

Aspirational City Futures:

Three Models for City Living

Phase 1c: Workshops

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1.0 INTRODUCTION

Having commissioned working papers and other material to provide an evidence base, the Foresight Future of Cities (FoC) project looks at the opportunities and challenges UK cities could face over the next 50 years. The breadth of approach and its outputs distinguish the project from other initiatives exploring the challenges facing UK cities and include: the articulation of desired outcomes (visions from individuals, sectors, and cities); identification of pathways enabling desired outcomes; exploration of implications and potential impact; and identification of risks and opportunities. Where done collaboratively, futures-based work also builds relationships and facilitates learning that supports capabilities for long-term planning.

At the University of Birmingham, we have started work on a three-phase project to help understand the future and consider how to enable different visions. The first phase is divided into three sections and forms the foundation for this work and explores how scenarios might be created and used by cities to help create policies and strategies to meet their own future city visions. This phase is divided into three sections and this report focuses on Phase 1c.

1.1 A review of aspirational scenarios approaches

Phase 1a (May to June 2015) has been completed and builds on an extensive monograph (appended to Lombardi et al., 2012) produced by the *Urban Futures* project team (at the University of Birmingham, University of Exeter, and Lancaster University). This contains a critical review of ‘aspirational’ scenario approaches, methodologies and toolkits reported within the literature with the aim of identifying consistency in the various approaches, along with a commentary on their usefulness and the skill levels needed to apply them, considering three broad categories of user:

- (a) citizens
- (b) practitioners
- (c) practitioners and/or academics well-versed in the topic area

1.2 Testing the hypothesis of clustering aspirations

Phase 1b (July to August 2015) has been completed. The ‘vision clustering exercise’ adopted therein showed that it is possible to draw three distinctly different visions, with associated narratives, for an aspirational city from datasets collected by UB *Policy Commission on Future Urban Living* (Rogers et al., 2014). These datasets were compiled when taking evidence from a wide range of leading thinkers on cities, drawn from the UK and elsewhere, on thoughts and lessons for city living.

The three clustered visions place either the environment and resources first (Vision 1 – Figure 1), or people and community first (Vision 2 – Figure 2), or work and economy first (Vision 3 – Figure 3), and, crucially for the analysis, they thereby reduce the importance placed on the other two aspects.

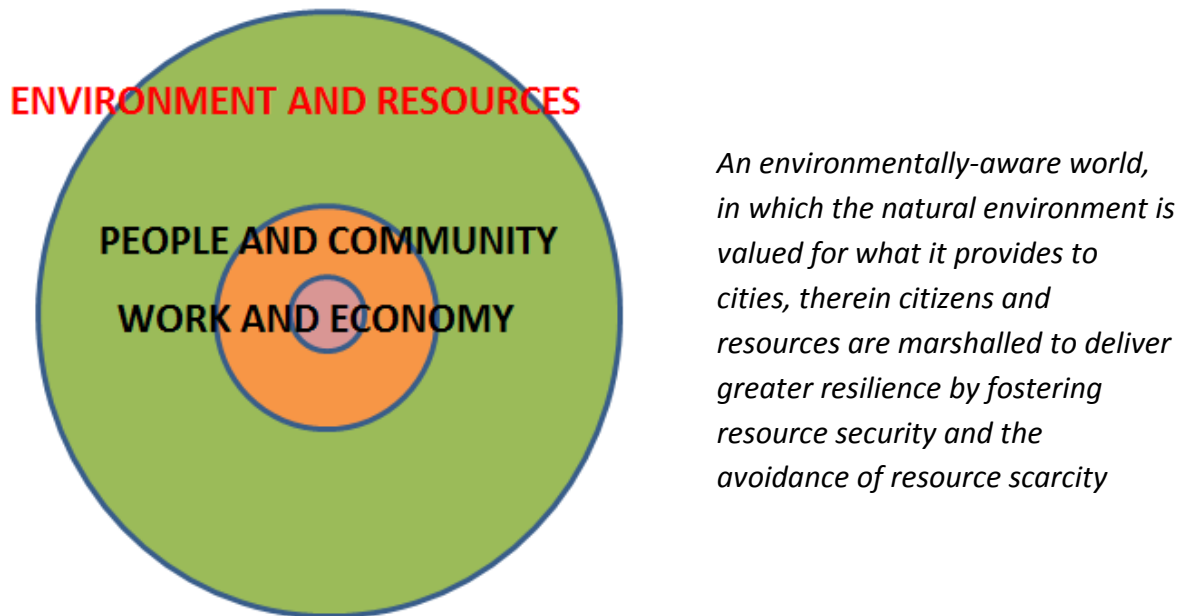


Figure 1. Environment and Resources first.

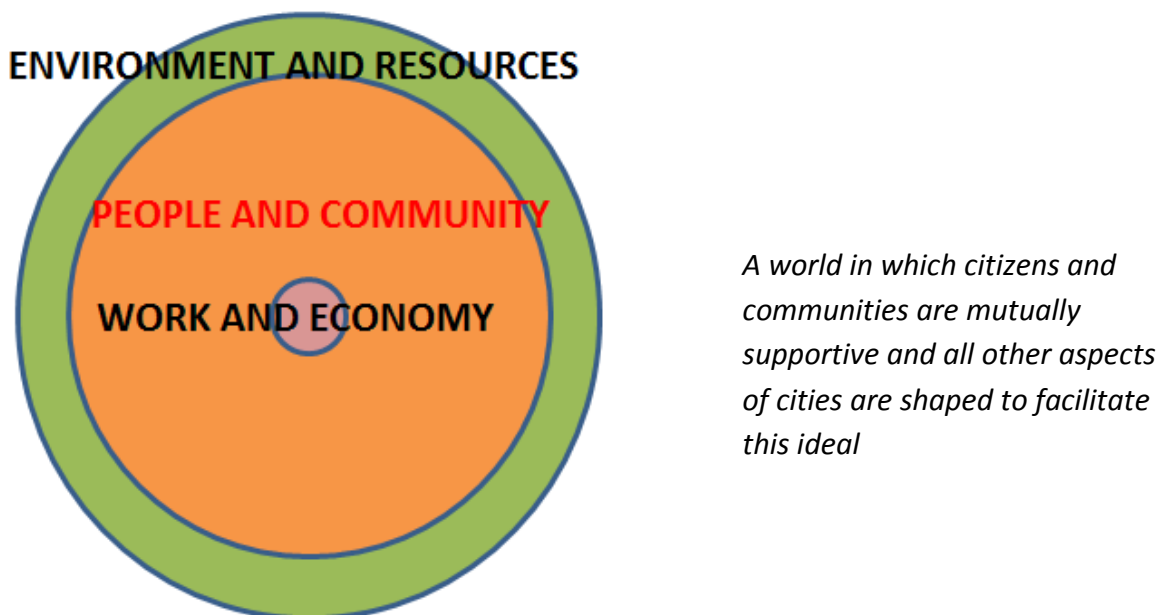


Figure 2. People and Community first



A super-connected world in which the economy, trade and the world of work is prioritised

Figure 3. Work and Economy first

For convenience, the clustering was done around the three pillars of sustainability, and it was assumed that technology and policy (the remaining drivers in a Social, Technology, Economic, Environment and Political (STEEP) analysis) aligned with and supported the chosen priority. For each of the three visions a narrative of clustered evidence was provided according to seven key sub-themes previously adopted within UB *Policy Commission on Future Urban Living* (Rogers et al., 2014) – Figure 1 .

- (1) Natural Environment;
- (2) Natural Resources;
- (3) Accessibility and Movement;
- (4) Resilience Adaptation and Smart Technologies;
- (5) Financing and Alternative Business Models;
- (6) Governance; and
- (7) Cities and City Regions, and the Role of Planning.

Figure 1. Sub-themes taken from UB Policy Commission on Future Urban Living (Rogers et al., 2014)

The primary learning outcomes from the exercise were:

- A city needs to create an agreed vision for the future that embraces all aspects that are important to it, and use of a STEEP analysis as prompts to this visioning process will ensure an appropriate breadth of coverage in the vision. The vision will have many elements to it. [One recommendation of the Policy Commission is that citizens should be empowered to contribute to the creation of this vision.]
- Clustering the elements of the city's vision using three distinct categories, such as the three 'pillars of sustainability', brings into sharp focus the synergies between the elements of the vision, and therefore how they might combine to change the nature of the city if they were prioritised at the expense of the other elements of the vision.
- Creating the narrative associated with a prioritised cluster necessarily introduces the consequences of down-playing the other elements of this vision, and contributes to the creation of an extreme scenario.
- Repeating the exercise for each cluster in turn results in three extreme future scenarios for the city in its particular context. The desirable and undesirable features and consequences of each of the scenarios are thus made explicit.
- Policies, strategies and plans can then be created with the aim of bringing about the desirable changes while avoiding the undesirable changes, informed by the consequences.
- Engaging with the process is just as important, if not more important, than the outcomes as a result of the insights that it brings.

1.3 Workshops to explore aspirational visions and future scenarios for Birmingham and Bristol

This report contributes to the third part (Phase 1c – September to November 2015) of the first phase of a proposed three-phase element of work. In culmination all three phases will help to investigate how future scenarios might be used by cities to help them create policies and strategies to meet their own future city visions. Once completed Phases 1a to 1c will facilitate an initial, outline version of a toolkit for cities to adopt aspirational scenario development and testing. This phase uses two workshops held in Bristol (16th November 2015, see Section 2.0) and Birmingham (20th November 2015, see Section 3.0) with city delegates from across the country to test the efficacy of the aspirational vision clustering approach. The workshops used the same structure as used in Phase 1b whereby aspirational visions (and narratives) are developed using three cluster visions (see below) and seven key sub-themes (Section 1.2):

- Vision 1: Environment and Resources
- Vision 2: People and Community
- Vision 3: Work and Economy

The clustered narratives developed from Phase 1b are complementary to the clustered evidence for both Birmingham and Bristol and can be read in conjunction. This allows for valuable comparison and contrast. Phase 1b concluded that clustering the elements of the city's vision using three distinct categories, such as the three 'pillars of sustainability', brings into sharp focus the synergies between the elements of the vision, and therefore how they might combine to change the nature of the city if they were prioritised at the expense of the other elements of the vision. This phase of work tests this hypothesis further using workshops. Following this phase of work there will be subsequent refinement of the methodology and trialling of the Designing Resilient Cities (DRC) Methodology (Lombardi et al., 2012) on some of the outcomes.

2.0 THREE MODELS FOR CITY LIVING IN BRISTOL

A full day workshop was held in the Main Conference Room at Arup's Bristol Office (63 St Thomas Street, Bristol BS1 6Z) with a range of delegates and stakeholders from cities across the country. Prior to the workshop, delegates were informed that academics from the University of Birmingham leading the Liveable Cities research programme (www.liveablecities.org.uk) were looking to construct aspirational visions for Bristol looking towards the far future, exploring their relation to today's context and therefrom determine how best to bring them about. The outputs and findings of this workshop were presented to the national Foresight project on the Future of Cities. The workshop was split according to the following structure – the outcomes of the day are reported in this section:

Introduction to Liveable Cities (LC) and Foresight Future of Cities (Professor Chris Rogers)

Step 1: Future Visions of Bristol – Personal and Professional Reflections (in groups, facilitated by the LC and FoC representatives, and inspired by the Arup Cards*)

Plenary Reflection and Clustering of Visions (facilitated by the LC and FoC representatives)

Introduction to the Aspirational Futures Methodology (Professor Chris Rogers)

Step 2a: Future Bristol Prioritising Environment and Resources (in groups)** and Reflections on an Alternative Bristol (plenary) – Section 2.1.1

Step 2b: Future Bristol Prioritising People and Communities (in groups)** and Reflections on an Alternative Bristol (plenary) – Section 2.1.2

Step 2c: Future Bristol Prioritising Work and the Economy (in groups)** and Reflections on an Alternative Bristol (plenary) – Section 2.1.3

Synthesis of the Visions (plenary)

Reflections on the Value of the Foresighting Process (plenary)

Final remarks (Professor Chris Rogers)

*Prior to the workshop delegates were sent a copy of ARUP's Cities Alive: 100 issues shaping future cities (<http://www.driversofchange.com/projects/cities-alive/>, e.g. Figure 3) and asked to consider aspirations they have for Bristol – they were instructed that these would be disseminated and added to on the day of the workshop (Step 1 above) on large 'post it' notes visible from 3m away. Delegates were told that these aspirations should consider the far-future (>40 years hence) and not be constrained by any current context.

**In Steps 2a to 2c delegates were provided with Google maps of Bristol and asked to re-consider their aspirations given the current context of Bristol.

ageing society

Cities Alive
social



The global population is ageing, due to both an increase in life expectancy and a decrease in total fertility rates. The number of people aged 65 and older is projected to triple from 531M in 2010 to 1.5bn by 2050.⁴ Cities will need to adapt to and prepare for the needs of a larger cohort of older people. While urban areas offer advantages to older residents such as access to services, cities can also create feelings of insecurity and social isolation.

ARUP

cbd TheeEIn

circular economy

Cities Alive
economic



In a circular economy, products and resources are reused to extract their maximum value rather than entering the waste stream. Resource scarcity and tighter environmental standards will propel this trend forwards, as will new technologies and new patterns of consumer behaviour. US-based company Recology, for example, has reduced San Francisco's landfill disposal by 78% through "source reduction, reuse, and recycling and composting programs".⁵⁸

ARUP

cb Daniel Dudek-Corrigan

Figure 3. Example cards from ARUP's Cities Alive: 100 issues shaping future cities

3.0 OUTCOMES FROM WORKSHOP

The outcomes of Steps 1 and 2 are reported in this section.

3.1. Step 2a: Environment and Resources

In this step the 'post it' notes (Figure 4 and Table 1) for Environment and Resources (Step 1) were read out to the delegates. Subsequently they were provided with a Google map of Bristol showing its salient features and asked to re-consider their aspirations given the current context of Bristol. The 7 sub-themes were not presented but (where possible) have been used post-workshop to organise responses.



Figure 4. 'Post it' notes for Environment and Resources

Table 1: Environment & Resources

Walking or cycling always first choice	Food growing everywhere
A city that leads the way in environmental and human innovation	Urban spaces (→ Streets, houses, neighbourhoods) that actively support health.
City systems connected, automated & responsive to local needs / priorities	Local, small scale services make city cleaner, more efficient and accessible
Much more functional city + neighbourhood polity / representative groups	Increased tree coves, biodiversity and nature-based solutions in urban area improve quality of life for all.
Resilient to new climate	Air clear as countryside
Resilient to threats	“old stuff” removed
A cradle-cradle city that manages its resources for well-being with its hinterland	Most consumption needs met within region-circular economy
Public transport; non-polluting interconnected	100% renewable energy
Producing the majority of food consumed in the city	Welcoming spaces – walkable bike-able
Energy; self-sustainability	Effective housing solution
Collaboration + co-creation	Fewer cars in city centre (parked + moving)
A city run on renewable energy	“unsustainable” is a total anathema
We never talk of “exploiting nature”	We know we are nature (+ we deplore exploitation)
Recreational, natural spaces within walking / accessibility reach of all homes	Green space providing clean air, water, biodiversity and somewhere for people to enjoy
Healthy diets for all → people connected to where their food comes from	A city that is autonomous & ambitious with better than just less bad on traffic, health, reserves + sustainability
A city that lives within its means (resources)	

Aspirations around ‘Natural Environment’ (Sub-theme 1): A delegate proposed that it is not just about bringing people into Bristol, but about encouraging ‘Bristolians’ to **spend time outside the city** [presumably, in the countryside]. There was a desire to connect green spaces – where streets become green biodiversity corridors. Rivers would form part of these and any plot of land is considered fair game for this. In addition water fountains would be provided throughout the city. Greening of roads was considered desirable, but putting trees down the middle of busy dual carriageways, where they are inaccessible, was not considered desirable [even though they perform a function: removing pollutants]. Removing hard, sealed surfaces (i.e. driveways) and making the surface permeable allowed for better storm water infiltration. This was considered desirable for mitigating flood concerns whilst allowing for green growth and freedom to grow in unused spaces. A new barrage was considered positive by preventing flooding whilst generating power without environmental damage.

Aspirations around ‘Natural Resources’ (Sub-theme 2): The group agreed the overarching purpose in this theme → was to look after the environment and not waste resources. In terms of *Food* some delegates envisioned a tension between importing foodstuff from Wales and provision of local food, while others imagined a city where ‘Bristolians’ ate less (than today) and did not consume meat. This was facilitated by an urban landscape integrated with

vertical gardening and green corridors (mentioned previously). Local agriculture production was a key aspect within this sub-theme and it was emphasised that food crops would need to be protected from climate extremes due to environmental change and to enhance resilience of a more self-sufficient Bristol. In this vision as much food as possible is grown locally ... implying that less choice is acceptable. Every roof top (and driveway) was conceived as being used to grow food. One delegate proposed lab-grown food to release the pressure on land for agriculture and to enable the city to be more self-sufficient in this regard. Whilst some liked the concept, others thought the term 'lab-grown' provoked negative imagery

In terms of *Water* it was envisioned that 'Bristolians' would use water more conservatively. The possibility of a new reservoir was mentioned alongside alternative water efficiency measures. This included using only clean water to drink and adoption of new sources of supply (GW / RWH) within and outside the home. Some delegates mentioned a two-tier water system (infrastructure supplies low grade water and delivery service supplies bottled water for drinking) and a water allowance.

In terms of *Energy* (heat and power) delegates assumed 'Bristolians' would use less. [When taken in combination, these last three top line statements for food, water and energy related to a principle of back-to-basics – one delegate posed the question of “what do we really need to survive?” and suggested the response for Bristol’s future should be set against what Bristol (and the planet) can support, given Bristol will have a significant increase in population by 2065]. This aspirational energy vision of Bristol was suggested to have 100% renewable energy combined with demand reduction and demand shifting; within this energy micro-generation was a recurring theme. The supply streams included:

- Bristol channel barrage
- Solar panels on every large roof
- Wind turbines in the 'blue lagoon' that is Avonmouth and in farmland locations
- Geothermal – the option to drill deeper in cities (Cheddar Gorge was cited as having 12°C temperature all year) and use of innovative technologies (e.g. heat extraction from piles)
- District heating (5000 small boilers versus 1 large boiler – added benefits of maintenance). [This contrasts nicely with a viewpoint of each household having PV panels, but both feed into the 'sharing principles' idea which was echoed throughout – sharing in this vision is seen as positive.]

One delegate noted that in a more sustainable future we would be using more electricity for virtual meetings, cloud computing and other digitally-assisted activities. Therefore, energy needed to be greener. The suggestion of harvesting heat from city data centres was

posed. One respondent suggested positioning benches around the city covered for protection from the sun and rain and fitted with solar panels.

In terms of *Waste* there was a suggestion that Bristol would become a more closed loop economy and numerous delegates envisioned an array of recycling and repurposing centres dispersed at local centres around the city to remove waste. In contrast others envisioned large recycling centres on the outskirts of the city.

Aspirations around 'Transport' (Sub-theme 3): Delegates envisioned a 'car-free' city where roads have been removed and substituted / repurposed with pedestrianised and cycle routes. [Car-free in this sense related to no fossil fuel powered cars]. As part of this thread the M32 would become a route for a solar-powered train. This is facilitated by the fact that the need to travel is minimised – jobs in the city for those who work there, rather than having such a large Cardiff-Bristol commute. Those who did travel (in a car) over the Bristol channel and commuted from Cardiff would be charged £20 to bring cars over versus £5 if they were travelling by bus. Two respondents even suggested that all NCP parking spaces would be removed and replaced with innovative green cycle parking zones. Allied to this other delegates suggested that all new developments, in particular ones located at the disused airport site, would be built with no need for cars and hence parking.

There was a brief discussion about moving 'stuff' around in different ways. One delegate asked '*What of Avonmouth?*' and stated that this vision should seek to greatly reduce the number of containers delivering from beyond Bristol – the transition could be achieved using containers for other purposes. In this respect numerous delegates envisioned much improved / better use of the port with decarbonised shipping connected to an electrified (currently disused) railway. The group wanted to ensure that ship containers were reused at the end of their life and one delegate suggested using them as low-cost housing. A no 'delivery one way' mindset would be allowed – only full containers would be transported (and use of ballast would be precluded). In other words those containers still in use would be required to arrive and leave the port full – an ethos of neither partly-full nor empty would ensue. [What are the negative consequences of this? Might stuff be shipped just to make up the numbers?].

A delegate suggested reducing the need for local (i.e. Bristol) airports (a target of 95% reduction was suggested), whilst another delegate suggested integrating a solar train that linked Bristol to other main airport hubs, thus allowing the Bristol airport site to be used for other purposes (e.g. wind farm). Others held a contrasting view whereby Bristol airport was retained but with the proviso that it would accommodate only solar planes and predominantly damage-free air travel.

Delegates included green transport in their aspirational vision: electric buses or trams, and electric cycles / scooters were mentioned by numerous delegates. Covered walkways were

proposed, with solar panels above thus providing shelter for those walking and cycling, thus making them more acceptable environmental choices. One member of the group asked “*why do we need buses?*” The response was that road infrastructure is more flexible than rail. The idea of using river routes for freight and joining up with solar boats, and multiple green corridors for walking and cycling, providing multiple local connectivity was suggested. Allied to this was an aspiration to remove all barriers to movement (which exist in many forms, from busy roads to cul-de-sacs). This yielded multiple straight green lines on the Bristol map, while collection points for deliveries were seen as a way of removing some ubiquitous traffic. In essence it was suggested that pedestrians become the priority over vehicles and allied to this vision was the need for trees, benches, public conveniences and cafes that allowed people to sit / linger and congregate.

Aspirations around ‘Resilience Adaptation and Smart Technologies’ (Sub-theme 4): The group queried if the interventions suggested thus far would / should work differently (or not at all) at different scales – Russian dolls of self-sustainability, from the individual and individual household upwards. This led them to questioning what was meant by ‘local’, what were the city’s boundaries and how does sustainability and resilience performance change with changing scales? In other words one might be quite sustainable at the household level, yet their city may be less sustainable than their home, and the nation is more sustainable than the city, and so on. They posed the question: how efficiently and effectively can we *transition* to a more sustainable future? However they did not propose an answer.

Aspirations around ‘Financing and Alternative Business Models’ (Sub-theme 5): Localised, distributed manufacturing would facilitate local hubs for work and allow the ‘urban villages idea’ to be realised. [A word of caution “I want to live in a city for its cityness, not an urban village” was countered by retention of centres that provide different aspects of city life – culture, leisure and so on – as quarters.] Rolls Royce’s alternative business model was suggested in addition to the rising block prices for water (see below). Delegates were asked whether new business models that capture all forms of value could enable radical change.

CASE STUDY: RISING BLOCK PRICES FOR WATER

Delegates were presented with the idea of rising block prices for water use and asked for push back on the validity of the current business model. The delegates seemed to generally agree that the business model could work, although it would have to be with caveats and exceptions to take into account how different people use water differently (there are age-, culture- and ability-related differences, to name a few). Some delegates were concerned that the greater the number of exceptions the less fair the model and the greater the risk the model will fail as it will be moving against market forces. One delegate noted that such a model was proposed in Uganda 15 years ago. The government did not take it up. Another delegate noted that in Los Angeles users are fined for using excessive amounts of water. However, the very wealthy are easily able to pay this fine so it has no effect upon their water use. It was also noted that the system presumes control over water use. In the case of renters, the landlord has control over the water efficiency of the appliances, not the tenant. If developers were required to deliver services such as water (rather than walking away from a development once it has been completed) then there would be an incentive for them to make their developments as water efficient as possible, thus reducing the cost to them and allowing them to make a profit by charging tenants slightly more. [This emphasised that delegates perpetuated the current economic business model, where profit is made by private water companies.]

Aspirations around ‘Governance’ (Sub-theme 6): In terms of ‘Governance’ one delegate suggested a policy of ‘clear fell’ for 100+ year old ailing houses – these would be knocked down and rebuilt with more energy efficient ones. Land value taxation incentivises a maximal use of personal space (for environmental reasons) – preventing a disproportionate ratio of ‘bedrooms / people’ and fuel subsidies would allow this not to happen. One delegate aspired to remove multiple choices of everything (not least food) and suggested that this *might* mean many aspirations are met, even though this is counterintuitive – certainly burdens and consequences would need to be explored. Delegates aspired to remove the ‘throwaway society’, although recognised that this required the transition to be handled carefully to avoid it being blocked by adverse unintended consequences *en route*. Most delegates wanted *equality and fairness* and this included preventing the wealthy from ‘opting out’ of being more sustainable (for example, by being able to easily afford higher prices for resources when others cannot). In order to ensure that those who are rich enough do not buy their way out when using such an approach it was suggested that Bristol might need very heavy taxes to avoid inequalities. In this respect a stance against land banking would need to be adopted in Bristol to avoid competitive groups buying land and leaving it idle, which is inefficient in its usage – an aspirational future would seek to prohibit this.

Aspirations around ‘Cities and City Regions, and the Role of Planning’ (Sub-theme 7): In this city vision it was suggested that city walls (metaphorically) are adopted and that the city does more from within. [It was also commented how difficult it is to define an exact

boundary around the city.] One delegate further suggested that Bristol's borders would then only be crossed virtually via Skype. As part of this philosophy it was suggested that new employment areas would be adopted within the southwest, with relocation (dispersion) or repurposing of services which could enhance the environmental credentials of a currently environmentally benign area. One delegate suggested that a policy of embracing high density in some key areas of Bristol would improve resource use significantly, whilst another suggested adopting a 'Bipolar city' with polycentric design (2 centres or multiple centres). Delegates suggested that 'the physical layout of Bristol's suburban sprawl could be changed so that the neighbourhoods are interconnected (and not at dead ends). This would facilitate the formation of mini-centres'. This led to a consensus that this would allow for 'ease of movement' and 'improved connectivity' between each satellite town. Numerous delegates envisioned provision of distributed hospitals, and other services. This included community hubs dotted around that would have medical facilities that served as triage for the main hospital.

3.2. Step 2b – People and Community

In this step the 'post it' notes (Figure 5 and Table 2) for People and Community (step 1) were read out to the delegates. Subsequently they were provided with a Google map of Bristol showing its salient features and asked to re-consider their aspirations given the current context of Bristol. The 7 sub-themes were not presented but (where possible) have been used post-workshop to organise responses.



Figure 6. 'Post it' notes for People and Community

Table 2: People and Community

A city that is never at the mercy of one politician	Children out and about independently
No lonely people	People matter; lowest GINI coefficient in Europe
People know each other, help each other	A city where those in need can be welcomed
No dementia!	Community cohesion achieved through immigration
Charter of rights to the city	Healthy lifestyles in all parts of city
A fair and equal society without poverty	Everyone has time to spend with family and friends
Everything I need to access is easy walk and cycle	Socially cohesive
Polycentric governance	Accessible to <i>all</i> people
Reduced need to travel	Everyone has a network of friends
More equal (wealth, opportunity voice)	Motivated people
A region of local urban centres sharing a core centre and services	A welcoming place for people for all ages and backgrounds
Localism	Technology
Happy healthy city with a co-operative approach to challenges	A responsive city with the knowledge, skills and social capital to be reflexive to internal and external chaos
People share, connect, support each other in local informal and formal networks	Diversity is <i>always</i> recognised as our greatest strength.
I don't need to wait to cross a road as they are there for people	A city that works tougher to solve problems innovatively
Cultural diversity is celebrated	Friendly, but with space for anonymity
Life expectancy broadly the same across the city	Residents are proud to be from Bristol
There is no need to projects called "age-friendly city", "nature-friendly city", "city of sanctuary", etc.	Healthy, safe, fun ways for people to move around the city
An identity of creativity, quality of life and sustainability not just efficiency, growth and pragmatism	Somewhere where being a citizen is a dynamic, rewarding and enjoyable role – and responsibility is shared.
No lonely elderly in their homes or isolated in their flats on outer city fringes	Greater affordability of city centre living for more diverse social groups
Strong sense of pride/ownership by communities of their neighbourhoods	No homeless sleeping on street at night

Aspirations for 'Natural Resources' (Sub-theme 1): Delegates suggested that local community hubs could be joined up with local schools and hospitals – underlying this would be a resource-reduced culture that embraced mending, sharing, and local purchasing.

Aspirations for 'Natural Environment' (Sub-theme 2): Delegates discussed how the environment could be used to allow people to lead healthier lifestyles brought about by healthy places. This includes active travel, greenspace, trees, wider pavements, public toilets, benches and access to affordable, accessible, good quality food, grown locally. They noted that for people to capitalise on such advantages they required certain life skills (e.g. how to cook seasonal, fresh vegetables) and by allowing things to happen organically, with a bit of facilitation, might be the way to achieve this.

Aspirations around 'Transport' (Sub-theme 3): Delegates suggested there should be identifiable (cf. Roman) forums and public spaces, with markets, and there might be a big

one in the city centre and smaller ones all accessible on foot within around one mile (though positioned sensitively to the local context), recreating the idea of the Roman Forum, or EU squares, i.e. places where people can do things (meet, shop, eat). They must be walkable and with no cars, and include both open spaces and covered spaces, and with other offerings (cafe, local food cooperative /greengrocer), and this in turn needs active travel infrastructure to be provided and proper maintenance regimes. Take the 'city centre' outwards and distribute it.

Aspirations around 'Resilience Adaptation and Smart Technologies' (Sub-theme 4):

Delegates did not specifically mention aspects related to this theme.

Aspirations around 'Financing and Alternative Business Models' (Sub-theme 5): In this vision the rich no longer get richer whilst the poor get poorer, since the creation of enterprise zones in the south and a new South City centre allows for local jobs and local recreation, whilst keeping a sense of identity and community. Bristolians in this vision work a 4 day week and have to spend the fifth day engaging in the community 'a community service contract'. The group considered a Bristol without gentrification and without inequalities, a city vision which embraces a redistribution of wealth [to overcome the situation of poverty in South versus prosperity in the North, not helped by the river acting as a barrier].

Aspirations for 'Governance' (Sub-theme 6): The group noted that Bristol has a history of 'people just getting on and doing it'. They briefly considered how much formal governance was needed. The concept of citizenship was discussed and in particular, "what does it mean to be a citizen in the UK and in Bristol?" What responsibilities are expected of citizens? What is a reasonable model of engagement in order to call someone a citizen? Are only 'city citizens' allowed to engage in the development of the city? [What about all those who work in the city, but do not live there? They are disenfranchised in terms of voting for what they want in Bristol.] To what extent should people be expected to engage and be active in their cities? The delegates considered that Bristol had efficient city-level decision-making through its mayor. However they stated that localisation of governance, below the level of the mayor, was required in order to reach and include everyone – effective decision-making at the sub-city level. To achieve something workable delegates suggested a balanced approach somewhere between a 'talking shop' where everyone has a say and a local dictatorship. One delegate wanted to abolish the current neighbourhood partnership mechanisms, thinking them ineffective. Another countered that this was not the case, but that they could be improved. Following a brief discussion about the problems with neighbourhood partnerships, the group decided that what was desirable was sub-city level governance that reached everyone, not just those who had the time to engage or who shouted the loudest. There was general consensus that busy people have less time to

engage. The delegates also agreed that the responsibilities and powers of such groups needed to be clear to those participating in them. Moving away from current local democracy paradigm and empowerment of citizens is necessary. Delegates suggested sub-city scale governance should capture citizen's thoughts and use citizens for data collection (e.g. to report pot holes, although the group did discuss if it was reasonable to expect people to take such a role). Delegates asked how more citizen voices could be heard by local government and what the appropriate scale for engagement is. An iPad in every house / use of phone apps to provide communication links with city leaders, for example. They noted that cities are often stratified, where geographical communities can polarise those with different levels of wealth, and this must be guarded against. By expanding the scale of engagement it was suggested that these boundaries can be crossed. The idea of concentric circles of communities emerged within the group. [It is simplistic to think that communities are concentric, as they rarely are in reality.]

Aspirations around 'Cities and City Regions, and the Role of Planning' (Sub-theme 7):

Delegates discussed how useful community spaces / forums are for Bristol: spaces where communities / citizens can gather (congregate), such as for demonstrations or to debate issues of importance. The squares used for the Arab Spring were referenced, as were London's public squares and European plazas. Delegates debated if such spaces were relevant in Bristol or the UK (referring back to the previous discussion about citizenship and encouraging greater citizen engagement). If so, "should they be prescribed in some way?", "should they be public spaces?", "where should they be placed (e.g., should they be evenly spaced throughout Bristol at walkable distances?", "should there be a large space in the centre of Bristol with smaller spaces outside the centre?"), "what other activities should take place there (e.g. cafes)?", "how can they be woven into the fabric of Bristol as flexible spaces that citizens have 'permission' to use as they see fit?" It was noted that current UK planning does not easily allow for the creation of such spaces. One delegate noted a counterpoint, that ring-fenced spaces that fall out of fashion with communities can become underused if other uses aren't forthcoming. Within this aspirational future a delegate suggested that the older generation would not need to move out of Bristol as the quality of public and private retirement homes would cater for all their needs and provide an enhanced quality of life for them. Allied to this people from all walks of life would not need to be made to live together, they would want to live together.

3.3. Step 2c – Work and Economy

In this step the post it notes (Figure 6 and Table 3) for People and Community (step 1) were read out to the delegates. Subsequently they were provided with a Google map of Bristol showing its salient features and asked to re-consider their aspirations given the current context of Bristol. The 7 sub-themes were not presented but (where possible) have been used post-workshop to organise responses.



Figure 5. ‘Post it’ notes for Work and Economy

Table 3: Work and Economy

No cars	A convergent resilience industrial centre
A solar city	Generation
Storage	Transport
Connected	Well integrated hinterland
Well connected to the rest of the UK and the world	No permanent sense of boundary – digital citizens
Innovation and new knowledge created in the city	No income gradient to differences in life expectancy
Local partnerships blur lines between public / private and third sector	Diverse city with equal opportunities for all citizens – women, immigrants, disabled
Bristol plays leading role in regional, national and global debates on future of cities	A city that is fully employed – either voluntarily or paid
Circular economy based on local manufacturing	A city that can ride economic and political cycles
Locally owned sustainable biz (more)	Home to a global business that doesn't exist yet
No cars (or at least no cars singly owned, only shared), lots more bikes	Everyone has a livelihood
Leading city for Automation and IoT <i>adaptation</i>	Different measures of prosperity
Greater presence / involvement / contribution by University of Bristol and UWE and others to daily lives of citizens	Coordination between areas – or competition. But pick one!
Quality employment	A city with no internal mobility barriers
Employment means so much more than being paid by the hour	Prosperity means to flourish on every level (not just in your wallet)
Lots of choice and opportunities for work / community participation of retired / elderly population	We judge our politicians (and educators, businesses) on the growth of meaningful and healthy lives
No business or organisation does anything unless it can say yes to the question: “Does this benefit people, place, planet?”	Businesses are concerned about local people and place and prioritise local jobs / support skills development
Full employment for those who want to work (but with better work–life balance)	

Aspirations for ‘Natural Resources’ (Sub-theme 1): Some delegates envisioned Bristol as a place where short-term flexible solutions were adopted. Others supported a ‘circular economy’ approach where innovative upcycling exists and is supported by a community culture of makers, menders, and sharers. Delegates further suggested adopting new architecture within Bristol and tackling the issue of dwindling resource supply through alternative use and re-use strategies.

Aspirations for ‘Natural Environment’ (Sub-theme 2): Delegates did not specifically mention aspects related to this sub-theme.

Aspirations around ‘Transport’ (Sub-theme 3): Delegates noted that getting workers to places of employment causes much congestion in cities, and considered the need for there to be 'a place' of work, versus many places (i.e. distributed firms); underpinning this was an ethos of “work is what you do, not where you do it”. Many small distributed hubs, and distributed manufacturing, would enable change. Delegates recognised that a diversity of people in different work places, rather than one place, brings new skills and challenges. In

the case of Arup, employees can ask questions across the world and get an answer, and staff only need to travel to get together occasionally – a paradigm for others to follow?

Aspirations around 'Resilience Adaptation and Smart Technologies' (Sub-theme 4): The group envisioned a significantly evolved Bristol city centre where the role of working has changed – being substituted by fully automated processes. The group questioned what kind of city this would be: services / manufacturing / creative, or a mixture of all of these. Therein delegates envisioned Bristol as a network of shared spaces [enterprise zones were once more suggested, as with the previous visioning exercises] with excellent connectivity (i.e. internet, and an array of mobile communications).

Aspirations around 'Financing and Alternative Business Models' (Sub-theme 5): In this economic future vision for Bristol delegates perceived of neighbouring cities cooperating and not competing – where a set of rules did not allow for neighbouring cities to be completely different (*economically that is*). Delegates hypothesised that creating opportunities in this future involved attracting a mix of players who are able to attract finance. Delegates suggested the circular economy for Bristol and asked what sort of infrastructure might be needed for it to be successful. They recognised that the logistics of the circular economy are complicated and asked how local manufacturing (e.g., 3D printing) might fit with the circular economy. One delegate brought the '**dependency ratio**' (how many employed verses unemployed people) to the group's attention. However it was noted that this does not take into account the non-monetary contribution of those who are not in employment, which is problematic. It also assumes that if more jobs are created than there are people to fill those jobs, then this is also problematic. One delegate prompted the wider cohort to think about alternative ways of sharing resources that do not involve the exchange of money. In this respect it was recognised that a move away from money to pay for transactions might change the world of work, and the value placed on it. We don't know whether if we keep creating jobs there will be someone to do them. Getting the State to pay for 'citizen type jobs' would be a transformation – and these would be not focussed on wealth creation, but social good, for example. Additionally delegates mentioned use of local taxation – a neighbourhood tax to spend locally for supporting services. In this vision of Bristol, delegates perceived much private capital, innovation and new businesses, drawing on a university role to supply capability (rather than the economic model we now have); a stronger duty of care between people and jobs where joined up budgets, so work delivers health benefits for example, provided a transformative approach. The group mentioned that a healthy population is able to be more productive (less time off work sick) and has increased economic output as a result.

Aspirations for 'Governance' (Sub-theme 6): Delegates proposed that this vision of Bristol would consider more stringently who is allowed to set up business and trade in the city – fewer Amazon-type premises [to ensure taxes are paid and go into the local area] and the

local community will be empowered to allow self-regulation against these large-scale companies; an anti-Oligarch approach. There was consensus about building a better relationship with the city without the need to close boundaries – this could be a ‘sell’ (i.e. selling the ideas of change) rather than ‘tell’ (i.e. enforce change through strict policy) approach supported by the Bristol £. Corporate Social Responsibility would push the ‘Better not Cheaper, Revenue not Cost’ ethos with a shared contribution to finance. As such Bristol would be perceived as a good place to buy from. Delegates envisioned Bristol embracing those who had the best skills to do the job in the quickest time [the example of nuclear power and China was given]. However it was suggested that whilst this ethos might be beneficial to this aspirational city, it should be accompanied by investment in local skills and regional ownership – this would require a long-term vision where education / skills development was at least 10 years ahead of the curve. This would involve place-based and problem-based learning (‘A living Bristol Laboratory’) from the grass roots up. [The group did not settle upon the type or scale of organisations Bristol would seek to attract, or the skills base it desired, although at one point they did say a portfolio approach was desirable and they wanted brilliant and highly-motivated people.] With regard to attracting this typology of future citizen, they hypothesised that Bristol would need to be well networked, have a basis of knowledge generation and provide collaboration opportunities (i.e. upward mobility). The group discussed the validity of preventing environmentally unsustainable organisations from operating within the city, but did not delve into the detail of how this could be resolved. In addition they discussed how to shift the mind-set of such people so they do not think of welfare as an entitlement – they suggested education was vital.

Aspirations around ‘Cities and City Regions, and the Role of Planning’ (Sub-theme 7): The delegates envisioned a city centre that contained a network of shared spaces / distributed work hubs where people from various organisations (and elsewhere) could go to work. This was possible because the work Bristol would be attracting would not require co-location. One delegate asked why this would be better than the current system of people travelling to work at a single site per organisation. The response was that it would reduce congestion and the stress caused by commuting, but also it is a more flexible way of working and might improve work quality and problem solving by allowing people to engage with a variety of people from different backgrounds. One delegate asked what this might mean for organisational identity and for community cohesion (it was suggested by one delegate that doing things for others would bring this about). In tandem with this the group discussed how SMEs would be scattered around the city; they would not be co-located with similar SMEs. One delegate spoke out against live / work environments, fearing they promoted insular thinking, however the group did recognise that some organisations need to be co-located to operate efficiently.

3.4. Reflections on Workshop

Reflections on Step 2a

In terms of content, one delegate noted that political boundaries are not reflective of the best borders for the various issues raised, such as resources. [Boundaries will change depending upon the focus.] Another delegate promoted sharing and mending as of importance in the future, however others contested that *as an economic activity, they have little worth as they do not contribute much to GDP*. However, if what we are measuring is something other than GDP, such as resource efficiency, they have great worth. Things should be designed so they can be fixed and so they can be repurposed and recycled. A delegate commented that people won't vote for a city vision predicated on the environment and resources as it is too risky requires strong leadership and capability. This resonated with other delegates, who talked about risk (and need to resist) an initial policy of closing Bristol's borders during the exercise.

In terms of process delegates were asked if the activity had provided them with a different vision of Bristol. The response was that their idea(s) for two city centres (a polycentric approach) was quite different to Bristol as it currently stands. One delegate responded that he could see how past decisions had been made for economic reasons and how this may have been countered by using the environmental cluster as a priority. Another delegate noted that as the exercise progressed and more ideas were added, tensions between ideas arose. Other delegates noted that there is a difficulty with considering the physical environment of the city (via the maps) and then promoting social change to create changes in the future. Another delegate observed that the maps made it difficult to express non-geographically-located ideas (such as those about systematic change or governance). Delegates closed the discussion by suggesting that the information being gathered could be used to influence current activities in Bristol.

Reflections on Step 2b

In terms of content some delegates started mapping the poorest areas of the city first and found that they are often the areas that have the poorest connectivity to the city centre. However, it was noted also that these areas often have strongest sense of identity (and community). Delegates noted also that there were similar themes and issues cropping up as in the previous session: walkable community spaces, services such as cafes and no cars.

In terms of process delegates mentioned that maps were less useful for this cluster as compared to Environment and Resources, in part because it was harder to express aspects of this vision onto this type of map. One delegate suggested using personas to capture issues that cannot be geo-located.

Reflections on Step 2c

In terms of content the delegates maintained that they came to a vision of a more confident Bristol; one that could attract investment, but was not afraid to reject investment that did not fit with its overarching vision. This included a shared, portfolio approach to financing and city as a 'living lab' where flexible land use policies and different ownership models existed. Delegates cautioned about putting all the city's eggs into one basket, whilst another queried how a 'networked' Bristol would perform in respect to other cities in this type of future – this led to uncertainty between which was better, an open or closed economy?

In terms of process this appeared to be the hardest session to capture on the maps. The delegates thought that this was because it was the most abstract of the three visions.

4.0 THREE MODELS FOR CITY LIVING IN BIRMINGHAM

A half-day workshop was held in the Impact Hub in Birmingham (Digbeth, Birmingham B5 5NR) with a range of stakeholders and delegates from cities across the country. Prior to the workshop delegates were informed that academics from the University of Birmingham leading the Liveable Cities research programme (www.liveablecities.org.uk) were looking to construct aspirational visions for Birmingham looking towards the far future in order, exploring them in relation to today's context to determine how best to bring them about. The outputs and findings of the workshop were presented to the national Foresight Future of Cities project. The workshop was split according to the following structure (broadly similar to that used in Bristol) – the outcomes of the day are reported in this Section.

Introduction to Liveable Cities and Foresight Future of Cities (Professor Chris Rogers)

Step 1: *Alternative visions of Birmingham (Dr Dexter Hunt)**
Clustering of Visions (facilitated by the LC representatives)

Introduction to the Aspirational Futures Methodology (Professor Chris Rogers)

Step 2a: Future Bham Prioritising Environment and Resources (in groups) and Reflections on an Alternative Birmingham (plenary) – Section 3.2.1

Step 2b: Future Bham Prioritising People and Communities (in groups) and Reflections on an Alternative Birmingham (plenary) – Section 3.2.2

Step 2c: Future Bham Prioritising Work and the Economy (in groups) and Reflections on an Alternative Birmingham (plenary) – Section 3.2.3

Synthesis of the Visions (plenary)

Reflections on the Value of the Foresighting Process (plenary)

Final remarks (Professor Chris Rogers)

In Step 1, given the reduced timeframe for this workshop, significant preparatory work was required. This involved gathering evidence from existing visions (Figure 6) for the future of Birmingham published over the last ten years (2005 and 2015). This evidence was organised into a city narrative for each of the three visions (Sections 3.1 to 3.3) and further organised according to the seven key sub-themes. In this first step delegates were presented with a set of distilled 'post it' notes that captured the essence of these narratives. The full narratives (with references) are provided here and when read in conjunction with the 'post it' notes and discussion captured on the day; they provide powerful future narratives for the city of Birmingham.



Figure 6. Evidence base for Birmingham workshop

In Steps 2a to 2c delegates were provided with several different GIS maps for Birmingham showing its salient features in different layers and asked to re-consider the aspirations given the current context of Birmingham.

4.1. Outcomes from Birmingham Workshop

The outcomes from Steps 1 and 2 for Birmingham are reported in this section.

4.1.1. Step 2a: Environment and Resources

The following narratives were used to prompt the ‘post it’ note session related to ‘*Environment and Resources*’. They are based on clustered evidence taken from existing visions for the future of Birmingham’s City published over the last ten years (2005 and 2015). These are further organised according to the seven key themes from the UB *Policy Commission on Future Urban Living Report*.

Natural Environment: This Green Vision for Birmingham seeks to tackle climate change and enhance the local environment (BCC, 2008, p8). As such it pulls together strategies for carbon reduction, ecosystems services (**the ‘biophilic’ city**, BCC, 2013b, p12), and mitigating for / adapting to climate change (BCC, 2012d, p5). Sustainable green living spaces (**The City’s Greenways**, BCC, 2013b, p12) within this green economy are created by improvements to the use and management of Birmingham’s land and water and nurturing the city’s natural ecosystem and green spaces; this is helped in part by collaborating with like-minded green cities (BCC, 2012d, p5,6). An underlying ethos to this vision has been to

conserve Birmingham's Natural Environment, allowing biodiversity and wildlife to flourish (BCC, 2012e, p6) and includes sustainable management of the city's water courses (BCC, 2012e, p7), collectively known as **the City's Blue network**, through water sensitive design (BCC, 2013b, p12).

A 'green infrastructure network' threads through the city and links with the countryside beyond (BCC, 2012e, p7) and the canal network is continually promoted as a vital asset supporting movement, and environmental and biodiversity quality (BCC, 2012e, p7). This '**Adapted City**' ensures all past, present and future growth is adapted, thereby trees are seen as useful for cooling and insulation (BCC, 2013b: 12).

Natural Resources: In this vision the city of Birmingham has taken radical steps to minimise its carbon footprint and waste (BCC, 2012e, p6). This has required vitally important natural capital aspects of the city (i.e. natural environment service provision and related **Ecosystem Services**) to be both maintained, protected and enhanced, whilst encouraging new opportunities for wildlife and biodiversity (BCC, 2012d, P5; BCC, 2012e, p7). Allied to this has been the reduction of CO₂ emissions through a range of schemes including, but not limited to: increased decentralised energy provision (e.g. Combined Heat and Power); and low carbon energy generation within buildings that use 'SMART' technologies, grids and meters (see later), in addition to apps that help control the supply and demand of energy in the home and at work (BCC, 2014a, p43). Local decarbonised energy generation is readily endorsed and adopted, provided that the **impact on overall environmental quality including air quality is neutral** (BCC, 2012d, p21). Armed with an evidence base, politicians and socio-political decision-makers in the city support and promote green solutions and distributed energy systems at a community level (The New Optimist Forum, 2013, p53). Better management of 'total' waste exists throughout the city and this has led to much improved recycling, reuse and energy conversion rates, all of which have helped engender a **zero landfill waste city** (BCC, 2011b, p9, BCC, 2012d, p5). Therein resource-recovery technologies have been adopted to reduce the impact of over-consuming scarce resources and materials (BCC, 2012d, P5). The environmental impact of road transport is minimised by promoting '**Electro-mobility**' – this has been achieved through supporting electrically powered (and other low emission) vehicles and strong encouragement for use of efficient fuels and technologies (BCC, 2012c, P6). Consolidation centres are created where low / zero emission vehicles have been adopted and alternative fuels are both promoted and facilitated, for example through an extensive network of electrical charge points at key locations within the city (BCC, 2010a, p9).

Accessibility and Movement: This 'EFFICIENT CITY' makes best use of the existing highway network with an appropriate hierarchy of priority for public and private transport, including cycling (BCC, 2014a, p5). This city vision very much seeks to reduce dependency (and use)

from Birmingham's citizens toward the private car, whilst keeping the city moving (BCC, 2010, p9; BCC, 2014a, p5). As such smart routes have been adopted for all major corridors in the city and parking outside is strongly encouraged (and facilitated) to allow for more efficient use of available highway capacity (BCC, 2014a, p5, BCC, 2010, P9). Whilst '**Eco-Driving**' initiatives have been encouraged to change driving behaviour in order to reduce fuel consumption in the city (BCC, 2012c, p10), the overarching preference is now for walking and cycling (BCC, 2012c, p6).

Resilience, Adaptation and Smart Technologies: Smart Technologies help Birmingham's 'smart users and green citizens' make more environmentally sustainable choices in terms of work, leisure and healthy recreation (BCC, 2012a, p8, BCC, 2012d, p23). The city has radically rethought the way health and social care services to respond effectively to the needs of a very mixed socio-economic demographic, and the load this places on general health care in the community and other related services. In addition they have helped the city secure access to resilient energy supplies, whilst at the same time meeting the obligations to satisfy a clean green city agenda (BCC, 2012a, p9). As such this vision of Birmingham is considered smart in its ability to be much more effective in terms of: resource use across multiple agencies; minimising waste and increasing 'value-adding' activities; and public sector productivity (BCC, 2012a, p21).

Financing and Alternative Business Models: Concepts like micro-energy trading have been facilitated as a part of a smarter Birmingham through the development, implementation and adoption of a range of non-traditional business models (BCC, 2012, p23). Financing has been helped from a range of sources and new initiatives, for example 'The Birmingham Green Fund' (BCC, 2012d, p3). In addition the '**natural capital city model**' is now widely adopted, hence future development is looked at from an outcomes perspective linking directly to ecosystem services. This approach maximises multiple benefits, with staggered returns on investments (BCC, 2013b, p26).

Governance: In this vision of Birmingham the City Council has a much stronger role in managing demand and preventing need for services across the public sector (BCC, 2015, p8). A proactive, supportive and encouraging approach has embedded green behaviours in city (BCC, 2012d, p23). This has required provision and promotion of a package of techniques (i.e. smarter choices) for influencing people's behaviour towards more sustainable choices (e.g. transport modes, see earlier) in order to reduce carbon emissions. These choices often include interventions which work with human behavioural tendencies to encourage "good" choices – referred to as "Nudge" (BCC, 2012c, p6).

Cities and City Regions, and the Role of Planning: The planning framework and policy has ensured that development encapsulated the requirement for Birmingham to be a leading Green City. This has been brought about through the Birmingham Development Plan (BDP)

that guided decisions on development and regeneration in Birmingham; enshrined within this was the underlying ambition “to create a more sustainable city that minimises its carbon footprint.” Planning Frameworks and Policy have provided the necessary steer for a more integrated and systemic approach to linking the city’s physical transformation and development to the carbon and environmental challenges – a fundamental requirement of becoming a leading green city (BCC, 2012d, p13). The city has had to consider more comprehensively how the Council’s transport and planning services are delivered in a sustainable way, from inception through to implementation, and how wider partnerships can help to reduce carbon impacts on the city (BCC, 2012c, p6). New development is built to the highest environmentally sustainable standards, generating wider benefits for those who live in the city. This includes protecting flood plains from inappropriate development (BCC, 2012e, p7). Marginal industrial land of poor quality that no longer meets the requirements of the market or businesses is promoted for redevelopment to alternative uses. In these circumstances financial contributions are sought through planning obligations such as Section 106 agreements (BCC, 2012e, p8). ‘Green Living Spaces’ related policies secure, enhance and ensure effective long-term maintenance of the City’s natural green and water spaces (BCC, 2012f, p13).

In this step the ‘post it’ notes (Table 4 and Figure 7) for ‘*Environment and Resources*’ (output of Step 1) were read out by a delegate from the workshop cohort.



Figure 7. 'Post it' notes for Environment and Resources

Table 4: Environment and Resources

Communities more self-sufficient on waste energy and food	Building communities of future, self-build, wikihouse, free up underused brownfield land
'Green' economy is main sector	Connect communities / diversity to economy
There is a comprehensive network of paths and cycle routes across city	Birmingham has grown out and is creating liveable places and environments
Neighbourhood plan coverage across all city areas embedded into planning governance	Birmingham is resilient; enables and draws benefit from diversity; and is 'connected' (in the sense of citizens using it to make links).
A nature rich city with aware, empowered and engaged citizens	Pride in our <i>civic centre</i> and our <i>neighbourhood</i> and what it means to a resident/business born or adopted 'Brummie'
Better housing and natural spaces	A city region with a natural economy
Ecosystem which facilitates relationships between communities of all types	Vibrant, integrated city at ease with itself
Which understands its data, correlating and predicting for insight and strategy	People share resources, work in their communities (paid work)

Subsequently the five groups were each provided with a new GIS map of Birmingham showing its salient (layered) features and asked to re-consider their aspirations, given the current context of Birmingham. The following highlights the key areas being discussed according to the 7 sub-themes:

Natural Environment: Delegates suggested Birmingham would be a city of both Green Parks and Pocket Parks with allotments, and green walkways, roofs and walls. These 'unmixed multi-use' green spaces would be linked together by canals acting as living 'wildlife' and 'social' corridors that are accessible to all ages.

Natural Resources: Delegates envisioned a city fully connected to (publically owned) district heating schemes allowing for a zero emission city centre. Strategic green areas ("Urban Forests") would be identified to help counter the "urban heat island" effect and a greater amount of food would be produced within the city. Local waste facilities (one of Birmingham's bug bears) would allow for improved sorting, aiming for zero waste and more resource efficient developments.

Accessibility and Movement: Delegates envisioned driverless, electric / low carbon / zero emission transport into, out of and around the city; an interconnection of nodes / hubs / green areas, where those living on the edge of the city centre can easily be picked up and moved around. The city is a car free zone where the possibility to live and work in Birmingham without a car is realised. Delegates envisioned a secure, safe night-time transport system that helped to keep the city centre vibrant and alive after working hours – this includes mass rapid transit with last mile cycle hubs. Canals within this vision are used far more strategically, e.g. in daytime for commuting and at night for transporting waste / goods.

Resilience, Adaptation and Smart Technologies: This was not specifically mentioned or expanded upon.

Financing and Alternative Business Models: Delegates envisioned a “Re-Price” of the economy, particularly around natural capital where fundamental changes to the development models have been implemented. For the most part, business moves out from the city centre and people work closer to where they live. There are more work hubs and more flexible assets. Alternative health and education models (local + prevention based) are adopted.

Governance: The city implements community-driven changes that build social capacity in order to sustain regeneration. This includes a visceral cultural shift and changes to permission + procurement. Some delegates envisioned a more controlled city with drones.

Cities and City Regions, and the Role of Planning: Delegates mentioned a city of streets and centres, places of interaction and points of destination, with several commercial centres surrounded by villages.

4.1.2. Step 2b: People and Community

The following narratives were used to prompt the 'post it' note session related to *People and Community*. They are based on clustered evidence taken from existing visions for the future of Birmingham's City published over the last ten years (2005 and 2015). These are further organised according to the seven key themes from the *UB Policy Commission on Future Urban Living Report*.

Natural Environment: In this vision Birmingham is a safe, clean and friendly city – a great place to live, learn, work and visit: a global city with a local heart. Birmingham people are skilled and have the opportunities they need to succeed, they have high aspirations, are healthy and enjoy living together (BCC, 2008, p8). Birmingham has been developed with diverse and inclusive city neighbourhoods (BCC, 2012e, p4, BCC, 2013d, p11) where the underlying ethos has been the creation of a society which is fairer, more equitable and protects the vulnerable (BCC, 2012d, p9). Improvement to the natural environment is supported where it can be shown to deliver locally-shared benefits to the people and community (BCC, 2012d, p7). For example better health and wellbeing is achieved through the provision of new and existing recreation and leisure facilities and this is linked to good quality public open space (BCC, 2012e, p6), for example by adopting Natural Health Improvement Zones (integrating the delivery of health and green living spaces has facilitated achieving a '**Heathy City**' (BCC, 2013b, p12). This welcoming and inclusive city adopts an 'open city' approach that provides open spaces and social events for maximising opportunity for intercultural activity (BCC, 2013d, p24).

Natural Resources: Local centres reflect the diversity of the city and the needs of local people. As such, the historic environment and sense of place of localities throughout the city have been enhanced, while considering future adaptation (BCC, 2012e, p6). Citizens embrace the '**City's Productive Landscapes**', where the multiple benefits of urban forestry and urban food growing are gained. Allotments are promoted, facilitating community food growing and orchards (BCC, 2013b, p12). Urban agriculture, in this leading green city, consists mostly of growing fruit and vegetables (The New Optimist Forum, 2013, p43) within "**poly-cities**" – agglomerations of communities, developed around energy generators (The New Optimist Forum, 2013, p52).

Accessibility and Movement: This city vision for Birmingham connects people and places (BCC, 2013d, p33) – a '**Walkable City**' that has an outstanding well-connected, safe pedestrian environment which is an easy and enjoyable place to get around (BCC, 2014a, p43). Travellers and commercial operators are provided with better journey planning abilities and up-to-date transport information that has helped ease congestion, reduce air and noise pollution, and enhance the travel experience, whether by foot, car, train or bus (P5, BCC, 2014a, p43). Initiatives, such as travel plans, car sharing, car pools and other

smarter choice facilitate integrated travel behaviour (BCC, 2010a, p9) as part of an integrated transport system that allows for the best pedestrian, cycling, road and air access to and within the city (BCC, 2008, p17). This city vision considers much more readily the needs of pedestrians, putting them at the heart of the movement strategy for the city centre (BCC, 2010a, p9). Birmingham's city streets and public spaces have much enhanced environmental quality (e.g. clean streets), safety and security, meaning that walking becomes the most enjoyable and convenient way of getting around (BCC, 2008, p, BCC, 2010a, p11). The needs of the elderly and mobility-impaired are catered for through careful attention to street design, public realm and transport interchanges (BCC, 2010a, P11). Where public transport is embraced, it must be efficient and affordable (BCC, 2012d, p7). This **"barrier free" city** ensures that disabled people have access, on an equal basis with others (BCC, 2013d, p27). Every child and young person has the 'right to play' and is provided with free transport (BCC, 2013d, p30).

Resilience, Adaptation and Smart Technologies: This city vision for Birmingham is one of a resilient, adaptive and smart environment (BCC, 2012e, p6). Smartness in this vision has required Birmingham to radically rethink how it provides health and social care services to respond effectively to the needs of a very mixed socio-economic demographic, and manages effectively the load this places on general health, care in the community and other related services (BCC, 2012a, p9). Thereby it helps ensure that its citizens can easily and affordably connect to work, leisure and healthy recreation (BCC, 2012a, p9). Digital inclusion is a priority in this scenario and supports Birmingham's citizens and communities to be digitally skilled so that they can be part of the global digital economy (BCC, 2012a, p10). A digitally capable city of Birmingham is a place where everyone is enjoying the social, economic and cultural benefits of being online – access to jobs, education, civic participation and health are improving choices and opportunities for a better way of life (BCC, 2014a, p29). Technology (i.e. Smart Meters and Smart Grids) within a smart Birmingham allows for convenience and better deals for consumers (citizens, business communities and public services) through provisioning of better information with more choice. This includes responsive services personalised to consumers' requirements and expectations, such as 24 hour service provision (BCC, 2012a, p15, p18, p21). This smart city vision for Birmingham makes better use of the city's data to improve service outcomes and citizens' quality of life through predictive analysis and timely decision making (BCC, 2012a, p20, p21). This includes affordable connectivity, increasing neighbourhood connectivity and e-participation (BCC, 2012a, p24). The use of new digital technology, Smartcard ticketing, consistent design, travel information, and branding of public transport encourages greater use of public transport within and around the city (BCC, 2010, p7). New models of people-centred digital health and care, and use of data in its widest forms, are making it easier for individuals to manage their health and wellbeing and bring the people with needs closer to the people that can help to support a better way of life (BCC, 2014a, p43).

Financing and Alternative Business Models: Concepts such as car-pooling and crowd-funding would be facilitated by a Smart Birmingham, requiring non-traditional business models (BCC, 2012, p23). A **'buy Birmingham [goods and services] first'** procurement policy provides business opportunities for those at the edge of the employment market (BCC, 2012f, p10). In addition unrivalled expertise in enabling new business models has helped add value to the region's businesses and digital hubs that deliver a platform for success – and not just economic success (BCC, 2012f, p12). In this city vision there is much better connection between SMEs, innovation and research, where the expertise of its universities is readily harnessed. Innovative development funds ignite then sustain the creativity of Birmingham's entrepreneurs and businesses, and help engender the city as **'the test bed of Europe for innovation and digital creativity'** (BCC, 2012f, p12). There is a much greater emphasis on small and micro-businesses including social enterprise. There are funding and business support structures (BCC, 2013d, p20) where innovative finance models build on local businesses' Corporate Social Responsibility (BCC, 2013d, p21).

Governance: Birmingham City Council becomes a more strategic body, with less direct service delivery but a stronger role in community leadership. This includes place shaping across Birmingham and integrating services from a range of providers around the needs of people and places (BCC, 2015, P8). Services are delivered in different ways, often at a more local level where they can be more responsive to needs and demands, leading to better management thereof (BCC, 2015, P8). There is a bigger role for social enterprises and the community, and new forms of organisation such as 'mutuals' readily exist (BCC, 2015, P8). Integral to this vision is the nurturing of digital skills and talent that span education to employment. Additionally building cross-sector capacity to support innovation and SME growth leads to increased job opportunities and entrepreneurship (BCC, 2014a, P29). Accountability is with residents, where opportunities to influence services occurs at local levels. Voluntary, community and resident groups, active citizens and practitioners share their learning, discuss their needs and shape solutions (BCC, 2012f, P13). Birmingham's schools and colleges are the best in the county at preparing people for the world of work. More power devolved to a local level has helped increase opportunities that are available to young people and considerably lower unemployment (BCC, 2013a, p23-25).

Cities and City Regions, and the Role of Planning: In this city vision the City Council works co-operatively with other public agencies and enlists local people, community organisations and the business community to tackle local issues (BCC, 2013c, p17). People and businesses come together to collaborate and exploit the city's assets, data, technology and networks to design new solutions to our societal and economic challenges, and are valued for what they do (BCC, 2014a, p29). New partnerships between citizens, government and business have been combined with technology-driven services that create more efficient, effective and

enjoyable ways for people to live within a modern municipality such as Birmingham (BCC, 2014c, p4). The city provisions and prioritises for all of the following:

- Supporting families and children out of poverty (BCC, 2013d, p19)
- Embracing super diversity (BCC, 2013d, p23)
- Protecting the most vulnerable (BCC, 2013d, p25)
- Addressing safety, isolation and loneliness (BCC, 2013d, p33)

Strong relationships exist between neighbourhoods because they share examples of learning and good practice – ‘neighbourhood twinning’ (BCC, 2013b, p32). New residential areas engender a strong sense of place – they are climate-proof, attractive and safe with multi-functional public spaces (BCC, 2012e, p8). As Britain's ‘most engaged city’, people very much value being able to influence local decision-making, therefore residents are involved as much as possible (BCC, 2008, p17) and are empowered to shape their neighbourhood (BCC, 2013d, p31). The creation of the Birmingham Food Council and adoption of a Food Charter has been a strong facilitator for allotments, community growing, orchards and ‘edible landscapes’. The tree bond has helped ensure an urban forest approach can be supported throughout development (BCC, 2013b, p20). ‘Birmingham’s Big Ideas’ funds attract philanthropic investment, public sector and charitable grants, and personal giving (BCC, 2013b, p34).

In this step the ‘post it’ notes (Table 5 and Figure 7) for ‘*People and Community*’ (output of Step 1) were read out by a delegate from the workshop cohort.



Figure 7. 'Post it' notes for People and Community

Table 5: People and Community

City which leads the application and development of new technology	Take a people focused approach, as common language to build a vision around
A city where school class sizes are no greater than 10 (People and Communities)	Prepare people for intangible economy, applying wisdom to tech
Connect communities / diversity to economy	Comedy replaces all religion
Long term political consensus	Birmingham overturns the power of capital
A city where no one worries about transport costs to work: where 70% people walk and cycle to work, or public transport	Genuine ability for indigenous communities to purchase building own assets as investment boom / gentrification hits
Investment decisions put people first	Implement long term strategy and sustainability
Planners are valued professionals!	Culture/communities => values – ethics
A city which has smart infrastructure used in a smart way.	There are zero NEETS in Birmingham → self-determination for the city
City has wholly owned waste and energy infrastructure	Community owned assets
A city region with a natural economy	In an Inclusive City, celebrating Super-Diversity
In a Nature Rich city with Aware, engaged and empowered citizens	Super connected mega city – new capital of the country
People are living longer and living well	Looking at welfare as investment
No suicides in Birmingham	Eradication of city poverty
<i>Citizen 'start-up'</i> of the UK. We welcome, integrate and use the skills and energy of new residents better than anywhere else!	Old age is respected and supported – independence especially around mobility/healthcare
Young people of Birmingham identify with the city and community	A city that turns education into impact on regional economy, environment, and community
Highly qualified workforce	We do what we do to improve the lives of residents
Transport: transport system that rivals London	An inclusive city celebrating super diversity
The model successful 'diversity city': internationally connected	Ecosystem which facilitates relationships between communities of all types
Frictionless daily lives	A city where 75% of people work from home
People have more responsibility for their health through both technology and attitudes	People have access to communities for support, help and opportunities
75% people use a natural health service for recreation and saving NHS bills	'A super diverse city' where communities play an important, active, direct role in the city
Policies meet social justice priorities	Birmingham plans for local people and their future
Birmingham is truly a citizen city governed by and for the people	Human wisdom catches up with technology to apply to the big issues
Which understands its data, correlating and predicting for insight and strategy	People and community to ensure all communities benefit from developments
Gentrification is old news. Local communities have more opportunity to express identity.	Safety in homes where people can live long and happy

Subsequently the five groups were each provided with a new GIS map of Birmingham showing its salient (layered) features and asked to re-consider their aspirations given the current context of Birmingham. The following highlights the key areas being discussed according to the 7 sub-themes:

Natural Environment: This was not specifically mentioned in break-out groups.

Natural Resources: This was not specifically mentioned in break-out groups.

Accessibility and Movement: Delegates perceived of a city where improved mobility and inter-connection had transformed social interaction of all local areas. This had been achieved by initiatives developed from the 'ground up' (community-based and small group based).

Resilience, Adaptation and Smart Technologies: Delegates envisioned a city of seamless technology that allowed people to take control of their affairs (not least of own health) – this was a city vision allowing for digitally-connected inclusion.

Governance: This aspirational vision highlighted the importance of community neighbourhoods where each community has a bigger say in their areas. This is supported by a much more developed Local Authority, whereby the city retains strategic responsibility with a range of very local (networked) governance models – all integrated into a regional framework and reflective of needs of the economy; health; housing; and transport. Allied to this are hyper-local services which include specialist healthcare centres that anticipate health trends (and are supported by distributed health care models) – these see a step change in the health of the city.

Financing and Alternative Business Models: Delegates envisioned a city that invested heavily in local centres in Birmingham, making them the centre of community activity. The development of multi-centre hubs has helped cater for growth in population and economy.

Cities and City Regions, and the Role of Planning: Delegates envisioned strong local communities (of all age groups) with much more of a city ('centre') focus, where community is much more than neighbourhood – the problems of being a diverse city with non-diverse neighbourhoods has been overcome. All schools (not just the grammar schools) are culturally and socially diverse.

4.1.3. Step 2c: Work and Economy

The following narratives were used to prompt the 'post it' note session related to 'Work and Economy'. They are based on clustered evidence taken from existing visions for the future of Birmingham's City published over the last ten years (2005 and 2015). These are further organised according to the seven key themes from the UB *Policy Commission on Future Urban Living* Report.

Natural Environment: The City's economy will be strong and prosperous, built around a diverse base of economic activities and supported by a skilled workforce. The City Centre will have expanded, accommodating major new prime office developments and a series of exciting destinations boosting the cultural, leisure and retail offer. The network of thriving local centres will reflect the diversity of the City (BCC, 2012e, P4). However, improved use of land and green space for an attractive city has only been supported where it can be shown to lead to a more prosperous economy (BCC, 2012d, P7).

Natural resources: The key aspect to this vision is prosperity of the city and its ability to operate and succeed in a world of increasingly scarce and expensive resources (BCC, 2012d, P7). Whilst Industrial Symbiosis is embraced, it is with an economic imperative (BCC, 2012d, P7).

Accessibility and Movement: This 'Well Connected City' delivers a world class, easy to use integrated public transport system into and around the city (BCC, 2010b, P5). Continued investment in bigger airports and high speed transport (e.g. HS2 and Birmingham Curzon) has brought economic benefits to the region and is seen as a game-changer revolutionising door-to-door connections nationally and worldwide (BCC, 2012f, P10, BCC, 2014c, p6, p14, GBSLEP, 2014, p40). Provision of additional capacity for regeneration and economic growth in the city centre (BCC, 2010a, P7), and a focus on maximising the reliable operation of the transport network (for all traffic), has seen improvements to key delay points in the highway network. This includes improvements to the efficiency by which freight is moved, services are arranged and waste is collected (BCC, 2012c, P12).

Resilience, Adaptation and Smart Technologies: A smart city roadmap has helped create the conditions for employment growth (through a range of new jobs and delivery of new services) that have boosted the economy (BCC, 2012, P8, P14). City data is unlocked from individual silos (BCC, 2011b, p14). 'Open City' data and intelligence become one of the city's key assets that are used for job creation and economic growth (BCC, 2012f, P11). Commercial and public data assets innovation continues to be driven and new value creation added. Continually stimulated market growth is enabled through provision of smart city services, technologies and applications. Greater visibility has enabled early and targeted intervention across a range of services, with less duplication and more focus on

continuity of intervention (BCC, 2012, P21). Online service models support new applications, services and ways of working (BCC, 2014a, P17) and early development of a Smart Development Blueprint has ensured that the digital infrastructure for 21st Century living continues to be future-proofed (BCC, 2012f, P12). Through early deployment and investment in the right infrastructure (e.g. fibre optic cabling and smart sensors), Birmingham strengthens its ability to be an adaptable, resilient city, capable of supporting healthy and prosperous communities (BCC, 2014a, P17). Key elements of Birmingham's economic vision relate to energy security and resilience (BCC, 2012d, P7); the latter includes a built environment that is resilient (and adaptive) to the impacts of climate change, e.g. flooding (BCC, 2012e, P7).

Financing and Alternative Business Models: The smarter vision of Birmingham (described previously) has come to fruition through finding new ways to leverage the city's financial strength combined with development of new ways to help businesses flourish (BCC, 2012e, p8, p14). Key to this has been support given to new business models and innovation (by SMEs and entrepreneurs) through greater collaboration and commercial engagement with public sector service delivery (BCC, 2012e, p20). This includes, but is not limited to, a single, multi-year budget for local public services ("The Birmingham Pound") which enables integrated planning and commissioning (BCC, 2015, p8). Public Service Reform to reduce costs and prevent future high-cost service demand has been adopted (BCC, 2015, p6). This includes pooled support resources in the fields of economic intelligence, investment planning, skills and local regeneration (BCC, 2015, p6). Birmingham is now Britain's easiest place to start and grow a business. A more strategic approach has been adopted whereby economic and employment opportunities from the green economy have been maximised (BCC, 2012d, p18). For example minimising the impact of climate change on GDP or attracting investment for aspects such as how we heat and power our cities (BCC, 2012d, p6,11). Housing benefit costs have been reduced through implementation of a range of schemes, including 'Earn-back' (BCC, 2015, p8). Development of Birmingham's international role [Shouting up for the City, BCC, 2012, p10] has been central to its success, attracting investment and visitors, whilst supporting a growth agenda (BCC, 2012e, p7). There are new thriving marketplaces for city information and services, where innovation is externally and internally driven. An open innovation platform supports SMEs and social entrepreneurs (BCC, 2012b, p14). Birmingham as an '**Entrepreneurial City**' has helped ensure a significantly increased share of high growth companies. Therein '**Economic Growth Zones**' have helped support inward investment, medium enterprises and value-added businesses using and promoting the cluster model (BCC, 2012f, p9). Moreover, the Greater Birmingham brand is widely adopted and the region is once more a major driver of the UK economy outside London (GBSLEP, 2014, p13, p35). Birmingham is globally competitive, contributing fully to the thriving, prosperous and economically sustainable region (BCC, 2008, p8).

Governance: In this city vision for Birmingham significant delegation of responsibilities from Central Government agencies to local public service leaders takes place (BCC, 2015, p8). The City Council loses other functions to other parts of government and more local arrangements, but develops a more strategic role (BCC, 2015, p8) – the City Council remains responsible for regulatory functions, social care, refuse collection and potentially whole place budgeting (BCC, 2015, p8). The City Council develops a stronger place-shaping and city leadership capacity, and more is done through engagement with city-level partnerships in order to take forward the vision for the city (BCC, 2015, p8).

Cities and City Regions, and the Role of Planning: There is a focus on economic development, transport, regeneration and skills (BCC, 2015, p6). Planning seeks to provide high quality connections throughout the city and to other places beyond its boundaries, encouraging the use of public transport (BCC, 2012e, p6). The impetus has been to strengthen Birmingham as a learning city, with high quality institutions, and promote its role nationally and internationally (BCC, 2012e, p6). The provision of land and premises has been a fundamental part of creating a prosperous economy, and this has required significant release of land from the Green Belt (BCC, 2012e, p10). Planning Birmingham’s future housing and promoting dynamic arts and leisure opportunities in the city will be integral to the economic vision of the city (BCC, 2012f, p16).

In this step the ‘post it’ notes (Table 6 and Figure 9) for Work and Economy (output of Step 1) were read out by a delegate from the workshop cohort.



Figure 9. 'Post it' notes for Work and Economy

Table 6: Work and Economy

City which leads the application and development of new technology	Centre of excellence for low carbon energy industries
'Green' economy is main sector	Flexibility to raise finances and invest in the
Economy: have the right policies in place to ensure business development	city Prepare people for intangible economy, applying wisdom to technology
Long term political consensus	Birmingham overturns the power of capital
Small innovative business is valued, supported and relates to sustainable growth	Talent and innovation dictates place in economy / work, not upbringing / background
A city region with a natural economy	Implement long term strategy and sustainability
Built around bio-diversity of city to become leader for bio-tech	Super connected mega city – new capital of the country
World class knowledge economy	We invent, make, export solutions to meet <i>global challenges and markets</i> for a better future
City infrastructure which supports home/portfolio working	A city that turns education into impact on regional economy, environment, and community
Highly qualified workforce	A city where 75% of people work from home
Meeting hubs	Ubiquitous Wifi
Local networking	

Subsequently each of the five groups were provided with a new GIS map of Birmingham showing its salient (layered) features and asked to re-consider their aspirations given the current context of Birmingham. The following highlights the key areas discussed according to the 7 sub-themes:

Natural Environment: This was not specifically mentioned in break-out groups.

Natural Resources: Delegates envisioned an economy that recognised values within the constraints of understanding its natural capital and resource limits, a whole offering: economic ecosystem. This included a new global model of industrial production closer to resources (for good economic reasons). This vision was for a city with a natural economy that learnt lessons from past failures, made better (more efficient) use of its assets and fully understood the term 'Earth Overshoot Day'.

Accessibility and Movement: This was not specifically mentioned in break-out groups.

Resilience, Adaptation and Smart Technologies: This was not specifically mentioned in break-out groups.

Governance: This was not specifically mentioned in break-out groups.

Financing and Alternative Business Models: In this vision delegates envisaged a city where investment is dictated by the needs of citizens. A diverse economy that has adopted new localised business models and manufacturing bases – this includes clean technologies and moves away from a single globalised model. The successful economy is based on knowledge and skills: 'The 2050 alternative education supply chain'. The city of 'values' is not

conceived of as just a workforce and is supported by grass-roots changes to education, finance, collaborations, innovation, skills – all supported within a strong ethical framework. Birmingham is seen as a magnet for people with skills and helps them build businesses here (this is how the city started after all). Delegates envisioned that these businesses would be formed of a diverse base made up of strong medium-sized enterprises and small enterprises, which are helped to grow through their own skills and facilitated by federations of small businesses – ‘The City of 1,000 Social Enterprises’. This diversified, balanced, economic base would not be over-reliant on large companies and would have flexibility based on human skills.

Cities and City Regions, and the Role of Planning: This was not specifically mentioned in break-out groups.

4.2 Reflections on Workshop

Given the time constraints for the Birmingham workshop, unlike Bristol, delegates were left with very little time within each of the three visions to help populate and crystallise them. As such many delegates pulled toward an overarching vision for the city rather than thinking within the individual pillars. Consequently the overarching strands that ran through the morning have been synthesised below according to the seven sub-themes.

Aspirations for Natural Environment (Sub-theme 1):

In all three visions there were very strong views about the importance of parks and green spaces – and even more importantly the need to provide links between these spaces to encourage wildlife corridors, amenity and way finding. Delegates on several tables noted that green spaces are very effective in helping combat the ‘urban heat island’ effect. Linked with the green space agenda, there was a desire to make greater use of the canal system both for tourism and (night-time) commercial use, which could be included into a more integrated sustainable transport system across the city. Use of existing hubs and infrastructure assets as living corridors (e.g. canals, roads, green spaces to be more than conveyance, but places to live and interact with).

Aspirations for Natural Resources (Sub-theme 2):

Energy, not surprisingly, was seen to evolve around the expansion of the city’s district heating system, but also by the provision of micro-energy at a neighbourhood level. Again, this would need overseeing at a strategic level to ensure compatibility with the needs of essential services, business, etc.

Aspirations for Accessibility and Movement (Sub-theme 3):

There was a desire for a **car-free city centre**, the car being cited as one of Birmingham’s major problems. A key future solution to this was seen to be a strongly integrated public transport system that provided access into and out of, as well as around, the city. There was also a discussion about the merits or not of a single transport authority and provider rather than, for example, the range of private bus operators that Birmingham currently has. Park and Ride was discussed, with locations well outside of the city centre, in less dense areas, with excellent public transport links, including an extended tram system. The tram system was seen as an essential part of the move to ‘de-car’ the city. This concept could be extended to include having commercial / industrial consolidation centres outside the city to allow HGVs and other commercial vehicles to congregate, unload and reload smaller ‘green’ vehicles to deliver into the city, allowing control of delivery times and ensuring vehicles are fully loaded.

Electrically-powered transport was seen as the most effective means of cutting air pollution, using the new breed of powerful batteries and energy from green sources. Where parking was required in new housing developments (in peri-urban areas) the suggestion of underground parking was made.

There was much discussion about measures to reduce the impact of rush hour traffic. Solutions were proposed around different ways of working and more flexible working, combined with varying school times and holidays. This could have complex implications for child-minding and family activities, but reducing the need for journeys and evening out traffic flows was seen as a greater benefit to the city.

HS2 and its implications were also discussed. This was seen to be a good opportunity for the city in terms of economic growth, and the opportunity to improve public transport links around the HS2 hubs.

Aspirations for Resilience, Adaptation and Smart Technologies (Sub-theme 4):

Radical changes to education were identified as a need. A new approach to teaching children to prepare them with the skills required, and the abolition of the National Curriculum, were suggested. More specifically, a flexible curriculum to fit the needs of the city was suggested. This led onto asking what the needs of the city would be in 10 years' time, the type of industries and skills that would be required. This was deemed particularly critical in terms of adaptation and resilience, as the lead in time for teaching and training new workers was around 10 years. The discussion started with talking of university education being more relevant to needs, but then was tempered by the realisation that other trades and professions would still be required. There was a feeling that the city would evolve into a high quality service delivery centre, but businesses and people would still be needed to build houses, maintain buildings and vehicles, and provide food, clothes, etc. So, tertiary education had to be around skills training at all levels.

Aspirations for Financing and Alternative Business Models (Sub-theme 5):

In all three visions the **budget** issue was mentioned, whereby communities needed the means for local implementation. There was discussion on how devolution of budgets could take place, ranging from Central Government devolving more budgets to the City, and then to communities, to allowing the city / communities to withhold (from central government) and spend locally Business Rates. There was a much greater role for people-centred investment and design. Delegates identified that future investment should be steered by the needs of the people and integrated with new approaches to value capture.

Aspirations for Governance (Sub-theme 6):

This appeared to be the most often articulated concern, and within each vision a need to increase community responsibility was highlighted. There was recognition that the city had an important role in strategic decision making, and it was crucial for upward as well as downward discussions between the boundaries of local and strategic concern. There were no concerns expressed about communities being unable to manage these new powers, but there were concerns about local parochialism and how to re-engage citizens with local politics and decision making, and the need to make citizens feel that they have the ability to make change.

Aspirations for Cities and City Regions, and the Role of Planning (Sub-theme 7):

Delegates suggested a polycentric (or village) approach with a shared city centre where excellent well-planned connectivity existed between hubs (around the city), the system of cities (outside the city) and a city's hinterland. There was an ethos of delivering greater diversity and greater flexibility through mixed use / provision centres – retaining existing assets, but using them in a better way (e.g. roads are useful and already exist for transport and conveying utilities).

5.0 CONCLUDING DISCUSSION

5.1. *Common Themes from the Birmingham and Bristol Workshops*

In terms of an overarching vision that drew together the three individual visions it was interesting to note that both workshops picked up on similar ideas. For example, **‘well-connected hub networks’** was an overriding impression of a synthesis of these aspirations in both Bristol and Birmingham. Both workshops suggested a need to address how to **‘bring communities together’** in order to establish and meet aspirations. The question then became: how can government enable this? **‘Devolution’** was mentioned in both workshops and delegates discussed how local government must be sensitive to differences across the city. National government needs to allow Bristol / Birmingham to act autonomously, whilst checking their long-term performance. This required **‘local governance’**, with powers, and regional checks (in the sense of equal capacity and capability assuredness), which in turn raised the need for local teamwork with universities, and skill base creation. Both workshops noted that **‘aggregating up’** in making the process of devolution effective would help balance a strategic ‘top-down’ approach, and as one of the *Liveable Cities* (LC) team members suggested devolution does not necessarily have to be the same for all cities – different cities could have different amounts of devolution depending upon their capabilities and capacities.

5.2. *Overall Impressions of an Aspirational Visioning Approach*

The Birmingham workshop was quite a different session to that undertaken in Bristol, with some very interesting discussions amongst the break-out groups. Firstly, unlike Bristol the process appeared to take a while to get going on a few of the tables, the conversation being constrained by two factors: projecting current trends in relation to configurations and problems in Birmingham today; and, apprehension around the approach and a desire to ground this in reality to avoid proliferation of visions that won’t or can’t be delivered. On reflection some delegates in Birmingham suggested they would have found it useful to look back 50 years and use this to guide them going forward (hindsight in foresight); this was not mentioned in Bristol. Perhaps in some way this may be related to the fact that the Birmingham cohort was not given the ARUP cards prior to the workshop and therefore it is unlikely that many will not have undertaken any significant degree of pre-thinking or preparatory work for the workshop. Conversely even though the ARUP cards were available for delegates to use on the day of the Bristol Workshop, they did not refer to them – this might suggest that they had already been read through, but equally might suggest that those invited to the Bristol workshop were well-versed in the many issues. Certainly one way of getting around this is to adopt a ‘persona approach’ – in other words thinking about what things are like when you are 5 (being a child also disassociates the delegates from

current concerns and constraints, meaning that one can be more utopian), 35, and/or 75 in 2065, or even if you are doing your job in 2065. In both sessions there were in excess of fifty 'post its' for each topic, so it should not have come as a surprise that the outcomes did not represent many of the big aspirations on the vision board [the visions produced by the delegates at the start of the event]. Given this, it might have been more helpful to choose the most important, with a narrative, or say limit the discussions to five or three, and use those. This type of approach could involve asking delegates about what the city will be and what it would be like to live in; another approach is to write a postcard from a place in 2065.

Delegates stated that they were not constrained by the 'post it' notes in both workshops, although in Birmingham delegates did initially feel constrained by the (7 sub-themed) categories, though this soon dissipated as the process became clearer and the importance began to be attached to the visioning process not the categorisation. The 7 sub-themes were not used in the Bristol workshop, however the outcomes were organised according to them – yet this emerged naturally, as did the existing visions for Birmingham. The fact that Birmingham delegates said they found them constraining suggests that it may be more appropriate to not use them in the workshop, but use them afterwards.

There was also a recurring issue around common language, both in terms of how this sort of exercise is constructed and explained, and as an output for any vision and future city work. However by the end of the sessions the interactions between all participants were well balanced. This is not uncommon when there are delegates from different backgrounds and it takes time to establish the necessary rapport within a multi-disciplinary workshop (the LC team facilitators could draw on substantial experience from their current and past projects). In both workshops *scale* arose as an issue. In terms of the three visions and use of maps, *'Environment and Resources'* was seen as both a strategic and local scale issue and the arising visions could be represented well from the map, whereas the sessions involving *'People and Community'* and *'Work and Economy'* tended to be personalized, with much less use of the maps and greater emphasis on relationships and dynamics – though ideas around people and place did scale down to neighbourhoods, and these could be visualised. What carried over from each of three map sessions were recurring motifs that were built upon in succeeding sessions. Some delegates suggested that multi-scalar and multi-temporal views would be required.

When reflecting on the experience of using Google maps in Bristol, the use of topic maps was suggested for Birmingham (i.e. age distribution, fuel poverty, wealth distribution, access to green space, and so on). This was trialled in Birmingham, although when a wider variety of maps was used some delegates suggested they were constrained by the maps. On reflection after running both workshops, it was concluded that there should be caution in the use of detailed maps too early in the visioning process as delegates were likely to

‘ground themselves in the present’, so maybe introducing these at the back-casting stage is more appropriate. Moreover it is appreciated that neither Bristol nor Birmingham is an island and visioning must take account of the national and global contexts. In reality it is very difficult to imagine what either of the places will actually be like in the far future, and thus it is to be expected that generalities will be adopted. The point of the process is to uncover new ways of thinking about a city vision. Nevertheless a combination of large general maps (perhaps of the city and the city region) and alternative means of capturing the non-visual ideas should be employed.

In terms of content both workshops questioned whether (within each of the three visions) they were prioritising the right ‘aspirations’ and agreed that enabling any of them would require strong leadership. Delegates wanted greater plurality (and therefore alignment and consensus) in the creation, ownership and delivery of any vision, rather than a plurality of visions. In addition they wanted visions very much to be ‘with the grain’, and built upon identity and assets, i.e. to be place-based and not generic – there was concern that “if you took the name away from many of the cities’ visions being created, you wouldn’t work out where they were”. They questioned whether they were affordable, who would pay, who would benefit and who / what might be disadvantaged. In some ways this reflects us being constrained by what we know now – whilst from the outside this may be seen as risky approach, if done well there are probably very few negative consequences when all three aspirations are eventually brought together. As a starting point, the environment provides a fixed boundary and it is one that we need to protect for the survival of the human race. As such it is a good place to start, and for both workshops that is the way the process was undertaken (i.e. ‘*Environment and Resources*’ was considered before the other two themes).

The feedback from both workshops was refreshing as it showed that delegates bought into the three pronged approach, whereby each ‘*aspirational*’ vision contributed to and combined into a single, coherent vision – a synthesised vision for an ‘aspirational city’. In both workshops there was consensus that the process of deconstructing and clustering the ideas, and prioritising one set above the rest, sheds a new light on the issues at hand since it necessarily raises questions around a city’s priorities and makes explicit the consequences of prioritising one vision above another. In Birmingham, the delegates suggested that Birmingham needed to agree on a strong vision and a deeper understanding of the richness that makes it what it is – they believed the process being used within the workshop had the potential to do this. In conclusion, the feeling from both workshops was that the approach ‘resonated’ with the delegates, was very helpful and could be use in the delegates’ day-to-day work. One delegate stated that the richness of the process resulted in uncovering new questions about the city.

Whilst the authors recognise that each of the three visions assumes a certain level of internal consistency, there simply was not time to identify (or unpick) some of the tensions that might ensue in a workshop setting. This is where the ‘*Urban Futures*’, or *Designing Resilient Cities*, methodology (Lombardi et al., 2012) and associated Interactive tool (<http://designingresilientcities.co.uk/>) are extremely useful; each of the suggestions presented herein can be unpicked by adopting a 5-step method (Figure 6). This method establishes the intended benefits of a proposed city intervention (i.e. all of the potential benefits that might be sought), determines for each intended benefit the necessary conditions for it to be able to deliver the benefit in question (the conditions might relate to processes of governance such as legislation or regulation, a policy, a practice, citizen behaviours / societal norms, a physical feature or operation of an urban system, and so on), and establishes whether the conditions are in place today and whether they are likely to exist in four extreme-yet-plausible futures (termed, Market Forces, Policy Reform, Fortress World and the New Sustainability Paradigm). This makes explicit whether, and why, the intervention might be vulnerable to failure, and leads to the three options listed for Step 5 in Figure 6.

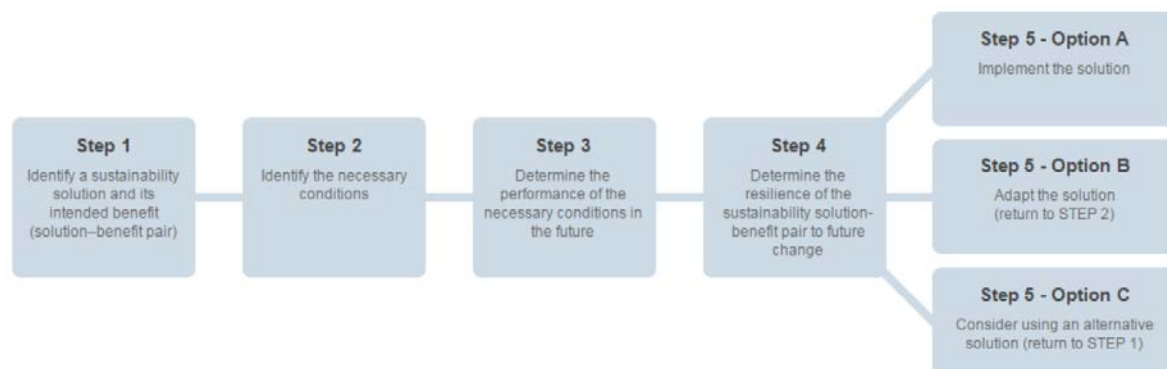


Figure 6. The 5-step Designing Resilient Cities Methodology

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