



Maximizing Opportunities, Addressing Fears on Big Data

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What is big data?



Trends in Big data



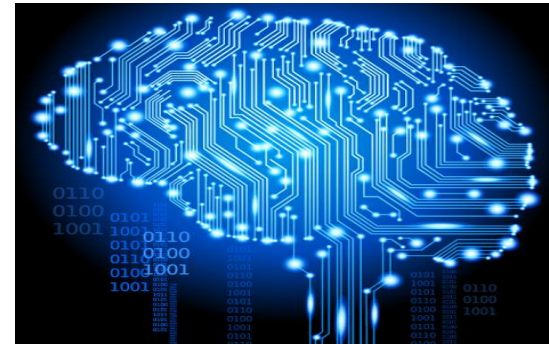
Real time data capture



Volume of data generated is set to increase



Cloud-based processing



Deep learning capabilities

Smart Nation as a platform to leverage big data in Singapore



Smart Nation- Data availability

The screenshot displays the data.gov.sg website interface. At the top left is the logo for data.gov.sg with the tagline "discovering data, inspiring ideas". To the right is the Singapore Government logo with the motto "Integrity · Service · Excellence" and links for "Contact Us", "Sitemap", and "Feedback". A search bar is located below these links.

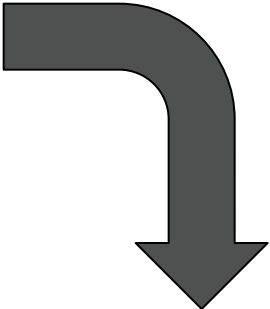
The main navigation bar includes: Home, Data Sharing Principles, Data Catalogue, App Showcase, For Developers, and News & Events. Below this is a large banner with the text "First-stop to Discover Government Data" and various icons representing data and technology.

Below the banner is a section for "MyTransport.sg™" with the tagline "Your Transport Companion". It is brought to you by the Land Transport Authority. This section includes links for "About Us", "Contact Us", "Useful Links", "Sitemap", "FAQs", "Feedback", and "Log In", along with a search bar.

The bottom navigation bar features: Home, Interactive map, MyConcierge, Commuting, Motoring, Cycling, Apps Zone, DataMall, Happenings, and a dropdown for "Other LTA Websites".

The main content area shows the breadcrumb "Home > DataMall" and a Facebook "Like" button with 48 likes. The "DataMall" section includes a graphic with the word "DATA" and the text: "DataMall LTA publishes a variety of transport-related data for public and community to co-create innovative and inclusive transport solutions." Below this is a large "STATIC DATA" heading and a "Download All" button.

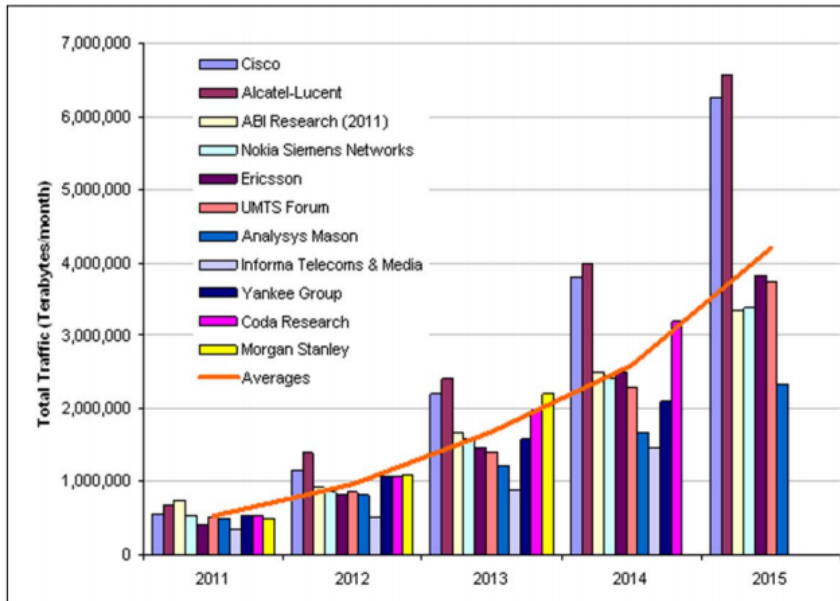
MyConnectionSG Mobile App



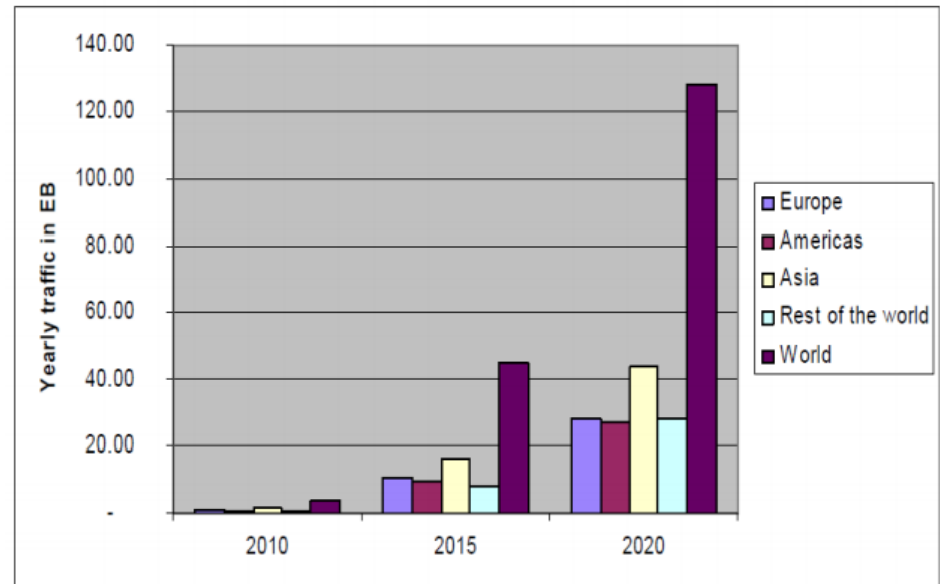


Greater Demand for Mobile Spectrum - Infocomm Usage & Accessibility on the Rise

Mobile global data traffic estimates from 2011 to 2015 based on multiple sources



Regional traffic forecasts for 2020



Mobile forecasts

(including M2M – dates refer to end of corresponding year)

Global Base (million)	2010	2015	2020
Europe	1 033	1 222	1 427
Americas	915	1 166	1 437
Asia	2 579	3 825	4 957
Rest of the world	801	1 276	1 863
World	5 328	7 490	9 684

Source: International Telecommunication Union

Multi-pronged Approach to Address the Demand for Mobile Spectrum

**Timely
Spectrum
Allocation**

**Heterogeneous
Networks**

**TV White
Space**

**Optimising
Spectrum
Usage**

Addressing fears on big data



Big Data Protection



Data Governance Frameworks

To build organisations' accountability to individuals

Privacy by Design

Legitimate Use and Accountability

Anonymisation

Secure Handling of Different Data Types

New Challenges for Telecom Regulators

New service providers



- The industry is moving beyond traditional service providers. Over-the-top service providers e.g. WhatsApp and Internet giants e.g. Google have revolutionised the market
- IDA needs to consider potential issues such as net neutrality & zero rating

New technological developments



- There are also new technological developments such as Machine-to-Machine and Internet-of-Things, Blockchain, etc.

Thank you