industry to keep pace with the rising threat of deadly superbugs in **BUGS AND DRUGS: The Resistance Wars**. On Saturday, entry to Cobb+Co Museum was free, and visitors explored the extraordinary science of everyday materials with the **STREET SCIENCE SHOW**.

IPSWICH

22 MARCH 2018

THE WORKSHOPS RAIL MUSEUM

Australia's favourite science guru Dr Karl travelled to The Workshops Rail Museum on 22 March 2018, to debut **EXTREME MOMENTS IN SCIENCE**. The sell-out crowd was taken on a rollercoaster ride through the strange and wonderful, sublime, arcane and bizarre world of science.

Inclement conditions resulting from unexpected rain scuppered the **STARGAZING: Ipswich** event originally scheduled to follow Dr Karl. **STARGAZING: Ipswich** was subsequently held on 18 May 2018 to coincide with International Museums Day. More than 750 people gathered at The Workshops Rail Museum to see dead volcanoes, impact craters, and lava flows on the moon's surface, identify the Southern Cross and witness the rings of Saturn thanks to expert guidance from Brisbane Astronomical Society.

TOWNSVILLE

25 – 26 MARCH 2018

MUSEUM OF TROPICAL QUEENSLAND

The World Science Festival Brisbane 2018 Regional Program wrapped up in Townsville.

Entry to the Museum of Tropical Queensland was free on Sunday, resulting in more than 2,200 visitors who enjoyed explosions and mesmerising liquid nitrogen concoctions as part of the **STREET SCIENCE SHOW**.

On Sunday night **FACT OR FICTION: WEB OF INTRIGUE** made its Townsville debut with a family show, which was repeated on Monday for a schools audience. Experts from the Australian Nuclear Science and Technology Organisation (ANSTO) discussed the science of selfies, internet shopping and viral videos, and revealed the top 10 reasons people use the internet.

TAKE-TWO: TOWNSVILLE 2017

Safety threats posed by Tropical Cyclone Debbie scotched original plans for World Science Festival Brisbane 2017 programming in Townsville. The event was rescheduled for 13-14 August 2017 to coincide with National Science Week.

More than 620 people converged on the Museum of Tropical Queensland for two days of dedicated programming. On Sunday, visitors enjoyed two IMAX-style movies presented in a mobile planetarium. *Earth's Wild Ride* took viewers on a 3D journey through ice ages, dinosaur extinctions, volcanic eruptions and eclipses. *Oasis in Space* voyaged through the solar system, galaxy and universe in search of water and water-worlds like Earth.

That evening, astrophysicists Charley Lineweaver and Lucyna Chudczer joined science journalist Graham Phillips to discuss human colonisation of distant planets in **EARTH 2.0 Are We Moving to Mars?** Afterwards, visitors turned their eyes to the night sky with **STARGAZING: TOWNSVILLE**.

On Monday, students gained insight into careers of marine biology and palaeontology with two **APPRENTICE PROGRAMS** delivered by Queensland Museum scientists Tom Bridge and Espen Knutsen.

World Science Festival Brisbane 2017 – Regional Program, Townsville was generously supported by Energy Queensland, Inspiring Australia and James Cook University.

| VISITOR FEEDBACK

**THE FESTIVAL
GAVE ME HOPE
FOR THE FUTURE,
BECAUSE OF
THE POSITIVE
ATTITUDE OF THE
PRESENTERS ...**

**I LOVE,
LOVE, LOVE
THIS EVENT,
AS DOES
MY FAMILY!**

THE APPROACH TO SCIENCE AND MATHS SHOWN BY THE PRESENTERS WAS INSPIRING, AND AS A TEACHER I HAVE BEEN INSPIRED TO TEACH MATHS AND SCIENCE DIFFERENTLY.

**THIS IS A GREAT
EVENT, A COUP
FOR BRISBANE
AND IT LIFTS
THE PROFILE OF
SCIENCE IN OUR
COMMUNITY.**

**THIS WAS
[A] GREAT
OPPORTUNITY
TO SHOWCASE
OUR CITY, THE
UNIVERSITIES AND
THE RESEARCH
CARRIED OUT ...**

THOUGHTFUL, INSIGHTFUL
AND ENTERTAINING TOPICS
AND SPEAKERS.

**I LOVE SCIENCE AND LEARNING ALL
ABOUT THE DIFFERENT TYPES OF
SCIENCE. I WANT TO BE A SCIENTIST
WHEN I GROW UP!**

**I HOPE THE
FESTIVAL WILL
BE COMING TO
BRISBANE FOR
MANY MORE
YEARS!**

**CLOSE
ENCOUNTERS
OF THE THIRD
KIND IN CONCERT
WAS PURE
PERFECTION!**

**I LOVE
THE PANEL
LECTURES IN
WHICH THEY
DISCUSS
POSSIBILITIES,
IDEAS. THEY
MAKE ME
WONDER
ABOUT WHAT
COULD BE ...**

**I LOVE THIS FESTIVAL. I THINK IT'S GREAT THAT
SCIENTISTS AND PEOPLE WHO EXCEL IN STEM
ARE ON STAGE AND CELEBRATED. IT'S A GREAT
WAY FOR PEOPLE TO SEE THE VALUE OF SCIENCE
IN EVERYTHING WE DO.**

AUDIENCES

The diverse nature of World Science Festival Brisbane events provides a path for everyone, regardless of age or expertise, to meaningfully engage in STEM.

ATTENDANCES

More than 200,000 attendances were recorded for World Science Festival Brisbane 2018, representing a nine per cent increase on the previous year. Attendances by event location, including year-on-year growth are provided in Table 1, below.

TABLE 1: TOTAL ATTENDANCES⁷ BY EVENT LOCATION

Location	2016	2017	2018	Year-on-year growth (2017 – 2018)	%
Gladstone		4,410	4,849	439	10
Chinchilla	2,190	1,670	2,394	724	43
Toowoomba		300	1,042	742	247
Ipswich			1,227	1,227	100
Townsville	907	625 ⁸	2,370	1,745	279
Brisbane	117,270	175,845	188,857	13,012	7
TOTAL	120,367	182,850⁸	200,739	17,264	9

As in previous years, most events were attended by individuals living in the greater Brisbane area (refer Table 2, right). Interstate and International visitation was bolstered by the affiliated conferences MuseumNEXT (19-21 March 2018) and Conference on Science and Christianity (23-25 March 2018), 56 high school students from regional Queensland participating in the STEM Girl Power Camp sponsored by the Department of Education and a delegation of 74 students and teachers from China on a dedicated study excursion managed by Education Queensland International. Attendees who travelled further than 200 kilometres stayed overnight, either with family or friends or in paid accommodation, generating 65,065 event specific visitor nights.

Audience profiling for the flagship event in Brisbane was obtained from intercept surveys at **STREET SCIENCE!** and in the Queensland Museum, and by post-event surveys sent to ticket buyers. Free events attracted Queensland Museum's traditional *Expression* audience⁹. *Essence* was also a predominant audience for ticketed event alongside the *Essence* and *Stimulation* growth markets⁹.

This year, World Science Festival Brisbane offered a VIP ticket package. Designed to entice non-Brisbane visitors, the exclusive and strictly limited offer included six events over three days and two nights including VIP access to **THE HATCHERY**, and reserved seating for the world premiere performance of **CLOSE ENCOUNTERS OF THE THIRD KIND IN CONCERT**. The package proved successful, selling to a mix of local (60 per cent) and non-local (40 per cent) audiences.

TABLE 2: ATTENDANCES BY GEOGRAPHIC ORIGIN¹⁰ (BRISBANE)

Base	2016	2017	2018
Brisbane	81%	78%	79%
Intrastate	15%	18%	17%
Interstate	3%	3%	3%
International	1%	1%	1%

PARTICIPANTS

The World Science Festival Brisbane brings an array of the world's greatest thought leaders to Queensland and showcases the best and brightest local experts.

In 2018 the talent line-up included 192 participants from Australia, Germany, New Zealand, Switzerland, UK and USA, an 84-piece orchestra and an 80-voice choir. The line-up of world-leading scientists, communicators and performers included the return of Australia's Chief Scientist Alan Finkel; World Science Festival co-founder Brian Greene; environmentalist and author Tanya Ha; beloved science communicator Karl Kruszelnicki; Nobel Laureate Brian Schmidt; and science journalist extraordinaire Robyn Williams. Joining the stage with these World Science Festival Brisbane veterans were NASA's senior project scientist for the Hubble Space Telescope Jennifer Wiseman; champion cyclist Bridie O'Donnell; award-winning author and leader in space archaeology Alice Gorman; and Paralympian sporting legend Brendan Burkett.

The breadth of expertise amongst our academic partners – namely Brisbane's three award-winning universities Griffith University, QUT and The University of Queensland – was demonstrated throughout the World Science Festival Brisbane 2018 program with participants in the fields of archaeology, anthropology, biomedical science, mathematics and statistics, sport and exercise science, psychology and cryptology taking part.

A full list of participants is provided at Appendix 3.

Dr Karl thrilled Ipswich audiences with a rollercoaster ride through the scientific landscape in **EXTREME MOMENTS IN SCIENCE**

VOLUNTEERS

World Science Festival Brisbane 2018 was supported by more than 200 enthusiastic volunteers, including 20 team leaders who supervised venue teams. Volunteer duties varied from way-finding and queue management through to greeting and accompanying participants, audio visual and backstage tasks.

Volunteering opportunities are promoted year-round on the World Science Festival Brisbane website. All 2018 applicants were assessed and interviewed by the Volunteer Coordinator and rostered according to expertise, areas of interest and availability.

Two weeks prior to World Science Festival Brisbane 2018 volunteers were invited to attend one of three orientation sessions at Queensland Museum during which they received the official volunteer handbook and uniform, a verbal overview of the program, general information on protocol and responsibilities, and a tour of event venues.

⁷ Sourced from end-of-season ticket reports and venue attendance counts.
⁸ World Science Festival Brisbane 2017 recorded attendances of 182,850, comprised of 182,225 attendances at events held in Brisbane, Gladstone, Chinchilla and Toowoomba in March 2017, and a further 625 attendances at events in Townsville in August 2017. Townsville events were originally scheduled for March 2017 but rescheduled until April 2017 as a result of Cyclone Debbie. Townsville 2017 attendances were not included in the 2017 IN REVIEW report as the event was held after the reporting period had concluded. See page 19 for more details.

⁹ Morris Hargreaves McIntyre Cultural Segments.

¹⁰ Sourced from Economic Impact Statement commissioned by Tourism and Events Queensland.



MARKETING

World Science Festival Brisbane 2018 was supported by a multi-channel, national marketing and communication strategy.

The strategy concentrated on building brand equity through story-telling and best practice marketing. Campaign activity included advertising, digital and social engagement, outdoor signage and printed collateral, all designed to increase brand awareness, encourage attendance and drive ticket sales.

The new tag line, 'Follow your curiosity', conveyed the sentiment that World Science Festival Brisbane is an accessible, fun and rewarding experience for everyone. This was echoed in the new television commercial that employed original footage interspersed with destination imagery to take viewers on a journey through space and time. Curiosity was evoked with three bold and intriguing hero images – planets, the flu virus and neural brain pathways. The brain image dominated to maximise recall and reinforce the humanity theme.

ADVERTISING

Digital advertising allowed recurrent data analysis to continually test and refine content for optimal results. Comprising a number of elements, the digital advertising campaign was designed to drive awareness, build passive bias and increase conversion from a highly targeted audience. Video format advertisements achieved the best results across all channels.

The television commercial aired more than 1,800 times on subscription channels including placements during *American Idol*, *Better Things*, *How I Met Your Mother*, *Grand Designs Australia*, reaching an audience of 4.9 million. Free-to-air placement included premium airtime with first or last placement in commercial breaks on Channel 9 programming.

Digital and television advertising were complemented by print and radio advertising. Print included targeted placements in the Tourism and Events Queensland *Alive* major events calendar, *Creative Brisbane*, QPAC *Story*, *Chinchilla News* and *Murilla Community News*. Almost 100 radio advertisements aired on Nova 106.9, designed to build awareness and drive action with high-frequency reminders reaching more than 220,000 listeners in the two-weeks prior to opening day.



World Science Festival Brisbane collateral featured three bold and intriguing hero images

OWNED DIGITAL +SOCIAL

The official website worldsciencefestival.com.au continued to be the central hub for all World Science Festival Brisbane activities, events and news. The website was visited by 191,830+ people from 1 June 2017 – 31 May 2018. Website visitation peaked on Saturday 24 March 2018, with 68,200+ page views.

Social activity outside the campaign period included Queensland Museum collection and research content and coverage related to major science events such as the NASA Cassini End of Mission and National Frog ID Citizen Science project. This content drove Facebook, Twitter and Instagram engagement and established World Science Festival Brisbane as a credible, year-round source of STEM information and commentary.

In-campaign social content focussed on programming and participant news, supported by original imagery and extensive video assets. On 8 March 2018, in celebration of International Women's Day, social channels featured every woman scheduled to participate in World Science Festival Brisbane 2018, resulting in more than 50 posts highlighting the role of women in STEM.

Based on the hugely successful NASA framework, a Digital Ambassador initiative was piloted to encourage user-generated content and increase reach and engagement. Ten Digital Ambassadors – including emerging and mid-career professionals, students, entrepreneurs and citizen scientists – were chosen as a result of a competitive application process. Digital Ambassadors reviewed, shared and promoted World Science Festival Brisbane 2018 events across their social channels reaching an audience of 40,000+. From 1 May 2017 to 30 April 2018 social media channels generated more than 9.3 million impressions. Highlights included:

- #WSFB2018 trending second-place in the local market on 22 March 2018
- 85 Facebook events created to deliver event-specific content
- 53% average growth in social media audiences on Facebook (20,160+ followers), Twitter (3,042+ followers) and Instagram (2,286+ followers).

Social and digital content consisted of organic posts, event listings and more than 55 World Science Festival Brisbane-specific eDMs distributed across eight databases, achieving an average open rate of 40 per cent, well above industry average.

OUTDOOR

Of an evening, Brisbane took on a red hue with lighting projections on Sir Thomas Brisbane Planetarium, QPAC, Wheel of Brisbane, Treasury Casino, Reddcliffe Place and the Kurilpa, Victoria and Story bridges. Images of the Queensland Museum's entomology collection were also projected onto the William Jolly Bridge.

Ambient promotion was complemented by large format signage across the Cultural Precinct and banners, flags, bollards and inner-city digital billboards across Brisbane. Interstate awareness was piqued with digital billboards in New South Wales and Victoria timed to coincide with launch of the VIP ticket package.

SIGNAGE +COLLATERAL

Below-the-line activity comprised promotional posters, postcards and a 20-page tabloid program, distributed to event and partner venues, commuter hubs, tourist information centres, cafes, restaurants, libraries, shopping centres, and social hubs throughout south-east Queensland. During the festival, signage was installed throughout the Cultural Precinct and South Bank, providing eye-catching way-finding information and a visual connection across all World Science Festival Brisbane 2018 venues.



Australia's favourite science communicator
Dr Karl debuted his signature **EXTREME
MOMENTS IN SCIENCE** event in Ipswich

MEDIA RELATIONS

Publicity and media relations created interest and excitement, supplementing the marketing and communication strategy.

World Science Festival Brisbane 2018 enjoyed almost five months of media coverage, commencing with the release of the VIP ticket package on 17 November 2017. This strategy spotlighted **CLOSE ENCOUNTERS OF THE THIRD KIND IN CONCERT** – and other VIP ticket package events – spreading awareness and generating excitement ahead of the official program launch.

The full program was launched on Thursday 1 February 2018 with a public spectacle that juxtaposed science and art with chemistry experiments, bubble demonstrations and a roving, live rendition of the instrumental hit single *Theme from Close Encounters of the Third Kind* performed by a string trio.

To mark the launch of World Science Festival Brisbane 2018 The Hon. Leeanne Enoch, Minister for Science and the Arts held a media call at Parliament House on Wednesday 21 March 2018. That afternoon, World Science Festival Co-Founder Brian Greene embarked on a two-day media tour of Sydney and Melbourne, resulting in television interviews on *Tonightly* with Tom Ballard, *Studio 10*, *News Breakfast* and *Compass* (ABC).

ABC and Channel 9 were named official media partners, resulting in a live morning radio broadcast from **STREET SCIENCE!** and five live weather crosses on the *Today Show* on Saturday 24 March 2018, in-studio and recorded interviews with participants (including Arthur Benjamin, Jennifer Wiseman and Eddie Woo) over 11 ABC radio programs, and ticket give-away promotion *The Today Show*.

More than 1,300 media opportunities were pitched to local, national and international outlets. Opportunities were supplemented by a comprehensive media kit, participant profile catalogue, image and video library, and Media Accreditation Program. Accredited media received regular updates, in-event interview opportunities and exclusive access to the World Science Festival Brisbane 2018 Media Centre, centrally located at The Edge, State Library of Queensland.

The media campaign resulted in 1,902 mentions with an Advertising Space Rate of more than \$18 million, reaching a cumulative global audience of one billion people that peaked on Saturday 24 March 2018. As demonstrated in Table 3, online media produced the most coverage with 1,682 mentions, resulting from targeted engagement with international arts/culture blogs and websites.

TABLE 3: MENTIONS BY MEDIA TYPE¹⁰
1 JUNE 2017 – 31 MAY 2018

Outlet	Number	Audience Reach	ASR (\$)
Online	1,682	1,070,027,427	10,753,845
Radio	1116	2,670,600	5,309,722
Print	78	4,795,610	1,004,845
Television	26	3,727,000	952,739
TOTAL	1,902	1,081,220,637	8,521,491

¹⁰ Sourced from ISENTIA and Meltwater Media Monitoring. Results are considerably higher than previous years due to the introduction of online and international media monitoring through Meltwater Media Monitoring in 2018.

PARTNERSHIPS

World Science Festival Brisbane 2018 was generously supported by partners committed to securing Queensland's prosperity through an event that educates, inspires and enriches the lives of many.

Continued investment from Queensland Government has been instrumental in the ongoing success of World Science Festival Brisbane. This year the departments of Agriculture and Fisheries, Health, Arts Queensland and Premier and Cabinet contributed to programming 'at large'. The Office of Queensland Chief Scientist supported the regional program and, together with Department of Communities, the **Queensland Women in STEM Prize**. Department of Environment and Science assisted **THE HATCHERY** and tried their hand at **STREET SCIENCE!** with conservation activities while the Department of Education contributed curriculum-linked learning resources.

Tourism and Events Queensland and Brisbane Marketing returned as strategic partners, endorsing World Science Festival Brisbane as an unmissable 'stay and see' opportunity across local, interstate and international markets. Academic partners Griffith University, QUT and The University of Queensland contributed vital expertise to the fledgling Signature Event program, and unfettered access to their esteemed personnel across all events. A full participant list is provided at Appendix 3.

A generous, repeat donation from the BHP Billiton Foundation allowed the return of **STREET SCIENCE!**. This free, two-day, open-air event delighted crowds with hands-on workshops, interactive demonstrations and mesmerising displays celebrating STEM, including bespoke play-based activities for under-fives, delivered by early childhood experts, C&K. In a World Science Festival Brisbane first, **STREET SCIENCE!** and Queensland Museum venues hosted free, water refill stations. Supplied by Go2Zone (an initiative of Healthy Land and Water) the stations encouraged visitors to use refillable water bottles instead of single-use plastics.

World Science Festival Brisbane 2018 programs and participants achieved phenomenal promotion thanks to media partners ABC and Channel 9. Mass media coverage was complemented by bespoke and targeted activity from official suppliers Southern Cross Austereo, Cosmos and Welcome to the Fold.

Community partner QGC contributed to the growing regional program, investing in Gladstone and Chinchilla. Regional programming was bolstered by participants from QIMR Berghofer Medical Research Institute and ANSTO, while online streaming of **THE HATCHERY** and some of the conversation and salon series by AARNet allowed access to those unable to attend events in person.

Our long-term friends at QPAC ensured that the world premiere event **CLOSE ENCOUNTERS OF THE THIRD KIND IN CONCERT** was a sell-out success. QAGOMA curated the film program for the third year running, while other neighbours State Library of Queensland and South Bank Parklands contributed venue hire. We collaborated with Arup and The Australian Research Council Centre of Excellence for Australian Biodiversity and Heritage (CABAH) to deliver the third annual **FORESIGHT SERIES** and **AUSTRALIA'S EPIC STORY: Exploring 130,000 Years of History** respectively. Inspiring Australia supported the popular **LET'S TALK** series and Celestron delivered **STARGAZING: Brisbane**. Official suppliers Mantra Hotels and Sci-Fleet Toyota accommodated and transported travelling participants with the professionalism, style and efficiency synonymous with the World Science Festival Brisbane brand.

OUR PARTNERS

Queensland Museum Network is grateful for the generous contribution made by partners in support of World Science Festival Brisbane 2018.

PRESENTED BY



OUR PARTNERS

STRATEGIC PARTNERS



ACADEMIC PARTNERS



STREET SCIENCE PARTNER



MEDIA PARTNERS



PERFORMANCE PARTNER



COMMUNITY PARTNER



INNOVATION PARTNER



PROGRAM PARTNERS



OFFICIAL SUPPLIERS



¹¹ Includes support from Agriculture and Fisheries, Arts Queensland, Communities (Office for Women), Environment and Science (including Office of the Queensland Chief Scientist), Health, Education and Premier and Cabinet.

Visitors to Queensland Museum contributed to an origami bird installation as part of **MIGRATORY SHOREBIRDS**



| APPENDICIES

APPENDIX 1: NOMENCLATURE

Activity provider	an individual or organisation that provided programming at Queensland Museum, a Regional Event or as part of <i>Street Science!</i>
Attendee/ance	an individual who attended World Science Festival Brisbane events
Affiliate event	approved activities staged by third party organisations under the aegis of the World Science Festival Brisbane brand
eDM	electronic direct mail
Event	individual activities that comprised the official World Science Festival Brisbane program – performance, conversation and salon, <i>Street Science!</i> Film, etc.
Participant	an individual who took part in a World Science Festival Brisbane event, either as a speaker or performer (excluding activity providers)
Performances	the number of times an individual event was performed
Program	the collective noun for all individual events that comprise World Science Festival Brisbane
Ticketed	an event where attendees were required to make a booking to secure a ticket and take part.

APPENDIX 2: ACTIVITY PROVIDERS

#	ACTIVITY PROVIDER NAME	STATE	EVENTS
1	AARNet	Queensland, Australia	G,C
2	ABC Brisbane	Queensland, Australia	SS
3	Arup	Queensland, Australia	SS
4	Australian MegaFauna Project	Queensland, Australia	SS
5	Australian Science Olympiads	Queensland, Australia	SS
6	BHP Billiton Foundation	Queensland, Australia	SS
7	BOP Industries	Queensland, Australia	QM
8	Brisbane Astronomical Society	Queensland, Australia	I
9	C&K	Queensland, Australia	SS
10	Celestron	Queensland, Australia	SS
11	Central Queensland University	Queensland, Australia	G
12	Coding Kids & INovoTech	Queensland, Australia	SS
13	Department of Environment and Science	Queensland, Australia	SS
14	Fizzics Education	Queensland, Australia	OS
15	Flying Fox Studios	Queensland, Australia	SS
16	Geckos Wildlife	Queensland, Australia	QM
17	Geological Society of Australia	Queensland, Australia	SS
18	Gladstone Library	Queensland, Australia	G
19	Great Barrier Reef Foundation	Queensland, Australia	SS
20	Griffith University	Queensland, Australia	SS
21	Healthy Land and Water	Queensland, Australia	SS
22	Jurassic Joe	Queensland, Australia	G
23	Translational Research Institute	Queensland, Australia	SS
24	Mud Kitchen	New South Wales, Australia	SS
25	Nadia Sunde	Queensland, Australia	OS
26	Channel 9	Queensland, Australia	OS
27	Office of the Queensland Chief Scientist	Queensland, Australia	G,C
28	Petrosains Kuala Lumpur	Kuala Lumpur, Malaysia	SS
29	Power of Engineering	Queensland, Australia	G,C
30	Australasian Radiation Protection Society Inc. (Queensland) Branch) "QARPS"	Queensland, Australia	SS
31	QIMR Berghofer Medical Research Institute	Queensland, Australia	G,C,SS
33	Queensland Museum	Queensland, Australia	G,C, QM, SS
34	QUT	Queensland, Australia	QM, SS, OS

#	ACTIVITY PROVIDER NAME	STATE	EVENTS
35	Robotics Playground	Queensland, Australia	SS
36	Soil Science Australia	Queensland, Australia	SS
37	STEM Punks	Queensland, Australia	SS
38	Street Science	Queensland, Australia	SS,OS,G,C,TM,TV
39	The University of Queensland	Queensland, Australia	QM,SS
40	University of New England	Queensland, Australia	SS
41	Young Scientists of Australia and the National Youth Science Forum	Queensland, Australia	SS

LEGEND

B	Brisbane
C	Chinchilla
G	Gladstone
I	Ipswich
OS	Osmosis Stage
QM	Queensland Museum
TM	Toowoomba
TV	Townsville

APPENDIX 3: PARTICIPANTS

#	NAME	EVENT	GEOGRAPHIC ORIGIN	REPRESENTING (PARTNER ORGANISATIONS)
1	Dr Robert Adlard	B,I	Queensland, Australia	
2	Associate Professor Lynley Anderson	B	Queenstown	
3	Mr Matt Arthur	F	Queensland, Australia	Queensland Government
4	Mr Tim Atkinson	F	Queensland, Australia	Arup
5	Ms Carol Azzam	TV	New South Wales, Australia	ANSTO
6	Dr Robert Bell	B	Queensland, Australia	
7	Dr Arthur Benjamin	B	California, USA, USA	
8	Associate Professor Jesse Bering	B	Otago, New Zealand	
9	Professor Martin Betts	B	Queensland, Australia	
10	Mrs Katie Bickford	F	Queensland, Australia	BCC
11	Professor David Bishop	B	Victoria, Australia	
12	Ms Christine Blanchard	B	Queensland, Australia	Brisbane City Council
13	Dr Mark BlaskoVictoriah	B	Queensland, Australia	The University of Queensland
14	Mrs Heather Bone	F	Queensland, Australia	
15	Ms Jodie Bricout	F	Victoria, Australia	
16	Dr Jennifer Broom	TM	Queensland, Australia	Queensland Government
17	Professor Matt Brown	B	Queensland, Australia	QUT
18	Ms Natasha Browne	F	Queensland, Australia	
19	Associate Professor Adam Brumm	B	Queensland, Australia	Griffith University
20	Mr Nicholas Buc	B	New York, USA, USA	
21	Dr Joshua Burgess	F	Queensland, Australia	
22	Mr Michae lBurke	F	Queensland, Australia	Queensland Government
23	Professor Brendan Burkett OAM	B	Queensland, Australia	
24	Professor Benjamin Burton	B	Queensland, Australia	The University of Queensland
25	Professor Aidan Byrne	B	Queensland, Australia	
26	Ms Jennifer Campbell		Queensland, Australia	Griffith University
27	Ms Kellie Charlesworth	F	Queensland, Australia	Arup
28	Dr Andrew Christy	G	Queensland, Australia	
29	Professor Bill Clarke	F	Queensland, Australia	The University of Queensland
30	Professor Peter Collignon AM	B	Australian Capital Territory, Australia	
31	Mr Troy Collings	F	Queensland, Australia	
32	Miss Sarah Collins	F	Queensland, Australia	
33	Ms Caitlin Corrigan	F	Queensland, Australia	Arup

#	NAME	EVENT	GEOGRAPHIC ORIGIN	REPRESENTING (PARTNER ORGANISATIONS)
34	Mr Patrick Couper	B	Queensland, Australia	
35	Associate Professor Darren Curnoe	B	New South Wales, Australia	CABAH
36	Ms Alice Dahlberg	F	Queensland, Australia	
37	Dr Vincent Dalbo	G	Queensland, Australia	
38	Professor Norelle Daly	B	Queensland, Australia	
39	Dr Georgina Davis	F	Queensland, Australia	
40	Professor Melissa de Zwart	B	South Australia, Australia	
41	Professor Andrew Dempster	B	New South Wales, Australia	
42	Ms Sharon Denny	F	Queensland, Australia	
43	Associate Professor Cheryl Desha	B	Queensland, Australia	Griffith University
44	Dr Keith Devlin	B	California, USA	
45	Professor Carol Dickenson AM	B	Queensland, Australia	
46	Mr Tony Donegan	F	Queensland, Australia	
47	Ms Rebecca Duffy	F	Queensland, Australia	Queensland Government
48	The Hon. Leeanne Enoch	B	Queensland, Australia	
49	Ms Jasmine Fairbairn	B	Queensland, Australia	
50	Professor Kim Felmingham	B	Victoria, Australia	
51	Mr Craig Fenton	F	Queensland, Australia	
52	Dr Chris Ferrie	B	New South Wales, Australia	
53	Dr Alan Finkel AO	B	Australian Capital Territory, Australia	
54	Dr Elizabeth Finkel	B	Victoria, Australia	Cosmos
55	Ms Jody Finsen	F	Queensland, Australia	Arup
56	Professor David Franklin	B	Munich, Germany	
57	Professor Richard Fuller	B	Queensland, Australia	The University of Queensland
58	Mr Rene Garcia	F	Queensland, Australia	Arup
59	Ms Sylvie Garner	F	Queensland, Australia	Queensland Government
60	Mr Jackson Gerard	F	Queensland, Australia	Queensland Government
61	Mr Craig Gibbons	F	Queensland, Australia	Arup
62	Professor Alice Gorman	B	South Australia, Australia	
63	Ms Charles Gray	B,C	Victoria, Australia	
64	Dr Katharine Greenaway	B	Victoria, Australia	
65	Professor Brian Greene	B	New York, USA	
66	Professor Lyn Griffiths	B	Queensland, Australia	

#	NAME	EVENT	GEOGRAPHIC ORIGIN	REPRESENTING (PARTNER ORGANISATIONS)
67	Professor Rainer Grun	B	Queensland, Australia	Griffith University
68	Ms Tanya Ha	B	Victoria, Australia	
69	Dr Krispin Hajkowicz	B,TM	Queensland, Australia	Queensland Government
70	Ms Penny Hall	F	Queensland, Australia	Arup
71	Mr Chris Hamblong	F	Queensland, Australia	Queensland Government
72	Professor Ben Hankamer	F	Queensland, Australia	The University of Queensland
73	Professor Damien Harkin	B	Queensland, Australia	QUT
74	Mr Alexander Hayward	B	Queensland, Australia	
75	Ms Angela Heck	F	Queensland, Australia	
76	Professor Ian Hickie AM	B	New South Wales, Australia	
77	Mr Harry Hines	B	Queensland, Australia	Queensland Government
78	Professor Peter Hiscock	B	New South Wales, Australia	
79	Ms Bernie Hobbs	B	New South Wales, Australia	ABC
80	Dr John Hooper	B	Queensland, Australia	
81	Professor Jonti Horner	TM	Queensland, Australia	
82	Ms Kylie Hughes	F	Queensland, Australia	Queensland Government
83	Mr David Iliffe		Queensland, Australia	ABC
84	Associate Professor Muireann Irish	B	New South Wales, Australia	
85	Mr Kris Isles	F	Queensland, Australia	
86	Mr David Jackson	F	Queensland, Australia	
87	Prof Zenobia Jacobs	B	New South Wales, Australia	
88	Professor Cheryl Jones	B	Victoria, Australia	
89	Professor Nalini Joshi	B	New South Wales, Australia	
90	Mr Simon Kalinowski	F	Queensland, Australia	
91	Dr Prasad Kaparaju	F	Queensland, Australia	Griffith University
92	Dr Vincent Kelly	B	Queensland, Australia	The University of Queensland
93	Ms Madeleine Kersting Flynn	C,TM	Queensland, Australia	QIMR Berghofer Medical Research Institute
94	Professor Glenn King	B	Queensland, Australia	The University of Queensland
95	Mr Mitch Klemmer	TV	New South Wales, Australia	ANSTO
96	Ms Anne Kovachevich	F	Queensland, Australia	Arup
97	Dr Karl Kruszelnicki	B,I	New South Wales, Australia	ABC
98	Professor David Lambert	B	Queensland, Australia	Griffith University
99	Mr David Lemalu	G	Queensland, Australia	QGC

#	NAME	EVENT	GEOGRAPHIC ORIGIN	REPRESENTING (PARTNER ORGANISATIONS)
100	Mr Carol Lemmens	F	California, USA	Arup
101	Mr Steve Liddell	B,G,C,TM,TV	Queensland, Australia	
102	Dr Colin Limpus	B	Queensland, Australia	Queensland Government
103	Dr Charley Lineweaver	B	Australian Capital Territory, Australia	
104	Dr Serena Love	B	Queensland, Australia	The University of Queensland
105	Ms Kirsten Macey	F	Queensland, Australia	Queensland Government
106	Ms Jacqueline Mackay	G	Queensland, Australia	ABC
107	Emeritus Professor Alan Mackay-Sim	B	Queensland, Australia	Griffith University
108	Ms Lynne Malcolm	B	New South Wales, Australia	ABC
109	Ms Joyanne Manning	B,F	Queensland, Australia	Arup
110	Mr Jeremy Mansfield	F	Queensland, Australia	
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114	Dr Bernadette McCabe	F	Queensland, Australia	
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116	Dr Joanna McMillan	B	New South Wales, Australia	
117	Ms Fiona McNee	F	Queensland, Australia	Queensland Government
118	Distinguished Professor Kerrie Mengersen	B	Queensland, Australia	QUT
119	Associate Professor Craig Millar	B	Auckland, New Zealand	
120	Associate Professor Clemency Montelle	B	Christchurch, New Zealand	
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122	Ms Jaine Morris	F	Queensland, Australia	
123	Professor Gene Moyle	B	Queensland, Australia	QUT
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131	Mr Gabriel O'Keefe	F	Queensland, Australia	
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134	Mr Marc Orchard	F	Queensland, Australia	
135	Dr Jonathan Peake	C	Queensland, Australia	QUT
136	Associate Professor Joel Pearson	B	New South Wales, Australia	
137	Dr Matthew Piper	B	Victoria, Australia	
138	Dr Daniel Price	B	California, USA	
139	Mr Giles Prowse	F	Queensland, Australia	Arup
140	Dr Graham Radford-Smith	B	Queensland, Australia	QIMR Berghofer Medical Research Institute
141	Mr Shaun Rainford	F	Queensland, Australia	Arup
142	Associate Professor Derek Richard	B	Queensland, Australia	QUT
143	Muriel Richard-Noca	B	Geneva, Switzerland	
144	Professor Linda Richards	B	Queensland, Australia	The University of Queensland
145	Mr Josh Richards	G	Western Australia, Australia	
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147	Dr Caroline Riot	B	Queensland, Australia	Griffith University
148	Distinguished Professor Richard Roberts	B	New South Wales, Australia	CABAH
149	Mr Tony Roberts	F	Queensland, Australia	Queensland Government
150	Dr Chelsie Rohrscheib	B	Queensland, Australia	The University of Queensland
151	Mr Michael Rose	TV	New South Wales, Australia	ANSTO
152	Professor Lynette Russell	B	Victoria, Australia	
153	Professor Pankaj Sah	B	Queensland, Australia	The University of Queensland
154	Scientia Professor Veena Sahajwalla	B	New South Wales, Australia	
155	Professor Brian Schmidt AC	B	Australian Capital Territory, Australia	
156	Dr Kate Seib	TM	Queensland, Australia	Griffith University
157	Associate Professor Jamie Seymour	B	Queensland, Australia	
158	Mr Ryan Sim	B	Queensland, Australia	
159	Dr Leonie Simpson	B	Queensland, Australia	QUT
160	Associate Professor Tanya Smith	B	Queensland, Australia	Griffith University
161	Mr Malcolm Smith	B,F	London, UK	Arup
162	Professor Andrew Smith	B	Queensland, Australia	
163	Dr Liam St Pierre	B	Queensland, Australia	QIMR Berghofer Medical Research Institute
164	Professor Kim Sterelny	B	Australian Capital Territory, Australia	

#	NAME	EVENT	GEOGRAPHIC ORIGIN	REPRESENTING (PARTNER ORGANISATIONS)
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167	Mr Josh Symonds	F	Queensland, Australia	Arup
168	Mr Dion Tatow	B	Queensland, Australia	
169	Mr Richard Taylor	F	Queensland, Australia	
170	Ms Cathy ter Bogt	B	Queensland, Australia	
171	Mr Peter Thompson	F	Queensland, Australia	
172	Dr Jim Thompson	B	Queensland, Australia	
173	Mr Alan Thomson	F	Queensland, Australia	Arup
174	Mr Jeremy Thorpe	F	Queensland, Australia	
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176	Dr Makrina Totsika	TM	Queensland, Australia	QUT
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188	Dr Jennifer Wiseman	B	Maryland, USA	
189	Mr Edward Woo	B	New South Wales, Australia	
190	Professor Fiona Wood AM	B	Western Australia, Australia	
191	Dr LindSouth Australiay Wu	B	New South Wales, Australia	
192	Dr Maryam Ziaei	B	Queensland, Australia	The University of Queensland

LEGEND

B	Brisbane
C	Chinchilla
G	Gladstone
I	Ipswich
OS	Osmosis Stage
QM	Queensland Museum
TM	Toowoomba
TV	Townsville

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WITH SPECIAL THANKS TO

Board of the Queensland Museum, Brisbane Astronomical Society, Education Queensland International, Carpentaria Land Council Aboriginal Corporation, Queensland Wader Study Group, Queensland Museum Network staff and volunteers, John Plummer, Bill Tomkins, Stefan Treyvaud and World Science Festival Brisbane 2018 volunteers.

World Science Festival Brisbane 2018: In Review

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A Corner Grey and Melbourne Streets South Brisbane QLD 4101
 P +617 3842 9103
 E info@worldsciencefestival.com.au
 W worldsciencefestival.com.au

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IN 2019**