

# Technology Strategy Board

Driving Innovation

## Innovation for a Low-Carbon Future

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Low Impact Building

## Technology Strategy Board

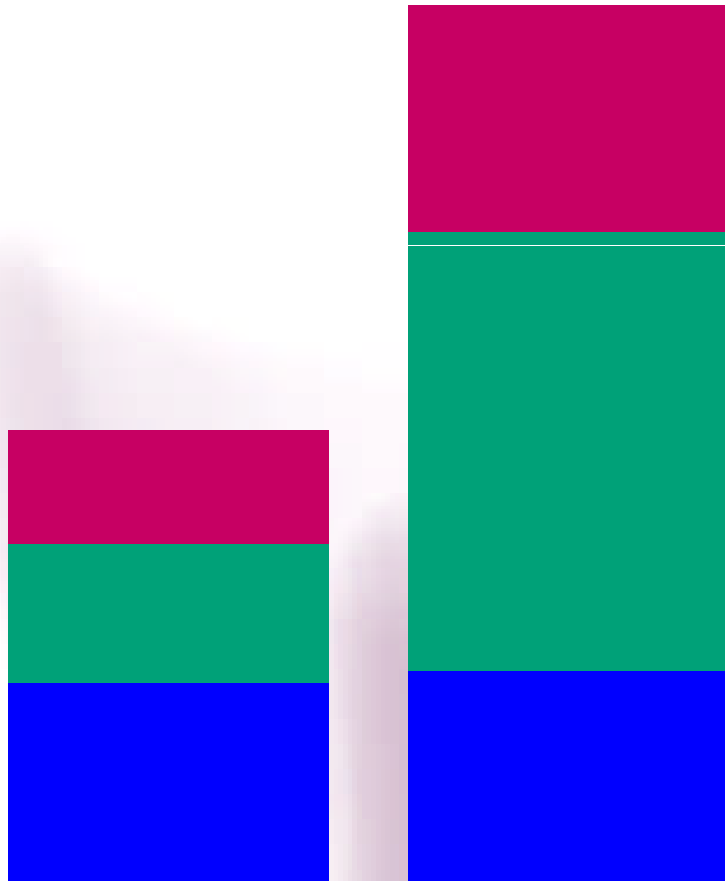
Driving Innovation

# Technology Strategy Board

- An arm's length executive body
- Sponsored by the Department for Business, Innovation and Skills
- Working across government
- in partnership with research councils, regional development agencies and the devolved administrations
- Focused on business innovation and the application of technology

2008-9

2010-11



**£1 billion investment  
over 3 years**

**The innovation climate**

**Challenge-led innovation**

**Technology-inspired  
innovation**



Despite £140bn investment  
in infrastructure over 10  
years, congestion will get  
25% worse.

Cost of that congestion will  
double to £20bn p.a.


A photograph of a yellow car, likely a taxi, with a semi-transparent grey text overlay. The car is shown from the side, with the rear door and a red taillight visible. The background is blurred, suggesting an outdoor setting.

Transport 25% UK  
emissions, road transport  
80% of that.

Average car emissions  
down 13%.


Passenger miles up 22%.

Net increase of 6%.

A nighttime photograph of a city skyline with several prominent skyscrapers. The buildings are illuminated with various colors of lights, including white, blue, and green. The lights are reflected in the water in the foreground, creating a shimmering effect. The sky is dark, and the overall scene is a vibrant urban nightscape.

Buildings have a very large  
environmental footprint.

There is a huge  
business opportunity in  
reducing that footprint

The image shows two large, cylindrical industrial cooling towers, likely from a power plant or refinery. They are illuminated from below, creating a warm, yellowish glow. The towers are set against a dark, cloudy sky. A semi-transparent grey rectangular box is overlaid on the image, containing white text.

45% of all carbon emissions  
in the UK come from buildings

A photograph of a landfill site. In the center, a yellow bulldozer is working on a large pile of waste. The ground is covered in a dense layer of trash, including plastic bottles, bags, and other debris. The sky is overcast and filled with numerous birds, likely gulls, flying around. A semi-transparent grey box is overlaid on the center of the image, containing white text.

32% of all landfill in the UK  
is construction waste





13% of all construction materials delivered to a site in the UK go straight into a skip without being used



Buildings consume almost  
60% of UK drinking water  
most of it is not used for  
drinking



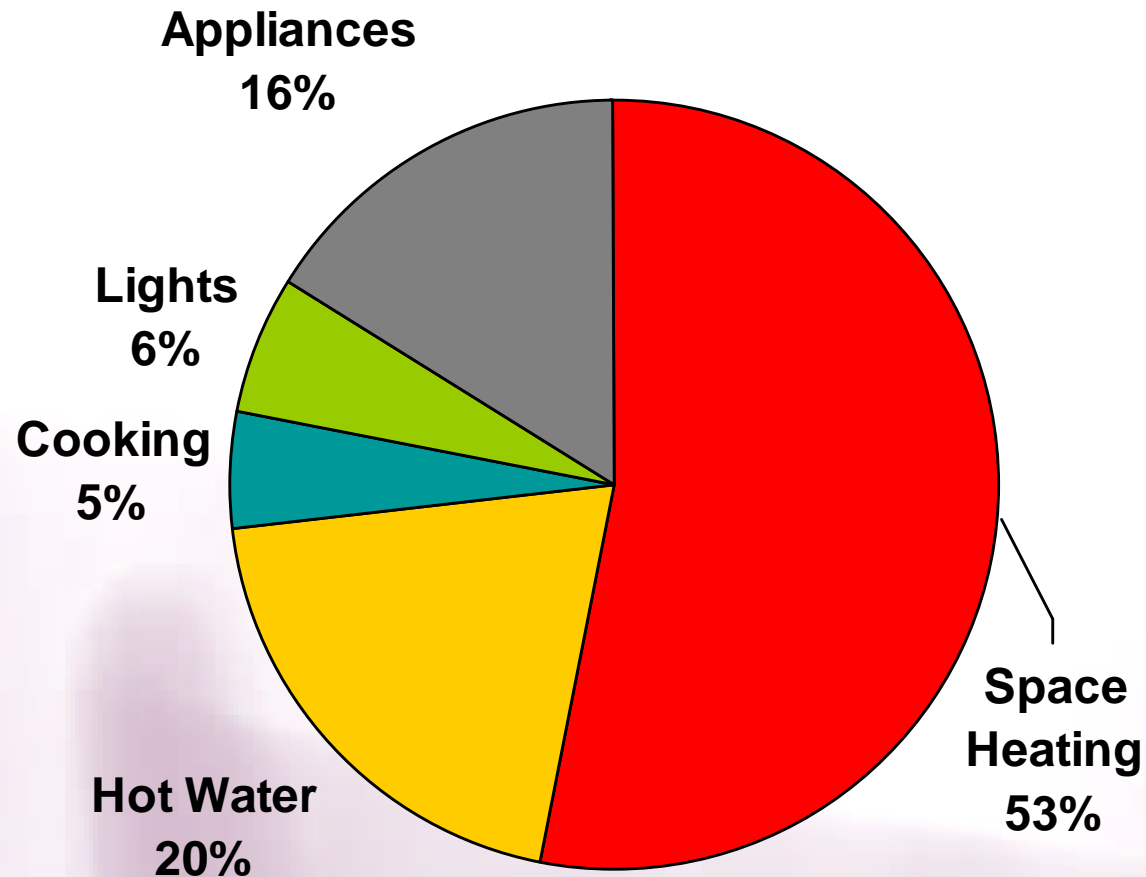
Government is challenging  
the industry to provide  
'zero carbon' homes by 2016



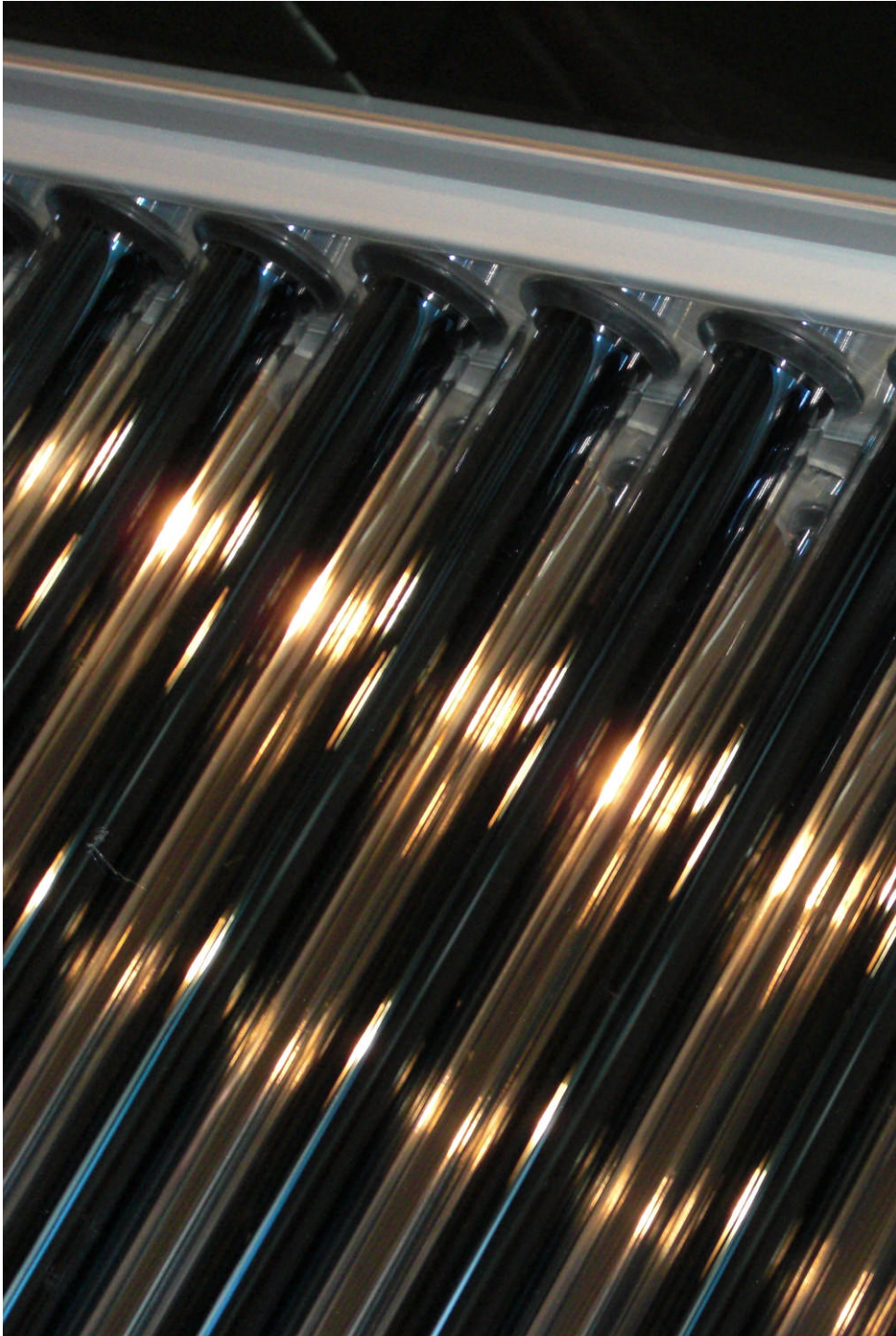
‘Zero carbon’ commercial  
and public buildings will be  
required from 2019



# Domestic carbon emissions



*Data: DTI 2005*

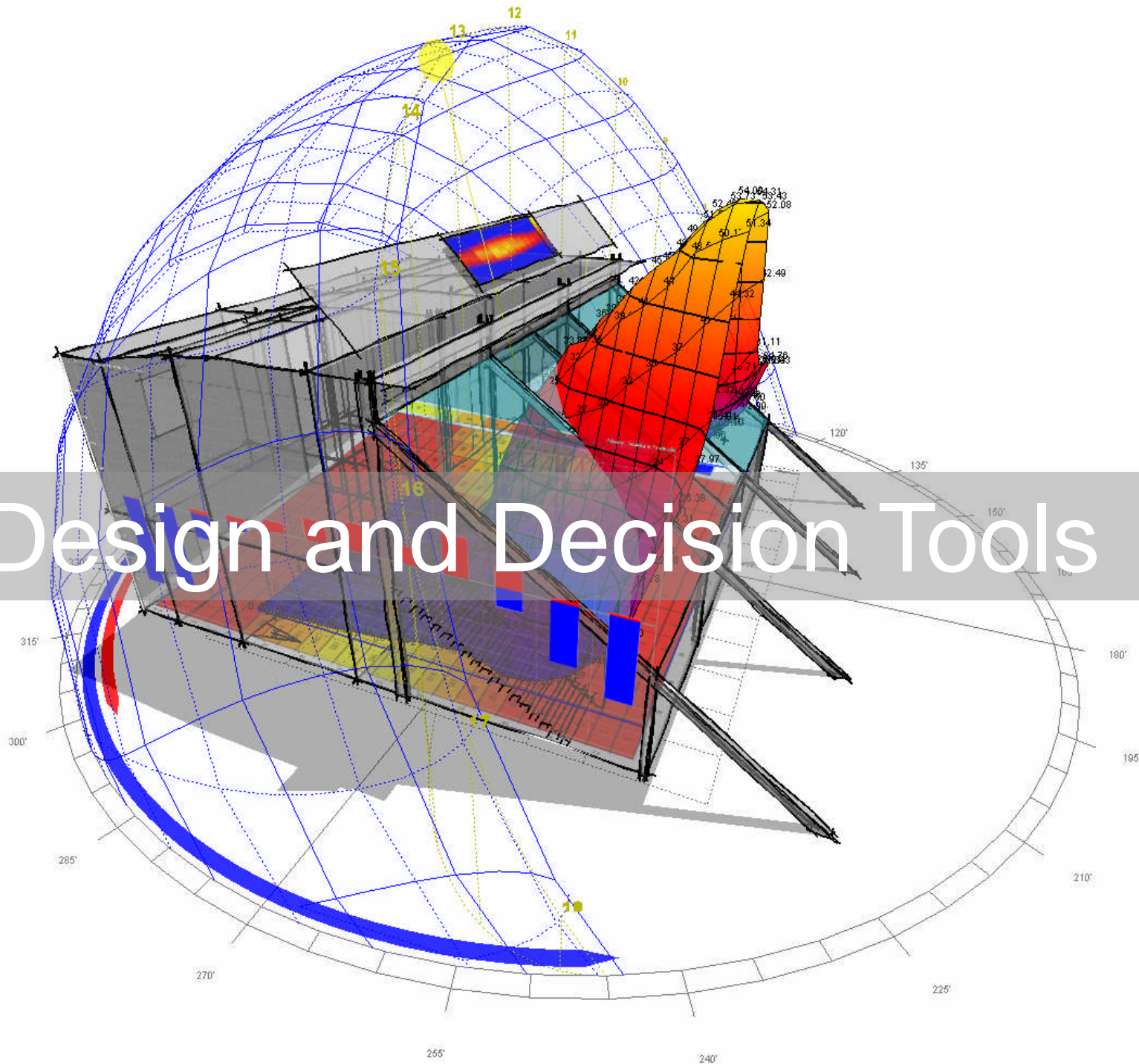


A dark-colored car is driving through deep floodwaters on a road. The water is murky brown and splashing around the car. The driver is visible through the windshield, looking forward. The car's headlights are on, and the front grille is visible. The road has a white dashed line on the left side. The background shows a grassy area and a tree.

# Design for Future Climate



# Design and Decision Tools



A hand is holding a grey remote control in the foreground, with a blurred television screen in the background. The remote has several buttons, including 'VOL+', 'VOL-', 'CH+', 'CH-', 'MENU', 'OSD/OUT', and 'SRC'. The text 'Management and Operation of Buildings' is overlaid on the image in a white, sans-serif font.

# Management and Operation of Buildings



# Materials and Components



# Integrating Low-Carbon Energy



# Retrofit for the Future



[www.innovateuk.org](http://www.innovateuk.org)