

Greening your IT workspace - Revised October 2021

John Booth, the Vice Chair of the Green IT SG has reviewed the “Greening your IT Workspace” document that was originally compiled back in 2010 and updated it for 2021 and beyond, it is unsurprising that many of the statements made are equally valid today as they were back in 2010, and with some minor amendments, mostly to do with energy costs, the document remains unchanged, where changes or additional comments have been made the text is highlighted.

Today the need to reduce greenhouse gasses and consumption of power is widely accepted. Information and communication technologies are an increasingly important contributor to carbon emissions in the UK and with the growing business and domestic use of ICT, its footprint now exceeds that for the UK aircraft industry.

Data from a recent study by Carbon 3IT Ltd indicates that the total amount of ICT related energy spend in the UK is now 12+% of total UK energy consumption, this includes small server rooms, government, transportation systems and academia, this does not include home compute and other digital technologies as smart speakers, gaming consoles, and streaming services set top boxes.

With UK public sector, at £12.7bn (2020), having the largest IT budget, UK departments and local authorities are embarking on aggressive plans to reduce their IT footprints. These public sector commitments will put pressures on all its suppliers to use and provide greener IT assets and services, and along with those from UK international commitments, will eventually ripple through to all of us.

The government has been very active in this area since 2011 and has published reports on an annual basis since 2012

The Government has released the “Greening Government ICT and digital services:2019-2020 annual report which can be downloaded from this link: <https://www.gov.uk/government/publications/greening-government-ict-and-digital-services-2019-to-2020-annual-report>

There is also an ICT and digital services strategy 2020-2025 which can be downloaded on this link: <https://www.gov.uk/government/publications/greening-government-ict-and-digital-services-strategy-2020-2025>

It should also be noted that the recent PPN 06/21 requires that all government suppliers not provide a “carbon reduction” plan for all competitive tenders.

It is clear that ICT energy efficiency and sustainability is a hot topic within government and that, we as citizens can adopt many of their practices.

Why take action now? Advantages of green IT include:

- Enhanced reputation (green image);
- Feel good factor (making a difference); Helping the world address the climate emergency and to reduce the impact of any current or future carbon taxation.
- Reduce energy bills (carbon comes from energy and energy costs money).
- Reduce future energy requirements by purchasing green assets, services and consumables.
- Use IT to facilitate working from home, and reduce the cost of travel, remote meetings. Which many organisations have already done to mitigate the impact of the recent pandemic.

The journey to effective greening

- Raise awareness at all levels.
- Assess green impact of your technologies, practices and behaviours, identify hot spots, establish baselines and identify simple things to do first.
- Establish a senior manager as a green 'champion'.
- Engage all staff to win hearts and minds.
- Corral the problem - adopt green criteria and accounting for new investments.

Staff awareness - examples, from the carbon trust, include:

- A computer left on 24/7 will cost about £37 a year, whereas by switching off at night and weekends, the charge can be reduced to about £10 a year - enough energy to make some 34,900 cups of coffee.
- A PC monitor switched off overnight saves enough energy to microwave six dinners.
- Turning off all non-essential equipment in an office for one night will save enough energy to run a small car for 100 miles.
- CRT Monitors account for almost two-thirds of a computer's energy use.
- Office equipment is the fastest-growing area, accounting for up to 20 per cent of total UK energy use.

Assess technologies and behaviours - take simple actions first

Reduce daily consumption turn it down or switch it off.

- Awareness sessions and posters to staff to switch off the lights when not required.
- Lights to automatically switch off when no movement within the room.
- Switching off computers, when not required, either by the users or automatically.
- Reduce brightness on monitors.

Consume less with what you have

- Remove active screensavers - same power used to run a screen saver as in working.
- Reduce screen brightness and increase contrast.
- If monitors and printers have standby settings use them.
- Where available enable active power management on PCs and laptops.
- Apply timer switches to non-networked technology and printers.
- Share printers and other devices e.g., comms devices, faxes, servers.
- Share PCs and hot desk.
- Rethink data storage policies to reduce servers.

Take less from the environment

- Use recycled paper and recycled print cartridges and re-cycle again,
- Ask yourself - why print? If you have to
- Set printers for double-sided or side by side printing as the default
- Set printers for draft and grey printing
- Adopt high density fonts and maximise print areas

Use IT to reduce carbon from other services/ activities/ overheads out of peak times e.g. office space

- Utilise the concept of hot rooming to reduce the heating and lighting to a limited area.
- Improve the physical security so staff feel able to start and work earlier / later, to reduce space required to house everyone.
- Use teleconferencing and videoconferencing to save travel and meeting room space.

Build your green ICT champion

Gear up your IT manager/ person to:

- Understand best practice from journals, latest reports, many freely available from the Internet.
- Do the obvious things now, e.g., buy greener kit at next refresh e.g., Energy Star rated.
- Get others to be aware of how to use IT to work and do business in greener ways.

Engage staff - win hearts and minds

- A survey by Logicalis indicated that 85 per cent of employees switch off their home PC when they have finished with it, whereas only 66 per cent turn off work machines after use.
- Provide visualizations of consumptions e.g., toner and paper carton mountains.
- Set up a staff group to come up with their ideas.
- Provide metrics and monitoring to show and encourage progress and if possible harmless competition with rewards.

Procurement - take less, use more

- Why procure, why not re-use or re-cycle.
- Upgrade rather than purchase new equipment.
- Check green rating of all purchases and get information on manufacture and transportation.
- Invest to save
 - buy video and tele-conferencing services to save travel.
 - buy laptops to enable staff mobility - but safeguard data.
 - buy multi-function and shareable devices.
 - future proof - buy modularized, upgradeable devices.

- Assess investments in energy terms consumption as well as business value.
- Specify low-power consumption CPUs and high-efficiency power supply units (80 per cent or better).
- Choose goods made from partial or wholly recycled products / materials.
- Require information from suppliers on the greenness of their products and services including transportation.
- Rethink just-in-time policies to reduce transportation.
- If you have to dispose of kit - do so carefully.

Remember...

- Best practice evolving at a fast pace, need to invest in keeping up to date.
- Given energy price issues and ability to use IT as a tool to effect gains elsewhere, the business case can now be made for green IT.
- There are some things you can and should do now.
- Pressure in the supply chain from greener government practices and demands.
- Many global organisations are making demonstration of green / energy efficiency a requirement for identifying suppliers / products.
- Cannot afford to be left behind.

Green IT Training

The original BCS “Green IT Foundation” exam and course has been discontinued although the BCS Green IT committee has been discussing the updating and reintroduction of the course, at present there is only one organisation providing Green IT training in the UK and that is Carbon3IT Ltd

Green IT Fundamentals

Courses can be delivered at your site (minimum 5 delegates) or at our training centre in Birmingham (Q1 2022), and costs £1,500+VAT, BCS and UK Public Sector £1,350+VAT.

Please visit www.nationaldcacademy.com or www.carbon3it.com for more information.

Led by the BCS Green IT SG Vice Chair and Carbon3IT’s MD, John Booth, this course will prove to be a useful addition to the recent series of webinars published by the SG and will cover the following topic's:

1. What is Green IT?

Understand the overall need for an organisation to adopt a Green IT strategy.

Provide an understanding of the historic development and context of the Kyoto and subsequent Agreements and Protocols.

Understand the definition of ‘Green IT’.

Identify and understand an organization’s external drivers and opportunities for greening its IT.

Identify and understand the internal drivers, opportunities, and benefits of adopting a Green IT strategy for both an organisation and its IT service provider(s).

Understand the main goals of government legislation and voluntary initiatives pertaining to Green IT.

2. Internal Assessment of your own organisation: where are you now?

Gain an understanding of how to create a Green IT policy.

Know how to assess an organisation's business operations, in terms of their carbon footprint.

Understand the contribution that emissions from the use of IT is making to those carbon footprints in terms of energy consumption and behaviours.

Describe how to audit an organisation's existing IT functions and processes.

Understand the importance and risks, issues, and opportunities around improving efficiency.

Understand the concept of total systems lifecycle management that supports IT assets from manufacture to disposal and its carbon impact.

Understand how best to re-use, recycle, and dispose of IT assets.

Developing a Green IT Action Plan.

3. Deployment of ICT for Sustainability across your organisation's activities.

Understand how to embed the use of ICT for reducing emissions from business activities, in an IT Strategy for Sustainability.

Discuss the roles and responsibilities associated with Green IT and IT for sustainable operations.

Explain how to encompass Green IT and IT for sustainable operations in end-to-end lifecycle costing, business cases and TCO.