

Approach to Green IT Business at Fujitsu Australia Limited

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Whether you are a climate change sceptic or a believer, as a business leader you have an obligation to prepare for the opportunities arising during the transition to a carbon-constrained market. There will be major economic and industry disruption to the market, resulting from an array of influences. This transformation will not just be the introduction of emissions trading in 2010; it will be one of the most wide-ranging transformations of our time. The carbon-constrained market will create revenue worth billions of dollars and generate new opportunities across the Australian economy. It will impact all Australian businesses in some way—doing nothing is no longer a viable option for those who wish to remain competitive and sustainable. Fujitsu Australia Limited (FAL) has developed new service offerings to assist its clients to meet these challenges. The Enterprise Sustainability offering is a broad approach aimed at assisting our clients to understand their risks and identify new business opportunities and prepare for incoming regulation and the major economic changes to the market. The Green IT offering addresses the information technology (IT) function/industry, which has a role to play in reducing the environmental burdens caused by IT and also providing advanced technology and solutions to reduce environmental burdens. FAL is working with their clients to develop and implement a Green IT strategic response.

1. Introduction

There is now broad consensus that greenhouse gas (GHG) emissions directly contribute to increasing the earth's surface temperature. Human actions, including the burning of fossil fuels (coal, oil, and natural gas), agriculture, and land clearing, are increasing the concentration of carbon dioxide (the most important GHG) and other GHGs in the atmosphere. This enhanced greenhouse effect is contributing to the warming of the earth's surface. The projected changes in climate will have significant environmental, social, and economic implications for our world. The time for action is now. "Delaying now is not postponing a decision, it's making a decision".¹⁾

According to the Intergovernmental Panel on Climate Change (IPCC),²⁾ if we want to mitigate

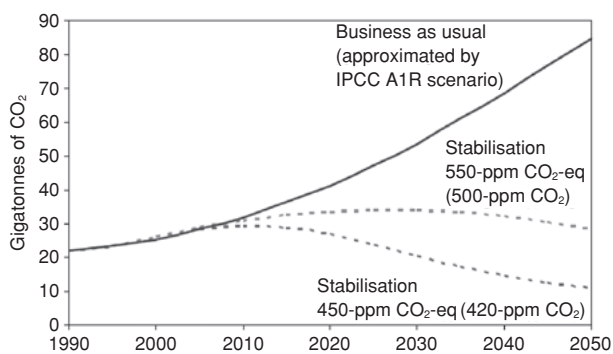
further impacts of climate change, then we need to stabilise the global carbon-dioxide equivalent (CO₂-eq) emissions per annum to 450 ppm, which is the basis of the 25–40% emissions reduction proposal for developed countries, as discussed at the Conference of Parties in Bali in December 2007. This will require dramatic and immediate changes in global emissions. A less-challenging target of 550-ppm (CO₂-eq) leaves a much higher risk of dangerous climate change. These scenarios are compared with business as usual in **Figure 1**.

2. Fujitsu's response to climate change

Fujitsu Limited (Fujitsu) is a global leader in sustainability. It is listed on the Dow Jones

Sustainability Index,³⁾ the first worldwide index to track the financial performance of leading sustainability-driven companies. Fujitsu recognises that the environment is a vitally important business issue and takes its corporate citizenship responsibilities seriously. This includes providing more environmentally friendly products and services to customers and extends to the ongoing pursuit of green activities in every area of our operations. Fujitsu uses its technological expertise and creative talents to help promote sustainable development. The company observes all environmental regulations in its business operations and actively pursues environmental protection activities on its own initiative. Through individual and collective actions, Fujitsu and its staff continuously strive to safeguard a rich natural environment for future generations. Sustainability efforts within Fujitsu are guided by the following principles:

- We strive to reduce the environmental impact of our products throughout the product lifecycle.
- We are committed to conserving energy and natural resources and practice a 3R approach (reduce, reuse, recycle) to create best-of-breed eco-friendly products.
- We seek to reduce our risks to human health and the environment from the use of harmful chemical substances or waste.



Source: Figure 3.1. of IPCC 4th Assessment Report⁴⁾

Figure 1
IPCC scenarios.

- Through our IT products and solutions, we help customers reduce the environmental impact of their activities and improve environmental efficiency.
- We disclose environment-related information about our business activities, products, and services, and we utilise the resulting feedback to critique ourselves in order to further improve our environmental programs.
- We encourage our employees to work to improve the environment, bearing in mind the impact of their business activities and their civic responsibilities.

Fujitsu Australia Limited (FAL) follows the environmental policies and philosophy of our parent company. The key features of our local environmental policy include the following:

- Members of the Executive Team are responsible for ensuring that our environmental policy is understood and implemented at every level of the organisation.
- We are committed to training and informing our staff about environmental matters.
- We follow a process of continual improvement in all aspects of our business, taking into consideration the impact of our business on the environment.
- We set objectives and measurable targets to continually improve our environmental performance.
- We regularly review our environmental activities and progress against targets and make appropriate adjustments to our Environmental Management System.
- We regularly communicate our performance against targets throughout the Fujitsu group of companies and externally.
- We adhere to environmental standards and legislation, where applicable.
- We establish programs for recycling products and waste and are committed to reducing energy consumption in our products and operations.
- We work with our suppliers to ensure that

they in turn give thought and consideration to the impact of their processes and products on the environment. We also work closely with our customers to identify ways in which together we can improve awareness of, and impact on, the environment.

3. Australia's call for action

On the 1st of July 2008, the National Greenhouse and Energy Reporting (NGER) Act 2007 commenced in Australia. It requires Australian businesses to register and report their GHG footprint. The NGER Act is a bridge to the Australian emissions trading scheme (AETS), currently proposed to commence in 2010. The introduction of the AETS within a relatively short timeframe provides a number of issues to Australian businesses. The main issues are:

- Assumptions made by businesses that benefits may not be achieved in time,
- Low confidence in measurements and the reporting of data,
- Lack of knowledge by businesses about the impacts, and
- Confusion in the market about the scheme.

The AETS will help promote private sector innovation. It will create a major financial market that is aimed at achieving environmental obligations. The changes in our market will impact all Australian businesses in some way, resulting in challenges for some Australian businesses, while creating significant opportunities for others. Doing nothing is no longer a viable option for businesses that wish to remain competitive and sustainable.

4. Addressing the challenges

Leaders recognise climate change as a major business risk and understand the need to respond. However, they face significant challenges in determining how and when to act and how much a practical response will cost. The response requires large-scale change, leadership, and the ability to look beyond an organisation's own di-

rect emissions and consider the impact on its entire value chain.

I said, "If you look at environmental sustainability simply as a cost, you'll be stuck reacting to problems and make only gradual improvements".⁵⁾

The price of carbon in the cost of goods sold (COGS) is a significant economic driver. The profitability challenge will be felt throughout the market, requiring new business and financial models.

I said, "It's about the connection between the environment, sustainability, and profitability".⁶⁾

To help our clients respond to these challenges and bridge the gap from intention to action, Fujitsu Consulting has developed two service offerings: Enterprise Sustainability and Green IT.

4.1 Enterprise Sustainability

Our Enterprise Sustainability offering is a broad approach aimed at assisting our clients to understand their risks and identify new business opportunities and prepare for incoming regulation and the major economic changes to the market. We work with our clients to develop the Green Value Case, including:

- Alignment to strategy,
- Identification of strategic benefits, and
- Understanding of the capability required to deliver.

We help our clients implement a range of strategic initiatives supported by a roadmap of benefits. The Enterprise Sustainability framework comprises five phases, as shown in **Figure 2** and described below.

4.1.1 Risk Identification

Our clients need to identify and classify the risks that climate change presents to their businesses. Risk categories may include regulatory, supply chain, product, technology, litigation, reputation, and physical risks. The assessment process identifies risks and develops appropriate mitigation strategies. It also identifies new busi-

ness opportunities and/or improvements in current operations.

“It requires fundamental differences to operations which can generate new sources of revenue and profitability”.⁷⁾

The deliverable of this phase is the Statement of Intent. (The call for action)

4.1.2 Development of a sustainability strategy

During this phase, we work with our clients to develop a sustainability strategy based on the risks and opportunity assessment. This strategy must align with corporate objectives and be endorsed by executives. The strategy should consider the boundaries and scope of the organisation’s responsibilities, brand strategy, leadership opportunities, and shareholder value.

4.1.3 Measurement

Once our clients understand the boundaries of scope, including direct and indirect emissions, and take into account the full lifecycle of operations they need to measure their GHG footprint. Clients often see measurement as the first phase of activity and remain caught up in measurement without any linkage to corporate strategy or due consideration of accountability within the value chain. We help our clients design performance metrics and models to establish the baseline for ongoing measurement, transparency, and benchmarking. The deliverable of this phase is the Organisational Sustainability Profile, including the:

- Current baseline
- Metrics
- Benchmarks

- Sustainability targets in line with strategy

4.1.4 Implementation of strategic initiatives

The strategy and measurement phases identify a series of strategic initiatives aimed at meeting the identified sustainability targets and realising the proposed benefits. The initiatives are structured into a series of delivery programs, whose funding is confirmed and prioritised using the Fujitsu Green Value Framework. Fujitsu’s Green Value Framework approach is based on an integrated set of techniques that systematically identify, evaluate, align, and manage value from investments. Once the delivery programs have been optimised, the changes are executed through the Fujitsu Business Transformation Model (**Figure 3**), which provides the frameworks, processes, and vocabulary to help clients to engage staff at all levels of the organisation and embed the required changes, including ones related to technology, people, and processes, throughout the value chain.

4.1.5 Performance reporting

A range of stakeholders will require our clients to report on the progress of sustainability goals and targets. Our clients will need to report on areas such as ongoing GHG emissions and compliance with regulations and standards. We work with our clients to ensure that they have the tools and reporting systems to respond to market demands.

4.2 IT Industry perspective and Green IT

It is generally accepted that IT globally accounts for 2% of GHG emissions.⁸⁾ The price of energy is expected to further increase, and IT has

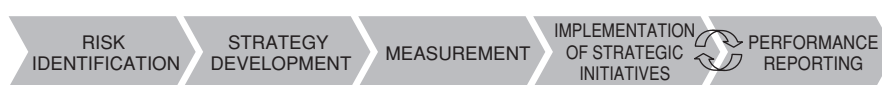


Figure 2
Enterprise Sustainability framework.

a fundamental role to play in reducing this cost to business. IT is a large consumer of power in a typical office: current estimates put it as high as 40%.⁹⁾

In 2006, Japan's power consumption by IT equipment equalled 5% of the country's total power consumption.¹⁰⁾ In the USA, power consumption by data centres equalled 1.5% of total power consumption.^{11),12)}

It has been estimated¹³⁾ that by 2008, 50% of current data centres will have insufficient power and cooling capacity to meet the demands of high-density equipment. Even while sitting idle, servers use approximately 30% of their peak electricity consumption.¹⁴⁾ The total cost of ownership (TCO) of IT assets is accelerating. By 2012, the ra-

tio of energy versus procurement costs (over three years) for a server could be as high as 22:1.¹⁵⁾

I said, "Switching from a tower desktop to a notebook can reduce electricity consumption by up to 70%".¹⁶⁾

The IT industry has a role to play in reducing the environmental burdens caused by IT and also in providing advanced technology and solutions to assist its customers in reducing environmental burdens. The Green IT movement is gathering momentum in the marketplace. Whilst organisations have embraced the concept of Green IT, they fail to translate it into action. The Green IT framework comprises five phases, as shown in **Figure 4** and described below.



HR: Human resources

Figure 3
Fujitsu Business Transformation Model.



Figure 4
Green IT framework.

4.2.1 Strategic alignment

The first activity is to understand the organisation's strategic intent and business drivers for Green IT. This is done by examining the target position with a focus on IT alignment to the organisational strategy, including both the business and IT objectives and how they relate to sustainable outcomes. The deliverable of this phase is the Statement of Intent for Green IT, which includes the Green IT Vision Statement, Objectives, and the Green IT Self-Assessment Report.

"It's an opportunity for an IT department to move from a more reactive approach. It builds on the business's existing environmental strategies and also outlines a framework for collecting information on emission and carbon trading".¹⁷⁾ James Scott, CIO Toyota Motor Corporation Australia.

4.2.2 IT assessment

During this phase, we assess the current impact of IT on the environment in terms of energy consumption and associated GHG emissions by examining the hardware and software inventories and power consumption in detail. Through data modelling and scenario analysis considering utilisation, business rules, costs, and trends, the IT Sustainability profile is developed highlighting key focus areas. Fujitsu's Green IT Savings model¹⁸⁾ estimates the electricity consumption and GHG emissions for IT assets. This model utilises data published by Energy Star USA¹⁹⁾⁻²³⁾ to estimate the electricity consumption and data published by the Australian Government Department of Climate Change²⁴⁾ to convert electricity consumption into GHG emissions.

4.2.3 Strategy development

A Green IT strategy should include initiatives aimed at the following four actions.

- Cleaning up operations. Identifying unnecessary equipment and quick benefits through the reduce-reuse-recycle approach.
- Optimising infrastructure. Optimising IT infrastructure and assets using techniques

such as consolidation, virtualisation, and power management.

- Managing energy use. Optimising the data centre environment, power sources, policies, and alternative technology communications.
- Rationalising procurement and supply. Adopting a lifecycle-management strategy for procurement and supply and for sourcing products and services through a low-carbon directory.

4.2.4 Business transformation and change

Defining, structuring, and executing the change programs include the selection and prioritisation of strategic initiatives through the development of a program roadmap. The delivery programs are prioritised using Fujitsu's sustainability value framework²⁵⁾ and funding is confirmed. The success of any effort to achieve sustainability is dependent on staff adopting the new ways of working.

4.2.5 Realisation of the benefits

Every sustainability initiative must be developed with a solid link to business benefits. The Fujitsu Benefits Realisation Approach enables our clients to:

- Scope, plan, evaluate, and deliver programs of business change to achieve their target benefits,
- Understand the underlying risks and assumptions of change programs that must be managed, and
- See the complete picture of the potential benefits of an investment and the interrelated actions needed to achieve them, as depicted in **Figure 5**.

Potential benefits from implementing a Green IT strategy may include:

- reduced demand for energy,
- more efficient use of infrastructure,
- reduced carbon footprint,
- optimised supply chain, and
- cost reductions.

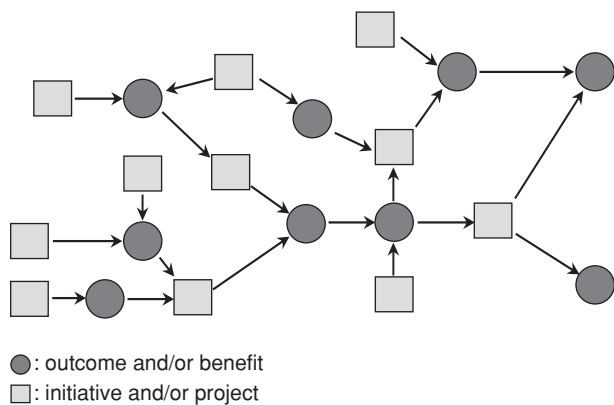


Figure 5
Results chain.

5. Case study: Toyota Motor Corporation Australia^{note)}

5.1 Situation

In 2005, Toyota Australia developed a 5-Year Environment Plan and in 2007 reported its progress in their annual Sustainability Report. Toyota wanted to develop a strategy for Green IT to complement its vehicle production strategies. Toyota needed to develop specific sustainability strategies for IT at its Corporate headquarters to ensure that IT contributed to meeting the targets in their Environment Plan.

5.2 Our approach

FAL applied our Green IT Framework Phase 1. Using interviews and questionnaires, we quantified the alignment between the Toyota IT department's plans and Toyota's corporate sustainability strategy. The scope included the extended IT environment because Toyota outsources to several providers.

5.3 Outcomes

After the assessment, Fujitsu worked with Toyota to develop a Statement of Intent for Green IT. Fujitsu also proposed a Green IT vision state-

note) FAL worked with Toyota through the Green IT Framework Phase 2—IT Assessment, completed in November 2008.

ment for Toyota's IT department. The statement will guide IT toward making a strong contribution to Toyota's Environmental Plan by optimising infrastructure, managing energy use, and achieving lifecycle management of IT assets.

- It highlights the key role that IT will play in meeting Toyota's corporate environmental objectives, including carbon emission reduction targets.
- It allows Toyota to commit to develop a detailed strategy for Green IT including targets and key performance indicators.
- It communicates Toyota's intent to extend environmental measures to its IT suppliers and partners.

6. Conclusion

The debate on whether or not climate change is real is over. Actions will be driven by the market. There is increasing evidence that going green is good for business financially and provides an opportunity for market leadership.²⁶⁾ Environmental responsibilities are becoming a core element of organisations' social and regulatory licences to operate. The way companies manage their carbon footprints will either provide long-term sustainability or pose a threat to their existence.

"Organisations that manage and mitigate their exposure to climate change risks while seeking new opportunities for profit will generate a competitive advantage".²⁶⁾

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