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**Programme Area:** Smart Systems and Heat

**Project:** Consumer Response and Behaviour

**Title:** Provisional Consumer Segmentation

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**Abstract:**

This report was prepared for the ETI by the consortium that delivered the project in 2013 and whose contents may be out of date and may not represent current thinking. This presentation was an interim outputs which set out the approach taken, and proposed the segmentation to be used in the pilot study. This provisional segmentation was reviewed and refined through the project, and a final segmentation report was produced in 2013.

**Context:**

The delivery of consumer energy requirements is a key focus of the Smart Systems and Heat Programme. The Consumer Response and Behavior Project will identify consumer requirements and predict consumer response to Smart Energy System proposals, providing a consumer focus for the other Work Areas. This project involved thousands of respondents providing insight into consumer requirements for heat and energy services, both now and in the future. Particular focus was given to identifying the behaviour that leads people to consume energy - in particular heat and hot water. This £3m project was led by PRP Architects, experts in the built environment. It involved a consortium of academia and industry - UCL Energy Institute, Frontier Economics, The Technology Partnership, The Peabody Trust, National Centre for Social Research and Hitachi Europe.

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**ETI CRaB Deliverable D5.1(i)  
Provisional Customer  
Segmentation**

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**Tuesday 13<sup>th</sup> November 2012**

## **Agenda**

- Introduction and background
- Approach and rationale
- Segmentation attributes
- Provisional segmentation
- Application of the segmentation
- Limitations and expected changes
- Conclusions



## Project Context



- 5.1b aims to segment consumers to achieve pragmatic smart energy solutions;
- Three stages:
  - **Provisional segmentation** based on past work and expert knowledge;
  - **Stage 2 segmentation** after 5.4 (Field research 1);
  - **Final segmentation** after 5.7 (Field research 2);
- Final segmentation could reclassify earlier findings;
- Basis of segmentation can evolve (e.g. technical/geodemographic to research-based);
- This presentation concerns the **provisional segmentation**.

## Inputs so far

- **Consideration** of existing segmentations;
- **Consideration** of options;
- **Exploration** of availability/suitability of external data sources;
- **Discussion** with consortium and stakeholders:
  - 5.1 and 5.2 kick-off workshops;
  - Project team meetings;
  - 5.1 and 5.2 team discussions.



# What is Customer Segmentation?



- People **acquire** and **use** solutions;
- People are at the heart of a Smart Energy Solution;
- Segmentation **defines, sub-divides** and **groups**;
- Based on similar **needs, wants** or **demands**.

# Approaches to segmentation

- We considered three approaches:
  - 1. Ground-up development:**
    - Technical segmentation (theory-based);
    - Consumer-based segmentation (data-based);
  - 2. Use an existing segmentation:**
    - Academic or project (e.g. ETI TE);
    - Commercial (Experian, Acorn, etc.);
    - Energy supplier;
    - Other (DEFRA Green Behaviours, EST, etc.)
  - 3. A hybrid approach**





# Evaluation of approaches

## 1. Ground-up:

- **Approach:** start with expert understanding, develop this with further research data;
- **Verdict:** the first part is feasible, the second part (data) is not.

## 2. Existing segmentation:

- **Approach:** use existing segmentation, refine throughout project;
- **Verdict:** no suitable segmentations for our specific need;

## 3. Hybrid approach:

- **Approach:** use elements of both above, combine available information sources to develop provisional segmentation;
- **Verdict:** recommended approach for this project

## Segmentation: Chicken and egg...



- **Problem:** segmentation *should* be based on data, **BUT** we need a segmentation to guide research;
- **Solution:** develop provisional segmentation to guide sampling and data collection;
- In the remaining slides we will:
  - Present segmentation attributes;
  - Describe the provisional segmentation;
  - Share our vision for use and evolution;
  - Highlight the limitations.



## Attributes as drivers and moderators



- Starting point is a list of relevant attributes;
- Attributes categorised and placed in 15 groups;
- “Needs” categorised as **moderators** – they determine direction and magnitude of drivers;
- The 14 other attributes are **drivers** – they influence behaviours and capabilities;

# Drivers



1. Family Type



2. Children



3. Occupancy



4. Home Triggers



5. Socio-demographics



6. Household



7. Life triggers



8. Pace of life



9. Pattern of life



10. Tech Savvy



11. Control



12. Fuel poverty



13. Property type



14. Marketing

# Provisional Segmentation



- Provisional segmentation based on two primary drivers:
  - **Family type;**
  - **Children;**
- Currently have **relevant** attributes but unclear on **salience**:
- Based on variance of a small subset of attributes;
- We chose these drivers because:
  - They have a relationship with energy use;
  - Data can be obtained relatively easily;
  - Majority of UK population covered without prejudice.

# Provisional Segmentation

P1



- Adults: 2+
- Children: 0+
- Sharers

P2



- Adults: 1-2
- Children: 0
- Age: <60
- Singles/Cohabitors

P3



- Adults: 2
- Children: 1-2
- Married/Cohabitors

P4



- Adults: 2
- Children: 3+
- Married/Cohabitors

P5



- Adults: 1
- Children: 1+
- Single Parents

P6



- Adults: 2+
- Children: 0+
- 2+ generations of related adults

P7



- Adults: 1-2
- Children: 0
- Age: 60+
- Singles/Cohabitors

## How the segments will be used

- Development and application of research design/methods (5.2):
  - Basis for **quota sampling** (5.4);
  - Guide **data collection** requirements (e.g. topics) (5.4);
- Structure analysis of **external factors** (5.3);
- Structure early stages of **solution scenarios** (5.5) and **consumer response model** (5.6)



## Fieldwork application

- Fieldwork needs to provide data to transform segmentation from **demographic** to **needs-based**;
- Plan data collection according to anticipated needs;
- Broad definition of needs:
  - From “essential for life” to personal preferences;
  - Needs can exist with or without awareness;
  - Might relate to personal needs, social norms or expectations or set standards (e.g. regulators);
  - Personal or vicarious (for someone else);
  - Individual needs and order of priority important.

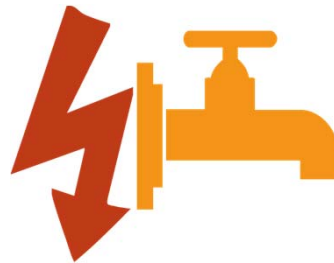


# Categorisation of needs



## A - Wider implications

- A1. Save the world
- A2. Save the country
- A3. Save my community



## B – Resource related

- B1. Save money
- B2. Avoid waste
- B3. Self sufficiency



## C – Quality of life

- C1. Save money
- C2. Aesthetic appeal
- C3. Easier life
- C4. Confidence in technology
- C5. Entertainment
- C6. Happiness



## D – Social needs

- D1. Self-image
- D2. Social interaction

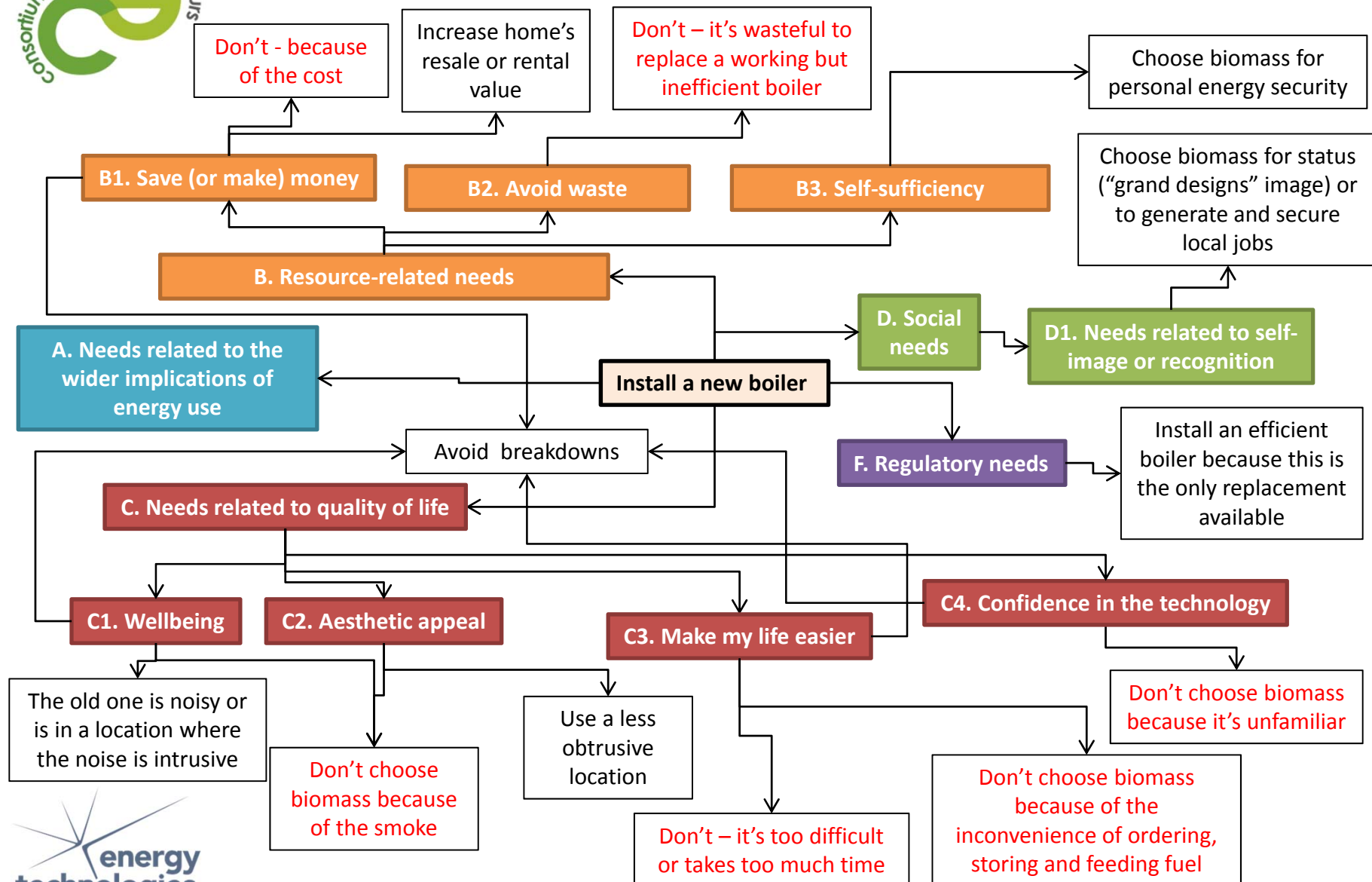


## E – Mobility



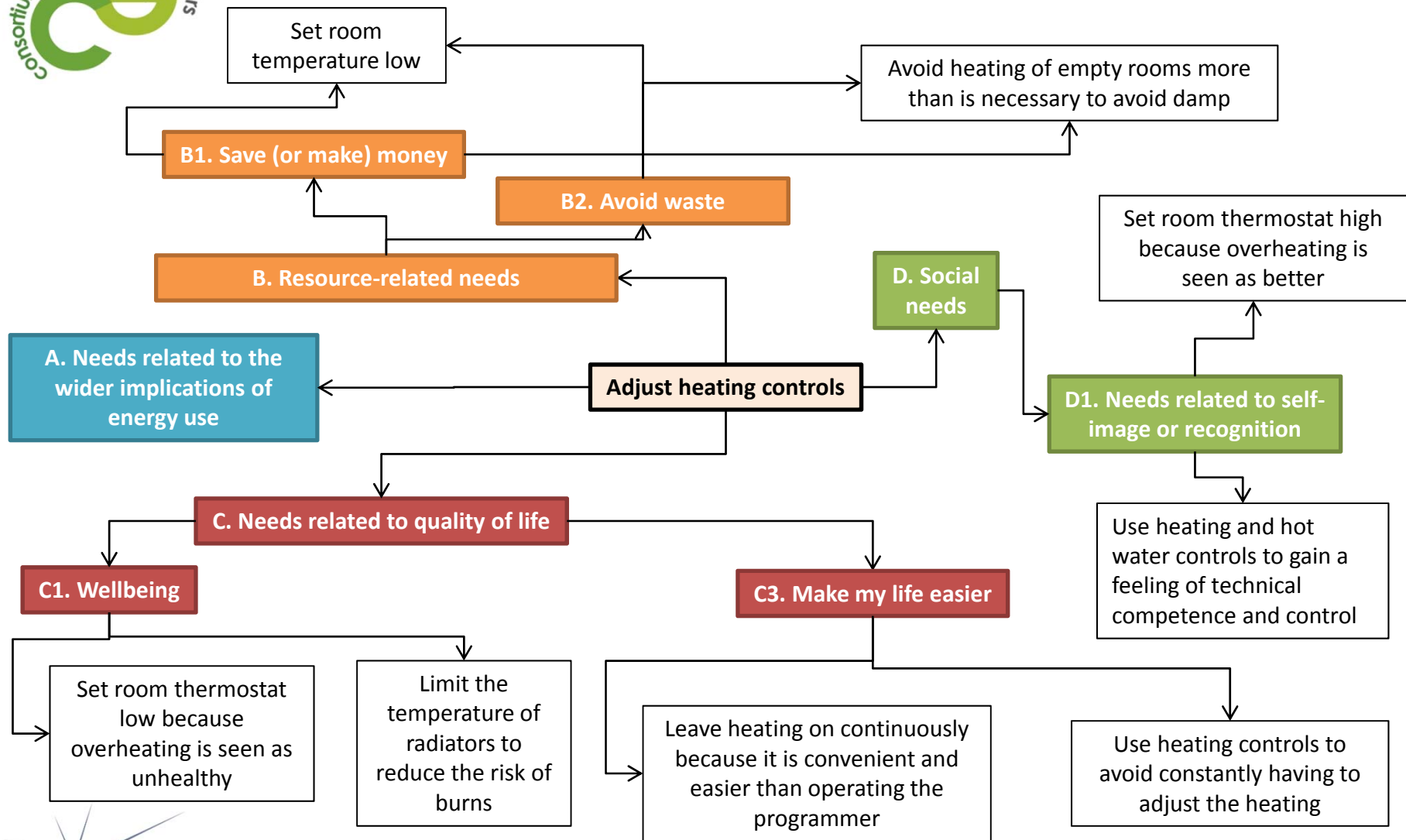
## F – Regulatory needs

# Needs and behaviours – example 1

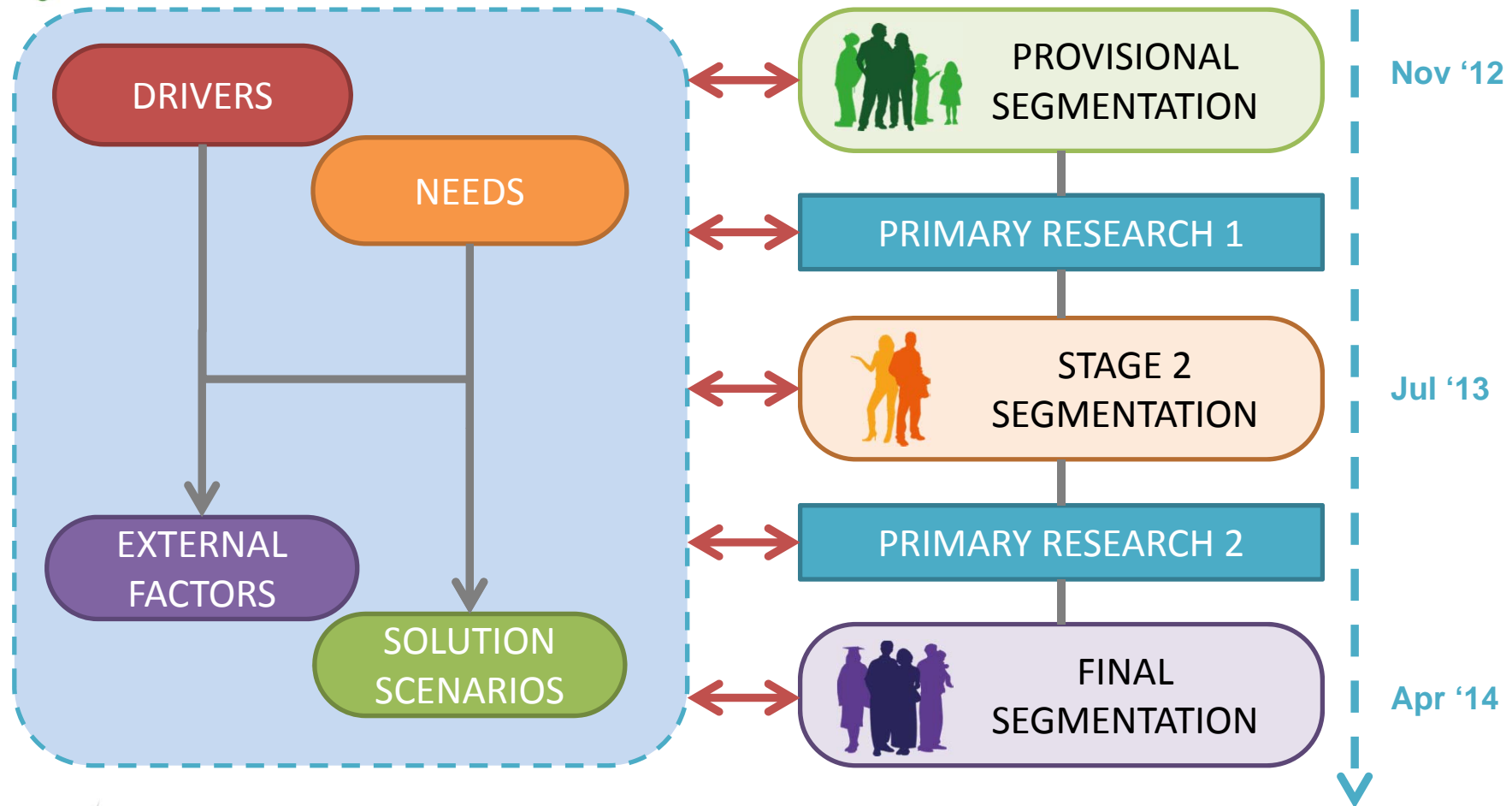




# Needs and behaviours – example 2



# Segmentation Evolution



## Limitations and anticipated changes

- Based mainly on **expert knowledge** and **literature review**;
- Stage 2 needs to shift from **demographic** to **needs/behaviour** basis;
- Other potential changes:
  - Understanding of needs;
  - Understanding of external factors;
  - Understanding of solution scenarios;
- Limited sample size may limit scope of stage 2 segmentation;
- More relevant to current consumers than 40 years into future;



# Dependencies throughout project



- **Functionality and benefits of solutions** are well described and clearly aligned to **needs attributes**;
- **External factors** are well described and clearly aligned to **relevant attributes**;
- Outputs from other WPs are **timely** and **fit for purpose** to allow further refinement of segmentation .



## Conclusions

- A segmentation has been proposed that **meets project needs**;
- The segmentation **can evolve** based on data from field research;
- The segmentation encompasses the **majority of the current and future UK population**;
- With agreement of this presentation we can proceed with:
  - Definition of 5.4 sampling strategy;
  - Alignment of external factors;
  - Definition of solution scenarios;
  - Development of consumer response model.

# Thank You

