

## Investigating the Effectiveness of Energymark

*Changing public perceptions and behaviours using a longitudinal kitchen table approach*

Energy Transformed Flagship

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**FLAGSHIPS**



# Background to the Project

Majority of Australians are concerned about climate change and GHG mitigation **BUT** they do not necessarily relate their own energy behaviours as being part of the problem

The step between concern and action can often be huge particularly with the presence of information asymmetries and lack of incentives

**Research Question:** How can CSIRO create national momentum around the topic of climate change and its relation to energy; that will change the way Australians think and act about energy and climate change mitigation?



Figure 1: Behavioural change model

# Creating Social Change

1. The need to reach people in a **safe environment**; people are anti major Government publicity campaigns, pro kitchen table discussions/workshops
2. Perspectives of participants involved in **deliberative processes** shift as they develop more informed opinions. In many cases this leads to a more positive attitude towards new technologies
3. **Trust in the messenger** is as significant as the message in shaping public perceptions
4. A lack of knowledge exists in communities about energy technologies and their relationship to greenhouse gas emissions and there is a clear need and demand for **education at all levels**
5. People want **balanced, accurate information** which is independent and credible
6. **Engagement** is a way to develop leaders within the community to move the debate forward

# Foundations to Our Engagement Approach

## Essential Engagement Principles

**Inclusiveness** - recognising that effort, acknowledge and incorporate ideas and perspectives

**Mutual respect** - provides the opportunity to explore, listen and understand different viewpoints, values and beliefs by encouraging others to share their experiences

**Transparency** - the open sharing of and access to information

**Mutual responsibility** and **accountability** - actively contribute to building a better solution, define boundaries and expectations helps to build confidence in the participants about the process

**Adequate resources** - confirm the overall commitment to the process

**Mutual trust** - trust is crucial if real outcomes are going to be achieved from any engagement activities

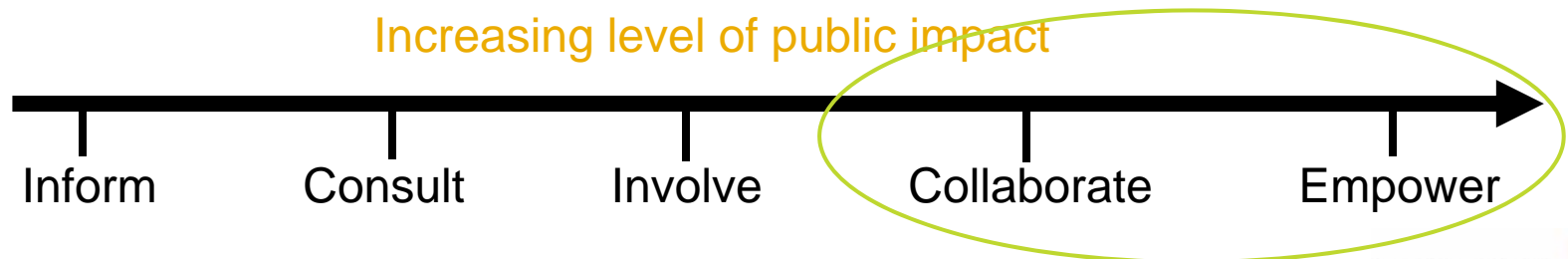


Figure 2: IAP2 Engagement Continuum

# Theoretical Framework

- Social Identity Theory (Tajfel and Turner, 1986)
- Small Group Dynamics (Campion, 1986)
- Social Network Theory (Wasserman and Faust, 1994)
- Cognitive dissonance theory (Oskamp, 2000)
- Theory of planned behaviour (Ajzen, 1989)
- Theory of reasoned action (Ajzen and Fishbein, 1980)
- Theory of consumer uptake and societal acceptance (Niemeyer, 2004)

# Energymark

- is a new concept for **brokering public dialogue** about the role that individuals can play in moving towards a new energy future
- is based on the concept that behavioural change requires both **knowledge interventions** (to change attitudes) and **policy interventions** (to incentivise action)
- **addresses the knowledge intervention stage** in order to influence attitudes, intended and actual behaviours (Figure 1)



Figure 1: Behavioural change model

# Energymark

Brings together small groups of people to discuss climate change, energy technologies and behaviour

The benefit of the process is twofold:

- ensure a coordinated approach to researching public perceptions to energy technologies across Australia
- engaging the public in this way ensures the information will be translated into action by individuals within their local communities

## Session Topics

### THE BIG PICTURE

**Session 1:** Demystifying climate change

**Session 2:** Energy and climate change

### A PORTFOLIO OF SOLUTIONS

**Session 3:** New and existing fossil fuel technologies

**Session 4:** New and existing renewable technologies (part 1)

**Session 5:** New and existing renewable technologies (part 2)

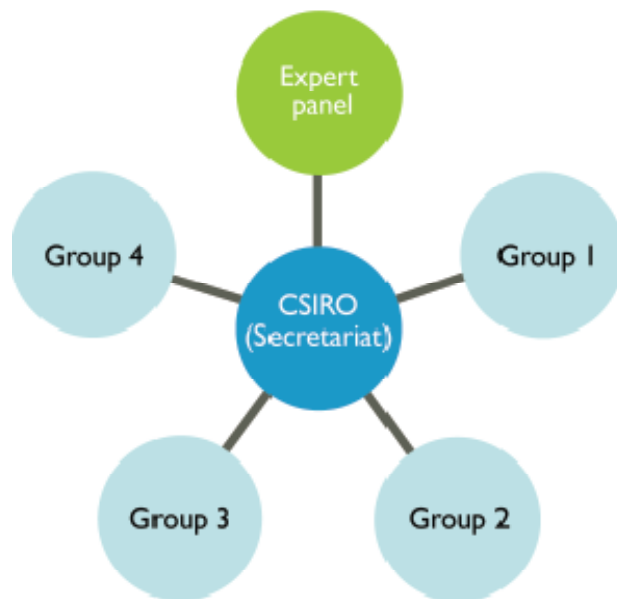
### BRINGING IT HOME

**Session 6:** Addressing energy and climate change in homes and businesses

**Session 7:** Addressing energy and climate change in the community

**Session 8:** Transportation

# Energymark



## The Expert Panel

- Defines a standardised topic sequence
- Approves information
- Safeguards process legitimacy

## CSIRO (The Secretariat)

- Facilitates questionnaire completion
- Evaluates questionnaire responses
- Provides standardised, balanced information for a sequence of defined topics
- Supports the group convenor
- Evaluate convenor responses

## The Group Convenor

- Coordinates discussion group
- Facilitates information flow
- Provides a written summary of each discussion

***The group convenor role is crucial to the success of the project***

Figure 3: Roles within *Energymark*

# Energymark

## Group convenors

- individuals who volunteer to bring together a small group of people, for example, family, friends, neighbours, and workmates
- organise and manage the meetings of their group and provide the link back to the project Secretariat.
- conduit for information/data and at the end of each session send a one page summary of the discussion results.
- are best to have some interest in the topic and may be recruited through a variety of methods including: word of mouth, through local interest groups, non government organisations or through advertisements in local newspapers and other media.

# Methodology

## Longitudinal design, mix methods

- Pre, interim and post questionnaires
- Carbon footprints, energy audits and Action Plans (T1 & T2)
- Social Network Analysis (T1, T2 & T3)
- Qualitative data (8 convenor summaries & open ended survey questions)

Location	State	Number of Group Convenors	Recruited from	Number of Network Members
Newcastle	NSW	12	Community + U3A	172
Sydney		3	SIFE	150
Brisbane	QLD	1	SIFE	50
Gold Coast		1	SIFE	50
Perth	WA	18	Community	180
Adelaide	SA	9	Community	90
Melbourne	VIC	3	SIFE	150
<b>TOTAL</b>		<b>47</b>		<b>842</b>



# Current Findings

## Preliminary Quantitative Results: Questionnaires

Participants' mindsets are increasingly climate friendly as they progress through Energymark. Significant, positive shifts were found on measures of, or relating to, the following:

- Environmental beliefs
- Changes in knowledge (self-rated) of climate change mitigation
- Changes in attitudes toward climate change topics
- Changes in behavioural intentions

## Further information searches

- The results indicate that on average participants' had sought further information from their colleagues and the internet

## Preliminary Quantitative Results: Carbon Footprints

On average:

T1: annual individual carbon footprint was approx. 20t CO<sub>2</sub>-e

T2: 12.5t CO<sub>2</sub>-e by the end of the program = 37.5% reduction

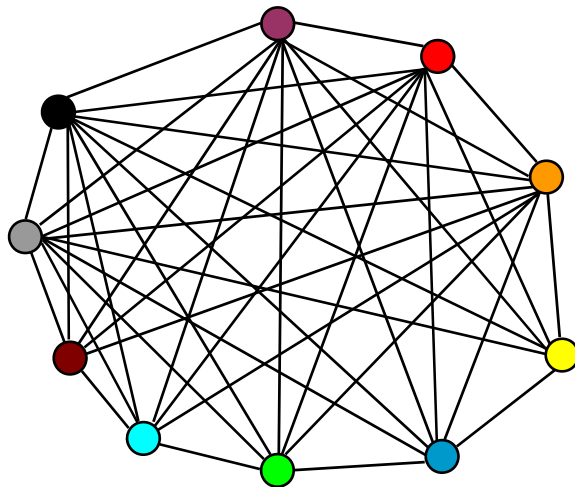
# Current Findings

Session 1

(T1)

## Quantitative Results: Social Network Analysis

Where does  
the information  
go?



At the beginning of the process each node is actively communicating with all the actors in the network

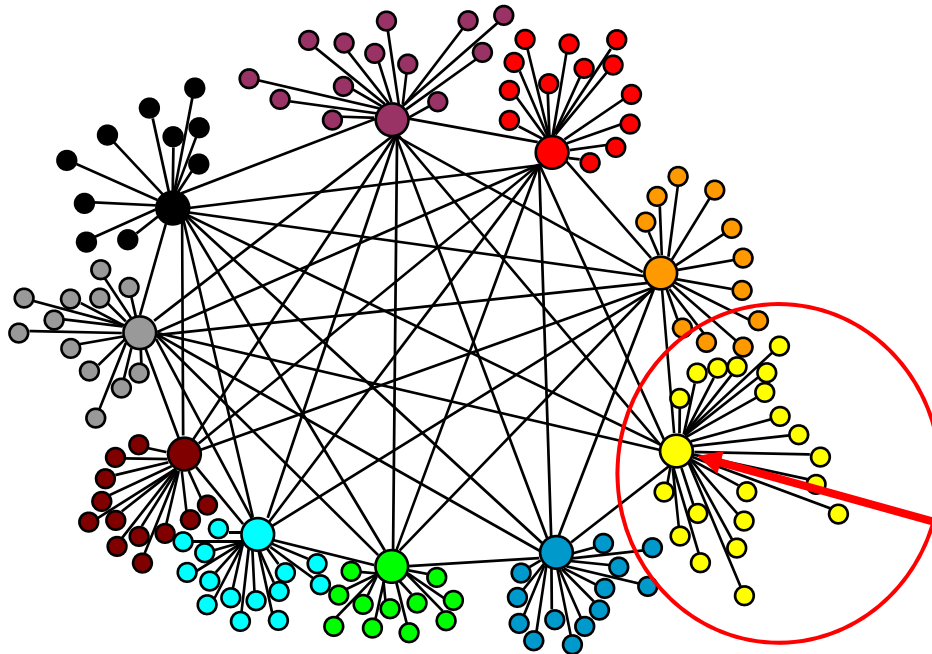
Density = 1

# Current Findings

Session 4

(T2)

## Quantitative Results: Social Network Analysis



Useful tool in the quantifying of impact and identifying potential group convenors

This node has already communicated with 20 actors by the middle of the Energymark process

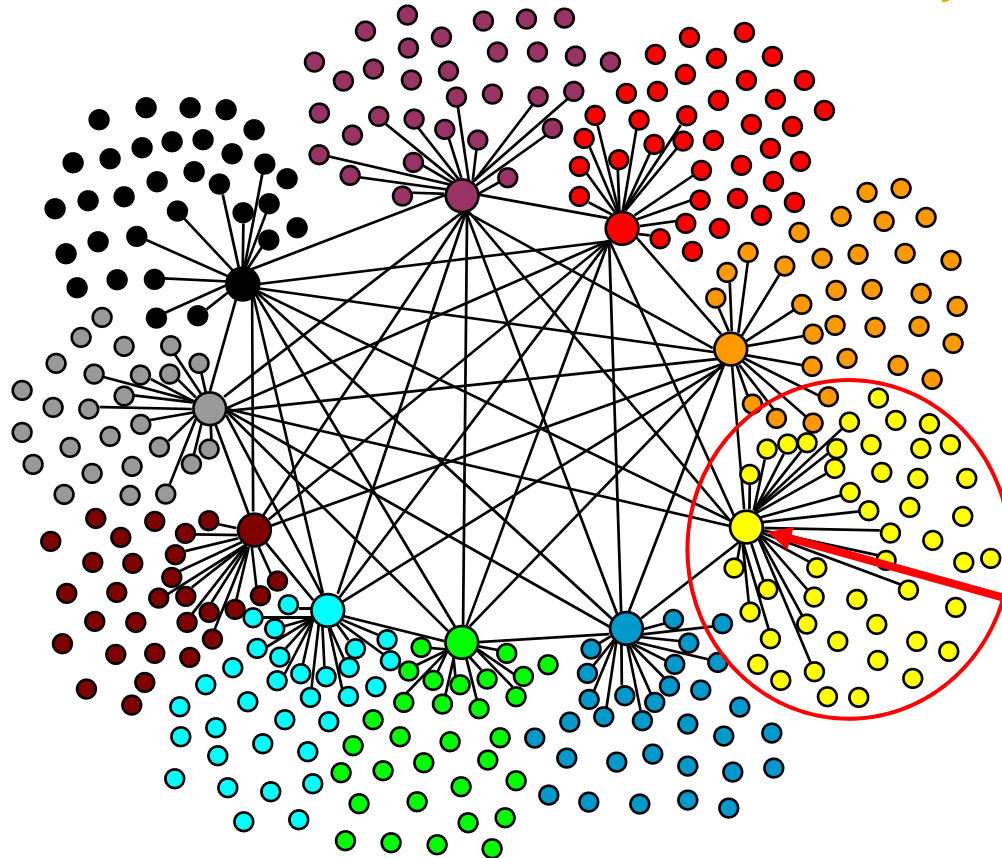
By the 4<sup>th</sup> session, each node has communicated/discussed about Energymark to an **average of 13 additional actors** external to their Energymark network

# Current Findings

Session 8

(T3)

## Quantitative Results: Social Network Analysis



This node has communicated with 45 actors by the end of the Energymark process

By the 8<sup>th</sup> session, each node has communicated/discussed about Energymark to an **average of 34 additional actors** external to their Energymark network

# Current Findings

## Qualitative Results: Session Reports and Open Ended Survey Questions

### Range of responses on the discussion summaries:

- Climate change (attitudes, values, beliefs)
- Energy technologies (fossil fuel, CCS, renewables)
- Behaviours (individual, household, work, community, national, global)

### Key Triggers to behaviour change

- Family (children and their future)
- Economic benefits
- Social pressure
- Environmental and community concern

### Barriers and challenges to behaviour change

- Economic
- Education and/or information (inadequate)
- Trust and individual impact
- Personal or cultural reasons
- Political barriers
- Living arrangements
- Physical and structural issues

# Learning

## What we have learnt so far from the trial process:

- Need for re-development of the materials
- Developed to suit business/industry stakeholders
- The process of recruiting group convenors
- Need to have the local government agency in support
- Essential to have a local phone number and staff member
- Work in collaboration with existing programs to enhance both
- The Energymark process can transcend cultural barriers

# Conclusion

## Benefits of Energymark:

- Creating momentum at a national level and attempting to collaborate with existing programs to enhance the measurement of impact
- Ability to bring about large scale behavioural change
- Ability to track changes in public perceptions
- The impact of information on public perceptions
- Measurable up take
- Way to engage mass numbers more readily in the debate
- Involving individuals and communities in the decision making process
- Information for policy makers, industry and technology developers

# Example of Energymark in Action



*For interest in this project or possible collaboration, please contact:*

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Energymark website: [www.csiro.au/science/EnergymarkTrial](http://www.csiro.au/science/EnergymarkTrial)

www.csiro.au

Thank you

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