

Different Dimensions to Consumer Behaviour in Smart Sustainable Cities

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Why are we here?

At the core of a smart and sustainable city is...

A person with various wants, needs, peculiarities and likings.

What can we do to make that person behave in a more sustainable manner?

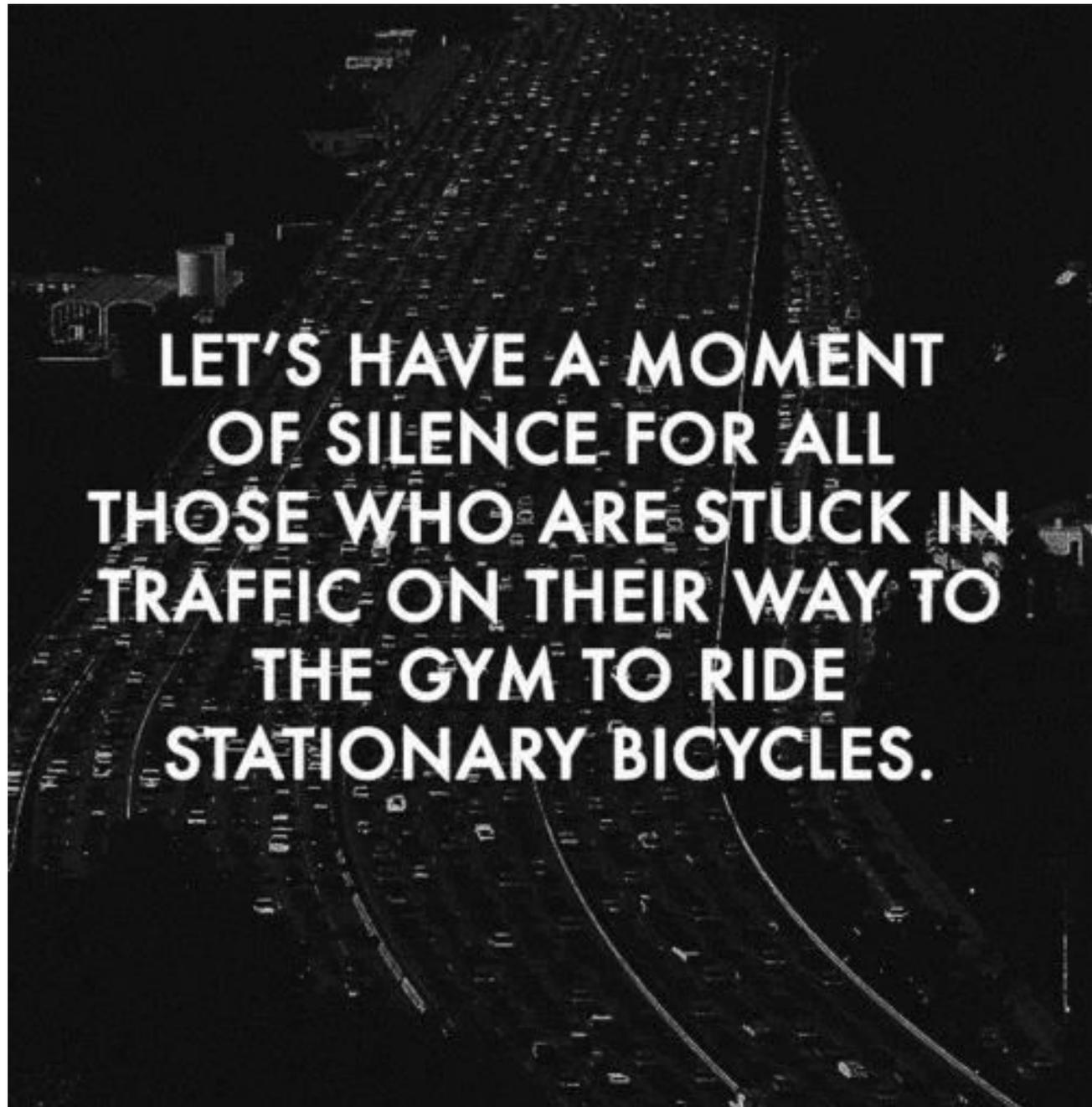
Oh, behave!

1. The basics of pro-environmental behaviour
2. What to consider when aiming to promote energy efficient behaviour from the consumer's point of view?
3. Mobility behaviour in cities



**How do you travel to your
university? To hobbies?**

Why?



Pro-environmental behaviour

Although it has been shown that overall attitudes towards the environment are positive, there is a clear **discrepancy between attitudes and actions**

- A positive attitude does not always lead to pro-environmental behaviour

Pro-environmental actions require not only knowledge and skills but also **motivation**

- According to surveys, a majority of Finns think they are well acquainted with the main environmental problems and their causes. But in addition to knowledge, one needs the skills to act differently and most importantly the motivation to do so.
- Worth finding ways to motivate behaviour change among those whose motivation for behaviour derives from non-altruistic values (e.g. money, social pressure, enjoyment, e.g. you can save money, you can boost your image or enjoy beautiful views)

Pro-environmental behaviour

”Information deficit model”

The belief that by providing enough information on e.g. the climate change people will change their behaviour

WRONG.

Studies have shown that information can change attitudes but alone rarely leads to behaviour change.

Also – behaviour can change without changing attitudes

- Economic incentives, legislation
- Pro-environmental behaviour can also be promoted via other values besides environmental ones (e.g. healthy lifestyle, economic values, comfort)

Pro-environmental behaviour

Why aren't we rational actors when it comes to the environment?

- **People are not rational, we are driven by an array of different interests which guide our behaviour**
- **The impacts of our behaviour** are difficult to assess
 - e.g. the impact of recycling one's own waste to overall waste accumulation
- **Individual benefits** are also hard to assess (e.g. lowered waste collection fees)
 - when it comes to public goods, the causality between one's pro-environmental behaviour and the impact may be vague and open to various interpretations

...For the consumer, there might not be enough information available to form rational decisions.

...And even with enough information, there might still not be means available to choose differently

....Also we do like our comfort zone

Pro-environmental behaviour

Values, attitudes and habits

Values:

What we consider as important and desirable

Usually very stable and difficult to change

Pro-environmental behaviour guided by e.g. following values:

altruistic, economic, family-related, comfort-orientated

Attitudes:

Tendency to act positively or negatively to a particular thing, person, event or a situation

Usually depends on the context, i.e. a person's attitudes can change depending on the situation

A change in attitudes requires usually concrete tools to actualize the change

Habits:

Guide our behaviour very strongly

Usually subconscious and their effects are not well known

Habits are formed in a complicated process governed by e.g. norms, cultural, social and economic factors, personal qualities, beliefs, peer behaviour etc



Pro-environmental behaviour

Values, attitudes and habits

... Pro-environmental behaviour cannot be explained by values, attitudes, goals or motivations alone



Contextual factors are very important

Contextual factors:

- gender
- age
- education
- where you live
- financial situation
- culture
- politics etc



Reducing energy consumption via behaviour change

- It has been estimated that via small changes in **consumer energy consumption** could be lowered by 10 – 15 %
- Changing energy consumption patterns a complicated equation of different internal (attitudes, beliefs) and external variables (e.g. financial situation)

*Traditionally the focus has been on technology,
not energy end users.*

However:

*Any technological energy efficiency improvement works best when
taking into consideration behavioural aspects too*

Why is it so darn difficult to save energy?

- Energy use is largely **invisible** in one's day-to-day actions
- Energy consumption is often **not a conscious process** but a result of actions
- **Habits and customs** are often automated, subconscious processes
- Rational choice is largely an illusion
- **Group pressure**
- **Operational environment guides our behaviour** – this environment does not always support energy efficiency
- A feeling of **powerlessness** very common, "a drop in the ocean"

Reducing energy consumption via behaviour change

The problem: the discrepancy between attitudes and behaviour

- We tend to choose the most convenient energy option to us although it is not the most rational one or costs us a lot of money
- We do this although we are aware of the environmental impacts of our energy choices

...To change this, incentives are needed, barriers to behaviour change need to be removed and default behaviours need to be changed. Providing information is simply not enough!

... energy consumption needs to be made more visible & concrete

...better default behaviours need to be promoted

...pricing mechanisms need to be utilized and incentives designed

...communication needs to be targeted to different energy end-user groups

...peer pressure: "You do what your neighbours do"

When it comes to energy, one must always remember the end-user's point of view and work from there with a variety of measures.



Reducing energy consumption via behaviour change

- Legislation, directives, incentives
- Social pressure
- Communication
- "Nudging"
- Feedback
- Immediate benefits vs. future rewards



Sustainable mobility behaviour

- Choices, choices!

People tend to choose **the most suitable travel option**. A variety of factors determine our preferred choice of travel mode.

- Comfort
- Time consumed
- Quality of service/roads etc.
- Travel cost
- Availability
- Habits, attitudes, prejudice

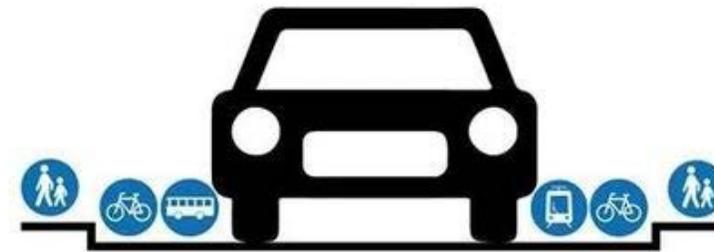


Barriers to sustainable mobility

Contextual factors

- Land use and urban design
- Structural (e.g. culture)
- Policy environment (e.g. legislation, incentives)

Individual mobility behaviour



How most traffic engineers see your city



How cities should be designed

How to motivate people to change their transport behaviour?

Changing people's transport behaviour is not easy. However, following strategies show promise according to research:

- **Change the angle**
 - People tend to be more concerned about their health than the environment → Underline the health benefits
- **Make it into a norm**
 - People are prone to do what is expected from them → make cycling, public transport and walking the new normal
- **Make it easy**
 - People won't change their behaviour, if it's somehow difficult → make the change easy
- **Make it social**
 - People like to compare themselves with others and do things together
 - People tend to trust their friends, neighbours, family (i.e. their peers)
- **Break the habits** → Try to introduce a change in daily commuting habits
- However – don't forget **contextual factors!**



How to motivate people to change their transport behaviour: Campaigns

Traffic campaigning is a common tool for moulding people's behaviour. Research indicates that:

- **Positive** messages work better than negative ones
 - People do not respond well to fear mongering → Using the polar bear backfires easily
- **Flipping** the message is effective
 - Highlighting the negative sides of a popular exercise such as car driving can be more convincing than underlining the environmental benefits of cycling
- Simple **visual images** may work better than numbers
 - Smiley faces instead of statistics



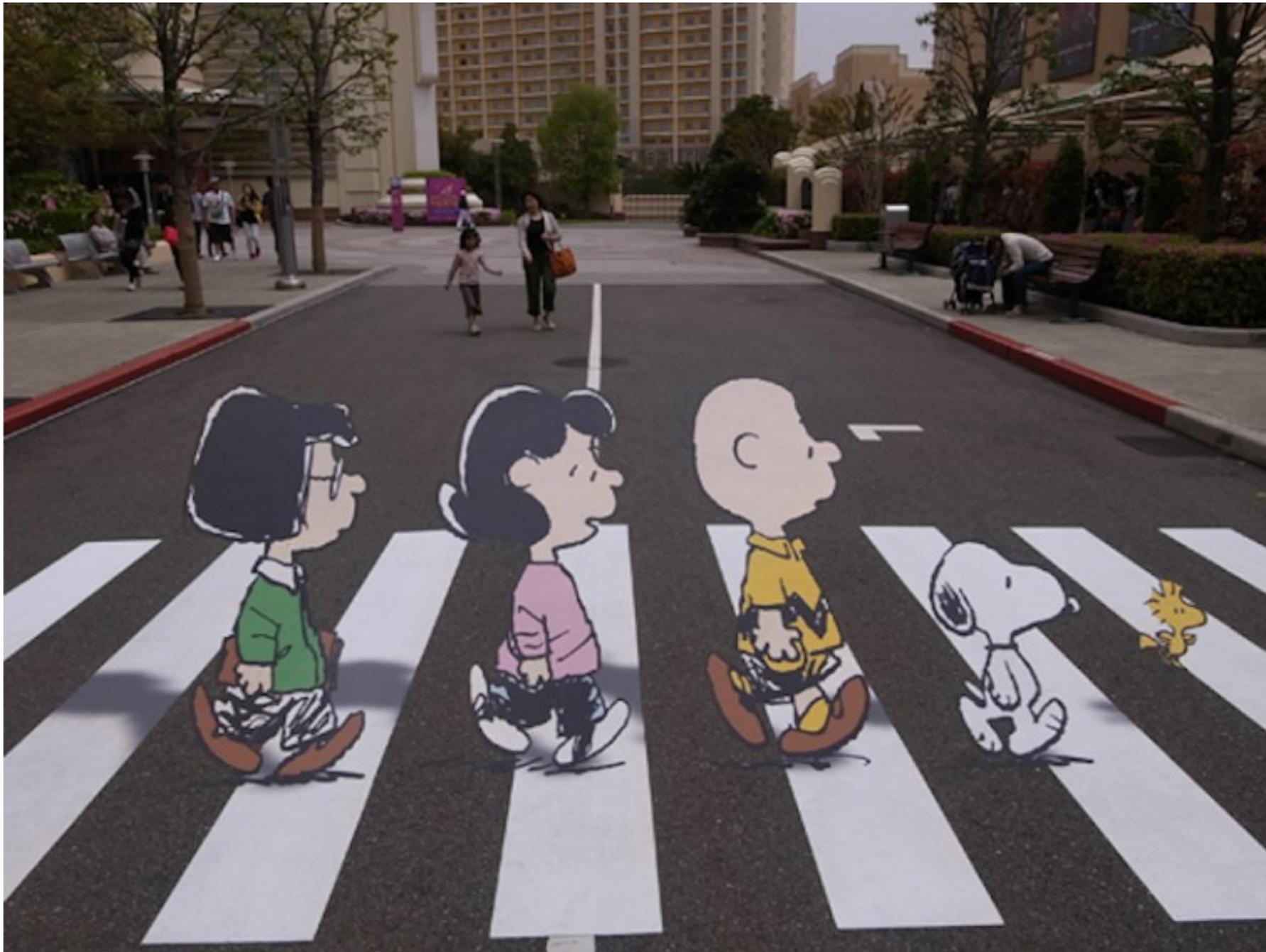
How to motivate people to change their transport behaviour: Nudging for smarter mobility

“A nudge is any aspect of the **choice architecture** that alters people’s behaviour in a predictable way without forbidding any options or significantly changing their economic incentives.”

Nudges work by **appealing to people’s cognitive biases**, gently steering decisions to the option that appears to be the default, is most salient or most straightforward.

- Supermarkets can be designed to subtly push people to making the desired purchase decision themselves, e.g. by placing of items
- Plate size defaults - smaller plate, less food
- Changing default options via city planning (e.g. bike parking vs. car parking)







Your turn!

TUAS is building a new campus building. Look at the picture? How does it take sustainable transport into account?

How would you encourage people not to use cars for commuting in the new TUAS campus?

1. Divide into groups (2-4 people)
2. Discuss your ideas
3. Present your ideas to others



Thank you!



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