



EPSRC Centre for  
INDUSTRIAL  
SUSTAINABILITY

# Technical Seminar Series

**Communication appeals for influencing  
pro-environmental behaviour change**

Zoe Rowe, C4D, Cranfield University

16:00-17:00    20 April 2015



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*We will record this  
webinar and issue the  
recording afterwards*

*Slides will also be made  
available*

*Please use chat to raise  
questions throughout the  
presentations*

*Questions after this  
presentation finishes?*

*Please contact*

*Zoe Rowe*

*[z.o.rowe@cranfield.ac.uk](mailto:z.o.rowe@cranfield.ac.uk)*

## Technical webinar series – schedule

5 FEBRUARY 2015

- **Today:** Communication appeals for influencing pro-environmental behaviour change, Zoe Rowe, C4D, Cranfield University
- **Next week:** Resource Efficient Manufacturing: An Exergy Based Approach, Sanober Khattak, De Montfort University
- Future months: much more to follow!!
- ... and it could be you...
- Typically first Thursday of the month



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*If you have interesting content to share from research and development, good practice, valuable results in practice, etc then perhaps you should be scheduled in the series.*

Contact **Sharon Mey** [cis-admin@eng.cam.ac.uk](mailto:cis-admin@eng.cam.ac.uk)  
or **Peter Ball**,  
[p.d.ball@cranfield.ac.uk](mailto:p.d.ball@cranfield.ac.uk)

## Technical webinar series – the aims

5 FEBRUARY 2015

- Sharing **research** results and **industrial** practice for Centre members
- **Connecting people** within the Centre as well as outside the Centre
- Providing **feedback**, comments, suggestions, refinement, etc to those presenting



## How is the Centre structured?



### **Eco-efficiency**

Reducing resource use (water, energy, materials)  
Improvements without radical changes to product or process



### **Eco-factory**

Increasing added value and improving production capability  
and responsiveness  
Decreasing consumption of natural resources



### **Sustainable Industrial System**

Exploring future configurations of the industrial system and  
their implications  
Taking first steps to improve understanding of the long term  
challenges facing industry



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Educating the  
**Leaders of  
Tomorrow**  
**TODAY**

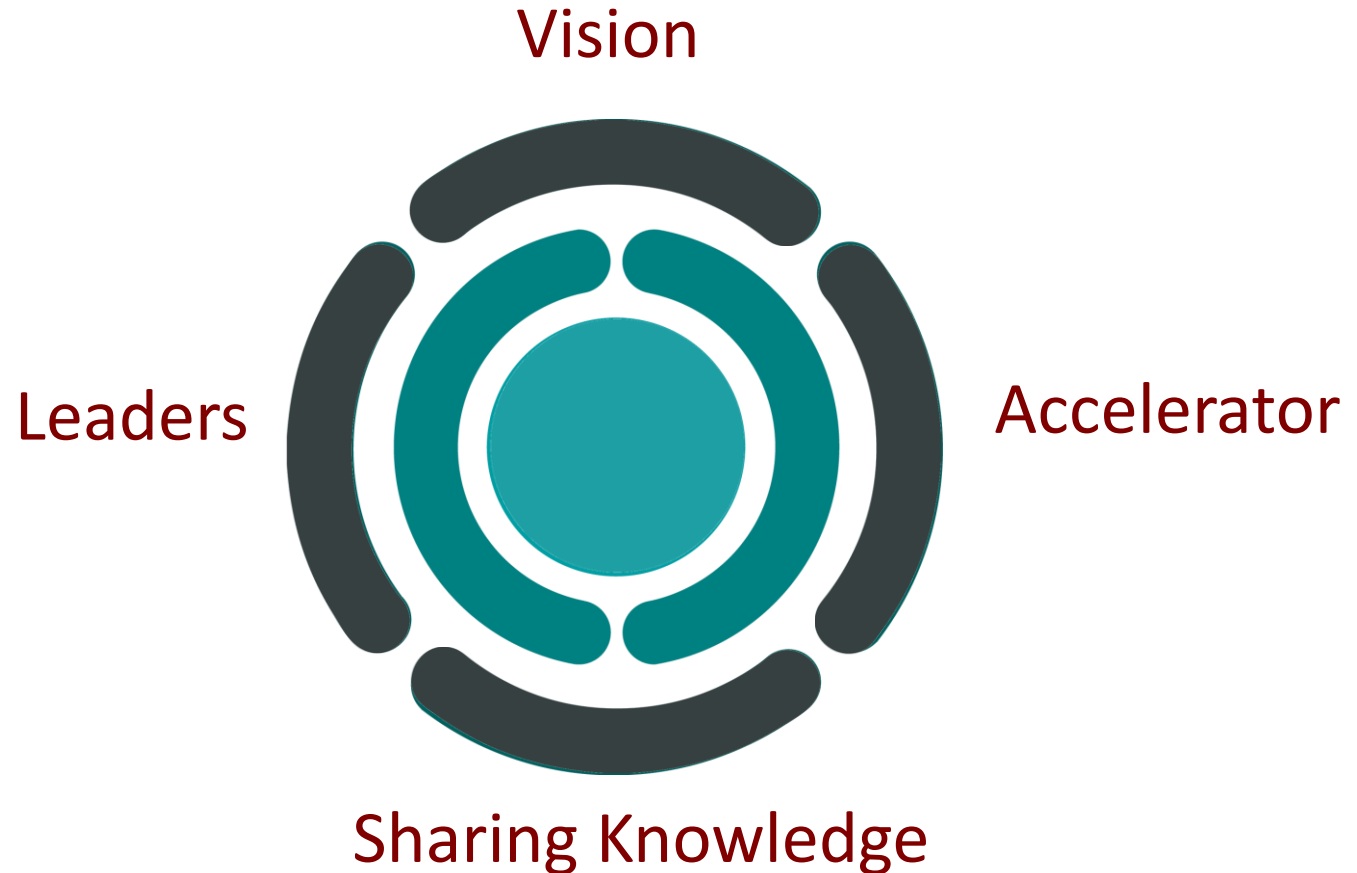
Bigger **Impact**,  
faster, wider,  
sooner

Sharing **Knowledge**

Building & Sharing  
a **Vision**

## How the Centre works - Impact

WEBINARS ... CONTRIBUTING TO SHARING OUR KNOWLEDGE





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# Eco-Efficiency Grand Challenge: Resource Efficiency in the Factory

5 FEBRUARY 2015

16.00 **Introduction** (Peter)

16.10 **Communication appeals for influencing  
pro-environmental behaviour change**  
(Zoe)

16.30 **Q&A** (Zoe)

16.40 **Wrap up** (Peter)

16.45 **Close**

*Questions after this  
presentation finishes?*

*Please contact*

*Zoe Rowe*

*[z.o.rowe@cranfield.ac.uk](mailto:z.o.rowe@cranfield.ac.uk)*

# Communication appeals for influencing pro-environmental behaviour change

Zoe Rowe  
PhD Researcher

**C4  
D/**

Centre for Competitive  
Creative Design







## Context of Research

- Many issues threaten the sustainability of the environment, many of which are effected by human behaviours
- Not entirely in the control of companies
- Consumers declare that they are environmentally conscious
- Disconnect in their concerns and their actual behaviour
- Harness the power of marketing





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## Pro-environmental Behaviour Change Definition

### Aim:

Influence consumers' behaviour in the purchase, use and disposal of products to not have a negative impact on the environment

### Definition:

'behaviour that takes into consideration the well-being of the environment and individuals, that has as little harm on the environment as possible'



## ***“How do marketing communications create specific pro-environmental behaviour outcomes?”***

### ***“What contextual factors influence the selection of marketing communications?”***

- the contexts in which the behaviours are taking place
- the marketing communication strategies that are used as interventions to the pro-environmental behaviour
- the impacts of the context on the chosen marketing communication strategy

### ***“How do marketing communications influence pro-environmental behaviours?”***

- the pro-environmental behaviour outcomes
- the impact of different marketing communication strategies on pro-environmental behaviour outcomes
- the theoretical mechanisms underpinning intervention-outcome relationship



# Conceptual Framework

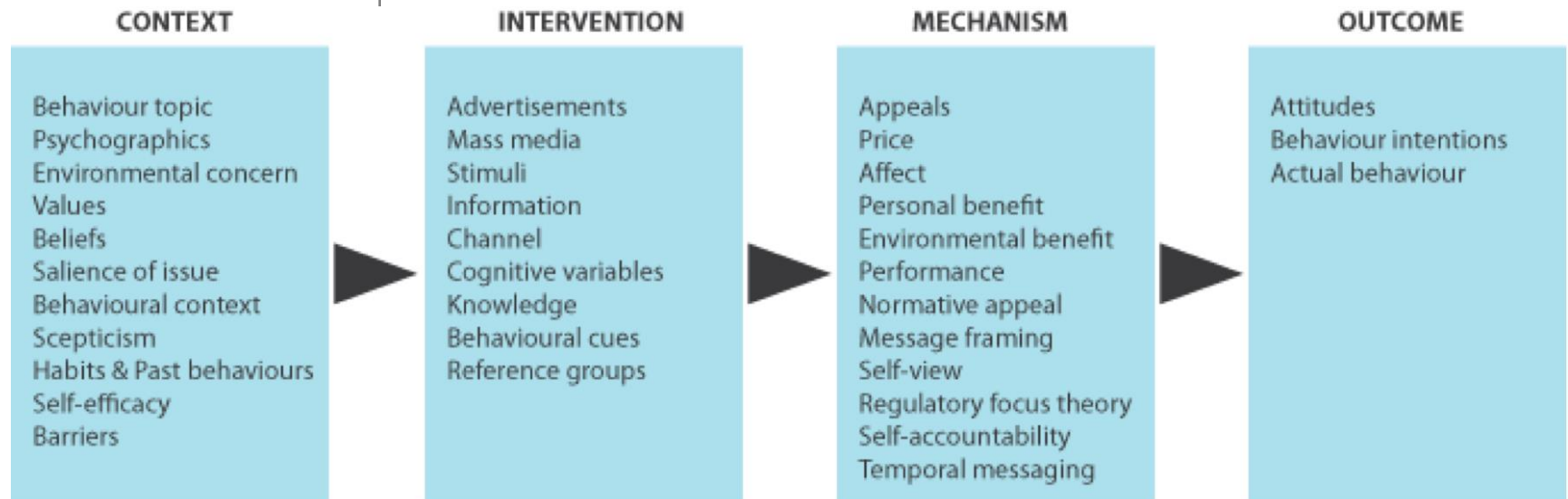


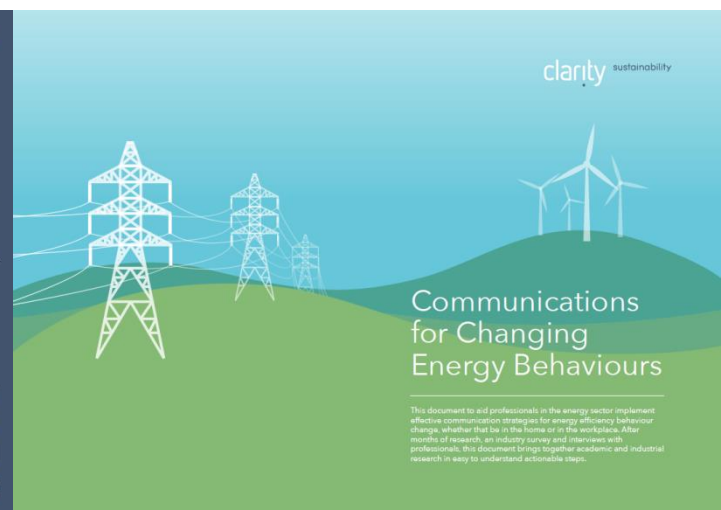
Figure 2: A CIMO-logic based model

Figure 1: CIMO-logic framework (Denyer et al., 2008)



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**White papers:**  
 Industry research  
 Academic research  
 Surveys  
 Interviews  
 Case studies



## C.L.E.A.R. METHODOLOGY

CHALLENGE

STEP 1 - Know what issue you want to address

STEP 2 - Understand the direct and indirect impacts of the issue and specific solutions

STEP 3 - Understand the context you are addressing (e.g. homeowners; rentals; social housing; employees)

LEARN

STEP 4 - Identify the different groups you are targeting

STEP 5 - Understand the attitudes and motivations of each group and the benefits they seek

STEP 6 - Identify the types of appeals they best respond to

STEP 7 - Uncover the barriers preventing behaviour change

EXPRESS

STEP 8 - Highlight the integrated communication strategy to effectively influence attitude and behaviour change

ACT

STEP 9 - Test the strategy in a pilot test with a small group

REVIEW

STEP 10 - Use the data to continually refine, scale up and increase return on investment

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### WORKPLACE

Encouraging energy and waste efficiency behaviours in the workplace could save businesses £300 million a year and over 6 million tonnes of carbon (1). Large businesses could cut 15% of their bills through energy efficiency measures. Much of this can be done through behavioural factors in the business but there are few businesses trying to engage employees with only 23% of employees in a survey by the Carbon Trust having been asked to save energy in the workplace (6). The internal rate of return for energy efficiency in the workplace averages at 40%, which is significantly higher than normal returns from business investments that are usually 10-15% (6).

**"ONLY 23% OF EMPLOYEES IN A SURVEY BY THE CARBON TRUST HAVING BEEN ASKED TO SAVE ENERGY IN THE WORKPLACE"**

Incorporating energy into the daily practices of the business can help integrate the behaviour into the company culture. This will help prevent the behaviour from fading and help them become a habit. Strategies may be more effective if they are brought in from the top. Top management buy-in could be key in some cases for the successful implementation of behaviour change strategies. Not everybody speaks 'carbon jargon', including the most senior managers. Technical specifics are not likely to engage them, so present a case, including that of the consequences of inaction in everyday language and business benefits.

There can be a dramatic difference in energy use between different types of workplaces. In complex buildings it can be difficult for the average worker to often fully appreciate where energy is used and what the results are. This is why for energy consulting clients for example, Clarity have delivered sets of tools and campaigns to easily cut away or drill into the building visualise impacts in their type of building.

Another challenge for businesses is that people tend to work in silos and see others as a vehicle of change and don't necessarily take responsibility themselves. This is where leadership is important to encourage people to take ownership for their behaviours and the impacts. Make staff feel part of the change so they feel they are contributing. Show staff how they are part of the impact on the company performance and give them a sense of pride in both achieving this and the wider sustainability benefits of energy reductions.

**"Incorporating energy into the daily practices of the business can help integrate the behaviour into the company culture. This will help prevent the behaviour from fading and help them become a habit."**

### What can we do?

- Engage and educate employees for increased cost savings in the business
- Make energy efficiency part of daily core business practice to become a habit
- Identify someone to lead and manage strategies so it is effective for the long-term
- Get top management buy-in to help implement and enforce strategies
- Present a strong business case to get top management buy-in, in their language - £ not KW!

### What can we do?



- Understand the barriers that may prevent people from being energy efficient and address them head on
- Show people how their actions will have an actual impact in a relatable and realistic way
- Guide and support people in how to change their behaviours so they feel they have the ability to do it
- Think about who is sending the message and how people will react to it



- Tailor your interventions to be most appropriate for your communication strategy
- Find out which interventions your audience will respond to best
- Don't overload people with information, give them easy to understand bite sized nuggets
- Make your interventions fun, engaging and memorable
- Show people the direct link between their behaviour and energy use
- Choose the channel to communicate your message depending of your audience and the context they will be receiving it
- Use a champion as an example for people to learn from



- Use visible daily reminders to prompt the behaviour
- Tell people how they are performing through regular feedback that is relevant to them
- Show how a person's performance compares with others to encourage competition
- Use multiple interventions for more effective behaviour change



- Find a small group of people that represent your target audience
- Introduce them to your communication strategy
- Observe their reactions to gain insights
- Use a questionnaire to understand their attitudes towards the communication strategy



- Trail your strategy and scale it up for long term success
- Report your results regularly to the right people to show its impact and keep interest in energy efficiency
- Provide regular feedback to employees on the impact of their efforts towards energy efficiency in an easy to understand, visual way



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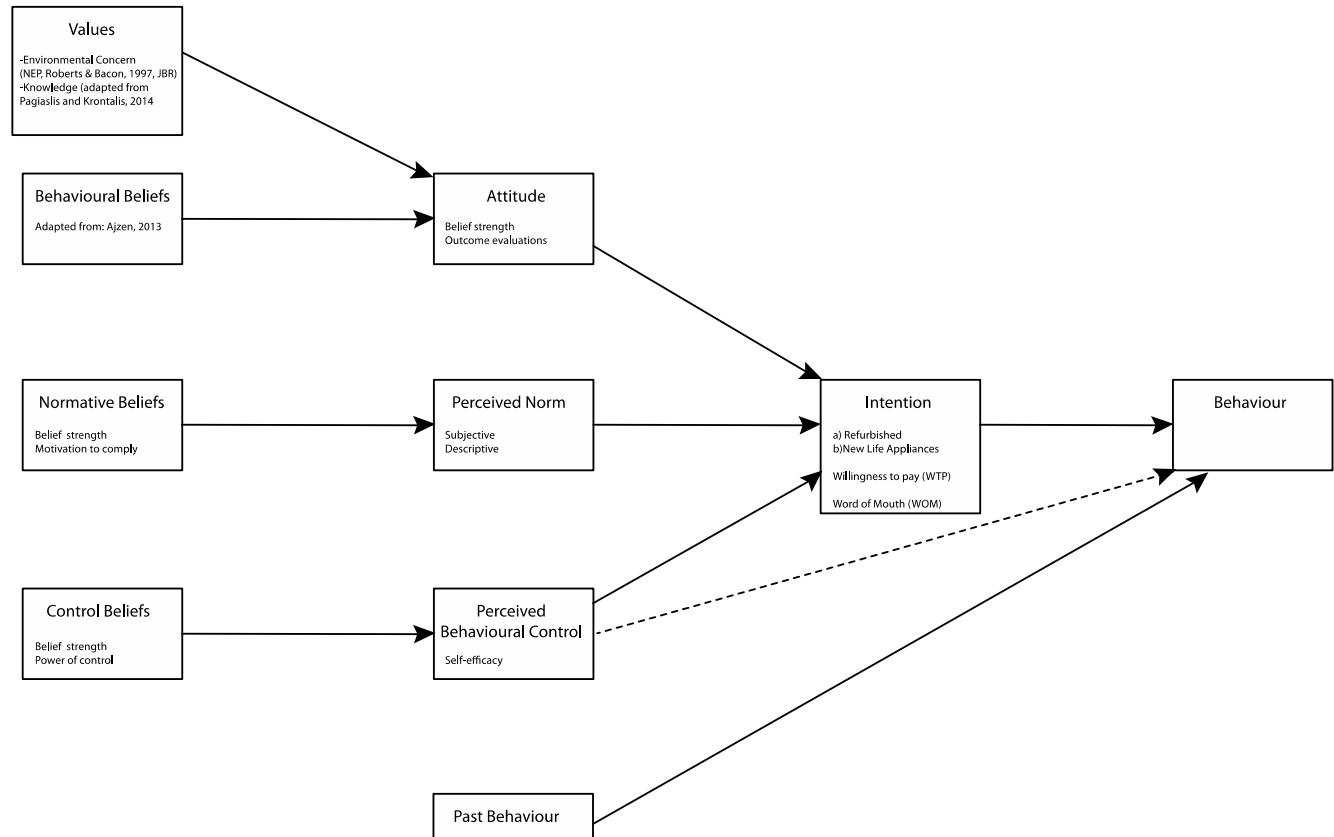
## Testing: NewLife Appliances

NewLife  
Appliances

- Environcom - remanufactured/recycled WEEE waste
- Member of Ellen MacArthur Circular Economy
- Selling white goods on Ebay and Amazon
- Launched New Life Appliances website
- The main issue they have identified is the need to change consumer perceptions around remanufactured goods and to increase awareness of the benefits



# Theory of Planned Behaviour (Ajzen, 1985)







## Market Research: Survey

- Problem wanted to address: perceptions around refurbished products
- Market research through online panel
- Test consumers' responses to different message appeals
- Randomising the offer that is presented in the surveys
- Contact 3 months later in a follow up survey
- Insights into the types of message appeals that are most effective
- Segmentation of the types of people who actually buy remanufactured white goods



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## Circular Economy Business Model

- Middle class consumption and urbanization continue to grow in developing world
- Business will struggle to meet demand
- Opportunity/importance of refurbished/leasing
- Need to shift consumer attitudes and behaviour towards more circular business models



## Next Steps: Research Directions

- Priming self-accountability will encourage pro-environmental behaviour change
- Anticipated guilt and pride with self-accountability will influence behaviours
- The social identity a person holds in the context they receive the communication will inform the type of message to use



## Next Steps

- Follow up survey from study 1
- More research into self-accountability (linking social identity; emotion; and the self)
- More testing on NewLife Appliances' communications  
Testing communication appeals for encouraging leasing of refurbished white goods
- Research into environmental issues and publishing white papers with Clarity Sustainability



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# Technical Seminar Series

30<sup>th</sup> April

Resource Efficient Manufacturing: An Exergy Based Approach, Sanober Khattak, De Montfort

4<sup>th</sup> June

Sustainable value creation in manufacturing through maintenance services, Maria Holgado, Cambridge

All at 16:00-17:00