

IDA's Data and Analytics Programme¹

Data & Analytics, a Key Driver of Competitiveness and Growth

In an increasingly complex global marketplace, Data & Analytics will provide enterprises with crucial capabilities to derive insights from vast amounts of data, to make more effective and timely decisions and create a competitive edge for themselves. A joint study by the MIT Sloan Management Review and the IBM Institute for Business Value revealed that enterprises that leveraged analytics were 2.2 times more likely to outperform their industry peers that did not. Some ways in which Data & Analytics can deliver business value are:

- *By improving the quality of products and services*, e.g. analysing product usage patterns to uncover customer needs and guide future product development and innovation;
- *By optimising processes*, e.g. optimising production and distribution processes to reduce processing time and resources needed while increasing throughput;
- *By identifying more targeted actions to maximise returns*, e.g. analysing customer data to identify and engage customers who will be most likely to respond to marketing campaigns;
- *By providing insights for more effective decision making and planning*, e.g. analysing market, economic, geographic and demographic data to identify ideal locations for future expansion; and
- *By identifying potential business risks*, e.g. analysing business transactions to detect fraud.

IDA's Initiatives in Data & Analytics

IDA takes an integrated approach that involves catalysing demand and seeding early adoption of analytics in key industry sectors, developing infocomm industry and manpower capabilities, establishing scalable and secure data exchange platforms, formulating the appropriate data policies, and developing "data hubs" that will deliver innovative data services and applications. Collectively, these efforts will create a vibrant Data & Analytics ecosystem in Singapore and position Singapore strategically as an international Data & Analytics Hub.

Local and foreign enterprises will be able to leverage on Singapore's Data & Analytics capabilities to apply analytics strategically, to guide business strategy and planning, as well as tactically, to optimise day-to-day business processes. Effective use of analytics will enable enterprises to remain agile and competitive in dynamic market environments, and to maximise productivity.

This initiative comprises three main thrusts:

¹ The Data & Analytics homepage is located at <http://www.ida.gov.sg/Sector%20Development/20111101083444.aspx>

Thrust 1: Developing Singapore's Data & Analytics capabilities to position Singapore as an international Data & Analytics Hub

IDA seeks to develop Singapore into an international Data & Analytics Hub by building up local industry and manpower capabilities to serve the Data & Analytics needs of enterprises and users around the world.

Some of the initiatives under this thrust are:

- **Industry Development**, to anchor leading Data & Analytics vendors and users, and build platforms to hub regional demand in Singapore. These will be achieved through:
 - **Catalysing the development of innovative analytics and cloud computing products and services** by anchoring Intellectual Property commercialisation activities into Singapore; and
 - **Driving regional business development out of Singapore** by building market channels and developing new business models to capture regional analytics users and partners.
- **Manpower Development**, which focuses on the following strategies:
 - **Enabling professional conversion**, by collaborating with leading analytics ecosystem players and Institutes of Higher Learning (IHLs) to enable conversion opportunities for professionals through workshops and on-the-job training;
 - **Creating and delivering Business Analytics and Cloud Computing training capacities**, by collaborating with WDA and key ecosystem players to establish job roles and competency standards for Business Analytics and Cloud Computing under the National Infocomm Competency Framework (NICF)². In addition, IDA will collaborate with training providers to roll out Business Analytics and Cloud Computing programmes for infocomm professionals aligned to NICF; and
 - **Building Business Analytics and Cloud Computing talent for the industry**, by collaborating with universities and polytechnics to roll out either specialisations or electives in Business Analytics and Cloud Computing in the form of diploma and undergraduate infocomm degree programmes.

Thrust 2: Drive sectoral economic competitiveness with innovative application of Data & Analytics

IDA seeks to drive the adoption of Data & Analytics in key sectors of the economy to enhance the competitiveness of these sectors. IDA will identify sectors where Data & Analytics will have the potential to deliver significant economic value, and work with key players and sectoral champions to increase the level and sophistication of Data & Analytics adoption.

Some of the initiatives under this thrust are:

² <http://www.ida.gov.sg/Programmes/20061016172720.aspx>

- **Sectoral Business Analytics Shared Services Programme**, which will establish commercially available analytics shared services for selected sectors, with the aim of reducing the cost and time to adopt analytics, and facilitate the adoption of analytics by local businesses.
- **Government Business Analytics Programme**, which aims to build public sector capabilities in analytics and drive the adoption of analytics by Government agencies. Taking a co-ordinated approach, the programme will focus on catalysing the adoption of analytics by Government agencies; implementing shared BA services for Government to develop and deploy analytics applications; developing public sector analytics capabilities; and creating awareness of analytics and promoting a data-driven and evidence-based decision making culture.

Thrust 3: Develop supporting platforms and enablers for Data & Analytics

IDA seeks to establish the technology platforms and enablers that are required to support the development of Singapore's Data & Analytics capabilities, as well as to drive productivity through enterprise adoption of Data & Analytics. These platforms and enablers will provide secure, efficient and scalable capabilities for businesses to acquire, store, manage, process, sell, analyse and visualise data to generate business value for themselves and their customers.

Some of the initiatives under this thrust are:

- **Software-as-a-Service (SaaS) Enablement Programme**, which provides funding support for SaaS enablement projects in specific industry verticals in Singapore, in order to lower the barriers of SaaS enablement, expedite the SaaS enablement process, and upgrade the capabilities of ISVs in SaaS enablement.
- **Development of Standards**. In order to support the growth of cloud adoption, there is a need to address users' concerns on cloud security and to develop appropriate standards and guidelines. To this end, IDA and the Information Technology Standards Committee (ITSC) formed a Cloud Computing Standards Coordinating Task Force under ITSC in February 2011. ITSC is currently developing two Technical References (TR). The first, on Virtualisation Security for Servers, guides users on how to mitigate the security risks posed by compute hypervisor virtualisation. The second, on Security and Service Level Guidelines for the usage of public cloud computing services, advises users on the security risks to look out for and service levels to consider when seeking public cloud computing services. Cloud computing service providers will also find this Technical Reference useful as it will provide guidelines on the best practices that they can put in place to enhance users' confidence in their cloud services.
- **Proposed New Regulatory framework on Data Protection** to increase consumer trust and strengthen Singapore's position as a trusted global data hub. The new law will provide a framework for the collection, use, disclosure, transfer and security of personal data. For more information, see: <http://www.mica.gov.sg/>.