Creating Impact from Research: The Role of Communication Agencies

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Creating impact from academic research

Creating Impact from Research: The Role of Communication Agencies

Overview

Introduction to Bulletin Academic

The Prometheus Weather Files Project

The impact

Continuing the journey

Conclusions

Q and A

Introduction to Bulletin Academic

Who we are and what we do

Who we are

- Academic communications agency
- Experience and understanding of academic environment and agendas
- USP: understanding complex information and disseminating to target audiences
- Skill set of ‘intelligent’ journalism, marketing, copywriting and graphic design
- Strong client base of universities, research centres and think tanks

Some of our clients

What do we bring to knowledge transfer?

We see ourselves ‘bridging the gap’ between academics and research users. We:

–Understand the research

–Identify target audiences

–Creatively disseminate

–Follow up

This approach can fit with the impact agenda but its about much more than that…

The reach of the media

Time to stamp out trade in misery – China Daily

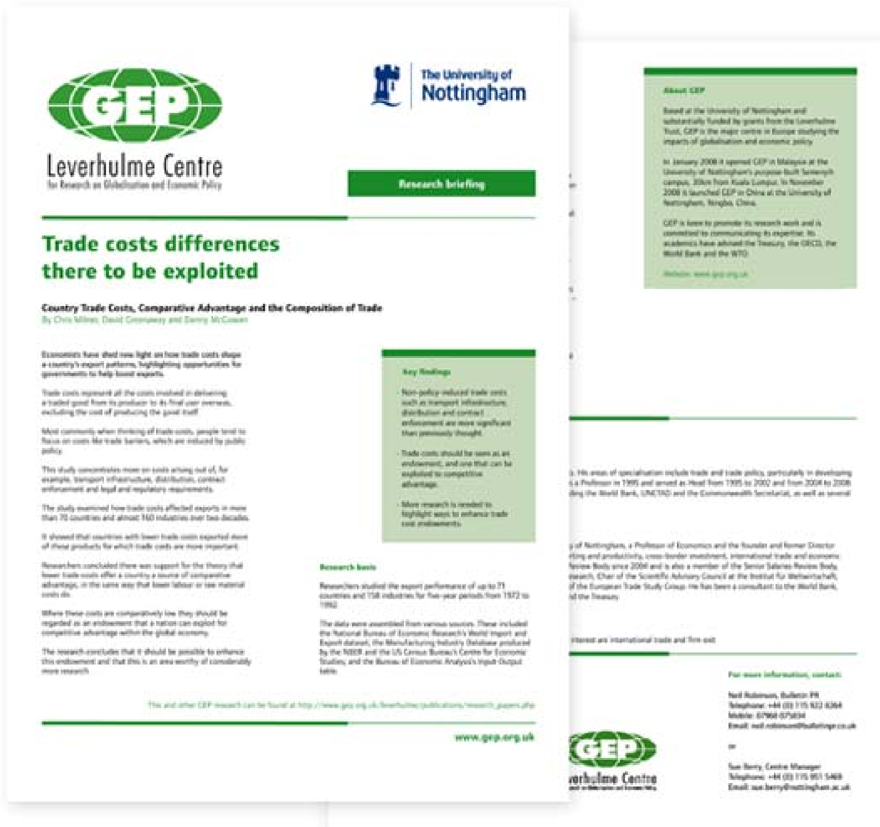
Comment

Time to stamp out trade in misery

ACTION PLAN TO BE PUBLISHED SOON GIVES CHINA THE CHANCE TO DO MORE TO COMBAT HUMAN TRAFFICKING

Influencing policymakers

Research and policy briefings



Collaborating with industry

Business briefings and trade press


Research briefing

Nottingham University Business School

The new language of business

What real ale buffs can teach the UK economy

The Fall and Rise of the Local Brew

www.nottingham.ac.uk/business/

Investment Adviser


FOCUS

The latest Trust Index finds customer confidence in financial institutions to be low. So what's the solution?

Repairing broken trust

NIGEL WAITE

main points

Asked how strongly they trusted their own financial providers, respondents ranked brokers/advisers first

Communicating with funders and stakeholders

– Impact statements
– Newsletters
– Annual reports

Launching new ventures

NCCCS launch material

The PROMETHEUS weather files project

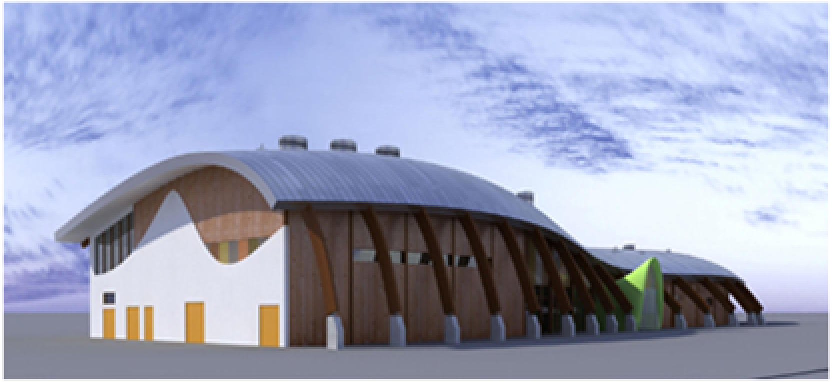
Built to stand the test of time

Using PROMETHEUS weather files to guard buildings against climate change

–University of Exeter's Centre for Energy and the Environment

–EPSRC 'Pathways to Impact' funding

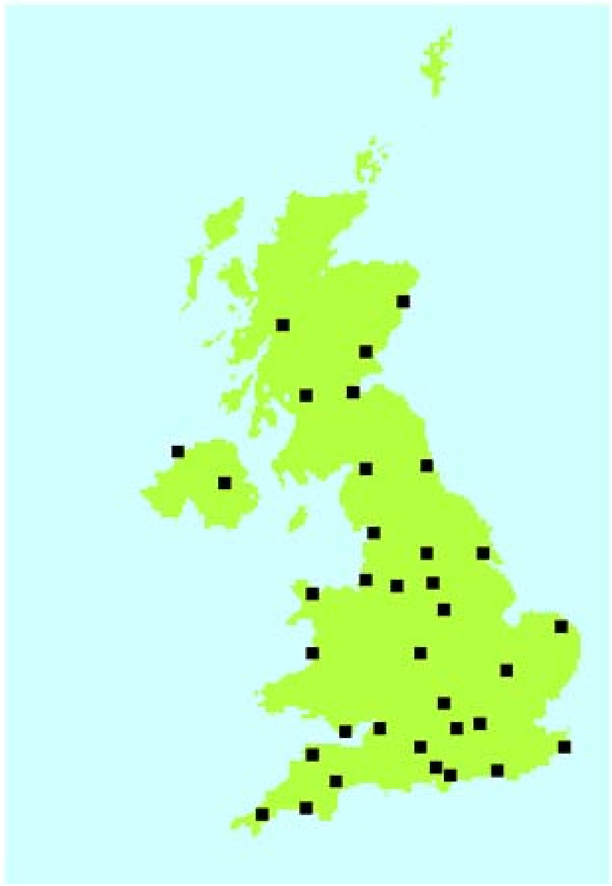
–Six-day project



Above: MyPlace Youth and Community Centre, London – Jacobs Engineering

PROMETHEUS project overview

- Files predict weather up to 2080 eg mean temperatures, wind speed
- Designers can use data to prevent overheating in buildings
- Test resilience of existing designs to climate change



Project brief – the knowledge broker role

- Raise profile of PROMETHEUS within the building industry
- Encourage architects and engineers to put data into practice
- Identify policy implications and engage relevant policymakers
- Demonstrate the research's impact on the wider world

What’s the story?

Communicating the key messages to the right audiences

Why should policymakers care?

–Failure to protect buildings against overheating cost lives eg Paris heatwave

–Existing data for modelling buildings flawed

–Schools and hospitals could be unfit for purpose in 40 years

–Industry needs regulatory push to treat climate change adaptation seriously

What’s the story?

Communicating the key messages to the right audiences

Why should architects and engineers care?

–Opportunity to take the lead in sustainable design
–Data files are free to download
–Easy to test resilience of designs to climate change
–Already in practice eg UK’s first zero-carbon primary school

Devise dissemination strategy

- Write targeted briefings for policy and industry audiences
- Produce case study document to show PROMETHEUS works
- Set up links with policy advisors across government and industry bodies
- Write press briefing for media team
- Work with RKT team to attract industry to workshops

Workshop invitation/Research briefings


UNIVERSITY OF EXETER

Research Briefing

Built to Stand the Test of Time

Using PROMETHEUS weather files to adapt building designs to climate change

By Dr David Coley and Dr Matt Eames

Key findings


UNIVERSITY OF EXETER

Built to Stand the Test of Time

Designing and adapting buildings to meet the challenges posed by climate change

Choice of three free lunchtime workshops for engineering and architectural firms

February 17th 2011, Council Chamber, Northcote House, University of Exeter
February 21st 2011, Council Room, Society of Chemical Industry, Belgrave Square, London
February 22nd 2011, Byford Room, Devonshire Hall, University of Leeds

Case study booklet

Free downloads from **www.exeter.ac.uk/cee/prometheus**

Case Studies

The PROMETHEUS weather files are being used by the UK's leading engineering and architectural firms to test the resilience of their building designs to climate change for projects totalling £1.8 billion, including schools, hospitals and an eco-town. The designers of the following four building projects consulted the PROMETHEUS data.

Dolcoath Offices, Cornwall County Council

Project overview

Cornwall County Council is seeking to reallocate staff from 78 buildings to just 30 through the refurbishment of three existing buildings and the construction of one new building. The £4m project, based on a 1960s concrete frame T-shaped building with an inside area of 4,800m² over four floors, calls for a major rethink of office layout and working conditions.

The need for adaptation

The aim of the refurbishment is to create a contemporary office environment that can accommodate a marked increase in occupation density. Adaptation strategies were chosen, based on the PROMETHEUS data, to allow for an increase in internal gains, while limiting the potential for overheating without the use of active cooling. Large open-plan office spaces were recommended to offer a more modern working environment and the potential for cross ventilation. Increasing the exposure of the thermal mass was found to limit overheating by using perimeter gaps on suspended ceilings. Reducing solar gains through the installation of solar films on south-facing windows improved thermal comfort inside the offices.

Conclusions

The adaptation strategies delivered significant improvements to the building design prior to refurbishment. The hours of overheating (>25°C) were limited to 78 hours in the current climate and 342 hours according to the worst-case climate change scenario in 2050. A provision for night cooling during the summer would further lower these figures.

Montgomery School, Devon County Council

Project overview

The UK's first 'zero carbon in use' school, Montgomery Primary School is being funded by Devon County Council, with an additional award from the Zero Carbon Task Force. The total budget is approximately £9m. The school is also aiming for Passivhaus accreditation.

The need for adaptation

The school will exist in its current form for at least 60 years and a commitment has been made to ensure it can cope with likely climate change through to 2080. When considering the school's Passivhaus aspirations, it was decided that a heavyweight structure was best suited to withstanding the effects of climate change. This will give the school a high thermal mass, which will mediate internal temperatures in both hot and cold conditions. To reduce solar gain, all south-facing windows were shaded to allow only diffuse light to enter the rooms. The building is also raised above ground level as it is situated on a flood plain.

Conclusions

Initial studies have shown that the adaptation strategies can comfortably limit overheating under a changing climate. The PROMETHEUS files informed the design process from the beginning and highlighted the factors that need the most careful consideration during any value engineering.

MyPlace Youth and Community Centre, London

Project overview

A £4.7m project to build a youth and community centre located in London with a total floor area of 1,800m². The project designers intend to create a zero carbon building with a BREEAM rating of at least 'very good' with aspirations of 'outstanding'.

The need for adaptation

Given the environmental sustainability focus, it was crucial to evaluate how sustainable the building would be in 2050. The PROMETHEUS data showed that areas with large internal heat gains, such as the proposed IT hub, would be susceptible to overheating. The adaptation strategies that were subsequently considered included increasing solar shading and the solar reflectivity of the roof, removing sun pipes and increasing roof insulation. Other recommendations were the introduction of night cooling, increasing the thermal mass of the building envelope and the replacement of glazing with polycarbonate around the entrance. These measures were predicted to increase the cost by a maximum of 7.6%.

Conclusions

Recommendations based on the PROMETHEUS files would result in improvements under current conditions and under climate change. However, the adaptation strategies did not fully mitigate against overheating, suggesting that changing the building shape, orientation and internal planning would help to adapt the building further.

Leeds Arena, Leeds

Project overview

A £55m project to build a 12,000-capacity arena to host entertainment and sporting events. The building will cover 26,100m² over five stories.

The need for adaptation

The building is intended to set a benchmark for sustainable arenas, with features such as air source heat pumps and rainwater harvesting. The building has to be completely sealed for acoustic reasons and is therefore fully air conditioned. The high density of occupants during events could cause problems during current heat waves. As a result, adaptation strategies that were considered included increasing wall and roof insulation, as well as the solar reflectivity of the roof. It was also recommended that 15% of the roof could be opened for night cooling and more efficient lighting could be installed. These measures were predicted to increase the cost by a maximum of 4.5%.

Conclusions

Results showed that, in the current climate, the adaptation strategies would reduce the proportion of occupied hours during which the internal temperature exceeded 28°C from 1.5% to zero. When tested under the upper end of climate change in 2050, the occupied hours over 28°C fell from 9.3% to 2.6%. The introduction of night cooling was found to exert the most significant impact and could be retrofitted at any stage quite easily.

Creative approach

Linking PROMETHEUS to UK's first zero-carbon country estate

–Stay across the news agenda

–Be proactive

Above: Highclere Castle, *(uploaded to Flickr by Jonjames1986)*

Initial results

- Secured speaking slot for academic at industry event
  - Audience of policy advisers
  - Networking opportunity
- Discussions with industry body on publishing data
- Attracted leading firms to roundtable discussions
- Established links with DEFRA, DECC, TSB

The impact

- Referenced in official government response to Low Carbon Construction Action Plan
- Used in more than £3 billion of building projects
- University tightened intellectual property of PROMETHEUS data

Continuing the journey

After the funding stops…

- Build on policy paper momentum
- Seek media coverage to raise profile of climate change adaptation
- Track continued use of research by industry

Conclusions

Does the communications agency as knowledge broker work?

Conclusions

Does the communications agency as knowledge broker work?

- Need proactive and creative dissemination strategy from the start
- Academic institutions need integrated approach to impact
- Broad skill set and collaboration essential
- Time challenges
- Achieving impact is a journey – prepare for the long haul

Thank you for your time

Any questions?