Topic:
Green IT

Going Green in the Asia-Pacific Region

In the last issue of i**CT** we took a broad look at the Green IT market in the light of the current economic downturn. Industry experts tend to agree that saving money, not Mother Earth, is the main driver behind the adoption of more energy efficient IT. While this overall mindset may be a global one, some countries are further ahead than others in the adoption of Green IT. Nowhere is this more apparent than the Asia-Pacific region. i**CT** looks at the reasons behind this, with a particular focus on Japan, China and India.

Green IT is the practice of using computing resources more efficiently, but also extends to the use of IT to reduce the carbon footprint of other operations. The term covers more energy efficient solutions for everything from data centres to desktop hardware, to thin client solutions and the virtualisation of servers.

JAPAN

The Japanese Government has been at the forefront of action to combat climate change in recent decades. Strong legislation on emissions and energy conservation has helped to drive industry efforts to curb damage to the environment. But business imperatives have played a vital role too. *"The 1973 oil crisis was a turning point for our economy,"* says Osamu Inoue, Director, Green IT Promotion Office at the Japan Electronics & Information Technology Industries Association. *"It shifted away from oil intensive industries to those such as electronics. At the same time Japanese enterprises turned all their ingenuity to improve energy efficiency."*

i**CT** *is produced by Business Advantage, a B2B research, business development and marketing consulting practice operating in the global IT, Digital and Telecommunications sectors.*

Reach for the clouds

The Japanese Government also plays a proactive role. Its Green IT initiative aims to develop cutting-edge technologies and create a more energy efficient society through the use of IT. Three main projects are underway, including work on nanobit technology to reduce energy consumption per unit of information content. Most recently the Japanese Government has announced plans to build a massive 'cloud' computing infrastructure that will support its entire IT system. This 'Kasumigaseki Cloud' will consolidate existing data centres and enable separate ministries to use only the required computing resources through the cloud platform.

Cool measures

The Japanese Government works closely with a number of Japanese companies that are investing in far-reaching Green IT solutions. Hitachi has a 'Cool Centre 50' initiative for reducing power consumption in its data centres by 50% over five years. An estimated 40% reduction is expected through 'Massive Array of Idle Disks' (MAID) technology that enables inactive hard disk drives to be shut off. Meanwhile Fujitsu expects to reduce CO_2 output by 0.76 million tons in the four years up to 2010. Green IT measures include the use of optical fibres that measure temperature in a data centre in more than ten thousand areas simultaneously. Energy consumption is reduced through the pin-point location and operation of air-conditioning systems.

CHINA

It's no surprise that countries with emerging economies are slower to embrace Green IT. China faces the challenge of pursuing much needed economic growth, reducing poverty and addressing climate change. However, for rapidly growing industries, the emphasis has tended to be on the reliability and security of IT systems. In recent years many Chinese businesses have not been factoring energy costs into their IT budgets. But Reco Li of IDC Asia/Pacific believes this is changing.

"Compared to most other Asian countries, awareness in China of Green IT is at the education stage. But helped by changes in Government policy, IT energy consumption is attracting more attention."

Reco Li, IDC Asia/Pacific

Mixed picture

Recent IDC surveys have shown that, in addition to energy costs, CIOs and IT managers in China have a range of concerns that are leading them to consider greener IT. Many big businesses are struggling to find the space required for their growing collections of server, storage and network equipment. They also report concerns over spiralling maintenance costs and software licensing and development fees. *"Both the Government and the IT industry recognise that Green IT is the most effective solution to these problems,"* explains Reco Li. The Chinese Government has shown a stronger commitment to improving energy efficiency in recent years, as shown by its target of reducing energy consumption by 20% on 2005 levels by 2010, and promoting greater efficiency in China's top 1000 businesses. Reco Li feels however that a more proactive approach is needed: *"Without proper reward systems and market promotion programmes, many businesses are not prepared to invest in greener technology. Many large enterprises are on board, but it tends to be the small/medium sized enterprises and family firms that aren't engaged."*

Green shoots of opportunity

Despite these barriers, Reco Li sees real opportunity in China for Green IT suppliers: *"Many suppliers anticipate that the next wave of IT spending in China will be a green one. We expect increased take-up of various technologies. Server virtualisation for example – VMware, Hyper-V and Citrix have already built a strong market position in this field; also storage virtualisation and related technologies such as data deduplication and thin provisioning; then there's network consolidation, and unified communications that bridge the gap between telephony and computing to deliver real-time messaging, voice, presence, e-mail, and conferencing facilities."*

INDIA

Similar barriers exist to the growth of Green IT in India. The Government is reluctant to commit to binding emission reduction targets that might impede the pace of economic growth. The national power shortage, however, highlights the need for drastic energy saving measures - the country has a 12% power shortage at peak times. The unreliability of the power supply means that many businesses run their own diesel-fuelled generators, putting them at the mercy of fluctuating crude prices.

Delayed reaction

This need to decrease power consumption is the biggest driver for the adoption of Green IT in India – yet only a minority of Indian businesses have a Green IT strategy in place. Varghese Thomas, Head of Corporate Communications, Cisco India & SAARC sets the scene: *"Despite widespread awareness of technology to cut carbon footprint and improve return on investment, India is still lagging in the adoption of Green IT. The energy saving technologies for data centres, computer systems, building power consumption and air conditioning come at a cost, which not all companies can afford immediately. We also need government policies that support the use of green products, services and processes. Tax rebates on energy efficient buildings, products, and **carbon trading will improve large scale adoption of Green IT.**"*

Some technologies in the green category are catching on faster than others. An IDC India survey estimated that 22% of servers were virtualised in India in 2007, with a large percentage increase expected in following years. Meanwhile vendors are pushing hard at all areas of the Green IT agenda. Companies such as Hewlett-Packard, Dell and Acer have been promoting their energy-efficient range of PCs and notebooks. Hewlett-Packard has set up an India Design Centre with a view to manufacturing products for the Indian market that offer better productivity and use less power.
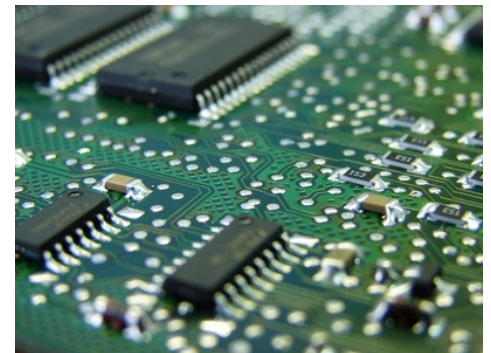
Economy down, awareness up

Varghese Thomas is confident that the economic downturn will heighten awareness of energy efficient products: *"Customers actively prefer to associate with eco-friendly companies, as long as the costs remain the same. We see that increasing numbers of customers are using green criteria in their IT purchasing decisions. The recession has made our customers and partners aware of the fact that being 'green' is an essential cost saver, and a long-term investment."*

"Customers actively prefer to associate with eco-friendly companies, as long as the costs remain the same."

Varghese Thomas, CISCO

Conclusion - National Greening Factors

Two key factors tend to distinguish countries where Green IT has the strongest foothold (such as Japan, South Korea and Australia). Firstly they have well developed, wealthy economies; IT infrastructures are well established, and operational expenditure tends to outweigh capital expenditure. This creates the conditions for a heightened awareness of the proportion of running costs in the IT budget. Secondly, the Governments in these countries take the lead in driving the adoption of Green IT through a combination of investment and regulation.

Supply chain pressure

Big business in India and China may not feel strong legislative pressure to reduce carbon emissions. But pressure is coming from a different source – from down the supply chain. Enterprises in the West (and other countries with strong Government commitment to reducing carbon emissions) are starting to introduce green clauses in their contracts with suppliers. These can require suppliers to report on greenhouse gas emissions and use more energy efficient processes. As this trend continues, more enterprises in countries such as India and China will be forced to introduce more energy efficient IT strategies. With pressure on the bottom line from within and without, Green IT's global growth is assured.

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