

# Future Cities Dialogue

Summary of citizen engagement exercise

An Ipsos MORI & Forum for the Future study for Innovate UK

March 2017



**Ipsos MORI**  
Social Research Institute

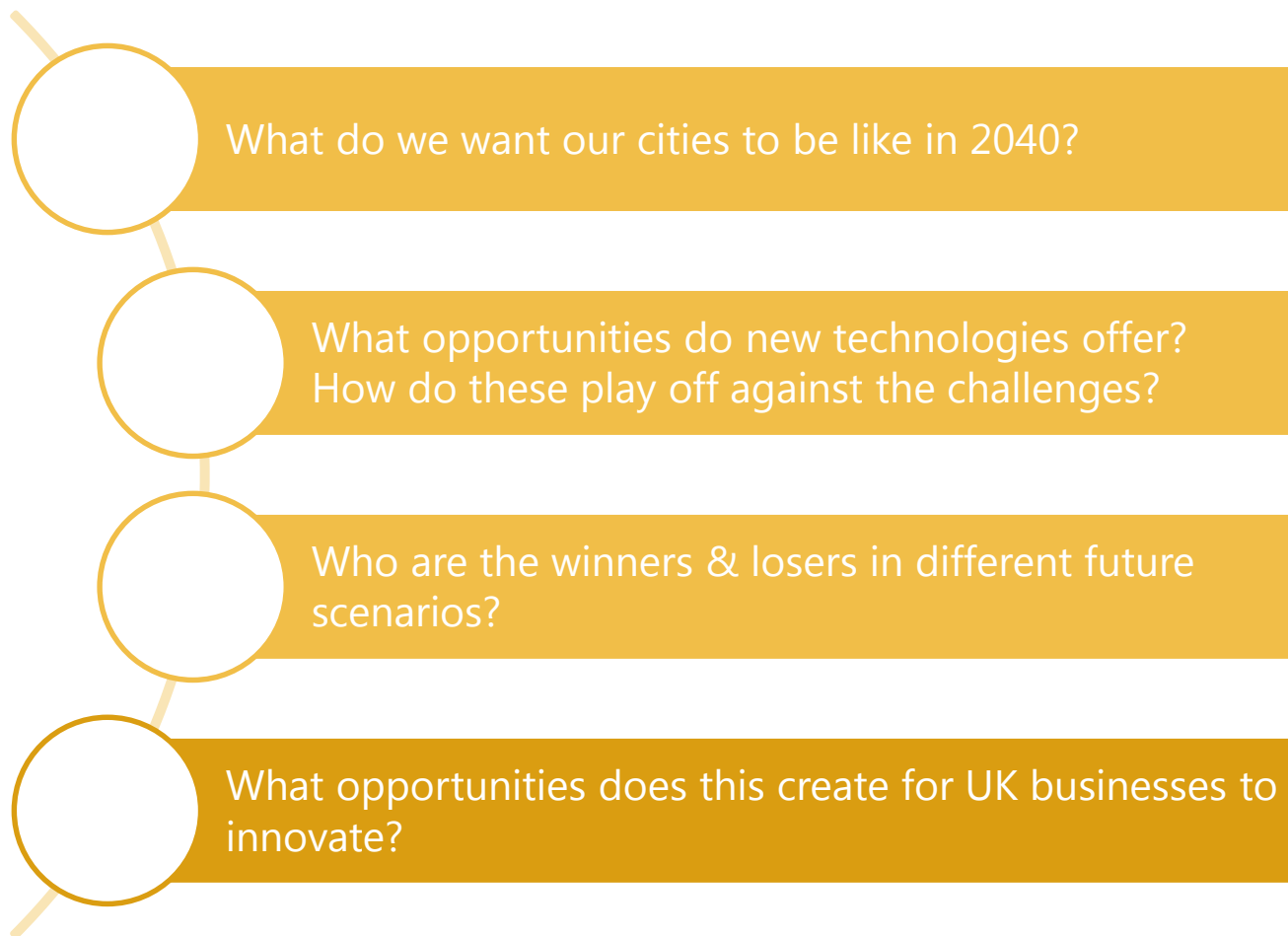


**forum for  
the future**

Future  
Cities  
Dialogue

# Imagining 2040

## Research questions and focus



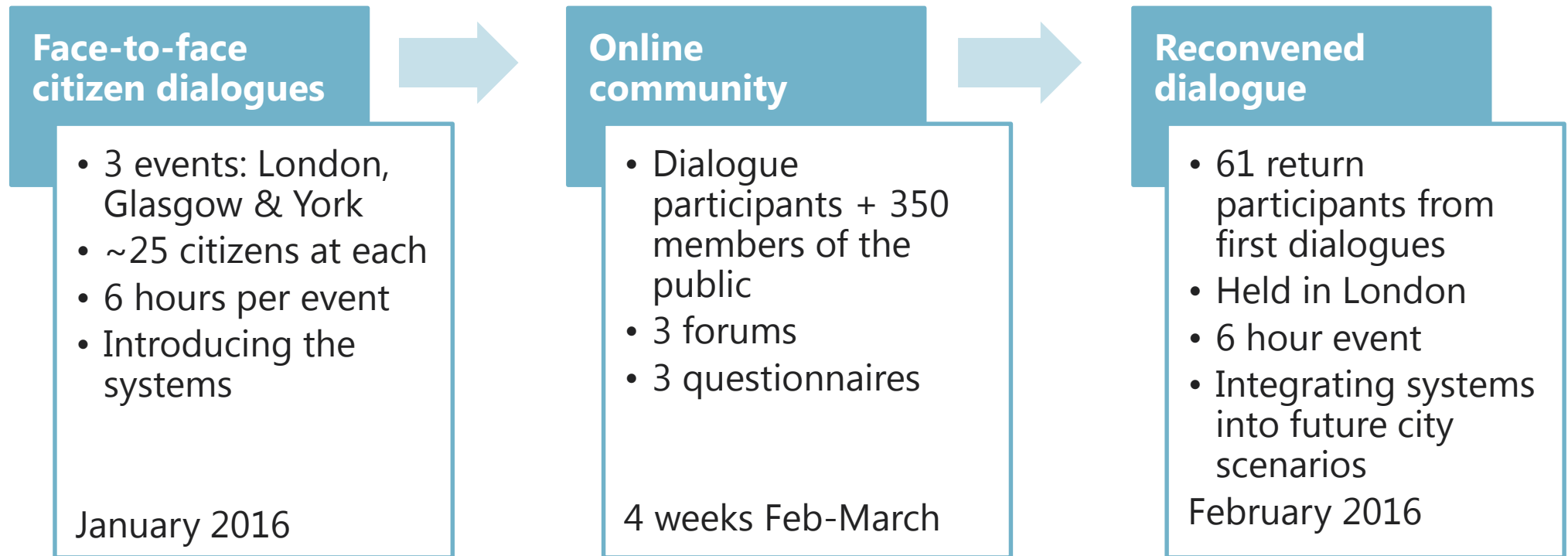
With focus on  
six city systems:



Integrated into three  
scenarios

# Gathering citizen voices

Extended citizen engagement through 12 hours+ discussion



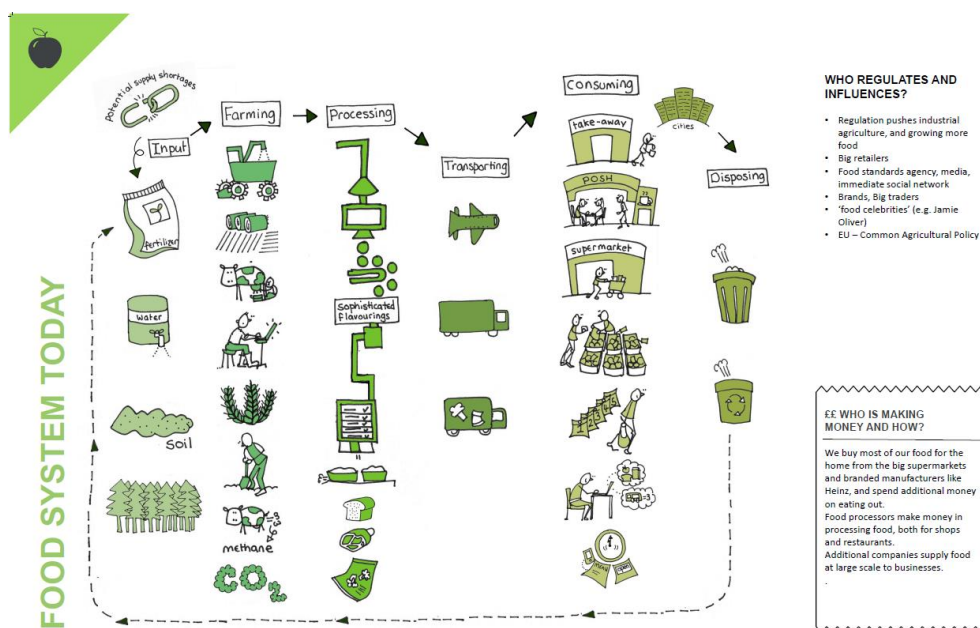
# Bringing the systems to life

## Moving citizens from today's process to tomorrow's technologies

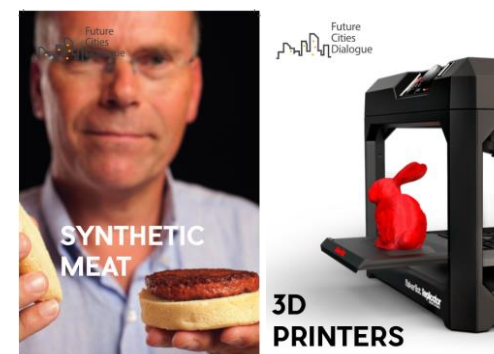
Dialogue participants discussed:

- 6 city systems
- 3 integrated future scenarios
- 10 technologies

Here is an example of how city systems might evolve in the future through technology



**Future Challenges:** Using too much water, polluting soil and water, using fossil fuels, carbon dioxide and methane gas emissions, overuse of antibiotics in animal feed. Our system is vulnerable to supply shortages e.g. in droughts.

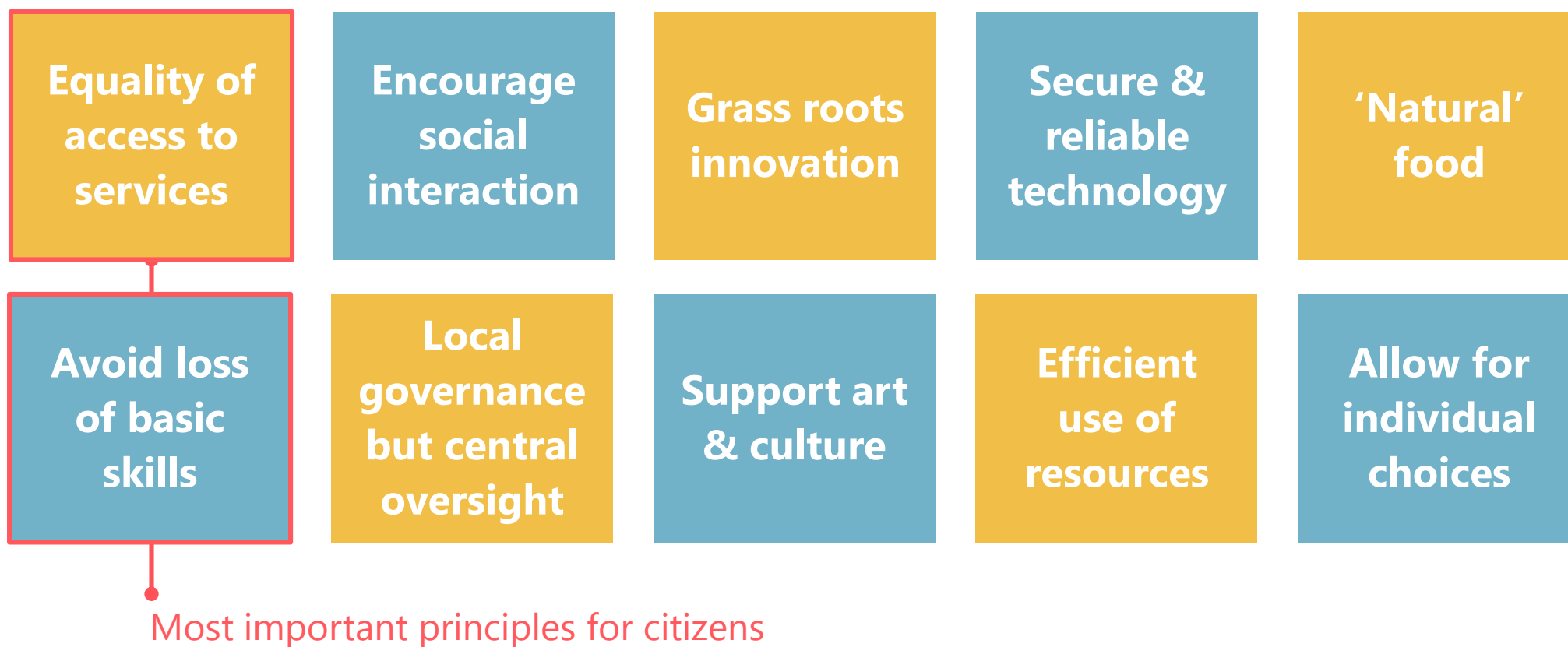


**3D food printing  
at home**



# Key principles for the vision of future cities

Key values emerging from citizen discussions of urban futures



# Key principles underpinning urban life

## Key values emerging from citizen discussions of urban futures

**Equality of  
access to  
services**

No citizens left  
behind by lack  
of access to  
technology or  
resources

**Local  
governance  
but central  
oversight**

Local decision-  
making but  
government  
oversight,  
particularly  
around health

**Grass roots  
innovation**

Use innovation  
to spark  
community  
projects &  
resource  
sharing

**Efficient  
use of  
resources**

Renewable  
energy and  
waste reduction  
and re-use to  
protect  
environment

**'Natural'  
food**

Avoid losing  
naturalness of  
food, and keep  
its social and  
cultural aspects

# Key principles for use of technology

## Key values emerging from citizen discussions of urban futures

**Avoid loss  
of basic  
skills**

Use technology  
to make life  
easier, but  
avoid losing  
skills e.g.  
cooking

**Encourage  
social  
interaction**

Use technology  
to aid efficiency  
but not to  
replace all face-  
to-face  
interaction

**Support art  
& culture**

Use innovation  
to support art  
& culture, not  
just  
productivity &  
efficiency

**Secure &  
reliable  
technology**

Data sharing  
can offer  
tailored  
services but  
needs to be  
secure

**Allow for  
individual  
choices**

Smart devices  
can encourage  
positive  
behaviour but  
allow 'nudges'  
to be ignored

# So what does the future look like?

Three future city scenarios illustrated potential system integration

## Devolution Revolution

Greater Harchester

Strong regional government & city-led decision making



## Repair and Share

Little Langbrook

Local management & community initiatives



## High Tech, High Choice

Market Newton

Strong private sector with focus on technological solutions





## Devolution Revolution favoured; High Tech, High Choice less so

“ I’d choose devolution revolution ... it’s a bit big brother but I think it’s for the best, everyone’s best interest and I like how the tax system is creating jobs, closed loop, contained in the city. ”

“ Everyone has to pull their weight. There would be a feeling of discontent towards those that couldn't contribute e.g. the elderly or disabled. ”

“I'm not entirely sure what the role for humans is in this world.”



# Devolution Revolution



## Future scenario:

- Strong regional government & cities have power to raise taxes and deliver services in social care, health and transport: each city seen as just one 'system'.
- National government has invested in regional areas and oversees national infrastructure.
- Advanced technology used e.g. remote health analytics.
- Desirable behaviour encouraged through interventions such as subsidises (e.g. reduced cost fruit and vegetables) and 'nudges' (e.g. heating systems remind people to turn temperatures down).

## Citizen response:

- ✓ Balances local decision-making with government oversight
- ✓ Seems the most equal as national government holds the regions together
- ✓ Resource efficiency through use of technology.
- ✓ High taxes in this future acceptable if for example guarantees a good quality transport service...
- X ...although scepticism this could be the case
- X 'Nudging' towards socially optimal behaviour invasive - assurances were sought by citizens that nudges could be ignored or 'switched off', maintaining citizens' lifestyle choices

# Repair and Share



## Future scenario:

- Centred on strong & cohesive urban neighbourhoods & councils, with locally-led planning and service provision (e.g. water, energy).
- Many systems run through community initiatives, e.g. car-pooling services, promotion of recycled products from community waste.
- Wearable tech data shared with health providers and healthy behaviour rewarded.
- As communities rely on their own resources there are differences in access, quality & cost of food & energy

## Citizen response:

- ✓ Strong sense of community working together for collective good – high social interaction
- ✓ Highly localised innovation gives ownership and generates benefits for local citizens
- ✓ Sustainability at core of economic & governance models
- X Community aspect appealing, but unrealistic and utopian – risk of free riders
- X Individuals unable to contribute or naturally resource-poor communities could be left behind
- X Communities too closed off from trading goods & skills, inhibiting culture
- X Productivity more valued than fun & socialising

# High tech high choice



## Future scenario:

- Small public sector - lower taxes, with services provided by private high tech companies, who receive data shared via wearables to enable targeted services.
- Government covers most basic services, but those who can afford it pay for higher-end products & services.
- Food is functional, focused on nutrition & convenience: cooking replaced by delivery & 3D printing.
- Health monitored by nanobots in the bloodstream for those who can afford expensive treatments.

## Citizen response:

- ✓ Resource efficiency & service delivery achieved through advanced technology e.g. for travel and resource use.
- X Risk of inequality through dominance of private sector and technological exclusion (of particular concern for health services).
- X Technology overly pervasive, at expense of face-to-face interaction and socialising – risk of isolation and mental health problems.
- X Dependence on technology – risk of system failure, and of losing skills & creativity
- X Opposition to food innovation proposed – food prioritised as a means of encouraging social interaction.



# Citizen preferences for city energy system

## Future scenario

### Renewable communities



- Locally managed grids using locally generated renewable energy.
- Basic national grid maintained with competitive energy market.
- Flexible demand management through smart appliances.

### Intercity trading



- City-based energy generation, including renewables or nuclear depending on regional resources.
- Surplus trading between cities through national grid, & emergency funding for energy 'poor'

### Big power



- Centralised system using large scale nuclear, gas & offshore wind
- High prices maintain secure supplies
- Some cities opt to go 'off grid' with local or private solutions

## Citizen preferences

### Renewable Communities favoured as:

- greater choice & responsibility at community level
- vested interest in own energy provision may encourage more efficient use
- increased use of renewables more environmentally friendly

### Big Power was least favoured as:

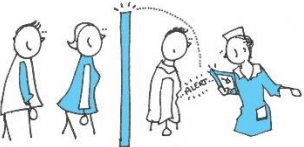


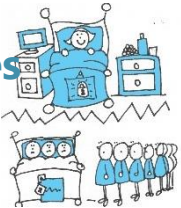
- power and profit seen to be concentrated with large energy companies

Concerns about equality were central to debates about **Intercity Trading** and **Big Power**

- Key principle that energy system should provide affordable energy for all, and regions with fewer energy resources should not be penalised



# Citizen preferences for city health system

Future scenario	Citizen preferences
<p><b>Targeted healthcare</b></p>  <ul style="list-style-type: none"> <li>• Large NHS paid for through high taxes.</li> <li>• Monitoring and assessment by NHS drives highly targeted care delivery.</li> <li>• Central decision-making over allocation of treatment.</li> </ul>	
<p><b>Remote healthcare</b></p>  <ul style="list-style-type: none"> <li>• Automated &amp; virtual healthcare with reduced NHS role, fewer large hospitals &amp; private outsourcing</li> <li>• Wearable tech diagnoses needs with services delivered by drone or robot</li> </ul>	
<p><b>Open data platforms</b></p>  <ul style="list-style-type: none"> <li>• Users' health data from wearable tech openly &amp; freely shared in exchange for tailored health services</li> <li>• Private providers dominate with affordable services from competition</li> </ul>	
<p><b>Private dominates</b></p>  <ul style="list-style-type: none"> <li>• Two-tiered system of public &amp; private provision</li> <li>• Taxes fund basic NHS services for everyone</li> </ul>	<p><b>Targeted healthcare</b> favoured as seen as most equal system as free at point of use</p> <p>Key principles central to debates around health:</p> <ul style="list-style-type: none"> <li>• <b>Equality:</b> NHS should be protected as a prominent provider for all in future health system</li> <li>• <b>Efficient diagnosis &amp; service delivery</b> through effective use of technology including wearable tech and drones</li> <li>• <b>Preserving privacy &amp; direct interaction</b> however, to protect more vulnerable</li> </ul>

# Citizen preferences for city transport system

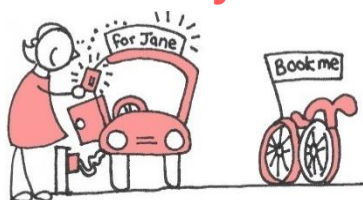
## Future scenario

### Regional renaissance



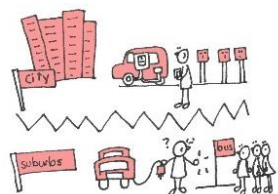
- Large NHS paid for through high taxes.
- Monitoring and assessment by NHS drives highly targeted care delivery.
- Central decision-making over allocation of treatment.

### Me mobility



- Automated & virtual healthcare with reduced NHS role, fewer large hospitals & private outsourcing
- Wearable tech diagnoses needs with services delivered by drone or robot

### Two tier town



- Users' health data from wearable tech openly & freely shared in exchange for tailored health services
- Private providers dominate with affordable services from competition

### Car pool



- Two-tiered system of public & private provision
- Taxes fund basic NHS services for everyone

## Citizen preferences

**Regional Renaissance** favoured as seen as providing highest quality public transport system

Quick and affordable transport was key priority, and so key principles central to debates around transport:

- **Equality:** good public transport should be available and affordable to all, not just those in city centres or on high incomes
- **Reducing congestion but in balance with enabling flexibility:** investment in public transport welcomed although personal freedom and flexibility prevented dismissal of scenarios with increased private car use

# Citizen preferences for city food system

## Future scenario

### High Tech Globalised Supply



- Food is high tech, sold and distributed globally
- Market dominated by intensive production by multinational businesses
- Large global market for 'heritage foods' e.g. Scotch whisky, Swiss cheese

### Pulling Together Locally



- Communities locally grow own sustainable crops
- Technology (e.g. sensors & drones) ensure efficient water & fertiliser use
- Food rationed in case of poor harvests, with volatile prices

### Government Keeps Me Healthy



- Government mass produces food centrally, ensuring basic nutrition
- Resource scarcity as a result of climate change means waste is penalised, with park land used to grow food

### High Tech and Functional



- Technology widespread e.g. delivery drones, 3D printing of food – highly convenient, but expensive
- No supermarkets, few kitchens in homes
- Roof-based urban farming common e.g. salad vegetables, honey

## Citizen preferences

**High Tech Globalised Supply** favoured as allows consumers to enjoy food from around the world.

**Pulling Together Locally** has appeal as brings us closer to the origins of our food and improves community cohesion.

**High Tech and Functional** least favoured as:

- Too reliant on technology (although benefits of this were recognised, e.g. convenience).
- Social and cultural aspects of cooking and eating lost - rejection of 'food as fuel'

# Citizen preferences for city waste system

## Future scenario

### Patching Things Up



- New products made from recycled resources and made to be recyclable
- Old products reused
- Environmental costs internalised so produce costs reflect lifetime impact

### Repurposing



- Expensive high-end products made for life are the norm, with short-term fast-turn around consumption discouraged
- Broken parts are replaced, rather than whole products

### Sorting Things Out



- High tech, government-run waste collection and recycling e.g. by autonomous vehicles
- Charges and fines encourage recycling and relate to amount and type of waste
- Less landfill, with waste reused for energy generation

## Citizen preferences

Participants aspired to a less wasteful future society, with these values supported in all scenarios presented.

**Patching things up** most favoured as:

- Today, goods that are still usable are thrown away
- Pricing of goods reflects environmental costs

Products that last for life as in **Repurposing** appealing but:

- Might hinder innovation and reduce consumer choice
- Poorer citizens may not afford higher upfront costs

**Sorting things out** least favoured as participants:

- Want to reduce their waste, but not for this to be forced upon them by government
- Resent the idea of paying for waste by quantity

# Citizen preferences for city water system

## Future scenario

## Citizen preferences

### Smart Water



- High taxes fund government investment into water system
- Hi-tech e.g. smart pipes monitor water use, filter resources out of sewage
- Grey water reused

### Make do and mend



- In a future with increasingly frequent extreme weather events, water saving is a strong social norm
- Mentality of using less, recycling more e.g. homes all have tanks for rainwater

### Community patrol



- Water use managed and self-policed by communities – people have a strict water allowance, pay if exceeded
- Products include water footprint in cost

The preferred water outcome was **Smart Water** as:

- It embraced technology to facilitate reduced water use with minimal public effort - welcomed as current engagement in the water system is low.
- Although come concerns technology could fail.

**Community patrol**, was least favoured as strict community control seen as 'Orwellian' and intrusive.

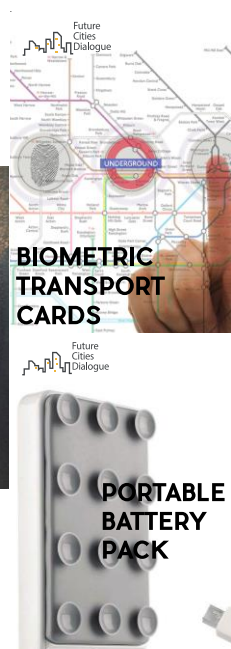
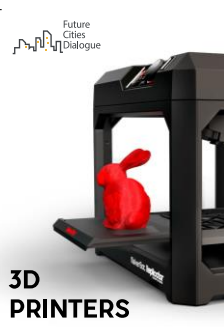


# Technology revolution in our future cities

## Citizen preferences around application of new technologies


More positive reactions

Less positive reactions



# Imagining 2040

## Implications of citizen views for planning urban futures



**What do we want our cities to be like in 2040?** Places where technology makes life easier, but where these benefits are shared equally, naturalness is not too lost and where social interaction is maintained.

**What opportunities do new technologies offer? How do these play off against the challenges?** Improved resource use efficiency, more tailored services, faster diagnoses of personal or system issues, but risking inequality of access and data misuse or loss.

**Who are the winners & losers in different future scenarios?** Locally-focused governance is desired to help cities and regions maximize their local resources and make locally relevant decisions, but needs of resource-poor communities must be considered.

**What opportunities does this create for UK businesses to innovate?** Citizens welcome innovation enabling smart resource use (water, waste), personal information (health, food) and tailored services (transport, energy) balanced against individual flexibility and choice.

# Find the full Future Cities Dialogue reports here:

<https://www.ipsos-mori.com/researchpublications/publications/1924/Future-Cities-Dialogue.aspx>

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