

Institute for Learning & Research Technology, University of Bristol

# Rethinking Events

Greening Events in Higher and Further Education

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# Greening Events Project Summary

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Planned academically related events such as conferences, funding briefings, training events, board meetings and vendor presentations pervade the lives of those who work within universities and colleges. They are embedded into the fabric of the way that virtually every aspect of Higher and Further Education (HE and FE) operate; spanning research, operations, administration and teaching and learning. These events may be face-to-face with participants being physically co-present or virtual, with participants linked via network technologies or a hybrid mixture of the two.

There is an increasing awareness of negative impacts on sustainability issues of these events such as; contributions to climate change due to transport emissions of Greenhouse Gases (GHG) and other energy use, use of non-renewable and water resources, social impacts both directly through, for example, employment practices at venues and on communities local to event venues and indirectly via supply-chains for goods and services that make an event possible.

The nature of events is also changing due to the increasing availability and capabilities of networked digital technologies and the services that they enable, such as video and virtual conferencing, social networking, e-learning systems, media hosting and sharing services, etc. The new possibilities offered by these technologies mean that their potential for improving the outcomes of events in an academic context is very significant. The co-evolution of these technologies with the way events are planned, run, how participants interact and the legacy that they leave behind is rapid and dynamic.

Understanding the *net* sustainability impacts of changes in the way events are used due to the introduction and use of technologies is problematic for a range of reasons; events themselves, ICT systems and services and the way we use them are complex and dynamic. Their supply chains are broad, often deep and globalised. Net impacts depend critically on behaviour change in individuals, organisations and society more widely and how they react to change. For example the displacement of physical travel by video conferencing, potentials of increasing mobile network access, financial shifts due to reduced spending on business travel, etc. These *systemic* impacts are likely to be significant, far more significant than any individual technical innovation.

The initial goal of the Greening Events project was phrased along the lines:

*“To help understand how it might be possible to reduce the negative sustainability impacts of academically related events and yet still get as much from the events as we do now”*

As the project progressed, this changed as we gained a deeper understanding of the many roles that events serve and many factors that need to be taken in to account. Towards the end of the project we rephrased our goal to reflect that change in understanding:

*How can we rethink the way we ‘do’ events in Higher and Further Education so as to make them more effective in meeting their goals (explicit and implicit) while at the same time making as positive a contribution to meeting our sustainability goals as we are able?*

That rephrasing reflects a range of insights gained, that in turn led us to the realisation that if the goal of the project was to help understand how to make events – essentially – more sustainable, then it appeared that the most fruitful answer may lay not in focusing on how to reduce the negative sustainability impacts of any particular event, but rather to *rethink* the way that we *do* events as a whole:

- Rethink why we have them and what purposes they fulfil
- Rethink what they are and how we do them
- Rethink where and when we have them
- Rethink who is involved and who they are for
- Rethink how we can learn to meet the underlying needs currently met by events more effectively

Such rethinking will be a continual process and require a more conscious engagement with sustainability issues and explorations of the potentials for ICT to help enable reductions in negative sustainability impacts as well as contribute to positive changes. In the process a range of barriers will need to be overcome, some related to learning how to effectively assess sustainability impacts of events and any benefits offered by ICT facilities, some related to the need to gain new skills and a willingness to take on problematic issues and actively re-think and explore the way events are used.

### **Authors' Notes**

The Greening Events project spanned a wide range of rich and multidisciplinary areas. Possibly the hardest decisions associated with the project have been what not to include in this document. Given the project's exploratory nature, timescales and resources it is not possible to produce a *comprehensive* review of all of the findings of the project. This document aims to give a flavour of the issues and opportunities associated with 'greening events'.

For those interested in taking these issues forward the bibliography<sup>1</sup> provides a set of starting points. The larger findings of the project will inform and be further developed by the Greening Events II project as it moves forward<sup>2</sup>.

### **Acknowledgements**

We would like to thank JISC (Joint Information Systems Committee), the case study event partners including JISC Digital Media and Economics Network of the Higher Education Academy, our interviewees, the JISC Greening ICT Programme team and projects, especially Rob Bristow, the many researchers and practitioners from other fields and disciplines for their helpful insights and perspectives.

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<sup>1</sup> [http://greenevents.ilrt.bris.ac.uk/files/2011/05/Greening\\_Events\\_Bibliography\\_2505111.pdf](http://greenevents.ilrt.bris.ac.uk/files/2011/05/Greening_Events_Bibliography_2505111.pdf)

<sup>2</sup> <http://www.jisc.ac.uk/whatwedo/programmes/greeningict/organisational/events2.aspx>

# Background

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Greening Events was a short exploratory project<sup>3</sup> based in the Institute for Learning and Research Technology (ILRT)<sup>4</sup> at the University of Bristol. It was funded as part of the *Greening ICT programme* of JISC (Joint Information Systems Committee)<sup>5</sup>. The Greening ICT programme aims to “*support UK colleges and universities in reducing their energy use, plan for more sustainable use of ICT for the future and help chart the course to new technology enabled paradigms for the university and college of the future.*”

The Greening Events project conducted an investigation into how to reduce the negative sustainability impacts of planned academically related events (such as conferences and seminars, training, administrative and project related events) whilst gaining the maximum benefit from them. It also focused on the role that digital technologies could play in helping to reduce the negative sustainability impacts of these kinds of events.

The project was divided into two related strands:

- Systemic Impact Investigation<sup>6</sup> – aimed to explore ways to understand the sustainability impacts of academically related events from a system wide perspective – rather than only the direct impacts of an event - and so discover possible options for reducing their overall negative impacts
- An exploration into the potential for using mobile and web-based information services to help event attendees make more effective use of public transport, cycling and walking options<sup>7</sup>

This report is focused on the systemic impact investigation strand. The systemic (or systems based) approach involved studying events as part of larger contexts: research, educational, economic, environmental, social/developmental, technological, infrastructural, etc., rather than in isolation. It aims to *begin* helping to enable decision makers (policy developers, event organisers, attendees, etc.), make choices that effectively balance the many factors that come in to play when making decisions related to such events. For example:

balancing the need to gain value from an event (operational, research, pedagogic, etc.), while also taking into account and attempting to minimise the negative impacts such as non-renewable resource depletion and pollution caused by the consumption of transport, electricity and other goods and services, as well as broader negative socio-economic impacts.

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<sup>3</sup> <http://greenevents.ilrt.bris.ac.uk/>

<sup>4</sup> <http://www.ilrt.bris.ac.uk/>

<sup>5</sup> <http://www.jisc.ac.uk/whatwedo/programmes/greeningict.aspx>

<sup>6</sup> Originally called ‘systemic impact assessment’ strand, this changed during the project as the issues and approaches became clearer, see ‘rethinking greening events’ below.

<sup>7</sup> <http://greenevents.ilrt.bris.ac.uk/>

Given the exploratory nature of the project it deliberately took a *broad scope* investigating and outlining the landscape associated with academically related events and their impacts on sustainability and sustainable development.

We defined 'event' to mean 'three or more people who agree to gather together'<sup>8</sup>, either face-to-face or via networked technologies. By this definition, the only kind of event consciously excluded, were those related to the teaching of students. This was simply for pragmatic reasons given the time scales and resourcing available for the project.

Included were all forms of academic, operational, training, and research events:

- Face-to-face events - where participants are physically co-present
- Virtual or remote events where most or all of the participants are physically remote from each other and using ICT (Information and Communications Technologies) to communicate
- Hybrid events where there is a mixture of the two modes

The underlying goal of the project was to begin to identify, and map out on a wide-scale, the key issues, factors, initiatives, gaps in knowledge and understanding, defined by the intersection of *events, sustainability issues and event enabling ICT*.

To that broad end, the project used a range of approaches to explore the landscape, including semi-structured interviews and informal conversations, observational case-studies, questionnaire surveys and literature scans. In the short time scale (circa 3 months FTE) these studies were used to inform the project as it progressed.

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<sup>8</sup> Based on Schwartzman's definition of a meeting, "... a gathering of three or more people who agree to assemble for a purpose ostensibly related to the functioning of an organisation or group, see Urry 2007, p240

# Greening Events Context

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This section aims to set the context in which the Greening Events projects sits. It covers the key areas around which Greening Events is focused – *academically related events, sustainability issues associated with events, the changing nature of events* and in particular the role of ICT, the *sustainability impacts (positive and negative) of ICT* and finally the *systemic perspective* taken by the project. The subsequent sections illustrate a range of the key ideas that arose from the Greening Event projects.

## Academically Related Events

*... academic conferences, weekly team meetings, research funding briefings, departmental away-days, project review meetings, exam moderation, training events, board meetings, policy development meetings, grant assessment meetings, union negotiations, fieldwork meetings, professional association AGMs, vendor pitches, award ceremonies, consultations, brainstorming sessions, trade shows, ...*

Planned events<sup>9</sup>, such as those listed above, pervade the lives of those who work within universities and colleges. They are embedded into the fabric of the way that virtually every aspect of Higher and Further Education (HE and FE) operate; spanning *research, operations, administration and teaching & learning* (although not teaching events themselves).

There is increasing awareness of sustainability issues related to events, for example anthropogenic climate change and the Greenhouse Gas (GHG) emissions due to travel and other resource use associated with events. This has led to number of discussion pieces and editorials in academic and professional journals with titles such as:

- *“The need for sustainable conferences” (Bonnett 2006)*
- *“Rethinking scientific meetings: an imperative in an era of climate change”(Young 2009)*
- *“Why do we fly? Ecologists' sins of emission”(Fox et al 2009)*
- *“Are international medical conferences an outdated luxury the planet can't afford? Yes” (Green 2008) [and 'No' (Drife 2008)]*
- ...<sup>10</sup>

HEFCE (Higher Education Funding Council for England) estimated<sup>11</sup> that air travel (for business purposes) in the academic sector represented a total of the order of 30,000 tonnes CO<sub>2</sub> in 2006. A small study in a research institute at UCL (University College London)<sup>12</sup> estimated that their academic staff have an average work related travel (non-commuting) carbon footprint (CO<sub>2</sub> only) of the order of 2000 kgCO<sub>2</sub> per person per year. For comparison the average annual CO<sub>2</sub>(eq) emissions per

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<sup>9</sup> There are many ways to define 'event' (Getz 2007) because of the breadth of Greening Events we choose a very open working definition: *3 or more people who agree to gather together* (see for example Urry 2008)

<sup>10</sup> *see annotated bibliography for other examples*

<sup>11</sup> (using a simplified methodology based on uk average figures)

<sup>12</sup> <http://www.ucl.ac.uk/silva/environment-institute/research/carbon>

person per year in the UK as a whole is of the order of 8000-10,000 kgCO<sub>2</sub> per person per year,<sup>13</sup> travel being a highly carbon intensive activity.

Such estimates are indicative of the scale of sustainability impacts – although as the next section shows the sustainability related impacts are much wider in scope than climate change alone.

## Sustainable Events

Events of all kinds will have environmental, social and economic sustainability impacts, for example, through the direct and indirect use of energy and material resources, goods and services that make them possible. UNEP (United Nations Environment Programme) define a 'green event' in their Green Meeting Guide 2009 (UNEP 2009) as follows:

The Sustainable United Nations (SUN) unit in UNEP believes that a green event is one organised in such a way that:

- **emissions of greenhouse gases**, such as CO<sub>2</sub>, are minimised, and unavoidable emissions are compensated for,
- **natural resource consumption** (including water and energy) is minimised and demand is adapted to available local resources,
- **waste generation** is avoided where possible and remaining waste is reused and/or recycled,
- **biodiversity, water, air and soil resources are protected**,
- minimal environmental damage is caused while preparing and implementing the meeting,
- the local **community benefits economically, socially and environmentally** both during and after the meeting, with local sustainable development encouraged to the extent achievable,
- the above **principles are applied in purchasing goods and services** for the meeting, the selection of the **venue, transportation, catering and accommodation** arrangements,
- the **awareness of participants, staff service providers and the local community in sustainability issues is increased**, with the greening aims and measures communicated clearly to all,
- **local hosts, regional and national authorities, sponsors, citizens groups, NGOs, business and technical experts are involved** to the extent possible in order to comply with and support the above - stated principles.

This gives a good overview of the wide range of sustainability issues that arise from events and in particular larger event such as conferences. These impacts occur both directly, e.g. in and around the event location itself and indirectly e.g. via supply chains for goods and services that make an event possible.

Events, and the *events industry* that support them, are significant socially and economically. For example the 'UK Events Market Trends Survey 2010' estimated that 1.32 million face-to-face conferences and meetings [of all kinds with 8 or more delegates], took place at UK venues during 2009, 37% of those involved delegates staying overnight in the location<sup>14</sup>. Rogers (2010) estimates the economic value of conferences and meetings in Britain (c2010) was in the order of £18 billion

<sup>13</sup> <http://www.decc.gov.uk/en/content/cms/statistics/indicators/ni186/ni186.aspx> and [http://www.decc.gov.uk/assets/decc/Statistics/climate\\_change/1515-statrelease-ghg-emissions-31032011.pdf](http://www.decc.gov.uk/assets/decc/Statistics/climate_change/1515-statrelease-ghg-emissions-31032011.pdf)

<sup>14</sup> <http://www.eventia.org.uk/html/article/research-2010>



and also illustrates the mechanisms by which economies (local and global) benefit from conferences and conventions (see also Rogers 2008).

With growing awareness of sustainability issues, there is a rapidly developing 'sustainable events' community and practice associated with the planning, organising and running of physical (face-to-face) events. This includes the development of a British Standard Sustainability Management Systems for Events<sup>15</sup> (BS 8901). Published in 2007 and updated in 2009, this provides a framework for developing sustainable event practice.

In addition an international standard (ISO 20121) is under development (due 2012) along with numerous other activities. Notably a criterion based set of 'Green Meeting Standards' is being developed by the Convention Industry Council<sup>16</sup>, and an Event Organizers Sector Supplement is under development by the Global Reporting Initiative (GRI)<sup>17</sup>. There are also broader protocols that draw these various complementary aspects of these activities together, such as the Copenhagen Sustainable Meetings Protocol<sup>18</sup> developed as part of the COP15 (United Nations Climate Change Conference) in 2009. There are also numerous existing guidelines developed by a range of bodies e.g. DEFRA in the UK<sup>19</sup> (see bibliography).

At present such guidelines and protocols tend to focus on face-to-face events alone – rather than including aspects relevant to 'virtual' or hybrid events in which some or all of the attendees are remote with communication mediated via networked computer technologies. This reflects the context of the events industry from which they have been developed.

Currently the uptake and interest in sustainable events services from event commissioners and organisers, appears relatively low – as indicated by our interviews with event, venue and business tourism officers and events media reports. However awareness and momentum appears to be growing.

## **Changing Shape of Events & ICT**

The way that we 'do' and use planned events has co-evolved with human cultures over our histories. Technologies have always been integral to that co-evolution. The period since the introduction of networked and multimedia Information Technology (IT) over the last few decades has seen dramatic changes in the nature of the way that planned (and unplanned) events have evolved. The technologies involved include:

*Presentation software, data projectors, teleconferencing (PSTN and IP), video conferencing (suites, desktop and mobile), telepresence (high end video conferencing), online meeting tools (inc. webinar tools), live video streaming, pre-recorded video, sub-titling services, integrated conferencing software/services, interactive voting systems, virtual community services (e.g. Facebook, Ning, Lanyrd, ...), wireless (WiFi) networking, websites (and their many associated media and interactive technologies), virtual learning environments,*

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<sup>15</sup> <http://www.bsigroup.co.uk/en/Assessment-and-Certification-services/Management-systems/Standards-and-Schemes/BS-8901/>

<sup>16</sup> <http://www.conventionindustry.org/StandardsPractices/GreenMeetings.aspx>

<sup>17</sup> <http://www.globalreporting.org/ReportingFramework/SectorSupplements/Events/>

<sup>18</sup> <http://www.visitdenmark.dk/international/en-gb/menu/mice/news/csmp/csmp.htm>

<sup>19</sup> [http://www.eventsustainability.co.uk/pages/uploadedfiles/www/SustainableEventsGuide\\_defra.pdf](http://www.eventsustainability.co.uk/pages/uploadedfiles/www/SustainableEventsGuide_defra.pdf)

*blogging, micro-blogging (e.g. Twitter), instant messaging/IRC (Internet Relay Chat), media sharing services (e.g. YouTube and Flickr), podcasting, active badges (e.g. based on RFID), personal area networks, slide sharing, mobile devices (laptops, smartphones, ...), location based services (network and GPS enabled), translation services, e-Readers, digital recording of physical and virtual events, event mobile apps (e.g. for iPhone/Android smartphones) 3D virtual environments (such as Second Life), asynchronous collaboration environments, ...*

These and other technologies and more importantly the abilities (affordances) that they provide have changed and continue to change the way we plan, organise and use events; for example events now take many forms along a spectrum of purely face-to-face to fully virtual/remote where all attendees are in different physical locations.

Networked ICT and the new services that they enable, provide many additional ways in which people can interact in relation to events, including prior to, during and after events. 'Back channel' technologies such as instant messaging allow multiple conversations to take place simultaneously and even multiple events to be *attended* simultaneously.

The term *event amplification*<sup>20</sup> can be used to describe the way in which such technologies and the social software services that they enable, can be used to enhance the value of events for a wide range of 'stakeholders' – organisers, attendees, users of the outputs, etc. For virtually any technology, or indeed combination of technologies listed above, there are those who are investigating, developing and practicing their uses.<sup>21</sup> However it is not only technological advances that drive and disrupt the way that we 'do' events, many other innovations such as lightning talks, 'un-conferences', lab-tours and hack days are innovations in the format of events which can bring about changes as dramatic as those of technologies.

The changes that take place as part of the interplay of technologies, the new abilities that they offer and other changes in practice, all have significant implications for the way we use events. Within HE and FE there are many issues and opportunities that arise that remain to be resolved. These may be at professional, (inter)disciplinary, cultural, institutional and other levels – examples are given in the 'rethinking events' sections below.

## **Sustainable ICT**

ICT is highly resource intensive and has numerous environmental, social and economic impacts. In environmental terms ICT equipment has significant material and energy demands in manufacturing, use and waste management along with the associated environmental impacts. They also necessitate very extensive supply chains that have many socio-economic impacts on individuals and communities across the global economy. The JISC funded SusteIT project<sup>22</sup> explores many of the sustainability issues that surround ICT.

Like 'sustainable events', *sustainable ICT* is a relatively young but rapidly growing area of development, with goals to reduce the negative impacts of ICT through, for example, reductions in resource use in manufacture and energy requirement during use – both of consumer devices and

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<sup>20</sup> <http://ukwebfocus.wordpress.com/2008/08/28/defining-an-amplified-conference/>

<sup>21</sup> The wider JISC community being at the forefront of these kinds of activities.

<sup>22</sup> <http://www.susteit.org.uk/>

the background infrastructure that forms the Internet and services layered on top of it. A key question in terms of sustainability is *can these efficiency measures offset the increasing demand for both access to ICT goods and services and the use of them?*

ICT also brings with it potential for significant sustainability related benefits through what has been called its 'enabling effect' (The Climate Group 2008). There are many examples where ICT can potentially reduce the negative effects of current models of consumption and enable new more sustainable ways of life. For example, through reducing the need for long distance travel via video conferencing and other means of communications, improving the energy efficiency of buildings through building management systems, reducing the need for physical objects to be produced (dematerialisation) enabling 'smart' electricity/energy grids. ICT also provides potential mechanisms for social/economic development for example through improving access to communications via mobile networked technologies. These potential applications are the focus of a great deal of investment worldwide.

In parallel with these investments are activities to develop robust methodologies to assess the *net* impacts of 'enabling' technologies. This is problematic for a range of reasons including, i) assessing impacts of ICT is itself relatively difficult because they are made from 1000s of components from complex globally distributed supply chains, ii) because changes in impacts must be in comparison with a 'baseline' and choosing one of these can be contentious iii) knock on or secondary/tertiary impacts of changes need to be considered as well as those intended (see next section). An example of an early assessment methodology is that developed by GeSI (Global e-Sustainability Initiative).<sup>23</sup> Banister et al (2007) provide a good illustration of the issues in making clear judgements about the net sustainability impacts of technologies and practices.

The use of ICT to enable and enhance events thus has sustainability costs, benefits and future potentials. Understanding these and the net sustainability impacts of ICT seem vital to an understanding of the roles of ICT in enabling 'sustainable events'.

## **Systemic Perspective**

Events are systems in themselves and are parts of larger systems. They are made up of many interacting elements – buildings, organisations, individuals, technologies – hard and soft, infrastructures, supply chains, etc. Indeed when we look there is no 'event' as such; an event, whatever form it takes, is an emergent thing that arises out of those interactions.

We tend to think of events as tightly located in space and time – the event-on-the-day. However when viewed from the perspective of their impacts, their influence is seen to spread backwards and forwards in time and across geographies.

Studying the sustainability (or indeed business, academic, research or other) impacts of an event demonstrates that the event-on-the-day may be the 'cause', but that the impacts themselves are often far away. These may be in the past: in factories or farms and associated communities that supply goods, in data centres and power stations that enable networked communication (before, during and after) an event, or the engines of cars (and extraction and production of fuel) that power the transport of attendees.

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<sup>23</sup> <http://www.gesi.org/ReportsPublications/AssessmentMethodology.aspx>

There are of course impacts close to an event, such as the working conditions of venue staff, positive and negative consequences for communities local to the venue, etc., activities at the event can have significant impacts both physical (e.g. through minimising of waste) or behavioural (e.g. through promoting sustainable behaviours/issues). A principle of eco-design is that a great deal of the sustainability footprint of a good or service is effectively built-in at design time – for example the pollution caused by materials in production of a computer system, electricity use over its lifetime and ease of recycling will depend significantly on choices made during its design phase. This certainly seems true of events (see sustainable events above).

Events are also part of other larger systems – in fact events generally happen *because* they are part of larger systems; that is because they are thought necessary or effective for decisions that need to be made, research disseminated, grants or qualifications awarded, new skills acquired, etc. They are also embedded in economic, political and socio-cultural and technological contexts. These contexts affect funding and priorities, etc. We might think of these as forming the landscape in which events sit. That landscape is itself in a state of continual change - expecting the nature of events to remain static and therefore for there to be a once-and-for-all best way to use or run events is unlikely to be helpful.

These factors together illustrate why we believe that in order to understand both the sustainability impacts of events and how to gain the most value from them we need to take a systemic perspective. That is to study and use events as systems and as part of wider systems.

The term ‘systems thinking’ describes a wide range of ways of looking at systems that enable them to be understood in terms of the interactions of their parts. This includes aspects often missed when a non-systemic perspective is taken. They encourage the analysis of knock-on or secondary/tertiary impacts rather than simply direct impacts. For example, so called rebound effects – in which a planned change with an intended consequence may lead to unintended consequences that can reduce (or even have the opposite consequence to that intended).

A hypothetical illustration of a rebound effect might be; a project that introduces video conferencing in order to reduce Greenhouse Gas (GHG) emissions enables financial savings by reducing travel, which may be spent elsewhere in GHG intensive ways – thus offsetting some (potentially all) of the original savings. The impacts of this spending may not appear directly or quickly and so may not be attributed to the original change. These are examples of consequences of more basic systems concepts such as *feedback*, *delay* and displaced or *secondary effects*.

Other concepts that are explained, and can often be identified, by systems thinking approaches include: wider *rebound phenomena* (that can be positive as well as negative), *perverse incentives* (through which policies can cause the opposite of their intentions), the *Mathew effect* (by which benefit breeds benefit and disadvantage breeds disadvantage), the more general *law of unintended consequences*<sup>24</sup>, emergence and complex adaptive systems.

Systems thinking methodologies (scenario planning, soft systems methodology, systems dynamics modelling, agent based modelling) and more recently ideas from *complexity science* seem to offer great potential, and indeed we argue may be essential for, understanding sustainability impacts of

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<sup>24</sup> Merton 1938

events, how we can develop the way that events are used effectively, and how events may themselves be impacted by wider systemic behaviours.

### **Greening Events Bibliography**

We have only had the chance to brush the surface of many of the important areas associated with Greening Events. The Greening Events bibliography<sup>25</sup> provides a list of the majority of the key references under topic headings that we have found on the topics above and many other related topics.

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<sup>25</sup> [http://greeningevents.ilrt.bris.ac.uk/files/2011/05/Greening\\_Events\\_Bibliography\\_2505111.pdf](http://greeningevents.ilrt.bris.ac.uk/files/2011/05/Greening_Events_Bibliography_2505111.pdf)

# Rethinking Events

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The previous sections have highlighted two factors that are driving changes in the way that events are used and the nature of events, i.e. the rapidly evolving use of networked digital technologies and associated services and sustainability issues<sup>26</sup>. The following section describes how and why, as the Greening Events project progressed and we drew together the strands of context described in the previous section, the foci and goals of the project changed.

## Rethinking Greening Events

When the Greening Events project began our initial goal was phrased conceptually along the lines:

*'to help understand how it might be possible to reduce the negative sustainability impacts of academically related events and yet still get as much from the events as we do now.'*

As the project progressed we became aware that the original phrasing of our goal was not the most helpful way of looking at the situation. This awareness has led us to re-assess our original goal. In retrospect a more meaningful phrasing might have been something more along the lines of:

*How can we rethink the way we 'do' events in Higher and Further Education so as to make them more effective in meeting their goals (explicit and implicit) while at the same time making as positive a contribution to meeting our sustainability goals as we are able?*

This phrasing is still far from satisfactory, insofar as it begs many questions, e.g. What do we mean by effective? Whose goals? How do we decide what a positive contribution is? What should our sustainability goals be? etc. However it does highlight the shifts in perspective as the project progressed.

The key reasons for the change in perspective include our realisations that:

1. **Most events fulfil multiple intended and incidental (but still desired) purposes** for organisers and attendees. They are embedded into the fabric of the way that virtually every aspect of Higher and Further Education operate - spanning teaching & learning, research, operations and administration. Many of these multiple purposes have co-evolved with the way events are used over very long periods. The existence of some purposes may have become largely 'invisible'. For example during the project we identified over 50 distinct purposes of academic conferences.
2. **Events generally have many different stakeholders** (not just organisers and attendees). What each group of stakeholders 'get' from an event will vary considerably – identifying stakeholders and understanding the impacts of and on stakeholders of events is vital in terms of sustainability goals.
3. **'Sustainability impacts' are not independent of each other** - we had originally focused on reducing 'negative sustainability impacts' and thought of them as things-to-be-minimised.

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<sup>26</sup> There are many other significant factors influencing changes in the nature of events for example wider aspects of the globalisation of business/trade, research and teaching and learning and many other aspects of our lives. We might also add shorter term, but no less significant, factors such as the current 'financial crisis' and consequent economic environment. See 'rethinking why' below.

However events have both negative and positive impacts and a decision that may have a positive impact on one factor may at-the-same-time have a negative impact on another.

4. **It is difficult, probably impossible, to comprehensively and accurately assess the sustainability impacts** of events (not least) because *they are complex systems* in themselves, made up of multiple interacting components, and *are part of wider multiple interacting systems*.
5. **The nature of events is rapidly co-evolving with Information & Communication Technology (ICT)**; understanding how best to make use of these technologies in order to enable:
  - i. events to meet their goals (explicit and implicit) is in its infancy.
  - ii. organisations and society more broadly to meet sustainability goals is very much in its infancy.
6. **Overall there must be a balancing (conscious or not) of factors, 'business', academic, social, economic, environmental, personal, political, ethical, ...** none of these areas are stable or static, therefore the landscape in which we use events is continually changing.

These realisations led us to the insight that if the goal of the project was to help understand how to make events – essentially – more sustainable, then it appeared that the most fruitful answer may lay not in focusing on how to reduce the negative sustainability impacts of any particular event<sup>27</sup>, but rather to *rethink* the way that we *do* events:

- Rethink why we have them and what purposes they fulfil
- Rethink what they are and how we do them
- Rethink where and when we have them
- Rethink who is involved and who they are for
- Rethink how we can learn to meet the underlying needs currently met by events more effectively

The next sections offer some highly *tentative* thoughts on what that rethinking might include – these need to be considered in parallel, rather than stepwise.

At the start of this section we listed some questions that arose from our re-casting of our project goal, i.e. What do we mean by effective? Whose goals? How do we decide what a positive contribution is? What should our sustainability goals be?

The forgoing points demonstrate why it may be that these questions remain, because they are all (along with many others) fundamental questions whose answers depend on the values of those involved, their particular contexts and many other factors in any given situation. Each individual, organisation and community needs to answer these kinds of questions themselves.

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<sup>27</sup> examples might include use less paper, reduce travel by hosting it using video conferencing rather than face-to-face, etc. although these *are* a critically important component

## Rethinking Why

*... academic conferences, weekly team meetings, research funding briefings, departmental away-days, project review meetings, exam moderation, training events, board meetings, policy development meetings, grant assessment meetings, union negotiations, fieldwork meetings, professional association AGMs, vendor pitches, award ceremonies, consultations, brainstorming session, trade shows, ...*

## Why do we have planned events?

As noted previously, planned events are part of the fabric of the operations of HE and FE (as illustrated by the very incomplete list above). Each type of event listed above is part of larger processes, these examples span all areas; research, operations/administration and education.

Many (if not all) events serve multiple purposes – in the case of academic conferences, the Greening Events project identified over 50 roles fulfilled by organising and/or attending conferences, beyond the more obvious (primary explicit) goals such as disseminating research findings, sharing best practice, etc. For example:

gather business intelligence (who's doing what, funding opportunities), find new project partners, provide a 'safe' place for interdisciplinary gathering, support job seeking & recruitment, escape the 'daily grind' and have time to reflect, debate new ideas, enculturate new researchers, signal the importance of topic, be (re)inspired, meet personal performance metrics, ...

Anecdotally we found similar examples for other types of event. Many purposes seem to be common to many kinds of events, e.g. sharing 'gossip'/business intelligence, building trust in partners, collaborators, suppliers, etc., opportunities to discuss peripheral (off topic) issues with key people and getting a sense of the mood/morale of a team or community. Others are much more specific e.g. face-to-face academic conferences seem to provide a primary means of introducing/enculturating new researchers into a research community.

There are some incidental purposes whose role may be significant but at present are largely hidden/invisible. These will require more systematic study to understand. An example of this is that events provide opportunities for serendipitous<sup>28</sup> meetings and inspiration. In our interviews we heard many examples of the significant consequences of chance meetings at face-to-face events.

## Disentangling Purposes

One of the key surprises of Greening Events is that there seems to be a relative lack of detailed research into the nature and roles of most kinds of events. However even the simple insight that events have multiple purposes led us to realise that events can be conceived, at least in part, as means-to-ends. Most events being a single means to multiple ends.

With this insight, before beginning to deal with the question of sustainability impacts, other questions arise:

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<sup>28</sup> See Merton and Barber (2004) for an exploration of the wider roles of serendipity



*Is the way we are using events the most effective way of meeting the multiple purposes and underlying needs that we currently use them for (as part of larger processes)?*

*How did it come to be that we do and use events in the way we do?*

If we disentangle (list and detail) the various explicit and implicit purposes and look at them individually we can ask other questions, for example:

- How important is that purpose?
- Should we consider raising its priority and make sure that it is met more effectively? (e.g. if job seeking and recruitment are of value at a conference, perhaps providing explicit opportunities for them would be helpful)
- Is that particular event (or indeed an event at all) the most appropriate or most effective means for meeting that purpose?
- Do individual purposes reinforce/enhance each other or conflict?
- Might we be better splitting up this set of purposes and having different events (or other means) for different purposes?
- Can we enhance our ability to meet a purpose using new approaches, e.g. video recording the presentations and making them available via a website, providing live streamed video to remote participants, giving co-present attendees internet access, publishing a twitter #tag for the event, ...
- Are there more appropriate non-event based approaches to meeting this purpose? e.g. using asynchronous networked collaboration tools (e.g. e-mail, online-forums, ...)
- Can we combine our activities with another organisation/group/etc. to meet that goal more effectively?
- How might we balance potentially conflicting purposes/goals e.g. video or audio recording an event might make it more accessible but might reduce the likelihood of attendees being open and frank
- What other activities or processes within the organisation help meet that goal?
- ...

These and *other questions* that arise from disentangling the multiple purposes/roles/goals that events serve, lead to an opportunity to *rethink* the way that an organisation or community uses events to meet its goals, and find more effective ways of meeting them. Similarly disentangling can also apply at an individual or small group level when deciding how to use event attendance to meet their needs.

See the *Rethinking How, What, Where, Who and Evaluation* sections below to see illustrations of how such questions might be answered.

As with all organisational change, into the mix for rethinking must go many other factors:

- Financial contexts and costs
- Making effective use of time and resources
- Existing capabilities and traditions
- Where to (re)direct investment (e.g. in staff training, equipment, strategy development, ...)

From a Greening Events perspective *sustainability factors* are fundamental to consider when rethinking!

## **Rethinking Why - Meeting Sustainability Goals**

Increasingly organisations in Higher and Further education have sustainability policies and programmes (especially at the whole institutional level) to assess and improve their sustainability performance on a range of factors, e.g. energy use, carbon emissions, procurement criteria, etc. (see for example that of our own institution the University of Bristol University<sup>29</sup>).

At the sector level, initiatives such as the CRC (Carbon Reduction Commitment) Energy Efficiency Scheme mean that estimates of direct GHG emissions and increasingly indirect GHG emissions (e.g. due to student and staff commuting and business travel, purchases of goods and services, etc.), are currently estimated at the institutional level and also the whole sector level. Many organisations and programmes are working to enable the HE and FE sectors to become more sustainable, e.g. EAUC (The Environmental Association for Universities and Colleges<sup>30</sup>), HE Academy<sup>31</sup>, JISC Greening IT Programme (which funded Greening Events) and the Higher Education Funding councils.

The following points, drawn from above, illustrate why it is important that sustainability goals related to events, need to be put into contexts of larger sustainability goals. These may be goals of the organising body(ies), sponsoring organisations, institutions of attendees, and other stakeholders.

- All planned events will to a lesser or greater extent have negative and positive consequences in terms of environmental, social and economic sustainability both in the short and long term
- Sustainability issues are a matter of having to find a balance between conflicting factors – it is not generally (if ever) possible to make optimal decisions in terms of *all* sustainability factors at the same time. For example organising an event often balances carbon-footprint vs. levels of (potential) participant inclusion and engagement vs. financial costs vs. resource use vs. opportunity costs<sup>32</sup>
- Events are not isolated, they fulfil multiple roles within larger organisational processes and are impacted by wider socio-economic contexts, e.g. government policies, access (or not) to broadband internet or social trends such as use of social networking services
- Sustainability goals by definition are based on long term vision(s) of what a sustainable future may look like. Short-term and medium term policies and strategies need to integrate with larger and longer term activities, themselves set in broader societal and global contexts.

The larger sustainability policies should provide the basis for setting priorities that enable decisions to be made where compromises are necessary. At an institutional level it seems sensible that policies related to events should link directly to their wider *institutional sustainability policies*.

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<sup>29</sup> <http://www.bris.ac.uk/environment/policy/>

<sup>30</sup> <http://www.eauc.org.uk/>

<sup>31</sup> <http://www.heacademy.ac.uk/ourwork/teachingandlearning/sustainability>

<sup>32</sup> As noted in Rethinking How and What below creative thinking about the way events are used can help find ways to reduce negative impacts and increase positive impacts, however fundamentally compromises will have to be made

However events bring with them opportunities to extend institutional policies to include aspects that may not otherwise be included, e.g.

- How the institution should engage with communities/stakeholders local to its own event venues and those for which it, or members of its staff, are key stakeholders
- Strategy and policy (investment, training, etc.) around the use of ICT systems and services, such as video conferencing and event *amplification* technologies, that may enable improved sustainability performance
- Policies related to its own role as an event industry body – organising and hosting events, e.g. it may decide that striving for BS8901 (Sustainability Management Systems for Events) in those roles should be a goal
- Integration of policies related to event attendance by its employees, (e.g. procurement of travel, accommodation and other choices) with other wider procurement practices.

Our experience is that institutional policies are developing rapidly and so this may be a good time to integrate events related issues.

## Rethinking How and What

While *rethinking why* we use events as we do, a key question to ask is how those goals and purposes might be met? That is, what is the full range of choices available to us and what possible forms might they take?

Rethinking 'how?' and rethinking 'what?'

### Events as Means to Ends?

Using an event may or may not be the most appropriate way of meeting any particular goal or set of goals – indeed it is quite likely that for any particular goal (especially those that are at all complex) there will be no single means but a range.

Taking an illustrative example of a primary intended purpose; *dissemination of research findings*, this takes place in a variety of ways, depending on a range of factors, e.g. the stage, scale or type of a project. For example:

- **Local institutional face-to-face events**, e.g. team/project meetings, departmental or institutional research seminars, 'brown-bag lunches', workshops/brainstorms with invited external researchers/stakeholders, etc.
- **Larger research events such as face-to-face conferences, symposia, etc.** There are a wide range of types of conference style research events that fulfil a range of dissemination roles, from informal distributed research community seminars to highly prestigious international conferences.
  - *paper presentation sessions*
  - *'poster' (and other less formal) sessions*
  - *'corridor', break time conversations, poster and other less formal session formats and evening gatherings, ...*
  - *conference proceedings*
  - *event website*, on which abstracts, papers and presentation slides and more rarely video of presentations are available
  - *networked social media*
- **Published papers and reports** e.g. academic journal papers, research/project reports, conference proceedings, etc.
- **Online communities**, e.g. formal services e-mail lists such as those run by JISCMail<sup>33</sup> but also increasingly via generic social software services such as blogs and Twitter
- **Personal communication**, personal e-mail, telephone/desktop-video conference, face-to-face conversations provide a means of dissemination in a range of ways
- **Etc.**

All of these means (and others) play a role in the dissemination of research results. As we noted earlier there seems to have been little systematic study of the specific role research events in this overall 'dissemination system'. However their role seems significant on many formal and informal levels, as part of the wider system.

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<sup>33</sup> <http://www.jiscmail.ac.uk/>

Through the Greening Events activities we have come to the conclusion that it may be possible to rethink how events are used so as to:

- i. **improve the ability to meet the desired primary outcome** (e.g. research dissemination of various kinds)
- ii. **reduce the risk of negative unintended consequences** of changing the way events are used. Indeed encourage finding ways of more effectively meeting some *implicit* goals (such as academic job market functions of conferences)
- iii. **attempt to reduce the negative and enhance the positive sustainability impacts** of meeting the goals currently met through events

A 'rethinking' approach may facilitate these outcomes in the following ways:

- ⇒ by looking at events *as part of a whole system* rather than events in isolation, for example in research dissemination in this case above
- ⇒ by understanding and experimenting with the *affordances of different kinds of event* and event format - both traditional and more innovative
- ⇒ by understanding and experimenting with the *affordances of different kinds of technologies*, that enable new forms of events and other means of meeting any particular goal
- ⇒ by taking into account the (likely) sustainability impacts and opportunities offered by various event formats and technologies in the context of the relevant sustainability goals including impacts on stakeholder groups
- ⇒ by being conscious of other explicit and incidental goals of events as currently used in that context, (e.g. wider networking and job market function of conferences)

Where it is not possible to do all three of i, ii and iii, the balances chosen will be more consciously made.

Each situation will be quite specific to the particular goals, communities, stakeholder context, etc. In addition these contexts are also continually changing. We can however illustrate the *kinds of rethinking* that might be useful in a particular context. As a hypothetical example:

**A research project wishes to reduce the GHG emissions associated with their current practice of organising a series of three annual international face-to-face, two day meetings per year, they might consider:**

*Consulting as a community* (perhaps with 3<sup>rd</sup> party help) about the various explicit and implicit roles of the events for the organising community/group but also for them as individuals, their institutions and other stakeholders, e.g. funders

*Disentangling those goals* (e.g. goals might include: sharing detailed status of different project work packages, exploring implications of interim findings, team-building, brainstorming potential problem solutions as an interdisciplinary team, making decisions about strategy, keeping up with external news and sustainability goals)

PTO.

*Exploring a range of alternative means for meeting specific goals, such as*

- making more use of online discussion/community technologies for sharing information (wiki, project blog(s), e-mail lists, instant messaging, etc.)
- using hub based video conferencing for some purposes e.g. for sharing detailed status of work packages. That is, geographically close group members meeting face-to-face in video conference facilities and the whole group meeting via VC
- perhaps having more but much shorter meetings focused on one work-package at a time, rather than all-at-once, etc.
- using face-to-face events for those purposes that it may be best suited to e.g. team building, brainstorming, purposes where longer meetings are necessary, etc.
- perhaps having a number of smaller (fewer people) more focused face-to-face meetings

*Determining what barriers exist to using various solutions, lack of access to equipment or services, lack of experience and or negative attitudes/previous-experiences (e.g. if there is limited experience of certain technologies such as wikis and video conferencing there will be training needs in order to make effective use of them), technical support requirements, etc. Our experience was that disciplinary and community differences in the use of ICT to facilitate events was very significant, with some events/having nearly one hundred percent of attendees using mobile devices during an event and others where it was apparently zero.*

*Assessing the sustainability impacts – based on the stated sustainability goals - of the various options, e.g. assessing the GHG emissions and other environmental/social/economic impacts of the various technologies and face-to-face event options. This step is likely to require external help in choosing an appropriate methodology, developing appropriate lifecycle models and obtaining appropriate data on which to base an assessment. In most cases there will be multiple sustainability goals, e.g. derived from institutional procurement policies. Where face-to-face elements are used the existing and evolving sustainable event guidelines (see above) can form the basis of such assessments.*

*Systemically studying the impacts of the changes they are proposing, e.g. analyse the system for likely knock on impacts, identify possible re-bounce effects, look out for unhelpful feedback loops, seek out research about differences in affordances of technologies, etc.*

*Developing an evaluation/monitoring programme, however lightweight, to help evaluate the effectiveness of the changes made and monitor for potential un-intended consequences. Then feedback, where appropriate, to change the strategy and practice as necessary (e.g. a technology may not be as suitable as hoped, for a given purpose, etc.) and especially where negative unintended consequences are occurring.*

*Combining the results above to choose an approach that meets what they feel to be the most appropriate compromise between meeting the 'business', research and other needs of the project and their sustainability goals.*

In practice these processes would be iterative with links back and forward as the process progressed.

This example illustrates the kind of approach to *rethinking how and what* that might be used. However it was not possible as part of Greening Events to step through such a process, so this example can only be proposed tentatively.

## Rethinking Where, When & Who

In parallel with reconsidering, 'why' 'how' and 'what' in relation to events, it is helpful to take the opportunity to rethink:

- Where an event is held – physical and virtual 'locations' or channels
- When an event happens – there are many ways that enable events to spread out in time prior to and following an event
- Who is involved? Who are the target attendees? – there are a range of opportunities for enabling wider engagement with actual and potential attendees and stakeholders

### Rethinking Where?

Where an event is held has many potential consequential impacts with respect to intended event and sustainability goals. For example it may affect who is able to attend, the ability to meet incidental purposes (e.g. informal networking, building trust, etc.), negative environmental impacts (e.g. carbon footprint, energy and resource use), economic contributions to local economy of event venues, etc. As already mentioned balancing these can be difficult and decision processes must be multifaceted.

### ICT & Redefining Location

ICTs enable a wide range of non-face-to-face modes of participation in an event, as well as enabling those physically attending a face-to-face event to participate in that same event, in the parallel virtual event environments. This potentially enables fundamental changes to the nature of 'presence' and 'location' of events. For example:

- It is not uncommon to hear a fellow train traveller teleconference into a meeting using a mobile device such as a mobile internet enabled laptop or smart phone
- Delegates at a multi/parallel-stream conference can physically attend one session while virtually attending others
- Attendees can remotely *attend* multiple events (hybrid or virtual) where attending physically would be impossible (because they take place at the same time), impractical (because of distances involved) or too costly (in financial and/or time terms and/or with regard to meeting sustainability goals)
- Hub-hybrid events – in which a number of physical hub locations host delegates in potentially globally distributed locations. The hubs are connected via networked communications such as video conferencing or telepresence, providing advantages (to some degree) of both face-to-face and virtual attendance
- An 'in demand' speaker can remotely give talks (e.g. keynote presentations) at distant events where they otherwise would not be able to
- Attendees can attend conferences as 3D avatars in virtual worlds such as SecondLife. Or use such environments to enable informal social interactions at virtual events
- E-learning technologies enable a wide range of training opportunities that would previously require face-to-face approaches

That is not to say that the use of these technologies to support event goals is mature or that best practices and widespread social/professional norms are fully developed. In some cases, such as teleconferencing, use is ubiquitous in some organisations and communities. However in many cases

such as the use of remote attendance at conferences, the practices listed above are still evolving, for example see recent discussions about the role of micro-blogging and blogging at scientific conferences (e.g. Brumfiel 2009).

Even the use of relatively long standing technologies, such as using video conferencing to bring keynote speakers remotely to an event, has room for innovation. For example the suggestion by Paul Dickinson<sup>34</sup> that attendees could book time for a short 1:1 video conference session with the speaker immediately after a their keynote presentation, as an alternative to the face-to-face experience of going to talk to that speaker after the session.

In addition, practices may need to change to ensure that remote participants are well represented and able to engage effectively. For example new roles have arisen, at one hybrid event we observed that a member of the event team had taken on specific responsibilities to facilitate and represent the views of remote participants. Such roles are likely to require new skills, and as best practice evolve, training.

For almost any technology and/or approach to 'doing' and attending events there are likely to be active communities who are and have been using, experimenting and developing the use of that technology/approach and so support and guidance are often available.

As with any set of practices and technologies that are evolving there will be issues that are unclear and associated risks. One example from a research study located by our literature scan found evidence that:

*"... participants attending a seminar via videoconference were more influenced by the likeability of the speaker than by the quality of the arguments presented, whereas the opposite pattern was true for participants attending in-person."* (Ferran and Watts 2008).

If this kind of effect were general to video conferencing then its use in processes such as procurement and employment interviews might require adaptation to mitigate such differences.

### **Not Just Technologies**

In addition simple non-technical measures could provide significant opportunities for rethinking where events are held. For example in our interviews and literature scan, it is clear that face-to-face events are often used for multiple meetings. As illustrated by a quote from the JISC 2010 annual conference "[we] organise other meetings because this is the event in the year where the whole community is together." This kind of 'time shifting' of meetings to coincide with others seems to be quite common. More planned practice of, for example, co-locating, or indeed combining, similarly themed events or meetings would seem to offer great potential for reducing travel related impacts and making more effective use of other resources.

### **Rethinking When**

While we tend to think of events as tightly confined in space (location) and time (duration) of the event-on-the-day(s), as we have already seen in terms of their impacts they begin long before the event-on-the-day and many of their impacts both positive and negative last long into the future.

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<sup>34</sup> At the Sustainable Events Summit 2010 - <http://www.sustainableeventssummit.com/>



Networked technologies also provide additional support allowing events to spread in time. This enables the engagement of potential and actual participants and other stakeholders prior to and following the event-on-the-day. Thus extending the value of events into the future. For example it is possible to increase the future impact of an event by making event content available in perpetuity and by making ongoing discussion possible.

By '*rethinking when*' we can make the expansion of the time horizon of events more explicit and so integrate them more effectively into rethinking events as a whole. Examples of this expansion in time include:

- *The planned for outcomes of events* will often have hoped for impacts into the future, be they due to decisions made and subsequently implemented, training provided and consequently utilised, advice given and consequently taken, etc. Many of these will have sustainability related impacts and it may or may not be appropriate to include those in any sustainability assessment of the impacts of an event or series of events
- *Planning periods for events can be very long* – many major conferences and large meetings can have planning horizons of years with very significant investment in time, people and resources for all aspects of the event along with the involvement of many stakeholder groups over a long period.
- *Procurement processes* and the impacts of the supply chains are an example of where the sustainability consequences of events can extend considerable periods into the past. Impacts of the life cycle of goods and services can even take place before an event is conceived, (e.g. resource extraction, equipment manufacture, food/drink production, etc. ).
- *Many events are recurring*, e.g. team and project meetings, board and governance meetings of various kinds, annual general meetings of associations, etc. as noted in *rethinking why* above, opportunities exist to reconsider how such events are used and/or how they could be their goals could be met differently and so how they might be used and organised in time differently
- *Technologies can be used to extend the temporal scope of events* – enabling for example:
  - *engagement with stakeholders prior to an event* – many aspects of planning and organisation already have extensive use of ICT e.g. the use of e-mail, teleconferencing, etc., newer social media and media sharing services extend these possibilities further for example, by making it easier to enable consultation on the nature of the event, discussion of content, structure, key issues, reviewing of documents, pre-event discussion and debate so that only key issues need be focused on during 'the meeting' itself, etc., thus making it possible for more participatory event planning and evaluation to take place and increasing transparency.

Such facilities also make it possible to significantly rethink the way events-on-the-day are used, e.g. for academic conferences it may be that full (i.e. long) presentations of papers can be made available prior to an event. For example, via video or slide share services; papers themselves are often already available in this way, and the event itself can be used for short summaries and extended discussion.

- *provision of content and engaging with stakeholders following an event* – just as networked technologies and services enable events begin prior to the event-on the day they enable the event to continue on beyond it.

Perhaps the most obvious way is that content can remain available via the internet and/or intranet. In addition external contributions from attendees and others via social media (e.g. Twitter and blogs) will be available and can be linked to. Currently we are unaware of services or facilities to semi-automatically or easily systematically gather such information for re-use, although the JISC iugo<sup>35</sup> and Crew<sup>36</sup> projects demonstrate how such services could work.

Another means of continued engagement is made possible via social networking services and collaborative working environments (e.g. wikis) used by the event, where discussion begun at an event can be followed up. Our limited experience of case study events is that active follow up and continued discussion after an event is currently limited. However it seems likely that the potential for such active post-event engagement is considerable, particularly where coherent communities of interest and/or practice are involved.

### **Rethinking Who?**

The range of stakeholders in an event will vary from event to event; a daily software development team meeting, annual board meeting and very large conference will have very different numbers and types of stakeholders. However in large part the socio-economic and environmental sustainability impacts of events revolve around the impacts of and on stakeholders beyond organisers and attendees, for example:

- *sponsors (i.e. those who authorise/commission an event) and funders both direct and indirect (e.g. via attendee fees, travel costs, etc.) and their stakeholders*
- *suppliers and their staff and iteratively down the supply chain*
- *the host communities including residents, their institutions and local businesses*
- *the institutions, work colleagues and families of organisers and attendees*
- *the users of the outputs of events; e.g. decisions, research findings or best practice presented, etc.*
- *etc.*

*Rethinking who* is central to understanding sustainability related goals. It can also be helpful in understanding how to ensure that the important goals – both explicit and implicit – of events organisers and attendees are met effectively. Many of the goals or purposes of an event, especially those that are more implicit, are those of less direct stakeholders.

Stakeholder consultation is central to sustainable event management– as illustrated by the existing guidelines including the British Standard for sustainable event management (BS8901), it is also

<sup>35</sup> <http://www.jisc.ac.uk/whatwedo/programmes/vre1/iugo.aspx>

<sup>36</sup> [http://www.crew-vre.net/?page\\_id=8](http://www.crew-vre.net/?page_id=8)

central to behaving sustainably when making changes in the way events are used and *why, how, where and when* they are held.

By *rethinking who*, we also have the opportunity to ask the questions *who is not here? Who is not represented?* As noted below, generally event evaluation is done by asking attendees about the event experience. When rethinking who, those who do not attend but could, and perhaps should, attend, also become part of rethinking process.

Examples of aspects of *rethinking who*:

*Attendees and potential attendees* – inclusion and the issues that surround it are a significant sustainability issue. As already noted above by rethinking events we can potentially greatly improve access and representation to and at events, for example:

- through wider stakeholder engagement in any *rethinking process* it seems likely that barriers to participation can and will be identified and strategies for mitigating those developed, implemented and their effectiveness and appropriateness monitored and reviewed
- the wide range of remote attendance and *event amplification* technologies and approaches offer very significant opportunities to improve access; those who might otherwise be excluded can be enabled to take part, e.g. those with limited budgets and resources, personal commitments, for whom issues such as obtaining visas may be an issue, etc.
- social networking technologies can also be used to promote an event and actively encourage participation amongst a wider range of participants than might otherwise be reached, with the strong caveat that other means are also be used
- another group of attendees that appear may welcome and be welcomed in taking part are those who are on-the-edge of a community or discipline, who would normally not see an event as valuable enough to attend as a face-to-face event. Our experience is that these *potential attendees* may both have much to offer – often bringing different perspectives and insights to the mainstream membership of a community, and potentially benefiting from participation in new communities. Thus promoting opportunities for interdisciplinarity.

*Host communities (including local to events and institutions)* – As highlighted by the UNEP Green Meeting Guide 2009, a fundamental factor in the sustainability of events is to leave a positive legacy, that is to make a positive contribution, within the communities local to a face-to-face event. For example:

- one manifestation of this is seeing host communities as partners and key stakeholders. These might include: local residents, local authorities, businesses, workers, tourism departments, local professional and academic organisations, etc.
- where an institution is a host (providing a venue) those opportunities are particularly strong and will likely integrate with existing policies on community engagement. Wherever an event is hosted, local communities are stakeholders and venue selection should include issues related to impact on those communities – positive and negative

- goals are likely to be more than simply minimising the negative impacts on a community but making a positive contribution, for which there are many opportunities
  - local business can benefit significantly from directly supplying an event and indirectly via attendees spending and through those the community more widely benefits. The New Economics Foundation highlights the potential for a *multiplier effect* of local spending and benefits for local communities<sup>37</sup>. Such issues could be considered within sustainable procurement policies
  - one interesting example of direct community involvement that we observed in Greening Events was for a conference to host an evening public session as part of an event
  - events can also add to civic pride, bring return tourism, improve business capacity, e.g. if requests for sustainable goods/services are made and organisers actively assist venues in meeting those requirements where they lack experience

*Wider potential beneficiaries* – there are many other opportunities for events to benefit others, for example:

- where appropriate, recording relevant and potentially valuable parts of events and making them available via the web (see above)
- by sharing lessons and practice with the wider community via online communities. At present we are unaware of a generic HE/FE focused community for sustainable events yet such a service would be valuable. However sharing experience via publication of evaluation of events on event websites and blogs is already very valuable. See for example JISC Innovating e-Learning 2010<sup>38</sup> and the Open University annual Learning and Technology conference<sup>39</sup> as examples in the case of running online conferences.

*Issues and Risks* - As with all innovations there are issues and risks, for example there may be significant need for support and assistance in developing the knowledge and skills necessary to make community engagement effective or meaningful and meet the needs of wider stakeholders.

Furthermore the use of technology to widen participation and representation may bring associated risks, e.g. through event amplification approaches it may amplify some voices at the expense of others. Our own observations noted that it was possible for over emphasis of the views of remote participants to occur at face-to-face events, where their views (e.g. Twitter comments) are relayed to the wider audience. Although the opposite is more generally the case.

A significant investment in time is required for cultural norms to develop amongst communities new to the use of such technologies. Many longstanding professional, disciplinary or cultural practices will likely be disrupted by the use of technologies and the changes in priorities and norms they may bring about (as noted above in the case of scientific conferences and live blogging - Brumfiel 2009). Perhaps the most difficult questions are those related to how we determine which are likely to be positive changes are and which not.

<sup>37</sup> <http://www.pluggingtheleaks.org/resources/plm.htm>

<sup>38</sup> <http://www.jisc.ac.uk/whatwedo/programmes/elearningpedagogy/elconference10/programme.aspx>

<sup>39</sup> [http://nogoodreason.typepad.co.uk/no\\_good\\_reason/ouconf10/](http://nogoodreason.typepad.co.uk/no_good_reason/ouconf10/)

This section has highlighted the range of opportunities that arise when a wider range of stakeholders are considered in the way that events are used, planned, run and the legacy that they leave behind. However it is very much just a flavour, for further reading see the Greening Events bibliography.

## **Sustainability Implications of Rethinking Where, When and Who?**

There are a wide-range of actual and potential sustainability related impacts of changing the way events are used (including substituted for other means), planned, organised and run. A number of examples have already been illustrated. Other examples include:

- **Travel requirements/impacts** –the ability to attend an event remotely means in general less travel (with a caveat about risks of rebound effects).
  - travel related sustainability impacts may be reduced – travel and consequent needs (e.g. for accommodation) are resource intensive, so reducing travel may reduce the negative impacts. However *rebound effects* can reduce such savings.
  - in the case of face-to-face events attendees can be encouraged to make more sustainable travel choices by providing better information and mobile services, e.g. promoting the use of public transport rather than car, walking rather than catching taxis, car sharing, etc.
  - an interesting example from our interview and literature scan is the fact that key staff, ‘experts’, specialists and popular speakers can be made more available since they spend less time travelling leading in principle to potentials for better decision making and governance processes
  - work life balance – in general remote attendance removes the need for travel time and consequent time away from home leading to opportunities for improved work life balance
  - however travel has potential positive as well as negative impacts, e.g. cultural exchange, time-out-of-the-office/time-to-reflect, opportunities for serendipity, etc. and there may be losses associated with the un-mitigated reduction of such factors.
- **Host communities and other event industry stakeholders**
  - reducing face-to-face events and/or reducing the number of attendees at events, are likely to cause (at least in the short term) significant negative impacts on host communities and the services that have grown up and co-evolved with the use of events. This is especially the case if significant sector wide changes to the way events are used were implemented across HE/FE in the UK.
  - beyond making an event itself more sustainable, the use of sustainable procurement processes is likely to encourage the events industry suppliers to implement required sustainable practices and strive to meet sustainability related criteria, e.g. venues and event organisers may strive to gain BS8901 Sustainable Event Management standard certification.
- **Event Viability** - a common concern of many event organisers interviewed as part of Greening Events was that remote attendance may lead to loss of income from delegate fees, so potentially undermining financial viability and sustainability of face-to-face events. This is particularly the case where events are used to generate income rather than simply being self financing. However increasingly payment models are evolving for remote attendance.

- **Use of resources** –fewer events and/or remote attendance may enable savings in financial cost, staffing and material and energy resources
  - Every event held has a range of costs. If by rethinking the way events are used, these are ‘saved’ then those resources become available for other purposes, for example staff are available for productive work, funding available for other investments, etc.
  - As noted above the net effects will depend on how ‘saved’ resources are re-allocated
  - Furthermore systemic effects of such changes can be complex, for example the introduction of video conferencing can induce more people from an organisation to attend a meeting as they do not need to ‘leave the office’. Such a change may in turn lead to, for example increased staff costs associated with events and/or more effective event outcomes, depending on the detailed context.
- **Greater transparency** – many of the approaches and factors above lead to increased transparency and openness, events made more accessible, events recorded, events documented from multiple perspectives, etc. Transparency is often seen as a fundamental requirement of many sustainability related processes. However there are associated risks with, for example, potential decreases in speakers’ willingness to be open and frank as noted above.
- **Sustainable ICT?** - The use of ICT may increase negative impacts. For example event amplifying technologies while having positive impacts on many sustainability goals, might significantly increase overall energy, carbon and resource footprints of events. This is because the use and provision of mobile devices, network infrastructures, data storage and ongoing hosting and serving of recordings of events in perpetuity all use energy and resources (see for example James and Hopkinson 2009).

There is a great deal of work taking place to reduce the negative sustainability impact of ICT itself, e.g. ‘green data centre’ initiatives, energy management and behaviour initiatives, reductions in stand by energy, waste, use of hazardous chemicals, improved social performance of manufacturing, etc. A key issue is whether impacts due to increasing demand for ICT goods and services can be mitigated by such reductions; as yet this seems to be an open question.

- **Potentially improving access and extending representation** – as already illustrated remote attendance and participation of different kinds means that those who may not have previously been able to ‘attend’ an event can do so. So helping meet social sustainability goals, e.g.
  - those with family or other responsibilities which mean that being away from home or the-office is often not feasible
  - stakeholders who have limited financial resources and so would not be able to attend face-to-face events may be able to attend remotely (e.g. research students, researchers from developing countries where research budgets are often low and major research events are rarely held locally)
  - those where other systemic factors are potential barriers e.g. visa requirements for researchers from some countries

However there are associated issues – for example remote attendance can only be part of a solution; this is because access to broadband internet and associated hardware is still limited on a global scale. Even within the UK many may not have access, skills, experience, access technical support etc. to make effective use of the facilities. A more comprehensive set of measures to enhance equality of access to the benefits of events will require multiple means.

- **Systemic thinking when implementing changes** - Thinking of events as systems in themselves and part of larger systems is very valuable in understanding the implications of making changes to the way events are used and where risks are associated. We have already highlighted a number of illustrative examples. Others include:
  - if incidental purposes are not identified when systems are changed then there may be negative impacts associated with those needs/goals not being met
  - identifying potential rebound effects and other forms of systemic impacts is an active process and one that is not yet well developed. The use of modelling approaches needs experience and understanding of the issues
  - unintended consequences are virtually inevitable when changes are made to complex systems, identifying and responding to these can be difficult and these consequences can involve (and by their nature) unknown risks.

The processes of rethinking where, when and who – will all have many more sustainable issues associated with them, however hopefully this section gives an indication of the kinds of sustainability related issues, benefits and risks associated that arise.

## Rethinking & Extending Evaluation

Evaluation methods of various types are widely used for many kinds of events. Post event questionnaires are used to help organisers learn how to improve the experience of attendees. They generally include; topics covered, quality and appropriateness of sessions, presentations, trainers, etc., aspects of the event that were most and least valuable and/or could be improved and the facilities and accommodation.

Increasingly social software (e.g. micro-blogging, event and participant blogs, event website discussion groups ...) provide feedback. Our experience of studying Twitter feeds associated with events identified comments related to a similar range of aspects covered in post event questionnaires. However these also have an advantage that they often provide real-time feedback, e.g. at an operational level that rooms are too hot or crowded, etc .

The event organisers also assess their events under other measures, e.g. numbers and 'demographics' of attendees, effectiveness of organisation, financial performance, comparisons with similar/competing events and increasingly sustainability metrics.

In the process of rethinking events, evaluation can take on a much wider role than focusing on a single event. It can play an integral role in the rethinking process and cause the breadth of what is evaluated to expand. For example:

- When changes are made to the way events are planned, organised and delivered, there could be active monitoring for expected and unintended consequences. These would include, changes in demographics of attendees, rebound effects, perverse incentives
- Extending evaluation to gain feedback from those who have *not* attended an event or other stakeholders who did not engage with an event, but could have done
- Impacts may also be monitored beyond usual boundaries, e.g. impacts of policy/event changes on local host communities and suppliers
- Evaluation might assess not only whether the intended goals were met but also the incidental goals
- Gathering feedback on the sustainability performance of suppliers associated with the event so that overall sustainability performance can be assessed
- Extending evaluation to engage attendees and stakeholders in discussion to explore ways of changing the use of events by the organisation or community as a whole

### The Use of Sustainability Assessment Tools & Methodologies

There are a wide range of tools and methodologies available to help assess the sustainability impacts (see for example Bell and Morse 2008) – many are directly appropriate to assessing the impacts of various aspects of events<sup>40</sup>. These must span the range of environmental, social and economic impacts. Some of these methodologies are built into (or used indirectly to determine criteria for), the evolving sustainable events planning and assessment tools and methodologies already mentioned, such as BS8901 (Sustainability Management Systems for Events) and soon to be

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<sup>40</sup> Dickinson and Shipway (2007) have produced a resource guide/bibliography for those interested in the assessment of the impacts of larger events. See also the Greening Events bibliography



published 'Green Meeting Standards' being developed by the Convention Industry Council and Global Reporting Initiative (GRI).

However the application of sustainability assessment methodologies to both face-to-face events, and ICT systems are both in their relative infancy. This is even more the case for the combination of the two that make up hybrid and 'amplified' events and the wider use of technologies within events.

A number of the JISC Greening ICT Programme projects funded along with Greening Events are investigating exactly these issues, for example: 'How Green was my Video Conference'<sup>41</sup> is working to estimate impacts of video conference use on energy and GHG emissions relative to face-to-face meetings and the 'e-Reader demonstrator project'<sup>42</sup> is investigating the potential environmental and financial impacts of the use of e-readers to displace paper use.

The use of assessment techniques and methodologies (even those that are becoming more common such as 'carbon footprinting' and Life Cycle Assessment (LCA)<sup>43</sup> on which it is based), require significant background knowledge and experience not only to use but to understand the results. Decisions that use the results of such assessments must be based on an understanding of what they actually mean and their limitations. For example, it is clear that at present there is no standard methodology available to make comparative assertions about the carbon footprints of events – as highlighted by Deloitte in their assessment of the COP15 event in 2010:

*"Measuring carbon footprints is an international, rapidly evolving discipline, and for events such as the COP, there are no detailed standards or accepted methods for defining scope, calculating, making assumptions and presenting results ... The COP15 carbon footprint is therefore not necessarily directly comparable with other carbon footprint statements and must be read in conjunction with COP15 carbon footprint approach and methodology."*  
(Deloitte, 2010 p3)

Such issues, and many more subtle factors, are often not generally apparent to those who are not experienced in the use of the appropriate assessment methodologies. For these reasons, when planning to assess sustainability impacts of events – especially for the first time – it is highly advisable to seek advice and guidance. In many cases institutions will have departments responsible for sustainability policies and performance who may be able to help and organisations such as EAUC (The Environmental Association for Universities and Colleges) can provide assistance.

### **Using ICT to Enhance and Extend Evaluation**

One further aspect of rethinking events is the use of ICT itself to widen the range of tools available for evaluation of individual events and more broadly help assess the best way to use events.

As noted social software used at events already provides significant (often real-time) evaluation and feedback. Other examples of the possible use of ICT in evaluation and feedback include:

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<sup>41</sup> <http://www.jisc.ac.uk/whatwedo/programmes/greeningict/greenvideoconference.aspx>

<sup>42</sup> <http://www.jisc.ac.uk/whatwedo/programmes/greeningict/ereader.aspx>

<sup>43</sup> For an example of detailed guidance on the use of a standard methodology see the 'ILCD Handbook: General guide for Life Cycle Assessment - Detailed guidance'. <http://lct.jrc.ec.europa.eu/pdf-directory/ILCD-Handbook-General-guide-for-LCA-DETAIL-online-12March2010.pdf>

- *Interactive Voting Systems* – as part of Greening Events we observed the use of both physical handset and virtual voting systems (in the Elluminate Live online conference service<sup>44</sup>). These allowed attendees to respond to questions from the presenters and facilitators, and the results were then shared with the attendees. This enables real-time adaptation of the programme as well as gathering more traditional evaluation feedback. Voting can be anonymous or linked to individuals. Similar approaches can be used with live micro-blogging (e.g. Twitter) and instant messaging technologies.
- *Instrumenting events* – most networked technologies can (and often do) capture information about how they have been used. These ‘logs’ contain very rich data, e.g. website access logs automatically contain information about the time/date of access, the IP address and internet domain of the accessing device. If users are registered so that their identities are known the data can be much richer. This kind of data is widely used to assess the usability and effectiveness of websites, e-commerce sites, etc. There are many potential applications for this kind of data e.g. data gathered from live video feeds can help assess how and when remote users are attending events. Such data can be very valuable in understanding the realities of for example remote attendance. Physical analogues exist – for example ‘active badges’ can be used to track attendees around a physical event (Cox et al 2003).

There are clearly very significant issues of privacy and ethics that need to be discussed in how such data is used and/or shared.

Once again we have only scratched the surface of the possibilities and issues associated with this aspect of rethinking events; however we hope that these examples illustrate the importance of extended evaluation in the rethinking process.

## **Rethinking - A Systemic and On-going Process**

The ideas above are the tentative outcomes of the Greening Events project. There is a great deal more work underway in the areas highlighted above across the spectrum of events management, academic contexts, ICT technologies and services, sustainability issues and the policies and practices that related to them. It will, we hope, be clear that the kind of ‘rethinking’ process illustrated above is a continuous process.

Fundamentally the processes of *rethinking events* can facilitate an adaptive approach to developing more sustainable ways of using events, both within the Higher and Further Education sectors and beyond.

## **The Future of Events**

Taking a systemic perspective leads naturally to the conclusion that it is simply not possible to predict how events will change over the next years and decades. Event and the way that we use them will continue to co-evolve with socio-economic, cultural, technological and environmental changes.

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<sup>44</sup> [http://www.illuminate.com/Products/Elluminate\\_Learning\\_Suite/Elluminate\\_Live!/?id=79/](http://www.illuminate.com/Products/Elluminate_Learning_Suite/Elluminate_Live!/?id=79/)

Key foci of the Greening Events project have been sustainability and technological factors – in those areas it seems highly likely that dramatic developments are likely to occur over the next decades.

- Sustainability concerns such as climate change, efficiency of use and access to water, energy and mineral resources, loss of biodiversity and habitat, etc. show no signs of reducing in significance. The same is true of social and ethical issues surrounding for example, working conditions, equality, transparency, etc. which are systemically intertwined with environmental issues
- Technological developments, both through invention and innovation in the use of existing technologies are likely to provide very significant opportunities to continue to rethink the way that we 'do' events. For example the development of mobile networked technologies, location based services, display devices such as e-readers, flexible displays and 3D camera/displays, increases in broadband accessibility and speeds and associated services and in the longer run technologies such as holography. However it seems likely that the most impactful technologies will not be those we might predict today.
- Socio-economic, professional and cultural contexts are also likely to have significant parts to play in how events evolve. It is very common to have research, business and other projects that span continents, increasing globalisation means the way events are used and the contexts in which they are held will continue to co-evolve in those contexts.

## **Greening Events – Future Work**

The rethinking event sections above illustrate some of our thinking as the initial phase of Greening Events came to an end. This is as we have stressed tentative – one of the most significant lessons of the project is how much is not yet well understood.

The Greening Events II project<sup>45</sup>, funded under the JISC's Greening ICT programme, is a partnership between the University of Bristol and UKOLN<sup>46</sup>. It will take the findings of Greening Events project and investigate some of the most basic questions identified, e.g. profiling the use of events across an institution (Bristol University) to help fill in some of the most fundamental gaps in our knowledge. It will also further develop the ideas and practices represented in Greening Events to develop a toolkit for effective use of sustainable events guidelines and practices and event amplification by those using and planning events.

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<sup>45</sup> <http://www.jisc.ac.uk/whatwedo/programmes/greeningict/organisational/events2.aspx>

<sup>46</sup> <http://www.ukoln.ac.uk/>

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<sup>47</sup> [http://greeningevents.ilrt.bris.ac.uk/files/2011/05/Greening\\_Events\\_Bibliography\\_2505111.pdf](http://greeningevents.ilrt.bris.ac.uk/files/2011/05/Greening_Events_Bibliography_2505111.pdf)

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