scitech

Released June 2018. Version 1.1

# SCITECH 2018 – 2021 BUSINESS PLAN

A business plan to invest in **Science, Technology, Engineering** and **Mathematics** for Western Australia's economic and social future

GOVERNMENT OF WESTERN AUSTRALIA

The 2018 to 2021 BUSINESS PLAN for Scitech in partnership with the Western Australian Government

# EXECUTIVE SUMMARY

Scitech is Western Australia's pre-eminent STEM engagement organisation providing quality experiences for people through science, technology, engineering and mathematics (STEM). Developing STEM interest, awareness, participation and capability benefits our community, diversifies our economy and develops our future workforce.

For the past 30 years, Scitech has offered engaging, inspiring and relevant experiences that foster a lifelong curiosity and positive attitude towards STEM. We directly engage more than 500,000 Western Australians in STEM every year, plus many more people online and around the world. As a result, Western Australians trust and hold Scitech in high regard. However, in today's rapidly changing environment, we cannot rest on our past achievements. Over 2018 to 2021, the population of Western Australia is growing, and the needs of the future workforce are changing. We need to be agile and able to adapt to become a commercially sustainable and more innovative organisation, driven by the pursuit of excellence, to deliver our full constitutional remit.

For 2018 to 2021, Scitech has developed a new vision for enabling a brighter STEM-enabled future for all Western Australians. We call it 'New Scitech'. This plan sets out how our 'New Scitech' strategy will deliver on our mission, vision and business objectives from July 2018 through to June 2021, which is a time of critical change and evolution. Our bold 'New Scitech' strategy will see Scitech change to become more digitally focused in the way we deliver STEM education and awareness, and will drive the showcasing of the latest STEM technologies and advances from across Australia and the globe. Through this strategy, Scitech will empower all Western Australians to be equipped with the 21st century skillset needed now and for the future.

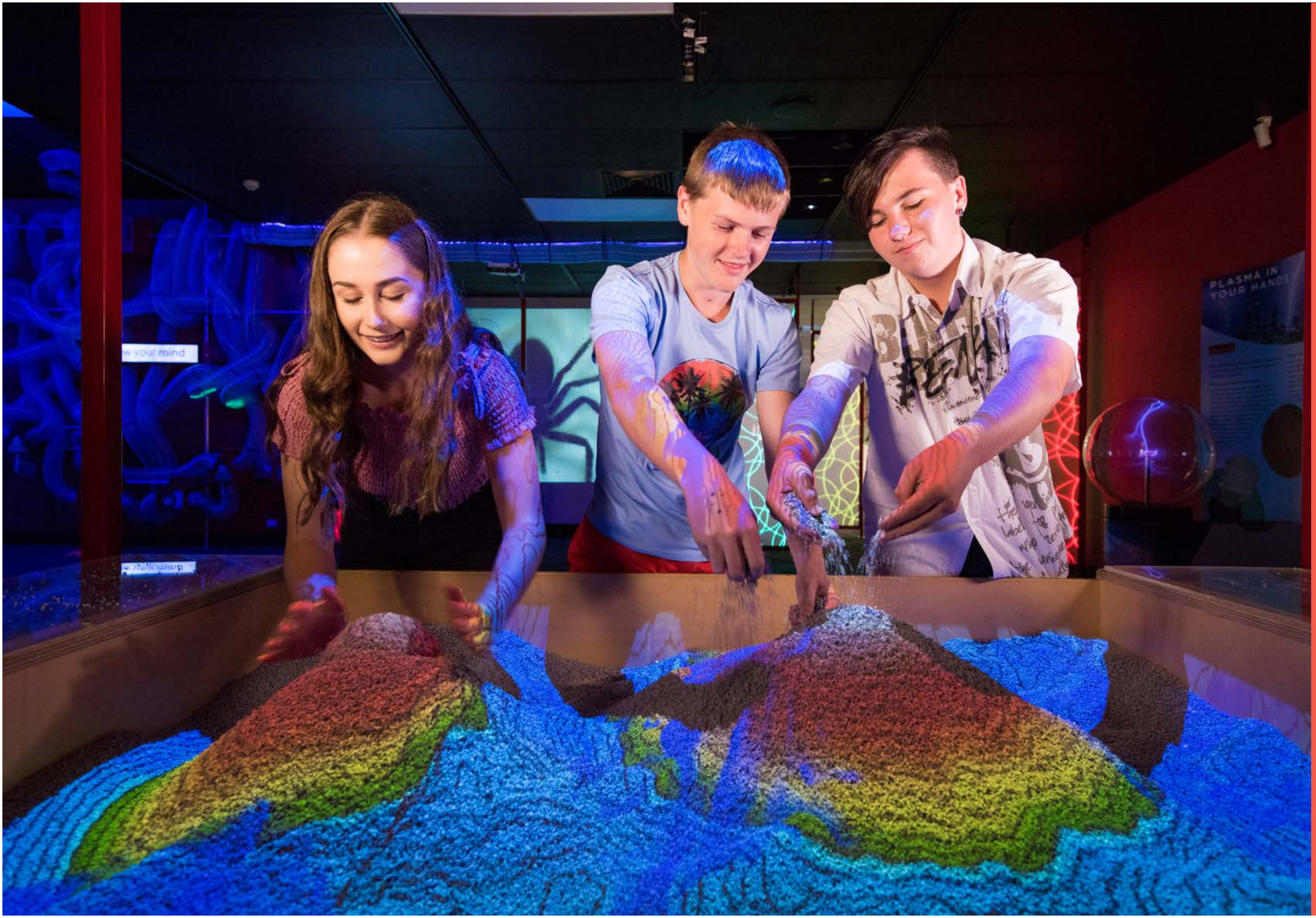
We will 'walk the talk' and demonstrate STEM in action - we will inspire people with more leading-edge contemporary STEM content, and we will shift and elevate STEM dialogue to create an opportunity mindset and support a bright future for those who choose a STEM-enabled career. We will actively facilitate a highly integrated STEM community through collaboration and partnership. We will also play a significant role in the delivery of the Government of Western Australia's State STEM Strategy.

We acknowledge the strong ongoing support of the Government of Western Australia and recognise that its investment in Scitech is an investment into a positive future for all Western Australians. Scitech also enjoys long-term, beneficial relationships with a variety of partners, including leading industry players, tertiary education institutions, STEM agencies and other key stakeholders, and for this, we express our heart-felt appreciation.

This 2018 to 2021 Business Plan showcases how Scitech will continue to deliver our existing STEM programs, while also undergoing an exciting transformation process to prepare all Western Australians for an exciting STEM-enabled future.

**Mr Tony Joyner**
Board Chairman

**Ms Deb Hancock**
Chief Executive Officer


PLASMA IN
YOUR HANDS

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# INTRODUCTION

Scitech is a not-for-profit company limited by guarantee that was established in 1987. It officially opened to the public on 13 August 1988.

**The company was established for the following charitable purposes:**

- To operate, promote and develop a centre in Western Australia to increase awareness, interest, capability and participation in science, technology, engineering and mathematics;
- To advance education in relation to science, technology, engineering and mathematics;
- To operate a world-class science centre that inspires, engages, prepares and develops the Western Australian community to be scientifically literate to ensure the State's future prosperity;
- To advance knowledge and understanding of both the benefits and practical applications of science, technology, engineering and mathematics for the benefit of the Western Australian community; and
- To support, encourage and facilitate students, teachers, parents and the general Western Australian community in continued interest and lifelong learning in science, technology, engineering and mathematics and their application in the modern world.

## MISSION

Scitech's mission is to increase awareness, interest, capability and participation by all Western Australians in science, technology, engineering and mathematics.

## VISION

Scitech's vision is to be a world leader in providing innovative and creative STEM programs that inspire, engage and develop citizens for Western Australia's social well-being, economic prosperity and sustainability.

# LEADERSHIP As at June 2018

## SCITECH BOARD OF DIRECTORS

Tony Joyner **- Chair**
Fiona Roche
Lindsay Hale
David Joyce
Matthew Weaver
Martin Kirkness
Shaun Gregory
Karen Murcia
Alan Bye
Kristen Nowak
Max Hills

## SCITECH BOARD SUB-COMMITTEES

**Audit and Risk Sub-committee Chair**
Martin Kirkness

**New Scitech Sub-committee Co-Chairs**
Shaun Gregory & Karen Murcia

## CHIEF EXECUTIVE OFFICER

Deb Hancock

**Scitech Patrons and Nobel Laureates**
Professor Barry Marshall AC
Emeritus Professor J. Robin Warren AC

# PARTNERSHIPS As at June 2018

Scitech enjoys the support of numerous corporate partnerships and government support. A key element of our business model is to be heavily engaged with industry. This provides Scitech with access to funds to help support the delivery of our mission and vision; and to be responsive to industry needs and thereby ensure that we remain relevant to Western Australia's future for a STEM-enabled future workforce pipeline.

As at June 2018, Scitech is 17% funded through corporate partnerships, 34% funded through self-derived revenue from visitation and program delivery, and 49% funded by the State Government under a periodic funding agreement in place from July 2018 to June 2021. We are also supported by community (non-financial) partnerships.

**Scitech's major partners include**

GOVERNMENT OF WESTERN AUSTRALIA
Alcoa Foundation
BHP
Chevron
CSIRO
MITSUI IRON ORE DEVELOPMENT PTY. LTD.
RioTinto
Woodside

# OUR 30-YEAR STORY

Scitech was established in 1988 through the combined efforts of the State government, education sector, industry and the community.



The vision was to build a not-for-profit organisation to increase interest and participation in modern science and technology, particularly for children and their families. Today, Scitech remains a not-for-profit organisation driven by the same values, focused on the importance of STEM education as critical to Western Australia's prosperity.

Established as a science centre in 1988, Scitech grew over three decades to provide services in all regions of Western Australia. Our programs, exhibitions, regional tours, and teacher development programs now engage more than 500,000 Western Australians each year. Scitech's websites and social media platforms engage hundreds of thousands more.

As Scitech grew, we developed an international reputation for quality STEM engagement. Science and education centres around the world lease Scitech-built exhibitions, creating additional revenue for investment in our WA-focused mission. We also collaborate with STEM organisations around the globe to bring the best back to Western Australia.

The Scitech success story started and continues to grow through our greatest asset – our people. All of Scitech's people are committed to creating engaging STEM experiences and lifelong STEM learning opportunities. From the beginning, this was displayed by our founder, celebrated scientist Emeritus Professor John de Laeter, and now continues to be exemplified by our passionate staff, volunteers, audiences and partners. Recognition of the value of STEM for Western Australia's future is modelled by our renowned Board of Directors who represent an extensive cross-section of business and industry leadership in the State.

Scitech is building on our 30 years of success as it transitions to a bigger, brighter future.

# ACHIEVEMENTS OVER THE PAST 5 YEARS

The 2013 to 2018 period was focused on building Scitech's collaborative partnerships and setting the foundations for transforming our organisation. Over the 5 years, the State Government contributed almost half of Scitech's revenue and the remainder was generated through partnerships, admissions, travelling exhibitions and programs.

## REACH

During 2013 to 2018, Scitech engaged with more than two and a half million people in person, including public visitors, event participants, educators, students, youth, STEM professionals, industry representatives, tourists and people living in regional and remote locations, plus many more segments of our community. 97% of visitors surveyed enjoyed their experience at Scitech, and 98% of teachers agreed that a Scitech excursion provides engagement, inspiration and creativity. Volunteers generously contributed more than 50,000 hours to STEM programs.

Scitech also engaged with more than two million people over the 5 years through its digital services, including websites, apps, social media channels, online resources, email subscriptions and STEM digital media platforms.

## EFFECTIVENESS AND IMPACT

Scitech is independently assessed to ensure we are effective in delivering on our constitutional remit. An independent review of Scitech's operating model by McKinsey & Company in 2015 found that we were fulfilling our mission for traditional customer segments (which are elements of the full constitutional purpose) and we compare favourably to international peers. To evaluate our impact, in 2014, internationally renowned STEM education researchers Professor Leonie Rennie and Dr Terry McClafferty assessed Scitech's effectiveness on family learning, confirming that we were achieving our mission and that traditional customer segments had positive experiences and increased their scientific literacy during a visit to Scitech. As Scitech was expanding our services for teachers, in 2015, Solutions One Pty Ltd conducted a social impact study on Scitech's teacher professional development programs, finding participants reported an increase in their confidence to deliver STEM engagement activities to their students.

## REVITALISATION

The Scitech brand was redeveloped in 2015 to position our organisation as contemporary and appealing. With additional support of the State Government, Scitech invested $1.5 million into the science centre in 2017 to develop an additional 17% of floor space for exhibitions, open a new feature gallery, and upgrade amenities. Scitech's Outreach department was renamed to 'Statewide' to reflect the growing diversity in the services provided, and new distinctive red touring vehicles were added so we could take additional technology programs and equipment 'on tour' across Western Australia. Our first Digital Strategy was formed, which led to the piloting and development of new digital services.

## AWARD-WINNING EXHIBITIONS

Scitech's exhibition quality has been celebrated through several prestigious awards, and recently, Scitech's Rio Tinto Innovation Central exhibition won the ASPAC 2016 Creative Exhibit Award in Beijing, China. Ten Scitech-built exhibitions are currently touring science centres internationally, including the recent addition Planet Pioneers which featured in NASA's science centre in Houston.

## STEM LEADERSHIP AND PARTICIPATION

Scitech has been - and continues to be - a member of several national and international organisations supporting science centres and STEM engagement. During 2013 to 2018 we participated in the creation of a new STEM Consortium with WA science, mathematics and computing teacher associations to provide contemporary STEM teaching materials and professional development. Scitech representatives participated in numerous planning and STEM strategy panels to keep connected with State, national and international STEM engagement initiatives.

# THE FUTURE

Investing in Scitech is investing in Western Australia's future. The future of work is changing, and a new workforce is taking shape. Research shows that 75% of the fastest growing occupations now require STEM skills and knowledge.

Preparing all Western Australians for the future of STEM-enabled careers and lives is critical to the success and well-being of our community. Scitech will enable this through the New Scitech strategy.

## KEY BENEFITS OF THE NEW SCITECH STRATEGY

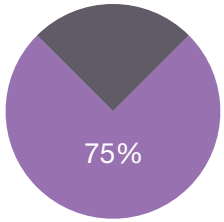
**Prepare the WA public for the future of STEM enabled careers**
Via additional hours of STEM engagement including with indigenous, girls and low social economic segments

**Support the development of STEM skills required by industry**
Increase collaboration with industry to develop WA's STEM sector and associates job opportunities

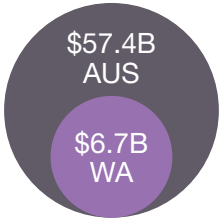
**Make STEM relevant to all of WA**
Generate interest in STEM careers, research and insight to create IP and support the state's prosperity

**Create exciting partnerships with leading global STEM companies**
To provide world leading STEM experiences and diversity funding sources

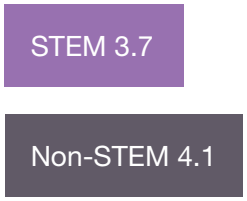

**Future jobs will require STEM**
Employment in STEM occupations is projected to grow at almost twice the pace of other occupations




**Jobs growth is dependent on the availability of STEM skills**
75% of the fastest growing occupations now require STEM skills and knowledge




**STEM leads to significant GDP benefits to Australia and WA**
Benefits are based on developing a STEM workforce in line with other leading STEM countries




**STEM workers enjoy better employment rates**
Lower Unemployment rate is STEM vs Non-STEM careers

## Western Australia's future prosperity will benefit from a STEM-literate community and a skilled workforce that enables us to innovate and drive growth.

Generating a STEM-literate community requires a pipeline of STEM engagement, therefore Scitech caters for all ages, from toddlers beginning their learning journey, to school students who may become our future doctors and electricians, to adults, parents, teachers, STEM professionals and even those seeking new careers and STEM-enabled futures. In addressing the needs of Western Australia, we will increase our focus on target audiences being: youth, females, Indigenous people, regional and remote communities and low socio-economic persons. We will expand our reach and prepare more young people to develop Western Australia's future STEM-enabled workforce pipeline.

The Western Australian **workforce** of the future will need to be **agile, connected and collaborative.** In a **digitally disrupted** world, **change will become the new norm** and it will continue to **accelerate as machines replace** repetitive and low risk jobs and are replaced with a **highly skilled and creative workforce.**

**Paul Nicholls**
Director, Strategic Projects (R&D) Curtin University

In our future It is very likely that **some jobs will be replaced by automation.** However, Research show that for every job that "goes away" another one or two is created. **Jobs are NOT going away, they're just changing. We have to future proof our learner.** In the future, people will have an estimated **17 Jobs across 5 Industries.** There will be an increase in Start-Up companies, Increase in part-time contingent work, in Project work and freelance. So the thinking is the best way to ensure our nation's future prosperity is to provide our **emerging new workers with a good foundation in STEM.**

**Paula Dewhurst**
Portfolio Director - STEM, North Metro TAFE

The workforce of the future will require **excellent critical thinking skills** and a **collaborative endeavour,** drawing on **STEM disciplines, to manage new technologies, gain insights from data, as well as weigh and mitigate risks.**

**David Joyce**
Head of Rio Tinto Projects Rio Tinto

Just as the digital revolution has touched every job that exists today, **cognitive science, data analytics and robotics will fundamentally change the workplaces of tomorrow.** At Woodside, we are investing in our employees, partnerships and communities so that they are **ready for the next wave of new jobs and the opportunities they will bring.**

**Shaun Gregory**
Senior Vice President & Chief Technology Officer, Woodside Energy

**As technology changes the way we work**, our **people will increasingly need** skills in science, technology, engineering and maths (**STEM**) disciplines. They will be **creative thinkers** who **thrive in changing environments** and can **apply** their **digital knowledge to solve problems** within our business.

**Dr Alan Bye**
Vice President Technology BHP

Future employment opportunities will not be defined by a job title but rather a particular task or problem. Our future workforce will be **defined by your skills set rather than a traditional job title.** To fit this employment market we will need a workforce that is **resilient, having experienced challenges to their learning and be able to work with others** to solve problems.

**John Clarke**
CEO, Science Teachers' Association of WA

As science, technology, engineering and mathematics are key pillars for Western Australia's economic and social well-being, Scitech's strategy aligns with the 'State STEM Strategy' to lead and contribute to the co-ordinated approaches to engage more Western Australians in STEM.

Globally there is an ever-increasing awareness of the importance of STEM to achieve economic, social and sustainable prosperity. Scitech endorses the Tokyo Protocol, which is the set of principles set by the world's science centre networks to successfully contribute to society and support the United Nations Sustainable Development Goals.

# THE NEW SCITECH STRATEGY

This is the New Scitech strategy, which will guide the transformation of Scitech to fully deliver our new vision.

# SCITECH'S PROGRAMS FOR 2018 TO 2021

## STRATEGIC FOCUS AREA 1: STATE-OF-THE ART SCIENCE CENTRE

**Outcome 1:** Inspire Western Australians to engage in STEM opportunities through a state-of-the-art science centre for social well-being, sustainability and economic prosperity.

**State-of-the Art Science Centre objectives**

**a.** Develop an accessible, innovative, signature science centre that lifts visitation and engagement, which appeals to all Western Australians.

**b.** Offer dynamic in-centre experiences that deliver deep, immersive engagement for all visitors, regardless of age, that support the uptake of STEM and evolve with the community's changing needs, values and expectations.

**c.** Showcase the best of Western Australia and worldwide STEM and innovations through collaboration with leading STEM-related organisations.

**d.** Be a trusted place that introduces our community to new technological solutions and broadens the potential use of these solutions.

The current Scitech centre in West Perth opened in 1988 and was given a fresh look in 2017 with a $1.5 million upgrade that provided more visitor space, new visitor experiences, new carpets, and improved amenities. With the centre lease in place until 2023, our focus for 2018 to 2021 is to develop more engaging and innovative experiences to uphold Scitech's brand and value, whilst looking for and designing the new future premises.

The current Scitech centre has 4,000 sqm of visitor space and receives almost 300,000 visitors annually. The centre offers dynamic experiences for all visitors, regardless of their backgrounds. As Scitech evolves, our content evolves with the community's changing needs, values and expectations, showcasing more of the best of Western Australian and worldwide STEM.

Two feature exhibitions open to visitors each year. All galleries are updated with exhibits to engage visitors with hands-on STEM experiences. The Scitech Planetarium offers a unique experience in Western Australia and is the most popular experience at Scitech. Planetarium presenters take ever-growing audiences on guided tours of the universe using the latest data and mixing scientific expertise with storytelling.

The CSIRO Lab provides an extensive range of imaginative and relevant hands-on STEM programs for visitors and school groups. It also provides professional learning workshops for teachers. The after-school and holiday workshops in the CSIRO Lab regularly sell out.

For younger children, the early childhood festivals, Discoverland gallery and the Puppet Theatre enable them to explore their world. School students find excursions to the centre very inspiring, with almost 50,000 school students visiting each year. Scitech's adult-only events have increased in frequency and attendance, and they link Scitech with broader community events.

After a visit to Scitech, people can take STEM experiences home with the unique Discovery Shop providing activities, games and hobby kits.

TripAdvisor ranks Scitech at 14th out of 180 things to do in Perth.

**The following is planned for this strategic focus area over 2018 to 2021 (some will not run continuously).**

| SUB-PROGRAM | DESCRIPTION |
|---|---|
| General public visitation | Experiences and informal learning for everyone, including science centre visits, booked programs, holiday activities, early childhood activities, new youth initiatives, adult-only events, birthday parties, cultural activities, membership program and retail services. More in-centre experiences will be extended through digital / online content. |
| School visitation | Inspirational and engaging school activities with Scitech through structured excursions, school access programs, partnered school programs, school festivals, challenges, competitions and Primary Extension and Challenge (PEAC) programs, aligned with key syllabuses in the Western Australian Curriculum. Increased online resources development will complement school visits and school programs. |
| Special events | Functions held at Scitech including festivals, STEM network events, award nights, venue hire, social inclusion opportunities and pop-up initiatives. |
| Science centre and STEM content development | Upkeep of the visitor centre and development of new dynamic experiences for visitors including hands-on exhibits, showcases, displays, shows in three theatres, gallery refurbishments, and the design and construction of multiple feature exhibitions. Implementation of Scitech's updated content strategy will bring in more state-of-the-art content. |
| STEM communication development | STEM communicator training and development led by inhouse experts, plus community participation programs to extend STEM communication skills with volunteers and interns. |
| Community and corporate partnerships | Development of strong partnerships, collaboration with community partners, and exploration of new opportunities to develop STEM content and social inclusion opportunities to engage all Western Australians. |
| Measuring success | Capture and communication of outcomes and impact through improved data management, particularly for visitor feedback and evaluations. |
| New Premises | Exploration of Scitech's future premises models and assessment of the feasibility of options, with a view to securing 'state-of-the-art' premises for Scitech, with a modern, purpose-built visitor centre to open between 2021 and 2023. (Note that the program of work associated with the development and transition to new premises is outside the scope of this Business Plan). The new premises sub-program is being progressed in accordance with the State Government's public election commitment being that "the State Government will work with Scitech to facilitate its relocation to new state-of-the-art accommodation". [1] |

1. McGowan Labor Government (June 2017) New Inner City College at the heart of Subiaco Oval transformation [media statement] from https://www.mediastatements.wa.gov.au/Pages/McGowan/2017/06/New-Inner-City-College-at-the-heart-of-Subiaco-Oval-transformation.aspx

# STRATEGIC FOCUS AREA 2: TARGETED, DEEPER REACH BEYOND THE CENTRE

**Outcome 2:** Drive deeper STEM engagement and reach, via digital and interactive experiences for our target audiences, including regional and remote Western Australians.

**Targeted, Deeper Reach Beyond the Centre objectives**

**a.** Take STEM to our target audiences in current and new ways via interactive, digital and hands-on experiences.

**b.** Explore a hub and spoke model and a potential secondary Scitech centre.

**c.** Expand our focus and increase our positive impact on target audience segments, especially youth, females, Indigenous persons, people in regional and remote Western Australia, and people in low socio-economic areas.

**d.** Develop partnerships with aligned organisations that promote STEM to multiply our impact on targeted audiences.

**e.** Support in-service and pre-service educators to teach and develop STEM skills in students in early childhood, primary and secondary education through pedagogy, practices, resources and networks.

Scitech takes STEM across Western Australia. Our Statewide service engages 200,000 people every year with innovative STEM activities across remote, regional and metropolitan areas. We visit every region in Western Australia, bringing STEM shows, workshops, festivals, interactive exhibits, resources and more. In addition, with our experiences extended online, more than 500,000 people engage with our digital services each year.

Across the State, Scitech provides opportunities from early childhood through to specialist programs for adults - supporting lifelong learning - in conjunction with corporate and community partners as part of the State's STEM network. Statewide services are delivered in community spaces, in shopping centres, at events, through schools, in libraries, at universities, via resource kits, and online, just to name some of ways in which we engage with our community.

Scitech's Professional Learning services upskill and support educators to teach and develop STEM skills in students, which has a multiplier effect to develop positive attitudes towards STEM. Each year, the Professional Learning services reach more than 4,000 primary and secondary school teachers, delivering a range of curriculum-aligned workshops and resources to inspire their delivery of STEM in the classroom. We also provide STEM resource kits to more than 100 schools with curriculum-aligned STEM activities, and we support Western Australian schools with digital STEM education resources.

As Scitech transitions over 2018 to 2021, we are investing in research and development of reach and impact, from hands-on experiences to digital services that extend the depth and breadth of our engagement with the community. To increase our impact in target areas, select programs are being transformed to be more in-depth and provide deeper engagement, including in digital technologies and future STEM careers. To address the changing needs of Western Australia, Scitech is also investing in more services to increase our focus on target audiences including youth (13 to 25-year-olds), females, Indigenous people, regional communities and low socio-economic audiences. New initiatives are currently being trialled, such as in youth programs and digital technologies, which will form the basis of future programs.

**The following is planned for this strategic focus area over 2018 to 2021 (some will not run continuously).**

| SUB-PROGRAM | DESCRIPTION |
|---|---|
| General public visitation | Engaging STEM-based experiences provided across Western Australia, including at community events, in shopping centres, at regional festivals, through early childhood initiatives and in programs for the metropolitan area, regional communities and remote locations. New methods (including digital) are being explored for extending experiences. |
| School visitation | Hands-on STEM experiences to inspire and develop school students and their teachers, including school incursions, regional tours, competitions, award programs, mobile lab experiences, after-school STEM activities, technology programs including robotics, plus specialist programs for primary and secondary students. |
| Supporting schools with resources | Curriculum-aligned digital content to support formal education in Western Australia, including classroom tools and activities. The development of more digital services will complement the hands-on resources that are being provided, including STEM kits and equipment to schools. |
| Professional learning for teachers and pre-service teachers | Capability development and support for teachers and pre-service teachers to improve their teaching and development of STEM skills in students in early childhood, primary and secondary education. Services are provided through workshops, regional programs, subscriptions, curriculum-aligned materials, and education-based contract services. Support services provided include pedagogy awareness, access to resources, and network building. Additional subject areas for capability development and support are being developed, particularly digital technology. |
| Growing the focus on target audiences | Strategic development of initiatives that focus on the target audiences of youth, females, Indigenous, people in regional and remote Western Australia, and people in low socio-economic areas. This includes improving the services, channels and opportunities provided through the award-winning Aboriginal Education Program (AEP). |
| Future STEM career development | Increasing the awareness of secondary-school-aged students - and the influencers of those students - of the opportunities and benefits of future STEM-based careers, provided through career education shows, festivals, competitions, industry-student connections and opportunities to meet and network with STEM-based professionals. |
| STEM content and asset management | Investment in content development to underpin Scitech's targeted, deeper reach beyond the centre, including interactive exhibits, shows, programs and equipment. New content development is focused on increasing the depth of engagement and outcomes. |
| Community and corporate partnerships | Development of partnerships, collaboration with community partners, and exploration of new opportunities to develop STEM experiences for our community. |
| Measuring success | Capture and communication of outcomes and impact through feedback, evaluations and research. |

# STRATEGIC FOCUS AREA 3: INFORMED PUBLIC VOICE FOR STEM

**Outcome 3:** Elevate the STEM dialogue to create an opportunity mindset and positive momentum for STEM, to drive economic prosperity and sustainability in WA.

**Informed Public Voice for STEM objectives**

**a.** Engage Western Australians in an ongoing positive STEM dialogue to raise awareness of the benefits of STEM.

**b.** Develop a proactive public voice to deliver a positive message to build STEM awareness, interest, capability and development opportunities.

**c.** Become recognised by our community as a credible voice on STEM to empower people, drive positive attitudes and ensure the STEM accomplishments of universities, research institutions and other organisations are shared with our community.

**d.** Establish programs for - and contribute to - informed debate on STEM topics and opportunities of relevance to our community, including future workforce implications.

**e.** Understand and reflect community interest in STEM, its impact and benefits for Western Australia and influence STEM policy.

The importance and value of STEM in Western Australia can be elevated by highlighting STEM achievements and by developing positive mindsets in our community. Scitech will increase our contribution to positive STEM dialogue in the community by developing our public voice for STEM. We are positioning Scitech as a key and credible STEM resource, delivering through multiple channels including digital, personal, mass media and through stakeholders.

A key part of Scitech's informed public voice is our STEM digital media platform Particle, plus we are increasing our investment in new methods (including digital) for broader and more meaningful engagement with the public. Our informed public voice will share local STEM stories, innovations, career prospects, role-models, future workforce needs and opportunities for participation in STEM.

This strategic focus area is closely linked to the strategic focus area Highly Connected STEM Community because we share the STEM accomplishments of universities, researchers, digital innovators and other organisations with the community.

**The following is planned for this strategic focus area over 2018 to 2021 (some will not run continuously).**

| SUB-PROGRAM | DESCRIPTION |
|---|---|
| Strengthen the informed public voice for STEM | Development of communication channels and delivery of content to increase positive STEM dialogue across our community, with an emphasis on two-way communications. Increasing our capability in public relations, mass communications and digital engagement will support the organisational positioning of Scitech as a contemporary and credible STEM resource. |
| Digital communications including Particle | Digital communication services for all Western Australians, including through Scitech's websites, social media, subscription services, the WA STEM digital media platform Particle, and contemporary platforms. |
| Media relations for STEM | Expansion of media connections and more proactive provision of STEM-based communications to media services to increase positive STEM dialogue, including inspirational insights for our community, highlighting STEM-based opportunities in Western Australia, and highlighting the benefits of STEM careers. |
| Special event contribution | Presentations and contributions at conferences, consortiums, STEM-based events and online to share knowledge, to provide insights, and to inspire. Provision of STEM-communication development through lectures and activities at tertiary institutions. |
| Community and corporate partnerships | Development of partnerships, collaboration with community partners, and leveraging communication channels. |
| Measuring success | Measuring of outcomes and credibility through evaluations and expanded data analysis. |

# STRATEGIC FOCUS AREA 4: HIGHLY CONNECTED STEM COMMUNITY

**Outcome 4:** Actively facilitate a highly integrated STEM community through collaboration and partnership

**Highly Connected STEM Community objectives**

**a.** Facilitate and support STEM cooperation and develop strategic alliances between STEM leaders, champions and stakeholders, including educators, researchers, industry, influencers and our community, to address Western Australia's STEM opportunities and challenges including developing a STEM-enabled workforce equipped with the higher order skills required for the future workplace.

**b.** Create bold partnerships with innovative organisations.

**c.** Spearhead knowledge development and sharing to improve social impact and community engagement.

**d.** Develop targeted school-industry partnerships to increase the uptake of STEM in education in priority areas.

Scitech will continue to grow its role in STEM leadership and coordination. We will invest in understanding local STEM networks, target areas and opportunities. We will continue to facilitate collaborations between STEM leaders and stakeholders - including educators, schools, researchers, industry, influencers and our community - to address local STEM opportunities and challenges.

As part of the State STEM Strategy Future jobs, future skills, we are leading initiatives to develop STEM capabilities, particularly through the strategy pillars of Skills for Future Jobs, STEM Culture, School Leadership and Teacher Excellence, and Diversity In STEM. Underpinning Scitech's initiatives is the research and development of knowledge in social impact and community engagement.

**The following is planned for this strategic focus area over 2018 to 2021 (some will not run continuously).**

| SUB-PROGRAM | DESCRIPTION |
|---|---|
| STEM network leadership | Connecting the STEM network and increasing the engagement of the STEM industry with our community, through mapping providers, brokering partnerships, facilitating targeted school-industry connections based on mapping, facilitating connections between vocational education and training (VET) and industry, promotion of STEM outreach programs, and supporting STEM-based events including National Science Week. Investigation of techniques for developing sustainable networks. |
| Regional community development | Regional support through STEM hubs and Inspiring Australia initiatives. Investigation of new methods for expanding reach and engagement online. |
| Community and corporate partnerships | Formation of bold partnerships with innovative organisations and collaboration with partners to develop STEM-based networks, including supporting our community partners. |
| Alumni connection | Connecting past Scitech staff, Board members and volunteers with Scitech, its activities and the STEM industry. |
| Measuring success | Effective capture and communication of outcomes and impact through feedback, research and development. |

# ENABLING STRATEGY: BUSINESS GROWTH AND SUSTAINABILITY

**Outcome 5:** Be a commercially sustainable and innovative organisation, driven by the pursuit of excellence to deliver our full Constitutional remit.

**Business Growth and Sustainability objectives**

**a.** Drive new revenue and funding sources, including partnerships, commercial services, grants and philanthropy.

**b.** Explore and grow the domestic and international commercial opportunities for our exhibitions, expertise and services.

**c.** Investigate and implement best practice processes, systems and structures to deliver efficiencies and financial sustainability.

**d.** Extensively use digital technologies to drive innovation, undertake high quality programs, support evidence-based decision-making, and engage with and grow our customer base.

**e.** Cultivate a collaborative and capable Scitech workforce aligned to our business strategy and values that enhance our capacity to engage the community in STEM.

**f.** Strengthen our brand awareness, value and organisational positioning including brand advocacy.

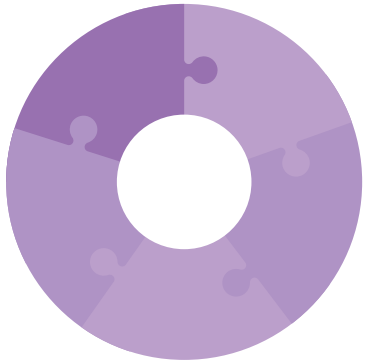
To implement the New Scitech strategy, Scitech needs to transform. Over 2018 to 2021, our operating model review will transition the organisation to be more customer-centric, developing a deeper understanding of the needs of Western Australians and STEM capabilities in the future of work. We will become a more contemporary and innovative organisation, strategically driven by design thinking methodologies to ensure customer centricity and efficiency.

Scitech is investing more into organisational performance management practices and systems for increasing organisational effectiveness and delivery of our mission and vision, in alignment with the needs of audience segments. We are improving our collection and use of data to inform decisions and capture our impact.

The pursuit of revenue generation and diversification activities are planned to provide a lower-risk, more sustainable foundation for our transitional business model. Concurrently, improvements will be made across marketing, communications, staff development, asset production, end-to-end processes and our overarching operating model to ultimately improve delivery of Scitech's mission and vision.

**The following is planned for this strategic focus area over 2018 to 2021 (some will not run continuously).**

| SUB-PROGRAM | DESCRIPTION |
|---|---|
| Revenue diversification | Increasing non-government revenue through diversified self-derived sources, including undertaking business development and exploring the new revenue opportunities of commercial services, international exhibition markets, retail opportunities (online and in centre), partnerships, and fundraising. |
| Partnerships | Collaboration with corporate partners, community partners and strategic allies, developing opportunities to provide more innovative, state-of-the-art STEM content for Western Australians. In the community, providing proactive support and contribution towards broader STEM network activities. |
| Exhibit production and asset management | Bolstering Scitech's specialist exhibition workshop for effective exhibition design, development, manufacturing and services to develop world-class products while maintaining and refreshing STEM exhibits and exhibitions. Refinements to the travelling exhibitions program will generate more revenue for STEM program investment within Western Australia. |
| Operating model, processes and efficiency | Implementation of business improvement initiatives over 2018 to 2021 - recommended by independent consultants - for a more nimble organisation aligned to the New Scitech strategy. This includes implementing the endorsed operating model review outcomes, supported by strategic change management and centralisation of shared services. |
| Digital services expansion | Digital transformation initiatives to extend engagement and improve Scitech experiences. This includes redevelopment of Scitech's website, development of online content to extend other STEM-based experiences, introduction of more online services (e.g. ticketing, bookings and retail), digital content capability development for Particle, expansion of media channel connections, and incorporation of innovative digital technologies into audience experiences. |
| Staff, culture and learning | Celebrating and upholding Scitech's culture and values. Training, leadership skills development, recognition and strategic management are focus areas for human resources. Developing the cooperative, collaborative and capable workforce maintains Scitech's status as an employer of choice. |
| Workplace health and safety | Continued investment in Scitech's workplace health and safety, including the safe work culture, aligns with relevant Australian legislation. |
| Marketing, communications and branding | Public relations, communications and marketing are transitioning to support the breadth and depth of Scitech's activities. Service improvements include increased media coverage, integrated marketing and public relations campaigns, data-informed campaign management, expanded web services, strong social media engagement, development of channels to support our informed public voice for STEM, brand strategy redevelopment, and strategic engagement of target audiences. |
| Information and communications technology (ICT) transformation | Transformation of the ICT systems to enable Scitech to be a more data-driven, secure, efficient organisation with increased digital capabilities to incorporate emerging technologies into content and delivery. The transformation includes cloud technologies, best-practice IT service management (ITIL), platform standardisation, development of enterprise-wide business systems, security and reliability improvements, asset upgrades, KPI dashboarding and staff training. This transformation is also critical to the digital services expansion and financial management transformation. |
| Financial management transformation | Improved financial management capabilities through digital transformation and implementation of new systems such as Dynamics AX, supported by streamlined processes, as well as the transition from cash-based to accrual-based accounting, and efficiency reviews of Scitech's product portfolio. |
| Quality, compliance and risk management | Effective management of partnerships, contracts, agreements, memorandums of understanding, content contribution agreements and procurement. Appointment of independent services to transparently validate Scitech's compliance. Investment in systemisation and efficiency improvements, including process mapping and quality management. |
| Measuring success | Improved monitoring of Scitech's balanced scorecard performance, supported by increased data management capabilities as part of the information and communications technology transformation. |



# MEASURING OUR SUCCESS

Scitech's New Balanced Scorecard

## BUSINESS GROWTH AND INNOVATION

- Reputation
- Partnerships
- Communications
- Digital connections
- Marketing
- Innovation
- Intellectual property
- Networks

## CUSTOMER EXPERIENCE AND ENGAGEMENT

- Reach
- Perceptions
- Impact
- Membership
- Content
- Professional Learning
- Volunteers
- Particle
- Other services
- Knowledge development

## PEOPLE AND LEARNING

- Staff
- Culture
- Leadership
- Workplace health and safety
- Learning

## BUSINESS PROCESSES AND EFFICIENCY

- Data analysis
- Process efficiencies
- Information technology
- Governance

## FINANCIAL FRAMEWORK

- Assets
- Revenue
- Revenue sources
- EBITDA
- ROI
- Research and development

# 2018 TO 2021 KPIs

The following annual KPIs are supported by additional internal measures as per the Scitech Balanced Scorecard and Performance Reporting.

### STATE OF THE ART SCIENCE CENTRE

1. General public visitors to City West
2. Primary school visitors to City West
3. Secondary school visitors to City West
4. Audience satisfaction with the science centre programs and services
5. Number of memberships (rolling average)

### TARGETED, DEEPER REACH BEYOND THE CENTRE

6. General public engagement with Statewide programs
7. Primary school engagement with Statewide programs
8. Secondary school engagement with Statewide programs
9. Teachers and pre-service teachers participating in a Professional Learning session
10. Indigenous students and Indigenous teachers receiving services through the AEP
11. STEM career information sessions
12. Audience satisfaction with programs and services provided beyond the science centre

### INFORMED PUBLIC VOICE FOR STEM

(In addition to Particle performance reporting)

13. Digital audiences directly engaged
14. Audience satisfaction with informed public voice for STEM services

### HIGHLY CONNECTED STEM COMMUNITY

15. Community partner engagement
16. Industry-school linkages facilitated
17. Audience satisfaction with highly connected STEM community services

### BUSINESS GROWTH AND SUSTAINABILITY

18. EBITDA (earnings before interest, tax, depreciation and amortisation)
19. Ratio of State contribution to Scitech self-generated revenue
20. Total expenditure

Performance reporting

| REPORT | CONTENTS | PROVISION |
|---|---|---|
| **ANNUAL REPORTING** | | |
| Annual Report | Performance, governance, stakeholders, directors report, independent auditor's report (financial results) | Australian Charities and Not-for-profits Commission (public document) |
| Scitech Annual Progress Report | Financial results, KPI results, performance narrative with highlights, outcomes and impact | Department of Jobs, Tourism, Science and Innovation |
| Scitech Key Performance Indicators | Target levels for reportable KPIs | Department of Jobs, Tourism, Science and Innovation |
| Register of Assets | Audited register as per the Funding Agreement | Department of Jobs, Tourism, Science and Innovation |
| **OTHER REPORTING** | | |
| Scitech Quarterly Progress Report | Financial results, KPI results, variance explanations, performance narrative with highlights, outcomes and impact | Department of Jobs, Tourism, Science and Innovation |
| Particle Report – half yearly | Particle digital service report – performance, proposed changes, financial results | Department of Jobs, Tourism, Science and Innovation |
| Partnerships/contracts reporting | As required by agreements | Relevant stakeholders |
| Mid-term Review | Independent effectiveness review by June 2020 | Department of Jobs, Tourism, Science and Innovation |

# WE LOVE SCITECH…

"We had a wonderful time today, thank you! My 18 month old loved all of the interactive displays. Definitely be back this week." – Shelley McLean, Toddlerfest visitor. "We love Lab workshops. We travelled from Busselton for three days at Scitech. Thanks Scitech you are awesome." – CSIRO Lab workshop attendee. "Useful! The best [workshop] I've been to in a while! Thank you so much for the loaded USB!" – Kirsten, Rostrata Primary School, Professional Learning workshop attendee. "I would like to pass on our sincere appreciation for the amazing work and quality of both the interactive activities and the presentations at Scitech….fabulous work!" – Mary and Ken, visitors. "This empowered me as a future teacher to engage science without fear." – Richelle Gibson, pre-service teacher workshop attendee. "I had the pleasure of bringing my grandchildren on two occasions in one week during the school holidays and I would like to compliment you on your great facility! The staff were most helpful, informative and fun to deal with. The exhibits are educational, well-constructed and make learning fun. All round a lovely day out – and to make it even better both sets of grandchildren absolutely loved it too!" – Barbara Heighton, school holiday visitor. "A great new learning experience! [We will] include science in everyday routines." – Little Geckos, Nintirri Centre Tom Price, Early Childhood program. "Beijing Bound has been a wonderful opportunity for Isha to be able to share the platform with future scientists or technologists from all over the world and it would not have been possible without the contribution from Scitech and Rio Tinto." – Mamta Singh, Mother of 2014 Beijing Bound winner Isha Singh. "Seeing a science lesson in action was valuable for me and for the students. We learnt to be excited about nature, as science is everywhere." – Teacher, Yiyili Aboriginal Community School, Aboriginal Education Program.

# OUR PLAN TO TRANSFORM SCITECH FOR THE KNOWLEDGE ERA

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GOVERNMENT OF WESTERN AUSTRALIA

The 2018 to 2021 BUSINESS PLAN for Scitech in partnership with the Western Australian Government