Polycentricity and the London City Resilience Strategy

**Account of Forum meeting on Monday 29th November 2021 on Zoom
Full minute by James Mitchell also at planninginlondon.com > LP&DF**

Brian Waters welcomed everyone and introduced the first speaker:Professor **Michael Batty** (Centre for Advanced Spatial Analysis CASA, UCL)
Polycentricity:What is it? What Relevance to Planning?
MB introduced the focus of the research - applying digital tools to cities to develop a science of cities, covering smart cities to some extend but also more traditional things such as how cities are evolving and grow in terms of transportation.

What is Polycentricity?

MB began by describing that most cities grow from a single 'seed site' where people (traditionally) gather involving physical contact. However this is evolving to become a virtual exchange.

Most cities are monocentric. This is weakening now due to new transport technologies.

As the cities evolve, they get more than one centre and such cities are referred to polycentric.

Frequently the form of the city is now seen as a tension of competing forces – centralisation vs sub-urbanisation.

Two types of polycentricity:
1. Cities spawn more than 1 centre because the economy and size allow to afford more than one place of exchange. (second Central Business Districts) –example: Canary Wharf in London.
2. Cities that grow together-where single centre cities fuse into an agglomeration – example: Manchester

The core theory of how the city systems are organised suggest that cities have a hierarchy of sizes

What is Polycentricity

- Most cities grow from a single seed site – traditionally the market where people gather to exchange which involves face to face contact
- This is traditionally physical exchange but increasingly this is a virtual market for exchange with actual exchange taking place elsewhere,
- Most cities are thus **monocentric** – a single centre
- Monocentricity has however weakened as more and more people can enable exchange and production elsewhere in the city. This has led to cities with **more than one centre**, perhaps **many centres**, and such cities are now referred to as **polycentric.** A lot of this due to new **transport technologies**
- Frequently the form of the city is now seen as a tension of competing forces – centralization versus suburbanisation

- There are really **two sorts of polycentricity**
- First where monocentric cities spawn more than one centre because their economies and size are able to afford more than one place for exchange. There are sometimes called **second CBDs** (Central Business Districts) such as canary Wharf in London, La Defense in Paris and so on
- In North America, they have been called by Garreau '**edge cities**'
- Second, there are cities that grow together – single centres cities fuse – the most familiar example is Manchester where single cities grew up around their own industrial base. In fact this form of city was referred to first by Patrick Geddes as a '**conurbation**'
- In fact one might think of most cities which grow in an agricultural landscape as absorbing villages in the landscape that become small centres – London is classic as a 'city of villages' – you can see the old history in the trace from the centre of London going north

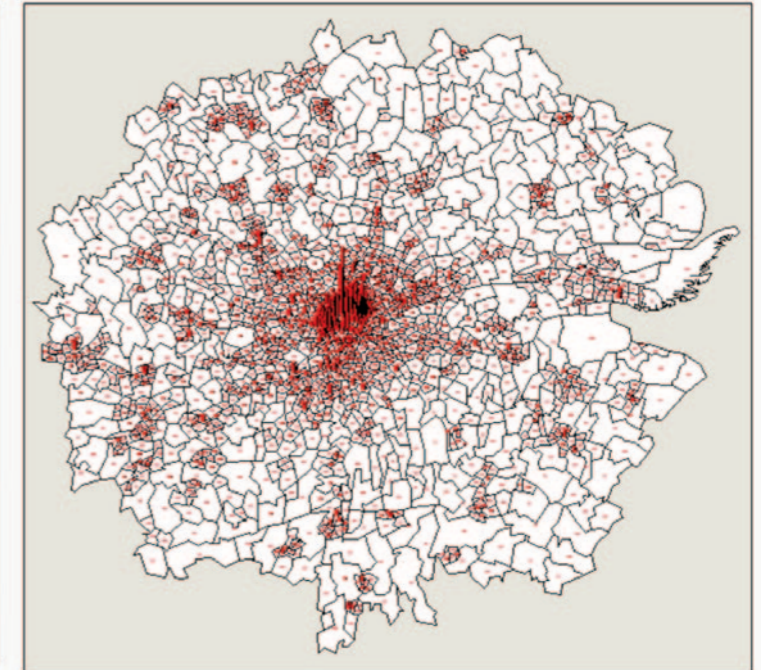## Meeting held on Monday 29th November 2021 on Zoom

Moderators
Brian Waters – Chairman
Jonathan Manns – Vice chairman
James Mitchell – Hon Sec

Speakers
Professor Michael Batty CBE FRS FBA
Brian Waters

Participants:
John Walker
Gary Young
Riette Oosthuizen
Nigel Moor
Tim Wacher
Judith Ryser
Natasha Reid
Andrew Rogers

where the key economic focus varies depending on specialisation, economy, density etc.

As cities have become more complex, the differentiation between types of hubs, size and specialisation has become more elaborate.

Examples:

The first example MB gave was Manchester and London as 2 different polycentric cities:

The first image MB presented was a map of Manchester highlighting the density of employment. It showed different centres belonging to pre-existing towns that grew up their industrial base and became absorbed into Manchester itself.

The second one showed London and the outer metropolitan area highlighting the polycentric nature of the city itself. The pre-existing towns ,such as Reading, were built into emerging metropolis. They are natural growing systems and they are sustainable. There are different sizes of centres. MB showed two images of London at different scale.

The first one was showing an image of the traditional city centre of London (The Central Activities Zone), which is divided into different zones and has its own hierarchy; while the second map was an updated opportunity area showing the different hubs of London with their specialisations.

The last example MB showed was there different maps comparing London and the outer metropolitan area with areas with different agglomerations which traditionally were composed of single cities and whose form has now merged into polycentric clusters.

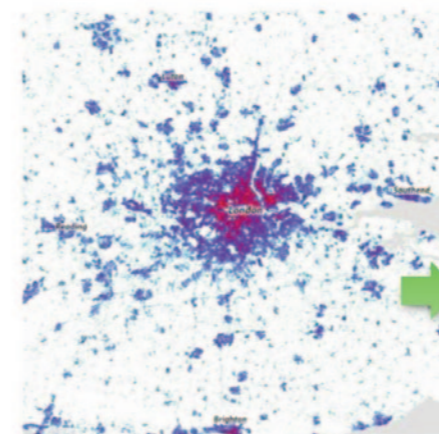London Metropolitan Region: population 16.3 million (2016)

Pearl River Delta Greater Bay Area: population 66 million (2016)

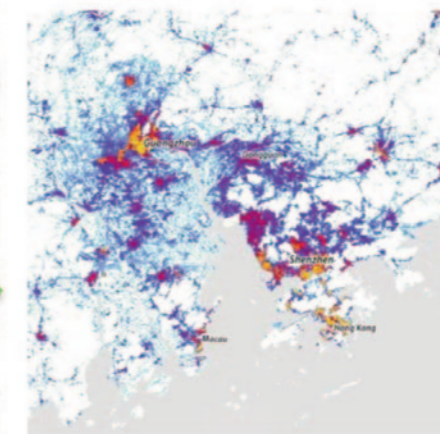Randstad Region: population 8.1 million (2017)

These mega cities are beginning to appear around the world – and they formed through cities being fused together.

This is the kind of things we need to think about when we talk about how the cities grow together
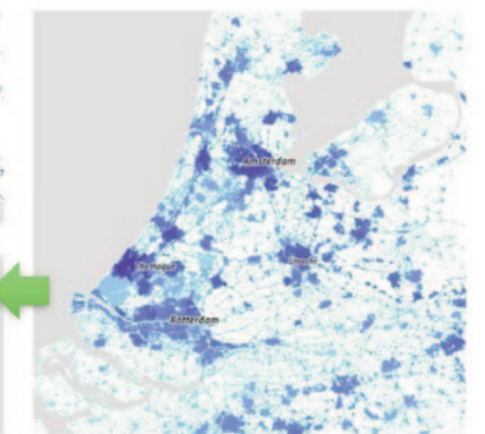
Different agglomerations which traditionally were composed of single cities and whose form has now merged into polycentric clusters

London Metropolitan Region
Population: 16.9 million (2016)

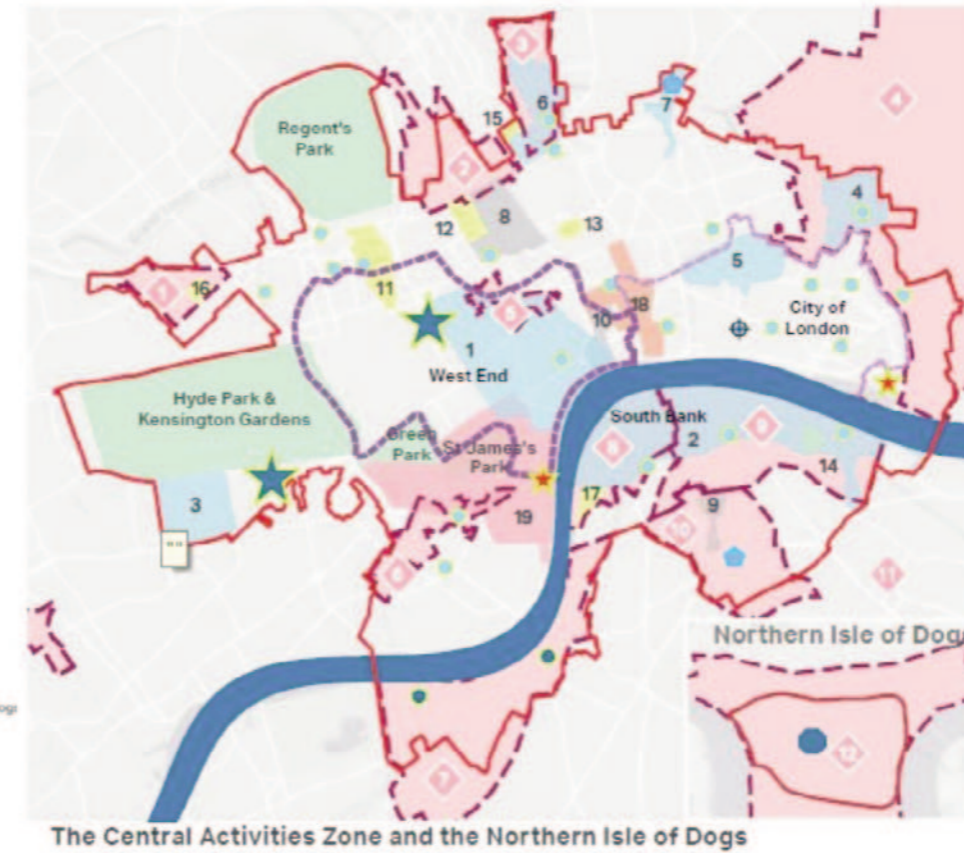**Pearl River Delta Greater Bay Area**
Population: 66 million (2016)

Randstad Region
Population: 8.1 million (2017)

Map data: Global Human Settlement Layer Population Density 2015 (European Commission JRC & CIESEN 2017). Cartography by D. A. Smith, CASA UCL.

LONDON PLAN 2021 – STRATEGIC VISION

The Central Activities Zone and the Northern Isle of Dogs

next few years.

JW: One of the reason for why you get polycentric city as it grows is that people are priced out of traditional West End or City of London location. People cannot afford the rent and they relocate to area that have the support infrastructure. In terms of common change why City of London is getting emptier is because is too office dominated. You don't get that with West End because it is a mixture of uses – retail, theatre, events – there are always reasons for people to gather. While City of London is not having this mixed used space and it should have.

JM: The City Of London is developing to be more diverse. Working with Culture Marley Initiative on a building that recently got planning permission, they are trying to make it more publicly accessible by providing a gallery. There are also a lot of other planning applications that provide pops up or some sort of cultural offer. There is a shift in diversifying the area.

JW agrees that the area is more diverse now than it used to be 20 years ago.

JM: We tried the concept of satellite offices with Milton Keynes, Croydon etc or were they set up as large office centres with easy access?

BW: It was an attempt by the government to stop the growth of London and move the offices out. The attempt of 'levelling up'' was the tendency to move 'back of house' functions out of London and the high value added to remain in the city – West End, Canary Wharf etc. There is a strong argument that if they were really meaning to 'level up' they should have moved the core function out to add value to provincial cities. The UK is atypical of most countries, especially in Europe as it is very London centralised.

The other thing is the idea of micro-hubs – about how the new technology and the hybrid working allow the blur of land use between living, working and so on. We cannot predict their impact but we know it will be considerable. Working from home does not necessarily mean to work from the kitchen table. Many people do not have a home to work from. The idea that you can go to a coffee shop to work from is increasingly attractive rather than in a corporate office.

Gary Young (GY): Looking at London and how distribution is affected pre- and post- Covid19. Is there any other form of analysis similar to Michael's which looks at the idea that multiple uses create

>>> and how they develop economically.

Conclusion:

There are different centralising and decentralising forces. Cities and the way they function depends on a balance of forces that pushes people to do things at their centre.

These balance of forces are changing rapidly, particularly due to the development of technology. These will influence the shape of the city.

The last slide of the presentation- MB presents a map of London showing the percentage of professional groups and the division of poor and wealthier areas depending on income distribution.

DISCUSSION
Brian Waters (BW)

There are different angles to polycentric cities. One angle is your suggestion of London having more than one centre. Peter Rees – giving a tour of Canary Wharf - said that it is a serious threat to Croydon and not a competitor to the City of London.

Question to **John Walker**(JW) – Does City of Westminster see itself of a centre on its own terms distinct of the City of London Corporation?

JW– People living in Westminster sees it as a series of villages – Marylebone Village, Pimlico Village etc. They divide Westminster in small areas which have their own high streets. Westminster is a polycentric city in its own right.

BW - It is a question of scale, you can go down to street level.

MB – When we talk about London as a polycentric city, we can develop different views depending on the scale with high streets as the finest scale. There is a famous book written about London as an urban village.

In terms of the the notion of Canary Wharf competing with the City - one of the issues with the growth of the financial services generally is that almost one needed a safety valve –you needed to expand into that area. A lot of the financial services have migrated to other parts of London such as Mayfair.

We can look at other polycentres in London –ex Wembley or Croydon - the centre is so big that many of these polycentres are at different levels, sizes and specialisations.

JM agrees and talked about his experience of being part of a panel discussing polycentric cities for London Real Estate forum and debating whether the transition from a monocentric to a polycentric city is a good or a bad thing.

The transition to flexible working (working in the office only three days a week) is affecting the City Corporation. It is a question of how to start to look at hybrid working that is affecting the city centre and what do you do on the other days to make the city centre more attractive to people?

Ealing, Wembley or similar areas became micro-hubs. This discussion about polycentric city might come from the change on our working behavioural patterns and how is affecting the shape of the city.

MB: There is no question that there are major issues about working from home/ pandemic . Some of these issues were happening anyway to some extent. The new technology having a big impact on development. I live in Central London and some areas are empty. There is a massive movement of different activities that you would normally not associate with some specific location now that a smaller proportion is physically working in these places. We might see big changes of where the most popular places to develop activities might be in the
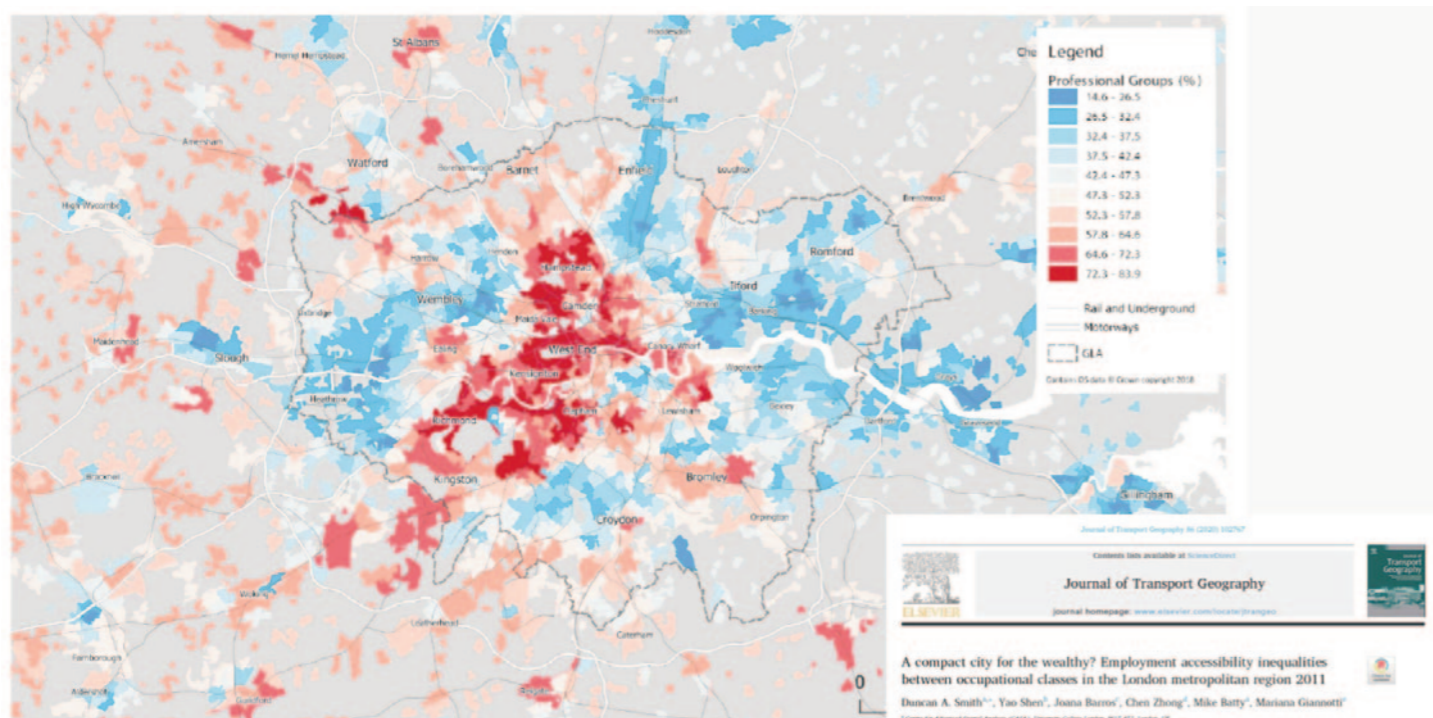
Fig. 2. Professional Classes (Manag., Prof. & Assoc. Prof.) Residential Percentage 2011. Data: Census 2011

Polycentricity: What Is It? What Relevance to Planning?

>>> this gravitation towards this centre. An example was the West End being more diverse than City of London therefore more populated during weekends.

A study for **Places For People** showed that about 10 things are needed to retain that consistent repeat of spatial richness. Does mapping of this form help to understand where are we going as we evolve polycentric cities?

MB: In terms of the diversity of the city, although we experience it, we do not have the right sort of information. The classic land use map is prepared for ground floor uses without showing the upper floor uses. We are slowly progressing good data in which we are able to develop measures of diversity.

It is a question to what extent we can identify places that need to be more or less diverse? It can be problematic as most of the things that happen in the city are informed by our activities so they are not planned by an organisaiton.

Jane Jacobs in the book 'The Death and Life of Great American Cities' – argues that there is a need to increase diversity.

Improving and changing diversity can be more problematic. It is a big political and social debate about what sort of diversity we want. The question is to what extend we need to encourage diversity?

Riette Oosthuizen (RO): Talking about the15 minutes neighbourhood which has been increasingly discussed and researched – the planning bill is going to focus more on the concept of street level, looking with much finer grain at how cities develop in terms of centres. What are Michael's thoughts on this?

MB: The concept of the 15 minutes city is very

interesting as it is refering that it takes 15 min to get to any place that satisfy our needs. Asking a hypothetical question of how long does it take for different groups of people to get to different places in London? Transport for London have done a lot of research and generally we are nowhere near to the 15 minute city. We can rearrange things to show how the 15 minute city will look however, you might not be able to make a feasible 15 minute city given the costs and physical constraints.

There is an interesting hypothesis as it raises the question of how cities should look.

MW: In relation to planning system - what are the inhibitions to discourage the 15 minute city?

BW described his experience in taking part in an experimental policy within the borough of Hackney and the desert that North of Broadgate had become to evolve into a 15 minute city hosting a variety of uses – creative, entertainment, commercial, residential etc and improving the economy of the area, Shoreditch. This demonstrated that if the planning system relaxes some of the constraints, it can have a dramatic effect on uses and diversity.

GY: What is interesting is how do you maintain the data source. GY had issues looking at new towns and villages. One information that can be mapped is the employment data. Any other information is vague to record in the level of depth than you need. However this will change with the research that has been done to help companies to locate.

When the data is available and accessible we will have more resources to learn from.

MB worked on a project looking at smart cities in

Dubai. Part of the project was about the technology used to predict the location of developments and the team was asked to build a model of Dubai.

The model took three days to build. Initially the team contacted Dubai Statistics Agency but it was impossible to interact with them. Therefore they ended up using the web – using remote sensor images, Google Business, etc to gather information for the model.

There is a lot of information that you can gather from the Internet. One of the issues is the reliability of the information. There is a lot we can do in terms of the data set simply by mining what is already there.

BW: With working from home, gaining the data set can get complicated.

15 years ago someone from the district of Horsham claimed that they had done a survey of the VAT-registered businesses in Horsham and 60% were at residential addresses.

Looking at the data source – how many business have been set up from home now?

JW: Going back to the use classes, JW does not agree with the relaxation of planning regarding the use classes. The industrial uses in West End were all wiped out in 1987.

There are several uses and activities you need to protect from the planning perspective because they cannot compete in the market.

We need to be careful of having a free flow in planning uses – quite often the planning categories have been put there for a reason.

BW: The problem with the planning system is

that it does not allow for flexibility to look at ways in which changing uses encourages things to happen in a space.

BW talked about his experience with a client, Virgin Records, owning a megastore at the east end of Oxford Street who wanted to expand into the basement. The planners refused to give permission on the basis that there were some workshops around and underneath the building. This was a successful retail operation trying to revive the dying East End of Oxford Street. Putting a disc pressing unit into the shop basement solved the issue.

JW: The use classes have evolved and changed over the years to meet the demand. The problem is that it is not changing quick enough. The government cannot forecast what is coming forward.

MB concludes that the presentation was a firmly specific topic on one level but has been broaden out into questions of diversity and uses – which are extremely important.

The discussions raised the question of where we get the data and there is hope to be able to get better information.

The cities are becoming more complex – there are more opportunities to do things and the population is going through a demographic transition. It is becoming more global.

Some of the things not discussed today were how the new technology we use is making an impact on what the city looks like such as email, web activity etc.

We have to acknowledge that the cities are becoming more complex and need to respond.

Nigel Moor (NM): The British planning system has been predicted to change to a form of zoning. but land uses need to be separated and regulated. Implicit in this is that mixed uses are untidy, uneconomic and unneighbourly.

London City Resilience Strategy 2020

Brian Waters presented the document that was published a few months earlier (its author the deputy mayor was indisposed and so unable to attend the Forum meeting).

BW began by reading 'What is resilience for a city?' (London City Resilience Strategy 2020, page 9).

Definition: "Resilience is the capacity of individuals, communities and institutions, businesses and systems within a city to survive, adapt, and thrive no matter what kinds of chronic stresses and acute shocks they experienced." (Rockefeller Foundation)

Summary introduction:

The document is outlining the challenges that cities and urban environments are facing such as climate change, increase in population, environmental degradation, etc. and the GLA (Greater London Authority) strategy in response to these challenges for the next 30 years (2050). The aim is to improve the ability to manage future crises successfully.

The strategy aspires to make resilience central to policymaking in London.

The first part of the strategy explains the vision,

approach, and analysis of the resilience activities that are already taking place. While the second part sets out projects that have been identified during the process of developing the strategy.

In 2050 London is aiming to be a city that:
-Starts with resilient citizens, actively participating in city life.
-Is capable of adapting to changing social and economic vulnerabilities and local needs
-Has the agility to develop resilience measures that can address long term stresses, turning future challenges into opportunities
-Mobilises its collective intelligence to improve societal wellbeing for current and future generations.
-Is continuously preparing and developing to face all types of disruptive shock, with resilience part of our day to day thinking and actions.

London Major Shocks - drought, terror attack, flooding, extreme weather, cyber-attack, disease pandemic and infrastructure failure.

BW wanted to highlight that there is no plan B for infrastructure failure in the UK.

With our increased dependency in electricity and internet if we have three months without electricity how will we be dealing with that?

London's Chronic Stresses – lack of social cohesion, inequality, poor air quality, food insecurity, poor housing affordability, aging infrastructure, poor health and wellbeing, Brexit

The report is looking at the relationship between shocks and stresses and how they can support or undermine each other.

The report talks about different types of resilience: Resilience for People, Resilience for Place, and Resilience for Process.

Summary conclusion:

The document concludes that the analysis of policy, risks and the proposed projects provide a basis to build resilience. For London 2020 there is a need to increase knowledge and capacity to improve preparedness by developing datasets to aid decision making at different levels.

It has been acknowledged that risks to the capital >>>

In 2050 London will be a city that:

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- **Has the agility to develop resilience measures that can address long-term stresses, turning future challenges into opportunities**

- **Mobilises its collective intelligence to improve societal wellbeing for current and future generations**

- **Is continuously preparing and developing to face all types of disruptive shock, with resilience part of our day to day thinking and actions**

>>> will inevitably change over time, meaning the process of becoming resilient needs to be a continual one and the city needs to learn and adapt

BW recommends the recent book by **Oliver Letwin** – *Apocalypse How? Technology and the Threat of Disaster*.

In his book Letwin is talking about the absence of funding for plan B. The book is half fiction, half fact. His argument is that the treasury will not finance a possibility that is too remote. BW believes that without a plan B we do not have much resilience.

NM: shared an experience as a former county councillor. Across the county council network they have a Gloucestershire Gold Command as a result of tremendous floods in 2007 being overcome with great difficulties. They set in place a resilient framework lead by 2 fire officers to approach these kind of situations as they regularly deal with risk.

During pandemic there were regular meetings with them to look at the whole range of council services to cope with difficulties thrown up by the pandemic.

What the government lacks is a very systematic identification of the whole range of risks and what it means in terms of policy to be developed in dealing with particular risks.

BW: It make sense to be linked to the fire system – it deals with risk and understands it, but also it has resources for flood and fire.

What the GLA report does not do is give a plan B, which is alarming.

Judith Ryser (JR) talked about the book she is writing. One of the chapters is on resilience in planning but she has a different take than GLA's report. The GLA's report is a very general approach.

JR agrees with BW that if the infrastructure fails then what you can do? but at the same time you cannot have an alternative supply system.

BW: Plan B has to be something else and not Plan A duplicated. You need less dependence on electricity – to have a different way of communicating or paying for transactions with the absence of electricity.

JR – we are depending on electricity – and even with a short power cut there is panic.

BW: Talks about his recent experience in Spain – when a power cut happened. Afterwards he learned that a small plane hit the power lines in France and the whole Spain was down! The system is incredibly fragile. The complexity of the city that MB was talking of today is everywhere and makes us vulnerable.

JM: It is all back to infrastructure and how you can provide resilience to a world that is increasingly online. Looking at the positive, it does help to connect our cities better, making them more efficient and to enable cities to become more fluid.

BW: Going back to the book by Oliver Letwin, the core problem is that the Treasury mindset is to look at payback. Pandemic is a clear example of this. Now the government has no choice but to fund it whatev-

er the cost.

Maybe we should relate it at a smaller scale when we are thinking of development about our own circumstances and have backup plans.

BW: As per previous discussion about the city as being a bit monocultural and lifeless is a bit unfair on the City. Last week he went to a livery function for a lecture. There was catering, a tour of the building, it was entertainment, it was intellectual and it was social. The livery companies do it almost every night so it is not just people sitting at desks working.

GY: How is the data of that happening getting recorded in terms of the new diverse and wider spread city.

BW: It depends on what metrics you want to analyse it with. These things has been going on for ages so if you want to interrogate it you have to know to go to the livery companies and the information will be made available to you.

GY: Now with information being more widespread it is useful to know these things can be collated and ways that we can actually understand how much this is valued in the public realm.

Tim Wacher (TW): Talking about resilience – with the sea levels rising there will be a need for the Thames barrier to be replaced and it will require a big sum of money. This is a prime example of where the city should think about in terms of resilience. It was originally designed to be raised once a year but in reality it is raised considerably more. Resilience matters in terms of physical terms – and there are real problems that have to be addressed.

BW thinks that this is an example that is under

control – environmental agency is in control of the whole issue of fluvial and sea flooding on the Thames. They published a recent study concluding that the Thames Barrier with a design life until 2032. but given what is happening with the sea level rise and the weather they said it now has a design life until 2082. The real problem it is fluvial flooding – heavy rains coming down the Thames.

GY –The issues are always with the Treasury and not the environment agency.

BW: The GLA document is about the process and not the product. Talking about the Environment Agency and its monitoring of the Thames barrier is a good model for how to deal with resilience.

The problem is with vast areas like pandemics that are such remote risks that we do not have a plan to deal with them when we should. ◾