### The High Streets Task Force

### An overview of the High Streets Task Force for England

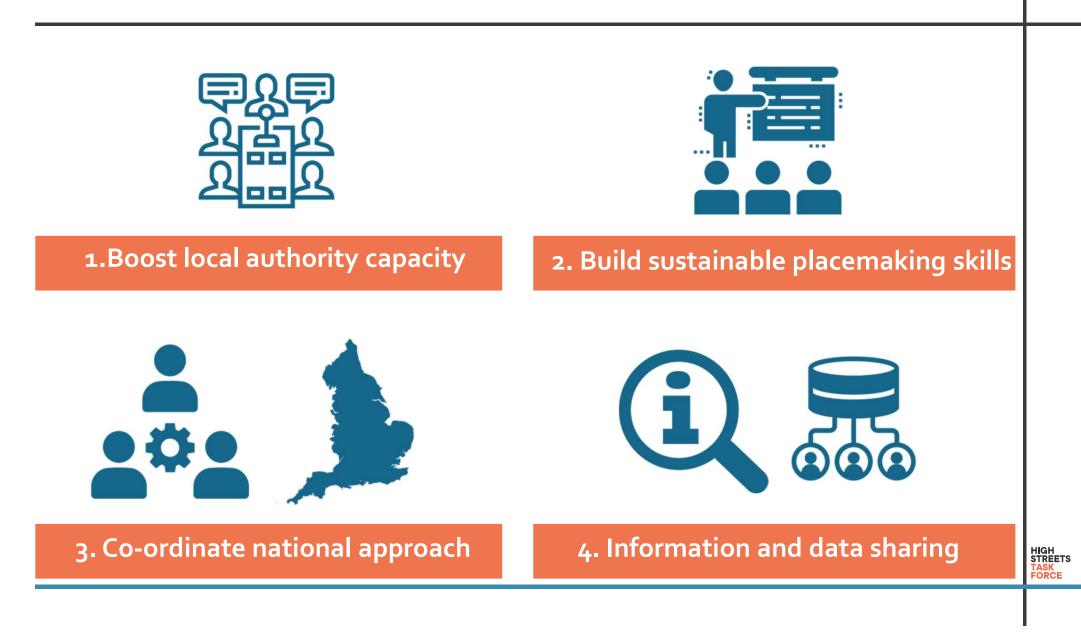
www.highstreetstaskforce.org.uk



HIGH STREETS TASK FORCE

### The Task Force

An alliance of place making experts supporting communities and local government to transform their high streets.











Developing Place Leaders

**Developing Place Analysts** 

Webinars

### Building sustainable placemaking skills



**Placemaking Programme** 

**Online Learning** 









#### Dashboards

### Information and data sharing



Professional, research and data group



Place capacity mapping





## Towards a Citizen-Centric Smart City

USING CO-CREATION TO DEVELOP SMART SOLUTIONS TO PLACE-SPECIFIC URBAN CHALLENGES

Dr Regine Sønderland Saga

## The Smart City

- Population growth and urbanisation
- Environmental challenges and efficiency opportunities
- Smart Cities addressing the challenges and opportunities

#### Aims:

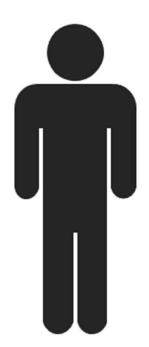
- $\circ \downarrow$  Energy consumption
- $\downarrow$  Carbon emissions
- 个 Quality of life

## Why a citizen-centric focus?

- Inevitable dawn of smart technology
- Citizens are key stakeholders in the smart city
- Big data and speculative futures
- From top down to people-led and inclusive solutions

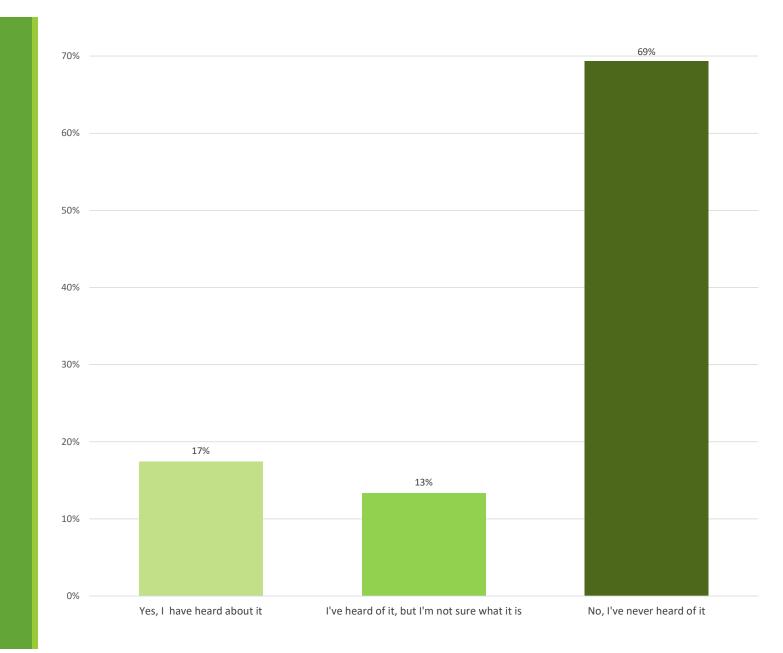
**Research problem:** 

 Socio-technical challenges to integration of ICTs and technology



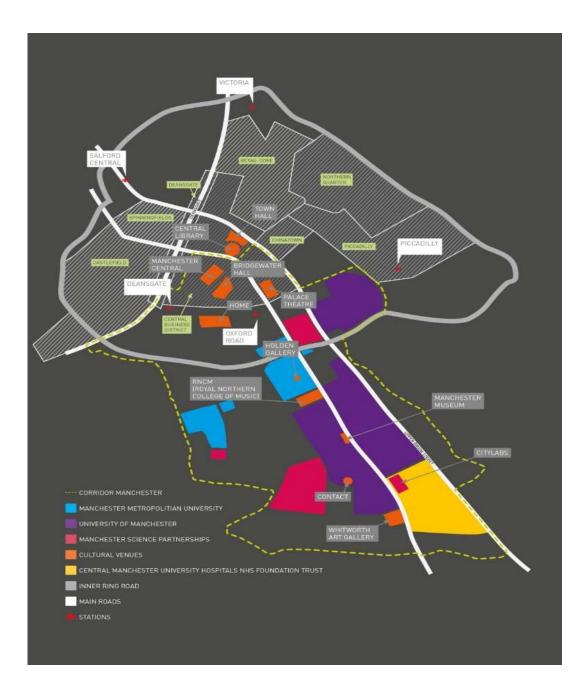
# Awareness of the Smart City

- Two-thirds unfamiliar
- Then what about broader public?



### Student citizens in Manchester

- Smart City district: Oxford Road Corridor
- Universities as analogues to the Smart City
  - Universities as living labs and test beds
  - Platform for collaboration
  - Educators of tomorrows leaders
- Digital natives and early adopters
- Digitally enabled and technoliterate
- Life changing event
- Unexplored population



# Birley Fields Campus

## Why Birley Student Living

#### Halls

#### **Townhouses**

- 2 blocks, 37 flats
- 8 students per flat
- 3 blocks, 56 flats
- 12 students per flat

- In the Oxford Road Corridor a Smart City District
- Built to high Energy Performance Standard
- Multiple replicates of flats with identical energy demand
- Students do NOT pay bills
- Real time energy monitoring at flat level
- Only variable in determining actual energy use = occupant behaviour

### The Landlord-Tenant Split Incentive Scenario

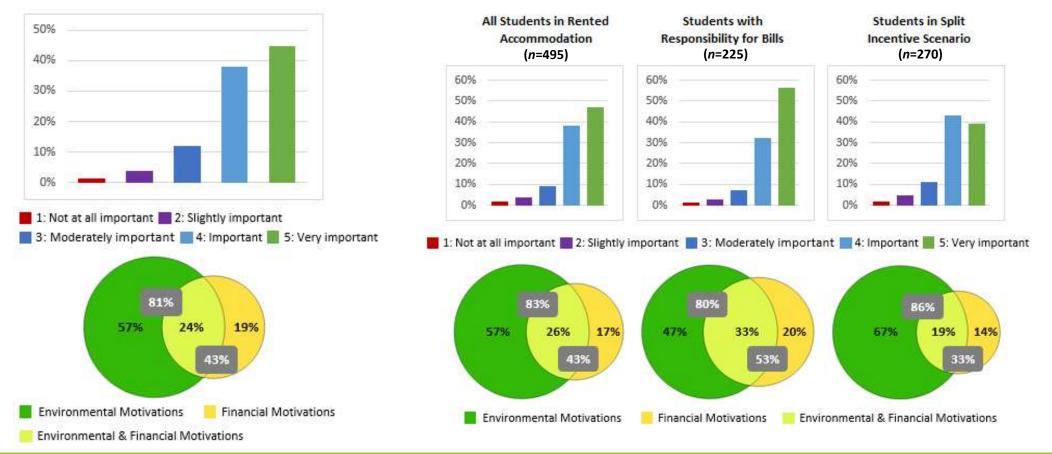
**Tenant** pays energy bills

Landlord has no incentive to improve energy performance of building

Landlord pays energy bills Tenant has no incentive to reduce energy use Objective: Explore the potential for smart solutions to encourage energy savings in a split incentive scenario

### How important do you think it is to save energy?

#### All Students (n=1007)



### Cues, context, challenge

#### Seeing my real-time energy use would encourage me to conserve energy because...

"...if I had a little progress bar that told me how much i was using I'd be much more aware of and able to prevent my energy wastage"

- "...if I knew the average amount that a person was using and I was using more, I would want to cut down."
- "...I'm quite competitive so I'd probably be trying to beat my daily best for less consumption"

"...gamification [...] would make it easy to turn the abstract concept of saving energy into a tangible concept and remind you how much you should / shouldn't be using"

#### Having a smart meter or monitor didn't encourage me to conserve energy because...

"...[it only showed] numbers I don't understand and didn't really have a severity level (showing what's good, bad and average)"

"...it tell [sic] me what it's currently using however it should also come up with [a] message [...] warning when I'm using more than average amount daily or weekly. Just because it displays numbers doesn't mean anything."

#### Having a smart meter or monitor did encourage me to conserve energy because...

"...[it displayed a] smiley face and a green background when we used little energy"

"...it would show how much energy is being used in the household at that time represented by colours; green, orange and red. When it is red or a large amount of orange it encourages us to use less energy, by switching things off or using them for a short amount of time."

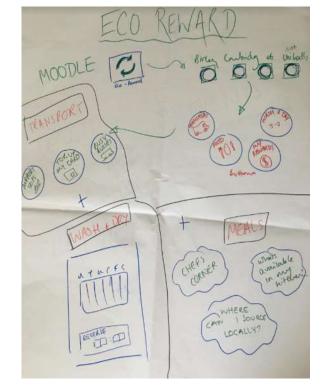
"...it reminded me of how much energy I have used and how much I have saved from previous day or week"



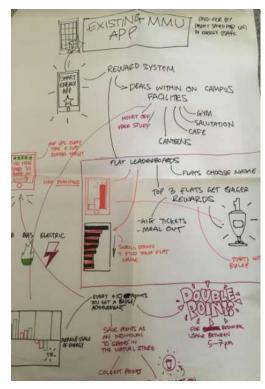
If you were to design a smart solution to encourage students to save energy in the flats and town houses at Birley Fields campus, what would it look like?



Team 2: Eco-Students

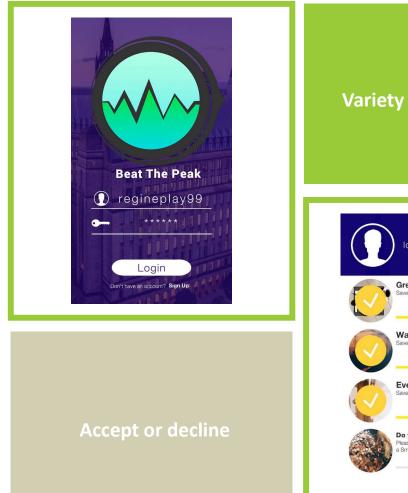


Team 3: OMIE



### The Innovation Challenge (n=13)

Apps and dashboard solutions



#### Variety of missions



### Focus Groups

(n=49, split between 8 groups)

- Colours and design
- Language
- Information
- Tips
- Leader boards and competition
- Rewards and incentives

## Conclusions



A call for **more visible smart cities** that include citizens in the **co-creation** of solutions to urban problems.



**Environmental drivers are the dominant motivation** for students to conserve energy, also in split incentive scenarios.

Encouraging indications that provision of **contextualised and real-time energy information using intuitive visual cues and gamification** could potentially change student energy behaviours.