

## **FACT SHEET** **Infocomm Infrastructure, Services and Technology Development**

### **iN2015 < Totally Connected, Wired and Wireless**

#### **AIM**

- To prepare Singapore for digital opportunities towards 2015 by deploying a next-generation infocomm infrastructure that will enhance economic competitiveness as well as enrich lives.

#### **HOW TO GET THERE**

- By creating an ultra-high speed, pervasive, intelligent and trusted infocomm infrastructure – Next Generation National Infocomm Infrastructure (Next Gen NII).
- By establishing national enabling platforms, policies and standards. Adopting international standards where available and harmonising our policies and accreditation standards with best-practices around the world.
- By nurturing a conducive environment for the piloting and showcasing of innovative applications on Singapore's next-generation infocomm infrastructure.

#### **LOOK OUT FOR THESE**

Next-Generation National Infocomm Infrastructure that will comprise both wired (Next Generation National Broadband Network) and wireless (Wireless Broadband Network) components.

- Next Generation National Broadband Network (Next Gen NBN) – The Next Gen NBN will be an open-access carrier-neutral wired network and will offer high-speed access of over 1Gbps. A Request-For-Concept was launched on 23 March to seek market feedback on the network's design, construction and operation. Responses will be taken into consideration when drawing up specifications of the Request-For-Proposal which will be called by end 2006. The Next Gen NBN is expected to be completed by 2012.
- Wireless Broadband Network (WBN) – To complement the wired network, a pervasive wireless broadband network will be deployed in key catchment areas around Singapore to fulfill mobility needs of individuals. A Wireless Broadband Market Development Call-For-Collaboration (CFC) was called on 9 March 2006 to solicit proposals for the deployment of wireless broadband coverage in Singapore. Awardees will be announced in September 2006 and wireless broadband services will be rolled out in December 2006.
- IPv6 - With IPv6, unique Internet addresses can be assigned to anything electronic. This will accommodate significant increases in new network devices and in turn help to manage more efficiently areas like energy, transport and healthcare, to name a few. IPv6 also has many capabilities to make the net more secure. The Singapore Government, as a major buyer and user of infocomm equipment, will also gradually move to IPv6 by 2010.

- National Trust Framework - In tandem with the development of Next Gen NII, identity, security and privacy issues will be addressed under the National Trust Framework (NTF). A consultancy study will commence by August 06 for the National Authentication Framework (NAF). The study will gather operational, technical, business requirements as well as the governance framework to deploy the NAF. A tender has been called to operate the National Cyberthreat Monitoring Centre (NCCMC) to ensure that the Next Gen NII operates in a safe, secured and trusted environment. The NCCMC is expected to commence operation by early 2007.

### **THIS NEEDS TO BE DONE BECAUSE...**

- Infocomm Infrastructure has been an enabler and is a critical component of Singapore's economic competitiveness. Timely past investments in our national infocomm infrastructure has enabled Singapore to be an important node in the global knowledge economy. Such strategic foresight has served Singapore well. Data trends suggest continued exponential growth in network traffic and 'speed needs'. Ultra-high speed broadband pipes are necessary conduits for the future. This points to the need to ensure our infocomm infrastructure does not become a constraint to our growth; hence the need to put in place the Next Gen NII.

### **NUMBERS TO NOTE**

- More than 90% of Singapore's households as well as over 90% of all businesses with more than ten employees will be using broadband by 2015.

### **SOMETHING FOR EVERYONE**

- **People:** In addition to higher broadband access speed, users can enjoy high-definition IP TV, video on demand, immersive video conferencing, interactive digital learning experiences, telemedicine and many other rich multimedia interactive applications. These are just some of the possibilities that can be enjoyed 'on-net', anytime, anywhere.
- **Local Infocomm Companies:** This Next Generation National Infocomm Infrastructure will provide the necessary framework to spur the development of new and innovative applications and services. Singapore is an ideal test-bed for the deployment of these applications and services in a live, commercial environment. Successful applications and services can be then be exported overseas easily.
- **International Market:** The Next Gen NII will strengthen Singapore's drive to be a vibrant global city, ensuring that we attract top companies and talents around the world to our shores. The Next Gen NII will also enable closer collaborations of top minds around the world and foster greater cross-geographical and cross-sectoral innovations, supporting our national focus on R&D.

## QUOTABLE QUOTE

- “Ten years ago, many of us were satisfied with corresponding via physical mail, or searching for information using library catalogues or encyclopedias. Ten years ago, less than one in ten of us had a mobile phone and even fewer of subscribed to access the Internet. Clearly, infocomm has fundamentally changed and differentiated the way Singapore lives, works, plays and learns today. It will continue to do so in the future. But only if we plan ahead, put in place the right environment and equip ourselves with the right competencies and mindset. This is why iN2015 is timely.” - ***Mr Willie Cheng, Chairman, iN2015 Infocomm Infrastructure Services and Technology Sub-Committee***

## KEY PERSONNEL

- **Sub-Committee Chairman:** Mr Willie Cheng, Chairman, Singapore Science Centre
- **IDA Lead:** Mr Khoong Hock Yun, Assistant CEO, Infrastructure and Manpower Group
- **IDA Communication Contact:** Ms Dawn Lim, Manager, +65 6211 0514, dawn\_lim@ida.gov.sg

## **FACT SHEET**

### **Updates to the Next Generation National Infocomm Infrastructure**

#### **(A) Next Generation National Infocomm Infrastructure**

The Next Generation National Infocomm Infrastructure (Next Gen NII) is Singapore's new digital super-highway for super-connectivity. It will entrench Singapore's Infocomm hub status and open the doors to new business and social growth for the country. Next Gen NII comprises complementary wired and wireless networks to ensure Singaporeans enjoy seamless connectivity.

The wired broadband network or Next Generation National Broadband Network (Next Gen NBN) will deliver ultra-high broadband symmetric speeds of 1Gbps and above, to all homes, offices and schools, while the Wireless Broadband Network (WBN) will offer pervasive connectivity around Singapore.

This infrastructure was announced by Prime Minister Lee Hsien Loong in February 2006. In line with the Government philosophy of public-private partnership, the Infocomm Development Authority (IDA) of Singapore launched a Request-For-Concept (RFC) for Next Gen NBN and a Wireless Broadband Market Development Call-For-Collaboration (CFC) to set in motion the deployment of Singapore's Next Generation National Infocomm Infrastructure.

#### **(B) Next Generation National Broadband Network Request-For-Concept**

##### **ABOUT THE RFC**

IDA announced the Next Gen NBN RFC on 23 March 2006. The aim of the RFC was to solicit industry inputs to shape the Next Gen NBN initiative. The RFC closed on 15 June 2006 with a total of 33 submissions received from both local and international telcos, hardware and software providers among others.

##### **OVERVIEW OF SUBMISSIONS**

The RFC called for inputs in the areas of network capability, interconnection issues, market coverage, possible rollout strategies; and construction and installation techniques.

The submissions affirm Singapore's proposed approach for the Next Gen NBN infrastructure – the government's catalytic role and that the infrastructure should be open access. The submissions suggest fibre as the solution of choice to provide ultra-high speed broadband access of 1Gbps and above, describing it as future-proof and best serving the strategic objectives of the Next Gen NII initiative.

The submissions also offered innovative business models for consideration to help Singapore enjoy one of the lowest broadband prices in the world and encourage an exciting host of new broadband-enabled services and applications. These include immersive learning experiences, telemedicine, high definition TV, immersive video conferencing and grid computing.

### LIST OF NEXT GEN NBN RFC SUBMISSIONS

No.	Company
1	3M Technologies (S) Pte Ltd
2	ADC Telecommunications
3	Alcatel Singapore Pte Ltd
4	Axia Netmedia Corporation
5	Caspian Networks, Inc
6	Cisco Systems (USA) Pte Ltd
7	Corning Cable Systems Pty Ltd
8	Datacraft (Singapore) Pte Ltd
9	Emtelle Asia Pacific (M) Sdn Bhd
10	Exfo Asia Pacific Pte Ltd
11	Huawei Technologies Co. Ltd, Singapore Representative Office
12	Hutchison Global Communications Ltd
13	LS Cable Limited, Singapore Branch Office
14	Lucent Technologies Inc
15	M1 Ltd and BlueTel Pte Ltd
16	Motorola Inc
17	NEC Solutions Asia Pacific Pte Ltd
18	Nippon Telephone and Telegraph West Corporation
19	Pacific Internet Corporation
20	Reliance Communications
21	Siemens Communications
22	Singapore Computer Systems Ltd
23	Singapore Telecommunications Ltd
24	Skycom Satelite Systems Pte Ltd
25	SMRT Engineering Pte Ltd
26	StarHub Ltd
27	ST Electronics (Info-Comm Systems) Pte Ltd
28	STELOP Pte Ltd
29	Taihan Electric Wire Co. Ltd
30	T-Systems Singapore Pte Ltd
31	UTStarcom Telecom Co. Ltd
32	Videsh Sanchar Nigam Ltd (VSNL)
33	VPISystems Inc

### WHAT'S NEXT

IDA will now study the inputs from the RFC for consideration in the detailed specifications of the subsequent Request-For-Proposal (RFP) of the Next Gen NBN. IDA expects to launch the Next Gen NBN RFP by end of the year.

## **(C) Wireless Broadband Market Development Call-For-Collaboration**

### **ABOUT THE CFC**

The Wireless Broadband Market Development (WBMD) Call-For-Collaboration (CFC) was launched on 9 March 2006. Through the CFC, IDA invited interested operators and service providers to submit proposals for the deployment of wireless broadband coverage in catchment areas in three (North, East & West) geographic regions in Singapore. These catchment areas include the Central Business District, major shopping belts and residential town centres. The CFC closed on 12 June 2006 with nine submissions.

### **AIM**

- Accelerate the deployment of wireless broadband by providing coverage in locations where users on-the-move can conveniently access wireless broadband services using data-centric infocomm devices.
- Catalyse the demand for wireless broadband services.

### **OVERVIEW OF SUBMISSIONS**

- Wireless broadband services to be made available at major commercial hubs and residential town centres island wide.
- Proposals to provide free basic 512kbps wireless broadband services to the public for the first year.
- Speeds of 1Mbps or more available to paid subscribers.
- Network proposed to be deployed using technologies such as WiFi, WiMax and HSDPA in various combinations.
- Users to be able to enjoy enhanced mobility services including voice-over-IP, video conferencing, online gaming and location-based services.

### **LIST OF WBMD CFC SUBMISSIONS**

<b>No.</b>	<b>Company</b>
1	Bluengine Asia Pacific Pte Ltd
2	iCell Network Pte Ltd
3	MobileOne Ltd
4	Pacific Internet Ltd
5	Pacific Mediacom Pte Ltd
6	Qmax Communications Pte Ltd
7	Singapore Telecommunications Ltd
8	StarHub Mobile Pte Ltd
9	Zaienta Singapore Pte Ltd

## **EVALUATION CRITERIA**

An Evaluation Committee has been set up to assess the submissions and award the CFC based on their merit. The following criteria will be used:

- Qualification of the Participant to complete the Project
- Compliance to the required Specifications of the CFC (Operating model, Coverage, Usage and Access; and Network reliability and security)
- Network coverage areas beyond the Primary Catchment Areas within the three, East, West and North, regions
- Number of users; and
- Amount of funding required by the Participant

## **WHEN TO EXPECT**

The winning proposal(s) will be selected and awarded by September 2006. Singapore can look forward to the launch of commercial services from December 2006.

## **IDA COMMUNICATION CONTACT**

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## **FACT SHEET** **Internet Protocol version 6 (IPv6)**

### **iN2015 < To Future Proof Next Generation Infocomm Infrastructure**

#### **AIM**

- With the development of the Next Generation National Infocomm Infrastructure, IDA will need to develop a clear policy position and strategy to catalyse the deployment of IPv6, a future-proofed standard, here.

#### **WHAT IS IPv6?**

- Today's public Internet functions on the common network layer standard of Internet Protocol version 4 (IPv4). However, talk has been rife about the need for the next standard, i.e., Internet Protocol version 6 (IPv6). The transition to IPv6 is driven by several factors, namely IPv4's limitations, future needs of Next Generation Networks and Services and the technical capabilities – being more secure - of IPv6.
- The Internet Engineering Task Force<sup>1</sup> in 1994 adopted IPv6. This standard uses 128-bit addresses that allow for  $3.4 \times 10^{38}$  unique addresses compared to 4.3 billion unique addresses offered by IPv4.
- IPv6 has technical capabilities useful for Next Generation Networks and Services and fixed-mobile convergence. They are:
  - a. Larger address space
  - b. Multicast
  - c. Auto-configuration of Hosts and Mobile IP
  - d. Mobile IP
  - e. Network-layer Security

#### **IP ADDRESSES AS SCARCE RESOURCE**

- The talk since the early 1990s, is that IPv4 addresses would run out. Predictions may differ – various estimates suggest depletion by 2012 and 2027 - but there is consensus that IPv4 address exhaustion will happen.
- The need for IP addressing is compounded by the bloom of new applications, “always on” broadband connectivity and the sheer growth in the number of Internet users. With IPv6, unique Internet addresses can be assigned to anything electronic. This will accommodate significant increases in new network devices and in turn to help to manage more efficiently areas like energy, transport and healthcare, to name a few.

#### **NEXT GENERATION NEEDS**

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<sup>1</sup> An open, all-volunteer, standards organisation that develops and promotes Internet standards.



- Trends in rich and interactive multi-media applications such as telemedicine and high-definition video-conferencing are key drivers for Next Generation Networks.
- Such applications and services need a network where users can communicate and run applications across the Internet, on a peer-to-peer basis. This means each device they use must come with a unique IP address.

### **IPv6 GLOBAL SCAN**

- Around the world, Government-led initiatives are driving IPv6 migration.
- Many organisations and application developers are waiting for IPv6 to gain global momentum before they migrate to it.
- The United States in June 2005 said its federal agencies must all deploy IPv6 by June 2008
- The European Union in 2001 revealed a joint strategy called e-Europe to promote IPv6 adoption. Research projects were started to develop protocol knowledge, deployment experience and new applications.
- The Telecom Regulatory Authority of India in January 2006 made recommendations on IPv6, including the creation of a national Internet Registry within the framework of the Asia Pacific Network Information Centre.
- China, Taiwan, Japan and South Korea also have government-led IPv6 initiatives, including efforts to sort out interoperability issues and create IPv6 awareness.

### **IPv6 LOCAL SCAN**

- IPv4 addresses here may start being in short supply from 2015.
- Our Internet Service Providers, who obtain IP addresses from the Asia Pacific Network Information Centre, are competing with address-hungry countries like China and India.
- The case for IPv6 is not based solely on the imminent IPv4 address shortage, but is part of the process of technology renewal. The Next Generation Network Singapore is building fuels this need.

### **PROPOSED IPv6 INITIATIVES FOR SINGAPORE**

- Mandatory nation-wide IPv6 transition would be difficult to implement
- No country has mandated an immediate IPv6 transition with a cut-off for IPv4.
- The Government-led transition is in line with global trends. Initiatives follow two consistent themes: (a) Government catalyses IPv6 transition through its procurement process; and (b) Government provides initiatives for industry to formulate its own transition plans through education or research initiatives.
- IDA will put in place a strategy via:
  1. Inclusion of IPv6 elements in the Next Generation National Infocomm Infrastructure
  2. Government Procurement – As major buyer and user of infocomm equipment, a Government transition by end 2010 to IPv6 will spur the private sector to follow suit.
  3. National IPv6 Task Force – This working group will include IPv6 experts from IDA, partnering local research institutes, telecommunications companies, ISPs, and equipment manufacturers. The task force will also look into developing the industry's IPv6 capabilities.

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## **FACT SHEET** **Infocomm Manpower Development**

### **iN2015 < Drive the Future. Be a Player. Go Infocomm**

#### **AIM**

- To have an infocomm-savvy workforce and globally competitive infocomm manpower to drive national economic competitiveness.

#### **HOW TO GET THERE**

- Develop infocomm competencies in key economic sectors – Companies need to move beyond using infocomm for automation and use it to generate economic value. Businesses need to view infocomm-use as a strategic priority. To do this, workers in all sectors - from CXOs to the rank and file - need to be made comfortable and competent in applying infocomm to their work situations.
- Develop globally competitive infocomm professionals - Currently, most of Singapore's infocomm enterprises focus on marketing, sales and distribution. They must move to higher value-added infocomm activities such as infocomm solutioning and research and development (R&D). To support this shift, Singapore needs a pool of techno-strategists and technologists. Techno-strategists are infocomm professionals who possess both technical and business expertise, and can integrate infocomm use within an organisation. Technologists will have the technical expertise to drive R&D, such as in Interactive and Digital Media, Infocomm Security and Communications Engineering.
- Develop, attract and retain infocomm talent – Singapore must establish itself as the city of choice for global infocomm talent, while also working to ensure a sustainable pipeline of talent for the future.

#### **LOOK OUT FOR THESE**

A few key programmes will start shortly. They include:

- The National Infocomm Competency Framework  
The Framework maps the full range of infocomm occupations, their required skills, the career progression pathways and the relevant training and certifications available. Individuals can use it to assess their competency level and decide on personal training and career path. Employers can use it to better articulate their job descriptions and understand the competency and skill gaps of their employees. The Framework will be updated to track market needs.
- CXO Programme  
This initiative lets decisions makers, CEOs, CIOs and CFOs network and share views with business and technology experts on using infocomm strategically in a changing business environment. More help will be given to those who lack experience in finding the right infocomm solutions for their businesses. The first CXO roundtable on Business Process Outsourcing, held jointly by IDA and the Singapore Chinese Chamber of Commerce and Industry, will be on 26 June 2006

## **THIS NEEDS TO BE DONE BECAUSE...**

- Infocomm manpower is a critical enabler for Singapore's infocomm-enabled future. That is why, besides targeting current infocomm manpower and the general workforce, IDA will seek to groom future manpower too, through Student Outreach Programmes (e.g. Infocomm Clubs) and flagship infocomm courses (e.g. those offered jointly by local and top overseas universities).

## **NUMBERS TO NOTE**

- Boost the number of infocomm jobs by 55,000 to about 170,000 in 2015. The Masterplan is expected to generate another 25,000 non-infocomm jobs in the infocomm industry. In total, the number of new jobs created would be about 80,000.

## **SOMETHING FOR EVERYONE**

- **People** - Infocomm professionals enjoy enhanced employability and prospects with the National Infocomm Competency Framework. A more infocomm-savvy general workforce can lead to innovative work processes and ensuing efficiencies. An inclusive digital society also means that the socially-disadvantaged can reap the benefits that an infocomm-enabled future offers.
- **Infocomm Companies** – With more techno-strategists and technologists, local infocomm companies can move into higher value-added infocomm activities and distinguish themselves in the global market. R&D talent can help create marketable infocomm intellectual property. Local and multi-national corporations can tap key sectors who have become sophisticated users of Infocomm, such as Banking and Finance, Education and Healthcare, to deploy innovative, end-to-end solutions for their global clients.
- **User Companies** – An infocomm-savvy workforce will be empowered to seek innovative ways to deliver better results with infocomm. Their companies benefit from constant innovations that add to greater market differentiation and long-term sustainability.

## **QUOTABLE QUOTE**

- “We need people who are able to see infocomm systems as one piece of an organisation's overall business strategy. People who can create, adapt, even actively embrace, the opportunities to do things better and faster using infocomm innovations. People capable of designing infocomm tools to enhance an organisation's ability to meet its current and future targets.” - **Mr Lee Kwok Cheong, Chairman, iN2015 Infocomm Competency Council**

## **KEY PERSONNEL**

- **Council Chairman:** Mr Lee Kwok Cheong, President of Singapore Computer Society; Chairman of NCS Pte Ltd; Chief Executive Officer of Singapore Institute of Management
- **IDA Lead:** Ms Seah Lye Khim, Director, Manpower Development
- **IDA Communication Contact:** Ms Gayle Wong, Manager, +65 6211 0209, [gayle\\_wong@ida.gov.sg](mailto:gayle_wong@ida.gov.sg)

## **FACT SHEET**

### **Enterprise Development For Singapore-Based Infocomm Companies**

#### **iN2015 < Growing To Go Global**

##### **AIM**

- To develop a globally competitive infocomm industry as an engine of growth for the Singapore economy.

##### **HOW TO GET THERE**

- Internationalisation - Infocomm local enterprises (iLEs) will have to strengthen their external presence to grow or risk losing its competitive advantage to emerging lower-cost countries. IDA will help them enter overseas markets.
- Capability Development - iLEs will have to strengthen their domain and technology capabilities in order to develop innovative products and solutions for the global market. IDA will continue to encourage more partnerships between MNCs and iLEs to create intellectual property and implement projects with sectoral impact.
- Branding and Marketing – To develop a distinct “Made-by-Singapore” brand as a leading global marque for innovative infocomm products, services and solutions.

##### **LOOK OUT FOR THESE**

- In the near term - As part of the iLE Internationalisation Programme, IDA will establish support services in overseas markets where the agency does not yet have an overseas office. These points of presence will assist our iLEs by providing market intelligence, and helping them to establish marketing channels and networks. Specifically, to market our iLEs’ e-Government capabilities, IDA will set up a Singapore e-Government Leadership Centre to provide training to foreign government officials on Singapore’s e-Government experience. We will also be making Government-held Intellectual Property available to iLEs.
- Within three to five years - IDA will launch a concerted effort, together with stakeholders in the infocomm industry, to strengthen the brand recognition of the products and solutions of our iLEs.
- In the long term - IDA will continue with efforts to promote Singapore as an ICT hub where local firms engage in high-end activities that add technology depth and diversity to the industry. Foreign technopreneurs will also be wooed to use Singapore as a development and engineering centre, as a springboard into global markets.

## **THIS NEEDS TO BE DONE BECAUSE...**

- To help more local infocomm enterprises expand abroad. More deliberate efforts will be made to help iLEs initiate and build referential projects in Singapore which they can export overseas. It's a holistic effort through iN2015 – The sub-committee together with infocomm infrastructure deployment and manpower development - enables businesses in the vertical sectors to thrive.

## **NUMBERS TO NOTE**

- Revenue of the infocomm industry grew by 8.9% to reach S\$37.89 billion in 2005. In the long term, the targets are to achieve: a two-fold increase in value-added of the infocomm industry to S\$26 billion; a three-fold increase in infocomm export revenue to S\$60 billion, with a proportionate increase in the export revenue of infocomm local enterprises; a four-fold jump in Software and IT Services revenue, contributing to 40 per cent of total infocomm revenue.

## **SOMETHING FOR EVERYONE**

- **People:** Look forward to more programmes geared at turning our infocomm professionals – present and future – into “techno-strategists”. Such “hybrid” infocomm manpower is proficient in the technical aspects of infocomm and their respective business domains.
- **Local Infocomm Companies:** They will be able to get assistance in developing business strategies, management capability, human capital, improving processes and acquiring technologies to compete in the global marketplace. iLEs will also gain from the “Made-by-Singapore” branding and marketing programme.
- **International Market:** Foreign investors can participate in the programmes by investing in the growth of new ICT start-ups and growing iLEs.

## **QUOTABLE QUOTE**

- “Singapore’s Infocomm industry is ready for the next leap; to be innovators and creators of infocomm products and services. iN2015 is a timely masterplan conceived by Government and Industry. It will also require the same partnership, in brains and hearts, to realise this bold vision.” - **Mr Stephen Lim**, *Chairman, iN2015 Enterprise Development For Singapore-Based Infocomm Companies Sub-Committee*

## **KEY PERSONNEL**

- **Sub-Committee Chairman:** Mr Stephen Lim, Chairman, Singapore infocomm Technology Federation, CEO & MD, SQL View Pte Ltd
- **IDA Lead:** Mr P Ramakrishna, Director, Industry Development
- **IDA Communication Contact:** Mr Derek Ng, Manager, +65 6211 0353, derek\_ng@ida.gov.sg

## **FACT SHEET** **Digital Media & Entertainment Sector**

### **iN2015 < A Digital Marketplace for Global Media and Entertainment**

#### **AIM**

- To establish Singapore as a key player on the global stage and to draw high value-added digital media and entertainment activities here.

#### **HOW TO GET THERE**

- By developing Singapore into a centre for the creation and commercialisation of DME technologies, and making available technologies and platforms for media and entertainment companies to create content and services.
- By becoming a global centre that provides core services for storing, trading and distributing digital assets; and providing the infrastructure for the processing, management and delivery of DME content and services.

#### **LOOK OUT FOR THESE**

- Digital Assets Marketplace Programme - There is no such marketplace in existence in the world today. But Singapore already has the attributes to be one – it is geographically well-situated, has strong intellectual property laws, good infocomm infrastructure and a reputation as a trusted hub. This marketplace will be a one stop, always-on meeting place for buyers and sellers to trade in digital assets.
- Digital Media and Entertainment Technology Research and Development is another key programme for the DME sector that IDA will introduce through the iN2015 plan. This programme is aimed at transforming the production aspects of digital creation through new DME technologies, content and services. This is in-line with the national Interactive & Digital Media (IDM) goals to make Singapore a global IDM capital through a Research & Development (R&D) focus. This is an inter-ministry undertaking in which IDA is a major stakeholder.
- Tech & Resource Centre - This centre will make available best-of-breed technologies, resources and skills training, targeting initially at games developers and animation studios.

#### **THIS NEEDS TO BE DONE BECAUSE...**

- This programme will build on the Digital Exchange initiative which IDA had spearheaded as part of Connected Singapore. Having made advancements in distributing digital content, and having strengthened our capabilities in the DME value chain (e.g. Digital Factory) leveraging R&D innovation is an important next step. This ensures Singapore's innovation and commitment to DME in delivering quality service, and our companies have unique and strong Intellectual Property to grow their DME businesses.

## NUMBERS TO NOTE

- In 2005, the size of the global media and entertainment market based on market spending was estimated to be US\$1.34 trillion. This is estimated to rise to US\$1.78 trillion by 2009. The Asia-Pacific market that year is estimated at US\$276 billion, and expected to increase to US\$431 billion in 2009, with a CAGR of 11.6 per cent. This makes Asia-Pacific the highest potential growth market in the world. In Singapore, Digital Exchange gave a measure of the revenue growth accrued by Singapore-based companies in “Digital Business Lines”, which has more than tripled in the last few years to \$500 million in 2006. IDA expects this growth to continue, and achieve the targets set by the national IDM initiative.

## SOMETHING FOR EVERYONE

- **People:** Vital for creative talents to join this industry and be groomed to complement the country’s strong technical work force.
- **Local Infocomm Companies:** IDA invites collaborations with the industry through initiatives like the DME Partners’ Programme, to roll out the various programmes under both DME-Technology R&D and Digital Assets Marketplace. IDA will also aim to help Singapore-based companies penetrate foreign markets by establishing peer nodes in regional cities through business alliances with their affiliated partners in these places.
- **International Market:** With the sector’s focus on R&D going forward, there is much scope for collaborations with top minds from around the world. Diverse disciplines need to come together to foster innovations that cut across sectoral and institutional boundaries through international R&D links.

## QUOTABLE QUOTE

- “With a robust infrastructure, high-speed connectivity and strong intellectual property rights regime, together with its strategic geographic location, Singapore is well-positioned to take advantage of the tremendous growth opportunities offered by the digital media and entertainment space.” - **Mr Frank Brown, Chairman, iN2015 Digital Media & Entertainment Sub-Committee**

## KEY PERSONNEL

- **Sub-Committee Chairman:** Mr Frank Brown, Director, Colorzip SEA Pte Ltd
- **IDA Lead:** Mr Thomas Lim, Director, Digital Media & Entertainment
- **IDA Communication Contact:** Ms Jesmin Tan, Manager, +65 6211 0917, jesmin\_tan@ida.gov.sg



## FACT SHEET Education & Learning Sector

### **iN2015 < Empowering Learners and Engaging Minds, through Infocomm**

#### **AIM**

- To foster an engaging learning experience to meet the diverse needs of learners in Singapore, through the innovative use of infocomm.

#### **HOW TO GET THERE**

- By creating an enriching and personalised learner-centric environment in our educational institutions;
- By building a nation-wide Education and Learning infrastructure; and
- By positioning Singapore as a centre for innovation in the use of infocomm technologies for the sector.

#### **LOOK OUT FOR THESE**

- The EdVantage Programme aims to strategically deploy infocomm in education to provide a learner-centric, collaborative environment that extends beyond the classrooms. The aim is to spur diversity and vibrancy in the education landscape.
- EdVantage has three components:
  - a) **iACCESS** – This component will provide pervasive and cost-effective infocomm access for learning anytime, anywhere;
  - b) **iLEARN** – will provide interactive digital resources for independent learning; and
  - c) **iEXPERIENCE** – will empower learners through collaborative, intelligent applications that are adaptable to different learning styles.
- **By 2015**, all our schools will be competent users of infocomm in education. Among them, 15 to 20 per cent of schools here will be designated as *Experimental Schools*. They will be the ones to trial innovative applications of infocomm in teaching and learning. Another five per cent will be identified as *Schools of the Future*, as they are the paragons of infocomm-empowered education, the ones who will raise the bar in technology-use. These schools will lead the way in the innovative use of infocomm, for Singapore and beyond. With this, Singapore's reputation as an education and infocomm hub can be enhanced, while its infocomm enterprises will be better-placed to export their products.

#### **THIS NEEDS TO BE DONE BECAUSE...**

- In order to build on the strong foundations from our past efforts, the iN2015 Education and Learning plan will catalyse further transformation in the learning experience of our students. This programme will complement the Ministry of Education's IT in Education masterplan II.

## NUMBERS TO NOTE

- For the year 2004/2005, the public expenditure on Education was 3.5 per cent of Gross Domestic Product (GDP), or about S\$6 Billion. Singapore also has a diverse private education sector, which comprised approximately 2,800 establishments, employing a total of 49,300 workers and contributed to about three per cent of GDP<sup>2</sup>.

## SOMETHING FOR EVERYONE

- **People:** Our students will enjoy an engaging learning experience, with anytime anywhere connectivity, access to a wealth of interactive digital learning resources and able to collaborate with peers and experts overseas.
- **Local Infocomm Companies:** Through the iN2015 Education and Learning plan, iLEs are able to work with like-minded schools in test-bedding, piloting and deploying innovative Education and Learning products and services ; subsequently using the “real-life” deployments in Singapore as reference sites for overseas markets.
- **International Market:** The reputation of Singapore’s education system will be further enhanced with this sectoral plan. iLEs will be able to leverage on this global branding as a platform to market their education technology products and services overseas. Our educational institutions, with their pervasive and innovative use of infocomm, will also be magnets for global talent.

## QUOTABLE QUOTE

- “We need to start from young, to develop the habits of lifelong learning, re-learning, unlearning, and to acquire new competencies and mindsets. Infocomm is a strategic enabler in making the learning experience an engaging and fulfilling one. We will build upon our strong infocomm foundations, make our educational institutions showcases of exemplary infocomm usage, and create a virtuous cycle of widespread usage, industry innovations and new export opportunities. iN2015 is our blueprint to realise our vision for the Education and Learning sector”  
- **Mrs Tan Ching Yee, Chairman, iN2015 Education and Learning Sub-Committee**

## KEY PERSONNEL

- **Sub-Committee Chairman:** Mrs Tan Ching Yee, Second Permanent Secretary, Ministry of Education
- **IDA Lead:** Ms Yip Yuen Fong, Deputy Director, IT in Learning
- **IDA Communication Contact:** Ms Jenny Ng, Senior Manager, +65 6211 1341, [jenny\\_ng@ida.gov.sg](mailto:jenny_ng@ida.gov.sg)

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<sup>2</sup> Source: Economic Surveys Series for Education Services, Singapore Department of Statistics (DOS), 2005

## **FACT SHEET** **Healthcare & Biomedical Sciences Sector**

### **iN2015 < Integrating Healthcare, Empowering Patients**

#### **AIM**

- To accelerate the transformation of the sector through an infocomm-enabled personalised healthcare delivery system, to achieve high quality clinical care, service excellence, cost-effectiveness and strong clinical research.

#### **HOW TO GET THERE**

- To move the focus from the treating of diseases to its prevention, health promotion and wellness care.
- To empower the public to keep closer tabs on their health through accessibility to personal health records and relevant health information.
- Adopt an integrated and patient-centric system of healthcare, away from the current fragmented kind of care.
- To strive towards the widespread usage of infocomm systems that can analyse test results and quickly offer doctors the relevant medical information for treatment, based on widely-accepted guidelines.
- Increase the focus on research to improve clinical care and outcomes by transforming biomedical research to healthcare delivery

#### **LOOK OUT FOR THESE**

- By 2007 - To enable different players in the healthcare value chain – hospitals, clinics, patients and step-down care providers – to work together in an integrated and coordinated manner. The integrated approach enables holistic care, especially for those suffering from chronic diseases such as diabetes.
- In the Middle Term (2009-2011) - Patients will be empowered to manage and monitor their health at home. Through such remote monitoring solutions, patients with chronic diseases can stay connected to their healthcare provider and/or family members.
- In the Long Term (2011 and beyond) - The public in general to be empowered to proactively keep themselves healthy, by keeping close tabs on their electronically-accessible personal health records and related health information.

## **THIS NEEDS TO BE DONE BECAUSE...**

- Singapore's population is ageing rapidly. Senior citizens, those aged 65 and above, currently form 8.4 per cent of our resident population, or about 300,000. Of this, 85 per cent will have one or more chronic diseases that will require life-long treatment. As many of the major chronic medical conditions are preventable, the effective management of such diseases can curtail the demand for costly healthcare treatments. Thus iN2015's recommendation to shift the focus towards health promotion and prevention.
- Infocomm technologies will be deployed to help in this shift. It will deliver patients' information to healthcare professionals by linking hospitals, clinics, nursing homes, laboratories and their homes to deliver holistic care. It will also empower individuals to manage their health with access to personal health records and relevant health information.

## **NUMBERS TO NOTE**

- This approach of disease prevention and health promotion can help Singapore mitigate a ballooning healthcare bill brought on by higher demands for healthcare services. In addition to the greying population, the rise in healthcare cost is also due to costlier new treatments and drugs. For the record, in 2003, Singapore spent 3.8 per cent of its Gross Domestic Product, or S\$6.3 billion, on healthcare<sup>3</sup>.

## **SOMETHING FOR EVERYONE**

- **People:** High quality clinical care, service excellence and cost-effective healthcare.
- **Local Infocomm Companies :** Opportunities to develop exportable infocomm solutions and products for the local and global healthcare markets.
- **International Market:** Singapore as your centre for the research and development of innovative infocomm solutions and products for the sector.

## **QUOTABLE QUOTE**

- "Infocomm has tremendous potential to facilitate improvements in the healthcare sector. Applications like the personal e-health record will make it much easier for each individual to proactively manage his health, while electronic medical records will enable healthcare providers to ensure well-integrated and quality care. In addition, well-linked and comprehensive medical records can greatly facilitate clinical research that results in improved medical care. iN2015 will be a significant effort towards realising these benefits for our healthcare system." - **Prof Tan Chorh Chuan, Chairman, iN2015 Healthcare & Biomedical Sciences Sub-Committee**

## **KEY PERSONNEL**

- **Sub-Committee Chairman:** Prof Tan Chorh Chuan, Provost and Deputy President, Professor of Medicine, National University of Singapore
- **IDA Lead:** Ms Lim Bee Kwan, Director, Healthcare and Social Cluster
- **IDA Communication Contact:** Ms Jenny Ng, Senior Manager, +65 6211 1341, jenny\_ng@ida.gov.sg

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<sup>3</sup> Source: "Health Manpower & Expenditure", Ministry of Health website.

**FACT SHEET**  
**Manufacturing & Logistics Sector**

**iN2015 < Orchestrating Global Supply Chains, Enabling High-Value Manufacturing**

**AIM**

- To be a supply chain nerve centre and high value manufacturing hub, powered by infocomm

**HOW TO GET THERE**

- Focus on raising the operational competitiveness of the manufacturing and logistics companies through innovative use of infocomm
- Enhance efficiency of key supply chain infrastructure (ports, information exchange platform for international trade)
- Attract companies' regional / global supply chain management operations to Singapore

**LOOK OUT FOR THESE**

- Adaptive Supply Chain – Companies can tap on this programme to pilot new supply chain processes and technologies, develop local expertise in order to better reach their regional network. The programme also aims to provide better integration between them and their suppliers, service providers, customers and partners here in Singapore. It will also seek to anchor global/regional supply chain management of manufacturers and logistics companies here.
- TradeXchange - This programme aims to link up currently disparate national trade information systems into an integrated national platform, making the exchange of such information highly efficient and cost-effective. This will make it easier to carry out international trade from Singapore.
- Infocomm@Airport/Seaport - This programme aims to give Singapore's sea- and air-ports, which are already world leaders, an even bigger edge over their competitors through new infocomm-enabled services. Among other things, infocomm will be used to enhance the security of cargo flow through Singapore and improve the information linkages between port operators and their users. The Government will work closely with the port operators to explore the innovative deployment of infocomm.

**THIS NEEDS TO BE DONE BECAUSE...**

- Complex supply chains will be a future reality. Singapore wants to help companies better cope with the rising complexity in supply chains, by evolving into a global nerve centre for such operations. This plan will bring about a sea-change in the way manufacturing and logistics activities are conducted in Singapore.

## NUMBERS TO NOTE

- In 2005, manufacturing is estimated to have contributed about a quarter of the country's GDP, while the logistics industry was responsible for about 4 per cent. The two sectors are big employers too. About 25 per cent of the workforce<sup>4</sup> can be found in either one or the other.

## SOMETHING FOR EVERYONE

- **People:** New opportunities, in the form of higher value jobs in supply chain management and manufacturing operations, will be created.
- **Local Infocomm Companies:** Manufacturing and logistics companies will become more savvy in using infocomm to enhance their competitiveness. Local infocomm companies can expect a greater demand for their offerings by supply chain management and manufacturing organisations.
- **International Market:** Global companies will find Singapore an attractive location from which to manage their global supply chains due to top-notch, infocomm-savvy supply chain expertise and a world-class supply chain infrastructure.

## QUOTABLE QUOTE

- “In this intensely competitive world, infocomm is key in providing a seamless and virtual connection of the physical, financial and information flows that will propel Singapore’s drive towards a highly integrated supply chain nerve centre and high end manufacturing hub. iN2015 allows us to envision new ways of deploying infocomm towards this end.”
  - **Ms Chong Chiet Ping**, Senior Vice-President for Global Operations, Asia Pacific & Japan, Hewlett-Packard Asia Pacific Pte Ltd

## KEY PERSONNEL

- **Sub-Committee Chairman:** Ms Chong Chiet Ping, Senior Vice-President for Global Operations, Asia Pacific & Japan, Hewlett-Packard Asia Pacific; Chairman of Singapore RFID Alliance
- **IDA Lead:** Mr Tan Eng Pheng, Cluster Director, Manufacturing & Services Division
- **IDA Communication Contact:** Ms Jenny Ng, Senior Manager, +65 6211 1341, [jenny\\_ng@ida.gov.sg](mailto:jenny_ng@ida.gov.sg)

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<sup>4</sup> Source: “Persons Employed Aged 15 and Over by Industry and Occupation”, Singapore Department of Statistics, June 2005, “Logistics Skills Report 2005/2006”, Singapore Workforce Development Agency, 2006.

## **FACT SHEET** **Tourism, Hospitality & Retail Sector**

### **iN2015 < Enhancing Service, Enriching Experience, Differentiating Singapore**

#### **AIM**

- To transform the tourism and retail sector, differentiating Singapore as a leading travel destination

#### **HOW TO GET THERE**

- Create Seamless and Personalised Services – To attract visitors here with intelligent and personalised services that can understand and anticipate their needs, give them what they want, and when they want it. These will also streamline and consolidate their various interactions with service providers.
- Improve industry efficiency – To raise the level of infocomm adoption in the tourism and retail sector to boost the efficiency and competitiveness of companies there.
- Extend to new areas – To create infocomm-themed entertainment and experience to make Singapore a more attractive travel destination. Products from Singapore’s burgeoning digital media sector may also come into play and contribute to the development of infocomm-themed attractions.

#### **LOOK OUT FOR THESE**

- **Digital Concierge** – This aims to give every visitor his “own concierge” service, with access to information anywhere, anytime. It will anticipate the visitor’s needs and provide personalised premium services to him. For example, he will receive location-based information of his favourite retail stores, get suggestions on the places to visit, and transact for services while on the move, helping him optimise the limited time that he has in Singapore.
- **EnAbling Speedy rEgistration for Visitors (EASE)** – Imagine visitors getting from the airport’s arrival hall to their hotel rooms in 30 minutes. That may be possible as infocomm may let visitors register just once, in order to check into their hotel, enter their conference among other integrated services.
- **Technology Adoption Programme** – Companies in the sector will be encouraged to make better use of infocomm through education, skills development and other incentives.

## THIS NEEDS TO BE DONE BECAUSE...

- It is necessary for Singapore to differentiate itself to capture its share of the world's tourism market. Infocomm can enable this. In particular, it can help increase a visitor's access to information and services, making them highly personalised to his needs. This, together with other initiatives to streamline processes in the industry, will greatly enhance visitors' experience, to make Singapore a more compelling destination.
- An increasingly global business environment leading to increased cross-border travel and rising affluence (particularly in populous countries like China and India) have contributed to the rapid growth in the world's tourism industry.

## NUMBERS TO NOTE

- In 2005, the tourism and hospitality industry generated S\$10.8b in tourism receipts, and had about 150,000 people working in the sector. There were 8.94 million visitor arrivals<sup>5</sup>. The retail industry generated S\$28.8b in operating receipts and employed a total of 94,000 workers<sup>6</sup>. STB's Tourism 2015 goals are to triple tourism receipts to S\$30b, double visitor arrivals to 17 million and create 100,000 additional tourism-related jobs by 2015.

## SOMETHING FOR EVERYONE

- **People:** As the sector expands, more employment opportunities will emerge. It is possible for residents in Singapore to enjoy the services in the Digital Concierge.
- **Local Infocomm Companies:** The move towards infocomm-enabled tourism means local infocomm companies have another market to consider developing more innovative products for.
- **International Market:** Travel to Singapore, travel through Singapore – which ever the case, infocomm will ensure that a stay here will be relatively fuss-free, enriching and enjoyable.

## QUOTABLE QUOTE

- "Infocomm can create new possibilities in the tourism, hospitality and retail sector, particularly in the key areas of improving visitors' and customers' experiences, and enhancing the competitiveness of the sector. It is timely to embark to a long term plan to embrace and realise the possibilities that technology can offer." - **Ms Leong Wai Leng, Chief Financial Officer of Temasek Holdings (Pte) Ltd; Deputy CEO of Raffles Holdings Ltd and concurrently CEO of Raffles International Ltd (May 2001 – Sep 2005)**

## KEY PERSONNEL

- **Sub-Committee Chairman:** Ms Leong Wai Leng, Chief Financial Officer of Temasek Holdings (Pte) Ltd; Deputy CEO of Raffles Holdings Ltd and concurrently CEO of Raffles International Ltd (May 2001 – Sep 2005)

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<sup>5</sup> Information source: STB, 2006

<sup>6</sup> Information source: DOS, 2003 statistics



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## **FACT SHEET** **Financial Services Sector**

### **iN2015 < Leveraging Infocomm to Ensure Singapore's Prospects in the Financial Markets**

#### **AIM**

- To be a trusted gateway to emerging Asia and be an innovative hub for financial services through infocomm.

#### **HOW TO GET THERE**

- Develop Singapore into a trusted financial gateway to Asia
- Establish Singapore as a centre for infocomm innovation in financial services
- Develop a Next-generation e-Payment infrastructure

#### **LOOK OUT FOR THESE**

- i-wealth Management - To strengthen Singapore as the wealth management hub of Asia. Infocomm will enable innovation and build new capabilities in front-end customer service and advisory, middle office management and back office operations. With infocomm, users can get a holistic and complete view of their financial positions and access personalised information and services, anytime, anywhere. Infocomm will also allow banks to interact via electronic channels with their customers in Asia, and to offer customised products that suit their needs.
- Next Generation e-Payments infrastructure – To develop a nation-wide e-payments infrastructure to bring about new payment solutions that spell convenience to the users and open up opportunities in new market segments.
- Corporate financial information exchange – To smoothen the flow of corporate information and create greater transparency, new electronic standards in corporate reporting will be introduced.

#### **THIS NEEDS TO BE DONE BECAUSE...**

- The capital formation in Asia in recent years presents significant opportunities for the financial services industry. Singapore can ride on this to become a trusted gateway to this new, emerging Asia as well as a showcase for innovative financial services. The Republic is well-placed to do so with its ability to harness infocomm. With infocomm in hand, the financial institutions are better equipped to deliver holistic and personalised services to their regional customers.

## NUMBERS TO NOTE

- As the industry expands, its infocomm spending will stay strong. According to the Singapore IT Spending and Industry Segmentation Report 2005 by IDC, the total estimated infocomm spending (IDC Market Analysis, Singapore IT spending and Industry Segmentation, June 2005) in Singapore for banking, financial markets and insurance sector for year 2004 was US\$1.04 billion. This accounts for 28 per cent of Singapore's total IT spending by user sector.

## SOMETHING FOR EVERYONE

- **People:** Enjoy more personalised financial services anytime, anywhere and greater convenience in payments.
- **Local Infocomm Companies:** The move towards using infocomm as a strategic enabler means more business opportunities for infocomm companies.
- **International Market:** With Singapore's robust financial infocomm infrastructure, global finance companies are encouraged to tap it to reach their regional customers.

## QUOTABLE QUOTE

- "iN2015 presents a framework for leveraging Singapore's thriving infocomm to ensure Singapore's prospects in the financial markets and at the crossroads of Asia." - **Mr Jackson Tai, Vice-Chairman & Chief Executive Officer, DBS Group Holdings & DBS Bank**

## KEY PERSONNEL

- **Sub-Committee Chairman:** Mr Jackson Tai, Vice-Chairman & Chief Executive Officer, DBS Group Holdings & DBS Bank
- **IDA Lead:** Mr Tan Eng Pheng, Cluster Director, Manufacturing & Services Division
- **IDA Communication Contact:** Ms Jesmin Tan, Manager, +65 6211 0971, [jesmin\\_tan@ida.gov.sg](mailto:jesmin_tan@ida.gov.sg)

## **FACT SHEET** **Government Sector**

### **iN2015 < From Integrating Services to Integrating Government**

#### **AIM**

- To be an Integrated Government that delights customers, connects citizens and contributes to the nation's competitive advantage.

#### **HOW TO GET THERE**

- Increasing Reach and Richness of e-Services – Public e-services will be made more accessible via the mobile channel. A single SMS will be adopted for all Government services delivered through the mobile channel. The key is to gain insights into customers' needs and preferences so that more pro-active, responsive, user-friendly and integrated e-services can be delivered.
- Increasing Citizens' Mindshare in e-Engagement - Infocomm technologies are used to strengthen the Government-citizen relationship as citizens are roped into the policy-making process. To promote interactivity and feedback, Government websites will be made more vibrant and easy to understand. The Government Consultation Portal will be enhanced to suit the needs of different user groups.
- Enhancing Capacity and Synergy in Government – The axiom will be to “do more with less”. The capacity and capability of public agencies will be upped with the greater sharing of processes, data and systems across the Government. Infocomm will be used to raise the capabilities of our public officers and transform the way they work.
- Enhancing National Competitive Advantage – Efforts will be made to enhance Singapore's strength in iGov solutions. One of the ways is to work with local infocomm companies to co-create, develop and export such solutions. The relevant intellectual property rights of iGov solutions will be released to companies, where possible, for them to market these solutions abroad.

#### **LOOK OUT FOR THESE**

- Mobile e-Services – For the convenience of customers on the move, more Government mobile services will be made available and accessible via one SMS number.
- CitizenConnect Centres - Citizens or residents who do not have access to, or need help in using the computer or the Internet, can find aid at such centres in their neighbourhood Community Clubs. The current 5 centres will grow into a network of 25 centres across Singapore within a year.
- Unique Establishment Identifier - Currently, establishments have to use different identification numbers when interacting with different public sector agencies. Moving forward, Unique Establishment Identifiers will be issued to all establishments in Singapore – akin to the NRIC number for individuals – so it is easier for them to transact with the Government. The

Government in turn can serve them more effectively and deliver better and more personalised services.

- Standard ICT Operating Environment (SOE)- Comprising a standard desktop environment and a standard network environment, the SOE will be applied in the public sector for cost-savings while enhancing operational efficiency and corporate identity within the Government.
- Infocomm technology showcase for Government workplace – This aims to show how infocomm can be tapped to transform public officer’s workplace in the next three to five years.

### **THIS NEEDS TO BE DONE BECAUSE...**

- Rather than presenting just an integrated shop-front to our customers, iGov2010 aims for greater synergy within the Government so as to transform the delivery of information and services to customers and citizens. Thus the emphasis of the plan is “Integrating Government”.

### **NUMBERS TO NOTE**

- The targets to achieve by 2010 include: having 8 out of 10 users who are very satisfied with the quality of e-services; 8 out of 10 users who are very satisfied with the quality of information published online; and 9 out of 10 users who are willing to recommend Government e-services to others.

### **SOMETHING FOR EVERYONE**

- **People:** Customers and citizens can expect services that are intelligent, customised and consistent; accessible through their preferred channels e.g. mobile phones, kiosks or the Internet.
- **Private Sector:** The Government will work with businesses to create an efficient and conducive environment that shows Singapore as a place that “works all the time; every time”. The infocomm industry, in partnering with the Government to co-develop and export iGov solutions, can grow and in turn, boost the country’s economic competitive advantage.
- **International :** Foreign governments will find in the Singapore Government, a partner in the co-development of infocomm initiatives that are mutually beneficial.

### **QUOTABLE QUOTE**

“The principle to think ‘Customer’ and ‘start with the user in mind’ in everything we do remains the same in iGov2010. Rather, what is new is the strengthened focus and emphasis on transcending organisational structures, changing rules and procedures, to reorganise and integrate the Government around customers’ and citizens’ needs and intentions.” - **Mr Raymond Lim, Minister for Prime Minister’s Office and Second Minister for Finance and Foreign Affairs**

### **KEY PERSONNEL**

- **iGov2010 Steering Committee Chairman:** Mr Lim Hup Seng, Deputy Secretary (Performance), Ministry of Finance
- **IDA Lead:** Ms Tan Kar Joo, Director, e-Government Policies and Programmes

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## **FACT SHEET** **Infocomm@Society**

### **iN2015 < Infocomm@Society**

#### **AIM**

- To build an inclusive digital society by reaching out to all facets of society.

#### **HOW TO GET THERE**

- Enriching lives – Infocomm can play an important role in helping the elderly and persons with disabilities lead more independent and fulfilling lives by facilitating home health monitoring, shopping from home, online learning or communication with friends and loved ones. Customised training programmes will be provided on the use of relevant infocomm applications and devices to empower and connect them with others.
- Ensuring accessibility to infocomm - Infocomm promises new and exciting possibilities to motivate and engage learners, and to enable learning outside their classrooms. Unfortunately, not every family can afford a computer and internet access for their children. To turn this around, we aim to achieve 100% computer penetration in households with school-going children by year 2015.
- Enhancing employability – People with disabilities can benefit significantly from infocomm, which widens their opportunities, enhances their employability and connects them with the mainstream community. Infocomm can also re-design jobs that may be suited for persons with disabilities.

#### **LOOK OUT FOR THESE**

A few key programmes will start shortly. They include:

- NEU PC Programme  
This is an existing programme which will subsidise low income families with school-going children to purchase a computer. Students will also be allowed to “earn” their computers by rendering their services for community work.
- Bizlink’s Media Content Digitisation Workshop  
Through Bizlink, the centralised manpower agency for the people with disabilities, a media content digitisation workshop will be set up. This workshop aims to equip the disabled and the home-bound community with infocomm capabilities that would enhance their employability. Besides training on relevant infocomm skills, the trainees will be able to gain hands-on experience through the creation of “live projects” such as website design and portal development at the workshop.

### **THIS NEEDS TO BE DONE BECAUSE...**

- To build an Inclusive Digital Society so that no one is left behind in the infocomm-enabled future. Besides targeting existing infocomm manpower and general workforce, programmes have also been planned to reach the less-abled and the less-privileged.

### **NUMBERS TO NOTE**

- Reach 100 per cent computer ownership for all homes with school-going children; and
- Provide customised training for 30,000 senior citizens and 6,000 persons with disabilities by 2015.

### **SOMETHING FOR EVERYONE**

- Society will be equipped with the necessary infocomm competencies, will be well-connected through infocomm and will use infocomm pervasively to enrich lives.
- No student will be denied a computer and Internet access because of lack of funds.
- Persons with disabilities will be able to integrate with the mainstream workforce through the help of infocomm.

### **KEY PERSONNEL**

- **IDA Lead:** Ms Seah Lye Khim, Director, Manpower Development
- **IDA Communication Contact:** Ms Gayle Wong, Manager, +65 6211 0209, [gayle\\_wong@ida.gov.sg](mailto:gayle_wong@ida.gov.sg)



## **FACT SHEET**

### **iN2015 < Imagine Your World**

#### **INTELLIGENT NATION 2015 (iN2015) – WHAT IT IS**

- iN2015 (pronounced “In Twenty Fifteen”) is Singapore’s new 10-year infocomm masterplan with a bold vision - to transform the country into an intelligent nation and global city powered by infocomm. It recommends the way forward for Singapore, into a future where infocomm will revolutionise and become intrinsic in the way people live, learn, work and play. New possibilities will be unleashed for Singapore’s industries, economy, and society, empowered by next-era technologies.
- Led by IDA, the formulation of iN2015 is a multi-agency effort that engages the people, private, and public sectors.

#### **iN2015 – WHY?**

- Singapore first embarked on the National Computerisation Plan for the Civil Service in the 1980s. Since then there were various plans to grow an IT industry and build connectivity within Singapore. These include the National IT plan (TradeNet, LawNet and MediNet); IT2000 (Singapore ONE - One Network for Everyone); Infocomm 21, and Connected Singapore. IT has become a critical differentiator that has helped Singapore reach current successes, benefited individuals and businesses.
- The iN2015 master plan will ensure Singapore’s continued international competitiveness through infocomm technologies. In 10 years, Infocomm technologies will be pervasive. Infocomm technologies will transform key economic sectors in Singapore.

#### **REALISING OUR VISION – THREE THEMES & FOUR STRATEGIC THRUSTS**

- The iN2015 masterplan is guided by three themes – Innovation, Integration and Internationalisation.

<b>Innovation</b>
The capacity to innovate will be a key differentiator of Singapore’s economy, and allow new possibilities, solutions and services that will ensure Singapore’s continued global competitiveness.
<b>Integration</b>
By 2015, success will depend on the ability to integrating resources and capabilities across diverse organisations and geographies, speedily and efficiently. Infocomm will be a critical enabler in achieving this.
<b>Internationalisation</b>
The world is the market for Singapore’s businesses. Infocomm will make expansion beyond domestic shores possible by facilitating access to global resources and keeping Singapore plugged in as a global hub.

- Bearing in mind these three themes, the masterplan details four strategic thrusts to realise the iN2015 vision:

- 1) Spearhead the transformation of key economic sectors, government, and society through more sophisticated and innovative use of infocomm. The key areas of focus are:

Digital Media & Entertainment	Education & Learning	Financial Services	Government Services	Healthcare & Biomedical Sciences	Manufacturing & Logistics	Tourism, Hospitality & Retail
Enterprise Development for Singapore-Based Infocomm Companies						
Infocomm Infrastructure, Services and Technology Development						
Infocomm Manpower Development						

- 2) Establish an ultra-high speed, pervasive, intelligent and trusted infocomm infrastructure
- 3) Develop a globally-competitive infocomm industry
- 4) Develop an infocomm-savvy workforce and globally-competitive infocomm manpower

### THE GOALS – BY 2015, SINGAPORE WILL...

- Be number one in the world in harnessing infocomm to add value to the economy and society
- Realise a two-fold increase in value-added of the infocomm industry to S\$26 billion
- See a three-fold increase in infocomm export revenue to S\$60 billion
- Create 80,000 additional jobs
- Have 90 per cent homes using broadband
- Achieve 100 per cent computer ownership for all homes with school-going children

Most of all, by 2015, Singapore will boast an inclusive digital society for all. Businesses will be better empowered to grow, people will lead better lives, and foreign investors will find new opportunities in Singapore’s infocomm-enriched environment. It will be an exciting infocomm-enabled future where no one will be left behind.

## FACT SHEET

### IDA At CommunicAsia 2006

#### THE iN2015 BOOTH – WHAT IT IS

- An interactive showcase that will give you a glimpse into the digital future that Singapore's new infocomm masterplan paves the way for.

- **HIGHLIGHTS:**

<b>The iN2105 Vision Map</b>
Fast forward through time and experience how an ordinary day in 2015 will be. Through interactive technologies, you will be able to get a preview of how infocomm will become pervasive to enhance lives in 2015.
<b>Technology Showcases</b>
See how exciting possibilities like remote health monitoring and biometric payments can materialise, with the latest technologies developed by various companies.

- **TAKE ME THERE:**

Singapore Expo, Hall 3, Booth 3E1-01  
20-23 June, 10.30am – 6pm.

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#### MADE-BY-SINGAPORE SOLUTIONS SHOWCASE – WHAT IT IS

- An exciting showcase of best-of-breed solutions developed by Singapore's homegrown companies. Latest innovations and state-of-the-art technologies that form practical solutions for a myriad of sectors such as healthcare, infocomm security, wireless and e-government will be unveiled.

- **Take Me There:**

Singapore Expo, Hall 3, Booth 3F2-01  
20-23 June, 10.30am – 6pm