The voice of professional publishers

How can I reduce my footprint? Guidance and suggestions for PPA members

Reducing the carbon footprint of your offices

There is already plenty of information freely available to help businesses understand how they can reduce the carbon impact of their offices whilst saving money through reduced utility bills. These include both technical solutions and behavioural changes. A few examples are provided below, along with links to some useful resources. It is also possible to take advantage of free advice from organisations such as the Carbon Trust, who may be able to provide a free energy audit and improvement report.

Technical solutions, e.g.:

- Low energy lighting
- Movement-sensitive lighting in low-usage areas
- Optimised heating/air conditioning settings
- Smart meters to identify where energy is used (for larger office facilities)

Behavioural solutions, e.g. encourage staff to:

- Fully switch-off computers and IT equipment at night
- Switch of meeting room lights, heating and air conditioning when not in use

Useful resources

The Carbon Trust - www.carbontrust.com
Includes reports and tools on employee awareness, behaviour change, lighting, heating, ventilation and air conditioning, etc. In particular the short guidance dedicated to office-based companies should be useful, available by clicking this link.

10 tips for reducing energy use in non-domestic buildings.

Reducing the carbon footprint of fieldwork and journalism

For some publishers, travel for fieldwork (such as sales meetings) and journalism can represent a significant share of the carbon impact of their business.

Where appropriate, distance meeting tools can significantly reduce this impact, particularly in cases where it offsets flights or long distance car or train journeys. An investigation of the potential benefits of distance meeting tools in media businesses in Sweden found that these solutions could reduce greenhouse gas emissions provided that equipment is frequently used to replace travel. However, under-utilised advanced meeting technology may result in similar or even higher impacts than meetings travelled to by train[1]. It is important to therefore make sure that technology is available and promoted to all staff.

Of course, in media it is not always possible to replace travel with distance meetings – travel is essential for journalism, photo shoots, etc. In this case, it is important to choose the most efficient means of travel:

- Public transport is more efficient than private cars
- If travel by private car or hire car is necessary, then try to choose a fuel efficient vehicle
- In Europe, it is quite possible to travel to many destinations as quickly and economically by train as it is by plane
- Where flights are necessary, economy seats incur a lower share of the overall carbon impact of a plane compared with business or first class travel.

Reducing the carbon footprint of a publication

The carbon calculator will help you to identify which stages of the product life cycle make the greatest contribution to the overall carbon footprint. Once this is understood, actions to reduce the footprint can be prioritised. As a general rule, the following actions can be considered as a priority.

Minimise supply chain losses

Manufacturing product which becomes waste along the supply chain is both economically and environmentally detrimental. For this reason, supply chain wastes should be minimised, e.g. printer waste, unsolds in the newsstand supply chain, and mailovers and postal returns in the subscriptions supply chain.

Optimise distribution

This is particularly important for publications with a significant level of overseas distribution by air. In some cases, international distribution can dominate the footprint of a title. In these instances, encouraging readers to adopt digital versions of the product may be both economically and environmentally advantageous.

[1] Business meetings at a distance – decreasing greenhouse gas emissions and cumulative energy demand; Broggren, Clara; Moberg, Asa; Rasanen, Minna and Finnveden, Goran; **Journal of Cleaner Production 41** (2013) 126-139

Continue to work closely with paper suppliers and printers to minimise the footprint of these stages of the life cycle

Typically, paper and/or print accounts for the largest share of the carbon impact of a magazine title with a UK readership. Working with suppliers to reduce paper grammage, minimise paper movements, etc can provide quick wins whilst reducing the carbon impact of the title.

Reducing the carbon footprint of digital content

Acknowledgement

During 2012-2013, the PPA actively participated in the Digital Sustainability Group, a working group of companies interested in digital media impacts. The working group was convened by Two Tomorrows, a sustainability agency which is now part of the DNV Group. In preparing this guidance for members, the PPA has drawn on the findings from the final report of this working group.

The four phases of digital content delivery

When thinking about the carbon impacts of digital media products and activities, it is best to think about four distinct but interrelated phases:

Content creation

This is the point at which the digital content is created and it is crucial as this is the point at which many significant energy impacts further down the supply chain are determined. The main challenges during this phase are:

- Users demand higher quality products and a richer user experience
- Content creators may not have awareness of how much data they create and few have a clear understanding of the energy/emissions impacts of their choices or options available to reduce the impacts
- Business strategy in most media organisations is heavily focused on growing digital content. In some cases this is "growth at whatever cost" or is focused on enhancing the content without sufficient wider consideration. This has the

potential to be in conflict with a company's sustainability and commercial strategies

Content storage

- Data storage is significant in the overall process of getting content from the creators to its final destination – users. It can represent a significant cost for organisations through the provision of internal (i.e. servers on site) or external services. The amount of electricity consumed by data centres worldwide grew by 56% between 2005 and 2010. It is widely anticipated that global storage requirements will continue to grow rapidly, with energy demand and cost implications. The main considerations during this phase are:
- Disk arrays and servers consume significant amounts of energy
- Increasing energy costs create a business case for managing data storage
- Many creators store data indefinitely and/ or with no limits on adding to their data banks
- Creators may not have a good awareness of how much data they store and few have a clear understanding of the energy/emissions impacts of their decisions on data storage or options available to reduce these impacts.

Content Distribution

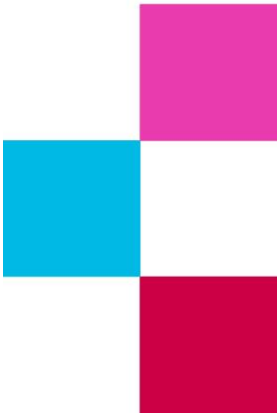
The process of distributing data around digital infrastructure requires energy, which contributes to the overall impact of delivering digital media. The main challenges during this phase are:

- Content creators are often unaware that some of the costs of data distribution is incorporated into their data transfer/ISP bills
- Increasingly customers are encouraged to stream their data live as they use it rather than downloading it
- Data distribution costs are not directly passed on to consumers, so there is limited awareness of the energy required to transmit data through networks
- Cloud computing is encouraging an "always on, always downloading" mentality

Content consumption/use

The use phase has the potential to use the most energy in the vast majority of instances. Compared to the energy required to create and then deliver content to the user, the energy required to make and power the devices used to consume that data will typically be far greater. The main challenges during this phase are:

- This phase is difficult to measure
- User behaviour is highly variable and difficult to influence



Opportunities to reduce the carbon impact of the digital supply chain

During the content storage phase there are both data management and technical solutions available to reduce the potential impacts:

- Data management, e.g. aspects to agree with your digital team.
    - Do we need to store all the data? Are sound deletion strategies in place? Engage with internal stakeholders to consider implementing a policy to delete or archive older data. Consider what is important and frequency of demand. When file formats become out of date are they converted and then older versions deleted, etc.
    - Is data storage limited? – consider a policy to cap storage, rather than allowing continuous and unregulated expansion of capacity. Guidance should be provided internally. This could include advising users on individual storage limits or developing appropriate limits per article or product.
- Technical solutions, e.g. solutions to discuss with your data storage service providers:
    - Data storage technology allows for tiered storage, placing data with high importance on the fastest equipment, while allowing low priority data to be stored on hardware which is slower to access and likely to have a lower energy impact
    - Cloud computing – independent studies have demonstrated that significant carbon savings can be achieved through cloud computing solutions

New storage technologies – e.g. thin provisioning

The key to energy (and therefore carbon) efficiency during the content creation, distribution and consumption/use phases is to

ensure that the content itself is optimised. Issues to consider with the digital content teams are:

- Are files optimally compressed or prepared to enable smallest size/energy requirement?
- Does content need to be sent each time a page/media changes?
- Are there opportunities to reduce impact using the templates in a Content Management System?
- Is content accurately described to enable referencing and searches/avoid unnecessary accessing of data?
- Streaming versus downloads? – digital or audio content that individuals access multiple times have to be distributed for every use – in this case, downloads, which require data to be distributed only one, are a more efficient delivery strategy.

There may also be a role for publishers in educating and nudging consumers to be more efficient in the way they consume digital materials. The amount of time a user spends consuming digital content on any particular device is a key variable in calculating the total energy required to consume content. Also, whether the device remains on or in standby when not in use; whether it has any low power modes; whether the device is already in use for a primary activity e.g. as well as listening to the radio / a podcast as a secondary activity. By informing users of their role in the carbon impact of digital content more sustainable practices can be encouraged.