Week 2:
Making the Community a part of your team

Community Led-Sustainable Transport: the case of the Big Lemon

Background

In the last few decades, urban areas across the world have become increasingly automobile-dominated and less sustainable. It is clear that sustainable transport is one of the greatest challenges in the pursuit of sustainable development, as it is one of the largest contributors to our individual carbon footprints influencing the global climate. In this regard, we have witnessed the transport sector taking numerous measures to lessen the burden on the environment, reclaiming urban space from the automobile and prohibiting cars from major parts of downtown areas and confining them in other ways. These examples are nowadays considered as leading cities of sustainable urban development because of the work they have done to improve public transport, encouraging non-motorized modes, creating pedestrian zones, limiting the use of private cars, and trying to undo the transformation of cities caused by automobile dominance.

Country Context: United Kingdom

Motor vehicles generate more air pollution than any other single human activity, yet people will not give up their cars unless the quality of public transport is improved. Statistical data suggest that in 2012, the United Kingdom (UK) total energy consumption from transport was 53 million tons of oil equivalent, or about 36% of the UK total. The total carbon of the sector by 2013 was 117 million tons of CO2, or about a quarter of the UK total. With this in mind, the UK Government has latterly recognised the need to take action to control the rate of traffic growth, improve the environmental performance of vehicles and increase public awareness about the environmental impacts of pollutant emissions from transport. Moreover, it has recognised the use of new technology such as alternative 'cleaner' fuels to power motor vehicles as a sustainable option.

Some of the measures that the UK Government has adopted in the last few years include: reducing the need to travel, carpooling, promoting cycling and walking, and improving public transport in general.

The Big Lemon

The Big Lemon started in Brighton, a popular touristic city located in the South in 2006 when Tom Druitt and Graeme Simpson, two friends from childhood, met to see if they could design a bus service that was affordable, sustainable and could provide excellent service at the same time. They decided to organise a public meeting in a Brighton pub where they invited local people to come to discuss the initial idea. In 2007, they founded the Big Lemon as a social enterprise aiming to carve a niche in the provision of community-led sustainable bus services in the region. After gaining an operator license, the first public transport route was launched on 1 September 2007. The company currently operates three local bus services in Brighton & Hove; 1) Route 52: City Centre – Hospital – Marina – Ovingdean – Woodingdean, 2) Brighton University Shuttle UB1: City Centre – Moulsecoomb – Varley Park – Falmer, 3) and City College Shuttle: Central Campus (Cheapside) – East Campus (Wilson Avenue). It also offers bus and coach hire for a wide variety of private parties, weddings, sports clubs, schools, colleges, universities, business and conferences, and runs festival coaches to a wide range of music festivals and outdoor events such as Glastonbury, Bestival, Reading, Latitude, Shambala and Lewes Bonfire. The Company is registered as a Community Interest Company (CIC), and is organised with a Board of Directors, a Management Team and an elite team of highly trained professional drivers.

All the Big Lemon buses run on recycled waste cooking oil, where it is initially collected from chip shops, restaurants and hotels in Brighton & Hove and across Sussex. Since the Big Lemon started, they have made use of over half a million tons of waste cooking oil and saved over 900 liters of carbon dioxide from going into the atmosphere. Unlike burning fossil fuels like mineral diesel – which releases carbon dioxide into the atmosphere which had been buried for millions of years – burning plant material only releases the carbon dioxide that the plant had absorbed in the last few years as it grew not any new emissions in our lifetime.

If no one used the oil, it would be sent to the already overstretched landfill sites, which in turn emit another greenhouse gas – methane. Carter et al (2005) stressed, the benefits of biodiesel from waste cooking oil are as it follows:

- Approx. 75% reduction in carbon dioxide emissions compared with mineral diesel.

- Virtually no sulphur dioxide (a major contributor to acid rain).

- Lower emissions of carbon monoxide, hydrocarbons and particulates.

- Approx. 25% reduction in nitrogen oxides if engine timing is 'retarded'.

- 79% less waste water and 96% less hazardous solid waste.

- Biodegrades four times quicker than mineral diesel.

- No wars, Arctic drilling or ocean rig disasters required.

In 2012, the Big Lemon decided to sell the cooking oil part of their business to a local company in Eastbourne that makes biodiesel, a plant-based alternative to regular mineral diesel. The Big Lemon has since it was founded in 2007 developed a Sustainability Policy that is reviewed every year and it has received several awards including the Dandelion Award for sustainable business in 2009 and the "Best Sustainability Initiative" at the 2010 Brighton & Hove Public Service Awards. The Big Lemon has since 2016 started to replace its fleet of biodiesel buses with a fleet of electric buses.

Video link here: https://www.youtube.com/watch?v=Aa5749MNyjA