

Food Information System

From Farm to Fork – innovative approaches to reducing food miles



Design Challenge

Drivers of heavy goods vehicles already endure supervision by a tachometer, logging their speeds and driving times on behalf of a myriad of external authorities. What would happen if we applied a similar monitoring system to food: a tachometer for tomatoes, fish and potatoes, say? What would be revealed if these 'food miles' were made explicit?

Context:

why food is a global design opportunity

Food miles represent the distance a food travels from the field to the plate. Agriculture and food now account for nearly 30% of goods transported on our roads contributing substantially to CO₂ emissions and thus climate change. Furthermore, 95% of the fruit and half the vegetables in the UK are imported; strawberries, for instance, flown in from warmer climates to satisfy consumer desires, contribute to the huge environmental impact caused by air freight.

Food distribution can be tremendously wasteful, often invisibly so. Here are some issues to keep in mind:

- the contemporary food system is unsustainable and is damaging the environment, but in order to do things differently, we need to see things differently
- there are 52 transport and process stages in one bottle of ketchup
- the CO₂ emissions attributed to producing, processing, packaging and distributing the food consumed by a family of four, is about eight tonnes a year
- in the UK the five largest retail chains account for 80% of the market, and their marketing decisions have a massive effect on the producers, other retailers and the environment. The supermarkets exert a virtual monopoly over many towns and villages, so many consumers have little choice but to shop at the major multiples. The supermarkets' drive for efficiency, central distribution systems, overseas sourcing and the expansion of their retail area incur costs to the environment and society that are not accounted for. http://www.sustainweb.org/chain_fm_why.asp
- 127 calories of energy (aviation fuel) is needed to transport 1 calorie of lettuce across the Atlantic
- food often travels long distances and in an inefficient way. It is not assumed that all food exports will cease as there are implications in that, too, but that the real energy and environmental costs of such distribution shall be explicit and, where appropriate, offset in some way

- number of food miles has increased by 15% in the ten years to 2002. 19 million tonnes of CO₂ emitted from foods transport in 2002
- the environmental, social and economic costs of food transport are estimated at £9bn per year of which £5bn is due to road congestion, £2bn is due to road accidents, £1bn is due to pollution and £1bn to other factors. Looked at another way food shopping by car accounts for 40 per cent of the total costs
- if all foods were sourced from within 20km of where they were consumed, the country would save £2.1bn in environmental and congestion costs
- food shopping is one of the most basic and regular activities that people undertake, and accounts for over five billion car miles a year in Britain

Brief

Your challenge is to use innovative design practice to draw attention to the environmental, social and ethical implications of transporting food. Develop a proposal for how this might work and what it would look like to the consumer: a device, a product-service system, what? – you decide.

Criteria

Several criteria should inform the development of your ideas and proposal:

- your submission should be informed by, and/or located in, a real location/situation, preferably your own
- your submission should demonstrate evidence that your research engaged with people, organisations and companies involved in the food system so you can learn from what's already happening
- your submission should show consideration and/or use of new technologies
- your submission **must** demonstrate input by a multidisciplinary team and, ideally, you should submit as a team. If you have been unable to work through the whole project as part of a team however, then you may still submit, but evidence must be shown that as part of your research during the project, you connected meaningfully with other specialists, relevant expertise and assistance – from staff and students – in other faculties of your own institution, or in other universities. This is very important
- whole systems approach: this brief offers the opportunity to tackle a real issue in depth, and to adopt a broader 'systems' approach or strategy that changes attitudes and engages the wider public as part of the solution

- Evidence of research: as with all projects, research is crucial. You must familiarise yourself with the issues and arguments – and counter-arguments – in order to ensure the integrity of your response

Outcomes/Submission Details

The delivery must be a written outline together with a visualisation of your device/product-service system idea that addresses the issue. This must include the communication, through any medium you see relevant, of the following:

- 1 **A statement of creative strategy** – this is your big idea. It is essential and should be done whether you are proposing a device, product, a service or something more conceptual. It should be no more than 500 words (typewritten, sans serif, 14pt)
- 2 **Evidence of research** – including information about whom you consulted and how this led to your strategy and proposal – this can be in sketchbook form and be a mix of visuals and words. It may also be in the form of a journal, a blog, or a video diary but it must be easily accessible for judging purposes
- 3 **Realisation** – this is how your proposal tackles the issue and can be presented in the form most appropriate to your chosen solution. For example the options might be:
 - four A3 boards (700 gsm)
 - if appropriate, one sketchbook only, related to the brief
 - a running demo on a CD-ROM or other digital medium. The resulting designs/products should be entirely self-contained (that is, should be self playing and, if necessary, self-decompressing without special software). Consider that your presentation will not necessarily be shown on the same sort of machine as the one on which it was created. Your work will be shown to the jury on an Apple all-white iBook or a PC; specify which machine your disc should be played on and display this clearly on the disc. Application software should be Macromedia Director (or popular alternative), and should be able to be viewed using Flash Player; Shockwave Player; Quicktime 4 or 5, or Adobe Acrobat
 - video (VHS) or DVD
 - all work should carry an RSA label on the back; do not submit work in plastic sleeves or on foam board, metal, wood or perspex, or in boxes; these requirements are in the interests of students to ensure the safety of their work whilst in storage and transit, and to ensure that it can be displayed for judging

Remember that your entry, as well as being the primary vehicle by which your work will be judged, may also form part of an exhibition. For both, the communication of ideas – powerfully and succinctly – is absolutely vital.