



## Finalist's case study



# UWE, Bristol Facilities and Services Together in Electric Dreams

**UWE  
Bristol**

University  
of the  
West of  
England

### Profile

Example:

Higher Education

- 35,000 students (includes full and part time students)
- 3,000 staff
- Sub-urban/Campus

## About the project

### Summary

Bristol is at the forefront of innovation in sustainable travel. As a proud Bristol institution, The University of the West of England (UWE) is helping push boundaries in promoting electric and low-emission vehicles.

### Project partners

Bristol City Council, South Gloucestershire Council, Co-Wheels, OLEV, Frist Bristol, NISSAN and Wessex Garages.

## The results

### The problem

Our aims is to reduce CO<sub>2</sub> and air pollution through encouraging uptake of ultra-low emission transport when motorised travel is essential. The aim is to be a sector leader, promoting innovation and research, developing teaching and changing attitudes primarily towards electric and ultra-low emission modes of transport.

### The approach

Rather than running, one project UWE Bristol has launched several forms of electric and low emission transport around our campuses, including innovative hybrid buses, e-bikes, electric pool cars and vans, charging infrastructure and even electric buggies and battery powered tools for our grounds' teams.

### Our goals

The very nature of these initiatives are forward thinking and are very much only the start of the journey, UWE Bristol will continue and strive to be at the forefront of low emission sustainable travel. Our next project will be to establish a showcase charging hub and sustainable engagement center at our Frenchay campus, to not only encourage uptake but to also help answer questions on future demand, type of charging infrastructure, how users want to charge and what they will do while they charge.



### Obstacles and solutions

<ul style="list-style-type: none"> <li>Funding</li> </ul>	<ul style="list-style-type: none"> <li>With any new or emerging technology it is often difficult to secure funding for something new however, when it comes to low emission vehicles the business case really does make sense especially when a robust scoring mechanism and whole life costs are considered. The current availability of substantial grant funding and manufacturer support for the new technologies have also helped significantly.</li> </ul>
<ul style="list-style-type: none"> <li>Infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>This is a particularly tricky issue now as it adoption of low emission vehicles are at an early stage and picking the correct infrastructure to install is a bit of a minefield. For fleet vehicles, it is a relatively straightforward decision and can be aligned with vehicle usage and in many cases, additional funding is readily available. When it comes to wider adoption, it becomes more of a challenge and is a question UWE is hoping to help answer, the next stage of our project is to develop a showcase charging hub in partnership with Go Ultra Low. (Should we be putting many charging bays in our car parks or should organisation's provide a top up facility? What / how do we charge to charge? What do you do when charging?)</li> </ul>
<ul style="list-style-type: none"> <li>Early Adoption</li> </ul>	<ul style="list-style-type: none"> <li>One of the main challenges to early adoption has been range anxiety and is a challenge to convince users that in reality with some small adjustments to behaviors it really is not an issue for most. Range of new vehicles are increasing as new models come to market, availability of charging infrastructure is increasing and with a little planning you can now drive all the way across the UK Europe without running out of power. For most users pure EV is already a good potential solution to travelling more sustainably if car travel is essential and the economic case is also very strong as when the whole life cost is considered it can save users a significant amount of money.</li> </ul>

### Performance and results

- UWE Bristol already plays a prominent role in the transport, planning and business context of Bristol and the wider region. Advocacy through influential bodies such as Business West (chaired by our VC), North Bristol Suscom and links with local authorities helps us share best practice and encourage policy developments. We also host regular demonstrations with local large businesses to showcase our approach.
- The electric-hybrid bus service has been positively received, and as it is one of the busier routes to UWE; carrying c150 passengers per hour during the peak. Staff and student electric vehicle users have gone from 1 or 2 to now around 30 and rising (estimate based on demand/usage of our EV chargers) in the last 4 years. The Co-wheels pool car network now has over 270 registered users, making it the largest user base on Co-wheels national network.
- Although there will be good CO2 reductions through switching from petrol/diesel vehicles to fully electric and ULEVs it is difficult to quantify as we have yet to capture before and after mileage. However, the wider benefit will be through reduced air pollution, and helping top spark a wider change throughout the local area.
- Test drive events for our pool cars and e-bikes always prove popular. The main feedback is how surprisingly fun to drive and ride the cars and bikes are. This all helps with wider shifting public perception



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for the new technology. The main positive feedback on the electric bus is how much smoother and quieter it is!

### CO2 savings

As the projects cover many strands including internal fleet, pool cars and bikes, grounds equipment and public transport it is extremely difficult to exactly quantify the CO2 savings as some projects are nudges and some are direct replacement for ICE vehicles. CO2 savings are expected to be very substantial into the future especially as on site all of the electrical energy used is now taken from renewables meaning that the benefits are amplified over using fossil-fuel energy production. Our fleet of vehicles now stands at over 30% pure EV and we are targeting 50% by 2020 and our ambition is to be at 100% by 2030 as larger capacity EV's become a realistic proposition.

### The future

#### Lessons learned

We are still very much in the infancy of ultra-low emission vehicles and there are still many unknowns with regard to how and what technologies will evolve, not least with the challenges they pose to local power distribution and generation and indeed if EV is the answer over other types of energy.

#### Top 3 learnings from implementing your project

- It is not only about buying a vehicle, charging infrastructure also needs to be considered and can add significant costs to the upfront purchase.
- Always base your business case on both the whole life and lifecycle of the chosen technology this way you will realise the maximum benefit (For example; Grant funding, low maintenance costs, low running costs and resale/recyclability can far outweigh a higher purchase cost against a more traditional vehicle even before you take into account how clean they are.)
- Ask for help, At UWE Bristol we have been very lucky in that we have been able to work very closely with OLEV and our local authorities and manufacturers who have provided us with support and access to grant funding to get things moving along.

#### Sharing your project

Other than promoting the projects through our own internal comms channels and social media channels #WeAreElectric we also share our projects with the wider business community by working in partnership with local authorities, local enterprise partnerships, chambers of commerce and suscom which is an award winning regional sustainable travel group of large regional employers.

#### What has it meant to your institution to be a Green Gown Award finalist?

It is a huge boost for the University's Travel and wider Sustainability Team, to realise that what we are putting into place is recognised as something of value and is making a difference to people's lives by improving air quality and wellbeing. It inspires us to keep going despite it being a long journey ahead!

#### Further information

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