

30 September 2016

**MEDIA FACTSHEET**  
**IMDA's NEW INITIATIVES**

*Developing a strong ICM Sector to power and transform our economy*

No.	Initiatives
1	<p><b>NEW – Urban logistics project to improve delivery and logistics processing for shopping malls</b></p> <p><i>IMDA is working with partners to reduce the number of trucks on the road, increase productivity, and reduce in-waiting and queuing time for deliveries.</i></p> <p><b>What's New</b></p> <ul style="list-style-type: none"> <li>• IMDA has launched this initiative in two places - Bedok Mall and Tampines Mall - with the objective of scaling them up for widespread deployment.</li> </ul> <p><b>Objective</b></p> <ul style="list-style-type: none"> <li>• The aim of Urban Logistics is to leverage technology to achieve a collaborative distribution amongst different stakeholders in the supply chain. Collaborative distribution involves the sharing of logistics resources such as vehicles, drivers and warehouses to coordinate delivery schedule to selected zones, improving the overall effectiveness of the sector for mutual benefit.</li> </ul> <p><b>Background on initiative</b></p> <ul style="list-style-type: none"> <li>• IMDA is working with SPRING and CapitaLand to implement urban logistics solutions for shopping malls.</li> <li>• In-Mall Distribution (IMD), a collaborative distribution model in the Urban Logistics programme, was implemented at Tampines Mall and Bedok Mall in June and September 2016 respectively.</li> <li>• IMDA worked with Gurusoft to develop a Dock Scheduling and Queue Management system, which was deployed in the IMD implementation at Tampines Mall and Bedok Mall.</li> </ul>

	<ul style="list-style-type: none"> <li>• IMDA is working with Ascent Solutions to develop state-of-the-art electronic locks to secure and track cargo handling units such as roller cages and tote boxes to enable quick change of custody in the supply chain by minimising the need to do piece level counting by recipient.</li> </ul> <p><b>Benefits</b></p> <ul style="list-style-type: none"> <li>• Dock Scheduling and Queue Management system with Gurusoft Pte. Ltd.</li> <li>- Enable shorter waiting times at unloading bay and better utilisation of delivery trucks and drivers</li> <li>• Change of Custody System with Ascent Solutions Pte Ltd</li> <li>- Facilitate a seamless handing and taking over process by securing the cargo at source, and providing cargo track-and-trace audit trails</li> </ul>
2	<p><b>UPDATE – More productive ways of delivering facilities management service through the use of smart technologies</b></p> <p><i>IMDA plans to deploy smart facilities management at 30 pilot site buildings by 2020.</i></p> <p><b>What’s New</b></p> <ul style="list-style-type: none"> <li>• IMDA is launching the Smart Facility Management (Smart FM) initiative, which will help transform the cleaning, security guarding, landscaping and facility maintenance sectors.</li> <li>• IMDA is partnering Starmall to deploy Smart FM at Jurong Point to increase productivity with smart tech as an enabler. IMDA is also exploring launching similar trials with AsiaMalls Management.</li> <li>• To sustain the deployment of Smart FM, IMDA will work with partners to publish an accompanying set of practices for Smart FM, namely, reference designs for technology infrastructure, workforce competence requirements and technology-augmented facilities management service contracts.</li> </ul> <p><b>Objective</b></p>

- To introduce smart technologies to address the manpower shortage in the cleaning, security guarding, landscaping and facilities maintenance sectors.
- To help Small and Medium-sized Enterprise (SME) service providers in the FM industry to deploy their resources more effectively and to attract new entrants through more challenging jobs enhanced with technology.

#### **Background on Initiative**

- IMDA will work with facilities management service buyers, starting with the institutional, industrial, commercial and retail asset classes, to deploy smart FM at 30 pilot site buildings to prove ROI for smart technologies (e.g. analytics, sensors, optimisation, predictive maintenance, autonomous systems) and identify key challenges during implementation.
- SME service providers will leverage Enhanced iSPRINT for smart FM solutions pre-qualified by IMDA and for grants to lower the cost using such solutions.
- IMDA is also working with partner government agencies to support the transformation of the FM industry through enablers such as worker re-training, shifting from manning-based to outcome-based contracts and incorporating sector productive practices into Smart FM solutions.

#### **Benefits**

- Smart FM will improve the efficiency of facility management sectors by more than 15% over 5 years. Service Buyers will see more cost effective solutions and improved total cost of operations while Service Providers can have access to new, more productive ways of delivering facilities management services.
- The Enhanced iSPRINT programme will offset the cost of deploying Smart FM solutions.

3	<p><b>NEW – A@IMDA Collaborates with MediaCorp’s Mediapreneur Incubator Programme to Nurture Media-Related Start-Ups</b></p> <p><i>A@IMDA will complement Mediapreneur’s mentoring efforts to nurture media start-ups by providing technical product testing, building of financial models and fund raising pitches, tailored to the growth stages of these start-ups.</i></p> <p><b>What’s New</b></p> <ul style="list-style-type: none"> <li>• This initiative is an expansion of the A@IMDA program and in line with efforts to build an innovative technopreneur ecosystem.</li> </ul> <p><b>Background on Initiative</b></p> <ul style="list-style-type: none"> <li>• Start-ups selected for Mediapreneur will be assisted by A@IMDA in reviewing the robustness of their product as well as being provided financial advice to facilitate sustainable growth.</li> <li>• A@IMDA will tailor the assistance to the start-ups’ growth stage and needs. These forms of assistance will complement Mediapreneur’s mentorship for innovative seed stage media-related start-ups and also help to groom these start-ups into high growth tech companies.</li> </ul> <p><b>Benefits</b></p> <ul style="list-style-type: none"> <li>• Opportunity to groom promising seed stage media-related start-ups into high growth technology companies.</li> </ul>
4	<p><b>UPDATE – TechSkills Accelerator (TeSA) training programs to upskill ICT workforce</b></p> <p><i>This overarching framework of initiatives is aimed at addressing manpower challenges in the information and communications technology (ICT) sector through training programmes.</i></p> <p><b>Objective</b></p> <ul style="list-style-type: none"> <li>• Ensure local ICT professionals are equipped with updated and relevant skills to remain employable.</li> <li>• Build a pipeline of highly skilled ICT workforce with a strong Singapore core.</li> <li>• Tackle manpower challenges due to increasing use and pace of technology, which results in the emergence of new skillsets along with the decline of existing skillsets.</li> </ul>

	<p><b>Background on initiative</b></p> <ul style="list-style-type: none"> <li>TeSA is targeted at both ICT and non-ICT professionals, from fresh graduates to mid-level professionals</li> </ul> <p>TeSA offers training opportunities through three programmes:</p> <ul style="list-style-type: none"> <li>Company-Led Training (CLT) - which aims to enable fresh and mid-level professionals to acquire specialist, expert or mastery-level competences for jobs in demand.</li> <li>Tech Immersion and Placement Programme (TIPP) - which helps non-ICT professionals convert to industry-ready ICT professionals through intensive and immersive training.</li> <li>Critical Infocomm Technology Resource Programme Plus (CITREP+) - which supports local existing ICT professionals through courses and certification to upgrade their skills to stay relevant in the industry.</li> </ul> <p><b>Benefits</b></p> <ul style="list-style-type: none"> <li>Fresh graduates and mid-level professionals from both ICT and Science, Technology, Engineering and Mathematics (STEM) backgrounds will get help in getting a head start in their careers through the acquisition of relevant skills that are in demand.</li> <li>Existing ICT professionals will be able to up-skill to keep pace with technology shifts.</li> <li>Employers will have a more accessible pool of potential manpower to tap on to meet demands.</li> </ul>
5	<p><b>UPDATE – Accreditation@IMDA (A@IMDA): AeroLion to deploy drone and image analytics software on suitable State properties</b></p> <p><i>Partnership demonstrates the abilities of new technologies; such as drone technologies for the benefit of various sectors.</i></p> <p><b>What’s New</b></p> <p>AeroLion successfully completes State land and properties inspection Proof-of-Concept with Singapore Land Authority (SLA).</p>

	<p><b>Background on Initiative</b></p> <ul style="list-style-type: none"> <li>• AeroLion, accredited in December 2015, has been working with A@IMDA in identifying new business opportunities and refining their product pitch for various strategic projects with government agencies.</li> <li>• A@IMDA is working with AeroLion and SLA to move on to the next phase of deployment with AeroLion’s drone and image analytics software for 2 to 5 actual sites.</li> <li>• SLA is currently working on a potential full deployment with AeroLion’s drone and image analytics software for suitable State properties.</li> </ul> <p><b>Benefits</b></p> <ul style="list-style-type: none"> <li>• Performance of land and property inspections used to be labour intensive with officers having difficulties accessing hard-to-reach areas.</li> <li>• Possible now to auto-detect building defects such as cracks and environmental issues such as debris and water ponding on State land and properties from images collected via the Unmanned Aerial Systems.</li> </ul>
6	<p><b>UPDATE – Finalists awarded for Integrated Guest Experience (iGX@Sentosa) Innovation Challenge</b></p> <p><i>Five companies have successfully completed the prototyping phase and will move on to the piloting phase in Q3-Q4 2017.</i></p> <p><b>Background on Initiative</b></p> <ul style="list-style-type: none"> <li>• In April 2015, IMDA and Sentosa Development Corporation (SDC) announced a collaboration to co-innovate and develop technologies aimed at addressing real-life challenges in the tourism and hospitality sector.</li> </ul> <p><b>Objective</b></p> <ul style="list-style-type: none"> <li>• By working together with the local tech community, the aim of the IDA-Sentosa Tech Challenge for an Integrated Guest Experience is to build innovative solutions that will deliver a better experience to Sentosa’s visitors and improve operational efficiencies.</li> </ul> <p><b>About the Finalists</b></p> <p>FaceRecog Asia’s "Smart Emotion Recognition-enabled Interactive Screen" (SERIES)</p>

- The solution aims to provide targeted promotions to guests based on Emotions and Facial Recognition Analytics capabilities.
- Emotion Recognition-enabled cameras are able to recognise the emotions from facial expressions, gender and age groups from facial features of island guests to trigger targeted communication, such as customised ads, info-videos etc.

#### LDR Pte Ltd's Pocket iConcierge

- The Pocket iConcierge acts like a handy tour guide. Built into the customised app, the technology allows for curation and design of island itineraries that cater to the needs of different visitors.
- The AR Wayfinder and Route Finder will enable guests to navigate around the island with their mobile phones, thus helping to reduce frustration of navigating around the island and shorten the commute time between locations.
- With a network enabled by beacons, GPS and near field technology, the solution can also provide guests concierge services on the go.

#### Natural Intelligence Solutions Pte Ltd's Lloopp

- The Lloopp Customer Journey Suite provides Sentosa the capability to operationalise data-to-insight and insight-to-action to deliver an enhanced guest experience.
- The Lloopp Customer Journey Suite includes:
  - (1) Deep Brand Sentiment – automatically detect key topics your customers talk about, and how they feel about it
  - (2) Deep Customer Genome – have a 360-degree customer view and automatically-generated customer segments
  - (3) Customer Journey Optimiser – generate, execute, and monitor personalised campaign recommendations

	<p>Mastercard Asia-Pacific's Smart City Engine</p> <ul style="list-style-type: none"> <li>• Mastercard is providing a seamless payment solution, which empowers users with various payment options, choosing from any credit/debit card they have in their Masterpass wallet. QR codes generated also simplify entry processes at attractions.</li> <li>• The solutions have the ability to integrate with other service providers such as wearables, attractions, F&amp;B outlets to enable virtual ticketing/table reservations, redemption to cashless payment options.</li> </ul> <p>OhMyEvents Pte Ltd's Ez-Band (Wearable tech)</p> <ul style="list-style-type: none"> <li>• Proposed wearable wristband offers cashless payment convenience to guests as they enjoy their day on the island with cashless payment options, virtual ticket and queue redemption.</li> </ul> <p><b>Benefits</b></p> <ul style="list-style-type: none"> <li>• Guests to Sentosa can enjoy a seamless, connected guest experience.</li> <li>• New solutions to increase revenue yield per guest and improve productivity and operational efficiencies can be deployed in future.</li> </ul>
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***Opportunities abound for businesses and individuals with convergence***

No.	Initiatives
7	<p><b>NEW – IMDA partners Side Effects Asia Pacific Pte Ltd to explore use of VR technology in clinical training</b></p> <p><i>As an illustration of the emergency room of the future, this high realism clinical training system will integrate technology and media to allow trainees access to challenging situations that they may not be exposed to adequately before.</i></p> <p><b>What's New</b></p> <ul style="list-style-type: none"> <li>• This is a new and innovative application of technology in the clinical sector and increases the learning opportunities for medical trainees.</li> </ul> <p><b>Objective</b></p> <ul style="list-style-type: none"> <li>• To immerse trainees into a more realistic and replicable learning environment for effective skills development and retention.</li> </ul>



	<p><b>Background on Initiative</b></p> <ul style="list-style-type: none"> <li>• The collaboration with Side Effects Asia Pacific can potentially serve as a reference to understand how advanced immersive technology like AR/VR or even MR (mixed reality) can be applied in real healthcare environments. In addition, digital information and medical images can be integrated to enhance realism for facilitating critical decision making during the resuscitation of the critically ill in an emergency room (ER) of the future.</li> <li>• IMDA is also working with several industry partners to explore the use of augmented and virtual reality technologies. Sectors that are currently being explored include healthcare, education and traffic safety.</li> </ul> <p><b>Benefits</b></p> <ul style="list-style-type: none"> <li>• Reproduce realistic yet risk-free complex scenarios for experiential exposure.</li> <li>• Perfect skills by rehearsing procedures and navigating through challenges in life-saving situations.</li> <li>• Reduce resource wastage.</li> <li>• Increase interest for learning with new multimedia capabilities.</li> <li>• Drive innovative use of technology for business sectors.</li> </ul>
8	<p><b>NEW - IMDA collaborates with Beach House Pictures to bring VR to the classrooms</b></p> <p><i>Students get to take virtual journeys around Singapore to help them better understand the interconnectedness of Singapore and the world they live in.</i></p> <p><b>What's New</b></p> <ul style="list-style-type: none"> <li>• This collaboration will see the development of local learning content which will take students to cultural and historic sites around Singapore.</li> </ul> <p><b>Objective</b></p> <ul style="list-style-type: none"> <li>• To leverage VR/AR technology to enhance the learning of Social Studies by taking students on virtual journeys around Singapore to help students better understand the interconnectedness of Singapore and the world they live in through a deeply immersive, interactive and authentic learning experiences.</li> </ul> <p><b>Background on initiative</b></p> <ul style="list-style-type: none"> <li>• Beach House Pictures would be teaming up with a VR Platform Tech company to develop a VR application customised for use in a classroom setting which</li> </ul>

	<p>enables multiple students to experience the same interactive VR content at the same time.</p> <ul style="list-style-type: none"> <li>• With this application, educators can guide students through the VR experience and augment layers of supplemental instructional photos, videos or information on top of the immersive environment to emphasise and enrich key learning points.</li> </ul> <p><b>Benefits</b></p> <ul style="list-style-type: none"> <li>• The use of VR can transport students to different cultural and historical sites for exploration and enable experiential learning without leaving the classroom.</li> <li>• The interactivity and immersive-ness that this technology brings to the classroom enables learners to have an active learning experience that is able to improve the retention and recall of key learning outcomes.</li> <li>• Opportunity to build up manpower capability in the creation of virtual reality content and develop VR film-maker specialists within the media space.</li> <li>• Cross convergence and collaborations between media and technology companies creates new market opportunities.</li> <li>• Illustrate how the media industry is able to harness VR/AR for a diversification of their business model into the sphere of education and training.</li> </ul>
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### Improving the lives of Singaporeans' through ICM

No.	Initiatives
9	<p><b>NEW – IMDA Partners Non-Profit Organisations &amp; IT Solution Providers to Enable Healthcare Delivery to the Community</b></p> <p><i>Technology can play a key role in improving our everyday lives, in areas such as healthcare, to build a digitally inclusive society.</i></p> <p><b>What's New</b></p> <p>IMDA has partnered 2 non-profit organisations, The Good Life Co-operative Ltd (TGLC) and SATA Commhealth (SATA), together with their IT solutions providers,</p>

Philips Healthcare and Napier Healthcare Solutions Pte Ltd (Napier) respectively, to leverage on Internet of Things (IoT) sensors to enable care delivery to the community.

**Objective**

- To leverage the use of sensors, to supplement and improve our healthcare delivery and enable proactive care in the home and community.

**Background on initiative**

- By 2030, the number of Singaporeans aged 65 and above will triple to 900,000 (or one in every 5 Singaporeans), a three-fold increase from today. About 117,000 of these senior citizens will be semi-ambulant or non-ambulant with 80,000 living alone.
- IMDA has partnered 2 non-profit organisations, The Good Life Co-operative Ltd (TGLC) and SATA Commhealth (SATA), together with their IT solutions providers, Philips Healthcare and Napier Healthcare Solutions Pte Ltd (Napier) respectively, leverage on IoT sensors to enable care delivery to the community
  - TGLC is partnering the People’s Association (PA) to run a programme, which includes health screening, raising overall health literacy level of its members, subsidised medical supplies through bulk purchase and immunisation services. TGLC envisages deploying a health monitoring station or self-help kiosk in each community centre or residential centre, within easy reach of residents, that will allow the programme to run more efficiently and bring benefits such as regular health monitoring of its members. With the help of its IT solutions provider, Philips Healthcare, TGLC is currently developing a health monitoring station/kiosk which will be able to take a resident’s weight and blood pressure readings for a start, and extendable to cover other vital signs later on. When completed, the health monitoring station/kiosk will be deployed to support 200 community users. If successful, TGLC will work with PA to scale the solution up to the other constituencies in Singapore.

- SATA is issuing IOT devices to patients at home, to allow for continuity of care and early intervention. This involves 60 patients in the Chai Chee area, covers different aspects of Telehealth, including Tele-monitoring of vital signs (such as Blood Pressure, Pulse Rate, Blood Oxygen Level (SpO2), Blood Glucose Level and Weight), Tele-consultation and Tele-rehabilitation. If successful, SATA plans to deploy the Telehealth solution, which was developed by Napier Healthcare Solutions Pte Ltd, to the rest of its 6 clinics around Singapore. Separately, Napier will be looking to export the same to its existing overseas markets, including the US and Middle East. In fact, it has recently concluded a sale agreement with an Australian nursing home for its Telehealth offerings.

**Benefits**

- The use of sensors in homes and centres, in the form of wearables, mobile IOT devices or ambient sensors installed in homes that monitor the different parameters including vital signs and transmit data securely via 3G/LTE or home gateway to caregivers and healthcare providers, enable patients, including senior citizens, to stay healthy, or manage their illnesses in the comfort of their own homes and communities, close to their loved ones for as long as possible.
- Reduction of the number of visits and admissions to healthcare facilities and alleviation of patient load.
- Anticipated increase in productivity as healthcare providers can spend more time focused on other areas of healthcare needs.
- Opportunity to level up Community Healthcare Providers in the use of technology for the provision of care.

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**NEW – IMDA Collaborates with National Council of Social Service (NCSS) to bring new support programme to the Home Access for Low-income Households**

*The new support programme under the Home Access aims to help low-income households and the elderly to be equipped with the fundamental skills to use the tablet, access to the Internet and introduce them to useful social apps and government e-services, so the elderly are able to enjoy the benefits of tech adoption in their lives. The new support programme is funded by the Care & Share Movement, a national fund-raising and volunteerism movement led by Community Chest for the social service sector with an aim to bring our nation together to show care and concern for the less fortunate and recognise the contributions made by social service organisations.*

**What's New**

- Appointment of three social service organisations by NCSS for greater outreach to the Home Access beneficiaries: Under the Home Access programme, NCSS has appointed three social service organisations to help the beneficiaries use the tablets through a starter kit available in four languages. The starter kit serves as a reference guide, with instructions on the use of tablets and recommendations of useful mobile applications such as that for social networking and e-government services. About 80% of the Home Access beneficiaries are seniors. Hence, the Home Access support programme offers introductory training to help seniors learn the fundamentals of using the tablet, and accessing information via the internet to enrich their daily living.
- The three social service organisations appointed by NCSS are TOUCH Community Services, Chinese Development Assistance Council (CDAC) and Lions Befrienders Service Association. The three organisations will provide service to different components of the Home Access support programme.
- TOUCH Community Services will send out starter kits and introduce the support programme to Home Access beneficiaries. Interested beneficiaries will be referred to CDAC for introductory training workshops conducted at a

centre or to Lions Befrienders for home-based sessions if they have difficulties travelling to the centre.

#### **Background on Initiatives**

- The Digital Inclusion programme consists of four key areas, namely the Silver Infocomm Initiative, NEU PC Plus Programme, Home Access Programme and Enable IT Programme which target four key groups: seniors, students from low-income families, low-income households and persons with disabilities respectively.
- Launched in September 2014, the Home Access programme aims to make internet connectivity more accessible and affordable to the low-income households. This includes the provision of a basic mobile computing device and internet connectivity in the homes at an affordable rate of \$6 per month.
- The programme targets to benefit 8,000 households over 4 years. To date, about 6,000 households have been approved to benefit from the programme (as at end September 2016).

#### **Benefits**

- Opportunity for info-communications media integration regardless of one's background or age.
- Vulnerable segments of the community can have access to tech and enjoy the benefits of tech adoption in their lives.

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