



Julie's Bicycle
SUSTAINING CREATIVITY



Creu Cymru Emergence 2013-14 Final Report

SSL023 Stage 2 Environment Wales Grant

This work is funded by the Welsh Government SSL scheme, delivered by Environment Wales and Cynnal Cymru-Sustain Wales.

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1. About the Partners and Participants

The Partners

Creu Cymru is the development agency for theatres and arts centres in Wales. Its mission is to develop a vibrant and progressive sector through creative collaboration; sector leadership; and best practice

Julie's Bicycle is a not for profit organisation making sustainability intrinsic to the business, art and ethics of the cultural industries. Currently working with over 2,000 cultural organisations in the UK and Europe, Julie's Bicycle offer free online tools, research and bespoke consultancy to help arts organisations measure, manage and reduce their environmental impacts.

Julie's Bicycle bridges the gap between the creative industries and sustainability. Based on a foundation of peer reviewed research, we sustain creativity, enabling the arts to create change.

Cynnal Cymru is a networking organisation that enables people to learn from each other and discover interesting good practice projects in Wales. It works with people and organisations across a broad range of issues - from climate change to economy and fair-trade to health - increasing awareness of sustainability issues and good practice examples, and raise awareness of practical resources encouraging sustainable living in Wales.

Project summary

Creu Cymru Emergence was a pilot project that aimed to identify barriers related to behaviour change and attitudes which create carbon-habitual behaviours. In particular we looked at available knowledge, resources and access to information;

the pilot focused on three main areas of work:

- staff/stakeholder engagement
- facilities & buildings; primarily measurement of energy & waste
- artistic programming & production

The project worked with pilot venues through a combination of targeted mechanisms and approaches such as 1 to 1 support and networking and peer learning events to help embed more sustainable carbon behaviours across organisational and institutional frameworks. We worked with the participants to identify and address issues and obstacles and create opportunities to share experiences and learning.

The pilot group consisted of 18 theatres and arts centres across Wales:

Aberystwyth Arts Centre
Borough Theatre, Abergavenny
Chapter, Cardiff
Congress Theatre, Cwmbran
Galeri, Caernarfon
Theatr Hafren, Newtown
Metropole Culture and Conference Centre, Abertillery

Neuadd Dwyfor, Pwllheli
Park & Dare Theatre, Treorchy
Sherman Cymru, Cardiff
St David's Hall and New Theatre, Cardiff
The Riverfront, Newport
The Welfare, Ystradgynlais
Theatr Brycheiniog, Brecon
Theatr Mwdan, Cardigan
Torch Theatre, Milford Haven
Wales Millennium Centre, Cardiff

2. Background

In 2012 Creu Cymru was awarded a Stage 1 Support for Sustainable Living grant. We used this grant to gather baseline data from the 42 strong Creu Cymru membership, looking at patterns of energy consumption, waste, water, recycling and travel. We wanted to identify opportunities for carbon and waste reduction and identify the behavioural and cultural shifts that may be required to achieve this.

During the stage 1 project we were unable to establish a clear baseline across the group as many venues did not have the necessary recording or monitoring systems in place. This led us to explore further the challenges that theatres and arts centres were facing in developing and delivering their work in a more sustainable way. This stage 2 project focussed specifically on 3 main areas of work: staff/stakeholder engagement; facilities and buildings; and artistic programming and production.

We wanted to create a pilot project that would enable Creu Cymru to explore and test a variety of mechanisms and tools to support theatres and arts centres in embedding more sustainable carbon behaviours across their organisations, having a direct impact reducing carbon and their economic bottom line. We also wanted to understand more about the role of the arts in telling our sustainability story, communicating ideas and information, and engaging stakeholders and audiences (impacting on social sustainability).

Using this project as a pilot we wanted to learn about what worked and what didn't, with the aspiration of rolling out a future programme to the wider network of theatres and arts centres in Wales. Within the wider context of the Future Generations Bill and the need for arts organisations to become more adaptable and resilient, Creu Cymru recognises that addressing areas of sustainability will be key to the future of this sector.

During Stage 1 of the Creu Cymru Emergence project we worked with all 42 Creu Cymru members. To take this work forward we needed to work with a smaller group and asked the theatres and arts centres to volunteer for the pilot. Through this open call we established a diverse group of 18 theatres and arts centres who all put themselves forward to be part of the pilot.

The group ranges from Wales Millennium Centre in Cardiff, to Neuadd Dwyfor in Pwllheli. It includes local authority-run venues, charitable trusts, and theatres on university campuses. They range hugely in size, scale, personnel, resources and geography; this diversity is a good representation of the wider network and provided the project with both challenges and opportunities.

18 is a large group for any pilot project. However we felt at the project's inception that if organisations were willing to volunteer and commit to the project, that willingness should be recognised and that enthusiasm capitalised on.

The timing of this project is quite significant; the current legislative, economic and policy contexts have been both challenges and opportunities for Creu Cymru Emergence.

This project is taking place against a backdrop of local authority funding cuts to a number of services, including arts organisations. For theatres and arts centres,

finding a new way to operate in this changed economic circumstance is a priority and also a huge challenge. At the same time local authorities are being forced to consider new ways of delivering services and working with their communities, all of which could present great opportunities for partnership and collaborative working. There is also reduced funding from Arts Council of Wales and the Lottery, two primary sources of income for theatres and arts centres. This is coupled with a funding framework that seems to require more from the sector in terms of delivering for wider policy agendas. All of this context places the participants under huge pressures to deliver more for less, and find efficiencies and savings across a range of resources.

The wider political and legislative context, including the development of the Future Generations Bill, will require organisations to think differently about their businesses. This seems also to be reflected in social and cultural shifts, with more stakeholders: audiences, artists; suppliers; partners; funders considering sustainability and looking to change the conversation that is happening about the world that we want to live in. Initiatives such as 'The Wales We Want' are a great opportunity for theatres and arts centres to demonstrate how arts and culture can be a driver, a supporter and a catalyst for change.

Part of the wider and less tangible impact of the Creu Cymru Emergence project has been to work with participants to help them understand this context: to show how Sustainability will need to be at the heart of the Arts Centre of the Future; and to demonstrate more widely how arts and culture have a role to play in creating and sustaining a better Wales for the future.

3. Project

Aims

The project aim was to identify the various barriers that theatres and arts centres faced in embedding sustainability into their organisations. In particular we considered expertise, resources, access to information and attitudes which create carbon habitual behaviours.

This pilot project worked with participating venues through a combination of mechanisms and approaches, trying to identify models of good practice and a methodology that could be rolled out to the wider network .

Overview and Objectives

- To engage with 18 theatres and arts centres in the pilot project across Wales
- Deliver 6 webinars both as a training opportunity and a as forum for sharing good practice covering the following themes: An introduction to Sustainability, Energy and Waste Management, Sustainable Production, Communications, Strategic thinking and sustainable governance, Programming
- Design and deliver three events including a presence at the World Stage Design Festival
- Create a bespoke sustainability toolkit for theatres and arts centres in Wales looking at good practice and providing information and support across a variety of themes
- Support venues to identify quantifiable improvements in environmental performance and reduce carbon emissions
- Develop a repository of good practice including case studies, guidance, information and inspiration via the Creu Cymru website
- Develop a community of practice committed to ongoing improvement and knowledge, by encouraging peer-to-peer learning
- Consider ways in which theatre and art can communicate the message of Sustainability to a wider audience

Targets

Aim	Target	Outcome
Engage theatres and arts centres	18	70% of participating theatres and arts centres were engaged in the project A table showing engagement in project activity is included in Appendix 4
Deliver webinars	6	We delivered 3 webinars: Introduction to Sustainability; Energy and Waste Management;

		Sustainable production Management
Deliver events	3	We delivered 3 events: World Stage Design Festival; Creu Cymru Conference; Emergence Final Event
Toolkit	PDF / part of website resource (?)	Toolkit was designed and developed by Julie's Bicycle
Quantifiable environmental improvements	10% reduction in carbon emissions from at least 4 participating venues (those who are already measuring energy usage). Remaining venues to establish routine measurement procedures.	Due to inconsistent monitoring and reporting it has been difficult to measure the actual carbon reductions from the participants. But other quantifiable improvements have been made as detailed in the table in section 4 of this report
Good Practice repository	Website	Created on Creu Cymru website
Community of good practice	Website	Created on Creu Cymru website
Communications		Workshop on telling your sustainability story with Carbon Trust and talk from Sarah Woods at Final Event

Measurement and Reporting

Measurement to obtain evidence for the above target outcomes has taken the form of the following:

- Regular communications with participating theatres and arts centres via email and phone
- 1-to-1 sessions with Julie's Bicycle
- Monitoring of participation in webinars and events and evaluation of all activity
- Monitoring participants' use of Creative IG Tools, SMeasure and Wattson monitoring software
- Qualitative evidence from each participant's representative regarding organisational culture and thinking
- Energy Audits carried out by Sustain on behalf of Carbon Trust Wales

4. Programme Outputs

Project Activity Outcomes

Webinars

We delivered three webinars:

- An introduction to Sustainability
- Energy and Waste Management
- Sustainable Production.

The webinars were designed to enable participating venues to come together in a digital forum to receive training as well as provide an opportunity to share good practice. Webinar dates and agendas were sent out in advance of each session and there was space for more than one person from each organisation to attend, enabling cross-organisational engagement. Each webinar is also available on the Creu Cymru website for participants to revisit at a later date or for participants who were unable to attend.

Feedback from the webinars was very positive but we became aware very quickly that participation across the pilot group was low and engagement in discussion and debate during the webinars was also limited. We found that a number of organisations had technological difficulties, either with connection speeds which made it difficult to interact and follow the webinar, or with IT regulations from parent organisations such as local authorities and universities, who required various levels of security creating barriers to participation.

We also found that participants were less familiar with working in this way, using digital technology for communications and therefore felt more inhibited than they did when meeting face-to-face. A lack of familiarity with the technology proved to be a barrier for some.

Taking on board this learning, the project team decided that the webinars were not the right mechanism to support and engage with the pilot group, and after delivering the first three sessions, shifted the programme's focus to direct engagement via 1-to-1 support and more opportunities to meet face-to-face.

Events

We delivered three events across the project (more detailed agendas can be found in the Appendix).

At the World Stage Design Festival we hosted a session looking at sustainability and resilience. The session was designed to look at the way networks and collaboration can enhance sustainable practice. There were contributions from Mark Godber from Arts Admin - talking about the Imagine 2020 project – and from Julie's Bicycle, as well information about the Creu Cymru Emergence project.

In 2013 Creu Cymru turned its annual conference over to Emergence with presentations from Deborah Rees from The Roses Theatres in Tewkesbury talking about Social Sustainability and from Andy Fryers, Sustainability Director at Hay Festival who talked about the Festival's approach and attitude to sustainability. We also used the Creu Cymru conference as an opportunity to launch the Emergence

toolkit, with an introductory presentation from Julie's Bicycle and contributions from Carbon Trust Wales.

In June 2014 we delivered a final Creu Cymru Emergence event which pulled together some of the learning from the project and gave participants an opportunity to reflect on and share their experiences. The event covered a range of issues, with presentations on behaviour change theory, a workshop on telling your sustainability story and talks from artists such as Sarah Woods.

Website

We have developed a digital resource on the Creu Cymru website which has been updated throughout the project. There have been regular blog posts from the project manager with information and links to different initiatives, news items or provocations, all of which have also been highlighted via social media such as twitter using the hashtag #ccemergence. A storify of some of our digital activity can be viewed on the Creu Cymru website.

We have also pulled together a variety of resources, including links to guidance, support organisations, green initiatives and case studies. We have also made all the project's resources available digitally, including: webinars; conference presentations and toolkits. This has helped us to build a repository of good practice and started to build a community around this practice as information and experience is shared through case studies and regular communication from the project team.

Carbon Trust energy audits

During the Creu Cymru Emergence project we have developed an excellent working relationship with the Carbon Trust in Wales. This has led to energy audits being undertaken at 13 venues out of our pilot group of 18. The accompanying report has also generated some excellent data as well as providing the venues with checklists and action points that have been transformed into significant quantifiable environmental improvements. You can see a copy of the report in Appendix 1.

As well as the energy audits we have worked with Carbon Trust on an event held at Wales Millennium Centre looking at sustainable event management. Carbon Trust have provided additional support to 3 participating venues in analysing and reducing their energy bills and provided substantial input into our final event in June 2014 .

1-to-1 sessions

We have delivered 1-to-1 support sessions to all 18 participating theatres and arts centres; the majority were delivered by phone and identified and provided support for specific organisational objectives. At the start of the project Julie's Bicycle conducted a series of face-to-face 1-to-1 sessions with the theatres and arts centres that we had identified as facing some of the largest challenges.

Email communications

We used regular email communications to highlight opportunities, information, events and learnings with all our participants. We created 4 email groups covering the following staff groups: marketing, technical, facilities, project leaders. These communications kept participants up to date with the project and ensured that Creu Cymru Emergence was regularly on the radar of the participating venues.

Toolkit

We developed an English and Welsh language toolkit for theatres and arts centres in Wales covering the following areas:

Getting organised; energy use and supply; waste and recycling; water and waste water; production; travel and transport; and procurement. The toolkit also contained fact sheets, checklists and other tools to support organisations in developing Sustainability action plans and policies.

Participants' Activity

Participants have logged a range of activity over the last 12 months relating to the Emergence project. It is recorded in the table below. A number of participating venues have extensive Sustainability programmes in existence, so this activity does not represent the full range of work that is going across the group but does represent that which participants considered to be additional as a result of Emergence.

Venues	Activity
Aberystwyth Arts Centre	<ul style="list-style-type: none">● Established monitoring systems● Exploring set recycling/banking● Incorporating sustainability into mission statement● Implementation of Carbon Trust energy audit recommendations
Borough Theatre	<ul style="list-style-type: none">● Sustainability written into business plan● Sustainability responsibilities written into job descriptions● 9-month monitoring of electricity usage related to theatre usage starting July 2014● Principal consideration in developing brief for feasibility study for capital development of building● Implementation of Carbon Trust energy audit recommendations
Chapter	<ul style="list-style-type: none">● Introduced recycled paper and toilet paper● Working with WRAP on food waste● Reduced print run for Chapter magazine● Implemented recycling stations and food waste bins in hire rooms and offices● Installed solar panels● Installed movement sensors and timers on lights● Double glazing installation● Green points on CLIC card for customers who travel by bus/walk/cycle● Bike shelters installed● Partnership with Renault to use an electric van● Community garden - Chapter peelings also provide compost● Water butts in community garden● Trying to get computers shut down every night

Congress Theatre	<ul style="list-style-type: none"> ● Substantial reduced electricity consumption through implementation of monitoring system ● Moved to more effective and efficient recycling system and new contractor ● Staff awareness campaign ● Implementation of Carbon Trust energy audit recommendations
Galeri	
Theatre Hafren	<ul style="list-style-type: none"> ● Installing LED lighting ● Developed food recycling ● Changed procurement for suppliers and use local food in particular ● Investment in new build – working on Passivhaus standard ● Installed new more efficient boiler
Metropole Culture and Conference Centre	<ul style="list-style-type: none"> ● Implementation of Carbon Trust energy audit recommendations
Neuadd Dwyfor	
Park & Dare Theatre	<ul style="list-style-type: none"> ● Work with local authority regarding BMS controls ● Implementation of monitoring systems ● Implementation of Carbon Trust energy audit recommendations
Sherman Cymru	<ul style="list-style-type: none"> ● Development of policy and action plan to support existing improvements and systems ● Implementation of Carbon Trust energy audit recommendations
St David's Hall	<ul style="list-style-type: none"> ● Reduced printer usage ● Upgraded waste disposal ● Now have bees on the roof ● Waterless urinals ● LED where possible ● Utility usage monitoring ● Turn air conditioning down by 1.5% ● Awaiting funds for new BMS system ● Awaiting funds for new LED's ● Cut 1 brochure print ● Cut size of brochure ● Cut specific brochures for event types ● No brochure delivery ● Closed building outside of performance times to reduce energy usage ● Implementation of Carbon Trust energy audit recommendations
The New Theatre	<ul style="list-style-type: none"> ● Communication and sharing of Green Dragon status and process ● Consideration of venue specific sustainability policy ● LED where possible ● Utility usage monitoring

	<ul style="list-style-type: none"> ● Implementation of Carbon Trust energy audit recommendations
The Riverfront	<ul style="list-style-type: none"> ● Replaced seals in doors ● Insulation of all exposed pipe work ● LED lights in basement and energy efficient lighting installed throughout building ● Vending controls for fridges/machines ● DEC acquired ● Food recycling implemented ● Recycling points on the go throughout building ● LED lights for main theatre space ● Sustainable theatre plan for studio theatre - considering implementation ● Paper recycling in the office ● Introducing further can and bottle bins into the building ● Implementation of Carbon Trust energy audit recommendations
The Welfare	<ul style="list-style-type: none"> ● Have new BMS system and boiler ● Looking at insulation ● Energy saving checklists for Front Of House ● Replacing existing with LED lighting ● Raising awareness resulting in positive energy saving competition between staff ● Share Emergence project with Front Of House staff ● Looking at external impact ● Implementation of Carbon Trust energy audit recommendations
Theatr Brycheiniog	<ul style="list-style-type: none"> ● Working on building improvements which will be heavily influenced by Sustainability needs ● Worked with Carbon Trust to reduce cost of energy bills and have reduced usage through monitoring ● Implementation of Carbon Trust energy audit recommendations
Theatr Mwldan	<ul style="list-style-type: none"> ● Implementation of Carbon Trust energy audit recommendations
Torch Theatre, Milford Haven	<ul style="list-style-type: none"> ● Worked with Carbon Trust to reduce cost of energy bills and have reduced usage through monitoring ● Implementation of Carbon Trust energy audit recommendations
Wales Millennium Centre, Cardiff	<ul style="list-style-type: none"> ● Changing foyer lighting to LED's ● Create a green team ● Write a sustainability policy that is public facing ● Monitor half hourly usage ● Understand BMS ● Exploring use of soak away system ● Exploring installation of solar panels

In addition the savings made by the venues participating in the Carbon Trust energy audits is estimated at a total of 299 tonnes of CO₂ with the majority of venues already performing better than the industry benchmark.

Behaviour Change

The majority of the behaviour change that has been recorded in this project has been around the reduction of energy usage related to carbon habitual behaviours. It has been interesting to see that participants have reported seeing a difference between staff attitudes at home and at work and trying to understand how best to capitalise on intrinsic motivations rather than reward led.

Emergence has acted as a catalyst for the participating venues to start a conversation with staff and raise awareness of how behaviour can have a direct impact on the business. This has been the simplest way for our participants to have a direct impact on their carbon footprint as for many the technological changes or building fabric projects are beyond their reach in terms of resources.

The aims of this project however were to go one step further with behaviour change and look more at the culture change that is needed within organisations to truly embed sustainability. This is very challenging to measure and we feel that any impact in this area will also be outside of the timeframe of our 12-month project. However initial anecdotal evidence suggests that organisations are starting to think differently.

Feedback and conversations with project leads within organisations suggest a change in thinking. Issues of sustainability are being raised at senior management and board level and staff are considering sustainability when procuring services for projects. Times of change or renewal are great moments to embed new organisational cultures so opportunities for capital redevelopment or major staff changes which have effected some of our participants during the course of our project, and have made it challenging to implement some new systems or action plans within our timescales, have also been opportunities to make progress in less tangible areas.

CO₂ Reduction

The first stage of Creu Cymru Emergence involved scoping the potential to create a baseline carbon footprint against which future progress of the venue group could be measured.

During the applications stage an initial baseline estimate was created with information from 14 of the 18 pilot venues using floor space alongside Julie's Bicycle's sector benchmarks. This created a figure of 7245 Tonnes of CO₂e. During the course of this project we planned to work closely with the 18 venues to create actual footprints based on real data.

Accurate baseline figures have been established for 14 out of the 18 venues as a result of the Carbon Trust energy audits. In our original plans we had anticipated collecting, monitoring and working with the venues to analyse and share this data through Julie's Bicycle's Creative IG Tools. However, at this point in time 7 venues have submitted data to the Creative IG tools with a further 2 having registered for accounts but yet to submit. Where monitoring is taking place participants have developed their own monitoring systems and some are using Creative IG tools for reporting and analysing the data which is what the tool is primarily designed for. When developing any future project, establishing good monitoring practices

throughout the sector will be key. Tools like Julie's Bicycle's IG Tools system work well but are perceived as labour intensive by smaller, less well-resourced theatres and arts centres.

In our original project outline we wanted to be able to look at the impact of waste and water as well as energy. The challenges that we have faced in engaging venues in monitoring basic utilities has meant that we have not developed our work as significantly as we may have hoped in these areas. We know that a number of participants have made significant changes to their recycling systems and contractors, including food waste, but none of the participants have systems which enable us to collect and analyse data in this area.

5. Other benefits

Outside of the core aims and objectives of this project, as addressed above, participants have identified a number of additional benefits of the Creu Cymru Emergence project.

National Scope

The National nature of this project has been cited as a key element for participants. Being part of a larger programme gave them confidence within their own organisations to move the sustainability agenda forward, it also gave their position weight and credibility with stakeholders. The external input has given momentum to existing projects and being part of a community tackling these issues has helped participants feel support and able to achieve more.

Legacy

The digital resource created as part of this project will be a key resource for theatres and arts centres in the future. Each participant is at a different stage in their journey and being able to continue to draw on these resources as and when they need them has been described as a key benefit. Our project had a very specific timescale so enabling the knowledge, information and expertise we have collected to continue to be shared will help build capacity for the future.

Sustainable production project

Sustainability has been embedded into Creu Cymru's wider work with its membership with the Creu Cymru Dance and Drama consortia taking the lead in developing two sustainable production projects. Using these existing models has enabled Creu Cymru Emergence to engage with a wider group than the 18 pilot participants and to embed sustainability into existing work rather than making it something additional that members need to do.

Sustainable networks project

We are still considering the development of regional sustainability networks as an opportunity to continue the peer learning and sharing that has been integral to this project. We have had an offer from Wales Millennium Centre to host a network in South Wales but we have yet to establish a model that will work across other regions or to fully research existing networks that members might benefit from. Setting up of any networks will also require additional resources.

6. Lessons learnt

Diversity of the group

In enabling the pilot group to self identify we had a wide diversity of participants. This had an impact on the project because of the range of both size and scale of resources but also because of the variance in existing knowledge within the organisations. Some venues were much further along than others in terms of their thinking and activity around sustainability.

Although in some ways we were able to turn this in to a positive with skills sharing and peer learning, we feel that future programmes could see higher impact by grouping similar venues together.

The diversity of the group meant that the more generic parts of the project like the toolkit and the webinars worked less well as participants had very specific questions across a wide range of themes. Also some participants wanted more basic introductory support and information while others needed to be challenged and stretched. Bringing together similar interest groups, face to face and with a more targeted approach could work better for future programmes.

Data collection and measurement

Collecting data that is consistent and useful from the participants has been a major challenge for this project. The majority did not have existing monitoring and recording systems in place and in some cases it has taken the entirety of the project to establish these systems, due to competing pressures and priorities.

Advocating for and demonstrating the need for monitoring has been a key element of this project. Making the business case and demonstrating how efficiencies can easily be made became more important than collecting the data. Where participants were not monitoring energy usage, we have asked them to look at other records such as utility bills to consider if some of the behaviour changes they have made have had an impact in cost terms. Evidence like this has been a useful tool in showing how monitoring could inform further savings and efficiencies if implemented.

When developing any future project, establishing good monitoring practices throughout the sector will be key. Tools like Julie's Bicycle's Creative IG Tools system work well but are perceived as labour intensive by smaller, less well-resourced theatres and arts centres.

Parent organisations

A number of the participants that we worked with were venues which were part of a larger organisation, for example, a University or a Local Authority. In these cases we found that the relationship between the parent organisation and the participating venue was incredibly significant as in many of these situations energy data was collected centrally and contracts for waste management, utilities or transport were all governed by central procurement procedures which were often disconnected from the way that the venues operated on a daily basis. This created a disconnect for the organisations where savings and efficiencies couldn't always be easily understood.

In a number of these cases theatres and arts centres are such a small part of the larger parent organisation that they do not feature as a priority for carbon reductions

so may not benefit from capital investment or additional support in monitoring energy usage. However at the same time these buildings are often one of the main public faces of these organisations where a great deal of interaction happens with the public making them the perfect place to engage communities and customers in this type of work and to tell a powerful sustainability story.

Carbon reduction

Although baseline figures for CO₂ consumption have been established it has taken much longer for venues to develop specific monitoring systems. This means tracking reductions and savings during the course of the project has been very challenging. At this point in time we know that at least 25% of the participants still do not have mechanisms for regular monitoring so any reductions that are made are based on comparisons of annual figures which do not provide a true like for like comparison.

With part of focus of this project being on behaviour change it also became apparent quite quickly that there were limits to the amount of carbon that could be saved in this way.

Some of our participants will need significant capital investment in both building fabric and technology in order to make significant reductions in their carbon footprint. And although Emergence has provided an opportunity to find out about different funding strands that could support this work, in times where finances are stretched it is hard to see how in-roads will be made in this area.

In terms of embedding a culture of sustainability into our participating organisations, carbon reduction is one of the ultimate aims but real reductions will take a longer timeframe than that of a project like Creu Cymru Emergence. This will be a challenge for funders and policy makers going forward. This project has led us to believe that identifying the real and true measures of sustainable practice needs exploring further.

Engagement

Any organisation faces a number of day-to-day challenges and is working within an ever changing context. We have found that organisational priorities and pressures outside of our control such as restructuring, taking on new work and shifts in funding has meant that some organisations have been unable to see through their commitment to the project.

Although understandable, these time and resource pressures along with the economic backdrop of austerity, make up a context which is likely to change soon and it is difficult to see how these barriers can be overcome without a significant shift in priorities from the organisations themselves. And it is this very context that sustainability initiatives such Creu Cymru Emergence could help organisations to address, providing as it does a route- map to resilience and adaptability.

Partnerships

The importance of partnership working has been paramount in this project and ensuring that partnerships are set up appropriately with institutional rather than individual buy-in is extremely important. Cardiff University was a founding partner of the project, bringing expertise in the area of behaviour change and leading on the evaluation and monitoring elements of the project. This partnership came to an end

due to the unforeseen closure of BRASS centre which impacted on the partnership, with the academic involved in the project no longer being employed by the University.

It took a significant amount of time to unravel the complexities of the situation but ultimately Cardiff University were unable to continue support for the pilot. The time lost in resolving this issue and the loss of skills and expertise the University had previously committed to the project had a significant impact the shape and scope of the project overall as well as a significant impact on the financial and human resources of the project, with the remaining project team taking on additional work.

However at the same time the project has established an excellent working relationship with the Carbon Trust, which has yielded unexpected interventions and had a significant (and extremely positive) impact overall.

7. Next steps

This project was a pilot and it has been important for us to use the information and experience of this 12 month project to consider what could happen next. Creu Cymru Emergence has shown us that there is a great deal of work happening across the presenting sector in terms of reducing carbon emissions and embedding Sustainability into the culture of our organisations. However there are also many challenges and how to move forward and to make the most effective interventions for the future is a complex question.

A great deal of the evidence from this pilot suggests that smaller bespoke projects that deal with specific issues and bring together smaller groups of venues with similar contexts and resources would be a more effective way to embed carbon saving behaviours and technologies. However there are also come larger projects that could be of benefit to the sector as a whole which could only be led at a strategic level and would need an organisation like Creu Cymru to lead and manage. This could be for example, a Wales wide recycling scheme for props and theatrical sets.

For Creu Cymru the next steps have to be working with policy makers and with our members to be clear about the priorities and what exactly we want to achieve with any future project. There are some key issues which we feel need to be resolved in order to make any future body of work in this area meaningful.

Terminology

Clarity around terminology will be important going forwards, with any future work we need to be clear about the words and concepts we are using and ensure that we have a common understanding at the start. We have come across a variety of words which have sometimes been used interchangeably; Sustainability, Resilience, Adaptability. We have also been working with concepts such as Carbon footprints which can be measured in a myriad of different ways. For any future work to have meaningful targets and to have relevance for our members and the wider public we need to be clear about definitions.

Measurement

Throughout our project measurement has been a challenging area. In addition to the barriers we have faced we feel it will be important in any future project to ensure that measurement is consistent and this throws up a number of wider questions going forwards. What calculation are we using to arrive at our carbon footprint? What are we including and excluding? Is the measurement of Carbon reduction the best way to measure increased sustainability? Can sustainability be standardised?

Sustainability is a complex web of relationships, which it is difficult to understand or contain in a single figure of tonnes of CO₂ used. This is also a question for policy makers and funders going forwards when considering priorities. Is a commitment to Sustainability solely borne out through a reduction in CO₂ or are there other measurements that we can employ.

Leadership

There is a need for leadership in this area and working with organisations who are already demonstrating good practice to encourage them to take a leadership role in

the sector could be of great benefit. There is also a need for leadership from national and umbrella organisations like Creu Cymru and Arts Council Wales. Raising the profile of sustainability across the sector and encouraging organisations to tell their sustainability stories will help to make this issue a priority and an important principle in the work we do.

9. Conclusion

There is a definite need for a greater understanding of sustainability as a process not a checklist, as a way of doing things not a series of things to be done. The concept of environmental behaviour change is a simple and potentially cost effective way of making reductions in an organisation's environmental impacts. It is however incredibly difficult and takes individual time and energy - resources which theatres and arts centres have in short supply.

The Creu Cymru Emergence project was aimed at creating a legacy, including sustained behaviour change within the presenting sector. We wanted to explore the barriers theatres and arts centres were facing and identify appropriate tools and mechanisms to support them in overcoming these challenges. We have established a huge amount of good practice across our pilot group. Recognising the importance of telling this sustainability story, sharing good practice and working together with peers to share skills, experience and expertise to build capacity and resilience in the sector will be key to the future success of the arts in Wales. We will be looking to continue to embed sustainability into our own working practices and make sure that it is an issue that is now considered in our day to day work with our network of members.

Appendices

Appendix 2: Agenda; Emergence presents: Resilience in the Face of Challenge Creu Cymru

Friday 13 September 2013

9.30-11.00

The Creu Cymru Emergence project is working with 18 theatres and arts centres across Wales to consider the challenges and opportunities of making sustainability intrinsic to their thinking and practice. This project focuses on social and economic sustainability as well as environmental. The aim is to effect behaviour change and to use this network to impact on wider thinking in the area of Arts and Sustainability.

This session is designed to look at the way networks and collaboration can enhance sustainable practice. There will be contributions from Mark Godber from Arts Admin - talking about the Imagine 2020 project - as well as more about the Creu Cymru Emergence project. It will be an opportunity to share best practice and to discuss some of the specific challenges facing theatres and arts centres.

Creu Cymru is the development agency for theatres and arts centres in Wales.

Creu Cymru Emergence is funded by the Welsh Government through Environment Wales' Support for Sustainable Living Fund.

Open to all.

Price: £6

Speakers

Mark Godber; Artists Producer at Arts Admin

Catherine Langabeer; Director of Arts and Deputy Director at Julie's Bicycle

Deborah Keyser; Director at Creu Cymru

Appendix 3:

Creu Cymru Emergence Final Event

3 and 4 June 2014

Centre for Alternative Technology, Machynlleth

AGENDA

3 June 2014

2.00 check in opens

2.45 Tea and Coffee

3.00-5.00 **Confessional**: An opportunity for all participants to share their experience – positive and challenging. This will be a facilitated session looking at the journey that each organisation has made and encouraging peer to peer sharing and learning. **120 mins**

We will be collecting some information from participants prior to the event to support this session.

5.00 free time

6.00 **Evening speaker** – We will all come together in the bar area to grab a drink and listen to Sarah Woods, talks about The Story We've Got and The Story We Want: empathy, art and cultural shift. www.sarah-woods.co.uk **60 mins**

7.00 **Group Dinner**

4 June 2014

08.30 Breakfast

09.30 – 10.30 **Tours** of CAT and **Surgeries** Julies Bicycle and Carbon Trust.

An opportunity to take advantage of expertise from Carbon Trust and Julie's Bicycle in a 1 to 1 surgery session and/or take a tour of CAT. There will also be plenty of tea and coffee available to support talking, meeting and networking.

10.30 Tea and Coffee

10.45 **Presentation**: Paula Owen from Julie's Bicycle and www.paulaowenconsulting.co.uk talks about Sustainability and behaviour change; why people say one thing but do something completely different **60 mins**

12.00 Lunch

1.00 **Workshop**: Your Sustainability Story (led by Carbon Trust).

An opportunity for participants to spend time thinking about their organisational stories; How to communicate your work to the public and stakeholders, who to involve, how to do this creatively, and the benefits of publicising this information. 90 mins

2.30 Tea and Coffee break

2.45 **Panel debate:** Representatives from Carbon Trust, Julie's Bicycle, Creu Cymru and Emergence participants have an opportunity to reflect on the project 60 mins

3.45 **Goodbye, thank you and where next**

4.30 End

Appendix 4: Record of Engagement

Venue	Webinar 1	Webinar 2	Webinar 3	1 to1 support	World Stage design festival	Creu Cymru Conference	Emergence Final Event
Aberystwyth Arts Centre	✓			✓	✓	✓	
Borough Theatre, Abergavenny	✓			✓		✓	✓
Chapter, Cardiff	✓	✓	✓	✓	✓	✓	✓
Congress Theatre, Cwmbran		✓		✓		✓	
Galeri, Caernarfon						✓	
Theatr Hafren, Newtown				✓		✓	✓
Metropole Culture and Conference Centre, Abertillery				✓		✓	

Neuadd Dwyfor, Pwllheli				✓			
Park & Dare Theatre, Treorchy				✓		✓	
Sherman Cymru, Cardiff		✓		✓		✓	✓
St David's Hall, Cardiff				✓		✓	✓
New Theatre, Cardiff				✓		✓	✓
The Riverfront, Newport	✓		✓	✓	✓	✓	✓
The Welfare, Ystradgynlais				✓		✓	✓
Theatr Brycheiniog, Brecon	✓	✓		✓		✓	
Theatr Mwdan, Cardigan	✓	✓		✓		✓	
Torch Theatre, Milford Haven				✓	✓	✓	

Wales Millennium Centre, Cardiff	✓	✓	✓	✓	✓	✓	✓

Appendix 5: Webinar Evaluations

Evaluation: Webinar 1 – Introduction to Sustainability

Attendees:

Theatr Brycheiniog
Wales Millennium Centre
Theatr Mwdan
Chapter Arts Centre
Borough Theatre
Aberystwyth Arts Centre
Creu Cymru

Question	Responses
What did you hope to gain from attending this webinar?	Reminder of what I need to do at this stage of the project - and why!
	A little more guidance on what will be involved; an introduction to webinar
	1) To learn about how we can make TB more sustainable 1) To understand the project plan and what resources Emergence can offer 2) To find out what other people are doing 2) To see how the impact of each organisation's different approaches could

	<p>be shared - successes, challenges, lessons learned etc.</p> <p>3) To experience my first webinar and figure out how to use the technology!</p>
	<p>A sense of the project kicking off, and colleagues engaging. I did get this - and felt extremely enthused by the presentation and the questions and opportunities it raised.</p> <p>And a more prosaic aim: I'd never been involved in a webinar before, so wanted to see its potential to the Creu Cymru network - which I think is extensive.</p>
<p>Do you feel your expectations were met? If not, why?</p>	<p>Absolutely - well done and thanks to Catherine</p>
	<p>Yes, but I have several questions</p>
	<p>It was my first webinar experience and, like anything else, it takes a few practice sessions to feel comfortable with a new type of interaction. I guess that many of us were in the same boat as the level of engagement was less than usual from the group. We'll get better at it as we get used to it!</p>

	As a training tool, I felt it's extremely powerful. And Catherine's presentation was excellent. There was reticence from some about taking a pro-active part (i.e. being seen/heard) but I think that's understandable. Slightly disappointed that only 8 out of 18 pilot venues were present - hope the others catch up.
Did you experience any technical issues while on the webinar (e.g. sound, visual, etc.)?	No, it worked very well
	No
	I got an echo on my computer when trying to contribute. It was better when I muted it but then lost the sense of 'audience' which felt strange at first!
	Yes, some ring-round occasionally, and others were not able to be seen. But nothing dreadful. And it was pretty user-friendly, really.
Any other comments?	Great technology - shame I can't use it in the office, but it worked fine at home

	Thank you for your time and I look forward to engaging with the project more fully in due course.
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Evaluation: Webinar 2 – Energy and Waste Management

Attendees:

Theatr Brycheiniog
Wales Millennium Centre
Theatr Mwdan
Chapter Arts Centre
Sherman Cymru
Congress Theatre

Question	Responses
What did you hope to gain from attending this webinar?	Information and guidance on waste management
	Information in what to look for in attempting to improve our energy and waste management.
	An overview of the buildings and facilities side of the project and experiences the other members.
	A better understanding of the support we can expect in developing and implementing our action plan.
	more information about the project and ideas from what everyone else is doing

Do you feel your expectations were met? If not, why?	To an extent
	As we are just starting out in this project I would have liked a bit more depth to the topic but I think most of this will come later in the one to one sessions and the Carbon Trust Audit.
	Presentation was a good overview of the project. Our internet connection had some serious issues so we were unable to hear a lot of the discussion.
	They were
	yes
Did you experience any technical issues while on the webinar (e.g. sound, visual, etc.)?	It was hard to hear from the contributing venues with webcams
	Occasional sound lag.
	Yes, internet connection from our end.
	No

	No - I just had to leave before the end
Any other comments?	I would have liked more information on the basic no cost / low cost measures that all business premises should consider.
	We would be very interested in talking to a BMS or setting up a BMS working group to optimise the use of our BMS system

Evaluation: Webinar 3 – Sustainable Production

Attendees:

Theatr Brycheiniog
Wales Millennium Centre
Chapter Arts Centre
Cynnal Cymru
The Riverfront

Question	Responses
What did you hope to gain from attending this webinar?	Yes, it was an excellent hit list of things to do and think about: well structured and well-presented.
Do you feel your expectations were met? If not, why?	Exceeded: I wasn't sure how pertinent it would be to a theatre/arts centre that only co-produces 2/3 things a year; but it was very much so, and all those who didn't participate missed out on some important stuff. It also had lots of relevance in terms of contractual/rider agreements with visiting companies and other partners. e.g. our contract requires timber and steel to have SWL stamps and fire resistance etc, but not that the wood is from a sustainable source: it won't be hard to add that in!
Did you experience any technical issues while on the webinar (e.g. sound, visual, etc.)?	There were a couple of issues with Sholeh's microphone, but it only happened a couple of times.

Any other comments?	Excellent.
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