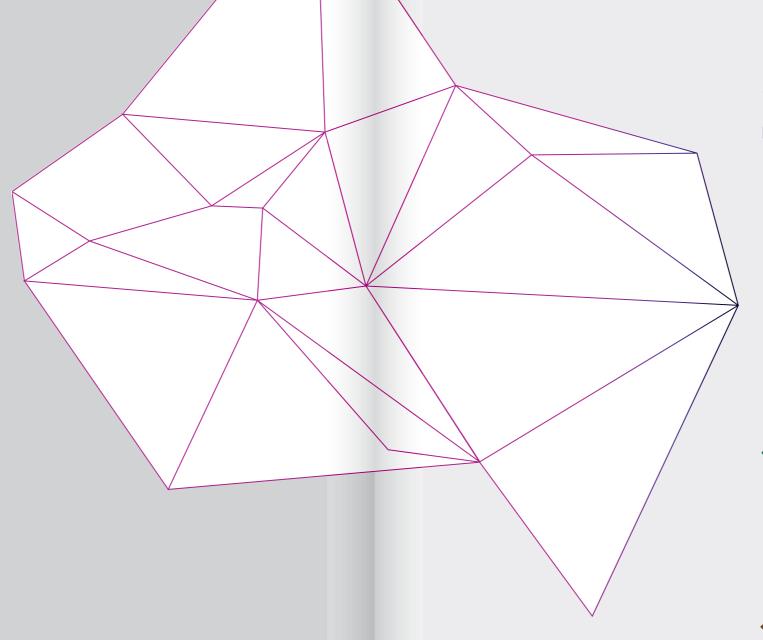


new worlds
through future
technologies





# 21 EVENTS, EXHIBITIONS & PROGRAMMES

Event Timeline
Exhibitions
Science Outreach
& Competitions
STEM Inc

32 OTHER ATTRACTIONS
Other Attractions
& Activities

COMMUNITY

Community & Support

Sponsorship Fund

Sub-Board

& Project Committee

ODUR TEAM

Chairman's Review
Board Members

Management Team

46 FINANCIAL STATEMENT

15 HIGHLIGHTS

Highlights

Awards

Click on the page number to access the respective section.



# CHAIRMAN'S REVIEW



What an exciting year 2015 has been for Science Centre Singapore, with the Centre pushing the boundaries of creative STEM (Science, Technology, Engineering and Mathematics) learning in Singapore and accomplishing several milestones in the process.

Through 38 enduring years, Science Centre continues to inspire and bring the wonders of Science to Singaporeans. Our aim to ignite the spark of curiosity in young minds and foster an interest in STEM is strongly supported by a dedicated Science Centre team, partners and sponsors; all who have helped make the Centre a world-class institution.

#### Staying Ahead of the Game

2015 has been a milestone year in our continuous process of reinventing ourselves. We fuelled the imagination of our visitors through immersive experiences and broke new ground in STEM Education with the National Science Experiment.

We gave our visitors wings and took them on a flight of fantasy into a new world of E3, a world of E-mmersive Experiential Environments. Such exhibitions are at the forefront of new methods of learning; possessing great potential to spark the imagination of students and the public as they encounter realms that are otherwise inaccessible to the ordinary person. E3 has paved the way to a more nuanced experience for our visitors, while simultaneously allowing us to test-bed new forms of engagement that can be translated to other exhibitions.

Over at a new and exciting space – the Tinkering Studio – visitors get to come face-to-face with their own creativity as they think with their hands and embark on a fun journey of experimentation. The Tinkering Studio is an extension of the maker movement that the Centre is championing.

We also took visitors on intergalactic journeys at our upgraded Omni-Theatre through the acquisition of the highest resolution digital planetarium system. Audiences can now witness astronomical phenomena in an immersive and dynamic way in the comfort of their seats. They now enjoy Digital Movies with unrivalled clarity and brightness, and experience live lectures on space science with real-time data from agencies such as NASA.

At Snow City, we gave visitors a close-to-Arctic experience at the revamped attraction. This is the first major overhaul since Snow City opened 15 years ago. The new space seeks to create awareness of Climate Change in the Arctic and its impact on the world. Snow City now features more interactive exhibits and a real snowfall experience.

#### A Science Centre without Walls

As STEM learning evolves, Science Centre has to constantly innovate and refresh its offerings to stay relevant and fulfil its commitment of nurturing a love for science in all. Our commitment in engaging and enriching young minds through creative learning goes beyond our walls. We are a science centre without boundaries; one that engages our audiences with experiential and connected initiatives both online and offline.

We have taken the fun of learning to schools, shopping malls and numerous other avenues, which has helped reach tens of thousands of children and adults alike. This year's edition of the Singapore Science Festival successfully engaged over 177,000 visitors with 50 events in the span of a month. With the support of like-minded partners, we will continue to widen our reach and engage stakeholders to promote interest in the field of STEM and enhance STEM learning.

Science Centre spearheading the maker movement in Singapore has led to its exponential growth and the first full featured Maker Faire in South East Asia this year. Maker Faire is a platform for visitors to embrace the spirit of tinkering, creativity and innovation. Maker Faire 2015 saw a record 12,000 attendees, with over 400 Makers presenting exhibits ranging from simple craftwork to intricate circuitry and 3D printing.

STEM Inc has built on its successes in the past year, continuing to widen its reach to foster interest and passion for STEM amongst secondary school students. Our STEM educators work hand-in-hand with teachers to co-teach and inject excitement into science lessons through fun & experiential activities in STEM Inc's Applied Learning Programmes (ALP), which have since engaged 18,000 students in 70 schools across Singapore.

#### Making a Difference

As we seek to entertain, engage and enrich our audiences through new initiatives, we are pleased to be recognised for our efforts. *Sex Cells*, a unique science musical fully conceptualised in-house, clinched us the 'ASPAC Creative Science Communication Award' at the Asia Pacific Network of Science and Technology Centres (ASPAC) 2015 conference. Our Human Body Experience exhibition has won the 'Best Exhibition Event' at the Best Marketing Awards 2015 and the 'Most Innovative Marketing Idea' at the Singapore Experience Awards 2015. Additionally, Transformers 30<sup>th</sup> Anniversary Exhibition clinched the 'Best Multi-channel Campaign' at the Best Marketing Events Award 2015. We also clinched bronze awards in the PR Awards 2016 for the 'Best Product Re-launch PR Campaign' for Snow City: Arctic Avengers and the 'Best Use of Technology' for E3: E-mmersive, Experiential Environments.

#### Support & Appreciation

Our partners, sponsors and the community have continued to play an instrumental role in the Centre's success, helping to make the wonders of STEM accessible to all Singaporeans. The strategic guidance and commitment of our Board has also helped propel the Centre forward in delivering creative, cutting-edge STEM experiences. Thank you for journeying with us and making our mission yours as well.

Lastly, the Centre would not be what it is without the enduring passion and commitment from our wonderful management and staff. Their hard work and creativity have shone through in the initiatives presented over these many decades. Thank you.

The future is what we make of it. Let us boldly embrace the new and adopt a creative mindset in our mission to continually inspire audiences with the wonders of Science.

#### Ms Tan Yen Yen

Chairman Science Centre Board

# BOARD MEMBERS



Ms Tan Yen Yen Chairman



Mr Sin Kim Ho



Ms Melissa Ow



Mr Soh Gim Teik



Mr Hian Goh



Ms Shirley Wong



Mr Bruce Poh



Mr Chew Kwee San



Ms Tricia Huang



Mr Lim Eng Hwee



Mr Zaqy Mohamad



Mr Chandran Nair



Mr Cheong Chee Hoo



Mr Kenneth Tan



# MANAGEMENT TEAM



Mr Aaron Chew Director, Human Resources



Mr Clar Deputy

**Mr Clarence Sirisena**Deputy Chief Executive







Il Chani

Ms Cham Lee Fin

Corporate Resources

Director,

Ms Kamaria Bte Abdul Ghani Director, Science Upstream & Gallery Programmes



Mr Michael Chay Director, Marketing & Communications



Ms Susan Chang Deputy Director, Visitor Services



Dr Tan Ei-leen Deputy Director, Physical Sciences





Mr Edwin Teng Assistant Director, MIS



Ms Veronica Heng



Mr Lee Lian Soon Assistant Director, Travelling Exhibitions & Special Projects



Mr Lim Ping Lim Chin Kin Assistant Director, Exhibitions



**Dr Lee Song Choon**Deputy Director, Life Sciences



Mr Mohd Jaafar Dollah Acting Assistant Director, Facilities & Estate Management





# HIGHLIGHTS 2015/2016

#### A Science Centre Accessible to All

The past year has marked many milestones for Science Centre Singapore. In one of its boldest moves, the Centre struck off its admission fees – while KidsSTOP™ reduced theirs – for citizens, Permanent Residents and local school groups during off peak periods. The aim is to bring the world of creative and experiential science learning to more Singaporeans.

#### Entertaining, Engaging & Enriching Audiences

The digital age is rewiring the way we consume information and the way we respond to stimulus. It has become imperative to develop and introduce new ways of acquiring knowledge to address this changing environment.

New immersive experiences such as E3: E-mmersive Experiential Environment, launched in December, feature immersive environments that enable visitors to encounter realms otherwise inaccessible to the ordinary person. They seek to bring visitors closer to the heart of science issues through a designed experience that help foster participation and discussion.

Additionally, a collaboration with the InfoComm Development Authority (IDA) on 'Smart Learning Spaces' within our exhibition galleries allows visitors to receive dynamic content with customised learning experiences based on their profiles.

The revamped Omni-Theatre provides yet another immersive learning experience for visitors. The newly acquired digital planetarium software allows visitors to experience planets, stars and space in a dynamic way. Live lectures on space science is a reality now, where our Science Educators interact with the content to better engage audiences. Visitors can now also enjoy new Digital Movies in exceptional clarity and brightness with the 8K Projection System.

Snow City underwent its first major revamp since its opening 15 years ago. The new Inuit theme, which portrays the Arctic's extraordinary landscape, wildlife and people, aims to raise awareness of climate change and its impact. Additionally, a new snow gun producing crystallised snow was introduced, simulating snowfall.

# Promoting STEM Education





The growth of the maker movement in Singapore was boosted with the Centre driving the first full featured Maker Faire in South East Asia, which saw a record 12,000 attendees and more than 400 Makers. A Tinkering Studio was also launched in December as an extension of the maker movement, providing a dedicated space to encourage children to tinker and explore their creativity as they 'think with their hands'.

The inaugural National Science Experiment enabled youths to learn about big data and how it can be applied to manage real world issues. More than 250,000 students tracked their carbon footprint, travel mobility patterns and amount of time spent indoors and outdoors for the project.

Working in partnership with Marshall Cavendish, we introduced a new magazine, called *Science Spy in collaboration with Singapore Scientist*. The magazine features a wide range of science articles and activities to stimulate and engage children's interest.

The Centre and the *Asian Scientist* magazine also co-organised the first Asian Scientist Writing Competition to find the best science writers from Asia. The aim is to increase public awareness of Asia's scientific excellence and cultivate a scientifically literate society among our youths.

# Fostering Collaborations

Science Centre Singapore renewed and created many collaborations during the last financial year. The Centre partnered with the Early Childhood Development Agency (ECDA) on the Innovation Guidance Project (IGP) to train teachers from 30 childcare centres on developing creative curious thinkers and ways to setup makerspaces in the kindergarten classroom. This is one of four innovation guidance projects that Science Centre is partnering ECDA to deliver to schools.

The Centre also brought a new forensics science workshop entitled 'the Unseen Truth in Forensics' to the China Science Festival from 17 Jul to 2 Aug 2015, which proved to be extremely popular, as all sessions were fully booked with close to 6,000 participants taking part in activities. The workshop was rated as one of the top three activities in the whole festival.

The Singapore International Science Teachers Conference, held from 12 to 13 November 2015, was organised by the Science Teachers' Association of Singapore, the Academy of Singapore Teachers, the Ministry of Education and Science Centre Singapore. Themed, 'Science Learning in the 21st Century: Perspectives and Possibilities', it was attended by more than 300 local and overseas educators.

The Free and Open Source Software Asia Summit (FOSSASIA), Asia's largest open Tech event with over 135 talks and workshops, was hosted at Science Centre and was attended by over 2,700 participants from 18 to 20 March 2016. The programme was supported by notable organisations such as Google, Git Hub, Red Hat, ORACLE, HP and UNESCO.

# AWARDS 2015/16

#### PR Awards 2016

Bronze award for 'Best Product Re-launch PR Campaign' for Snow City: Arctic Avengers

Bronze award for 'Best Use of Technology' for E3: E-mmersive Experiential Environments Exhibition

by Marketing Magazine

#### **Singapore Experience Award 2015**

'Most Innovative Marketing Idea' for Human Body Experience Exhibition

by Singapore Tourism Board

#### **The Marketing Events Awards 2015**

Bronze award for 'Best Multi-channel Campaign' for Transformers 30<sup>th</sup> Anniversary Exhibition

Bronze award for 'Best Exhibition Event' for Human Body Experience Exhibition

by Marketing Magazine

#### **Best of the Best Products and Services Award 2015**

by Family World

# **TripAdvisor's Travellers' Choice 2015**

Travelers' Choice Museum Winner

by TripAdvisor

#### **ASPAC Creative Science Communication Award 2015**

Sex Cells Science Musical

by Asia Pacific Network of Science & Technology Centres

#### **MOE Innergy Awards 2015**

Gold Award for Most Innovative Project - Resource Management for Environmental Sustainability

by Ministry of Education

#### **Outstanding Mentor Awards**

Science Mentorship Programme for  $\mathsf{CRADL}\Sigma$ 

by Gifted Education Branch, Ministry of Education

#### **Singapore Book of Records 2015**

Largest Rube Goldberg Machine with 74 working stages by the Singapore Academy of Young Engineers and Scientists

Largest Singapore map made of chromatography paper (measuring 16.2m by 8.4m)

Most number of people wearing illuminated personalised T-shirts for the Singapore Science Festival 2015

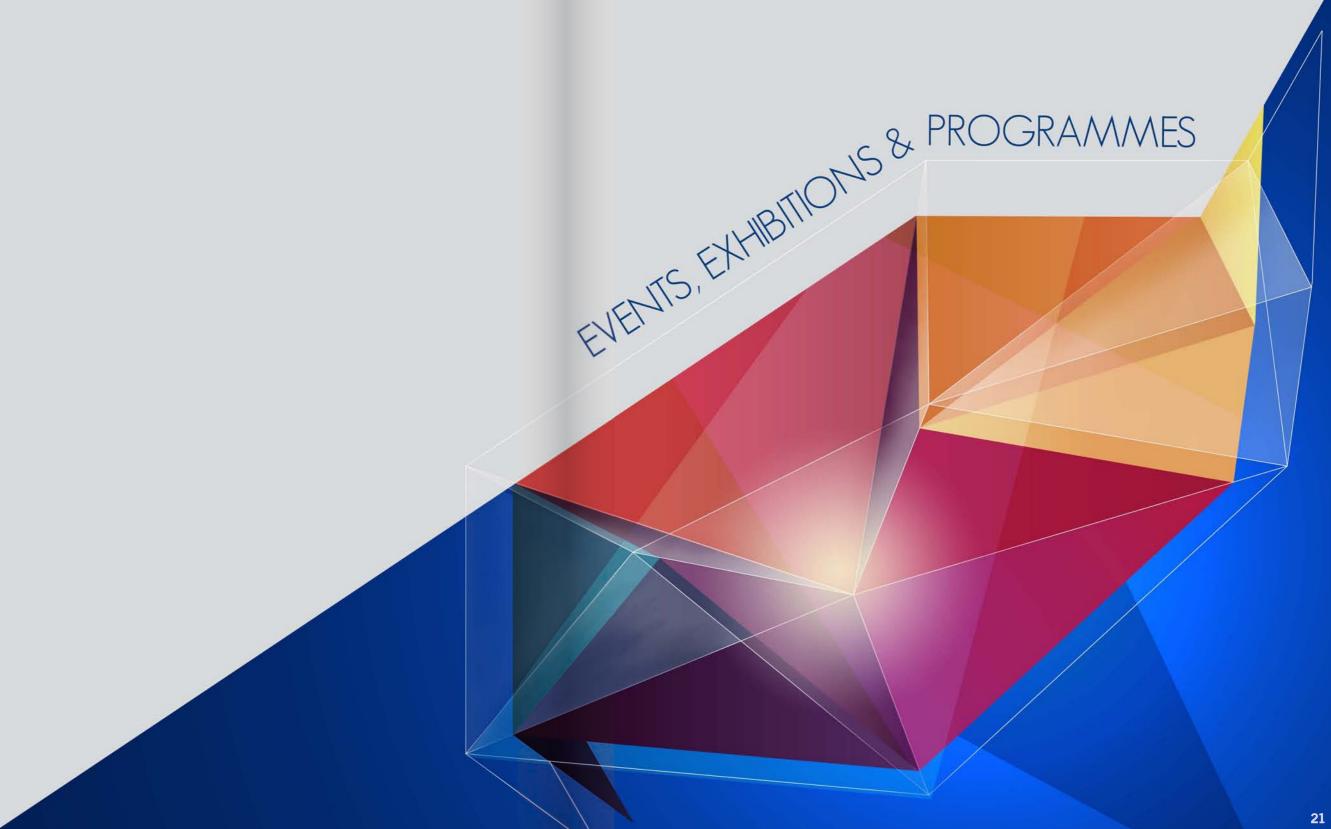
#### **Businesses for Families Mark Accreditation**

by Singapore Productivity Association

**Water Efficient Building Certification Silver Award** 

by Public Utilities Board





# EVENTS TIMELINE

#### **April 2015**

**A\*STAR Talent Search** 

#### **May 2015**

BrainFest 2015

Tan Kah Kee Young Inventors' Award

Launch of Interplay Exhibition

Singapore International Space Camp

International Science Drama Competition

Launch of Digital Planetarium Live Shows – Exploring the Planets,

Cosmic Surfing and What's Up There

Launch of Digital Movie - Back to the Moon for Good

#### June 2015

Science in the Mall

#### **July 2015**

Visual SG

Maker Faire Singapore

Sony Creative Science Award

Science Buskers Festival

Bioethics Week

#### August 2015

Singapore Amazing Machine Competition
Golden Jubilee Weekend

#### September 2015

Launch of Singapore Innovations – From Ideas to Creations Exhibition
Amazing Science-X Challenge
National Junior Robotics Competition
Young Learners' Festival
Launch of Digital Movie – Stars of the Pharaohs

#### October 2015

Launch of Monsters of the Sea Exhibition

#### **November 2015**

Launch of Explore the Arctic – Past, Present & Future Exhibition

Launch of Digital Movies - One World, One Sky: Big Bird's Adventure and Earth, Moon and Sun

Singapore International Science Teachers Conference

#### **December 2015**

Launch of E3: E-mmersive Experiential Environments Exhibition
Hour of Code
Maker Camp

#### January 2016

**Launch of Tinkering Studio** 

#### **March 2016**

MindFest

Launch of FunFair Maths Exhibition
Singapore Amazing Flying Machine Competition
Singapore Science & Engineering Fair
Brain Awareness Week
FOSSASIA
Solar Eclipse

Launch of Digital Planetarium Live Show - Climate Change





Explore the Arctic – Past, Present and Future

Explore the Arctic – Past, Present and Future was gifted to Singapore from the Kingdom of Norway to mark the occasion of Singapore's birthday and commend our nation's active engagement in Arctic affairs. The exhibition gave visitors an insight into the history of polar exploration, the Arctic region today, and why developments in the Arctic matter to Singapore. The exhibition's launch was marked by 'Climate Change and the Arctic' forum, in which policymakers and leading scientists in Arctic affairs discussed issues like rapid climate change in the Arctic.

# E3: E-mmersive Experiential Environments

Launched by His Excellency President Tony Tan Keng Yam in December, E3 seamlessly blends and combines different virtual reality technologies to create a fully immersive experience for visitors. E3 aims to encourage exploration of undiscovered frontiers by 'transporting' visitors to environments not easily accessible by the average Singaporean, with highlights such as Birdly®, a virtual reality rig that allows users to 'soar' over cities like New York and San Francisco. The exhibition was made possible through support from the Ministry of Education and Tote Board, and also partnerships with ARS ELECTRONICA, the American Museum of Natural History and Linköping University (Sweden), Panasonic System Solutions Asia Pacific. The launch also signified a milestone for Science Centre in the signing of a Memorandum of Understanding (MOU) between the Centre and ARS ELECTRONICA for knowledge transfer and further collaboration.

## **Tinkering Studio**

With support from the Tote Board and in partnership with the world renowned Exploratorium, Science Centre launched the Tinkering Studio in December. The studio is the first-of-its-kind in Asia and encourages learning through creative experimentation, with hands-on exhibits and activities that allow visitors to 'think with their hands'. The launch also marked a MOU with the Exploratorium to see both institutions actively involved in encouraging and supporting the growth of the tinkering movement in the region. An additional MOU with the Institution of Engineers, Singapore (IES) will strengthen collaborative efforts in promoting engineering amongst our youth through talks and forums and outreach events such as robotics competitions. The Tinkering Studio was officially opened by Minister for Foreign Affairs, Dr Vivian Balakrishnan, an avid maker and DIY enthusiast himself.





The launch event, X-periment! gave visitors the chance to interact with Changemakers from research institutions, universities, polytechnics and partnering companies as they showcased their ground-breaking research. Visitors got to witness first-hand the latest in research & development, including technology designed to aid dementia sufferers and battle against cancer. Also wowing the crowds at VivoCity was guest-performer and America's beloved Science presenter, Science Bob, who demonstrated popular experiments like the Film Canister Rocket and Liquid Nitrogen Cloud.

This year's STAR Lecture was presented by Professor Danielle George from the University of Manchester. Themed "Sparks Will Fly: How to Hack Your Home", more than 1,200 students aged 13 to 18 were shown how to use everyday items and modern technology to make a difference to our everyday lives.

With the growing Maker Culture in Singapore, Science Centre also hosted the nation's first ever full-featured Maker Faire. Maker Faire Singapore 2015 served as an effective platform for visitors to learn the art of Making, and see first-hand the spirit of tinkering, creativity and innovation. The event, graced by Mr Heng Swee Keat, Minister for Education, saw more than 400 do-it-yourself (DIY) enthusiasts and 12,000 participants over two days.

In all, the festival engaged over 177,000 participants including children, youths, families, and professionals through its variety of exhibitions, shows and workshops.

## Singapore Amazing Flying Machine Competition

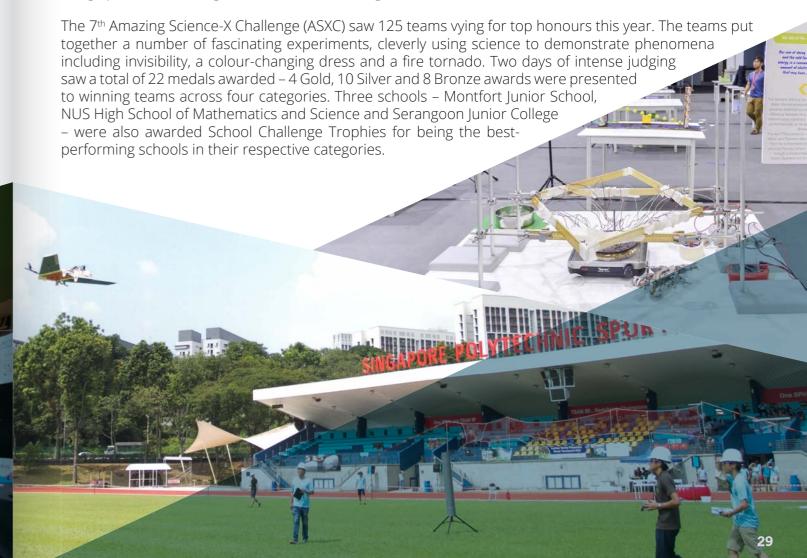
The 8<sup>th</sup> edition of the Singapore Amazing Flying Machine Competition (SAFMC) saw 377 teams pit their flying machines against each other. This year's competition represented the largest number of participating teams since its inception in 2009, including a record 14 international teams. New challenges included two demonstrations for Category E - 'Island Infiltration' and 'Maneuvrability Test'. The event was graced by Guest-of-Honour Mr Ong Ye Kung, Acting Minister for Education (Higher Education and Skills) & Senior Minister of State for Defence.

#### Singapore Amazing Machine Competition

To commemorate the SG50 celebrations, this year's Singapore Amazing Machine Competition (SAMC) required students to tell stories of Singapore's past, present and future by incorporating their vision of Singapore's next 50 years into their respective machines. More than 200 students from 23 primary, secondary and pre-tertiary institutions conceptualised and built 53 Rube Goldberg machines.

12 awards were presented in total by Guest-of-Honour Mr Lui Tuck Yew, Minister for Transport and Second Minister for Defence. One project that left a particularly deep impression on the judges was Category C's winning machine from Anglo-Chinese School (Independent). The machine utilised a series of scientific concepts and models such as Newton's Cradle, falling dominoes and electric circuits to complete the formation of the characters 'HAPPY' and 'SG50' one letter at a time, highlighting the overall complexity demonstrated in the invention.

## Singapore Amazing Science-X Challenge







# SNOW CITY

KidsSTOP™ started the year on an upbeat note with the revision of admission rates for the public. Singaporeans and Permanent Residents now enjoy lower admission rates, which marks a new beginning for KidsSTOP™ in bringing the world of creative science and experiential learning through play to more Singapore residents.

On April 1, KidsSTOP™ and Science Centre hosted the launch of our President's Challenge 'Start Small, Dream Big' project by Early Childhood Development Agency. The event saw more than 1,000 pre-schoolers and teachers coming together to contribute to the community and help the less fortunate. During the event, they participated in many hands-on activities and enjoyed a Science Show staged by KidsSTOP™ educators.

On July 6, KidsSTOP™ and National Technological University (NTU) signed a Memorandum of Understanding for a new research partnership centred on early childhood learning. An on-site research facility, the Early Cognition Lab, was set up at KidsSTOP™, where a team of researchers will conduct a series of experiments, each targeting about 200 participants. These psychology-based experiments seek to enhance our understanding of young children so that we can provide better programming and activities for more effective learning.

STEM-related activities and workshops of KidsSTOP™ continue to be popular. Regular educational ground activities including Fun Spots, Tinkering Sessions and Artsy Science Craft were introduced in the year. These activities were well received by visitors. Families also bonded over highly popular science-themed birthday parties and signature events like KidsSTOP™'s first Birthday Bash, Children's Day Carnival cum Dream Climber Competition, Christmas Light-Up, Colouring Competition and Supermarket Run-Around.

revamp since officially opening in 2000.

With the new Inuit (indigenous Arctic people) theme, visitors journey alongside Snow City's 'Arctic Avengers' to get a deeper insight into the Inuit lifestyle and climate change through storytelling sessions such as

Snow City underwent a revamp of its premises in November last year, the first major

to get a deeper insight into the Inuit lifestyle and climate change through storytelling sessions such as The Life of the Inuit' and 'The Northern Lights'. New interactive installations in Snow City include igloos, Inuit clothes, a snow playground and an adventure playground which engage visitors in the Inuit lifestyle experience.

To offer an Arctic experience that is as close to winter as possible in an indoor environment, Snow City commissioned a snow machine that is the first-of-its-kind in Asia, able to produce realistic, fine snow and complemented by a new snow gun offering a crystallised snowfall experience to visitors.

The new space also features supporting educational activities on climate change that allow visitors to learn about what they can do to reduce their carbon footprint. Tips on how visitors can help to combat global warming are also displayed around the premises.

Through creating an Arctic-like environment with an enhanced snow experience, the revamped

Snow City allows visitors to enjoy realistic winter experiences and programmes based on

the Arctic theme, culture and lifestyle.

Within the first year of operations, on 16 May, KidsSTOP\*New Lorend its 100,000° wolk in visitor. On a monthly basis, KidsSTOP\*New Lorend its averaged 13,000 wolk-in visitors and 2,000 school children visits.

# REVAMPED OMNI-THEATRE

In May 2015, Science Centre Singapore re-opened its Omni-Theatre, now digitally enhanced with the world's latest and brightest 8K digital full dome system. With the revamp, the Omni-Theatre now offers visitors a distinctly immersive experience. With the new capabilities, audiences can now transcend physical boundaries and travel virtually to remote locations on Earth and space to learn more about astronomy, space science and exploration, all from the comfort of their seats.

Visitors enjoy an increased selection of digital fulldome movies and 'Live' shows which are topical and real-time presentations conducted by the Centre's science educators. The 'Live' shows, powered by the 8K digital fulldome system and Digistar 5 visualisation software with high-resolution detail, are accompanied by real-time data from prominent organisations like the American Museum of Natural History and National Aeronautics and Space Administration (NASA).







# VOLUNTEER PROGRAMME

Volunteers continue to contribute their support to Science Centre's programmes and events. Our volunteers range from secondary school students to senior volunteers, engaging visitors in the spirit of science education.

Contributing to different fields of science, our volunteers help out at our DNA laboratory focusing on biology, at our Scientist-for-a-Day section where physics-related experiments are conducted, and at the Observatory where they engage visitors in astronomy. Our volunteers also contribute to our outreach efforts such as Brain Awareness Week, Young Learners' Festival held in the Centre, as well as our external outreach events in Kandang Kerbau Women and Children Hospital, and Yuhua Community Club.



# LIST OF SPONSORS 2015/16

Abbott Laboratories (Singapore) Pte Ltd Agency for Science, Technology & Research Autodesk Asia Pte Ltd **Building and Construction Authority** Citi Construction and Engineering Pte Ltd Civil Aviation Authority of Singapore Cadaq Pte Ltd Cerebos Pacific Ltd Defence Science and Technology Agency **DSO National Laboratories** Earth Observatory of Singapore Infocomm Development Authority of Singapore Intel Mobile Communications Southeast Asia Pte Ltd Kingsmen Exhibits Pte Ltd Lee Foundation Media Development Authority National Climate Change Secretariat National Environment Agency National Research Foundation National University of Singapore Panasonic System Solutions Asia Pacific Pilot Pen Singapore Shell Eastern Petroleum Pte Ltd Sembcorp Industries Ltd Senoko Energy Pte Ltd Singapore Telecommunications Ltd Singapore Totalisator Board Singapore Technologies Aerospace Ltd Singapore Technologies Endowment Programme Sony Electronics Asia Pacific Pte Ltd

# SPONSORSHIP FUND

## **Science Centre Board Sponsorship Fund Programmes & Activities**

The principal activities of the Science Centre Board Sponsorship Fund are to:

- Promote interest, learning and creativity in science and technology through imaginative and enjoyable experience and contribute to the nation's development of its human resource;
- Conduct supplementary science classes, lectures, demonstrations and workshops to complement the school science syllabi;
- Produce and publish scientific literature in the form of magazines and guidebooks;
- Organise activities and programmes for targeted and general audiences so as to bring science closer to the people; and
- Screen planetarium programmes and OMNIMAX films to students and general public, using state-of-the-art audio-visual projection systems.

## **Board Members**

Chairman Members Ms Tan Yen Yen

Mr Lim Eng Hwee

Mr Zaqy Mohamad

Ms Melissa Ow

Mr Bruce Poh

Mr Kenneth Tan

Mr Chew Kwee San

Mr Soh Gim Teik

Mr Hian Goh

Ms Shirley Wong

Ms Cherie Nursalim

Mr Chandran Nair

Mr Jeffrey Siow

Mr Cheong Chee Hoo

Ms Tricia Huang

Mr Sin Kim Ho

# **Key Executive Management**

Chief Executive

Deputy Chief Executive

Senior Director, Education Programmes

Senior Director, Projects and Exhibitions

Quality Service Manager

A/Prof Lim Tit Meng

Mr Clarence Sirisena

Ms Anne Dhanaraj

Mr Daniel Tan

Ms Veronica Heng

# **Conflict of Interest Policy**

The Science Centre Board has implemented a conflict of interest policy that covers both the Board members and the staff. The document procedures require the Board members and staff to make a declaration of potential or actual conflicts of interest at the start of their term of office or at the start of their employment of service respectively. Thereafter, Board members are required to provide updates whenever there are changes to the original declaration, while staff are required to make such declarations annually.

Reserves policy is not applicable as funds received are used for their intended purposes.

# DISTINGUISHED VISITORS 2015/16

# 2015

# **April**

Delegation from the University of Macau, Education Department His Excellency Ambassador Mr Haruhisa Takeuchi, Japan Embassy Dilip Kanhare, Distinguished Professor, Centre for Simulations and Modelling, University of Pune, India

# July

Delegation from the Ministry of Education and Sports, Uganda Delegation from Ministry of Science and Technology, Vietnam Delegation from Quzhou Qujiang District Education Bureau, Zhejiang Province, China Delegation from Ministry of Education, Shanghai and Tianjing Normal University, Tianjing, China Delegation from Council for the Indian School Certificate Examinations (CISCE), India

# August

Delegation from Sirindhorn Science Camp Management (SCM) of NSTDA, Thailand Delegation from Beijing Continuing Education College for Science and Technology (BAST) Delegation from The Research Center for Scientific Communication of CAS, China Delegation from Seychelles Institute of Teacher Education

# September

Delegation of Educators from Saudi Arabia Delegation from Gwangju National Science Museum of Korea

# October

Mr G S Rautela, Director General of the National Council of Science Museums, India Delegation from Kunming Education Bureau, Yunnan Province, China

## December

Mr Teo Chee Hean, Deputy Prime Minister & Coordinating Minister for National Security

# 2016

# January

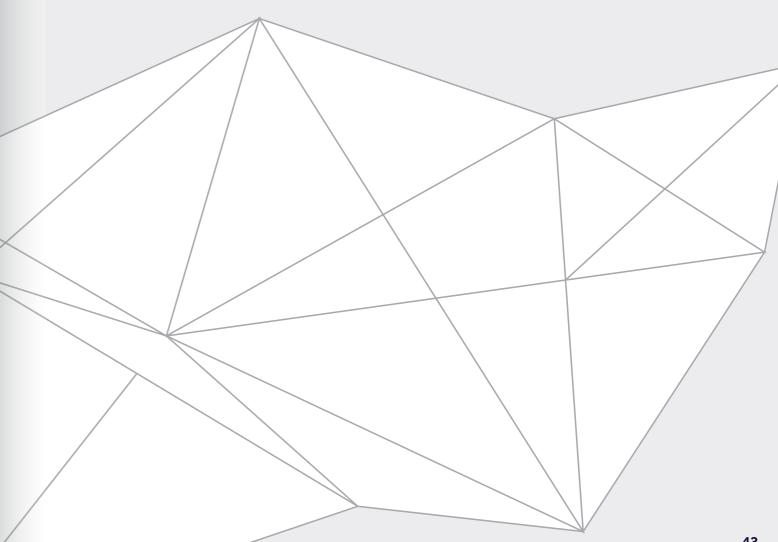
Mr Ng Chee Meng, Acting Minister for Education (Schools) and delegation from Ministry of Education.

# **February**

Delegation from the Moscow City Government Department of International Relations and Culture, Russia

#### March

Sir John Holman, Advisor to the Gatsby Foundation, University of York, United Kingdom Dr Dirar S. Khoury, Executive Director, Research Coordination & Special Initiatives, Acting Executive Director, Education, Training & Development, Qatar Foundation for Education, Science, and Community Development, Doha, Qatar



# SUB-BOARD COMMITTEES 2015/16

## **Executive Committee**

Chairman Members Ms Tan Yen Yen Ms Shirley Wong

Mr Lim Eng Hwee Mr Sin Kim Ho Mr Soh Gim Teik Mr Hian Goh Mr Chandran Nair

# Finance & Investment Committee

Chairman Members Mr Hian Goh Mr Kenneth Tan Mr Chew Kwee San

Mr Zaqy Mohamad Ms Cherie Nursalim Mr Cheong Chee Hoo

## Advancement Committee

Chairman Members Ms Shirley Wong Ms Melissa Ow Mr Lim Eng Hwee Mr Kenneth Tan Mr Chew Kwee San

Mr Chandran Nair Ms Cherie Nursalim

## **Audit Committee**

Chairman Members Mr Soh Gim Teik Mr Bruce Poh Mr Sin Kim Ho Ms Tricia Huang Mr Jeffrey Siow

# PROJECT COMMITTEES 2015/16

A\*STAR Talent Search 2015 Steering Committee

CRADL∑ 2015 Steering Committee

National Junior Robotics Competition 2015 Advisory Committee

National Science Challenge 2015 Steering, Working & Science Content

Committees

SAYES 2015 Advisory and Executive Committees
Science Buskers Festival 2015 Advisory Committee
Shell Singapore Youth Science Festival 2015 Organising Committee
Singapore Science & Engineering Fair 2015 Working Committee
Singapore Science Festival 2015 Steering and Working Committees
Sony Creative Science Award 2015 Organising Committee
Energy Innovation Challenge 2015 Steering and Working Committees





(Established under the Science Centre Act, Cap. 286)

# ANNUAL REPORT

For the financial year ended 31 March 2016

# SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES (Established under the Science Centre Act, Cap. 286)

#### ANNUAL REPORT

For the financial year ended 31 March 2016

# **Contents**

	Page
Statement by the Board of Science Centre Board	1
Independent Auditors' Report	2
Statement of Comprehensive Income - Group	4
Statement of Comprehensive Income - Board	5
Balance Sheets - Group and Board	6
Statement of Changes in Capital, Funds and Accumulated Surplus - Group	7
Statement of Changes in Capital, Funds and Accumulated Surplus - Board	8
Consolidated Statement of Cash Flows	9
Notes to the Financial Statements	10

#### STATEMENT BY DIRECTORS

For the financial year ended 31 March 2016

In the opinion of Science Centre Board (the "Board"),

- (a) the consolidated financial statements of the Group as set out on pages 4 to 50 are drawn up so as to present fairly, in all material respects, the state of affairs of the Board and of the Group as at 31 March 2016, and the results of the business, changes in capital, funds and accumulated surplus of the Board and of the Group and cash flows of the Group for the financial year then ended; and
- (b) proper accounting and other records have been kept, including records of all assets of the Group whether purchased, donated or otherwise have been kept in accordance with the provisions of the Science Centre Act, Cap. 286 (the "Act"); and
- (c) the receipts, expenditure, investment of moneys and the acquisition and disposal of assets by the Board during the financial year have been made in accordance with the provisions of the Act.

On behalf of the Board

Ms Tan Yen Yen Chairman

Associate Professor Lim Tit Meng Chief Executive

23 June 2016



KPMG LLP 16 Raffles Quay #22-00 Hong I eong Building Singapore 048581 Telephone Fax

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# INDEPENDENT AUDITORS' REPORT TO THE SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

#### Report on the Financial Statements

We have audited the accompanying financial statements of Science Centre Board (the "Board") and its subsidiaries (the "Group") set out on pages 4 to 50, which comprise the balance sheets of the Group and the Board as at 31 March 2016, and the statements of comprehensive income and statements of changes in capital, funds and accumulated surplus of the Group and the Board and the consolidated statement of cash flows of the Group for the year then ended, and a summary of significant accounting policies and other explanatory information.

#### Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with the provisions of Science Centre Act, Cap. 286 (the "Act") and Singapore Statutory Board Financial Reporting Standards ("SB-FRS"), and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Singapore Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.



Independent auditors' report For the financial year ended 31 March 2016

#### Opinion

In our opinion, the consolidated financial statements of the Group and the balance sheet, statement of comprehensive income and statement of changes in capital, funds and accumulated surplus of the Board are properly drawn up in accordance with the provisions of the Act and SB-FRS so as to present fairly, in all material respects, the state of affairs of the Group and of the Board as at 31 March 2016, and the results, changes in capital, funds and accumulated surplus of the Group and of the Board and cash flows of the Group for the financial year ended on that date.

#### Report on Other Legal and Regulatory Requirements

In our opinion, proper accounting and other records required by the Act to be kept by the Board and by those subsidiaries incorporated in Singapore, of which we are the auditors, have been properly kept in accordance with the provisions of the Act.

#### Other matter

During the course of our audit, nothing came to our attention that caused us to believe that the receipts, expenditure and investment of moneys and the acquisition and disposal of assets by the Board during the financial year have not made been in accordance with the provisions of the Act.

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KPMG LLP

Public Accountants and Chartered Accountants

Singapore 23 June 2016

#### SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

#### STATEMENT OF COMPREHENSIVE INCOME

For the financial year ended 31 March 2016

			* *				
GROUP		Genera	al Funds	Restricte	ed Funds	To	otal
NAME OF TAXABLE PARTY O	Note	2016	2015	2016	2015	2016	2015
		\$	\$	\$	\$	\$	\$
Income		3.575	- 2	~	10.80	-34	1.5
- Admission fees		5,105,678	5,877,594			5,105,678	5,877,594
- Proceeds from special projects		911,566	1,070,101	-		911,566	1,070,101
<ul> <li>Fees from courses and</li> </ul>		240747672577	C80/2084			2475.7047	101000000000
programmes		903,716	703,815			903,716	703,815
- Collections from exhibits		409,775	311,207		-	409,775	311,207
- Sales of merchandise and		4 004 745	4 404 000				4 404 000
publications		1,334,715	1,104,832	-	-	1,334,715	1,104,832
- Service income		129,007	102,636	7.3		129,007	102,636
<ul> <li>Rental income</li> </ul>		223,354	268,303			223,354	268,303
<ul> <li>Photo-taking income</li> </ul>		201,457	235,385	7.5		201,457	235,385
<ul> <li>Royalty fee</li> </ul>			6,938	-	-		6,938
		9,219,268	9,680,811			9,219,268	9,680,811
Other income	4	1,667,050	1,716,802	829,826	3,856,821	2,496,876	5,573,623
Other gains/(losses) - net	5	5,850	(17,681)	26,423	146,041	32,273	128,360
Expenses							
- Employee compensation	6	(20,255,517)	(17,611,726)	(166,308)	(227,006)	(20,421,825)	(17.838.732
<ul> <li>Materials for exhibits and</li> </ul>					()		(
projects		(8,687,414)	(6,058,450)	(475,052)	(3,315,297)	(9,162,466)	(9,373,747
- Repairs and maintenance		(5,874,488)		(7,100)	(11,207)		
- Publicity and promotions		(2,702,083)		(15,536)	(67,223)		
- Depreciation	16	(3,944,757)		(10,000)	(01,220)	(3,944,757)	
- Other expenditure	7	(5,150,019)		(109,191)	(231,488)		
- Finance expenses	8			(109,191)	(231,400)		
- Finance expenses	0	(5,372)	(3,541)	(7770 40T)	10.000.004	(5,372)	(3,541)
		(46,619,650)	(38,853,270)	(773,187)	(3,852,221)	(47,392,837)	(42,705,491)
(Deficit)/surplus before grants		(35,727,482)	(27,473,338)	83,062	150,641	(35,644,420)	(27,322,697)
Operating grants from government	17	26,881,593	20,130,935			26,881,593	20,130,935
Grants from other government			THE SOUTH OF WATER				
agencies	11	5,682,963	5,243,480			5,682,963	5,243,480
Deferred capital grants amortised	21	1,214,611	1,224,095		-	1,214,611	1,224,095
		33,779,167	26,598,510		-	33,779,167	26,598,510
Deficit)/surplus before tax		(1,948,315)	(874,828)	83,062	150,641	(1,865,253)	(724,187
Income tax expense	9	(8,080)	(10,133)			(8,080)	(10,133)
Net (deficit)/surplus and total comprehensive (loss)/income		(1,956,395)	(884,961)	83,062	150,641	(1,873,333)	(734,320)
							1.0.1000

STATEMENT OF COMPREHENSIVE INCOME For the financial year ended 31 March 2016

BOARD		General Funds		Restricte	ed Funds	Total	
	Note	2016	2015	2016	2015	2016	2015
Other Control of		\$	\$	\$	\$	\$	\$
Income							1240
- Admission fees		4,014,490	4,581,277	-		4,014,490	4,581,277
<ul> <li>Proceeds from special projects</li> </ul>		916,873	1,080,399			916,873	1,080,399
<ul> <li>Fees from courses and</li> </ul>						and the	E. 35 %
programmes		626,618	523,416		-	626,618	523,416
<ul> <li>Collections from exhibits</li> </ul>		409,775	311,207	-	-	409,775	311,207
<ul> <li>Sales of merchandise and</li> </ul>			1000070000				
publications		1,157,076	1,036,491	54		1,157,076	1,036,491
<ul> <li>Service income</li> </ul>		30,199	47,452			30,199	47,452
		7,155,031	7,580,242			7,155,031	7,580,242
Other income	4	1,801,863	1,906,870	829,826	3,856,821	2,631,689	5,763,691
Other gains/(losses) - net	5	5,850	(17,681)	26,423	146,041	32,273	128,360
Expenses			20				
- Employee compensation	6	(19,065,882)	(16,730,146)	(166,308)	(227.006)	(19,232,190)	(16.957.152)
<ul> <li>Materials for exhibits and projects</li> </ul>		(8,662,351)		Carrier Street		And a state of the	
- Repairs and maintenance		(5,347,325)		(533,463)	(3,315,297)	(9,195,814)	
- Publicity and promotions		(2,544,945)		(7,100)	(11,207)	(5,354,425)	A-1
- Depreciation	16	(3,619,073)		(15,536)	(67,223)	(2,560,481)	
- Other expenditure	7			(400 404)	(224 400)	(3,619,073)	
- Finance expenses	8	(4,896,958) (5,372)		(109,191)	(231,488)	(5,006,149)	
- I mance expenses	0		(3,541)	(004 500)	(0.000.004)	(5,372)	(3,541)
		(44,141,906)	(36,814,466)	(831,598)	(3,852,221)	(44,973,504)	(40,666,687)
(Deficit)/surplus before grants		(35,179,162)	(27,345,035)	24,651	150,641	(35,154,511)	(27,194,394)
Operating grants from government Grants from other government	17	26,881,593	20,130,935	2	2	26,881,593	20,130,935
agencies	11	5,642,297	5,215,987		23	5,642,297	5,215,987
Deferred capital grants amortised	21	1,199,945	1,216,255		-	1,199,945	1,216,255
	3,37,50	33,723,835	26,563,177			33,723,835	26,563,177
Net (deficit)/surplus and total							
comprehensive (loss)/income		(1,455,327)	(781,858)	24,651	150,641	(1,430,676)	(631,217)

#### SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

#### **BALANCE SHEETS**

As at 31 March 2016

				0.0	
		Gr	oup	Bo	ard
	Note	2016	2015	2016	2015
		\$	\$	\$	\$
ASSETS					
Current assets					
Cash and cash equivalents	10	18,006,775	21,013,060	17,644,071	19,659,928
Trade and other receivables	11	4,130,606	3,762,942	4,077,186	3,748,844
Financial asset at fair value through profit					
or loss	12	4,072,464	4,046,041	4,072,464	4,046,041
Held-to-maturity financial assets	13	-	1,005,000		1,005,000
Inventories	14	346,942	253,798	134,529	179,492
*		26,556,787	30,080,841	25,928,250	28,639,305
Non-current assets					
Held-to-maturity financial assets	13	2,020,500	1,002,500	2,020,500	1,002,500
Investments in subsidiaries	15	110000000000000000000000000000000000000		1,260,002	1,260,002
Property, plant and equipment	16	28,588,444	28,430,585	26,881,888	27,635,395
		30,608,944	29,433,085	30,162,390	29,897,897
Total assets	-	57,165,731	59,513,926	56,090,640	58,537,202
LIABILITIES					
Current liabilities					
Government grants received in advance	17	7,360,788	7,375,124	7,360,788	7,375,124
Other government grants received in advance	17	7,300,700	1,515,124	7,500,700	7,575,124
advance	11	1,669,829	1,566,262	1,669,829	1,566,262
Sponsorship received in advance	18	506,115	582,639	506,115	582,639
Trade and other payables	19	6,608,046	6,895,099	5,893,899	6,641,257
Current income tax liabilities	9	620	18,143	-	0,041,201
outlett moonte tax nabinios		16,145,398	16,437,267	15,430,631	16,165,282
Non-current liabilities					
Deferred income tax liabilities	20	59,302	48,787		
Deferred capital grants	21	18,242,053	19,280,361	18,134,073	19,260,108
belefied dapital grants		18,301,355	19,329,148	18,134,073	19,260,108
Total liabilities		34,446,753	35,766,415	33,564,704	35,425,390
NET ASSETS		22,718,978	23,747,511	22,525,936	23,111,812
CARITAL FUNDS AND ACCUMULATED					
CAPITAL, FUNDS AND ACCUMULATED SURPLUS					
Capital account	22	2,979,983	2,979,983	2,979,983	2,979,983
Share capital	23	6,165,076	5,320,276	6,165,076	5,320,276
Omni-theatre development fund	25	122,780	122,780	122,780	122,780
Accumulated surplus:		the graphs of relations	2001/06/00/06/06	22222	227020222
General funds	10000	6,149,175	8,105,570	6,014,544	7,469,871
Restricted funds	24	7,301,964	7,218,902	7,243,553	7,218,902
Total capital, funds and accumulated surplus		22 749 079	23 747 514	22,525,936	23 111 812
surpius		22,718,978	23,747,511	22,020,930	23,111,812

# STATEMENTS OF CHANGES IN CAPITAL, FUNDS AND ACCUMULATED SURPLUS For the financial year ended 31 March 2016

			Omni-	Accumulat		
GROUP	Capital account	Share capital	theatre development <u>fund</u> \$	General funds \$	Restricted funds	Total \$
ALTERNATION TOURTH						
2016 Beginning of financial year	2,979,983	5,320,276	122,780	8,105,570	7,218,902	23,747,511
Issue of new shares (Note 23)		844,800	-			844,800
Total comprehensive (loss)/income				(1,956,395)	83,062	(1,873,333)
End of financial year	2,979,983	6,165,076	122,780	6,149,175	7,301,964	22,718,978
2015 Beginning of financial year	2,979,983	3,364,782	122,780	8,990,531	7,068,261	22,526,337
Issue of new shares (Note 23)		1,955,494				1,955,494
Total comprehensive (loss)/income	3	ē		(884,961)	150,641	(734,320)
End of financial year	2,979,983	5,320,276	122,780	8,105,570	7,218,902	23,747,511

#### The accompanying notes form an integral part of these financial statements.

#### SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

### STATEMENTS OF CHANGES IN CAPITAL, FUNDS AND ACCUMULATED SURPLUS For the financial year ended 31 March 2016

		Omni-		Accumulated surplus			
BOARD	Capital account	Share capital	theatre development <u>fund</u> \$	General funds \$	Restricted funds	Total \$	
2016 Beginning of	0.070.000	F 000 070	400 700	7 400 074	7.040.000	00 111 010	
financial year	2,979,983	5,320,276	122,780	7,469,871	7,218,902	23,111,812	
Issue of new shares (Note 23)		844,800				844,800	
Total comprehensive (loss)/income				(1,455,327)	24,651	(1,430,676)	
End of financial year	2,979,983	6,165,076	122,780	6,014,544	7,243,553	22,525,936	
2015 Beginning of financial year	2,979,983	3,364,782	122,780	8,251,729	7,068,261	21,787,535	
Issue of new shares (Note 23)		1,955,494			-	1,955,494	
Total comprehensive (loss)/income	4	72		(781,858)	150,641	(631,217)	
End of financial year	2,979,983	5,320,276	122,780	7,469,871	7,218,902	23,111,812	

#### CONSOLIDATED STATEMENT OF CASH FLOWS

For the financial year ended 31 March 2016

	Note	2016 \$	2015 \$
Cash flows from operating activities			•
Deficit before grants and after tax		(35,652,500)	(27,332,830)
Adjustments for:			
- Income tax expense		8,080	10,133
- Depreciation		3,944,757	3,454,743
- Gain on disposal of property, plant and equipment		(9,367)	-
- Sponsorships and donations		(769,379)	(3,786,629)
- Changes in fair value of financial asset at fair value through profit or		VF-035-030-034	0.000004045
loss		(26,423)	(146,041)
- Interest income		(165,585)	(167,398)
Change in working capital		(32,670,417)	(27,968,022)
- Inventories		(93,144)	69,506
- Trade and other receivables		240,238	74,062
- Trade and other payables		(287,053)	708,264
Cash used in operations		(32,810,376)	(27,116,190)
Income tax (paid)/refunded		(15,088)	1,911
Net cash used in operating activities	-	(32,825,464)	(27,114,279)
			, , , , , , , , , , , , , , , , , , , ,
Cash flows from investing activities			12 3 2 2 3 3 3 3
Purchases of property, plant and equipment		(4,136,749)	(2,483,448)
Proceeds from sale of property, plant and equipment		43,500	(0.000.000)
Purchase of financial asset at fair value through profit or loss		44 040 000	(3,900,000)
Purchase of held-to-maturity financial assets		(1,018,000)	-
Proceeds upon maturity of held-to-maturity financial assets Redemption of fixed deposits with maturity of more than 3 months		1,000,000	0.000.000
Interest received		470 FOE	2,300,000
	- 5	170,585	167,398
Net cash used in investing activities		(3,940,664)	(3,916,050)
Cash flows from financing activities			
Government grants received		26,907,716	19,568,001
Sponsorship received		907,984	2,337,070
Other government grants received		5,099,343	3,222,140
Issuance of share capital		844,800	1,955,494
Net cash from financing activities	19	33,759,843	27,082,705
Net decrease in cash and cash equivalents		(3,006,285)	(3,947,624)
Cash and cash equivalents at beginning of financial year		20,013,060	23,960,684
Cash and cash equivalents at beginning of financial year	10	17,006,775	20,013,060
and out of the state of the sta	10	17,000,775	20,013,000

#### SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

#### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

These notes form an integral part of and should be read in conjunction with the accompanying financial statements.

The financial statements were authorized for issue by members of the Board on 23 June 2016.

#### General information

Science Centre Board (the "Board") is a Statutory Board incorporated under the Science Centre Act (Cap. 286) under the purview of the Ministry of Education ("Government" or "MOE"). The registered office and principal place of business of the Board is 15 Science Centre Road, Singapore 609081.

The principal activities of the Board are to:

- (a) Promote interest, learning and creativity in science and technology through imaginative and enjoyable experience and contribute to the nation's development of its human resource;
- (b) Conduct supplementary science classes, lectures, demonstrations and workshops to complement the school science syllabi;
- (c) Produce and publish scientific literature in the form of magazines and guidebooks;
- Organise activities and programmes for targeted and general audiences so as to bring science closer to the people; and
- (e) Screen planetarium programmes and OMNIMAX films to students and the general public, using state-of-the-art audio-visual projection systems.

The principal activities of the subsidiaries are described in Note 15 to the financial statements.

#### 2. Significant accounting policies

#### 2.1 Basis of preparation

The financial statements have been prepared in accordance with Singapore Statutory Board Financial Reporting Standards ("SB-FRS"). The financial statements have been prepared under the historical cost convention, except as disclosed in the accounting policies below.

The accompanying notes form an integral part of these financial statements.

#### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

#### 2. Significant accounting policies (continued)

#### 2.1 Basis of preparation (continued)

The preparation of financial statements in conformity with SB-FRS requires management to exercise its judgement in the process of applying the Group's accounting policies. It also requires the use of certain critical accounting estimates and assumptions. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the financial statements, are disclosed in Note 3.

# Interpretations and amendments to published standards effective for the financial year ended 31 March 2016

On 1 April 2015, the Group adopted the new or amended SB-FRS and Interpretations to SB-FRS ("INT SB-FRS") that are mandatory for application from that date.

The adoption of these new or amended SB-FRS and INT SB-FRS did not result in substantial changes to the Group's accounting policies and had no material effect on the amounts reported for the current or prior financial years.

#### 2.2 Subsidiaries

#### Consolidation

Subsidiaries are entities over which the Group has power to govern the financial and operating policies so as to obtain benefits from its activities, generally accompanied by a shareholding giving rise to a majority of the voting rights. The existence and effect of potential voting rights that are currently exercisable or convertible are considered when assessing whether the Group controls another entity. Subsidiaries are consolidated from the date on which control is transferred to the Group. They are de-consolidated from the date on which control ceases.

In preparing the consolidated financial statements, transactions, balances and unrealised gains on transactions between group entities are eliminated. Unrealised losses are also eliminated but are considered an impairment indicator of the asset transferred.

#### SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

#### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

#### 2. Significant accounting policies (continued)

#### 2.3 Joint operation

A joint operation is an arrangement in which the Group has joint control whereby the Group has rights to the assets, and obligations for the liabilities, relating to an arrangement. The Group accounts for each of its assets, liabilities and transactions, including its share of those held or incurred jointly, in relation to the joint operation.

#### 2.4 Revenue recognition

Revenue is recognised to the extent that is it probable that the economic benefits will flow to the Group and the revenue can be reliably measured. The following specific recognition criteria must also be met before revenue is recognised:

#### (a) Admission fees

Admission fees are recognised upon the sale of admission tickets to visitors and members.

#### (b) Proceeds from special projects

Proceeds from special projects are income from the organisation of temporary exhibitions. Income from such projects is recognised upon the sale of tickets to visitors.

#### (c) Fees from courses and programmes

Fees from courses and programmes are recognised over the duration of the courses and programmes.

#### (d) Collections from exhibits

Collections from exhibits comprise mainly of collections from rental of travelling exhibitions and are recognised on a straight-line basis over the rental period.

#### (e) Sales of merchandise and publications

Sales of merchandise and publications are recognised at the point of sales of the merchandise and publications.

#### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

#### 2. Significant accounting policies (continued)

#### 2.4 Revenue recognition (continued)

(f) Service income

Service income from provision of services for set up of travelling exhibitions and organisation of corporate events are recognised when services have been rendered.

(g) Rental income from equipment

Rental income from equipment such as lockers and gear are recognised when the rental service is provided.

(h) Photo-taking

Income from photo-taking is recognised upon the sale of photos to visitors and members.

(i) Donations and sponsorships

Donations and sponsorships are received or receivables to meet approved expenditure for specific projects or purposes. Donations and sponsorships are recognised in profit or loss as income in the financial year when the expenditure for the specified projects or purposes is incurred. The amount that is not utilised for the specific projects or purposes is included in the sponsorship received in advance account.

(i) Rental income

Rental income from operating leases (net of any incentives given to the lessees) is recognised on a straight-line basis over the lease term.

(k) Interest income

Interest income is recognised using the effective interest method.

#### SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

#### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

#### 2. Significant accounting policies (continued)

#### 2.4 Revenue recognition (continued)

(I) Commission fee

Commission fee income is recognised when earned.

(m) Management fee

Management fee for the provision of services to government agencies is recognised over the period the services are rendered.

#### 2.5 Government grants

Grants from the Ministry of Education are recognised as a receivable at their fair value when there is reasonable assurance that the grants will be received and the Group will comply with all the attached conditions.

Government grants are recognised as income over the periods necessary to match them with the related costs which they are intended to reimburse, on a systematic basis. Government grants that are receivable as reimbursement for expenses already incurred are recognised in profit or loss in the period in which they become receivable.

#### 2.6 Deferred capital grants

Government grants and contributions from other government organisations utilised for the purchase or construction of depreciable assets are recorded in the deferred capital grants account (shown as liability on the balance sheet).

Government grants whose primary condition is that the Group should purchase, construct or otherwise acquire non-current assets are recognised as deferred capital grants in the balance sheet and transferred to profit or loss over the useful lives of the related assets.

On the disposal of property, plant and equipment, the balance of the related grants is recognised in profit or loss to match the net book value of property, plant and equipment disposed.

#### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

#### Significant accounting policies (continued)

#### 2.7 Employee compensation

#### (a) Defined contribution plans

Defined contribution plans are post-employment benefit plans under which the Group pays fixed contributions into separate entities such as the Central Provident Fund on a mandatory, contractual or voluntary basis. The Group has no further payment obligations once the contributions have been paid.

#### (b) Employee leave entitlement

Employee entitlements to annual leave are recognised when they accrue to employees. A provision is made for the estimated liability for annual leave as a result of services rendered by employees up to the balance sheet date.

#### 2.8 Sponsorship Fund

The Sponsorship Fund is set up to account for contributions received from private organisations, individuals and other government agencies for specified purposes. The Sponsorship Fund has been conferred the Institute of Public Character status under Section 37(2)(c) of the Charities Act since 1 April 2008. The income from the Sponsorship Fund will be used to further the objectives of the Sponsorship Fund. The principal sums of the Sponsorship Fund are presented separately in the balance sheet. The Sponsorship Fund is classified as a restricted fund in accordance with SB-FRS Guidance Note 3.

#### 2.9 Endowment Fund

The Endowment Fund is set up to account for contributions received from private organisations, individuals and other government agencies for specified purposes. The Endowment Fund was conferred the Institute of Public Character status under Section 37(2)(c) of the Charities Act from 1 April 2008 to 31 March 2013. The income from the Endowment Fund will be used to further the objectives of the Endowment Fund. The principal sums of the Endowment Fund are presented separately in the balance sheet. The Endowment Fund is classified as a restricted fund in accordance with SB-FRS Guidance Note 3.

#### 2.10 Omni-Theatre Development Fund

The Omni-Theatre Development Fund was set up to account for contributions received from private organisations and individuals. The principal sums of the Omni-Theatre Development Fund, consisting of donations and sponsorships received, are kept intact. The Omni-Theatre Development fund is classified under general funds in accordance with SB-FRS Guidance Note 3.

#### SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

#### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

#### 2. Significant accounting policies (continued)

#### 2.11 Borrowing costs

Borrowing costs are recognised in profit or loss using the effective interest method.

#### 2.12 Income taxes

Current income tax for current and prior periods is recognised at the amount expected to be paid to or recovered from the tax authorities, using the tax rates and tax laws that have been enacted or substantively enacted by the balance sheet date.

Deferred income tax is recognised for all temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements except when the deferred income tax arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and affects neither accounting nor taxable profit or loss at the time of the transaction.

A deferred income tax liability is recognised on temporary differences arising on investments in subsidiaries, except where the Group is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

A deferred income tax asset is recognised to the extent that it is probable that future taxable profit will be available against which the deductible temporary differences and tax losses can be utilised.

#### Deferred income tax is measured:

- (i) at the tax rates that are expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled, based on tax rates and tax laws that have been enacted or substantively enacted by the balance sheet date; and
- (ii) based on the tax consequence that will follow from the manner in which the Group expects, at the balance sheet date, to recover or settle the carrying amounts of its assets and liabilities.

Current and deferred income taxes are recognised as income or expense in profit or loss.

#### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

#### Significant accounting policies (continued)

#### 2.13 Inventories

Inventories are carried at the lower of cost and net realisable value. Cost is determined on a weighted average basis. Net realisable value is the estimated selling price in the ordinary course of business, less applicable variable selling expenses.

#### 2.14 Property, plant and equipment

#### (a) Measurement

Property, plant and equipment are initially recognised at cost and subsequently carried at cost less accumulated depreciation and accumulated impairment losses.

#### (b) Component of costs

The cost of an item of property, plant and equipment initially recognised includes its purchase price, capitalised borrowing cost and any cost that is directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management.

Assets under construction are stated at cost, and comprise construction costs and development costs. Construction costs are recorded based on contract progress payments for certified works and services. Development costs include manpower costs and other construction overheads.

#### (c) Depreciation

Depreciation is calculated using the straight-line method to allocate depreciable amounts over their estimated useful lives as follows:

	Useful lives
Leasehold land	Over lease period of 99 years
Buildings	20 to 50 years
Leasehold improvements	5 years
Furniture and office equipment	3 to 5 years
Motor vehicles	10 years
OMNIMAX films	2 years

No depreciation is provided on assets under construction.

#### SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

#### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

#### 2. Significant accounting policies (continued)

#### 2.14 Property, plant and equipment (continued)

#### (c) Depreciation (continued)

The residual values, estimated useful lives and depreciation method of property, plant and equipment are reviewed, and adjusted as appropriate, at each balance sheet date. The effects of any revision are recognised in profit or loss when the changes arise.

The following items are written off in the year of construction or purchase:

- Exhibits
- Films (other than OMNIMAX)
- Cost of publications and souvenirs
- Property, plant and equipment costing below \$2,000 each

#### (d) Subsequent expenditure

Subsequent expenditure relating to property, plant and equipment that has already been recognised is added to the carrying amount of the asset only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. All other repair and maintenance expenses are recognised in profit or loss when incurred.

#### (e) Disposal

On disposal of an item of property, plant and equipment, the difference between the disposal proceeds and its carrying amount is recognised in profit or loss within "Other losses/(gains) – net".

#### 2.15 Investments in subsidiaries

Investments in subsidiaries are carried at cost less accumulated impairment losses in the Board's balance sheet. On disposal of investments in subsidiaries, the difference between disposal proceeds and the carrying amounts of the investments are recognised in profit or loss.

#### 2.16 Impairment of non-financial assets

Property, plant and equipment Investments in subsidiaries

Property, plant and equipment and investments in subsidiaries are tested for impairment whenever there is any objective evidence or indication that these assets may be impaired.

#### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

#### Significant accounting policies (continued)

#### 2.16 Impairment of non-financial assets (continued)

For the purpose of impairment testing of these assets, the recoverable amount (i.e. the higher of the fair value less cost to sell and value-in-use) is determined on an individual asset basis unless the asset does not generate cash inflows that are largely independent of those from other assets. If this is the case, recoverable amount is determined for the cash-generating unit ("CGU") to which the asset belongs.

If the recoverable amount of the asset is estimated to be less than its carrying amount, the carrying amount of the asset is reduced to its recoverable amount. The difference between the carrying amount and recoverable amount is recognised as an impairment loss in profit or loss.

An impairment loss for an asset is reversed if, and only if, there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognised. The carrying amount of this asset is increased to its revised recoverable amount, provided that this amount does not exceed the carrying amount that would have been determined (net of any accumulated amortisation or depreciation) had no impairment loss been recognised for the asset in prior years. A reversal of impairment loss for an asset is recognised in profit or loss.

#### 2.17 Financial assets

#### (a) Classification

The Group classifies its financial assets in the following categories: loans and receivables, fair value through profit or loss, and held-to-maturity. The classification depends on the nature of the asset and the purpose for which the assets were acquired. Management determines the classification of its financial assets at initial recognition and in the case of assets classified as held-to-maturity, re-evaluates this designation at each balance sheet date.

#### (i) Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are presented as current assets, except for those expected to be realised later than 12 months after the balance sheet date which are presented as non-current assets. Loans and receivables are presented as "trade and other receivables" (Note 11) and "cash and cash equivalents" (Note 10) on the balance sheet.

#### SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

#### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

#### 2. Significant accounting policies (continued)

#### 2.17 Financial assets (continued)

#### (a) Classification (continued)

#### (ii) Financial assets at fair value through profit or loss

This category has two sub-categories: financial assets held for trading, and those designated at fair value through profit or loss at inception. A financial asset is classified as held for trading if it is acquired principally for the purpose of selling in the short term. Financial assets designated as at fair value through profit or loss at inception are those that are managed and their performances are evaluated on a fair value basis, in accordance with a documented investment strategy.

Assets in this category are classified as current assets if they are either held for trading or are expected to be realised within 12 months after the balance sheet date.

#### (iii) Held-to-maturity financial assets

Held-to-maturity financial assets are non-derivative financial assets with fixed or determinable payments and fixed maturities that the Group's management has the positive intention and ability to hold to maturity. If the Group were to sell other than an insignificant amount of held-to-maturity financial assets, the whole category would be tainted and reclassified as available-for-sale. They are presented as non-current assets, except for those maturing within 12 months after the balance sheet date which are presented as current assets.

#### (b) Recognition and derecognition

The Group initially recognises loans and receivables and deposits on the date that they are originated. All other financial assets (including assets designated at fair value through profit or loss) are recognised initially on the trade date, which is the date that the Group becomes a party to the contractual provisions of the instrument.

Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or have been transferred and the Group has transferred substantially all risks and rewards of ownership. On disposal of a financial asset, the difference between the carrying amount and the sale proceeds is recognised in profit or loss.

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### 2. Significant accounting policies (continued)

### 2.17 Financial assets (continued)

### (c) Initial measurement

Financial assets are initially recognised at fair value plus transaction costs, except for financial assets at fair value through profit or loss, which are recognised at fair value. Transaction costs for financial assets at fair value through profit or loss are recognised immediately as expenses.

### (d) Subsequent measurement

Financial assets, at fair value through profit or loss are subsequently carried at fair value. Loans and receivables are subsequently carried at amortised cost using the effective interest method.

Changes in the fair value of financial asset at fair value through profit or loss are recognised in income or expenditure within "other gains/(losses) – net" when the changes arise.

### (e) Impairment

The Group assesses at each balance sheet date whether there is objective evidence that a financial asset or a group of financial assets is impaired and recognises an allowance for impairment when such evidence exists.

Loans and receivables/Held-to-maturity financial assets

Significant financial difficulties of the debtor, probability that the debtor will enter bankruptcy and default or significant delay in payments are objective evidence that these financial assets are impaired.

The carrying amount of these assets is reduced through the use of an impairment allowance account which is calculated as the difference between the carrying amount and the present value of estimated future cash flows, discounted at the original effective interest rate. When the asset becomes uncollectible, it is written off against the allowance account. Subsequent recoveries of amounts previously written off are recognised against the same line item in profit or loss.

The impairment allowance is reduced through profit or loss in a subsequent period when the amount of impairment loss decreases and the related decrease can be objectively measured. The carrying amount of the asset previously impaired is increased to the extent that the new carrying amount does not exceed the amortised cost had no impairment been recognised in prior periods.

### SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### 2. Significant accounting policies (continued)

### 2.18 Trade and other payables

Trade and other payables represent liabilities for goods and services provided to the Group prior to the end of financial year which are unpaid. They are classified as current liabilities if payment is due within one year or less. If not, they are presented as non-current liabilities.

Trade and other payables are initially recognised at fair value, and subsequently carried at amortised cost using the effective interest method.

### 2.19 Fair value estimation of financial assets and liabilities

The fair values of financial instruments that are not traded in an active market are determined by using valuation techniques. The Group uses a variety of methods and makes assumptions that are based on market conditions existing at each balance sheet date. Where appropriate, quoted market prices or dealer quotes for similar instruments are used.

The fair values of financial liabilities carried at amortised cost are estimated by discounting the future contractual cash flows at the current market interest rates that are available to the Group for similar financial liabilities.

Fair values are categorised into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows:

- quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1);
- inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices) (Level 2); and
- (iii) inputs for the asset or liability that are not based on observable market data (unobservable inputs) (Level 3).

### 2.20 Cash and cash equivalents

The Board is required to participate in the Centralised Liquidity Management Framework ("CLM") in accordance with the Accountant-General's Circular No.4/2009 dated 2 November 2009. All selected bank accounts of the Board maintained with selected banks are linked up with the Accountant-General's Department's ("AGD") bank accounts for available excess cash to be automatically aggregated for central management on a daily basis. The deposits held with AGD are short-term highly liquid investments that are readily convertible to known amounts of cash and are classified in cash and cash equivalents as "Deposits held with AGD".

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### 2. Significant accounting policies (continued)

### 2.20 Cash and cash equivalents (continued)

Cash at bank and on hand represents funds that are derived from non-government sources/entities, which are not required to be included in the CLM.

For the purpose of presentation in the consolidated statement of cash flows, cash and cash equivalents include cash on hand and at bank, deposits held with AGD and deposits with financial institutions which are subject to an insignificant risk of change in value. Bank deposits with maturity over three months are excluded in the statement of cash flows.

### 2.21 Leases

### (a) When the Group is the lessee:

The Group and the Board lease land and office equipment under operating leases from non-related parties.

Lessee - Operating leases

Leases of land where substantially all risks and rewards incidental to ownership are retained by the lessors are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessors) are recognised in profit or loss on a straight-line basis over the period of the lease.

Contingent rents are recognised as an expense in profit or loss when incurred.

### (b) When the Group is the lessor:

The Group and the Board lease retail space under operating leases to nonrelated parties.

Lessor - Operating leases

Leases of retail space where the Group retains substantially all risks and rewards incidental to ownership are classified as operating leases. Rental income from operating leases (net of any incentives given to the lessees) is recognised in profit or loss on a straight-line basis over the lease term.

Initial direct costs incurred by the Group in negotiating and arranging operating leases are added to the carrying amount of the leased assets and recognised as an expense in profit or loss over the lease term on the same basis as the lease income.

Contingent rents are recognised as income in profit or loss when earned.

### SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### Significant accounting policies (continued)

### 2.22 Provisions

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events, it is more likely than not that an outflow of resources will be required to settle the obligation and the amount has been reliably estimated.

### 2.23 Currency translation

### (a) Functional and presentation currency

Items included in the financial statements of each entity in the Group are measured using the currency of the primary economic environment in which the entity operates ("functional currency"). The financial statements are presented in Singapore Dollars, which is the functional currency of the Board.

### (b) Transactions and balances

Transactions in a currency other than functional currency ("foreign currency") are translated into functional currency using the exchange rates at the dates of the transactions. Currency translation differences resulting from the settlement of such transactions and from the translation of monetary assets and liabilities denominated in foreign currencies at the closing rates at the balance sheet date are recognised in profit or loss.

Foreign exchange gains and losses impacting profit or loss are presented in the income statement within "other (losses)/gains - net".

### 2.24 Dividends

Dividends are recognised when the dividends are approved for payment to the Ministry of Finance under the Capital Management Framework - Finance Circular Minute No. M26/2008.

### 2.25 Share capital

Ordinary shares to the Minister for Finance are classified as equity.

### 2.26 Capital account

The Capital account represents the grant given by the MOE to contribute towards the repayment of the outstanding accumulated interest on a Government loan taken.

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### 3. Critical accounting estimates, assumptions and judgements

Estimates, assumptions and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

### 3.1 Critical accounting estimates and assumptions

Depreciation of property, plant and equipment

Property, plant and equipment are depreciated on a straight-line basis over the estimated useful lives, after taking into account the estimated residual value. The Group reviews the estimated useful lives of the assets regularly in order to determine the amount of depreciation expense to be recorded during any reporting period. The useful lives are based on the Group's historical experience with similar assets and taking into account anticipated technological changes. Depreciation expense for future periods is adjusted if there are significant changes from previous estimates.

### 3.2 Critical judgements in applying the entity's accounting policies

Held-to-maturity financial assets

The Endowment Fund follows the guidance of SB-FRS 39 on classifying non-derivative financial assets with fixed or determinable payments and fixed maturity as held-to-maturity financial assets. This classification requires significant judgement. In making this judgement, the Endowment Fund evaluates its intention and ability to hold such investments to maturity. If the Endowment Fund fails to hold these investments to maturity other than for the specific circumstances, for example, selling an insignificant amount close to maturity, it will be required to reclassify the entire class as available-for-sale. The investment would therefore be measured at fair value and no longer at amortised cost.

### 4. Other income

	Group		Bo	ard
	2016	2015	2016	2015
	\$	\$	\$	\$
Donations and sponsorship	769,379	3,786,629	769,379	3,786,629
Rental income	758,407	725,620	827,428	815,322
Interest income	165,585	167,398	165,585	166,948
Commission income	14,870	22,526	17,384	22,587
Management fee	636,019	680,520	786,619	826,680
Others	152,616	190,930	65,294	145,525
	2,496,876	5,573,623	2,631,689	5,763,691

### SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### 5. Other gains - net

	Group an	Group and Board	
	2016	2015	
	\$	\$	
Net gain on disposal of property, plant			
and equipment	9,367		
Fair value changes on financial asset	12/2/07/20		
at fair value through profit or loss	26,423	146,041	
Net currency translation losses	(3,517)	(17,681)	
	32,273	128,360	

### Employee compensation

	Group		Board	
	2016	2015	2016	2015 \$
Wages and salaries Employer's contribution to Central	17,377,870	15,394,184	16,329,810	14,630,838
Provident Fund	2,666,846	2,058,132	2,531,182	1,944,462
Other staff benefits	377,109	386,416	371,198	381,852
	20,421,825	17,838,732	19,232,190	16,957,152

### Other expenditure

	Gr	oup	Board	
	2016	2015	2016	2015
*	\$	\$	\$	\$
Professional, consultancy and other fees				
- subsidiaries		-	341,200	215,100
- non-related parties	1,419,705	617,102	1,314,853	510,476
Cost of merchandise and				
publications	914,464	492,196	572,170	469,596
Printing, stationery and office	===			
supplies	176,059	219,707	161,414	210,272
Rental of equipment and venue and				
lease fees of films	89,807	264,574	187,987	262,269
Postage, telephone and courier	20			
charges	89,486	84,231	76,286	71,340
Transport and travelling expenses	576,875	534,288	561,589	529,004
Refreshment and entertainment				
expenses	198,147	141,259	198,147	140,146
Property tax	125,443	122,878	125,443	122,878
GST input tax (non-claimable)	1,264,514	1,042,457	1,272,692	1,042,453
Royalties	108,548	55,687	108,548	55,687
Others	296,162	336,621	85,820	107,930
NT-170-7-1-1-1	5,259,210	3,911,000	5,006,149	3,737,151

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### 8. Finance expenses

15		Group and Board		
	21	2016	2015	
Interest expense on borrowing		5,372	3,541	

### Income taxes

### (a) Income tax expense

	Grou	ID.
	2016	2015
	\$	\$
Tax expense attributable to (deficit)/surplus is made up of:		
- Current income tax	( <del>*</del> ( )	6,071
- Deferred income tax (Note 20)	24,593	(6,361)
The state of the s	24,593	(290)
(Over)/under provision in preceding financial years		
- Current income tax	(2,435)	(1,911)
- Deferred income tax (Note 20)	(14,078)	12,334
	(16,513)	10,423
Income tax expense	8,080	10,133

The tax expense on the Group's results differs from the theoretical amount that would arise using the Singapore standard rate of income tax as follows:

	Gro	up
	2016	2015
Deficit before tax	(1,865,253)	(724,187)
Tax credit calculated at a tax rate of 17% (2015: 17%) Effects of:	(317,093)	(123,112)
- Deficit of the Board exempted from tax	243,215	107,307
- Statutory stepped income exemption	(t)	(18,459)
- Expenses not deductible for tax purposes	56,044	17,913
- Income not subject to tax	(2,493)	(3,124)
- Tax incentives	(3,782)	(5,977)
- Deferred tax assets not recognised	48,702	25,162
- (Over)/under provision in preceding financial years	(16,513)	10,423
Income tax expense	8,080	10,133

As a statutory board, the Board is exempted from income tax.

### SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### 9. Income taxes (continued)

Deferred income tax assets are recognised for tax losses and capital allowances carried forward only to the extent that realisation of the related tax benefits through the future taxable profits is probable. The Group has unrecognised tax benefits of approximately \$514,790 (2015: \$228,310) at the balance sheet date which can be carried forward and used to offset against future taxable income subject to meeting certain statutory requirements. The tax losses have no expiry date.

### (b) Movements in current income tax liabilities

Group	
2016	2015
\$	\$
18,143	12,072
(15,088)	1,911
WEST CHARLES	6,071
(2,435)	(1,911)
620	18,143
	2016 \$ 18,143 (15,088) - (2,435)

### 10. Cash and cash equivalents

	Group		Board		
45	2016	2015	2016	2015	
Deposits held with AGD	14,311,892	16,186,298	14,311,892	16,186,298	
Cash at bank and on hand	2,694,883	3,826,762	2,332,179	2,473,630	
Short term bank deposits	1,000,000	1,000,000	1,000,000	1,000,000	
120 1 20 1 10 10 10 10 10 10 10 10 10 10 10 10	18,006,775	21,013,060	17,644,071	19,659,928	

For the purpose of presenting the consolidated cash flow statement, the consolidated cash and cash equivalents comprise the following:

t.	2016 \$	2015
Cash and cash equivalents (as above)	18,006,775	21,013,060
Less: Short term bank deposits with maturity of more than 3 months	(1,000,000)	(1,000,000)
Cash and cash equivalents per consolidated cash flow statement	17,006,775	20,013,060

Short term bank deposits at the balance sheet date bear average effective interest rate of 1.70% (2015: 1.15%) and have a tenure of 6 to 12 months (2015: 6 to 12 months).

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### Cash and cash equivalents (continued)

Deposits held with the Accountant-General's Department ("AGD") earn interest based on fixed deposit rates determined by financial institutions with which AGD deposits the monies.

### 11. Trade and other receivables

	Group		Board	
	2016	2015	2016	2015
	\$	\$	\$	\$
Trade receivables				
- subsidiaries	-		216,473	121,412
- other related parties	-	47,094		47,094
<ul> <li>non-related parties</li> </ul>	235,616	417,716	184,373	384,127
Trade receivables - net	235,616	464,810	400,846	552,633
Sponsorship receivables	1,030,137	1,245,266	1,030,137	1,245,266
Other government grants receivable				3450,00492003
(see below)	2,550,272	1,727,241	2,447,879	1,727,241
Deposits	30,280	10,701	1,000	7,501
Prepayments	232,208	263,483	162,049	172,920
Other receivables	52,093	51,441	35,275	43,283
	4,130,606	3,762,942	4,077,186	3,748,844

Other related parties refer to Ministries, Organs of States and other Statutory Boards.

### Other government grants

	Group		Board	
	2016	2015	2016	2015
Other government grants receivable Other government grants received in	2,550,272	1,727,241	2,447,879	1,727,241
advance	(1,669,829)	(1,566,262)	(1,669,829)	(1,566,262)
	880,443	160,979	778,050	160,979

### SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### 11. Trade and other receivables (continued)

### Other government grants (continued)

Movement in other government grants receivable/(received in advance) is as follows:

### Group

	Recei	ivable	Received	in advance	To	ital
	2016	2015	2016	2015	2016	2015
	\$	\$	\$	\$	\$	\$
Beginning of financial						range and Australia
year	1,727,241	23,754	(1,566,262)	(1,966,218)	160,979	(1,942,464)
Less/add: Grants received		7750 075/07500	2213-03-03-03-03			- Carrier County
during the year Add/less: Amount recognised in profit or	(1,642,099)	(924,240)	(3,457,244)	(2,297,900)	(5,099,343)	(3,222,140)
loss Add: Amount transferred	2,353,384	2,545,624	3,329,579	2,697,856	5,682,963	5,243,480
to deferred capital grants (Note 21)	111,746	82,103	24,098		135,844	82,103
End of financial year	2,550,272	1,727,241	(1,669,829)	(1,566,262)	880,443	160,979
<u>Board</u>	Recei	vable	Received i	n advance	To	tal
	2016	2015	2016	2015	2016	2015
	\$	\$	\$	\$	\$	\$
Beginning of financial						
year	1,727,241	23,754	(1,566,262)	(1,966,218)	160,979	(1,942,464)
ess/add: Grants received	/4 COD 7501	(000 7 17)			20000000000	See Ball
during the year Add/less: Amount recognised in profit or	(1,620,753)	(896,747)	(3,437,924)	(2,297,900)	(5,058,677)	(3,194,647)
loss	2,332,038	2,518,131	3,310,259	2,697,856	5,642,297	5,215,987
Add: Amount transferred to deferred capital	6.5%	8 88		to Access		0,210,001
grants (Note 21)	9,353	82,103	24,098		33,451	82,103
nd of financial year	2,447,879	1,727,241	(1,669,829)	(1,566,262)	778,050	160,979

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### Financial asset at fair value through profit or loss

Group and Board 2016 2015 \$ \$ 4,072,464 4,046,041

Fullerton Conservative Balanced Fund ("Fullerton Fund")

The Fullerton Fund has a nominal value amounting to \$3,900,000 (2015: \$3,900,000).

The fair value of the Fullerton Fund is provided by the Fund Manager and determined based on estimated valuations derived from market quotations and are within level 2 of the fair value hierarchy.

Changes in the fair value of the financial asset at fair value through profit or loss amounting to \$26,423 (2015: \$146,041) have been included in the statement of comprehensive income for the year.

### 13. Held-to-maturity financial assets

	Group a	nd Board
	2016	2015
Quoted corporate bonds, at amortised cost	2,020,500	2,007,500
Classified as:		
- Current		1,005,000
- Non-current	2,020,500	1,002,500
	2,020,500	2,007,500

The quoted corporate bonds have nominal value amounting to \$2,000,000 (2015: \$2,000,000) and coupon rates ranging from 1.23% to 2.58% (2015: 1.23% to 3.80%) per annum. The maturity of the bonds ranges from 30 January 2018 to 24 September 2020 (2015: 29 January 2016 to 30 January 2018). The average effective interest rate of the quoted corporate bonds ranges from 1.18% to 2.17% (2015: 1.18% to 3.72%). All the bonds carry a fixed coupon rate.

The fair values of the bonds are provided by banks employing generally market accepted valuation parameters and techniques. The quoted corporate bonds have fair values amounting to \$2,009,300 (2015: \$1,982,700) and are within level 2 of the fair value hierarchy.

### SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### 14. Inventories

	Gro	up	Boa	<u>ird</u>
	2016	2015	2016	2015
Finished goods	346,942	253,798	134,529	179,492

Inventories comprised finished goods held at cost for resale purposes.

The cost of inventories recognised as an expense and included in "Other expenditure" amounts to \$855,051 (2015: \$492,196) for the Group and \$569,921 (2015: \$469,596) for the Board.

At 31 March 2016, the write-down of inventories to net realisable value by the Group and Board amounted to \$71,710 (2015: \$106,665) and \$1,339 (2015: \$1,947) respectively.

### Investments in subsidiaries

	Bo	ard
	2016	2015
Unquoted equity investments at cost	1,260,002	1,260,002
Details of the subsidiaries are as follows:		
	Country of	

Name of companies	Principal activities	Country of business/ incorporation	7 (200)	uity ding
			2016	2015
Science Centre Holdings Pte Ltd (a)	Investment holding, marketing and promotional activities for related entities and participation in joint ventures and collaboration projects, with educational and entertainment elements, on an academic and commercial basis.	Singapore	100	100
Snow Venture Pte Ltd (a)	Proprietor and operator of entertainment centres	Singapore	100	100

(a) Audited by KPMG LLP, Singapore

## NOTES TO THE FINANCIAL STATEMENTS For the financial year ended 31 March 2016

### 16. Property, plant and equipment

Group

	Leasehold land	Buildings \$	Leasehold improvements \$	Furniture and office equipment \$	Motor vehicles \$	OMNIMAX films \$	Assets under construction \$	Total
2016 Cost Beginning of financial year	3,754,976	42,738,538	20,774,587	14,747,751	268,315	602,594	106,250	82,993,011
Additions	•	10,427	109,047	2,745,028	*	•	1,272,247	4,136,749
Disposals Reclassifications		(2,969)	(117,052)	(231,922)		r. 10	(1,247,192)	(356,943)
End of financial year	3,754,976	42,740,996	21,752,725	17,521,906	268,315	602,594	131,305	86,772,817
Accumulated depreciation Beginning of financial year	1,211,386	24,382,931	15,853,070	12,262,786	249,659	602,594	•	54,562,426
Depreciation charge	36,377	1,095,795	1,635,267	1,173,094	4,224	•	*	3,944,757
Disposals		(7,969)	(117,052)	(197,789)	•	1.		(322,810)
End of financial year	1,247,763	25,470,757	17,371,285	13,238,091	253,883	602,594		58,184,373
Net book value End of financial year	2,507,213	17,270,239	4,381,440	4,283,815	14,432		131,305	28,588,444

# SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

## NOTES TO THE FINANCIAL STATEMENTS For the financial year ended 31 March 2016

### Property, plant and equipment (continued) 16.

Group (continued)

300c	Leasehold land	Buildings \$	Leasehold improvements \$	Furniture and office equipment	Motor <u>vehicles</u> \$	OMNIMAX films \$	Assets under construction	Total \$
Cost Beginning of financial year	3,754,976	42,675,764	16,468,153	13,914,010	268,315	602,594	3,365,253	81,049,065
Additions	•	110,000	1,337,260	929,938	•	•	106,250	2,483,448
Reclassifications		(47,720)	3,091,571	(369,879) 273,682			(3,365,253)	(539,502)
End of financial year	3,754,976	42,738,538	20,774,587	14,747,751	268,315	602,594	106,250	82,993,011
Accumulated depreciation Beginning of financial year	1,175,009	23,306,637	14,612,537	11,704,973	245,435	602,594	•	51,647,185
Depreciation charge Disposals	36,377	1,123,520 (47,226)	1,362,930 (122,397)	927,692 (369,879)	4,224			3,454,743 (539,502)
End of financial year	1,211,386	24,382,931	15,853,070	12,262,786	249,659	602,594	•	54,562,426
Net book value End of financial year	2,543,590	18,355,607	4,921,517	2,484,965	18,656		106,250	28,430,585

33

## NOTES TO THE FINANCIAL STATEMENTS For the financial year ended 31 March 2016

### Property, plant and equipment (continued) 16.

Board

	Leasehold land	Buildings	Leasehold improvements	Furniture and office equipment	Motor vehicles	OMNIMAX	Assets under construction	Total
2016 Cost Beginning of financial year	3,754,976	41,478,610	20.272.175	14.471.228	268.315	602.594		80 847 898
Additions Disposals			77,210	2,691,184 (175,953)	res		131,305	2,899,699
End of financial year	3,754,976	41,478,610	20,349,385	16,986,459	268,315	602,594	131,305	83,571,644
Accumulated depreciation Beginning of financial year	1,211,386	23,233,000	15,588,355	12,327,509	249,659	602,594	,	53,212,503
Depreciation charge Disposals	36,377	1,060,134	1,459,729	1,058,609 (141,820)	4,224		* *	3,619,073
End of financial year	1,247,763	24,293,134	17,048,084	13,244,298	253,883	602,594		56,689,756
Net book value End of financial year	2,507,213	2,507,213 17,185,476	3,301,301	3,742,161	14,432		131,305	26,881,888

# SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

## NOTES TO THE FINANCIAL STATEMENTS For the financial year ended 31 March 2016

### Property, plant and equipment (continued) 16.

Board (continued)

2015	Leasehold land	Buildings \$	Leasehold improvements \$	Furniture and office equipment	Motor vehicles	OMNIMAX films \$	Assets under construction \$	Total
Beginning of financial year Additions Disposals	3,754,976	41,478,610	15,921,477	13,769,717 755,078 (277,249)	268,315	602,594	3,315,253	79,110,942 2,014,205 (277,249)
End of financial year	3,754,976	41,478,610	20,272,175	14,471,228	268,315	602,594	(3,315,233)	80,847,898
Accumulated depreciation Beginning of financial year Depreciation charge Disposals	1,175,009	22,172,866 1,060,134	14,311,935	11,766,629 838,129 (277,249)	245,435	602,594		50,274,468 3,215,284 (277,249)
End of financial year	1,211,386	23,233,000	15,588,355	12,327,509	249,659	602,594	•	53,212,503
Net book value End of financial year	2,543,590	18,245,610	4,683,820	2,143,719	18,656			27,635,395

35

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### 17. Government grants received in advance

	Group a	nd Board
	2016	2015
G G	\$	\$
Beginning of financial year	7,375,124	8,110,258
Add: Grants received during the year	26,907,716	19,568,001
Less: Amount transferred to deferred capital grants (Note 21)	(40,459)	(172,200)
Less: Amount recognised in profit or loss	(26,881,593)	(20,130,935)
End of financial year	7,360,788	7,375,124
Total grants received since inception of the Board	336,941,816	310,034,100

### 18. Sponsorship received in advance

		Group an	d Board
	90	2016	2015
Beginning of financial year		582,639	1,728,794
Add: Sponsorship granted during the year Less: Amount recognised in profit or loss		216,265 (292,789)	338,788 (1,484,943)
End of financial year		506,115	582,639

### 19. Trade and other payables

	Gr	oup	Во	ard
	2016	2015	2016	2015
	\$	\$	\$	\$
Trade payables to				
- non-related parties	1,626,248	1,007,653	1,297,415	916,312
- other government agencies	50 St 199	4,700		4,700
- subsidiaries			89,643	5,527
	1,626,248	1,012,353	1,387,058	926,539
Non-trade payables to		10.000.000.000.000.000.000.000.000.000.	100000000000000000000000000000000000000	
- non-related parties	1,868,118	2,881,140	1,850,282	2,873,022
- other government agency	102,420	115,856	104,033	117,487
- subsidiary			23,019	23,317
Deposits received	232,329	270,136	251,207	288,785
Deferred income	417,507	270,092	89,454	217,449
Other accruals for operating	2007	20000470000	1.77	
expenses	2,361,424	2,345,522	2,188,846	2,194,658
Ö	6,608,046	6,895,099	5,893,899	6,641,257

Non-trade payable to subsidiaries are unsecured, interest-free and repayable on demand.

### SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### 20. Deferred income taxes

	Group		
	2016	2015	
Beginning of financial year	48,787	42,814	
Tax charged to profit or loss (Note 9(a))	10,515	5,973	
End of financial year	59,302	48,787	

The movement in deferred income tax liabilities during the financial year is as follows:

### Deferred income tax liabilities

Dorottod moonto tax madminod		
	Accelerated tax	
	depreciation	Total
	\$	\$
2016	A	5000
Beginning of financial year	48,787	48,787
Tax charged to profit or loss	10,515	10,515
End of financial year	59,302	59,302
2015		
Beginning of financial year	42,814	42,814
Tax credited to profit or loss	5,973	5,973
End of financial year	48,787	48,787
	A. V	

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### 21. Deferred capital grants

in profit or loss

End of financial year

Total deferred capital grants received

government grants received) since inception of the Board

(included in

Group						
	Gove	mment	Other go	overnment	T	otal
	2016	2015	2016	2015	2016	2015
	\$	\$	\$	\$	\$	\$
Beginning of financial						
year	18,879,605	19,812,067	400,756	438,086	19,280,361	20,250,153
Add: Transferred from - government grants						
(Note 17) - other government	40,459	172,200		2	40,459	172,200
grants (Note 11)			135,844	82,103	135,844	82,103
Less: Amount recognised			100,011	02,100	100,011	02,100
in profit or loss	(1,064,411)	(1,104,662)	(150,200)	(119,433)	(1,214,611)	(1,224,095
End of financial year	17,855,653	18,879,605	386,400	400,756	18,242,053	19,280,361
Managara and a state of the sta			-		ACTUAL DESIGNATION OF THE PARTY	
Total deferred capital grants received (included in government grants received) since						
inception of the Board	74,306,128	74,265,669	13,667,951	13,532,107	87,974,079	87,797,776
Board						
	Gove	mment	Other go	overnment	To	otal
	2016	2015	2016	2015	2016	2015
	\$	\$	\$	\$	\$	\$
Beginning of financial						
year	18,879,605	19,812,067	380,503	409,993	19,260,108	20,222,060
Add: Transferred from - government grants		5 302	151	* W		8 150
(Note 17) - other government	40,459	172,200	2	-	40,459	172,200
grants (Note 11) ess: Amount recognised	(*)		33,451	82,103	33,451	82,103
in a strict in the strict in t						Charles and the Charles and the Charles

(135,534)

74,306,128 74,265,669 13,526,358 13,492,907 87,832,486 87,758,576

380,503

278,420

(111,593) (1,199,945) (1,216,255)

18,134,073 19,260,108

(1,064,411) (1,104,662)

17,855,653 18,879,605

### SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### 22. Capital account

The Board's capital account represents:

- (a) the grant of \$1,640,347 given by the MOE in the financial year 1993/94 to contribute towards the repayment of the outstanding accumulated interest on a Government loan taken in 1984 for the purchase of a piece of leasehold land for the Omni-Theatre; and
- (b) the conversion of a Government loan and the related outstanding accumulated interest amounting to \$1,339,636. The loan was utilised by the Board in 1988 to finance the building of the Omni-Theatre. The conversion of the loan and outstanding accumulated interest to capital was approved by the Ministry of Finance in the financial year ended 31 March 2001.

### 23. Share capital

	Group and Board		
e.	2016 \$	2015	
Beginning of financial year	5,320,276	3,364,782	
Issue of new shares	844,800	1,955,494	
End of financial year	6,165,076	5,320,276	

For the year ended 31 March 2016, the Board issued 844,800 (2015: 1,955,494) ordinary shares for a total consideration of \$844,800 (2015: \$1,955,494) as part of the Capital Management Framework for Statutory Boards under Finance Circular Minute M26/2008. The shares are fully paid and are held by the Minister for Finance, a body corporate incorporated by the Minister for Finance (Incorporation) Act (Chapter 183).

The holders of these shares are entitled to receive dividends as and when declared by the Board. The shares carry neither voting rights nor par value.

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### 24. Restricted funds

Restricted funds comprise of the Sponsorship Fund and the Endowment Fund:

### Statement of Comprehensive Income - Restricted Funds

	Sponsorship \$	Endowment \$	Total \$
2016	10°	•	*
Other income	772,607	83,642	856,249
Less: Expenses	(769,379)	(62,219)	(831,598)
Net surplus for the year	3,228	21,423	24,651
Accumulated surplus brought forward	72,861	7,146,041	7,218,902
Accumulated surplus carried forward	76,089	7,167,464	7,243,553
2015			
Other income	3,791,229	211,633	4,002,862
Less: Expenses	(3,786,629)	(65,592)	(3,852,221)
Net surplus for the year	4,600	146,041	150,641
Accumulated surplus brought forward	68,261	7,000,000	7,068,261
Accumulated surplus carried forward	72,861	7,146,041	7,218,902

Sponsorship income relates to expenditure incurred which will be subsequently reimbursed by the sponsors of the events. The amount reimbursable is correspondingly recorded as sponsorship receivables under trade and other receivables (Note 11).

### Balance Sheet - Restricted Funds

	Sponsorship \$	Endowment \$	Total S
2016	120	1.7	100
ASSETS			
Current assets			
Cash and cash equivalents	1,401,099	1,126,671	2,527,770
Trade receivables	9,335	W M	9,335
Other receivables	-	10,026	10,026
Sponsorship receivable (Note 11) Financial asset at fair value through profit or	1,030,137	-	1,030,137
loss (Note 12)		4,072,464	4,072,464
	2,440,571	5,209,161	7,649,732
Non-current assets			
Held-to-maturity financial assets (Note 13)	- C-	2,020,500	2,020,500
Total assets	2,440,571	7,229,661	9,670,232

### SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### 24. Restricted funds (continued)

### Balance Sheet - Restricted Funds (continued)

	Sponsorship \$	Endowment \$	Total \$
2016	150	2.7	
LIABILITIES			
Current liabilities			
Trade and other payables	1,858,367	62,197	1,920,564
Sponsorship received in advance (Note 18)	506,115	3.1.1.1	506,115
,	2,364,482	62,197	2,426,679
Total liabilities	2,364,482	62,197	2,426,679
NET ASSETS	76,089	7,167,464	7,243,553
2015			
ASSETS			
Current assets			
Cash and cash equivalents	1,240,113	1,146,013	2,386,126
Trade receivables	14,370		14,370
Other receivables	170,728	12,059	182,787
Sponsorship receivable (Note 11)	1,245,266	-	1,245,266
Financial asset at fair value through profit or		0.000.0000.00	
loss (Note 12)	-	4,046,041	4,046,041
Held-to-maturity financial assets (Note 13)		1,005,000	1,005,000
	2,670,477	6,209,113	8,879,590
Non-current assets			
Held-to-maturity financial assets (Note 13)		1,002,500	1,002,500
Total assets	2,670,477	7,211,613	9,882,090
LIABILITIES			
Current liabilities			
Frade and other payables	2,014,977	65,572	2,080,549
Sponsorship received in advance (Note 18)	582,639	- 10	582,639
A STATE OF THE STA	2,597,616	65,572	2,663,188
Total liabilities	2,597,616	65,572	2,663,188
NET ASSETS	72,861	7,146,041	7,218,902

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### 25. Omni-Theatre Development Fund

The Omni-Theatre Development Fund was set up with contributions received from private organisations and individuals. The income of this fund is taken to the profit or loss and is used for:

- replacing the various specialised and highly technical projector systems and sound equipment;
- (ii) leasing of OMNIMAX movies; and
- (iii) producing Planetarium shows.

Group an	d Board
2016	2015
122,780	122,780
122,780	122,780
	122,780

### 26. Commitments

### (a) Capital commitments

Property, plant and equipment

Capital expenditures contracted for at the balance sheet date but not recognised in the financial statements are as follows:

Group a	nd Board
2016	2015
\$	\$
41,815	2,547,456

### (b) Operating lease commitments - where the Group is a lessee

The Group and the Board lease land and office equipment from non-related parties under non-cancellable operating lease agreements. The leases have varying terms, escalation clauses and renewal rights.

The future minimum lease payables under non-cancellable operating leases contracted for at the balance sheet date but not recognised as liabilities, are as follows:

10.10.10.1	Group and	d Board
	2016	2015
Not later than one year	3,253	36
Between one and five years	10,771	144
Later than five years	1,803	1,839
	15,827	2,019

### SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### Commitments (continued)

### (c) Operating lease commitments - where the Group is a lessor

The Group and the Board lease out retail space to non-related parties under non-cancellable operating leases. The lessees are required to pay either absolute fixed annual increase to the lease payments or contingent rents computed based on their sales achieved during the lease period.

The future minimum lease receivables under non-cancellable operating leases contracted for at the balance sheet date but not recognised as receivables, are as follows:

	Group		Board	
	2016	2015	2016	2015
Not later than one year Between one and five years	647,112 467,979	429,062 274,239	777,912 737,979	559,862 664,239
bettiedir ene and inte jears	1,115,091	703,301	1,515,891	1,224,101

### 27. Financial risk management

### Financial risk factors

The Group's activities expose it to a variety of financial risks: market risk (including currency risk, price risk and interest rate risk), credit risk and liquidity risk.

The Board is responsible for setting the objectives and underlying principles of financial risk management for the Group. The Board then establishes detailed policies such as risk identification and measurement and exposure limits.

The information presented below is based on information received by the key management.

### (a) Market risk

### (i) Currency risk

The Group has no significant exposure to foreign currencies as its operations are substantially denominated in Singapore dollars, which is also its functional currency.

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### 27. Financial risk management (continued)

### (a) Market risk (continued)

To manage its price risk arising from these investments, the Group manages its investment portfolio in accordance with investment guidelines and limits set by the Group for the portfolio. The Group has no significant exposure arising from its equity securities designated at fair value through profit or loss.

### (ii) Cash flow and fair value interest rate risk

Cash flow interest rate risk is the risk that the future cash flows of a financial instrument will fluctuate because of changes in market interest rates. Fair value interest rate risk is the risk that the value of a financial instrument will fluctuate due to changes in market interest rates. As the Group has no significant interest-bearing assets, the Group's income and operating cash flows are substantially independent of changes in market interest rates.

The Group's exposure to cash flow interest rate risk arises from interest-bearing assets consisting mainly of cash balances and fixed deposits maintained/managed by AGD. The cash balances and fixed deposits maintained/managed by AGD under centralised liquidity management are placed with high credit quality financial institution and are expected to move in tandem with market interest rate movements. The Group is not exposed to cash flow interest rate risk arises from held-to-maturity financial assets as the bonds carry a fixed coupon rate.

As the Group does not have other significant interest-bearing assets at floating rates, the Group's income is substantially independent of changes in market interest rates. Accordingly, no sensitivity analysis is presented. Information relating to the Group's interest rate exposure are disclosed in the respective notes to the financial statements.

### SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### 27. Financial risk management (continued)

### (b) Credit risk

Credit risk refers to the risk that counterparty will default on its contractual obligations resulting in financial loss to the Group. The major classes of financial assets of the Group are cash and cash equivalents, trade and other receivables, financial asset at fair value through profit or loss and held-to-maturity financial assets.

For trade receivables, the Group adopts the policy of dealing only with customers of appropriate credit history, and obtaining sufficient security where appropriate to mitigate credit risk. For other financial assets including deposits held with AGD, the Group adopts the policy of dealing only with high credit quality counterparties such as reputable financial institutions. Concentrations of credit risk with respect to trade receivables are limited due to the Group's large number of customers. Due to these factors, management believes that no additional credit risk beyond the amount of allowance for impairment made is inherent in the Group's trade receivables.

The maximum exposure to credit risk for each class of financial instruments is the carrying amount of that class of financial instruments presented on the balance sheet. The Group does not hold any collateral in respect of their financial assets.

The age analysis of trade receivables is as follows:

	Group		Bo	pard
	2016	2015	2016	2015
Current	183,255	242,649	197,033	302,765
Past due 0 to 2 months	41,572	164,315	95,968	193,024
Past due over 2 months	10,789	57,846	107,845	56,844
	235,616	464,810	400,846	552,633

### (i) Financial assets that are neither past due nor impaired

Cash and cash equivalents that are neither past due nor impaired are mainly deposits with banks with high credit-ratings assigned by international credit-rating agencies. Deposits held with AGD are available for withdrawal upon request from AGD. Trade and other receivables that are neither past due nor impaired are substantially institutions and companies with a good collection track record with the Group. For financial assets, the Group adopts the policy of dealing only with high credit quality counterparties.

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### 27. Financial risk management (continued)

### (b) Credit risk (continued)

### (ii) Financial assets that are past due and/or impaired

There is no other class of financial assets that is past due and/or impaired except for trade receivables. The age analysis of trade receivables past due but not impaired is set out above.

There is no allowance for doubtful debts rising from these outstanding balances. The Board believes that the past due amounts are still collectible in full, based on historical payment behaviour and analysis of debtors' credit risk.

### (c) Liquidity risk

Liquidity risk is the risk that the Board will not be able to meet its financial obligations as and when they fall due. The Board's approach to maintain liquidity is to ensure sufficient funding from the government and other government agencies and maintains a level of cash and cash equivalents deemed adequate by management to finance its operations.

The table below analyses non-derivative financial liabilities of the Group and the Board into relevant maturity groupings based on the remaining period from the balance sheet date to the contractual maturity date. The amounts disclosed in the table are the contractual undiscounted cash flows.

Group	2016	2015
Trade and other payables		
- Less than 1 year	6,190,539	6,625,007
Board	*	
Trade and other payables		
<ul> <li>Less than 1 year</li> </ul>	5,804,445	6,423,808

### (d) Capital risk

The Board's objectives when managing capital are to ensure that the Board is adequately capitalised and to fulfill objectives for which monies of the Board may be applied under the Act. To achieve these objectives, the Board may secure grants from Government or other government agencies, return as capital to shareholders, issue new shares, or obtain new borrowings.

47

### SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### 27. Financial risk management (continued)

### (d) Capital risk (continued)

The Board is not subject to any capital requirements under the Act or any other externally imposed capital requirements, except for those mandated by the Ministry of Finance.

The Board defines capital as share capital, capital account, funds and accumulated surplus. The Board monitors its net surplus/deficits. The Board's approach to capital management remains unchanged from the previous financial year ended 31 March 2015.

### (e) Fair values

### Financial assets

Information on the determination of fair values of financial assets at fair value through profit or loss and held-to-maturity has been separately disclosed in Notes 12 and 13.

In 2016 and 2015, there were no transfers between the different levels of the fair value hierarchy.

### Other financial assets and liabilities

The carrying values of other financial assets and liabilities with a maturity of less than one year (including trade and other receivables, cash and cash equivalents, and trade and other payables) are assumed to approximate their fair values because of the short period to maturity.

### (f) Financial instruments by category

The aggregate carrying amount of loans and receivables and financial liabilities at amortised cost are as follows:

	Group		Board	
	2016	2015	2016	2015
	04 005 470	04 540 540	04 550 000	22 225 252
Loans and receivables Financial assets, at fair valu	е	24,512,519		23,235,852
through profit or loss Held-to-maturity financial	4,072,464	4,046,041	4,072,464	4,046,041
assets Financial liabilities at	2,020,500	2,007,500	2,020,500	2,007,500
amortised cost	6,190,539	6,625,007	5,804,445	6,423,808

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### 28. Related party transactions

In addition to the information disclosed elsewhere in the financial statements, the following transactions took place between the Group and related parties at terms agreed between the parties:

### (a) Sales of goods and/or services to government

	Group		
	2016	2015	
Admission fees received from government	302,233	133,087	3
Proceeds from special projects received from government	54,722	33,719	
Fees from courses and programmes from government	327,020	170,508	
Sales of merchandise and publications to government	2,154	25,363	

### (b) Donations and sponsorships

	Group		
	2016	2015	
Donations and sponsorships from other government agencies	250,717	1,329,116	

### (c) Key management personnel compensation

Key management personnel are in accordance with SB-FRS/FRS 24 Related Party Disclosures. These persons have the authority and responsibility for planning, directing and controlling the activities of the Group.

Key management personnel compensation is as follows:

	Group		Board	
	2016	2015	2016	2015
Wages and salaries Post-employment benefits	1,283,881	1,230,347	1,147,833	1,098,054
- contributions to CPF	71,908	68,052	55,962	53,827
	1,355,789	1,298,399	1,203,795	1,151,881

### SCIENCE CENTRE BOARD AND ITS SUBSIDIARIES

### NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

### 29. New or revised accounting standards and interpretations

A number of new standards, amendments to standards and interpretations are effective for annual periods beginning on or after 1 April 2016, and have not been applied in preparing these financial statements.

These new standards include, among others, SB-FRS 115 Revenue from Contracts with Customers and SB-FRS 109 Financial Instruments which are mandatory for adoption by the Group on 1 April 2018.

### · SB-FRS 115 Revenue from Contracts with Customers

SB-FRS 115 establishes a comprehensive framework for determining whether, how much and when revenue is recognised. It also introduces new cost guidance which requires certain costs of obtaining and fulfilling contracts to be recognised as separate assets when specified criteria are met. When effective, SB-FRS 115 replaces existing revenue recognition guidance, including SB-FRS 18 Revenue and SB-FRS 11 Construction Contracts.

### SB-FRS 109 Financial Instruments

SB-FRS 109 replaces most of the existing guidance in SB-FRS 39 Financial Instruments: Recognition and Measurement. It includes revised guidance on classification and measurement of financial instruments, a new expected credit loss model for calculating impairment on financial assets, and new general hedge accounting requirements

As SB-FRS 115 and SB-FRS 109, when effective, will change the existing accounting standards and guidance applied by the Group in accounting for revenue and financial instruments, these standards are expected to be relevant to the Group. The Group is currently assessing the impact upon adoption of these standards on the financial statements of the Group.



