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# THE FRAGILE CITY & THE RISK NEXUS

BY CHARLES LANDRY  
& TOM BURKE



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& TOM BURKE

COMEDIA



Toronto: The hoarding for  
Bruce Mau's exhibition.

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## OVERTURE

Cities are accelerators of opportunity. They are increasingly the wealth creators rather than nations.

Cities are the most complex artefact created by human beings and their most significant investment. They make civilisations manifest. They drive cultures, they embody their values and are crucial to development. Cities are hubs of creativity and potential. They are accelerators of opportunity, force feeding transactions and connections. Skills, talent and expertise cluster in them as do trade, commerce and industries. This generates vitality, energy and the possibilities out of which business prospects emerge and cultural richness grows. Cities shape and anchor our identity.

Increasingly, it is cities, rather than nations, that are the wealth generators – especially in a knowledge driven economy. They now create about 80% of global economic growth. This requires dense circuits of information exchange, talented people and high levels of expertise and research competences allied to complex production capacities largely found in cities.

Cities are compelling. They vie with each other for status and compete to attract headlines, investment and celebrity citizens. Some are rising to such importance that their leaders have become global actors – think of the Mayors of New York or London. They can fail, like Detroit, trapped in their heyday and unable to adapt to new circumstances. But they remain everywhere the focus of attention for most people on the planet – the setters of trends, arbiters of fashion, wellsprings of aspiration.

### Two narratives

The dominant narrative for cities focusses on their triumphant achievements.<sup>1</sup> We hear less about their vulnerabilities. Yet there is an emerging, darker narrative of accumulating internal and external stresses which threatens to turn our cities from pinnacles of hope into sloughs of despair. The first of these narratives involves the city looking inwards at itself and the second outwards at the opportunities and risks presented by the world that surrounds it.

<sup>1</sup>See: Glaeser, Edward (2012). *Triumph of the City*. Pan or Hollis, Leo (2013). *Cities Are Good for You: The Genius of the Metropolis*. Bloomsbury Publishing





The explosion of the world's population from 2 billion in 1945 to 7 billion<sup>2</sup> today is putting unprecedented pressures on global stability and human survival. Demands on resources have never been greater and our impact on the planet is ever more apparent.

Meanwhile we are witnessing the greatest mass movement of people in history. We have never been more urban, with over half the planet's inhabitants now living in cities. Every week another 1.5 million people move to cities; roughly 200,000-plus a day or 140 every minute.

For cities to survive and flourish requires elaborate infrastructure, well-functioning institutions and public services. An estimated

US\$100 trillion will need to be spent over the next 15 years on roads, airports, sanitation systems and housing to cope with the predicted growth. More still will need to be spent on health and social services for ageing populations, or to attract investment to generate jobs for burgeoning numbers of young people.

The cost is not only financial. The resources – steel, cement, energy – and rapid growth in affluence and aspiration come at a price for our environment and climate too. The perpetuation of the historical pattern of endless energy consuming growth will threaten to make the internal stresses unmanageable for even the most innovative and imaginative city leaders.

... the scale and pace of urban transformation threatens even the best managed cities.

Climate change threatens to undermine food, water and energy security. This will lead to more mass movement and to price increases which exacerbate urban poverty and inequality and add considerably to the stress of managing the multicultural melting pots of modern cities. While increasing ethnic or religious diversity will impact on social cohesion, requiring thoughtful social and political management.

Such is the scale and pace of transformation it threatens to exceed the capacity of even the best managed cities to adapt to the forces we have unleashed. Just as the opportunities in a connected world are expanding, so too, are the risks. Nor is it any longer clear that national governments can continue to provide the stability necessary for cities to cope.

Already we have seen how the 2007 financial crisis fed back immediately and painfully into cities everywhere. The public expenditure priorities of national governments changed overnight. The need for governments to restore financial stability resulted in considerably cut back resources available to many cities to deal with the pressures of growth, change, more mouths to feed and climate change.

Cities are too big and too clever to fail it is tempting to think. They possess immense capacity to adapt as they have always done, constantly evolving today to meet the rapidly expanding opportunities of a globalised economy. But new patterns of risk, often global in scope, growing alongside today's opportunities are of a nature and magnitude wholly unfamiliar to us.

Cities are already undertaking a huge range of local initiatives to manage these risks. The Green City Index created by the Economist Intelligence Unit and sponsored by Siemens summarizes these well. In the European top rank are Copenhagen, Stockholm, Oslo, Amsterdam, Zurich, Vienna, Helsinki and Berlin. Brazil leads the way in Latin America with Curitiba the clear leader followed by Sao Paulo, Belo Horizonte and Rio. Bogota and Mexico City are also worthy of mention. In Asia, Singapore is the top performer and Taipei, Hong Kong and Tokyo are doing well. In China forceful moves are now at last beginning, but they will take time to have an impact. In North America, San Francisco, Vancouver and New York are the role models and in Africa, the South African cities.<sup>3</sup>

<sup>3</sup>The Green City Index (2012). A research project conducted by the Economist Intelligence Unit, Sponsored by Siemens AG [http://www.thecrystal.org/assets/download/120724\\_GCI\\_SummaryReport\\_final2.pdf](http://www.thecrystal.org/assets/download/120724_GCI_SummaryReport_final2.pdf)

Yet cities acting on their own can have little impact on the systemic problems and their ability to take control of their own destiny is hampered. They are constrained by inadequate national policies from creating the necessary incentives and regulations to drive solutions more forcefully especially fiscal policies. In addition policy failure by national governments threatens not only to overwhelm local efforts but also to intensify the existing internal stresses on city leaders. The failure to manage global risks effectively threaten the ability of cities to access both the resources and global markets they need.

This is the risk landscape cities find themselves in. It is an interlocking interdependent chain – a risk nexus – combining to form a crisis that cannot be dealt with by business as usual. Resolving this nexus of risks so as to ensure the prosperity and security of the three quarters of the world's people who will be living in cities by the middle of the century, is the dominant political challenge of the next four decades. It is not clear that our political systems are up to it.

### Authority & legitimacy

City leaders continue to assume national governments can be relied on to maintain stability as they have always done in times of peace. This may no longer be wise.

The systemic nature of the risks threatening both urban and global stability requires the exercise of great authority. However a growing crisis of legitimate authority within national governments is hindering their ability to make the difficult decisions needed. Since the changes required directly affect the daily lives of most people they will only be accepted by citizens if they are felt to be legitimate. Few governments today, democratic or not, are confident that they have the legitimate authority to take such bold decisions.

City leaders are closer to their citizens than national leaders. They have more legitimacy to speak for their people. With vision they will have a greater capacity than national governments to build a consensus around common purposes and a collective response to shared problems. A similar argument is made by others such as Bruce Katz and Benjamin Barber.<sup>4</sup> Struggles about the relative

Cities are constrained by inadequate national policies from generating their own innovative solutions more forcefully.

<sup>4</sup>Katz, Bruce & Bradley, Jennifer (2013). *The Metropolitan Revolution: How Cities and Metros Are Fixing Our Broken Politics and Fragile Economy*, Brookings Institution Press Barber, Benjamin R., (2013). *If Mayors Ruled the World: Dysfunctional Nations, Rising Cities*. Yale University Press

power of city and state are increasing. Across the world there are many variations with city leaders having differing degrees of influence over decisions and resources. Urban leadership comes in diverse forms. There can be an elected mayor, and often that works best, or a leader elected amongst the city councillors or an appointed chief executive. The main point is whether they can act effectively.

Cities are the natural engines to drive the necessary innovations to avert the worst of the risks. They can act more nimbly than national governments to deliver the innovative and integrated responses required, and they have the critical mass to implement them. Taking a helicopter view of urban initiatives globally we can see that many sustainable solutions have been introduced. These include implementing new building and construction methods, revitalising public transport, investing in renewables and using smart technologies to reduce energy consumption.

The external stresses being placed on cities means it is no longer enough to drive change at local level. Increasingly for a city to thrive depends not only on how it can change its own behaviours and those of its citizens, but on how they can influence others, especially national governments, to change theirs. This will require cities to play a more prominent role in national life, both practically and politically.

Cities as creative hubs have always been the laboratories of solving the problems of their own making. To play their full part they must now add to their skills and ambition the task of renegotiating their political contract with their host governments.

Governments and cities need to connect far more strongly and governments must acknowledge that cities can help them achieve their wider objectives. Few, such as the Swedish government, have created fruitful alliances. To secure their own future, cities must first respond to the consequences of dramatic urban growth and secondly respond to the global risk nexus that affects cities directly in ever more visible ways. Together cities can play a significant role in helping to turn the vicious cycles into more virtuous ones.

There is a growing belief that the nation state is becoming increasingly redundant in a connected world. This is not the



*Athens: This well-crafted urban art seems to say 'look closer'.*

case. The nation state remains essential to negotiate the global rules systems, however difficult to establish and implement, as well as broader national frameworks within which cities operate. This ensures cities have a common legal platform, which enables them to access the markets they need to trade, to generate the revenues, to purchase essential resources.

This pamphlet is hopeful. It explores how, triggered by a common purpose derived from civic engagement, cities can collectively create the urgency needed, and demand that national governments act more decisively. This will help governments to restore sufficient legitimate authority to take the difficult decisions required, but at the price of shifting political power away from the centre and learning to use the stronger political legitimacy of cities to leverage bolder action from national governments.

... civic engagement in cities can create the urgency to demand national governments act.

Cities have always been laboratories for solving the problems of their own making.





# THE CITY TRIUMPHANT & ITS THREATS

... millions of kilometres of cabling, piping, paving, and countless tons of cement, steel and glass are needed to build new cities.

## Cities in boom

Cities are growing incessantly. In 1800, only 3% of the world's population lived in cities. In 1900, only 160 million people were urbanised equalling 10%. In 1950, it was 730 million or 34%. Today 3.5 billion or 51% are urban dwellers. By 2050 it will be 75%. And the urban axis is shifting eastwards. In 1900 the top 10 biggest cities in the world were in the Western developed world. By 2015 none will be. In 1800, London was the world's largest city with 1 million people. Today there are 425 metropolitan areas with more than a million people. By 2025 there are expected to be 650. The number of megacities, cities of more than 10 million, has climbed from five in 1975 to 14 in 1995 and is expected to reach 26 cities by 2015.

China is the extreme case. It is seeing an unprecedented mass movement of people to cities and is planning to build 500 new medium-sized cities of around 600,000 each. In the past 30 years 252 million people moved to cities. Now in one of the most wrenching changes in 35 years of economic transition, sweeping plans are afoot to move another 250 million people over the next dozen years bringing China's urban population up to 1 billion.

In India by 2030 there will be 68 cities with a population of more than a million, 13 with a population of 4 million and 10 megacities. The pattern repeats itself across Asia, Africa and Latin America. The shift has already happened in Europe and North America where over 75% and 80% respectively, now live in cities.

It is hard to picture the vast physical infrastructures needed to build and rebuild cities – millions of kilometres of cabling, piping and paving; millions of tons of cement, steel and glass. Consider the cranes needed to build, or the elevators to lift people up skyscrapers. This is why US\$100 trillion of investment is needed over the next 15 years. Break down each of the production elements of this massive investment and each has embedded resource use. The opportunity, of course, is to build these new

*Wrocław: We will need to think differently about mobility.*



Sao Paulo: A view of the extent of 'citiness' from an Oscar Niemeyer building.



City dwellers have a smaller carbon footprint, but lifestyle choices mean too many resources are used.

cities according to the best green building standards, but it is not yet happening enough, so exacerbating the climate crisis.

#### **Eerie light beacons**

Night maps show the extent of urban ubiquity most graphically. The entire Japanese nation shines like a beacon. Osaka to Tokyo is nearly one built mass, a contiguous city of 80 million people stretching 515 kilometres. The Pearl River Delta in southern China moved from paddy fields to near complete urbanisation in 50 years. Even more extreme, the seaboard of the east coast of China will soon be one strip of urbanisation.

The east coast of the US is already all but completely urbanised from Boston to Washington, which is 710 kilometres. From the

east coast inland are 1,000 kilometre stretches of light blur. Forty years ago the Spanish coastline seen from the air was punctuated by a few large cities with some speckled fishing villages in between. Now it is almost completely built up along a 970 kilometre stretch. The same is true for Marseille in France to Genoa in Italy (440 kilometres).

Thanks to denser housing and greater use of public transport, city dwellers have a relatively smaller carbon footprint. But urban lifestyle choices, excess consumption and production methods still means too much energy and resources are being used. The challenge for decision makers is to create the conditions and desire whereby these new urbanites wish to live a one-planet lifestyle.

These images and figures make it easy to grasp why our carbon footprint has exceeded what our biosphere can handle and why we have moved beyond one-planet living. We need to brace ourselves for the consequences. To take a vivid example, out of nearly



*Bristol: Coping with increased rain fall in the Green Capital of Europe 2015.*

Ethics aside  
being eco-  
conscious is  
an increasing  
competitive  
tool.

nowhere China has more cars, trucks, motorcycles, rural vehicles and buses than the USA with 270 million and estimates suggest that might rise to 600 million by 2030.<sup>5</sup> The 'kingdom of bicycles' is becoming the kingdom of cars. The famous 60-mile traffic jam on China's highway 110 that lasted 10 days in August 2010 is then a harbinger of things to come.

The point is not China, but its effects on the rest of the world. Events like the week-long suffocating smog which sullied Singapore's clean and green reputation was caused by Indonesian forest fires. The respiratory problems and incidence of asthma rising inexorably are an instance of the health risks in cities growing apace, threatening the liveability which makes cities attractive.

This has serious economic consequences, as those with greatest expertise are most mobile and are choosing cities with better environments. Ethics aside, being eco-conscious is an increasingly competitive tool. This is why, for instance, the Nordic countries with more inclement climates continue to be attractive to global nomads.

### Once lost never regained

Paying more attention to opportunities than to risks is deeply human.

Failure to maintain energy, water or food security has very immediate political consequences. No government will risk these in order to achieve climate security, even though solving them involves burning unlimited fossil fuels that endanger the climate. Consequently short-term resource security currently takes priority over the integrated approach to long-term climate security. Yet civilisation as we know it is a product of 30,000 years of a stable climate, and, crucially, loss of climate security acts as a stress multiplier on the other components of an emerging risk nexus.

Allowing the more immediate to obscure the more urgent is a common cause of policy failure. We know from experience that nations can recover from a loss of energy, water or food security, albeit at great human and economic cost. The same is not true for climate security. Once lost it cannot be regained. The climate problem is time bound and this makes it more urgent, though less immediate, than the visible resource issues with which it is closely interlocked. Without deeper understanding of the dynamics of this complex nexus of issues governments could adopt policies with perverse or contradictory consequences. And, as they do so, the exposure of cities to the consequences will grow.

Remember that in 2008, floods in South East Asia led to several rice exporting countries prohibiting the export of food. In 2010, extreme heat in Russia led to a ban on the export of wheat. In 2012, an intense drought in the United States, the world's largest exporter of grain, reduced crop yields by a third. As the world's temperature rises, the frequency of such events will increase. As food prices spiked in 2008 and 2010 so, too, did the number of food riots in cities throughout the world.

The loss of climate security does not so far feature high on the risk register of most cities. Some of these risks seem to many not to be imminent, even if potentially existential in character, sea level rise and extreme weather events for instance. Others are much more immediate even if the link to climate change is not so apparent. Many coastal cities including Calcutta, Shanghai, Mumbai and

... deeper  
understanding  
of the dynamics  
of the complex  
risk nexus is  
urgent.





... many cities are extremely vulnerable to sea level rises.

Bangkok are extremely vulnerable to sea level rises. Once this happens people will pay attention, but it will be too late. The OECD has projected that as much as US\$35 trillion of assets could be at risk by 2070 in the world's coastal cities alone. Seven years after Hurricane Katrina, New Orleans, in the richest and most technically capable country on the planet, has not fully recovered. The Dutch government already devotes 1% of its annual budget to its intricate system of dikes, dunes and sea walls and that will have to rise.

Some cities, especially in the Nordic countries and Germany, are already beginning to think through their exposure to the risk nexus. They are taking action to reduce it both by adapting their infrastructure to cope with extreme events, or by making more efficient use of the natural resources within their control. These are important first steps but they are only effective at the margin. Shanghai, for instance, has already sunk by 1.2 metres in the past

*The increased demand for food outstrips our ability to produce it sustainably.*

... meeting the expectations of billions of people requires vast energy resources.

80 years. No measures, it or any other vulnerable coastal city can take on its own, will help defend itself successfully from the consequences of a sea level rise of several feet it might experience before the end of the century, no matter how resourceful and well managed it is. Increasingly, to cope with the stresses of the risk nexus, cities all over the world are going to have to ask much more of their national governments.

### Frightening figures

A few large numbers indicate the scale of this challenge. The International Energy Agency (IEA) projects global primary energy demand will increase by 36% in the next 22 years. To secure the resources necessary to meet this demand requires an investment of £33 trillion. Over half of this new supply will come from fossil fuels so driving up carbon dioxide emissions by 21%. Demand for food will double by 2050 as the population grows and as wealthier people shift their diets to consume more grain intensive meat and dairy products. But new land that can be brought into agriculture is limited and continuing soil loss is reducing the productivity of the land already cultivated. Water use has increased historically twice as fast as population. More than a third of the world's people now live in areas of high water stress, such as northern China or much of the Middle East, and by 2030 that figure could rise to more than a half.

These numbers sharply define a set of shared and urgent dilemmas for governments and cities around the world. The key task is to maintain energy, water and food security for a growing, and increasingly urban, population. But today it must be done without forcing so much climate change that it threatens energy, water and food security, which together, form a nexus of risks which are becoming more acute as population and affluence grow.

It will be impossible without an increase in energy services on the scale projected by the IEA to sustain the economic growth necessary to meet the expectations of billions of people whilst maintaining social and political stability. The dangerous climate change implications cannot be avoided if that energy growth is delivered primarily by current fossil fuel intensive technologies.

These are not unmanageable stresses. Essential technologies and appropriate engineering skills already exist or are within reach.



*The mass movement of people will continue unabated.*

... to address the risks demands policy coherence.

There is also no fundamental economic barrier to managing them, although there are substantial barriers in allocating the necessary capital in an effective and timely way. It is the complex and dynamic nature of the relationship between the components of this risk nexus that is not yet well understood. This presents increasing difficulties for governments. Managing these interactions well requires that governments at all levels from the local to the global achieve a transformation in their policy coherence.

#### **The city detached**

Among the most urgent of less obvious climate security risks is food security. Next to London Bridge is one of Britain's most ancient markets, Borough Market. On one of the market walls from the 19th century a board details the tolls for bringing live sheep and cattle into the market, a reminder that not so long ago London's food walked to market from surrounding farmland. London's food no longer walks to market. Instead, Londoners rely for their food on far flung logistical networks over which they have no direct control.

What is true of London is true for the other 450 cities in the world with populations of over 1 million people. While once cities controlled most of the hinterland on which they depended for food, energy, resources and markets for their manufactures, today extended networks supply its energy, water and the raw materials for its economy. They also move the goods and services on which urbanites depend to earn the money to buy the food and other resources they need to sustain their lives.

The political consequences should those networks fail will be rapid and serious. Extreme weather events compelled food exporting countries to ban the export of rice and wheat. The resulting price rises helped trigger urban unrest and conflicts like the Arab Spring. Food riots have been a feature of urban life throughout history. If national governments fail to manage the risk nexus they will become a constant, and destabilising, part of contemporary city life.

... extreme weather conditions are triggering urban unrest and conflicts.

*The global Occupy movement highlighted our skewed priorities.*





# CULTURE CHANGE FUTURE

## HOPE & POSSIBILITY

Driving the inexorable migration from smaller towns and rural areas is hope, ambition, opportunity and a desire to fulfil dreams and expectations.

The allure of the city has a darker, shadowy side.

Too often it is driven by the sheer need for survival or the aspiration to escape from abject poverty. This constant feeding with new blood nourishes cities giving them their dynamism and providing a source of cheap labour, people to provide basic services and creativity.

But behind the allure of the city with its promise of vitality and opportunity, there is a darker, shadowy side to this unfolding urban story. Resources and wealth are very unevenly spread. We see spectacular high-rises and gleaming shopping centres next to places like the favelas and barrios where battles for existence can be brutal. Increasing social tensions result, as evidenced by the rise in urban rioting, especially after the financial crisis. Not everyone can afford to buy and consume, or to live in the new glossy apartments.

Unconstrained urban growth has a human cost and much pollution. Many cities are becoming dysfunctional with endless traffic jams and city life for many is a daily grind in which friction and conflict do battle with thrill and opportunity. Take congestion costs, they account for an estimated 3% of GDP in Buenos Aires, Dhaka or Mexico City and 4% in Cairo. The cost was £4.3 billion for Britain in 2012, amounting to a cost of nearly £500 per urban household.<sup>6</sup>

Added to these tangible difficulties are the psychological stresses of urban life. Emotional disorders in cities are one of the fastest growing illnesses.<sup>7</sup> It appears to be a reflection of increased social fragmentation. There is an irony of being surrounded by millions of people, yet feeling alone.

Big numbers are telling, but all the added zeros barely begin to illuminate the impact on people of dense living, pollution, grinding

*The new industries festival at the 'Dortmunder U' complex.*

<sup>6</sup>The Centre for Economics and Business Research (Cebr) (2013). The Economic Costs of Gridlock. INRIX

<sup>7</sup>Meyer-Lindenberg, Andreas, *Big City Blues*, article in Scientific American Mind (March/April 2012) and Dutch Daily News referencing: Central Bureau of Statistics 2011 report and Stanley Zammit et. al. Archives of General Psychiatry. 2010

poverty, the urban rush, the ugly, slipshod-built buildings or the escalating sense of things being out of control. The zeros do not communicate the heaving weight of fates fulfilled or destroyed, the sadness lived through, injustices endured, helplessness put up with, and occasional delight. Our picture of the city veers between the thrill of its excitement and bling and the difficulties of navigating its complexities. This gloomier picture of life in the city is less often in view. It is the shining image that cities prefer to project.

### The city resurgent

There was a brief moment in the second half of the 20th century in Europe and North America when cities moved out of fashion. The problems of the inner city were thought to be unsolvable and in any case the suburbs seemed to provide a more desirable alternative. It is now hard to believe that New York nearly went bankrupt in the 1970s. Cities were hollowed out as the car drove suburbanisation and traditional industries declined and moved production first to the urban fringe and then to Asia and elsewhere.

But cities are now resurgent in Europe and North America as their inimitable strengths reassert themselves, the inputs increasingly being information, knowledge, creativity. Knowledge rich products and services are more valuable than those with low embedded knowledge, such as simple machines, so help a city achieve wealth and competitive advantage.

The city is compelling, primarily because it is an accelerator of opportunity. It force feeds transactions and exchange. The ability to add value comes through interaction. The World Wide Web and Internet have enabled our transaction capacity to grow exponentially, filling cities with a torrent of data and content. This can obscure our capacity to see and to think clearly. The catalysts that allow information, ideas and projects and industrial supply chains to concentrate are proximity and density. The clustering effect of cities is immensely powerful. It drives the urban engine giving cities their potential.

Fast knowledge flow is key and it is difficult to remember how slowly we communicated without the Internet in a more

... the  
clustering  
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urban engine.



*The carbon neutral Sunship complex in Freiburg one of Europe's greenest cities.*

mechanical age. The new connectivity has enabled globalisation to reach a new level and with it the reach of city powerhouses. This requires vast systems of cables, switching devices, signalling technology and self-regulating sensors with increasingly intelligent software embedded into the hardware to help information flow and to track messages or the movement of goods. This speeds up business and trade relying on intricately complex logistical systems for it to work. These are fragile interlocking systems and any sustained disruption to them would rapidly degrade urban economies. This is why disaster management is an increasingly important topic.

### Missed opportunities

As the urban focus re-emerged so did a vast urban regeneration process, begun largely in the West. The past was torn down, often with negative social effects, to make the city ready for the new information intensive service industries, for offices and for retail developments. Simultaneously an extensive retrofitting exercise began as worldwide



hundreds of old warehouses and industrial structures were transformed into culture or experience centres, incubators and company breeding grounds. These developments resonate because they exude memory and so anchor identity. The transformation of cities globally in the past decades has been breathtaking as many made a determined effort to move from being commonplace to special.



*A reminder  
that we can all  
contribute in a  
small way.*

... the chance  
to build and  
to retrofit  
sustainably  
was mostly  
missed.

Yet the chance to build and to retrofit sustainably was mostly missed. Green building codes were ignored and techniques like life-cycle assessment, which look at the full range of impacts associated with cradle-to-grave stages of a process, not adopted. Investors and developers claimed it was too expensive and chose to close their eyes to the growing evidence of climate change; and political will was missing.

The making, and remaking, of cities is driven by the logic of property development. It is a logic that takes a narrow, financial view of capital. It chooses to forget the cost to the environment. This is understandable as so much money is at stake it blinds us from seeing the bigger picture in which the physical hardware of a city is held together by its cultural software. You can make vastly

greater profits by building high into the sky and down to a cost rather than up to new eco-quality standards. The dearth of land and space drives this logic. Old buildings, usually far smaller than can now be built, are in the way. New cities work on the supermarket principle of stacking as much as possible into the smallest space. From the perspective of the individual project and the potential profits a developer can harvest, this makes sense.

But financial value is often being built at the expense of cultural or eco-value. A whole city perspective offers a completely different logic. If you assess the total capital value of the city in terms of its personality and overall attractiveness, its social capital balance or heritage value, it may be that individual projects that do not profit maximise, in fact add more to the overall value of a city. It is often these intangible assets that make up the major part of a city's attractiveness.

This brings in the argument for public goods, things available to all. To experience heritage in a city has a value for all citizens, including the same business people who may destroy it. It is part of the many things that make up the identity of a city. The central question for decision makers is then: 'Is this a city of projects or is the project the city?' And which will cope better with the stresses of the 21st century?

### Civic urbanity

Turning this new urban narrative into a policy programme and to contain its explosive mix of centrifugal and centripetal forces, we come to the idea of civic urbanity. Urbanity and being urbane has a proud history. It combines economic, social, political and cultural factors.

The tradition of urbanity focused both on 'the right to the city' and 'responsibility for the city'. It first arose in the Italian city states, especially during the Renaissance, and it then marked the movement towards meritocracy and freeing individuals from the yoke of feudalism. The German saying 'Stadtluft macht frei' (city air makes you free) encapsulates this idea. In time though the notion of urbanity degraded, ending with the idea of the flâneur, someone who watches urban life go by, uncommitted to the needs of the collective whole. Today it is more about the right to consume thoughtlessly.

There are eight concepts that together frame the modern idea of civic urbanity: the shared commons; eco-consciousness; healthy urban planning; addressing inequality; cultural literacy; the aesthetic imperative; creative city making; and an invigorated democracy. Civic urbanity seeks to realign individual desires and self-interest within a collective consciousness focused as much on responsibilities for 'us' or 'our joint world' rather than choices that are only for 'me' and my more selfish needs.

There is a demand for a reinvigorated public and shared commons. This is a social ethos that argues against our increasingly self-centred public culture. It fosters amongst other things spaces and places from parks to libraries that are free, non-commercial and public. Places underpinned by this ethos can help retrofit conviviality and the habits of solidarity so helping to nurture our capacity to bond and to build social capital.

All cities talk of sustainability. Every vision statement mentions combating the effect of climate change. While there are many good initiatives few cities make the hard planning choices to counteract an economic dynamic, spatial configurations and physical forms that continue to make cities unsustainable in every sense.

We know about unhealthy urban planning. Rigid 'land use zoning', which separates functions and gets rid of mixed uses which blend living, working, retail and entertainment, is a classic example. One hit 'comprehensive development' that often lose out on providing fine grain, diversity and variety is another. They are joined by 'economies of scale' thinking with its tendency to regard only the big as efficient, and the 'inevitability of the car' which can lead us to plan as if the car were king and people a mere nuisance. Walkable cities give you time and space to experience the city in visceral ways as part of being healthy, is sensory satisfaction.

Unequal societies create tension, resentment and lead to unfulfilled potential. A society of have and have-nots does not harness the collective imagination, intelligence and energy of its citizens. There are grave warnings of the looming effects and impacts of severe income disparity. It is seen as the most dangerous risk to social stability and well-being. It is corrosive, divisive, inefficient and ethically unsound.

The ability to see the world through the eyes of others gives us greater competence in navigating today's urban world. Cultural literacy, an understanding of others, helps us negotiate difference, understand better the sources of agreement and dissent. The aesthetic imperative reminds us that the city is a 360° immersive experience and it communicates through every fibre of its being, its built structures, its natural forms, its activities and overall atmosphere. Its aesthetics engender an emotional response with psychological impacts. This heightens our awareness of our surroundings.



*A Freiburg hotel:  
The corporates can  
play their part.*

Creative city making seeks to address the escalating crisis cities face. It argues that curiosity, imagination and creativity are the pre-conditions for inventions, as well as to solve intractable urban problems and to create interesting opportunities. Unleashing the creativity of citizens, organisations and the city is an empowering process. It harnesses potential and is a new form of capital and a currency in its own right.

Finally, most things have been reinvented – how we do business, how we build cities and how we entertain ourselves. Technology has moved in gigantic leaps enabling us to connect across the world in completely unforeseen ways. Yet our forms of representative democracy have remained largely the same for hundreds of years. This is why perhaps our civic engagement has atrophied. Cities need to explore new ways of communicating with citizens, so engagement with the civic can be reignited.

*... creativity is  
a new form of  
capital.*





# THE CHANGING FACE OF PLANNING

... planning an industrial city is different from planning an ecological one.

## An urban engineering paradigm

Cities have been planned since they began in Mesopotamia. Until recently the planning model for city making was the 'urban engineering paradigm'. This is hardware driven and concerned with physical infrastructures. Its focus on technical issues has shaped the disciplines and skills applied. These are largely based on engineering, architecture and surveying with their focus on land uses, how space is organised or where differing types of settlement should occur.

Yet to plan an industrial city is different from planning a city where ecological priorities or knowledge intensity or being creative are key. In the one people are seen simply as units of mechanical production, in the other as ideas and wealth generators, and in the third nurturers of their environment.

The culture of engineering is logical, rational and technologically adept, it learns by doing, it tends to advance step by step and through trial and error. The weakness of this mindset is that it can become narrow, inflexible and not see the connections and forget the cultural software aspects. While architects as manipulators of three-dimensional space, often feel they, rather than those who see the connections between hardware and software, are the central actors in making a city.

Planning over time has evolved to have a greater focus on strategic visioning – a lesson taken from business – without forgetting its original day-to-day tasks of organising space. A new elastic framework to reflect emerging needs developed and in response key concepts evolved such as the sustainable city or other prefixes like the creative, digital, intelligent, knowledge, green and now the smart city, or movements such as the New Urbanism. The planning paradigm has been recast.

## City form & sustainability

The rise of the sustainability agenda with growing force from the 1970s onwards has reshaped planning goals and the way plans are judged. The concept is now embedded as a matter of

*Urban infrastructures are immensely complex.*

course into any urban plan. The biggest problem planning faces is that urban form itself exacerbates the environmental risks we want to avert, especially low density suburbia which privileges car use. These patterns are immensely difficult to shift and to retrofit sustainability within them as witnessed by the planning battles to shift single-occupancy housing into medium density that begins to make public transport a more viable proposition.

The sustainability planning agenda has typically focussed on issues like renewable energy sources, such as wind turbines, solar panels, or bio-gas created from sewage, the argument being that cities provide economies of scale that make such energy sources viable. Novel methods to reduce the need for air-conditioning such as planting trees, developing natural ventilation systems or increasing green spaces to counter the heat island effect are being tried. Increasingly the results are seen



*Newfoundland: Vast pipe and cabling systems keep our cities going.*



*Oulu: A wind farm in the icy sea.*

as aesthetically pleasing. There is a focus on improved public transport, walkable neighbourhoods and a reduction in car use. This requires a radically different approach where more integrated business, industrial, and residential zones make driving difficult. Part of this involves optimal building densities to make public transport viable and to reduce urban sprawl. The mass of other initiatives include green roofs, zero-energy buildings and even urban agriculture to reduce food miles. The argument also is that in addition walkable, accessible places make it easier to transact.

#### **Ideas & action**

At ground level there is growing awareness of the challenges being faced. There is no lack of ideas, but less large scale action than it appears. It always seems just one step away. There are many good initiatives from community gardening to address food

*... a mass of imaginative solutions already exist.*



shortages; to encouraging small areas to become carbon neutral through greening competitions; to the Smart Energy Citizen in Groningen, which puts the citizen in control of tuning their energy demand or 'carrotmobbing',<sup>7</sup> where if a shop is prepared to invest in energy-efficiency improvements activists will organise a 'mob' of shoppers to visit the store. Too many projects find it difficult to scale up and remain pilot projects dependent on time-dated funding streams, resources are rarely available to bring them into the mainstream and the long term business case, for instance of solar energy, is often challenged so scaling up to generate critical mass does not happen. Shifting well-tried older, out-of-date, approaches such as reliance on private car transport is difficult; harnessing substantial resources to make a bigger impact is not possible, and cities have little control over financial incentives and rules to bend the market their way.

... embedding ecological thinking across all sectors very rarely happens.

Embedding ecological thinking across all public sector departments and then into local business very rarely happens; typically short-term exigencies push priorities such as unemployment. An alternative approach is to take a whole systems view that pushes eco-efficiency to deal with unemployment as part of that process.

The exceptions remain, places such as Stockholm, Freiburg, Copenhagen or Hamburg who have used 'cradle to cradle' thinking within every designed system, process or service across the city as a whole. And there are interesting smaller initiatives like the Green the Ghetto project set up by Majora Carter, who aware of the high rate of asthma and diabetes due to poor air quality and pollution sought to revitalise the Bronx through environmental initiatives.<sup>9</sup> Another is the growth in urban farming in Detroit, which has become a centre of an increasingly global movement as it seeks to tackle the problems of 30,000 acres of distressed land.<sup>10</sup>

Eco-thinking seeks to have a complete and integrated view of city systems such as energy, transport, health and employment by analysing, gathering citizen feedback and leveraging information across all city agencies and departments to make smarter decisions. The aim is to anticipate problems, such as traffic bottlenecks or excess energy use, in order to minimise the impact of disruptions to city services and operations. To make this work effectively it is necessary to coordinate cross-agency resources to respond to

<sup>8</sup><https://carrotmob.org/>

<sup>9</sup>[ed.ted.com/lessons/majora-carter-greening-the-ghetto](http://ed.ted.com/lessons/majora-carter-greening-the-ghetto)

<sup>10</sup>For many references look up: Urban Farming Detroit on the Internet



*Civic engagement and co-creation can have a big impact.*

issues rapidly. A central plank of this approach is applying open-data principles which allow for citizen involvement and the co-creation of policy. By synchronising data flows decision makers can respond just in time and proponents argue that this helps develop a smart economy, smart mobility, a smart living environment and smart governance. Making this happen requires smart grids and sensors, open participatory platforms and apps for city services. These help monitor aims like being sustainable. Many cities such as Amsterdam, Helsinki, Bologna and Berlin are leading the way in opening their databanks and involving citizens in finding solutions to urban problems.<sup>11</sup>

The city is an ideal vast canvas to use these possibilities given their critical mass, yet as with all technologies there is a flipside - the danger of 'big brother' and misreading data flows. When human interaction and their judgements are reduced there is a risk of bad decisions of automated systems as they might not see the whole picture. To make the most of this potential requires legal liability frameworks and co-operative, semi-public ownership structures which governments in collaboration with cities, companies, and risk analysts have to develop.

Citizens' control and engagement needs to remain the key principle and watchword especially as major corporations such as IBM, Cisco or Siemens see the great market potential to sell data integration services to cities under the moniker 'smart city'. Doors of Perception beautifully encapsulates the dilemma: 'Trust is not an algorithm: Big Data are hot, but also miss a lot'.<sup>12</sup> Smart cities require independently thinking smart citizens, who do not fall into the trap of thinking data is everything. Clearly machine decision making can try to mimic human reactions, but never substitute them.

<sup>11</sup>[www.amsterdamsmartcity.com/](http://www.amsterdamsmartcity.com/)

[www.forumvirium.fi/en/project-areas/smart-city](http://www.forumvirium.fi/en/project-areas/smart-city)

[www.eu-smartcities.eu/place/berlin](http://www.eu-smartcities.eu/place/berlin)

<sup>12</sup><http://www.doorsofperception.com/new-economic-metrics/trust-is-not-an-algorithm/>



## THE INTERNET OF THINGS & SUSTAINABILITY

Historically vital data about the city and human behaviour has been locked up in private hands and the public sector at city and government level. This is changing dramatically.

... helping citizens become co-creators to solve urban problems is crucial.

Our physical world is evolving into an information system – the Internet of Things. Increasingly objects are being embedded with sensors and so can communicate with each other; the public sector is opening its databases to allow citizens to interpret the data in new ways and develop apps to solve problems; and information can be harvested from the Internet and proprietary sources. New software is being developed to interpret, monitor and evaluate this 'big data' in order to aid decision making.

The possibility of combining this Internet of Things with the impulse to help citizens become co-creators to solve urban problems through the 'open data movement', opens up vast potential to create more sustainable cities.

### Sensors & tracking

Sensors and actuators embedded in physical objects communicate how the environment is working and through self-regulating systems can adjust to changing circumstances. Domestic appliances can adapt as well as utilities, buildings, cars and consumption goods. This helps reduce energy consumption, optimise processes or encourage new ways of behaviour. The ability, for instance, to price utilities dynamically can encourage lower energy consumption, or sensorised farming equipment linked with data collected from remote satellites can assess crop conditions and adjust how a field is farmed appropriately. Sensorised manufacturing processes can reduce waste and optimise the use of materials. Self-regulating systems continuously fed by data and feedback loops can monitor hazards or take corrective action to avoid problems, risks and reduce costs.

Tracking is shedding new light on behaviour, and new visualisation techniques are powerfully both helping and jolting awareness.

*'Smart city' ideas have a potential to contribute to reducing our carbon footprint.*



... sensors  
and grids  
are creating  
a new urban  
information  
system.

MIT's SENSEable City Lab's idea to tag 3,000 pieces of waste in Seattle sought to monitor the patterns and costs of urban disposal and create awareness of the impact of waste on the environment. You could follow a formerly invisible infrastructure unfold as the waste travelled mostly to recycling sites, some as far as New York State. It clarified visually some of the inefficiencies in the system.<sup>13</sup> Jet engine manufacturers, like Rolls-Royce, who often own their planes, charge airlines for the amount of thrust they use and monitor wear and tear. Utility companies such as E.ON, Enel or British Gas are at the forefront of the 'smart city' movement'. 'Smart' meters deployed to drive power-management systems show residential and industrial customers their energy usage and the real-time costs of providing it, and enable appliances such as air-conditioners to automatically shut down.

Tracking aids gives decision makers a heightened awareness of real-time events. This helps people adjust their behaviour thereby increasing the capacity of facilities, such as public transport systems, without needing to grow.

The sensors and grids are creating a new urban information system and economy that is interoperable, immersive, self-regulating, interactive, ubiquitous and breaks down information silos so in principle unleashing creative potential. Cutting edge technologies that provide ever greater granularity into how the urban environment is working, dramatically change how we navigate places.

*New alliances  
between the  
public, private  
and universities  
sectors and  
citizens groups  
are needed.*

<sup>13</sup>[senseable.mit.edu/trashtrack/](http://senseable.mit.edu/trashtrack/)





## TOWARDS THE 9 BILLION

Let us come back to the problems we must tackle. By 2050 there will be around 9 billion people on the planet. About 1 billion of today's 7 billion are the affluent of the world.

... the collective  
choices the  
rapidly growing  
populations  
make  
determine our  
fate.

They live mostly in the OECD countries and they are growing fast in China, India, Brazil and other emerging economies. These people have arrived. They have many assets, secure and relatively high incomes and most of the other six billion people on the planet aspire to their, predominantly urban, lifestyle.

About 1.5 billion people make up the emerging and expanding middle classes in both developing and developed worlds. These new consumers have driven much of the economic growth in recent years. They have begun to acquire assets and have steady if lower incomes. In transition, they are becoming more affluent, healthier, better educated but have a way to go to enjoy the comfort and security of the top billion. McKinsey recently estimated their numbers might double by 2030.

Some 2 billion people are just entering the global economy. They have no assets and very insecure incomes. They are on the move, making up the economic migrants both within and between countries. They are the hundreds of millions who have moved to the cities in recent decades. They live in the barrios, favelas, townships and their equivalents around the world. They are hanging on by their fingernails to their place in the global economy.

Still essentially outside the global economy are 2.5 billion subsistence farmers and herders, forest dwellers and indigenous peoples. They have no economically valuable assets and too little cash for it to be reasonably called an income. They account for most of the billion undernourished people on earth. They are vulnerable to shocks of any kind – price shocks, storms, droughts, conflict.

The aggregate of the choices the individuals in these four groups make – personal, economic and political – will drive the politics

*Walking along  
Istanbul's Istiklal  
Avenue.*



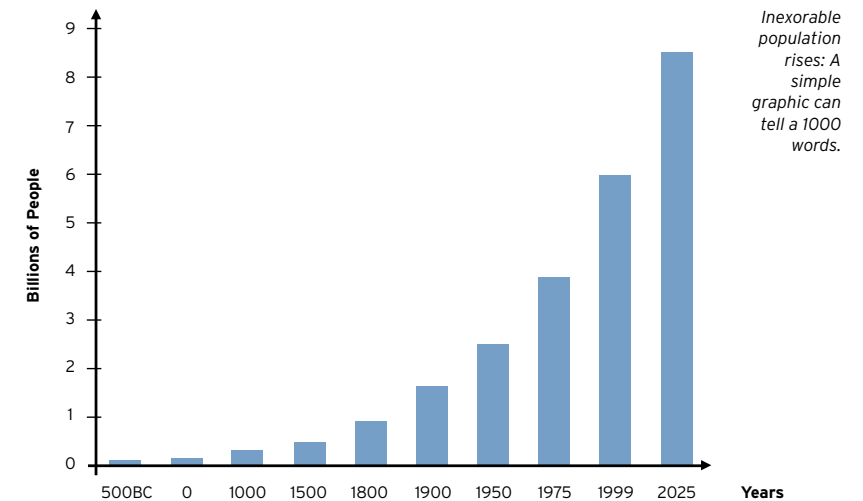
and economics of the 21st century. These aggregates and the complex interactions between them are the tectonic forces shaping the landscape of risk and opportunity for everyone as the century progresses. Depending on how well governments manage these transformations will determine how companies and cities can navigate them successfully. The biggest challenge will be to meet the aspirations of the 6 billion in an increasingly resource constrained world. This will occur in the cities, the arena where these aspirations will be met – or not.

### Consumer culture

The most difficult problem to address is the addiction to consumption and the associated culture of entitlement that seeks to 'make the masses happy'. This is why the counter-image of the good city must be strong. At its broadest it involves subverting the link between rising consumption and development levels. We need to remember that consumerism has been engineered and created. The cultural template for millennia was thrift.<sup>14</sup> Propped up by US\$500 billion of annual advertising spend, (US\$16,000 every second) billions in lobbying and PR spending in the name of stimulating markets, consumerism has been internalised as a new way of life.

There are already beginnings of counter-movements. Take food. The Veggie Thursday movement launched by Ghent and part of its public policy, where already over 20,000 take part, both does its bit and has generated new businesses and an additional tourist flow as well as help launch schemes in cities, from San Francisco to Cape Town. Similarly the Meatless Monday movement is having an impact. New York has banned super-sized sodas the fructose filled drinks, produced from corn and present also in many other foods, which lead directly to obesity, given the triggers they alert in the brain so that you feel hungry. When producing an apple requires 70 litres of water, a hamburger 2,400 and a kilo of beef 15,000 litres, the arguments are compelling and Ghent's approach full of humour.<sup>15</sup> Take billboards. Sao Paolo has banned all outdoor billboards and intense debates are happening from Delhi to Moscow, initially because of the aesthetics, but now also the anti-consumption argument. The 'billboard liberation front' work is an amusing counterpoint to explore.

... the addiction to consumption and a culture of entitlement is one of our greatest problems.



In reviewing the qualities of cities that are as attractive as the consumerist dream, we assessed the extensive range of real life examples from Copenhagen to Masdar in Abu Dhabi and the sustainability portals including: the Sustainable Cities Institute; ICLEI, the Sustainable Cities Collective, the Sustainable Urban Development Network of the UN-Habitat programme, the C40 Cities Climate Leadership Group, the Green City Index and more. Vast databanks of best practices and 'how to' manuals exist, but few provide a compelling narrative.

### Sustainia

This is where the work of Sustainia<sup>16</sup> coming out of Copenhagen is insightful. It has made the narrative shift. A unique organization it has a combination of roles. It is a think tank, a campaign, an advocate and a resource provider showing how you can best drive through sustainable solutions to urban problems. It shows the bird's eye view of what has been achieved. It moves beyond sharing best practices and producing manuals to using its resources to build the alliances to make things happen. It is an innovation platform to equip decision makers, CEOs and citizens with the solutions, arguments, visions, facts and networks needed to accelerate sustainable transformation in sectors, industries and everyday life. It has a tangible approach to sustainability focusing on readily available solutions with the intent to mature markets and sectors for sustainable products and services.

Sustainia is creating a vision of what a self-sustaining city could look like. Not Utopia or a distant dream, as it says, it 'demonstrates how available solutions, innovation and technologies are implemented at large scale. By focusing on possibilities and benefits, Sustainia is reshaping a new narrative of optimism and hope for a sustainable future that seeks to inspire and motivate instead of scare people with gloom and doomsday scenarios'. The annual 'Sustainia100' list and associated awards are its annual highpoint.

<sup>14</sup>Gruber, Ulrich (2012). *Sustainability: A Cultural History*. Green Books, Totnes

<sup>15</sup><http://www.gent.be/ThursdayVeggieDay> - detailed information

<sup>16</sup>[www.sustainia.me/](http://www.sustainia.me/)



## THE NARRATIVE REDEFINED

The message is not getting across and the messaging may be wrong, inspite of escalating evidence about the impending climate driven crisis. Showing that becoming more sustainable is better and more beautiful than excessive consumption is the most important cultural project of our time.

How do you change peoples' minds and shift the cultural template so that one-planet living feels like desirable common sense? We need to bring together the two narratives on the future of cities: The inward facing one about the city's own intrinsic, inherent challenges and the outward facing narrative about the pace and nature of change in the world within which cities are set. It needs to target less the committed or ideologically sceptical and more the un- or nearly decided, if that is achieved a tipping point may be reached.

### Communication & mindset

Getting the conversation and narrative right is the basis of building the confidence of cities to exert a greater influence on the external political forces threatening their success. Yet we still face an entangled communications challenge. Becoming a sustainable city is less a technological issue than one of mindset, visceral understanding of the issues and subsequent behaviour change. Too many people still believe there is no problem. How can this be overcome? Do we approach it by engendering fear, cajoling, or persuasion? Or: By providing evidence of the threats or examples of good practices? Do we jolt people into focus by ascending graphs of problems or imagery of iconic events like Katrina or Superstorm Sandy? It is best to show how the shift is doable and already happening and that those at the forefront have a better life, economically and socially. The image of the sustainable city needs to feel as emotionally satisfying, and if not more, as the lure of consumer culture. We can take inspiration from the Ephebic Oath. This was sworn by young men in ancient Athens as a requirement to become a citizen and influenced the city's development: 'I shall leave this city not less, but more beautiful than I found it'. We might adapt this: 'I shall leave this

... we need a compelling, emotionally satisfying story.

*Shanghai  
World Expo  
2010 on better  
cities. Thomas  
Heatherwick's  
British pavilion  
exhibits 60,000  
seed pods we  
must save.*



city not less, but more sustainable than I found it’.

By wrapping the narrative into desire and beauty, it becomes a motivating source for action. A message needs to get across that the more you live it the better you feel, as if going to a spa.

Yet there are forces against this and so all parties public, private and community need to be on board. Several steps need to happen simultaneously: blending a vision of society with a role for the different actors and a sense that everyone benefits; it needs to address people and organisations both as citizens, to engender responsibility, and consumers, to feed their needs and wants, with a clear set of steps that can be taken and how to get there. What promotes change is a picture of where to go; presenting consumers, the electorate and the media with a tangible, compelling image of what the world would look like if we unleashed the potential. This image needs to be strong enough to make consumer culture and cities driven by consumption feel old-fashioned. Without threatening it should get across, that consumerism is not a cultural pattern or paradigm that works and that it is bad for you directly and personally, because it touches your pocket, your health and your happiness.

The narrative starts by showing it can happen using this to redefine the ‘good life’. It should show how opportunities are fleeting by for business if they do not get involved. For instance, the high level expertise, more educated people or young talents companies need, increasingly choose their city first before the company or the job within it. There is an intense competition for these people who are a scarce resource.

An additional lure within the narrative is to spell out the prizes to be had from engaging in the green industrial revolution and that it is about to happen. Pushing that simultaneously there needs to be vision by national governments, with the panoply of right strategies, programmes and resources to match, that greening the economy solves a range of other problems, such as unemployment, economic vitality or social fragmentation. A greener society, for instance, swaps resources or reuses older clothes and this is already very fashionable. It needs to communicate through every fibre of its being and foster a new aesthetic so behaviour change is not suggested by hectoring but understanding how an attractive sustainable building or neighbourhood operates, looks

... wrapping  
the narrative  
into desire  
and beauty  
becomes a  
motivating  
source for  
action.



*Zaragoza captures the spirit of a more walkable city.*

and feels. That vision needs to trigger the right responses to make it work by rewarding those who save resources or providing incentives for others invest or change behaviour.

Cities can be promoted as the places to mobilise and harness the resources, will and motivation, provided their capacity to act is broadened. Then they can more forcefully do the planning, find the finance, develop the governance systems and delivery required. Cities are the laboratories to tackle the difficult solutions. They have the critical mass to scale up new technologies. But their innovative drive needs to refocus by embedding in civic values that make a sustainable lifestyle the norm. We need to trigger the competitive instinct of cities so they outdo each other in their ethical response, to be the most ‘creative place for the world’ rather than ‘in the world’ – a dramatic difference.

Underpinning everything there is the balanced flow of evidence and information that both express the urgency as well as the continuing good examples of making it work.

To help the mindset shift the important work of holistic accounting needs to be popularised and finally the limitations of GDP to be accepted (Gross Domestic Problem as Lorenzo Fioramonti so aptly puts it).<sup>17</sup> It served its purpose when invented under Roosevelt to assess the scope of the pre-war US economy, but is now outdated given its extensive flaws.

<sup>17</sup>Fioramonti, Lorenzo (2013). *Gross Domestic Problem: The Politics Behind the World's Most Powerful Number*. Zed Books



## THE CRISIS OF LEGITIMACY

Even now, few people understand that climate change will lead to a complete transformation of our human prospects. This is true whether climate policy succeeds or fails.

If it succeeds, the global energy system will be transformed in the next 30 years – and with it the way we power our cities. If it fails, a very different, dangerous change – one that is already underway – will accelerate and become dramatic in the 30 years after that. Global average temperatures will rise by as much as 4°C and be accompanied by more frequent and more intense extreme weather events. In both cases the impact on cities will be momentous because of how climate change interacts with food, energy and water security with the social implications that follow.

### Events or people driven

The choice is whether events or people drive this transformation. If people drive it, then over the next 30 years the technologies we use to make energy available for daily use will need to change completely. The transition will be difficult, but it will bring with it a wide range of other benefits including much improved air quality in our cities and new industries will evolve. Food and water security will be maintained. Economic and political stability will be retained.

If events drive the transformation then the technologies we use to make energy available will remain much as they are now. But the global temperature will rise relentlessly and, for all practical purposes, irreversibly. Food and water security will be undermined and ever larger numbers of people will be displaced into cities, ever less capable of coping with these growing stresses.

### Silo thinking

The institutional structures governments currently have in place tackle each issue separately. Typically, energy, water, food and climate are each dealt with by different a government department or agency. Each has a separate constellation of supporting

... the transition will be difficult, but will bring a wide range of benefits.

*An artistic installation in Perth that says it all.*

professionals and cluster of related businesses. This significantly increases the risk of policy cannibalism as the solutions to one problem serve simply to add to the difficulties of another. The British government, for example, has consistently sought to drive energy prices down to deal with competitiveness and fuel poverty issues while driving them up to tackle climate change.

We can address threats to our water security by energy intensive desalinisation and water transfer projects but at the risk of sabotaging energy security by increasing dependence on expensive imports. If the extra energy is provided by combusting fossil fuels this undermines climate security and eventually the water security being sought. If lower water security threatens food security because of climate altered rainfall this can be compensated by using energy intensive agro-chemicals and water transfer projects. But, if the additional energy to do this is provided from fossil fuels this increases the risk of further altering precipitation patterns and raising temperatures, which in turn reduces crop yields so attenuating both water and food security.

This combination of demographic, economic and resource pressures creates the risk that national government policies will fail so increasingly endangering the viability of cities. In an inter-dependent global economy most countries can no longer manage their risk exposure from within their own territory. This places greater importance on maintaining the open, rules based, global trading system, as distinct from a protectionist approach, on which so much of the world's post-Second World War prosperity has depended. Make no mistake about it – without access to global markets to earn the revenues to pay for imported food, cities will not long remain stable.

The first imperative facing any government is to secure its territorial integrity. If it cannot do that, it is no longer a government. Its second imperative is to maintain internal stability, without which maintaining territorial integrity becomes impossible as we are witnessing in Syria. After ensuring territorial integrity and internal stability, preserving energy, food, water and climate security are the next most important imperatives facing governments. A significant failure to do this will quickly result in regime change whatever the nature of the regime. Governments everywhere are now finding this an increasingly demanding task.

... the risk that national government policies will fail increasingly endangers the viability of cities.



*A conference on breaking boundaries and collaboration in Toronto.*

### **Beyond radical individualism**

Politics is the art of making choices together. It is the antithesis of the radical individualism that has come to dominate public life in recent times. No political choice in human history is more significant than the one we must now make about climate change and the other issues connected with the risk nexus. These are not simply choices about our energy, agriculture or water policy but about the very nature of civilisation.

We are ill-prepared to make them. Transformational choices are necessary to prevent the threats to the liveability of our cities and will fundamentally alter the pattern of winners and losers in society. There will be rich job opportunities and business prospects. But they will not be the same jobs, in the same places, for the same people with the same skills. They will disrupt long established economic interests and social conventions. Making political choices of this magnitude means exercising great authority to match the problems – an authority felt to be legitimate to command the public consent required for their success.

Nations everywhere are experiencing a crisis of legitimate authority. Those with well-established democratic cultures and institutions have legitimacy, but are increasingly unable to acquire the authority to make strategic decisions with far reaching implications for their citizens. The government of the United States, for example, is better informed





*Will Alsop's art college extension jutting into the urban landscape in Toronto.*

... the machinery of government is increasingly failing to manage the risks.

than most about the urgency of addressing climate change and fully aware of the consequences for Americans of a failure to do so. Yet it has been unable to assemble enough authority, for example in Congress, to put a cap on its own emissions. Elsewhere, there are governments with sufficient authority to act decisively but are constrained by their lack of legitimacy. Many developing countries, for example, compensate for their democratic deficits by maintaining artificially low prices for energy, food and water which increases their exposure to price shocks and limits their ability to reduce their carbon emissions.

Many reasons account for this loss of legitimate authority. It has arisen in part because politicians everywhere have failed to understand the scale of change caused by the explosion of affluence which followed the population explosion of the last century. They have failed to invest in the necessary reinforcement of the machinery of government, nationally and internationally, to manage the risks which accompany opportunities. Indeed, many countries have been beguiled by specious ideologies into believing that a vastly larger global economy could somehow be

managed successfully with less governance when needs are more complex and populations more diverse.

Other dynamics have contributed to the loss of legitimate authority. Political parties in most liberal democracies – long the basis of legitimacy for their governments – are losing their connection to the social base. Increasingly they are empty shells with very few members. Take Britain, with a population of over 62 million people, the combined membership of all of the political parties is about 400,000, just over 0.5% per cent of the population. This compares badly with the mass memberships of political parties at the end of the Second World War which totalled about 6 million out of a population of 50 million – 12 per cent. It also compares badly with a membership of the Royal Society for the Protection of Birds at over a million or the National Trust at 4 million.

### Reigniting the polis

The hollowing out of political parties has significant consequences. Fewer members means less income so they must forge closer relations with business to finance their activities, especially at election time. This inevitably skews their agenda towards that of the business leaders from whom they are seeking support. They are less able to communicate directly with voters relying instead on the various media to build the electoral coalitions necessary to achieve office. This makes them hugely dependent on the preferred agenda of the editors whose primary interest is in retaining the loyalty of their paying customers. Political discourse then tends to become over focussed on the near term, emotionally potent, social issues whilst paying less attention to analysing the rich, strategic issues that make up the national interest. The result is an ill-informed electorate ill-prepared to deal with the multiplying stresses of the risk nexus.

Compounding this failure of political parties is a more general degrading of the polis – the public space in which citizens come together to make political decisions. There are structural reasons predominantly the vast and rapid increase in our communications technologies which undoubtedly brought huge benefits. Billions of us now know, or can discover, more about the world we live in than ever before. We are better informed about what affects our daily lives and can manage the information technologies to secure

... political discourse tends to over focus on the near term and emotionally potent.

... cyberspace  
can fragment  
and lead to  
less time  
spent on civic  
responsibilities.

what we want more effectively. We can explore other cultures with our fingertips. We think this makes us more connected to each other than we have ever been.

In some ways this is true, but in others our societies have become more fragmented as more time is spent in cyberspace. Facebook may make us more connected to our friends and family but at the price of leaving us less connected to our neighbours and communities. We have more private experiences and fewer that are widely shared. There is more pressure on our time. We spend more of it working and travelling than in the past. Eating and sleeping still take as much time as ever. To make more time we eat and walk faster and multitask. The more of our limited free time spent in cyberspace is less time spent on our civic responsibilities, perhaps most importantly participating in the democratic governance of our cities and nations. Compared to the instant gratifications of cyberspace, the inevitable demand on patience and tolerance of civic participation appears less rewarding, even though the Internet has been a powerful tool to harness opinion and to drive campaigns. This understandable, if less forgivable preference, reduces our political attention.

### Will & vision

In secular democracies, political parties of neither the right nor left have been willing to seek electoral mandates to deal with the looming threat of the risk nexus to prosperity and security. They are scared. Parties of the right have been pre-occupied with a drive to reduce taxes, regulations and spending by government. Their core desire has been to create an ever expanding realm of personal individual choice. They believe markets are always wiser than governments and can be relied on more to solve the big problems of the risk nexus. It is difficult for politicians from the right to accept the level of government activism required to tackle this risk complex.

The left parties generally seek to maximise economic growth as fast as possible to create the wealth to improve public services and alleviate poverty. Anything putting economic growth at risk is anathema. They are not so viscerally opposed to government interventions as those from the right but they prefer marginal change to the transformations now needed.

In both cases political discourse tends to default into a debate about managing public services better so as not to overburden the economy. Important as this may be, it does not arouse sufficiently intense and deep public interest or passion to make people want to join a political party. Lost in this managerial noise is any sense that political vision and choices play a central part in determining our success or failure in maintaining political stability. It has simply been assumed that national governments of either right or left will always succeed in preserving territorial integrity and internal stability. The rise of the risk nexus questions this assumption.

*Far-sighted  
leadership  
is often  
required.*



Beyond liberal democracies the social contract may have different forms but must still meet the over-riding imperative of preserving stability. In nations where the contract is strongly faith based the stresses generated by the risk nexus are exacerbating sectarian tensions whose immediate urgency distracts government attention from making the more strategic choices. Regimes with secular authority are constrained in exercising their undoubted authority by the need to preserve the momentum of the present form of economic development at all costs. They lack the courage to adopt the transformational changes needed to manage the risk nexus.

Lately, it has become apparent to the leaders of some of the world's largest corporations that this nexus of risks threatens the global stability necessary to retain the huge flows of capital that sustain prosperity. They have begun to refer to the 'broken triangle', which is the increasingly dysfunctional relationship between governments, business and civil society. The decline of legitimate authority is central to the breakdown of this relationship. By virtue of their closer connection to the base of society, urban leaders are well placed to begin responding to this challenge. But first they must become aware of the extent to which their potentially bright future is under threat.



## CONNECTING CITY & THE STATE

Two disconnected conversations – the escalating stresses of urban growth and the global risk nexus – must be brought together for cities to survive as creative hubs in the 21st century.

... cities must  
play a larger  
role in shaping  
national policy.

Unless climate change is averted, the future of cities looks grim. If climate change is to be averted, cities must play a larger role in shaping national policy.

The challenges to the modern city, which several leading cities especially in the Nordic countries are seriously attempting to tackle, cannot be dealt with in isolation. Praise worthy initiatives from greening to dealing with negative impacts of economic growth or the dilemmas of diversity are not enough. The power to maintain food, energy, water and climate security lies largely with governments. Their failure to provide the vision, the policy, the rules system needed to deploy the solutions that are already available will undo the benefits we currently see in more imaginative cities. The triumphant city could turn into a dystopian urban landscape with escalating crises and conflict over resources. This would be a failure of political will not technology or economics.

Cities do not have the capacity or competences, let alone the authority, to solve global systemic risk problems though they contribute significantly at the margin. What cities do have is greater legitimacy. They are closer to the citizen. With the right vision good city leaders can inspire their populations towards greater goals than merely managing today's services. In so doing they can bond people together, encourage co-operative action and thus replace the self-focused radical individualism that cares nothing for collective needs and public goods.

Some cities so far have done as much as they can within the limits of their possibilities and powers. They have, for instance, created mutual learning networks, they share best practice, they have developed pilot projects or have sought to embed eco-thinking into everything they do. They can address their internally generated

*Waiting for  
city and state  
to collaborate.*



risks by what they decide to do themselves and we think here especially of the North European cities. They are helpless against the external risks resulting from the behaviour of others which affect their city negatively.

The global rules system to contain the risk nexus can only be negotiated by nation states. Cities remain subordinate to the state. They cannot build the global rules for trade, the environment or security. But they do not need to be servile. What they can do is to build strongly on their existing networks to integrate the urban and global agendas. The C40 Cities Climate Leadership Group (C40) is one example of tackling part of the problem. It is a network of the world's significant cities committed to addressing climate change, which acting both locally and collaboratively seeks to have a meaningful global impact in reducing both greenhouse gas emissions and climate risks. Its interactive map is a good explanatory tool to explain what is happening and what they are doing.

Others include the Transitions Towns Movement, the US Sustainable Cities Network, Canadian Sustainable Cities International, the Sustainable Food Cities Network, the Networking Intelligent Cities for Energy Efficiency grouping with its green digital charter and many others focusing on issues such as becoming more innovative or fostering economic growth. Eurocities perhaps the biggest network brings together the local governments of over 130 of Europe's largest cities and 40 partner cities that between them govern 130 million citizens across 35 countries. Eurocities, which has climate change as a priority, is a potentially powerful organisation started in 1986 to help put the urban agenda onto the European Union's orbit, but it is limited in its impact since the member states are reluctant to devolve power to cities.

### Rebalancing the relationship

Throughout the 20th century the balance of political power between cities and their national governments shifted inexorably towards the capitals as globalisation progressed. Yet falling membership of political parties is undermining the political legitimacy of national governments in many parts of the world. The oligarchic husks of the traditional political parties offering themselves for election are too vulnerable to populist sentiment to take the tough, strategic decisions required to secure the



*Nature and the city  
need to come to  
together in better  
harmony.*

stability necessary for our burgeoning cities to thrive. City leaders everywhere must now negotiate a reversal of the flow of political power to the centre.

They need to build alliances with a wide range of other civil society organisations with local and global capabilities that share the same frustrations with failure of governments everywhere to address systemic risks. These already include non-governmental and faith-based organisations and are likely to include a growing numbers of business organisations as they grasp the scale of the emerging threats to prosperity and security. Cities need more freedom from central control of their finances in order to be able to build resilient local economies. We need more figures like former Mayor of New York, Michael Bloomberg, willing to use their stronger legitimacy to press governments to act more urgently and decisively on stresses of the risk nexus. If cities are to continue to provide a liveable home for the majority of human beings as the 21st century advances, they need to negotiate a more explicit and more binding political contract with their national capitals, about managing the risks as well as the opportunities of building a sustainable planet.

**Cities need  
more freedom  
from central  
government to  
control their  
finances.**

**... cities remain  
subordinate to  
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Newfoundland:  
When you are  
close to the  
melting ice you  
know what really  
matters.





Shanghai World Expo  
2010 exhibition: Is this the  
urban future we want?

## CHARLES LANDRY

Charles Landry is an international authority on the use of imagination and creativity in urban change. In 1978 he founded Comedia, a highly respected European consultancy working in creativity, culture and urban change. He has completed several hundred assignments for public and private organizations and given keynote addresses and workshops in over 50 countries. Recently he developed a Creative City Index to assess the creative eco-system of cities. In 2013, Charles Landry's book *The Art of City Making* was voted the second best book on cities ever written and *The Creative City*, voted twelfth, by the planning website <http://www.planetizen.com/node/66462>

## TOM BURKE

Tom Burke CBE has worked to protect the environment for over forty years in environmental organisations, business and government. Formerly the Director of Friends of the Earth and the Green Alliance, he was a Special Advisor to three Secretaries of State for the Environment. He is chairman of E3G and an Environmental Policy Advisor to Rio Tinto plc and has also advised BP and Standard Chartered Bank. He is a Visiting Professor at Imperial and University Colleges, London. His career was described by the *Daily Mail* newspaper, as 'prodigious'.

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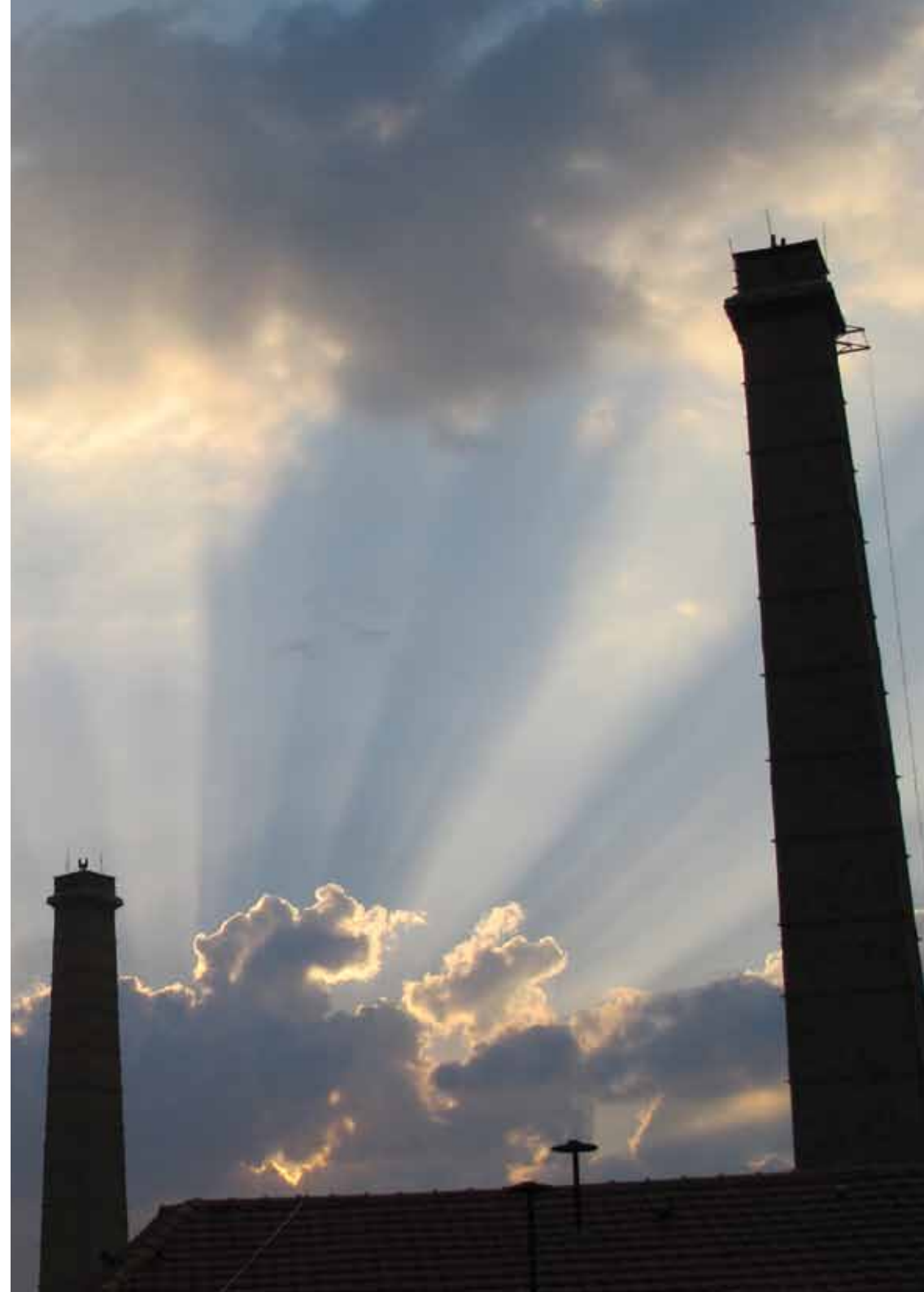
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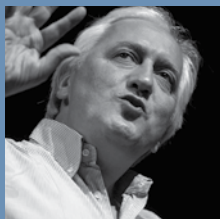
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*'Cities with imagination and dynamic leadership have the capacity to help solve some of our world's most urgent problems. I am delighted that 'The Fragile City' addresses the need for a new relationship between the city and national governments.'*

**George Ferguson, Mayor of Bristol, European Green Capital 2015**





Charles Landry works with cities around the world to make the most of their potential. Tom Burke CBE is an environmentalist. He is currently the Chairman of E3G.

This is the fifth in a series of short publications encapsulating crucial issues shaping cities today. *The Fragile City* for the first time, brings together two disconnected conversations about the future of cities and the risks of climate change. One looks at what cities can do for themselves to secure their prospects and the stresses of explosive urban growth have stimulated an outburst of creativity to meet the challenges. On the other hand powerful wider forces could undo their efforts. This involves the interaction between climate change and food, energy and water security creating a nexus of risks threatening global economic and political stability.

National governments show little desire to preserve climate security and lack the legitimate authority to deal effectively with climate change. City leaders must now take a more prominent political role in insisting that governments act more forcefully. They must build on their strengths to innovate and integrate and play a larger political role in meeting the climate challenge.

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