Happy Birthday, Singapore!
MND and its family of agencies celebrated Singapore’s 52nd birthday at its National Day Observance Ceremony on 8 August. Find out what went on at the event.

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Green City Best Home: 4th Urban Sustainability R&D Congress
This biennial Congress provides a national platform to discuss R&D responses to urban sustainability challenges for Singapore.

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Extending Shelf-Life with NASA Technology
Find out how the shelf-life and quality of fresh produce can be prolonged with the use of Airocide, which adopts a technology developed by NASA.

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Building the Largest Cardboard Structure in Singapore
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Journeying Ahead Together
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Happy Birthday, Singapore!

The Ministry of National Development (MND) and its family of agencies celebrated Singapore’s 52nd birthday at its National Day Observance Ceremony (NDOC) on 8 August.

Held annually since 2000 for MND and our agencies to come together to celebrate National Day as a family, NDOC 2017 was attended by about 480 guests, including Minister for National Development and Second Minister for Finance Mr Lawrence Wong, Second Minister for National Development and Home Affairs Mr Desmond Lee, Senior Minister of State for National Development and Trade and Industry Dr Koh Poh Koon, Senior Management, and union representatives of the MND Family.

At the ceremony, Minister Lawrence Wong presented the President’s Challenge 2017 cheque of $105,008 to Ms Ng Ling Ling, Managing Director, National Council of Social Service (NCSS).
The Minister’s Award (Team) 2017 was also presented to 15 teams. These awards recognise impactful and innovative team-based projects that contribute to the vision of transforming Singapore into an Endearing Home and a Distinctive Global City.

In his speech, Minister Wong noted several common themes across the winning projects and the work done by the MND family: a refusal to accept the status quo, the boldness and willingness to experiment, and a willingness to collaborate with others in both the public sector and the private sector.

Rounding up, Minister Wong said: “When we look ahead, in the coming years and the coming decade, there will be many things we want to do, new breakthroughs we have to achieve in building our future city. Sceptics will tell you it cannot be done. But remember what our pioneers have done and be inspired by their actions. Let’s all work hard together to prove the sceptics wrong, and make things happen as our pioneers did. That’s the spirit that will enable Singapore to continue to succeed in the future.”

The projects were judged on three criteria: Impact/Results, Degree of Teamwork/Collaboration, and Innovation. The winning projects included the Kampung Admiralty project, the Singapore Botanic Gardens Learning Forest, and the MND Family Volunteer and Alumni Network. (See Table 1 below for the full list of winning projects.)
The Kampung Admiralty Team was one of the recipients of the Minister’s Award (Team) 2017. When completed in 3rd Quarter 2017, the 11-storey Kampung Admiralty development will see several “firsts”. It will be the first to fully integrate housing for the elderly with a medical centre, eldercare and childcare centres, dining and retail outlets, and a hawker centre.

Another winning project was the MND Family Volunteer and Alumni Network. The Network was formalised in 2015 to grow strong partners who work together with the MND Family to make Singapore a greater city and a better home for all.

Heartiest congratulations to all the winning projects!

<table>
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<th>Table 1: List of Winning Projects for Minister’s Award (Team) 2017</th>
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Transforming Singapore into a “Green City, Best Home” through the research and development of innovative urban solutions. This aspiration was the theme of the 4th Urban Sustainability R&D Congress held on 29 & 30 June at the Suntec Singapore Convention and Exhibition Centre. The Congress attracted more than 1,200 participants who discussed Singapore’s urban challenges and R&D solutions.

Mr Lawrence Wong, Minister for National Development and Second Minister for Finance, was the Guest-of-Honour at the Congress. He recognised the need for Singapore to innovate in order to continue improving and transforming, and urged the research community to collaboratively develop innovative R&D solutions that can be actively deployed.

Minister Wong also announced the $150m Cities of Tomorrow (CoT) R&D Programme. The initiative aims to drive innovations that will contribute towards transforming Singapore into a highly liveable, sustainable, and resilient city of the future.
Minister Wong also presented the Minister for National Development’s R&D Awards to five teams in recognition of their outstanding projects towards MND’s vision of Making Singapore An Endearing Home and a Distinctive Global City. The teams were led by the Urban Redevelopment Authority, the Housing & Development Board, JTC Corporation, the Land Transport Authority, and their research partners.

They received Distinguished, Merit and Special Mention awards for their contributions to land-use planning, system modelling and biophilic design for residential towns, noise barriers at construction sites, and an integrated smart estate and building operations system.

At the “Green City, Best Home” integrated exhibition booth, participants learnt about the government’s key research focus areas in creating new spaces, advancing construction, enhancing resilience, and driving greater sustainability. For the first time, there was also a co-located event, the Sembcorp-EMA Energy Challenge, to encourage real-world problem solving ideas among tertiary students.

Eminent local and international speakers shared their insights and led lively discussions during plenary sessions on how the circular economy, together with city engineering and intelligent systems, could transform a city. People-centric aspects of adopting technology were also discussed. Four breakout tracks went into greater detail on the integrated topics of sustainable cities, resilient infrastructure, urban environment analytics, and advanced construction.

**About the Urban Sustainability R&D Congress**

Inaugurated in 2011, this biennial Congress provides a national platform for government agencies, research institutes and private sector
companies to come together to discuss R&D responses to national urban sustainability challenges for Singapore. The Congress is co-organized by MND and 16 partner agencies. Click to find out more about the Congress at http://www.mnd.gov.sg/urbansustainability/

**About the Cities of Tomorrow (CoT) R&D Programme**

The CoT programme aims to support R&D efforts on urban solutions for transforming Singapore into a highly liveable, sustainable, and resilient city of the future and a vibrant urban solutions hub. The programme will support the fields of advanced construction, resilient infrastructure, new spaces, and greater sustainability, as well as urban environment analytics and complexity science for urban solutions. Click to find out more about the Cities of Tomorrow R&D programme and share your ideas at http://www.mnd.gov.sg/citiesoftomorrow.

**Extending Shelf-Life with NASA Technology**

Temperature, humidity, and air quality are the key factors affecting the shelf-life and quality of fresh produce. Undesirable odours, microorganisms (such as bacteria, mould, and fungi), and ethylene gas can alter the quality of the air, thus shortening shelf-life.

Ethylene gas is a naturally occurring ripening agent in certain types of fresh produce, and can accumulate in food warehouses and cold stores. Ethylene-sensitive produce such as berries, asparagus, broccoli, and lettuce will ripen and deteriorate more quickly when they come into contact with this gas.
This problem is compounded by the fact that fresh fruits and vegetables are fast-moving goods, and operators may not find time between consignments to clear and decontaminate their premises.

To overcome the adverse effects of ethylene accumulation, various air purification systems have been developed to help improve air quality. One such system, called Airocide, adopts a technology developed by NASA to purify air using photocatalytic oxidation and ultraviolet light.

With support from AVA, this system was tested by Ban Choon Marketing Pte Ltd (Ban Choon) for its effectiveness in maintaining the air and fresh produce quality and extending the shelf-life of strawberries and romaine lettuce. Strawberries and romaine lettuce could last three to five days longer when stored in chillers installed with Airocide. The extended shelf-life translates into cost savings due to the reduction in food spoilage.

Besides adopting advanced air purification technology, the industry should also observe good management practices such as segregating ethylene-sensitive types of produce from ethylene-producing ones. Good cold chain standards will also help to ensure that food stays fresh for as long as possible.
Ban Choon uses an air purification system developed using NASA technology to reduce the amount of ethylene gas in its store.

Building the Largest Cardboard Structure in Singapore

APSN Delta Senior School (DSS) students and staff, as well as volunteers from the built environment sector with the completed dome-shaped cardboard structure that would
It was a celebratory moment for the staff and students of APSN Delta Senior School (DSS) on 28 July, as they set a new record in the Singapore Book of Records for the largest single cardboard structure.

Together with volunteers from the built environment sector, APSN DSS students and staff pieced together 101 triangular cardboard panels to form a dome-shaped cardboard structure that would become a mobile art gallery for the school.

The event was part of a corporate social responsibility initiative jointly organised by the Building and Construction Authority (BCA) and APSN DSS, a post-secondary school operating under the Association for Persons with Special Needs (APSN).

The idea of setting a new national record came up when the school was brainstorming for a Youth Day activity that could instil the value of resilience in its students. The 5m by 5m by 3m cardboard structure is meant to be a green gallery which showcases APSN DSS students’ art pieces and handicraft.

The design of this structure has also been cleverly engineered in such a way that it can be dismantled and reassembled for future exhibitions at other locations.
Close to 70 participants — including the staff and students of APSN DSS, young leaders in the built environment sector, industry professionals, students from institutes of higher learning, and BCA staff — were involved in this record-breaking feat. They were divided into two teams (architecture and civil engineering) and worked closely together over two months to conceptualise and build the structure.

27-year-old Ong Jian Liang, an architectural associate at a consulting firm, explained that the design was inspired by traditional Southeast Asian triaxial weaving techniques as “a subtle appeal to protect our heritage even as we embrace technology in the building and construction industry”. Vanessa Koh, an executive manager at BCA’s manpower planning department, attributed their success to the great team effort by the volunteers and students.

In a note congratulating the participants, BCA CEO Mr Hugh Lim said: “It’s really very encouraging to see built environment professionals and students taking time out from their busy schedules to lend their expertise and guide the students from DSS in this meaningful activity. I take my hat off to the participants for their creativity and dedication in producing this beautiful and functional dome-shaped structure, using only cardboard as the basic building material. This goes to show that anything is possible if we put our heads, our hearts and our hands to it, and I hope this brings us a step closer towards building an inclusive society.”

Mdm Aslinah, Principal of APSN DSS, said: “We were extremely thrilled by this collaboration as it provided opportunities for our special
needs students to interact and work with industry professionals. Despite knowing the challenges in executing this task, we felt that this project is an authentic platform to inculcate our school value of resilience in our students. The students are very happy to complete the structure and are grateful to have learned from the volunteers during this activity."

Journeying Ahead Together

Over the past few months, the Ministry of National Development (MND) and the Council for Estate Agencies (CEA) have invited real estate industry stakeholders to share their views on how the industry can transform, innovate, and raise productivity in the midst of a rapidly-changing technological and economic climate. These engagement sessions are part of our efforts to co-develop a Real Estate Industry Transformation Map (ITM) with the industry.

What is the Real Estate Industry Transformation Map?

The Real Estate ITM aims to create a future-ready industry, one that can continue to provide good real estate jobs for Singaporeans.

To accomplish this, MND and CEA are bringing together stakeholders from across the real estate value chain to collectively develop a roadmap for the real estate industry. Stakeholders include estate agencies, developers, industry associations, conveyancing firms, property and facility management companies, property portals, and consumer groups.

The ITM will focus on raising productivity and streamlining processes; helping businesses to scale up and take advantage of new growth areas; supporting business in expanding to overseas markets; and equipping workers with the right skills.

Engaging stakeholders

Second Minister for National Development and Home Affairs Mr Desmond Lee and Senior Minister of State for National Development and Trade and Industry Dr Koh Poh Koon each met with real estate representatives to hear their views and suggestions.
Industry discussions with Dr Koh Poh Koon revolved around ways to raise the accountability and transparency of property agents so as to maintain trust with consumers.

A common theme running through the dialogue sessions was the importance of raising professionalism and productivity amidst challenges in the future economy.

In a Facebook post, Minister Lee said the stakeholders he met shared that, despite the challenges, they saw growth opportunities from the perspectives of workers, firms, and the economy as a whole. He added that dialogue participants contributed fresh ideas about how the industry envisioned property transactions and other real estate services could be enhanced in the future, such as by improving data linkages between the private sector and the government.
Minister Desmond Lee said the stakeholders he met shared that despite the challenges, they saw growth opportunities – from the perspectives of worker, firm and economy.

Similarly, at the dialogue session with SMS Koh, useful insights were gleaned from industry representatives on the topic of leveraging technology. SMS Koh said that participants touched on how the industry can embrace new technology in order to become more productive. There was also discussion about how the government can further raise the accountability and transparency of property agents, thereby maintaining consumer trust.

Dialogue participants also gave their take on challenges in growing revenue and becoming more labour-efficient in an evolving operating environment. The ideas generated included ways for the industry to deepen its internationalisation efforts in order to increase its value, add to the economy, and create better jobs.

MND and CEA will continue to engage with stakeholders, and the views and feedback received will help the agencies to develop the ITM and detail its implementation.

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1,000 BTO Flats with Shorter Waiting Times to be Offered in 2018

To help young couples get their first homes earlier, HDB will be offering BTO flats with shorter waiting times in selected projects.
The first batch of 1,000 flats, spread across three projects in the non-mature estates of Sembawang, Sengkang and Yishun, will be launched for sale in the 2nd half of 2018.

Construction will not be rushed to meet the shorter wait times. Instead, HDB will commence construction of the flats ahead of their sales launches. Construction work on the three projects is expected to commence in the 4th quarter of 2017. The flats will be completed between the 4th quarter of 2020 and the 1st quarter of 2021.

As a result, flat buyers only need to wait about 2.5 years for their flat from the time of application. There will be no compromise on the quality of the flats since construction time remains the same, at three to four years.

First-timer families will have another reason to rejoice as they will enjoy higher priority when applying for these flats. At least 95% of the 4-room and larger flats are set aside for them, which is a 10% increase from the current 85% quota for non-mature estates.

Flat buyers of these BTO projects can look forward to flats equipped with floor finishes, internal doors, sanitary fittings, and an open kitchen concept (if the layout permits). This will reduce the time needed for renovation so that they can move into their new homes earlier.

Look out for the sales launches of these BTO projects in the second half of 2018! For more information, visit the HDB InfoWEB at www.hdb.gov.sg.
HDB will be offering BTO flats with shorter waiting times to help young couples get their first homes earlier.

Heartland Event for OneService Partnership

From time to time, members of the public may have encountered littered public areas, overgrown grass, and other municipal issues in their neighbourhoods, and reported them to the respective agencies and Town Councils. The OneService Partnership, comprising the Municipal Services Office (MSO), its 11 partner agencies and all 16 Town Councils, has been working closely to address such issues and to improve our living environment.

With the OneService App, the public can report municipal matters easily and conveniently without having to know which party to direct matters to, especially in the case of complex issues that require coordination across multiple agencies.
On 15 July, Minister Ms Grace Fu (click here for the full speech) announced the launch of a new category, “Facilities in HDB Estates”, in the OneService App and Portal at Bedok Town Square. The heartland event was abuzz with residents who wanted to know more about OneService. Many, including seniors, learned about the OneService App’s geo-tagging and photo uploading functions during the demonstration sessions, and found it easy to “spot, shoot, and send”.

MSO staff demonstrating the use new OneService App Category, “Facilities in HDB Estates”.

Residents finding out more about OneService.
Minister Grace Fu with invited guests at the municipal “pop-up” display.

NEA educating members of public on the prevention of mosquito breeding at its booth.

For the Love of Pulau Ubin
Home to one of Singapore’s last kampongs (villages), Pulau Ubin is close to many people’s hearts. The National Parks Board (NParks) is working with the community to retain the island’s rustic charm, enhance its cultural heritage, and conserve its biodiversity. A slew of community-led initiatives and enhancements were announced at the 6th Ubin Day on 16 July.

Ubin Day is a community event which celebrates the different facets of the island. First held in 2002, it is part of Pesta Ubin, a festival organised by the Friends of Ubin Network (FUN) and the wider community. This year, a host of activities such as kampong games, art workshops, and visits to kampong houses were organised by the community in collaboration with NParks. Community groups also set up booths to promote biodiversity conservation and cultural heritage. Minister for Education (Schools) and Second Minister for Transport Mr Ng Chee Meng was the guest-of-honour.

**Kampong House Restoration Efforts on Pulau Ubin**

At this year’s Ubin Day, Minister in the Prime Minister’s Office and Second Minister for Home Affairs and National Development Mr Desmond Lee announced the launch of a multi-year kampong house restoration effort on Pulau Ubin. NParks will work with FUN and community groups to sensitively restore kampong houses on the island, connecting interested groups with experts in architecture, heritage and related fields as well as with volunteer networks through FUN.

The restoration efforts will start with House 63C, which was built in the 1930s. NParks will also identify other kampong houses suitable for restoration.

The community-led restoration efforts will be carried out in line with the overall look and feel of Pulau Ubin, retaining the cultural heritage and rustic character of the island. FUN will look into how the Ubin community can be revitalised by allowing interested groups and
individuals to use and manage these restored kampong houses. FUN will also gather feedback and suggestions from Ubin residents and heritage groups on these proposals.

**Revamped Nature Gallery by HSBC**

The revamped Nature Gallery by HSBC was also launched on Ubin Day. The refreshed gallery features new information panels, educational displays, and an interactive touchscreen, showcasing Ubin’s biodiversity conservation, research, heritage, nature-based recreation, and sustainable practices. The displays include 3D models of animals found on Pulau Ubin such as the Asian Small-clawed Otter (Aonyx cinereus), the Dugong (Dugong dugon) and the Oriental Pied Hornbill (Anthracoceros albirostris).
Through the interactive touchscreen, visitors can learn about the nature conservation masterplan for Ubin and the various bird species that call the island home. The Nature Gallery is supported by a S$100,000 donation from HSBC through the Garden City Fund.

First Comprehensive Biodiversity Survey of Pulau Ubin

Minister Lee also announced that, beginning in late 2017, NParks will work with the research community on a two-year comprehensive biodiversity survey of Pulau Ubin. This will be the first survey ever conducted on the biodiversity of the entire island, which includes 720 native plant species and over 300 species of mammals, birds, reptiles, and amphibians. Some of these species can only be found on the
island and not on the mainland.

The survey will involve NParks staff, volunteers, researchers from the National University of Singapore, and citizen scientists from nature groups such as the Vertebrate Study Group of the Nature Society (Singapore), the Herpetological Society of Singapore, the Entomological Network of Singapore and ButterlyCircle.

The survey results will enable NParks to update Pulau Ubin’s species inventory, which will aid in planning future research, habitat enhancement, and species recovery projects. The results will also be used for the systematic long-term monitoring and management of the island.

With the concerted efforts of the community, future generations can continue to enjoy Pulau Ubin’s rich history and biodiversity. Want to play a part in conserving Pulau Ubin’s natural and cultural heritage? Join the Ubin Volunteer Programme to become a nature or heritage guide, participate in patrols, aid in habitat enhancement, or join wildlife surveys, among other activities.


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Calling for a New Generation of Bench Designs

The Urban Redevelopment Authority (URA) is looking for fresh interpretations of the National Stadium’s memories in the form of benches in our public spaces. URA is calling for designs for the next batch of benches through ‘Re:Bench’, a public competition launched on 14 August.

Back in 2012, salvaged wooden planks from the former National Stadium were transformed into 30 designs selected and commissioned through a design competition. 93 benches from that competition are now located in 23 public spaces around Singapore, and the new batch of benches will be fabricated from the remaining seating planks.
Mr Lim Eng Hwee, CEO of URA, said: “Through the bench project, we see good design tangibly expressed in beautiful and useful ways. The benches not only commemorate the former National Stadium, but have also injected vibrancy to the public spaces they are in. We want to bring this buzz to other areas using the remaining planks.”

Entries will be evaluated based on strength of concept (how well they respond to the brief) and creativity (their level of innovation as both public furniture and art).

The competition — under URA’s Our Favourite Place programme — is open to designers aged 35 and below, and will close on 30 November. Winning designs will each be awarded a $1,000 cash prize, and the designs will then be brought to life and placed in public spaces. More
details on the competition can be found at http://www.ourfaveplace.sg/ReBench.

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